Clare County Council

Waste Licence W0170-01

Annual Environmental Report for 2014

Name & location of facility: **Lisdeen Recycling Centre & Transfer Station, Cemetery Road, Lisdeen, Kilkee, Co. Clare**

Submitted by:

Environment Section, Clare County Council, New Road, Ennis, Co. Clare.

Table of Contents

Reporting Period

1/01/14 – 31/12/14

1) Details of Activity

The principal waste activity of the Transfer Station is the compaction of solid waste into 30 m^3 closed containers for subsequent disposal to landfill in accordance with Class 12 of the Third Schedule of the Waste Management Act, 1996. Other waste activity is the storage of non-recoverable waste received at the facility, prior to disposal at an appropriate facility in accordance with Class 13 of the Third Schedule.

Other waste recovery activities include recycling or reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes) in accordance with Class 2 of the Fourth Schedule, recycling or reclamation of metals and metal compounds in accordance with Class 3 of the Fourth Schedule, and recycling or reclamation of other inorganic materials in accordance with Class 4 of the Fourth Schedule. This covers the acceptance of waste oils, cooking oils, beverage cans, white goods, other metals, and glass at the facility.

3) Volume and composition of waste received during the reporting period.

The quantity of municipal solid waste accepted at the facility during the reporting period(s) was as follows:

Public Domestic Waste delivered to site	461.4	tonnes
Recyclable material delivered to site	255.2	tonnes
Total	716.6	tonnes

The quantity of waste materials accepted for subsequent recycling/recovery for 2014 is as outlined in Table 3.1 below

Table 3.1

Material Type	E.W.C. Code	Tonnage
Domestic waste	20 00 00 20 03 01	461.4
Metals for recycling	20 01 40	25.76
Glass for recycling	20 01 02	13.83
Aluminium Cans	15 01 04	0.55
Plastic bottles	20 01 39	10.7
Hard Plastics		24
Steel cans	15 01 04	5.42
Car Batteries	16 06 01*	1.1
Newspapers	20 01 01	30.5
Waste Engine Oil	13 02 00	0.99
Cardboard	20 01 01	30.5
Tetrapak	15 01 01	0.591
Timber	20 01 38	36.2
Textiles	20 01 11	1.95
WEEE	20 01 36	54.21
Batteries	16 06 04	0.522
Oil filters	16 01 07	0.24
Green waste	20 02 01	18.12

The quantities of waste allowed for acceptance the facility under Schedule A of the licence at are as outlined in Table 3.2 below:

Table 3.2:

Waste Type	Maximum (Tonnes per annum)
Municipal Waste	1,800
Wastes for recovery/recycling	200 Note4
Total	2,000

Note 4: The amount of wastes accepted for recovery/recycling may be altered as long as the total accepted at the facility does not exceed 2000 tonnes per annum.

4) Summary report on emissions, including wastes from silt traps and interception sumps.

No desludging of the septic tank has taken place since installation. Loading on the tank is quite small with one w.c. and sink as well as run-off from waste transfer area.

5) Foul Water Emissions

There is no direct foul water discharge. Foul water is diverted to a septic tank unit, which in turn is discharged to a reed bed. This foul water is collected from w.c., sink unit, the transfer station shed, from the compactor and the bin transverse area. It comprises wash water and rainwater falling on the contaminated areas.

6) Surface Water Emissions

Surface water runoff from site roads and uncontaminated surfaces discharges to the surface water drains. There are no other emissions of any environmental significance from the facility.

7) Summary of Results and Interpretation of Environmental Monitoring.

Table 7.1. Lisdeen Transfer Station (WL170-1) Monitoring Schedule

Schedule D	Monitoring
D.1	Monitoring Locations
D.2	Waste Water
D.3	Landfill Gas
D.4	Surface Water, Groundwater and Leachate

Monitoring was conducted at the specified locations and frequencies as indicated in each of the above referenced Schedules of the Waste Licence, unless otherwise noted in this report. Monitoring locations are shown in Appendix 1. Wastewater monitoring has not

been carried out to date as the discharge from the septic tank is directly to a percolation area. The reed bed system is now commissioned; however due to the low flow, it was not possible to obtain a sample from the system.

7.1. Landfill Gas

During this reporting period, landfill gas monitoring was carried out on a monthly basis at landfill gas wells L1 and L2. Monitoring was carried out in accordance with Schedule D.3 of the waste licence. Gas monitoring locations are shown in Appendix 1. Completed landfill gas monitoring forms for the period is available for inspection at the facility and can be forwarded if required. Landfill gas results for L1 and L2 are graphed in figures 7.1 and 7.2 below:

Figure 7.1:

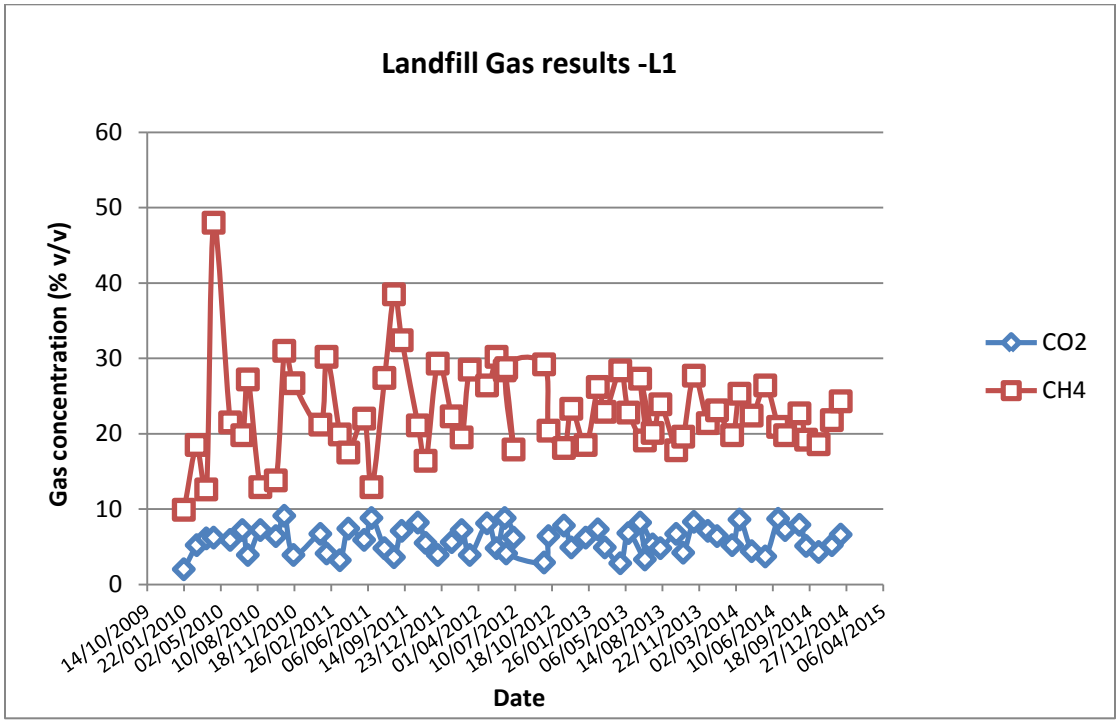
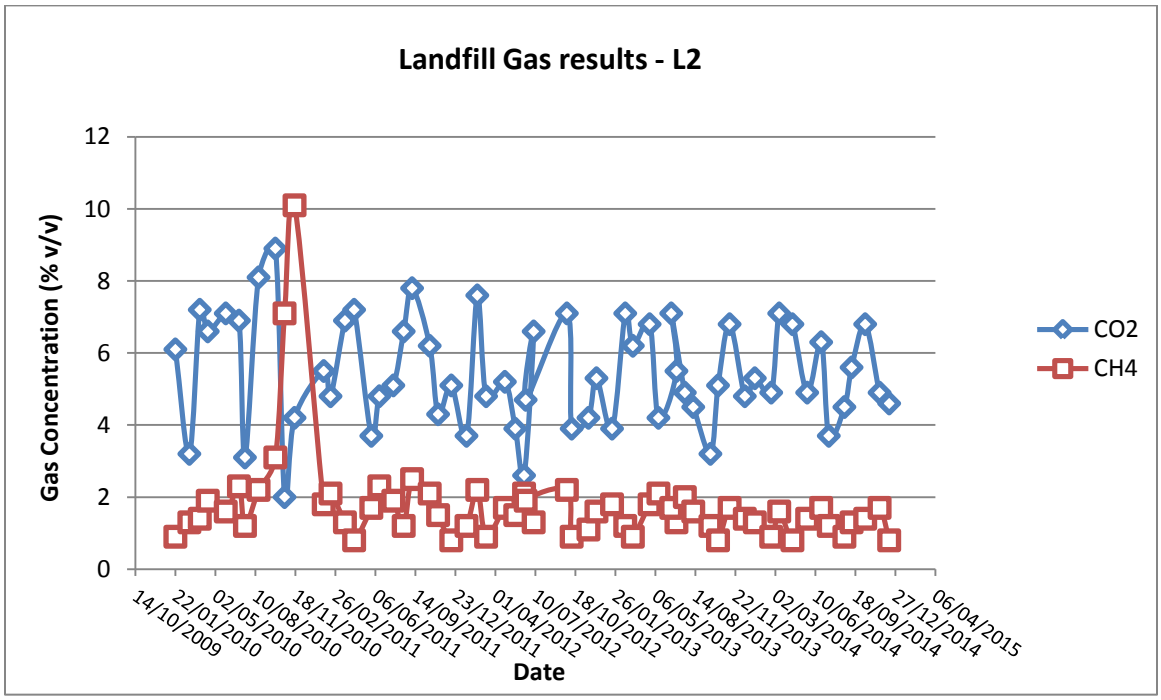


Figure 7.2:



Both gas wells are located in waste; L2 is located in the centre of the waste body and L1 is close to the northwest site boundary

The methane concentration at L1 is significantly higher than at L2. The trend during 2014 was in line with historic monitoring within the site. Carbon dioxide levels for the majority of the year were similar at both locations with levels <10%v/v.

Landfill gas levels in the caretaker's office are continuously monitored using the online gas analyser. Methane and carbon dioxide levels during 2014 remained within trigger levels as stated in Condition 6.4.1 of Waste licence 170-1.

Surface Water, Groundwater and Leachate.

SNC-Lavalin Environment (SLE) was retained by Clare County Council to complete groundwater, surface water and leachate sampling at the Lisdeen Waste Recycling Centre (Lisdeen) located at Kilkee, Co. Clare. Sampling was conducted on the 19th February 2014.

7.2 Surface Water

7.2.1a Water Quality Standards and Trigger values used for comparison

Although water is not abstracted for drinking water use from these surface water locations, it is useful to provide a benchmark for comparison of monitoring results and therefore the measured results are compared to the Water Quality Standards as presented below.

PARAMETER	WATER QUALITY STANDARDS			
	SURFACE WATER REGULATIONS [1]			[2]
	A1 MAC	A2 MAC	A3 MAC	SALMONID REGULATIONS
Conductivity, µS/cm at 20^0C	1000	1000	1000	
Temperature, ^{0}C	25	25	25	NS
pH	5.5 – 8.5	5.5 – 9.0	5.5 – 9.0	> 6 < 9
Dissolved oxygen, mg/L	NS	NS	NS	NS
Dissolved oxygen, % Saturation	> 60%	> 50%	> 30%	50%, > 9 mg/l O2
BOD, mg/L O2	5	5	7	< 5
COD, mg/L O2	NS	NS	NS	NS
Total Ammonium, mg NH4/L	0.2	1.5	4.0	1.0
Suspended solids, mg/L	50	NS	NS	<25

Chloride, mg/L Cl	250	250	250	NS
Phosphates, mg/L P2O5	0.5	0.7	0.7	NS
Sulphates, ml/L SO4	200	200	200	NS

[1] EC (Quality of Surface Water Intended for the Abstraction of Drinking Water) Regulations, 1988 [S.I. No. 294 of 1989]

[2] EC (Quality of Salmonid Waters) Regulations, 1988 [S.I. No. 293 of 1988]

7.2.1b Trigger Levels

Clare County Council has proposed trigger levels for ammonia and BOD concentrations for the surface water monitoring locations around the site. These trigger levels are considered to highlight a significant change in water quality compared to normal results and require corrective action to be taken. The proposed trigger levels, which are yet to be agreed with the EPA are presented below in Table 7.2.1.

Table 7.2.1 Surface water trigger levels at Lisdeen Recycling Facility

Monitoring Location	**SW1**	**SW2**	**SW3**	**SW5**	**SW5a**	**SW7**
Ammonia Concentration (ppm)	2.5	-	10	12.5	-	1.2
BOD Concentration (ppm)	38	-	10	36	-	10

Evaluation of monitoring results

Annual sampling was completed at six (6) surface water sampling locations on the boundaries of the site and off site to determine any potential impacts the site may have had on surface water quality in the area. Five main surface water bodies were sampled as part of the sampling programme:

- Stream 1 – Main tidal channel located along the eastern boundary of the site.

- Stream 2 – Small stream located along eastern boundary of site parallel to Stream 1.
- Stream 3 – Stream located north of the site before it discharges to stream 1 (main tidal
- channel) and stream 2 located along the eastern boundary of the site.
- Stream 4 – Surface water ditch located along southern boundary of site.
- Stream 5 – Surface water ditch located south of the site and parallel with Stream 4.

Stream 1 –Main Tidal Channel East of the Site

Annual monitoring and sampling was completed at two (2) locations on stream 1. Sample location SW3 was at the surface water outlet from the Lisdeen site and sample location SW7 was located approximately 200m downstream from the outlet. The electrical conductivity at SW3 was 8,760µS/cm, exceeding the EPA water quality limit of 1,000µS/cm but is indicative of estuarine water. This was greatly reduced at SW7 (i.e. 349µS/cm) and was less than the EPA water quality limit. The concentrations of all parameters analysed from SW3 with the exception of elevated, chloride, ammoniacal nitrogen (NH4-N), BOD and COD concentrations were less than the 2009 surface water regulations and EPA guideline values. Concentrations of all parameters analysed from SW7 were less than the 2009 surface water regulations and/ or EPA guideline values with the exception of elevated concentrations of chloride and COD.

Additional monitoring was conducted in November 2013, at the request of Clare County Council. The aim of this additional monitoring was to establish the cause of elevated results which had been recorded during the annual monitoring event in March 2013. Monitoring locations were selected along the inner drain, and along the main tidal channel. It was found that results were elevated at a number of locations along the inner drain, however it could not be clearly stated that these elevated results were due to migration from the landfill, or saline water ingress due to a faulty control barriers which

allowed the high tide to infiltrate the drain. Clare County Council is in the process of repairing these control barriers, and additional monitoring shall be conducted.

Stream 2 – Stream Parallel to Main Tidal Channel East of the Site

Annual sampling was completed at one (1) location on stream 2 at the northeast corner, and upstream, of the Lisdeen site (SW2). The concentrations of all parameters analysed from SW2 with the exception of NH_4-N were less than the applicable 2009 surface water regulations and/or EPA guideline values

Stream 3 – Stream North of the Site – Background

Annual sampling was completed at one (1) location on stream 3 to the north, and upstream, of the Lisdeen site (SW1). The concentrations of all parameters analysed from SW1 with the exception of BOD and COD were less than the 2009 surface water regulations and EPA guideline values. The elevated BOD and COD concentrations in surface water upstream of the site indicate that factors other than the landfill site may be influencing the concentrations of BOD and COD at this location.

Stream 4 – Surface Water Ditch on Southern Boundary of Site

Annual sampling was completed at one (1) location on stream 4 located along the western boundary of the Lisdeen site (SW5). The electrical conductivity of the sample collected from SW5 (1,410µS/cm) marginally exceeded the EPA guideline value of 1000µS/cm. The concentrations of all parameters analysed from SW5 with the exception of NH4-N, BOD, chloride and manganese concentrations were less than the 2009 surface water regulations and applicable EPA guideline values. The BOD and NH4-N concentrations found at SW5 were the highest results found at the site for the 2013 sample event (i.e., 9mg/l O2 and 3.97mg/l, respectively). The concentration of NH4-N at SW5 exceeded the 2009 surface water regulations with the elevated concentration most probably due to runoff from the Lisdeen site. It should be noted that although the NH4-N concentration in SW5 was greater than the 2009 surface water standard it was consistent with historic results and significantly less than the proposed trigger level for that sample location outline in section 2.3.1 of this report. The stagnant nature of surface water at SW5

allowed for algal and water based plant growth and this may also be influencing the elevated BOD concentrations at this location.

Stream 5 – Surface Water Ditch South of the Site Parallel with Stream 4.
Annual sampling was completed at one (1) location on stream 5 located south (and outside the boundary) of the Lisdeen site (SW5a). The concentrations of all parameters analysed from SW5a were less than the 2009 surface water regulations and applicable EPA guideline values with the exception of COD that marginally exceeded the EPA guideline value of 40mg/lO2.

7.3 Groundwater

Groundwater wells BH1, BH3s, BH3d, BH4s and BH4d were sampled on the 19th April 2014. Monitoring locations are shown in Appendix 1.

Table 7.3.1 Groundwater water locations

Location Reference	Description of location
BH1	Artesian bedrock well located outside the site, adjacent to the northeast boundary.
BH3d	Bedrock well located close to BH3s, downgradient of the main waste body.
BH3s	Overburden well located within the landfill, close to the southern site boundary.
BH4d	Bedrock monitoring well located in waste and downgradient of the main waste body.
BH4s	Overburden well located within the landfill, close to the southern site boundary.

7.3.1 Water Quality Standards and Trigger Values used for comparison purposes

Table 7.3.2 Extracted from E.C. (Drinking Water) Regulations, 2007 SI No. 106 of 2007

Parameter	**Table [1]**	**Drinking Water Quality Standard**	**Deviations**
Temperature	Not Listed	-	N/A
Conductivity	Table C	2500 µS/cm @ 20ºC	none
pH	Table C	$6.5 \leq pH \leq 9.5$	none
Ammonium	Table C	0.23 mg/l N (0.30 mg/l NH_4)	See trigger levels below
Total Organic Carbon	Table C	No abnormal change	N/A
Cadmium	Table B	0.005 mg/l	none
Chromium	Table B	0.05 mg/l	none
Iron	Table B	0.2 mg/l	BH3, BH3s, BH4
Lead	Table B	0.010 mg/l	none
Manganese	Table B	**0.05 mg/l**	none
Nickel	Table B	**0.020 mg/l**	none
Sodium	Table B	**200 mg/l**	none

[1] The notes above quote the Table in the regulations from which parametric or limit values were obtained

N/A Not applicable.

Trigger Levels

Clare County Council has proposed trigger levels for ammonia concentrations for the monitoring wells located around the site. These trigger levels are considered to highlight a significant change in water quality compared to normal results and require corrective action to be taken. The proposed trigger levels, which are yet to be agreed with the EPA are presented below in Table 7.3.3.

Table 7.3.3 Groundwater trigger levels at Lisdeen Recycling Facility

Monitoring Well	**BH1**	**BH3**	**BH3s**	**BH4**
Ammonia Concentration (ppm)	0.5	1.7	1.0	0.5

7.3.2 Evaluation of results

Background Well

The annual sampling programme indicated that the concentrations of the majority of contaminants of concern in groundwater at the Lisdeen site were below the applicable groundwater standards and/or the EPA guideline values. The parameters with elevated concentrations in monitoring well BH1 were NH4-N, iron, manganese and total alkalinity.

The elevated concentrations of manganese in BH1 indicated that there may be a natural source of manganese in the area. The background well is located up gradient of the site and would not be considered to be influenced by historic activities at the Lisdeen site. The EPA guideline value for manganese is set as an aesthetic objective for drinking water (i.e., staining of pipes and appliances) rather than as a concentration that would constitute a health impact. However, none of the monitoring wells at Lisdeen are used for potable water extraction and the application of the standard may be considered overly conservative. The elevated concentrations of NH4-N and iron in the sample collected from BH1 indicated contamination sources other than the historic landfill.

Southwest Area Wells

Monitoring wells BH3 and BH3S are located at the south of the site, and down gradient from the historic landfill body. The results of the annual sampling event indicated that that the concentrations of the majority of contaminants of concern in groundwater were

below the applicable groundwater standards and/or the EPA guideline values in monitoring wells BH3 and
BH3S. The only parameters with elevated concentrations that exceeded the 2010 groundwater standard in both monitoring wells were NH4-N, total alkalinity and manganese. BH3S contained elevated residue on evaporation concentrations that exceeded the EPA guideline value of 1000mg/l. There has been a significant reduction in iron concentrations since October, 2012 and concentrations found in samples collected during the March, 2013 and February, 2014 sampling events were below the laboratory method detection limit (MDL) for BH3 and BH3S.
Concentrations of manganese in BH3 and BH3S (i.e. 387mg/l and 415mg/l, respectively) exceeded the EPA guideline value of 50mg/l but were below the concentrations found in background well BH1 (i.e. 479mg/l) indicating naturally elevated manganese concentrations in the area. The EPA guideline value for manganese is set as aesthetic objectives for drinking water (i.e., staining of pipes and appliances) rather than as a concentration that would constitute a health impact. However, none of the monitoring wells are used for potable water extraction and the application of the standards may be overly conservative.
The sample collected from BH3S contained elevated residue on evaporation concentrations (i.e. 12,798mg/l) that exceeded the EPA guideline value of 1000mg/l and may be due to impact from solids from soil or material falling down the standpipe. The slightly elevated total alkalinity concentration in both monitoring wells indicated that the water contains higher concentrations of calcium carbonate which may act as a buffer against significant pH changes within the groundwater aquifer.

Southeast Area Wells

Monitoring wells BH4 and BH4S are located at the southeast of the site, and down gradient from the historic landfill body. The results of the annual sampling event indicated that the concentrations of the majority of contaminants of concern in groundwater were below the applicable groundwater standards and/or the EPA guideline values in both monitoring wells with the exception of NH4-N, manganese and total

alkalinity. Iron concentrations marginally exceeded the EPA guideline value in BH4 and BH4s and contained marginally elevated residue on evaporation concentrations.
The elevated concentration of manganese in both wells indicated that there is a natural source of manganese in the area as both wells contained lower manganese concentrations than background monitoring well BH1. It should be noted that the EPA guideline value for manganese is as an aesthetic objective for drinking water (i.e., staining of pipes and appliances) rather than as a concentration that would constitute a health impact. However, none of the monitoring wells at Lisdeen are used for potable water extraction and the application of the standards may be overly conservative.
The slightly elevated total alkalinity concentration in both monitoring wells indicated that the water contained higher concentrations of calcium carbonate (CaCO3) which may act as a buffer against significant pH changes within the groundwater aquifer.

7.4 Leachate

7.4.1 Evaluation of monitoring results

The leachate samples were collected from monitoring locations L1 and L2 on the 19th March 2014.

The results of the sampling programme are discussed below:

Electrical conductivity for the leachate sample collected from L1 was 732µS/cm and L2 was 1,572µS/cm which were less than the 2010 groundwater standard of 1,875µS/cm.
pH for the leachate samples collected from L1 was 8.1 and L2 was 7.3.
The concentration of NH4-N in both L1 and L2 (i.e., 0.94mg/l and 38.79mg/l, respectively) exceeded the 2010 groundwater standard of 0.175mg/l. The results indicated that limited decomposition of organic material is still taking place in the central area of the landfill.
Metals concentrations (i.e., chromium, copper, iron, lead, mercury, nickel and zinc) for samples collected in both wells (L1 and L2) were all less than the 2010

groundwater standard and/or the applicable EPA guideline values.
The concentration of potassium in L2 (i.e. 26.4mg/l) exceeded the EPA guideline value of 12mg/l and was below the EPA guideline value in L1 (i.e. 7.3mg/l). Concentrations of magnesium and sodium in wells L1 and L2 were less than the applicable EPA guideline values.
Results for earth metals (i.e., boron and calcium,) and major anions (i.e., fluoride, sulphate and chloride) in wells L1 and L2 were all less than the applicable 2010 groundwater standards and/or EPA guideline values.
The concentration of manganese in L1 (i.e., 605µg/l) and L2 (i.e., 1,975µg/l) significantly exceeded the EPA guideline value of 50µg/l which is consistent with previous results.
Total alkalinity concentrations in L1 (i.e., 220mg/l) and L2 (i.e., 666mg/l) exceeded the EPA guideline value of 200µg/l which is consistent with previous results.
The concentration of BOD in L1 (i.e., <1mg/l O2) was below the 2009 surface water regulation standard of 2.6mg/l. Concentrations of BOD in L2 (i.e., 33mg/l O2) were greater than the 2009 surface water regulation standard. BOD concentrations have decreased in L1 compared to results obtained in October, 2012 (i.e., 10mg/l O2) and increased in L2 (i.e., 7mg/l O2 in October, 2012).
The concentration of COD in L1 (i.e., 29mg/l O2) and L2 (i.e. 42mg/l O2) were below the EPA guideline value of 50mg/l. COD concentrations in L2 have shown a reduction compared to previous analytical results (i.e., 89mg/l O2 in March, 2013 and 103mg/l O2 in October, 2012).
The analytical results indicated that the concentrations of NH4-N, boron, manganese, potassium and total alkalinity were significantly higher in leachate well L2 (i.e., central area of the site) than in leachate well L1 (i.e., north western area of site). The concentrations of organic and inorganic contaminants, particularly in L2 are indicative of leachate from an historic landfill site (e.g., manganese, BOD). Analytical results for samples collected from both leachate wells are consistent with historic results at the site. The slightly elevated total alkalinity concentration in both leachate wells indicated that the

leachate contains higher concentrations of calcium carbonate (CaCO3) which may act as a buffer against significant pH changes. The elevated manganese may be partially attributed to naturally elevated manganese concentrations in the area (e.g. upgradient well BH1 has elevated manganese concentrations).

The Leachate results are presented in Appendix IV Table IV.

8) Resource Consumption Summary

Diesel

Fuel consumption was similar to that used in previous years.

Electricity

Electricity usage was similar to that in 2013.

Water

Water supply to the site is via a connection to the group water scheme. Water usage on site is mainly for power washing yards, transfer station apron and hopper. Average water usage is approximately 3,000 litres monthly, with an approximate total of 36,000 litres used in 2014.

9) Development works undertaken during the period and timescale for proposed works.

Clare County Council has received Part VIII Planning Permission to begin the remediation process. Clare County Council intend to begin works as soon as finances permit.

10) Full title and written summary of any procedures developed by the licensee during the previous year.

No procedures were developed during the past year.

11) Drum, Tank and Bund Testing.

An integrity test was carried out on the bund in May 2012.

12) Reported Incidents and Complaints Summaries.

There were no complaints received during the year and no incidents recorded at the facility.

13) Review of nuisance controls

No review of nuisance controls was carried out during 2014; no nuisances were noted at the facility during 2014, therefore a review was not considered to be necessary.

14) Schedule of Environmental Objectives and Targets

Objective 1

Comply with all aspects of the licence.

> Target 1.1 - Every effort will be made to comply with all conditions of the waste licence by the prescribed dates.

The Senior Engineer, Executive Engineer in charge, Deputy Site Manager, Executive Chemist and Environmental Patrol Warden have responsibility for implementing this objective.

Objective 2

Ensure that sufficient funds are available to comply with condition 12 of the licence.

Responsibility for ensuring compliance with this objective lies with the Finance Officer of Clare County Council.

Objective 3

Increase the quantity of waste collected for recycling at the facility.

Target 3.1-Increase the quantities of cardboard and newspaper collected at the Recycling Centre. Suitable containers for each waste type will be provided on site and the public will be informed by means of appropriate awareness campaigns.

Target 3.2-Increase the quantities of glass, aluminium cans, and steel cans collected at the Recycling Centre.

The Senior Engineer, Environmental Services has responsibility for implementing this objective with the assistance of the Executive Engineer in charge and the Environmental Awareness Officer in the Environment Dept.

Objective 4

Improve facilities at the facility.

Target 4.1 - Make facility more user-friendly by providing containers and providing clear instructions as to what these are for. This will allow for proper segregation of recyclable streams. All bulky wastes and hazardous wastes will be stored in one particular area of the facility and this area will be secured thus

allowing for greater supervision when these recyclable streams are being deposited. This will also eliminate traffic hazards. On occasion there is difficulty with turning/reversing manoeuvres at the facility due to large stockpiles of white goods and large recycling receptacles.

Target 4.2 - Provision of additional recyclable streams by year-end.

The Executive Engineer in charge has responsibility for implementing this objective.

Objective 5

Improve correspondence with the E.P.A.

Target 5.1 - Council will make every effort to reply to letters of correspondence received from the Agency by the requested dates.

The Executive Engineer in charge and Senior Staff Officer have responsibility for implementing this objective.

Objective 6

Comply with condition 3.10.1

Target 6.1 - Install by mid-2008 an interceptor as per condition 3.10.1 of the waste license, as part of overall landfill remediation programme.

This will be installed when funds become available.

The Executive Engineer in charge will have responsibility for implementing this objective.

Objective 7

Advance the Restoration and Aftercare Plan.

Target 7.1 - Implement the first phase of the Restoration and Aftercare plan as agreed with the Agency.

The Senior Executive Engineer, Executive Engineer, Finance Officer and Senior Staff Officer have responsibility for implementing this objective.

Time scale

A requisition for funding is with the DOEHLG at present. When this funding becomes available details of the Restoration and Aftercare plan will be submitted.

Designation of Responsibilities

The Senior Engineer, Environmental Services Section of Clare County Council has overall responsibility for the implementation of these objectives. The specific responsibilities for each objective are outlined in the description.

15) Progress of objectives and targets

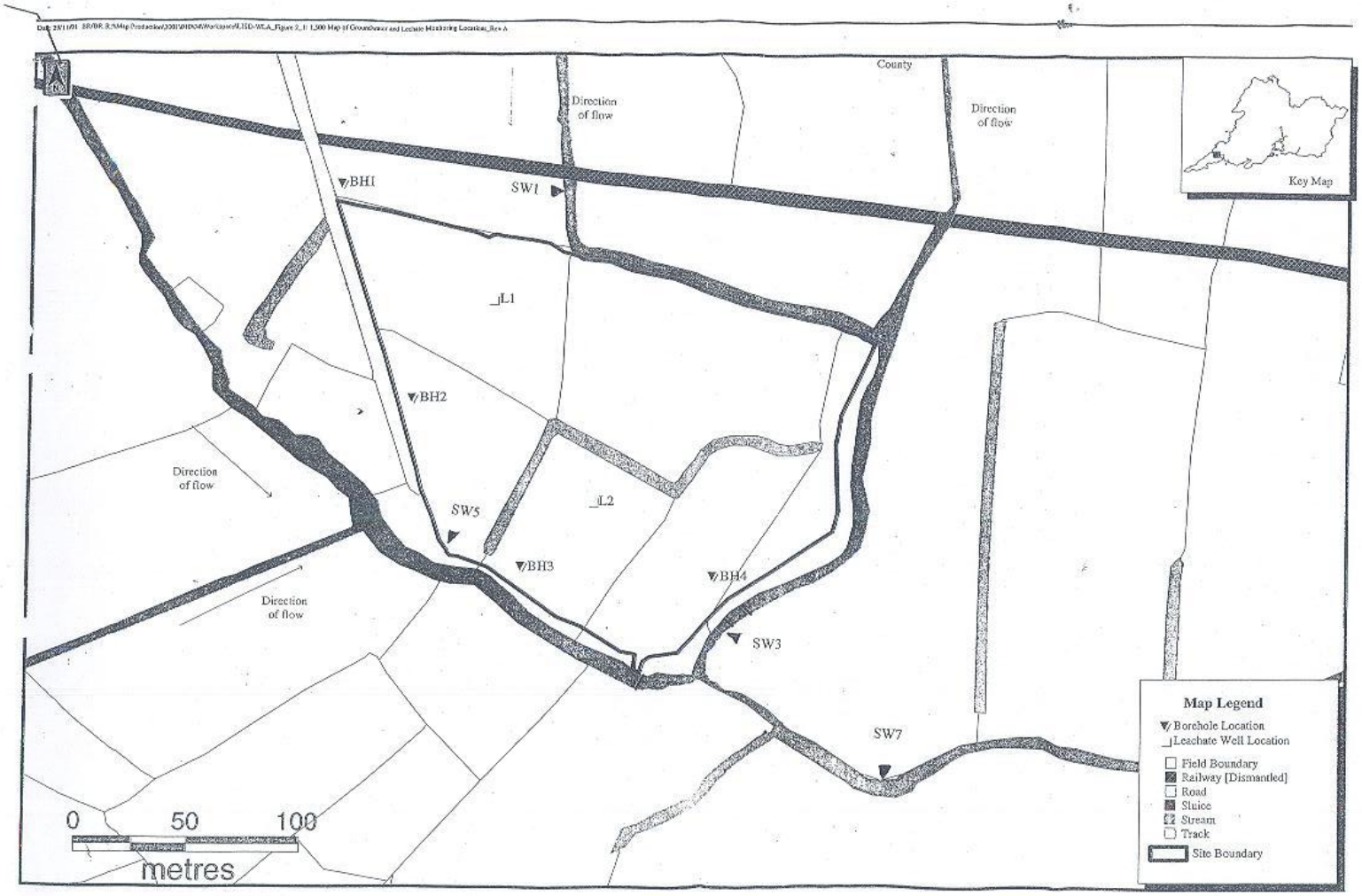
Objective 1	This is ongoing and mainly successful, the licensee will continue to aim for maximum compliance.
Objective 2	Funding has been made available and the licensee will continue to ensure funding is made available.
Objective 3	Recyclable material amounted to 50.3% of all waste accepted at the facility in 2012.
Objective 4	The licensee placed additional signage to improve user friendliness on the site. A new concrete base was installed in the main recycling area which

	improves greatly the safety and layout of the site. The licensee will continue to review the site layout in order to provide the best possible service. We introduced the following new waste streams: rigid plastics and flourescent tubes (WEEE).
Objective 5	Correspondence with EPA as set out by EPA is an ongoing objective, the licensee will continue to progress this objective.
Objective 6	Installation of the oil Interceptor will form part of the remediation project.
Objective 7	This project will proceed when funding becomes available

16) Financial Provision

A sum of €200,000 has been set aside in the 2014 Clare Co. Council Budget for the operation of the facility. Additional monies are being sought through grants from the Department of the Environment and Local Government for the capital works relating to the Restoration and Aftercare of the Site.

Appendix I
Location of Monitoring Points



Fehily Timoney & Company

1: 1,500 Map of Groundwater and Leachate Monitoring Locations

Figure 2