

**Hull City Council**

**Pollution Prevention and Control Act 1999**

**The Environmental Permitting (England and Wales)  
Regulations 2016**

**Environmental Permit No: EPA/188/Rev5**

**Premier Galvanizing (Hull) Limited**

**Unit 25, Stoneferry Business Park**

**Foster Street**

**Stoneferry Road**

**Kingston upon Hull**

**HULL CITY COUNCIL**

**Pollution Prevention and Control Act 1999**

**The Environmental Permitting (England and Wales) Regulations 2016**

Application Received: 18<sup>th</sup> August 2004

Environmental Permit No. EPA/188/Rev5

Issue Date:

**Address of Permitted Activity**

Premier Galvanizing (Hull) Limited

Unit 25 Stoneferry Business Park

Foster Street

Stoneferry Road

Kingston upon Hull

HU8 8BT

Premier Galvanizing (Hull) Limited, Unit 25 Stoneferry Business Park, Foster Street, Stoneferry Road, Kingston upon Hull, HU8 8BT are hereby permitted to carry out the activity of surface treating metals, at their installation address; Unit 25 Stoneferry Business Park, Foster Street, Stoneferry Road, Kingston upon Hull, as outlined in red on the attached plan reference Premier Plan 1.

## Introductory Note

The following environmental permit is issued under Regulation 13 of The Environmental Permitting (England and Wales) Regulations 2016 (the EP Regulations) to operate an installation which carries out an activity covered by the descriptions in Section 2.3, Part A2 (a) to Schedule 1 of the EP Regulations in accordance with the following environmental permit conditions.

Section 2.3 A2 (a) states that an installation will require an A(2) environmental permit to operate if the activity carried on there involves surface treating metals and plastic materials using an electricity or chemical process where the aggregated volume of the treatment vats is more than 30m<sup>3</sup>, and where the activity is carried out at the same installation as one or more activities falling within:-

- (i) Part A(2) or B of Section 2.1 (ferrous metals)
- (ii) Part A(2) or B of Section 2.2 (non ferrous metals) or
- (iii) Part A(2) or B of Section 6.4 (coating activities, printing and textile treatments)

Within this Environmental Permit advisory notes are included within each section.

Environmental Permit conditions are clearly marked from 1.1 to 17.2. The various sections of the Environmental Permit are as detailed below. Although potential emissions are described for each activity carried out at the installation, for example pickling, rinsing in Section 3 and Section 4, conditions relating to those activities are also contained within various sections of the Environmental Permit.

The Environmental Permit therefore should be read as a complete document and not as 17 individual documents according to the number of sections.

## Sections of Environmental Permit

Section 1	Delivery and Storage of Raw Materials
Section 2	Heated Degreasing
Section 3	Pickling
Section 4	Rinsing
Section 5	Fluxing
Section 6	Galvanizing
Section 7	Post Treatment/Passivation
Section 8	Emissions Control and Monitoring
Section 9	Emissions to surface water and sewer
Section 10	Environmental Management
Section 11	Waste
Section 12	Energy
Section 13	Accidents
Section 14	Noise and Vibration
Section 15	Monitoring
Section 16	Decommissioning
Section 17	General

**Premier Galvanizing (Hull) Ltd**

**Environmental Permit Reference No: EPA/188/Rev5**

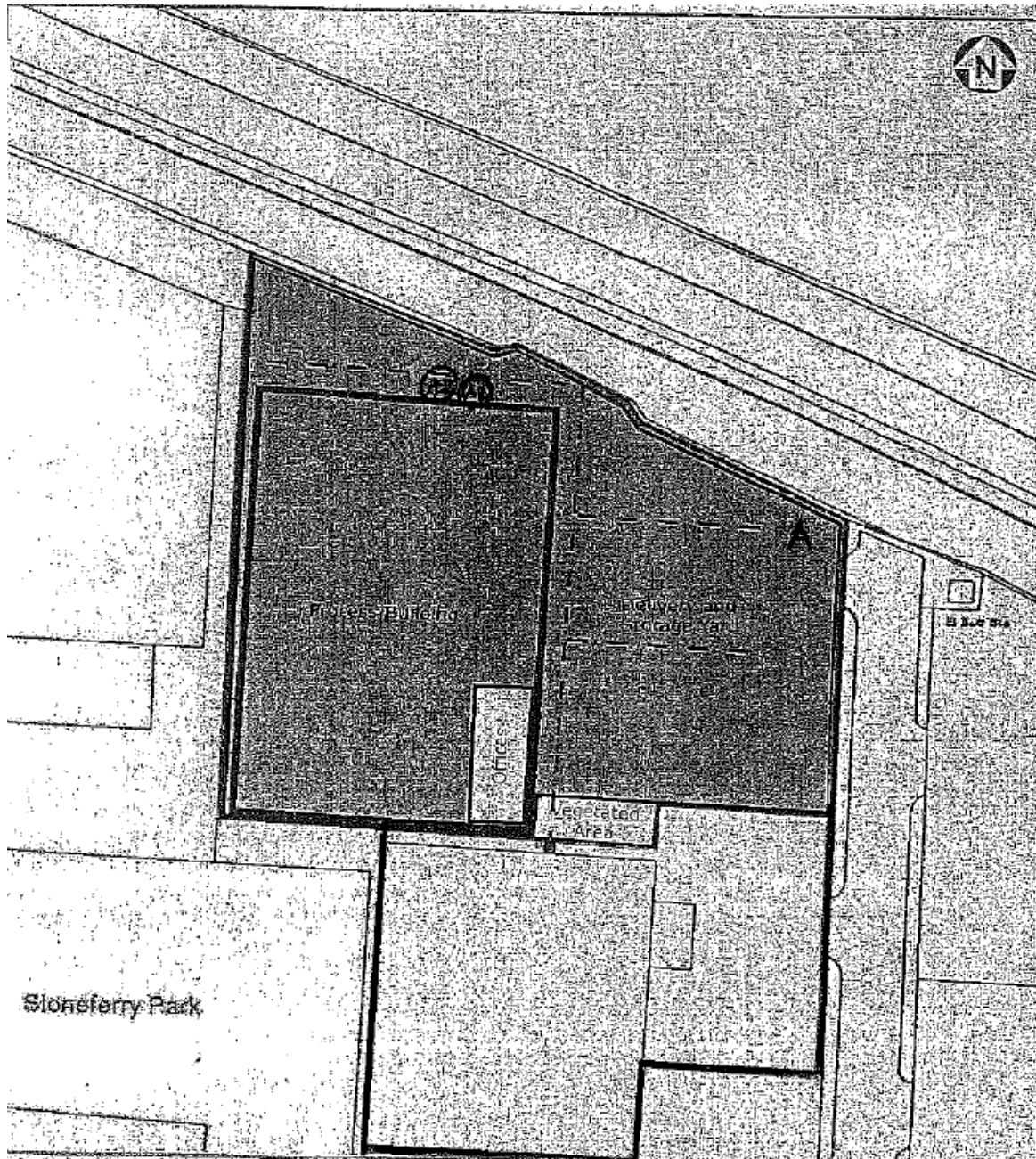
**Plan Ref. No. Premier Plan 1**



**Premier Galvanizing (Hull) Ltd**

**Environmental Permit Reference No: EPA/188/Rev5**

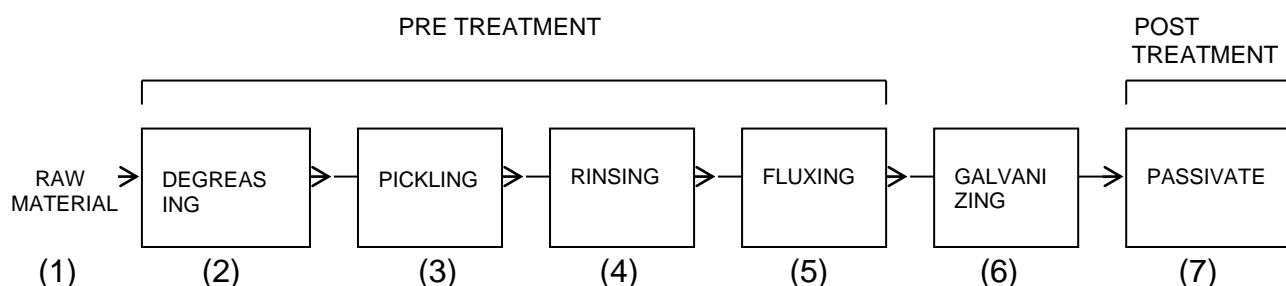
**Plan Ref. No. Premier Plan 2**



## **Premier Galvanizing (Hull) Ltd**

**Environmental Permit Reference No: EPA/188/Rev5**

**Plan Ref. No. Premier Plan 3**

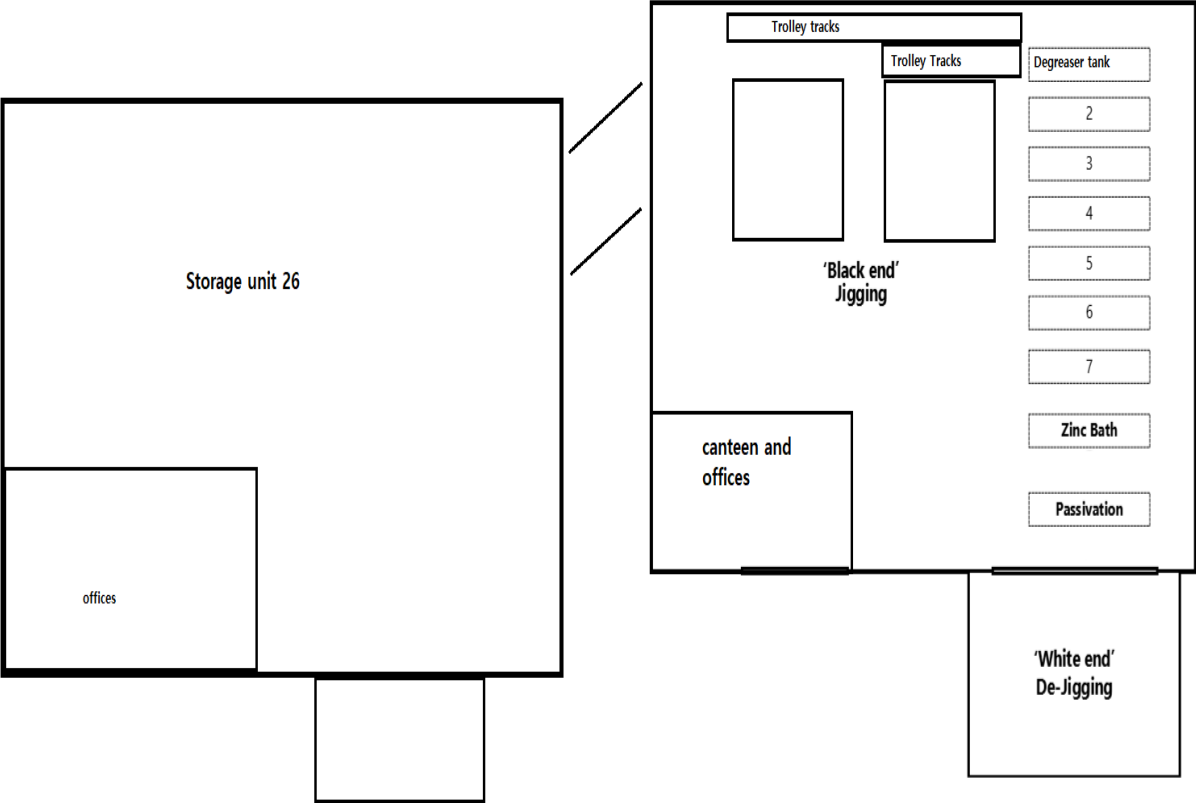


- (1) Environmental Impact
  - water – spillage during delivery
  - land – spillage – overfilling of containers
  - accidents – overfilling/leakage from containers
  - noise – vehicles and deliveries
- (2) Environmental Impact
  - waste – sludge – off site waste disposal
  - energy – required to maintain degrease solution at 40-45°C
  - accidents – spillage
- (3) Environmental Impact
  - air – hydrochloric acid fumes (fugitive)
  - waste- used liquor to off site waste treatment
  - accidents – spillage
- (4) Environmental Impact
  - waste – used rinsing liquor – taken off site for treatment
- (5) Environmental Impact
  - air – steam
  - waste – sludge – off site waste disposal
  - accidents – spillage
- (6) Environmental Impact
  - air – potential emissions from fume and steam
  - energy – used to maintain zinc at 440-450°C – reuse of waste heat
  - waste – dross, ash – sold as by product
  - noise – extraction fans
- (7) Environmental Impact
  - air – steam from quenching
  - land – sludge to be disposed of
  - water – used for quenching
  - accidents – spillage from passivation tanks/storage of proprietary agent

**Premier Galvanizing (Hull) Ltd**

**Environmental Permit Reference No: EPA/188/Rev5**

**Plan Ref. No. Premier Plan 4**





## **Description of Activity**

The galvanizing process involves pre-treating steelwork components and fabricated items in various solutions, known as the 'pre-treatment' stage, prior to dipping into a bath of molten zinc.

The galvanized product is then left to cool by air or is quenched into a further process tank which is known as the passivation stage.

The pre-treatment line involves the following:

### **Heated Degreasing**

The material is immersed in a tank containing a sodium hydroxide and surfactant solution which is heated to between 40 and 45°C. This removes any oils and grease from the product.

### **Pickling**

The material is immersed in a tank containing dilute hydrochloric acid. This removes any surface rust and/or millscale which is on the product.

### **Rinsing**

After the work has been pickled correctly, it is immersed in a static water rinse tank in order to wash away the acid from the surface.

### Fluxing

After the work has been rinsed, it is immersed in a hot pre-flux tank (55-65°C), in order to prevent any oxidation taking place prior to the work being dipped in the molten zinc.

Steam emissions are given off to atmosphere from the surface of the tank.

The fluxing operation used at Premier Galvanizing is known as 'dry fluxing' with a special 'low fume flux' being used in an aqueous solution. This special flux is used to vastly reduce fume emissions created at the galvanizing bath when the work is lowered into the molten zinc.

### Galvanizing

The galvanizing stage is carried out after the work has been pre-fluxed. The material is lowered into molten zinc, with the tank holding the zinc at a temperature of between 440-450°C.

As the material is lowered into the zinc, the temperature is brought up to the same temperature as the molten zinc and a metallurgical reaction takes place which creates zinc/iron alloy layers at the surface.

As the material is being lowered into the zinc, a fume is given off from the dried preflux film on the surface of the work, and this is contained within a steel enclosure above the galvanizing bath.

Whilst the material is undergoing the galvanized process, the area around the bath is fully enclosed. The only exception to this is when larger items require to be 'double dipped'.

The fume is extracted from the enclosure and ducted to an external stack where it is released to atmosphere.

The 'low fume flux' ensures that emission limits are met without the need for end of pipe abatement.

'Ash' is formed on the surface of the galvanizing bath (zinc oxide). This is removed manually by the operators to avoid excessive fume being created. The zinc ash is sold as a by product.

### Post Treatment

After the work has been galvanized, it is immersed in one of two tanks which contain a dilute proprietary passivation solution. Steam is emitted to atmosphere as the work is 'quenched'.

The various areas of the activity are clearly marked on plan reference number: Premier Plan 4, with the flowchart shown in Premier Plan 3 detailing the various stages.

## **Conditions of Environmental Permit reference EPA/188/Rev5**

### **Section 1 - Delivery and Storage of Raw Materials**

*All raw materials, other than those on a mains supply (i.e. water and electricity) are delivered to site by road transport. The raw materials used in the activity include:-*

- *Hydrochloric acid*
- *Acid inhibitor*
- *Degreaser additive*
- *Fluxing agents (bagged powdered products)*
- *zinc*
- *zinc ingots*
- *passivation solutions*
- *calor gas*

*The potential environmental impacts from delivery and storage of raw materials are as follows:-*

- (a) *Land – spillage/leakage of liquid materials, overfilling of containers.*
- (b) *Water spillage during delivery of liquids followed by run off.*
- (c) *Accidents – overfilling of acid tanks/leakage of liquid materials from containers.*
- (d) *Noise – vehicle and delivery operations may cause noise disturbance, especially if close to the site boundary.*

### **Conditions relating to Section 1**

- 1.1 The operator shall ensure that during deliveries of raw materials, measures are taken to prevent noise emissions and prevent spillages and leakages of raw materials.

- 1.2 All storage areas shall be hard surfaced.
- 1.3 All raw materials shall be kept under cover, with the exception of black steel, which if the need arises can be stored in the yard area.
- 1.4 Liquid storage areas shall be bunded, where the bunds:
- are impermeable and resistant to the stored materials
  - have no outlet and drain to a bund collection point
  - have pipework routed within bunded areas with no penetration of contained surfaces
  - are designed to catch leaks from tanks or fittings
  - have a capacity of at least 110% of the largest tank
  - are visually inspected monthly
  - spillage materials contained within the bunds are pumped out or manually removed and checked for contamination
  - have an annual maintenance inspection
- 1.5 All spillages shall be cleared as soon as possible, with liquid spillages being cleared by the addition of absorbent material, or by run-off to contained drainage systems.
- 1.6 A high standard of housekeeping shall be maintained at all times.
- 1.7 An inventory of all raw materials that are used on site or in stock shall be maintained, and this inventory shall be checked on a weekly basis.

## **Section 2 – Heated Degreasing**

*Degreasing removes surface oils, grease and traces of coolants and lubricants from fabricated steel using proprietary solutions which are alkaline. It is normal to add the sodium hydroxide proprietary chemical to the degrease bath which removes oil and grease from the metal surface by emulsification. A surfactant additive is also added to ensure the resulting unstable emulsions float on the surface of the bath and can be removed. The bath is heated to about 40°C to aid the cleaning process. The degrease bath has an overall volume of 26,000L and contains a solution of Masco 245 DMX, an alkaline degreasing solution with a pH of 14. Any waste produced from the degreasing process is removed and disposed of using bulk tanker collections.*

### **Conditions relating to Section 2**

- 2.1 The degreasing bath shall be bunded. The bunding and maintenance of the bund shall be in accordance with Condition 1.4.
- 2.2 The degrease solution shall be checked on a regular basis to determine the correct strength. Should there be a reduction in solution strength; a proprietary degreasing product shall be added to maintain an adequate level.

### **Section 3 - Pickling**

*The work is attached to jigs by means of hooks and wires. The jigs are moved by use of an electric driven hoist. The work is now ready for pickling.*

*Pickling is a process whereby the surfaces of the materials to be galvanized are prepared. The pickling process removes rust and millscale from the material.*

*Hydrochloric acid is brought onto the site and diluted for use in one of six pickling baths at ambient temperature. In the case of rework (typically <1%), stripping will be conducted within one of the pickling vats, which will be dedicated for stripping. The jigs are also stripped to prevent zinc build up. Hydrochloric acid is added to the pickling baths and diluted with water (from the rinse tanks or town's water) until a concentration of approximately 14% is reached. The fume from the bath (including hydrogen released during the reaction of the acid on the surface of the rusting metal) is passively vented through roof vents. The fumes are minimised by operating the acid pickling at ambient temperatures. An inhibitor is added to the pickling baths to prevent over pickling of the steel.*

*During operation, the iron content of the pickling bath increases over time, while the amount of free acid decreases. When the bath reaches a certain composition and is determined to be no longer effective as a pickling solution, a calculated volume is pumped to a tanker for off site disposal, and fresh acid is added to the bath as a top up. Iron sludge will also fall to the bottom of the tank and eventually the contents of the whole tank may have to be removed and a 'new' tank made up.*

*The potential environmental impacts from the rinsing activity are as follows:-*

- (a) Air – hydrochloric acid fumes (fugitive)*
- (b) Waste – spent liquor to off site waste treatment facility*
- (c) Accidents – spillage*

### **Conditions relating to Section 3**

- 3.1 All pickling baths shall be contained within a pit which drains to two sumps. Any spillages or leaks from the pickling baths shall be contained in the pit and shall drain to the sumps.
- 3.2 Any spillages contained in the sumps shall be pumped out and sent for off site disposal.
- 3.3 Pickle liquor shall be checked at least every 2 months using a standard titration method to ensure the strength of acid and iron content is satisfactory, and to determine if the acid is spent.
- 3.4 Stripping shall be carried out in a separate bath to pickling, to ensure zinc content of the pickling baths is negligible.



## **Section 4 - Rinsing**

*After the material has been pickled, the hydrochloric acid is washed from the surface of the material during the rinsing operation in order to prevent contamination of the preflux solution, and to reduce the amount of iron 'salts' reaching the galvanizing bath.*

*If the rinsing tank becomes too acidic or the iron content is too high, the contents may have to be replaced with water from the rainwater storage tank.*

*The potential environmental impacts from the rinsing activity are as follows:-*

*(a) waste – 'contaminated' water taken off site for treatment and disposal.*

### **Conditions relating to Section 4**

4.1 Water from the rinse tanks shall be used as far as practicable to make up fresh new acid tanks or top up acid tanks.

4.2 Water from the rinse tanks that cannot be used as a top up for a new acid tank shall be taken off site as special waste for treatment and disposal.

4.3 The rinsing bath shall be contained within a pit which drains to two sumps. Any spillages or leaks from the rinsing bath shall be contained in the pit and shall drain to the sumps.

## **Section 5 - Fluxing**

*Fluxing is carried out in order to prevent oxidation of the work before it is dipped, as well as enabling the zinc to form a uniform coating. The material is immersed in a heated (55-65°C) preflux solution. The flux used by Premier Galvanizing is a low fuming flux where the ammonium chloride constituent has been reduced and partially replaced with other salts. Although not individually banded, the fluxing bath is contained within a pit. The pit, which also houses the pickling baths and the rinsing bath, drains to two sumps.*

*The flux is periodically analysed (every 2-3 months) by the suppliers to assess the iron content in order to determine if the flux is spent. When the flux is considered to be spent, it is tankered off via a licensed waste contractor.*

*The potential environmental impacts from the prefluxing activity are as follows:-*

- (a) Air – production and emissions of ammonium chloride, zinc chloride and steam.*
- (b) Waste – sludge taken off site for disposal.*
- (c) Accidents – spillages.*

## **Conditions relating to Section 5**

- 5.1 The preflux solution shall contain zinc chloride, potassium chloride and ammonium chloride at a ratio that ensure emissions are achieved (see Condition 8.1), without the need for abatement equipment.

- 5.2 The operator shall control the iron content of the flux solution in order to minimise dross production at the dipping stage. This control will be part of the overall Improvement Programme required by conditions 10.1 and 11.1.

## **Section 6 - Galvanizing**

*The fluxed steel material is slowly lowered into the galvanizing bath which contains molten zinc and zinc alloys at approximately 440-450°C. The gas burners and temperature control for the bath are connected to an automated audio visual alarm and telephone alarm. Fume is created instantaneously at the point of dipping, as the sublimation temperature of ammonium chloride is lower than the temperature of the zinc bath. The fume content includes ammonium chloride, zinc oxide, zinc chloride, hydrogen gas and steam. Containment of the fume occurs through use of a mobile enclosure. During dipping the enclosure is in place and the extractor fans are switched on. The enclosure will remain in place until the galvanized product is complete. The work pieces are rattled during extraction from the zinc bath to minimise zinc losses.*

*Ash, which is mainly zinc oxide, forms on the surface of the molten zinc and is skimmed back before the material is withdrawn from the bath – this is to avoid contamination of the galvanized coating.*

*The ash is removed from the bath on a regular basis, and is stored in drums until it is sold for further processing by the zinc chemicals industry.*

*Zinc dross is formed in the galvanizing bath due to iron from the work dissolving in the zinc and reacting to form dross particles that precipitate to the bottom. The dross is poured into moulds, left to cool and then shrink wrapped prior to collection. The dross is sold as a by-product to be recycled into zinc oxide.*

*The potential environmental impacts from the galvanizing activity are as follows:-*

- (a) Air – emissions of fume, steam and possible particulate from ash handling.*
- (b) Waste – dross, ash produced, sold as a by product.*
- (c) Energy – energy required to heat galvanizing bath – reuse waste heat to flux solution bath.*
- (d) Noise – extraction fans.*

### **Conditions relating to Section 6**

- 6.1 Emissions from the galvanizing activity shall be adequately contained by the mobile enclosure and extracted through to the 12m stack (emission point A1 on Plan Reference: Premier Plan 2). The mobile enclosure shall be in place above the galvanizing bath when material is immersed, as well as when the bath is being replenished.
- 6.2 Emissions from the reclamation of ash shall be extracted through to the 12m stack (emission point A2 on Plan Reference: Premier Plan 2).
- 6.3 All doors to fume enclosures shall be closed during immersion of articles into the galvanizing bath, unless double dipping is required. In which case, the extraction system shall be operational to minimise fugitive emissions from the operation.
- 6.4 Ash and dross which is collected from the galvanizing bath shall be stored in suitable metal containers (drums) and in moulds until they are taken from the site for recycling.

## **Section 7 - Post Treatment**

*The galvanized material is immersed into a water quench solution. Finishing chemicals are added to the quench tanks to prevent 'wet storage stain' appearing.*

*The quench is periodically analysed by the suppliers to assess the polymer, zinc and chloride build up in order to determine if the quench is spent. When the quench is spent, the quench water is removed via a licensed waste contractor. The water bath is refilled with fresh water from the main supply.*

*Sludge builds up at the bottom of the tank. Periodically this is removed and disposed of as a special waste.*

*Once the passivation process is complete, the galvanized material is then left in storage awaiting pick up or delivery to customers.*

*The potential environmental impacts from the passivation activity are as follows:*

- (a) Air – steam from quenching.*
- (b) Land – sludge to be disposed of.*
- (c) Water – used for quenching – lost as steam.*
- (d) Accidents – spillage from the passivation tank/storage of the passivation proprietary agent.*

### **Conditions relating to Section 7**

- 7.1 Galvanized material shall be lowered carefully into the passivation tank in order to minimise spillage and splashing.
- 7.2 The passivation tank shall be within a bunded area, with the bunds being of suitable construction and in accordance with Condition 1.4.
- 7.3 The 'finishing chemicals' shall be stored in suitably lidded containers to prevent accidental spillage.

## **Section 8 - Emissions Control and Monitoring**

*The potential emissions to air have been detailed in the previous sections, which involve each of the process activities. In general they comprise:-*

- *acid fumes from pickling*
- *ammonium chloride and zinc chloride fumes from fluxing*
- *fume from galvanizing*
- *ash handling may give rise to particulate matter in the form of dust*
- *visible steam emissions may arise from pre-fluxing and post galvanizing treatments due to the temperature of the operations*

### **Conditions relating to Section 8**

- 8.1 The operator shall ensure that mobile enclosures and the extraction equipment are used correctly to ensure compliance with the following emission limits.

<u>Pollutant</u>	<u>Source</u>	<u>Limit</u>
Particulate matter	Galvanizing bath	15mg/m <sup>3</sup>
Particulate matter	pre flux	} No persistent visible emission
	galvanizing bath	
Particulate matter	Ash reclamation	20mg/m <sup>3</sup>

The operator shall ensure that indicative emission monitoring is undertaken once every 2 years to demonstrate compliance with the particulate matter emission limits above.



- 8.2 The operator shall ensure that fugitive emissions are kept to a minimum. In the case of the pickling activity, fugitive emissions of hydrogen chloride shall be minimised by using acid at ambient temperature and ensuring that the strength of the acid is controlled within set limits. Testing of the acid levels shall be in accordance with Condition 3.3.
- 8.3 The stack heights shall remain at 12m. The local authority officer shall be informed if there is any alteration intended to the stack height.
- 8.4 Exhaust gases discharged through the stack shall have an exit velocity which ensures adequate dispersal.
- 8.5 Visual and olfactory assessments shall be made at least once daily of the stack, entrance doors and roof area at monitoring position A on Premier Plan 2. If there are incidents of persistent visible emissions, these shall be investigated immediately and rectified without delay. All results of daily monitoring and any resultant incidents shall be recorded in a log book. The log book shall be kept on site and made available to the local authority officer to examine. The log book records shall be kept by the operator for at least two years.
- 8.6 Stacks shall not be fitted with any restriction at the final opening such as a plate, cap or cowl, with the exception of a cone which may be necessary to increase the exit velocity of the emissions.

- 8.7 The operator shall ensure that the galvanizing operation is undertaken in a manner as to minimise fugitive emissions. The principle source of fugitive emissions is the pickling operation, where small amounts of hydrogen chloride are released into the atmosphere as fugitive emissions. The operator shall ensure that visual assessments are made at entrance doors and roof area to show compliance with Condition 8.5.
- 8.8 The flues and ductwork shall be inspected and cleared as required, to prevent accumulation of materials.

## **Section 9 - Emissions to surface water and sewer**

*All solutions used in the activity are contained within dedicated tanks or held in specific storage areas.*

*Each of the tanks or storage areas are in a large sump or are fully bunded to prevent spillage or leakage.*

*Surface water (rain water) is either collected in a storage tank for use within the process or discharged to sewer together with domestic foul water. There are no release points from the installation to ground waters.*

### **Conditions relating to Section 9**

- 9.1 Inspections shall occur once a month on the condition of storage tanks, sumps and bunds, and the concreted external storage areas to ensure that the condition is satisfactory and would not allow leakage of the activity solutions to surface water or sewer. Any contents within the areas shall be pumped out for reuse/disposal accordingly.
- 9.2 All sumps shall be impermeable and resistant to stored materials.
- 9.3 All vessels shall have secondary containment.
- 9.4 Audit records on water usage shall be kept and referenced to annual production.

## **Section 10 - Environmental Management**

*The operator has chosen to implement an Improvement Programme that will encompass an Environmental Management System, waste minimisation audit, energy consumption and Process Hazard review.*

### **Conditions relating to Section 10**

10.1 The operator shall have a fully documented updated Environmental Management System in place as part of the Improvement Programme. The EMS shall include:

- preventative maintenance schedule
- an inventory of essential spares and consumables
- records of breakdowns and corrective action taken
- documented training procedures for staff which will be in accordance with competence based development modules
- induction training for contractors who may be working on the site
- procedures in place for investigating accidents/incidents with suitable corrective action procedures

## **Section 11 - Waste**

*The main waste streams have been identified within Premier Plan 3. Within this section, waste minimisation, water use, waste handling and waste reuse, recovery, recycling and disposal will be discussed.*

### **Waste minimisation**

*This can be defined as ‘a systematic approach by the reduction of waste at source, by understanding and changing processes and activities to prevent and reduce waste.’*

*Key operational features of waste minimisation will be:-*

- *the ongoing identification and implementation of waste prevention opportunities.*
- *staff involvement and commitment*
- *monitoring of materials usage and reporting against key performance measures*

### **Conditions relating to waste minimisation**

11.1 The operator will have in place and this shall be updated as per Condition 11.2 a waste minimisation audit (Improvement Programme). The audit shall detail opportunities for waste reduction, changes in process and improved efficiency. From the audit, suitable waste minimisation Performance Indicators (PIs) will be generated and monitored. They will be established after a baseline for operations has been set.

11.2 The waste minimisation audit shall be undertaken annually and reported to the Regulator on an annual basis.

### **Water Use**

*The main water usage within the activity is in acid baths, in flux solution and as a top up for evaporative losses in post treatment operations.*

### **Conditions relating to water use**

11.3 The operator shall check water consumption on a regular basis throughout the year, and the annual consumption is compared to performance indicators set by the Company. Opportunities for reduction in water use shall be assessed and this shall form the water efficiency audit (Improvement Programme).

### **Waste Handling**

*The operator has in place a waste material segregation policy in order to maximise the amount of waste for recovery, recycling and reuse.*

*The principle types of waste are:-*

- *spent acid*
- *ash and dross (by product)*

### **Conditions relating to waste handling**

- 11.4 The operator shall ensure that all staff receive appropriate training to ensure they correctly use the waste by product segregation system.
- 11.5 Waste storage areas shall be clearly marked, with each container being labelled to categorise each waste.
- 11.6 The quantities of each waste to be taken off site for disposal shall be recorded, together with relevant transport documentation and detail of destination.
- 11.7 Particulate matter, such as ash, shall be stored in steel containers in a covered area to ensure prevention of wind whipping and resultant dust emissions, and also to keep the material dry.
- 11.8 Lorries transporting ash shall be sheeted immediately after loading to prevent dust escape.
- 11.9 A high standard of housekeeping shall be maintained around the waste storage area.

## **Section 12 - Energy**

A program of energy review and use by the operator is essential to ensure the use of energy is minimised. The main sources of energy are electricity, gas and fuel oil.

### **Conditions relating to Section 12**

12.1 The operator shall adopt an environmental management system relating to energy consumption, as part of the Improvement Programme, which will include:-

- an annual report on the energy consumption of the installation
- the energy flows will be monitored on a monthly basis and will be reviewed annually for opportunities for reduction
- the plant will be operated and maintained in such a way as to minimise the use/loss of energy
- all containment measures will be in place to ensure minimised energy losses

12.2 The environmental management system will be updated following any revisions to operational procedures.

12.3 Operational staff will be responsible for visually inspecting, and where possible rectify leaks including the following:-

- operation of motors and drives
- lubrication
- zinc bath temperature



## **Section 13 - Accidents**

*In relation to the permit, accidents refer to any incident which is likely to cause an environmental impact. Measures should be put in place to minimise any such impact.*

### **Conditions relating to Section 13**

- 13.1 The operator shall have standard operating procedures for reporting, investigating and dealing with accidents such as spillages, failure of containment, overfilling of tanks etc. which will be known as the Process Hazard Review. The Process Hazard Review (Improvement Programme) shall detail suitable corrective action to be taken. This Process Hazard Review shall be reviewed every two years. The next review shall be incorporated into the Environmental Improvement Programme as required by Condition 10.1.
- 13.2 Within the Process Hazard Review, the procedures shall direct the operator to:-
- investigate the accident immediately and undertake remedial action as soon as practicable
  - promptly record the events and actions taken
  - ensure the local authority officer is made aware, as soon as practicable.
- 13.3 All staff involved in dealing with accidents shall receive the necessary training to enable them to deal with such incidents.

## **Section 14 - Noise and Vibration**

*Noise and vibration from the installation shall be controlled so as not to cause nuisance to any nearby receptor.*

### **Conditions relating to Section 14**

- 14.1 The operator shall ensure that staff handle steel work carefully so as to minimise the noise levels from handling activities.
- 14.2 The operator shall provide Hull City Council with noise output details of any new plant and equipment that has the potential to increase ambient noise levels, before the equipment is installed.

## **Section 15 - Monitoring**

*This section provides conditions for the general monitoring and reporting requirements for emissions to all environmental media.*

*The main emissions from the activity are the fume released to atmosphere through the stacks, from the galvanizing bath and ash reclamation. These emissions are tested isokinetically on an annual basis to ensure the amount of total particulate matter is within the emission limits stipulated in Condition 8.1 of 15mg/m<sup>3</sup> (for the galvanizing bath) and 20mg/m<sup>3</sup> (for ash reclamation). As required by Condition 8.5, these records remain on site for a minimum of two years. The following conditions are general monitoring conditions that should be complied with as part of the permit.*

### **Conditions relating to Section 15**

- 15.1 The operator shall inform the local authority officer within 7 days of the date monitoring that will be undertaken.
- 15.2 The operator shall forward results of the monitoring to the local authority officer within 8 weeks of the monitoring.
- 15.3 Adverse results from any monitoring activity shall be investigated immediately. The operator shall ensure that:-
- the cause has been identified and corrective action taken
  - as much detail as possible is recorded regarding the cause and extent of the problem and the action taken to rectify the situation

- retesting to demonstrate compliance is carried out as soon as possible
- the local authority officer is kept updated.

15.4 In the case of abnormal emissions, malfunction or breakdown leading to abnormal emissions, an investigation and remedial action shall take place immediately. The activity shall be adjusted to minimise the emissions. Events and actions shall be recorded promptly, and if non-compliance should occur that could cause immediate danger to health, the operation will be suspended. The local authority officer will be notified without delay.

15.5 Particulate matter tests required by provision of Condition 8.1 shall be undertaken in accordance with BSEN 13284: Part 1 for sampling particulate matter in stacks. The samples shall be taken during the time period of maximum emissions.

15.6 The operator shall ensure that adequate facilities for sampling are provided on the stack.

15.7 The introduction of dilution air to achieve emission concentration limits is not permitted.

## **Section 16 - Decommissioning**

- 16.1 The site closure plan, as detailed in Appendix 3 of the application, shall be updated and revised by the operator, as circumstances change on the site.

## **Section 17 - General**

- 17.1 The best available techniques shall be used to prevent, or where that is not practicable, reduce emissions from the installation in relation to any aspect of the operation of the installation which is not regulated by any other condition of this Permit.
- 17.2 You must respond to any Information Notice served on you for the purposes of complying with your obligation to report your pollutant releases and off-site waste transfers pursuant to the directly applicable EU duty in accordance with Article 5 of EC Regulation No 166/2006 concerning the establishment of a European Pollutant Release and Transfer Register. As a permit condition, your failure to respond in accordance with such annual E-PRTR Information Notice will hereby constitute a breach of your Permit.

Signed: ..... Date: .....  
Section Manager (The person appointed for this purpose)

## **ENVIRONMENTAL PERMIT EXPLANATORY NOTE (A(2))**

This note does not comprise part of the Environmental Permit but contains guidelines relevant to the Environmental Permit.

### **BEST AVAILABLE TECHNIQUES (BAT)**

Some conditions within this Environmental Permit require that the operator use the Best Available Techniques (BAT) to achieve the requirements of the conditions and to prevent or, where this is not practicable, reduce emissions. Although the environmental permit does not give details of what would constitute BAT, it is expected that the operator will refer to any relevant guidance, available at that time, to achieve BAT.

### **MAINTENANCE**

Effective preventive maintenance needs to be employed on all plant and equipment concerned with the control of emissions to air. Essential spares and consumables need to be available at all times.

### **TRAINING OF STAFF**

Staff at all levels need to receive proper training and instruction in their duties relating to control of the activity and emissions, and particular emphasis given to training for start-up, shut down and abnormal conditions.

## **HOUSEKEEPING**

A high standard of housekeeping needs to be maintained.

This environmental permit is issued under the Pollution Prevention and Control Act 1999. The responsibility under legislation for health, safety and welfare in the workplace remain in force. This environmental permit does not detract from any other statutory requirement such as any need to obtain planning permission, or Building Regulations approval.

Your attention is also drawn to the following additional matters.

## **REFERENCE CONDITIONS**

The reference conditions for concentrations of substances in emissions to air from contained sources are:

- (a) For combustion gases, dry temperature: 273K (0°C) pressure 101.3 Kpa (1 atmosphere), 11°Oxygen.
- b) For non-combustion gases no correction for water vapour content, temperature:-  
273(0°C) pressure 101.3 Kpa (1 atmosphere).

## **RINGLEMAN**

Information on Ringlemann smoke charts is given in BS2742:2009.

## **RELEVANT SECTOR GUIDANCE**

The requirements of the contents relate to the final standards as described in Sector Guidance Note SG5.

## **CHANGES TO THE ACTIVITY**

The operator carrying on a prescribed activity under an environmental Permit must notify the Hull City Council in writing if he wishes to make a relevant change to this activity. in order that the Council may make a determination as to whether the change would be substantial or involve the breach of the current environmental Permit conditions.

## **SURRENDER OF THE ENVIRONMENTAL PERMIT**

Should the operator wish to surrender the environmental permit either wholly or partially. they must first of all make an application to Kingston upon Hull City Council stating that surrender is required. Before allowing such a surrender, Hull City Council will need to be satisfied that the site will be left in a reasonable state and no further pollution risk will be posed by either the site or, if it remains, any part of the installation.

## **TRANSFER OF THE ENVIRONMENTAL PERMIT**

Should the operator wish to transfer this environmental permit to another operator, either wholly or partially, an application must first of all be made to



Hull City Council stating that surrender is required. A transfer of the environmental permit will be allowed provided Kingston upon Hull City Council are satisfied that the proposed new environmental permit holder can operate the activity in accordance with the conditions of the environmental permit.

### **CONTACTING US**

This environmental permit has been issued by Hull City Council, Public Protection, Environmental Regulation Section, 33 Witham, Kingston upon Hull, HU9 1DB. Any queries should be made either in writing to this address or via the Council's Call Centre on telephone number 01482 300300.

### **Appeals**

Anyone served with a permit can appeal to the Secretary of State at the following address:

The Planning Inspectorate  
Environmental Appeals Team  
Room 3A – Eagle Wing  
Temple Quay House  
2 The Square  
Temple Quay  
Bristol  
BS1 6PN

Tel: 0303 444 5584