

JOHN ENGLISH

(WOODFARM FENCING SUPPLIES LTD)

ANNUAL ENVIRONMENTAL REPORT 2013

IPC Reg. No. P0352-01

March 2014

INTRODUCTION

John English operates a wood processing and timber treatment plant at Clonbrock, Co. Galway. The plant is trading as Woodfarm Fencing Supplies Ltd and is under the operational control of Managing Director Jason English, son of John English. John and his wife Mary English are also directors of the company. The IPC license requirements are managed by Jane English (daughter of John) who is Environmental Manager at the plant.

In 2013 the plant produced approximately 300 tones per week of treated fencing posts. The plant operates from 8.30 hrs to 18.00 hrs, five days per week. Woodfarm Fencing Supplies Ltd employs 14 full time staff from the locality.

The sawmill is equipped with a number of saws, a de-barker and a pointer. The plant uses Osmose Celcure AC-500 for the treatment of timber on site. Currently there are two treatment vessels installed, each with a capacity of 18.6 m³. These treatment vessels are supplied by a number of tanks for the storage and mixing tanks. One of the treatment vessels is self-bunded, while the second treatment vessel and storage tanks rely on the bunding capacity of the building. The total bund capacity of this 460 m² building is 30.2 m³. This excludes the self-bunded treatment vessel.

This building was constructed as a specific requirement of the IPC license. Treated timber is stored indoors for at least 48hours, (dependant on weather conditions) before being placed on a concrete yard.

EMISSIONS DATA

Waste management

Solid Waste Produced in 2013

Waste Material	EWC Code	Amount kg	Waste Contractor
General Waste	20 03 01	3,000	East Galway Waste Disposal Walsh Waste
*Treatment Plant Sludge	03 02 04	440	Indaver Ireland
Metal Waste	20 01 40	1270	The Hammond Lane Metal Co. Ltd
Empty ink cartridges - non refillable (office waste)	08 03 13	0.45	HP Planet Partners

Water usage

Rainwater used for treatment plant. The facility now has a 55m³ storage facility for rainwater.

Environmental incidents and complaints

None reported in 2013.

Spending on Environmental Protection, 2013

Company time devoted to environmental management	10,000
Environmental Consultants , Laboratory Analysis, Bund Testing	4,968
Hazardous Waste treatment	365
General Waste disposal	870
E.P.A. Charge	3,139
Total	€19,342

SCHEDULE OF OBJECTIVES & TARGETS 2014

1. Objective

Maintain an Environmental Management System for the Site

Target

Maintain a working EMS system to the satisfaction of the EPA. Revise existing EMS and relevant documents.

Responsibility

Jane English, Environmental Manager, will have responsibility for meeting this objective.

2. Objective

Assess all operations and review all practicable options for the use of cleaner technology, cleaner production and reduction and minimisation of waste. To initiate waste reduction projects where practicable.

Target

Identify opportunities for cleaner production and prepare programs to avail of such opportunities.

Responsibility

Jane English, Environmental Manager, will have responsibility for meeting this objective

3. Objective

To demonstrate that all bunded structures and tanks on-site are water tight and resistant to penetration by materials stored therein.

Target

To carry out integrity tests on all bunds and report findings to EPA every three years.

Responsibility

Jane English, Environmental Manager, will have responsibility for meeting this objective

4. Objective

To ensure all treated timber is stored on impermeable surfaces.

Target

To ensure all treated timber is stored on impermeable surfaces to ensure ground water is protected from contamination

Responsibility

Jane English, Environmental Manager, will have responsibility for meeting this objective

5. Objective

To monitor the environment surrounding the plant for potential pollutants arising from the manufacturing activity and to take corrective action should such pollutants be detected.

Target

To monitor groundwater and surface water for contamination on site, in accordance with EPA requirements

Responsibility

Jane English, Environmental Manager, will have responsibility for meeting this objective

Environmental Management Programme 2013

Project 1/2013	To continue to develop an Environmental Management System (EMS).
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Relationship to objectives and targets:	This is in line with John English EMP objective number 1.
Reason for undertaking project:	The maintenance of an EMS is necessary to fulfil Conditions 2.1 to 2.7 of the John English's IPC licence. It is also company policy to operate an Environmental Management System
Target:	Continue to improve Environmental Management system
Project Summary:	<ul style="list-style-type: none">• Set schedule of objectives and targets• Meet environmental management programme• Maintain and improve environmental management documentation system• Maintain corrective action procedures• Maintain an awareness and training programme• Maintain programme for public information• Prepare annual environmental reports
Designation of Responsibility:	Jane English is responsible for implementation of this project.
Time Frame:	Review EMS procedures and documents; prepare any outstanding procedures which need to be implemented. In addition Jane English will; <ul style="list-style-type: none">• Maintain a Public Information file• Identify training needs of workers which can have a significant impact on the environment and provide these workers with training• Implement all environmental programs outlined in this document <p>This will be completed by December 2013.</p>

Project 2/2013**Groundwater and surface watering monitoring on site.**

Relationship to objectives and targets:	This project is in line with John English's EMP Objective number 5, To monitor groundwater and surface water for contamination.
Reason for undertaking project:	This project is specifically required under condition 8.3.1 of the IPC licence.
Target:	To carry out annual monitoring groundwater and surface water on site
Project Summary:	Carry out annual surface and groundwater monitoring onsite and submit results to EPA
Designation of Responsibility:	Jane English, Environmental Manager
Time Frame:	Results of groundwater and surface water on site to be submitted to the EPA when available.

Project 3/2013**Management of Treatment Plant Sludge**

Relationship to objectives and targets:	This is in line with John English EMP objective number 1 and 5
Reason for undertaking project:	This project is specifically required under condition 8.3.1 of the IPC licence.
Target:	Manage treatment plant sludge so that it does not impact on the local environment
Project Summary:	Ensure all treatment plant sludge is stored in bunded areas in clearly labelled drums. Ship offsite all stored treatment plant sludge to permitted waste contractor
Designation of Responsibility:	Jane English, Environmental Manager
Time Frame:	Progress will be reported in AER 2013

Project 4/2013	Establish record keeping inspection of leaks from flanges and valves on pipes and equipment associated with treatment plant.
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Relationship to objectives and targets: This is in line with John English 2005 EMP objective number 2.

Reason for undertaking project: This project is specifically required under condition 8.4.8 of the IPC licence.

Target: To inspect for leaks on all flanges and valves on overground pipes carrying tanalith e solution. To repair these leaks and to record such maintenance.

Project Summary: Maintain inspection records of flanges and valves on a weekly basis and record any leaks. Follow up with repairs of such leaks and document maintenance

Designation of Responsibility: Jane English, Environmental Manager

Time Frame: Progress will be reported in AER 2013

2013 ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

Project 1/2013	<p>Establish an Environmental Management System (EMS).</p> <p>Progress: Jane English has in operation an environmental management documentation system. This includes incident and corrective action procedures, awareness and training programme, a complaints procedure, an emergency response procedure and a programme for public information.</p> <p>In the last year John English/Woodfarm Fencing Supplies Ltd endeavoured to meet all of their IPC requirements and to implement their environmental management programmes.</p>
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Project 2/2013	<p>To carry out annual monitoring of groundwater and surface water on site</p> <p>Progress: Hydrogeological Investigation Report re Technical Amendment A was submitted to the EPA through ALDER on 04/12/2013.</p> <p>Jane English, Environmental Manager was approved an extension by the EPA for submission of water results for 2013 so that sampling could be carried out using the information and parameters achieved through the work of the Hydrogeological Investigation Report. These results will be submitted with AER 2013</p>
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Project 3/2013	<p>Management of treatment plant sludge</p> <p>Progress; Treatment plant sludge was stored in 210L clearly labelled steel combi drums.</p> <p>Total of 440 kg of Treatment plant sludge was shipped off site by Indaver Ireland in July 2013</p>
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Project 4/2013

Establish record keeping inspection of leaks from flanges and valves on pipes and equipment associated with treatment plant

Progress; A list of all flanges and valves on over ground pipes carrying wood treatment solution has been prepared

A plant inspection and maintenance record sheet/folder is completed on a weekly basis and is kept up to date. Any leaks/maintenance is acted on immediately and repaired.

We maintain records of the annual external plant programme and record any maintenance.

Environmental Management Programme 2014

Project 1/2014	To continue to develop an Environmental Management System (EMS).
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Relationship to objectives and targets: This is in line with John English EMP objective number 1.

Reason for undertaking project: The maintenance of an EMS is necessary to fulfil Conditions 2.1 to 2.7 of the John English's IPC licence

It is also company policy to operate an environmental management system.

Target: Complete revision of Environmental Management System.

Project Summary:

- Compliance of 48 hour rule to be highlighted
- Include fuel and chemical handling procedures to EMS
- Staff to be trained accordingly on the above
- Maintain & update environmental management documentation system and files
- Add method statements to EMS so that representative samples are always collected - no matter who collects them
- Signage to be put in place in treatment area re 48 hour procedure
- Maintain public information file
- Prepare annual environmental reports

Designation of Responsibility: Jane English is responsible for implementation of this project.

Time Frame:

This will be completed by 31/08/2014

Project 2/2014**Groundwater and surface watering monitoring on site.**

Relationship to objectives and targets:	This project is in line with John English's EMP Objective number 5, To monitor groundwater and surface water for contamination.
Reason for undertaking project:	This project is specifically required under condition 8.3.1 of the IPC licence.
Target:	To carry out annual monitoring groundwater and surface water on site using the recommendations/parameters of the Hydrogeological Investigation Report Nov 2013
Project Summary:	Carry out annual surface and groundwater monitoring on site in accordance with EPA requirements and submit results to EPA
Designation of Responsibility:	Jane English is responsible for implementation of this project.
Time Frame:	Results of groundwater and surface water on site to be submitted to the EPA through ALDER in 2014

Project 3/2014**Management of treatment plant sludge**

Relationship to objectives and targets:	This is in line with John English 2005 EMP objective number 1 and 5.
Reason for undertaking project:	This project is specifically required under condition 8.3.1 the IPC licence
Target:	Manage treatment plant sludge so that it does not impact on the local environment.
Project Summary:	<p>Ensure that all treatment plant sludge will be stored in bunded areas in clearly labelled drums.</p> <p>Ship offsite all stored treatment plant sludge to permitted waste contractor</p>
Designation of Responsibility:	Jane English, Environmental Manager
Time Frame:	Progress will be reported in AER 2014

Project 4/2014. Maintain record keeping inspection of leaks from flanges and valves on pipes and equipment associated with treatment plant.

Relationship to objectives and targets:

This is in line with John English EMP objective number 2.

Reason for undertaking project:

This project is specifically required under condition 8.4.8 of the IPC licence.

Target:

To inspect for leaks on all flanges and valves on over ground pipes carrying treatment solution. To repair these leaks and to record such maintenance.

Project Summary:

Maintain inspection records of flanges and valves on a weekly basis and record any leaks.

Follow up with repairs of such leaks and document maintenance.

Designation of Responsibility:

Jane English, Environmental Manager

Time Frame:

Progress will be reported in AER 2014

Project 5/2014.	Bund Integrity Assessment
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Relationship to objectives and targets:

This is in line with John English EMP objective number 5

Reason for undertaking project:

This project is specifically required under condition 8.4.3 of the IPC licence which requires that the licensee shall test the integrity and water tightness of all the bunded structures every three years.

Target:

To demonstrate that all bunded structures on-site are water tight and resistant to penetration by any materials stored therein.

A robust integrity test on bunded shed, sump, surrounding concrete apron and any construction joints to be carried out and report submitting to the EPA by end year 2014

Investigation into foaming and leakage around self-bunded pressure vessel door to be carried out to find out if this leakage is a normal part of running process or if it can be eliminated - if the latter is possible then maintenance works to be carried out to prevent this leakage. This project to be completed by end 2014.

Project Summary:

Carry out robust integrity test on bunded shed by end year 2014

Carry out investigation/maintenance works if possible on self-bunded vessel door by end year 2014

Designation of Responsibility:

Jane English, Environmental Manager

Time Frame:

Progress will be reported in AER 2014

Dear Jane,

The Agency has reviewed your submission LR006391, "Technical Amendment A" in relation to the hydrogeological assessment carried out to demonstrate compliance with the EC Environmental Objectives (Groundwater) Regulations 2010 as amended as required by Condition 8.3.2 (Amendment A) of IPPC Licence P0352-01.

Your request to use the proposed water quality monitoring parameter suite set out in Table 13, page 24 of the report (see attached), when carrying out the next monitoring round is noted and I can confirm that **the EPA is in agreement with this.**

With regard to the measures/recommendations outlined in Section 8 of the hydrogeological report, please provide details of when the actions will be completed; in particular integrity testing of bunds and concrete apron, etc, installation of a new borehole, installation of an oil interceptor. Please provide the timeframes for completion of the various tasks to me **by 6th January 2014.**

Yours sincerely, *Helen Boyce, Inspector*

Office of Environmental Enforcement, Castlebar

Table 13 Proposed Water Quality Monitoring Parameter Suite

Type	Parameter	Monitoring location & frequency
Field Parameters	pH; temperature; electrical conductivity; Groundwater level	Annual at BH01, BH02 and SW03
<i>Laboratory Analysis</i>		
COCs	Ammonia, Arsenic, Benzyl Ammonium Chloride, Boron, Chromium, Copper, Extractable Petroleum Hydrocarbon (EPH), Lindane, Propiconazole, Tebuconazole	Annual at BH01, BH02 and SW03. Note 1: COC status of EPH, Lindane, propiconazole, tebuconazole, arsenic and chromium to be reviewed after 2 no. monitoring rounds.
Major ions	Alkalinity, Chloride, Sulphate, Nitrate, Calcium, Sodium, Magnesium, Potassium	
Physico-chemical	pH; Electrical Conductivity; Total Phosphorus; Molybdate Reactive Phosphorus, Nitrite, Total Organic Carbon	
Microbiological	Total Coliforms & faecal Coliforms (E. coli)	
Trace Metals	Iron; Manganese	

Ref: 1053_WaterQualityJan2014_forIPC2013Requirements

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FAO: Ms. Jane English
Woodfarm Fencing Ahascragh
Ballinasloe
Co. Galway

21 February 2014

RE: IPC P0352-01 Water Quality Monitoring on 10/01/2014, to satisfy 2013 IPC water quality monitoring requirement

Dear Jane,

I have received the results of the laboratory analysis carried out by the INAB accredited laboratory Complete Laboratory Solutions (CLS), Rosmuc, Co. Galway, on the groundwater sample (BH01) and surface water sample (SW03) collected at the WFS IPC site on 10/01/2014. The data are summarised in the attached table. The original laboratory certificates are also attached.

The samples were analysed for the parameters set out in Section 7.4, Table 13 of the Hydrogeological Assessment Report (Conroy 2013), which was prepared in line with the requirements of Technical Amendment A of IPC License P0352-01. These included the contaminants of concern identified in Table 13 of that report and a number of additional parameters recommended by the EPA Guidance document "Guidance on the Authorisation of Discharges to Groundwater" (2011).

Site specific compliance thresholds were recommended for groundwater and surface water for the various contaminants of concern in Section 7.3, Table 12 of the Hydrogeological Assessment Report (Conroy 2013). The various compliance thresholds are reproduced in the attached summary table.

Assessment of the water quality results from 10/01/2014

Results for several of the additional parameters monitored suggest that the groundwater and surface water samples may have been contaminated by organic matter:

- The potassium:sodium ratio (K:Na) exceeded 0.3 in both samples. Geological Survey of Ireland experience suggests that values above 0.3 may indicate contamination by organic matter;
- Orthophosphate exceeded the relevant Surface Water EQS in the SW03 sample. Organic matter is a potential source of phosphorous.
- Fecal coliforms were detected in the SW03 sample. The presence of faecal coliforms indicates sewage and/or animal excrement contamination.
- Ammonia was detectable in the BH01 groundwater sample, and nitrate concentrations were low in both samples. These results are suggestive of anoxic conditions, which would result from the breakdown of dissolved organic matter in the water.
- Iron and manganese were above background in both samples. Reducing conditions resulting from the breakdown of dissolved organic matter in the water could lead to the reductive dissolution of iron and manganese oxides naturally present in the soil. This in turn would be likely to lead to above background concentrations of dissolved iron and manganese in water.
- It is considered that agricultural activities in the surrounding area are the most likely source of the organic matter contamination suggested by the data.

The analytical results for the contaminants of concern have been compared to their respective compliance thresholds. Where a contaminant of concern exceeds its compliance threshold the value is presented in bold, red font in the attached summary table. The data were assessed as follows:

- The measured concentrations of the contaminants of concern arsenic, boron, chromium, copper, ammonia, propiconazole, and tebuconazole were below their respective compliance thresholds.
- The contaminant of concern benzalkonium chloride measured 61 ug/l in the groundwater sample, which exceeded the compliance threshold of 0.1 ug/l. It was not detected in the surface water sample. This parameter is a component of Celcure AC 500, which is currently in use at the site. The compound is known to biodegrade rapidly in groundwater, which means that its detection in groundwater above the site compliance threshold is a potential indicator of ongoing contaminant release from the site via the groundwater pathway.
- The contaminant of concern lindane measured 0.81 ug/l in the groundwater sample, which exceeded the compliance threshold of 0.1 ug/l. It was not detected in the surface water sample. This parameter is a component of Protim Ground Contact, which was used on the site historically. Its detection in groundwater above the site compliance threshold is a potential indicator of residual subsoil contamination beneath the site by Protim Ground Contact owing to historical, accidental releases.
- The contaminant of concern Extractable Petroleum Hydrocarbons (EPH), as represented by the analytical parameters Petrol Range Organics (PRO), and Diesel Range and Lube Oil, was detected in both the surface water and the groundwater at concentrations above the 10 ug/l threshold. The PRO fraction was present in the groundwater sample only and measured 533 ug/l. The Diesel Range and Lube Oil Fraction was detected in the groundwater and surface water at concentrations of 2,923 ug/l and 712 ug/l respectively. The laboratory report states that the Diesel Range and Lube Oil results possibly indicate the presence of mineral oil in both samples. EPH was a component of the

Protim Ground Contact solution, which was used on the site historically. It is also a component of the diesel fuel currently used on site. Its detection in groundwater above the site compliance threshold is a potential indicator of residual subsoil contamination beneath the site by Protim Ground Contact owing to historical, accidental releases. Alternatively or in addition, it is a potential indicator of historical and/or recent accidental releases of diesel fuel at the site.

Recommendations

It is recommended that further testing be carried out to confirm whether or not the contaminants of concern benzalkonium chloride, lindane and EPH are present in the groundwater beneath the site, and whether or not the contaminant of concern EPH is present in surface water at the site.

It is proposed that the routine water quality monitoring for 2014 for IPC License P0352-01, scheduled for July 2014 is appropriate for the recommended confirmatory monitoring. This will need to be agreed with the EPA.

Sign Off

I hope this assessment is satisfactory for you. If you have any questions or queries regarding the assessment and/or the contents of the attached table, please do not hesitate to contact me.

Yours sincerely,



EurGeol. Peter Conroy PGeo., M.Sc.,
B.Sc. Hydrogeologist.

Encl: Table entitled "Groundwater and Surface Water Quality Monitoring January 2014".
 CLS Laboratory Certificates for sample analysis for BH01 & SW01 for samples from 10/01/2014.

Sample Name									BH01	SW03		Comment on Results Jan 2014
Consultant									P Conroy	P Conroy		
Analysing Laboratory									CLS	CLS		
Lab Report No.									216910	216912		
Lab Sample No.									493628	493630		
Lab Sample Receipt Date									10/01/2014	10/01/2014		
Sample Type									Groundwater	Surface Water		
Sample Name									BH01	SW03		
Sample Date									10/01/2014	10/01/2014		
	Units	Site Compliance Thresholds		Lab Limit of Quantitation (LOQ)	Lab Limit of Detection (LOD)	Groundwater Threshold	Surface Water MAC-EQS (Inland SW)	Drinking Water Standard				
		Groundwater	Surface Water			SI 9 of 2010 or (GSI guideline)	SI 272 of 2009 & 327 of 2012	SI 278 of 2007				
Calculated Parameters												
Potassium:Sodium meq/l Ratio (K:Na)	n/a					(0.3)			0.5	0.8		Both values exceed 0.3. Suggests contamination of groundwater and surface water by organic matter. Agriculture is most likely source.
Hardness	mg/l CaCO3								421	200		The groundwater is very hard. The surface water is moderately hard, suggesting a significant runoff component dilutes any groundwater baseflow.
Physico-Chemical Parameters												
Groundwater Level	m below datum								1.79			
Field pH	n/a								6.8	7.3		
Field Electrical Conductivity (25 degC)	uS/cm								803.0	489.0		
Field Temperature	Deg. C								9.2	6.4		
pH	n/a			2			>6 & <9	>6.5 & <9	6.6	6.9		
Electrical Conductivity (20 deg C)	uS/cm			5		800		2500.00	637	254		
Total Phosphorous	mg/l as P			<0.05					0.15	1		
Orthophosphate	mg/l as PO4			0.1		0.035	0.035 (Good Status)		0.024	1		High orthophosphate in surface water likely to be due to organic matter.
Total Organic Carbon	mg/l			1				NAC	6.06	3		
Microbiological Parameters												
Faecal Coliforms	cfu/100ml							0	<10	80		Detectable faecal coliforms suggest contamination by sewage or animal excrement. Agriculture is a potential source.
Total Coliforms	cfu/100ml							0	30	1040		
Major Cations (i.e. Ca, Mg, Na, K, NH4)												
Dissolved Calcium (Ca)	mg/l			3					154	72		
Dissolved Magnesium (Mg)	mg/l			0.8					9	5		
Dissolved Sodium (Na)	mg/l			1		150		200	11	12		
Dissolved Potassium (K)	mg/l			0.5					10	17		
Ammonia (as N)	mg/l	0.175	0.065	0.005		0.175	0.065 (Good Status)	0.23	0.152	<0.005		
Major Anions (HCO3, Cl, SO4, NO3)												
Alkalinity total	mg/l CaCO3			10					375	200		
Chloride (Cl)	mg/l			2		24		250	19.6	22.3		
Sulphate (SO4)	mg/l			5	2	187.5		250	4.32	3.23		
Nitrate (NO3)	mg/l			0.44		37.5		50	3.12	1.23		Low nitrate and detectable ammonia suggests anoxic groundwater conditions
Trace Ions												
Nitrite as NO2	mg/l			0.017		0.375		0.5	<0.017	<0.017		
Trace Metals												
Dissolved Arsenic	ug/l	7.5	25	0.5		7.5	25	10	5	12		
Dissolved Boron	ug/l	750		10		750		1000	559	110		
Chromium (total dissolved)	ug/l	37.5	32	0.5		37.5	3.4 (VI) + 4.7 (III)	50	1	0.9		
Chromium 6 total /Hexavalent chromium	ug/l					37.5	3.4	50	na	na		
Dissolved Copper	ug/l	1500	30	1		1500	30 (Hardness > 100)	2000	10	12		
Dissolved Iron	ug/l			10				200	1222	1412		Above background iron possibly due to reductive dissolution of oxides under anoxic conditions due to organic matter contamination
Dissolved Manganese	ug/l			5				50	2064	423		Above background manganese possibly due to reductive dissolution of oxides under anoxic conditions due to organic matter contamination

Sample Name									BH01	SW03		Comment on Results Jan 2014
Consultant									P Conroy	P Conroy		
Analysing Laboratory									CLS	CLS		
Lab Report No.									216910	216912		
Lab Sample No.									493628	493630		
Lab Sample Receipt Date									10/01/2014	10/01/2014		
Sample Type									Groundwater	Surface Water		
Sample Name									BH01	SW03		
Sample Date									10/01/2014	10/01/2014		
	Units	Site Compliance Thresholds		Lab Limit of Quantitation (LOQ)	Lab Limit of Detection (LOD)	Groundwater Threshold	Surface Water MAC-EQS (Inland SW)	Drinking Water Standard				
		Groundwater	Surface Water			SI 9 of 2010 or (GSI guideline)	SI 272 of 2009 & 327 of 2012	SI 278 of 2007				
Pesticides/Biocides/Fungicides												
Benzalkonium chloride (8001-54-5)	ug/l	0.1	0.1	10				0.1	61	<0.1		Component of Celcure AC 500. Rapid biodegradation means that its detection in groundwater above the site compliance threshold is a potential indicator of ongoing contaminant release from the site. Needs confirmation over several monitoring rounds.
Propiconazole and tebuconazole in waters	ug/l	0.1	0.1	0.02 - 0.5				0.1	<0.1	<0.1		
Lindane (gamma-HCH)	ug/l	0.1	0.1	0.01		0.075		0.1	0.81	0		Component in Protim Ground Contact. Potential indicator of residual contamination in the subsoil. Needs confirmation over several monitoring rounds.
alpha-HCH	ug/l	0.1	0.1	0.01				0.1	0.014	0		
Extractable Petroleum Hydrocarbons												
PRO Water (C5-C12) by GC-FID	ug/l	10	10	10					533	<10		
Diesel Range & Lube Oil (C8-C40) by GC-FID	ug/l	10	10	10					2923 possible mineral oil	712 possible mineral oil		Components of Protim Ground Contact and diesel. Potential indicator of residual Protim or diesel contamination in the subsoil or recent accidental release of diesel. Needs confirmation over several monitoring rounds.

Client :	Peter Conroy PGeo., MSc, Hydrogeologist Shantraud Killaloe Co. Clare	Supplement to Report No. :	216910
		Date of Receipt :	10/01/2014
		Start Date of Analysis :	10/01/2014
		Date of Report :	06/02/2014
		Order Number :	
		Sample taken by :	Client

CERTIFICATE OF ANALYSIS

Lab No	Sample Description	Test	Result	Units
493628	1053. GroundWater BH 01. 10/1/14	pH	6.6	pH Units
		Conductivity @20C	637	uS/cm
		Alkalinity, total	375	mg/l CaCO3
		Total Phosphorus as P	0.15	mg/l
		Chloride	19.6	mg/l
		Nitrate as NO3	3.122	mg/l
		Nitrite as NO2	<0.017	mg/l
		Sodium, dissolved	11	mg/l
		Calcium, dissolved	154	mg/l Ca
		Faecal Coliforms (Filtration)	< 10	cfu/100ml
		Sulphate	4.32	mg/l
		Pesticides (OCP) (see attached OCP report)	gamma-HCH 810ng/l, alpha-HCH 14ng/l	ng/l
		Orthophosphate as PO4-P	0.024	mg/l
		Ammonia as N	0.152	mg/l
		Propiconazole & Tebuconazole in waters	<0.1	ug/l
		Iron, dissolved	1222	ug/l
		Manganese, dissolved	2064	ug/l
		Copper, dissolved	10	ug/l
		Chromium, dissolved	1	ug/l
		Arsenic, dissolved	5	ug/l
		Magnesium, dissolved	9	mg/l
		Potassium, dissolved	10	mg/l
		Boron, dissolved	559	ug/l
		Benzalkonium chloride [8001-54-5]	61.0	ug/l
		PRO Water (C5-C12) by GC-FID	533	ug/l
		TOC	6.06	mg/l
Total Coliforms (Filtration) (Environmental Waters)	30	cfu/100ml		
Extractable Hydrocarbons Water (C8-C40, Diesel Range and Lube Oil) by GC-FID	2923 Possible Mineral Oil*	ug/l		

* Note: The comment expressed here is an interpretation and is not INAB accredited



Approved by:



Rita McGrath
Environmental Scientist

See page 2 for test specifications and accreditation status
This report only relates to items tested and shall not be reproduced but in full with the permission of Complete Laboratory Solutions.

Test	Specification	Subcontracted	CLS 17025 Status	Sub 17025 Status
Total Phosphorus as P	CLS 151	No	Yes	No
Total Coliforms (Filtration) (Environmental Waters)	CLS 16	No	No	No
TOC	CLS 150	No	Yes	No
Sulphate	Konelab CLS 88	No	No	No
Sodium, dissolved	ICP-MS CLS129	No	Yes	No
Propiconazole & Tebuconazole in waters	Triazole fungicides by GCMS, (Reporting limit: 0.02-0.5ug/l)	Yes	No	No
PRO Water (C5-C12) by GC-FID	CLS 148	No	Yes	No
Potassium, dissolved	ICP-MS CLS129	No	Yes	No
pH	CLS 26	No	Yes	No
Pesticides (OCP)	GC	Yes	No	Yes
Orthophosphate as PO4-P	Konelab CLS 35	No	Yes	No
Nitrite as NO2	Konelab CLS 37	No	Yes	No
Nitrate as NO3	Konelab CLS 39	No	Yes	No
Manganese, dissolved	ICP-MS CLS129	No	Yes	No
Magnesium, dissolved	ICP-MS CLS129	No	Yes	No
Iron, dissolved	ICP-MS CLS 129	No	Yes	No
Faecal Coliforms (Filtration)	Based on CLS 16	No	No	No
Extractable Hydrocarbons Water (C8-C40, Diesel Range and Lube Oil) by GC-FID	CLS 147	No	Yes	No
Copper, dissolved	ICP-MS CLS 129	No	Yes	No
Conductivity @20C	CLS 67	No	Yes	No
Chromium, dissolved	ICP-MS CLS 129	No	Yes	No
Chloride	Konelab CLS 36	No	Yes	No
Calcium, dissolved	ICP-MS CLS129	No	Yes	No
Boron, dissolved	ICP-MS CLS129	No	Yes	No
Benzalkonium chloride [8001-54-5]		Yes	No	No
Arsenic, dissolved	ICP-MS CLS129	No	Yes	No
Ammonia as N	Konelab CLS 40	No	Yes	No
Alkalinity, total	CLS 54	No	No	No

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Client : Peter Conroy PGeo., MSc, Hydrogeologist
 Shantraud
 Killaloe
 Co. Clare

Supplement to Report No. : 216912
 Date of Receipt : 10/01/2014
 Start Date of Analysis : 10/01/2014
 Date of Report : 06/02/2014
 Order Number :
 Sample taken by : Client

CERTIFICATE OF ANALYSIS

Lab No	Sample Description	Test	Result	Units
493630	1053. SurfaceWater SW 03. 10/1/14 @ 12.30pm	pH	6.9	pH Units
		Conductivity @20C	254	uS/cm
		Alkalinity, total	200	mg/l CaCO3
		Total Phosphorus as P	0.87	mg/l
		Chloride	22.3	mg/l
		Nitrate as NO3	1.23	mg/l
		Nitrite as NO2	<0.017	mg/l
		Sodium, dissolved	12	mg/l
		Calcium, dissolved	72	mg/l Ca
		Faecal Coliforms (Filtration)	80	cfu/100ml
		Sulphate	3.23	mg/l
		Pesticides (OCP)	none detected	ng/l
		Orthophosphate as PO4-P	0.513	mg/l
		Ammonia as N	<0.005	mg/l
		Propiconazole & Tebuconazole in waters	<0.10	ug/l
		Iron, dissolved	1412	ug/l
		Manganese, dissolved	423	ug/l
		Copper, dissolved	12	ug/l
		Chromium, dissolved	0.9	ug/l
		Arsenic, dissolved	12	ug/l
		Magnesium, dissolved	5	mg/l
		Potassium, dissolved	17	mg/l
		Boron, dissolved	110	ug/l
		Benzalkonium chloride [8001-54-5]	<0.10	ug/l
		PRO Water (C5-C12) by GC-FID	<10	ug/l
		TOC	2.71	mg/l
		Total Coliforms (Filtration) (Environmental Waters)	1,040	cfu/100ml
Extractable Hydrocarbons Water (C8-C40, Diesel Range and Lube Oil) by GC-FID	712 Possible Mineral Oil*	ug/l		

* Note: The comment expressed here is an interpretation and is not INAB accredited



Approved by:

Rita McGrath

Rita McGrath
Environmental Scientist

See page 2 for test specifications and accreditation status
 This report only relates to items tested and shall not be reproduced but in full with the permission of Complete Laboratory Solutions.

Test	Specification	Subcontracted	CLS 17025 Status	Sub 1702 Status
Total Phosphorus as P	CLS 151	No	Yes	No
Total Coliforms (Filtration) (Environmental Waters)	CLS 16	No	No	No
TOC	CLS 150	No	Yes	No
Sulphate	Konelab CLS 88	No	No	No
Sodium, dissolved	ICP-MS CLS129	No	Yes	No
Propiconazole & Tebuconazole in waters	Triazole fungicides by GCMS, (Reporting limit: 0.02-0.5ug/l)	Yes	No	No
PRO Water (C5-C12) by GC-FID	CLS 148	No	Yes	No
Potassium, dissolved	ICP-MS CLS129	No	Yes	No
pH	CLS 26	No	Yes	No
Pesticides (OCP)	GC	Yes	No	Yes
Orthophosphate as PO4-P	Konelab CLS 35	No	Yes	No
Nitrite as NO2	Konelab CLS 37	No	Yes	No
Nitrate as NO3	Konelab CLS 39	No	Yes	No
Manganese, dissolved	ICP-MS CLS129	No	Yes	No
Magnesium, dissolved	ICP-MS CLS129	No	Yes	No
Iron, dissolved	ICP-MS CLS 129	No	Yes	No
Faecal Coliforms (Filtration)	Based on CLS 16	No	No	No
Extractable Hydrocarbons Water (C8-C40, Diesel Range and Lube Oil) by GC-FID	CLS 147	No	Yes	No
Copper, dissolved	ICP-MS CLS 129	No	Yes	No
Conductivity @20C	CLS 67	No	Yes	No
Chromium, dissolved	ICP-MS CLS 129	No	Yes	No
Chloride	Konelab CLS 36	No	Yes	No
Calcium, dissolved	ICP-MS CLS129	No	Yes	No
Boron, dissolved	ICP-MS CLS129	No	Yes	No
Benzalkonium chloride [8001-54-5]		Yes	No	No
Arsenic, total	ICP-MS CLS 129	No	Yes	No
Arsenic, dissolved	ICP-MS CLS129	No	Yes	No
Ammonia as N	Konelab CLS 40	No	Yes	No
Alkalinity, total	CLS 54	No	No	No

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AER Returns Workbook

Version 1.1.18

REFERENCE YEAR	2013
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1. FACILITY IDENTIFICATION

Parent Company Name	Mr John English
Facility Name	Mr John English
PRTR Identification Number	P0352
Licence Number	P0352-01

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	Clonbrock
Address 2	Ahascragh
Address 3	Ballinasloe
Address 4	Co. Galway
	Galway
Country	Ireland
Coordinates of Location	-8.38243 53.4202
River Basin District	IEGBNISH
NACE Code	1610
Main Economic Activity	Sawmilling and planing of wood
AER Returns Contact Name	Jane English
AER Returns Contact Email Address	woodfarmfencing@gmail.com
AER Returns Contact Position	Environmental Manager
AER Returns Contact Telephone Number	090 9688755
AER Returns Contact Mobile Phone Number	090 9688755
AER Returns Contact Fax Number	090 9688448
Production Volume	300.0
Production Volume Units	Tonnes per week of fencing posts
Number of Installations	1
Number of Operating Hours in Year	2470
Number of Employees	14
User Feedback/Comments	As a result of completing the Hydrogeological Investigation Report in November 2013 for Technical Amendment A to our license, our parameters for water sampling have changed - please see AER 2013 for more detail
Web Address	www.woodfarmfencing.com

2. PRTR CLASS ACTIVITIES

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

Is it applicable?	No
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. WASTE IMPORTED/ACCEPTED ONTO SITE[Guidance on waste imported/accepted onto site](#)

Do you import/accept waste onto your site for on-site treatment (either recovery or disposal activities) ?	No
--	----

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

Please enter all quantities on this sheet in Tonnes

| PRTR# : P0352 | Facility Name : Mr John English
| Filename : P0352_2013.xls | Return Year : 2013 |

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)
						M/C/E	Method Used				
Within the Country	20 01 40	No	1.27	metals	R4	C	Weighed	Offsite in Ireland	Hammond Lane,WP/173/2008	...,Athlone,,Ireland	
Within the Country	20 03 01	No	3.0	mixed municipal waste	D1	E	Volume Calculation	Offsite in Ireland	East Galway Waste Disposal Ltd,WCP-MO-10-25-01	Killimor,Ballinasloe,Co Galway,0,Ireland	
To Other Countries	08 03 13	No	0.00045	waste ink other than those mentioned in 08 03 12	R4	E	Volume Calculation	Abroad	HP Planet Partners,La Poste Gonesse TIM CTCL Autorisation 0450 95919 Roissy CDG Cedex 9	Hewlett-Packard GmbH,Schickardstrasse 32,Geb. Businesspark,71034 Boblingen,Germany	
To Other Countries	03 02 04	Yes	0.44	inorganic wood preservatives	D10	C	Weighed	Abroad	Indaver Ireland ,WCP-DC-08-1121-01	4th Floor Block1 ,West Pier Busines Campus,Old Dunleary Road,Dun Laoghaire,Ireland	AVG,62.40-4 G.O. 10/70,Abfall-Verwertungs-Gesellschaft mbH,Borsigstrasse 2, Hamburg,22113,Germany

