

Pollution Prevention and Control (England and Wales) Regulations 2000 (as amended)

The Solvent Emissions (England and Wales) Regulations 2004

Operator	W.Corbett & Co (Galvanizing) Limited
Installation	New Alexandra Works,
Address	Haldane,
	Halesfield 1,
	Telford,
	Shropshire
	TF7 4QQ
Grid Reference	372068 308963
Registered Office	W.Corbett & Co (Galvanizing) Limited
	New Alexandra Works,
	Haldane,
	Halesfield 1,
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	Shropshire
	TF7 4QQ

W.Corbett & Co (Galvanizing) Limited is hereby permitted by The Borough of Telford & Wrekin to carry on a Surface Treatment and Galvanizing Activity under Section 2.3(A2) of the Pollution Prevention and Control (England and Wales) Regulations 2000 (as amended) and other Part B activities as listed and as described below within the installation boundary as marked red on the attached plan reference PPC116/1 and in accordance with the following conditions.

Provenance	Relevant Dates
Date Application Made	19.05.04
Date 'Duly Made'	21.05.04
Date Permit First Issued	31.03.05
Date of Variations	none
Date of Latest Variation	none

This permit consists of 42 numbered pages.



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Description of the Installation

The installation produces iron and steel galvanised fabrications by application of zinc to a diverse range of products. The surface of the fabrication is fused onto the iron or steel by dipping the product into a bath of molten Zinc and this forms a corrosion resistant coating. For ease of identification these steps to achieve this are divided into activities and elements. The activities are prescribed within Schedule 1 of the Pollution Prevention and Control (England and Wales) Regulations 2000 (as amended), and the elements are directly associated and technically connected to the activities.

The galvanizing steps are surface treatment (surface cleaning, pickling, and prefluxing as well as stripping), zinc melting, galvanizing and finally quenching. There are additional elements that also occur on the Corbetts site, involving finishing and assembly.

The following text divides the processes as described above into activities both those scheduled under the above regulations and those non scheduled activities required to be permitted because of their polluting potential and direct association and technical connection with the scheduled activities. For the purpose of this document finishing and assembly are incapable of directly causing pollution of the environment and are not regulated by this document.

The main raw materials are delivered to site by lorry to the concreted area where the items to be galvanized are offloaded as "black steel" by forklift trucks. Zinc metal arrives as ingots and is stored in a segregated area within the process buildings, only a minimal inventory is kept to minimise hold up of capital. Powdered products are delivered in sealed bags and are stored within a segregated area within the process buildings. The hydrochloric acid is delivered in bulk tankers primarily at a concentration of 28 %w/w, the tankers are driven into the process areas and offloaded directly into the tanks, so there is no storage on site. The offloading operation is carried out by the delivery driver, trained by the supplier of the acid.

The deliveries are managed in line with BAT such that they are carried out during daytime, to avoid any reversing alarms on the lorries outside of normal hours. Storage areas for the main raw materials are within the processing building with the exception of the black steel, which is stored on the concreted area. The liquid stores on site for diesel, fuel oil and kerosene are held within designated bunded areas. The management style ensures a high standard of housekeeping is maintained. With all spillages are cleared as soon as possible, via dry methods where practicable.

The installation comprises two almost identical galvanizing plants running side by side. The operation of those plants is almost identical with the exception that the 2nd (newer) plant has a much larger galvanizing bath capable of dealing with physically larger products. For activities 1, 2 and 3 listed below each activity is duplicated



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almost exactly. For convenience, what is written about one activity applies to both, except where noted in the text specifically. The older plant will be designated with the suffix 'a', and the newer with the suffix 'b' in order to distinguish between them.

It is accepted that because the two plants are located in contiguous buildings and that products could equally be galvanized in either plant, there is sufficient technical connection and direct association to issue a permit for the whole installation.

The following text describes the activities in more detail.

1a – Surface Pre-treatment Activity

All materials to be galvanized are subjected to pre-treatment involving the following process:

- Cleaning and Degreasing using acid
- Pickling using acid
- Water rinse
- Pre-fluxing

Some returned imperfectly galvanised products are subject to the following pre-pre-treatment:

> Stripping

In all cases materials to be introduced to the tanks are loaded onto specially constructed loading jigs, and are lifted by overhead cranes. The materials are then moved from tank to tank in sequence. All acid is delivered direct to the tank to be filled. Spent acid is removed for disposal by a suitable waste contractor. No acid is stored other than in the tanks used for pickling.

There are again 8 tanks with capacities noted as:

- 1 18,000L Hydrochloric Acid
- 2 18,000L Hydrochloric Acid
- 3 18,000L Hydrochloric Acid
- 4 18,000L Hydrochloric Acid
- 5 18,000L Hydrochloric Acid
- 6 18,000L Hydrochloric Acid
- 7 18,000L Rinse Water
- 8 22,500L Pre-flux

The *cleaning and degreasing* bath is carried out in any of the 6 large bunded tanks within the installation. Degreasing removes surface oils, grease and traces of coolants and lubricants from fabricated steel using proprietary solutions which are acidic. Surfactant additives are occasionally added in the acid pickling baths which remove oil and grease from the metal surface by emulsification. The resulting unstable emulsions float on the surface of the bath and can be removed. The cleaning and degreasing operation is the initial stage of the pre-treatment process,



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however, the product is not removed from the tank into a separate pickling tank. Pickling takes place after cleaning and degreasing has occurred.

Pickling using acid is carried out in 6 of the 8 large bunded tanks within the installation. Pickling of the metal prepares the surface for better zinc adhesion and is normally carried out with a cocktail of strong acids, pickling inhibitors and fume suppression chemicals (and cleaning and degreasing as above).

Pickling involves removal of surface oxidation products (e.g. rust) and millscale (arising from the steel rolling process). Generally hydrochloric acid (28% or sometimes other grades such as 36%) is bought in bulk and diluted on site for use in pickling baths at ambient temperature. The galvanizing plant usually operates with a series of pickling baths with different acid concentrations that range in strength of pickling liquor from fresh acid (normally 12 to 18%) to spent acid. (2%). To prevent excessive pickling of steel items, especially in pickling high tensile steels, and to protect the steel pickling vats, pickling inhibitors are added to the bath. Fume suppressants may also be used.

Rinse Water is used only between the pickling and the pre-flux stages within the installation to prevent carry over of acid into the flux, and thereby contaminate the contents of that tank. Rinse water is used to dilute the concentrated acid delivered to the installation from 28% concentration to around 18% for normal use, in this way carry over of acid into the rinse water becomes irrelevant and waste is minimised.

Pre-fluxing is a process usually applied to the work surface in order to prevent any oxidation of the work piece before it is dipped. It covers the whole surface and enhances the zinc "wetting" of the steel allowing a uniform coating to be achieved on galvanizing.

Zinc chloride can be used as a flux but most fluxes consist of zinc ammonium chloride (ZAC) and in the case of W.Corbett this is applied in a liquid form.

ZAC is a mixture of zinc chloride and ammonium chloride salts. The proportions of each may vary. They are sometimes described as double or triple salts, where double salt is made of 55% zinc chloride 45% ammonium chloride and triple salt is made of 45% zinc chloride 55% ammonium chloride. Ammonium chloride from the flux is one of the main components of the fume when the workpiece is dipped in the galvanizing bath.

The work piece is dipped into a solution of ZAC at about 70^oC that allows a uniform coating of the flux, it is then removed, drained, and subjected to the galvanizing activity. The pre- fluxing bath is heated using an electric immersion heaters which are shortly to be replaced by a radiant heating plate and a gas boiler.



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Stripping occurs when it is necessary to clean the zinc coatings from the jigs, to remove faulty coatings from steel fabrications or to de- zinc fabrications whose coatings have to be renewed. This is commonly done by dipping in diluted pickling acid. Any acid solution may be used to remove the zinc but management prefers to use the weakest available acid for economic and waste minimisation reasons. Stripping only occurs as and when necessary and is carried out prior to the rest of the surface treatment activity.

Surface Treatment is an activity falling within schedule in section 2.3(A2) of the Pollution Prevention and Control (England and Wales) Regulations 2000 (as amended).

1b – Surface Treatment Activity

The 2nd plant surface treatment operations are identical to those listed for activity 1a above with the exceptions noted below:

Due to the increased capacity of the 2nd plant, the tank sizes are correspondingly larger. There are again 8 tanks with capacities noted as:

- 9 33,600L Hydrochloric Acid
- 10 33,600L Hydrochloric Acid
- 11 33,600L Hydrochloric Acid
- 12 33,600L Hydrochloric Acid
- 13 33,600L Hydrochloric Acid
- 14 33,600L Hydrochloric Acid
- 15 33,600L Rinse Water
- 16 35,400L Pre-flux

The heated pre-flux tank in activity 1b is heated using radiant heater and a gas boiler.

Surface Treatment is an activity falling within schedule in section 2.3(A2) of the Pollution Prevention and Control (England and Wales) Regulations 2000 (as amended).

2a – Metal Melting Activity

The galvanizing bath is a zinc melting crucible that is continuously operating. The large steel melting vessel has a capacity to hold 120 tonnes of molten metal and, dependent on the throughput of galvanizing, the bath has a melt rate of about 0.7-1.0 tonnes per hour. The galvanizing bath is heated directly by hot flue gases from the combustion of natural gas. The burners operate continuously (i.e. the zinc is always kept molten) ensuring the flue gases remain hot and do not give rise to emissions of water droplets or a visible plume. There is no direct contact between the flame and the metal.



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The bath heating system is of an energy efficient design that maximises heat recovery from the combustion of natural gas. The galvanizing baths are maintained at a temperature of \sim 450°C by gas fired burners that are mounted within a jacket that surrounds the bath. The base of the bath is not heated, as the accumulation of dross within the vessel would have an adverse impact upon heat transfer.

All of the burners are of the low-NOx design. Optimal operation of the burners is assured by six-monthly maintenance checks by the burner supplier, during which, the combustion efficiency is monitored by analysing for carbon monoxide in the flue gases.

Metal Melting is an activity falling within schedule 1 in section 2.2(A2)(a) of the Pollution Prevention and Control (England and Wales) Regulations 2000 (as amended).

2b – Metal Melting Activity

The melting capacity of the second galvanizing bath is slightly larger than that of the first with a melt rate capacity of 0.8-1.2 tonnes per hour. Temperature control and melting temperature are identical to 2a above, however, the total mass of molten zinc is approximately 230 tonnes.

Metal Melting is an activity falling within schedule 1 in section 2.2(A2)(a) of the Pollution Prevention and Control (England and Wales) Regulations 2000 (as amended).

3a – Galvanizing Activity

There are two distinct galvanizing baths within the installation, activity 3a relates to the older 1^{st} galvanizing plant that has capacity to galvanize product up to dimensions 5.5m long x 1.4m wide x 2.3m deep. Any larger product would be sent to activity 3b below.

The fluxed steel fabrications are lowered into the galvanizing bath, which contains molten zinc or zinc alloy at about 440 - 460°C. Additions of other metals may be made to the molten zinc to enhance the galvanizing process and finished product. Aluminium and lead are added because of their influence on the thickness and the appearance of the coating. The addition of lead up to 1.4% has an influence on the physical properties of zinc, especially viscosity and surface tension, it helps to wet the steel before galvanizing and the zinc to flow from the surface after galvanizing. Lead can also be used to protect the base of the galvanizing bath. The addition of Aluminium is made to ensure good adhesion of the zinc and the iron and acts as an inhibitor slowing the ferro-zinc fusing.

The galvanizing process is a metallurgical reaction between the steel work piece and the molten zinc which creates zinc/iron alloy layers. The composition of the alloy



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layers change with thickness of the coating. The layers closest to the base metal are iron rich with the percentage of zinc increasing through the layers towards the surface. The characteristics of the final product can be affected by the make up of the steel article. The period of immersion varies from several minutes for relatively light steel work up to 30 minutes for the heaviest structural parts.

The dipping process typically gives rise to fume emissions. These emissions take place principally on the commencement of dipping or occasionally during removal of the work piece. This fume is contained within the completely enclosed galvanizing bath by the extraction enclosure. During dipping, the enclosure is fully closed and the extractor fans switched on. Emissions of fume are captured by the enclosure and are ducted to the bagfilter arrestment plant.

The galvanizing process gives rise to a number of residues, notably in the form of zinc dross. This is a ferro-zinc compound that contains significant levels of impurities that normally collects at the bottom of the galvanizing bath. Additionally zinc ash is generated on the surface of the galvanizing bath as a result of oxidation. The operator recovers this dross and the ash for further zinc recovery by external contractors.

Galvanizing is an activity falling within schedule in section 2.2(B)(c) of the Pollution Prevention and Control (England and Wales) Regulations 2000 (as amended). This activity falls within the same section as the metal melting activity noted above.

3b – Galvanizing Activity

The 2^{nd} galvanizing plant is identical in all respects to 3a above, with the exception that the plant has the capacity to galvanize products up to 7.6m long x 1.4m wide x 3.2m deep.

Galvanizing is an activity falling within schedule in section 2.2(B)(c) of the Pollution Prevention and Control (England and Wales) Regulations 2000 (as amended). This activity falls within the same section as the metal melting activity noted above.

4 – Raw Material Storage element

Raw materials for the installation are stored in varying locations around the site, as marked on the plan PPC116/2 in Appendix 2.

The major raw materials concerned with the installation are listed in Table 1 along with the activities or elements those materials are concerned with the installation.

Raw material storage is an element within the galvanizing process that is directly associated and technically connected with the activities scheduled in section 2.3(Part A2) and section 2.2(Part(B)(d) of the Pollution Prevention and Control (England and Wales) Regulations 2000 (as amended) and as such it is regulated as a polluting activity.



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Materials Used

Table 1 (below) lists the total quantities of raw materials (in tonnes – except where noted otherwise) brought into the installation and subjected to processing. The figures listed are for the year 2002/3.

Raw Material	Usage	Activity
Steel Wire		1a,1b,4,5
Hydrochloric Acid	<u> </u>	1a,1b,4,5
Acid Inhibitor	L L	1a,1b,4,5
Anti-vapour (acid additive)		1a,1b,4,5
Degreaser (acid additive)	Ä	1a,1b,4,5
Zinc Ammonium Chloride	ij	1a,1b,4,5
Zinc		2a,2b,3a,3b,4
Brightener (5-10% Al/Zn Alloy)	Q	2a,2b,3a,3b,4
Lead	0	2a,2b,3a,3b,4
Nickel (NiZn alloy)		2a,2b,3a,3b,4
Lime		3a,3b,4,5
Passivator (Chromate based)		4,6
Steel Banding	O	Packaging
Electricity		Site Activities
Natural Gas	Ž	1a,1b,2a,2b,3a,3b
Diesel		Transport Fuel
Kerosene		Transport Fuel
Gas Oil		Heating
Water		1a,1b,5,6
Zinc Spray		Repair Product

Table 1 Quantities of Materials

The quantities and use of raw materials has been determined to be commercially confidential. The information is submitted to the regulator annually in accordance with condition 6.1 but is not a matter of public record.

Raw materials, e.g. steel for galvanizing is inspected for contaminants e.g. oil and grease.

The receipt and inspection of incoming materials includes:

- Visual inspection of loads during off-loading
- Rejection of any loads containing excessive contamination or non-compliance with purchase specification.

Currently, there is no requirement for the company to operate under a sewerage undertaker discharge consent as all effluent emissions are tankered away from site.



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Table 2 (below) lists all the plant and equipment concerned with the installation that is regulated within this permit. The plant or equipment is classified by Activity (discussed above), identified specifically by reference numbers, relevant emission point(s) and any relevant abatement plant.

Plant or Equipment used	Activity	Machine reference numbers	Abatement	Emission Points
Galvanizing bath	2a,3a		Contaiment, Bagfilter A	1,2
Galvanizing bath	2b,3b		Contaiment, Bagfilter B	3,4
Furnace Burners	2a,3a		none	4
Furnace Burners	2b,3b		none	5
Pickling Baths	1a, 1b		none	fugitive
Pre-flux Baths	1a, 1b		none	fugitive
3 Overhead Crane	1a,2a,3a		none	N/A
3 Overhead Crane	1b,2b,3b		None	N/A
Degrease Baths	1a, 1b		none	fugitive
Compressor	2,3		none	N/A
Boiler	1		none	2

Table 2. List of plant equipment concerned with the installation

Plant concerned with preventing emissions to the environment

Many of the emissions from the process plant identified in Table 2 above, are ducted to abatement equipment installed for the purpose of removing pollutants prior to release to the environment. Table 3 (below) identifies the abatement plant or production equipment that discharge direct to environment via the identified emission point. Equipment and emission points that emit direct to the environment are classified as unabated emission sources. These external emission points are shown on plan PPC116/4.



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Table 3 Abatement plant and Emissions

Plant or Equipment used	Abatement Type	Machine reference numbers	Emission Points	Pollutants
Galvanizing baths	Contaiment, Bagfilters A&B		1, 2, 3, 4	TPM, HCI, Pb, CO, NOx, SOx, CO2, Smoke
Furnace Burners	None, Dispersion		4, 5	Smoke, CO, CO2, NOx, SOx
Boiler	None, Dispersion		2	Smoke, CO, SOx, CO2, NOx

Legend: TPM - Total Particulate Matter, HCI – Hydrogen Chloride, Pb – Lead (and its compounds), CO – Carbon Monoxide, NOx – Oxides of Nitorgen, CO2 – Carbon Dioxide, SOx – Oxides of Sulphur , Smoke – see condition 2.2.

5 – Waste storage element

All waste materials associated with activities and elements noted above are stored in appropriate sealed drums or containers, skips or are contained and stored in the specified waste storage areas marked on plan PPC116/2.

All liquid wastes containing acids are stored in the hydrochloric acid tanks on plan PPC116/2 noted above with a bunded area capable of containing 110% of the volume of the largest container present.

Solid wastes from the installation are stored in dedicated covered containers and are stored within the dedicated waste storage areas.

Waste storage is an element within the surface treatment and galvanizing activity that is directly associated and technically connected with the activities scheduled in section 2.3(Part A2) and section 2.2(Part(B)(d) of the Pollution Prevention and Control (England and Wales) Regulations 2000 (as amended) and as such it is regulated as a polluting activity.

6 – Quenching Activity

After the work piece has been galvanized it is placed into the quench tank to specification of the customer, or is left to air cool. The quench tank both rapidly reduces the heat of the product and also chemically passivates the zinc coating.

The tank contains an acidic Chromium Phosphate solution that chemically passivates the zinc rendering the surface brighter and prevents the creation of 'white rust' (formation of zinc oxide).



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The quench tank is a 10mm steel construction and is placed in a concrete bunded area recessed into the ground. The bund is connected to a blind sump and is capable of fully containing the contents of the tank in the event of tank failure.

The quenching activity falls within the surface treatment and galvanizing activity that is directly associated and technically connected with the activities scheduled in section 2.3(Part A2) and section 2.2(Part(B)(d) of the Pollution Prevention and Control (England and Wales) Regulations 2000 (as amended) and as such it is regulated as a polluting activity.



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Schematic Diagram of Galvanizing process



Legend: S - Solid; L - Liquid; G - Gas



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Glossary of Terms/Definitions:

Activity	One or more stationary technical units falling within the defined sections of the Schedule 1 of the Pollution Prevention and Control (England and Wales) Regulations 2000 (as amended).
Ash	Particulate by-product produced from the hot dip process.
Bagfilter	An arrestment plant device used to trap particulate matter from emissions to air. Essentially grit laden air is passed through a fabric filter trapping the particles on the one side allowing the clean air to be discharged. Collected particles are knocked off the surface of the filter and collected in drop bins for disposal.
Clean	'Clean' in reference to water shall mean water, which is used as a virgin product, i.e mains water or abstracted water.
Dipping	The process of actually introducing the work piece into the galvanizing bath.
Dross	Solid by-product produced from the hot dip process, usually containing a high proportion of iron.
ELV	Emission Limit Values, those values stipulated in the SED or in guidance for emission of particular pollutants to atmosphere.
EPA	Environmental Protection Act, the former pollution control regime, now redundant due to the implementation of PPC.
Flux Blanket	Normally only used when double dipping components, the flux lies on the surface of the molten zinc and 'wets' the iron or steel directly before contact with the zinc.
Installation	One or more stationary technical units comprising at least one activity or activities falling within the description of Schedule 1 of the Pollution Prevention and Control Regulations 2000 (as amended) within a defined area.
LEV	Local Exhaust Ventilation, normally associated with small uncontained plant or equipment.



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- Passivation The conversion of a metal surface to a less reactive state. A process used to reduce the corrosion rate of a metal surface normally using Chromate based solutions.
- Pickling Process: pickling is a process whereby the surface of the items are prepared for galvanizing. It involves removal of surface oxidation products (e.g. rust) and millscale (arising from the steel rolling process).
- PPC Pollution Prevention and Control, the new pollution control regime replacing that under EPA.
- Regulator Means The Borough of Telford and Wrekin Pollution Control Section. When contacting the regulator it is not sufficient to contact any other part of the council other than the Pollution Control Section at the address specified in the additional notes or at the telephone numbers provided.
- STU Stationary Technical Unit shall have the same meaning as in the Pollution Prevention and Control Regulations. There must be at least 1 STU per activity, but it is possible to have multiple STU's still comprising only one activity.
- The Regulations Means the Pollution Prevention and Control (England and Wales) Regulations 2000 (as amended)



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Permit Conditions

Authorised Plant

Emission Limits and Controls - Air

- 1.1 The permitted installation shall consist of the plant and equipment mentioned in Table 2 (above). No other production plant or equipment shall be used except where a formal written application has been submitted to, and approved by, the regulator.
- 2.1 There shall be no persistent visible emissions, other than steam or water vapour from the installation.
- 2.2 Emissions from combustion processes, (specifically plant with emission reference points denoted by the word 'smoke' in Table 3 above) shall not exceed the equivalent of Ringleman shade 1 as described in British Standard B.S.2742:1969 at any time.
- 2.3 Emissions from final point of discharge to atmosphere serving the emission points listed in Table 3 shall not exceed the following concentrations of the substances and chemicals listed in the Table 4 below:

Pollutant	Emission Limit
Total Particulates (TPM) (Galvanizing	15mgm⁻³
Baths)	
Total Particulates (TPM) (All other	20mgm⁻³
Sources)	
Lead (and Lead Compounds) (Pb) (wire	0.25mgm ⁻³
galvanizing only)	
Hydrogen Chloride (HCl)	30mgm ⁻³

Table 4 – Permitted Concentrations in Emissions to Air

It shall be a requirement for emission points listed in Table 3 to meet the particular pollutant emission concentrations listed for that emission point only. Not all emitted substances or chemicals apply to all emission points.

Except where requested specifically in writing by the regulator, the operator shall not be required to routinely demonstrate compliance and sample for concentrations of Lead and its compounds.



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Where the requirements of condition 2.5 are complied with, it shall not be necessary to routinely demonstrate compliance and sample for concentrations of HCI.

- 2.4 The concentrations of the substances listed in condition 2.3 shall be expressed at reference conditions, 273K, 101.3kPa, without correction for water vapour content and the results of the monitoring shall be expressed in milligrams per cubic metre (mgm⁻³).
- 2.5 There shall be no offensive odour emitted from the installation detected beyond the site boundary as perceived by an officer of the regulating authority.
- 2.6 No piece of plant or equipment mentioned in condition 1.1 above (or any replacement used for the same purpose), shall be operated with an extraction point direct to atmosphere unless specifically noted within this document or specifically agreed in writing with the regulator.
- 2.7 The introduction of dilution air to emission stacks shall not be permitted.

In the event that an emission stack can be demonstrated to be compliant with conditions 2.3 above, dilution air may be added to render harmless a visible or odorous emission. Such dilution shall only be permitted where agreed in writing with the regulator.

- 2.8 Where necessary, all emissions from the installation shall be ducted to suitable abatement plant capable of meeting the same standard as is indicated in condition 2.3 or shall be accounted for in Table 2 and be noted to specifically comply with those emission limits without abatement plant.
- 2.9 Any bypass of the abatement plant shall be deemed an emergency and steps shall be taken to contain the unabated emissions. If the unabated emissions cannot be contained steps shall be taken to stop the process. The regulator shall be notified immediately.



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- 2.10 Fuel used for the combustion plant (denoted by the word 'smoke' appearing in the list of pollutants) listed in Table 3 shall have a sulphur content of no more than 1% wt/wt sulphur in fuel, or, if gas oil is used, no more than 0.2% until 1st October 2008 and no more than 0.1% thereafter.
- 2.11 The final efflux velocity of all emissions from the final point of discharge to atmosphere serving the emission points listed in Table 3 shall not be less than 15 ms⁻¹.
- 2.12 Chimneys and vents listed in Table 3 from which it is necessary to achieve dispersion of the residual pollutants shall discharge vertically upwards and shall not be fitted with any restrictive plates, caps or cowls at the final opening. Caps, cowls and restrictive plates shall be removed from the existing chimneys/vents, by 1st June 2005. Use of an accelerator cone to increase efflux velocity is permitted.
- 2.13 Within a period not to exceed 2 years from the date of issue of this permit and to be agreed in writing with the regulator, emission points listed in Table 3, shall be altered to new heights calculated in accordance with the procedural document D1 entitled, "The Determination of Discharge Stack Heights for Polluting Emissions", published by HMIP or another standard to be agreed with the regulator. The height, as calculated, shall be agreed with the regulator prior to works being carried out.

Notwithstanding the above, emissions consisting solely of particulate matter shall not require a calculation to be carried out, and, in accordance with the requirements of D1, the effective discharge height is reduced to ground level.

2.14 Any final points of discharge to atmosphere shall be maintained at the minimum height as calculated in condition 2.13 for the lifetime of the plant. Where guidance, plant or equipment, or the nature of emissions changes; the calculations required in

Atmospheric Dispersion of Contained Emissions



Emission Limits and Controls – Surface Water and Sewer **Pollution Prevention and Control Act 1999**

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conditions 2.13 shall be repeated and the heights modified accordingly.

- 2.15 Run-off from identified raw material storage areas shall be channelled/transported to a suitable effluent treatment plant, e.g. an interceptor, where necessary to prevent or minimize discharge of pollutants to surface waters and sewers. Areas to which this condition applies shall be specified in writing by the regulator.
- 2.16 Where installed, all effluent treatment plant, e.g. interceptors, for the site shall be:
 - impermeable;
 - visually inspected weekly and;
 - have an annual maintenance inspection. Prior to this inspection all contents shall be removed.
- 2.17 No process effluent shall be channelled or transported from the site unless first directed to a suitable effluent treatment plant or otherwise agreed in writing by the regulator.

This condition shall not apply where road-going tankers collecting effluent from storage tanks and transporting the effluent to a suitably licensed point of final disposal.

- 2.18 Delivery connections to bulk liquid storage tanks shall be located within the bunded area noted in condition 2.21, and shall be locked when not in use.
- 2.19 All fixed storage tanks (excluding oil storage) shall have volume indicators to warn of over-filling. These indicators shall be at a point 300mm from the top of the tank. Where practicable, the filling systems shall be interlocked to the alarm system to prevent overfilling.

The operator shall supply a plan of the site indicating the location of the fixed storage tanks, their contents, and maximum capacity together with the location of any associated fixed above or below ground pipework.



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The plan shall be submitted by 1st June 2005 and updated (and resubmitted) as may be necessary where changes occur or new plant is installed.

2.20 Each storage tank shall be clearly labelled with:

- A reference number consistent with the above plan
- The tank maximum volume
- The tank contents
- Any relevant hazard warnings
- 2.21 Every storage tank shall be surrounded by a bunded area impervious to the material being stored in the tank. The bunded area shall be capable of storing 110% of the capacity of the largest tank within the bund.

The integrity of storage tanks and bunds shall be inspected, recorded and documented, particularly where corrosive substances are involved. Such inspections shall take place at least every three months or as indicated on the operator's maintenance schedule prepared for condition 9.1 below.

These inspections should be included in the maintenance schedule required by condition 9.1 and copies stored with the logbook required to be kept in accordance with condition 9.5.

- 2.22 There shall be no effluent emissions to sewer or surface water drainage without the prior consent of the regulator and the prior consent of Severn Trent or Environment Agency as may be necessary. The operator shall make a written application to the regulator at least 28 days prior to any intention to discharge waste effluent to sewer or surface water drainage.
- 2.23 The effluent transport system (including any subsurface plant, equipment, tanks, drains, sewers, sumps, or storage vessels) shall, where necessary, be inspected and surveyed at least once every five years for the following:



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- Establish a record of all subsurface drains, sewers, plant, equipment, sumps or storage vessels to include the routing of all pipework.
- Produce an inspection and maintenance record for all subsurface drains, sewers, plant, equipment, sumps of storage vessels, which involves as necessary, pressure or leak tests, materials thickness checks or camera surveys.

Where an inspection determines that subsurface infrastructure is leaking, arrangements shall be made to repair, isolate or otherwise contain the leak, and the regulator shall be notified immediately.

- 2.24 The concentration of passivator chemicals in the quench tank shall be checked on a daily basis by a method to be agreed by the regulator. The concentration of passivator chemicals shall be retained at a level suitable for the purpose of passivation.
- 2.25 Care shall be taken to ensure that there is no spillage of liquid from the quench tank during the quenching operations, moreover, after quenching is complete, the work piece shall be allowed to completely air dry prior to being moved from above the tank.
- 2.26 Where residual quench water is found on the floor surrounding the quench tank, it shall be considered a spillage and dealt with in accordance with the requirements of condition 4.2 immediately.
- 2.27 There shall be no defects in the concrete hard standing within the area of the installation as designated on the Plan PPC116/3. Moreover, as far as is practicable, joints between concrete pads shall be effectively sealed so as to provide an impervious surface.

Where a defect is noted in accordance with the requirements of condition 3.9, action shall be taken to rectify the defect within 6 weeks of identification. For the purpose of this condition, a 'defect' is any break in the concrete hard standing that will allow

Emission Limits and Controls – Controlled Water



Monitoring, Sampling and Measurement of Emissions - Air **Pollution Prevention and Control Act 1999**

Pollution Prevention and Control (England and Wales) Regulations 2000 (as amended)

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liquid spillages to drain away into the sub soil. For the purpose of this condition 'rectified' shall mean repair of the defect such that liquid spillages can no longer enter the subsoil.

3.1 The process shall be observed for visible emissions at least once per day, or more often as may be prescribed in writing by the regulator, when the installation is operating, from a point providing an unimpeded view of the emissions points for the permitted process. In the event of visible emissions being observed, immediate action shall be taken to determine the cause of the emission, and action shall be taken to abate the emission.

Contingency arrangements shall be instigated to prevent or reduce to a minimum any further visible emissions caused by the malfunction.

The regulator shall be notified of any such occurrence as soon as practicable.

The results of the observations shall be recorded in the logbook (required to be kept by condition 9.5), along with details of remedial action taken.

3.2 At the written request of the regulator, a daily assessment shall be made for odour emissions from the installation while it is operating normally for such a period as may be specified by the regulator. The assessment shall be made at a point on the process boundary where such an emission is most likely to be detected (i.e. downwind), taking into account the wind direction, source of odour, nearest neighbour, The assessment must be made by a etc. responsible person who has been instructed to carry out these duties. A record of **all** olfactory assessments shall be entered into the logbook required to be kept in accordance with condition 9.5. The records shall include a subjective assessment of the nature and severity of any odour detected.

If excessive odour emissions are detected, immediate action shall be taken to determine the cause of the emission and to resolve the malfunction



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responsible for the emission. Contingency arrangements shall be instigated to prevent or reduce to a minimum any further odour emissions caused by the malfunction.

The regulating authority shall be notified of any such occurrence as soon as practicable.

3.3 Emissions from the final point of discharge to atmosphere serving the emission points listed in Table 3 shall be sampled for concentrations of the substances listed within that table on an annual basis. Where an emission limit (prescribed by conditions 2.3) for a particular pollutant is listed for an emission point, there shall be a requirement to sample and provide emission monitoring results for that pollutant.

All sampling shall be carried out in accordance with recognised standards as agreed with the regulator prior to monitoring taking place. In all cases this shall be to the MCERTS, or equivalent, standards for both procedures and personnel. The proposed test methods for measuring compliance with emission concentration limits shall be forwarded to the regulator at least 21 days prior to commencement of sampling, and testing shall not be commenced until the regulator approves the proposed test method in writing.

The regulating authority must be advised at least 7 days in advance of any periodic monitoring exercise giving the date, time and place of sampling and the pollutants to be tested.

Results shall be expressed in accordance with the requirements of condition 2.4 and the results of monitoring to be supplied to the regulating authority within 28 days of completion of the monitoring. Monitoring reports shall be submitted in both paper copy and electronic format.

The results of annual testing will be reviewed, and the period between testing may be reduced, after a minimum of two years of continuous compliance.



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3.4 Emissions from the final point of discharge to atmosphere serving the abatement plant serving the galvanizing baths in Table 3 shall be continuously monitored and continuously recorded for particulate emissions. The continuous monitoring equipment shall be connected to a visual and audible alarm that shall be set to trigger at a reference level to be agreed with the regulating authority.

Emission events that lead to the triggering of an alarm shall be recorded in the log book required to be kept in accordance with condition 9.5 along with details of the investigation into what caused the event.

The continuous monitor shall be calibrated every 12 months (or more frequently if necessary) in accordance with manufacturers' instructions.

The continuous monitoring device noted in this condition shall be replaced with a suitable MCERTS accredited device by 1st April 2009.

3.5 The melt temperature of galvanizing baths shall be continuously monitored for temperature and shall operate within a temperature range to be agreed with the regulating authority:

The galvanizing baths shall be fitted with an audible and visual alarm to be triggered in the event that the plant ceases to operate within the agreed temperature range.

Any activation of an alarm to be recorded in the log book required to be kept in accordance with condition 9.5.

3.6 The operator shall prepare a list of all emission points, and related pollutant emissions to atmosphere based on Table 3 (above). The operator shall provide details of the emissions of those pollutants to atmosphere as a result of any sampling that may be carried out (see conditions 3.3 and 3.4) or data gathered (see condition 2.10).

Air Quality



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Where sampling is carried out, no correction for atmospheric pressure or water vapour shall be made.

The operator shall also submit for each point of emission to atmosphere details of stack height, volume flow rate and stack diameter, as well as the height, width and length of the building to which the stack (or stacks) are attached.

The results shall be tabulated and submitted in Microsoft Excel format and shall be sent to the following email address (or another to be specified by the regulator):

environmental.health@telford.gov.uk

Such information shall be submitted as and when requested by the regulator.

3.7 The Environment Agency have not requested any specific surface water monitoring as a result of Regulation 13 of the Regulations.

The sewerage undertaker has not reported any consented discharge to sewer.

3.8 The Environment Agency have not requested any specific ground water monitoring as a result of Regulation 13 of the Regulations.

3.9 External surfaces of the process building, ancillary plant and open yards and storage areas shall be inspected at least annually and cleaned as may be necessary to prevent the accumulation of dusty material. Particular attention shall be paid to roofs, guttering, roadways, external storage areas and yards. Cleaning operations shall be carried out by methods which minimise emissions of particulate matter to air.

Monitoring, Sampling and Measurement of Emissions – Surface Water and Sewer

Monitoring, Sampling and Measurement of Emissions – Ground Water

Monitoring, Sampling and Measurement of Emissions – Land contamination



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A formal record of the inspections shall be retained and held with the log book required to be kept under condition 9.5.

- 3.10 The concrete hard-standing covering the installation designated in plan PPC116/3 shall be inspected on an annual basis. Defects in the concrete hard standing shall be identified and results shall be included in the log book required to be kept by condition 9.5. 'Defects' shall have the meaning prescribed in condition 2.27. Particular attention shall be given to areas surrounding storage tanks, within bunded areas, waste storage areas, and raw material storage areas. All defects shall be dealt with as required by condition 2.27 (above) within 6 weeks of the inspection.
- 3.11 The storage areas for waste and for raw materials identified in accordance with condition 4.3 hereinafter referred to as storage areas, shall be assessed for the following:
 - maximum storage capacity
 - maximum storage period

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suitability to store the specified material

The storage areas shall be inspected once per month to check that capacity, period of storage or the materials stored conform to those specified for that particular repository. The results of the monthly inspection shall be included in the log book required to be kept by condition 9.5.

- 4.1 The raw materials used in the installation and all waste materials produced from the installation shall be handled with care to prevent or reduce to a minimum any emissions to the environment.
- 4.2 Spillages of liquids and finely divided materials outside the process buildings shall be cleaned up immediately. Liquid spillages shall be contained and cleaned up by the use of a suitable absorbent material. Spillages of finely divided or powdery materials shall be removed by vacuum cleaning using an industrial grade vacuum cleaner or by wet cleaning methods (with the exception of materials identified in condition 4.5 below). Dry sweeping

Process Controls



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methods shall not be permitted. Sweeping and movement of powdery materials using uncovered containers is prohibited unless the material is thoroughly damped to prevent wind entrainment.

4.3 All raw materials delivered to the installation, and waste materials generated by the installation, shall be placed in areas of site designated for storage. These storage and waste areas are designated on the plan PPC116/2.

No raw material or waste shall be stored anywhere other than in the areas so designated.

All designated areas shall be capable of containing the raw material or waste contained therein, and prevent overflow onto surrounding areas. Where damage accrues to containment for these areas, this damage shall be repaired as soon as it practicable and in any case no longer than 4 weeks from the date of detection of the damage after the inspection (see below).

The operator shall inspect the designated areas on a monthly basis to ensure that materials or waste are adequately contained. The results of the inspections along with any remedial work shall be recorded in the log book required to be kept by condition 9.5.

- 4.4 Any accumulation of waste or raw materials found outside the areas designated by condition 4.3 above shall be considered a spillage and shall be dealt with in accordance with the requirements of condition 4.2 above.
- 4.5 Notwithstanding conditions 4.1 to 4.3 above, ashes and any dust emissions associated with the galvanizing bath shall be fully contained or placed into fully sealed containers and kept dry at all times to prevent the formation of Arsine gas.
- 4.6 No dipping shall take place until the galvanizing bath is fully enclosed and the extraction system is operating.



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- 4.7 Where double dipping is undertaken it shall not be necessary to comply with condition 4.6, however, enclosure shall be positioned such the extraction system continues to capture emissions
- 4.8 Drums and containers containing liquid materials, whether full, partly full or empty, shall be stored in a secure, well-ventilated storage area away from other products. All full, partly full or empty drums and containers shall be kept tightly closed to prevent any emissions to air.
- 4.9 A locking device shall be securely attached to the kerosene tank, fuel oil tank and the diesel storage tank such that delivery or collection cannot take place without removal of the device. The unlocking mechanism shall be held by the nominated person or persons who shall be responsible for securely locking and unlocking the device before and after each transfer to or from the tanks.
- 4.10 No transfer shall take place to any tank without the express permission of the nominated person and discharge shall only take place when the driver of the vehicle discharging to the tank (or collected from a tank) has been advised of the procedure to be followed.
- 4.11 The following procedure shall be used for the delivery of materials to tank or transfer between tanks:
 - (a) The nominated person shall be notified on the arrival of a bulk delivery or of a request to transfer between tanks.
 - (b) The nominated person shall confirm that there is sufficient capacity in the tank to accept the quantity to be delivered or transferred.
 - (c) The nominated person shall ensure that:
 - i. The nature of the material to be delivered to the tank is consistent with materials already present such that no adverse chemical reaction can take place
 - ii. That the person responsible for the delivery or transfer is competent to do so.



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- (d) The driver and the nominated person shall inspect the delivery lines and check them for signs of damage or wear, the driver shall connect the delivery lines and the driver and the nominated person shall check the connections are properly made.
- (e) Only after conditions (a) to (d) have been complied with shall delivery commence.
- (f) Where any alarm sounds, or the level indicator on the tank suggests the tank is full, delivery shall cease immediately.
- 5.1 The operator shall:
 - Carry out a survey of the installation and identify any plant or equipment likely to give rise to noise. The survey shall specifically identify plant or equipment capable of being heard at the installation boundary.
 - Annually review the noise survey of the installation such that any changes to the plant or equipment noted in Table 2 (above) are identified and the survey updated appropriately.
 - Construct a noise management plan based on the survey which shall include the following:
 - A statement of policy with regard to dealing with complaints
 - A documented complaint procedure for the investigation, analysis, determination, and solution to noise problems
 - Details of routine maintenance undertaken in particular to deal with noise issues
 - Construct a register of complaints regarding noise emissions from the installation

The operator shall provide the above information by 1st June 2005 and thereafter shall update the information upon written request from the regulator. All documentation required to be produced by this condition shall be retained in the log book required to be kept in accordance with condition 9.5.

5.2 It shall be an absolute requirement that any new plant or equipment brought into the installation, or any plant or equipment that undergoes significant

Noise Emissions



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modification, shall demonstrate Best Available Technique (BAT).

Unless already meeting BAT requirements, the operator shall demonstrate that sound power levels for substantially changed plant or equipment shall be lower than for existing. The procedure listed in condition 5.3 below shall be used.

- 5.3 No new plant or equipment shall be permitted within the installation except where:
 - (i) The plant or equipment can be demonstrated to have a minimal environmental impact. For the purpose of this condition 'minimal' shall be taken to mean that, the plant or equipment, if monitored under requirements of BS4142:1997, has a rating level of -10dB (when compared to the background level), or is otherwise inaudible.
 - or
 - (ii) Where plant or equipment cannot be demonstrated to meet the standard above, a full noise survey shall be carried out and the results modelled to show the specific impact of the new plant or equipment on the environment. The modelling exercise shall take account of any relevant noise abatement measures. The results of the modelling shall be submitted to the regulator and shall demonstrate BAT.

The modelled plant or equipment shall be permitted within the installation only where written consent of the regulator has been obtained.

- 5.4 In the event of the regulator receiving a complaint of noise associated with any element or activity within the installation boundary, the operator shall:
 - (i) Be required to investigate the source of the complaint within 48hrs of receipt of the complaint.
 - (ii) Carry out such monitoring, surveys or modelling of the source of the complaint to demonstrate within a time period to be agreed with the



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regulator and to the satisfaction of the regulator, either:

- (a) that the complaint is unfounded, or
- (b) the complaint has substance

Where (ii)(b) above is found to be the case, the operator shall arrange to carry out such works or change procedures or processes in such a way, that a re-assessment carried out in (ii) above comes to the conclusion in (ii)(a).

- 6.1 The operator shall:
 - Maintain an inventory covering the principal types of raw materials used (as listed in Table 1). The inventory shall be made available at the request of the regulator.
 - Review alternatives for the principal types of raw materials used with regard to their environmental impact. Notably this shall include, acids, fluxes and additives used within zinc bath. Such reviews shall be submitted to the regulator every four years.
 - Maintain records to demonstrate that quality control procedures are used to minimise any potential adverse environmental impact of the use or storage of raw materials
 - Undertake to complete any long term studies needed into the less polluting options and make any material substitutions identified within the review period. Such studies will be identified as and when required by the regulator and requested in writing.

All information required by this condition shall be prepared by the operator annually, or where such information is requested every four years from the date of issue of the permit as may be required for long term studies. All such information shall be retained by the operator and kept with the log book required to be kept in accordance with condition 9.5. A summary may be requested to be submitted by the regulator.

The information required by this condition has been deemed commercially confidential and shall not

Waste Minimisation



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appear on the public register, all information submitted in accordance with this condition shall be clearly marked "Commercially Confidential – DO NOT place on public register".

6.2 The operator shall demonstrate that a systematic approach to the reduction of waste at source is being used.

The operator shall carry out a waste minimisation audit within 18 months of issue of the permit and thereafter at the written request of the regulator. The methodology used and an action plan for optimising the use of raw materials shall be submitted to the regulator within 2 months of completion of the audit.

Specific improvements resulting from the recommendations of audits shall be carried out within a timescale approved by the regulator.

- 6.3 The operator shall, within 4 weeks of preparing the information required by condition 6.1, also calculate the following indicators of waste minimisation performance expressed as a ratio:
 - (i) tonnes of zinc melted v tonnes of good product
 - (ii) tonnes of ash/dross produced v tonnes of good product
 - (iii) tonnes of acid disposed v tonnes of good product
 - (iv) volume of 'clean' water consumed v tonnes good product

All such information shall be retained by the operator and kept with the log book required to be kept in accordance with condition 9.5.

Where any of the above parameters are not specifically monitored, arrangements shall be made to undertake monitoring of the use of the material within 8 weeks of issue of this permit.

The information requested by this condition has been deemed to be commercially confidential. It is not required that this information shall be submitted, the



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information shall be held available for inspection on site.

The information required by this condition has been deemed commercially confidential and shall not appear on the public register, all information submitted in accordance with this condition shall be clearly marked "Commercially Confidential – DO NOT place on public register".

- 6.4 Rinse water from the rinse tanks shall be used to dilute acid used within the pickling baths in preference to 'clean' water.
- 6.5 The operator shall arrange to measure the monthly volume of mains water used in the installation. All measurements should be recorded and the records held on site.
- **7.1** As far as is practicable, all raw materials to be used in the galvanizing bath shall be kept covered so as to prevent water ingress into the material, for 24 hrs prior to use, as far as is practicable.
 - 7.2 The operator shall ensure that the galvanizing bath and any other tanks required to be heated are maintained at the correct operational temperatures as noted within condition 3.5, and agreed in writing with the regulator.

Ideally the operator shall arrange that the treatment tanks requiring heating are supplied with heat recovered from the galvanizing bath, and are not heated directly.

- 7.3 Where gas-fired heating systems are used for the purpose of melting or heating or other activities within the installation, particular attention shall be paid to good cleaning and maintenance of burner systems.
- 7.4 The operator shall produce an annual report on the energy consumption of the installation. The report shall monitor energy usage for the installation and identify target areas for reduction and shall be

Energy Efficiency



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updated annually. ("Sankey" diagrams and energy balances would be useful as aids.)

The operator shall also produce a comment on the above report and account for the following issues:

- heat recovery from different parts of the processes
- minimisation of water use and closed circulating water systems
- good insulation of heated tanks/galvanizing bath
- plant layout to reduce pumping distances
- phase optimisation of electronic control motors
- optimised efficiency measures for combustion plant e.g. air/feedwater preheating, excess air etc.

The information required by this condition has been deemed commercially confidential and shall not appear on the public register. All information submitted in accordance with this condition shall be clearly marked "Commercially Confidential – DO NOT place on public register".

- 7.5 The operator shall ensure that all plant listed in Table 2 is operated and maintained to optimise the use and minimise the loss of energy.
- 7.6 The operator shall within 4 weeks of submitting the information required by condition 7.4, also calculate the following indicators of energy efficiency performance expressed as a ratio:
 - (i) Gas consumed v good tonnes produced.
 - (ii) Electricity v good tonnes produced.

All such information shall be retained by the operator and kept with the log book required to be kept in accordance with condition 9.5.

Where any of the above parameters are not specifically monitored, arrangements shall be made to undertake monitoring of the use of the energy source within 8 weeks of issue of this permit.



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The information requested by this condition has been deemed to be commercially confidential. It is not required that this information shall be submitted, the information shall be held available for inspection on site.

7.7 In respect of energy efficiency, the operator shall meet the requirements of either:

(i) Climate Change Agreement (CCA), or

(ii) Direct Participation Agreement (DPA);

in addition to the requirements of conditions 7.1 to 7.6 (above).

Where neither (i) nor (ii) above are complied with the operator shall notify the regulator immediately.

7.8 The operator shall arrange to completely cover the galvanising bath when not in use.

For the purpose of this condition, 'not in use', shall be taken to mean, periods of longer than 1 hour between dipping, placing (or removing) of material into the baths.

8.1 The operator shall produce an accident management plan that identifies the hazards, assesses the risks and identifies the measures required to reduce the risk of potential events or failures that might lead to an environmental impact. The plan shall identify:

- the actions to be taken to minimise these potential occurrences; and
- the actions to deal with such occurrences so as to limit their consequences

In the case of abnormal emissions arising from an accident, such as a spillage for example, the operator shall:

- investigate immediately and undertake remedial action as soon as practicable
- promptly record the events and actions taken
- ensure the regulator is made aware, as soon as practicable

In the event of an accident occurring, the operator shall follow the prescribed instructions within the

Prevention of Accidents



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accident management plan. In an emergency situation it shall be sufficient to demonstrate that any divergence from the plan was necessary either:

- in the interests of health and safety
- as a result of instructions from a suitably qualified member of the emergency services (fire, ambulance, police)
- as a result of instructions from a duly authorised officer of the Health and Safety Executive
- > as a result of instructions from the regulator.

The accident management plan shall be reviewed annually and a copy shall be submitted to the regulator upon written request. A copy of the accident management plan shall be kept with the logbook required to be kept be condition 9.5.

- 9.1 Effective operational and maintenance systems shall be employed on all aspects of the installation where failure could impact on the environment. In particular there shall be:
 - documented operational control procedures
 - a documented preventative maintenance schedule, covering all plant where failure could lead to impact on the environment, including major 'non productive' items such as tanks, pipework, retaining walls, bunds, ducts and filters. This shall be reviewed and updated annually
 - a documented cleaning schedule covering all plant and equipment that could potentially cause an environmental emission through not being clean. The schedule shall also include roadways and buildings and tanks and bunding in accordance with conditions 2.15 and 2.22 respectively.
 - documented procedures for monitoring of emissions to include duration, frequency, type and appropriate reference standard where applicable.

Operation and maintenance procedures shall be updated from time to time as may be necessary to account for changes in working practice or plant and machinery, chemical or procedures used. If the procedures change, a copy of the new procedures

General Conditions



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shall submitted to the regulating authority within 14 working days from changes being made.

In terms of emergency maintenance, spares and consumables, in particular, those subject to continual wear shall be held on site or shall be available at short notice so that plant breakdowns can be rectified rapidly.

- 9.2 Relevant staff at all levels shall receive the necessary formal training and instruction in their duties relating to control of the process and emissions to the environment. Such training shall include the following:
 - awareness of the regulatory implications of the permit
 - awareness of all potential environmental impacts under normal and abnormal circumstances
 - awareness of the procedures for dealing with a breach of the permit conditions
 - prevention of accidental emissions and action to be taken when accidental emissions occur
 - > awareness of all operating procedures

Records shall be kept which detail all relevant training provided to staff. The records shall be made available for inspection by an authorised officer from the regulating authority. Records of training shall be retained for two years.

The operator shall appoint a suitably competent person to liaise with the regulator and members of the public in the event of complaint. The designated person shall be notified to the regulator within 14 days of issue of the permit and, where that person changes, within 14 days of any change. The requirement to have a competent person liaising with the regulator does not reduce the requirement to adequately train staff in terms of environmental awareness.

9.3 If there is any intention to change any aspect of the installation from the description of the process at the beginning of this permit, or any other aspect which may affect the substances or concentration of



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substances being emitted to the environment, the regulator shall be notified of the proposed changes at least 4 weeks before the changes take place.

- 9.4 Any malfunction which results in emissions to the environment which are likely to cause an adverse effect on the local community shall be reported to the enforcing authority immediately, and a record shall be made of the incident within the logbook required by condition 9.5.
- 9.5 A logbook shall be established and maintained which records all information required to be kept by conditions of this permit, this includes details of procedures, results of sampling, record of all visual and olfactory observations, maintenance records and any other information required to be recorded and kept by conditions of this permit.

The information shall be recorded in a form to be agreed with the regulator but can include both electronic and hard copies, and shall be retained for at least two years. This information shall be made available for inspection by an authorised officer of regulating authority on request. Where information is updated or modified, copies of the modified information shall replace those held within the logbook.

10.0 A site decommissioning plan shall be submitted to the regulator within 6 months of issue of this permit. The plan shall be prepared and updated as may be necessary due to changes in plant, equipment or materials used within the installation. In any event the changes to the plan, it shall be reviewed and resubmitted every 3 years from the date of the first submission. The plan shall include:

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- A complete methodology to be adopted in the decommissioning of the installation, to include:
 - Removal of key plant or machinery likely to be contaminated
 - Removal of contamination associated with the plant and machinery
 - Minimising any contamination from the installation buildings during demolition

Decommissioning the Installation



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- Removal of contaminated subsurface infrastructure as may be necessary
- An assessment of the impact of decommissioning on the nearest sensitive receptors
- The Preparation of a ground contamination report to include the testing of soil within the decommissioned installation to demonstrate contamination levels are no greater than those submitted in Operators application site reports.

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Date

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authorised by Borough of Telford &Wrekin Pollution Control PO Box 214 Darby House Telford Shropshire TF3 4LE





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PPC116/2 Raw Material and Waste Storage Area







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PPC116/4 Emission points to the environment (Table 3) (LEV*** references in red)





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Explanatory Notes

These notes do not form part of the Permit

- 1. You should note that section 12(10) of the Act provides that, in relation to any aspect of the process not regulated by specific conditions within the permit the best available techniques shall be used such that:
 - a. All the appropriate preventative measures are taken against pollution, in particular through application of the best available techniques; and,
 - b. No significant pollution is caused.
- 2. Section 3(1) of the Regulations defines "BAT" as follows:
 - a. 'available techniques' means those techniques which have been developed on a scale which allows implementation in the relevant industrial sector, under economically and technically viable conditions, taking into consideration the cost and advantages, whether or not the techniques are used or produced inside the United Kingdom, as long as they are reasonably accessible to the operator;
 - b. 'best' means, in relation to techniques, the most effective way of achieving a general high level of protection of the environment as a whole;
 - c. 'techniques' includes both technology used and the way in which the installation is designed, managed, operated and decommissioned.
- 3. The ready availability of essential spares and a written maintenance programme is covered by the specific condition 6.1.
- 4. This permit is issued in relation to the requirements of Pollution Prevention and Control Act 1999 and subordinate regulations. It must not be taken to replace any responsibilities you may have under workplace health and safety legislation.
- 5. This permit, does not absolve you of the responsibility of any other statutory requirement, such as any need to obtain planning permission, hazardous substances consent or Building Regulations approval from the Council. Discharge consents from the local sewerage undertaker or a waste disposal licence from the Environment Agency may still be required as will compliance with health and safety legislation.
- 6. This permit is covered by Secretary of State's Guidance:

Secretary of State's Guidance SG 5 – A2 Galvanizing Sector www.defra.gov.uk/environment/p pc/laippc/laippc.htm



Pollution Prevention and Control (England and Wales) Regulations 2000 (as amended)

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Act*	ISBN – 0-11-752423-9
GG 2(91) Authorisations*	ISBN – 0-11-752424-7
GG 3(91) Applications and Registers*	ISBN – 0-11-752425-5
GG 4(91) Interpretation of Terms used in Process Guidance Notes*	ISBN – 0-11-752426-3
GG 5(91) Appeals* General Guidance Manual on Policy and Procedures for A2 and B	ISBN – 0-11-752427-1 ISBN – 0-85521-028-1 or www.defra.gov.uk/environment/p pc/manual/index.htm

*The GG guidance series relates specifically to the Environmental Protection Act 1990 regime, however, the GG notes still contain useful advice not covered in the General Guidance Manual and so are included.

7. The operator will be liable to enforcement action where;

- (a) a change is made without approval of the regulator to the activities as outlined in the 'description of activities' at the start of this permit,
- (b) any of the activities are carried on outside the boundary of the installation,
- (c) a new activity (as defined within the Pollution Prevention and Control (England and Wales) Regulations 2000 (as amended) is carried on without a proper permit, and
- (d) any of the conditions of the permit are breached.
- 8. An annual fee due on 1st April each year (currently chargeable per activity per annum but subject to change by statutory instrument) is payable to the Borough of Telford and Wrekin. An invoice will be submitted by 1st March and payment should be made by 1st April. If the fee is not paid by the due date, a reminder letter will be sent stipulating a final deadline. If the fee remains unpaid after that deadline, then the permit will be revoked.
- 9. It is an offence to operate a scheduled activity without a current permit.
- 10. If you are required to contact the Borough of Telford and Wrekin with emission problems please telephone 01952 202509 between 9.00am and 5.00p.m or by email to <u>environmental.health@telford.gov.uk</u>