



This Report has been cleared
for submission to the Board by
Senior Inspector Marie O Connor
Signed Dee Reilly Date 3/10/12

**OFFICE
LICENSING &
RESOURCE USE**

INSPECTORS REPORT ON A LICENCE REVIEW

To:	Directors	
From:	Orla Harrington	- Licensing Unit
Date:	2 ND OCTOBER 2012	
RE:	REVIEW OF AN IPPC LICENCE – BASTA PARSONS LIMITED, GALLAGHER ROAD, TUBBERCERRY, CO SLIGO. LICENCE REGISTER NO. P0269-02	

Review Details	
Licensee:	Basta Parsons Limited,
Location of Installation:	Gallagher Road, Tubbercurry, Co Sligo.
Class of activity:	Class 12.3: The surface treatment of metals and plastic materials using an electrolytic or chemical process where the volume of the treatment vats exceeds 30 m ³ .
Category of Activity under IPPC Directive (2008/1/EC):	2.6
Section 87(1)b notice sent:	29 th September 2011
Review form received:	16 th January 2012
Notices under Article 90 issued:	29 th February 2012, 8 th May 2012
Information under Article 90 received:	2 nd April 2012, 18 th June 2012
Submissions received:	One (13 th February 2012)

1.0 Reason for Licence Review

Basta Parsons Limited (Ltd) is a manufacturing company that produces window and door furniture. These products are made from zinc and are electro-plate finished with copper, nickel and chrome. Basta Parsons Ltd is situated on the western side of Tubbercurry, Co. Sligo. The installation was granted a licence by the Agency on the 16th January 1998 and was

technically amended on the 9th November 2005 to bring operations into compliance with the Environmental Protection Agency Acts, 1992 and 2003. It should be noted that the licensee changed their name from Basta Hardware Limited to Basta Parsons Limited on the 2nd May 2001. The notification of the name change was received by the Agency on the 28th June 2005 and approved on the 26th July 2005. The licensee is a legal entity of normal status and the associated company's registration office (CRO) number is 280319.

On the 29th of September 2011, the Environmental Protection Agency initiated a review of the IPPC licence held by Basta Parsons Ltd for the installation located at Tubbercurry, Co. Sligo, IPPC licence register number P0269-01. The review was initiated by writing to the licensee and placing a newspaper notice in the Irish Independent. The reasons for initiating the review are in light of the following regulations:

- (1) The European Communities Environmental Objectives (Surface Waters) Regulations 2009; and
- (2) The European Communities Environmental Objectives (Ground Water) Regulations 2010.

2.0 Emissions to Surface Waters

The emissions from the installation come from the plating process. There is an onsite Waste Water Treatment Plant (WWTP) which treats waste metals (nickel, chrome, zinc and cyanide).

Process effluent flowing into the WWTP is pumped to a cylindrical feed tank with a conical base. The pH is adjusted to the optimum range for precipitating the metals out as insoluble complexes. The addition of lime is used to raise the pH. All solids are then fed through a centrifuge and dropped to a containment vessel before removal by a registered contractor. The liquid effluent is pumped through a microfiltration unit, which acts like a sieve and removes any particles remaining in the effluent. The liquid effluent is pH adjusted to meet licence limits before discharging via emission point SW1 to Stream 2. There are two surface water drainage lines from the site (Stream 1 and Stream 2) which collect storm water and treated effluent from the site and flow for 0.4km before discharging to the Tubbercurry River.

The process effluent emission is in compliance with its existing licence limits. The annual environmental report (AER) 2011 for the installation showed 100% compliance for licensed parameters discharging to the Tubbercurry River. The WWTP operates to meet the following requirements; BOD (20mg/l), COD (100mg/l) and SS (30mg/l). Total P removal is to less than the emission limit value of 2mg/l.

Priority substances are limited in the existing licence for effluent emissions from SW1. This includes cadmium which is a priority hazardous substance.

Storm water is discharged via SD1 to Stream 1. Elevated levels of zinc were reported in SD1 during 2010. EPA monitoring done on the 14th September 2010 recorded a level of 300µg/l zinc in the storm water discharge. Condition 3 and 8 in the recommended determination (RD) provides for both the appropriate handling of materials and the operation of the installation to ensure the protection of the environment against spillage/run-off.

All sanitary effluent is discharged to sewer.

2.1. Receiving waters and impact

The treated final effluent (SW1) discharges into Stream 2 and is conveyed by a spring for approximately 0.4km before it meets the Tubbercurry River (IE_WE_34_2633). Stream 2 has not been allocated a waterbody code as part of the characterisation of surface waters under the Water Framework Directive (WFD) and the Agency has decided that it is not acceptable to use a stream as a conduit for a discharge.

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Therefore, the RD requires the licensee to submit to the Agency for agreement, proposals for the relocation of the final effluent discharge point to the Tubbercurry River and having regard to the proposals submitted the licensee must implement agreed proposals before the 22nd December 2015. In light of this requirement to relocate the point of discharge, the Tubbercurry River and not Stream 2 has been assessed as part of this review and table 1 below summarises the main considerations in relation to this river.

Table 1.0 Receiving waters

Characteristic	Information	Comment
Receiving water name and code	Tubbercurry River (IE_WE_34_2633)	The Tubbercurry River flows for 5km before it reaches the River Moy (IE_WE_34_1462_1)
EPA monitoring stations	RS34T030400 RS34T020050 RS34M020300 RS34M020400	On the Tubbercurry River 0.6km upstream of the installation On the Tubbercurry River 0.6km downstream of the installation. On the River Moy 1.2km upstream of the confluence with the Tubbercurry River. On the River Moy 2.5km downstream of the confluence with the Tubbercurry River.
Biological quality rating (Q value)	Q2 2010 (RS34T030400) Q1-2 2010 (RS34T020050) Q4-5 2010 (RS34M020300) Q4 2010 (RS34M020400)	Upstream Downstream of the installation. This is deterioration from Q2 in 2008. On the River Moy 1.2km upstream of the confluence with the Tubbercurry River. On the River Moy 2.5km downstream of the confluence with the Tubbercurry River.
WFD Status	Bad (2011) ^{Note 1}	Objective is to restore by 2021. The River Moy has good status and is 5km downstream of the installation.
WFD Risk	1a, at risk.	
WFD Protected Areas	River Moy SAC (Code : 002298)	5km downstream of the installation

	River Moy is a designated salmonid river	-
WMU Action plan	The Moy Water Management Unit Action Pan	The installation has been identified as both a pressure and a risk to the waterbody in the plan.

Note 1: Western River Basin Management Plan (2009-2015) www.wfdireland.ie/maps.html

The installation is identified as both a pressure and a risk in the Water Management Unit Action Plan. Other pressures on the waterbody from nutrient sources have been identified as coming predominantly from agriculture (70%). Monitoring undertaken by the Agency indicates that upstream of the installation has a Q2 biological quality rating and deteriorating slightly to Q1-2 downstream of the emission to water (SW1). The Tubbercurry River has a water quality status rating of 'Bad' and the western river basin management plan (WRBMP) has set the water quality objective as 'restore to good status by 2021'.

Following consultation with the Office of Environmental Assessment (OEA) the main cause for concern regarding the poor status upstream of the installation seems to be sewage from the town. The licence application for the Tubbercurry agglomeration (D0092-01) is currently being assessed under the Waste Water Discharge (Authorisation) Regulations 2007, which when licensed will facilitate the river meeting its good status objective.

Chemical monitoring data taken from the Water Quality in Ireland 2007 -2009 report indicates that quality standards for orthophosphate are not being observed at (RS34T030400) upstream of the discharge point. The same dataset indicates a marked decline in water quality for all parameters downstream at RS34T020050; Ortho P (0.198mg/l), Total ammonia (0.989mg/l) and BOD (4.3mg/l).

An assessment on the impact of discharges on the Tubbercurry River was not carried out by the licensee.

The calculations in table 2 are based on the maximum flow rates from SW1 at 200m³/day (0.0023m³/sec) and 95%ile flow (0.02m³/sec) in the Tubbercurry River. The river flow upstream of the installation is 9 times greater than the discharge. The adjusted background values were used in the following table and are in accordance with the criteria set out in the *Guidance, Procedures and Training on the Licensing of Discharges to Waters and to Sewer for Local Authorities* issued by the Water Services Training Group. Ambient monitoring submitted as part of the review did not include monitoring for BOD and Ortho P.

Table 2: Mass Balance

Parameter	Background Conc. (mg/l) ^{Note 1}	Current ELVs (mg/l)	Proposed ELVs (mg/l)	Contribution from the discharge ^{Note 2} (mg/l)	Predicted downstream concentration ^{Note 2} (mg/l)	95%ile standard (mg/l) (good) ^{Note 3}
BOD	1.4	20	13	1.19	2.59	≤2.6
PO ₄ -P	0.03	2(TP)	0.45	0.043	0.073	≤0.075
Total Ammonia - N	0.053	10	0.85	0.082	0.135	≤0.140

Note 1: For good status waters the 'adjusted background conc.' is taken as midway between the high status EQS and good status EQS (mean standard).

Note 2: Based on the proposed ELVs

Note 3: European Communities Environmental Objectives (Surface Waters) Regulations 2009 - 2012.

Table 2 demonstrates that a reduction in BOD, Total Ammonia and Ortho P is required in order to comply with the requirements of the *European Communities Environmental Objectives (Surface Waters) Regulations 2009 - 2012*.

Monitoring results submitted as part of the review reported that the maximum daily average for Total Ammonia is 0.7mg/l, BOD 10.5mg/l and Total P 0.045mg/l which indicates that the proposed emission limit values (ELVs) can be met. The RD specifies that the proposed ELVs will not be effective until the 22nd December 2015 which will give the licensee time to relocate the discharge point, improve the control over the parameters and facilitate the Tubbercurry River reaching its good status objective by 2021.

The RD provides, post 2015 when more stringent ELVs take effect, under Condition 4 (Interpretation), for 8 out of 10 results to meet the limit value and in the case of Total Ammonia and Ortho P, specifies no individual result shall exceed the limit value by more than 2 times. This is an increase from 1.5 times which is currently applicable under IPPC licence register number P0269-01. All other parameters shall not exceed the limit value by 1.5 times which is a requirement brought forward from the current licence. The Ortho P limit will replace the Total Phosphorus limit currently specified in the existing licence from date of grant of licence.

The RD proposes to remove the limit for unionised ammonia. The Tubbercurry River is not designated as salmonid water under the *Salmonid Regulations S.I No. 293/1988* and the requirement to limit Total Ammonia in the current licence will be brought forward in the RD which is directly comparable to a quality standard in the *Surface Waters Regulations 2009 - 2012*.

The process effluent emission is currently limited for temperature (max. 25^oC). The RD retains the requirement not to increase the temperature of the receiving water by more than 1.5^oC and further specifies that the mixing zone shall not exceed 25% of the cross sectional area of the river.

This review does not deal with emissions to air however considering that this installation carries out an IPPC Directive activity, the RD requires the licensee under Schedule of Environmental Objectives and Targets, to review a reduction in emissions to air to levels specified in BAT.

Priority Substances/Heavy metals

The calculations in table 2(b) are based on the maximum flow rates from SW1 at 200m³/day (0.0023m³/sec) and Dry Weather Flow (DWF) (0.01m³/sec) in the Tubbercurry River. The use of DWF conditions in this assessment are considered more appropriate given the toxicity of the priority substances/heavy metals. The river flow upstream of the installation is 4 times greater than the discharge flow when applying DWF conditions. Background concentrations for specific pollutants, priority substances and priority hazardous substances were submitted in the review application and used in the assessment.

Table 2 (b): Mass Balance for specific pollutants, priority substances and priority hazardous substances

Parameter	Background Concentration (mg/l) Note 1	Current ELVs (mg/l)	Proposed ELVs (mg/l)	Contribution from the discharge (mg/l) Note 2	Predicted downstream concentration (mg/l) Note 2	Annual Average standard (mg/l) Note 3
Cadmium	0.0005	0.1	0.005	0.0008	0.0013	0.0015 Note 4

Nickel	0.002	0.5	0.1	0.018	0.020	0.02
Copper	0.007	0.5	0.13	0.028	0.03	0.03

Note 1: Background monitoring data submitted as part of the review

Note 2: Based on proposed ELVs.

Note 3: European Communities Environmental Objectives (Surface Waters) Regulations 2009 - 2012.

Note 4: Maximum allowable concentration (MAC-EQS) as per the Surface Waters Regulations 2009 - 2012.

Basta Parsons Ltd products are made from zinc and are electro-plate finished with copper, nickel and chrome. The emissions come from the plating process and the existing licence specifies limits for specific pollutants (chromium VI/total chromium, cyanide, zinc and copper), priority pollutants (nickel, lead) and a priority hazardous substance (cadmium). The ELVs proposed are in compliance with the limits specified in the *PARCOM recommendation 92/4* which applies to wastewater emissions from the electroplating industry discharging to water and will observe the standards specified in the *European Communities Environmental Objectives (Surface Waters) Regulations 2009 - 2012*.

Monitoring data in the 2011 AER indicates that the proposed ELVs can be met. The RD specifies that these ELVs will not be effective until the 22nd December 2015.

As discussed in Section 2.0, high levels of zinc were detected in the storm water at emission point (SD1). As a result of the identified contamination of the surface water at the site it is necessary to include more frequent monitoring requirements on the licensee. The RD requires that the monitoring frequency be increased from quarterly to weekly for zinc. The licensee can request a reduction in frequency when it is demonstrated that the discharge is substantially uncontaminated. As noted in the site inspection report on the 31st March 2011 (inspection reference no. P0269-01(11) SI11HB) elevated levels of chlorinated hydrocarbons (CHC's) were reported in SD1 and/or SW1705/1805 (just down gradient of SD1) in 2010. The report states that '*There appears to be an on-going source of release of such compounds to the surface water system, either as a process related discharge or groundwater base flow from an area of residual contamination (or both)*'. The RD requires the licensee within six months from date of grant of licence, establish suitable trigger levels for both zinc and chlorinated hydrocarbons in storm water discharges, such that storm waters exceeding these trigger levels will be diverted for retention and suitable disposal. The licensee shall have regard to the *Guidance on the setting of trigger values for storm water discharges to off-site surface waters at EPA IPPC and Waste Licensed Facilities* (draft) published by the Office of Environmental Enforcement (OEE). The RD also requires the licensee to carry out an investigation to identify the nature, source and cause of the zinc and CHC's contamination at SD1. This shall isolate the source, evaluate the environmental pollution and put in place measures to avoid recurrence. A report on this investigation shall be submitted to the Agency for approval within three months from date of grant of licence.

There is a requirement in the current licence to limit total chromium. Chromium exists in two oxidation states in the environment: trivalent (+3) and hexavalent (+6), the latter of which is more toxic. The total chromium parameter will be removed and chromium hexavalent (VI) will be left as is, which is directly comparable with a quality standard; however there will still be a requirement to monitor for total chromium in the RD. The requirement to limit for lead in the current licence will be removed in the RD. Lead is not characteristic of the discharge and monitoring results have not been submitted as part of the review. The requirement to limit for total heavy metals (THM) will be removed in the RD. There is no environmental quality standard (EQS) for THM in the *Surface Waters Regulations 2009 - 2012* and all metals of relevance to this installation have been assessed. There will still be a requirement to monitor for THM in the RD.

The current licence (licence register number P0269-01) has a requirement to limit for toxicity with an ELV of 10 TU. The RD proposes to replace this with an ELV of 5 TU in line with the BAT Guidance Note for the Surface Treatment of Metals and Plastic Materials.

Although the effluent is subject to treatment it is unlikely that the total elimination of heavy metals will occur as it is characteristic of the process effluent. The regulations require the drawing up of pollution reduction plans by coordinating local authorities (in consultation with the EPA) to reduce pollution by priority substances and to cease and/or phase out discharges, emissions or losses of priority hazardous substances. The relevant pollution reduction plan has not yet been completed. In the absence of the pollution reduction plan, the RD requires the licensee to review the plan when it is established; implement appropriate measures or controls and report them in the AER.

2.2 Specific Standards or Objectives for Protected Areas

In considering the application regard was had to the requirements of standards or objectives laid down for protected areas specifically the following:

Habitats and Species of European Sites directly dependant on water

The Tubbercurry River is part of the River Moy Special Area of Conservation (SAC 002298). The installation discharges 5km upstream of this SAC. The objectives for the SAC are to maintain or restore the favourable conservation condition of the Annex I habitats and Annex II species for which the SAC has been selected.

As previously highlighted, this review is for the purposes of assessing existing discharges in the context of new environmental quality standards and objectives and does not consider any further increase in the ELVs for emissions to waters. The Agency has examined the scope of the European Communities (Birds and Natural Habitats) Regulations 2011 and within the limited scope of this review; the Agency is satisfied that the discharge will not likely have a significant effect on the River Moy SAC. With respect to water quality, the ELVs in the RD aim to achieve good status in the River Moy SAC, and hence, will contribute to the favourable conservation objectives for the area.

2.3 Emission controls and environmental quality standards

The ELV's specified in the RD have been established according to the combined approach whereby the stricter of the requirements which would result from the application of limits which aim to achieve the quality standards and the application of limits based on BAT.

The ELVs specified in the RD aim to achieve the environmental objectives and standards established in the European Communities Environmental Objectives (Surface Waters) Regulations 2009 - 2012.

3.0 Emissions to Groundwater

There should be no process emission to ground associated with this installation. Historically, contamination of the groundwater beneath the site has occurred due to trichloroethylene (TCE) contamination. The TCE contamination relates to leaching from historic practices in the vicinity of the main production building, which was discontinued in the 1980's. TCE was used for cleaning and degreasing pre 1970s. Four groundwater monitoring wells (MW1-MW4) were installed in 1998 as part of a hydrogeological investigation required under the current licence (licence register number P0269-01). An additional five were installed in 2004.

The TCE contamination is located to the northwest of the site. A groundwater flow direction survey, undertaken in September 2005, found the overburden groundwater at the site to flow northwards, towards the Tubbercurry River. The most recent report submitted to the Agency by White Young Green (WYG) Consultants on behalf of the licensee entitled '*Groundwater and Surface Water Monitoring Report*' March 2012, concluded that additional groundwater

and surface water monitoring has shown that the contamination appears to be localised. The additional drilling on site has aided in delineating the localised plume of chlorinated hydrocarbon contamination. Monitoring results according to this report also confirm that the Tubbercurry River has not been impacted. WYG consultants have stated in this report that monitored natural attenuation (MNA) is occurring in the immediate vicinity of the site. MNA is a technique used to monitor or test the progress of natural attenuation processes that can degrade contaminants in soil and groundwater and in this situation is the only remediation process in operation at the installation.

It was noted by OEE in response to this report (Ref P0269-01(12) GC72HB.docx) that there was insufficient data to provide a clear picture of what is currently happening on site. There were no recommendations provided and insufficient details of sampling techniques/boreholes. The RD requires the licensee to review the most recent hydrogeological assessment done to demonstrate compliance with the EO *Groundwater Regulations 2010* and a report on the review must be included in the next AER. Any actions required to demonstrate compliance with the European Communities Environmental Objectives (Groundwater) Regulations 2010, must be implemented before 22nd December 2015.

The requirements specified in the RD aim to achieve the environmental objectives and standards set out in the European Communities Environmental Objectives (Ground Water) Regulations 2010.

4.0 Updating the existing licence

The RD has transposed all relevant existing licence conditions from P0269-01 into the Agency's current licence format. Consequently the RD specifies amendments and additional requirements.

Table 3 summarises the amendments made to the existing licence as a result of changes to the following;

- Adjustments approved by the OEE
- Once off assessments and reports being closed out
- Statutory and format updates of conditions
- The European Communities Environmental Objectives (Surface Waters) Regulations 2009 - 2012
- The European Communities Environmental Objectives (Groundwater) Regulations 2010

Table 3: List of new or amended conditions proposed in the RD

Condition or Schedule No.	Reason for change	Description
Condition 1.1, 1.2, 1.3, 1.7	Update licence	Scope
Condition 2.1, 2.2,	Update licence, BAT requirements	Installation management, review to achieve a reduction in air emissions.
Condition 3.1, 3.2, 3.4, 3.5, 3.6, 3.7, 3.10,3.11, 8.3, 8.6,8.8, 8.9	Update licence, statutory requirements.	Installation notice board, infrastructure, labelling, composite sampling, tank/container/drum storage areas, protection of wellheads, material handling, import/export of waste

Condition 6.1, 6.2, 6.5, 6.8, 6.12, 6.13, 6.16, 9.1, 9.2, 10.2, 11.7, 11.9, 12.2	Update the licence/ statutory requirements.	Control and monitoring, fugitive emissions, drainage, leaks, noise, accident prevention and emergency response, DMP, Notifications/reports, ELRA.
Schedule C.2.1, C.2.2	Update the licence	Control of emissions to water, monitoring of emissions to water

5.0 Cross Office Liaison

The OEE inspector for Basta Parsons Limited, Helen Boyce, was consulted in relation to current compliance and historical issues at the plant.

OEE is satisfied that the following conditions from the current licence (register number P0269-01) can be amended or removed to update the RD; Condition 6.8 (toxicity), Condition 6.10 (Temperature), Condition 7.5 (Waste management), Condition 8.1 (noise), Condition 9.1 (Surface Water) and Condition 9.2 (Groundwater).

OEE have requested that the monitoring frequencies for both emissions to water (SW1), storm water emissions and air monitoring are revised, which is included in the RD. The OEE agreed to the use of mass emissions per day (kg/day) on the 24th July 2006 in addition to concentration (mg/l) when reporting on emissions from SW1. This will not be carried forward in the RD as it is only a multiplication and offers no flexibility to the licensee.

The Decommissioning Management Plan (DMP) and the Environmental Liabilities Risk Assessment (ELRA) were submitted to the OEE in 2008. Following consultation with OEE, the RD requires that both documents be updated and submitted to the Agency within six months from date of grant of licence.

Submission

One submission was received and dealt with below:

Mr David Tuohy, Development Applications Unit, Department of Arts, Heritage and the Gaeltacht;

The Department is of the view that this development could significantly damage/destroy the River Moy SAC located 5km downstream of the installation. The potential impacts would be caused by the deterioration of the water quality downstream in the River Moy resulting from pollution caused by the discharge of trade effluent from the development. There has been no assessment of the potential ecological implications arising from this development. Therefore, it is not possible to adequately assess the impacts of the proposed development to the River Moy SAC.

Response

This review was initiated by the Agency to bring the licence into compliance with the European Communities Environmental Objectives (Surface Waters) Regulations 2009 - 2012 and European Communities Environmental Objectives (Groundwater) Regulations 2010. The review relates principally to the discharges to water.

As previously stated, the installation discharges approximately 5km upstream of the River Moy SAC. There are no environmental objectives or standards specified for the SAC. The RD does not propose any increase in the ELV's and furthermore, the RD proposes a reduction in six ELVs. As required by the EO *Surface Waters Regulations 2009 - 2012*, the ELV's aim to achieve good status in the receiving water body and consequently, will contribute to the achievement of a favourable conservation status in the downstream SAC. As part of the River

Basin District Management Plan, an Appropriate Assessment was carried out to ascertain any impacts on Protected Areas in the River Basin District, and a Natura Impact Statement (NIS) was prepared. Within the limited scope of this review, the Agency is satisfied that the discharge is not likely to have a significant effect on the SAC and therefore the requirements regarding Appropriate Assessment set out in Part 5 of the European Communities (Birds and Natural Habitats) Regulations 2011 do not apply.

Charges

The charge specified in the Rd is €12,052.86, the same as the invoice for 2012.

Recommendation

I recommend that a Proposed Determination be issued subject to the conditions and for the reasons as drafted in the RD.

Signed


Orla Harrington

Procedural Note

In the event that no objections are received to the Proposed Determination of the application, a licence will be granted in accordance with Section 87(4) of the Environmental Protection Agency Acts 1992 and 2012 as soon as may be after the expiration of the appropriate period.