Ana Bolger,
EPA
Headquarters PO Box 3000,
Johnstown Castle Estate
Co. Wexford

13th Jan 2012.

Register No:	**PO269-01**
Company Name:	**Basta Parsons Ltd**
Ref:	**Licence review**

Dear Ana,

Please find enclosed one original and two copies of the above report.

If you require any further information, please do not hesitate to contact me.

Yours Sincerely,

James Loftus
Basta Parsons Ltd

Integrated Pollution Prevention and Control (IPPC)/Waste Licensing

Review Form and Guidance Note

for the purposes of

EC Environmental Objectives (Surface Waters) Regulations 2009

EPA Reg. N°: *(Office use only)*	

Environmental Protection Agency
P.O. Box 3000, Johnstown Castle Estate, Co. Wexford
Lo Call: 1890 335599 Telephone: 053-9160600 Fax: 053-9160699

Web: www.epa.ie Email: info@epa.ie

INTRODUCTION

This Form is for the purposes of a review of an IPPC/Waste Licence in order to ensure that all authorisations under the *EPA Act 1992 to 2007* and the *Waste Management Acts 1996 to 2010* having discharges liable to cause water pollution are in compliance with the *EC Environmental Objectives (Surface Waters) Regulations 2009*.

While every effort has been made to ensure the accuracy of the material contained in the Review Form, the EPA assumes no responsibility and gives no guarantees, undertakings and warranties concerning the accuracy, completeness or up-to-date nature of the information provided herein and does not accept any liability whatsoever arising from any errors or omissions.

The Review Form and all supporting information shall be submitted to the Headquarters of the Agency in a format of a signed original, one hardcopy and two copies on CD-Rom. In cases where an Environmental Impact Statement (EIS) is required in support of the Review Form, a signed original, one hardcopy plus 16 copies (or 18 copies if the activity is within Energy sector) on CD-Rom shall be submitted.

All pages, including maps/drawings/plans, shall be no larger than A3 size. All files on CD-Rom shall be submitted in searchable PDF format and be no larger than 10MB each in size. All CD-Roms shall be labelled with the Licensee's name, Licence Register Number, address of the activity and name of the file (i.e. Review Form).

CONTENTS

SECTION A: GENERAL

A.1 Licensee

Name*:	Basta Hardware Ltd.
Address:	Gallagher Road
	Tubbercurry
	Co. Sligo
Tel:	07191 85032
Fax:	0719186269
e-mail:	lab@bastaparsons.com

* This should be the name of the Licensee which is current on the date this IPPC/Waste Licence Review Form is lodged with the Agency. It should be the name of the legal entity (which can be a limited company or a sole trader). A trading/business name is not acceptable.

Name and Address for Correspondence

Only documentation submitted by the Licensee and by the nominated person will be deemed to have come from the Licensee.

Name:	James Loftus
Address:	Basta Hardware Ltd
	Gallagher road
	Tubbercurry
Co. Sligo	
Tel:	071 9185032
Fax:	0719186269
e-mail:	lab@bastaparsons.com

Address of registered or principal office of Body Corporate (if applicable)

Address:	As Above
Company Register No.	280319
Tel:	
Fax:	
e-mail:	

A.2 Location of Activity

Name:	Basta Hardware Ltd
Address*:	Gallagher road
	Tubbercurry
	Co. Sligo
Tel:	07191 85032
Fax:	07191 86269
Contact Name:	James Loftus
Position:	Plating Supervisor
e-mail:	jloftus@bastaparsons.com

* Include any townland.

National Grid Reference (12 digit 6E,6N)	N54 3.143 W8 44.155

Location maps (no larger than A3), appropriately scaled, with legible grid references should be enclosed in **Attachment Nº A.2.** The site boundary must be outlined on the map in red colour.

Geo-referenced digital drawing files (e.g. AutoCAD files) in Irish Grid projection of the site boundary and overall site plan, including labelled emission points to surface water and their monitoring and sampling locations, are also required.

SECTION B: EMISSIONS

B.1 Emissions to Surface Waters &/or Ground

Describe the nature of emissions from the activity to receiving surface waters and/or ground. Specify which of these emissions are process discharges and storm/surface water discharges.

Tables B.1(i) and B.1(ii) should be completed.

The applicant should address in particular any emission point where the substances listed in the Schedule of S.I. No. 394 of 2004 are emitted.

Please note that monitoring of the discharge(s) for the purposes of Table B.1(ii) shall be undertaken for the list of parameters listed in Table D.1(i) as appropriate. Where other relevant substances have been identified, during the Assessment of Impact on Receiving Surface Water requested under Section D.1 of this Review Form, monitoring of the discharge upstream and downstream for the relevant parameters shall also be included.

A summary list of the emission points, together with maps/drawings (no larger than A3) and supporting documentation should be included as **Attachment Nº B.1.**

B.2 Tabular Data on Emission Points to surface water

Licensees should submit the following information for each emission point to surface water:

Point Code	Easting	Northing	Verified	Emission
Provide label ID's (e.g. SW1, SW2*)	6E-digit GPS Irish National Grid Reference	6N-digit GPS Irish National Grid Reference	Y = GPS used N = GPS not used	e.g. Ammonia (as N), Biochemical oxygen demand

See Appendix 1

* SW = Surface Water

An individual record (i.e. row) is required for each emission point. Acceptable file formats include Excel, Access or other upon agreement with the Agency.

Describe the proposed technology and other techniques for preventing or, where this is not possible, reducing emissions from the installation/facility.

C.1 Treatment, Abatement and Control Systems

An overview/summary of treatment/abatement systems for effluent emissions should be included together with schematics as appropriate.

For each Surface Water Emission Point identified complete Table C.1(i).

Supporting information should form **Attachment Nº C.1**.

Normal operation and variations for start-up and shutdown should be described. Anticipated malfunctions and known problems associated with the treatment should be highlighted.

Proposed monitoring to be undertaken for influent(s) to treatment plant, and in-treatment monitoring required for the management of the treatment plant should be detailed.

C.2 Monitoring and Sampling Points

Identify monitoring and sampling points and outline proposals for monitoring emissions to surface water bodies.

Table C.2(i) should be completed (where relevant) for emissions to surface water.

Where ambient environment monitoring is carried out or proposed, Table C.2(ii) should be completed as relevant for each environmental medium and at least 12 samples should be taken at regular intervals.

Include details of monitoring/sampling locations and methods.

Supporting information should form **Attachment Nº C.2**.

C.3 Tabular Data on Monitoring and Sampling Points

Licensees should submit the following information for each monitoring and sampling point:

Point Code	Point Type	Easting	Northing	Verified	Pollutant
SW-1 up stream	Sampling	E08.73626	N54.05182	GPS used	pH COD T. Heavy Metal Zinc Nickel Copper Total Chromium Hex Chromium Cadmium Conductivity Chloroform
SW-1 Down stream	Sampling	E08.735575	N54.05245	GPS used	pH COD T. Heavy Metal Zinc Nickel Copper Total Chromium Hex Chromium Cadmium Conductivity Chloroform

An individual record (i.e. row) is required for each monitoring and sampling point. Acceptable file formats include Excel, Access or other upon agreement with the Agency.

Point source monitoring/sampling refers to monitoring from specific emission points (e.g. from a wastewater treatment plant). Ambient monitoring includes monitoring of river quality upstream/downstream of an effluent discharge.

SECTION D: EXISTING ENVIRONMENT & IMPACT OF THE ACTIVITY

D.1 Assessment of Impact

Describe the existing environment in terms of water quality with particular reference to environmental quality objectives and standards as specified in the *EC Environmental Objectives (Surface Waters) Regulations 2009 S.I. No. 272 of 2009*. Table D.1(i) should be completed as appropriate.

Indicate whether or not the activity complies with the requirements of the *EC Environmental Objectives (Surface Waters) Regulations 2009 S.I. No. 272 of 2009* and the *EC Environmental Objectives (Groundwater) Regulations 2010 S.I. No. 9 of 2010*.

The Licensee should conduct an assessment of impact of discharge(s) from the installation/facility on receiving surface water and/or groundwater. In undertaking this assessment the Licensee shall have particular regard to substances used in the manufacturing processes likely to result in discharges. The licensee shall have regard for the environmental quality objectives and standards specified for protected areas and/or the standards specified in the Schedules of the *EC Environmental Objectives (Surface Waters) Regulations 2009 S.I. No. 272 of 2009*. When completing any assimilative capacity calculations have regard to the Water Services Training Group *'Guidance to Applicant – Discharge to Surface Waters'* available at http://www.wsntg.ie/publications/index.asp and other standard guidance.

If the process discharges are to coastal, transitional waters or lakes, the assessment may require a modelling study. The modelling study shall include estimates on what the resultant concentrations of the permitted substances in the receiving water body will be upon discharge at the current licence limits.

Regardless of the receiving water body type, determine the maximum allowable discharge concentrations to achieve compliance with the 95%ile good status limits. N.B. If the discharge is to a water body that is already achieving high status, or if the discharge is to waters draining to the surface water bodies identified under the First Schedule of the *EC Environmental Objectives (Freshwater Pearl Mussel) Regulations 2009*, compliance must be with 95%ile **high** status limits.

State distance from the process discharges to a nearest downstream water dependent Protected Area. Include the name and code of this Protected Area.

Full details of the assessment, including a copy of an Environmental Impact Statement if it was required for the purposes of obtaining planning permission(s), should be submitted as **Attachment Nº D.1.1**.

Where necessary, the Licensee should supply detailed information on the proposals to comply with the requirements of the *EC Environmental Objectives (Surface Waters) Regulations 2009 S.I. No. 272 of 2009* including a detailed timeframe for any proposed works in **Attachment Nº D.1.2**.

Please See Appendix 2
Proposal for installation of additional shallow wells.

D.2 Environmental Considerations and Best Available Techniques (BAT)

Describe, in outline, the main alternatives, if any, to the proposals contained in the Review Form.

Describe any environmental considerations which were made with respect to the use of cleaner technologies, waste minimisation and raw material substitution.

Describe the measures proposed or in place to ensure that:

(a) the best available techniques are or will be used to prevent or eliminate or, where that is not practicable, generally reduce an emission from the activity;

(b) no significant pollution is caused;

(c) waste production is avoided in accordance with *Council Directive 75/442/EEC of 15 July 1975 on waste*; where waste is produced, it is recovered or, where that is technically and economically impossible, it is disposed of while avoiding or reducing any impact on the environment;

(d) energy and other resources are used efficiently;

(e) the necessary measures are taken to prevent accidents and limit their consequences; and,

(f) the necessary measures are taken upon definitive cessation of activities to avoid any pollution risk and return the site of operation to a satisfactory state.

This section should present a statement on energy efficiency at the site to include, where appropriate, an energy audit with reference to the *EPA Guidance document on Energy Audits*. Licensees should have regard to Section 5 of the *EPA Acts 1992 and 2003* in selecting BAT and in particular the following:

- The use of low-waste technology;
- The use of less hazardous substances;
- The furthering of recovery and recycling of substances generated and used in the process and of waste where appropriate;
- Comparable processes, facilities or methods of operation, which have been tried with success on an industrial scale;
- Technological advances and changes in scientific knowledge and understanding;
- The nature, effects and volume of the emissions concerned;
- The commissioning dates for new or existing facilities;
- The length of time needed to introduce the BAT;
- The consumption and nature of raw materials, including water, used in the process and their energy efficiency;
- The need to prevent or reduce to a minimum the overall impact of the emissions on the environment and the risks to it;
- The need to prevent accidents and to minimize the consequences for the Environment; and,
- The information published by the Agency in the form of sectoral BAT Guidance documents and the relevant BREF documents published by the EC (available for download at http://eippcb.jrc.es/ and at www.epa.ie).

E.1 Best Environmental Practices – Compliance with Legislation

Demonstrate if the best environmental practices are in place for control of diffuse emissions from the installation/facility as set out in the following legislation:

(a) a specification prepared by the Agency in accordance with Section 5 of the *Environmental Protection Agency Act 1992* as amended by Section 7 of the *Protection of the Environment Act 2003*;

(b) the *Urban Waste Water Treatment Regulations 2001 (S.I. No. 254 of 2001)* as amended by the *Urban Waste Water Treatment (Amendment) Regulations 2004 (S.I. No. 440 of 2004)* or any future amendment thereof;

(c) the *European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I. No. 101 of 2009)* or any future amendment thereof;

(d) the *Local Government (Water Pollution) Act, 1977 (Control of Cadmium Discharges) Regulations 1985 (S.I. No. 294 of 1985)*;

(e) the *Local Government (Water Pollution) Act, 1977 (Control of Hexachlorocyclohexane and Mercury Discharges) Regulations 1986 (S.I. No. 55 of 1986)*;

(f) the *Local Government (Water Pollution) Acts, 1977 and 1990 (Control of Carbon Tetrachloride, DDT and Pentachlorophenol Discharges) Regulations 1994 (S.I. No. 43 of 1994)*; and

(g) measures or controls identified in a pollution reduction plan for the river basin district prepared in accordance with Part V of the *EC Environmental Objectives (Surface Waters) Regulations 2009 S.I. No. 272 of 2009* for the reduction of pollution by priority substances or the ceasing or phasing out of emissions, discharges and losses of priority hazardous substances.

SECTION F: APPROVED ADJUSTMENTS & CONDITIONS

Where the Office of Environmental Enforcement (OEE) of the Agency has agreed any variations or adjustments to the conditions of the existing licence, the licensee must supply a schedule detailing these agreed variations and adjustments to the existing licence conditions. An updated, scaled drawing of the site layout (no larger than A3) providing visual information on such adjustments or variations where appropriate should be included.

In the case of once-off assessments/ reports required under conditions of the existing licence the licensee must supply a schedule detailing those assessments/ reports that have been completed and agreed with the Office of Environmental Enforcement (OEE) or as otherwise agreed.

Attachment Nº F1 shall include the schedule of variations and/or adjustments together with the updated drawing.

Condition No.	Existing Condition	Proposed Wording (where appropriate)	OEE Agreement Reference	Description
10.5	Emission pt. SW-1		P0269-01(09)AP16HB.doc	Revised schedule for testing SW-1

SECTION G: DECLARATION

Declaration

I certify that the information given in this Review Form is truthful, accurate and complete.

I give consent to the EPA to copy this Review Form for its own use and to make it available for inspection and copying by the public, both in the form of paper files available for inspection at EPA and via the EPA's website. This consent relates to this Review Form itself and to any further information, submission, objection, or submission to an objection whether provided by me as Licensee, any person acting on the Licensee's behalf, or any other person.

Signed by: James Lofthus **Date:** 13-01-2012
(on behalf of the organisation)

Print signature name: JAMES LOFTUS

Position in organisation: Metal Finishing Supervisor

Company stamp or seal:

ANNEX 1: TABLES/ATTACHMENTS

TABLE B.1(i): EMISSIONS TO SURFACE WATERS

(One page for each emission)

Emission Point:

Emission Point Ref. No.:	SW1
Source of Emission:	Process Effluent
Location :	Located on the southern part of the site
Grid Ref. (12 digit, 6E,6N):	E08.73610 N54.05218
Name of receiving waters:	Stream 2
Flow rate in receiving waters:	0.0215 $m^3.sec^{-1}$ Dry Weather Flow $m^3.sec^{-1}$ 95%ile flow

Emission Details:

(i) Volume to be emitted			
Normal/day	$60m^3$	Maximum/day	$200m^3$
Maximum rate/hour	$12m^3$		

(ii) Period or periods during which emissions are made, or are to be made, including daily or seasonal variations (*start-up /shutdown to be included):*

Periods of Emission (avg)	40 min/hr 5 hr/day 234 day/yr

TABLE B.1(ii): EMISSIONS TO SURFACE WATERS - Characteristics of the emission (One table per emission point)

Emission Point Reference Number: ***SW-1***

Parameter	Prior to treatment				As discharged				% Efficiency
	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	kg/year	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	kg/year	
COD					4.9	24.7	1.4	346.8	
Suspended Solids					0.6	3.0	0.18	42.1	
Ammonia					0.130	0.7	0.039	9.13	
Temperature					----	---	----	----	
BOD					2.10	10.5	0.63	147.42	
Total Phosphorous					0.009	0.045	0.0027	0.631	
Phenols					0.0039	0.0195	0.0012	0.273	
Cyanide					0.0043	0.0218	0.0013	0.306	
Total Heavy Metals					0.1243	0.6219	0.373	8.73	
Zinc					0.0472	0.2364	0.0142	3.318	
Nickel					0.0451	0.2259	0.0136	3.171	
Copper					0.0239	0.1196	0.0072	1.679	
Chromium					0.0137	0.0687	0.0041	0.964	
Hex. Chromium					0.0073	0.0368	0.0022	0.517	
Cadmuim					0.00157	0.0079	0.0005	0.110	
Total Chloride					----	----	---	---	
Free Chloride					-----	----	---	---	
OrganicSolventsVOC)					-----	-----	---	---	

Oil Fats Greases Toxicity					0.4 ----	2 ----	0.120 -----	28.08 -----	

NOTE:
KG/YR IS CALCULATED WITH 234 WORKING DAYS PER YEAR

TABLE C.1(i): ABATEMENT/TREATMENT CONTROL

Emission Point Reference Number: ***SW-1***

Control [1] parameter	Equipment [2]	Equipment maintenance	Equipment calibration	Equipment back-up	Monitoring to be carried out [3]	Monitoring equipment	Monitoring equipment calibration
pH Discharge Flow Low/High levels	Micro Filtration system control	Daily maintenance check	Weekly	None	pH Discharge Low/High levels	MJK scada system	None

[1] List the operating parameters of the treatment/abatement system which control its function.
[2] List the equipment necessary for the proper function of the abatement/treatment system.
[3] List the monitoring of the control parameter to be carried out.

TABLE C.2(i): EMISSIONS MONITORING AND SAMPLING POINTS (One table per monitoring point)

Emission Point Reference Number: ***SW-1***

Parameter	Monitoring frequency	Accessibility of Sampling Points	Sampling method	Analysis method/ technique
Flow	Continuous	Ok		Flow meter with recorder
COD	Daily	Ok	Composite sampler	Standard method
Suspended Solids	Bi-Annually	Ok	Composite sampler	Gravimetric
Ammonia (as N)	Bi-Annually	Ok	Composite sampler	Standard Method
Temperature	Weekly	Ok	Composite sampler	Thermometer
pH	Weekly	ok	Composite sampler	pH meter
BOD	Bi-Annually	Ok	Composite sampler	Standard Method
Total Phorphous (as P)	Bi-Annually	Ok	Composite sampler	Standard Method
Phenols	Bi-Annually	Ok	Composite sampler	Standard method
Cyanide	Daily	Ok	Composite sampler	Hach Method
Total Heavy Metals	Weekly	Ok	Composite sampler	Hach Method
Zinc	Weekly	Ok	Composite sampler	Hach Method
Nickel	Weekly	Ok	Composite sampler	Hach Method
Copper	Weekly	Ok	Composite sampler	Hach Method
Total Chromium	Weekly	Ok	Composite sampler	Hach Method
Hex. Chromium	Weekly	Ok	Composite sampler	Hach Method
Cadmium	Bi-Annually	Ok	Composite sampler	Atomic Absorption/ICP
Total Chlorine	Daily	Ok	Composite sampler	Hach Method
Free Chlorine	Daily	Ok	Composite sampler	Hach Method
Organic Solvents(VOC)	Bi-Annually	Ok	Composite sampler	Gas Chromatography
Oil Fats Greases	Bi-Annually	Ok	Composite sampler	Standard Method
Toxicity	Annually	Ok	Composite sampler	Dophnia magna/Vibrio fischeri

TABLE C.2(ii): AMBIENT ENVIRONMENT MONITORING AND SAMPLING POINTS (One table per monitoring point)

Monitoring Point Reference Number: SD-1

Parameter	Monitoring frequency	Accessibility of Sampling point	Sampling method	Analysis method/ technique
pH	Quarterly	Easy Access	Grab Sample	pH meter
COD	Quarterly	Easy Access	Grab Sample	Standard Method
Total Heavy Metals	Quarterly	Easy Access	Grab Sample	Standard Method
Zinc	Quarterly	Easy Access	Grab Sample	Hach Method
Nickel	Quarterly	Easy Access	Grab Sample	Hach Method
Copper	Quarterly	Easy Access	Grab Sample	Hach Method
Total Chromium	Quarterly	Easy Access	Grab Sample	Hach Method
Hex Chromium	Quarterly	Easy Access	Grab Sample	Hach Method
Cadmium	Quarterly	Easy Access	Grab Sample	Hach Method
Conductivity	Quarterly	Easy Access	Grab Sample	Conductivity Meter
Chloroform	Quarterly	Easy Access	Grab Sample	VOC scan

Table D.1(i) RECEIVING WATER SURFACE WATER QUALITY

Monitoring Point/Grid Reference: __SW-2302 (Down stream from SW-1)_____

Parameter	Results [1] (mg/l)												Sampling method (grab, drift etc.)	Normal Analytical Range	Analysis method/ technique
	Aug 2011	May 2011	Mar 2011	Nov 2010	Oct 2010	May 2010	Feb 2010	Dec 2009	Aug 2009	July 2009	Mar 2009	Dec 2008			
pH	7.51	7.75	7.04	7.25	7.66	7.63	8.31	8.19	7.39	8.02	8.50	7.75	grab		pH meter
Electrical conductivity EC	560	444	240	517	673	470	507	525	516	158	140	825	grab		Conductivity meter
COD	12	7	10	16	11	14	67	22	42	40	24	18	grab		Std method
Chloride	26.7	44.2	25.6	/	/	/	/	0.0002	0.001	0.001	0.001	0.001	grab		Atomic Abs/ICP
Total Cyanide	<0.01	0.01	0.01	0.0005	/			0.005	0.05	0.05	0.05	0.05	grab		Atomic Abs/ICP
Total Ammonia	0.04	0.44	0.06	0.2	/	0.9							grab		Atomic Abs/ICP
Dissolved Cadmium	0.005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0002	0.0002	0.0004	0.0005	grab		Atomic Abs/ICP
Diss. Chromium	0.0015	0.007	0.0015	0.0015	0.0137	0.1179	0.023	0.013	0.009	0.17	0.01	0.05			
Dissolved Copper	0.007	0.007	0.007	0.009	0.007	0.032	0.039	0.009	0.003	0.036	0.028	0.05	grab		Atomic Abs/ICP
Dissolved nickel	0.012	0.033	0.023	0.008	0.017	0.068	0.409	0.005	0.008	0.212	0.140	0.05	grab		Atomic Abs/ICP
Dissolved Zinc	0.006	0.063	0.051	0.018	0.004	0.071	0.019	0.020	0.026	0.010	0.270	0.05	grab		Atomic Abs/ICP
Hex. Chromium	<0.03	0.03	0.03	0.03	<0.03	0.03	/	0.03	0.03	0.150	0.09	0.03	grab		Atomic Abs/ICP
Total Chromium	0.0015	0.008	0.0025	0.0015	0.0217	0.145	/	/	/	/	/	/	grab		Atomic Abs/ICP
Total metal Analys	0.045	0.104	0.0765	0.035	0.264	0.351	/	/	/	/	/	/	grab		Std method
Chloroform	0.011	0.035	0.038	0.002	0.029	0.065	0.066	0.024	0.011	0.055	0.088	0.01	grab		VOC scan

[1] At least 12 samples should be taken at regular intervals.

Results submitted are supplied from White Young Green consultants from Ground water reports.

Provide summary of the monitoring results

Appendix 1

B.2 Tubular Data on Emission Points to Surface Water

Point code	Easting	Northing	Verified	Emission	Frequency
			yes/no		of test
SW-1	E08.73610	N54.05218	YES	Flow	Continuous
(Process Discharge)				COD	Daily
				Suspended Solid	Bi-annually
				Ammonia(as N)	Bi-annually
				Temperature	Weekly
				pH	Weekly
				BOD	Bi-annually
				Total Phorphous(as P)	Bi-annually
				Phenols	Bi-annually
				Cyanide	Daily
				Total Heavy Metals	Weekly
				Zinc	Weekly
				Nickel	Weekly
				Copper	Weekly
				Total Chromium	Weekly
				Chromium IV	Daily
				Cadmium	Bi-annually
				Total Chlorine	Daily
				Free Chlorine	Daily
				Organic Solvents (VOC)	Bi-annually
				Oils, Fats Greases	Bi-annually
				Toxicity	Annually

Point code	Easting	Northing	Verified	Emission	Frequency
			yes/no		of test
SD-1	E08.73685	N54.05313	YES	pH	Quarterly
(Storm Water Discharge)				COD	Quarterly
				Total Heavy Metals	Quarterly
				Zinc	Quarterly
				Nickel	Quarterly
				Copper	Quarterly
				Total Chromium	Quarterly
				Chromium IV	Quarterly
				Cadmium	Quarterly
				Conductivity	Quarterly
				Chloroform	Quarterly

D.2 Environmental Considerations and Best Available Techniques (BAT)

Environmental considerations made with respect to the use of cleaner technology, waste minimisation and raw material substitution.

- Recirculation /recycling of the polishing/cleaning compound by using a centrifuge remove solid waste.
- Reduction of water usage with the repair of leaking water pipes.
- Reduction of chemical usage
- Reduction of cardboard usage and the recycling of cardboard
- Reduction of electricity usage by turning off motors and lights when not needed.
- Reduction of electricity usage on compressors by the reduction of compressor running time.
- Insulation of heating pipes and tanks to reduce heating costs
- Reduction in paper usage.
- Composting canteen waste.

E.1 Best Environmental Practices

Demonstrate the best environmental practices are in place for the control of diffuse emissions from the installation/facility

We are using the best industry environmental practices to achieve our licence targets.
We strive to improve the targets to the new standards.
For example: E.1(g)
Recirculation of polishing compound. The removal of zinc solids and waste particles from liquid by the use of a centrifuge. This allows the re-circulation of the polishing compound back into the process

Attachment No D.1.2 **(Appendix 2)**

Ref: CE02053/CMK/TH

Date: 2nd November 2011

Mr. Mark Murphy

Basta Parsons Ltd.

Tubbercurry,

Co. Sligo

Re: Proposal for Installation of two additional shallow monitoring wells and one deep monitoring borehole, quarterly groundwater and surface water monitoring.

Dear Mark,

At the request of Basta Parsons Ltd., WYG Environmental and Planning (Ireland) Limited (WYG) submit this proposal to install two additional shallow monitoring boreholes and one deep monitoring well and collect representative groundwater and surface water samples at Tubbercurry Co. Sligo.

Background

To date quarterly sampling has been on-going to confirm that degradation of historical TCE contamination is ongoing and that there is no significant effect on surface water and groundwater receptors outside of the site boundary. A meeting was held with the EPA (September 7th 2011) to review the progress to date and to identify a closing out procedure. It was recommended by the EPA that provision of additional monitoring data in the north west of the site, adjacent to the plant is necessary to confirm that a plume of contamination does not exist in this downgradient direction. The EPA confirmed that they were satisfied that there was no evidence of contamination migrating in a northerly direction.

Proposed Methodology

Phase 1 would consist of conducting a soil vapor survey to determine optimum borehole locations followed by the installation of two shallow boreholes at representative locations on or adjacent to the paving in the north west of the plant (between MW-3 and MW-4). The boreholes will be logged by WYG and representative water samples collected for independent analysis. Water samples will also be collected from MW,3 and MW-4. Surface water samples will be collected as in previous rounds and flow monitoring undertaken at 4 representative locations to allow dilution assessment. It was agreed at the meeting that no further sampling of MW-202 and MW201 was necessary as previous results have confirmed that there is no indication of contamination migrating in that direction. If no evidence of contamination is determined by the soil vapour survey or soil & water results, then no further drilling will be required.

Table 1 Laboratory Analysis - water

	MW-3	MW-4	MW-301	MW-302	SW-101	SW-102	SW-103	SW-104	SW-105	SW-106	SW-107
pH	√	√	√	√	√	√		√			
Ammonia, nitrate	√	√	√	√	√	√		√			
Metals*	√	√	√	√	√	√		√			
VOCs**	√	√	√	√	√	√	√	√	√	√	√
COD	√	√	√	√	√	√		√		√	√
Total Cyanide					√	√		√			

Laboratory analysis will also be completed to establish presence of compounds to support trichloroethene reduction at the site including dissolved oxygen, nitrate, iron II, sulphate, and sulphide, with field measurements for ORP, pH, temperature and conductivity.

* Metals - zinc, nickel, cadmium, chromium, copper, iron II, sulphate & sulphide chromium VI and total chromium

** Organohalogens include all compounds with the following chloro, fluoro or bromo

Note I: MW 301, MW 302 are the two new proposed shallow boreholes.

Note II field measurements for ORP, pH, temperature and conductivity.

Phase II (if required) would consist of the installation of a deeper borehole adjacent to an area of identified contamination within the shallow soils (based on the Phase 1 drilling and sampling programme). The borehole will be logged by WYG and representative soil samples and water samples collected for independent analysis. Water samples will also be collected from this deep borehole and two adjacent shallow wells and a brief report on the depth profile of any contamination prepared.

Schedule

WYG can commence the Phase 1 programme of works detailed in this proposal within 10 working days of written authorisation to proceed. Following receipt of the written authorisation it is anticipated that it will

take four weeks to complete drilling, monitoring and reporting. Phase II works will be determined by the results of the Phase I assessment.

Budget Estimate (2nd November 2011)

The following provides our budget estimate to undertake the works described above. VAT is not included and is chargeable at 21%.

Phase I

Professional Fees

Drilling supervision, soil vapour survey, flow monitoring, borehole surveying, sampling & reporting	€5,446.00
Expenses (Including not exhaustively - mileage, hire of equipment, subsistence, sampling consumables, couriers)	€350.00

Analytical Costs

Suite as outlined in table 1 above	€1,200.00

Drilling costs

Installation of 2 no.shallow boreholes (depth 5 metres)	€1,400.00
Total Phase 1 (ex. Vat)	**€8,396.00**

Phase II

Professional Fees

Drilling supervision , borehole surveying, sampling & reporting	€2,500.00
Expenses (Including not exhaustively - mileage, hire of equipment, subsistence, sampling consumables, couriers)	€250.00

Analytical Costs

Sampling of deep and shallow borehole for VOC and metal suite	€200.00

Drilling costs

Installation of 1 no. deep boreholes (15 metres depth)	€1,900.00
Total Phase II (ex. Vat)	**€4,850.00**

Note:

Professional fees, expenses and costs are all estimates. Any changes to these estimates resulting from additional work or unforeseen circumstances will be advised to the Client and charged accordingly.

Additional time not included in the scope of work will be charged on an hourly basis.

Please find attached our Terms of Engagement for Environmental Consulting Services (the Terms of Engagement) together with an authorisation to proceed form (the "Authorisation"). We can commence the Services once the Authorisation has been returned and completed by the Client with details of whom the invoice should be made out to.

This offer is made strictly on the agreement that payment will be made in line with our Terms of Engagement. Invoices will generally be submitted on a monthly basis during the month of the Services provision. Interim invoices will be submitted on larger value contracts. No other basis can be assumed unless agreed prior in writing by WYG. If any sums should remain unpaid after 28 days your attention is drawn to Clause 5.3 of the Terms of Engagement.

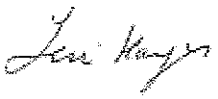
As more particularly set out at clause 9.1 of the Terms of Engagement, no person (including the Client) is entitled to use or rely on any documentation supplied by WYG in connection with the Services or their contents at any time if any Fees (or re-imbursement of expenses) due to WYG by the Client are outstanding. In those circumstances, WYG may require the return of all copies of those documents.

Our total liability arising out of our agreed services is detailed in our Terms of Engagement at Clause 7. We carry professional indemnity insurance (subject to an aggregate claim limitation on matters relating to pollution and contamination and the exclusion of cover for asbestos and terrorism related claims). Our insurers are fully aware of our Services related to Environmental Consultancy.

We request that any relevant information relating to this project is forwarded to us along with your Authorisation. The Fee assumes that the Services will be applied at the normal rate as per the estimated time programme. If we are requested to deliver the project in a concentrated time period or if the programme is extended this will constitute Additional Services as defined in the Terms of Engagement. We will undertake to proceed diligently with Services defined and quoted for herewith and we will exercise such reasonable skill and care as may be expected of a properly qualified and competent Environmental Consultancy.

We trust that the above is of interest to yourselves and we thank you for this opportunity to submit this proposal. Should you have any queries or comments, please do not hesitate to get in contact with the undersigned.

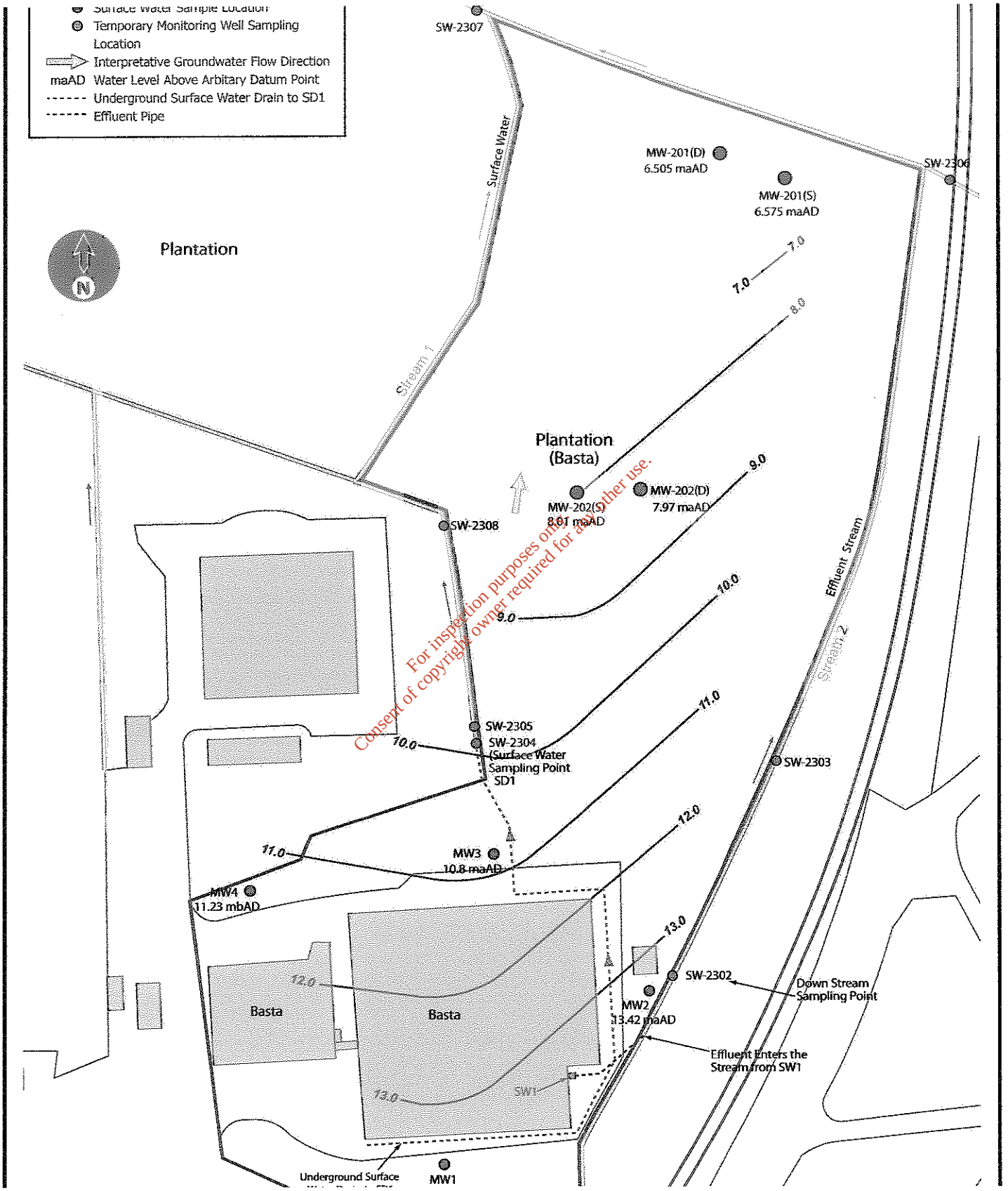
Yours Sincerely,



Teri Hayes

Director

For and on behalf of WYG



Legend

Effluent Discharge Point **Atmospheric Emissions Point** **Surface Water Emissions Point**

Site Boundary