



**POLLUTION PREVENTION AND CONTROL ACT 1999
ENVIRONMENTAL PERMITTING REGULATIONS 2007**

Permit Number: 2.3/044925/GJ1

**Installation Address:
Doncasters Precision Forgings Ltd
P.O. Box 66
Penistone Road
Sheffield
S6 2FR**

In accordance with Regulation 13 of the Environmental Permitting (England and Wales) Regulations 2007 as amended, Doncasters Group Ltd trading as Doncasters Precision Forgings Ltd is hereby permitted to operate a scheduled activity at the address detailed above, namely the Surface Treatment of Metals (which is likely to result in the release of acid-forming oxides of nitrogen into the air) as described in Schedule 1, Part 2, Chapter 2, Section 2.3, Part B, subsection (a) and subject to the following Permit.

Signed

A handwritten signature in black ink, appearing to be "A. H.", written over a horizontal line.

Dated this day: 10 July 2008

**Assistant Manager
Authorised by Sheffield City Council to sign on their behalf**

The Secretary of States Guidance PG 4/01 "Surface treatment of metals" has provided the framework for the conditions in this permit

Name & Address of Operator:

Doncasters Group Ltd trading as Doncasters Precision Forgings Ltd
PO Box 66
Penistone Road
Sheffield
S6 2FR

Contact Name: Mick McGann
Contact Telephone: 0114 285 8102
Mobile Telephone: 07760 174 208

Alternative:

Peter Allsop (07760) 174 156

Registered Office:

Doncasters Group Ltd
28 – 30 Derby Rd
Melbourne
Derbyshire
DE73 8FF

Address of Permitted Installation:

Doncasters Precision Forgings Ltd
PO Box 66
Penistone Road
Sheffield
S6 2FR

The Regulator

Any communication with Sheffield City Council should be made to the following address quoting the Permit Number:

Environmental Protection Service
Sheffield City Council
2-10 Carbrook Hall Road
Carbrook
Sheffield
S9 2DB

Alternatively Email: ippc@sheffield.gov.uk

Tel: (0114) 273 4651
Fax: (0114) 273 6464

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Explanatory Note to Pollution Prevention and Control Permit for Part B Installations.
(This note does not form a part of the Permit)

The following Permit is issued under Regulation 13 of the Environmental Permitting (England and Wales) Regulations 2007 (S.I. 2008 No.3538), as amended, (“the EP Regulations”) to operate an installation carrying out activities covered by the description in section 2.2, Chapter 2 of Schedule 1 of those Regulations, to the extent authorised by the Permit:

Process Changes

Under the provisions of Regulation 69 of the EP Regulations, you are required to notify the Council of any proposed change in operation at least 14 days before making the change. This must be in writing and must contain a full description of the proposed change in operation and the likely consequences. Failure to do so is an offence.

If you consider that a proposed change could result in the breach of the existing permit conditions or is likely to require the variation of permit conditions then you may apply in writing under Regulation 20(1) of the EP Regulations. Additionally, if this involves a SUBSTANTIAL CHANGE to the installation you will be required to submit an application, pay the relevant fee and advertise the application accordingly. You may serve a Notice on the Council requesting that they determine whether any change that is proposed would constitute a substantial change before you proceed with application.

Variations to the Permit

The Permit may be varied in the future (by the Council serving a Variation Notice on the Operator). If the Operator itself wants any of the Conditions of the Permit to be changed, a formal Application must be submitted.

Surrender of the Permit

Where the operator of a Part B installation or mobile plant ceases or intends to cease the operation of the activity the operator may notify the regulator of the surrender of the whole permit, in any other case, notify the regulator of the surrender of the permit in so far as it authorises the operation of the installation or mobile plant which he/she has ceased or intends to cease operating. The notification shall contain information as described in Regulation 24 or 25 of the EP Regulations.

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 Sheffield City Council 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.

Annual Subsistence Fee

In accordance with Regulation 65 of the EP Regulations, the holder of a permit is required to pay a fee for the subsistence of the Permit. This fee is payable annually on 1st April. You are advised that under the provisions of Regulation 65 (5) of the EP Regulations, if you fail to pay the fee due promptly, Sheffield City Council may revoke the Permit. You will be contacted separately each year in respect to this payment.

Public Register

The Council is required by Regulation 46 of the PPC Regulations to maintain a Public Register containing information on all LAPPC installations and mobile plant. The register is available for inspection by the public free of charge during office hours (Monday to Friday 9.00 am to 5.00 pm) at the following address:

Environmental Protection Service
Sheffield City Council
2-10 Carbrook Hall Road
Carbrook
Sheffield
S9 2DB

Tel: 0114 273 4651

Confidentiality

Sheffield City Council has a duty to consider the question of confidentiality of information supplied to it. If any information supplied is considered confidential, a statement of which information this applies to and the reasons why it is considered confidential should be specified. The Operator is reminded that he may apply to Sheffield City Council for the exclusion of information from the public register under the provisions of the Environmental Permitting (England and Wales) Regulations 2007 as amended.

Appeals

Under Regulation 31 of the EP Regulations operators have the right of appeal against the conditions attached to their permit. Schedule 6 of the EP Regulations sets out the detailed procedures.

Appeals against a Variation Notice do not have the effect of suspending the operation of the Notice. Appeals do not have the effect of suspending Permit conditions.

Notice of appeal against the conditions attached to the permit must be given within six months of the date of the Notice, which is the subject matter of the appeal.

How to Appeal

There are no forms or charges for appealing. However, for an appeal to be valid, appellants (the person/operator making the appeal) are legally required to provide:

- Written notice of the appeal;
- A statement of the grounds of appeal;
- A statement indicating whether the appellant wishes the appeal to be dealt with by written representations procedure or a hearing - a hearing must be held if either the appellant or enforcing authority requests this, or if the Planning Inspector or the Secretary of State decides to hold one.
- (Appellants must copy the above three items to the local authority when the appeal is made)
- A copy of any relevant application;
- A copy of any relevant permit;
- A copy of any relevant correspondence between the appellant and the regulator; and
- A copy of any decision or notice, which is the subject matter of the appeal.

Where to Send Your Appeal Documents

Appeals should be addressed to:

**The Planning Inspectorate
Environmental Appeals Administration
Room 4/19 - Eagle Wing
Temple Quay House
2 The Square
Temple Quay
Bristol BS1 6PN**

In the course of an Appeal process the main parties will be informed of procedural steps by the Planning Inspectorate.

To withdraw an appeal the appellant must notify the Planning Inspectorate in writing and copy the notification to the local authority.

Section 1 - Description Of Activities

- 1.1 Process lines A1 to A7 are located at the area indicated by green shading on the plan shown in Schedule 1 to this Permit. The layout of the area is as shown in Schedule 2.
- 1.2 Raw acid storage is in bunded areas, located as indicated in Schedule 2. The maximum storage of acid for use in Process lines A1 to A7 is 30 intermediate bulk containers (I.B.C.s).
- 1.3 Metal components are loaded into a perforated polymer container. The barrel is moved along one of 8 process lines for immersion into tanks of acid and rinse water. Acids are stored in sealed I.B.C.s. Transfer to the dip tanks is by enclosed gravity feed pipes. The process lines are as follows:
- 1.4 Plant A1 – Barrel Etch 1: comprises of 7 tanks, (3 containing acid, 3 for rinse water and a barrel tank). The line is used for surface treatment of titanium and titanium alloy components. These 3 acid tanks each have a volume of 0.62m³.
- 1.5 Plant A2 – Inspection Etch 1: comprises 2 acid tanks (volumes 0.3m³ and 0.20m³) and 4 rinse tanks, and is used mainly for removal of small defects from components.
- 1.6 Plant A3 – Barrel Etch 2: comprises 4 acid tanks (each with a volume of 0.58m³) and 3 rinse tanks. The line is used for surface treatment of nickel alloys.
- 1.7 Plant A4 – Nimonic Polish: comprises 2 acid and 3 rinse tanks. The acid tanks have a volume of 1.5 m³ each. The line is used for etching nimonic alloys.
- 1.8 Plant A5 – Inspection Etch 2: comprises 4 acid and 5 rinse tanks. It is used for the surface treatment of nickel alloys. The acid tanks have a volume of 0.2m³ each.
- 1.9 Plant A6 – Nickel Strip: comprises 2 acid and 2 rinse tanks. It is used for surface treatment of blades. Each acid tank has a volume of 0.4m³.
- 1.10 Plant A7 – Nickel: comprises acid, nickel chloride and water tanks with volumes of 1.28 m³, 2.45 m³ and 1.28 m³ respectively, making a total of 4.91 m³. It is used for the surface treatment of steel, titanium and cobalt-chrome components.
- 1.11 Plant A1 and A3 are fitted with automatic immersion mechanisms incorporating timers. Plant A2 and A4 – A6 are operated manually, and A7 has semi-automatic loading. The acid baths contain various mixtures of water, ferric sulphate, hydrofluoric acid, nitric acid, sulphuric acid, hydrochloric acid, nickel chloride and phosphoric acid.

- 1.12 The following Table indicates whether Nitric (HNO₃), Hydrochloric (HCl) or Hydrofluoric Acid (HF) are contained in the lines (scrubbers and stacks are as indicated on the plan in Schedule 2):

Line	HNO ₃	HF	HCl	Scrubber	Stack
1	Yes	No	Yes	1	1
2	Yes	Yes	No	No	3
3	Yes	Yes	No	1	1
4	No	No	No	2	2
5	Yes	No	Yes	3	4
6	Yes	No	Yes	No	5
7	No	No	Yes	3	4

- 1.13 Temperature is controlled in all etchant tanks with heaters and coolers to maintain required temperatures. The process lines are contained in appropriately constructed bunds. The total volume of acid tanks in lines A1 to A7 is 3.76 m³.
- 1.14 Waste rinse waters from lines A1 – A7 are gravity fed to a recycling plant (located as indicated in Schedule 2). Recovered water is re-circulated into the process and the remaining waste is piped into the acid holding tank. When the holding tank is almost full, the waste acid is pumped into a 20,000 litre holding tank, located as shown on the Plan in Schedule 2, prior to removal from site.
- 1.15 The bunded raw acid area is available for containment of hazardous liquids in emergency situations, located as indicated in Schedule.
- 1.16 Tanks in lines A1 – A7 are fitted with lip extraction systems and hood extraction. Lines A1, A3 and A5 are served by demisters and scrubbers, line A2 is served by an eliminator, line A4 is served by a demister and eliminator, and lines A6 and A7 are served by a scrubber. Discharge of emissions is to atmosphere via one of 5 stacks. The layout of the extraction, abatement and discharge system is shown on the plan in Schedule 2.

Section 2 – Upgrading Conditions

- 2.1 There are no upgrading conditions.

Section 3 - Emission Limits and Controls

- 3.1 All emissions to air other than steam or water vapour shall be colourless and free from persistent fume. All emissions to air shall be free from droplets in excess of 20 µm aerodynamic diameter.

- 3.2 The concentration of oxides of nitrogen (including Nitric acid vapour), expressed as nitrogen dioxide equivalent, shall not exceed 200 mg/m³ expressed as a 1 hour mean emission concentration.
- 3.3 The concentration of fluoride expressed as hydrogen fluoride shall not exceed 5 mg/m³.
- 3.4 Emissions to air shall be free of offensive odour beyond the premises boundary as perceived by an Authorised Officer from Sheffield City Council Environmental Protection Service.

Section 4 - Monitoring, Sampling and Measurement of Emissions

- 4.1 Manual extractive emissions monitoring tests for Oxides of Nitrogen and Hydrogen Fluoride shall be carried out at 12 monthly intervals as specified in the Table below:

Stack *	Hydrogen Fluoride	Oxides of Nitrogen
1	Yes	Yes
2	No	No
3	Yes	Yes
4	No	Yes
5	No	Yes

* reference as indicated on the plan in Schedule 2 of this Permit

unless otherwise agreed in writing by Sheffield City Council Environmental Protection Service.

- 4.2 Scrubber liquor pH and flow and exhaust gas pH shall be continuously monitored. The monitors shall be linked to an automatic alkaline dosing system to ensure the lowest concentrations of alkaline scrubbing media and maximum scrubber liquor density during operation, consistent with meeting the emission limits specified in Section 3 of this permit.
- 4.3 The operator shall notify Sheffield City Council Environmental Protection Service at least 7 days prior to any periodic monitoring exercise to determine compliance with emission limit values, of provisional dates and times, parameters to be tested and methods to be used.
- 4.4 The results of non-continuous monitoring tests shall be forwarded to Sheffield City Council's Environmental Protection Service, within 8 weeks of completion of the testing.
- 4.5 The operator shall keep records of all inspections, tests and monitoring, and visual and olfactory assessments on site for at least 2 years. These records shall be made available to Sheffield City Council Environmental Protection Service upon request.

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- 4.6 Monitoring shall be carried out in accordance with methods described in M1 “Sampling requirements for monitoring stack emissions to air from industrial installations”¹ and M2 “Monitoring of stack emissions to air”², or by another method agreed in writing by Sheffield City Council’s Environmental Protection Service.
- 4.7 Adverse results from any monitoring activity shall be investigated by the operator as soon as possible. The investigation shall include the following steps:
- Identification of the cause of the adverse result and taking corrective action;
 - Recording as much detail as possible regarding the cause and extent of the problem;
 - Re-testing to demonstrate compliance; and
 - Notification to Sheffield City Council’s Environmental Protection Service within 7 days of receipt of the results.
- 4.8 In any case of abnormal emissions, the operator shall:
- Identify the cause of the emissions and take corrective action immediately;
 - Adjust the process or activity to minimise the emissions;
 - Record details of the incident describing the nature and extent of the problems, and the remedial actions taken.
- 4.9 The operator shall inform Sheffield City Council Environmental Protection Service without delay in cases where:
- An emission is likely to have an effect on neighbouring premises; or
 - There is a failure of an arrestment plant listed in Schedule 4 to this Permit.
- The report to Sheffield City Council Environmental Protection Service shall include:
- The date and time of the incident;
 - The cause and nature of the incident;
 - Details of any abnormal emissions;
 - Remedial actions taken.
- 4.10 The operator shall implement and maintain a procedure on the computerised SHIRE management system for dealing with failures of key abatement plant. The procedure shall be made available to Sheffield City Council’s Environmental Protection Service upon request.
- 4.11 Visual and olfactory assessments of emissions shall be made by the operator upon commissioning a surface treatment bath, and whenever any change is made to the installation process. If coloured or odorous emissions are detected, then these assessments shall be made at least once a day whilst the process is operating. Results of these assessments shall be recorded, including their dates, times and locations. The results shall be made available to Sheffield City Council Environmental Protection Service upon request.

¹ Environment Agency, October 2005

² Environment Agency, June 2005

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- 4.12 The liquor in each scrubber shall be changed at least once in every 3 week period. The time and date of the changes shall be recorded and shall be made available for inspection by the regulator upon request.
- 4.13 The pH of the scrubber liquor shall be continuously monitored. The monitor shall be fitted with an audible and visual alarm.
- 4.14 Scrubber liquor flows shall be continuously monitored. In the event of a pump failure an audible and visual alarm and stand by pump shall operate. The output readings shall be on display to appropriately trained operating staff.
- 4.15 A list of alarm events shall be maintained. This shall be compiled from weekly report data and updated at least weekly. The list shall include times and dates of alarm events, their causes and remedies implemented.
- 4.16 The scrubber system shall be visually inspected at least once a week. The inspection shall include the following checks:
- Spray heads are fully and evenly spraying;
 - No blockages are inhibiting liquor circulation;
 - Seals are not perishing;
 - Mist eliminator is intact and in place;
 - No caustic crystallisation or fouling is occurring in the liquor.
- 4.17 The results of these inspections shall be recorded, including the times and dates, and shall be made available to the regulator for inspection upon request.
- 4.18 All continuous monitors shall be designed for less than 5% down time over any 3 month period. Maintenance and calibration of monitors shall be done in accordance with manufacturers recommendations, and details shall be recorded and made available for inspection by the regulator upon request.

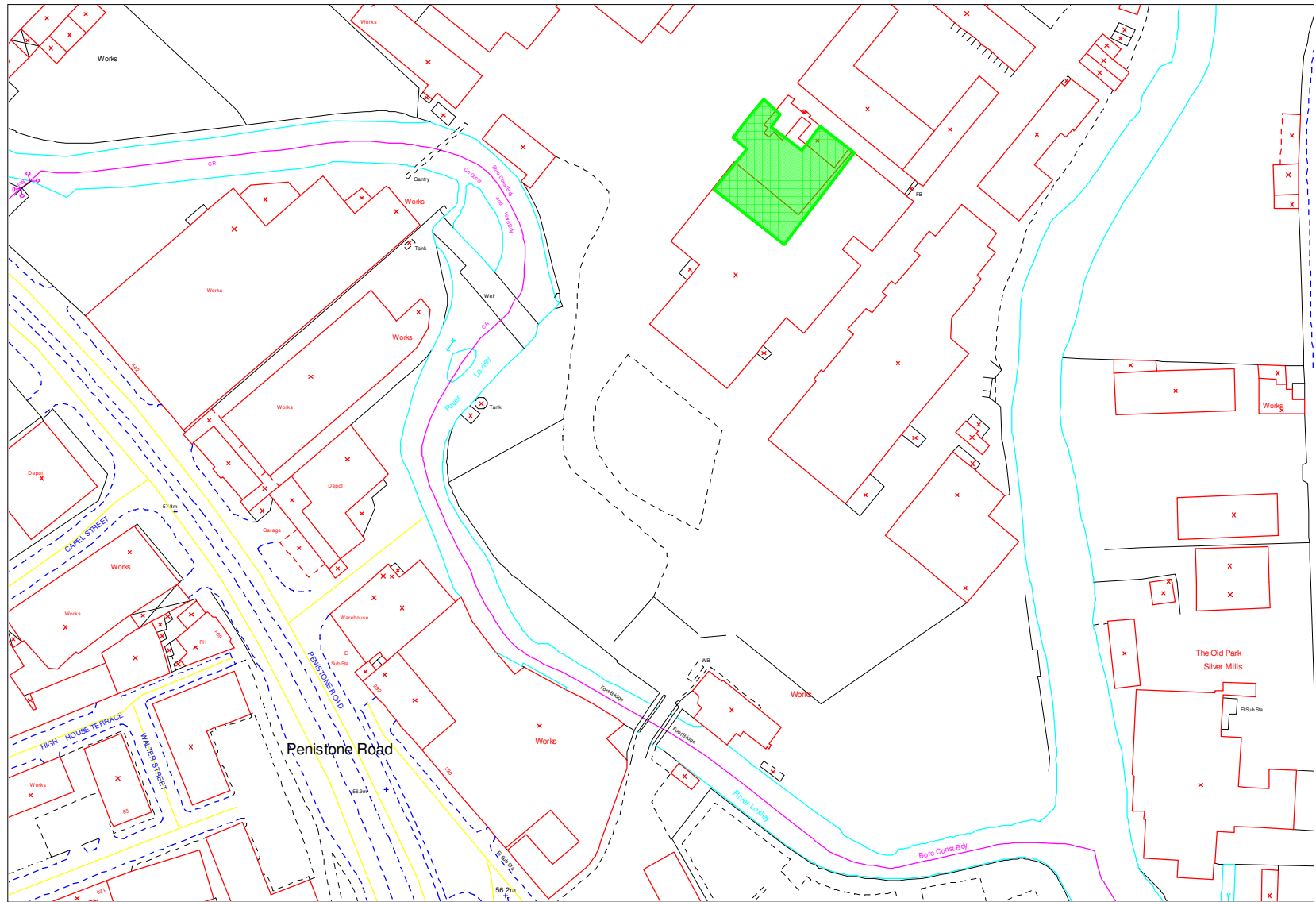
Section 5 - Control Techniques

- 5.1 Stacks and ductwork shall be maintained in a leak proof condition and shall be adequately insulated to prevent exhaust gas temperature falling below the dew point.
- 5.2 The accumulation of materials in flues and ductwork shall not be permitted.
- 5.3 The introduction of dilution air into duct systems in order to comply with emissions limits shall not be permitted.
- 5.4 Stacks shall not be fitted with any restriction at the termination, with the exception of a cone which increases the exit velocity.

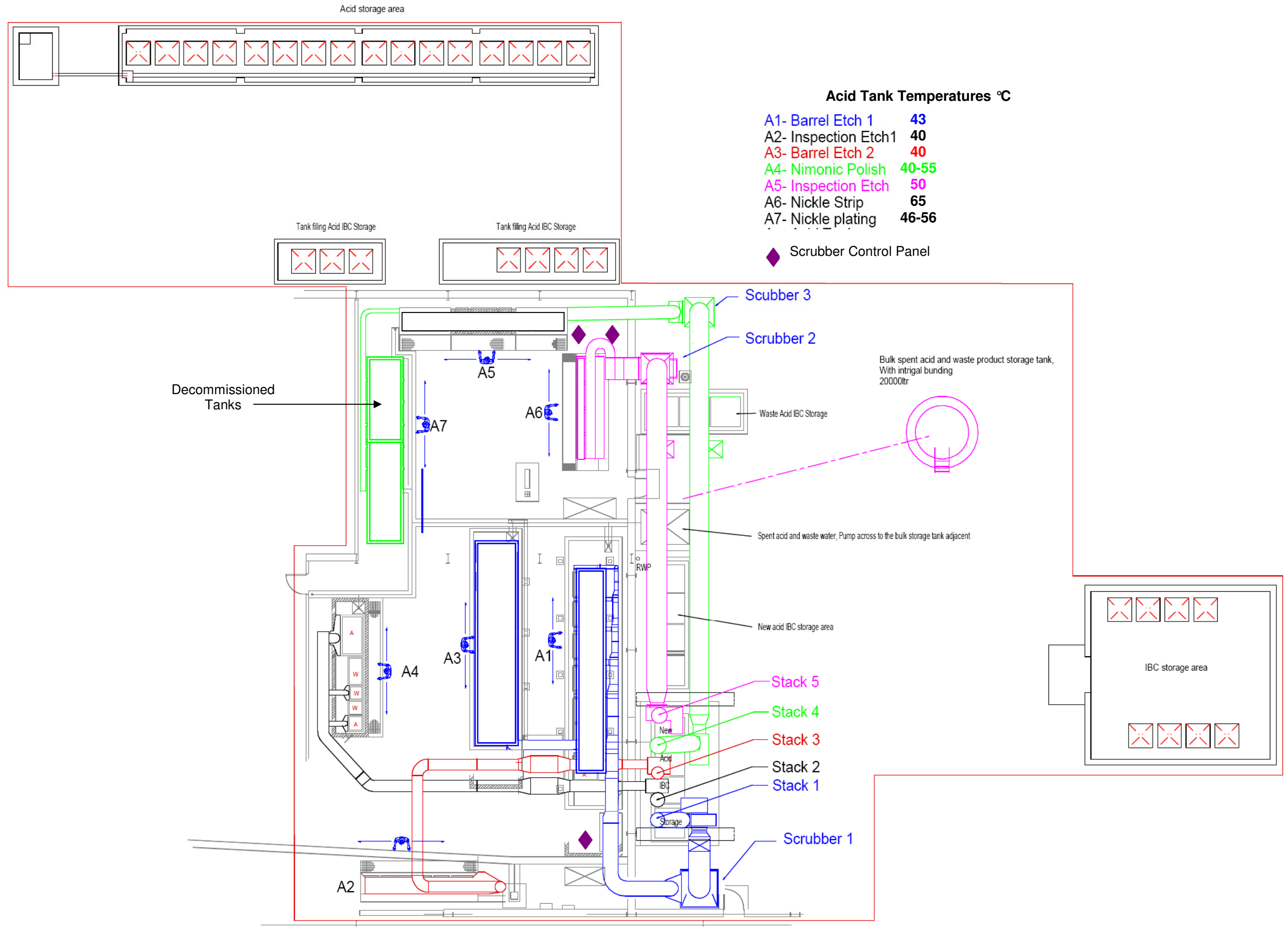
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- 5.5 Spares and consumables subject to continual wear shall be held on site or shall be available at short notice from guaranteed suppliers.
- 5.6 The operator shall notify Sheffield City Council's Environmental Protection Service of any proposed changes to dip tank contents that may affect the nature of the substances likely to be discharged from the stacks at least 7 days prior to the change being implemented.
- 5.7 Rim extraction systems fitted to the dip lines shall be used whenever material is being processed. The extracted emissions shall be exhausted through the stacks via the abatement systems.
- 5.8 All potentially dusty materials shall be stored in covered containers or under cover.
- 5.9 All spillages shall be cleared as soon as possible after they occur.
- 5.10 Spillages of solid materials shall be cleared by vacuum, wet or other methods that do not give rise to particulates to the atmosphere.
- 5.11 Dry sweeping of dusty wastes shall not be permitted.
- 5.12 Areas where acid is stored shall be bunded. Bunding shall be impervious and resistant to the substances in storage. Bunds shall have a capacity of 110% of the capacity of the largest storage tank within them.
- 5.13 The height of all stacks serving lines A1 to A6 shall be 17 metres.
- 5.14 Waste gases emitted from the stacks serving lines A1 to A6 shall have minimum exit velocities as follows:
Stack 1: 9.3 m/s
Stack 2: 6.0 m/s
Stack 3: 9.2 m/s
Stack 4: 9.5 m/s
Stack 5: 7.6 m/s
Stacks shall be located as indicated on the plan in Schedule 3.
- 5.15 The temperature of acid in process tanks shall be continuously monitored and automatically maintained as indicated on the plan in Schedule 2 of this Permit. These monitors shall be fitted with audible and visual alarms to indicate when the tolerance is exceeded. The alarms shall trigger shut down of the heaters, and barrels shall be automatically removed from tanks in lines fitted with automatic immersion systems. Operators shall remove workpieces from tanks in lines not fitted with automatic systems in such a way as to minimise any fugitive emissions.

Section 6 – General Conditions

- 6.1 The process shall be operated within the areas indicated by green and purple shading on the plan in Schedule 1 to this permit.
- 6.2 The layout of process and abatement plant shall be as indicated in Schedule 2 to this permit.
- 6.3 The operator shall inform Sheffield City Council's Environmental Protection Service of any proposed changes to the process which may have an impact on the emissions to atmosphere.
- 6.4 The operator shall carry out preventative maintenance on all plant, buildings and equipment concerning the control of emissions to air in accordance with the SHIRE computerised maintenance programme.
- 6.5 Records and programmes of maintenance shall be kept by the operator and made available for inspection by Sheffield City Council's Environmental Protection Service upon request.
- 6.6 Sampling ports shall be provided in accordance with the appropriate monitoring protocols, as described in Section 4 of this permit
- 6.7 Staff at all levels shall receive training and instructions necessary for their duties and shall include the following:
 - Responsibilities under the permit;
 - SHIRE computerised maintenance system;
 - Minimisation of emissions at start up and shut down;
 - Actions during abnormal emissions including minimisation of emissions.
- 6.8 The operator shall keep and maintain a statement of training requirements for each operational post and keep a record of the training received by each employee whose actions may have an impact on emissions to atmosphere. These documents shall be made available to Sheffield City Council Environmental Protection Service upon request.
- 6.9 Tanks containing Hydrofluoric, Hydrochloric or Nitric Acid shall be clearly labelled.
- 6.10 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.



Schedule 1 – Site Location



Schedule 3 – Key Arrestment Plant

Plant Ref	Plant Name	Plasticraft Plant Item Number	Doncasters Plant Serial Number	Location	Supplier	Capacity (cubic foot per minute)
A1 & A3	Titanium Barrel Etch & Nickel Inspection Etch	Fan No 1	61066 & 61063	External Fan Platform	Ketville Ltd	10,000
A4	Nimonic Electropolish	Fan No 2	61065	External Fan Platform	Ketville Ltd	3,000
A2	Inspection Etch	Fan No 3	61021	External Fan Platform	Ketville Ltd	3,500
A5	Nickel Inspection Etch	Fan No 4	61027	External Fan Platform	Ketville Ltd	6,000
A6	Nickel Strip	Fan No 5	61025	External Fan Platform	Ketville Ltd	6,500
A1	Titanium Barrel Etch	Scrubber No1	61066 & 61063	Feed Fan No1	Ketville Ltd	10,000
A6	Nickel Strip	Scrubber No 2	61025	Feed Fan No 5	Ketville Ltd	6,500
A5	Nickel Inspection Etch	Scrubber No 3	61027	Feed Fan No 4	Ketville Ltd	6,500
A4	Nimonic Electropolish	Eliminator No 1	61065	Feed Fan No 2 - On Internal platform	Ketville Ltd	3,000
A2	Inspection Etch	Eliminator No 2	61021	Feed Fan No 3 - On Internal Platform	Ketville Ltd	3,500
A1 & A3	Titanium Barrel Etch & Nickel Inspection Etch	Demister No 1	61066 & 61063	External Fan Platform	Ketville Ltd	10,000
A4	Nimonic Electropolish	Demister No 2	61025	External Platform Between Scrubber No 2/Fan No 5	Ketville Ltd	6,500
A5	Nickel Inspection Etch	Demister No 3	61027	External Platform Between Scrubber No 3/Fan No 4	Ketville Ltd	6,500
A7	Nickel Plate	Scrubber No. 2	61027	Feed Fan No 3	Ketville Ltd	6,500
A1 & A3	Titanium Barrel Etch & Nickel Inspection Etch	Liquor Pump	0001	External platform side of scrubber	Ketville Ltd	

Plant Ref	Plant Name	Plasticraft Plant Item Number	Doncasters Plant Serial Number	Location	Supplier	Capacity (cubic foot per minute)
A 5	Nickel Inspection Etch	Liquor Pump	0002	External platform side of scrubber	Ketville Ltd	
A 6	Nickel Strip	Liquor Pump	0003	External platform side of scrubber	Ketville Ltd	

Stacks

Details of which lines are served by which stacks are provided in the table below:

Stack 1	A1, A3
Stack 2	A4
Stack 3	A2
Stack 4	A5
Stack 5	A6, A7