



Environmental Licensing Programme
Environmental Protection Agency (EPA)
PO Box 3000
Johnstown Castle Estate
Co Wexford

17th October 2013

RE: Objection by KMK Metals Recycling Ltd (KMK) to Waste licence PD ref: W0113-04

Dear Sir/Madam,

Further to the Proposed Decision ref: W0113-04 as granted on the 26th September 2013, KMK Metals Recycling Ltd (the licensee) now wishes to object to specific conditions of the waste licence. In doing so, and in accordance with Section 42(4) of the Waste Management Acts 1996 to 2013, please note the following details;

Name & address of objector: KMK Metals Recycling Ltd, Cappincur Industrial Estate, Daingean Road, Tullamore, Co Offaly.

Subject matter of objections: Conditions and schedules of the licence W0113-04, further elaborated in the table below.

The grounds for objection including the reasons and considerations of the objection are tabulated below in the following pages. In addition, please note that condition 11.7 of the licence should read Schedule E and also that Groundwater Monitoring should be referenced as C.7 in the schedule section.

I therefore also enclose the objection fee of €500 by electronic payment via credit card as is required.

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

Yours Sincerely,

Niall Nally
Senior Environmental Consultant

Cc Kurt M Kyck, KMK Metals Ltd, Cappincur Industrial Estate, Tullamore, Co Offaly.

Ref	Waste licence W0113-04 condition	Grounds, reasons and considerations for objection
1	Schedule B.2: Emissions Points CX, DX and E	<p>KMK objects to the setting of emission limits of 35mg/l for suspended solids and 2mg/l for mineral oils for CX, DX and E. The reasons are as follows:</p> <ul style="list-style-type: none"> • The existing licence has a self imposed trigger level of 50mg/l for suspended solids. • Suspended solids are not included on the list of parameters with environmental quality standards in the EC Environmental Objectives (Surface Waters) Regulations 2009. • The receptor land drain is not a designated river and was investigated previously in terms of its environmental significance and the impact of KMK's emissions on water quality in the drain (see Drain Impact Report 2011 in Appendix 1 of this submission which previously formed Appendix 11 of the EIS which accompanied the waste licence application). • The KMK site has extensive roofed areas and the rainwater falling on these roofs is diverted directly to the adjacent land drain as clean run-off. Therefore, the quantity of the discharge from each of the 3 yard areas is very low, so setting emission limits of 35mg/l for suspended solids and 2mg/l for mineral oils for each of CX, DX and E is considered inappropriate as it takes no account of the impact of these low level discharges on the local watercourse. Trigger levels should be based on the potential impact on the local drainage network and this is best achieved through an investigation of the impact of the discharges on the surface water environment rather than on arbitrary trigger levels. If the Agency insists on imposing these trigger levels, KMK will have to reconsider the diversion of roof-water directly to the adjacent land drain and consider the possibility of a single discharge point that is representative of the full site discharge. • An Emission limit of 35mg/l for Suspended Solids for these discharges is inappropriate and unsubstantiated.

		KMK proposes that the setting of Trigger Limits be addressed as per Item number 2 (Condition 6.10.3) below, to be agreed with the Agency but not specified within the Licence, and proposes that the associated table within Section B.2 (2) be removed.
2	Condition 6.10.3	KMK objects to the exclusion of suspended solids and mineral oils from the list of parameters in Condition 6.10.3 and requests that these be included as KMK should determine and propose appropriate Trigger Levels (for all parameters) for agreement with the Agency, within 6 months of the date of grant of the License.
3	Schedule C.2.3	The Licensee request that the monitoring frequency for all metals be reinstated to bi-annually (as was the frequency for Waste Licence W0113-03, Schedule C.2.3). KMK's monitoring history demonstrates that there is no need for change.
4	B.4 Ambient dust emissions points and point source dust emission point.	KMK refers to a submission dated 31 st August 2012 (extract attached in Appendix 2). This submission makes reference to a revised environmental monitoring locations map F.1.1b. As part of this map there are 4 ambient dust monitoring points proposed (A2-1, A2-2, A2-3 and A2-4). KMK therefore requests that the Table in Schedule B.4 be amended to have monitoring location A2-5 removed.
5	Schedule C [C.1.1. and C.1.2.]	KMK asks that the Agency review the Environmental Monitoring Locations Map (F.1.1b) – as submitted with the Application, as we feel that possibly the labels from the Map may not have been adopted in the License W0113-04 (ref: A2-8 in the License should read A2-5).
6	Schedule B.1 emission limits for A2-8 of 10mg/m ³	This emission point should be referred to as A2-5, as above and as submitted in Environmental Monitoring Locations Map (F.1.1b). The new emission limit of 10mg/m ³ is lower than the existing limit of 12.5mg/m ³ as previously agreed with the Agency for W0113-03. KMK refers to the Inspectors Report associated with this licence application whereby the Air Quality standard of 40ug/m ³ is forecasted only to be reached once total particulates reach 12.5mg/m ³ . KMK maintains that the calculations in the Inspectors Report justify a limit of 12.5mg/m ³ , and that at this limit, the relevant Air Quality Standard is not exceeded.

Ref	Waste licence W0113-04 condition	Grounds, reasons and considerations for objection
7	Schedule C.2.2 Note 1 and Note 2 in relation to a proposal to install a composite sampler for emission F.	<p>We would consider a sophisticated composite sampling device to be unnecessary for the wastewater treatment system (WWTS) at KMK. Composite samplers are normally required to detect trends in concentrations of emissions over time and we fail to see the need for this methodology in this instance. The proposed monitoring frequency of four samples a year is perfectly representative on the basis of normal grab sampling. The use of the WWTS in KMK will be consistent from day to day, because of the type of occupancy at the facility and nature of effluent for treatment. The attenuation and mixing that takes place in the large Primary tank and the further attenuation and mixing that takes place in the Buffer tank of the WWTS ensures a consistent treatment level. The treated effluent is further attenuated as it is processed through the tertiary treatment Sand Filter; all of which will ensure that the final effluent is consistent in nature. KMK proposes that grab sampling be accepted as a suitable method of monitoring, at the proposed quarterly frequency. KMK also proposes that Table C.2.2 be amended so that Flow may be assessed on a daily basis by visual inspection.</p>
8	Condition 8.5	<p>KMK seeks approval from the Agency that offloading and loading of hazardous WEEE at KMK be permitted in outdoors areas, or that Clause 8.5 be removed, for the following reasons:</p> <ul style="list-style-type: none"> - This condition is not applied to other similar operations across Ireland - Should this condition be imposed it would place KMK at an unfair commercial disadvantage - Loading and unloading does not constitute treatment of waste - There is no requirement in the WEEE Directive nor the industry specific (Cenelec) WEEE Treatment Standard to support this condition <p>KMK substantiates its objection on the following grounds (using examples of bulk deliveries of Hazardous WEEE):</p> <ul style="list-style-type: none"> - Refrigerated Equipment: the reason for refrigerated equipment is that it contains and may cause release to the environment of greenhouse gases.

		<p>These items are collected by KMK from sites across Ireland where they are permitted to be stored outdoors. KMK does not process this equipment and does not cause release of greenhouse gases. There is no environmental benefit gained from the requirement to have these offloaded / loaded indoors.</p> <ul style="list-style-type: none"> - Televisions / Monitors: These are placed in cages and remain secure in those cages during the loading / offloading activity. The items are collected from sites and loaded onto trucks. There is no damage done during the offloading procedure. These are brought under cover without undue delay. There is no environmental benefit to be gained from the requirement to have these offloaded / loaded indoors. - Batteries: batteries are primarily stored in water tight and lidded containers prior to delivery at KMK. There is no release to the environment from containers of batteries during the offloading / loading activity. There is no environmental benefit to be gained from imposing a requirement that these be loaded / offloaded indoors.
9	Condition 8.7	<p>KMK considers outside storage of hazardous WEEE as incidental to site operations. KMK seeks agreement from the Agency that temporary storage of hazardous WEEE be permitted on the following grounds:</p> <ul style="list-style-type: none"> - It is acceptable for certain types of WEEE to be stored outside. - many waste streams are sourced from authorised civic amenity sites where WEEE is stored outside. - the WEEE Regulations 2011 specify that weatherproof covering should be provided for <i>appropriate</i> areas; - all outdoor storage areas are serviced by the site drainage infrastructure including interceptors and silt traps. <p>The Inspector notes in his report that the above is a reasonable request. KMK seeks agreement from the Agency that it is acceptable for KMK to temporarily store hazardous WEEE outdoors on the basis of the above, or alternatively that Clause 8.7 be removed from the proposed Licence.</p>

Appendix 1
Drain Impact Report September 2011

For inspection purposes only.
Consent of copyright owner required for any other use.

DRAIN IMPACT REPORT

FOR

**KMK METALS RECYCLING LTD.
W0113-03**

AT

CAPPINCUR INDUSTRIAL ESTATE,

DAINGEAN ROAD, TULLAMORE,

CO. OFFALY.

26th September 2011

This report is an investigation of the assimilative capacity of the receiving water (land drain along western site boundary) based on the actual flow measurement (using basic field data and survey) and water quality of the same land drain as determined from grab samples taken; up-stream and down stream of the KMK discharge points at CX and DX and also samples taken from CX and DX outlets on the same day.

Report prepared by;

ENVIROCO Management Ltd.

Bow House,
O'Moore Street
Tullamore

Tel : (057 93) 52200

Fax : (057 93) 52342

Website : www.enviroco.ie

The land drain flow as measured on 15th August 2011 = 0.0889m³/s

The CX discharge flow as measured on 15th August 2011 = 0.000072 m³/s

The DX discharge flow as measured on 15th August 2011 = 0.0000092 m³/s

To calculate the existing chemical parameter loadings the following equation is used:

Existing loadings (kg) = flow x conc. of each parameter measured (mg/l) / 1000

Table 1.1 shows the baseline parameter loadings for the land drain- Upstream (US) of the discharge outlets (CX & DX)

Parameter	River Flow (m ³ /s)	US Concentration measured (mg/l)	Existing loadings* (kg)
Total Suspended solids	0.0889	27	2.4 x 10 ⁻⁰³
Organic Carbon	0.0889	9.55	8.4 x 10 ⁻⁰⁴
Ammonical Nitrogen as NH3	0.0889	<0.2	Undetectable
COD unfiltered	0.0889	45.3	4.0 x 10 ⁻⁰³
Conductivity (mS/m3)	0.0889	0.637	5.66 x 10 ⁻⁰²
Aluminium	0.0889	<2.9 x 10 ⁻⁰³	Undetectable
Arsenic	0.0889	3.16 x 10 ⁻⁰³	2.8 x 10 ⁻⁰⁷
Chromium	0.0889	9.99 x 10 ⁻⁰³	8.8 x 10 ⁻⁰⁷
Lead	0.0889	1.6 x 10 ⁻⁰³	1.4 x 10 ⁻⁰⁷
Nickel	0.0889	8.56 x 10 ⁻⁰³	7.6 x 10 ⁻⁰⁷
Zinc	0.0889	12.9 x 10 ⁻⁰³	1.1 x 10 ⁻⁰⁶
EPH Range >C10-C40	0.0889	146 x 10 ⁻⁰³	1.3 x 10 ⁻⁰⁵
Mineral Oil >C10 C40	0.0889	<10 x 10 ⁻⁰³	Undetectable
Mercury	0.0889	<0.01 x 10 ⁻⁰³	Undetectable
Chloride	0.0889	51.3	4.5 x 10 ⁻⁰³
Iron	0.0889	<0.019	Undetectable
pH (units)	0.0889	8.59	7.6 x 10 ⁻⁰⁴

*Figures based the calculated flow rate of the drain: 0.0889 m³/s and using water quality analysis data taken upstream of the discharge points CX & DX on the drain. See Appendix 1 for analysis results

Table 1.2 shows the baseline parameter loadings for the land drain- Downstream (DS) of the discharge outlets (CX & DX)

Parameter	River Flow (m ³ /s)	DS Concentration measured (mg/l)	Existing loadings* (kg m ³)
Total Suspended solids	0.0889	8	7.1 x10 ⁻⁰⁴
Organic Carbon	0.0889	11	9.7 x10 ⁻⁰⁴
Ammonical Nitrogen as NH ₃	0.0889	<0.2	Undetectable
COD unfiltered	0.0889	30.4	2.7 x10 ⁻⁰³
Conductivity (mS/m ³)	0.0889	0.482	4.2 x10 ⁻⁰²
Aluminium	0.0889	<2.9 x10 ⁻⁰³	Undetectable
Arsenic	0.0889	3.5 x10 ⁻⁰³	3.1 x10 ⁻⁰⁷
Chromium	0.0889	9.78 x10 ⁻⁰³	8.7 x10 ⁻⁰⁷
Lead	0.0889	0.128 x10 ⁻⁰³	1.1 x10 ⁻⁰⁷
Nickel	0.0889	7.11 x10 ⁻⁰³	6.3 x10 ⁻⁰⁷
Zinc	0.0889	9.39 x10 ⁻⁰³	8.3 x10 ⁻⁰⁷
EPH Range >C10-C40	0.0889	<46 x10 ⁻⁰³	Undetectable
Mineral Oil >C10-C40	0.0889	<10 x10 ⁻⁰³	Undetectable
Mercury	0.0889	<0.01 x10 ⁻⁰³	Undetectable
Chloride	0.0889	16.8	1.5 x10 ⁻⁰³
Iron	0.0889	0.0656	5.8 x10 ⁻⁰⁶
pH (units)	0.0889	8.64	7.6 x10 ⁻⁰⁴

*Figures based the calculated flow rate of the drain: 0.0889 m³/s and using water quality analysis data taken upstream of the discharge points CX & DX on the drain. See Appendix 1 for analysis results



Water quality analysis was carried out on water samples taken at;

- The discharge points CX and DX flowing into the land drain.
- Upstream of the discharge points CX and DX on the land drain.
- Down stream of the discharge points CX and DX on the land drain.

Please see map attached for reference.

*For inspection purposes only.
Consent of copyright owner required for any other use.*

Surface water monitoring locations for
 KMK Metals Recycling Ltd, Cappincur Ind Estate, Tullamore.

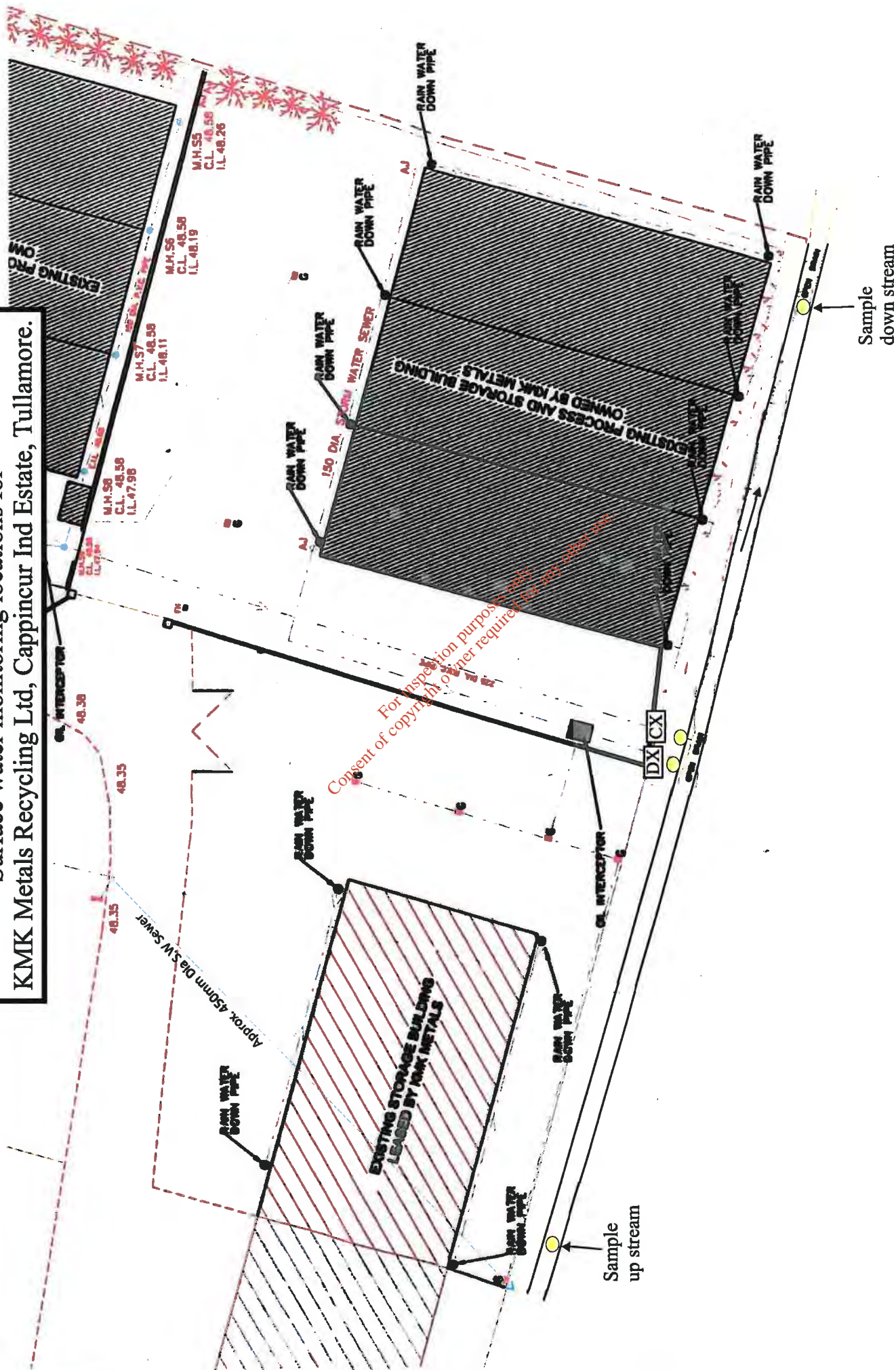


Table 1.3 shows the variation between upstream and downstream, including discharge values.

Table showing variation between upstream and downstream, including discharge values						
Parameter	Units	US	CX	DX	DS	US-DS
Suspended Solids	mg/l	27	6	46	8	19.00
Organic Carbon	mg/l	9.55	5.43	24.3	11	-1.45
Ammonical Nitrogen as NH3	mg/l	<0.2	4.72	2.11	<0.2	0.00
COD unfiltered	mg/l	45.3	20.4	103	30.4	14.90
Conductivity	mS/cm	0.637	0.627	0.85	0.482	0.16
Aluminium	µg/l	<2.9	<2.9	35.6	<2.9	0.00
Arsenic	µg/l	3.16	0.623	0.839	3.5	-0.34
Chromium	µg/l	9.99	5.52	5.61	9.78	0.21
Lead	µg/l	1.6	1.6	0.872	0.128	1.47
Nickel	µg/l	8.56	2.45	13	7.11	1.45
Zinc	µg/l	12.9	57.3	2.4	9.39	3.51
EPH Range >C10-C40	µg/l	146	114	741	<46	>100
Mineral Oil >C10 C40	µg/l	<10	<10	298	<10	0.00
Mercury	µg/l	<0.01	0.0101	<0.01	<0.01	0.00
Chloride	mg/l	51.3	49.1	173	16.8	34.50
Iron	mg/l	<0.019	<0.019	0.189	0.0656	-0.05
pH	pH units	8.59	8.42	8.55	8.64	-0.05

Negative values indicate where a parameter has increased downstream only.

Therefore the actual water quality up stream during the investigation event is of less quality than down stream of the KMK discharge points.

Tables 1.4 and 1.5 shows the actual loadings calculations being discharged from CX and DX outlet points.

Table 1.4 – loading impacts from CX

Parameter	Units	CX	Flow Rate m3/s	Loading Kg
Suspended Solids	mg/l	6	0.000072	4.3×10^{-07}
Organic Carbon	mg/l	5.43	0.000072	3.9×10^{-07}
Ammonical Nitrogen as NH3	mg/l	4.72	0.000072	3.4×10^{-07}
COD unfiltered	mg/l	20.4	0.000072	1.4×10^{-06}
Conductivity	mS/cm	0.627	0.000072	$4. \times 10^{-08}$
Aluminium	µg/l	<2.9	0.000072	Undetectable
Arsenic	µg/l	0.623	0.000072	4.4×10^{-11}
Chromium	µg/l	5.52	0.000072	3.9×10^{-10}
Lead	µg/l	1.6	0.000072	1.1×10^{-10}
Nickel	µg/l	2.45	0.000072	1.7×10^{-10}
Zinc	µg/l	57.3	0.000072	4.1×10^{-09}
EPH Range >C10-C40	µg/l	114	0.000072	8.2×10^{-06}
Mineral Oil >C10 C40	µg/l	<10	0.000072	Undetectable
Mercury	µg/l	0.0101	0.000072	7.2×10^{-10}
Chloride	mg/l	49.1	0.000072	3.5×10^{-06}
Iron	mg/l	<0.019	0.000072	Undetectable
pH	pH units	8.42	0.000072	6.0×10^{-07}

Table 1.5 – loading impacts from DX

Parameter	Units	DX	Flow Rates m3/s	Loading Kg
Suspended Solids	mg/l	46	0.00000092	4.2×10^{-08}
Organic Carbon	mg/l	24.3	0.00000092	2.2×10^{-08}
Ammonical Nitrogen as NH3	mg/l	2.11	0.00000092	1.9×10^{-09}
COD unfiltered	mg/l	103	0.00000092	9.5×10^{-08}
Conductivity	mS/cm	0.85	0.00000092	7.8×10^{-10}
Aluminium	µg/l	35.6	0.00000092	3.3×10^{-11}
Arsenic	µg/l	0.839	0.00000092	7.7×10^{-13}
Chromium	µg/l	5.61	0.00000092	5.2×10^{-12}
Lead	µg/l	0.872	0.00000092	8.1×10^{-13}
Nickel	µg/l	13	0.00000092	1.2×10^{-11}
Zinc	µg/l	2.4	0.00000092	2.2×10^{-12}
EPH Range >C10-C40	µg/l	741	0.00000092	6.8×10^{-10}
Mineral Oil >C10 C40	µg/l	298	0.00000092	2.7×10^{-10}
Mercury	µg/l	<0.01	0.00000092	Undetectable
Chloride	mg/l	173	0.00000092	1.6×10^{-7}
Iron	mg/l	0.189	0.00000092	1.7×10^{-10}
pH	pH units	8.55	0.00000092	7.9×10^{-9}

Table 1.6 shows the comparison between the existing loadings on the drain and the loadings from the discharges at CX and DX

Parameter	Existing loadings (kg) downstream of discharge points	Loading from CX discharge kg*	% increase in drain loading from CX	Loading from DX discharge kg*	% increase in drain loading from DX
Total Suspended solids	7.1×10^{-04}	4.3×10^{-07}	0.06	4.2×10^{-08}	0.006
Organic Carbon	9.7×10^{-04}	3.9×10^{-07}	0.04	2.2×10^{-08}	0.002
Ammonical Nitrogen as NH ₃	Undetectable	3.4×10^{-07}		1.9×10^{-09}	-
COD unfiltered	2.7×10^{-03}	1.4×10^{-06}	0.05	9.5×10^{-08}	0.003
Conductivity (mS/m ³)	4.2×10^{-02}	$4. \times 10^{-08}$	Negligible	7.8×10^{-10}	Negligible
Aluminium	Undetectable	Undetectable	-	3.3×10^{-11}	Undetectable
Arsenic	3.1×10^{-07}	4.4×10^{-11}	0.01	7.7×10^{-13}	0.0002
Chromium	8.7×10^{-07}	3.9×10^{-10}	0.04	5.2×10^{-12}	0.0006
Lead	1.1×10^{-07}	1.1×10^{-10}	0.1	8.1×10^{-13}	0.0007
Nickel	6.3×10^{-07}	1.7×10^{-10}	0.03	1.2×10^{-11}	Negligible
Zinc	8.3×10^{-07}	4.1×10^{-09}	0.5	2.2×10^{-12}	0.0002
EPH Range >C10-C40	Undetectable	8.2×10^{-06}	Negligible	6.8×10^{-10}	Undetectable
Mineral Oil >C10 C40	Undetectable	Undetectable	Negligible	2.7×10^{-10}	Undetectable
Mercury	Undetectable	7.2×10^{-10}	Negligible	Undetectable	Undetectable
Chloride	1.5×10^{-03}	3.5×10^{-06}	0.23	1.6×10^{-7}	0.01
Iron	5.8×10^{-06}	Undetectable	Negligible	1.7×10^{-10}	0.003
pH (units)	7.6×10^{-04}	6.0×10^{-07}	0.08	7.9×10^{-9}	0.001

* Figures based on 6,221 l/day being discharged from CX and 79.5 l/day being discharged from DX to the land drain on that day and using water quality analysis data taken at the discharge point.

See Appendix 1 for laboratory analysis results.

Discussion:

From the above results in tables 1.1, 1.2 and 1.3 we can see that there is little to no reduction in the water quality of the land drain downstream of the discharge points CX and DX. In fact the quality appears to improve somewhat downstream of the KMK discharge for most parameters (see table 1.3 for comparison purposes). This is due to the following reasons;

- The quality of the discharges at CX and DX are controlled and treated by the facility interceptor units. These interceptors are maintained and operated correctly.
- All clean roof rain water run-off from the buildings (apart from buildings A, B & C which are flowing to CX outlet) are being discharged to the land drain directly. Please refer to the enclosed Map 1 showing roof rainwater discharge points to the land drain. This clean water is diluting any possible contamination within the drain body. Similarly the clean roof rain water run-off from buildings A, B & C are diluting down the contamination in the CX outlet.
- The volume and flow of water being discharged from KMK via CX and DX discharges is controlled and partially attenuated by the additional sampling/holding chamber at the outlets but also more influenced by climatic rainfall. It should be noted that the sampling and flow monitoring event was between 2pm and 4pm on 15-08-11. The rain fall during this time period was approximately 0.2mm (see chart 1 below) and this is below the average daily rainfall for August which is 2.4mm (see monthly chart 2 below).
- Table 1.6 shows the comparison between the existing loadings on the drain and the loadings from the discharges at CX and DX. The percent increase in loadings from CX and DX is also represented in the shaded columns. As can be seen, the impact from the CX and DX discharges is quite negligible in terms of increases in all parameters on that day.
- Furthermore, taking into consideration the average daily rainfall for August i.e. 2.4mm, this would increase the flows and also the loadings from CX and DX by virtue of an increase in volume being discharged from the outlets. This also is not considered as a significant impact to the drain due to the fact that an increase in rainfall also equates to an increase in clean roof water run-off

being discharged to the land drain and KMK have considerably increased the roof areas on-site in the past few years.

Chart 1 – showing rainfall versus time for 15-08-11.

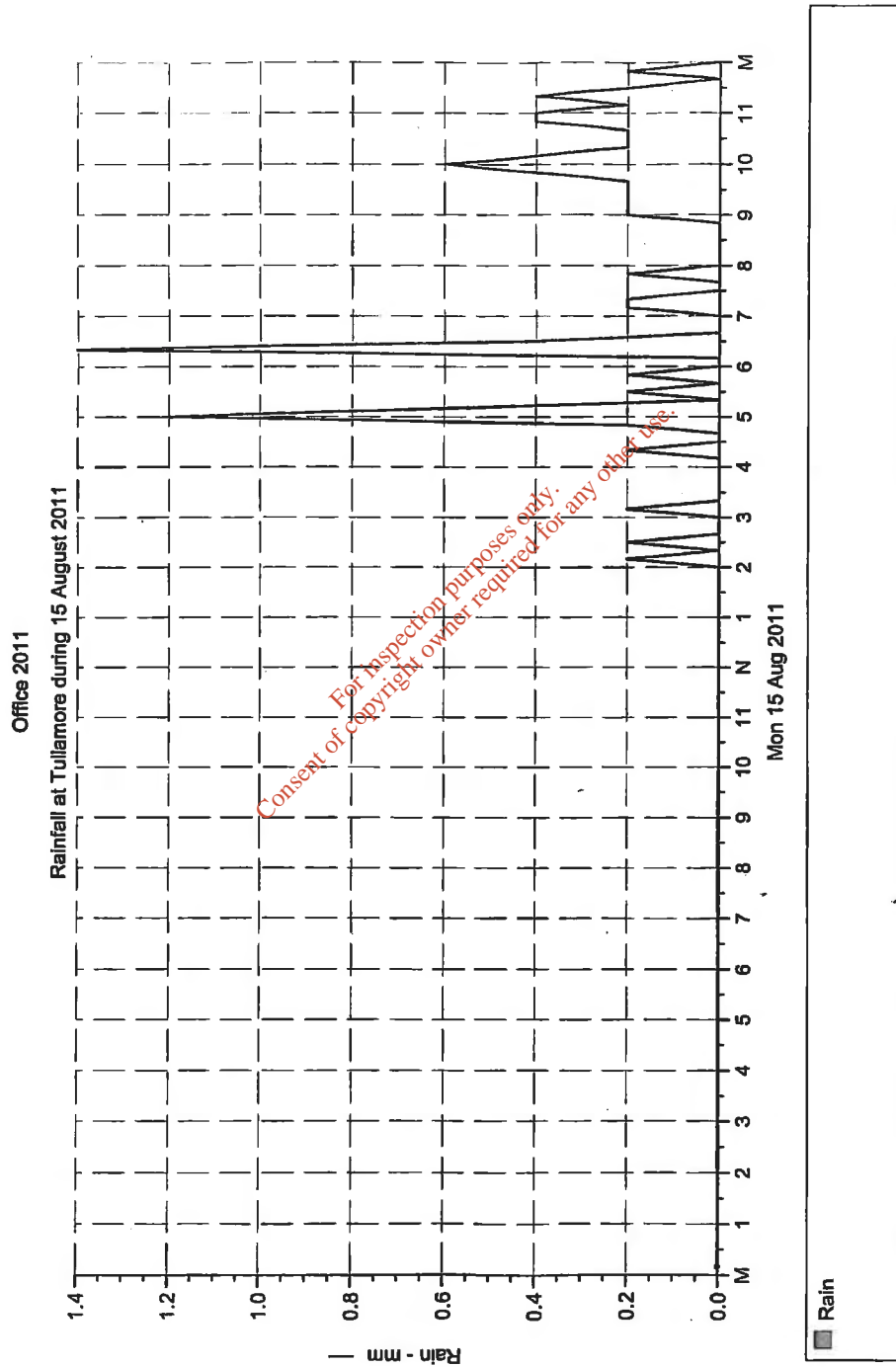
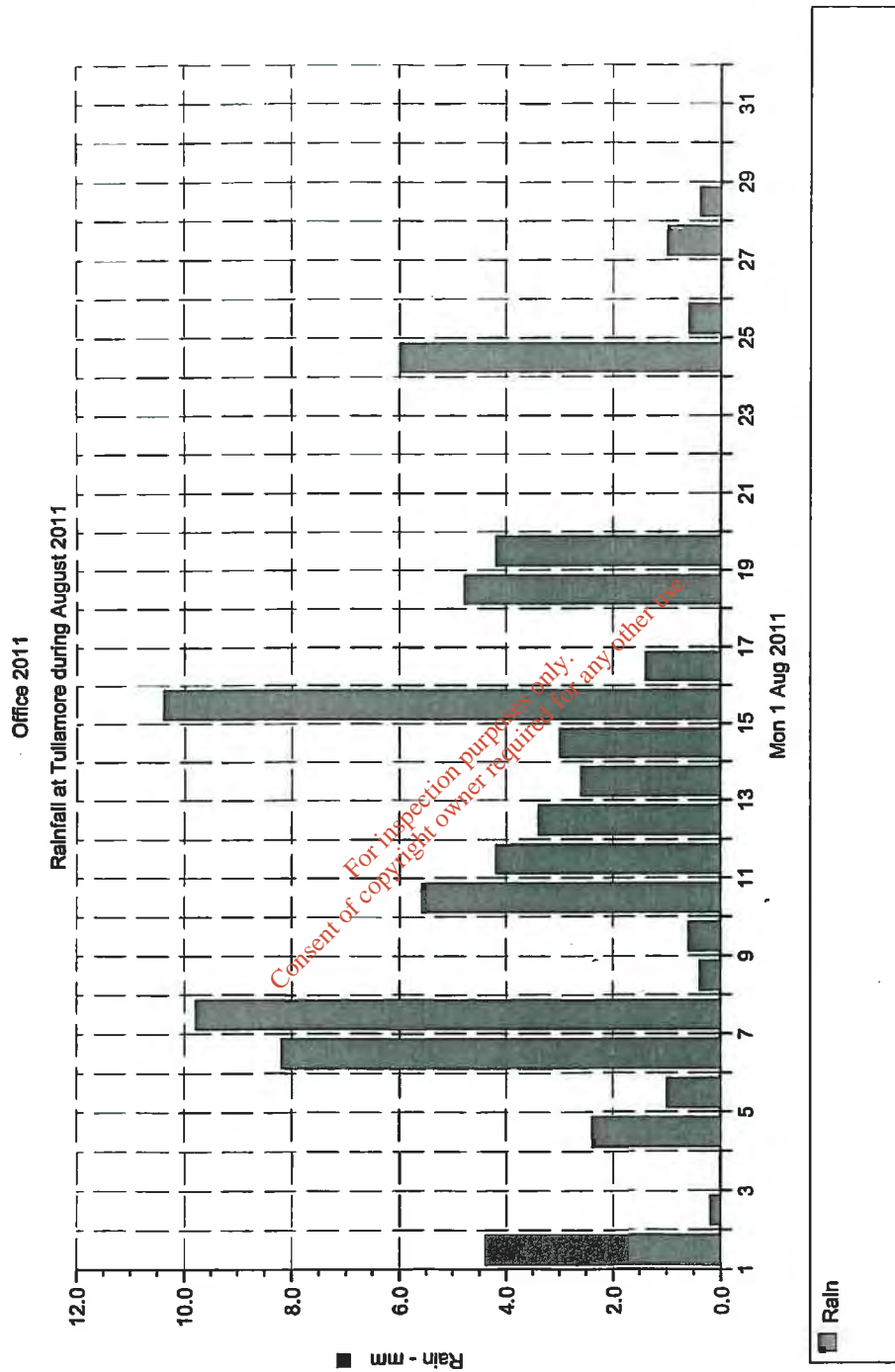




Chart 2 – showing rainfall versus days for August 2011.





On conclusion, examination of the loadings from the CX and DX discharges to the land drain indicates that there is no significant effect on the quality of the drain as a result of these discharges from KMK.

*For inspection purposes only.
Consent of copyright owner required for any other use.*



APPENDIX 1
LABORATORY TEST CERTIFICATES.

*For inspection purposes only.
Consent of copyright owner required for any other use.*



Enviroco Management Ltd
Bow House
O Moore Street
Tullamore
Co. Offaly

Attention: Kenneth Goodwin

CERTIFICATE OF ANALYSIS

Date: 31 August 2011
Customer: D_ENVMAN_TAM
Sample Delivery Group (SDG): 110816-70
Your Reference: 71139 / 71119
Location: KMK
Report No: 147656

We received 4 samples on Tuesday August 16, 2011 and 4 of these samples were scheduled for analysis which was completed on Wednesday August 31, 2011. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

All chemical testing (unless subcontracted) is performed at ALcontrol Hawarden Laboratories.

*For inspection purposes only.
Consent of copyright owner required for any other use.*

Approved By:

Sonia McWhan
Operations Manager



SDG: 110816-70	Location: KMK	Order Number: 71171
Job: D_ENVMAN_TAM-35	Customer: Enviroco Management Ltd	Report Number: 147656
Client Reference: 71139 / 71119	Attention: Kenneth Goodwin	Superseded Report:

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
4114009	CX			15/08/2011
4114012	DS			15/08/2011
4114010	DX			15/08/2011
4114011	US			15/08/2011

Only received samples which have had analysis scheduled will be shown on the following pages.

*For inspection purposes only.
Consent of copyright owner required for any other use.*

SDG: 110816-70
 Job: D_ENVMAN_TAM-35
 Client Reference: 71139 / 71119

Location: KMK
 Customer: Enviroco Management Ltd
 Attention: Kenneth Goodwin

Order Number: 71171
 Report Number: 147656
 Superseded Report:

LIQUID Results Legend <input checked="" type="checkbox"/> Test <input type="checkbox"/> No Determination Possible	Lab Sample No(s)					
	Customer Sample Reference					
	AGS Reference					
	Depth (m)					
	Container					
	4114009	4114012	4114010	4114011		
	CX	DS	DX	US		
	1l glass bottle (D)	1l glass bottle (D)	1l glass bottle (D)	1l glass bottle (D)		
Ammoniacal Nitrogen	All	NDPs: 0 Tests: 4	X	X	X	X
Anions by Kone (w)	All	NDPs: 0 Tests: 4	X	X	X	X
COD Unfiltered	All	NDPs: 0 Tests: 4	X	X	X	X
Conductivity (at 20 deg.C)	All	NDPs: 0 Tests: 4	X	X	X	X
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 4	X	X	X	X
EPH (DRO) (C10-C40) Aqueous (W)	All	NDPs: 0 Tests: 4	X	X	X	X
Mercury Dissolved	All	NDPs: 0 Tests: 4	X	X	X	X
Metals by ICap-OES Dissolved (W)	All	NDPs: 0 Tests: 4	X	X	X	X
Mineral Oil C10-40 Aqueous (W)	All	NDPs: 0 Tests: 4	X	X	X	X
pH Value	All	NDPs: 0 Tests: 4	X	X	X	X
Suspended Solids	All	NDPs: 0 Tests: 4	X	X	X	X
Total Organic and Inorganic Carbon	All	NDPs: 0 Tests: 4	X	X	X	X

For inspection purposes only.
 Consent of copyright owner required for any other use.



SDG: 110816-70
 Job: D_ENVMAN_TAM-35
 Client Reference: 71139 / 71119

Location: KMK
 Customer: Enviroco Management Ltd
 Attention: Kenneth Goodwin

Order Number: 71171
 Report Number: 147656
 Superseded Report:

Results Legend		Customer Sample R	CX	DS	DX	US
#	ISO17025 accredited.	Depth (m) Sample Type Date Sampled Date Received SDG Ref Lab Sample No.(s) AGS Reference	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)
M	mCERTS accredited.		15/08/2011	15/08/2011	15/08/2011	15/08/2011
S	Deviating sample.		16/08/2011	16/08/2011	16/08/2011	16/08/2011
aq	Aqueous / settled sample.		110816-70	110816-70	110816-70	110816-70
diss.filt	Dissolved / filtered sample.		4114008	4114012	4114010	4114011
tot.unfilt	Total / unfiltered sample.					
-	Subcontracted test.					
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery					
(F)	Trigger breach confirmed					
Component	LOD/Units		Method			
Suspended solids, Total	<2 mg/l	TM022	6 \$ #	8 \$ #	46 \$ #	27 \$ #
Organic Carbon, Total	<3 mg/l	TM090	5.43 \$ #	11 \$ #	24.3 #	9.55 \$ #
Ammoniacal Nitrogen as NH3	<0.2 mg/l	TM099	4.72 #	<0.2 #	2.11 #	<0.2 #
COD, unfiltered	<7 mg/l	TM107	20.4 #	30.4 #	103 #	45.3 #
Conductivity @ 20 deg.C	<0.005 mS/cm	TM120	0.627 #	0.482 #	0.85 #	0.637 #
Aluminium (diss.filt)	<2.9 µg/l	TM152	<2.9 #	<2.9 #	35.6 #	<2.9 #
Arsenic (diss.filt)	<0.12 µg/l	TM152	0.623 #	3.5 #	0.839 #	3.16 #
Chromium (diss.filt)	<0.22 µg/l	TM152	5.52 #	9.78 #	5.61 #	9.99 #
Lead (diss.filt)	<0.02 µg/l	TM152	1.6 #	0.128 #	0.872 #	1.6 #
Nickel (diss.filt)	<0.15 µg/l	TM152	2.45 #	7.11 #	13 #	8.56 #
Zinc (diss.filt)	<0.41 µg/l	TM152	57.3 #	9.39 #	2.4 #	12.9 #
EPH Range >C10 - C40 (aq)	<46 µg/l	TM172	114 \$ #	<46 \$ #	741 \$ #	146 \$ #
Mineral oil >C10 C40 (aq)	<10 µg/l	TM172	<10 \$	<10 \$	298 \$	<10 \$
Mercury (diss.filt)	<0.01 µg/l	TM183	0.0101 #	<0.01 #	<0.01 #	<0.01 #
Chloride	<2 mg/l	TM184	49.1 #	16.8 #	173 #	51.3 #
Iron (diss.filt)	<0.019 mg/l	TM228	<0.019 #	0.0658 #	0.189 #	<0.019 #
pH	<1 pH Units	TM256	8.42 #	8.64 #	8.55 #	8.59 #

Consent of copyright owner required for any other use.

SDG: 110816-70
 Job: D_ENVMAN_TAM-35
 Client Reference: 71139 / 71119

Location: KMK
 Customer: Enviroco Management Ltd
 Attention: Kenneth Goodwin

Order Number: 71171
 Report Number: 147656
 Superseded Report:

Notification of Deviating Samples

Sample Number	Customer Sample Ref.	Depth (m)	Matrix	Test Name	Component Name	Comment
4120540	DX		LIQUID	EPH (DRO) (C10-C40) Aqueous (W)	EPH Range >C10 - C40 (aq)	Sample holding time exceeded
4120540	DX		LIQUID	Mineral Oil C10-40 Aqueous (W)	Mineral oil >C10 C40 (aq)	Sample holding time exceeded
4121369	CX		LIQUID	EPH (DRO) (C10-C40) Aqueous (W)	EPH Range >C10 - C40 (aq)	Sample holding time exceeded
4121369	CX		LIQUID	Mineral Oil C10-40 Aqueous (W)	Mineral oil >C10 C40 (aq)	Sample holding time exceeded
4121417	CX		LIQUID	Total Organic and Inorganic Carbon	Organic Carbon, Total	Sample holding time exceeded
4121425	DS		LIQUID	EPH (DRO) (C10-C40) Aqueous (W)	EPH Range >C10 - C40 (aq)	Sample holding time exceeded
4121425	DS		LIQUID	Mineral Oil C10-40 Aqueous (W)	Mineral oil >C10 C40 (aq)	Sample holding time exceeded
4121434	DS		LIQUID	Total Organic and Inorganic Carbon	Organic Carbon, Total	Sample holding time exceeded
4121437	US		LIQUID	EPH (DRO) (C10-C40) Aqueous (W)	EPH Range >C10 - C40 (aq)	Sample holding time exceeded
4121437	US		LIQUID	Mineral Oil C10-40 Aqueous (W)	Mineral oil >C10 C40 (aq)	Sample holding time exceeded
4121444	US		LIQUID	Total Organic and Inorganic Carbon	Organic Carbon, Total	Sample holding time exceeded
4122080	DX		LIQUID	Suspended Solids	Suspended solids, Total	Sample holding time exceeded
4123170	US		LIQUID	Suspended Solids	Suspended solids, Total	Sample holding time exceeded
4123205	CX		LIQUID	Suspended Solids	Suspended solids, Total	Sample holding time exceeded
4149261	DS		LIQUID	Suspended Solids	Suspended solids, Total	Sample holding time exceeded

Note : Test results may be compromised

For inspection purposes only.
 Consent of copyright owner required for any other use.

SDG: 110816-70
 Job: D_ENVMAN_TAM-35
 Client Reference: 71139 / 71119

Location: KMK
 Customer: Enviroco Management Ltd
 Attention: Kenneth Goodwin

Order Number: 71171
 Report Number: 147656
 Superseded Report:

Table of Results - Appendix

REPORT KEY

Results expressed as (e.g.) 1.03E-07 is equivalent to 1.03x10-7

NDP	No Determination Possible	#	ISO 17025 Accredited	•	Subcontracted Test	M	MCERTS Accredited
NFD	No Fibres Detected	PFD	Possible Fibres Detected	•	Result previously reported (Incremental reports only)	EC	Equivalent Carbon (Aromatics C8-C35)

Note: Method detection limits are not always achievable due to various circumstances beyond our control

Method No	Reference	Description	Wet/Dry Sample ¹	Surrogate Corrected
TM022	Method 2540D, AWWA/APHA, 20th Ed., 1999 / BS 2690: Part120 1981;BS EN 872	Determination of total suspended solids in waters		
TM061	Method for the Determination of EPH,Massachusetts Dept.of EP, 1996	Determination of Extractable Petroleum Hydrocarbons by GC-FID (C10-C40)		
TM090	Method 5310, AWWA/APHA, 20th Ed., 1999 / Modified: US EPA Method 415.1 & 9060	Determination of Total Organic Carbon/Total Inorganic Carbon In Water and Waste Water		
TM099	BS 2690: Part 7:1968 / BS 6068: Part2.11:1984	Determination of Ammonium in Water Samples using the Kone Analyser		
TM107	ISO 6060-1989	Determination of Chemical Oxygen Demand using COD Dr Lange Kit		
TM120	Method 2510B, AWWA/APHA, 20th Ed., 1999 / BS 2690: Part 9:1970	Determination of Electrical Conductivity using a Conductivity Meter		
TM152	Method 3125B, AWWA/APHA, 20th Ed., 1999	Analysis of Aqueous Samples by ICP-MS		
TM172	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	EPH in Waters		
TM183	BS EN 23506:2002, (BS 6068-2.74:2002) ISBN 0 580 38924 3	Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry		
TM184	EPA Methods 325.1 & 325.2,	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers		
TM228	US EPA Method 6010B	Determination of Major Cations in Water by ICap 6500 Duo ICP-OES		
TM256	The measurement of Electrical Conductivity and the Laboratory determination of pH Value of Natural, Treated and Wastewaters. HMSO, 1978. ISBN 011 751428 4.	Determination of pH in Water and Leachate using the GLpH pH Meter		

¹ Applies to Solid samples only. DRY indicates samples have been dried at 35°C. NA = not applicable.

For inspection purposes only.
 Consent of copyright owner required for any other use.

SDG: 110816-70	Location: KMK	Order Number: 71171
Job: D_ENVMAN_TAM-35	Customer: Enviroco Management Ltd	Report Number: 147656
Client Reference: 71139 / 71119	Attention: Kenneth Goodwin	Superseded Report:

Test Completion Dates

Lab Sample No(s)	4114009	4114012	4114010	4114011
Customer Sample Ref.	CX	DS	DX	US
AGS Ref.				
Depth				
Type	LIQUID	LIQUID	LIQUID	LIQUID
Ammoniacal Nitrogen	22-Aug-2011	25-Aug-2011	25-Aug-2011	23-Aug-2011
Anions by Kone (w)	23-Aug-2011	22-Aug-2011	23-Aug-2011	23-Aug-2011
COD Unfiltered	21-Aug-2011	22-Aug-2011	21-Aug-2011	21-Aug-2011
Conductivity (at 20 deg.C)	30-Aug-2011	25-Aug-2011	30-Aug-2011	30-Aug-2011
Dissolved Metals by ICP-MS	18-Aug-2011	24-Aug-2011	18-Aug-2011	18-Aug-2011
EPH (DRO) (C10-C40) Aqueous (W)	30-Aug-2011	30-Aug-2011	30-Aug-2011	30-Aug-2011
Mercury Dissolved	18-Aug-2011	18-Aug-2011	18-Aug-2011	18-Aug-2011
Metals by ICap-OES Dissolved (W)	19-Aug-2011	23-Aug-2011	18-Aug-2011	19-Aug-2011
Mineral Oil C10-40 Aqueous (W)	31-Aug-2011	31-Aug-2011	31-Aug-2011	31-Aug-2011
pH Value	18-Aug-2011	23-Aug-2011	18-Aug-2011	18-Aug-2011
Suspended Solids	25-Aug-2011	25-Aug-2011	25-Aug-2011	25-Aug-2011
Total Organic and Inorganic Carbon	24-Aug-2011	24-Aug-2011	24-Aug-2011	24-Aug-2011

For inspection purposes only.
 Consent of copyright owner required for any other use.

SDG: 110816-70
 Job: D_ENVMAN_TAM-35
 Client Reference: 71139 / 71119

Location: KMK
 Customer: Enviroco Management Ltd
 Attention: Kenneth Goodwin

Order Number: 71171
 Report Number: 147656
 Superseded Report:

Appendix

1. Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following: NRA Leach tests, flash point, ammonium as NH4 by the BRE method, VOC TICS, SVOC TICS, TOF-MS SCAN/SEARCH and TOF-MS TICS.

2. Samples will be run in duplicate upon request, but an additional charge may be incurred.

3. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for both soil jars, tubs and volatile jars. All waters and vials will be discarded 10 days after the analysis is completed (e-mailed). All material removed during an asbestos containing material screen and analysed for the presence of asbestos will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALcontrol Laboratories reserve the right to charge for samples received and stored but not analysed.

4. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

5. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

6. When requested, the individual sub sample scheduled will be screened in house for the presence of large asbestos containing material fragments/pieces. If no asbestos containing material is found this will be reported as 'no asbestos containing material detected'. If asbestos containing material is detected it will be removed and analysed by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If asbestos containing material is present no further analysis will be undertaken. At no point is the fibre content of the soil sample determined.

7. If no separate volatile sample is supplied by the client, the integrity of the data may be compromised if the laboratory is required to create a sub-sample from the bulk sample -similarly, if a headspace or sediment is present in the volatile sample. This will be flagged up as an invalid VOC on the test schedule or recorded on the log sheet.

8. If appropriate preserved bottles are not received preservation will take place on receipt. However, the integrity of the data may be compromised.

9. NDP -No determination possible due to insufficient/unsuitable sample.

10. Metals in water are performed on a filtered sample, and therefore represent dissolved metals -total metals must be requested separately.

11. Results relate only to the items tested.

12. LODs for wet tests reported on a dry weight basis are not corrected for moisture content.

13. Surrogate recoveries -Most of our organic methods include surrogates, the recovery of which monitored and reported. For EPH, MO, PAH, GRO and VOCs on soils the result is not surrogate corrected, but a percentage recovery is quoted. Acceptable limits for most organic methods are 70 -130 %.

14. Product analyses -Organic analyses on products can only be semi-quantitative due to the matrix effects and high dilution factors employed.

15. Phenols monohydric by HPLC include phenol, cresols (2-Methylphenol, 3-Methylphenol and 4-Methylphenol) and Xylenols (2,3 Dimethylphenol, 2,4 Dimethylphenol, 2,5 Dimethylphenol, 2,6 Dimethylphenol, 3,4 Dimethylphenol, 3,5 Dimethylphenol).

16. Total of 5 speciated phenols by HPLC includes Phenol, 2,3,5-Trimethylphenol, 2-Isopropylphenol, Cresols and Xylenols (as detailed in 15).

17. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

18. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

18. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

20. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GC/FID/GCMS and all subcontracted analysis.

21. For all leachate preparations (NRA, DIN, TCLP, BSEN 12457-1, 2, 3) volatile loss may occur, as we do not employ zero headspace extraction.

22. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials -whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

23. Analysis and identification of specific compounds using GC/FID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C4 -C10 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

SOLID MATRICES EXTRACTION SUMMARY				
ANALYSIS	D/C OR WET	EXTRACTION SOLVENT	EXTRACTION METHOD	ANALYSIS
SOLVENTEXTRACTABLE MATTER	D&C	DOM	SOKTHERM	GRAVIMETRIC
CYCLOHEXANE EXT. MATTER	D&C	CYCLOHEXANE	SOKTHERM	GRAVIMETRIC
ELEMENTAL SULPHUR	D&C	DOM	SOKTHERM	HPLC
PHENOLS BY GCMS	WET	DOM	SOKTHERM	GCMS
HERBICIDES	D&C	HEXANEACETONE	SOKTHERM	GCMS
PESTICIDES	D&C	HEXANEACETONE	SOKTHERM	GCMS
EPH (DRO)	D&C	HEXANEACETONE	END OVER END	GC/FID
EPH (MIN OIL)	D&C	HEXANEACETONE	END OVER END	GC/FID
EPH (CLEANED UP)	D&C	HEXANEACETONE	END OVER END	GC/FID
EPH CWG BY GC	D&C	HEXANEACETONE	END OVER END	GC/FID
PCBTOT/PCB CON	D&C	HEXANEACETONE	END OVER END	GCMS
POLYAROMATIC HYDROCARBONS (MS)	WET	HEXANEACETONE	MICROVAPE TM218.	GCMS
CB-C10 (CB+C0) EZ FLASH	WET	HEXANEACETONE	SHAKER	GC-EZ
POLYAROMATIC HYDROCARBONS RAPID GC	WET	HEXANEACETONE	SHAKER	GC-EZ
SBA VOLATILE ORGANIC COMPOUNDS	WET	DOMACETONE	SOKTHERM	GCMS

LIQUID MATRICES EXTRACTION SUMMARY			
ANALYSIS	EXTRACTION SOLVENT	EXTRACTION METHOD	ANALYSIS
PAHMS	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GCMS
EPH	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC/FID
EPH CAG	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC/FID
MINERAL OIL	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC/FID
PCB 7 CONGENERS	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GCMS
PCB TOTAL	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GCMS
SVOC	DOM	LIQUID LIQUID SHAKE	GCMS
FREESULPHUR	DOM	SOLID PHASE EXTRACTION	HPLC
PEST COP/OPP	DOM	LIQUID LIQUID SHAKE	GCMS
TRIAZINE HERB	DOM	LIQUID LIQUID SHAKE	GCMS
PHENOLS MS	DOM	SOLID PHASE EXTRACTION	GCMS
TRI BY INFRARED (IR)	TCE	LIQUID LIQUID SHAKE	HPLC
MINERAL OIL BY IR	TCE	LIQUID LIQUID SHAKE	HPLC
GLYCOLS	NONE	DIRECT INJECTION	GCMS

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials or those identified as potentially asbestos containing during sample description which have been examined to determine the presence of asbestos fibres using Alcontrol Laboratories (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using Alcontrol Laboratories (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Oryzite	White Asbestos
Amosite	Brown Asbestos
Onchite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: -
 Traces -Where only one or two asbestos fibres were identified.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

Appendix 2

Extract from unsolicited further information submitted to EPA on
licence application W0113-04 dated 31st August 2012

*For inspection purposes only.
Consent of copyright owner required for any other use.*



ENVIRONMENTAL CONSULTANTS
LoCall 1890 522 000

Mr Brian Meaney
Inspector
Environmental Protection Agency (EPA)
PO Box 3000
Johnstown Castle Estate
Co Wexford

31st August 2012

RE: KMK Metals Recycling Ltd (KMK)
Waste licence ref: W0113-04

Unsolicited additional information regarding; 1) Stack emissions monitoring and emission limit values, 2) Noise & Dust monitoring and 3) Waste water treatment system up-grade works to supplement waste licence review application ref: W0113-04.

Dear Mr Meaney,

Further to the present waste licence review application as being determined by your office ref; W0113-04, KMK wishes to include the following information as important amendments to the application.

(1) Stack emissions point; emission limit value & monitoring details.

In relation to dusts/particulates generated inside the D-WEEE plant (building), these are exhausted to a duct/ventilation system, followed by the dust collection system (bag house type) for treatment with final discharge via emissions stack to atmosphere.

To date there have been three stack emissions monitoring events conducted by; Odour Monitoring Ireland Ltd, on 2nd December 2011 and by Glenside Environmental



BOW HOUSE O'MOORE STREET TULLAMORE CO. OFFALY
T: 057 935 2200 • F: 057 935 2342 • email: info@enviroco.ie • www.enviroco.ie

Registered in Ireland, Number 297801 • Directors: A. Fahey. D. Fahey



Services on 24th May and 20th July 2012. All monitoring reports are contained in Appendix 1 attached to this submission.

The WEEE processing plant was in use during monitoring, and the samples were taken as discharged from the emission stack after treatment.

The actual measured emissions for each monitoring event are summarised and tabulated below in tables 1, 2 and 3.

In summary the actual measured total particulate matter during the first monitoring event was 1.68 (mg/Nm³), was 1.82 (mg/Nm³) for the second monitoring event and was 0.21 (mg/Nm³) for the third monitoring event. All monitoring occurred during typical working conditions at KMK.

Table 1: Summary of Air Emissions stack monitoring event on 2nd December 2011.

Emission points identity	Parameter	Periodic monitoring result	Expanded uncertainty (%)
Dust filtration plant – exhaust stack	Volume flow (Nm ³ /hr dry gas)	29,197	-
	Cadmium and Thallium (mg / Nm ³ dry gas)	<0.00052	<1.0
	Mercury (mg / Nm ³ dry gas)	<0.000015	<1.0
	Lead (mg / Nm ³ dry gas)	0.00512	<1.0
	Chromium (mg / Nm ³ dry gas)	0.0392	<1.0
	Total particulate matter (mg/Nm ³ dry gas)	1.68	<2.0

Table 2: Summary of Air Emissions stack monitoring event on 24th May 2012.

Emission points identity	Parameter	Periodic monitoring result	Expanded uncertainty (%)
Dust filtration plant – exhaust stack	Volume flow (Nm ³ /hr dry gas)	16,362	-
	Cadmium and Thallium (mg / Nm ³ dry gas)	<0.0018	n/a
	Mercury (mg / Nm ³ dry gas)	<0.0008	n/a
	Lead (mg / Nm ³ dry gas)	0.0059	n/a
	Chromium (mg / Nm ³ dry gas)	0.0048	n/a
	Total particulate matter (mg/Nm ³ dry gas)	1.82	0.06

Table 3: Summary of Air Emissions stack monitoring event on 20th July 2012.

Emission points identity	Parameter	Periodic monitoring result	uncertainty (mg / Nm ³)
Dust filtration plant – exhaust stack	Moist flow rate at STP (Nm ³ /hr)	19,682.58	-
	Cadmium and Thallium (mg / Nm ³ dry gas)	0.0518	N/A
	Mercury (mg / Nm ³ dry gas)	0.0094	N/A
	Lead (mg / Nm ³ dry gas)	0.0392	N/A
	Chromium (mg / Nm ³ dry gas)	0.2902	
	Total particulate matter (mg/Nm ³ dry gas)	0.21	0.01

KMK has reviewed the present licence limit of 12.5mg/m³ for this emission point ref: A2-8 as per the technical amendment recently granted on 25th June 2012 and wishes to amend the waste licence application with the following proposed Schedule B and C replacement tables;

Schedule B

Parameter	Emission Limit Value
Total particulates	20 mg/m ³

Schedule C.1.2

Parameter	Monitoring frequency	Analysis Method/Technique
Total particulates Metals species (Al, As, Cd, Cr, Cu, FE, Hg, Ni, Pb and Zn)	Annually	Standard sampling and laboratory analysis methods

As a justification to this proposal, please note the air emissions stack assessments were conducted over three separate monitoring events, approximately 6 months and 2 months apart. Given the start-up and commissioning phase of the WEEE separation process at all times of monitoring, KMK contests that a maximum limit of 20mg/Nm³ for total particulates be strongly considered as the new license limit.

This limit will accommodate any additional treated dust emissions that may arise during periods of prolonged and/or repeat WEEE separations within the building.

It is proposed to conduct annual stack air emissions monitoring (i.e. total particulates and metals constituents) for future operations at the site in combination with a continuous particulates monitoring probe installed on the emissions stack. This probe device, effectively operates as a bag breach detector whereby any potential breach or problem on the filter bag possibly resulting in abnormal emissions from the stack will be automatically detected by the probe and resulting in an audible warning alerting management and operatives to the situation. This probe was sourced and fitted directly to the stack by the providers of the WEEE treatment equipment and will provide a real time detection should any abnormal emissions occur on the stack. Hence there will be no incidents of significant or abnormal continual emissions from the stack as KMK will be aware of these events should they occur immediately and therefore will rectify any plant defect or issue as a matter of urgency.

Finally, for comparison purposes, the following information is brought to the attention of the Agency;

- o *Draft BAT Guidance Note on Best Available Techniques for Ferrous Metal Foundaries. Draft September 2011.* This BAT on table 6.1 states an emission level for dust of 5-20mg/Nm³.
- o *Draft BAT Guidance Note on Best Available Techniques for the Initial Melting and Production of Iron & Steel Sector, December 2009.* Table 6.1

- itemises various emission levels for emissions to air, such as Total Particulates 5-10mg/Nm³, lead 0.5-2mg/Nm³, chromium 0.05mg/Nm³ etc.
- *BAT Guidance Note on Best Available Techniques for Non-Ferrous Metals and Galvanising*. Table 6.1 itemises various emission levels for emissions to air, such as Total Particulates 10mg/Nm³, lead 0.5-2mg/Nm³, chromium 0.05mg/Nm³ etc.
 - *Final Draft BAT Guidance Note on Best Available Techniques for the Waste Sector: Waste Transfer and Materials Recovery*. There are no actual air emission levels referred to in this document with the exception of fugitive dusts.
 - A previous waste licence No: W0233-01 for a company called Techrec Ltd, Dublin had 2 emission points whereby the **total particulates** levels were **50mg/m³**, they also had the limits; chromium 1mg/m³ and nickel 5mg/m³. This company operated as a WEEE processing waste management plant, which is very similar to KMK present operations and activity.

Hence, the proposed maximum limit of 20mg/Nm³ for total particulates with annual monitoring is considered appropriate and reasonable for the site operations given the plant and equipment installed on-site, continuous monitoring system and scale of activities.

Additional new air emissions point

In order to prepare for possible future operations at the site, KMK wishes to have an option available to install an air emission point at a location on E building. This emissions point will service a WEEE processing operation inside E building whereby the extracted air will be treated by a bag filter unit and the treated air will be discharged to atmosphere. The significance of emission will be lower than emission point A2-8. The exact nature and details of emission are not available at present but will be confirmed to the Agency at a later date on receipt of the waste licence and may be conditional within the same licence.

2) Ambient Noise & Dust monitoring – locations

In relation to compliance noise monitoring on-site, I refer to the attached letter sent to the enforcement section of the Agency on the 17th July and the corresponding acceptance letter from the Agency dated 7th August on same (Appendix 2). Therefore KMK formally requests the new noise monitoring locations of the waste licence review to reflect this information.

In relation to ambient dust monitoring at the site, it is now also proposed to modify the monitoring locations to reflect the overall new site design. Therefore it is now proposed to monitor ambient dust at 4 locations on-site reflecting the four site boundaries in all directions north, south, west and east.

3) Waste water treatment system up-grade works proposal

KMK has appraised their existing waste water treatment system (WWTS) and explored various options in order to improve the facilities on-site and at the same time comply with present guidelines on waste water treatment.

Therefore, a full proposal was prepared in July 2012 and was submitted to the Environment & Water Services section of Offaly County Council for their consideration prior to inclusion with a Planning Application proposed over the next couple of weeks. This full proposal titled 'Drain Impact and Assimilative Report based on a Proposed Waste Water Treatment System (WWTS)' is attached as Appendix 3 and was deemed appropriate and to the satisfaction of the environment section. The up-grade works to the WWTS will involve the following key improvements;

- The existing Biocycle treatment tank will be modified for use as a primary holding chamber for domestic effluent storage and settlement.
- A new tank will be installed to be used as a buffering and reaction tank called a Sequencing Batch Reactor (SBR) including dosing for ortho-phosphate and total nitrogen removal. This secondary treatment process is designed to reduce BOD, COD, solids, phosphates and ammonia over an 8, 10 or 12 hour batch cycle and thus prepare the effluent for sand filter treatment.
- The sand filter is a biological treatment process designed to further reduce the parameter loadings and ensure the final discharged effluent is acceptable for surface water assimilation in the land drain. There will be a sampling chamber located immediately downstream of the sand filter. The impact from the proposed discharge at point F (on-site WWTS source) will be acceptable to the land drain on the basis of the parametric values given for the output of the sand filter (5/1/1) for BOD/phosphates/ammonia respectively, the low volumes to be discharged from the system and the relative quality of the land drain up-stream of the proposed discharge point to effectively assimilate the loadings from KMK.

The report in Appendix 3 also concludes the following remarks regarding the impact to the land drain and indirectly the Tullamore River;

- All domestic and associated effluent from the proposed up-graded WWTS is effectively treated by a primary, secondary and final biological process prior to entry to the land drain.
- There will be a sampling chamber installed on the final outfall from the sand filter unit for sampling of treated effluent quality prior to linking with the roof water discharge pipe from D-Hanger building. This sampling point will provide monitoring of the discharge prior to dilution with rainwater during wet weather. The true dilution effect of the effluent discharge can be determined by sampling of the discharge pipe at the land drain during wet weather for comparison purposes.
- There are no chemicals or other substances entering the WWTS and therefore precluded from entering the land drain.
- The receiving land drain flows through a myriad of other land drains prior to entry to the Tullamore River. This network of land drains will assist greatly in assimilation of the organic and other parameters prior to entry to the river.

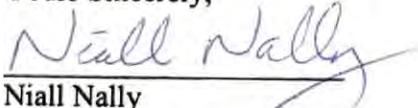
The proposed increase of waste acceptance tonnage and future operations at the KMK site will not affect the population usage of the WWTS and will not impact on its treatment capability.

As part of future developments, should foul sewer infrastructure be made available by Offaly County Council for occupiers of Cappincur Industrial Estate, KMK will assess their waste water system needs with the possibility to apply for connection to the foul sewer network and thereby ceasing their discharge to land drain.

A revised A3 size map ref: Map F.1.1b Environmental Monitoring Locations is also attached for inclusion with the review application submission.

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

Yours Sincerely,



Niall Nally

Senior Environmental Consultant

Cc Kurt M Kyck, KMK Metals Ltd, Cappincur Industrial Estate, Tullamore, Co Offaly.

Consent of copyright owner required for any other use.
For inspection purposes only.
Consent of copyright owner required for any other use.

Map F.1.1.b Environmental Monitoring Locations at the KMK Metals Recycling Ltd Facility

Surveyed 1998-1999
Revised 2009
Levelled

ITM CENTRE PT. COORDS.
635890,725108

Legend

- = Site Boundary
- = Point source emission
- = Dust monitoring points
- = Noise monitoring points
- = Surface Water monitoring points
- = Groundwater monitoring points

ITM Grid References

- A2-1 = E635911 N725118
- A2-2 = E635959 N725004
- A2-3 = E635882 N724955
- A2-4 = E635866 N725002
- A2-5 = E635870 N724963
- NE001 = E635847 N725118
- NE002 = E635959 N725004
- NE003 = E635870 N724963
- NE004 = E635772 N725046
- CX = E635772 N725046
- DX = E635772 N725036
- E = E635862 N725040
- F = E635847 N724955
- GW1 = E635847 N725032
- GW2 = E635812 N724986

KMK Metals Recycling Ltd

Environmental Monitoring Map

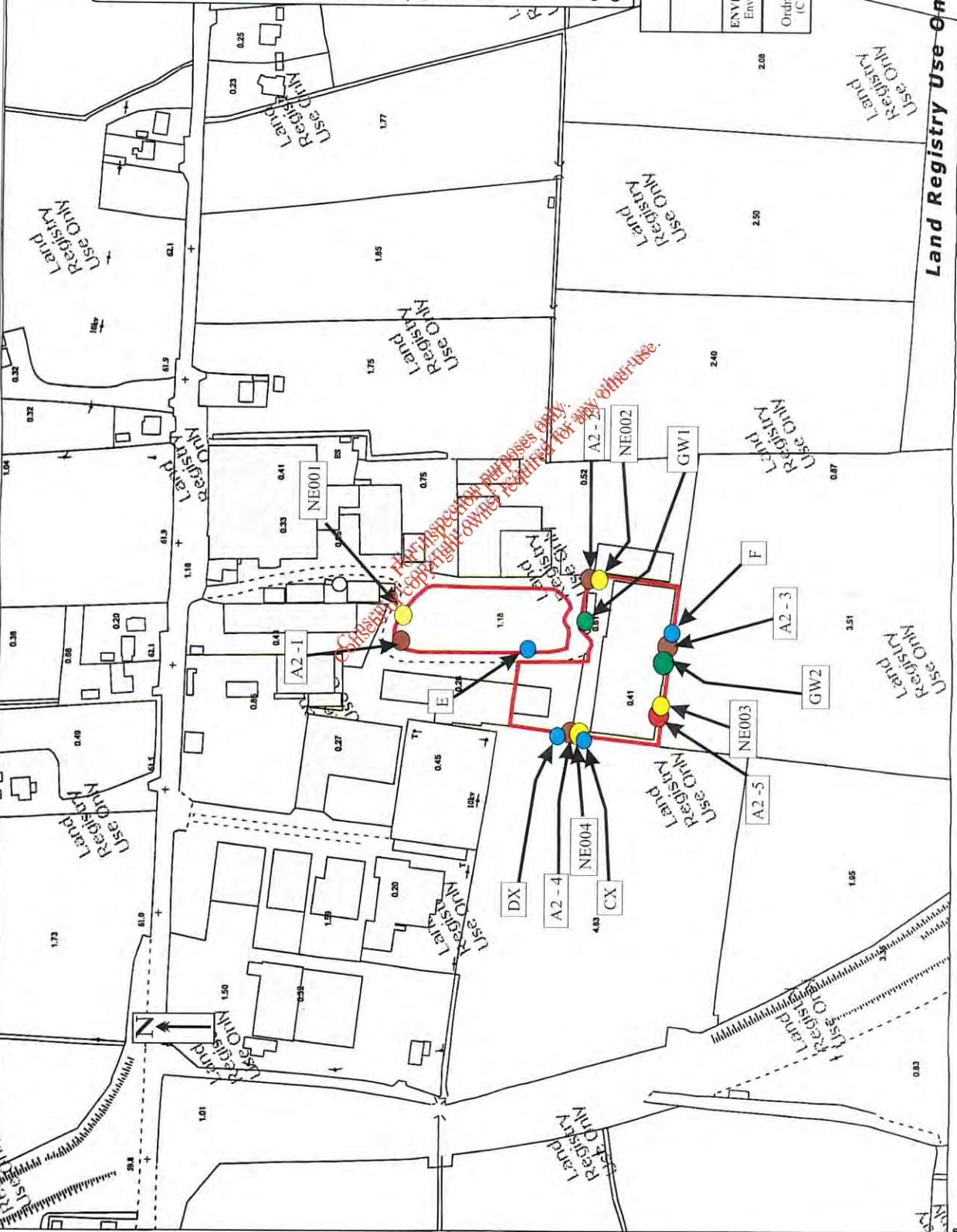
August 2012

ENVIROCO Management LTD
Environmental Consultants

ENVIROCO Management Ltd.
Ordnance Survey Ireland Licence No EN 0039412
(C) Ordnance Survey Ireland Government of Ireland

The representation on this map of a road, track or road/path is not evidence of the existence of a right of way.

© Suirbhreacht Ordánáis Éireann, 2009
© Ordnance Survey Ireland, 2009



Copyright © 2009. All rights reserved. This document is for the sole use of the client and is not to be distributed, copied, or used for any other purpose without the written consent of the copyright owner. For any other use, please contact the copyright owner.

Scale:- 1:2,500
Scala:- 1:2,500

Plot Ref. No. 19997435_1_1
Plot Date 28-AUG-2009

Land Registry Use Only

Land Registry Use Only

Land Registry Use Only

Land Registry Use Only