CANNOCK CHASE DISTRICT COUNCIL

THE ENVIRONMENTAL PERMITTING (ENGLAND AND WALES) REGULATIONS 2010

PERMIT TO OPERATE SURFACE TREATMENT OF METALS INSTALLATION & COATING ACTIVITY

PERMIT REFERENCE NO. IPPC 2.3A2 (a)(iii)/ 6.4A2 (a) EPR 10/13

Gestamp Tallent Limited
Wolverhampton Road
Cannock
WS11 1LY

Regulator Contact Details

Cannock Chase District Council
Environmental Health
Civic Centre
PO Box 28
Beecroft Road
Cannock
WS11 1BG

Tel: 01543 462621

Emergency and out of hours contact No. 01543 462621

Fax: 01543 464213

E-mail: environmentalhealth@cannockchasedc.gov.uk

The operator should use the Local Authority emergency contact telephone number (01543 462621) for notifications required by conditions 15.1 only.

Environment Agency Hotline (0800) 807060

This introductory note does not form a part of the Permit

The following Permit is granted under Regulation 13 of the Environmental Permitting (England and Wales) Regulations 2010 (S.I.2010/675) ("the EP Regulations") to operate an installation carrying out one or more of the activities listed in Part A2 and B to Schedule 1 of those Regulations, to the extent authorised by the Permit.

The Permit includes conditions that have to be complied with.

Techniques include both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned.

Sector and Process Guidance Notes

Sector Guidance Note IPPC SG6 (2006) for the A2 Surface Treatment for Using Solvents & IPPC SG5 for A2 Activities in the Galvanising sector have been used in producing this Permit.

Contacting the Regulator

This Permit has been issued by Cannock Chase District Council as the Regulator for this installation and the address above (Pg 2) is the Principle contact address for all matters relating to the Permit. The operator should use the Local Authority emergency contact telephone number (01543 462621) for notifications required by condition 15.1 only.

Confidentiality

The Permit requires the Operator to provide information to Cannock Chase District Council. The Council will place the information onto the public registers in accordance with the requirements of the EP Regulations. If the Operator considers that any information provided is commercially confidential, it may apply to Cannock Chase District Council to have such information withheld from the register as provided in the EP Regulations. To enable Cannock Chase District Council to determine whether the information is commercially confidential, the Operator should clearly identify the information in question and should specify clear and precise reasons.

Variations to the permit

Your attention is drawn to the Variation Notification Procedure condition in the permit. This Permit may be varied in the future. If at any time the activity or any aspect of the activity regulated by the following conditions changes such that the conditions no longer reflect the activity and require alteration, the Regulator should be contacted.

Revocation of the permit

Where an Operator intends to cease the operation of an installation (in whole or in part) the regulator should be informed in writing, The Regulator may revoke a permit in whole or in part, and may require the operator to take steps-

to avoid a pollution risk resulting from the operation of the regulated facility; or

to return the site to a satisfactory state, having regard to the state of the site before the facility was put into operation.

Transfer of the permit or part of the permit

Before the Permit can be wholly or partially transferred to another person, a joint application to transfer the Permit has to be made by both the existing and proposed holders, in accordance with Regulation 21 of the EP Regulations. A transfer will be allowed unless the Authority considers that the proposed holder will not be the person who will have control over the operation of the installation or will not ensure compliance with the conditions of the transferred Permit.

Responsibility under workplace health and safety legislation

This Permit is given in relation to the requirements of the EP Regulations. It must not be taken to replace any responsibilities you may have under Workplace Health and Safety legislation.

Appeal against permit conditions

Anyone who is aggrieved by the conditions attached to a Permit can appeal to the Appropriate Authority, (Secretary of State for the Environment, Food and Rural Affairs, in England and the Welsh Ministers in Wales) Appeals must be made in accordance with the requirements of Regulation 31 and Schedule 6 of the EP Regulations.

Appeals should be received by the Secretary of State for Environment, Food and Rural Affairs or the Welsh Ministers at the following addresses:

The Planning Inspectorate
Environment Team, Major and Specialist Casework
Room 4/04 Kite Wing
Temple Quay House
2 The Square
Temple Quay
Bristol BS1 6PN

Or for appeals in Wales:

The Planning Inspectorate
Crown Buildings
Cathays Park
CARDIFF
CF10 3NQ

Please Note

An appeal bought under Regulation 31 (1) (b) and Schedule 6, in relation to the conditions in a permit will not suspend the effect of the conditions appealed against; the conditions must still be complied with. In determining an appeal against one or more conditions, the Act allows the Secretary of State in addition to quash any of the other conditions not subject to the appeal and to direct the local authority either to vary any of these other conditions or to add new conditions.

End of Introductory Note

Process Description

Gestamp Tallent Limited is an automotive parts manufacturing installation located in south west Cannock, Staffordshire. The installation comprises a number of manufacturing operations along with associated infrastructure and offices. The main elements of the installation comprise of:

- Pickling line and wet scrubber abatement;
- Paint line & de-odourising unit;
- Large presses for forming of automotive body parts;
- Booths for manual and robotic welding operations;
- Workshop/stores;
- Reverse osmosis water treatment plant;
- Demineralised water tank;
- Two effluent treatment plant;
- Electrical Transformers
- Cooling (1 large closed loop chiller, approximately 50 closed loop chillers).

Paint Line

The paint line has been designed to treat up to 8.4 million automotive parts for use within the automotive industry. This is carried out by the automotive parts travelling by overhead conveyor though a series of pre-treatment processes which include acid and alkali treatments and demineralised water rinses before the electrophoretic paint being applied and then dried within the stoving oven.

Picking Line

The pickle line has been designed to treat up to 1.2 million sub frames for use within the automotive industry. This is carried out by the sub frames travelling by overhead conveyor through a series of pre-treatment processes which include acid and alkali treatments to degrease the axels before they are dried.

General automotive parts manufacturing comprises a series of welding and press operations, with some mechanical assembly operations, and the automotive parts are then either delivered off-site for use by the end user or go through the paint line process.

The automotive parts manufacturing facility generally runs 24 hours per day for 6 days a week but is capable of operating 24 hours a day, 7 days per week except during shutdowns for maintenance or unplanned outages.

There are no energy generation activities undertaken on site.

General Automotive Parts Manufacture

The process comprises a series of welding and press operations, with some mechanical assembly operations. The resulting automotive parts are either despatched off-site for use by the end user or pass through the onsite paint line process described above.

Emissions Control

The pickle line fume scrubber system is used to control acid gases. The scrubber system comprises a scrubber tower with water spray removing acid gases from the exhaust gases into the scrubber liquor (water). The scrubber liquor is recirculated within the tower reacting. There is a mist eliminator to further treat the air from the pickle line before it is returned to the process building or discharged via the stack.

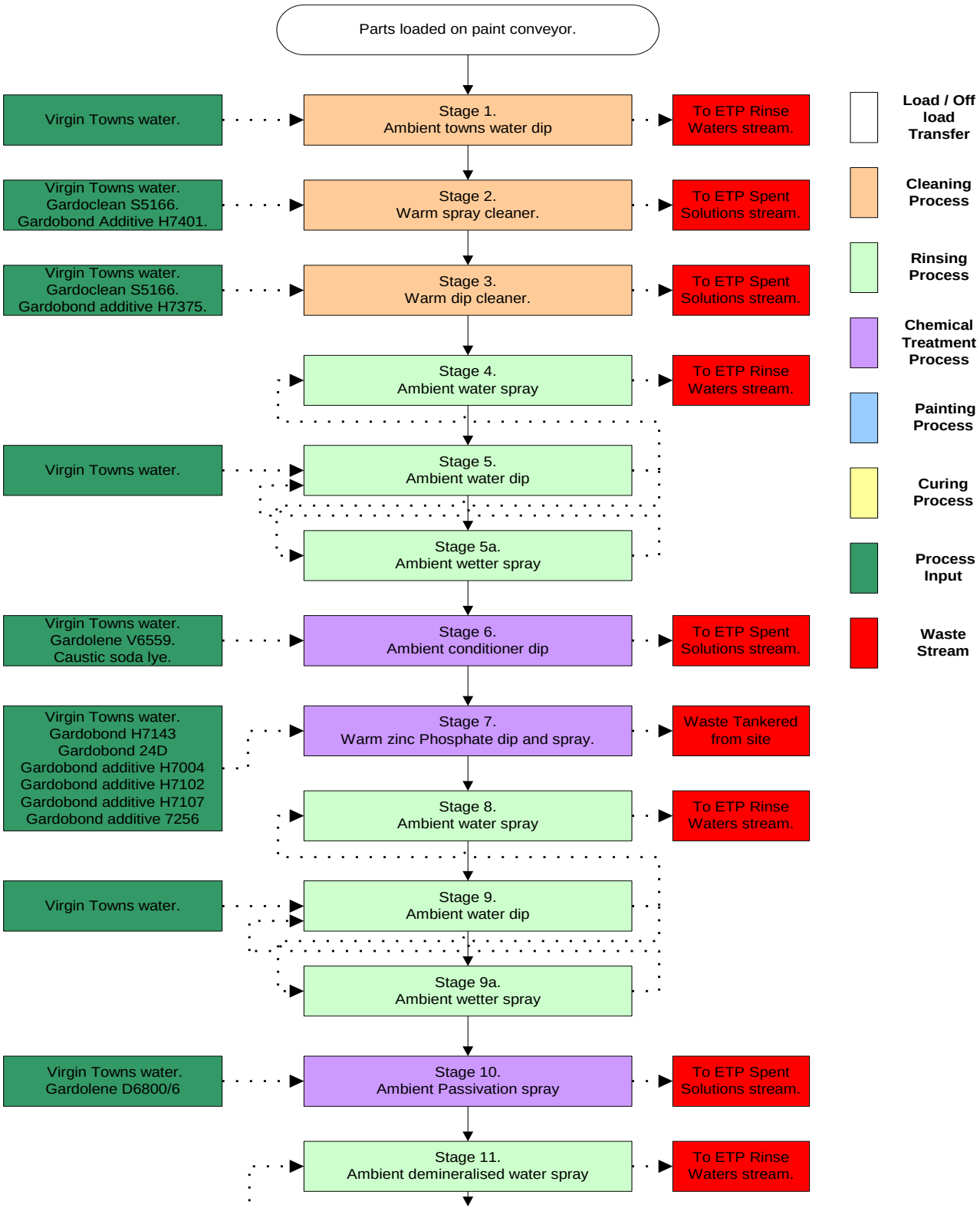
The recirculated water is controlled via the addition of an alkali as monitored by a pH probe to ensure that the scrubbing solution is at the correct pH.
The pickle and paint lines each have their own independent effluent treatment plant for the treatment of effluents which comprises pH correction and heavy metal removal prior to discharge to the Severn Trent foul sewer as trade effluent.
All of the automotive parts manufacturing facility areas will be surfaced to an appropriate standard for the activities within that area. All tanks are appropriately sized so as to contain 110% of the tank or 25% of the total tankage. The materials selected for surfacing of process areas and bunds are resistant to the materials they store.

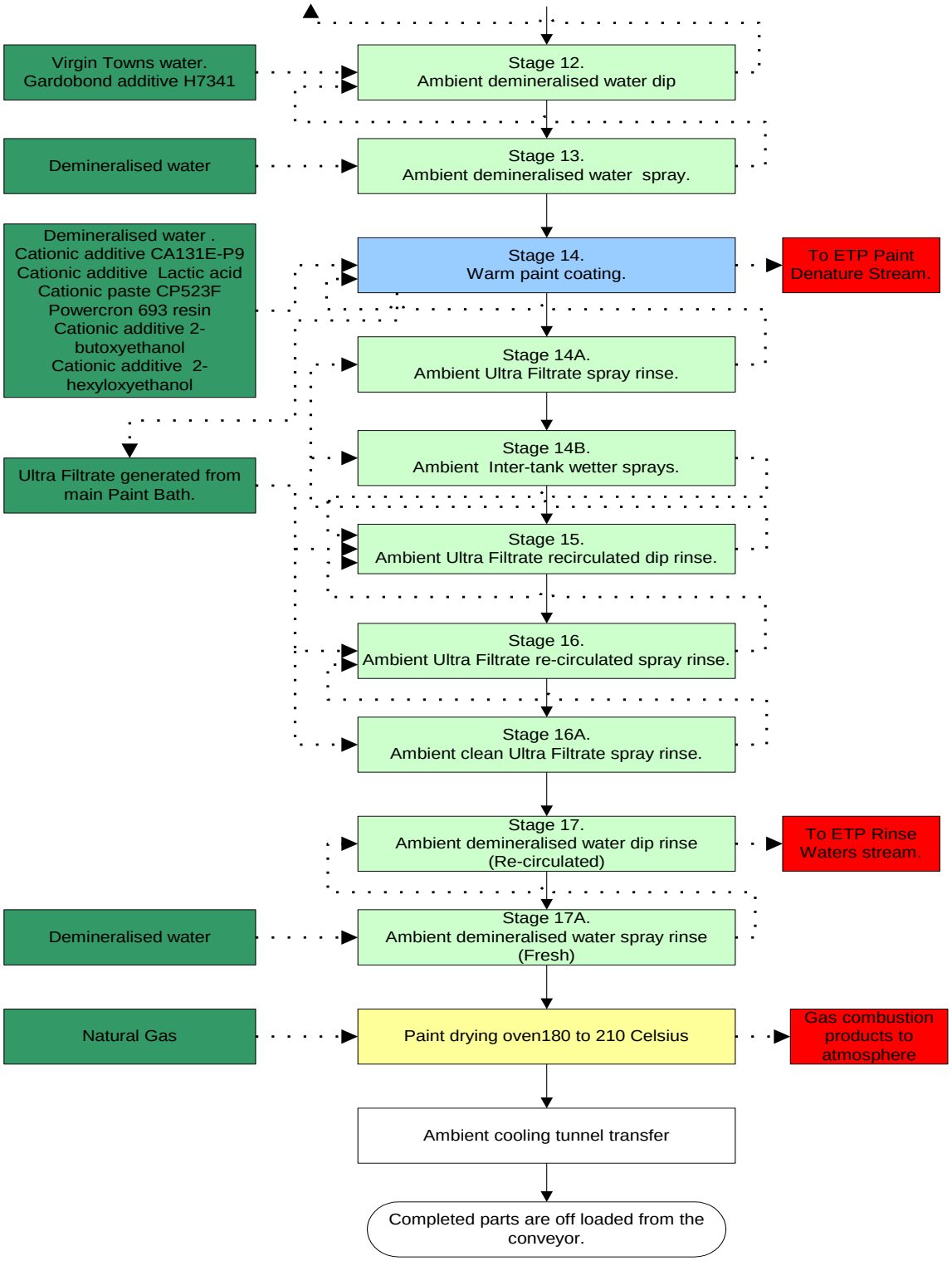
There are no direct discharges to groundwater from the automotive parts manufacturing facility.

Environmental Management System

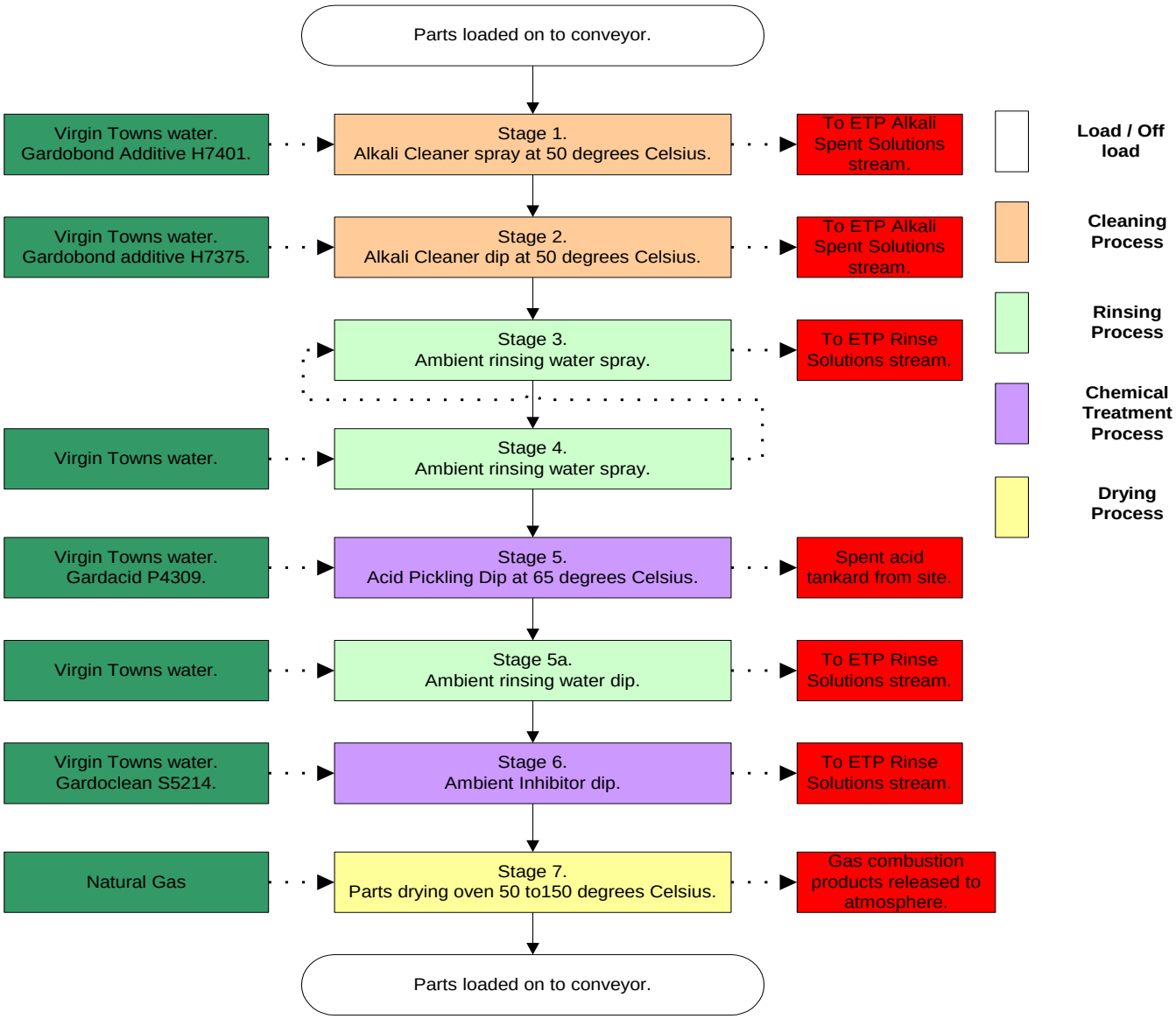
Tallent have in place an Environmental Management System (EMS) for their operations which meets the requirements of ISO 14001 and is certified by BSI to that standard under certificate number 40856.

Paint Process Flow Diagram




Virgin Towns water.
Gardobond additive H7341
Stage 12.
Ambient demineralised water dip
Demineralised water
Stage 13.
Ambient demineralised water spray.
Demineralised water .
Cationic additive CA131E-P9
Cationic additive Lactic acid
Cationic paste CP523F
Powercron 693 resin
Cationic additive 2-butoxyethanol
Cationic additive 2-hexyloxyethanol
Stage 14.
Warm paint coating.
To ETP Paint Denature Stream.
Stage 14A.
Ambient Ultra Filtrate spray rinse.
Ultra Filtrate generated from main Paint Bath.
Stage 14B.
Ambient Inter-tank wetter sprays.
Stage 15.
Ambient Ultra Filtrate recirculated dip rinse.
Stage 16.
Ambient Ultra Filtrate re-circulated spray rinse.
Stage 16A.
Ambient clean Ultra Filtrate spray rinse.
Stage 17.
Ambient demineralised water dip rinse (Re-circulated)
To ETP Rinse Waters stream.
Demineralised water
Stage 17A.
Ambient demineralised water spray rinse (Fresh)
Natural Gas
Paint drying oven180 to 210 Celsius
Gas combustion products to atmosphere
Ambient cooling tunnel transfer
Completed parts are off loaded from the conveyor.

Picking Line Process Flow



Permit

Permit Number: **IPPC 2.3A2 (a)(iii)/ 6.4A2 (a) EPR 10/13**

Cannock Chase District Council (the Regulator) in exercise of its powers under Regulation 13 of the Environmental Permitting (England and Wales) Regulations 2010 (S.I.2010/675), hereby permits

Gestamp Tallent Limited ("the operator"),

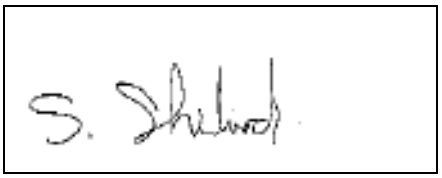
Whose registered office is:
Aycliffe Trading Estate
Darlington
County Durham
DL5 6EY

To operate an installation at:
Wolverhampton Road
Cannock
WS11 1LY

Company No. **00452916**

to the extent authorised by and subject to the conditions of this Permit.

Signed



Head of Environmental Health
The Proper Officer Designated to sign on behalf of the Council.
Cannock Chase District Council

Dated

5th December 2013

PERMIT CONDITIONS

1.0 The Permitted Installation

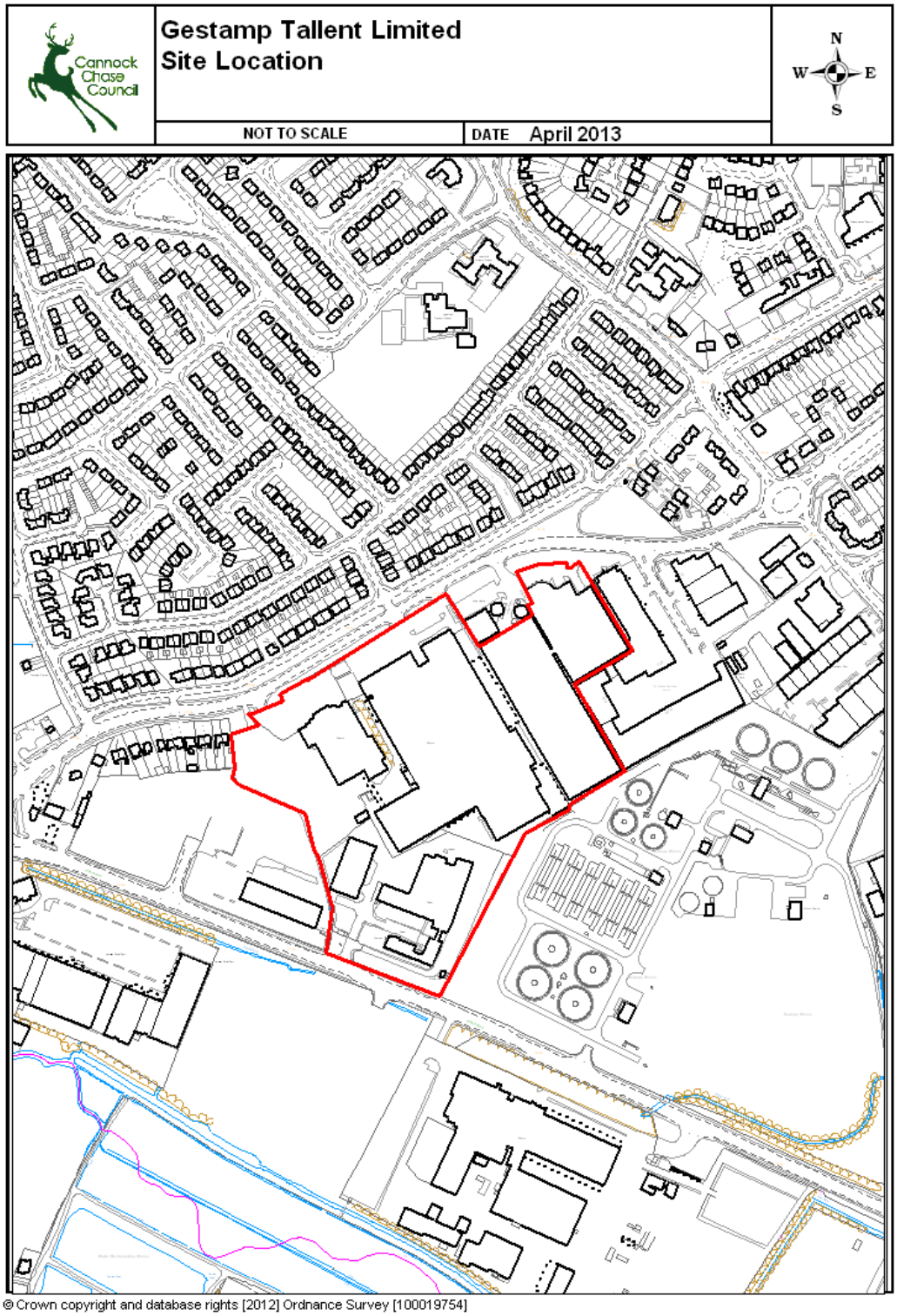
1.1 If the operator proposes to make a change in the operation of the installation, he must, at least 14 days before making the change, notify the regulator in writing. The notification must contain a description of the proposed change in operation. It is not necessary to make such a notification if an application to vary this permit has been made and the application contains a description of the proposed change. In this condition "change in operation" means a change in the nature or functioning, or an extension, of the installation, which may have consequences for the environment.

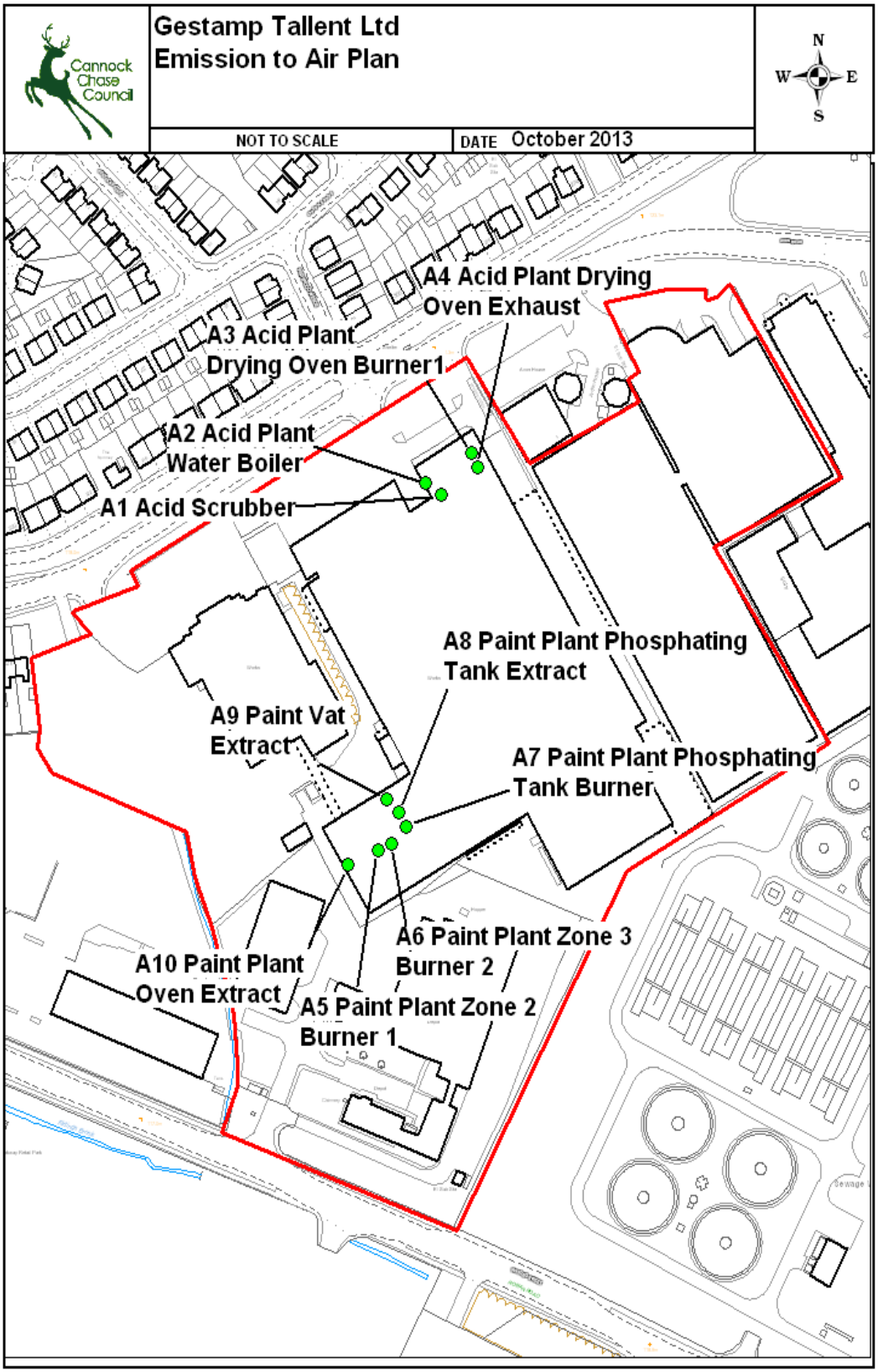
1.2 The best available techniques shall be used to prevent, or where that is not practicable, reduce emissions from the installation in relation to any aspect of the operation of the installation which is not regulated by any other condition of this permit.

1.3 The Operator is authorised to carry out the activities and/or the associated activities specified

Table A Activities and Directly associated activities			
Activities under Schedule 1 of the Regulations/Associated Activity	**Schedule 1 activity Reference (if Applicable)**	**Limits of specified activity**	**Operator**
Surface Treatment of Metals	2.3 A2 (a)	Within the paint line and pickle line processes.	Gestamp Tallent Limited
Coating Activities, Printing and Textile Treatments	6.4 A2(a)	Within the paint line process only.	Gestamp Tallent Limited
Welding Operations	Associated Activity	Within the process building	Gestamp Tallent Limited
Large Presses for forming of automotive body parts	Associated Activity	Within the process building	Gestamp Tallent Limited
Receipt, handling and storage prior to use of all raw materials	Associated Activity	As detail in Annex 2	Gestamp Tallent Limited
Waste materials storage	Associated Activity	As detailed in table B	Gestamp Tallent Limited
Two trade effluent treatment plants	Associated Activity	Treatment & discharge of process water and site drainage from the paint & pickling processes.	Gestamp Tallent Limited
Deodoriser unit	Associated Activity	Within the paint line process	Gestamp Tallent Limited
Wet scrubber unit	Associated Activity	Within the pickle line process.	Gestamp Tallent Limited

1.4 The activities authorised under condition 1.3 shall not extend beyond the boundary of the site shown in red.





Operational Matters

2.0 Management techniques and control

2.1 All plant, equipment and technical means used in operating the permitted installation, within the site boundary, shall be maintained in good operating condition.

2.2 The permitted installation shall be supervised by staff who are suitably trained and fully conversant with the requirements of this permit. .

2.3 All staff shall be fully conversant with those aspects of the permit conditions that are relevant to their duties and shall be provided with appropriate training and written operating instructions to enable them to carry out their duties.

2.4 A copy of this permit shall be available, at all times, for reference by all staff carrying out work subject to the requirements of the permit

2.5 Effective operational and maintenance systems should be employed on all aspects of the installation whose failure could impact on the environment; such systems should be reviewed and updated annually.

2.6 Procedures shall be in place for analysing operational faults in order to prevent their recurrence.

2.7 Training systems covering the following items shall be in place for all relevant staff:

- Awareness of the regulatory implications of the permit.
- Awareness of any 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 actions to be taken when accidental emissions occur.
- Awareness of all operating procedures.

2.8 The potential environmental risks posed by the work of contractors shall be assessed and instructions provided to contractors about protecting the environment while working on site.

3.0 Raw Materials, including Water

3.1 The Operator shall, subject to the conditions of this Permit, only use raw materials as described in Annex 2 of this permit, or as otherwise agreed in writing by the Local Authority.

3.2 Raw materials shall be stored and handled in a manner that prevents or minimises emissions to air, land or water.

3.3 The operator shall:

- At least annually review alternatives for the principal types of raw materials used with regard to their environmental impact. (A specified record.)

- Have quality procedures to control the specification of raw materials used, in order to minimise any impact on the environment. (A specified record.)

3.4 The delivery, handling, transport and storage of odorous, corrosive or oil based materials associated with the process shall be carried out in such a manner so as to prevent and/or minimise releases into the environment.

3.5 Substances assigned with the risk phrase R40, R45, R46, R49, R60 or R61 because of their content of VOC and potential harm to human health shall be replaced at the shortest time possible. A report submitted to this Authority annually indicating progress in replacing existing Risk Phase substances

3.6 The Operator shall carry out, at least once every four years, an audit for both waste minimisation and water efficiency. The results of the audit together with any action plan, and relevant timescales, for optimising the use of raw materials and water shall be submitted to Cannock Chase District Council within 2 months of the audits being competed. The audits shall be completed within 24 months of the issue date of the Permit.

4.0 Groundwater Protection

4.1 The Permitted Installation shall, subject to the conditions of this permit, be controlled as described where

- The Operator shall ensure that all liquid storage areas are either bunded to a capacity of 110% of the largest container stored or 25% of the total volume of liquid stored, whichever is the greater, or where hard-standing is used that all drains are fitted with interceptors.
- All interceptors and sumps shall be impermeable and resistant to the stored material, and be regularly checked by visual inspection and the check recorded (A specified record). Where necessary the contents shall be removed after testing for contamination. The results of the tests shall be recorded (A specified record).
- All storage tanks shall be fitted with high level alarms or volume indicators. Where practicable the filling system shall be interlocked to the alarm system.
- All drainage within oil or chemical storage areas shall be fitted with interceptors and discharge to foul sewer only.

4.2 Storage areas and containers shall be designed and operated to minimise the risk of fugitive release to surface water, sewer or groundwater.

4.3 There shall be no emissions to groundwater of any substance in List 1 or List 2 substance so as to cause pollution (as defined in the Groundwater Regulations 1998)

5.0 Waste Handling and Storage

5.1 Waste materials specified in Table B below shall only be stored on site in the manner specified in that table.

Table B Waste stored on site			
Description of Waste	**Expected Amount (tonnes)**	**Manner of Storage**	**Disposal/Recovery Route**
Steel Scrap	18,700	35 cubic yard skip	To approved waste carrier for recycling
Aluminium Scrap	86	Lidded 22 cubic yard skip	To approved waste carrier for recycling
Cardboard	61.3	Compacted on site. Placed on a suitable pallet and stored on tarmac roadway.	To approved waste carrier for recycling
Caustic Solution	16.5	Stored in effluent plant spent solution storage tanks.	Neutralised by waste treatment facility and sludge is dewatered prior to disposal at a hazardous waste landfill site.
General Waste	221	Enclosed 25m³ skip	Landfill
Oil Water	27.2	1100 litre IBCs	Tankered from site and oil recovered and recycled
Phosphate Sludge	81.5	Stored in process tanks	Neutralised by waste treatment facility and sludge is dewatered and sent to a hazardous waste landfill.
Wood waste	85.8	Stored on tarmac roadway	To approved waste carrier for recycling.

5.2 The operator shall:

- record the quantity, nature origin and where relevant, the destination, frequency of collection, mode of transport and treatment method of any waste which is disposed of or recovered (A specified record)
- Ensure that waste storage areas are clearly marked and signed, and that containers are clearly labelled.
- Ensure that appropriate storage facilities are provided for substances that are flammable, sensitive to heat or light etc and that
- Ensure that containers are stored with lids, caps and valves secured and in place. (This also applies to emptied containers.)
- Ensure that procedures are in place to deal with damaged or leaking containers
- Segregate waste wherever practicable

5.3 The Operator shall maintain records of all waste transfer and consignment notes (A specified record).

5.4 The Operator shall at a minimum of every two years investigate potential markets for the recovery/ re-use of wastes that are currently disposed of to landfill.

5.5 Emissions of waste shall be reduced where practicable following a reporting scheme to support the EMS, to designate where waste minimisation can be achieved.

6.0 Energy Efficiency

6.1 The Permitted Installation shall, subject to the conditions of this permit:

- update its energy efficiency assessment annually, including all changes to new buildings and installation equipment.
- include methods of improving energy efficiency within the site boundary and the report shall be made available to the regulator upon request

6.2 The Operator shall either adopt an energy management plan, which shall be updated annually, or be part of the national UK Climate Change Levy Agreement.

6.3 The operator shall monitor energy flows and target areas for reduction which should be updated annually ("Sankey" diagrams and energy balances would be useful aids)

6.4 The operator shall ensure that all plant is operated and maintained to optimise the use and minimise the loss of energy.

6.5 The operator should ensure that all appropriate containment methods (eg seals and self closing doors are employed and maintained to minimise energy loss.

7.0 Accident Prevention and Control

7.1 The Permitted Installation shall, subject to the conditions of this permit, be controlled where;

- As part of the Operators EMS a documented system (A safety and environmental management system or an Accident Management Plan) shall be implemented to identify, assess and minimise the environmental risks and hazards associated with environmental accidents.
- In the event of an environmental accident either to land, air or water a report shall be made and kept available to the regulator (A specified record).

7.2 The Operator shall make available the Safety/Environmental Management System or Accident Management Plan to the Regulator upon request. Any proposed changes to those areas mentioned in Condition 7.1 shall not be made unless agreed in writing by the Regulator.

7.3 The interceptors shall be visually checked for content monthly and following any spillage. A specified record shall be made of the check and any subsequent action.

7.4 All bunds including pallet bunds, where not covered or fitted with level devices within catchment sumps, shall be inspected monthly and emptied as determined by that inspection. A specified record shall be made of the check and any subsequent action.

8.0 Noise and Vibration

8.0 The Operator shall make available the Noise Management Plan the Regulator upon request. Any proposed changes to the installation, where there is a potential increase in noise or vibration from any new equipment shall not be made unless agreed in writing by the regulator.

8.1 The Noise Management Plan shall be reviewed and updated annually. The updated EMS schedule for noise and vibration shall be submitted to the regulator annually before 30th November. Additional reviews shall be undertaken in response to justified complaints and the regular shall be notified in writing without delay of improvement actions undertaken.

8.2 When complaints of noise attributable to the installation are received an investigation shall be carried out. Action shall be taken where necessary, and without undue delay, to identify and remedy any breakdown or malfunction of equipment likely to have led to the complaint being made. Details of the complaint and investigation shall be recorded (a specified record).

9.0 Odour

9.1 The Operator shall make available the Odour Management Plan (OMP) to the Regulator upon request. Any proposed changes to the installation; where there is a potential increase in odour from any new equipment shall not be made unless agreed in writing by the regulator.

9.2 The Odour Management Plan (OMP) shall be reviewed and updated annually. The updated OMP shall be submitted to the regulator annually before 30th November. Additional reviews shall be undertaken in response to justified complaints and the Regulator shall be notified in writing without delay of improvement actions undertaken.

10.0 Monitoring

10.1 The monitoring of emissions to air shall be undertaken in accordance to the monitoring protocol in Table C. Any proposed changes to the monitoring protocol shall not be made unless agreed in writing with the regulator.

Table C Monitoring and reporting of emissions to air and water				
Parameter	**Emission point as on plan (Condition 1.4 Emissions to Air Plan)**	**Monitoring frequency**	**Monitoring method**	**Accreditation**
Oxides of Nitrogen (NOx)	(A2) Acid Plant Water Boiler (A3) Acid Plant Drying Oven Burner (A4) Acid Plant Drying Oven Exhaust (A5) Paint Plant Zone 2 Burner 1 (A6) Paint Plant Zone 3 Burner 2 (A7) Paint Plant Phosphating Tank Burner (A10) Paint Plant Oven Extract	Annually	EN 14792	Sampling to MCERTS standard
Hydrogen Fluoride (HF)	(A8) Paint Plant Phosphating Tank Extract	Annually	EN13649 NOISH 7903	Sampling to UKAS standard
Particulates	(A8) Paint Plant Phosphating Tank Extract	Annually	EN 13284-1	Sampling to MCERTS standard
Volatile Organic Compounds (VOC)	(A2) Acid Plant Water Boiler (A3) Acid Plant Drying Oven Burner (A4) Acid Plant Drying Oven Exhaust (A5) Paint Plant Zone 2 Burner 1 (A6) Paint Plant Zone 3 Burner 2 (A7) Paint Plant Phosphating Tank Burner (A10) Paint Plant Oven Extract	Annually	EN 12619	Sampling to MCERTS standard
Carbon Monoxide (CO)	(A2) Acid Plant Water Boiler (A3) Acid Plant Drying Oven Burner (A4) Acid Plant Drying Oven Exhaust (A5) Paint Plant Zone 2 Burner 1 (A6) Paint Plant Zone 3 Burner 2 (A7) Paint Plant Phosphating Tank Burner (A10) Paint Plant Oven Extract	Annually	EN 15058	Sampling to MCERTS standard

10.2 The monitoring of emissions to sewer shall be undertaken as and when requested by the sewerage undertaker.

10.3 Sampling points, platforms and access shall where capable comply with all aspects of the guidance provided by the Environment Agency Technical Guidance Document (Monitoring) M1. Derivation from M1 shall be reported and approved by the regulator prior to sampling. Monitoring methods shall be a detailed in Table C or as per Technical Guidance Note M2 Monitoring of stack emissions to air.

10.4 All pollutant concentrations shall be expressed at reference conditions, 273K 101.3KPa, without the correction for water vapour content.

10.5 The frequency of monitoring shall be as detailed in Table C, any derogation or reduction in frequency shall be by variation application which shall demonstrate adequate technical measures to monitor and control process operations, reductions of monitoring frequency shall not be accepted below annual requirements where abatement plant is required to meet emission limits.

10.6 The operator shall notify the regulator at least 7 days before any periodic monitoring exercise.

10.7 Where available, the operator shall use monitoring equipment and instruments certified to MCERTS and use a stack-testing organisation accredited to MCERTS standards or such alternative requirements as approved by the regulator.

10.8 The introduction of dilution air to achieve emission concentration limits shall not be permitted.

11.0 Decommissioning

11. 1 The Permitted Installation shall, subject to the conditions of this permit, be controlled as described in the documentation in the original permit application response under section 2.11 where;

- Operations during the life of the IPPC Permit must not lead to any further environmental deterioration within the site boundary.
- As part of the Environmental Management System programme (Condition 4.1) shall ensure appropriate measures will be established to control significant environmental risks which could lead to a pollution episode.
- The Operator shall inform the regulator in writing (Condition 7.2) of proposals for ensuring satisfactory de-commissioning of the following areas,

    - actions to be taken at Design and Build of replacement developments,
    - site closure arrangements for de-commissioning,
    - decontamination and
    - demolition

11.2 A site closure plan shall be maintained such that, upon definitive cessation of activities, the site can be decommissioned safely and that pollution risks from the site are minimised.

12.0 Multi-operator installations

12.1 This is not a multi-operator installation. Any transfer ownership/management of an activity within the installation must comply with requirements of Regulation 21 of the Environmental Permitting Regulations 2007.

13.0 Records

13.1 A record (a "Specified Record") shall be made of: -

A any malfunction, breakdown or failure of plant, equipment or techniques (including downtime and any short term and long term measures) that may have, has had, or might have had an effect on the environmental performance of the Permitted Installation. These records shall be kept in a log maintained for that purpose;

B all monitoring and sampling taken or carried out and any assessment or evaluation made on the basis of such data;

C other Specified Records for the installation/sector;

13.2 There shall be made available for inspection by the Regulator at any reasonable time;

A Specified Records;

B any other records made by the Operator in relation to the operation of the Permitted Installation ("Other Records")

13.3 A copy of any Specified or Other Records shall be supplied to the Regulator on demand and without charge.

13.4 Specified Records and Other Records shall:-

A be legible;

B be made as soon as reasonably practicable; and

C indicate any amendments which have been made and shall include the original wherever possible.

13.5 Specified Records and Other Records shall be retained for a minimum period of 2 years from the date the record was made.

13.6 For all waste received at or produced from the Permitted Installation, the Operator shall record (and shall retain such records for a minimum of 2 years)

A its composition, or as appropriate, description;

B the best estimate of the quality produced;

C its disposal routes (including consignment notes); and

D the best estimate of the quantity sent for recovery.

13.7 A record shall be made at the Permitted Installation of any complaints concerning the installation's effect on the environment. The record shall give the date of complaint, a summary of any investigation and the results of such investigation. Such records shall be made in a log kept for this purpose.

14.0 Reporting

14.1 All reports and notifications required by this Permit, or by Article 12(1) of the IPPC Directive shall be sent to the regulator at the address in the introductory note to this permit.

14.2 Reports relating to extractive monitoring shall be provided within 8 weeks of sampling.

14.3 Any information notice served for the purposes of complying with your obligation to report your pollutant release and off site waste transfers pursuant to the EU duty in accordance with Article 5 of the EC regulation No. 166/2006 concerning the establishment of a European Pollutant Release and Transfer Register shall be responded to in full.

15.0 Notifications

15.1 The Operator shall notify the Regulator (or for emissions to water the Environment Agency Hotline number provided in the introductory note to this Permit) **without delay** of :-

a. the detection of an emission of any substance which exceeds any limit or criteria in this Permit specified in relation to the substance.

b. the detection of any fugitive emission which has caused or may cause pollution unless the quantity emitted is so trivial that it would be incapable of causing pollution.

c. the detection of any malfunction, breakdown or failure of plant or techniques which has caused or may have the potential to cause pollution; and

d. any accident which has caused or may have the potential to cause pollution.

15.2 The Operator shall give written notification as soon as practicable, of any of the following;

a. permanent cessation of the operation of any part or all of the Permitted Installation;

b. cessation of the operation of any part of or all of the Permitted Installation for a period, likely to exceed 1 year; and

c. resumption of the operation of any part of or all of the Permitted Installation after a cessation notified under 5.2 (b).

15.3 The Operator shall notify the following matter to the Regulator, in writing, within 14 days of their occurrence:

a. where the operators is a registered company:

i, any change in the Operator's trading name, registered name or registered office address;

ii, a change to any particulars of the Operator's ultimate holding company (including details of an ultimate holding company where the Operator has become a subsidiary);

iii, any steps taken with a view to the Operator going into administration, entering into a company voluntary arrangement or being wound up.

iv, If the operator proposes to make a change in operation of the permitted installation, the notification must contain a description of the proposed change in operation. It is not necessary to make such a notification if an application to vary this permit has been made and the application contains a description of the proposed change. In this condition 'change in operation' means a change in the nature or functioning, or an extension, of the installation, which may have consequences for the environment.

15.4 Where the Operator has entered into a Climate Change Agreement with the Government, the Operator shall notify the Regulator within one month of:-

a, A decision by the Secretary of State not to re-certify that Agreement.

b, A decision by either the operator or the Secretary of state to terminate that Agreement; and

c, Any subsequent decision by the secretary of State to re-certify such an agreement.

15.5 Where the Operator has entered into a Direct Participant Agreement in the Emissions Trading Scheme which covers emissions relating to the energy consumption of the activities, the operator shall notify the Regulator within one month of any decision by the Operator to withdraw from or by the Secretary of State to terminate the Direct Participant Agreement.

15.6 Adverse results from any monitoring activity shall be investigated as soon as the monitoring data has been determined or received. The following items shall be undertaken:

a. The cause shall be identified and corrective action taken.

b. A detailed record of the extent of the problem and action taken to rectify the situation.

c. A re-test to demonstrate compliance shall be undertaken as soon as possible.

d. The regulator shall be informed.

Emissions

16.0 Emissions to Air

16.1 All emissions to air, other than steam or water vapour shall be colourless and free from persistent mist.

16.2 All emissions to air shall be free from persistent fume and free from droplets.

16.3 The installation shall comply with the emission limits (air) in Table D below

Table D (Emission Limits (air))		
Determinant		**Monitoring**
Hydrogen Fluoride	5mg/m³	Once a year extractive monitoring
VOC	50mg/m³	Once a year extractive monitoring
Oxides of Nitrogen	200mg/m³	Once a year extractive monitoring
Particulate Matter	50mg/m³	Once a year extractive monitoring
Carbon Monoxide	500mg/m³	Once a year extractive monitoring

16.4 Daily visual assessments of emissions points A1-A10 shall be undertaken. Remedial action shall be taken immediately in the case of abnormal emissions and the Regulator shall be notified if persistent mal operation occurs. All adverse results of the assessments shall be recorded.

16.5 The operators shall ensure that stacks are not fitted with any restriction at final opening such as a plate cap or cowl. Cones to increase exit velocity shall be permitted.

17.0 Reduction Scheme

17.1 The Operator shall produce an Emission Reduction Scheme to achieve compliance with **Clauses 4.5, 4.6, and 4.7 of PG 6/23(11)** for compliance with the coating activity (See Schedule A.)

17.2 The installation shall comply with the Target Emission Values for the coating activity in table E below. The 'Target Emission' shall be determined in accordance with the 'Reduction Scheme' detailed in Schedule A to this Permit.

Table E Target Emission Values	
Fugitive Limit (% of solvent input)	**Reduction Scheme Target**
20% of solvent input	Mass of Solvent = Total Mass of solids x 0.37

Compliance with Reduction Scheme

17.3 The annual actual solvent emission determined from the Solvent Management Plan shall be less than equal to the Target Emission.

Solvent Management Plan

17.4 The Operator shall produce a Solvent Management Plan for the solvent based coating activity that shall be submitted to the operator updated annually before 30th November.

18.0 Emissions to Land

18.1 There shall be no emission to land from the Permitted Installation

18.2 The Operator shall notify the Regulator, as soon as practicable, of any information concerning the state of the site which affects or updates that provided to the Regulator as part of the Site Report submitted with the application for this Permit.

19.0 Emissions to Water

19.1 There shall be no direct emissions to surface waters from the installation.

20.0 Emissions to Sewer

20.1 Discharges to the sewer system shall meet the requirements of the Trade Effluent Notice issued by Severn Trent Water PLC.

21.0 Emissions of Heat

21.1 There are no direct conditions relating to emissions of heat. The Operator is reminded that heat efficiency will be reported within the Energy Efficiency Assessment and where cost/benefits determine potential savings the Operator shall address this under the EMS Environmental Improvement Plan.

22.0 Off site conditions

22.1 There shall be no offensive odorous emissions detected outside the site boundary as determined by the regulator, (unless the operator has used appropriate measures, including, but not limited to, those specified in an approved odour management plan, to prevent or where that is not practicable to minimise the odour).

22.2 The operator shall conduct daily odour assessments to determine whether emissions result in offensive odours at or beyond the site boundary and a specified record made of observations giving note to wind direction and observation location.

23.0 Improvement Programme

23.1 The operator shall within 12 months of the issue of this Permit, submit a decommissioning plan for the Installation. This shall detail the proposed measures to be taken to avoid any pollution risk during decommissioning and what steps shall be taken to return the site of operation to a satisfactory state.

23.2 The operator shall submit an accident management plan to be compliant with Environment Agency Guidance Note H6 within 3 months from the issue date of this Permit.

23.3 The operator shall review hardstanding across the site, especially around the waste storage area, and recommend and implement opportunities for improvement within 3 months from the issue date of this Permit.

23.4 The operator shall install appropriate oil interceptors on the surface water discharge points within 9 months from the issue date of this Permit.

23.5 The operator shall carry out a review to replace the existing effluent treatment plant to ensure that it is capable of treating all parameters of the discharge consent, most notably COD and meets the requirement of BAT within 6 months from the issue date of this Permit.
The review shall also cover the arrangements of tanks (above ground and resistant to effluent being treated) as well as monitoring protocols. The output from this report will be a proposed timescale for upgrading the effluent treatment plant and the technology to be installed.

23.6 The operator shall submit a Noise Management Plan to be compliant with Environment Agency Guidance Note H3 within 3 months fro the issue date of this Permit.

23.7 The operator shall increase the height of the installation stacks as specified in table G below within 6 months from the issue date of this Permit

TABLE G Stack heights			
Stack	**Location/plant**	**New Stack Height (above ground level)**	**Above ridge height**
A1	Acid Scrubber	12.6m	3m
A2	Water Boiler	12.6m	3m
A3	Drying Oven Burner 1	12.6m	3m
A4	Drying Oven Exhaust	12.6m	3m
A5	Paint Plant Burner 1	17.6m	3m
A6	Paint Plant Burner 2	17.6m	3m
A7	Phosphating Tank Burner	17.6m	3m
A8	Phosphating Tank Exhaust	17.6m	3m
A9	Paint Vat Extract	17.6m	3m

23.8

The operator shall complete all of the following works to the paint plant extract system within three months of the issue date of this Permit:

1. Remove and replace all ductwork and associated fan serving the paint plant oven extract (emission point A10)
2. Replace and increase stack (emission point A10) to 3 metres above ridge line (17.6m above ground level)
3. Undertake an extractive emission test under normal operating conditions for VOC certified to MCERTS standards after replacement of the ductwork, stack (A10) and fan serving the paint plant extract has been completed.

Should the extractive emissions monitoring test for VOC (emission point A10) exceed the 50mg/m³ (VOC) limit then the Operator shall install VOC abatement technology that meets BAT and agreed with the Regulator within 12 months of the issue date of this Permit.

24.0 Interpretation

24.1 In this Permit, the following expressions shall have the following meanings:

"Annual average"
means the average of all daily averages in a calendar year.

"Background concentration"
means the same as "background quantity" as defined in paragraph 1 to Part 1 to Schedule 1 of the EP Regulations.

"Climate Change Agreement"
means an agreement entered into with the Government for the saving of energy at the installation.

"Commissioning"
relates to the period after construction has been completed when the Permitted Installation process is being made ready to operate.

"Contained conditions"
shall mean conditions under which an installation is operated such that the emissions released from the activity are collected and discharged in a controlled way either via a stack or abatement equipment and are therefore not entirely fugitive.

"Daily"
means a 24 hour period commencing at 00.00 hours.

"EP Regulations"
means the Environmental Permitting (England and Wales) Regulations (S.I.2010/675) and words and expressions defined in the EP Regulations shall have the same meanings when used in this Permit.

"Fugitive emission"
means an emission from any point other than those specified in the Tables C & D of this Permit.

"Monitoring"
includes the taking and analysis of samples, instrumental measurements (periodic and continual), calibrations, examinations, tests and surveys.

"Permitted Installation"
means the activities and the limits to those activities described in Table A of this Permit.

"Oxidation"
shall mean either thermal oxidation or catalytic oxidation.

"Oxidation plant"
means thermal or catalytic incineration plant

"Regulator"
means any person authorised by Cannock Chase District Council under the Provisions of the Environmental Permitting Regulations 2010 and Section 108(1) of The Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, powers specified in Section 108(4) of that Act.

"Staff"
includes employees, directors or other officers of the Operator, and any other person under the Operator's direct or indirect control, including contractors.

"Start up and shutdown operations"
shall mean operations whilst bringing an activity, an equipment item or a tank into or out of service or out of an idling state. Regularly oscillating activity phases are not considered as start-ups and shutdowns

"Substances prescribed for water"
means those substances mentioned in the IPPC Directive.

"Year"
means calendar year ending 31 December.

24.2 Where a minimum limit is set for any emission parameter, references to exceeding the limit shall mean that the parameter shall not be less than that limit.

24.3 Unless otherwise stated, any references in this Permit to concentrations of substances in emissions into air means in relation to emission limits, the concentration in wet gas at a temperature of 273K, at a pressure of 101.3kPa.

25.0 Written agreement to changes

25.1 Where the qualification "or otherwise agreed in writing" is used in a condition of this Permit, the Operator shall seek such agreement in the following manner:

a, the Operator shall give the Regulator written notice of the details of the proposed change, indicating the relevant part(s) of this Permit; and

b, such notice shall include an assessment of the possible effects of the proposed change (including waste production) on risks to the environment from the Permitted Installation.

25.2 Any change proposed according to condition 1.1 and agreed in writing by the Regulator, shall not be implemented until the Operator has given the Regulator prior written notice of the implementation date for the change, and any relevant documentation referred to in this Permit shall be deemed to be amended.

End of Conditions

Appendix 1: VOC compliance methods

All activities within the scope of this document are regulated by the SED (Council Directive 1999/13/EC of 11 March 1999) and IPPC applies to the larger installations within SED control. All are therefore required to demonstrate compliance by either of the options given in the SED, both of which require the production of a Solvent Management Plan.

The STS BREF document, "Surface Treatment using Solvents" (Ref 5) details those industry sectors where compliance criteria in the BREF differ from those in the SED. It also gives advice, (Annexes 24.2 & 24.4), on solvent management plan calculations. The application of these methods to the printing industry, (Annex 24.3.1), and the automobile sector, (Annex 24.5), is also covered. Local Regulators may wish to consult the BREF where such industries are regulated.

Solvent Management Plan Definitions:

The following definitions provide a framework for the mass balance calculations used in determining compliance with the requirements of the Solvent Management Plan and the Reduction Scheme.

Inputs of Organic Solvent in the time frame over which the mass balance is being calculated (I)

I1 The quantity of organic solvents, or their quantity in mixtures purchased which are used as input into the process/activity (including cleaning solvents).

I2 The quantity of organic solvents or their quantity in mixtures recovered and reused as solvent input into the process/activity. (the recycled solvent is counted every time it is used to carry out the activity.)

Outputs of Organic Solvents in the time frame over which the mass balance is being calculated (O)

O1 Emissions in waste gases

O2 Organic solvents lost in water, if appropriate taking into account waste water treatment when calculating **O5**

O3 The quantity of organic solvents which remains as contamination or residue in products output from the process/activity.

O4 Uncaptured emissions of organic solvents to air. This includes the general ventilation of rooms, where air is released to the outside environment via windows, doors, vents and similar openings.

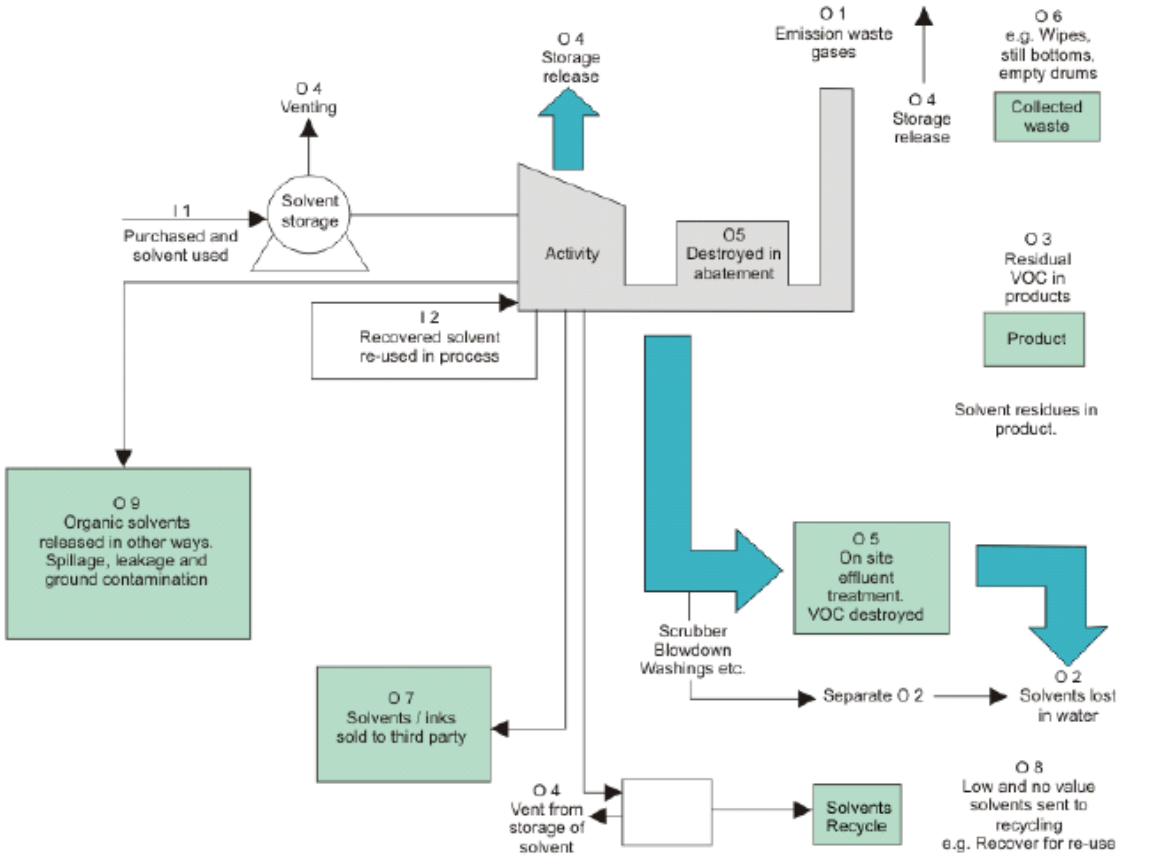
O5 Organic solvents and/or organic compounds lost due to chemical or physical reactions. (including for example those which are destroyed, e.g. by thermal oxidation or other waste gas or waste water treatments, or captured, e.g. by adsorption, as long as they are not counted under **O6, O7** or **O8**).

O6 Organic solvents contained in collected waste.

O7 Organic solvents, or organic solvents contained in mixtures, which are sold or are intended to be sold as a commercially valuable product.

O8 Organic solvents contained in mixtures 'recovered for reuse but not as input into the process/activity, as long as not counted under **O7**.

O9 Organic solvents released in other ways



Solvent Management Plan

Consumption = I 1 - O 8
Actual solvent emission = I 1 - O 5 - O 6 - O 7 - O 8
Fugitive emission (F) = I 1 - O 1 - O 5 - O 6 - O 7 - O 8
OR
Fugitive emission (F) = O 2 + O 3 + O 4 + O 9

Solvent Emissions Directive Activities
Fugitive Emission Value =

$$\frac{F}{I1 + I2} \times 100\%$$

Total emission = O 1 + Fugitive emission (F)

Determination of Consumption
Consumption (**C**): means the total input of organic solvents into an installation in the last calendar year, or previous 12-month period (**I1**), less any VOC that are recovered for reuse (**O8**).

The total mass of Solvent Inputs and Outputs must be determined and submitted to the regulator annually, preferably to coincide with the operators stocktaking requirements, in the form of a mass balance in order to determine the annual actual consumption of solvent

Where: C= I1- O8
I1 Total quantity of organic solvents, or their quantity in mixtures purchased which are used as input into the process/activity
A calculation of the purchased Solvent Input (**I1**) to the process/activity, is carried out by recording:
 mass of solvent contained in inks, coatings, diluents and cleaners in the initial stock (**IS**) at the start of the accounting period; **plus**
 mass of solvent contained in inks, coatings, diluents and cleaners in the purchased stock (**PS**) during the accounting period; **minus**
 mass of solvent contained in inks, coatings, diluents and cleaners in the final stock (**FS**) at the end of the accounting period.
Total Solvent Input (I1) = IS + PS - FS

Determination fugitive VOC emissions
To demonstrate compliance with fugitive emission values in Section 2 the operator must determine the fugitive emissions (F) from the installation using the following:
 F = I1 -O1 -O5 -O6 -O7 -O8 **or**
 F=O2+O3+O4+O9

This quantity can be determined by direct measurement of the quantities. Alternatively, an equivalent calculation can be made by other means, for instance by using the capture efficiency of the process. The Fugitive Emission value as a percentage of the Solvent Input (**I**) is determined by

Fugitive Emission Value = 100 x F/I
Where the Solvent Input **(I)= I1+ I2** (determined as part of the Solvent Management Plan)
Fugitive emission values must be determined for each installation, once completed, it need not be repeated until the equipment is modified.

Determination of compliance with the Reduction Scheme
Compliance with Reduction Scheme is achieved if the annual actual solvent emission is less than or equal to the Target Emission.
Where the annual actual solvent emission is:

Annual actual solvent emission = I1-O8-O7-O6 (-O5 if abatement has been used)
(see Definitions above)
Where a coating activity includes both food and non-food contact coating, compliance with the reduction scheme should be determined for each operation separately. Compliance is achieved if the annual actual solvent emission for both the food contact and the non-food contact coating is less than or equal to the sum of the individual target emissions for food contact and non-food contact coating.
The solids content of coating inks etc. should be determined in accordance with ISO method ISO-3251:1993(E)

Determination of compliance with the Total Emission Limit Values
Compliance is achieved if the Total Emission from the activity expressed in solvent emissions per unit of product, or otherwise as stated is equal to or less than the Total Emission Limit Value,
Where Total Emission Is equal to the mass of solvent released in waste gases Plus the fugitive emissions determined above

Total Emission = O1 + Fugitive (See above)

Appendix 2: Raw Materials

Raw Material	Nature	Expected Usage (approx.) per year.	Storage including capacity	Fate	Environmental Effects	Alternatives
Steel	Predominantly Iron (Fe) with some minor chemical additions dependent on alloy.	40,800 tonnes	1200 Tonnes at a time.	Mainly used within product with some wastage (see section on waste).	Steel is delivered in reels and processed as a solid and would result in some waste as detailed in Table 2.3 below.	This is a key component of the products and alternatives would be driven by the customer.
Aluminium	Predominantly aluminium with some minor chemical additions dependent on alloy.	395 tonnes	50 Tonnes at a time.	Mainly used within product with some wastage (see section on waste).	Aluminium is delivered in reels and processed as a solid and would result in some waste as detailed in Table 2.3 below.	This is a key component of the products and alternatives would be driven by the customer.
Oil Houghton Dromus B	Metal working oil	44,000 litres	4 IBCs used on production bunds plus 2 IBCs stored in bunded IBC cabinets.	Used as a steel processing lubricant in the press shop. Waste oil and water emulsion is sent for recycling.	Not classified as dangerous. Spills may form a film on water surfaces causing physical damage to organisms. Oxygen transfer could also be impaired.	Other lubricating oils are available but carry the same environmental risks.
Oil Castrol Hyspin AWS46	Hydraulic fluid.	8,700 litres	2,400l bunded oil storage tank.	Used in presses as a hydraulic fluid. Used oils are sent for recycling.	Not classified as dangerous. Spills may form a film on water surfaces causing physical damage to organisms. Oxygen transfer could also be impaired.	Other hydraulic oils are available but have similar properties.
Oil Castrol EPX 80W90	Gear oil.	12,000 litres	2,400l bunded oil storage tank.	Used in presses as lubricant. Used oils are sent for recycling.	Not classified as dangerous. Spills may form a film on water surfaces causing physical damage to organisms. Oxygen transfer could also be impaired.	Other gear oils are available but all have similar properties.
Weld Bead	Solid steel wire with a light copper coating to protect against corrosion in store.	342.5 tonnes	10 tonnes are on site at a time and the wire spools are stored in the production cells as well as in the main stores.	Mainly used within product with some wastage (see section on waste).	The solid weld wire cannot be released to any environmental media. The wire is deposited in a weld arc and hence small amounts may escape to atmosphere.	This is a key component of the products and alternatives would be driven by the customer.
Copper weld electrodes	Predominantly Copper with some minor chemical additions dependent on alloy.	3.8 tonnes	Approx. 0.75 tonnes on site stored in production cupboards and main stores.	Resurfaced until they are too small then they are sold as scrap for recycling	Copper weld electrodes are delivered and used as solids and hence would not result in a release to any environmental media.	None currently available.
ODR[4]	-	5,000 litres	Stored in 1,000 litres within the paint plant bund.	Neutralises odour within the curing oven stack and released to air.	Slightly hazardous for water.	Alternatives would cause similar effects.
Water	H_20 from town supply	34,500m^3 plus an additional 20,000 m^3 for the new line.	Stored in various tanks within process lines.	Discharged via effluent treatment plant.	None as discharged to a foul sewer for further treatment by Severn Trent Water.	None.
Hexamine Acetate Buffer Solution	Methanamine 25% Acetic acid 6%	1 litre	1 litre on laboratory bund tray	Used in analysis laboratory and would be discharged via effluent treatment plant.	Miscible in water and would react with strong oxidising agents. No stated ecological effects.	Nominated test reagent specified by paint supplier.
Gardolene V6559	Trizinc bis(orthophosphate) 25-50% Zinc oxide 0.25-1%	350 litres	4 off 25l –plastic containers stored within the paint plant bunding.	Additive for surface treatment of metals used in the process and would be discharged via effluent treatment plant.	Very toxic to aquatic life with long lasting effects.	Cleaning system nominated by customer requirements.
Gardoclean S5214	Boric acid 10-20% Ethanolamine 5-10% Dimethyldioctylammonium chloride 0.1-1%	800 litres.	4 off 25l –plastic containers stored within the acid pickle line bunding.	Used as an inhibiting agent in the process and would be discharged via effluent treatment plant.	Would have a slight affect in the water environment due to the Dimethyldioctylammonium chloride.	Cleaning system nominated by customer requirements.
Gardoclean S5166	Potassium hydroxide 25-50%	12,000 litres	1IBC stored within the paint plant bunding. 1 IBC stored in external bunded cabinet.	Used as a cleaning agent in the process and would be discharged via effluent	No stated ecological effects.	Cleaning system nominated by customer requirements.

Raw Material	Nature	Expected Usage (approx.) per year.	Storage including capacity	Fate	Environmental Effects	Alternatives
				treatment plant.		
Gardobond Additive H7401	Alkyl alkoxylate 25-50% Alkyl alkoxylate mod 10-20% Sodium octonate 1-2.5%	1,400 litres	4 off 25l –plastic containers stored within the paint plant bunding. Ditto for the acid pickle line.	Additive for surface treatment of metals used in the process and would be discharged via effluent treatment plant.	Would cause harm in the aquatic environment.	Cleaning system nominated by customer requirements.
Gardobond additive H7375	Ethane-1,2-diol 10-25%	500 litres	4 off 25l –plastic containers stored within the paint plant bunding. Ditto for the acid pickle line.	Additive for surface treatment of metals used in the process and would be discharged via effluent treatment plant.	No stated ecological effects.	Cleaning system nominated by customer requirements.
Gardobond additive H7341	Magnesium nitrate 1-2.5% 5-chloro-2-methyl-2H-isothiazol-3-one 0.6-1%	600 litres	4 off 25l –plastic containers stored within the paint plant bunding.	Used in process and would be discharged via effluent treatment plant.	Harmful to aquatic organisms and may cause long-term adverse effects in the aquatic environment.	Cleaning system nominated by customer requirements.
Gardobond H7143	Orthophosphoric acid 50-75%	120 litres	4 off 25l –plastic containers stored within the paint plant bunding.	Used in process and would be discharged via effluent treatment plant.	Highly acidic and would react in the environment.	Cleaning system nominated by customer requirements.
Gardolene D6800/6	Hexafluorozirconic acid 10-25%	280 litres	4 off 25l –plastic containers stored within the paint plant bunding.	Used in process as a rinsing solution and would be discharged via effluent treatment plant.	Harmful in the aquatic environment.	Cleaning system nominated by customer requirements.
Gardobond 24D	Zinc bis (dihydrogen phosphate) 25-50% Orthophosphoric acid 5-10% Zinc hexafluorosilicate 1-2.5% Nickel (II) nitrate 1-2.5%	18,500 litres	1IBC stored within the paint plant bunding. 2 IBCs stored in external bunded cabinet.	Used in process as a phosphating solution and would be discharged via effluent treatment plant.	Very toxic to aquatic organisms and may cause long-term adverse effects in the environment.	Phosphating system nominated by customer requirements.
Gardobond additive H7004	Sodium nitrite 25-50%	4,600 litres	1IBC stored within the paint plant bunding. 2 IBCs stored in external bunded cabinet.	Used in process as an additive and would be discharged via effluent treatment plant.	Very toxic to aquatic organisms.	Phosphating system nominated by customer requirements.
Gardobond additive H7102	Nickel (II) nitrate 25-50%	1,200 litres	4 off 25l –plastic containers stored within the paint plant bunding.	Used in process and would be discharged via effluent treatment plant.	Very toxic to aquatic organisms and may cause long term effects in the environment.	Phosphating system nominated by customer requirements.
Gardobond additive H7107	Zinc nitrate 25-50%	1,200 litres	4 off 25l –plastic containers stored within the paint plant bunding.	Used in the phosphating process as an additive and would be discharged via effluent treatment plant.	Very toxic to aquatic organisms and may cause long term effects in the environment.	Phosphating system nominated by customer requirements.
Gardobond additive 7256	Hexafluorosilicic acid 10-25% Hydrofluoric acid <1%	1,200 litres	4 off 25l –plastic containers stored within the paint plant bunding.	Used in process and would be discharged via effluent treatment plant.	Can cause harmful effects in the aquatic environment.	Phosphating system nominated by customer requirements.
Ferric sulphate	Ferric sulphate 40-42% Sulphuric acid <1%	200 litres	2 off 205l plastic drums stored within effluent plant bund.	Used in process and would be discharged via effluent treatment plant.	Large spillages could cause problems with low pH which could affect effluent and sewage treatment processes.	Painting system nominated by customer requirements
Sulphuric acid	Sulphuric acid 30%	25 litres	2 off IBCs stored with in effluent plant chemical store bund.	Used in process and would be discharged via effluent treatment plant.	Slightly water endangering.	Any commercial liquid acid can be used.
Caustic soda	Sodium hydroxide 25-50%	4000 litres	2 off IBCs stored with in effluent plant chemical store bund.	Used in process and would be discharged via effluent	Slightly water endangering.	Any commercial liquid alkali can be used.

Raw Material	Nature	Expected Usage (approx.) per year.	Storage including capacity	Fate	Environmental Effects	Alternatives
				treatment plant.		
Gardacid P4309	Sulphuric acid 65-80% Diethylthiourea 0.1-1%	15,000 litres	16m^3 Stainless steel storage tank located in chemical treatment line bund	Used in process as a rinsing solution and would be discharged via effluent treatment plant.	Slightly water endangering	Specified by processing plant designer.
Gardacid P4330	Hydrochloric acid 25-50%	5 litres	5l in brake safe glass bottle. Laboratory cupboard.	Used in process and would be discharged via effluent treatment plant.	Slightly water endangering	Any commercial liquid acid can be used.
Cationic additive CA131E-P9	2-butoxyethanol 7-10%	580 litres	4 off 25l –plastic containers stored within the paint plant bunding.	Used in paint process and would be part of the product or discharged via effluent treatment plant.	No known significant effects or critical hazards.	Painting system nominated by customer requirements
Cationic additive	Lactic acid 25-35%	100 litres	4 off 25l –plastic containers stored within the paint plant bunding.	Used in paint process and would be part of the product or discharged via effluent treatment plant.	No known significant effects or critical hazards.	Painting system nominated by customer requirements
Cationic paste CP523F	2-butoxyethanol 10-20% Dibutylin oxide 2.5-3% Dibutylin dichloride 0.01-0.025	23,000 litres	1IBC stored within the paint plant bunding. 2 IBCs stored in external bunded cabinet.	Used in paint process and would be part of the product or discharged via effluent treatment plant.	Toxic to aquatic organisms and may cause long term adverse effects in the aquatic environment.	Painting system nominated by customer requirements
Powercron 693 resin	-	160,000 litres	1IBC stored within the paint plant bunding. 2 IBCs stored in external bunded cabinet.	Used in paint process and would be part of the product or discharged via effluent treatment plant.	No known significant effects or critical hazards.	Painting system nominated by customer requirements
Hydrochloric acid 32%	Hydrochloric acid 25-50%	200 litres	2 off 25l –plastic containers stored within the paint plant bunding.	Used in process and would be part of the product or discharged via effluent treatment plant.	Reacts violently with water. Slightly water endangering.	Any commercial liquid acid can be used.
Cationic additive	2-butoxyethanol 100%	3,500 litres	4 off 25l –steel containers stored within the paint plant bunding.	Used in paint process and would be part of the product or discharged via effluent treatment plant.	No known significant effects or critical hazards.	Painting system nominated by customer requirements
Cationic additive	2-hexyloxyethanol 95.41%	900 litres	4 off 25l –steel containers stored within the paint plant bunding.	Used in paint process and would be part of the product or discharged via effluent treatment plant.	No known significant effects or critical hazards.	Painting system nominated by customer requirements
Aerosol black silk matt	Dimethylether 35-50% Acetone 35-50% n-butyl acetate <15% Xylene 1-5% 4-methylpentan-2-one 1-3% Toluene 1-<5% Butan-1-ol 1-<3%	550 of 400ml cans	Stored with in lower paint cupboard.	Used in paint process and would be part of the product or discharged via effluent treatment plant.	No known significant effects or critical hazards.	Do not rework parts and hence scrap them.