Tegral Building Products Ltd.

Annual Environmental Report (AER) 2010

In Relation To

Waste Disposal Facility

At

Ballylinan, Co. Laois

Waste Management License Reference 0046-01

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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 2010

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 2010)

The landfill site at Ballylinan was not used for disposal of waste in 2010. 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. Kevin McNair** who is responsible for the following;

- Ensuring compliance with all relevant environmental legislative requirements;

3.4. Deputy Facility Manager

The Deputy Facility Manger, when the site was active was **Mr. Paul Molloy** who is employed by Tegral as Assistant Manufacturing Manager.

3.5. Other Personnel

No other personnel were involved on the site in 2010.

4. Waste Acceptance and Handling

4.1. Waste Types

No wastes were deposited on the site in 2010.

4.2. Quantities

No waste was deposited on the site in 2010.

4.3. Deposition of Waste

No waste was deposited on the site in 2010.

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 upgradient of the facility and MW10 located downgradient. These wells were installed following a hydrogeological 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.

1st Quarter 2009	Report Submitted	March 2010
2nd Quarter 2009	Report Submitted	May 2010
3rd Quarter 2009	Report Submitted	October 2010
4th Quarter 2009	Report Submitted	January 2011

5.2. Air Monitoring

No wastes were deposited on the site in 2010 however, one fibre in air measurements was undertaken.

5.3. Climatological Data

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

Monthly Precipitation Data Kilkenny*

Month	Total Precipitation mm	Number of Days with No Precipitation	Daily Max. Precipitation mm
Jan	71.5	10	14.4
Feb	48.0	14	17.5
March	80.7	16	14.6
April	48.9	17	22.2
May	48.3	15	11.4
June	40.3	19	10.3
July	94.2	10	12.1
August	25.5	15	4.6
September	108.7	7	49.9
October	68.9	7	22.8
November	87.2	5	15.7
December	52.7	14	17.9
Annual Total	**774.7**	**149**	**-**

***** Source – Met Eireann Kilkenny

Monthly Mean Wind Speeds – Knots *

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Kilkenny	5.33	4.57	6.49	6.14	5.70	5.34	7.06	6.26	6.69	6.27	6.69	4.08

Annual Mean Oakpark = 5.86

***** Source Met Eireann Oakpark

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 Kilkenny during 2010 was 774.7 mm.

The average potential evaporation for Kilkenny for the period 1975 – 1999 (Met Eireann) was 463.84 mm. This gives a net precipitation of 280.86 mm.

This yields a volume of 2,120m3 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 $103m^3$.

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 walls.

In general, however, the 2010 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, ethylbenzene and Xylene were detected in MW9 in December. Trace levels of VOC's were also detected MW01. These VOC results are consistent with results previously submitted to the agency. The trigger levels which have been agreed with the agency were not exceeded in any of the monitoring walls.

Ballylynan Landfill Site
Groundwater Monitoring Results 2010
Monitoring Well No. MW-01

N 188424
E 265543

West of Centre

		Monitoring Dates			
Parameter	**Units**	Q1	Q2	Q3	Q4
pH	-	8.96	9.03	10.82	10.07
Conductivity	μS/cm	451	439	405	468
Ammonia - N	mg/l	8.45	7.99	12.05	13.8
Nitrate N	mg/l	0.3	<0.2	<0.2	0.4
Nitrite N	mg/l	0.04	0.03	<0.02	<0.02
TOC	mg/l	26	12	43	42
TON	mg/l	0.38	<0.05	<0.05	0.09
Alkalinity ($CaCO_3$)	mg/l				174
Fluoride	mg/l				<0.3
Chloride	mg/l	33.0	30.0	29.6	32.7
Sulphate	mg/l	16.39	8.11	0.80	<0.05
Total Phosphorus	mg/l				0.080
Calcium	mg/l	23.80	8.7	6.4	11.8
Magnesium	mg/l				0.3
Sodium	mg/l	22.03	23.1	29.9	26.7
Potassium	mg/l	59.86	63.8	83.9	76.6
Iron	mg/l	0.937	0.060	0.070	0.386
Manganese	mg/l	0.053	0.002	0.003	0.012
Phenols	mg/l	<0.006	0.0009	<0.006	0.012
Zinc	μg/l				0.005
Mercury	μg/l				<1
Lead	μg/l				<5
Cyanide	mg/l				<0.040
Barium	mg/l	0.019	0.005	0.006	<0.003
Boron	μg/l				34
Cadmium	μg/l				<0.5
Chromium	μg/l				2.8
Copper	μg/l				<7
Total Coliforms	mpn/100ml				<1
Faecal Coliforms	mpn/100ml				0
Total Solids	mg/l				323
Toluene	μg/l				Nd
Ethylbenzene	μg/l				Nd
Xylene	μg/l				6

Ballylynan Landfill Site
Groundwater Monitoring Results 2010
Monitoring Well No. MW-02

N 188464
E 265602

North of Centre

		Monitoring Dates			
Parameter	**Units**	**Q1**	**Q2**	**Q3**	**Q4**
pH	-	8.98	8.96	9.17	8.83
Conductivity	μS/cm	482	421	439	546
Ammonia - N	mg/l	13.31	10.82	14.38	15.0
Nitrate N	mg/l	0.4	<0.2	<0.2	0.4
Nitrite N	mg/l	0.05	0.02	<0.02	<0.02
TOC	mg/l	20	8	30	22
TON	mg/l	0.42	<0.05	<0.05	0.09
Alkalinity ($CaCO_3$)	mg/l				243
Fluoride	mg/l				<0.3
Chloride	mg/l	21.2	26.9	26.5	29.1
Sulphate	mg/l	10.61	5.13	6.28	15.14
Total Phosphorus	mg/l				0.031
Calcium	mg/l	34.33	17.1	18.2	27.2
Magnesium	mg/l				1.8
Sodium	mg/l	17.81	20.1	25.3	23.7
Potassium	mg/l	59.01	68.9	75.2	83.0
Iron	mg/l	0.049	0.073	0.056	0.158
Manganese	mg/l	0.134	0.036	0.049	0.085
Phenols	mg/l	<0.006	<0.0005	<0.0006	0.052
Zinc	μg/l				<0.003
Mercury	μg/l				<1
Lead	μg/l				<5
Cyanide	mg/l				<0.040
Barium	mg/l	0.015	0.005	0.008	0.011
Boron	μg/l				26
Cadmium	μg/l				<0.5
Chromium	μg/l				<1.5
Copper	μg/l				<7
Total Coliforms	mpn/100ml				13.4
Faecal Coliforms	mpn/100ml				2
Total Solids	mg/l				354
Toluene	μg/l				Nd
Ethylbenzene	μg/l				Nd
Xylene	μg/l				nd

Ballylynan Landfill Site
Groundwater Monitoring Results 2010

Monitoring Well No. MW-03

N 188411
E 265684

East of Centre

		Monitoring Dates			
Parameter	**Units**	**Q1**	**Q2**	**Q3**	**Q4**
PH	-	7.90	7.87	7.4	7.37
Conductivity	μS/cm	745	696	724	772
Ammonia - N	mg/l	8.92	6.25	22.78	11.2
Nitrate N	mg/l	0.5	0.44	0.3	0.8
Nitrite N	mg/l	0.06	0.03	<0.02	0.03
TOC	mg/l	7	<2	19	16
TON	mg/l	0.59	<0.05	<0.05	0.18
Alkalinity ($CaCO_3$)	mg/l				420
Fluoride	mg/l				<0.3
Chloride	mg/l	22.0	23.6	27.4	25.8
Sulphate	mg/l	30.71	48.69	36.20	54.14
Total Phosphorus	mg/l				0.762
Calcium	mg/l	90.61	77.2	92.0	83.1
Magnesium	mg/l				3.3
Sodium	mg/l	20.38	21.5	25.9	26.1
Potassium	mg/l	60.33	64.7	69.9	74.4
Iron	mg/l	0.107	<0.020	<0.020	<0.020
Manganese	mg/l	1.145	0.549	0.409	<0.002
Phenols	mg/l	<0.006	<0.0005	<0.006	<0.010
Zinc	μg/l				<0.003
Mercury	μg/l				<0.1
Lead	μg/l				<0.5
Cyanide	mg/l				<0.040
Barium	mg/l	0.079	0.055	0.057	0.040
Boron	μg/l				28
Cadmium	μg/l				<0.5
Chromium	μg/l				<1.5
Copper	μg/l				<7
Total Coliforms	mpn/100ml				66.3
Faecal Coliforms	mpn/100ml				34
Total Solids	mg/l				3383
Toluene	μg/l				Nd
Ethylbenzene	μg/l				Nd
Xylene	μg/l				nd

Ballylynan Landfill Site
Groundwater Monitoring Results 2010

Monitoring Well No. MW-04

N 188362
E 265618

South of Centre

		Monitoring Dates			
Parameter	**Units**	**Q1**	**Q2**	**Q3**	**Q4**
PH	-	7.58	7.61	7.53	7.37
Conductivity	μS/cm	820	732	723	759
Ammonia - N	mg/l	0.97	0.44	0.26	0.7
Nitrate N	mg/l	2.5	1.15	0.3	2.7
Nitrite N	mg/l	0.16	0.12	0.07	0.03
TOC	mg/l	7	<2	24	8
TON	mg/l	2.67	0.30	<0.05	0.61
Alkalinity ($CaCO_3$)	mg/l				419
Fluoride	mg/l				<0.3
Chloride	mg/l	11.6	13.3	13.6	14.5
Sulphate	mg/l	6.20	5.80	10.66	7.84
Total Phosphorus	mg/l				0.014
Calcium	mg/l	147.10	139.9	135.6	140.6
Magnesium	mg/l				4.6
Sodium	mg/l	11.01	11.5	24.2	22.8
Potassium	mg/l	10.97	11.5	14.9	12.7
Iron	mg/l	0.251	<0.020	<0.020	<0.020
Manganese	mg/l	0.951	0.837	0.777	0.033
Phenols	mg/l	0.006	<0.0005	<0.006	<0.010
Zinc	μg/l				<0.003
Mercury	μg/l				<1
Lead	μg/l				<5
Cyanide	mg/l				<0.040
Barium	mg/l	0.072	0.063	0.080	0.038
Boron	μg/l				20
Cadmium	μg/l				<0.5
Chromium	μg/l				<1.5
Copper	μg/l				<7
Total Coliforms	mpn/100ml				4.1
Faecal Coliforms	mpn/100ml				0
Total Solids	mg/l				412
Toluene	μg/l				Nd
Ethylbenzene	μg/l				Nd
Xylene	μg/l				nd

Ballylynan Landfill Site
Groundwater Monitoring Results 2010

Monitoring Well No. MW-05

N 188465
E 265657

North-East of Centre

		Monitoring Dates			
Parameter	**Units**	**Q1**	**Q2**	**Q3**	**Q4**
PH	-	7.73	7.65	6.92	7.46
Conductivity	μS/cm	862	723	800	810
Ammonia - N	mg/l	1.29	1.21	0.22	<0.3
Nitrate N	mg/l	0.6	9.60	0.6	0.7
Nitrite N	mg/l	0.07	0.15	0.04	0.04
TOC	mg/l	8	<2	14	12
TON	mg/l	0.64	2.22	<0.05	0.16
Alkalinity ($CaCO_3$)	mg/l				
Fluoride	mg/l				<0.3
Chloride	mg/l	16.7	20.5	20.3	21.3
Sulphate	mg/l	37.44	29.65	46.71	42.19
Total Phosphorus	mg/l				0.052
Calcium	mg/l	131.30	102.4	124.6	123.6
Magnesium	mg/l				5.8
Sodium	mg/l	15.48	19.8	26.7	25.4
Potassium	mg/l	41.14	48.3	59.0	55.1
Iron	mg/l	0.224	<0.020	<0.020	<0.020
Manganese	mg/l	3.757	0.560	1.325	0.102
Phenols	mg/l	<0.06	<0.0005	<0.006	0.010
Zinc	μg/l				<0.003
Mercury	μg/l				<1
Lead	μg/l				<5
Cyanide	mg/l				<0.040
Barium	mg/l	0.258	0.197	0.252	0.177
Boron	μg/l				31
Cadmium	μg/l				<0.5
Chromium	μg/l				<1.5
Copper	μg/l				<7
Total Coliforms	mpn/100ml				461.1
Faecal Coliforms	mpn/100ml				39
Total Solids	mg/l				612
Toluene	μg/l				Nd
Ethylbenzene	μg/l				Nd
Xylene	μg/l				nd

Ballylynan Landfill Site
Groundwater Monitoring Results 2010

Monitoring Well No. MW-06

N 188460
E 265498

Carlow Road
North-North West of Centre

		Monitoring Dates			
Parameter	**Units**				
PH	-				
Conductivity	μS/cm				
Ammonia - N	mg/l				
Nitrate N	mg/l				
Nitrite N	mg/l				
TOC	mg/l				
TON	mg/l				
Alkalinity ($CaCO_3$)	mg/l				
Fluoride	mg/l				
Chloride	mg/l				
Sulphate	mg/l				
Total Phosphorus	mg/l				
Calcium	mg/l				
Magnesium	mg/l				
Sodium	mg/l				
Potassium	mg/l				
Iron	mg/l				
Manganese	mg/l				
Phenols	mg/l				
Zinc	μg/l				
Mercury	μg/l				
Lead	μg/l				
Cyanide	mg/l				
Barium	mg/l				
Boron	μg/l				
Cadmium	μg/l				
Chromium	μg/l				
Copper	μg/l				
Total Coliforms	mpn/100ml				
Faecal Coliforms	mpn/100ml				
Total Solids	mg/l				
Toluene	μg/l				
Ethylbenzene	μg/l				
Xylene	μg/l				

N.S. – not sampled. No water discharging from pump

Ballylynan Landfill Site
Groundwater Monitoring Results 2010

Monitoring Well No. MW-08

N 188359
E 265781

Murphy's Well
East-South-East of Centre

		Monitoring Dates			
Parameter	**Units**	**Q1**	**Q2**	**Q3**	**Q4**
PH	-	7.81	7.86	8.06	7.61
Conductivity	μS/cm	940	790	742	759
Ammonia - N	mg/l	0.06	0.03	0.05	<0.3
Nitrate N	mg/l	42.8	33.99	24.2	28.4
Nitrite N	mg/l	<0.02	0.02	<0.02	<0.02
TOC	mg/l	4	<2	16	10
TON	mg/l	42.81	7.69	5.50	6.41
Alkalinity ($CaCO_3$)	mg/l				328
Fluoride	mg/l				<0.3
Chloride	mg/l	42.5	33.6	33.5	34.8
Sulphate	mg/l	29.39	27.77	30.50	28.91
Total Phosphorus	mg/l				0.0223
Calcium	mg/l	146.20	133.1	138.1	35.0
Magnesium	mg/l				8.4
Sodium	mg/l	15.48	15.1	16.1	14.7
Potassium	mg/l	26.86	20.5	19.5	16.3
Iron	mg/l	0.365	<0.020	<0.020	<0.020
Manganese	mg/l	0.007	<0.002	<0.002	<0.002
Phenols	mg/l	<0.06	<0.0005	<0.006	<0.010
Zinc	μg/l				<0.003
Mercury	μg/l				<1
Lead	μg/l				<5
Cyanide	mg/l				<0.040
Barium	mg/l	0.082	0.054	0.050	0.033
Boron	μg/l				41
Cadmium	μg/l				<0.5
Chromium	μg/l				<1.5
Copper	μg/l				<7
Total Coliforms	mpn/100ml				29.2
Faecal Coliforms	mpn/100ml				0
Total Solids	mg/l				403
Toluene	μg/l				Nd
Ethylbenzene	μg/l				Nd
Xylene	μg/l				Nd

Ballylynan Landfill Site
Groundwater Monitoring Results 2010

Monitoring Well No. MW-09

		Monitoring Dates			
Parameter	**Units**	**Q1**	**Q2**	**Q3**	**Q4**
PH	-	11.68	11.91	12.06	11.72
Conductivity	μS/cm	1798*	1954	2074	1967
Ammonia - N	mg/l	36.03	26.78	30.47	36.6
Nitrate N	mg/l	0.5	<0.2	<0.2	0.4
Nitrite N	mg/l	<0.02	0.04	<0.02	<0.02
TOC	mg/l	70	47	99	106
TON	mg/l	0.45	<0.05	<0.05	0.09
Alkalinity ($CaCO_3$)	mg/l				761
Fluoride	mg/l				0.5
Chloride	mg/l	30.0	28.9	26.4	26.8
Sulphate	mg/l	22.77	18.25	8.89	6.87
Total Phosphorus	mg/l				0.719
Calcium	mg/l	10.31	4.3	7.3	18.8
Magnesium	mg/l				<0.1
Sodium	mg/l	112.4	116.9	128.0	118.8
Potassium	mg/l	256.20	283.50	313.9.	315.8
Iron	mg/l	0.450	0.062	<0.020	0.479
Manganese	mg/l	0.017	0.003	0.003	0.017
Phenols	mg/l	<0.06	<0.0005	0.0043	<0.010
Zinc	μg/l				0.005
Mercury	μg/l				<1
Lead	μg/l				<5
Cyanide	mg/l				<0.040
Barium	mg/l	0.034	0.028	0.037	0.007
Boron	μg/l				26
Cadmium	μg/l				<0.5
Chromium	μg/l				4.9
Copper	μg/l				22
Total Coliforms	mpn/100ml				<1
Faecal Coliforms	mpn/100ml				0
Total Solids	mg/l				2378
Toluene	μg/l				203
Ethylbenzene	μg/l				59
Xylene	μg/l				162

Ballylynan Landfill Site
Groundwater Monitoring Results 2010

Monitoring Well No. MW-10

		Monitoring Dates			
Parameter	**Units**	**Q1**	**Q2**	**Q3**	**Q4**
PH	-	7.75	7.56	7.68	7.32
Conductivity	μS/cm	818	698	633	701
Ammonia - N	mg/l	0.27	0.02	0.13	<0.3
Nitrate N	mg/l	13.2	19.73	19.9	19.5
Nitrite N	mg/l	<0.02	0.02	<0.02	<0.02
TOC	mg/l	6	<2	10	10
TON	mg/l	13.15	4.46	4.50	4.40
Alkalinity ($CaCO_3$)	mg/l				331
Fluoride	mg/l				<0.3
Chloride	mg/l	17.3	19.2	22.6	23.6
Sulphate	mg/l	11.40	13.53	17.91	18.15
Total Phosphorus	mg/l				0.017
Calcium	mg/l	148.60	123.9	111.5	140.1
Magnesium	mg/l				9.7
Sodium	mg/l	9.74	9.5	11.3	11.9
Potassium	mg/l	2.72	3.2	3.0	3.0
Iron	mg/l	0.043	<0.020	<0.020	<0.020
Manganese	mg/l	<0.002	<0.002	<0.002	<0.002
Phenols	mg/l	<0.006	<0.0005	<0.006	<0.010
Zinc	μg/l				<0.003
Mercury	μg/l				<1
Lead	μg/l				<5
Cyanide	mg/l				<0.040
Barium	mg/l	0.045	0.034	0.034	0.025
Boron	μg/l				45
Cadmium	μg/l				<0.5
Chromium	μg/l				<1.5
Copper	μg/l				<7
Total Coliforms	cfu/100ml				4.1
Faecal Coliforms	cfu/100ml				0
Total Solids	mg/l				396
Toluene	μg/l				Nd
Ethylbenzene	μg/l				Nd
Xylene	μg/l				nd

6.2. Air Quality

6.2.1. Fibres in Air

One fibre in air monitoring sample was taken in 2010. 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 locked at all times when the site is unattended.

A new inner gate was fitted in 2008. A perimeter fence surrounds the landfill site, which serves to prevent unauthorized entry to the site. It consists of a 2m high chain link fence supported by concrete posts, spaced approximately every 4 metres. This is topped with barbed wire.

7.2. Site Inspections

No waste was deposited on the site in 2010 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 which 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 2010 was to continue to implement the monitoring and other relevant requirements of the licence.

This was achieved.

8.2. Objectives for 2011

The objective for 2011 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 2010.

9.2. Diesel Fuel

Not relevant as site not in sue for disposal of waste in 2010.

9.3. Electricity

Not relevant as site not in sue for disposal of waste in 2010.

10. Non-Compliance with License Conditions

One non-compliances with the Waste Management License were notified during the year. This related to a failure to complete electronic reporting on schedule

11. Complaints

No complaints were received during 2010.

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 2010 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 2010

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 IS0 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.

_____
STEPHEN GORMALLEY
Works Manager

_____
KEVIN MCNAIR
Group Quality Environment Health & Safety Manager

APPENDIX 2

MET EIREANN

DATA

Oak Park, Carlow					
Year	Month	Day	Rainfall (mm)	Wind Speed (Knots)	Wind Direction (Degrees from North)
2010	1	1	0	3.333	340
2010	1	2	0.3	1.875	350
2010	1	3	0	4.125	60
2010	1	4	0	3.125	340
2010	1	5	0.7	6.333	330
2010	1	6	1.3	7.667	335
2010	1	7	0.9	0.667	225
2010	1	8	0	0.958	355
2010	1	9	0.3	0.792	355
2010	1	10	1.3	3.042	340
2010	1	11	2.6	4.208	115
2010	1	12	14.4	13	120
2010	1	13	3.4	5.042	130
2010	1	14	0.1	4.25	145
2010	1	15	13.5	15.333	170
2010	1	16	10.4	8.917	185
2010	1	17	0	8.542	200
2010	1	18	0.2	6.25	180
2010	1	19	3.5	11.083	130
2010	1	20	3.7	3.833	250
2010	1	21	13.4	10.958	150
2010	1	22	0.1	2.708	275
2010	1	23	0.1	1.792	320
2010	1	24	0.1	1.667	225
2010	1	25	0	2.083	350
2010	1	26	0	0.833	245
2010	1	27	0	6.292	285
2010	1	28	0.1	8.375	305
2010	1	29	1.1	10.875	325
2010	1	30	0	3.375	325
2010	1	31	0	3.833	300
2010	2	1	0	5.125	255
2010	2	2	4.6	8.75	270
2010	2	3	7.8	5.625	125
2010	2	4	17.5	9.167	140
2010	2	5	3.2	5.667	125

2010	2	6	0	3.625	340
2010	2	7	0	4.042	120
2010	2	8	0.3	4	45
2010	2	9	0.3	5.583	360
2010	2	10	0	4.75	355
2010	2	11	0	3.458	340
2010	2	12	0	4.667	330
2010	2	13	0	3.667	355
2010	2	14	0.1	2.458	330
2010	2	15	0.6	8.083	270
2010	2	16	0	3.958	170
2010	2	17	0	2.542	330
2010	2	18	0	4.25	330
2010	2	19	0	3.583	335
2010	2	20	1.9	2.792	175
2010	2	21	0	2.333	315
2010	2	22	0	2.875	340
2010	2	23	3	5.5	75
2010	2	24	3.6	3.667	335
2010	2	25	4.3	2.917	335
2010	2	26	0.4	8.792	255
2010	2	27	0	2	10
2010	2	28	0.4	4.208	340
2010	3	1	0	1.417	110
2010	3	2	0	3.25	155
2010	3	3	0	5.792	130
2010	3	4	0	3.083	330
2010	3	5	0	2	350
2010	3	6	0	2.875	340
2010	3	7	0	5.042	135
2010	3	8	0	2.625	360
2010	3	9	0	1.542	10
2010	3	10	0	2.667	360
2010	3	11	0	4.083	355
2010	3	12	0	6.542	335
2010	3	13	0	4.542	335
2010	3	14	0	4	310
2010	3	15	0	4.083	155
2010	3	16	0.1	8.333	155
2010	3	17	0.3	10.333	175
2010	3	18	6.7	13.458	170
2010	3	19	4.9	6	215

2010	3	20	6.1	7.833	350
2010	3	21	0.5	7.75	185
2010	3	22	7.6	12.333	245
2010	3	23	1.3	8.333	165
2010	3	24	7.5	8.208	145
2010	3	25	8.6	8	120
2010	3	26	2.4	4.875	180
2010	3	27	0.1	7.292	290
2010	3	28	0	3.708	270
2010	3	29	14.6	5.5	90
2010	3	30	14	12.917	305
2010	3	31	6	13.583	305
2010	4	1	0	6.958	175
2010	4	2	12.7	6.583	150
2010	4	3	3.5	4.375	335
2010	4	4	2.9	8.833	285
2010	4	5	2	18.792	190
2010	4	6	22.2	10.792	180
2010	4	7	0.1	4.875	315
2010	4	8	0	3.667	260
2010	4	9	0	6.333	165
2010	4	10	0	4.917	150
2010	4	11	0	2.667	5
2010	4	12	0	3.25	360
2010	4	13	0	4.833	360
2010	4	14	0	5.042	350
2010	4	15	0	7.083	335
2010	4	16	0	3.708	140
2010	4	17	0	2.792	160
2010	4	18	0	3.875	335
2010	4	19	0	3.708	340
2010	4	20	0	3.75	330
2010	4	21	0	3	150
2010	4	22	0	3.042	140
2010	4	23	0	6.792	165
2010	4	24	0.4	8.042	140
2010	4	25	2.6	7.333	205
2010	4	26	0.1	5.958	180
2010	4	27	0.1	10.875	160
2010	4	28	1	11.25	170
2010	4	29	0.1	6.583	265
2010	4	30	1.2	4.542	190

2010	5	1	11.4	2.708	360
2010	5	2	1.8	5.542	345
2010	5	3	0	5.583	355
2010	5	4	0	5.375	340
2010	5	5	3.3	4.917	335
2010	5	6	5.7	7.167	10
2010	5	7	0.5	7.375	40
2010	5	8	0	7.792	20
2010	5	9	0	5.25	10
2010	5	10	0.3	7.792	345
2010	5	11	0.6	4.667	330
2010	5	12	0.1	5.125	345
2010	5	13	1.1	8.125	195
2010	5	14	0.6	5.542	325
2010	5	15	0	6.708	270
2010	5	16	0	6.208	305
2010	5	17	0	4.375	205
2010	5	18	2.5	8.792	175
2010	5	19	0	5.292	190
2010	5	20	0	3.5	145
2010	5	21	0.1	4.833	155
2010	5	22	0	3.708	135
2010	5	23	0	3.458	180
2010	5	24	0	4.833	345
2010	5	25	0	7.667	355
2010	5	26	0	7.25	350
2010	5	27	2	6.958	275
2010	5	28	0.1	5.125	175
2010	5	29	10.2	4.917	50
2010	5	30	0	3.75	320
2010	5	31	8	6.5	145
2010	6	1	8.6	5	320
2010	6	2	0	3.375	165
2010	6	3	0	5.958	135
2010	6	4	0	6.875	175
2010	6	5	0	2.417	325
2010	6	6	10.3	3.792	335
2010	6	7	6.8	5.292	115
2010	6	8	5.6	2.958	360
2010	6	9	1.3	6.833	25
2010	6	10	0	7.792	10
2010	6	11	0	5.458	335

2010	6	12	0	4.958	340
2010	6	13	5.8	6.583	300
2010	6	14	0.1	5.917	345
2010	6	15	0.3	2.25	340
2010	6	16	0	1.833	305
2010	6	17	0	3.458	355
2010	6	18	0	4.667	335
2010	6	19	0	6.458	345
2010	6	20	0	3.625	340
2010	6	21	0	4.792	175
2010	6	22	0	6.792	195
2010	6	23	0	6.333	195
2010	6	24	0	5.042	265
2010	6	25	0	5.5	155
2010	6	26	0	8.5	175
2010	6	27	0.3	8.75	200
2010	6	28	0.7	7.208	190
2010	6	29	0	4.042	320
2010	6	30	0.5	7.875	170
2010	7	1	12.1	12.458	180
2010	7	2	1.8	8.25	205
2010	7	3	0	7.417	190
2010	7	4	1.2	12.75	260
2010	7	5	0	6.333	290
2010	7	6	0.2	8.75	180
2010	7	7	0.1	8.458	245
2010	7	8	3.3	7.5	195
2010	7	9	9.6	6.458	160
2010	7	10	17	9.25	175
2010	7	11	0	7.708	265
2010	7	12	0	1.833	110
2010	7	13	2.5	4.25	110
2010	7	14	5.3	7.25	130
2010	7	15	9.6	7.167	205
2010	7	16	7.1	8.792	275
2010	7	17	2.2	8.292	240
2010	7	18	5.6	9.042	180
2010	7	19	10.8	8.708	180
2010	7	20	0	4.625	180
2010	7	21	1.5	3.375	305
2010	7	22	1.3	5.75	335
2010	7	23	0	4.083	315

2010	7	24	0.4	6	180
2010	7	25	0	5.208	290
2010	7	26	0	8.042	280
2010	7	27	0.3	6.792	270
2010	7	28	0	6.083	290
2010	7	29	0	3.458	300
2010	7	30	1.7	6.917	175
2010	7	31	0.6	7.917	275
2010	8	1	0	2.917	305
2010	8	2	0	3.5	330
2010	8	3	6	5.958	280
2010	8	4	2	7.667	315
2010	8	5	0	7.042	275
2010	8	6	0.2	8.667	240
2010	8	7	0.5	5.875	320
2010	8	8	0	4.25	200
2010	8	9	0.5	8.083	270
2010	8	10	0	6.417	300
2010	8	11	0	5.25	295
2010	8	12	0	7.583	320
2010	8	13	0	7.083	330
2010	8	14	0	5.625	335
2010	8	15	0	2.917	325
2010	8	16	1.3	3.25	190
2010	8	17	0.1	7.208	310
2010	8	18	0.3	8.833	255
2010	8	19	4.6	6.5	165
2010	8	20	0.1	10.625	215
2010	8	21	0.7	7.917	205
2010	8	22	3.6	5.667	210
2010	8	23	4.5	7.917	290
2010	8	24	0.7	9.75	275
2010	8	25	0	3.75	60
2010	8	26	0	5.875	335
2010	8	27	0	5.333	335
2010	8	28	0.1	7.458	285
2010	8	29	0.3	8.292	315
2010	8	30	0	3.167	85
2010	8	31	0	3.708	140
2010	9	1	0.1	3.917	135
2010	9	2	0	4.958	135
2010	9	3	0	5.875	135

2010	9	4	1.6	6.042	145
2010	9	5	3.7	8.5	130
2010	9	6	49.9	7.833	130
2010	9	7	0.9	5.583	170
2010	9	8	1.8	5.125	245
2010	9	9	5.1	5.542	190
2010	9	10	2	8.625	185
2010	9	11	0.3	7.75	275
2010	9	12	0.9	7.083	275
2010	9	13	0.3	10.792	215
2010	9	14	5.3	11.792	270
2010	9	15	0.3	10	280
2010	9	16	0.1	5.708	305
2010	9	17	0.2	4.25	335
2010	9	18	0.9	5.792	190
2010	9	19	2.9	8.333	200
2010	9	20	0	8.5	225
2010	9	21	0	8.833	160
2010	9	22	23.5	9.042	185
2010	9	23	2.4	7	310
2010	9	24	0.2	7.5	345
2010	9	25	0	3.875	345
2010	9	26	0	2.167	240
2010	9	27	0	3.375	150
2010	9	28	4.2	5.708	155
2010	9	29	0.1	4.5	270
2010	9	30	2	6.625	160
2010	10	1	4.5	8.792	230
2010	10	2	1.2	6.958	175
2010	10	3	1.2	4.292	215
2010	10	4	2.3	8.625	170
2010	10	5	0	9.667	190
2010	10	6	0.1	7.083	180
2010	10	7	0.9	9.292	170
2010	10	8	0.7	10.667	120
2010	10	9	0	5.875	105
2010	10	10	0	2.625	360
2010	10	11	0.2	2.583	345
2010	10	12	0.3	3	345
2010	10	13	0.1	2.667	355
2010	10	14	0	3.083	335
2010	10	15	0.5	4.5	335

2010	10	16	0	3.5	350
2010	10	17	0.1	3.25	205
2010	10	18	0.3	7.917	270
2010	10	19	1.1	7.667	300
2010	10	20	0	4.042	320
2010	10	21	0	5.333	260
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2010	10	24	0.1	3.417	345
2010	10	25	0.1	7.417	165
2010	10	26	7.8	11.458	180
2010	10	27	1.7	7.917	180
2010	10	28	4.3	11.333	175
2010	10	29	22.8	9.542	185
2010	10	30	1.2	4.333	180
2010	10	31	10.8	4.875	335
2010	11	1	4	5.833	170
2010	11	2	4.1	12.167	225
2010	11	3	2.1	7	170
2010	11	4	3.8	13.042	225
2010	11	5	0.5	5.667	235
2010	11	6	0.5	4.583	305
2010	11	7	15.7	8.958	250
2010	11	8	3.3	5.917	220
2010	11	9	6	8.125	335
2010	11	10	1.2	5.042	165
2010	11	11	11.2	20.5	245
2010	11	12	0.5	12	240
2010	11	13	2.8	5.667	160
2010	11	14	0.1	1.833	155
2010	11	15	0	3.208	140
2010	11	16	7.8	8.958	140
2010	11	17	13.9	11.583	160
2010	11	18	1	8.375	185
2010	11	19	0.1	2.792	135
2010	11	20	0.1	3.875	5
2010	11	21	0	5.458	325
2010	11	22	0	4.875	330
2010	11	23	0.1	3.542	330
2010	11	24	0.5	4.292	335
2010	11	25	1.6	6.042	335
2010	11	26	0.5	6.292	330

2010	11	27	3.6	4.75	335
2010	11	28	0	3.208	360
2010	11	29	0	1.833	340
2010	11	30	2.2	5.375	335
2010	12	1	17.9	4.5	340
2010	12	2	5.7	3.833	330
2010	12	3	1.6	2.667	150
2010	12	4	0.1	3.125	345
2010	12	5	0	2.125	345
2010	12	6	3.4	1.542	150
2010	12	7	2.9	4.583	330
2010	12	8	0	3.208	355
2010	12	9	0	1.667	235
2010	12	10	0	3.292	270
2010	12	11	0.2	2.25	345
2010	12	12	0	2	355
2010	12	13	0	2.917	105
2010	12	14	0	3.25	340
2010	12	15	0.2	3.25	345
2010	12	16	0.9	11.333	285
2010	12	17	0	8.083	295
2010	12	18	0	3	310
2010	12	19	0	1.625	360
2010	12	20	0	4.167	340
2010	12	21	0.3	4.792	345
2010	12	22	0.2	5.25	345
2010	12	23	0.2	4.958	345
2010	12	24	0	2.417	355
2010	12	25	0	0.417	220
2010	12	26	4.1	10.25	155
2010	12	27	14.2	12.125	160
2010	12	28	0.3	5.875	160
2010	12	29	0.1	4.667	160
2010	12	30	0.4	1.875	125
2010	12	31	0	1.458	90