

Tegral Building Products Ltd.

Annual Environmental Report (AER) 2014

In Relation To

Waste Disposal Facility

At

Ballylinan, Co. Laois

Waste Management License Reference 0046-01

Contents

1.	Introduction	4
1.1.	Licensee	4
1.2.	Register Number	4
1.3.	Reporting Period	4
1.4.	Location	4
1.5.	Environmental Policy	4
1.6.	Summary of Compliance	4
2.	Site Description	4
2.1.	Site Location	4
3.	Site Management Personnel	5
3.1.	Board of Directors	5
3.2.	Works Manager	5
3.3.	Facility Manager	5
3.4.	Deputy Facility Manager	5
3.5.	Other Personnel	5
4.	Waste Acceptance and Handling	6
4.1.	Waste Types	6
4.2.	Waste Quantities	6
4.3.	Waste Deposition Procedures	6
4.3.1.	Further Procedural Guidelines	6
5.	Landfill Monitoring	7
5.1.	Groundwater Monitoring	7
5.2.	Air Monitoring	7
5.3.	Climatological Monitoring	7-8
6.	Emission Impacts	9
6.1.	Groundwater	9
6.1.1.	Discharges to Groundwater	9
6.1.2.	Groundwater Quality	9-17
6.2.	Air	18
6.2.1.	Fibres in Air	18
6.2.2.	Deposited Dust	18

Contents

7.	Site Design / Development	19
7.1.	Security	19
7.2.	Site Inspections	19
7.3.	Site Roads	19
7.4.	Electricity Supply	19
7.5.	Other Infrastructure	19
7.6.	Restoration	19
7.7.	Site Development Works	19
7.8.	Topographical Survey	19
7.8.1.	Area Covered by Waste	19
8.	Objectives and Targets	20
8.1.	Review of Objectives and Targets for 2014	20
8.2.	Objectives for 2015	20
9.	Resources and Energy Consumption	20
9.1.	Cover Material	20
9.2.	Diesel Fuel	20
9.3.	Electricity	20
10.	Non-Compliance's	21
11.	Complaints	21
12.	Incidents	21
13.	Financial Provisions	21
Appendix 1	Environmental Policy	
Appendix 2	Met Eireann Data	

1. Introduction

1.1. Licensee

Tegral Building Products Ltd.
Athy,
Co. Kildare.

1.2. Register Number

W046-01

1.3. Reporting Period

1st January to 31st December 2014

1.4. Location

Ballylinan,
Co.Laois.

1.5. Environmental Policy

For the Environment Policy Statement refer to Appendix 1.

1.6. Summary of Compliance (1st January to 31st December 2014)

The landfill site at Ballylinan was not used for disposal of waste in 2014. Implementation of the agreed closure plan was completed in September 2007.

No non-compliance was notified by the Agency, in the period.

2. Site Description

2.1. Location

The landfill disposal site is located in the Ballylinan Townland approximately 1 km East of the village of Ballylinan, Co. Laois. The National Grid Reference for the site is:

2656 E, 1884 N.

The site comprises an area of 1.489 hectares of which approximately 0.755 hectares is a disused limestone quarry and the remaining 0.734 hectares is grass borders and site access road. The site has been in use since 1990, initially under Permit from Laois County Council and is licensed by the E.P.A. since 18th May 1999. The site was used exclusively for the disposal of wastes arising from the manufacture of fibre-cement products at the Athy factory.

3. Site Management Personnel

3.1. Board of Directors

The Board of Directors bears ultimate statutory responsibility for the actions of the company. Consequently, the ultimate authority within the company rests with the Board.

3.2. Works Manager

The Works Manager is **Mr. Stephen Gormalley** and his duties regarding Ballylinan Landfill Site include the following:

- Ensuring compliance with all relevant environmental legislative requirements;
- Ensuring that at all times competent staff and appropriate resources are available to meet the requirements of the Waste Management License.

3.3. Facility Manager

The Facility Manager is **Mr. Paul Loughman** who is responsible for the following;

- Ensuring compliance with all relevant environmental legislative requirements;

3.4. Deputy Facility Manager

The Deputy Facility Manager, when the site was active was **Mr. Paul Molloy** who is employed by Tegral as Relief Day Shift & Warehouse Manager.

3.5. Other Personnel

No other personnel were involved on the site in 2014.

4. Waste Acceptance and Handling

4.1. Waste Types

No wastes were deposited on the site in 2014.

4.2. Quantities

No waste was deposited on the site in 2014.

4.3. Deposition of Waste

No waste was deposited on the site in 2014.

4.3.1. Further Procedural Guidelines

Now not relevant

5. Landfill Monitoring

5.1 Groundwater Monitoring

In accordance with the requirements of the Waste Management License (W046-01) groundwater in the vicinity of the site is sampled four times per year at nine locations. Five of these locations are from monitoring wells installed in and around the landfill site and designated MW01-MW05. One sampling location, designated MW06 is a public hand pump located North of the site (although no samples could be obtained at this location), MW08 is located South East of the site. Samples were also taken at two additional wells not referenced in the waste management licence. These are MW09 located up gradient of the facility and MW10 located down gradient. These wells were installed following a hydro geological assessment of the site undertaken in December 2004.

O'Callaghan Moran & Associates (OCM) were contracted to do the sampling and analysis as required in the license. The following reports, produced by OCM were submitted to the Agency during the year.

1 st Quarter 2014	Report Submitted	08/04/2014
2 nd Quarter 2014	Report Submitted	30/06/2014
3 rd Quarter 2014	Report Submitted	21/10/2014
4 th Quarter 2014	Report Submitted	20/01/2015

5.2. Air Monitoring

No wastes were deposited on the site in 2014, however, one fibre in air measurement was undertaken.

5.3. Climatological Data

Data for rainfall and wind speed and direction is, as agreed with the Agency, obtained from Met Eireann. This data was obtained for the Oak Park station in Carlow. The daily figures for rainfall, mean wind speed are included in Appendix 2 and are summarized below.

Monthly Precipitation Data Oak Park

Month	Total Precipitation mm	Number of Days with No Precipitation	Daily Max. Precipitation mm
Jan	281.9	2	18.9
Feb	176.7	2	17.1
March	74.3	8	14.2
April	52.6	13	14.4
May	78.6	10	13
June	61.9	17	18.2
July	24.6	15	6
August	121.10	11	44
September	18.8	19	11.2
October	138.2	6	30.4
November	165.6	9	31.7
December	72	14	15.6
Annual Total	1266.3	126	

Monthly Mean Wind Speeds – Knots *

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Carlow	9.1	12	8	7.16	7.13	5.94	5.79	7.58	4.45	8.56	5.89	8.58

Annual Mean Oakpark = 7.52

* Source Met Eireann, Oakpark, Carlow

6. Emission Impacts

6.1. Groundwater

6.1.1. Discharges to Groundwater

There are no direct discharges to groundwater from the facility. Indirect discharges are calculated based on the net precipitation over the area of the site enclosed by the quarry rock face, which is 0.755 hectares. The measured total precipitation at the Met Eireann Station in Oakpark during 2014 was 1266.3 mm.

The average potential evaporation for Kilkenny for the period 1975 – 1999 (Met Eireann) was 463.84 mm. This gives a net precipitation of 802.46 mm.

This yields a volume of 6,058.5m³ of which a maximum of 5% would have penetrated the cap and percolated through the waste. The maximum indirect discharge to groundwater is therefore estimated to be 303m³.

6.1.2. Groundwater Quality

All of the groundwater monitoring data is presented on the following tables. There are no standards prescribed in the waste management license for groundwater quality. It is important to note that there are no private wells in the immediate vicinity of the landfill site. The local residents are serviced by a public water supply scheme.

The groundwater monitoring programme, which has been ongoing since 1999 has identified the consistent presence of elevated levels of ammonia, pH and potassium in a number of the monitoring wells.

In general, however, the 2014 monitoring results are consistent with those of previous years. The presence of faecal organisms in some of the wells is a clear indication of an external source of contamination

Trace levels of Toluene, Benzene, ethylbenzene and Xylene were detected in MW9 in (Q4). Trace levels of VOC's were also detected MW01. These VOC results are consistent with results previously submitted to the agency.

In Q2, the level TOC detected in MW-2 (70mg/L) is greater than the TOC trigger level for MW-2 (62.79mg/L). The level is within the previously recorded high detected at MW-2 (76mg/L – November 2005). In Q4 elevated fluoride levels were detected in MW-2 and MW-9, however, based on the previous monitoring data and the fact there have been No activities at the site, these results are considered to be anomalous.

Ballylynan Landfill Site
Groundwater Monitoring Results 2014
Monitoring Well No. MW-01

N 188424
E 265543

West of Centre

Parameter	Units	Monitoring Dates			
		Q1	Q2	Q3	Q4
pH	pH Units	8.04	9.54	10.01	8.66
Conductivity	mS/cm	0.67	0.479	0.549	562
Ammonia - N	mg/l	5.92	9.34	15.01	6.26
Nitrate - N	mg/l	14.1	0.6	0.7	2
Nitrite - N	mg/l	<0.02	<0.02	<0.02	0.07
TOC	mg/l	12	26	47	19
TON	mg/l	3.2	<0.2	<0.2	0.5
Alkalinity (CaCO ₃)	mg/l				258
Fluoride	mg/l				<0.3
Chloride	mg/l	23.7	27.1	28.8	24
Sulphate	mg/l	47.84	16.54	2.03	20.36
Total Phosphorus	mg/l				0.15
Calcium	mg/l	76.5	4.1	3.3	36.7
Magnesium	mg/l				1.6
Sodium	mg/l	29.9	45.4	48.5	35.5
Potassium	mg/l	49.4	77.7	84	64.3
Iron	mg/l	0.022	0.064	0.086	0.063
Manganese	mg/l	0.054	0.002	0.002	0.017
Phenols	mg/l	0.0054	0.059	0.082	0.078
Zinc	µg/l				0.008
Mercury	µg/l				<1
Lead	µg/l				<5
Cyanide	mg/l				<0.01
Barium	mg/l	0.026	0.004	<0.003	0.018
Boron	µg/l				22
Cadmium	µg/l				<0.5
Chromium	µg/l				4.6
Copper	µg/l				<7
Total Coliforms	mpn/100m l				613.1
Faecal Coliforms	mpn/100m l				62
Total Solids	mg/l				282
Benzene	µg/l				<0.5

Toluene	µg/l				18
Ethylbenzene	µg/l				5.9
Xylene	µg/l				13.5

ND – Non-detect

Ballylynan Landfill Site
Groundwater Monitoring Results 2014
Monitoring Well No. MW-02

N 188464
E 265602

North of Centre

Parameter	Units	Monitoring Dates			
		Q1	Q2	Q3	Q4
pH	pH Units	7.49	9.3	7.86	7.42
Conductivity	mS/cm	0.585	0.624	0.648	716
Ammonia - N	mg/l	3.26	25.21	15.44	1.95
Nitrate N	mg/l	2.7	0.4	0.8	10.6
Nitrite N	mg/l	<0.02	<0.02	<0.02	0.06
TOC	mg/l	5	70	25	12
TON	mg/l	0.6	<0.2	<0.2	2.4
Alkalinity (CaCO ₃)	mg/l				384
Fluoride	mg/l				0.5
Chloride	mg/l	18.7	33.5	31.1	22.2
Sulphate	mg/l	20.54	0.29	0.39	25.04
Total Phosphorus	mg/l				0.467
Calcium	mg/l	86.7	20.7	52	118.4
Magnesium	mg/l				5.7
Sodium	mg/l	12.9	29.5	22.4	13.6
Potassium	mg/l	25.7	83.5	62.4	30.4
Iron	mg/l	0.034	0.068	0.173	0.38
Manganese	mg/l	0.135	0.011	0.098	0.116
Phenols	mg/l	<0.006	0.31	0.098	<0.006
Zinc	µg/l				0.053
Mercury	µg/l				<1
Lead	µg/l				<5
Cyanide	mg/l				<0.01
Barium	mg/l	0.027	0.015	0.022	0.054
Boron	µg/l				31
Cadmium	µg/l				<0.5
Chromium	µg/l				3.2
Copper	µg/l				<7
Total Coliforms	mpn/100m l				1,956
Faecal Coliforms	mpn/100m l				150
Total Solids	mg/l				500

Benzene	µg/l				<0.5
Toluene	µg/l				<0.5
Ethylbenzene	µg/l				<0.5
Xylene	µg/l				<1.5

ND – Non-detect

Ballylynan Landfill Site
Groundwater Monitoring Results 2014

Monitoring Well No. MW-03

N 188411
E 265684

East of Centre

Parameter	Units	Monitoring Dates			
		Q1	Q2	Q3	Q4
pH	pH Units	7.34	7.46	7.24	7.49
Conductivity	mS/cm	0.875	0.808	0.77	736
Ammonia - N	mg/l	2.4	1.38	1.9	<0.03
Nitrate N	mg/l	0.7	3.4	1.9	10.4
Nitrite N	mg/l	<0.02	<0.02	<0.02	<0.02
TOC	mg/l	<2	6	7	7
TON	mg/l	<0.2	0.8	0.4	2.3
Alkalinity (CaCO ₃)	mg/l				358
Fluoride	mg/l				<0.3
Chloride	mg/l	26.7	26.4	23.3	22.2
Sulphate	mg/l	71.59	79.69	51.26	51.23
Total Phosphorus	mg/l				0.103
Calcium	mg/l	132.5	132.7	120.3	121.6
Magnesium	mg/l				4.8
Sodium	mg/l	18	14.5	14.7	14.4
Potassium	mg/l	45	37.8	41.1	40.1
Iron	mg/l	<0.02	<0.02	<0.020	<0.020
Manganese	mg/l	0.438	1.154	0.619	<0.002
Phenols	mg/l	<0.006	<0.006	<0.006	<0.006
Zinc	µg/l				0.015
Mercury	µg/l				<1
Lead	µg/l				<5
Cyanide	mg/l				<0.01
Barium	mg/l	0.058	0.065	0.052	0.043
Boron	µg/l				24
Cadmium	µg/l				<0.5
Chromium	µg/l				7.5
Copper	µg/l				<7
Total Coliforms	mpn/100m l				1,046.20
Faecal Coliforms	mpn/100m l				26
Total Solids	mg/l				<5

Benzene	µg/l				<0.5
Toluene	µg/l				<0.5
Ethylbenzene	µg/l				<0.5
Xylene	µg/l				<1.5

ND – Non-detect

Ballylnan Landfill Site
Groundwater Monitoring Results 2014

Monitoring Well No. MW-04

N 188362
E 265618

South of Centre

Parameter	Units	Monitoring Dates			
		Q1	Q2	Q3	Q4
PH	pH Units	7.56	7.46	7.26	7.35
Conductivity	mS/cm	0.782	0.757	0.689	703
Ammonia - N	mg/l	0.09	0.02	0.02	0.24
Nitrate N	mg/l	7	4.9	4.8	28.5
Nitrite N	mg/l	<0.02	<0.02	<0.02	0.04
TOC	mg/l	<2	5	6	9
TON	mg/l	1.6	1.1	1.1	6.4
Alkalinity (CaCO ₃)	mg/l				364
Fluoride	mg/l				<0.3
Chloride	mg/l	17.8	18.6	9.4	19.1
Sulphate	mg/l	14.6	16.13	13.13	13.27
Total Phosphorus	mg/l				0.087
Calcium	mg/l	107.7	116.5	109.4	117.2
Magnesium	mg/l				4.1
Sodium	mg/l	56.8	52.7	22.4	26.3
Potassium	mg/l	17.8	18.7	15.7	15.7
Iron	mg/l	<0.02	<0.02	<0.020	<0.020
Manganese	mg/l	0.042	0.018	0.017	0.18
Phenols	mg/l	<0.006	<0.006	<0.006	<0.006
Zinc	µg/l				0.01
Mercury	µg/l				<1
Lead	µg/l				<5
Cyanide	mg/l				<0.01
Barium	mg/l	0.066	0.078	0.066	0.067
Boron	µg/l				16
Cadmium	µg/l				<0.5
Chromium	µg/l				1.9
Copper	µg/l				<7
Total Coliforms	mpn/100m l				1,986.30
Faecal Coliforms	mpn/100m l				1,400
Total Solids	mg/l				586
Benzene	µg/l				<0.5
Toluene	µg/l				<0.5
Ethylbenzene	µg/l				<0.5
Xylene	µg/l				<1.5

ND – Non-detect

Ballylynan Landfill Site
Groundwater Monitoring Results 2014

Monitoring Well No. MW-05

N 188465
E 265657

North-East of Centre

Parameter	Units	Monitoring Dates			
		Q1	Q2	Q3	Q4
pH	pH Units	7.21	7.32	7.11	7.3
Conductivity	mS/cm	0.866	0.872	0.751	826
Ammonia - N	mg/l	0.43	0.28	0.16	0.66
Nitrate N	mg/l	0.7	3.8	4.4	4.4
Nitrite N	mg/l	<0.02	<0.02	<0.02	<0.02
TOC	mg/l	<2	4	5	9
TON	mg/l	<0.2	0.8	1	1
Alkalinity (CaCO ₃)	mg/l				442
Fluoride	mg/l				<0.3
Chloride	mg/l	37.9	41.4	37.2	38.3
Sulphate	mg/l	23.91	23.94	19.35	12.61
Total Phosphorus	mg/l				0.147
Calcium	mg/l	147.4	153.2	132.7	152
Magnesium	mg/l				8.5
Sodium	mg/l	12.4	12.8	11.1	12.2
Potassium	mg/l	27.1	27.3	19	23.7
Iron	mg/l	<0.02	<0.02	<0.020	1.84
Manganese	mg/l	2.013	2.092	0.58	2.824
Phenols	mg/l	<0.006	<0.006	<0.006	<0.006
Zinc	µg/l				0.022
Mercury	µg/l				<1
Lead	µg/l				<5
Cyanide	mg/l				<0.01
Barium	mg/l	0.221	0.229	0.173	0.225
Boron	µg/l				31
Cadmium	µg/l				<0.5
Chromium	µg/l				<1.5
Copper	µg/l				<7
Total Coliforms	mpn/100m l				1,413.60
Faecal Coliforms	mpn/100m l				72
Total Solids	mg/l				534
Benzene	µg/l				<0.5
Toluene	µg/l				<0.5
Ethylbenzene	µg/l				<0.5
Xylene	µg/l				<1.5

ND – Non-detect

Ballylynan Landfill Site
Groundwater Monitoring Results 2014

Monitoring Well No. MW-08

N 188359
E 265781

Murphy's Well
East-South-East of Centre

Parameter	Units	Monitoring Dates			
		Q1	Q2	Q3	Q4
PH	pH Units	7.2	7.86	7.44	7.54
Conductivity	mS/cm	0.944	0.734	0.611	645
Ammonia - N	mg/l	0.02	0.02	0.09	<0.03
Nitrate N	mg/l	39.4	27.3	17.9	20.1
Nitrite N	mg/l	<0.02	<0.02	<0.02	<0.02
TOC	mg/l	<2	5	<2	7
TON	mg/l	8.9	6.2	4	4.5
Alkalinity (CaCO ₃)	mg/l				336
Fluoride	mg/l				<0.3
Chloride	mg/l	37.6	23.2	17	18.3
Sulphate	mg/l	20.41	19.84	10.4	12.35
Total Phosphorus	mg/l				0.049
Calcium	mg/l	152.1	135.3	110.1	120.3
Magnesium	mg/l				9.5
Sodium	mg/l	17.1	12.5	7.8	7.8
Potassium	mg/l	36.4	8.8	1.5	1.9
Iron	mg/l	<0.02	<0.02	<0.020	<0.020
Manganese	mg/l	<0.002	<0.002	<0.002	<0.002
Phenols	mg/l	<0.006	<0.006	<0.006	<0.006
Zinc	µg/l				0.008
Mercury	µg/l				<1
Lead	µg/l				<5
Cyanide	mg/l				<0.01
Barium	mg/l	0.078	0.04	0.023	0.032
Boron	µg/l				21
Cadmium	µg/l				<0.5
Chromium	µg/l				<1.5
Copper	µg/l				<7
Total Coliforms	mpn/100m l				<1
Faecal Coliforms	mpn/100m l				<1
Total Solids	mg/l				342
Benzene	µg/l				<0.5
Toluene	µg/l				<0.5
Ethylbenzene	µg/l				<0.5
Xylene	µg/l				<1.5

ND – Non-detect

Ballylunan Landfill Site
Groundwater Monitoring Results 2014

Monitoring Well No. MW-09

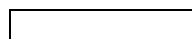


Parameter	Units	Monitoring Dates			
		Q1	Q2	Q3	Q4
PH	pH Units	12.01	12.11	11.13	11.8
Conductivity	mS/cm	2.244	1.889	1.339	1974
Ammonia - N	mg/l	28.17	26.26	25.98	23.54
Nitrate N	mg/l	0.7	0.4	0.8	0.4
Nitrite N	mg/l	<0.02	<0.02	<0.02	<0.02
TOC	mg/l	98	92	50	87
TON	mg/l	<0.2	<0.2	<0.2	<0.2
Alkalinity (CaCO ₃)	mg/l				694
Fluoride	mg/l				4.7
Chloride	mg/l	26.7	28	28.2	29.2
Sulphate	mg/l	12.39	17.07	16.47	24.1
Total Phosphorus	mg/l				0.58
Calcium	mg/l	13.7	15.3	0.8	12.5
Magnesium	mg/l				<0.1
Sodium	mg/l	126.7	123.8	110.8	107.2
Potassium	mg/l	289.1	310.6	316.5	313.3
Iron	mg/l	0.039	0.024	0.06	0.049
Manganese	mg/l	<0.002	<0.002	<0.002	<0.002
Phenols	mg/l	0.0111	0.018	0.165	0.046
Zinc	µg/l				0.063
Mercury	µg/l				<1
Lead	µg/l				<5
Cyanide	mg/l				<0.01
Barium	mg/l	0.022	0.031	0.004	0.026
Boron	µg/l				23
Cadmium	µg/l				<0.5
Chromium	µg/l				<1.5
Copper	µg/l				7
Total Coliforms	mpn/100m l				20
Faecal Coliforms	mpn/100m l				<1
Total Solids	mg/l				1142
Benzene	µg/l				7
Toluene	µg/l				204.7
Ethylbenzene	µg/l				52.6
Xylene	µg/l				150.9

ND – Non-detect

Ballylynan Landfill Site
Groundwater Monitoring Results 2014

Monitoring Well No. MW-10



Parameter	Units	Monitoring Dates			
		Q1	Q2	Q3	Q4
pH	pH Units	7.31	7.59	7.31	7.27
Conductivity	mS/cm	0.679	0.69	0.625	678
Ammonia - N	mg/l	0.02	<0.01	<0.01	<0.03
Nitrate N	mg/l	11.9	24	21.7	15.1
Nitrite N	mg/l	<0.02	<0.02	<0.02	<0.02
TOC	mg/l	<2	3	2	5
TON	mg/l	2.7	5.4	4.9	3.4
Alkalinity (CaCO ₃)	mg/l				390
Fluoride	mg/l				<0.3
Chloride	mg/l	10.7	19.5	19	15.2
Sulphate	mg/l	9.25	16.27	15.21	11.92
Total Phosphorus	mg/l				0.125
Calcium	mg/l	128.1	135.7	125.9	134.4
Magnesium	mg/l				7.7
Sodium	mg/l	7.5	9.9	9.2	8
Potassium	mg/l	2.6	3	2.6	2.8
Iron	mg/l	<0.02	<0.02	<0.020	<0.020
Manganese	mg/l	<0.002	<0.002	<0.002	<0.002
Phenols	mg/l	<0.006	<0.006	<0.006	<0.006
Zinc	µg/l				0.023
Mercury	µg/l				<1
Lead	µg/l				<5
Cyanide	mg/l				<0.01
Barium	mg/l	0.024	0.033	0.029	0.033
Boron	µg/l				45
Cadmium	µg/l				<0.5
Chromium	µg/l				<1.5
Copper	µg/l				<7
Total Coliforms	mpn/100m l				75
Faecal Coliforms	mpn/100m l				<1
Total Solids	mg/l				404
Benzene	µg/l				<0.5
Toluene	µg/l				<0.5
Ethylbenzene	µg/l				<0.5
Xylene	µg/l				<1.5

ND – Non-detect

6.2. Air Quality

6.2.1. Fibres in Air

One fibre in air monitoring sample was taken in 2014. All results were <0.01f/ml and comply with the required standard.

6.2.2. Dust Deposition

Dust deposition monitoring has ceased as agreed with the agency.

7. Site Design / Development

7.1. Security

Security is ensured by the provision of fencing with secure and lockable gates. The access road to the site is private; therefore the landfill is not adjoining a public road.

There are two gates between the public road and the landfill site. The external gate is used for access to the site inner gate, along the private access road, which is also used by the farmer from whom the land is leased to access his other property. The internal gate is used exclusively for site entry, and is open to allow free movement of sheep who graze the property as agreed with the agency.

7.2. Site Inspections

No waste was deposited on the site in 2014 and there was no need for the routine inspections undertaken during the operational phase of the site. The site was inspected by O'Callaghan Moran Consultants to ensure there were no indications of settlement, surface ponding, leachate outbreaks, etc.

7.3. Site Roads

When the site was active the private site access road was inspected on a regular basis. The site owner also uses this as a means of access to a portion of his land.

7.4. Electricity Supply

The electrical supply to the site was disconnected by the ESB in 2008 as there is now no need to maintain such a supply.

7.5. Other Infrastructure

There is no other infrastructure on the site.

7.6. Restoration

The implementation of the restoration plan agreed with the Agency was completed in September 2007.

7.7. Site Development Works

There were no such works.

7.8. Topographical Survey

The finished site levels are shown on the drawings with the Construction Validation reported prepared by O'Callaghan Moran / Capita Simmons.

7.8.1. Area Covered by Waste

0.755 hectares has been covered with waste.

8. Objective and Targets

8.1.

The objective set for 2014 was to continue to implement the monitoring and other relevant requirements of the licence.

This was achieved.

8.2. Objectives for 2015

The objective for 2015 is to continue to implement the monitoring and other relevant requirements of the licence.

9. Resources and Energy Consumption

9.1. Cover Material

Disposal activities at the site ceased in May 2005. No cover material was used in 2014.

9.2. Diesel Fuel

Not relevant as site not in use for disposal of waste in 2014.

9.3. Electricity

Not relevant as site not in sue for disposal of waste in 2014.

10. Non-Compliance with License Conditions

No non-compliances with the Waste Management License were notified during the year.

11. Complaints

No complaints were received during 2014.

12. Incidents

There were no incidents during the year.

13. Financial Provisions

In accordance with the requirements of Condition 11.2 of the license Tegral contracted Bord na Mona to undertake an environmental liabilities and risk assessment of the activity. Their report was submitted to the Agency in February 2000. According to their findings the worst-case scenario would be a targeted groundwater clean-up programme. Tegral Building Products Limited have made a provision of 127,000 Euro in the accounts to cover such an eventuality. On the basis of the monitoring results generated during 2014 and the risk assessment undertaken by O'Callaghan Moran & Associates, it is considered that this provision is adequate.

APPENDIX 1

ENVIRONMENTAL

POLICY

Tegral Buildings Products Annual Environmental Report 2014

Environmental Policy Statement

Tegral Building Products Limited is committed to complying with all relevant current licensing regulations with regard to operations carried out at its manufacturing plant in Athy, County Kildare and associated activities at its licensed landfill site at Ballylinan, County Laois.

In order to re-enforce this policy, Tegral is committed to the continued implementation of an Environmental Management System in compliance with the ISO 14001 International Standard. Certification to this standard was achieved in December 2001 and upgraded in 2005 to ISO14001:2004

The company undertakes to provide the necessary resources, including manpower and related training to achieve and demonstrate sound environmental performance and foster environmental protection by controlling the impact of its operational activities on the environment at large.

All employees shall be made aware of the commitment necessary to support environmental protection in the performance of their duties.

PATRICK KELLY
Managing Director

PAUL LOUGHMAN
Quality & Environment Manager

APPENDIX 2

MET EIREANN

DATA

Date	Rainfall(mm)	Mean Wind Speed(knots)
01/01/2014	4.4	9.9
02/01/2014	2.1	11.5
03/01/2014	2.8	18.5
04/01/2014	4.8	7
05/01/2014	8.5	13.1
06/01/2014	6	19.4
07/01/2014	0.3	13
08/01/2014	13.7	4.6
09/01/2014	0.3	6.7
10/01/2014	1.5	6.6
11/01/2014	0	3.9
12/01/2014	3.3	11.7
13/01/2014	1	5.2
14/01/2014	5.5	5.6
15/01/2014	2.4	8.3
16/01/2014	8.7	5.2
17/01/2014	0.1	5
18/01/2014	10.8	4.1
19/01/2014	0	4.4
20/01/2014	0.1	3.3
21/01/2013	2.3	10.2
22/01/2014	0.2	8.1
23/01/2014	3.2	9.7
24/01/2014	8.7	6
25/01/2014	6.1	13.1
26/01/2014	18.9	17.4
27/01/2014	8.5	15
28/01/2014	2.7	11.1
29/01/2014	2	7.5
30/01/2014	0.8	3.9
31/01/2014	18.5	12.9
01/02/2014	11.7	18.5
02/02/2014	0.1	13.4
03/02/2014	13.3	12.6
04/02/2014	13.6	12.0
05/02/2014	11.7	14.7
06/02/2014	0	4.6
07/02/2014	6.3	11.1
08/02/2014	6.6	18.9
09/02/2014	4.4	12.5
10/02/2014	8.1	7.3
11/02/2014	6.6	11.1
12/02/2014	17.1	20.9
13/02/2014	0.4	11.8
14/02/2014	15.5	9.8
15/02/2014	2.3	14.8
16/02/2014	2.7	7.8

17/02/2014	13.7	7.8
18/02/2014	0	4.9
19/02/2014	0.4	8.8
20/02/2014	1.6	13.2
21/02/2014	1.3	12.2
22/02/2014	0.4	13.8
23/02/2014	9.5	17.5
24/02/2014	7.4	11.9
25/02/2014	2.7	13.9
26/02/2014	8	13.7
27/02/2014	5	8.7
28/02/2014	6.3	8.7
01/03/2014	0.9	7.2
02/03/2014	6.5	7.0
03/03/2014	0.6	7.1
04/03/2014	0	5.6
05/03/2014	0.6	9.3
06/03/2014	5.7	10.4
07/03/2014	5.8	8.8
08/03/2014	0.6	15.8
09/03/2014	2	8.7
10/03/2014	0.2	2.3
11/03/2014	0	2.2
12/03/2014	0	1.4
13/03/2014	0	2.5
14/03/2014	0.2	5.8
15/03/2014	0	9.4
16/03/2014	0.1	8.2
17/03/2014	0.3	6.3
18/03/2014	3.7	13
19/03/2014	0	14.4
20/03/2014	12.5	16.4
21/03/2014	14.2	10
22/03/2014	0.6	10.7
23/03/2014	0	8.1
24/03/2014	6	13.5
25/03/2014	1.2	6.8
26/03/2014	4.1	7.2
27/03/2014	0	5.3
28/03/2014	2.9	5.9
29/03/2014	3.8	6.3
30/03/2014	0.1	5
31/03/2014	1.7	6.1
01/04/2014	1.7	4.9
02/04/2014	14.4	6.8
03/04/2014	0.1	6.2
04/04/2014	0.4	8.7
05/04/2014	5.2	11.2
06/04/2014	2	12.9

Tegral Building Products Ltd. Annual Environmental Report 2014

07/04/2014	2.2	7.6
08/04/2014	0.1	10.1
09/04/2014	0	7
10/04/2014	0	6
11/04/2014	0	4.6
12/04/2014	0	9.3
13/04/2014	0	9
14/04/2014	0	4
15/04/2014	0	7.6
16/04/2014	0	9
17/04/2014	0	8.4
18/04/2014	0	3.7
19/04/2014	0	3.8
20/04/2014	2.1	8
21/04/2014	1.1	7.7
22/04/2014	2.9	3.5
23/04/2014	4.8	10
24/04/2014	0.1	5.2
25/04/2014	4.9	7.4
26/04/2014	9.6	9.1
27/04/2014	0.2	6.7
28/04/2014	0	3.5
29/04/2014	0	4.6
30/04/2014	0.8	8.2
01/05/2014	2.8	4.6
02/05/2014	0	4.4
03/05/2014	1	7.5
04/05/2014	0	9.5
05/05/2014	3.2	12.5
06/05/2014	3.2	9.5
07/05/2014	0.6	11.9
08/05/2014	12.1	8.7
09/05/2014	4.2	12.4
10/05/2014	3.5	14.6
11/05/2014	0.6	14.9
12/05/2014	4.2	6
13/05/2014	1.3	6.7
14/05/2014	0	4.6
15/05/2014	0	3.6
16/05/2014	0	5.2
17/05/2014	0	8.7
18/05/2014	13	6.8
19/05/2014	4	3.3
20/05/2014	2.3	5.1
21/05/2014	0.1	4.9
22/05/2013	0	6.4
23/05/2014	1.8	10.5
24/05/2014	8.5	7.8
25/05/2014	8.8	5.2

Tegral Building Products Ltd. Annual Environmental Report 2014

26/05/2014	2.8	3
27/05/2014	0.1	4.1
28/05/2014	0	4.5
29/05/2014	0.5	5.7
30/05/2014	0	4.3
31/05/2014	0	4.1
01/06/2014	0.4	7.3
02/06/2014	1.1	5.2
03/06/2014	13.4	4.6
04/06/2014	13.8	6.6
05/06/2014	0	3.6
06/06/2014	1.3	6.4
07/06/2014	1.6	8.6
08/06/2014	4.5	10.1
09/06/2014	1.4	8.5
10/06/2014	18.2	5.8
11/06/2014	0.1	4.8
12/06/2014	0	6
13/06/2014	0	3.4
14/06/2014	0	3.9
15/06/2014	0	5.5
16/06/2014	0	5.9
17/06/2014	0	3.2
18/06/2014	0	4.1
19/06/2014	0	7
20/06/2014	0	4.9
21/06/2014	0	4.8
22/06/2014	0	4.7
23/06/2014	0	21.7
24/06/2014	0	3.4
25/06/2014	2.7	4
26/06/2014	2.2	6
27/06/2014	1.2	4.3
28/06/2014	0	5.3
29/06/2014	0	4.2
30/06/2014	0	4.3
01/07/2014	0	3.8
02/07/2014	0	9
03/07/2014	0	8
04/07/2014	6	8.3
05/07/2014	3	4.6
06/07/2014	0.8	4.8
07/07/2014	0	3.3
08/07/2014	2.8	6
09/07/2014	0.7	5.6
10/07/2014	3	4.2
11/07/2014	0	3.5
12/07/2014	1.2	6.2

Tegral Building Products Ltd. Annual Environmental Report 2014

13/07/2014	0	5.4
14/07/2014	1.4	9
15/07/2014	0	6.9
16/07/2014	0.1	8.1
17/07/2014	0	4.6
18/07/2014	3.5	6.6
19/07/2014	0.6	4.5
20/07/2014	0.1	4.8
21/07/2014	0.1	5.3
22/07/2014	0.1	4.6
23/07/2014	0	4.6
24/07/2014	0	3.6
25/07/2014	0	4.2
26/07/2014	0	4.4
27/07/2014	0	7.4
28/07/2014	0.3	7.3
29/07/2014	0.9	5.7
30/07/2014	0	7.6
31/07/2014	0	7.6
01/08/2014	6.5	4
02/08/2014	44	8
03/08/2014	0	8.5
04/08/2014	1	6.3
05/08/2014	11	5.2
06/08/2014	0	7.1
07/08/2014	0	6.4
08/08/2014	9.2	3.8
09/08/2014	0	6.8
10/08/2014	21.8	8.4
11/08/2014	1.8	11.4
12/08/2014	2.6	8.9
13/08/2014	0.1	9.1
14/08/2014	4.7	5.7
15/08/2014	0.1	5.9
16/08/2014	0	9.5
17/08/2014	0.2	10.5
18/08/2014	0	8.8
19/08/2014	0	5.7
20/08/2014	0	4.2
21/08/2014	0.5	8.7
22/08/2014	0	6.2
23/08/2014	0	5.4
24/08/2014	3.3	6.3
25/08/2014	3.3	6.5
26/08/2014	3	6.7
27/08/2014	1	10.3
28/08/2014	0.1	11.8
29/08/2014	5.6	12
30/08/2014	1.3	10.1

31/08/2014	0	6.9
01/09/2014	0.1	3.8
02/09/2014	0	2.7
03/09/2014	0	3.6
04/09/2014	0	3.4
05/09/2014	0.4	2.6
06/09/2014	0	7
07/09/2014	0	4.8
08/09/2014	0.1	4.6
09/09/2014	0	2.3
10/09/2014	0	3
11/09/2014	0	3.2
12/09/2014	0	3.6
13/09/2014	0	2.8
14/09/2014	0.1	3.6
15/09/2014	0	2.8
16/09/2014	0	3.2
17/09/2014	0.7	3.7
18/09/2014	0	3.3
19/09/2014	11.2	4.5
20/09/2014	0	6.9
21/09/2014	0	3.3
22/09/2014	2	5.8
23/09/2014	0.6	5.2
24/09/2014	0.9	5.2
25/09/2014	0	7.3
26/09/2014	0	6.2
27/09/2014	0	5.7
28/09/2014	0	5.2
29/09/2014	0.9	3.7
30/09/2014	1.8	8
01/10/2014	0.3	5.1
02/10/2014	0	7.8
03/10/2014	30.4	7.1
04/10/2014	5.1	7.5
05/10/2014	8.6	12.5
06/10/2014	6.5	7
07/10/2014	0	5.1
08/10/2014	11.3	6.2
09/10/2014	4.6	5.7
10/10/2014	0.4	5.6
11/10/2014	0.1	2
12/10/2014	0	2.8
13/10/2014	0.1	6.7
14/10/2014	0.1	3.6
15/10/2014	6.2	8.8
16/10/2014	9.4	7
17/10/2014	11.6	12.3
18/10/2014	3.7	18.1

19/10/2014	1.2	13
20/10/2014	1.9	11.4
21/10/2014	1.8	14.5
22/10/2014	1.5	7.4
23/10/2014	0.6	9.1
24/10/2014	0	7.9
25/10/2014	0	9.8
26/10/2014	0.2	13.2
27/10/2014	0	14
28/10/2014	28.7	9.7
29/10/2014	0.6	3.8
30/10/2014	0.3	9.3
31/10/2014	3	11.5
01/11/2014	9.6	11.7
02/11/2014	0.2	7.8
03/11/2014	0.4	7.1
04/11/2014	0.3	8.4
05/11/2014	0	4.9
06/11/2014	25.9	13.5
07/11/2014	1.3	7.2
08/11/2014	8	6.8
09/11/2014	0.9	5.8
10/11/2014	7.1	7
11/11/2014	11.3	3.2
12/11/2014	8.2	6.3
13/11/2014	31.7	8.8
14/11/2014	15.7	9.7
15/11/2014	2.5	3.5
16/11/2014	0.3	5
17/11/2014	0.5	7.3
18/11/2014	0.1	4.4
19/11/2014	21.1	6.1
20/11/2014	0.2	2
21/11/2014	17.6	8.4
22/11/2014	2.7	5.4
23/11/2014	0	3.3
24/11/2014	0	3.6
25/11/2014	0	2.6
26/11/2014	0	1.3
27/11/2014	0	4.5
28/11/2014	0	5.4
29/11/2014	0	2.6
30/11/2014	0	3.1
01/12/2014	2.4	4.2
02/12/2014	0	4.8
03/12/2014	0	1.5
04/12/2014	0	1.6
05/12/2014	0.2	6.6
06/12/2014	0	6.8

Tegral Building Products Ltd. Annual Environmental Report 2014

07/12/2014	3.4	11.1
08/12/2014	0	8.1
09/12/2014	15.2	18.8
10/12/2014	12	15.8
11/12/2014	15.6	14.1
12/12/2014	0	6.9
13/12/2014	0	6.7
14/12/2014	0.2	10.2
15/12/2014	0.5	5
16/12/2014	7.2	7.5
17/12/2014	0.9	9.7
18/12/2014	2.8	13.2
19/12/2014	0.1	8.3
20/12/2014	0	8.8
21/12/2014	0	13.6
22/12/2014	0	15.6
23/12/2014	1.1	10.7
24/12/2014	0.1	8.4
25/12/2014	0.1	6.5
26/12/2014	9.3	7.2
27/12/2014	0	7.4
28/12/2014	0	3.8
29/12/2014	0	3.3
30/12/2014	0	7.4
31/12/2014	1	12.5