Annual Environmental Report

Name: McGill Environmental Systems (Ireland) Limited

Address: Coom, Glenville, Co. Cork

Waste Licence: W0180-01

Reporting Period: January 1st 2014 – December 31st 2014

Signed: 

Heather Loughlin
Environmental Manager

Summary:

McGill Environmental Systems (Ireland) Limited operate a composting facility at Coom, Glenville, Co Cork, Waste licence W0180-01.

McGill Environmental Systems (Ireland) Ltd. (McGill) was founded by Jim McGill in Ireland in 1996. McGill specializes in the composting of non-hazardous industrial and sewage sludges, and other non-hazardous biodegradable materials. McGill will compost any biodegradable material provided it meets stringent regulatory requirements as well as McGill's own waste acceptance criteria.

McGill specialises in the recovery of biodegradable materials through the process of industrial composting. McGill operate the industrial composting facilities using a controlled static pile, forced aeration system. The process takes place completely indoors. The incoming wastes are mixed with dry finished compost and other dry amendments. The McGill method is based on a scientific enhancement of the natural composting process that creates and maintains an environment conducive to the proliferation of specific microbial populations. These microbes are responsible for biodegradation and, when provided with the right balance of moisture, temperature, and oxygen are able to affect the rapid decay of organic material.

McGill received Animal By Products approval in March 2011 following a six month validation period with the Department of Agriculture, Fisheries and Food. In 2014 the site accepted organic fines, which were composted to produce a stablised biowaste that is used as landfill cover. 'Overs' from the composting process are disposed of to landfill.

The attached Environmental Report covers the period 1st January 2014 to 31st December 2014

1.0 Waste activities carried out at the facility and quantity/composition of waste received, disposed of and recovered during the reporting period:

Attached are summary sheets with details of:

- All wastes accepted during the year
- All amendments accepted during the year
- All material moved of site during the reporting period
- A weighbridge log is available with details of all loads

See Attachment 1

2.0 Emissions and results of environmental monitoring

A monitoring plan is attached.

- Compost Analysis summary reports for metals and pathogens are attached
- Sludge Analysis Report is attached. All sludges were analysed on a quarterly basis
- McGill conducted dust monitoring on site for three different 28 day periods during 2014.
- Odour Monitoring Ireland were on site on 23rd April 2014 and again on 21st November 2014 to conduct PM10 and Bioaerosol monitoring. The results of both these visits showed that there are no significant bioaerosol impacts in the vicinity of the facility and the ambient air concentration levels of PM10 were below the statutory 24-hour average ambient air concentration level of 50µg m^3.
- Biofilter sampling was conducted as per the licence requirement and a summary sheet and full methodology is attached. There were no environmental concerns with the results.
- Groundwater sampling was conducted as per the licence requirement and a summary sheet is attached. There were no environmental concerns with the results.
- Surface water sampling was conducted as per the licence requirement and a summary sheet is attached. There were no environmental concerns with the results.

See Attachment 2

3.0 Resource and energy consumption summary

Water usage: 294m^3 for the reporting period.

Diesel Usage: 40,124 litres of diesel was used during the reporting period to operate equipment in the facility.

Electricity Usage: McGill have used 410100 KwH of electricity at the facility during the reporting year

4.0 Report on development works undertaken during the reporting period, and a timescale for any proposed for the coming year.

There were no development works on site during 2014 and there are no proposed developments for 2015.

5.0 Environmental Management Programme

The Environmental Management Programme is attached. This programme was updated in January 2015 as part of the annual EMS update

See Attachment 3

6.0 Reported Incidents and Complaints summaries

There were no complaints during 2014.

There were no reportable incidents during the reporting period.

7.0 Financial provisions made under this licence

McGill have put financial provisions in place to cover any Environmental Risk or Closure costs associated with the site as per the decommissioning and aftercare plan and as per the Environmental Liability Risk Assessment. This was looked at during the year and it was determined that there was no additional risks. These provisions are in the form of a guarantee from McGill Compost, USA, parent company of McGill Environmental Systems (Ireland) Limited

8.0 Management Structure

The Management and Staffing Structure for the facility are attached

See Attachment 4

9.0 Information Programme

The Programme for Public information is attached

See Attachment 5

10.0 Foul Water Movement

McGill transported 57.64 tonnes of water from the Biofilter to Mallow WWTP and 1001.32 tonnes of water from the Biofilter to Fermoy WWTP during the reporting year.

Attachment 1
Waste Figures

Waste Licence W0180-01

Reporting Period 1st January 2014 - 31st December 2014

Incoming Waste Material

EWC Code	Description	Tonnage
02 02 04	SLUDGES FROM ON SITE EFFLUENT TREATMENT	23.08
02 05 01	DAIRY INDUSTRY	12.08
03 03 11	PAPER INDUSTRY	0.98
07 05 14	HAWTHORN LEAVES	17.26
07 05 99	WASTE LEAVES	783.52
19 08 05	WWTP SLUDGES	1.48
19 12 12	ORGANIC FINES	15,973.18
20 01 25	EDIBLE OILS AND FATS	15.04
20 03 04	SEPTIC TANKS	13.58
		16,840.2

Material Removed from Site

Product	Destination	Quantity (tonnes)
CLO- Stabilised MSW Fines EWC Code 190599	Daily Landfill Cover	4837.46
CLOR- Oversize Inorganic Material EWC Code 190599	Landfill Void	5213.84
Biofilter Water	WWTP	1058.96
	Total	**11,110.26**

Incoming Amendment

Amendment	Quantity (tonnes)
SAWDUST	**341.18**
WOODCHIP	**114.18**
Total	**477.36**

Attachment 2
Lab Analysis

Trace Element Results

REPORTING PERIOD	Lab ref	CADMIUM	CHROMIUM	COPPER	LEAD	MERCURY	NICKEL	ZINC	PCB'S	PAH'S
STABLISED BIOWASTE CONC. LIMITS		*5*	*600*	*600*	*500*	*5*	*150*	*1500*	*0.4*	*3*
Q1-14	0360/347/01	0.517	9.035	103.308	174.44	0.246	24.043	524.8	<0.05	<0.005
Q2-14	0360/359/01	1.611	8.86	71.3	120.3	0.344	24.93	293.3	<0.05	<0.055
Q3-14	0360/372/01	1.128	12.126	199.47	169.03	136.51	39.771	358.6	0.543	<0.005
Q4-14	0360/404/01	1.876	7.271	67.251	94.753	0.1415	23.975	250.6	<0.05	0.238

All samples were tested by Fitz Scientific, Co. Louth

Stability Test Results

LAB REF	AT4 (mg O2/g TS in 4 days)
43925A	8.1
44136	7.5
44137	3.1
44164	4.8
44467	5.6
44939	2.7
44597	2.9
44946	2.4
14-39951A	2.4
14-39951	5.3
45616	3.3
45530	1.6
14-40639	2.3
14-40639b	5.0
14-40455	3.7
14-40455(a)	2.7
14-40953	1.4
14-41429	4.1
14-41674B	2.5
47923	2.9
48172	2.9
48408	4.6

Pathogen Results

McGill Ref:	Lab Certificate/ Report No.	Salmonella per 25g	Ecoli CFU/g
02-01-14 Bay ABP7 Sample 1	77/16810		<10
02-01-14 Bay ABP7 Sample 2	77/16811		<10
02-01-14 Bay ABP7 Sample 3	77/16812		<10
02-01-14 Bay ABP7 Sample 4	77/16813		<10
02-01-14 Bay ABP7 Sample 5	77/16814		<10
02-01-14 Bay ABP8 Sample 1	77/16815		<10
02-01-14 Bay ABP8 Sample 2	77/16816		<10
02-01-14 Bay ABP8 Sample 3	77/16817		<10
02-01-14 Bay ABP8 Sample 4	77/16818		<10
02-01-14 Bay ABP8 Sample 5	77/16819		<10
ABP07/01/2014 Bay ABP7 Sample 1	77/44215		<10
ABP07/01/2014 Bay ABP7 Sample 2	77/44216		<10
ABP07/01/2014 Bay ABP7 Sample 3	77/44217		<10
ABP07/01/2014 Bay ABP7 Sample 4	77/44218		<10
ABP07/01/2014 Bay ABP7 Sample 5	77/44219		<10
ABP07/01/2014 Bay ABP8 Sample 1	77/44220		<10
ABP07/01/2014 Bay ABP8 Sample 2	77/44221		<10
ABP07/01/2014 Bay ABP8 Sample 3	77/44222		<10
ABP07/01/2014 Bay ABP8 Sample 4	77/44223		<10
ABP07/01/2014 Bay ABP8 Sample 5	77/44224		<10
ABP14/01/2014 Bay ABP7 Sample 1	77/69830		<10
ABP14/01/2014 Bay ABP7 Sample 2	77/69831		<10
ABP14/01/2014 Bay ABP7 Sample 3	77/69832		<10
ABP14/01/2014 Bay ABP7 Sample 4	77/69833		<10
ABP14/01/2014 Bay ABP7 Sample 5	77/69834		<10
ABP14/01/2014 Bay ABP8 Sample 1	77/69835		<10
ABP14/01/2014 Bay ABP8 Sample 2	77/69836		<10
ABP14/01/2014 Bay ABP8 Sample 3	77/69837		<10
ABP14/01/2014 Bay ABP8 Sample 4	77/69838		<10
ABP14/01/2014 Bay ABP8 Sample 5	77/69839		<10
ABP20-01-14 Bay ABP7 Sample 1	77/83216		<10
ABP20-01-14 Bay ABP7 Sample 2	77/83217		<10
ABP20-01-14 Bay ABP7 Sample 3	77/83218		<10
ABP20-01-14 Bay ABP7 Sample 4	77/83219		<10
ABP20-01-14 Bay ABP7 Sample 5	77/83220		<10
ABP 28/01/2014 Bay ABP7 Sample 1	78/7310		<10
ABP 28/01/2014 Bay ABP7 Sample 2	78/7311		10
ABP 28/01/2014 Bay ABP7 Sample 3	78/7312		<10

McGill Ref:	Lab Certificate/ Report No.	Salmonella per 25g	Ecoli CFU/g
ABP 28/01/2014 Bay ABP7 Sample 4	78/7313		<10
ABP 28/01/2014 Bay ABP7 Sample 5	78/7314		<10
ABP 28/01/2014 Bay ABP8 Sample 1	78/7315		<10
ABP 28/01/2014 Bay ABP8 Sample 2	78/7316		<10
ABP 28/01/2014 Bay ABP8 Sample 3	78/7317		<10
ABP 28/01/2014 Bay ABP8 Sample 4	78/7318		<10
ABP 28/01/2014 Bay ABP8 Sample 5	78/7319		<10
Jan 2014 Sample 1	77/44229	Not Detected	
Jan 2014 Sample 2	77/44230	Not Detected	
Jan 2014 Sample 3	77/44231	Not Detected	
Jan 2014 Sample 4	77/44232	Not Detected	
Jan 2014 Sample 5	77/44233	Not Detected	
ABP04/02/2014 Bay ABP7 Sample 1	78/38406		<10
ABP04/02/2014 Bay ABP7 Sample 2	78/38407		<10
ABP04/02/2014 Bay ABP7 Sample 3	78/38408		70
ABP04/02/2014 Bay ABP7 Sample 4	78/38409		<10
ABP04/02/2014 Bay ABP7 Sample 5	78/38410		<10
ABP04/02/2014 Bay ABP8 Sample 1	78/38411		<10
ABP04/02/2014 Bay ABP8 Sample 1	78/38412		<10
ABP04/02/2014 Bay ABP8 Sample 1	78/38413		<10
ABP04/02/2014 Bay ABP8 Sample 1	78/38414		<10
ABP04/02/2014 Bay ABP8 Sample 1	78/38415		<10
ABP 11-02-2014 Bay ABP7 Sample 1	78/70730		<10
ABP 11-02-2014 Bay ABP7 Sample 2	78/70731		<10
ABP 11-02-2014 Bay ABP7 Sample 3	78/70732		<10
ABP 11-02-2014 Bay ABP7 Sample 4	78/70733		<10
ABP 11-02-2014 Bay ABP7 Sample 5	78/70734		<10
ABP 11-02-2014 Bay ABP8 Sample 1	78/70735		<10
ABP 11-02-2014 Bay ABP8 Sample 2	78/70736		<10
ABP 11-02-2014 Bay ABP8 Sample 3	78/70737		<10
ABP 11-02-2014 Bay ABP8 Sample 4	78/70738		<10
ABP 11-02-2014 Bay ABP8 Sample 5	78/70739		<10
Feb 2014 Sample 1	78/40740	Not Detected	
Feb 2014 Sample 2	78/40741	Not Detected	
Feb 2014 Sample 3	78/40742	Not Detected	
Feb 2014 Sample 4	78/40743	Not Detected	
Feb 2014 Sample 5	78/40744	Not Detected	
ABP19/02/2014 Bay ABP7 Sample 1	78/96814		<10

McGill Ref:	Lab Certificate/ Report No.	Salmonella per 25g	Ecoli CFU/g
ABP19/02/2014 Bay ABP7 Sample 2	78/96815		<10
ABP19/02/2014 Bay ABP7 Sample 3	78/96816		<10
ABP19/02/2014 Bay ABP7 Sample 4	78/96817		<10
ABP19/02/2014 Bay ABP7 Sample 5	78/96818		<10
ABP19/02/2014 Bay ABP8 Sample 1	78/96819		<10
ABP19/02/2014 Bay ABP8 Sample 2	78/96820		<10
ABP19/02/2014 Bay ABP8 Sample 3	78/96821		<10
ABP19/02/2014 Bay ABP8 Sample 4	78/96822		<10
ABP19/02/2014 Bay ABP8 Sample 5	78/96823		<10
ABP25/02/2014 Bay ABP7 Sample 1	76/16449		<10
ABP25/02/2014 Bay ABP7 Sample 2	76/16450		<10
ABP25/02/2014 Bay ABP7 Sample 3	76/16451		<10
ABP25/02/2014 Bay ABP7 Sample 4	76/16452		<10
ABP25/02/2014 Bay ABP7 Sample 5	76/16453		<10
ABP25/02/2014 Bay ABP8 Sample 1	76/16454		<10
ABP25/02/2014 Bay ABP8 Sample 2	76/16455		<10
ABP25/02/2014 Bay ABP8 Sample 3	76/16456		<10
ABP25/02/2014 Bay ABP8 Sample 4	76/16457		<10
ABP25/02/2014 Bay ABP8 Sample 5	76/16458		<10
ABP04/03/2014 Bay ABP7 Sample1	79/43469		20
ABP04/03/2014 Bay ABP7 Sample2	79/43470		<10
ABP04/03/2014 Bay ABP7 Sample3	79/43471		<10
ABP04/03/2014 Bay ABP7 Sample4	79/43472		<10
ABP04/03/2014 Bay ABP7 Sample5	79/43473		<10
ABP04/03/2014 Bay ABP8 Sample1	79/43474		<10
ABP04/03/2014 Bay ABP8 Sample2	79/43475		<10
ABP04/03/2014 Bay ABP8 Sample3	79/43476		<10
ABP04/03/2014 Bay ABP8 Sample4	79/43477		<10
ABP04/03/2014 Bay ABP8 Sample5	79/43478		<10
ABP11/03/2014 Bay ABP7 Sample1	79/66589		<10
ABP11/03/2014 Bay ABP7 Sample2	79/66590		<10
ABP11/03/2014 Bay ABP7 Sample3	79/66591		<10
ABP11/03/2014 Bay ABP7 Sample4	79/66592		<10
ABP11/03/2014 Bay ABP7 Sample5	79/66593		<10
ABP11/03/2014 Bay ABP8 Sample1	79/66594		<10
ABP11/03/2014 Bay ABP8 Sample2	79/66595		<10
ABP11/03/2014 Bay ABP8 Sample3	79/66596		<10
ABP11/03/2014 Bay ABP8 Sample4	79/66597		<10

McGill Ref:	Lab Certificate/ Report No.	Salmonella per 25g	Ecoli CFU/g
ABP11/03/2014 Bay ABP8 Sample5	79/66598		<10
March 1	49/66626	Not Detected	
March 2	49/66627	Not Detected	
March 3	49/66628	Not Detected	
March 4	49/66629	Not Detected	
March 5	49/66630	Not Detected	
ABP19/03/2014 Bay ABP7 Sample 1	79/99543		<10
ABP19/03/2014 Bay ABP7 Sample 2	79/99544		<10
ABP19/03/2014 Bay ABP7 Sample 3	79/99545		<10
ABP19/03/2014 Bay ABP7 Sample 4	79/99546		<10
ABP19/03/2014 Bay ABP7 Sample 5	79/99547		<10
ABP19/03/2014 Bay ABP8 Sample 1	79/99548		<10
ABP19/03/2014 Bay ABP8 Sample 2	79/99549		<10
ABP19/03/2014 Bay ABP8 Sample 3	79/99550		<10
ABP19/03/2014 Bay ABP8 Sample 4	79/99551		<10
ABP19/03/2014 Bay ABP8 Sample 5	79/99552		<10
ABP25/03/2014 Bay ABP7 Sample 1	80/20036		<10
ABP25/03/2014 Bay ABP7 Sample 2	80/20037		<10
ABP25/03/2014 Bay ABP7 Sample 3	80/20038		<10
ABP25/03/2014 Bay ABP7 Sample 4	80/20039		<10
ABP25/03/2014 Bay ABP7 Sample 5	80/20040		<10
ABP25/03/2014 Bay ABP8 Sample 1	80/20041		<10
ABP25/03/2014 Bay ABP8 Sample 2	80/20042		<10
ABP25/03/2014 Bay ABP8 Sample 3	80/20043		<10
ABP25/03/2014 Bay ABP8 Sample 4	80/20044		<10
ABP25/03/2014 Bay ABP8 Sample 5	80/20045		<10
ABP01/04/2014 Bay ABP8 Sample 1	80/53197		<10
ABP01/04/2014 Bay ABP8 Sample 2	80/53198		<10
ABP01/04/2014 Bay ABP8 Sample 3	80/53199		<10
ABP01/04/2014 Bay ABP8 Sample 4	80/53200		<10
ABP01/04/2014 Bay ABP8 Sample 5	80/53201		<10
ABP09/04/2014 Bay ABP8 Sample 1	80/71531		<10
ABP09/04/2014 Bay ABP8 Sample 2	80/71532		<10
ABP09/04/2014 Bay ABP8 Sample 3	80/71533		<10
ABP09/04/2014 Bay ABP8 Sample 4	80/71534		<10
ABP09/04/2014 Bay ABP8 Sample 5	80/71535		<10
ABP16/04/2014 Bay ABP7 Sample 1	81/3526		<10
ABP16/04/2014 Bay ABP7 Sample 2	81/3527		<10

McGill Ref:	Lab Certificate/ Report No.	Salmonella per 25g	Ecoli CFU/g
ABP16/04/2014 Bay ABP7 Sample 3	81/3528		<10
ABP16/04/2014 Bay ABP7 Sample 4	81/3529		<10
ABP16/04/2014 Bay ABP7 Sample 5	81/3530		<10
ABP16/04/2014 Bay ABP8 Sample 1	81/3531		<10
ABP16/04/2014 Bay ABP8 Sample 2	81/3532		<10
ABP16/04/2014 Bay ABP8 Sample 3	81/3533		<10
ABP16/04/2014 Bay ABP8 Sample 4	81/3534		<10
ABP16/04/2014 Bay ABP8 Sample 5	81/3535		<10
April 2014 Sample 1	80/53235	Not Detected	
April 2014 Sample 2	80/53236	Not Detected	
April 2014 Sample 3	80/53237	Not Detected	
April 2014 Sample 4	80/53238	Not Detected	
April 2014 Sample 5	80/53239	Not Detected	
ABP23/04/2014 Bay ABP7 Sample 1	81/23444		<10
ABP23/04/2014 Bay ABP7 Sample 2	81/23445		<10
ABP23/04/2014 Bay ABP7 Sample 3	81/23446		<10
ABP23/04/2014 Bay ABP7 Sample 4	81/23447		<10
ABP23/04/2014 Bay ABP7 Sample 5	81/23448		<10
ABP23/04/2014 Bay ABP8 Sample 1	81/23449		<10
ABP23/04/2014 Bay ABP8 Sample 2	81/23450		<10
ABP23/04/2014 Bay ABP8 Sample 3	81/23451		<10
ABP23/04/2014 Bay ABP8 Sample 4	81/23452		<10
ABP23/04/2014 Bay ABP8 Sample 5	81/23453		<10
ABP30/04/2014 Bay ABP7 Sample1	81/44968		<10
ABP30/04/2014 Bay ABP7 Sample2	81/44969		<10
ABP30/04/2014 Bay ABP7 Sample3	81/44970		<10
ABP30/04/2014 Bay ABP7 Sample4	81/44971		<10
ABP30/04/2014 Bay ABP7 Sample5	81/44972		<10
ABP30/04/2014 Bay ABP8 Sample1	81/44973		<10
ABP30/04/2014 Bay ABP8 Sample2	81/44974		<10
ABP30/04/2014 Bay ABP8 Sample3	81/44975		<10
ABP30/04/2014 Bay ABP8 Sample4	81/44976		<10
ABP30/04/2014 Bay ABP8 Sample5	81/44977		<10
ABP07/05/2014 BayABP7 Sample1	81/70260		<10
ABP07/05/2014 BayABP7 Sample2	81/70261		<10
ABP07/05/2014 BayABP7 Sample3	81/70262		<10
ABP07/05/2014 BayABP7 Sample4	81/70263		<10
ABP07/05/2014 BayABP7 Sample5	81/70264		<10

McGill Ref:	Lab Certificate/ Report No.	Salmonella per 25g	Ecoli CFU/g
ABP07/05/2014 BayABP8 Sample1	81/70265		<10
ABP07/05/2014 BayABP8 Sample2	81/70266		<10
ABP07/05/2014 BayABP8 Sample3	81/70267		<10
ABP07/05/2014 BayABP8 Sample4	81/70268		<10
ABP07/05/2014 BayABP8 Sample5	81/70269		<10
ABP13/05/2014 BayABP7 Sample1	81/98593		<10
ABP13/05/2014 BayABP7 Sample2	81/98594		<10
ABP13/05/2014 BayABP7 Sample3	81/98595		<10
ABP13/05/2014 BayABP7 Sample4	81/98596		<10
ABP13/05/2014 BayABP7 Sample5	81/98597		<10
ABP13/05/2014 BayABP8 Sample1	81/98598		<10
ABP13/05/2014 BayABP8 Sample2	81/98599		<10
ABP13/05/2014 BayABP8 Sample3	81/98600		<10
ABP13/05/2014 BayABP8 Sample4	81/98601		<10
ABP13/05/2014 BayABP8 Sample5	81/98602		<10
May 2014 Sample 1	81/70255	Not Detected	
May 2014 Sample 2	81/70256	Not Detected	
May 2014 Sample 3	81/70257	Not Detected	
May 2014 Sample 4	81/70258	Not Detected	
May 2014 Sample 5	81/70259	Not Detected	
ABP20/05/2014 Bay ABP7 Sample 1	82/26682		<10
ABP20/05/2014 Bay ABP7 Sample 2	82/26683		<10
ABP20/05/2014 Bay ABP7 Sample 3	82/26684		<10
ABP20/05/2014 Bay ABP7 Sample 4	82/26685		<10
ABP20/05/2014 Bay ABP7 Sample 5	82/26686		<10
ABP20/05/2014 Bay ABP8 Sample 1	82/26687		<10
ABP20/05/2014 Bay ABP8 Sample 2	82/26688		<10
ABP20/05/2014 Bay ABP8 Sample 3	82/26689		<10
ABP20/05/2014 Bay ABP8 Sample 4	82/26690		<10
ABP20/05/2014 Bay ABP8 Sample 5	82/26691		<10
ABP27/05/2014 Bay ABP7 Sample 1	82/45881		<10
ABP27/05/2014 Bay ABP7 Sample 2	82/45882		<10
ABP27/05/2014 Bay ABP7 Sample 3	82/45883		<10
ABP27/05/2014 Bay ABP7 Sample 4	82/45884		<10
ABP27/05/2014 Bay ABP7 Sample 5	82/45885		<10
ABP27/05/2014 Bay ABP8 Sample 1	82/45886		<10
ABP27/05/2014 Bay ABP8 Sample 2	82/45887		<10
ABP27/05/2014 Bay ABP8 Sample 3	82/45888		<10

McGill Ref:	Lab Certificate/ Report No.	Salmonella per 25g	Ecoli CFU/g
ABP27/05/2014 Bay ABP8 Sample 4	82/45889		<10
ABP27/05/2014 Bay ABP8 Sample 5	82/45890		<10
ABP04/06/2014 Bay ABP7 Sample 1	82/79027		<10
ABP04/06/2014 Bay ABP7 Sample 2	82/79028		<10
ABP04/06/2014 Bay ABP7 Sample 3	82/79029		<10
ABP04/06/2014 Bay ABP7 Sample 4	82/79030		<10
ABP04/06/2014 Bay ABP7 Sample 5	82/79031		<10
ABP04/06/2014 Bay ABP8 Sample 1	82/79032		<10
ABP04/06/2014 Bay ABP8 Sample 2	82/79033		<10
ABP04/06/2014 Bay ABP8 Sample 3	82/79034		<10
ABP04/06/2014 Bay ABP8 Sample 4	82/79035		<10
ABP04/06/2014 Bay ABP8 Sample 5	82/79036		<10
ABP10/06/2014 Bay ABP7 Sample 1	83/12657		<10
ABP10/06/2014 Bay ABP7 Sample 2	83/12658		<10
ABP10/06/2014 Bay ABP7 Sample 3	83/12659		<10
ABP10/06/2014 Bay ABP7 Sample 4	83/12660		<10
ABP10/06/2014 Bay ABP7 Sample 5	83/12661		<10
ABP10/06/2014 Bay ABP8 Sample 1	83/12662		<10
ABP10/06/2014 Bay ABP8 Sample 2	83/12663		<10
ABP10/06/2014 Bay ABP8 Sample 3	83/12664		<10
ABP10/06/2014 Bay ABP8 Sample 4	83/12665		<10
ABP10/06/2014 Bay ABP8 Sample 5	83/12666		<10
June 2014 Sample 1	83/12707	Not Detected	
June 2014 Sample 2	83/12708	Not Detected	
June 2014 Sample 3	83/12709	Not Detected	
June 2014 Sample 4	83/12710	Not Detected	
June 2014 Sample 5	83/12711	Not Detected	
ABP17/06/2014 Bay ABP7 Sample 1	83/43486		<10
ABP17/06/2014 Bay ABP7 Sample 2	83/43487		<10
ABP17/06/2014 Bay ABP7 Sample 3	83/43488		<10
ABP17/06/2014 Bay ABP7 Sample 4	83/43489		<10
ABP17/06/2014 Bay ABP7 Sample 5	83/43490		<10
ABP17/06/2014 Bay ABP8 Sample 1	83/43491		<10
ABP17/06/2014 Bay ABP8 Sample 2	83/43492		<10
ABP17/06/2014 Bay ABP8 Sample 3	83/43493		<10
ABP17/06/2014 Bay ABP8 Sample 4	83/43494		<10
ABP17/06/2014 Bay ABP8 Sample 5	83/43495		<10
ABP24/06/2014 Bay ABP7 Sample 1	83/67609		<10

McGill Ref:	Lab Certificate/ Report No.	Salmonella per 25g	Ecoli CFU/g
ABP24/06/2014 Bay ABP7 Sample 2	83/67610		<10
ABP24/06/2014 Bay ABP7 Sample 3	83/67611		<10
ABP24/06/2014 Bay ABP7 Sample 4	83/67612		<10
ABP24/06/2014 Bay ABP7 Sample 5	83/67613		<10
ABP24/06/2014 Bay ABP8 Sample 1	83/67614		<10
ABP24/06/2014 Bay ABP8 Sample 2	83/67615		<10
ABP24/06/2014 Bay ABP8 Sample 3	83/67616		<10
ABP24/06/2014 Bay ABP8 Sample 4	83/67617		<10
ABP24/06/2014 Bay ABP8 Sample 5	83/67618		<10
ABP01/07/2014 Bay ABP7 Sample 1	83/91633		<10
ABP01/07/2014 Bay ABP7 Sample 2	83/91634		<10
ABP01/07/2014 Bay ABP7 Sample 3	83/91635		<10
ABP01/07/2014 Bay ABP7 Sample 4	83/91636		<10
ABP01/07/2014 Bay ABP7 Sample 5	83/91637		<10
ABP01/07/2014 Bay ABP8 Sample 1	83/91638		<10
ABP01/07/2014 Bay ABP8 Sample 2	83/91639		<10
ABP01/07/2014 Bay ABP8 Sample 3	83/91640		<10
ABP01/07/2014 Bay ABP8 Sample 4	83/91641		<10
ABP01/07/2014 Bay ABP8 Sample 5	83/91642		<10
ABP08/07/2014 Bay ABP7 Sample 1	84/21598		<10
ABP08/07/2014 Bay ABP7 Sample 2	84/21599		<10
ABP08/07/2014 Bay ABP7 Sample 3	84/21600		<10
ABP08/07/2014 Bay ABP7 Sample 4	84/21601		<10
ABP08/07/2014 Bay ABP7 Sample 5	84/21602		<10
ABP08/07/2014 Bay ABP8 Sample 1	84/21603		<10
ABP08/07/2014 Bay ABP8 Sample 2	84/21604		<10
ABP08/07/2014 Bay ABP8 Sample 3	84/21605		<10
ABP08/07/2014 Bay ABP8 Sample 4	84/21606		<10
ABP08/07/2014 Bay ABP8 Sample 5	84/21607		<10
Bay 7 Batch No 110714 Sample 1	84/44004		<10
Bay 7 Batch No 110714 Sample 2	84/44005		<10
Bay 7 Batch No 110714 Sample 3	84/44006		<10
Bay 7 Batch No 110714 Sample 4	84/44007		<10
Bay 7 Batch No 110714 Sample 5	84/44008		<10
Bay 8 Batch No 110714 Sample 1	84/44009		<10
Bay 8 Batch No 110714 Sample 2	84/44010		<10
Bay 8 Batch No 110714 Sample 3	84/44011		<10
Bay 8 Batch No 110714 Sample 4	84/44012		<10

McGill Ref:	Lab Certificate/ Report No.	Salmonella per 25g	Ecoli CFU/g
Bay 8 Batch No 110714 Sample 5	84/44013		<10
July 2014 Sample 1	84/75095	Not Detected	
July 2014 Sample 2	84/75096	Not Detected	
July 2014 Sample 3	84/75097	Not Detected	
July 2014 Sample 4	84/75098	Not Detected	
July 2014 Sample 5	84/75099	Not Detected	
ABP22/07/2014 Bay ABP7 Sample1	84/75057		<10
ABP22/07/2014 Bay ABP7 Sample2	84/75058		<10
ABP22/07/2014 Bay ABP7 Sample3	84/75059		<10
ABP22/07/2014 Bay ABP7 Sample4	84/75060		<10
ABP22/07/2014 Bay ABP7 Sample5	84/75061		<10
ABP22/07/2014 Bay ABP8 Sample1	84/75062		<10
ABP22/07/2014 Bay ABP8 Sample2	84/75063		<10
ABP22/07/2014 Bay ABP8 Sample3	84/75064		<10
ABP22/07/2014 Bay ABP8 Sample4	84/75065		<10
ABP22/07/2014 Bay ABP8 Sample5	84/75066		<10
ABP29/07/2014 Bay ABP7 Sample1	85/5132		<10
ABP29/07/2014 Bay ABP7 Sample2	85/5133		<10
ABP29/07/2014 Bay ABP7 Sample3	85/5134		<10
ABP29/07/2014 Bay ABP7 Sample4	85/5135		<10
ABP29/07/2014 Bay ABP7 Sample5	85/5136		<10
ABP29/07/2014 Bay ABP8 Sample1	85/5137		<10
ABP29/07/2014 Bay ABP8 Sample2	85/5138		<10
ABP29/07/2014 Bay ABP8 Sample3	85/5139		<10
ABP29/07/2014 Bay ABP8 Sample4	85/5140		<10
ABP29/07/2014 Bay ABP8 Sample5	85/5141		<10
ABP05/08/2014 BayABP7 Sample 1	85/50836		<10
ABP05/08/2014 BayABP7 Sample 2	85/50837		<10
ABP05/08/2014 BayABP7 Sample 3	85/50838		<10
ABP05/08/2014 BayABP7 Sample 4	85/50839		<10
ABP05/08/2014 BayABP7 Sample 5	85/50840		<10
ABP05/08/2014 BayABP8 Sample 1	85/50841		<10
ABP05/08/2014 BayABP8 Sample 2	85/50842		<10
ABP05/08/2014 BayABP8 Sample 3	85/50843		<10
ABP05/08/2014 BayABP8 Sample 4	85/50844		<10
ABP05/08/2014 BayABP8 Sample 5	85/50845		<10
ABP12/08/2014 BayABP7 Sample 1	85/63284		<10
ABP12/08/2014 BayABP7 Sample 2	85/63285		<10

McGill Ref:	Lab Certificate/ Report No.	Salmonella per 25g	Ecoli CFU/g
ABP12/08/2014 BayABP7 Sample 3	85/63286		<10
ABP12/08/2014 BayABP7 Sample 4	85/63287		<10
ABP12/08/2014 BayABP7 Sample 5	85/63288		<10
ABP12/08/2014 BayABP8 Sample 1	85/63289		<10
ABP12/08/2014 BayABP8 Sample 2	85/63290		<10
ABP12/08/2014 BayABP8 Sample 3	85/63291		<10
ABP12/08/2014 BayABP8 Sample 4	85/63292		<10
ABP12/08/2014 BayABP8 Sample 5	85/63293		<10
Aug 2014 Sample 1	85/63298	Not Detected	
Aug 2014 Sample 2	85/63299	Not Detected	
Aug 2014 Sample 3	85/63300	Not Detected	
Aug 2014 Sample 4	85/63301	Not Detected	
Aug 2014 Sample 5	85/63302	Not Detected	
ABP19/08/2014 BayABP7 Sample 1	85/94413		<10
ABP19/08/2014 BayABP7 Sample 2	85/94414		<10
ABP19/08/2014 BayABP7 Sample 3	85/94415		<10
ABP19/08/2014 BayABP7 Sample 4	85/94416		<10
ABP19/08/2014 BayABP7 Sample 5	85/94417		<10
ABP19/08/2014 BayABP8 Sample 1	85/94418		<10
ABP19/08/2014 BayABP8 Sample 2	85/94419		<10
ABP19/08/2014 BayABP8 Sample 3	85/94420		<10
ABP19/08/2014 BayABP8 Sample 4	85/94421		<10
ABP19/08/2014 BayABP8 Sample 5	85/94422		<10
ABP26/08/2014 BayABP7 Sample1	0360/367/01		<10
ABP26/08/2014 BayABP7 Sample2	0360/367/02		<10
ABP26/08/2014 BayABP7 Sample3	0360/367/03		<10
ABP26/08/2014 BayABP7 Sample4	0360/367/04		<10
ABP26/08/2014 BayABP7 Sample5	0360/367/05		<10
ABP26/08/2014 BayABP8 Sample1	0360/367/06		<10
ABP26/08/2014 BayABP8 Sample2	0360/367/07		<10
ABP26/08/2014 BayABP8 Sample3	0360/367/08		<10
ABP26/08/2014 BayABP8 Sample4	0360/367/09		<10
ABP26/08/2014 BayABP8 Sample5	0360/367/10		<10
ABP02/09/2014 Bay ABP7 Sample1	0360/368/01		<10
ABP02/09/2014 Bay ABP7 Sample2	0360/368/02		<10
ABP02/09/2014 Bay ABP7 Sample3	0360/368/03		<10
ABP02/09/2014 Bay ABP7 Sample4	0360/368/04		<10
ABP02/09/2014 Bay ABP7 Sample5	0360/368/05		<10

McGill Ref:	Lab Certificate/ Report No.	Salmonella per 25g	Ecoli CFU/g
ABP02/09/2014 Bay ABP8 Sample1	0360/368/06		<10
ABP02/09/2014 Bay ABP8 Sample2	0360/368/07		<10
ABP02/09/2014 Bay ABP8 Sample3	0360/368/08		<10
ABP02/09/2014 Bay ABP8 Sample4	0360/368/09		<10
ABP02/09/2014 Bay ABP8 Sample5	0360/368/10		<10
September 2014 Sample 1	0360/376/11	Not Detected	
September 2014 Sample 2	0360/376/12	Not Detected	
September 2014 Sample 3	0360/376/13	Not Detected	
September 2014 Sample 4	0360/376/14	Not Detected	
September 2014 Sample 5	0360/376/15	Not Detected	
ABP09/09/2014 Bay ABP7 Sample1	0360/376/01		<10
ABP09/09/2014 Bay ABP7 Sample2	0360/376/02		<10
ABP09/09/2014 Bay ABP7 Sample3	0360/376/03		<10
ABP09/09/2014 Bay ABP7 Sample4	0360/376/04		<10
ABP09/09/2014 Bay ABP7 Sample5	0360/376/05		<10
ABP09/09/2014 Bay ABP8 Sample1	0360/376/06		<10
ABP09/09/2014 Bay ABP8 Sample2	0360/376/07		<10
ABP09/09/2014 Bay ABP8 Sample3	0360/376/08		<10
ABP09/09/2014 Bay ABP8 Sample4	0360/376/09		<10
ABP09/09/2014 Bay ABP8 Sample5	0360/376/10		<10
ABP16/09/2014 Bay ABP7 Sample1	0360/378/01		<10
ABP16/09/2014 Bay ABP7 Sample2	0360/378/02		<10
ABP16/09/2014 Bay ABP7 Sample3	0360/378/03		<10
ABP16/09/2014 Bay ABP7 Sample4	0360/378/04		<10
ABP16/09/2014 Bay ABP7 Sample5	0360/378/05		<10
ABP16/09/2014 Bay ABP8 Sample1	0360/378/06		<10
ABP16/09/2014 Bay ABP8 Sample2	0360/378/07		<10
ABP16/09/2014 Bay ABP8 Sample3	0360/378/08		<10
ABP16/09/2014 Bay ABP8 Sample4	0360/378/09		<10
ABP16/09/2014 Bay ABP8 Sample5	0360/378/10		<10
ABP02/09/2014 Sample1	0360/380/01	Not Detected	
ABP02/09/2014 Sample2	0360/380/02	Not Detected	
ABP16/09/2014 Sample1	0360/380/03	Not Detected	
ABP09/09/2014 Sample1	0360/380/04	Not Detected	
ABP09/09/2014 Sample2	0360/380/05	Not Detected	
ABP23/09/2014 Bay ABP7 Sample 1	0360/381/01		<10
ABP23/09/2014 Bay ABP7 Sample 2	0360/381/02		<10
ABP23/09/2014 Bay ABP7 Sample 3	0360/381/03		<10

McGill Ref:	Lab Certificate/ Report No.	Salmonella per 25g	Ecoli CFU/g
ABP23/09/2014 Bay ABP7 Sample 4	0360/381/04		<10
ABP23/09/2014 Bay ABP7 Sample 5	0360/381/05		<10
ABP23/09/2014 Bay ABP8 Sample 1	0360/381/06		<10
ABP23/09/2014 Bay ABP8 Sample 2	0360/381/07		<10
ABP23/09/2014 Bay ABP8 Sample 3	0360/381/08		<10
ABP23/09/2014 Bay ABP8 Sample 4	0360/381/09		<10
ABP23/09/2014 Bay ABP8 Sample 5	0360/381/10		<10
ABP30/09/2014 Bay ABP8 Sample 1	0360/382/06		<10
ABP30/09/2014 Bay ABP8 Sample 2	0360/382/06		<10
ABP30/09/2014 Bay ABP8 Sample 3	0360/382/06		<10
ABP30/09/2014 Bay ABP8 Sample 4	0360/382/06		<10
ABP30/09/2014 Bay ABP8 Sample 5	0360/382/06		<10
Bay 9 3/10/2014 Sample 1	0360/383/01		<10
Bay 9 3/10/2014 Sample 2	0360/383/02		<10
Bay 9 3/10/2014 Sample 3	0360/383/03		<10
Bay 9 3/10/2014 Sample 4	0360/383/04		<10
Bay 9 3/10/2014 Sample 5	0360/383/05		<10
Bay 9 3/10/2014 Sample 1	0360/383/01	Not Detected	
Bay 9 3/10/2014 Sample 2	0360/383/02	Not Detected	
Bay 9 3/10/2014 Sample 3	0360/383/03	Not Detected	
Bay 9 3/10/2014 Sample 4	0360/383/04	Not Detected	
Bay 9 3/10/2014 Sample 5	0360/383/05	Not Detected	
29/12/14@11.00 ABP 8 23-12-2014 Sample 1	MCGI-203291214		<10
29/12/14@11.00 ABP 8 23-12-2014 Sample 2	MCGI-203291214		<10
29/12/14@11.00 ABP 8 23-12-2014 Sample 3	MCGI-203291214		<10
29/12/14@11.00 ABP 8 23-12-2014 Sample 4	MCGI-203291214		<10
29/12/14@11.00 ABP 8 23-12-2014 Sample 5	MCGI-203291214		<10
29/12 @12.00 ABP 9 26-12-14 Sample 1	MCGI-204291214	Not Detected	
29/12 @12.00 ABP 9 26-12-14 Sample 2	MCGI-204291214	Not Detected	
29/12 @12.00 ABP 9 26-12-14 Sample 3	MCGI-204291214	Not Detected	
29/12 @12.00 ABP 9 26-12-14 Sample 4	MCGI-204291214	Not Detected	
29/12 @12.00 ABP 9 26-12-14 Sample 5	MCGI-204291214	Not Detected	
ABP9 19-12-14 Sample 1	MCGI-182221214	Not Detected	
ABP9 19-12-14 Sample 2	MCGI-182221214	Not Detected	
ABP9 19-12-14 Sample 3	MCGI-182221214	Not Detected	
ABP9 19-12-14 Sample 4	MCGI-182221214	Not Detected	
ABP9 19-12-14 Sample 5	MCGI-182221214	Not Detected	
ABP7 15-12-2014 Sample 1	MCGI-180221214		<10
ABP7 15-12-2014 Sample 2	MCGI-180221214		<10
ABP7 15-12-2014 Sample 3	MCGI-180221214		<10
ABP7 15-12-2014 Sample 4	MCGI-180221214		<10

McGill Ref:	Lab Certificate/ Report No.	Salmonella per 25g	Ecoli CFU/g
ABP7 15-12-2014 Sample 5	MCGI-180221214		<10
ABP8 17-12-14 Sample 1	MCGI-181221214		<10
ABP8 17-12-14 Sample 2	MCGI-181221214		<10
ABP8 17-12-14 Sample 3	MCGI-181221214		<10
ABP8 17-12-14 Sample 4	MCGI-181221214		<10
ABP8 17-12-14 Sample 5	MCGI-181221214		<10
bay 9 12/12/2014 sample 1	MCGI-147171214	Not Detected	
bay 9 12/12/2014 sample 2	MCGI-147171214	Not Detected	
bay 9 12/12/2014 sample 3	MCGI-147171214	Not Detected	
bay 9 12/12/2014 sample 4	MCGI-147171214	Not Detected	
bay 9 12/12/2014 sample 5	MCGI-147171214	Not Detected	
bay 8 10/12/2014 sample 1	MCGI-146171214		<10
bay 8 10/12/2014 sample 2	MCGI-146171214		<10
bay 8 10/12/2014 sample 3	MCGI-146171214		<10
bay 8 10/12/2014 sample 4	MCGI-146171214		<10
bay 8 10/12/2014 sample 5	MCGI-146171214		<10
bay 7 08/12/2014 sample 1	MCGI-145171214		<10
bay 7 08/12/2014 sample 2	MCGI-145171214		<10
bay 7 08/12/2014 sample 3	MCGI-145171214		<10
bay 7 08/12/2014 sample 4	MCGI-145171214		<10
bay 7 08/12/2014 sample 5	MCGI-145171214		<10
29/12/14@11.00 ABP 7 22-12-2014 Sample 1	MCGI-202291214		<10
29/12/14@11.00 ABP 7 22-12-2014 Sample 2	MCGI-202291214		<10
29/12/14@11.00 ABP 7 22-12-2014 Sample 3	MCGI-202291214		<10
29/12/14@11.00 ABP 7 22-12-2014 Sample 4	MCGI-202291214		<10
29/12/14@11.00 ABP 7 22-12-2014 Sample 5	MCGI-202291214		<10
ABP7 5-1-2015 Sample 1	MCGI-303140115		<10
ABP7 5-1-2015 Sample 2	MCGI-303140116		<10
ABP7 5-1-2015 Sample 3	MCGI-303140117		<10
ABP7 5-1-2015 Sample 4	MCGI-303140118		<10
ABP7 5-1-2015 Sample 5	MCGI-303140119		<10
10.00 06.01.15 ABP8 29-12-14 Sample 1	MCGI-255060115		<10
10.00 06.01.15 ABP8 29-12-14 Sample 2	MCGI-255060115		<10
10.00 06.01.15 ABP8 29-12-14 Sample 3	MCGI-255060115		<10
10.00 06.01.15 ABP8 29-12-14 Sample 4	MCGI-255060115		<10
10.00 06.01.15 ABP8 29-12-14 Sample 5	MCGI-255060115		<10

Pathogen tests were carried out by Exova Laboratories Cork, ALS in Clonmel or Fitz Scientific in Louth. Any batch of compost produced on site which did not met the Pathogen requirements of Waste Licence W0180-01 and Animal By Products Regulations where required was reprocessed back through the facility

Sludge Analysis

Lab Reference	DRY MATTER %	CADMIUM MG/KG	CHROMIUM MG/KG	COPPER MG/KG	LEAD MG/KG	MERCURY MG/KG	MOLYBDENUM MG/KG	NICKEL MG/KG	SELENIUM	ZINC MG/KG
0360/348/07	51.75	0.184	37.715	14.61	98.4	0.05	2.167	31.318	<0.01	154.6
0360/357/02	2.73	0.00073	0.00185	0.0038	0.066	0.025	0.088	0.0054	<0.002	0.083
0360/360/09	4.01	<0.005	0.024	0.439	0.13	0.0016	<0.005	0.072	<0.002	1.471
0360/357/01	45.48	0.871	8.437	38.29	112.8	0.152	1.979	26.24	0.181	166.7
0360/369/01	42.53	0.108	2.888	18.894	14.765	0.103	4.488	4.491	0.415	91.45

All sludge samples were tested by Fitz Scientific, County Louth

Dust Analysis

MCGILL REFERENCE	LAB REFERENCE	UNITS	RESULT
GLV DM1 R1 2014	0360/356/01	$mg/m^2/day$	56.09
GLV DM2 R1 2014	0360/356/02	mg/m2/day	103.8
GLV DM3 R1 2014	0360/356/03	mg/m2/day	104.85
GLV DM1 R2 2014	0360/379/01	mg/m2/day	30.93
GLV DM2 R2 2014	0360/379/02	mg/m2/day	14.68
GLV DM2 R2 2014	0360/379/03	mg/m2/day	6.82
GLV DM1 R3 2014	0360/405/05	mg/m2/day	51.37
GLV DM2 R3 2014	0360/405/06	mg/m2/day	23.59
GLV DM2 R3 2014	0360/405/07	mg/m2/day	105.89

All results are below the ELV of 350 mg/m2/day specified in Waste Licence

All analysis was conducted by Fitz Scientific, County Louth. Dust samples were collected over a 30 day period.

Biofilter Monitoring

Colormetric Indicator Tube Testing

	APRIL-14			NOV-14		
SAMPLE	**AMMONIA NH3 (PPM)**	**HYDROGEN SULFIDE H_2S (PPM)**	**TOTAL MERCAPTANS R•SH**	**AMMONIA NH3 (PPM)**	**HYDROGEN SULFIDE H_2S (PPM)**	**TOTAL MERCAPTANS R•SH**
S1	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected
S2	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected
S3	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected
S4	<5	Not detected	Not detected	Not detected	Not detected	Not detected
S5	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected
S6	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected
S7	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected
S8	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected
S9	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected
S10	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected
S11	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected
S12	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected

Biofilter bed media analysis

DATE	ANALYTE	UNITS	RESULTS
21.04.14	% Moisture Content	%	72.02
	Ammonia	mg/Kg as N	81.12
	pH	pH Units	4.1
	TVC @ 22˚C	cfu/g	910
	TVC @ 37˚C	cfu/g	>3000
16.12.14	% Moisture Content	%	78.12
	Ammonia	mg/Kg as N	6.22
	pH	pH Units	4.4
	TVC @ 22˚C	cfu/g	490000
	TVC @ 37˚C	cfu/g	72000

Biofilter Water Monitoring

DATE	ANALYTE	UNITS	RESULT
18.12.14	BOD	mg/l	270
18.12.14	pH	pH units	8
18.12.14	Solids (Total Suspended)	mg/l	1598

All analysis was conducted by Fitz Scientific, Drogheda

Groundwater Monitoring

PARAMETER	ANALYTICAL TECHNIQUE	UNITS	GLV-GW1-2014	GLV-GW2-2014	GLV-GW3-2014	GLV-GW4-2014
Depth			3.51m	2.48m	1.8m	Tap
Ammonium (NH4)	Colorimetry	mg/l	<0.01	<0.01	<0.01	0.024
Chloride	Colorimetry	mg/l	14.13	13.5	14.31	11.56
Coliforms (Faecal)	Filtration/Incubation @ 44C/24H	cfu/100ml	0	0	0	0
Coliforms (Total)	Filtration/Incubation	cfu/100ml	2	52	11	1
Electrical Conductivity	Electrometry	uscm - 1@20C	168.8	276	198.8	151.4
pH	Electrometry	pH units	6.8	7.1	6.8	6.2

Groundwater samples were taken by Heather Loughlin and analysed by Fitz Scientific, Co. Louth.

Surface Water Monitoring

PARAMETER	ANALYTICAL TECHNIQUE	UNITS	GLV-SW1-2014
Ammonia	Colorimetry	mg/l	0.054
BOD	Electrometry	mg/l	<2
Coliforms (Faecal)	Filtration/Incubation @ 44C/24H	cfu/100ml	10
Coliforms (Total)	Filtration/Incubation	cfu/100ml	19
Electrical Conductivity	Electrometry	uscm - 1@20C	169.9
pH	Electrometry	pH units	7.3
Solids	Filtration/drying @140C	mg/l	3

Surface water sample was taken by Heather Loughlin, McGill Environmental Systems.

The surface water was clean and there was a lot of water in the stream at the time of sampling.

All analysis was conducted by Fitz Scientific, Drogheda, Co Louth.

PM10 Monitoring

DATE	REFERENCE CONC. RANGE	PM10 (µg/m^3)
23.04.14	50 ug/m3 PM10	9.7
21.11.14	50 ug/m3 PM10	9.1

Bioaerosol Monitoring

DATE	BIOAEROSOL	REFERENCE CONCENTRATION RANGE	GLEN 1	GLEN 2	GLEN 3
23.04.14	Aspergillus fumigatus	1000-5000 CFU m3	<10	<23	<23
23.04.14	Mesophilic Bacteria	5000 - 10000 CFU m3	24	41	94
21.11.14	Aspergillus fumigatus	1000-5000 CFU m3	<10	<23	<23
21.11.14	Mesophilic Bacteria	5000 - 10000 CFU m3	23	39	90

All PM10 and Odour monitoring was carried out by Odour Monitoring Ireland.
Full reports are available

Noise Monitoring

Monitoring Point	Start Time	Sampling Interval Minutes	L(A)eq	L(A)10	L(A)90	Audible Noise Sources
N1	15:31	30	44.4	48.5	35.6	Very little daytime on site noise audible. Some car/van traffic, mostly off site.
	14:21	30	46.1	49.89	36.73	
	14:52	30	50.32	53.75	39.92	
	19:06	30	37.6	41.8	30.5	No night time noise from site activities audible at location
N2	12:42	30	41.7	43.73	38.34	
	13:12	30	46.87	43.44	39.0	Sources of low audible day time noise from ventilation from the main compost plant, mobile plant operating on site.
	13:46	30	42.9	45.2	37.6	
	19.35	30	35.23	35.28	34.85	Sources of low audible day time noise from ventilation from the main compost plant approx 40m away
N3	12:36	30	37.9	41.2	37.7	Sources of low audible day time noise from ventilation from the main compost plant, mobile plant operating on site approx 90m away
	13:07	30	44.1	42.5	37.6	
	13.44	30	44.21	47.16	38.22	
	19.03	30	36.73	36.98	35.16	Sources of low audible day time noise from ventilation from the main compost plant approx 90m away

Monitoring Point	Tonal or Impulsive Noise from Site Activity	Comments and Interference
N1	No	No tonal or impulsive noise from site activity during day or evening time noise monitoring
N2	No	No tonal or impulsive noise from site activity during day or evening time noise monitoring
N3	No	No tonal or impulsive noise from site activity during day or evening time noise monitoring

Interferences

Noise levels at N1 are prone to road and farm traffic on the local road that runs adjacent to the site entrance. Birdsong is also a source of interference noise during daytime readings at all three locations.

Conclusion

Daytime noise levels were within the permitted day time noise level of 55dB(A) at all three noise measurement locations – N1, N2 and N3.

Evening time noise levels were within the permitted day time noise level of 50dB(A) at all three noise measurement locations – N1, N2 and N3.

There was no significant tonal or impulsive noise from activities during daytime and night noise monitoring.

Noise monitoring was conducted on site by KD Environmental on 24th October 2014

Attachment 3

Environmental Objectives and Targets

W0180-01/7 Objectives and Targets

Objective	Target
Implement EMS	1. Ongoing informing all management and employees of their duties and responsibilities re EMS
HACCP Plan	1. Ongoing control of HACCP plan for site
Training	1. All employees to complete Fas / Cre course or receive on-site training
Develop written procedures	1. Standard Operating Procedures are in place for the main aspects of the process 2. SOP's will be developed on an ongoing basis
Staff	1. Adequate cover if an employee is on holidays or away from the facility 2. Training in advance notification of absence
Raw Material Usage	1. Monitor Raw Material usage and analyse results 2. Put procedures in place to maximise efficiency of raw material usage
Ongoing	Other objectives and targets will be identified.
Energy Efficiency	Ongoing reduction of energy usage

Attachment 4

Environmental Management Programme

W0180-01/8 Environmental Mangement Programme

The responsibility of implementing the Environmental Management System lies with the appointed Environmental Team:

Heather Loughlin	Environmental Manager
Lucinda Blyth	Administration Manager
Noel Lyons	General Manager
Niall Carroll	Factory Manager

The Environmental Management Programme (EMP) for McGill Environmental Systems (Irl.) Ltd. will be updated on an annual basis.

The EMP for McGill Environmental Systems (Irl.) Ltd. is as follows:

Environmental Management Plan	Responsibility	Target Date
Implement conditions of Waste Licence	Heather Loughlin/Niall Carroll	Ongoing
Carry out refresher training for all staff of requirements of the Waste Licence.	Heather Loughlin	End February 2015
Attend HACCP Course	Heather Loughlin	End January 2015
Carry out full review of EMS	Heather Loughlin	End July 2015
Monitor energy usage and identify opportunities for reductions	Heather Loughlin/Niall Carroll	Ongoing
Monitoring as per Waste Licence and ABP Requirements	Heather Loughlin	Ongoing

Attachment 5
Management Structure

MCL5 Structure and Responsibility

Roles and Qualifications

James H. McGill, Chief Scientific Advisor and founder of McGill in Ireland, passed away in late 2014. .

M. Noel Lyons, Managing Director. Mr. Lyons is also a founder of the McGill group and president of McGill (U.S.), with 17 years in the field of waste management. He is a graduate of the Waterford Institute of Technology and holds a certificate of supervisory management (with distinction) from the Irish Management Institute, and a certificate of technical competency in composting from the University of Maine. Noel is responsible for overall guidance and management of the company. Noel has a unique combination of technical and sales knowledge in feedstocks, composting and transportation. He has accomplished significant business results in challenging enterprise environments over the past 15 years. Noel has pioneered product marketing of compost as a revenue-producing service in North Carolina. Noel is currently splitting his time between America and Ireland. Noel is a director of Molaisín Compost Ltd.

Niall Carroll, Facilities Manager. Mr. Carroll has been with McGill (Ireland) since its start-up, managing daily operations and serving as a technical specialist serving for Ireland and U.S. plants. His expertise is in factory management with particular knowledge in machine maintenance. Niall spent three months at the McGill Composting factory in North Carolina in early 2000 where he was trained in compost plant management. He has completed courses in the United States to qualify him for position of factory manager, and to enable him to train in others for this position, including qualifying as Compost Facility Operator and Process Engineer at the University of Winthrop in Charlotte, South Carolina. This course would be of similar level to recommended Fás course. He has also completed an intensive course in Composting in North Carolina. Niall is facilities manager of McGill Environmental Systems (Ireland) Ltd. Niall is responsible for the daily operation of the composting facility and it is his duty to oversee any delegated work, and ensure that it is completed to a satisfactory standard.

Heather Loughlin replaced Fiona O'Sullivan as Environmental Manager in 2014. Heather has a BSc (Hons) in Applied Chemistry from Sheffield Hallam University and an MSc in Environmental Resources from Salford University. She has worked as an Environmental Consultant in the UK and Ireland since 1996, specialising in Environmental Management Systems, Environmental Auditing and Training. For the last twelve years she has worked predominantly in the field of Waste Management in Ireland and has extensive knowledge of waste management and planning regulations having worked with many private companies in the waste management sector. Heather is responsible for ensuring environmental compliance with all regulations.

Lucinda Blyth, Administration Manager. Lucinda has been with McGill since 2002. Among her responsibilities are office administration, human resources and record keeping. Lucinda's previous experience includes six years as Assistant to the Chairman of a Private Bank in London, several years as Administration Manager at a Strategy Consultancy based in London, Paris and Rome. Lucinda has also spent time working for a middle-eastern royal family organizing the logistics and staffing of several large palaces and houses throughout the world and a fleet of aeroplanes worldwide. Lucinda is responsible for the day to day running of the office, payroll and all office administration and human resources.

Attachment 6
Communications Procedure

W0180-01/10 Communications Procedure

1. The purpose of this procedure is to describe the methods of communication at McGill Environmental Systems (Irl.) Ltd.

2. The procedure applies to all communications, internal and external.

3. The procedure refers to:

Waste Licence W0180-01

Planning Permission S/02/2853

4. Internal Communication

- Management Review of EMS
- Notice Board

The organization regards verbal communication to be an important aspect due to its size.

5 External Communication

As per Licence Notification: In the event of any incident which may result in water, soil or air pollution, the Environmental Manager shall immediately report the incident to the Licensing Authority by phone or fax and shall confirm the communication in writing within 24 hours.

- Records of external communication are kept by the Administration Manager and the Environmental Manager. These records consist of letters, faxes and telephone conversations.

6 Complaints

- Complaints are handled by the Environmental Manager. Details of the complaint are recorded. Responses to complaints can be by phone or written.

7 Enquiries

- As per Waste Licence. Members of the public are welcome on site and can obtain information concerning the environmental performance of the licence holder at all reasonable times.

8 Emergency Response

- Local Fire Stations and Guards are aware of where the facility is situated
- Employees are made aware of emergency exits and location of emergency equipment
- In the event of an employee sustaining a work related injury and is absent for more than three working days, a report is to be sent to the Safety Authority detailing the incident.