Environmental Efficiency
Consulting Engineers

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ANNUAL ENVIRONMENTAL REPORT

2009

For

Waterford Joinery Ltd.

IPC Licence P0350-01

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QF 1. v2 Document Lead Sheet

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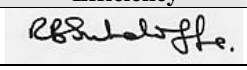
Project No.	1242
Document No.	1242-01
Client	Waterford Joinery
Address	Ballinamuck, Dungarvan, Co. Waterford.

Issue	Status	Date	Author	Signed for and on behalf of	
				Environmental Efficiency	Client
1.00	Approved	19/05/2010	AR		

Where it is a requirement that this report be issued to a regulatory or other authority, then the client should sign the appropriate place in the above table and, unless specifically agreed in writing to the contrary, forward copies to the appropriate authority (e.g. EPA).

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EEC Document Author: Agnès Ricoux, Diplôme d'Ingénieur, Industrial Processes

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Table of Contents

1. Introduction

1.1 Company Details

Company	Waterford Joinery Ltd.
Address	Ballinamuck
Town	Dungarvan
County / City	Waterford
Business	Joinery Manufacturer
Employees	12
Contact Name	Sean McGrath
Position	General Manager
Telephone	058 41417
Fax	058 42872

IPC Registration Number	**P0350-01**

2. Site Description

2.1 Previous site histories

Prior to the establishment of Waterford Joinery the 3 hectares of land on which they are situated was a green field area, therefore there is no previous environmental impact associated with the site.

2.2 Company background

The company has been in operation since 1965 and employs approximately 18 people. Waterford Joinery produces timber products e.g. doors and frames. The main hours of operation are 08:30 – 16:00 Monday to Friday and overtime occurs occasionally.

2.3 Description of equipment

The list below is a description of the major pieces of equipment on site:

- Saws
- Drying kiln
- Vacuum impregnation facility
- Boilers
- Air compressors

2.4 Manufacturing process

The manufacturing process is as follows:

- Timber which is prepared is delivered to our client's site.
- Timber sawing and planning is carried out.
- Some timber is dried in the kiln.
- Small amounts of timber, which are on order from customers, are treated with a preservative i.e. Protim, via a vacuum impregnation process, as follows:

1. Timber is loaded into the treatment vessel.
2. A vacuum is created in the vessel chamber.
3. The preservative enters the chamber and contact is maintained.
4. The fluid is pumped out.

5. The door is opened to remove the treated product.
6. The treated product remains in the bunded area whilst excess preservative drains off

- Adhesive resin and hardener are mixed together and applied to the doors via rollers. Waterford Joinery has decreased their Fire Door production which has significantly decreased the use of resins and hardeners in 2006.
- Doors enter heated press to cure adhesive.
- Finished product is placed on pallets and distributed to or collected by customers.

2.5 Company Organisation

Managing Director

John McGrath

General Manager

Sean McGrath

Environmental Officer / Safety Officer

Sean McGrath

Maintenance

John Dee

3. Summary Information

3.1 Self-Monitoring Data

3.1.1 Emissions to Waters/Sewer

The IPC Licence requires no monitoring of emissions to waters/sewer.

3.1.2 Emissions to Atmosphere

The IPC Licence requires no monitoring of emissions to the atmosphere.

3.1.3 Waste Management

The tonnages and EWC Codes for the waste materials listed in Schedule 1 (i) Wastes for disposal/recovery: See Table below. Due to the economical downturn, the quantities of process waste have drastically decreased in 2009.

Table 1 Tonnages and EWC Codes for waste arising on-site

Waste	EWC No.	Hazardous (Yes/No)	Annual Quantity	Method of Disposal/Recovery	Location of Disposal/Recovery	Name of Transporter	Name of waste contractor
Paper Note 2	15 01 01	No	None	Recycled	Recycling facility Shandon	Fennell Haulage and Waste Disposal	Fennell Haulage and Waste Disposal
Cardboard Boxes Note 2	15 01 01	No		Re-used and recycled	N/A Note 1	N/A Note 1	N/A Note 1
Plastic Wrapping Note 2	15 01 02	No		Re-used as outgoing packaging	N/A Note 1	N/A Note 1	N/A Note 1
Pallets	15 01 03	No	Small	Re-used	N/A Note 1	N/A Note 1	N/A Note 1
Metal Strapping	15 01 04	No	Small	Re-used	N/A Note 1	N/A Note 1	N/A Note 1
Hazardous Containers	15 01 10*	Yes	None	Re-used for waste oils or contaminated sawdust	N/A Note 1	N/A Note 1	N/A Note 1
Office/canteen waste Note 3	20 03 01	No	6,294kg	Landfill	Dunmore Landfill, Kilkenny County Council.	Fennell Haulage and Waste Disposal	Fennell Haulage and Waste Disposal
Waste oil	12 01 06*	Yes	None	Special facility at local landfill	Recycling facility Shandon.	Fennell Haulage and Waste Disposal	Fennell Haulage and Waste Disposal
Oil Filters	15 02 02*	Yes	None	Local garage with special facility	Gerard Fennell Garage	Fennell Haulage and Waste Disposal	Fennell Haulage and Waste Disposal
Sawdust	03 01 02	No	Medium	Re-used by local farmer as animal bedding/spill response kit	N/A Note 1	N/A Note 1	N/A Note 1
Trimmed door lippings, waste plywood, used sand belts	03 01 03	No	None	Re-used for home heating	N/A Note 1	N/A Note 1	N/A Note 1
				Landfill	Dunmore Landfill, Kilkenny County Council.	Fennell Haulage and Waste Disposal	Fennell Haulage and Waste Disposal
Off-cuts of untreated timber	15 01 03	No	Medium	Re-used for home heating	N/A Note 1	N/A Note 1	N/A Note 1
Waste glue and glue-washings Note4	08 04 10	No	Small	Hardener added	N/A Note 1	N/A Note 1	N/A Note 1
Off-cuts of damaged preserved timber Note 5	03 01 04*	Yes	None	N/A[1]	N/A Note 1	N/A Note 1	N/A Note 1

Waste	EWC No.	Hazardous (Yes/No)	Annual Quantity	Method of Disposal/Recovery	Location of Disposal/Recovery	Name of Transporter	Name of waste contractor
Contaminated absorbent material (sawdust)	15 02 02*	Yes	None	N/A[Note 1]	N/A[Note 1]	N/A[Note 1]	N/A[Note 1]
Sludge from treatment tank	20 03 04	No	None	N/A[Note 1]	N/A[Note 1]	N/A[Note 1]	N/A[Note 1]

Notes:

Note 1: N/A = Not Applicable

Note 2: There was no collection of recyclable waste in 2009.

Note 3: This quantity is not accurately known but 12 × 1,100L wheelie bins of general waste) and 5,380kg of mixed waste in a skip were collected by Fennel Waste in 2009. The estimated typical waste contained in one 1,100L wheelie bin is 12stones or 76.2kg (Source = Fennel Waste)

Note 4: The hardened glue is being stored on-site.

Note 5: This waste is not generated

3.2 Agency Monitoring and Enforcement

An amount of work was carried out on site arising from EPA site visits and requests. Details of this correspondence and work carried out are provided below in Table 2.

Table 2 Details of EPA correspondence and work for 2009

Date	Reference	Content
10/02/2009	P0350-01/nc10eok.doc	**Notification of Non-Compliance/Site Inspection Report** Non Compliances: • Training Records • Records of inspection of the septic tank Observations • Previous Agency Reports: lack of response • Boiler Monitoring • Waste Records • Site drainage map • Bund integrity testing
22/05/2009	None	**Notification of non-completion of task 2 of the AER/PRTR Reporting** (Submission of Full (paper) Annual Environmental Report (AER)

3.3 Energy and Water Consumption

3.3.1 Energy Consumption for 2009

Table 3 Summary for energy consumption 2009

Source	Consumption 2008	Consumption 2009	Units
Electricity	415,051	139,770	KWh
Tractor diesel	24,127	28,012	Litres
Auto diesel	20,797	23,294	Litres
Kerosene	6,579	5,714	Litres
Grade	0	0	Litres
Lubricating oil (Castrol)	0	209	Litres
Gas oil	0	24,708	Litres

3.3.2 Water Consumption for 2009

Table 4 Water Consumption Summary

Water	
m^3	**Unknown**
€	**521**

3.4 Environmental Incidents and Complaints

3.4.1 Environmental Incidents

There were no environmental incidents in the year 2009 as a result of activities originating at Waterford Joinery Ltd.

3.4.2 Complaints

There have been no complaints logged for 2009 as a result of the activities originating at Waterford Joinery Ltd.

4. Management of the Activity

4.1 Environmental Management Programme (EMP) Report

Table 5 Environmental Objectives and Targets for 2009

No.	Licence Objectives	Target date	Progress
1	Ensure the proper segregation of waste and that all waste management practices are compliant with legislation and in agreement by the Agency.	Continuous	This is an on-going/continuous objective. The overall activity of the site has greatly reduced and thus the quantity of waste generated has also declined.
2	Revise and improve the sawdust management procedures on-site.	December 2009	The amount of sawdust has significantly decreased because of the reduction in activity. The sawdust is recycled as animal bedding at the moment.
3	Ensure the removal of the stockpile of soil every six months and outline to the Agency how this material will be used/disposed.	December 2009	This is actually timber trimmings. The company was approached by 2 different sources interested in this material: i.e. one for using it as a fuel and one for using it as animal bedding. Thus this objective will be on-going for 2010
4	Ensure all IBCs containing hardened glue are fitted with lids to prevent the entry of rainwater.	December 2009	With the reduction in activity, there are now very few IBC on-site, all housed and bunded
5	Ensure the correct and designated storage of equipment around the site.	December 2009	Because of low level of trade, the instance of this is greatly reduced.
6	Carry out bund tests for all bunds which are due in the course of 2009	December 2009	Complete

4.2 Schedule of Environmental Objectives and Targets

The following table is a schedule of objectives and targets that have been set out by Waterford Joinery Ltd for 2010, in order to reduce any environmental impacts and improve environmental practices.

Table 6 Environmental Objectives and Targets for 2010

No.	Licence Objectives	Target Date
1	Ensure the proper segregation of waste and that all waste management practices are compliant with legislation and in agreement by the Agency.	Continuous
2	Revise and improve the sawdust management procedures on-site.	On-going
3	Ensure the removal of the stockpile of soil every six months and outline to the Agency how this material will be used/disposed.	On-going
4	Ensure all IBCs containing hardened glue are fitted with lids to prevent the entry of rainwater.	Continuous
5	Ensure the correct and designated storage of equipment around the site.	Continuous

4.3 Environmental Management Programme (EMP)

Below are all the objectives and targets listed above and the process by which they will be achieved.

Objective Number	OT1
Objective Title	Ensure the proper segregation of waste and that all waste management practices are compliant with legislation and in agreement by the Agency.
Target	Continuous
Responsibility	Sean McGrath

Plan

Steps	Who	Target
• Ensure all disposal/recovery facilities have been agreed by the Agency.	Sean McGrath	Continuous

Objective Number	OT2
Objective Title	Revise and improve the sawdust management procedures on-site.
Target	On-going
Responsibility	Sean McGrath

Plan

Steps	**Who**	**Target**
• Revise and improve the sawdust management procedures on-site	Sean McGrath	On-going
• It would be beneficial to extend the walls of the dust collection area.	Sean McGrath	On hold
• Empty dust bins regularly	Sean McGrath	Continuous

Objective Number	OT3
Objective Title	Ensure the removal of the stockpile of soil every six months and outline to the Agency how this material will be used/disposed.
Target	On-going
Responsibility	Sean McGrath

Plan

Steps	Who	Target
• Submit a proposal to the Agency outlining how this material will be disposed.	Sean McGrath	On-going

Objective Number	OT4
Objective Title	Ensure all IBCs containing hardened glue are fitted with lids to prevent the entry of rainwater
Target	Continuous Note 1
Responsibility	Sean McGrath

Plan

Steps	Who	Target
• Ensure all IBCs containing hardened glue are fitted with lids to prevent the entry of rainwater	Sean McGrath	Continuous Note 1

With the reduction in activity, there are now very few IBC on-site, all housed and bunded

Objective Number	OT5
Objective Title	Ensure the correct and designated storage of equipment around the site.
Target	Continuous
Responsibility	Sean McGrath

Plan

Steps	**Who**	**Target**
• Obsolete equipment, timber, metal drums, pallets, recyclable waste should be segregated and stored correctly in designated storage areas.	Sean McGrath	Continuous

5. Licence-Specific Reports

5.1 *Boiler efficiency*

The combustion efficiency determination of the Wanson boiler was carried out on the 29 April 2009. The following table summarises the results for this test.

Parameter	Result
Temperature ^{o}C	187
CO ppm	17
CO_2 %	5.3
Excess Air %	194
Efficiency %	83.1
O_2 %	13.8

In practice, air is supplied to the boiler beyond what is theoretically required for complete combustion: a certain amount of excess air has to be supplied to the burner to ensure full combustion and provide a safety factor. If not (i.e. lack of oxygen), incomplete combustion would result in unburnt or partially burnt fuel, thus result in emission of CO (highly toxic gas), inefficiency and fuel wastage. However, excess air is cooling the combustion chamber, carrying heat away into the flue thus reducing the efficiency. Therefore, the excess air level should not be too high either.

As a guideline, burners should be able to operate down to 15 % excess air with an upper limit of about 20%, and measures should be taken to adjust the burner if CO_2 in the flue gases is less than about 13% for oil. The excess value in this boiler is higher than the typical excess air guidelines. This can be explained by the fact that the boiler was not running on full load during the monitoring. This is because this boiler is not used frequently and was switched on for the monitoring.

5.2 *Bund Integrity Assessment*

The Bund Integrity Assessment took place on the 29 April 2009. The following bunded areas were tested:

- Expansion Vessel
- Standard Twin IBC Spill Pallet
- 2 x Spill Pallet
- Bunded Drum Trolley
- Spill Trays
- Three chambers interconnected bund
- Block bund lined with foam sealant
- Concrete bund on top of concrete roof Lined with foam sealant. Oil tank for space heating boiler
- Block walls lined with foam. Wood preservative tank
- Wood preservative and treatment plant

All the above bunds passed the water-tightness test. The report detailing the results of the test is Document 1121-02.

6. PRTR

The PRTR excel sheets sent to the Environmental Protection Agency are provided in this section:

| PRTR# : P0350 | Facility Name : Waterford Joinery Limited | Filename : P0350_2009.xls | Return Year : 2009 |

AER Returns Worksheet

Version 1.1.10

REFERENCE YEAR	2009

1. FACILITY IDENTIFICATION

Parent Company Name	Waterford Joinery Limited
Facility Name	Waterford Joinery Limited
PRTR Identification Number	P0350
Licence Number	P0350-01

Waste or IPPC Classes of Activity

No.	class_name
8.3	The treatment or protection of wood, involving the use of preservatives, with a capacity exceeding 10 tonnes of wood per day.

Address 1	Ballinamuck
Address 2	Dungarvan
Address 3	Co. Waterford
Address 4	
Country	Ireland
Coordinates of Location	-7.65195 52.103
River Basin District	IESE
NACE Code	1610
Main Economic Activity	Sawmilling and planing of wood
AER Returns Contact Name	Sean McGrath
AER Returns Contact Email Address	aricoux@energy.iol.ie
AER Returns Contact Position	Commercial Manager
AER Returns Contact Telephone Number	058 - 41417
AER Returns Contact Mobile Phone Number	
AER Returns Contact Fax Number	058 - 42872
Production Volume	0.0
Production Volume Units	
Number of Installations	0
Number of Operating Hours in Year	0
Number of Employees	0
User Feedback/Comments	
Web Address	

2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
50.1	General

3. SOLVENTS REGULATIONS (S.I. No. 543 of 2002)

Is it applicable?	
Have you been granted an exemption ?	
If applicable which activity class applies (as per Schedule 2 of the regulations) ?	
Is the reduction scheme compliance route being used ?	

4.1 RELEASES TO AIR

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

RELEASES TO AIR								
POLLUTANT		METHOD				QUANTITY		
			Method Used					
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B : REMAINING PRTR POLLUTANTS

RELEASES TO AIR								
POLLUTANT		METHOD				QUANTITY		
			Method Used					
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION C : REMAINING POLLUTANT EMISSIONS (As required in your Licence)

RELEASES TO AIR								
POLLUTANT		METHOD				QUANTITY		
			Method Used					
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

Additional Data Requested from Landfill operators

For the purposes of the National Inventory on Greenhouse Gases, landfill operators are requested to provide summary data on landfill gas (Methane) flared or utilised on their facilities to accompany the figures for total methane generated. Operators should only report their Net methane (CH4) emission to the environment under T(total) KG/yr for Section A: Sector specific PRTR pollutants above. Please complete the table below:

Landfill: Waterford Joinery Limited

Please enter summary data on the quantities of methane flared and / or utilised	**T (Total) kg/Year**	**M/C/E**	**Method Used**		**Facility Total Capacity m3 per hour**	
			Method Code	**Designation or Description**		
Total estimated methane generation (as per site model)	0.0				N/A	
Methane flared	0.0				0.0	(Total Flaring Capacity)
Methane utilised in engine/s	0.0				0.0	(Total Utilising Capacity)
Net methane emission (as reported in Section A above)	0.0				N/A	

4.2 RELEASES TO WATERS

| PRTR# : P0350 | Facility Name : Waterford Joinery Limited | Filename : P0350_2009.xls | Return Year : 2009 | 17/05/2010 18:11

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

Data on ambient monitoring of storm/surface water or groundwater, conducted as part of your licence requirements, should NOT be submitted under AER / PRTR Reporting as this on

RELEASES TO WATERS								
POLLUTANT						QUANTITY		
			Method Used					
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B : REMAINING PRTR POLLUTANTS

RELEASES TO WATERS								
POLLUTANT						QUANTITY		
			Method Used					
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION C : REMAINING POLLUTANT EMISSIONS (as required in your Licence)

RELEASES TO WATERS								
POLLUTANT						QUANTITY		
			Method Used					
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

4.3 RELEASES TO WASTEWATER OR SEWER

| PRTR# : P0350 | Facility Name : Waterford Joinery Limited | Filename : P0350_2009.xls | Return Y | 17/05/2010 18:11

SECTION A : PRTR POLLUTANTS

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER								
POLLUTANT		METHOD			QUANTITY			
			Method Used					
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B : REMAINING POLLUTANT EMISSIONS (as required in your Licence)

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER								
POLLUTANT		METHOD			QUANTITY			
			Method Used					
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

4.4 RELEASES TO LAND | PRTR# : P0350 | Facility Name : Waterford Joinery Limited | Filename : P0350_2009.xls | Return Year : 2009 | 17/05/2010 18:11

SECTION A : PRTR POLLUTANTS

RELEASES TO LAND							
POLLUTANT		METHOD			QUANTITY		
			Method Used				
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year
					0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B : REMAINING POLLUTANT EMISSIONS (as required in your Licence)

RELEASES TO LAND							
POLLUTANT		METHOD			QUANTITY		
			Method Used				
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year
					0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE | PRTR# : P0350 | Facility Name : Waterford Joinery Limited | Filename : P0350_2009.xls | Return Year : 2009 | 17/05/2010 18:11

3

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility Non Haz Waste: Name and Licence/Permit No of Recover/Disposer	Haz Waste : Address of Next Destination Facility Non Haz Waste: Address of Recover/Disposer	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
Within the Country	20 01 01	No	0.0	Paper, Cardboard Boxes, Plastic Wrapping	R5	E	Volume Calculation	Offsite in Ireland	Fennell Haulage and Waste,WP035-02	The Burgery,.,Dungarvan,County Waterford,Ireland		
Within the Country	20 03 01	No	6.294	Mixed General Waste	D1	E	Volume Calculation	Offsite in Ireland	Fennell Haulage and Waste,WP035-02	The Burgery,.,Dungarvan,County Waterford,Ireland		