

ANNUAL ENVIRONMENTAL REPORT 2017

For

KMK METALS RECYCLING LTD
Cappincur Industrial Estate,
Daingean Road,
Tullamore,
Co. Offaly



By

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REPORT PERIOD:
JANUARY 2017-DECEMBER 2017

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1.0 REPORTING PERIOD

The reporting period for this Annual Environmental Report is 1st January 2017 to 31st of December 2017.

2.0 EMISSIONS FROM THE FACILITY

A summary and interpretation of all emissions monitoring carried out at the facility during 2017 is discussed in detail below.

2.1 Dust

The full Ambient Dust Monitoring Reports were submitted separately to the EPA. A summary of the reports is provided below.

Dust deposition monitoring was carried out at the site from the 12th May to the 12th June 2017 by Q.E.D. Engineering Ltd, in accordance with Waste Licence Requirements (Table 1).

Table 1: Dust Monitoring Licence Requirements

Stations	Parameter (mg/m ² /day)	Monitoring frequency	Analysis Method/ Technique
A2-1, A2-2, A2-3, A2-4	Total Dust Deposition	Annually ^{Note1}	Bergerhoff Gauge ^{Note2}
	Metal content ^{Note3}	Annually ^{Note4}	Standard method

Note 1: During the period May to September, or otherwise specified in writing by the Agency.

Note 2: Standard VDI 2119 (Measurement of dustfall, Determination of dustfall using Bergerhoff Instrument (Standard Method) German Engineering Institute). Any modifications to eliminate interference due to algae growth in the gauge should be reported to the Agency.

Note 3: Analysis to include the following metals: Al, As, Cd, Cr, Cu, Fe, Hg, Ni, Pb and Zn.

Note 4: Biannually in the first twelve months following grant of licence.

Weather conditions can have a notable impact upon dust creation and entrainment in the air and these have to be taken into account when assessing dust monitoring results.

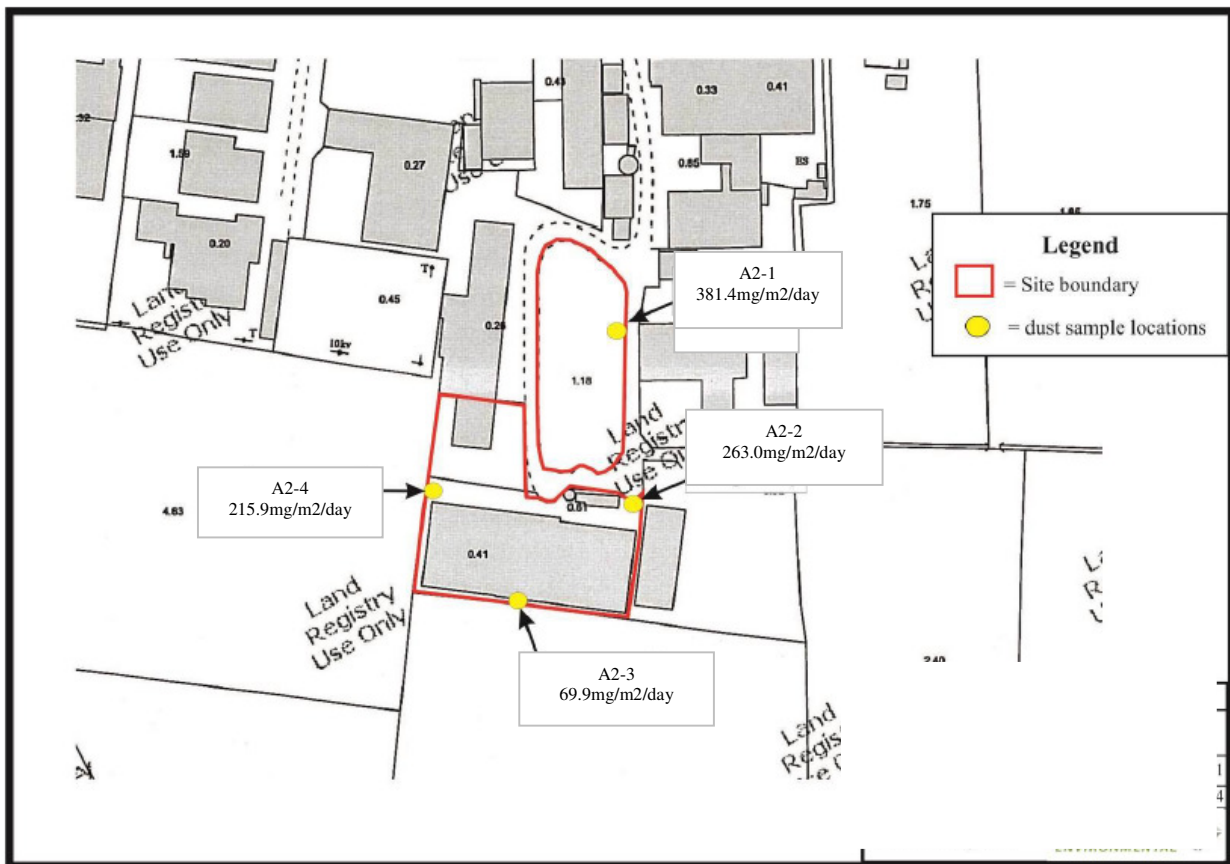
The dust monitoring was conducted during normal activity at the facility. The period of monitoring was a typical operational month at KMK with unsettled wind conditions, above average temperatures and rainfall (compared to the long term averages [LTAs]). Hence the climatic conditions for dust creation and movement was favourable. Dust monitoring around the boundaries of the KMK site during the monitoring period showed that dust monitoring location A2-1 was above the EPA recommendation limit of 350mg/m²/day. All remaining dust deposition results were below the EPA recommendation limit of 350mg/m²/day.

Dust monitoring location A2-1, which is situated in the E yard area on the northern boundary adjacent to the car park. Previous dust monitoring at the site has also resulted in the highest levels being recorded at this location. The E yard area sees a significant amount of HGV throughput as vehicles weigh-out over the weighbridge through this yard. The yard is also used for skip drop off and collection and by forklifts when transporting WEEE components to storage areas. This regular movement of vehicles rises dust which otherwise is not

obviously noticeable on the yard. The site keeps the E yard area in a tidy state and the yard is swept frequently to maintain a clear thoroughfare for vehicles. In addition, the predominant wind direction in the area is from the south west, which will blow dust in the direction of dust monitoring location A2-1.

The summary of dust deposition results are presented in Figure 1, below.

Figure 1 shows the location of each of the stations and total dust deposition results



In addition to Total Dust Deposition, metals are also analysed during this dust monitoring event. There are no Emission Limit Values specified for the metals content in the licence. Results of metal sampling show that all metals in the dust samples collected are relatively low. Results for all samples are broadly similar.

2.2 Stack Emission Point Monitoring.

The Waste Licence requirements for stack emission monitoring are presented in Table 2 below.

Table 2: Licence Requirements for Stack Monitoring

Emission point ref no.	Parameter	Monitoring frequency	Analysis Method/Technique
A2-5	Total particulates and metals including Al, As, Cd, Cr, Cu, Fe, Hg, Ni, Pb and Zn	Quarterly	Standard Methods

Monitoring of A2-5 was performed over four separate monitoring events during 2017: Q1, Q2, Q3 and Q4.

The plant was in use during monitoring, and the samples were taken as discharged from the emission stack after treatment by the bag house filter unit.

The individual monitoring reports were submitted separately to the EPA. A summary of the reports is provided below (Table 3) in terms of dates and total particulate results obtained.

Table 3: Stack Monitoring Results 2016

Date	Company	Ref	Result (mg/m ³)	Limit Value (mg/m ³)
01/03/17	Glenside Environmental	Q1	<0.36	10
07/06/17		Q2	<0.45	10
06/07/17		Q3	<0.61	10
07/12/17		Q4	<0.41	10

As can be seen from Table 3, results are extremely low throughout 2017, representing a consistent manner of air emissions treatment by the infrastructure on-site.

KMK will continue to conduct stack air emissions in accordance with the Waste Licence Requirements and make use of the continuous particulates monitoring probe as installed on stack A2-5 on 5th April 2013. The probe is pre-set to warn management (by an alarm system) in the event of any increase so that action may be taken prior to (and thus preventing) any breach of an Emission Limit Value.

Stack emissions continue to be consistently low and of minor significance.

2.3 Noise

The waste licence (W0113-04) requirements for the noise monitoring programme is referred to in Condition 6.11 and are presented in Table 4.

Table 4: Summary of Noise Monitoring Licence Requirements

Stations & grid ref	Parameter	Monitoring frequency	Analysis Method / Technique
NE001: 635847 725118 NE002: 635959 725004 NE003: 635870 724963 NE004: 635772 725046	L(A)eq [30 minutes], L(A) ₁₀ [30 minutes], L(A) ₉₀ [30 minutes] and 1/3 Octave Band Analysis	Annually	Standard Method ^{Note1}

Note 1: International Standards Organisation, ISO 1996 Acoustics – Description and Measurement of Environmental Noise. Parts 1,2 & 3.

Furthermore it is stated *‘The survey programme shall be undertaken in accordance with the methodology specified in the ‘Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4)’ as published by the Agency.’*

Condition 6.11.2 states: *‘The licensee shall implement any noise attenuation measures as required by the Agency, having regard to the principles of BAT, to ensure compliance with the noise limits specified in this licence.’*

Schedule B.3 Noise Emissions tabulates the following:

Daytime dB L _{Ar,T} ^{note2} (30minutes)	Evening time dB L _{Ar,T} ^{note2} (30minutes)	Night-time dB dB L _{Ar,T} ^{note2} (15-30minutes)
55	50	45 ^{note1}

Note 1: there shall be no clearly audible tonal component or impulsive component in the noise emission from the activity at any noise-sensitive location.

Note 2: L_{Ar,T} is defined as the Related Noise Level, equal to the L_{(A)eq} during a specified time interval (T), plus specified adjustments for tonal character and/or impulsiveness of the sound.

Hence the following parameters were measured and reported: L_{(A)eq}[30 minute], L_{(A)10}[30 minute], L_{(A)90}[30 minute] and 1/3 Octave Band analysis.

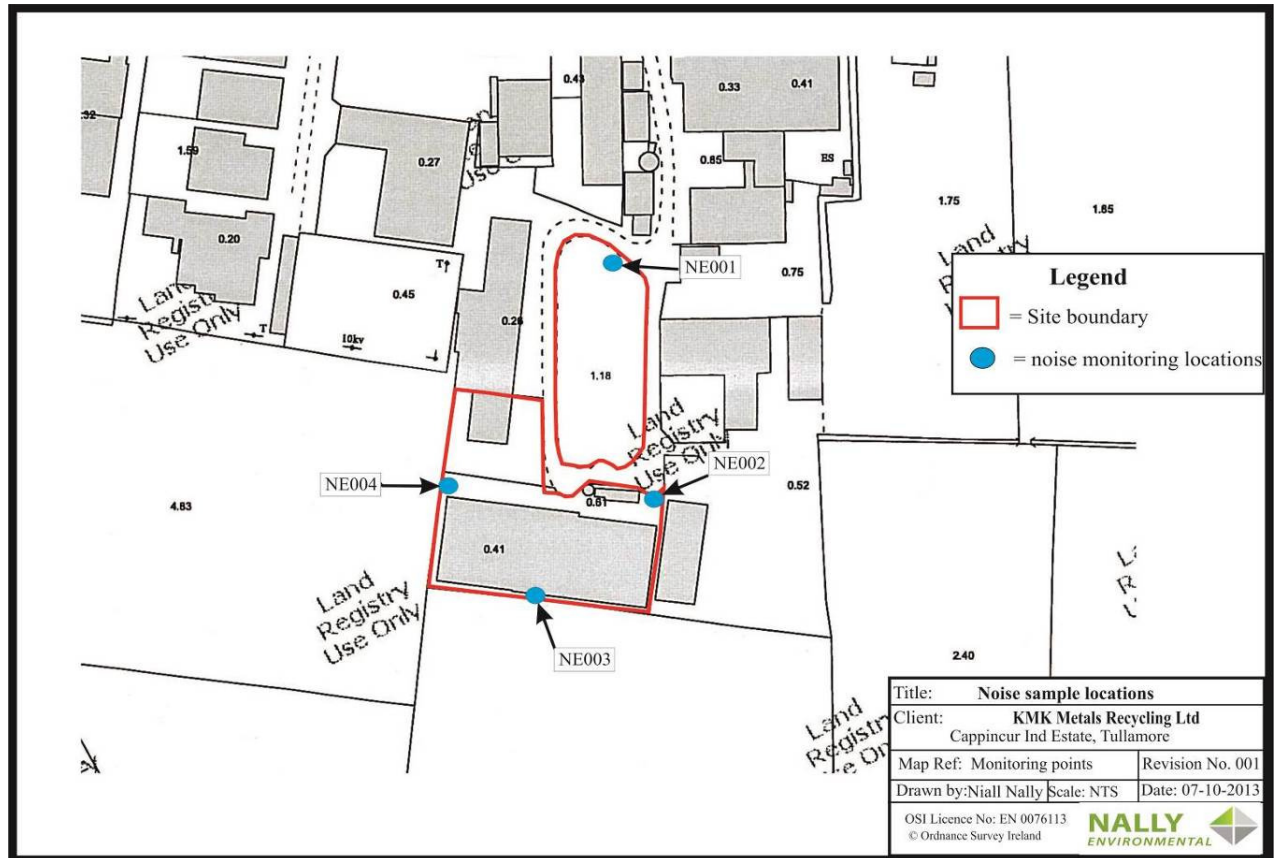
To ensure that all monitoring positions could be adequately monitored, and based upon normal best practice for noise measurements, as issued by the EPA, the night time measurement was a 15 minute period at each location.

The monitoring locations were thus as follows:

- NE001: Car park at fence boundary – northern boundary
- NE002: Eastern boundary, inside C yard
- NE003: Rear of the facility buildings – Southern boundary
- NE004: Adjacent the working yard area – Western boundary

Daytime noise monitoring took place on 04/08/17, between 10:45 – 14:00, evening monitoring took place on 03/08/17 between 20:35 – 21:30 and night time monitoring took place on 03/08/17 – 04/08/17 and 05/09/17 between 01:45 – 02:50. Each monitoring location is identified on the map shown in Figure 2 below. Weather conditions during monitoring were calm and mild with a slight breeze throughout the monitoring events.

Figure 2: KMK Noise Monitoring Locations 2017



The complete set of noise measurement results are included in the noise monitoring survey (Appendix 1). These are summarised and compared to the licence limits below in table 5.

Table 5 – Compliance table of results with licence limits

Daytime			
Noise Location	Start Time	KMK ^{note1} L_{Ar,T}	Licence limits ^{note2} L_{Ar,T}
NE001	10.43	57	55
NE001	11.13	66	55
NE001	11.43	62	55
NE001 Arithmetic Average		62	55
NE002	10.48	65	55
NE002	11.19	65	55
NE002	11.49	69	55
NE002 Arithmetic Average		66	55
NE003	12.16	75	55
NE003	12.46	74	55
NE003	13.16	75	55
NE003 Arithmetic Average		75	55
NE004	12.22	61	55
NE004	12.52	61	55
NE004	13.22	60	55
NE004 Arithmetic Average		61	55
Evening Time			
Noise Location	Start Time	KMK ^{note1} L_{Ar,T}	Licence limits ^{note2} L_{Ar,T}
NE001	20.39	64	50
NE002	21.14	58	50
NE003	21.18	63	50
NE004	21.11	68	50

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Night Time			
Noise Location	Start Time	KMK ^{note1} L_{Ar,T}	Licence limits ^{note2} L_{Ar,T}
NE001	01.44	37	45
NE001	01.59	38	45
NE001 Arithmetic Average		38	45
NE002	01.44	39	45
NE002	02.14	39	45
NE002 Arithmetic Average		39	45
NE003	02.17	48	45
NE003	02.32	47	45
NE003 Arithmetic Average		48	45
NE004	02.22	42	45
NE004	02.37	42	45
NE004 Arithmetic Average		42	45

Note1: L_{Ar,T} is defined as the Related Noise Level, equal to the L_{(A)eq} during a specified time interval (T), plus specified adjustments for tonal character and/or impulsiveness of the sound.

Note2: the licence does not specify whether the limits apply to the site boundaries or noise sensitive locations.

Noise sources from the facility, audible at the site boundaries have been identified as:

- Vehicles entering/leaving the site
- Unloading and loading of trucks with waste materials and processed materials using fork lift trucks, JCB etc
- Tipping of WEEE under cover in the Hanger building
- Reversing alarms from forklift trucks
- WEEE processing operations within buildings.
- Personnel entering/leaving buildings, car park area

During the **Daytime** measurements, maximum noise levels of L_{Aeq(30 minute)} varied between 57-75dB at boundary locations. The highest levels were noted at station NE003 (75, 74 and 75dB) on consecutive occasions. The elevated levels were as a result of intermittent noise from the handling and processing of WEEE in the D hangar and from road traffic on the by-pass. Noise was dominated here by the nearby dust extraction system used to treat dusts from the WEEE processing building.

Station NE001, located on the northern boundary, had noise levels $L_{Aeq(30 \text{ minute})}$ ranging from 57-65 dB during the day. There was a lot of intermittent noise present at this location, caused by on-site and off-site traffic, and the handling of WEEE on-site.

Station NE002, located on the east boundary, resulted in $L_{Aeq(30 \text{ minute})}$ values ranging from 65-69 dB during the day. Noise was dominated here by typical site activities; processing and handling of WEEE in D-Hanger, moving forklifts and reversing alarms.

Station NE004, located on the western boundary of the site, resulted in $L_{Aeq(30 \text{ minute})}$ values ranging from 60-61 dB during the day. Noise was dominated here by typical activities in the WEEE processing building, steam engines in the railway line and road traffic from the Tullamore bypass.

The **evening time** measurements resulted in $L_{Aeq(30 \text{ minute})}$ values ranging from 58-68 dB which were lower than the daytime readings. The highest $L_{Aeq(30 \text{ minute})}$ was at station NE004 at 68 dB and the noise here was due to site activities such as processing and handling of WEEE in D-Hanger, forklifts moving material and a sweeper cleaning yard. The lowest was at station NE003 where an $L_{Aeq(30 \text{ minute})}$ of 58 dB was measured i.e. behind the D-Hanger building.

The **night-time** measurements resulted in $L_{Aeq(30 \text{ minute})}$ values ranging from 38-48 dB. The highest noise level in $L_{Aeq(15 \text{ minute})}$ was 48dB at NE003 boundary location whilst the lowest noise level in $L_{Aeq(15 \text{ minute})}$ was 39dB at NE001 boundary location. There were no site activities noted during the night time measurements. NE003 was directly dominated by background traffic noise on the Tullamore by-pass.

In general, the exceedences at boundary locations are not likely to be experienced at any noise sensitive location near the site due to noise dissipation over increasing distances and mitigation as a result of buildings acting as noise reduction barriers (the closet dwelling house to the facility is located 200m from the northern boundary of the site). For point sources it is known that a doubling of the distance away from the source results in a 6 dBA fall in noise level. An example of this is shown in the following table:

Table 6 Attenuation of Noise over Distance for point source emissions e.g. industrial sources

Distance (m)	Noise Level (dB)
5	65
10	59
20	53
40	47
80	41
160	35

1/3 Octave analysis (analysis of recorded sound pressures to identify if tonal features are present) was carried out on the same day. There was no tonal or impulsive noise identified during the survey. These are summarised in the following Table 7.

Table 7: Tonal Features Identification

Monitoring Station	<u>Day-time</u> Tonal Features (Frequency & Pressure)	<u>Evening-time</u> Tonal Features (Frequency & Pressure)	<u>Night-time</u> Tonal Features (Frequency & Pressure)	Comments	Rating level ($L_{ar,T}$) as adjusted by adding 5dB to the relevant L_{Aeq}
NE001	No identified tones	No identified tones	No identified tones	No tones identified	Not applicable
NE002	No identified tones	No identified tones	No identified tones	No tones identified	Not applicable
NE003	No identified tones	No identified tones	No identified tones	No tones identified	Not applicable
NE004	No identified tones	No identified tones	No identified tones	No tones identified	Not applicable

In conclusion;

- Annual environmental noise monitoring occurred at KMK on 03rd, 04th of August and the 05th of September 2017.
- 4 boundary locations were assessed as per licence requirements.
- Activities at the KMK facility were deemed normal during the survey periods.
- The general acoustic environment at and around the facility is dominated by facility operations, off-site activities within the industrial estate due to neighbouring commercial premises and the Tullamore by-pass road and Ballinagar road.
- The noise measured in L_{Aeq} at all boundary locations exceeded the licence requirements (Schedule B3) for day time and evening time noise levels. All night-time noise readings at Boundary Noise Locations, with the exception of NE003 were below the licence requirements. These exceedances are not likely to be experienced at any of the closest dwellings near the site due to noise dissipation over increasing distances and mitigation as a result of buildings acting as noise reduction barriers.
- There was no tonal or impulsive noise identified during the survey.

2.4 Surface Water and Wastewater emissions

The requirements for the sanitary effluent water discharge monitoring are as follows:

Table 8: Wastewater Monitoring Licence Requirements

Locations	Parameter	Monitoring frequency	Analysis Method/ Technique
F	Flow	Continuous	On-line flow meter with recorder
F	BOD, Suspended solids, total dissolved solids, nitrates (as N), ammonia (as N), total phosphorous (as P)	Quarterly	Standard Methods

Similarly, the waste licence requirements for storm water monitoring are as follows:

Table 9: Storm Water Monitoring Licence Requirements

Locations	Parameter	Monitoring frequency	Analysis Method/ Technique
CX DX E	Visual inspection	Daily	Examine for colour and odour
CX DX E	pH, COD, Ammonia, Conductivity, Suspended solids, Mineral oils, Metals (Al, As, Cr, Cu, Fe, Hg, Ni, Pb, Zn)	Quarterly	Standard Methods

Following approval from the Agency on the 2nd April 2015, a new Class 1 interceptor was installed in September 2015 to replace the existing DX and CX interceptors. Storm water run-off from both C and D yards now passes through the new interceptor and discharges via emission point DX. Discharges from CX outlet has now ceased at the site.

The Water Discharge Monitoring Reports were submitted separately to the EPA. The sampling dates and discharge points are shown in table 10 below.

Table 10: Storm Water and Wastewater Monitoring Summary

Date	Sample taken			Laboratory
	DX	E	F	
08/03/17	Yes	Yes	Yes	ALS Environmental
28/06/17			Yes	ALS Environmental
26/04/17	Yes	Yes		ALS Environmental
07/09/17	Yes	Yes	Yes	ALS Environmental
07/12/17	Yes	Yes	Yes	ALS Environmental

The sanitary effluent water discharge monitoring (F sample) for all parameters applicable under the licence and compared to the emission limit values are detailed in Table 11.

Table 11: Waste Water Monitoring Results

Sample Date	08/03/17	28/06/17	07/09/17	07/12/17	Emission Limit values (ELVs)
Parameter	F	F	F	F	
Total dissolved solids (TDS) (mg/l)	649	625	2460	577	-
Suspended Solids (mg/l)	<2	<2	<2	6.35	-
BOD (mg/l)	<1	<1	<1	<1	5
Ammonia as N (mg/l)	0.0889	0.0435	0.081	4.84	1
Nitrates as N (mg/l)	54.7	54.4	78.2	171	-
Total phosphorous as P (mg/l)	0.918	0.791	1.380	0.965	1

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Table 12: Storm Water Monitoring Results

Date	Units	1 st Quarter		2 nd Quarter		3 rd Quarter		4 th Quarter		Emission Limit values (ELVs)	DX		E	
		DX	E	DX	E	DX	E	DX	E		Proposed Trigger Warning Value (Nov 17)	Proposed Trigger Action Value (Nov 17)	Proposed Trigger Warning Value (Nov 17)	Proposed Trigger Action Value (Nov 17)
Suspended Solids	mg/l	4.1	7.45	6.9	5.15	9.95	3.35	57.6	16.4	35	-	-	-	-
Ammonia as N	mg/l	0.278	0.93	1.01	1.08	0.961	0.213	0.886	1.06	-	2.01	2.63	1.814	2.326
COD	mg/l	17.1	31.6	37.2	48.7	55.6	32.6	89.3	30.7	-	63.34	77.84	69.64	87.49
Conductivity	mS/cm	0.163	0.336	0.391	0.358	0.652	0.749	0.817	0.567	-	0.709	0.876	0.827	1.067
Aluminium	ug/l	9.76	73.8	18.3	103	69.8	2.72	25.9	5.62	-	155.66	211.05	226.33	278.12
Arsenic	ug/l	1.13	1.73	0.766	1.2	1.06	2.24	1.92	19.5	-	1.8	2.3	2.89	3.66
Chromium	ug/l	<1.2	<1.2	<1.2	<1.2	<1	<1	<1	<1	-	1.8	2.00	3.33	4.30
Copper	ug/l	5.03	22.3	<0.85	15	2.84	1.81	2.1	0.532	-	12.9	16.9	27.87	35.54
Lead	ug/l	6.27	13.6	0.946	4.31	2.75	<0.2	1.07	0.224	-	19.9	26.0	10.0	12.5
Nickel	ug/l	6.03	10.3	10	10.6	8.22	5.71	13.6	6.1	-	15.7	19.3	16.78	21.04
Zinc	ug/l	236	177	6.82	42.6	5.61	10.7	10.1	52.3	-	225	296	248.42	322.92
Mercury	ug/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	0.036	0.048	0.121	0.168
Iron	mg/l	0.0393	0.103	0.605	0.0465	0.194	0.247	0.0327	3.69	-	0.593	0.781	0.493	0.653
Mineral Oil	mg/l	<1	1.04	<1	<1	<1	<1	<1	<1	2	-	-	-	-
pH	pH units	7.32	8.0	7.38	7.72	7.76	7.91	7.68	7.41	-	-	-	-	-

Interpretation of Quarterly Results 2017

Discharges from DX and E were below the license emission limit values for suspended solids and mineral oil during all monitoring periods in 2017.

Suspended solids and COD at discharge DX in the 4th Quarter 2017 exceeded the proposed Trigger Action values for suspended solids and COD.

Conductivity and Arsenic at discharge DX in the 4th Quarter 2017 exceeded the Trigger warning value for conductivity and Arsenic.

Arsenic levels at discharge E in the 4th Quarter 2017 exceeded the proposed Action Trigger Value.

KMK are actively investigating the exceedences in surface water parameters and will remedy in 2018 with investigations.

The new WWTS & biofilter on-site was fully installed and commissioned in November 2013. This replaced the percolation area which was removed. A delicate balance of Ferric Chloride dosing in the WWTS was carried out throughout 2014 and 2015 in order to reduce Total Phosphorous levels below the license emission limit value. In November 2017 a FeCl dosing unit was installed to remove excess phosphorus before discharge of final effluent. The results for Total Phosphorous were above the license emission limit value during the 3rd Quarter monitoring.

The basic sequence of operation controlled by the control board is as follows:

- Transfer the gravity outflow from the sand filter to a holding tank.
- When sufficient effluent is collected in the holding tank, transfer by Fill pump to the mixing tank.
- While the mixing tank is filling, inject the measured quantity of FeCl
- To convert the 1mg/l of total Phosphorous as P to a settling sludge, the dosing rate of the 40% FeCl solution will be 100ml per 1m³ of treated effluent. (This amount will be monitored in relation the P removal and modified as required.)
- When the mixing tank is full, begin mixing and continue for an hour.
- When the mixing stops, all the liquid is allowed to settle undisturbed for 4 hours.
- At the end of the settlement/clarifying period the precipitated Sludge is discharged from the bottom of the mixing tank and returned to the Sewage Treatment System Primary Septic tank, where all sludge settles, and is periodically de-sludged and disposed of by a licensed waste collection company, to be disposed of as all septic tank de-sludging is disposed of.
- At the end of the De-sludge operation, the clarified effluent is discharged to the main storm drain.
- The sequence begins again when there is enough liquid in the holding tank.
- This cycle has the potential to treat up to 5,000 lit/day so can deal with any unusual shock loading.
- There are alarms for faults and high levels in the tanks.

2.5 Groundwater

KMK has two wells: GW1 and GW2, both of which are tapped onsite and were sampled on 7th of December 2017. The full Annual Groundwater Monitoring Report 2017 was submitted separately to the EPA.

Groundwater monitoring of GW1 and GW2 wells onsite was carried out in accordance with parameters listed in Schedule C.7 of waste licence W0113-04 and the hazardous substances identified in the Groundwater Monitoring Risk Assessment Report 2014.

Table 13: Groundwater Monitoring Licence Requirements

Ref	Parameters	Monitoring frequency	Analysis Method / Technique
GW1 GW2	pH, Conductivity, groundwater level, total faecal coliforms, total nitrogen, chloride, hydrocarbons screen (mineral oils/DROs) and Metals (Al, As, Cd, Cr, Cu, Fe, Hg, Ni, Pb, Zn)	Annually	Standard Methods

All results were below the recommended guideline limits set by EC Groundwater Regs. S.I. 9/2010, with the exception of Nickel (36.3µg/l) and Arsenic (22.2µg/l) at GW2– both of which are known to be in soils and rock naturally.

Nickel is present in soils naturally and has been found in KMK samples since 2006 (with the exception of 2009 and 2012). According to the ‘Soils of Co. Offaly’ National Soil Survey of Ireland by Teagasc 2003, the typical levels of trace nickel in agricultural soils ranges from 0.5 to 100 mg/kg. The natural occurrence of arsenic in rock veins is also well documented across the world. There is No available specific data for arsenic in Co. Offaly.

3.0 WASTE ACTIVITIES CARRIED OUT AT THE FACILITY

The principal class of activity is:

Class 13 of the Fourth Schedule (Waste Recovery Activities) of the Waste Management Act (1996): Storage of waste intended for submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where such waste is produced.

Non Technical Description: Temporary storage and processing of waste materials at the facility prior to removal off site for further metals recovery at an alternative facility.

Consequently, other activities carried out on site include:

Class 3 of the Fourth Schedule (Waste Recovery Activities) of the Waste Management Act (1996): Recycling or reclamation of metals and metal compounds.

Non Technical Description: Collection, acceptance and processing of metallic wastes (hazardous and non hazardous including electronic and electrical wastes and liquids containing dissolved metals) as part of waste loads arriving at the facility prior to removal off site for recycling or recovery.

Class 4 of the Fourth Schedule (Waste Recovery Activities) of the Waste Management Act (1996): Recycling or reclamation of other inorganic materials.

Non Technical Description: Acceptance of plastic components and packaging as part of incoming waste loads.

Class 6 of the Fourth Schedule (Waste Recovery Activities) of the Waste Management Act (1996): Recovery of components used for pollution abatement.

Non Technical Description: Acceptance of auto catalysts, filters etc.

Class 7 of the Fourth Schedule (Waste Recovery Activities) of the Waste Management Act (1996): Recovery of components from catalysts.

Non Technical Description: Recovery of metals from catalysts in manufacturing processes (this applies to liquids and solids)

Class 11 of the Fourth Schedule (Waste Recovery Activities) of the Waste Management Act (1996): Use of waste obtained from any activity referred to in a preceding paragraph of this schedule.

Non Technical Description: Re-use of some waste materials e.g. metal drums, IBCs, cardboard boxes and textile IBC bulk bags as waste receptacles.

Class 12 of the Fourth Schedule (Waste Recovery Activities) of the Waste Management Act (1996): Exchange of waste for submission to any activity referred to in a preceding paragraph of this schedule.

Non Technical Description: Trading activities in waste management.

4.0 QUANTITY AND COMPOSITION OF WASTE RECOVERED, RECEIVED AND DISPOSED OF DURING THE REPORTING PERIOD INCLUDING EWC CODES

This specific and detailed information is presented in Appendix 2 of this report.

5.0 WASTE MANAGEMENT RECORD

5.1 Waste Received in 2017

Waste is received in the KMK facility from the following sources: civic amenity sites, commercial customers, industrial customers, transfer station waste management sites, and gate customers. A summary of all waste received during 2017 is given below:

Table 14: Summary of Waste Received in 2017

Source of waste accepted.	Total quantities (tonnes)
Civic amenity sites	8,882.21
Commercial	17,394.18
Industrial	509.14
Transfer Stations	1,060.27
Waste Industry	1,423.13
Gate Customer	111.15
Total	29,380.06

A full breakdown of waste types and quantities accepted for 2017 is included in Appendix 2 attached to this AER.

The total quantity received was 29,380.06 tonnes for 2017.

5.2 Waste Despatched from the Facility for Recovery in 2017

The total quantity of waste despatched from the facility in 2017 was 29,341.66 tonnes. A summary of all waste despatched during 2017 is included in Appendix 2 attached to this AER. Please note that there is a carry-over of waste material from the year ending 2017 into the beginning of 2018 (772.45 tonnes) and this is stock pending processing and stock pending dispatch (see Appendix 2).

6.0 WASTE RECOVERY REPORT

All waste accepted at KMK is treated for recovery and recycling. There is a 'no waste to landfill' policy on-site. KMK also acknowledges and complies with the most recent WEEE Regulations whereby recovery targets are calculated and achieved. See letter statement below.

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KMK Metals Recycling Ltd.

Precious and Non-Ferrous Metals
Electronic Scrap & Metallic Residues
Hazardous Metal Waste

Cappincur Ind. Est.
Daingean Road
Tullamore
Co. Offaly
Ireland

Telephone
057-934 1634

Telefax
057-932 2729

E-Mail
info@kmk.ie

Website
www.kmk.ie

EPA Waste Licence:
W0113-04

January 2018

To whom it may concern,

KMK Metals Recycling Ltd acts as your company's waste contractor for electrical waste.

KMK's facility at **Tullamore, Co Offaly** is licensed (EPA Waste License No. **W0113-04**) to accept and recover 35,000 tonnes of Waste Electrical & Electronic Equipment (WEEE) and batteries. KMK processes weee to the WEEELABEX Standard for the Treatment of Waste Electrical and Electronic Equipment as required under **section 22 of the Irish WEEE Regulations; STATUTORY INSTRUMENTS S.I. No. 149 of 2014 EUROPEAN UNION (WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT) REGULATIONS 2014**

KMK confirms that they meet the conditions for the storage of WEEE as required by **SCHEDULE 8, TECHNICAL REQUIREMENTS FOR STORAGE (INCLUDING TEMPORARY STORAGE OF WEEE PRIOR TO TREATMENT)** of the Irish WEEE Regulations: **STATUTORY INSTRUMENTS S.I. No. 149 of 2014 EUROPEAN UNION (WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT) REGULATIONS 2014**

With reference to **SCHEDULE 9, SELECTIVE TREATMENT FOR MATERIALS AND COMPONENTS OF WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT**, KMK confirms that they comply with the requirements for the removal and selective treatment of certain substances, preparations and components, such as batteries, cathode ray tubes, external electric cables etc as required by the Irish WEEE Regulations: **STATUTORY INSTRUMENTS S.I. No. 149 of 2014 EUROPEAN UNION (WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT) REGULATIONS 2014**

With reference to **SCHEDULE 10, MINIMUM RECOVERY TARGETS IN ACCORDANCE WITH ARTICLE 11 OF THE DIRECTIVE**, KMK achieved the minimum recovery targets and minimum component, material and substance reuse and recycling targets for 2015 and expects to exceed same over the next three years as required under **section 23 of the Irish WEEE Regulations: STATUTORY INSTRUMENTS S.I. No. 149 of 2014 EUROPEAN UNION (WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT) REGULATIONS 2014**

KMK's current recycling and recovery rates are as follows:

Category 1:	Large Household Appliances	82%
Category 1a:	Refrigeration Appliances	88%
Categories 2,4,6,7:	Small Electrical Appliances	94%
Category 3:	IT & Telecommunication Equipment	94%
Category 3a & 4a:	CRT & FPD (Televisions & Monitors)	98%
Category 5:	Lighting (FL's and CFL's)	95%
Category 8,9,10:	Medical Devices & Control Instruments	94%
	Lead-Acid Battery Recycling Efficiency	86%
	Portable Battery Recycling Efficiency average	64%

KMK has a 'no-waste to landfill' policy, with any waste generated going to Waste to Energy recovery in Ireland.

If I can be of any further help, please do not hesitate to contact me.

Kind regards,

Kai Meyer

KMK Metals Recycling Ltd.
Works: Cappincur Industrial Estate
Daingean Road, Tullamore, Co. Offaly
Tel: 057 93 41634
E-mail: info@kmk.ie

Prepared |
Tel: 047 7

Registered Office: Cappincur Industrial Estate, Daingean Road, Tullamore, Co. Offaly
Reg. No. 87176. VAT No. IE 4534857E

Directors
K.M. Ryck
E. Koessen-Ryck
GERMAN



In addition, KMK has achieved compliance with EN50625 WEEE Treatment Standard / the WEEELABEX Standard, which prescribes methods for conducting Batch Tests and for the subsequent Calculating Recycling and Recovery Targets.

7.0 RESOURCE CONSUMPTION SUMMARY

Electricity, green diesel and kerosene are used at the facility. The following tables summarise the electricity and fuel consumption at the facility from 2016 to 2017 inclusive and for comparison purposes.

Table 15: Breakdown of the Energy Consumption for the Year

Consumption in kWh*					
	2016	% of total	2017	% of total	
Electricity	578,760.00	31.07%	630,600.00	32.06%	
Kerosene	62,500.84	3.36%	54,378.88	2.76%	
Diesel	1,221,582.34	65.58%	1,281,788.11	65.17%	
Total	1,862,843.19	100.00%	1,966,766.99	100.00%	
*Energy conversion factors 2016: kerosene 9.821 kWh/L, diesel 10.169 kWh/L					

In summary, the following trends are noted:

Energy consumption in 2017 was similar to 2016. Electricity consumption in 2017 increased by 0.99% compared to 2016. Kerosene consumption decreased by 0.6% and Diesel consumption decreased by 0.41%. The reasons for this are that:

- Similar electricity consumption in 2017 compared to 2016 can be attributed to better energy management across the site.
- Kerosene is used for the heating of office space. The levels of kerosene used in 2016 and 2017 were relatively similar.
- Similar diesel consumption in 2017 was due to the same operation times as 2016 where the LHA Baler running from 06:00 – 22:00 during most days.

8.0 REVIEW OF NUISANCE CONTROLS

The types of nuisances which could be expected at a Waste Management Facility in general are litter, vermin, birds, flies, mud, dust and odours.

Due to the dry solid and non-food related origin of materials recycled at KMK, the activities carried out onsite are not conducive to flies, birds, odours, and vermin - there are however canteens onsite, and associated businesses nearby, therefore KMK employs a pest control company to ensure rodents are controlled.

All waste processing activities are carried out within buildings; all materials prior to processing are not able to create a windblown nuisance (as they are solid / intact and too large to be blown), and all fractions generated by the activities of KMK are stored under cover.

All site surfaces are concreted for minimisation of dirt/dust onsite, however dust is entrained or deposited onsite and controls are in place in the form of yard dampening as necessary - as often as twice per day in summer time, plus KMK uses a road sweeper on smooth floor surfaces for example in the WEEE Plant. Dust monitoring around the boundaries of the KMK site during the 2017 monitoring event showed that one monitoring location exceeded the EPA recommendation limit of 350mg/m²/day. All remaining dust deposition results were below the EPA recommendation limit of 350mg/m²/day.

9.0 SCHEDULE OF ENVIRONMENTAL OBJECTIVES AND TARGETS AND ENVIRONMENTAL MANAGEMENT PROGRAMME

The schedule of Objectives and Targets / Environmental Management Programme for 2017 and their current status is included below in Table 16 as part of the company IMS. Most of the scheduled objectives and targets were achieved in 2017; some were carried forward and where this is the case a note is made to that effect in 'Status'.

A new schedule of objectives and targets / EMP proposed for year ending 2018 is also presented in Table 17.

Table 16: Environmental Objectives and Targets 2017

1.1 General						
#	Aspect	Objectives	Target	Time Frame	Responsibility	Status
G-1-17	DPMS Audit	Amalgamation of existing systems with the DPMS to ensure further accuracy for reporting purposes.	An audited DPMS system that has been updated to ensure higher levels of accuracy and efficiency.	July 2017	KMK Management Compliance Department	Incomplete
G-2-17	KMK Kilbeggan	Development of the Kilbeggan facility as a contingency measure for operations at KMK Tullamore.	Suitable steps taken towards obtaining an EPA Licence for the Kilbeggan facility.	December 2017 leading into 2018	KMK Management Compliance Department	Ongoing
G-3-17	KMK Kilbeggan	Preparation for flat screen processing and re-use activity at KMK Kilbeggan.	Compliant flat screen processing and re-use activity at KMK Kilbeggan with achievement of the requirements of the PAS 141:2011 Standard.	December 2017 leading into 2018	KMK Management Compliance Department	Ongoing
1.2 Environment						
#	Aspect	Objectives	Target	Time Frame	Responsibility	Status
E-1-17	Energy	Basic Energy Management Plan – to be drafted and implemented in 2017.	Prevention of excess energy wastage and reduction in energy costs.	December 2017	OB	Ongoing
E-2-17	Food Waste	Determining the feasibility of a food waste bin service for the canteens.	A reduction in all food waste on-site, supporting our commitment to zero landfill.	September 2017	OB	Complete
E-3-17	IMS	Meet the requirements of ISO 14001 and 9001 :2015.	To improve the IMS system using the requirements of the new standards as required for continued NSAI Certification.	December 2017	OB	Ongoing
E-4-17	Monitoring	Full graphing of Environmental Report Data.	To clearly and concisely display KMK's overall environmental performance.	November 2017	OB	Complete

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1.3 Occupational Health & Safety						
#	Aspect	Objectives	Target	Time Frame	Responsibility	Status
H&S-1-17	Training	General site induction work instruction and supervisor training checklist.	Improved training of new employees and a log of training provided by site supervisors.	August 2017	MF	Complete
H&S-2-17	Accidents	Improved accidents investigation.	A prevention/reduction in the number of workplace accidents and lost time injuries.	June 2017	MF	Complete
H&S-3-17	IMS	Implementation of ISO 45001 (formerly OHSAS 18001).	To improve the IMS system to the requirements of the new standard for compliance with NSAI Certification.	December 2017	MF OB	Ongoing
H&S-4-17	Contingency	Business Continuity and Disaster Preparedness Plan.	Preparedness for any adverse, unexpected or emergency situations at KMK.	October 2017	MF OB	Ongoing

1.4 Quality						
#	Aspect	Objectives	Target	Time Frame	Responsibility	Status
Q-1-17	Operations	Review and update process flow diagrams for all WEEE fractions entering KMK.	Detailed process flows for all operations on-site.	July 2017	OB MF	Complete
Q-2-17	Customer Care	Prepare and distribute Customer Satisfaction Surveys.	Distribution of Customer Satisfaction Surveys and gathering of information for continual improvement of service.	December 2017	HW OB	Complete
Q-3-17	Customer Care	Prepare Electronic Customer Register.	A completed electronic database of customers who access the website and have regular contact with KMK.	December 2017	KM EP HW	Complete
Q-4-17	Operations	Populate Reptool system.	Waste Tracking – Prepare full material flow record as per WEEELABEX requirement to ensure material traceability to End-of-Waste status.	September 2017	KM OB	Complete

Table 17: Environmental Objectives and Targets 2018

1. General					
No.	Aspect	Objectives	Target	Time Frame	Responsibility
1.1	Waste to Energy Audit	Improved compliance with the waste management hierarchy.	Improve downstream treatment choice for waste materials currently sent for waste to energy.	May 2018	KMK Management
1.2	KMK Systems Update	Amalgamation of existing systems with the DPMS and Smart RFID for enhanced reporting and asset management.	An amalgamated DPMS and Smart RFID system that have been updated to ensure higher levels of accuracy and efficiency.	July 2018	KMK Management
1.3	IED Licence Application	Development of the Kilbeggan facility as an IED licenced site.	Obtain an EPA IED Licence for the Kilbeggan facility.	October 2018	KMK Management
1.4	KMK Kilbeggan Operations	Further development of process activities at KMK Kilbeggan.	Compliant flat screen, re-use and fines treatment at KMK Kilbeggan with achievement of the requirements of the PAS 141:2011 Standard.	December 2018	KMK Management
1.5	SOPs	Preparation of SOPs for key office functions.	Documented step-by-step procedures for the completion of various key office functions.	December 2018	KMK Management KMK Office Staff

2 Environment					
No.	Aspect	Objectives	Target	Time Frame	Responsibility
2.1	Environmental Aspects	Review and documentation of KMK's Environmental Aspects	Inclusion of KMK Kilbeggan and review of KMK Tullamore Aspects	May 2018	OB

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2.2	ISO Standard	Achieve certification to the ISO 14001:2015 and 9001:2015 standards following NSAI Audit in May	Certification to ISO 14001:2015 and 9001:2015	June 2018	OB
2.3	Monitoring Reports	Graphing of all Internal Monitoring Report data	To track KMK's internal monitoring performance	September 2018	OB
2.4	Surface Water Quality	Reduction in surface water monitoring result exceedances	Less exceedances in surface water monitoring results compared to 2017 and overall improvement in surface water quality	December 2018	KMK Management OB
2.5	Energy	Implementation of drafted Energy Management Plan	Prevention of excess energy wastage and reduction in energy costs	December 2018	KMK Management OB

3 Occupational Health & Safety

No.	Aspect	Objectives	Target	Time Frame	Responsibility
3.1	Risk Assessments	To incorporate process audits into Risk Assessment review and completion	To ensure Risk Assessments are effectively prepared and audit process activities during review and completion.	May 2018	MF
3.2	Business Contingency	Implementation of drafted Business Continuity and Disaster Preparedness Plan	Preparedness for any adverse, unexpected or emergency situations at KMK	August 2018	MF OB
3.3	Accidents	Accident Prevention	Less than 15 non-reportable accidents and less than 5 reportable accidents.	December 2018	MF
3.4	Near Misses	Increased Near Miss Reporting	Reporting of at least 10 near misses in 2018	December 2018	MF
3.5	ISO Standard	Implementation of ISO 45001:2018 requirements	To meet the new ISO standard requirements for future NSAI Certification	December 2018	MF OB

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4 Quality					
No.	Aspect	Objectives	Target	Time Frame	Responsibility
4.1	Cage Quality	To improve cage quality and tracking	Improved cage quality to the satisfaction of customers and effective cage tracking	July 2018	KMK Management KM
4.2	Battery Manual	Review and update of the KMK Battery Manual	Suitably detailed Battery Manual for documentation of all battery activities	July 2018	OB
4.3	Customer Satisfaction Surveys	Creation and distribution of further customer satisfaction surveys	To distribute more customer satisfaction surveys in 2018 compared to 2017	December 2018	KM HW
4.4	Complaints	Reduction in complaints received	Less than 5 complaints from customers on KMK products/services	December 2018	KM
4.5	De-Pollution Target Monitoring	Improved de-pollution target monitoring results	Quarterly reports distributed to management on results and progress	December 2018	KMK Management OB

10.0 POLLUTANT RELEASE AND TRANSFER REGISTER – REPORT FOR PREVIOUS YEAR

The PRTR report is specifically generated every reporting year using the EPA Guidance to completing the PRTR excel based workbook. The content of the PRTR for KMK is quite minimal in that the waste activity only has to enter in data for: 1) general facility data 2) emissions to air and 3) onsite treatment and off-site transfers of waste. KMK also have obtained a confidentiality status in relation to off-site waste transfer outlets (recovery and disposal) from the EPA since 2010 and therefore is not required to give actual names and addresses of such final transfer facilities.

The full PRTR report for 2017 forms Appendix 3 of this AER report.

11.0 POLLUTANT RELEASE AND TRANSFER REGISTER – PROPOSAL FOR CURRENT YEAR

KMK's reportable PRTR is generally similar from year to year and emissions are confined to air media for the facility, hence there is no requirement to generate any actual PRTR proposal for the forthcoming year (which differs from IPPC licensees).

12.0 NOISE MONITORING REPORT SUMMARY

A summary of the noise monitoring for 2017 on-site is presented in Section 2.3 of this AER and the full noise monitoring report is in Appendix 1.

13.0 AMBIENT MONITORING REPORT SUMMARY

A summary of the ambient dust monitoring for 2017 on-site is presented in Section 2.1.

14.0 TANK AND PIPELINE TESTING AND INSPECTION REPORT

14.1 Bund Assessments.

A full assessment of the bunds storage structures was completed between September 2016 and February 2017. The full report was submitted separately to the EPA.

14.2 Pipeline inspections and testing

Integrity Testing of Storm and Foul underground lines and a CCTV survey of the E Network was carried out in 2017. Repairs are scheduled for April 2018.

15.0 REPORTED INCIDENTS SUMMARY

There were four Category 1 reportable incidents during 2017 at the facility, summarised below

Table 18: Incidents Report Table during 2017

EDEN Ref no	Incident reported date	Incident cause/description	Summary of Actions throughout the course of this incident history.	Incident Status
012491	17/07/17	Breach of ELV as follows for monitoring location A2-1 during composite period 12/05/17 to 14/07/17. Dust deposition result of 381.40 mg/m ² /day. ELV: 350 mg/m ² /day	The following action was taken by KMK Metals Recycling Ltd. in response to the breach of ELV for monitoring location A2-1: •Additional measures were taken to prevent recurring incidents which include the review of the company Environmental Impact Procedure to include the use of weekly weather reports to assist with existing management practices (dampening, sweeping) in order to help mitigate dust levels in periods of dry weather.	Closed
013600	02/01/18	Breach of ELV at F discharge outlet from installed FeCl Waste water treatment plant on 07/02/17. Ammonia as No result of 4.84mg/l. ELV: 1mg/l	Mollys (WWTS provider) made dosing adjustments to the program on the newly installed FeCl dosing unit, Further samples were taken on 12/01/18 for analysis to determine the effectiveness of dosing adjustments. Monthly Analysis of F continued.	Closed

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EDEN Ref no	Incident reported date	Incident cause/description	Summary of Actions throughout the course of this incident history.	Incident Status
013602	02/01/18	Breach of trigger action limit values at E- Storm water discharge. Arsenic result of 19.5ug/l. Trigger Action Value as of November 2017:3.66ug/l Iron result of 3.69ug/l. Trigger Action Value as of November 2017: 0.693ug/l.	An investigation by KMK was carried out on site and pipelines and manholes where jetted and de sludged.	
013604	02/01/18	Breach of ELV at storm water discharge point DX. Suspended solids result of 48.2mg/l. ELV: 35mg/l	An investigation by KMK was carried out on site and pipelines and manholes where jetted and de sludged.	

All incidents will continue to be addressed in a timely manner and reported using the EDEN online reporting portal system, as adopted by the EPA, and in accordance with Guidance and Waste Licence requirements on same.

16.0 COMPLAINTS SUMMARY

No complaints received at KMK in 2017.

17.0 ENERGY EFFICIENCY AUDIT REPORT SUMMARY

Please refer to Section 7 of this report for energy usage data and information.
Energy usage has remained similar from 2016 values.

18.0 VOLUME OF TRADE EFFLUENT/LEACHATE AND/OR CONTAMINATED STORMWATER PRODUCED AND VOLUME TRANSPORTED OFF-SITE

There is no trade effluent or leachate produced at KMK.

In terms of stormwater, this is discharged off-site via DX and E outlets. The site interceptors are routinely emptied and maintained throughout the year and the following off-site disposals of same occurred during 2017:

Table 19: Storm Water Transported Off-Site

No. of collection events	Ref	EWC	Description	Quantity (Kg)
6	DX & E Interceptors	13 05 08*	Interceptor associated drains contents, jetting & washing cleanings and silt removal	May: 4180 June: 3720 October: 812 November: 8580 November: 8360 Total: 25652

19.0 REPORT ON THE ASSESSMENT OF THE EFFICIENCY OF USE OF RAW MATERIALS IN PROCESSES AND THE REDUCTION IN WASTE GENERATED.

The raw materials used at KMK for the recycling process are metallic and WEEE waste inputs. Please refer to Section 6 previously for information relating to the recovery efficiency of KMK's activities.

KMK does not landfill; all residual wastes are sent for recycling (for example Timber Waste and Dry Recyclables) or energy recovery (only those wastes which are not clean / dry recyclables and which are unsuitable for recycling).

20.0 REPORT ON PROGRESS MADE AND PROPOSALS BEING DEVELOPED TO MINIMISE WATER DEMAND AND THE VOLUME OF TRADE EFFLUENT DISCHARGE.

This section is not applicable to KMK as there is no trade effluent discharge from the facility in 2016.

21.0 DEVELOPMENT / INFRASTRUCTURAL WORKS SUMMARY (COMPLETED IN PREVIOUS YEAR OR PREPARED FOR CURRENT YEAR).

Any relevant such works are already presented Section 9 of this report.

22.0 REPORT ON THE FINANCIAL PROVISION MADE UNDER THIS LICENCE, MANAGEMENT AND STAFFING STRUCTURE OF THE FACILITY, AND A PROGRAMME FOR PUBLIC INFORMATION.

- Financial Provision: KMK confirms that adequate financial provisions are in place for all proposed environmental improvements and controls for the forthcoming year and thereafter. In particular, KMK has ‘Pollution Liability’ of €6.5 million included in their company insurance document. This is more than adequate to cover any pollution incidence of environmental significance as requested in the Environmental Liability Directive.

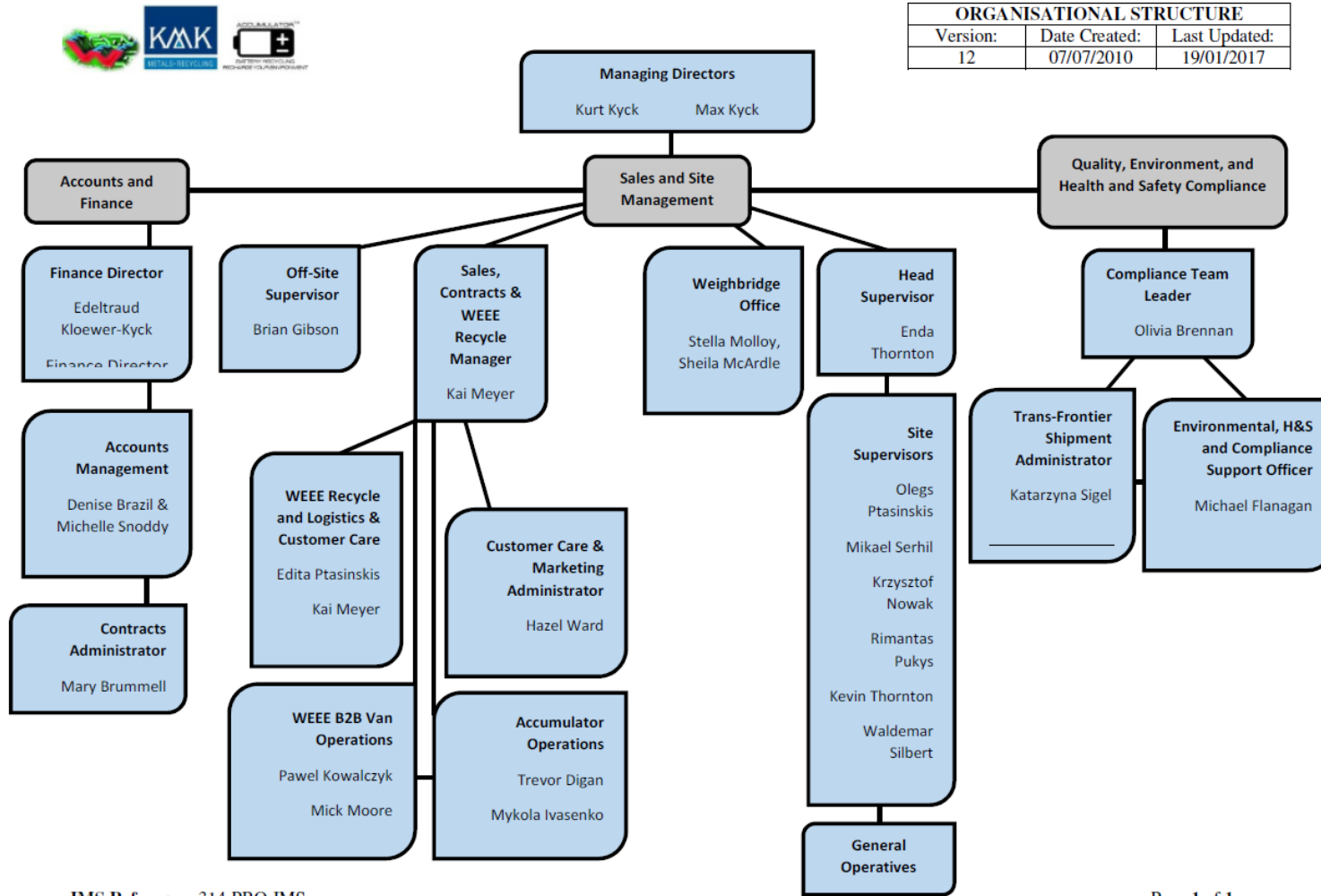
In addition, the operator has prepared a Decommissioning Management Plan (DMP) in accordance with Condition 10 of the licence. The methodology for the development of the report follows EPA guidance and it has been prepared by an independent and appropriately qualified consultant.

The total closure and restoration/aftercare costs have been calculate as €173,355 (including contingency and adjusted for inflation). KMK has made the necessary financial provision to cover this by means of a bond previously arranged under separate cover to the EPA.

- Programme for Public Information
 - KMK provides information about the facility opening hours, website address and contact details on the Facility Notice located at the main gates of the facility.
 - KMK provides a website: www.kmk.ie (complete with ‘Audit Us’ section and videos of waste management processes) to make relevant information readily available for interested parties. The website is updated by company employees as and when documents change, thanks to its user-friendly interface.
 - KMK maintains documents and records on file within the company IMS (Integrated Management System) as necessary for Waste Licence Compliance (W0113-04) and ISO 14001
 - Daffodil Day at KMK: This is an annual fundraising event where KMK grow Daffodils at the back of the facility, cut and sell them. All proceeds go to the Irish Cancer Society.
 - KMK has a social media presence on Facebook, Instagram and Twitter: www.facebook.com/kmk.metals/, <https://www.instagram.com/kmkmetals/>, www.twitter.com/kmkmetals?lang=en where information about the facility and current events can be followed.
 - Concern Worldwide's annual fast: KMK staff participate annually in this fundraising drive.
 - Ploughing Championships: KMK has a presence annually at the National Ploughing Championships.
 - KMK is a sponsor of the Lions Club.

- Tullamore Tractor Run 2017: KMK proudly sponsored the Tullamore Tractor Run in Aid of Dóchas Offaly Cancer Support Group.
- Christmas Jumper Day: KMK raised €125 in Dec 2017 for LauraLynn childrens charity.
- Christmas Lights Charity Appeal: KMK provided free recycling of old & broken Christmas Lights at the following locations: Bridge Shopping Centre, Tullamore and also Harbour Place Shopping Centre, Mullingar.
- Tullamore Christmas Lights: KMK annually donate towards the cost of Tullamore towns' festive lighting display- donating €500 in 2017.
- KMK advertises in the locally published Tullamore Annual.
- Back at time of E-Voting machines, KMK donated €10,000 to Barrettstown.
- KMK have sponsored a Fashion Show annually in Drogheda annually for approx. the last 20 years.
- GOAL Duvet day – KMK have participated last year and are participating again this year in a bid to raise funds while raffling a day off among staff.
- Goal – Jersey Day, KMK participate annually during October in the GOAL football jersey day to raise funds.
- KMK participate annually in the Pink Lunch during November for the Irish Cancer Society to raise funds for this very worthwhile charity.
- KMK also support the Rotary Club in Drogheda annually, especially the meals-on-wheels for those who require home deliveries.
- KMK raised €4,800 at the recent collection day in Tullamore in sponsorship of Cappincur GAA Club.
- KMK supported Junk Kouture 2017 by harvesting and supplying raw materials for a student entering this competition.
- KMK have proudly sponsored The Pieta Challenge 2017 – the climb to the top of Mount Kilimanjaro, Africa!

KMK Metals Recycling Ltd Organisational Chart



IMS Reference: 314-PRO-IMS

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23.0 REVIEW OF DECOMMISSIONING PLAN

QED Engineering has prepared a Decommissioning Management Plan (DMP) for the site in accordance with Condition 10 of the licence. The methodology for the development of the report follows EPA guidance and it has been prepared by an independent and appropriately qualified consultant. The KMK facility decommissioning plan has fully incorporated all factors which may arise in order to achieve successful clean closure. The guarantee bond currently in place is sufficient to facilitate any predicted and unpredicted costs which may be incurred during and post closure at the KMK facility.

24.0 ENVIRONMENTAL LIABILITIES RISK ASSESSMENT

Condition 12.2.2 of the waste licence states that: *‘The licensee shall arrange for the completion, by an independent and appropriate qualified consultant, of a comprehensive and fully costed Environmental Liabilities Risk Assessment (ELRA) which addresses the liabilities from past and present activities. The assessment shall include those liabilities and costs identified in Condition 10 for execution of the DMP. A report on this assessment shall be submitted to the Agency for agreement within twelve months of date of grant of this license. The ELRA shall be reviewed as necessary to reflect any significant change on site, and in any case every 3 years following initial agreement. Review results are to be notified as part of the AER.*

A full Environmental Liabilities Risk Assessment (ELRA) was prepared in 2017 and submitted to the EPA.

25.0 DEVELOPMENT WORKS

25.1 Development works in 2017

Please refer to Section 9 for an update on all scheduled development works.

An advanced phosphorus removal system was added to the facility Waste Water Treatment System in September/October 2017.

Approval was sought from the EPA under Condition 1.4 of the Industrial Emissions Licence W0113-04 for alterations to activity due to a material change in the abatement/treatment systems at the site. The EPA approved this request on 17/08/2017 subject to a number of conditions.

It was anticipated this unit, installed after the sand filter, would bring discharged Total Phosphorus concentrations to <1 mg/l. Recent results have shown this to be the case and monitoring continues to be conducted in accordance with EPA requirements.

25.2 Proposed Development for 2018

Please refer to Section 9 for a schedule of all planned development works.

26.0 OTHER ITEMS

There are no further items included in this Annual Environmental Report.

APPENDICES

APPENDIX 1

Annual Noise Monitoring Report 2017

Noise Survey Report 2017

for

KMK Metals Recycling Ltd
Cappincur Industrial Estate
Daingean Road
Tullamore
Co Offaly

Waste Licence No. W0113-04



by

Q.E.D. Engineering Ltd

M-TEK Building I
Armagh Road
Monaghan
Tel: 047 72060
Fax: 047 72060

August 2017

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1. Introduction

Noise levels were measured at KMK Metals Recycling Ltd, Cappincur Industrial Estate, Daingean Road, Tullamore, Co Offaly on the 3rd and 04th of August and the 5th of September 2017 by Q.E.D. Engineering Ltd, as part of the company's Waste Licence No. W0113-04, Condition 6.11.1.

Daytime, evening time and night time noise levels were measured at four boundary locations on site. A map showing the site boundary locations is provided in Appendix 1. All monitoring locations were defined in the licence W0113-04 in Condition 6.11.1.

Schedule B.3 Noise Emissions tabulates the following limits:

Daytime dB L _{Ar,T} (30 minutes)	Evening time dB L _{Ar,T} (30 minutes)	Night-time dB L _{Ar,T} (15-30 minutes)
55	50	45 ^{Note 1}

Note 1: There shall be no clearly audible tonal component or impulsive component in the noise emission from the activity at any noise-sensitive location.

Daytime noise monitoring took place on 04/08/17, between 10:45 – 14:00, evening monitoring took place on 03/08/17 between 20:35 – 21:30 and night time monitoring took place on 03/08/17 – 04/08/17 and 05/09/17 between 01:45 – 02:50.

2. Methodology and Instrumentation

Noise monitoring and reporting was carried out by Donal Beagan, BSc and Patricia Murtagh, BSc, MSc, AMIOA of Q.E.D Engineering Limited, following the EPA 'Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4)'.

Noise monitoring was carried out using two noise meters as follows;

1. Rion NA-27 Real Time 1/1, 1/3 Octave Band Logging SLM, Serial No. 00380685. This meter was last calibrated on 25/5/16.
2. NTi Audio XL2 Sound Level Meter, Serial No. A2A-12097-E0 with microphone NTi Audio M2230, Serial No. 6840 and Pre-amplifier MA220. The instrument was calibrated on 30/1/2017.

A GA607 Dual Level Calibrator, Serial No. 036023 was used to calibrate both sound level meters and this was also last calibrated on 13/06/17.

Both instruments were calibrated before measurements to 94dB and checked after measurement and were found to be satisfactory. Certificates of calibration for all instruments are provided at the end of the report.

Weather conditions during daytime monitoring were calm, cool and sunny with scattered rain showers. The average wind speed was 0.6 m/s. Weather conditions during the evening time monitoring were calm and cool with a slight breeze. The average wind speed was 1.0 m/s. Conditions for the night time monitoring were calm and cool with a slight

breeze and an average wind speed of 1.3 m/s. The wind direction during daytime monitoring was from the south, for the evening time monitoring the wind direction was from the south west and during night-time monitoring from the north west. Weather conditions were recorded during the survey using a portable Kestrel 3000 Weather Meter (Serial No. 1637619). A standard windshield was used on both instruments during the survey.

Measurement periods were appropriate to establish a typical noise level reading at each location. For boundary noise locations the measurement duration was 30 minutes with 3 sampling periods at each location for daytime, 30 minutes with 1 sampling period at each location for evening monitoring and 15 minutes with 2 sampling periods at each location for night-time monitoring as per the recommended minimum survey duration. In addition a 1/3-octave reading was taken at each boundary noise location.

Monitoring results are given in L_{eq} i.e. continuous equivalent sound level. In addition, the L_{A90} and L_{A10} are also given. L_{A90} is the noise level exceeded for 90% of the measurement time and the L_{A10} is the noise level exceeded for 10% of the measurement time. The L_{A90} is generally indicative of the background noise level. It is generally lower than the average noise - the L_{eq} . The L_{A10} is generally indicative of intermittent noise emissions and is generally higher than the L_{Aeq} . A small difference in L_{A10} , L_{Aeq} and L_{A90} will indicate a relatively constant noise emission (or a lack of intermittent noise). Therefore, the greater the difference between the L_{A10} , L_{Aeq} and L_{A90} , this indicates intermittent noise such as traffic.

3. Results

3.1 Boundary Noise Measurements

Noise measurements were taken at four boundary locations during daytime, evening and night time hours, to determine the general ambient noise level emanating from the site. A summary of results is presented in the following table.

Ref. No.	Day / Night	Time	L _{Aeq} dBA	L _{A10} dBA	L _{A90} dBA	Tonal/ Impulsive	Comments
NE001	Day	10.43 – 11.13	57	56	46	No	Lorries unloading and exiting site. Forklift dropping WEEE into skip. Loading of shredded material. Reversing beepers. Forklift operating at adjoining car dismantlers.
		11.13 – 11.43	66	70	49		
		11.43 – 12.13	62	66	48		
		Arithmetic Average Day	62	64	48		
	Evening	20.39 – 21.09	64	67	50	No	Forklift loading truck and trucks exiting site. Some activity from E yard. Dumping of material at bottom of E yard. Road noise from by-pass and main Ballinagar road continuous.
	Night	01.44 – 01.59	37	40	30	No	No site noise audible with the exception of noise from a moving security camera. Traffic noise audible on by-pass road and main Ballinagar road.
		01.59 – 02.14	38	40	32		
		Arithmetic Average Night	38	40	31		
	NE002	Day	10.48 – 11.18	65	68	58	No
11.19 – 11.49			65	68	59		
11.49 – 12.19			69	72	59		
Arithmetic Average Day			66	69	59		
Evening		21.14 – 21.44	58	60	53	No	Forklifts moving material, reversing beepers. WEEE handling inside D-Hanger audible. Pushing material in D Hanger.
Night		01.44 – 02.14	39	42	35	No	No site noise audible. Traffic noise audible on by-pass road and main Ballinagar road.
		02.14 – 02.44	39	41	34		
		Arithmetic Average Night	39	42	35		

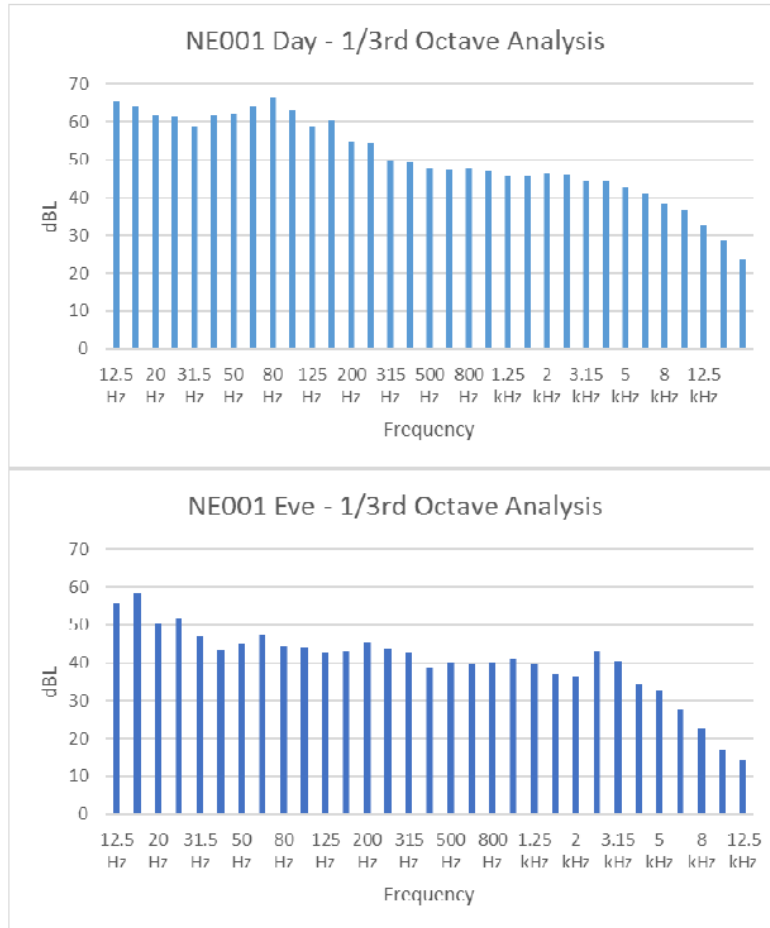
Ref. No.	Day / Night	Time	L _{Aeq} dBA	L _{A10} dBA	L _{A90} dBA	Tonal/ Impulsive	Comments
NE003	Day	12.16 – 12.46	75	77	72	Yes	Processing and handling of WEEE in D-Hanger, moving forklifts and reverse alarms. Noise from extractor, dust cyclone constant. Noise from bypass traffic audible.
		12.46 – 13.16	74	75	72		
		13.16 – 13.46	75	76	71		
		Arithmetic Average Day	75	76	72		
	Evening	21.18 – 21.48	63	66	51	Yes	Processing and handling of WEEE in D-Hanger, moving forklifts and reverse alarms. Noise from extractor, dust cyclone constant. Noise from bypass traffic audible.
	Night	2.17 - 2.32	47	50	36	No	Noise from traffic on by-pass. Noise from alarm (beep) within building audible.
		2.32 – 2.47	48	52	33		
Arithmetic Average Night		48	51	35			
NE004	Day	12.22 – 12.52	61	63	57	No	Processing and handling of WEEE in D-Hanger, moving forklifts and reverse alarms. Off-site traffic noise audible. Steam engines moving on railway line. Noise from traffic on by-pass.
		12.52 – 13.22	61	63	59		
		13.22 - 13.52	60	61	57		
		Arithmetic Average Day	61	62	58		
	Evening	21.11 – 21.41	68	71	59	No	Processing and handling of WEEE in D-Hanger, moving forklifts and reverse alarms. Sweeper cleaning yard.
	Night	02.22 – 02.37	42	45	35	No	Noise from traffic on by-pass. No site noise audible.
		02.37 – 02.52	42	46	35		
Arithmetic Average Night		42	46	35			

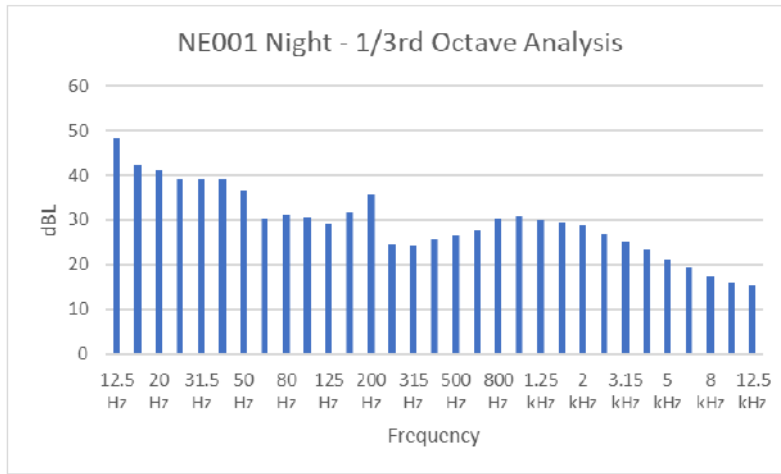
3.2 Tonal Noise Assessment of Boundary Noise Locations

Hz	NE001			NE002		
	Day	Evening	Night	Day	Evening	Night
12.5 Hz	66	56	48	55	52	41
16 Hz	64	58	42	56	65	38
20 Hz	62	50	41	57	53	38
25 Hz	61	52	39	65	61	37
31.5 Hz	59	47	39	63	61	35
40 Hz	62	44	39	65	56	32
50 Hz	62	45	36	70	58	32
63 Hz	64	48	30	62	56	30
80 Hz	67	44	31	53	54	28
100 Hz	63	44	31	61	51	26
125 Hz	59	43	29	60	50	26
160 Hz	61	43	32	61	51	26
200 Hz	55	45	36	59	50	28
250 Hz	54	44	25	60	51	27
315 Hz	50	43	24	55	50	27
400 Hz	50	39	26	57	49	29
500 Hz	48	40	27	56	49	31
630 Hz	48	40	28	55	49	30
800 Hz	48	40	30	54	49	32
1 kHz	47	41	31	54	48	33
1.25 kHz	46	40	30	54	48	32
1.6 kHz	46	37	30	53	47	32
2 kHz	46	36	29	53	46	32
2.5 kHz	46	43	27	54	46	31
3.15 kHz	44	40	25	52	43	30
4 kHz	45	34	23	50	41	30
5 kHz	43	33	21	48	39	29
6.3 kHz	41	28	19	46	37	27
8 kHz	39	23	18	46	36	25
10 kHz	37	17	16	43	32	24
12.5 kHz	33	14	16	33	22	22

Hz	NE003			NE004		
	Day	Evening	Night	Day	Evening	Night
12.5 Hz	67	57	44	59	50	46
16 Hz	69	71	42	59	56	41
20 Hz	67	57	41	62	59	38
25 Hz	76	65	40	64	59	39
31.5 Hz	79	69	39	68	73	37
40 Hz	78	64	40	65	65	34
50 Hz	76	60	38	66	55	35
63 Hz	73	62	36	65	70	28
80 Hz	70	60	42	63	63	26
100 Hz	71	59	39	60	60	27
125 Hz	68	54	31	55	48	29
160 Hz	67	54	29	54	46	28
200 Hz	64	51	31	54	47	36
250 Hz	63	50	31	56	47	34
315 Hz	62	48	33	53	45	34
400 Hz	61	48	36	52	44	35
500 Hz	62	49	33	49	47	36
630 Hz	60	49	36	50	48	35
800 Hz	60	52	41	51	53	33
1 kHz	62	53	41	53	55	33
1.25 kHz	73	56	37	51	51	34
1.6 kHz	59	48	35	48	50	35
2 kHz	57	46	33	44	46	35
2.5 kHz	62	49	34	40	47	34
3.15 kHz	64	59	34	37	40	33
4 kHz	53	39	28	35	37	33
5 kHz	49	35	26	35	35	32
6.3 kHz	51	35	26	33	32	30
8 kHz	49	32	27	31	29	28
10 kHz	44	29	22	28	25	24
12.5 kHz	38	28	21	25	21	20

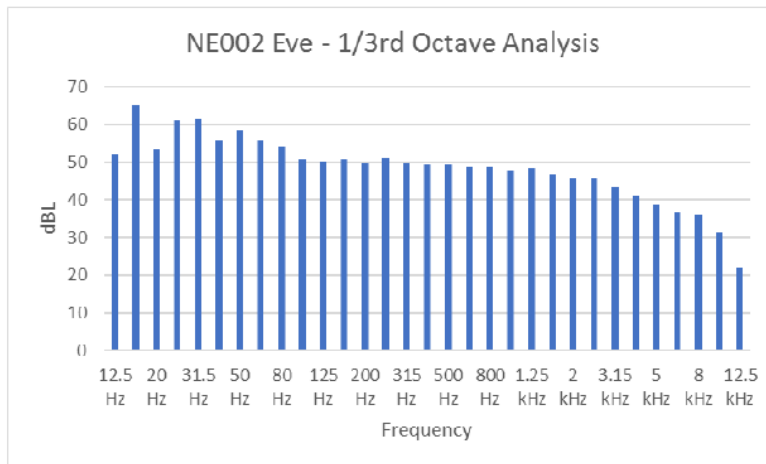
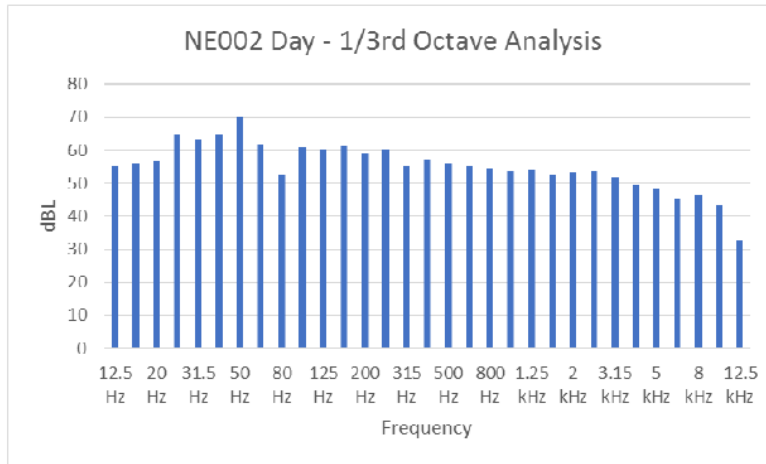
Tonal Noise Assessment NE001

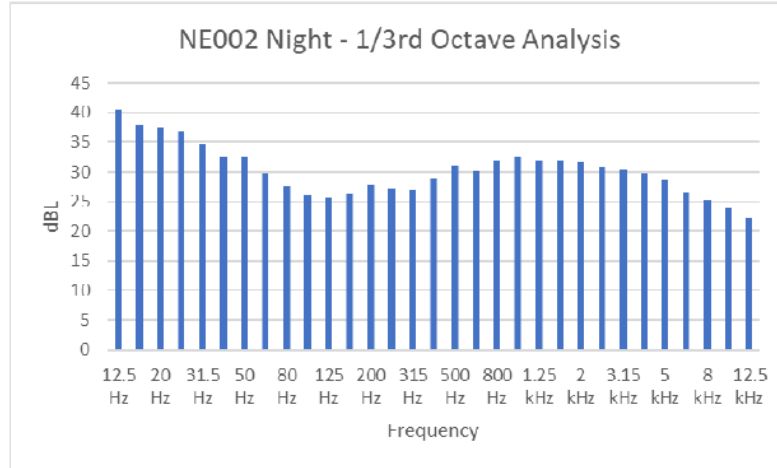




Location	NE001		
	Day	Evening	Night
Period	10.43	20.38	02.19
Time	10.43	20.38	02.19
Suspected 1/3 octave band frequency of tone, Hz	None	None	None
Magnitude of tone dB Leq	-	-	-
Is the magnitude greater than the threshold of hearing?	-	-	-
Level change from preceding 1/3 octave band, dB Leq	-	-	-
Level change from following 1/3 octave band, dB Leq	-	-	-
Are the level changes greater than or equal to; 15dB (low frequency), 8dB (middle frequency), 5dB (high frequency)	-	-	-
Conclusion	No tone present	No tone present	No tone Present

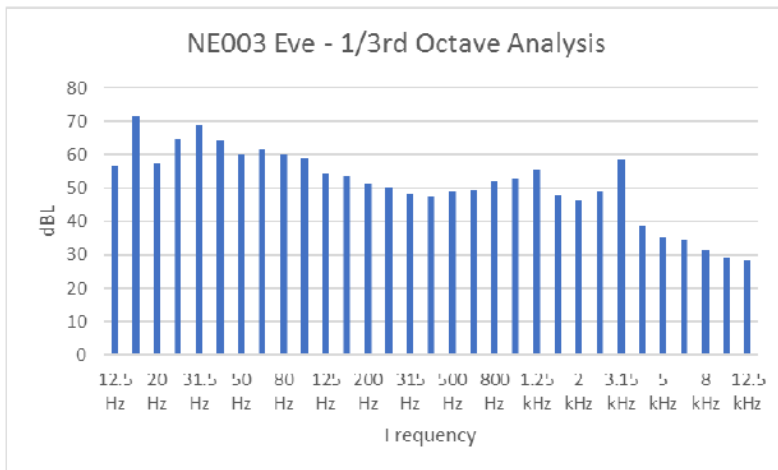
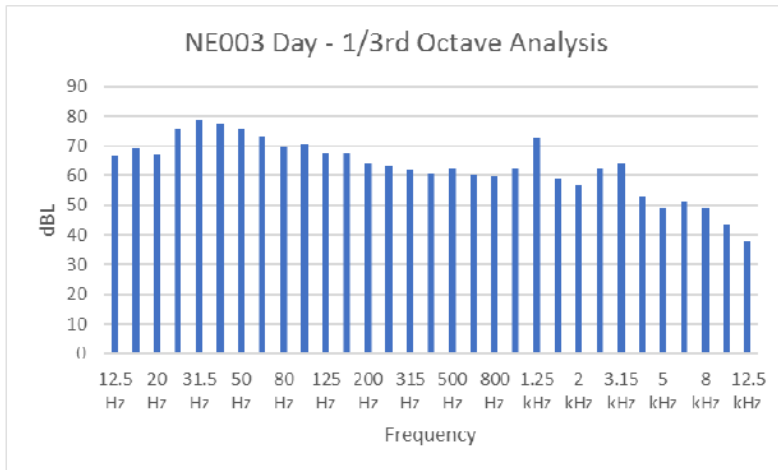
Tonal Noise Assessment NE002

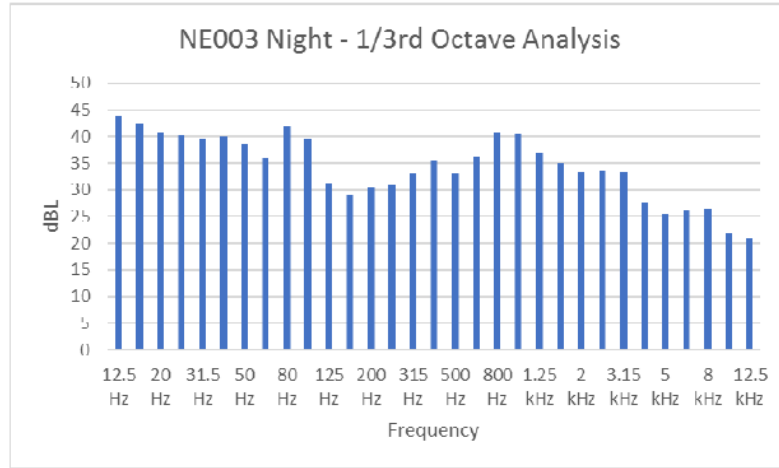




Location	NE002		
	Day	Evening	Night
Period	12.20	20.44	02.22
Time	12.20	20.44	02.22
Suspected 1/3 octave band frequency of tone, Hz	None	None	None
Magnitude of tone dB Leq	-	-	-
Is the magnitude greater than the threshold of hearing?	-	-	-
Level change from preceding 1/3 octave band, dB Leq	-	-	-
Level change from following 1/3 octave band, dB Leq	-	-	-
Are the level changes greater than or equal to; 15dB (low frequency), 8dB (middle frequency), 5dB (high frequency)	-	-	-
Conclusion	No tone present	No tone present	No tone present

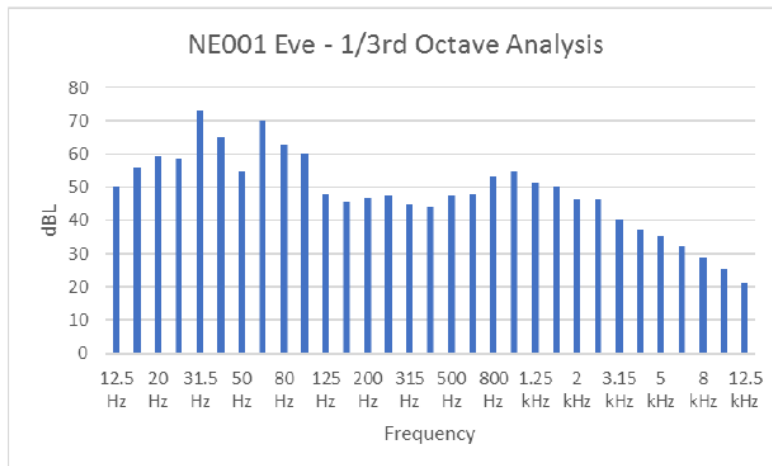
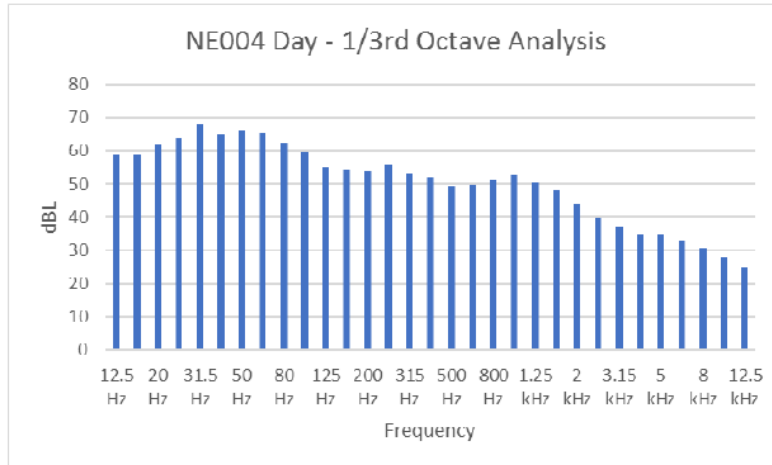
Tonal Noise Assessment NE003

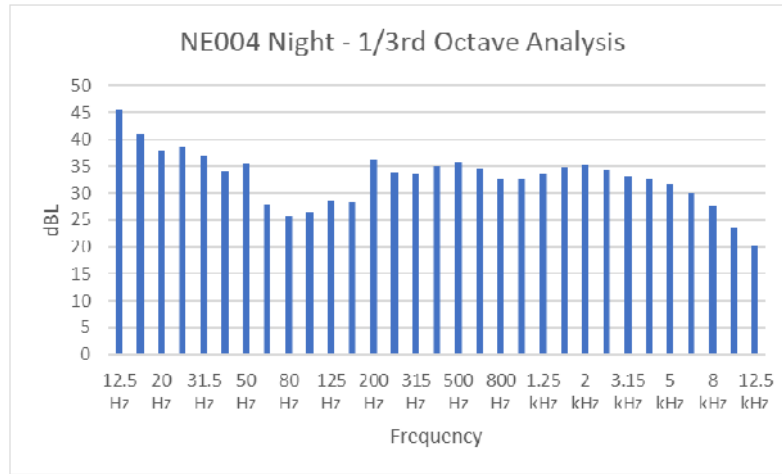




Location	NE003		
	Day	Evening	Night
Period	12.16	21.18	02.17
Time	12.16	21.18	02.17
Suspected 1/3 octave band frequency of tone, Hz	1.25kHz	3.15kHz	None
Magnitude of tone dB Leq	73 dB	59dB	-
Is the magnitude greater than the threshold of hearing?	-	-	-
Level change from preceding 1/3 octave band, dB Leq	11	10	-
Level change from following 1/3 octave band, dB Leq	14	10	-
Are the level changes greater than or equal to; 15dB (low frequency), 8dB (middle frequency), 5dB (high frequency)	>5dB	>5dB	-
Conclusion	High frequency tone present	High frequency tone present	No tone present

Tonal Noise Assessment NE004





Location	NE004		
	Day	Evening	Night
Period	13.53	21.41	02.24
Suspected 1/3 octave band frequency of tone, Hz	None	None	None
Magnitude of tone dB Leq	-	-	-
Is the magnitude greater than the threshold of hearing?	-	-	-
Level change from preceding 1/3 octave band, dB Leq	-	-	-
Level change from following 1/3 octave band, dB Leq	-	-	-
Are the level changes greater than or equal to; 15dB (low frequency), 8dB (middle frequency), 5dB (high frequency)	-	-	-
Conclusion	No tone present	No tone present	No tone present

4. Discussion

The site is located within the Cappincur Industrial Estate, Tullamore. This industrial estate includes warehousing, commercial/industrial and waste management operations with Tullamore Steel, Midland Farm Machinery, Modified Motors, Ravenhill Couriers, Dunne & Son solid fuel merchant and Condron Car Dismantlers and a number of other businesses, all located within a relatively close proximity to the KMK site. All of these businesses have noise associated with their activities and this results in a cumulative noise impact within the industrial estate. KMK operates two shifts at this site, 6am-2pm and 2pm -10pm, so there is no site noise outside these hours.

NE001

NE001 located on the northern boundary had an average L_{Aeq} reading of 62dBA during the day. The difference of 16dBA between the average L_{A10} reading of 64dBA and the average L_{A90} reading of 48dBA indicates the presence of a lot of intermittent noise at this location, caused by on-site and off-site traffic, the handling of WEEE on-site and the operation of a power washer at Ravenhill couriers adjacent to this monitoring location.

This location had an average L_{Aeq} reading of 64dBA during the evening. The difference of 17dBA between the average L_{A10} reading of 67dBA and the average L_{A90} reading of 50dBA indicates the presence of a lot of intermittent noise at this location, caused by vehicle movement in E yard/ dumping of material at the bottom of E Yard near this monitoring location and by road traffic noise from the by-pass and the main Ballinagar road.

This location had an average L_{Aeq} reading of 38dBA during the night. The difference of 9dBA between the average L_{A10} reading of 40dBA and the average L_{A90} reading of 31dBA indicates the presence of some intermittent noise at this location, caused by road traffic noise from the by-pass and the main Ballinagar road.

No impulsive or tonal noise from the factory was audible at this location.

NE002

NE002 located at the eastern boundary of the site had an average L_{Aeq} reading of 66dBA during the day. The difference of 10dBA between the average L_{A10} reading of 69dBA and the average L_{A90} reading of 59dBA indicates the presence of a lot of intermittent noise at this location, caused by the movement of material by forklift 5metres from this monitoring location and from general WEEE handling and dismantling.

This location had an average L_{Aeq} reading of 58dBA during the evening. The difference of 7dBA between the average L_{A10} reading of 60dBA and the average L_{A90} reading of 53dBA indicates the presence of a lot of intermittent noise at this location, again caused by a forklift moving material and from WEEE handling inside D-Hanger.

This location had an average L_{Aeq} reading of 39dBA during the night. The difference of 7dBA between the average L_{A10} reading of 42dBA and the average L_{A90} reading of 35dBA indicates the presence of some intermittent noise at this location, caused by road traffic noise from the by-pass and the main Ballinagar road.

No impulsive or tonal noise from the factory was audible at this location.

NE003

NE003 located at the southern boundary behind the D-Hanger building had an average L_{Aeq} reading of 75dBA during the day. The difference of 4dBA between the average L_{A10} reading of 76dBA and the average L_{A90} reading of 72dBA indicates the presence of some intermittent noise at this location, caused by the processing and handling of WEEE in D-Hanger and from road traffic on the by-pass.

This location had an average L_{Aeq} reading of 63dBA during the evening. The difference of 15dBA between the average L_{A10} reading of 66dBA and the average L_{A90} reading of 51dBA indicates the presence of a lot of intermittent noise at this location, again caused by road traffic on the by-pass.

This location had an average L_{Aeq} reading of 48dBA during the night. The difference of 16dBA between the average L_{A10} reading of 51dBA and the average L_{A90} reading of 35dBA indicates the presence of a lot of intermittent noise at this location, caused by road traffic noise from the by-pass.

Tonal noise in the high frequency band was detected from an extraction unit near this location during day and evening time surveys.

No impulsive noise was audible at this location.

NE004

NE004 located on the western boundary of the site had an average L_{Aeq} reading of 61dBA during the day. The difference of 4dBA between the average L_{A10} reading of 62dBA and the average L_{A90} reading of 58dBA indicates some intermittent noise at this location, caused by the processing and handling of WEEE in D-Hanger, steam engines on the railway line and road traffic noise from the by-pass and the main Ballinagar road.

This location had an average L_{Aeq} reading of 68dBA during the evening. The difference of 12dBA between the average L_{A10} reading of 71dBA and the average L_{A90} reading of 59dBA indicates the presence of a lot of intermittent noise at this location, caused by on site activities and road traffic on the by-pass.

This location had an average L_{Aeq} reading of 42dBA during the night. The difference of 11dBA between the average L_{A10} reading of 46dBA and the average L_{A90} reading of 35dBA indicates the presence of a lot of intermittent noise at this location, caused by road traffic noise from the by-pass and the main Ballinagar road.

No impulsive or tonal noise from the factory was audible at this location.

5. Conclusion

The level of noise at the site boundary of the facility is relatively high during day and evening times. All noise readings at boundary noise locations exceeded the licence requirements for daytime and evening time noise levels. All night-time noise readings at boundary noise locations were below the licence requirements, with the exception of boundary noise location NE003, at which traffic noise from the by-pass was the prominent noise source and no site noise was audible.

The site is located within the Cappincur Industrial Estate, Tullamore, which includes warehousing, commercial/industrial and waste management operations. The site is also located along the main Ballinagar road to the north of the site and the National N52 by-pass road of Tullamore, located to the west and south west of the site. There are no notable housing estates or noise sensitive locations within close proximity to the industrial estate. The closest dwelling house to the facility is located 200m from the northern boundary of the site. Dwelling houses in the area will experience noise from traffic movements on the local roads leading to Tullamore town and on the National N52 by-pass road, and from vehicle movements associated with the Cappincur Industrial Estate.

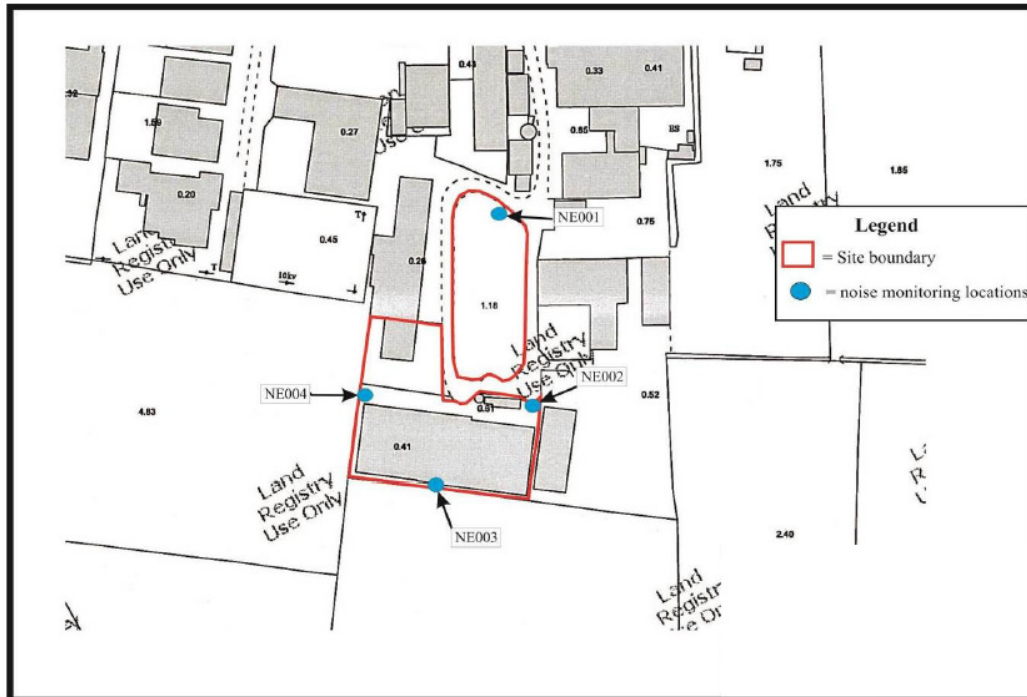
The exceedances at boundary locations are not likely to be experienced at any noise sensitive location near the site due to noise dissipation over increasing distances and mitigation as a result of buildings acting as noise reduction barriers. For point sources it is known that a doubling of the distance away from the source results in a 6 dBA fall in noise level. An example of this is shown in the following table:

Distance (m)	Noise Level (dB)
5	65
10	59
20	53
40	47
80	41
160	35

The 1/3 Octave Noise Readings taken at Boundary Noise Locations and subjective determinations made on the site during monitoring show that there was tonal noise at NE003 during the day and evening time survey due to high frequency noise being emitted from an extraction unit in operation near the location. This location is on the southern boundary of the site which is furthest from the nearest dwelling house, 200m from the northern boundary. There was no tonal noise detected at NE0001 on the northern boundary of the site during day or evening time surveys. Consequently, tonal noise from NE003 is not likely to be experienced at any noise sensitive location near the site.

There was no impulsive noise from the factory audible at the boundary noise locations.

Appendix 1. KMK Metals Recycling Map showing Boundary Noise Monitoring Locations



Appendix 2: Noise Meter Calibration Certificates

Certificate of Calibration NTI Meter & Microphone



Manufacturer Calibration Certificate

The following instrument has been tested and calibrated to the manufacturer specifications.
 The calibration is traceable in accordance with ISO/IEC 17025 covering all instrument functions.

- Device Type: **XL2 Audio and Acoustic Analyzer**
- Serial Number: **A2A-12097-E0**

- Certificate Issued: **30 January 2017**
- Certificate Number: **42765-A2A-12097-E0**

- Results: **PASSED**
 (for detailed report see next page)

Tested by: **M. Frick**

Signature:

Stamp:

NTI-Audio AG
 Im alten Riet 102
 LI -9494 Schaan
www.nti-audio.com



Manufacturer Calibration Certificate

The following instrument has been tested and calibrated to the manufacturer specifications.
The calibration is traceable in accordance with ISO/IEC 17025 covering all instrument functions.

- Device Type: **M2230 Measurement Microphone**
consisting of
MA220 Serial Number: 6480
Capsule Serial Number: 9562

- Certificate Issued: **30 January 2017**
- Certificate Number: **42765-6480-M2230**

- Results: **PASSED**
(for detailed report see next page)

Tested by: M.Frick

Signature:

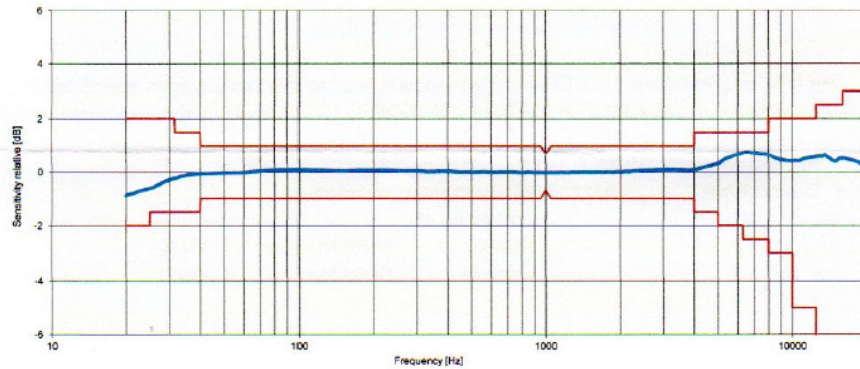
Stamp:


NTI Audio AG
Im alten Riet 102
LI - 9494 Schaan
www.nti-audio.com

Date: 30 January 2017
Calibration of: M2230 Measurement Microphone
MA220 Serial Number: 6480
Capsule Serial Number: 9562

• Detailed Calibration Test Results:

Frequency response: Class 1 acc. IEC 61672



	actual	calibration uncertainty ¹
Sensitivity @ 1 kHz, 114 dB SPL	40.4 mV/Pa	±2.85%

• Test Conditions: Temperature: 24.7 °C ±0.5 °C
Relative Humidity: 29.6 % ±2%
Air Pressure: 95.39 kPa ±0.25 kPa

• Calibration Equipment Used:

- Norsonic Sound Calibrator, Type 1251, S/No. 30930
Last Calibration: 05.12.2016, Next Calibration: 05.12.2018
Calibrated by Metas, Switzerland
- NTi Audio FX100, S/No. 11094
Last Calibration: 16.08.2016, Next Calibration: 16.08.2017
Calibrated by NTi Audio meeting product specifications
- MTG MV203, S/No. 0630 / Mic Capsule, MK221 S./No. 16502
Last Calibration: 30.11.2015, Next Calibration: 30.11.2017
Calibrated by MTG, Germany

¹ The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with the regulations of the GUM.

Certificate of Calibration for Rion NA-27 Noise Meter

CERTIFICATE OF CALIBRATION

Issued By BSRIA Instrument Solutions
Date of Issue 25 May 2016

Certificate Number
STD81873

Page 1 of 2 Pages



Old Bracknell Lane West, Bracknell,
Berkshire, RG12 7AH, United Kingdom
T: +44 (0) 1344 459314 F: +44 (0) 1344 465556
E: info@bis.fm W: www.bis.fm



Approved Signatory

Customer : QED Engineering Ltd

Date Received : 19 May 2016

Instrument - System ID : 101868
Description : Sound Level Meter, Type 1
Manufacturer : Rion
Model Number : NA27
Serial Number : 00380685
Procedure Version : NO149V1

Environmental Conditions

Temperature : 20°C +/- 4°C
Relative Humidity : 50% +/- 20%
Mains Voltage : 240V +/- 10V
Mains Frequency : 50Hz +/- 1Hz

Comments

Calibration tolerances quoted are those as stated in BS EN 61672-1:2003
Unless otherwise stated all readings are made at 1kHz.
Calibration performed acoustically.
Preamp Serial Number 73804.
Barometric Pressure= 1008.8 mbar. Ambient Temperature = 21.5 °C

Traceability Information

Instrument description	Serial number	Certificate number	Cal. Date	Cal. Period
B&K 4226 Calibrator (Danak 307)	1551580	CDK1500895	03/02/2015	104

Calibrated By : D. M. Tovey

Date of Calibration : 25 May 2016

This certificate provides traceability of measurement to recognised National Standards, and to the units of measurement realised at the National Physical Laboratory or other recognised National Standards laboratories.
Copyright of this certificate is owned by the issuing laboratory and may not be reproduced except with the prior written approval of the issuing laboratory.
This certificate complies with the requirements of BS EN ISO 10012:2003.

CERTIFICATE OF CALIBRATION

Certificate Number
STD81873

Page 2 of 2 Pages

Test Title	Tolerance	Applied Value	Reading	% Of Spec.
Acoustic Pre Calibration Check at 1kHz, 40 to 110dB Range, SLM Mode.				
As Found	1.1dB	104.0dB	104.2dB	18%
After Adjusted	1.1dB	104.0dB	104.0dB	0%
CALIBRATION RESULTS				
SLM Filter Mode, 1kHz, Fast Response.				
Range, 30 to 100dB	1.1dB	94.0dB	94.2dB	18%
Range, 40 to 110dB	1.1dB	94.0dB	94.0dB	0%
	1.1dB	104.0dB	104.0dB	0%
Range, 50 to 120dB	1.1dB	94.0dB	94.0dB	0%
	1.1dB	104.0dB	104.0dB	0%
	1.1dB	114.0dB	114.0dB	0%
Range, 60 to 130dB	1.1dB	114.0dB	113.9dB	9%
Range, 70 to 140dB	1.1dB	114.0dB	114.0dB	0%
A level of 94dB, at the frequency shown, was applied to the instrument and its dB(A) weighted response recorded.				
94dB @ 125Hz	1.5dB	77.9dB	77.9dB	0%
94dB @ 1kHz	1.1dB	94.0dB	94.0dB	0%
94dB @ 4kHz	1.6dB	95.0dB	95.3dB	19%
A level of 94dB, at the frequency shown, was applied to the instrument and its dB(C) weighted response recorded.				
94dB @ 125Hz	1.5dB	93.8dB	93.8dB	0%
94dB @ 1kHz	1.1dB	94.0dB	94.0dB	0%
94dB @ 4kHz	1.6dB	93.2dB	93.6dB	25%
Octave 1/1 Filter Mode, Fast Response, 40 to 110dB Range.				
94dB @ 63Hz	1.5dB	94.0dB	94.1dB	7%
94dB @ 125Hz	1.5dB	94.0dB	94.0dB	0%
94dB @ 250Hz	1.4dB	94.0dB	93.9dB	7%
94dB @ 500Hz	1.4dB	94.0dB	93.8dB	14%
94dB @ 1kHz	1.1dB	94.0dB	93.8dB	18%
94dB @ 2kHz	1.6dB	94.0dB	94.0dB	0%
94dB @ 4kHz	1.6dB	94.0dB	94.2dB	12%
94dB @ 8kHz	2.1dB	94.0dB	93.8dB	10%

Uncertainties

Sound Level ±0.5 dB

Certificate of Calibration Castle Calibrator



CERTIFICATE OF CALIBRATION



Date of Issue: 13 June 2017

Certificate Number: UCRT17/1483

Issued by:
ANV Measurement Systems
Beaufort Court
17 Roebuck Way
Milton Keynes MK5 8HL
Telephone 01908 642846 Fax 01908 642814
E-Mail: info@noise-and-vibration.co.uk
Web: www.noise-and-vibration.co.uk

Acoustics Noise and Vibration Ltd trading as ANV Measurement Systems

Page 1 of 2 Pages

Approved Signatory

K. Mistry

CUSTOMER Q.E.D. Engineering Limited
M-TEK Building 1
Armagh Road
Monaghan
Ireland

ORDER No Patricia Murtagh **Job No** UKAS17/06277

DATE OF RECEIPT 12 June 2017

PROCEDURE Procedure TP 1 Calibration of Sound Calibrators or Calibration
Engineer's Handbook section 2

IDENTIFICATION Sound Calibrator Castle type GA607 serial number 036023 with half-
inch housing

CALIBRATED ON 13 June 2017

This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to the SI system of units and/or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

CERTIFICATE OF CALIBRATION
UKAS ACCREDITED CALIBRATION LABORATORY No 0653

Certificate No UCRT17/1483
Page 2 of 2 Pages

MEASUREMENTS

The sound pressure level generated by the Sound Calibrator in its half-inch configuration was measured using a B&K type 4134 microphone with the protective grid in position. The microphone sensitivity was traceable to National Standards.

RESULTS

The mean level of the calibrator output, corrected to the standard atmospheric pressure of 101.3 kPa using manufacturers' data, and its fundamental frequency and total distortion were:

<u>Nominal</u>	<u>Mean Level</u>	<u>Frequency</u>	<u>Distortion</u>
<u>Setting dB</u>			
94	94.01 ± 0.1 dB rel 20 µPa	1000 Hz ± 0.06 %	(0.43 ± 0.04) %
104	103.99 ± 0.1 dB rel 20 µPa	1000 Hz ± 0.06 %	(1.08 ± 0.08) %

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor $k=2$, providing a coverage probability of approximately 95%. The uncertainty evaluation has been carried out in accordance with UKAS requirements.

During the measurements the laboratory environmental conditions were:

<u>Setting dB</u>	<u>Temperature</u>	<u>Atmospheric pressure</u>	<u>Relative Humidity</u>
94	21 to 22 °C	100.9 to 101.0 kPa	50 to 63 %
104	21 to 22 °C	100.9 to 101.0 kPa	49 to 62 %

The tests carried out were based on Annex B of BS EN 60942:2003, though the manufacturer does not appear to claim that the calibrator was designed in accordance with any International Standard.

END

R 2

APPENDIX 2

Waste Received in 2017

Point of Collection	Material Description	EWC Code	Material Weight (T)
Civic Amenity Site	Large Household Appliances (Fridge Freezers)	16 02 11*	5.79
Civic Amenity Site	CRT TV's and Monitors	16 02 13*	0.59
Civic Amenity Site	Large Household Appliances	16 02 14	1,868.70
Civic Amenity Site	Lead Acid Batteries	16 06 01*	94.09
Civic Amenity Site	Alkaline / Fence Batteries	16 06 04	120.16
Civic Amenity Site	Fluorescent Tubes & Bulbs	20 01 21*	65.69
Civic Amenity Site	Large Household Appliances (Fridge Freezers)	20 01 23*	1,012.02
Civic Amenity Site	Unsorted Batteries	20 01 33*	0.29
Civic Amenity Site	CRT TV's and Monitors	20 01 35*	1,863.51
Civic Amenity Site	Small Household Appliances	20 01 35*	3,851.37
Commercial	Nickel Iron Filter Cake	06 05 02*	1.05
Commercial	Welding waste	12 01 13	4.14
Commercial	Foundry Ceramics & Runnings	10 10 08	37.62
Commercial	Ferrous Metal Filings and Turnings	12 01 01	234.04
Commercial	Ferrous Metal Dust and Particles	12 01 02	7.93
Commercial	Non-Ferrous Metal Filings and Turnings	12 01 03	162.35
Commercial	Non-Ferrous Metal Dust and Particles	12 01 04	0.13
Commercial	Aluminium Oxide	12 01 17	76.38
Commercial	Spent Grinding Bodies (Hazardous)	12 01 20*	52.12
Commercial	Spent Grinding Bodies (Non-Hazardous)	12 01 21	4.32
Commercial	Paper and Cardboard Packaging	15 01 01	33.64
Commercial	Metallic Packaging	15 01 04	3.33
Commercial	Mixed Packaging (Waste to Energy)	15 01 06	18.50
Commercial	Capacitors (PCB-Suspect)	16 02 09*	1.42
Commercial	Large Household Appliances (Fridge Freezers)	16 02 11*	111.06
Commercial	SF6 MV Switch Gear	16 02 11*	0.97
Commercial	CRT TV's and Monitors	16 02 13*	39.07
Commercial	Flat Panel Display Units/Laptop Screens	16 02 13*	43.86
Commercial	Gas Meters	16 02 13*	8.72
Commercial	IT Equipment (Mixed Hazardous)	16 02 13*	204.57
Commercial	Laptops	16 02 13*	2.09
Commercial	Smoke Detectors	16 02 13*	0.18
Commercial	IT Equipment	16 02 14	1,412.02
Commercial	Large Household Appliances	16 02 14	7,219.92
Commercial	Medical Devices	16 02 14	35.60
Commercial	Microwaves	16 02 14	40.16
Commercial	Power Distribution Units / Supply Assemblies	16 02 14	12.85
Commercial	Radiators	16 02 14	4.84

Commercial	Small Household Appliances	16 02 14	9.79
Commercial	Capacitors (Non-Hazardous)	16 02 16	1.48
Commercial	Plastics	16 02 16	57.52
Commercial	Printer Cartridges	16 02 16	5.42
Commercial	Radiators	16 02 16	2.00
Commercial	WEEE Assemblies	16 02 16	740.32
Commercial	National Pen (Waste Merchandise)	16 03 04	27.12
Commercial	Lead Acid Batteries	16 06 01*	300.54
Commercial	Ni-Cd Batteries	16 06 02*	17.24
Commercial	Alkaline / Fence Batteries	16 06 04	334.45
Commercial	Lithium / Ni-Mh Batteries	16 06 05	8.88
Commercial	Non-Ferrous Metal Scrap	19 12 03	28.80
Commercial	Glass	19 12 05	0.06
Commercial	Fluorescent Tubes & Bulbs	20 01 21*	22.63
Commercial	Large Household Appliances (Fridge Freezers)	20 01 23*	2,443.45
Commercial	Unsorted Batteries	20 01 33*	6.81
Commercial	CRT TV's and Monitors	20 01 35*	458.07
Commercial	Small Household Appliances	20 01 35*	3,065.19
Commercial	Metal Scrap	20 01 40	91.54
Industrial	Nickel Iron Filter Cake	06 05 02*	7.56
Industrial	Welding Waste	12 01 13	1.05
Industrial	Foundry Ceramics & Runnings	10 10 08	78.19
Industrial	Ferrous Metal Filings and Turnings	12 01 01	8.24
Industrial	Ferrous Metal Dust and Particles	12 01 02	0.62
Industrial	Non-Ferrous Metal Filings and Turnings	12 01 03	114.13
Industrial	Non-Ferrous Metal Dust and Particles	12 01 04	1.63
Industrial	Aluminium Oxide	12 01 17	98.38
Industrial	Spent Grinding Bodies (Hazardous)	12 01 20*	73.01
Industrial	Mixed Packaging (Waste to Energy)	15 01 06	4.19
Industrial	Solder Tubes & Wipes	15 02 03	0.56
Industrial	Solder Wipes	15 02 03	0.59
Industrial	Large Household Appliances (Fridge Freezers)	16 02 11*	5.58
Industrial	CRT TV's and Monitors	16 02 13*	0.26
Industrial	Flat Panel Display Units/Laptop Screens	16 02 13*	0.39
Industrial	IT Equipment (Mixed Hazardous)	16 02 13*	13.97
Industrial	Laptops	16 02 13*	0.08
Industrial	IT Equipment	16 02 14	20.66
Industrial	Large Household Appliances	16 02 14	0.56
Industrial	Machinery Scrap	16 02 14	4.20
Industrial	Medical Devices	16 02 14	0.26
Industrial	Smoke Detectors	16 02 14	2.26

Industrial	Plastics	16 02 16	3.85
Industrial	WEEE Assemblies	16 02 16	30.88
Industrial	Lead Acid Batteries	16 06 01*	2.71
Industrial	Ni-Cd Batteries	16 06 02*	0.18
Industrial	Alkaline / Fence Batteries	16 06 04	3.09
Industrial	Lithium / Ni-Mh Batteries	16 06 05	0.18
Industrial	Non-Ferrous Metal Scrap	19 12 03	7.78
Industrial	Unsorted Batteries	20 01 33*	0.57
Industrial	Metal Scrap	20 01 40	23.52
KMK Gate Customer	Ferrous Metal Filings and Turnings	12 01 01	19.49
KMK Gate Customer	Non-Ferrous Metal Filings and Turnings	12 01 03	11.35
KMK Gate Customer	Large Household Appliances (Fridge Freezers)	16 02 11*	0.55
KMK Gate Customer	CRT TV's and Monitors	16 02 13*	1.42
KMK Gate Customer	Flat Panel Display Units/Laptop Screens	16 02 13*	1.10
KMK Gate Customer	IT Equipment	16 02 14	0.77
KMK Gate Customer	Large Household Appliances	16 02 14	0.49
KMK Gate Customer	Machinery Scrap	16 02 14	3.45
KMK Gate Customer	Radiators	16 02 14	0.81
KMK Gate Customer	WEEE Assemblies	16 02 16	7.02
KMK Gate Customer	Lead Acid Batteries	16 06 01*	59.08
KMK Gate Customer	Non-Ferrous Metal Scrap	19 12 03	5.61
Transfer Station	Ferrous Metal Filings and Turnings	12 01 01	2.49
Transfer Station	Non-Ferrous Metal Filings and Turnings	12 01 03	11.07
Transfer Station	Paper and Cardboard Packaging	15 01 01	0.10
Transfer Station	Large Household Appliances (Fridge Freezers)	16 02 11*	45.81
Transfer Station	CRT TV's and Monitors	16 02 13*	33.03
Transfer Station	Flat Panel Display Units/Laptop Screens	16 02 13*	47.70
Transfer Station	IT Equipment (Mixed Hazardous)	16 02 13*	0.80
Transfer Station	Smoke Detectors	16 02 13*	0.56
Transfer Station	IT Equipment	16 02 14	419.73
Transfer Station	Large Household Appliances	16 02 14	24.41
Transfer Station	Machinery Scrap	16 02 14	0.31
Transfer Station	Radiators	16 02 14	3.43

Transfer Station	Small Household Appliances	16 02 14	185.54
Transfer Station	Plastics	16 02 16	5.08
Transfer Station	WEEE Assemblies	16 02 16	107.52
Transfer Station	Lead Acid Batteries	16 06 01*	90.76
Transfer Station	Ni-Cd Batteries	16 06 02*	26.16
Transfer Station	Alkaline / Fence Batteries	16 06 04	16.97
Transfer Station	Lithium / Ni-Mh Batteries	16 06 05	3.35
Transfer Station	Non-Ferrous Metal Scrap	19 12 03	4.33
Transfer Station	Unsorted Batteries	20 01 33*	1.38
Transfer Station	Small Household Appliances	20 01 35*	29.76
Waste Industry	X-Ray Film with Silver	09 01 07	0.21
Waste Industry	Ferrous Metal Filings and Turnings	12 01 01	6.16
Waste Industry	Non-Ferrous Metal Filings and Turnings	12 01 03	1.19
Waste Industry	Capacitors (PCB-Suspect)	16 02 09*	0.55
Waste Industry	Large Household Appliances (Fridge Freezers)	16 02 11*	2.05
Waste Industry	CRT TV's and Monitors	16 02 13*	3.67
Waste Industry	Flat Panel Display Units/Laptop Screens	16 02 13*	11.82
Waste Industry	Laptops	16 02 13*	1.51
Waste Industry	IT Equipment	16 02 14	237.96
Waste Industry	Large Household Appliances	16 02 14	119.08
Waste Industry	Machinery Scrap	16 02 14	1.96
Waste Industry	Radiators	16 02 14	1.69
Waste Industry	Plastics	16 02 16	0.40
Waste Industry	WEEE Assemblies	16 02 16	23.86
Waste Industry	Lead Acid Batteries	16 06 01*	1.68
Waste Industry	Alkaline / Fence Batteries	16 06 04	4.25
Waste Industry	Lithium / Ni-Mh Batteries	16 06 05	0.69
Waste Industry	Fluorescent Tubes & Bulbs	20 01 21*	9.38
Waste Industry	Large Household Appliances (Fridge Freezers)	20 01 23*	139.57
Waste Industry	CRT TV's and Monitors	20 01 35*	299.09
Waste Industry	Small Household Appliances	20 01 35*	556.37
GRAND TOTAL			29,380.06

Waste Despatched in 2017

Material Description	EWC Code	Material Weight (T)
Welding Waste	12 01 13	6.61
Foundry Ceramics & Runnings	10 10 08	61.27
Nickel Iron Filter Cake	11 01 09*	15.05
Ferrous Metal Filings and Turnings	12 01 01	2,571.71
Ferrous Metal Dust and Particles	12 01 02	4.09
Non-Ferrous Metal Filings and Turnings	12 01 03	27.79
Spent Grinding Bodies (Hazardous)	12 01 20*	214.03
Waste Oil (Radiators)	13 02 05*	29.16
Waste Water (Interceptors)	13 05 08*	25.65
Paper and Cardboard Packaging	15 01 01	67.40
Wooden Packaging	15 01 03	88.40
Flat Panel Display Units/Laptop Screens	16 02 13*	546.57
IT Equipment	16 02 14	469.66
Glass-Mixed	16 02 15*	1,324.10
WEEE Assemblies	16 02 16	3,386.48
Lead Acid Batteries	16 06 01*	600.86
Ni-Cd Batteries	16 06 02*	71.37
Alkaline / Fence Batteries	16 06 04	462.01
Lithium / Ni-Mh Batteries	16 06 05	53.22
Non-Ferrous Metal Scrap	19 12 03	908.53
Plastics	19 12 04	2,371.16
Waste to Energy MT Residue	19 12 12	1,943.24
Fluorescent Tubes & Bulbs	20 01 21*	94.99
Large Household Appliances (Fridge Freezers)	20 01 23*	3,419.77
Smoke Detectors	20 01 35*	0.56
Large Household Appliances	20 01 36	10,578.00
GRAND TOTAL		29,341.66

Waste in Stock in 2017

Material Description	EWC Code	Material Weight (T)
Nickel Iron Filter Cake	06 05 02*	5.17
Welding Waste	12 01 13	1.80
Foundry Ceramics & Runnings	10 10 08	8.85
Ferrous Metal Dust and Particles	12 01 02	0.60
Non-Ferrous Metal Filings and Turnings	12 01 03	45.14
Non-Ferrous Metal Dust and Particles	12 01 04	13.70
Aluminium Oxide	12 01 17	42.16
Spent Grinding Bodies (Hazardous)	12 01 20*	37.45
Waste Oil (Radiators)	13 02 05*	2.58
Paper and Cardboard Packaging	15 01 01	1.00
Wooden Packaging	15 01 03	2.00
Mixed Packaging (Waste to Energy)	15 01 06	5.00
Solder Tubes & Wipes	15 02 03	2.28
Large Household Appliances (Fridge Freezers)	16 02 11*	7.50
Flat Panel Display Units/Laptop Screens	16 02 13*	7.50
Relay Switches	16 02 13*	0.12
Machinery Scrap	16 02 14	20.75
CRT Phosphorus Powder	16 02 15*	2.36
Glass-Mixed	16 02 15*	3.50
Capacitors (Non-Hazardous)	16 02 16	1.07
Plastics	16 02 16	15.00
WEEE Assemblies	16 02 16	85.88
Lead Acid Batteries	16 06 01*	39.76
Ni-Cd Batteries	16 06 02*	3.55
Alkaline / Fence Batteries	16 06 04	3.73
Lithium / Ni-Mh Batteries	16 06 05	3.17
Iron & Steel Waste	19 10 01	1.20
Ferrous Metal	19 12 02	0.27
Non-Ferrous Metal	19 12 03	24.50
Plastics	19 12 04	72.00
Waste to Energy MT Residue	19 12 12	10.31
Unsorted Batteries	20 01 33*	31.18
CRT TV's and Monitors	20 01 35*	12.16
Small Household Appliances	20 01 35*	180.00
Smoke Detectors	20 01 35*	0.19
Large Household Appliances	20 01 36	79.00
GRAND TOTAL		772.45

APPENDIX 3

PRTR Report for 2017



Environmental Protection Agency

| PRTR# : W0113 | Facility Name : KMK Metals Recycling Limited | Filename : Copy of W0113_2017 30.03.18. final xls.xls | Return Year : 2017 |

[Guidance on completing the PRTR workbook](#)

PRTR Returns Workbook

Version 1.1.19

REFERENCE YEAR	2017
-----------------------	------

1. FACILITY IDENTIFICATION

Parent Company Name	KMK Metals Recycling Limited
Facility Name	KMK Metals Recycling Limited
PRTR Identification Number	W0113
Licence Number	W0113-04

Classes of Activity

No.	class_name
-	Refer to PRTR class activities below

Address 1	Cappincur Industrial Estate
Address 2	Daingean Road
Address 3	Tullamore
Address 4	
	Offaly
Country	Ireland
Coordinates of Location	-7.462581076 53.27421423
River Basin District	IEGBNISH
NACE Code	3832
Main Economic Activity	Recovery of sorted materials
AER Returns Contact Name	Donal Beagan
AER Returns Contact Email Address	donal@qedeng.ie
AER Returns Contact Position	Environmental Consultant
AER Returns Contact Telephone Number	04772060
AER Returns Contact Mobile Phone Number	
AER Returns Contact Fax Number	
Production Volume	0.0
Production Volume Units	
Number of Installations	0
Number of Operating Hours in Year	0
Number of Employees	80
User Feedback/Comments	Differences in releases to air are due to increased operation times of air extraction. Waste dispatched from the site are similar to 2016, 'treatment & transfers of waste' tab to remain confidential.
Web Address	

2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
5(a)	Installations for the recovery or disposal of hazardous waste
50.1	General

3. SOLVENTS REGULATIONS (S.I. No. 543 of 2002)

Is it applicable?	No
Have you been granted an exemption ?	
If applicable which activity class applies (as per Schedule 2 of the regulations) ?	
Is the reduction scheme compliance route being used ?	

4. WASTE IMPORTED/ACCEPTED ONTO SITE

[Guidance on waste imported/accepted onto site](#)

Do you import/accept waste onto your site for on-site treatment (either recovery or disposal activities) ?	No
--	----

4.1 RELEASES TO AIR

[Link to previous years emissions data](#)

| PRTR# : W0113 | Facility Name : KMK Metals Recycling Limited | Filename : Copy of W0113_2017 29.03.18 final.xlsx | Return Year : 2017 |

30-03-18 9:41

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

POLLUTANT		METHOD			QUANTITY			
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
						0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column 1) then click the delete button

SECTION B : REMAINING PRTR POLLUTANTS

POLLUTANT		METHOD			QUANTITY			
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
						0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column 1) then click the delete button

SECTION C : REMAINING POLLUTANT EMISSIONS (As required in your Licence)

POLLUTANT		METHOD			QUANTITY			
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
244	Total Particulates	M	ALT	ISEN-13284:2004		49.375	49.375	0.0

* Select a row by double-clicking on the Pollutant Name (Column 1) then click the delete button

Additional Data Requested from Landfill operators

For the purposes of the National Inventory on Greenhouse Gases, landfill operators are requested to provide summary data on landfill gas (Methane) flared or utilised on their facilities to accompany the figures for total methane generated. Operators should only report their Net methane (CH4) emission to the environment under T (total) KG/yr for Section A: Sector specific PRTR pollutants above. Please complete the table below:

Landfill:	KMK Metals Recycling Limited			
Please enter summary data on the quantities of methane flared and / or utilised	T (Total) kg/Year	M/C/E	Method Used	Facility Total Capacity m3 per hour
	Total estimated methane generation (as per site model)	0.0		NA
	Methane flared	0.0		0.0 (Total Flaring Capacity)
	Methane utilised in engine/s	0.0		0.0 (Total Utilising Capacity)
	Net methane emission (as reported in Section A above)	0.0		NA

4.2 RELEASES TO WATERS

[Link to previous years emissions data](#)

(PRTTR - W0113) (Facility Name : KMR Metals Recycling Limited) (Filename : Copy of W0113_2017_2023.16_ExcelWorkbook (Return Year - 2017))

29-05-18 16:42

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

Data on ambient monitoring of stormwater or groundwater, conducted as part of your licence requirements, should NOT be submitted under AER/ PRTR Reporting as this only concerns releases from your facility

POLLUTANT		RELEASERS TO WATERS			Please enter all quantities in this section in KGs				
No. Annex II	Name	M/G/E	Method Used		QUANTITY				
			Method Code	Designation or Description	Emission Point 1	Emission Point 2	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
13	Total phosphorus	M	ALT	Alpha Standard Methods	0.542	0.0	0.542	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column 2) then click the delete button

SECTION B : REMAINING PRTR POLLUTANTS

POLLUTANT		RELEASERS TO WATERS			Please enter all quantities in this section in KGs			
No. Annex II	Name	M/G/E	Method Used		QUANTITY			
			Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column 2) then click the delete button

SECTION C : REMAINING POLLUTANT EMISSIONS (as required in your Licence)

POLLUTANT		RELEASERS TO WATERS			Please enter all quantities in this section in KGs						
Pollutant No.	Name	M/G/E	Method Used		QUANTITY				T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
			Method Code	Designation or Description	Emission Point 1	Emission Point 2	Emission Point 3	Emission Point 4			
240	Suspended Solids	C	ALT	APHA/WWA Standard Methods	11.803	9.9111	0.0	0.0	21.7141	0.0	0.0
303	BOD	C	ALT	APHA 5210B	0.0	0.0	0.8304	0.0	0.8304	0.0	0.0
304	Mineral oils	C	ALT	Determination of TPH by Infra Red Spectroscopy	0.627	0.125	0.0	0.0	0.807	0.0	0.0
235	Ammonia (as N)	C	ALT	Determination of Ammonium in Water Samples using the Nessler Analyser	0.0	0.0	1.0496	0.0	1.0496	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column 2) then click the delete button

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE | PRTR# : W0113 | Facility Name : KMK Metals Recycling Limited | Filename : Copy of W0113_2017 30.03.18. final.xls | Return Year : 2017 |

30-03-18 14:12

Please enter all quantities on this sheet in Tonnes

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Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Lic Waste - Name and Licence/Permit No of Next Destination Facility Lic Waste - Name and Licence/Permit No of Receiver/Disposer	Lic Waste - Address of Next Destination Facility Non Lic Waste - Address of Receiver/Disposer	Name and Licence / Permit No. and Address of Final Receiver / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Receiver / Disposal Site (HAZARDOUS WASTE ONLY)
						M/G/E	Method Used					
To Other Countries	12 01 13	No	6.61	welding wastes	R4	M	Weighted	Abroad	KMK Metals Recycling Ltd /W0113-03	Cappincur Industrial Estate, Daingean Road, Tullamore, Co Offaly, Ireland	Confidential	Confidential
To Other Countries	11 01 09	Yes	15.05	sludges and filter cakes containing dangerous substances	R4	M	Weighted	Abroad	KMK Metals Recycling Ltd /W0113-03	Cappincur Industrial Estate, Daingean Road, Tullamore, Co Offaly, Ireland	Confidential	Confidential
Within the Country	12 01 01	No	2571.71	ferrous metal filings and turnings	R4	M	Weighted	Offsite in Ireland	KMK Metals Recycling Ltd /W0113-03	Cappincur Industrial Estate, Daingean Road, Tullamore, Co Offaly, Ireland	Confidential	Confidential
To Other Countries	12 01 02	No	4.09	ferrous metal dust and particles	R4	M	Weighted	Abroad	KMK Metals Recycling Ltd /W0113-04	Cappincur Industrial Estate, Daingean Road, Tullamore, Co Offaly, Ireland	Confidential	Confidential
Within the Country	12 01 03	No	27.79	non-ferrous metal filings and turnings	R4	M	Weighted	Offsite in Ireland	KMK Metals Recycling Ltd /W0113-05	Cappincur Industrial Estate, Daingean Road, Tullamore, Co Offaly, Ireland	Confidential	Confidential
To Other Countries	12 01 20	Yes	214.03	spent grinding bodies and grinding materials containing dangerous substances	R4	M	Weighted	Abroad	KMK Metals Recycling Ltd /W0113-06	Cappincur Industrial Estate, Daingean Road, Tullamore, Co Offaly, Ireland	Confidential	Confidential
Within the Country	13 02 05	Yes	29.16	mineral-based non-chlorinated engine, gear and lubricating oils	R9	M	Weighted	Offsite in Ireland	KMK Metals Recycling Ltd /W0113-07	Cappincur Industrial Estate, Daingean Road, Tullamore, Co Offaly, Ireland	Confidential	Confidential
Within the Country	13 05 08	Yes	25.65	mixtures of wastes from grill chambers and oil/water separators	R9	M	Weighted	Offsite in Ireland	KMK Metals Recycling Ltd /W0113-08	Cappincur Industrial Estate, Daingean Road, Tullamore, Co Offaly, Ireland	Confidential	Confidential
Within the Country	15 01 01	No	67.4	paper and cardboard packaging	R3	M	Weighted	Offsite in Ireland	KMK Metals Recycling Ltd /W0113-09	Cappincur Industrial Estate, Daingean Road, Tullamore, Co Offaly, Ireland	Confidential	Confidential
Within the Country	15 01 03	No	88.4	wooden packaging	R3	M	Weighted	Offsite in Ireland	KMK Metals Recycling Ltd /W0113-10	Cappincur Industrial Estate, Daingean Road, Tullamore, Co Offaly, Ireland	Confidential	Confidential
To Other Countries	16 02 13	Yes	546.57	discarded equipment containing hazardous components (16) other than those mentioned in 16 02 09 to 16 02 12	R4	M	Weighted	Abroad	KMK Metals Recycling Ltd /W0113-11	Cappincur Industrial Estate, Daingean Road, Tullamore, Co Offaly, Ireland	Confidential	Confidential
Within the Country	16 02 14	No	469.66	discarded equipment other than those mentioned in 16 02 09 to 16 02 13	R4	M	Weighted	Offsite in Ireland	KMK Metals Recycling Ltd /W0113-12	Cappincur Industrial Estate, Daingean Road, Tullamore, Co Offaly, Ireland	Confidential	Confidential
To Other Countries	16 02 15	Yes	1324.1	hazardous components removed from discarded equipment	R5	M	Weighted	Abroad	KMK Metals Recycling Ltd /W0113-13	Cappincur Industrial Estate, Daingean Road, Tullamore, Co Offaly, Ireland	Confidential	Confidential
To Other Countries	16 02 16	No	3386.48	components removed from discarded equipment other than those mentioned in 16 02 15	R4	M	Weighted	Abroad	KMK Metals Recycling Ltd /W0113-14	Cappincur Industrial Estate, Daingean Road, Tullamore, Co Offaly, Ireland	Confidential	Confidential

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Lic Waste - Name and Licence/Permit No of Next Destination Facility		Name and Licence / Permit No. and Address of Final Recycler / Depositor (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination (i.e. Final Recovery / Disposal Site) (HAZARDOUS WASTE ONLY)
						M/G/E	Method Used		Lic Waste - Name and Licence/Permit No of Recycler/Depositor	Non Lic Waste - Address of Recycler/Depositor		
To Other Countries	16 06 01	Yes	600.86	lead batteries	R4	M	Weighted	Abroad	KMK Metals Recycling Ltd W0113-15	Cappinour Industrial Estate, Daingean Road, Tullamore, Co Offaly, Ireland	Confidential	Confidential
To Other Countries	16 06 02	Yes	71.37	Ni-Cd batteries	R4	M	Weighted	Abroad	KMK Metals Recycling Ltd W0113-16	Cappinour Industrial Estate, Daingean Road, Tullamore, Co Offaly, Ireland	Confidential	Confidential
Within the Country	16 06 04	No	462.01	alkaline batteries (except 16 06 03)	R4	M	Weighted	Offsite in Ireland	KMK Metals Recycling Ltd W0113-17	Cappinour Industrial Estate, Daingean Road, Tullamore, Co Offaly, Ireland	Confidential	Confidential
To Other Countries	16 06 05	No	53.22	other batteries and accumulators	R4	M	Weighted	Abroad	KMK Metals Recycling Ltd W0113-18	Cappinour Industrial Estate, Daingean Road, Tullamore, Co Offaly, Ireland	Confidential	Confidential
To Other Countries	19 12 03	No	908.53	non-ferrous metal	R4	M	Weighted	Abroad	KMK Metals Recycling Ltd W0113-19	Cappinour Industrial Estate, Daingean Road, Tullamore, Co Offaly, Ireland	Confidential	Confidential
To Other Countries	19 12 04	No	2371.16	plastic and rubber other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12	R4	M	Weighted	Abroad	KMK Metals Recycling Ltd W0113-20	Cappinour Industrial Estate, Daingean Road, Tullamore, Co Offaly, Ireland	Confidential	Confidential
Within the Country	19 12 12	No	1943.24	11	R4	M	Weighted	Offsite in Ireland	KMK Metals Recycling Ltd W0113-21	Cappinour Industrial Estate, Daingean Road, Tullamore, Co Offaly, Ireland	Confidential	Confidential
Within the Country	20 01 21	Yes	94.99	fluorescent tubes and other mercury-containing waste	R4	M	Weighted	Offsite in Ireland	KMK Metals Recycling Ltd W0113-22	Cappinour Industrial Estate, Daingean Road, Tullamore, Co Offaly, Ireland	Confidential	Confidential
To Other Countries	20 01 23	Yes	3419.77	discarded equipment containing chlorofluorocarbons	R4	M	Weighted	Abroad	KMK Metals Recycling Ltd W0113-23	Cappinour Industrial Estate, Daingean Road, Tullamore, Co Offaly, Ireland	Confidential	Confidential
To Other Countries	20 01 35	Yes	0.56	discarded electrical and electronic equipment other than those mentioned in 20 01 21 and 20 01 23 containing hazardous components	R12	M	Weighted	Abroad	KMK Metals Recycling Ltd W0113-24	Cappinour Industrial Estate, Daingean Road, Tullamore, Co Offaly, Ireland	Confidential	Confidential
Within the Country	20 01 36	No	10578.0	discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35	R4	M	Weighted	Offsite in Ireland	KMK Metals Recycling Ltd W0113-25	Cappinour Industrial Estate, Daingean Road, Tullamore, Co Offaly, Ireland	Confidential	Confidential
To Other Countries	12 01 03	No	0.0	non-ferrous metal filings and turnings	R4	M	Weighted	Abroad	KMK Metals Recycling Ltd W0113-03	Cappinour Industrial Estate, Daingean Road, Tullamore, Co Offaly, Ireland	Confidential	Confidential
To Other Countries	15 01 03	No	0.0	wooden packaging	R3	M	Weighted	Abroad			Confidential	Confidential
Within the Country	16 02 13	Yes	0.0	discarded equipment containing hazardous components (16) other than those mentioned in 16 02 09 to 16 02 12	R4	M	Weighted	Offsite in Ireland	KMK Metals Recycling Ltd W0113-03	Cappinour Industrial Estate, Daingean Road, Tullamore, Co Offaly, Ireland	Confidential	Confidential
To Other Countries	16 02 14	No	0.0	discarded equipment other than those mentioned in 16 02 09 to 16 02 13	R4	M	Weighted	Abroad	KMK Metals Recycling Ltd W0113-03	Cappinour Industrial Estate, Daingean Road, Tullamore, Co Offaly, Ireland	Confidential	Confidential

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	<u>Use Waste</u> : Name and Licence/Permit No of Next Destination Facility <u>Do Waste</u> : Name and Licence/Permit No of Receiver/Deposer	<u>Use Waste</u> : Address of Next Destination Facility <u>Do Waste</u> : Address of Receiver/Deposer	Name and Licence / Permit No. and Address of Final Receiver / Depositor (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Receiver / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
Within the Country	16 02 16	No	0.0 02 15	components removed from discarded equipment other than those mentioned in 16	R4	M	Weighted	Offsite in Ireland	KMK Metals Recycling Ltd W0113-03	Cappinour Industrial Estate, Dalingean Road, Tullamore, Co Offaly, Ireland	Confidential	Confidential
Within the Country	19 12 03	No	0.0	non-ferrous metal	R4	M	Weighted	Offsite in Ireland	KMK Metals Recycling Ltd W0113-03	Cappinour Industrial Estate, Dalingean Road, Tullamore, Co Offaly, Ireland	Confidential	Confidential
Within the Country	19 12 04	No	0.0	plastic and rubber other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12	R4	M	Weighted	Offsite in Ireland	KMK Metals Recycling Ltd W0113-03	Cappinour Industrial Estate, Dalingean Road, Tullamore, Co Offaly, Ireland	Confidential	Confidential
To Other Countries	19 12 12	No	0.0 11		R4	M	Weighted	Abroad	KMK Metals Recycling Ltd W0113-03	Cappinour Industrial Estate, Dalingean Road, Tullamore, Co Offaly, Ireland	Confidential	Confidential
To Other Countries	20 01 36	No	0.0 01 21, 20 01 23 and 20 01 35	discarded electrical and electronic equipment other than those mentioned in 20	R4	M	Weighted	Abroad	KMK Metals Recycling Ltd W0113-03	Cappinour Industrial Estate, Dalingean Road, Tullamore, Co Offaly, Ireland	Confidential	Confidential

* Select a row by double-clicking the Description of Waste then click the delete button