



ANNUAL ENVIRONMENTAL REPORT 2011

KTK Sand & Gravel, Ballymore Eustace, Co. Kildare W0156-01

Submitted to:

Mr Mervyn Ross
General Manager
KTK Sand & Gravel
Ballymore Eustace
Co. Kildare

REPORT



A world of
capabilities
delivered locally

Report Number. 11507190015.AER1.A0

Distribution:

2 Copies - KTK Sand & Gravel
2 Copies - Golder Associates
3 Copies - Environmental Protection Agency





Table of Contents

1.0	REPORTING PERIOD	1
2.0	SITE DESCRIPTION	1
2.1	Waste Management Activities Carried out at the Site	1
2.2	Methods of Deposition of Waste	1
2.3	Waste Sent off-Site	1
2.4	Quantity of Non-Acceptable Waste	1
3.0	SUMMARY OF ENVIRONMENTAL MONITORING AND EMISSIONS DURING 2011	2
3.1	Atmospheric Dust Monitoring During 2011	4
3.2	Environmental Noise Monitoring	5
4.0	GROUNDWATER MONITORING	5
4.1	Groundwater Levels	5
4.1.1	Methods of monitoring groundwater levels	5
4.1.2	Groundwater level results 2011	5
4.2	Groundwater Quality	6
4.2.1	Groundwater quality results	6
4.3	Discussion	9
4.4	Annual Water Balance Calculation	10
5.0	SURFACE WATER MONITORING	11
5.1	Surface Water Sampling Methodology	11
5.2	Discussion	15
6.0	RESOURCE AND ENERGY CONSUMPTION DURING THE REPORTING PERIOD	15
7.0	WASTE RECOVERY PROGRESS AND ACHIEVEMENTS	15
7.1	Site Restoration	15
8.0	REPORT ON DEVELOPMENT WORKS	16
8.1	Planned Works for 2012	16
9.0	SCHEDULE OF OBJECTIVES AND TARGETS	16
9.1	Schedule of Objectives and Targets for 2012	16
10.0	DESCRIPTION OF PROCEDURES DEVELOPED AT THE SITE DURING 2012	17
11.0	TANK, DRUM, BUND AND PIPELINE TESTING DURING THE REPORTING PERIOD	17
12.0	REPORTED INCIDENTS AND COMPLAINTS SUMMARY	17



13.0 REVIEW OF NUISANCE CONTROLS 17

13.1 Nuisances Caused by Vermin..... 17

13.2 Nuisances Caused by Birds..... 18

13.3 Nuisances Caused by Mud and Dust..... 18

13.4 Nuisances Caused by Odours 18

14.0 FINANCIAL PROVISIONS..... 18

15.0 MANAGEMENT AND STAFFING STRUCTURE 18

15.1 Staff Training 19

16.0 PROGRAM FOR PUBLIC INFORMATION 19

17.0 POLLUTION EMISSION TRANSFER REGISTER (PRTR) 20

1.0 REPORTING PERIOD 1

2.0 SITE DESCRIPTION..... 1

2.1 Waste Management Activities Carried out at the Site..... 1

2.2 Methods of Deposition of Waste 1

2.3 Waste Sent off-Site..... 1

2.4 Quantity of Non-Acceptable Waste..... 1

3.0 SUMMARY OF ENVIRONMENTAL MONITORING AND EMISSIONS DURING 2011..... 2

3.1 Atmospheric Dust Monitoring During 2011 4

3.2 Environmental Noise Monitoring..... 5

4.0 GROUNDWATER MONITORING..... 5

4.1 Groundwater Levels..... 5

4.1.1 Methods of monitoring groundwater levels..... 5

4.1.2 Groundwater level results 2011 5

4.2 Groundwater Quality..... 6

4.2.1 Groundwater quality results 6

4.3 Discussion 9

4.4 Annual Water Balance Calculation 10

5.0 SURFACE WATER MONITORING 11

5.1 Surface Water Sampling Methodology 11

5.2 Discussion 15

6.0 RESOURCE AND ENERGY CONSUMPTION DURING THE REPORTING PERIOD 15

7.0 WASTE RECOVERY PROGRESS AND ACHIEVEMENTS..... 15

7.1 Site Restoration..... 15



8.0 REPORT ON DEVELOPMENT WORKS..... 16

8.1 Planned Works for 2012 16

9.0 SCHEDULE OF OBJECTIVES AND TARGETS 16

9.1 Schedule of Objectives and Targets for 2012..... 16

10.0 DESCRIPTION OF PROCEDURES DEVELOPED AT THE SITE DURING 2011..... 17

11.0 TANK, DRUM, BUND AND PIPELINE TESTING DURING THE REPORTING PERIOD..... 17

12.0 REPORTED INCIDENTS AND COMPLAINTS SUMMARY 17

13.0 REVIEW OF NUISANCE CONTROLS 17

13.1 Nuisances Caused by Vermin..... 17

13.2 Nuisances Caused by Birds..... 18

13.3 Nuisances Caused by Mud and Dust..... 18

13.4 Nuisances Caused by Odours 18

14.0 FINANCIAL PROVISIONS..... 18

15.0 MANAGEMENT AND STAFFING STRUCTURE 18

15.1 Staff Training 19

16.0 PROGRAM FOR PUBLIC INFORMATION 19

17.0 POLLUTION EMISSION TRANSFER REGISTER (PRTR) 20

TABLES

Table 1: Licensed Waste Activities..... 1

Table 2: Monitoring and Reporting Requirements at KTK Sand & Gravel..... 2

Table 3: Environmental Monitoring Locations and Co-ordinates..... 3

Table 4: Depositional Dust Quarterly Survey Results (in mg/m²/day) during 2011 4

Table 5: Groundwater Monitoring Locations..... 5

Table 6: Annual Water Balance Calculation for KTK S&G for 2011 11

Table 7: Surface Water Monitoring Locations 11

Table 8: Energy and Resource Consumption 2010..... 15

Table 9: Planned development works 2012. 16

Table 10: Schedule of Objectives and Targets for 2012. 16

Table 11: Staff Structure at KTK Sand & Gravel 18

Table 12: Staff Training Records..... 19



FIGURES

Figure 1: Depositional Dust Survey Results during Q2, Q3 and Q4 of 2011 4

Figure 2: Static groundwater levels recorded in monitoring boreholes at KTK Sand & Gravel during 2011 6

Figure 3: pH values in groundwater during 2011 7

Figure 4: Electrical Conductivity levels in groundwater during 2011 7

Figure 5: Chloride levels in groundwater during 2011 8

Figure 6: Sodium Levels in groundwater during 2011 8

Figure 7: Calcium levels in groundwater during 2011 9

Figure 8: pH levels in surface water during 2011. 13

Figure 9: Electrical Conductivity in surface water during 2011 13

Figure 10: Dissolved Oxygen in surface water during 2011 14

Figure 11: Total Alkalinity in surface water during 2011 14

Noise

APPENDIX A

Drawing 4.1 Rev R - Environmental Monitoring Locations and Drawing 243 Rev A detailing the current site topography



1.0 REPORTING PERIOD

Waste activities commenced at the KTK Sand & Gravel Ltd (KTK S&G Ballymore Eustace Facility) on 12 September 2003. The waste activities at the facility were suspended on 7 July 2004, and following a grant of planning permission from Kildare County Council, reopened in January 2005. The facility is currently in the closure phase and no new material has been accepted at the facility since the end of 2008.

The reporting period for this Annual Environmental Report (AER) is from 1 January 2011 to 31 December 2011.

2.0 SITE DESCRIPTION

The facility is operated by KTK Sand & Gravel Limited, and is located in Kimmeens, Ballymore Eustace West and Coghlanstown East in County Kildare (the Site).

Figure 4.1 Rev. R and Drawing 243, Rev. A: Current Conditions (Appendix A) depict the site in its entirety.

2.1 Waste Management Activities Carried out at the Site

Table 1 below lists the waste management activities that were carried out at the facility in accordance with Waste Licence Register No. W0156-01. No waste materials were received or recovered at the site during 2011.

Table 1: Licensed Waste Activities

Licensed waste recovery activities, in accordance with the Fourth Schedule of the Waste Management Act, 1996 to 2003	
Class 3	Recycling or reclamation of metals and metal compounds
Class 4	Recycling or reclamation of other inorganic materials
Class 11	Use of waste obtained from any activity referred to in a preceding paragraph of this Schedule
Class 13	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

2.2 Methods of Deposition of Waste

Historically, incoming lorries carrying waste proceeded to an on-site weighbridge where they were weighed. The drivers were requested to supply information for the load in compliance with the Waste Acceptance Procedures for the facility. The weighbridge operator would then enter the details into the weighbridge computer system.

The weighbridge operator or the Facility Manager then directed the driver to the appropriate location for recovery where the Facility Manager or other qualified site personnel further assessed all wastes, with regard to acceptability. If the waste was deemed unacceptable they were reloaded and sent off the facility.

2.3 Waste Sent off-Site

There were no waste movement in or out of the facility during 2011.

2.4 Quantity of Non-Acceptable Waste

There were no waste movements in or out of the facility during 2011.



3.0 SUMMARY OF ENVIRONMENTAL MONITORING AND EMISSIONS DURING 2011

The monitoring and reporting requirements for KTK Sand & Gravel are listed in Table 2 below.

Table 2: Monitoring and Reporting Requirements at KTK Sand & Gravel

PARAMETER	MONITORING FREQUENCY (as per Schedule D of Waste Licence Register W0156-01)	Proposed Monitoring Frequency (Note 1)
Dust	Quarterly	Bi-Annually
Noise	Annually	Annually
Surface Water	Quarterly to Bi-Annually	Bi-Annually
Groundwater	Quarterly to Annually	Bi-Annually
Meteorological	Daily	-

Note 1: The licensee submitted a proposed revised schedule for monitoring frequency to the Agency on the 13th December 2010.

Figure 4.1 Rev. O (Appendix A) depicts all monitoring locations for the KTK S&G facility, and Table 3 presents the Grid Reference for each of the monitoring locations.



Table 3: Environmental Monitoring Locations and Co-ordinates

MEDIA	LOCATION	EASTINGS	NORTHINGS
Dust	D1	291878.5	210463.6
	D2	291848.0	210539.1
	D3	292361.1	210611.3
	D4	292519.0	210521.2
	D5	292483.0	210338.2
	D6	292315.7	210341.9
Noise	N1	291878.5	210463.6
	N2	291848.0	210539.1
	N3	292361.1	210611.3
	N4	292519.0	210521.2
	N5	292483.0	210338.2
	N6	292315.7	210341.9
	N7	292564.0	210267.2
	N8	291819.6	210335.3
	N9	292593.2	210256.3
Groundwater Monitoring Boreholes	GW1	292380.2	210585.3
	GW2	291941.5	210413.0
	GW3 *	292117.0	210457.9
	GW4	292290.4	210297.8
	GW5	292377.3	210559.7
	GW6	292365.8	210488.5
	GW7	292342.3	210385.7
Surface Water	SW1	292289.0	210383.2
	SW2	292169.1	210375.2
	SW3	292251.1	210611.6
Private Well	PW1	292251.1	210609.5

Grey shading = Locations are approximate



3.1 Atmospheric Dust Monitoring During 2011

Atmospheric dust monitoring was conducted quarterly at KTK Sand & Gravel during 2011 on the following occasions:

Quarter 2 2011: 9/6/2011 – 8/7/2011

Quarter 3 2011: 26/7/2011 – 25/8/2011

Quarter 4 2011: 9/11/2011- 9/12/2011

Table 4 and Figure 1 below detail the atmospheric dust results recorded during the reporting period.

Table 4: Depositional Dust Quarterly Survey Results (in mg/m²/day) during 2011

Sampling Point	Q2 2011 (in mg/m ² /day)	Q3 2011 (in mg/m ² /day)	Q4 2011 (in mg/m ² /day)
D1	72.3	149.9	71.1
D2	40.6	94.6	56.4
D3	10.6	-	131.7
D4	2.3	66.4	65.2
D5	8.3	62.3	7.1
D6	11.8	126.4	3.0
Average	24.3	99.9	55.8

- Dust Gauge broken upon collection

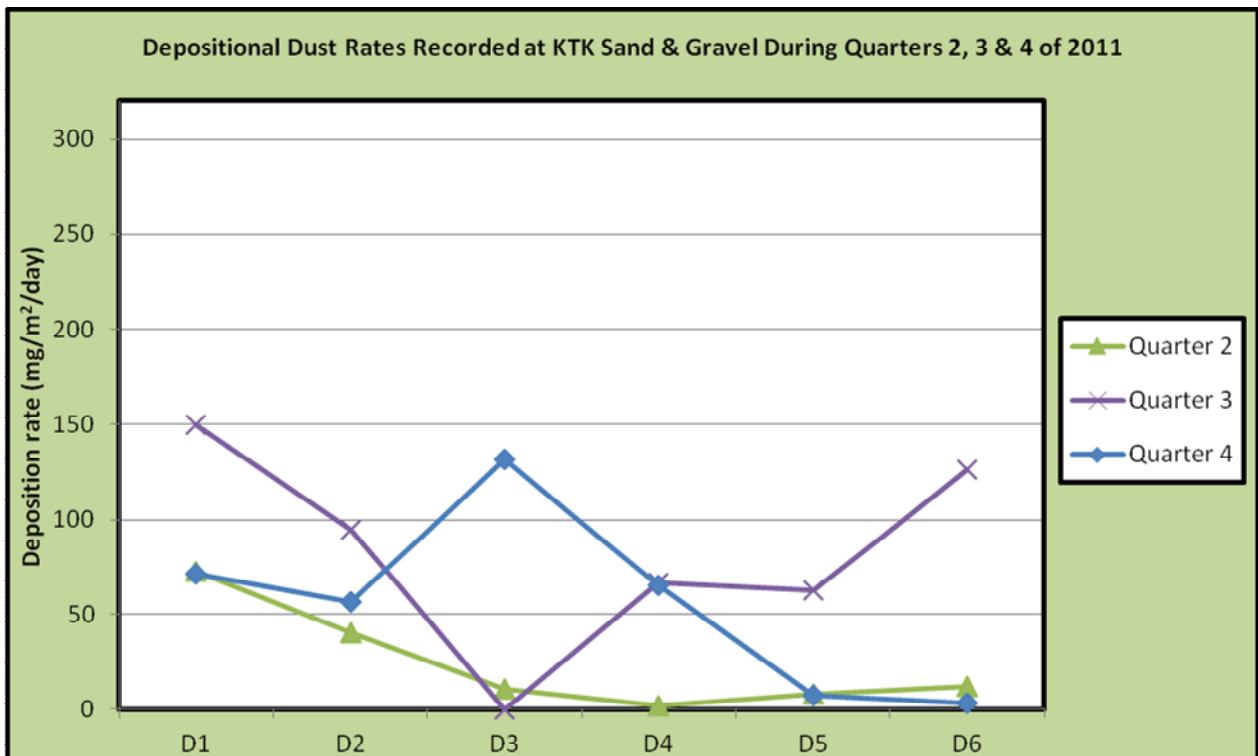


Figure 1: Depositional Dust Survey Results during Q2, Q3 and Q4 of 2011



The licence limit for depositional dust is set at 350 mg/m²/day which is specified in Table C.2 of the licence. This limit value was not breached at any locations during the two dust monitoring occasions. The average dust values ranged from 24.3 mg/m²/day to 99.9 mg/m²/day during the reporting period.

3.2 Environmental Noise Monitoring

Environmental noise monitoring was not carried during 2011 due to the facility being closed and no works being carried out. A noise monitoring survey will be carried out during the surface capping works, which are to take place during 2012.

4.0 GROUNDWATER MONITORING

Groundwater monitoring was conducted at nine locations during 2011 in accordance with Table D.1.1 and Section 4 “Environmental monitoring”, Figure 4.1 “Proposed Monitoring locations” of Volume I EIS dated June 2001, and Figure 3.1.1 “Monitoring locations” in Appendix 9 Volume II of the application for the current licence. Co-ordinates for all monitoring locations are detailed in Table 5 with locations illustrated on Figure 4.1 Rev O in Appendix A.

Table 5: Groundwater Monitoring Locations

MEDIA	LOCATION	EASTINGS	NORTHINGS	ELEVATION
Groundwater	GW1	292380.2	210585.3	143.690
	GW2	291941.5	210413.0	134.760
	GW3	292117.0	210457.9	139.215
	GW4	292290.4	210297.8	119.130
	GW5	292377.3	210559.7	142.725
	GW6	292365.8	210488.5	139.307
	GW7	292342.3	210385.7	131.191

4.1 Groundwater Levels

Groundwater levels were monitored on a quarterly basis in accordance with Table D.4.1 of Waste Licence Register No. W0156-01. The results of the water level monitoring were furnished to the Agency in the subsequent quarterly reports (Quarter 2 and Quarter 4 of 2011).

4.1.1 Methods of monitoring groundwater levels

Groundwater levels were measured using a standard dip-meter probe, which upon contact with water emits an audible signal. Measurements were made to the nearest centimetre relative to the top of the steel casing that protects each monitoring pipe.

4.1.2 Groundwater level results 2011

Figure 2 illustrates the annual water level data recorded from groundwater monitoring wells at the facility during 2011.

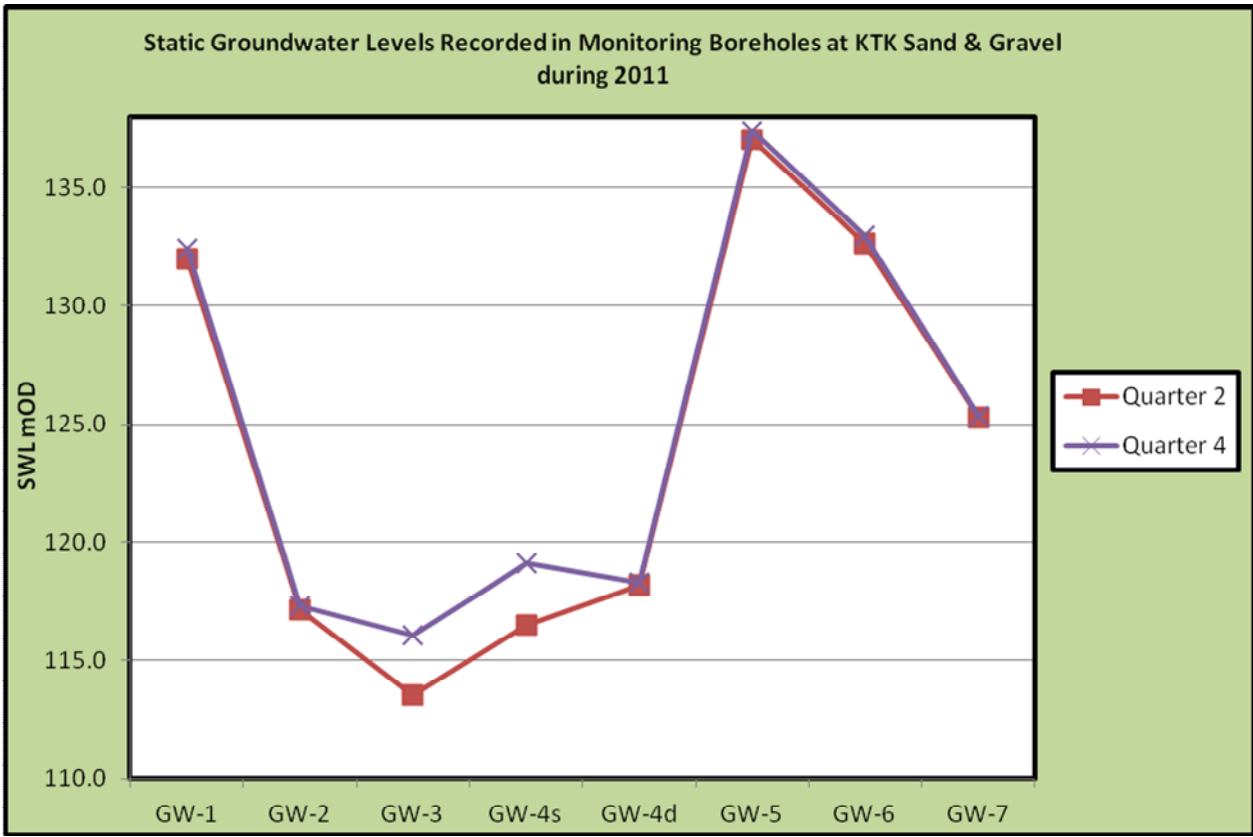


Figure 2: Static groundwater levels recorded in monitoring boreholes at KTK Sand & Gravel during 2011

4.2 Groundwater Quality

Analysis of groundwater quality at the facility was conducted on a quarterly basis in accordance with Schedule D.4 of licence W0156-01. Groundwater samples were collected by purging a minimum of 3 borehole volumes of water prior to sample collection.

This allows stagnant water to be removed and representative groundwater to be drawn into the hole. Dedicated sampling equipment was used to prevent cross contamination between sampling locations. Field measurements of temperature, pH and conductivity were recorded. Samples were decanted into laboratory designated containers and stored in cooler boxes to maintain a sample temperature of approximately 4.0°C. All samples were submitted to the laboratory within 24 hours of sampling.

4.2.1 Groundwater quality results

Groundwater quality has been monitored at nine locations during 2011 in accordance with Schedule D.1 of the license W0156-01. The results of all quarterly monitoring were sent to the EPA in Environmental Monitoring reports for Quarter 2 and Quarter 4 of 2011.

A summary of concentrations from a number of indicator parameters up-gradient and down-gradient of the facility recorded during the reporting period are presented in Figure 3 to Figure 7.

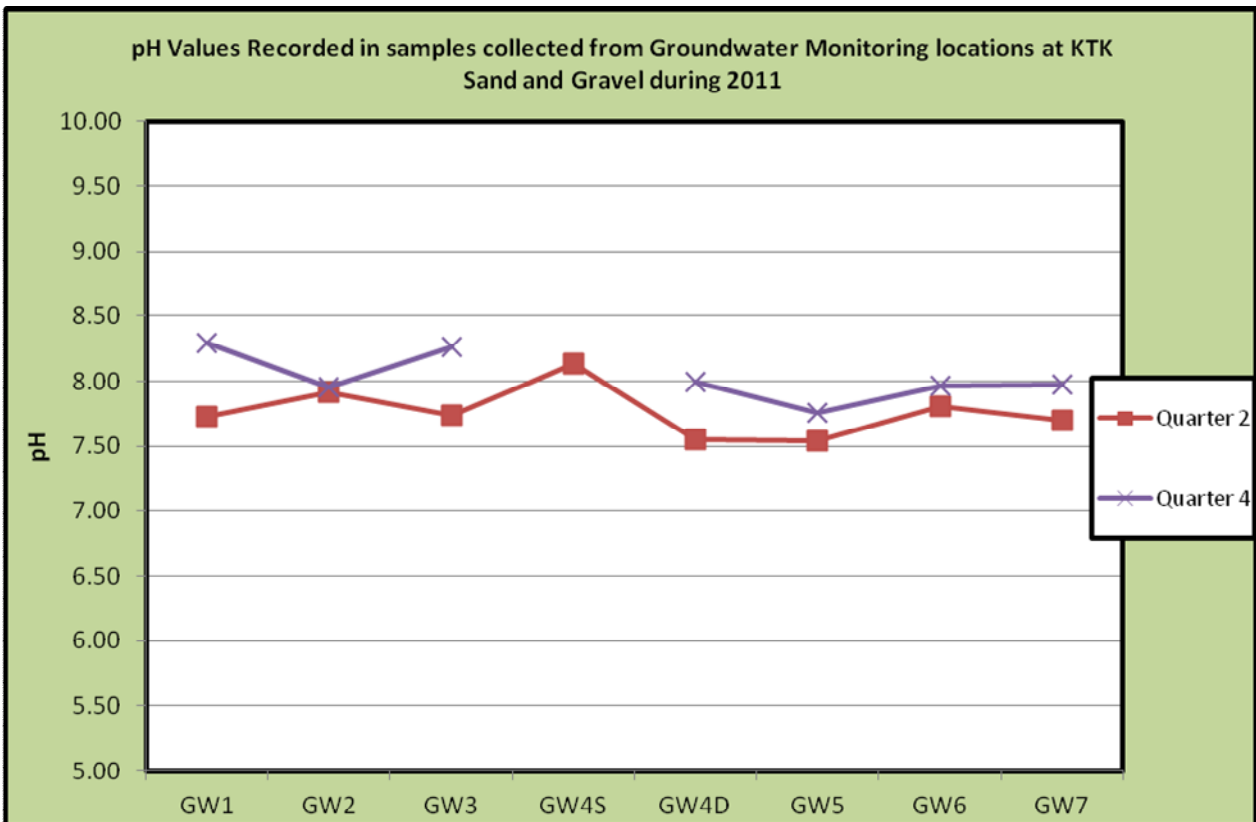


Figure 3: pH values in groundwater during 2011

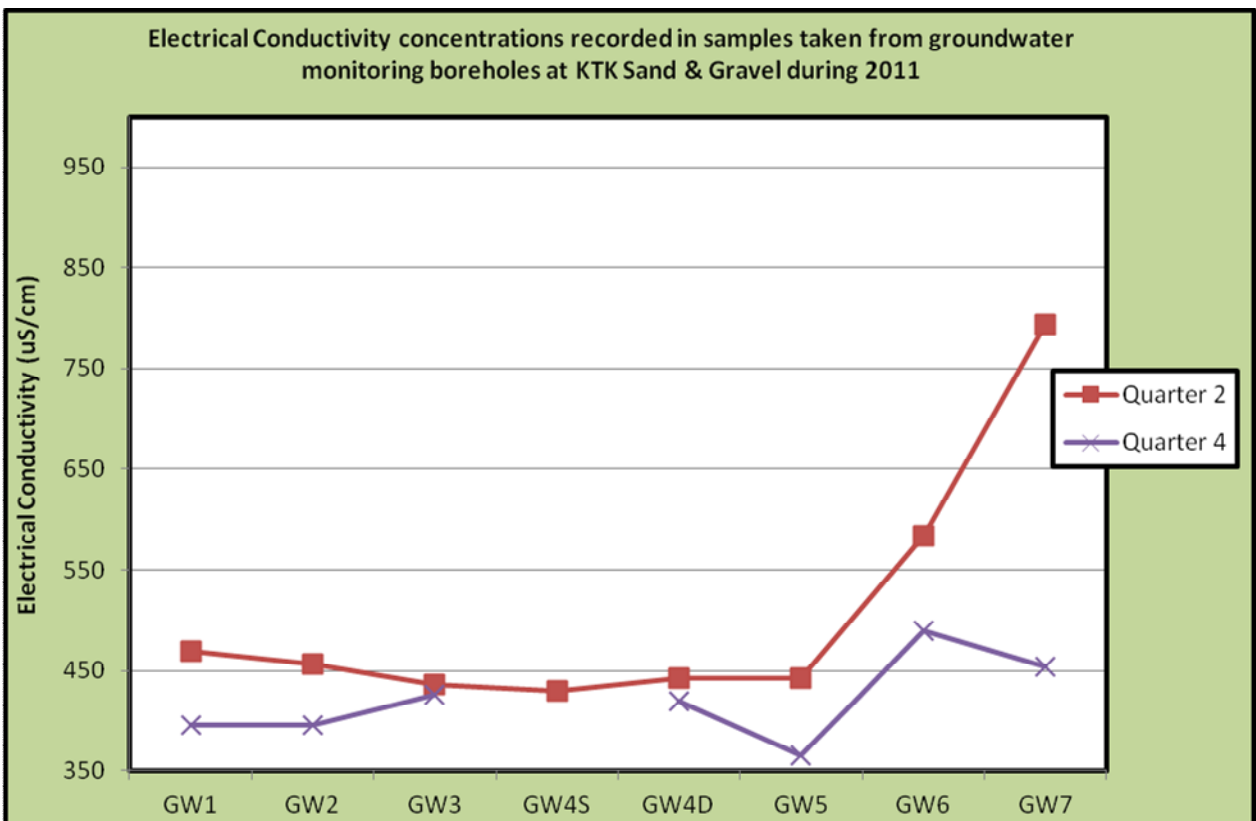


Figure 4: Electrical Conductivity levels in groundwater during 2011

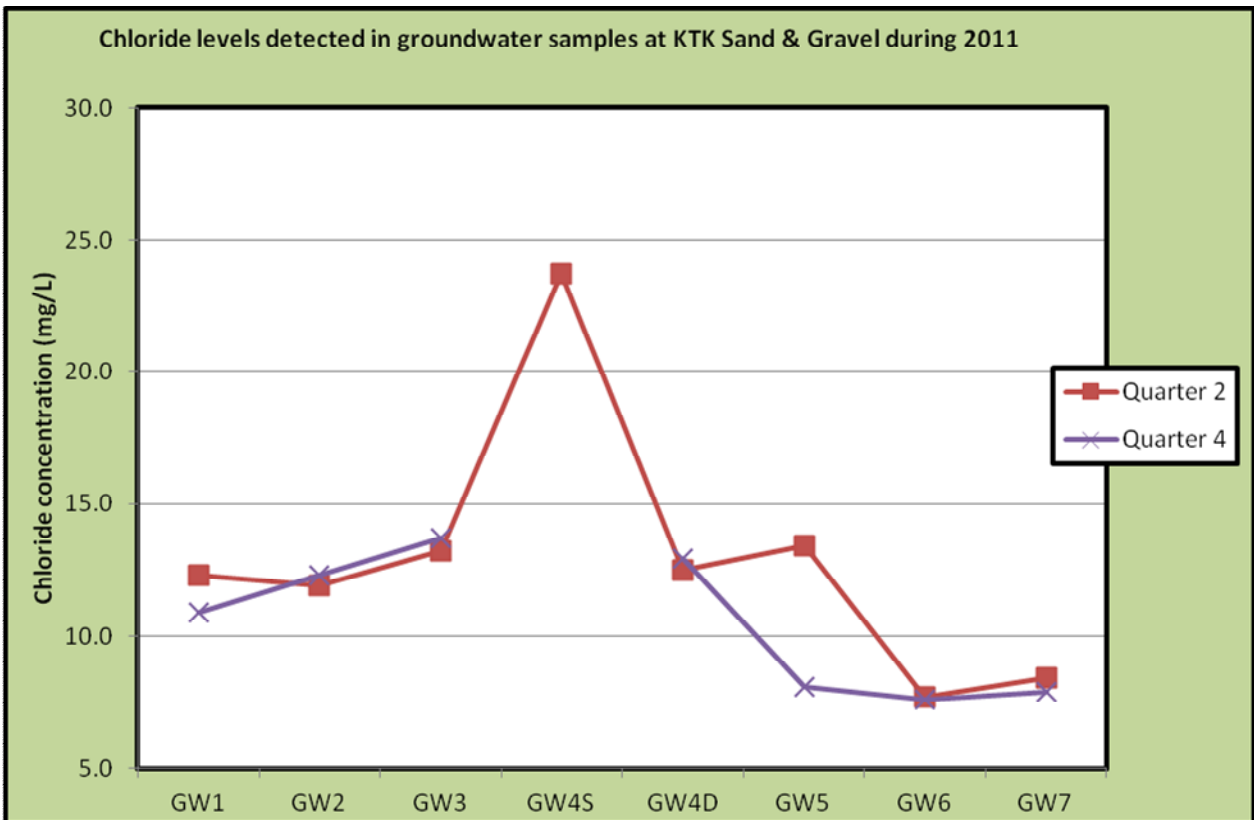


Figure 5: Chloride levels in groundwater during 2011

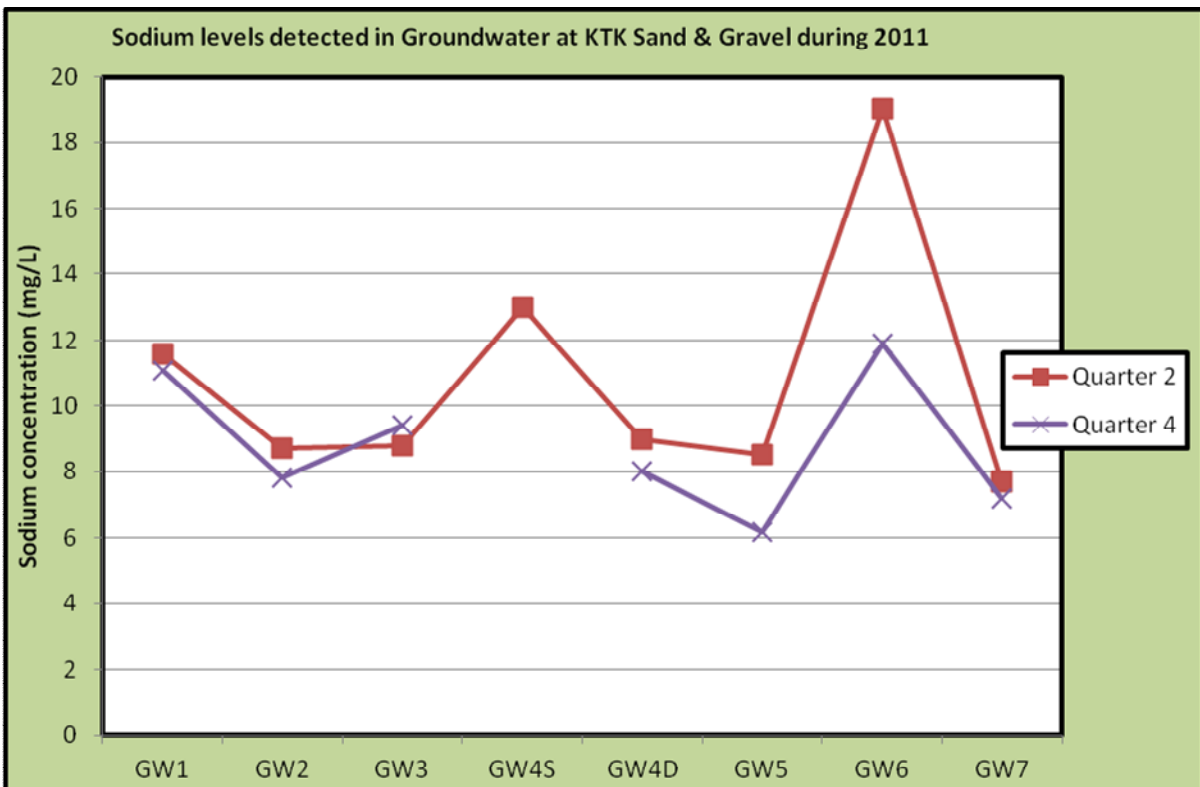


Figure 6: Sodium Levels in groundwater during 2011

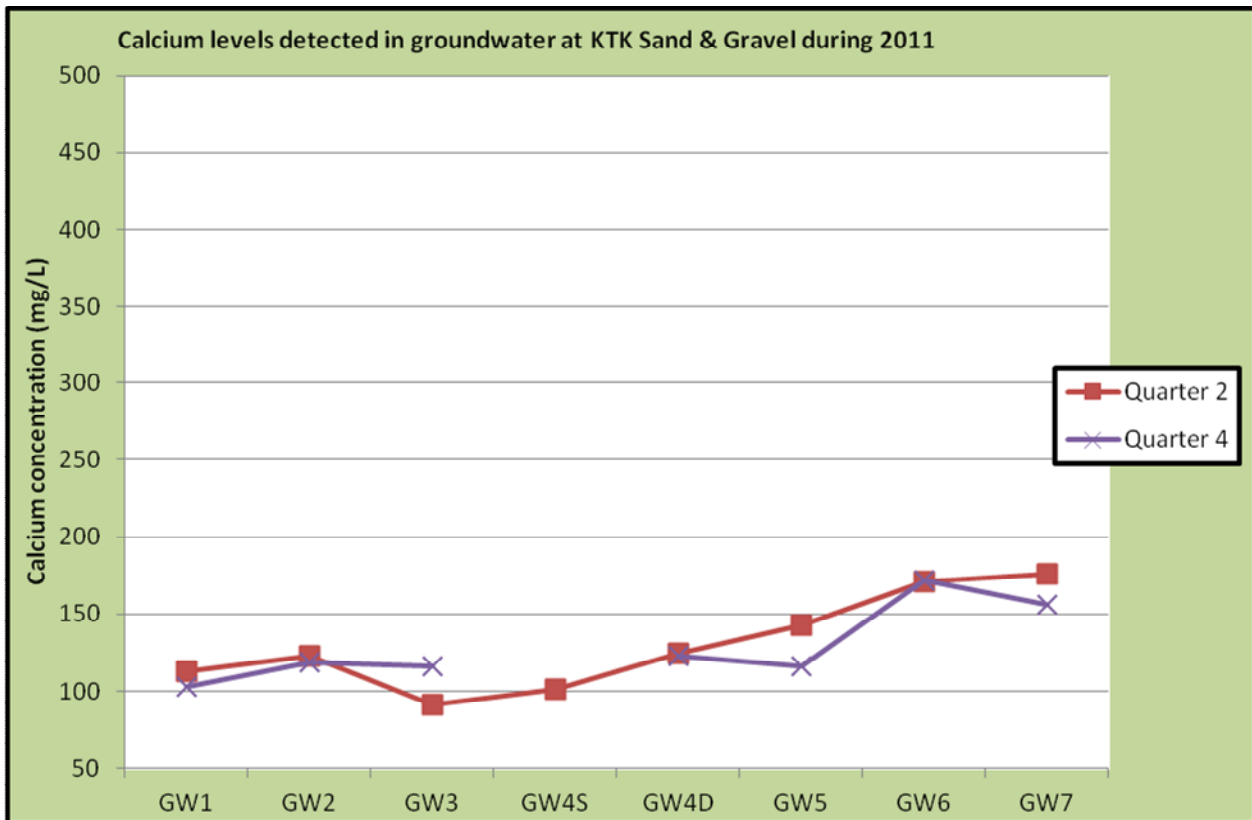


Figure 7: Calcium levels in groundwater during 2011

4.3 Discussion

Groundwater quality throughout the site has been stable over the course of the year with expected seasonal fluctuations. Groundwater quality is reported to the EPA on a quarterly basis as per licence conditions. A summary of the elevated parameters is given below.

- GW1:** During 2011, manganese and iron have been detected at concentrations above the EPA IGVs. However, these elevations are thought to be as a result of local geological conditions. The ammoniacal nitrogen concentration is slightly elevated at 0.18 mg/l, above the IGV concentration of 0.15 mg/l in Q2 while in Q4 it has increased to a concentration of 0.2189 mg/l.
- GW2:** All results were observed below EPA IGV concentrations.
- GW3:** The ammoniacal nitrogen concentration is elevated at 0.2962 mg/l as NH₄, above the IGV concentration of 0.15 mg/l as NH₄ in Q4 an increase from the laboratory limit of detection of <0.0386 mg/l in Q2. All other parameters were observed below EPA IGV concentrations.
- GW4S:** Manganese was elevated when compared with the EPA IGV of 0.05 mg/l during Quarter 2 2011 at a concentration of 0.848 mg/. In addition iron was detected at a concentration of 1.628 mg/l during Quarter 2 which is above the EPA IGV of 0.2 mg/l.
- GW4D:** All results were observed below EPA IGV concentrations.
- GW5:** All results were observed below EPA IGV concentrations.
- GW6:** All results were observed below EPA IGV concentrations.
- GW7:** All results were observed below EPA IGV concentrations.
- PW1:** Potassium is elevated at a concentration of 6.4mg/l against the IGV of 5mg/l in Quarter 4. All other parameters were observed below EPA IGV concentrations.



There are two areas within the facility boundary where there are potentially indirect emissions to groundwater.

One source is at the surface water percolation area located at the end of the discharge pipe from the settling pond. The volume of discharge through the settling pond is from the catchment of the pond only. Thus the indirect discharge to groundwater from the area is small and not from the area of waste deposition.

Another possible source is in the area where inert soils have been deposited in the pit to reinstate it. The volume of indirect emissions from this source area cannot be readily quantified because it is relative to the area of the deposited material at any given time, the permeability of the inert material, the intensity of the rainfall and the topography of the surface of the deposited wastes. It is suggested that it is insignificant and not of concern.

4.4 Annual Water Balance Calculation

The total catchment area is now approximately 130,000 m². The annual water balance calculation estimates a net rainfall volume of 31,395 m³ for the catchment area of the KTK S&G facility. Some of the net rainfall volume would have been absorbed by the deposited material, the remainder running off to the site drainage system.

Table 6 gives a summary of the water balance calculations for 2011.



Table 6: Annual Water Balance Calculation for KTK S&G for 2011

	AREA (m ²)	RAINFALL (m)	RAINFALL OVER LAND AREA (m ³)	POTENTIAL EVAPO-TRANSPIRATION (m)	NET RAINFALL (m)	NET RAINFALL OVER LAND AREA (m ³)
January	130,000	0.0124	1,612	0.0089	0.0035	455
February	130,000	0.0244	3,172	0.0168	0.0076	988
March	130,000	0.0526	6,838	0.0355	0.0171	2,223
April	130,000	0.1008	13,104	0.0668	0.0340	4,420
May	130,000	0.1228	15,964	0.0784	0.0444	5,772
June	130,000	0.1164	15,132	0.0800	0.0364	4,732
July	130,000	0.1099	14,287	0.0793	0.0306	3,978
August	130,000	0.0876	11,388	0.0628	0.0248	3,224
September	130,000	0.0714	9,282	0.0498	0.0216	2,808
October	130,000	0.0413	5,369	0.0296	0.0117	1,521
November	130,000	0.0250	3,250	0.0194	0.0056	728
December	130,000	0.0176	2,288	0.0134	0.0042	546
Total		0.7822	101,686	0.5407	0.2415	31,395

5.0 SURFACE WATER MONITORING

Surface water monitoring was conducted at the facility in accordance with Schedule D.4 of Waste Licence Register No. W0156-01.

Surface water monitoring locations SW1, SW2, SW3 are detailed below in Table 7 with monitoring locations illustrated on Figure 4.1 Rev. R, (Appendix A). Monitoring of surface water at the facility comprised weekly visual inspections and quarterly sampling and analyses, which are discussed in more detail below.

Table 7: Surface Water Monitoring Locations

MEDIA	LOCATION	EASTINGS	NORTHINGS
Surface Water	SW1	292289.0	210383.2
	SW2	292169.1	210375.2
	SW3	292251.1	210611.6

5.1 Surface Water Sampling Methodology

Surface water monitoring was conducted during Quarters 2, and 4 of 2011 at the three locations detailed in Table 7. Surface water sampling involved the submergence of the designated sample container into the surface water body (SW2) as well as using dedicated bailers (SW1 and SW3). During submergence every effort was made to keep the container steady so as to prevent sediment disturbance. The surface water



samples were analysed for parameters stipulated in Table D.4.1 Surface Water/Groundwater & Leachate of Waste Licence Register No. W0156-01. Details and analyses of all surface water sampling were forwarded to the Agency in Quarter 2 and Quarter 4 of 2011.

A summary of concentrations from a number of indicator parameters up-gradient and down-gradient of the facility recorded during the reporting period are presented in Table 8 to Table 11 below.

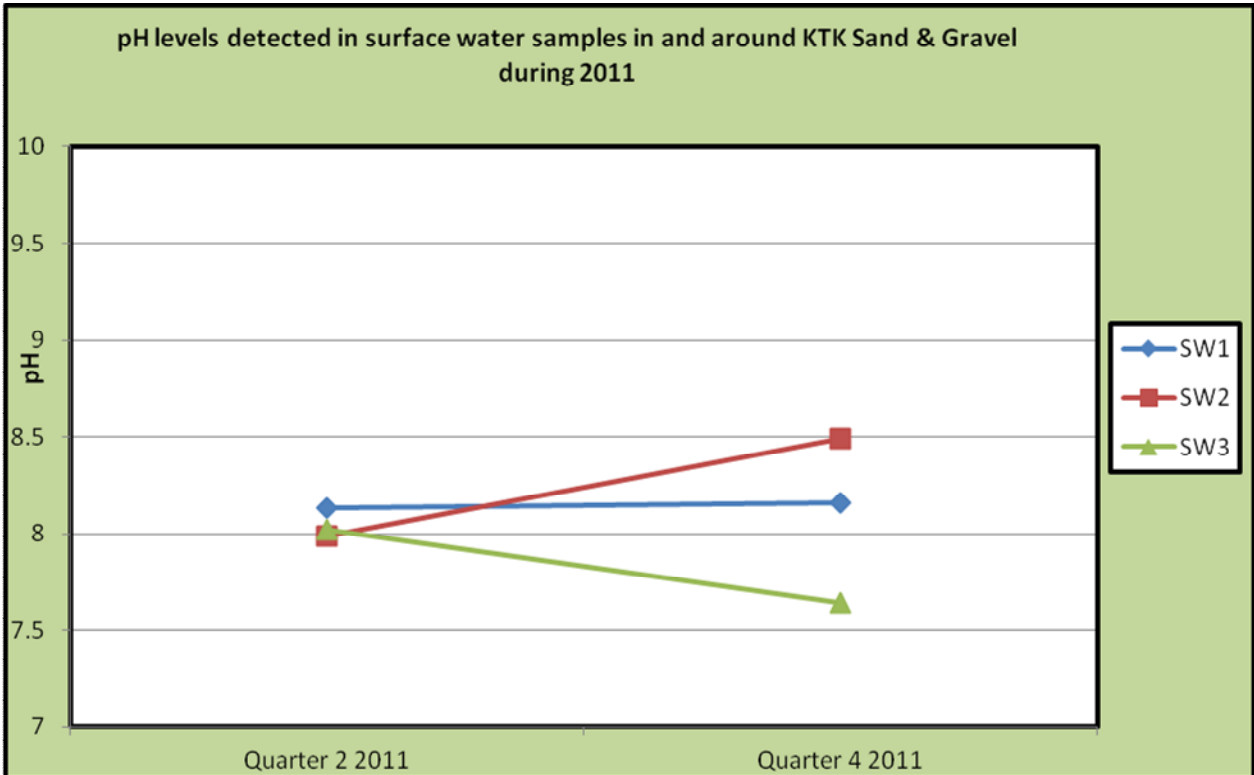


Figure 8: pH levels in surface water during 2011.

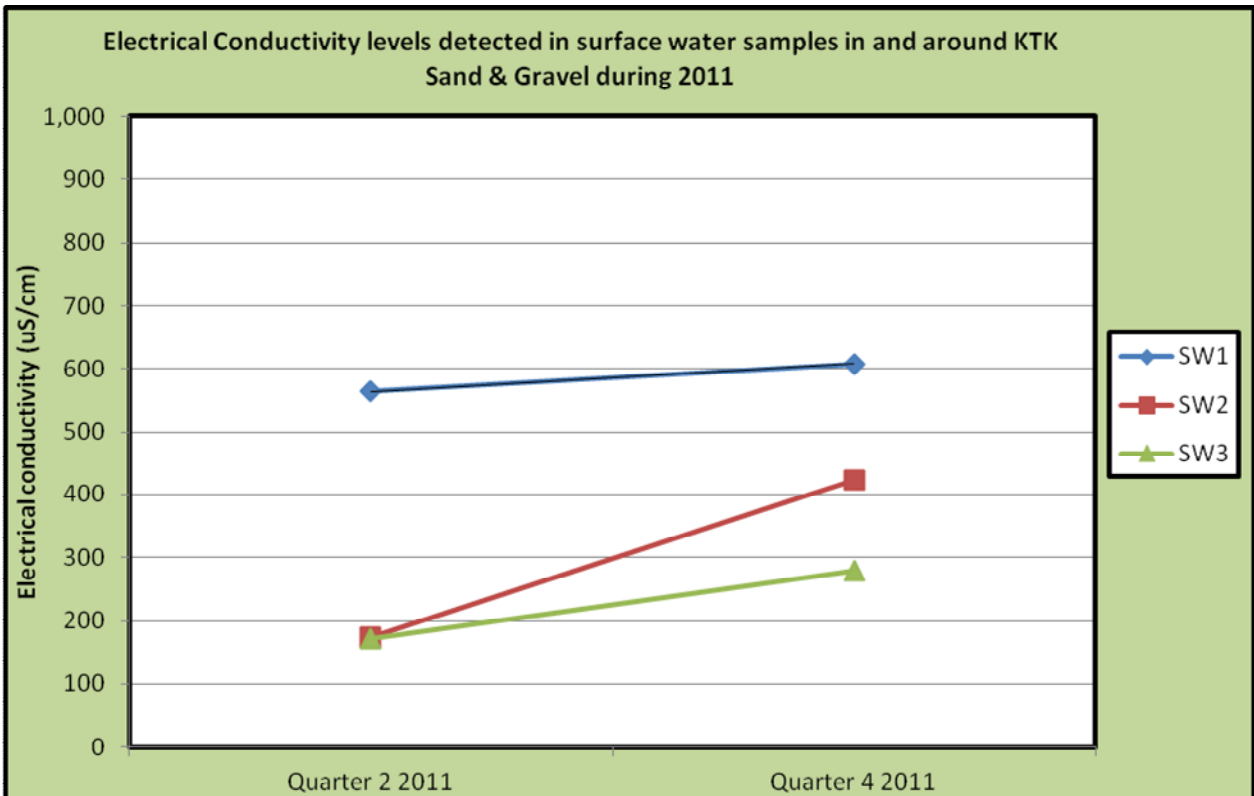


Figure 9: Electrical Conductivity in surface water during 2011

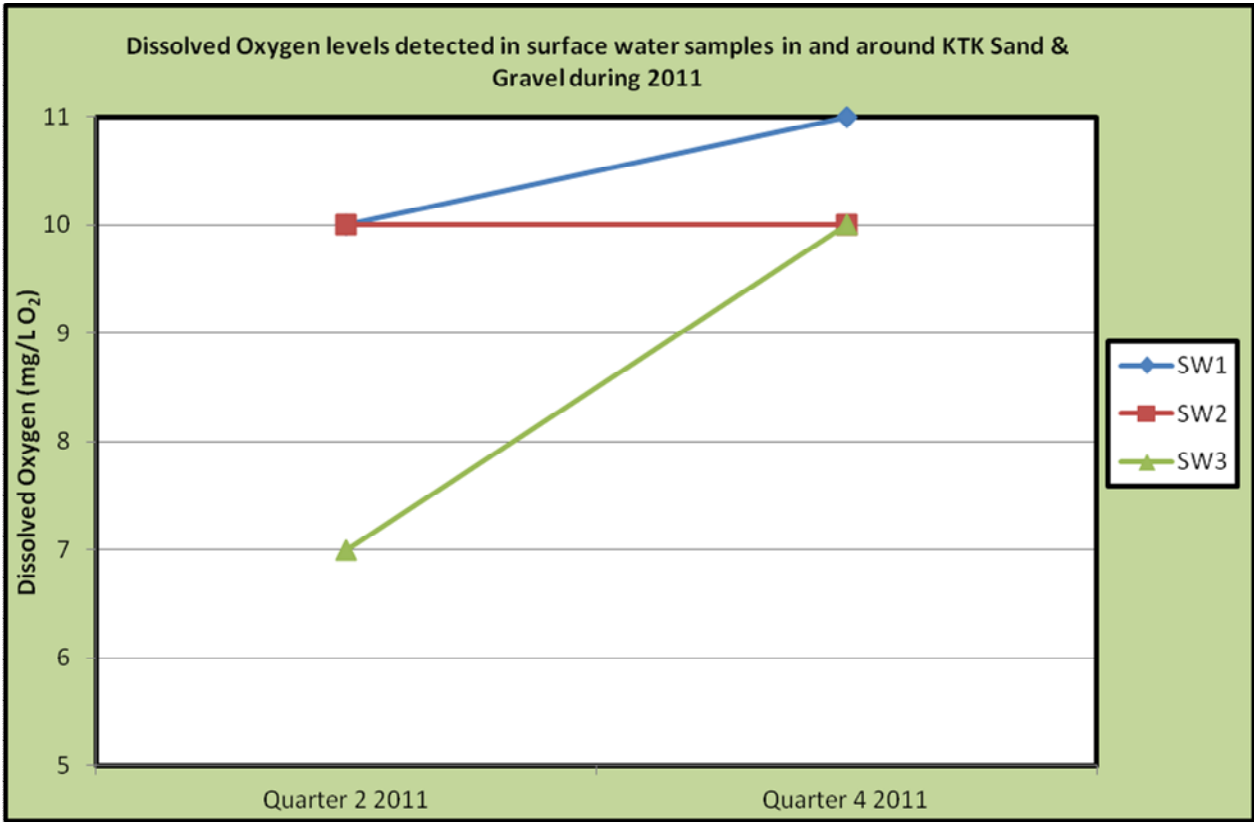


Figure 10: Dissolved Oxygen in surface water during 2011

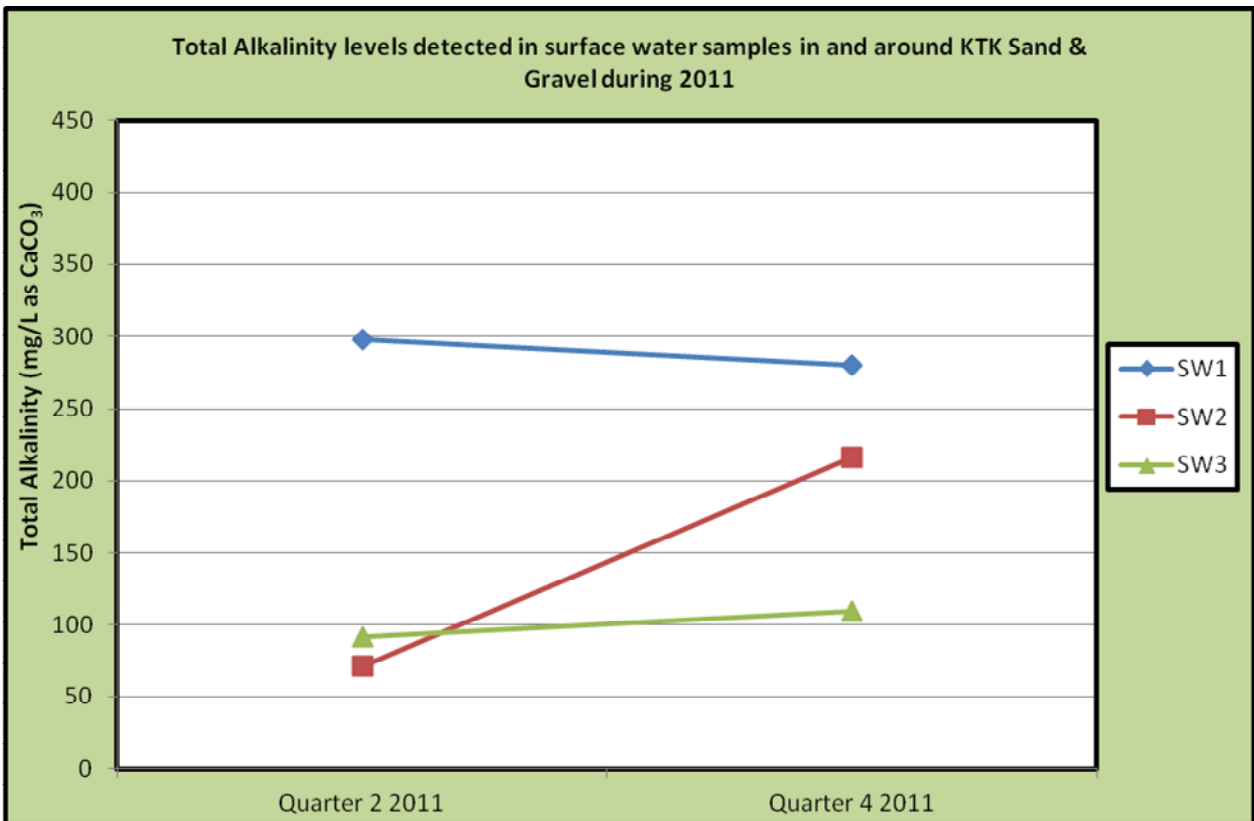


Figure 11: Total Alkalinity in surface water during 2011



5.2 Discussion

An increase in the pH, from Q2 2011, in SW1 and SW2 was observed during Q4 of 2011. Laboratory pH of 8.16 and 8.49 respectively were detected following sampling in Q4. Conductivity varied between SW1 and the other two surface water locations with a conductance of 608 $\mu\text{S}/\text{cm}$ recorded at location SW1 and conductances of 423 $\mu\text{S}/\text{cm}$ and 280 $\mu\text{S}/\text{cm}$ recorded at locations SW2 and SW3. In general, the samples were clear and did not have any odour.

A decrease in Manganese concentrations, from Q2 2011 to Q4 2011 in SW3 was noted. It ranged from 0.264 mg/l, to 0.048 mg/l over this period. The EPA IGV for Manganese in surface water is 0.3 mg/l. All locations are below this value. Manganese concentrations have historically been elevated in the region.

As the facility is inactive and is not subject to agricultural run-off or other agricultural activity, it is suggested that the elevated Manganese concentrations found at some locations around the site from time to time stem from a naturally occurring geological condition.

6.0 RESOURCE AND ENERGY CONSUMPTION DURING THE REPORTING PERIOD

Details of the resource and energy consumption at KTK Sand & Gravel during 2011 are presented below in Table 8.

Table 8: Energy and Resource Consumption 2010.

RESOURCE / ENERGY SOURCE	PERIOD	UNIT	ESTIMATED QUANTITY USED
Water	1 January 2011 - 31 December 2011	m ³	10
Electricity	1 January 2011 - 31 December 2011	unit	10,841

7.0 WASTE RECOVERY PROGRESS AND ACHIEVEMENTS

The facility is closed since end of 2008. No waste recovery activity took place during 2011.

7.1 Site Restoration

Drawing 243 Rev A in Appendix A details the current topography of the site. No activity took place during the reporting period. Drawing 243 Rev A is accurate as of May 2010.



8.0 REPORT ON DEVELOPMENT WORKS

No development works took place during 2011.

8.1 Planned Works for 2012

All proposed development works for 2012 are depicted in Table 9 below.

Table 9: Planned development works 2012.

ITEM	WORKS
1	Completion of capping Phases 1 & 2.
2	Completion of capping Phase 3
3	Cessation of Licence works.

9.0 SCHEDULE OF OBJECTIVES AND TARGETS

A review of the schedule of objectives and targets will be undertaken annually and achievement of targets during the previous twelve months will be measured.

Overall responsibility for managing the Schedule of Objectives and Targets rests with the Facility Manager, Mr. Mervyn Ross.

Golder Associates Ireland Limited have been engaged as consultants to advise on licence compliance matters, undertake environmental monitoring and prepare reports for the Agency as instructed by the licensee. They will undertake a number of tasks on behalf of the Licensee.

9.1 Schedule of Objectives and Targets for 2012

Table 10 below lists the planned Objectives and Targets to be undertaken during 2012.

Table 10: Schedule of Objectives and Targets for 2012.

ITEM	OBJECTIVE	DATE	SUCCESS/FAILURE
1	Site Restoration	September 2010	On-going restoration, new target for completion - August 2012
2	Licence Handover	June 2011	Revised target completion date December 2012.



10.0 DESCRIPTION OF PROCEDURES DEVELOPED AT THE SITE DURING 2012

No new procedures were developed at the site during the reporting period.

11.0 TANK, DRUM, BUND AND PIPELINE TESTING DURING THE REPORTING PERIOD

Currently all existing drums at the site have been stored in a dedicated storage container adjacent to the quarantine area. The following materials are stored at the facility:

- Lube oils – Approximately 10 gallons;
- Weed killer – small quantities; and
- Liquid soap – small quantities.

12.0 REPORTED INCIDENTS AND COMPLAINTS SUMMARY

Condition 10.6 of Waste Licence Register No. W0156-01 requires a notification of the Agency in case an incident has, or may have, taken place at the facility. Incidents are described in Condition 1.6 of the Licence as follows:

- 3.1 *The following shall constitute an incident for the purposes of this licence:*
- a) *An emergency;*
 - b) *Any emission which does not comply with the requirements of this licence;*
 - c) *Any level specified in this licence which is attained or exceeded;*
 - d) *Any indication that environmental pollution has, or may have, taken place, and;*
 - e) *Rejection of any waste load at the facility*

The Licence sets Emission Limit Values (ELV) for noise emissions, dust deposition and surface water discharge.

There were no complaints received during the reporting period.

13.0 REVIEW OF NUISANCE CONTROLS

Licence Condition 7: Nuisance Control requires the licensee to ensure that vermin, birds, flies, mud, dust, litter and odours do not give rise to nuisance at the facility or in the immediate area of the facility. Further, the condition requires that any method used by the licensee to control any such nuisance shall not cause environmental pollution.

13.1 Nuisances Caused by Vermin

Vermin have not been identified on the site as a nuisance. If a vermin related problem does occur at the facility, a licensed pest controller for vermin will be employed. An updated Vermin Control Plan was



submitted to the Agency for agreement on 15 March 2005. Vermin have never been identified on the site as a nuisance.

13.2 Nuisances Caused by Birds

Birds have not been identified on the site as a nuisance. If a bird related problem does occur at the facility, a licensed pest controller for birds will be employed.

13.3 Nuisances Caused by Mud and Dust

Monitoring for dust emissions on the site are carried out quarterly as requested in Licence Schedule D: Monitoring. A quarterly report is prepared and sent to the Agency. The internal roads and public roads in the vicinity of the facility are swept clean regularly.

13.4 Nuisances Caused by Odours

Odours have not been identified on the site as a nuisance.

14.0 FINANCIAL PROVISIONS

The Waste Licence holder was charged €7089.36 in 2011 by the Environmental Protection Agency for the services they provide in relation to overseeing the Waste Licence.

As requested by the Agency in correspondence dated 5 August 2005 (Your Ref. No.: 156-1/RF01DM) the licensee submitted an assessment for the Agency which included an initial screening and operational risk assessment of the facility.

On the basis of the above mentioned risk assessment the facility is be classified as a Low Risk facility. Consequently, Section 4.2 of the Guidance document (Guidance Documents and Assessment Tools on Environmental Liabilities Risk Assessment and Residuals Management Plans incorporating Financial Provision Assessment (EPA Contract OEE-04-03) states that for Low Risk facilities there is no requirement for a detailed environmental liabilities risk assessment to be undertaken.

Further to Condition 12.2.1, cost estimates have been made for the potential environmental liability during operation and decommissioning. To cover any environmental pollution events and pursuant to Condition 12.2.2, the Licensee has taken out an Environmental Site Liability Insurance Policy with XL Europe Ltd for €2,000,000 against Environmental Pollution.

15.0 MANAGEMENT AND STAFFING STRUCTURE

The current staff structure at KTK Sand & Gravel is presented below in Table 11.

Table 11: Staff Structure at KTK Sand & Gravel

NAME	POSITION
Mr. Kevin Keenan	Managing Director
Mr. Mervyn Ross	Facility Manager
Ms. Pauline McNally	Office Manager



15.1 Staff Training

Table 12 below indicates the status of training of the management and staff during the reporting period.

Table 12: Staff Training Records

TRAINING COURSE	MANAGING DIRECTOR Mr. Kevin Keenan	FACILITY MANAGER Mr Mervyn Ross	OFFICE MANAGER Ms. Pauline McNally
Contractors Plant Operation (FÁS)	X		
Waste Management Course (FÁS)		X	
Health & Safety for Management		X	
Occupational First Aid Course (NIFAST)			
Safe Pass (FÁS)	X	X	X
Manual Handling Course		X	
Loading Shovel Operation	X	X	
Safety Awareness		X	
Fire Fighting		X	

16.0 PROGRAM FOR PUBLIC INFORMATION

A Communications Programme was developed for the site in June 2003. The specific objectives of this programme are as follows:

- To ensure that the general public is aware of how to contact site and company management;
- To encourage liaison between KTK Sand & Gravel Ltd, local residents and those who may be affected by the site's operations;
- To make available Environmental Performance Data relating to the KTK S&G Ltd Ballymore Eustace facility at all reasonable times; and
- The communications programme focuses on ensuring that the general public knows how to access relevant information, facilitate personal contact with site management and facilitate site visits.

Any complaints regarding the facility operation of the facility can be forwarded to the facility manager who will log them. The facility manager or the managing director of the company will address the complaints.



17.0 POLLUTION EMISSION TRANSFER REGISTER (PRTR)

Following detailed correspondence and clarification with the Agency in relation to the requirement for a PRTR at KTK Sand & Gravel, it was confirmed by the Agency on 26 January 2009 that as a result of the inert nature of the facility, a PRTR is not required. The licence requirement has been removed from Waste Licence W0156-01 and a confirmation email was issued from the Agency on the same date.



Report Signature Page

Mark Butler
Project Scientist

Thomas Vainio-Mattila
Project Director

MB/TVM/aw

Registered in Ireland Registration No. 297875
Town Centre House, Dublin Road, Naas, Co. Kildare, Ireland
Directors: M. Gilligan, A. Harris (British)
VAT No.: 8297875W



APPENDIX A

Drawing 4.1 Rev R - Environmental Monitoring Locations and
Drawing 243 Rev A detailing the current site topography

LEGEND

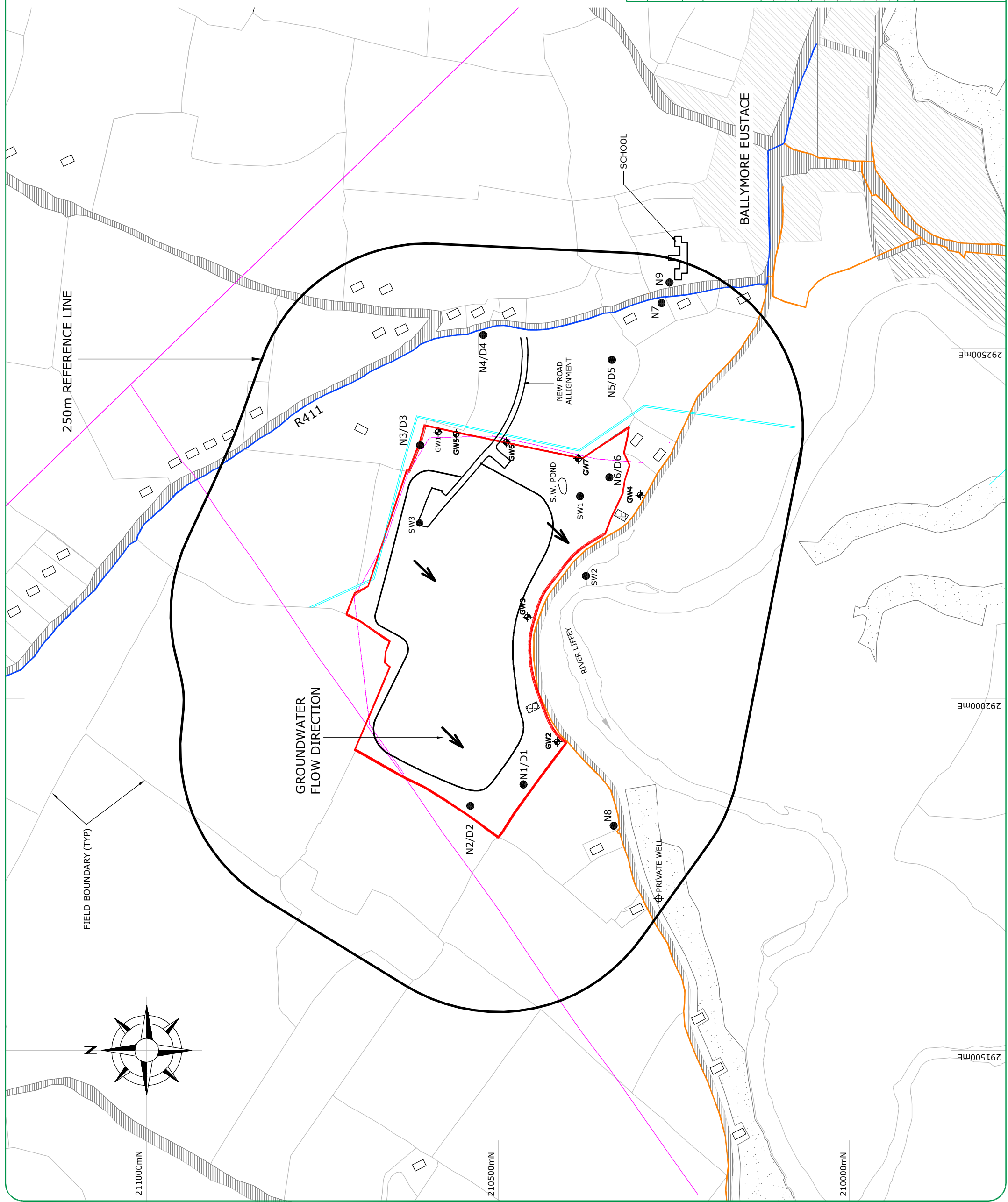
- FORESTRY
- BUILT UP AREA
- DWELLING
- DERELICT DWELLING
- ROAD
- WASTE LICENCE BOUNDARY
- POWER LINE
- DUBLIN CORPORATION WATER MAIN
- 15" w/m
- 4" PVC w/m

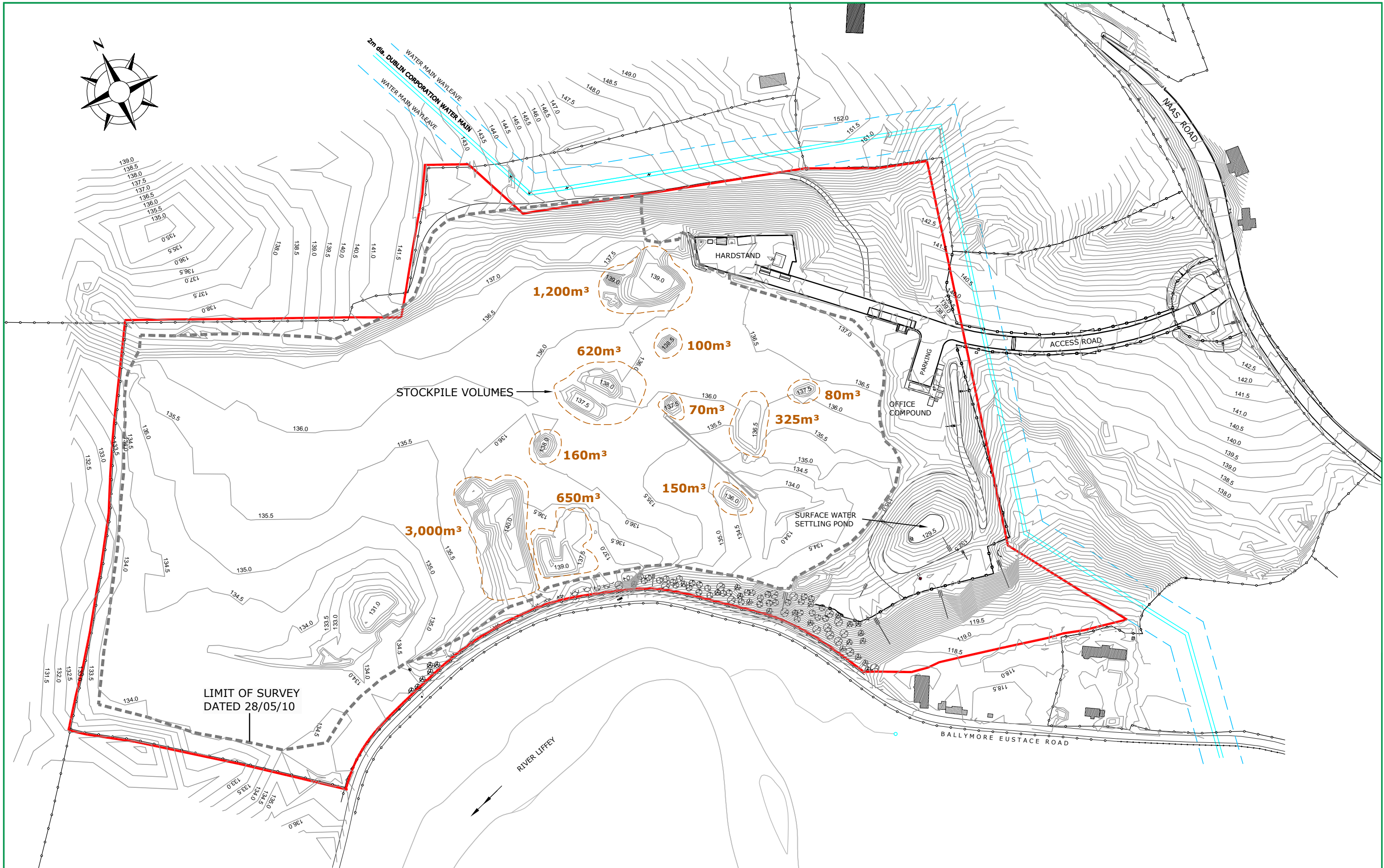
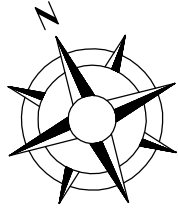
- GROUNDWATER MONITORING BOREHOLES
- NOISE MONITORING LOCATIONS
- DUST MONITORING LOCATIONS
- SURFACE WATER MONITORING LOCATIONS


NOTES

- SW1 = Discharge from surface water pond
- SW2 = Stream
- SW3 = Discharge from Class 1 Bypass Separator

Project		KTK SAND & GRAVEL Ltd.	
Location		WASTE LICENCE W0156-01	
Title		WASTE LICENCE W0156-01 MONITORING LOCATIONS	
Project No.	08507190004	Engineer	GP
File No.	4.1	Reviewed by	GP
Created by	CC	Figure No.	4.1
ISSUE TO EPA		10/01/09	L
ISSUE TO EPA		JUN '09	M
ISSUE TO EPA		JAN '10	N
ISSUE TO EPA		MAY '10	O
ISSUE TO CLIENT		NOV. '10	P
ISSUE TO CLIENT		JAN. '11	Q
ISSUE TO CLIENT		July '11	R
Description	1:2500 A1	Date	JULY 2011
Scale	1:5000 A3		





 <p>Golder Associates TOWN CENTRE HOUSE, DUBLIN ROAD, NAAS, CO. KILDARE TEL.: 045 874411 - FAX: 045 874549 - www.golder.com</p>	<p>Client: KTK SAND & GRAVEL Ltd.</p>	<p>Project number 067.194.12</p>	<p>Created by POB</p>	<p>Issue to ISSUE TO CLIENT</p>	<p>Date May '10</p>	<p>Revision A</p>	<p>Title: SITE CONDITIONS CURRENT TO SURVEY DATED 28/05/10</p>	<p>Drawing 243</p>
	<p>Location: BALLYMORE EUSTACE</p>	<p>File Location CAD\DRAWINGS\KTK S&G\02.076\WASTE LICENCE\243</p>	<p>Engineer CC</p>	<p>Reviewed by TVM</p>	<p>Scale 1:1,000 A1 1:2,000 A3</p>			

At Golder Associates we strive to be the most respected global group of companies specialising in ground engineering and environmental services. Employee owned since our formation in 1960, we have created a unique culture with pride in ownership, resulting in long-term organisational stability. Golder professionals take the time to build an understanding of client needs and of the specific environments in which they operate. We continue to expand our technical capabilities and have experienced steady growth with employees now operating from offices located throughout Africa, Asia, Australasia, Europe, North America and South America.

Africa	+ 27 11 254 4800
Asia	+ 852 2562 3658
Australasia	+ 61 3 8862 3500
Europe	+ 356 21 42 30 20
North America	+ 1 800 275 3281
South America	+ 55 21 3095 9500

solutions@golder.com
www.golder.com

Golder Associates Ireland Limited
Town Centre House
Dublin Road
Naas
Co. Kildare
Ireland
T: +353 45 87 4411

