C. MANAGEMENT OF THE INSTALLATION

Section C has not been requested in the Sections required as a minimum, for this licence review, as per letter issued by the Agency on 15 May 2007 to Waterford Plating Company Ltd (copy attached to cover letter). The company meets the requirements of Condition 2.2 on Schedule of Targets & objectives and 2.3 on Environmental Management Programme.

The following presents updated details on management of the installation.

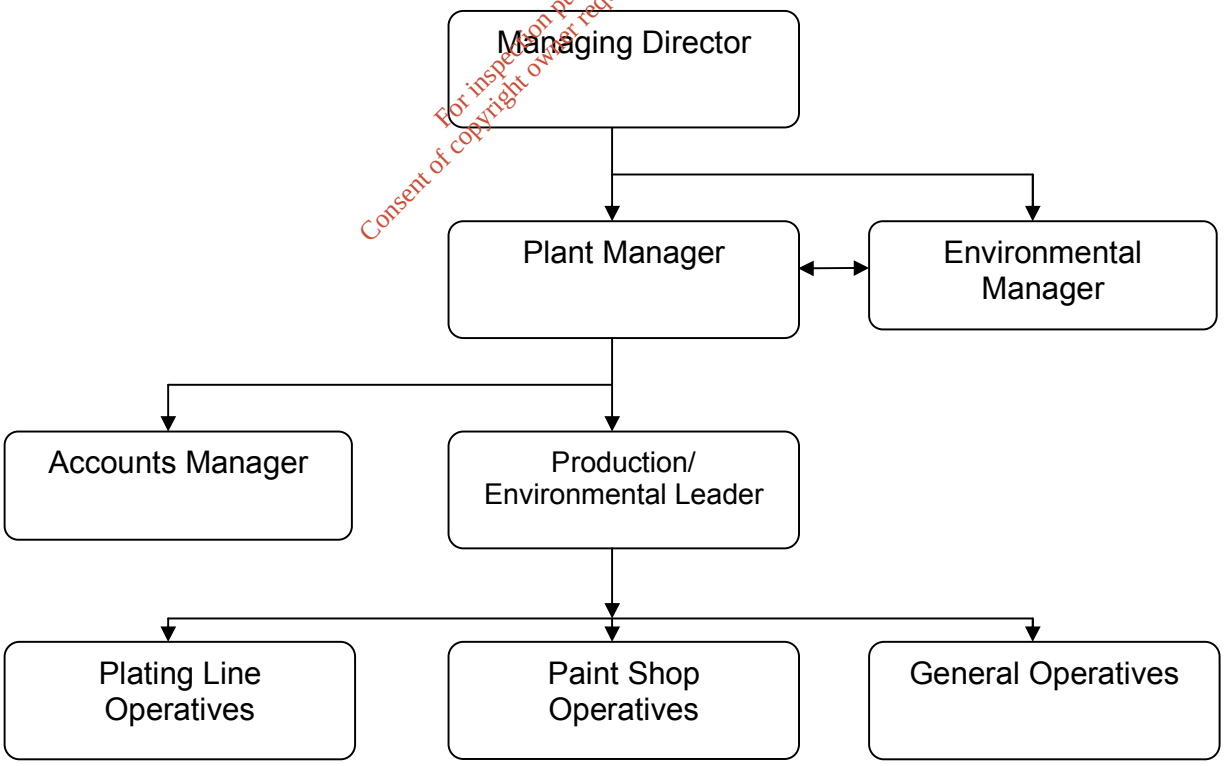
C.1 Site Management & Control

The current management structure is shown below:

WATERFORD PLATING COMPANY LTD.

SITE ORGANISATIONAL CHART

For inspection purposes only.
Consent of copyright owner required for any other use.



EPA Export 26-07-2013:00:56:44

Waterford Plating Company Ltd. has an Environmental Policy in place as shown below.

WATERFORD PLATING COMPANY LTD.

Environmental Policy

It is the policy of Waterford Plating Company Ltd. to conduct its business in a manner that protects the environment of the customers, employees and the communities in which it operates.

Waterford Plating Company Ltd. Is committed to complying with all national and European environmental legislation and regulations to prevent pollution at source.

By annual review of our Environmental Management System, Waterford Plating Company Ltd is dedicated to continuous improvement through waste minimisation.

Waterford Plating Company Ltd. Will provide services that cause minimum impact on the environment ensuring conservation of natural resources, by integrating and promoting environmental considerations into our surface treatment service.

The environmental policy will be communicated to all Waterford Plating Company Ltd. Employees and is available to the public.

Waterford Plating Company Ltd. will endeavour to communicate to and train all employees in environmental awareness and relevant procedures.

Consent of copyright owner required for any other use.
For inspection purposes only.

EPA Export 26-07-2013:00:56:44

C.2 Environmental Management System (EMS)

An explicit Environmental Management System for the facility has not been developed as this has not been required under Condition 2 of IPPC Licence P0280-01. The facility is accredited to quality standard EN ISO 9001:2000 from 30th August 2007.

C.3 Hours of Operation

The facility is operational five days a week from 8a.m. to 4.30p.m. These hours are consistent throughout the year excluding Christmas and summer shutdown in August. There is no activity at the facility during night-time hours. On occasion, and driven by customer needs, the facility is operational outside normal hours which may occur on Saturdays from 8a.m. to 12.30p.m. or for an extra 2 hours at the end of normal operating hours two to three times a week.

For inspection purposes only.
Consent of copyright owner required for any other use.

EPA Export 26-07-2013:00:56:44

D INFRASTRUCTURE & OPERATION

The facility operates under IPPC Licence Register No. P0280-01. The company was formed in 1991 and currently employs 16 permanent employees. Surface treatment activities are currently conducted within the leased Units 604/605/606 in the Northern Industrial Estate, covering a total area of 1382 m^2. The installation is surrounded by light industrial units within Northern Industrial Estate.

The facility is operated five days a week from 8a.m. to 4.30p.m. These hours are consistent throughout the year excluding Christmas and summer shutdown (August). There is no activity during night-time hours. Surface treatment is conducted through out the daytime working period. Painting process is dependent on the finishing turn around of the surface treatment process and the type of paint required by the customer. Extraction fans at the painting booths area are ran continuously during the working day and powered off outside hours of operation. The WWTP operates during working hours only.

Surface Treatment Operations

Activities at Waterford Plating Company Ltd. associated with the surface treatment of metals include 1) electroplating coatings 2) non-electroplating coatings and 3) painting of components.

For inspection purposes only.
Consent of copyright owner required for any other use.

The main process at the facility involves the surface treatment of customer components, which can be aluminium, steel or zintec (electro-coated steel) by placement on jigs, barrels are not used at the facility. The surface treatment line contains solutions and rinses in vats which are lined up simultaneously for each type of surface treatment provided by Waterford Plating Company Ltd. The finish is dependant on the requirements stipulated by the customer.

Phosphate Coatings are processes of chemical conversion on a metal surface to produce a thin adherent phosphate compound coatings. The phosphate crystals formed on the surfaces of materials can be iron, zinc, or manganese phosphates. It is one of the most useful non-metallic coatings.

Aluminium Chromating Coatings are also processes of chemical conversion where chromated coatings are formed by the reaction of water solutions of chromic acid or chromium salts. The coatings can be applied to aluminium, zinc, cadmium, and magnesium. These coatings have good atmospheric corrosion resistance.

Cyanide Zinc plating is a process of using electrical current to coat an electrically conductive object with a relatively thin layer of metal. The primary application of electroplating deposits a layer of a metal having some desired property (e.g. abrasion, corrosion protection, aesthetic qualities) onto a surface lacking that property. Colour or clear passivation is a chemical treatment applied to the surface of a metal to improve corrosion resistance and appearance.

At Waterford Plating Company Ltd., the beginning of the surface treatment line begins with two vats for non-electrolytic phosphate conversion coating, followed by nine vats for non-electrolytic chromate conversion coating (and 3 small sized vats off the line) and finally terminating with 17 vats for the cyanide zinc plating. The processes involves loading of components onto appropriate jigs and immersion in a series of chemicals vats followed by rinses vats, depending on the surface treatment to be applied.

EPA Export 26-07-2013:00:56:44

The rinsing vats are continuously replenished with clean water, and rinsing water is chemically and biologically treated on site in the Wastewater Treatment Plant (WWTP). Vats containing solutions that chemically alter the surface of components are only drained when spent or if a residue forms. These solutions are chemically treated in the WWTP, where metal hydroxides are precipitated out and filtered, where the residues retained in a sludge tank for removal off site and disposal with an approved waste contractor.

Schematics to outline the surface treatments are attached as follows:

- Phosphate conversion coating operation as detailed on page 4 of Attachment D
- Chromate conversion coating operation as detailed on page 5 of Attachment D
- Cyanide zinc plating operation as detailed on page 6 of Attachment D

The use of hexavalent chromium (Cr(VI), albeit for a small number of customers, is used in the cyanide zinc plating line. Hexavlent chromium (Cr(VI) compounds are a group of chemical substances that contain the metallic element chromium in its positive 6 valence (hexavalent) state. Occupational exposures to Cr(VI) occur during the production of stainless steel, chromate chemicals, chromate coating and chromate pigments, and the Cr(VI) compound has been considered as a potential occupation carcinogen.

To minimise the used of Hexavlent chromium (Cr (VI) compounds, two chrome free solutions have been introduced on the line for the chromate treatment of aluminium. The introduction of chrome free colour passivation on the zinc plating line was undertaken in August 2006. To date the use of Cr(VI) in clear chromating solutions has been fully changed over to the trivalent form Cr(III) by using the product Slotopoas Z21/Blue/22. Approximately 95% of the process for colour chromating solutions using Cr (VI) has been changed to Cr(III) by using the product Slotopas G10. The remaining 5% of processing using a product containing Cr(VI) arises due to customer specification for component finishing. The product MacDermid Iridite LY-FPC which contains Cr(VI) is received to the facility in soluble liquid state and the maximum stock level at any one time is 25 litres. This small percentage of customers are exempt from compliance with Directive 2002/95/EC on Restriction of Hazardous Substances

Consent of copyright owner required for any other use. For inspection purposes only.

Painting Operations

A mixture of paints are used in the process to apply a paint coating to the finished product from the surface treatment. Solvent based paints are used in the enclosed wet painting booth, where employees operating the spray guns wear air filter masks. Powder paints are sprayed on to components in an open booth with air extraction installed. Wet and dry paint operations take place in an open booth served by a water scrubber and baffle.

Wet Spray Painting Booth (Air Emission Ref AE2-1)

Solvent based paints are used in an enclosed wet spray painting booth (associated air emission point AE2-1) where painting operatives conduct painting with spray guns while wearing air filter masks. Approximately 90% of wet spray paint are solvent based. Transfer to water based paints will be encouraged to customers to reduce environmental impact. In conjunction with solvent based paints: thinners, primers and hardeners containing a VOC content are used in air extraction booths only at the facility.

The abatement consists of air extraction in conjunction with PROCART concertina extraction filters for spray booths. The Procart filter is manufactured with 100% natural materials, recycled cardboard and water-based glue, preventing the electrostatic effect and

EPA Export 26-07-2013:00:56:44

environmental disposal concerns of traditional staples. Its accordion design enables air to flow continuously whilst inhibiting any type of paint or lacquer. The PROCART filter is replaced monthly; used filters are treated as hazardous waste is disposed of with an approved waste contractor.

Where possible, compliant paints in accordance with S.I. No. 199 of 2007 *'Limitation of Emissions of Volatile Organic Compounds due to the use of Organic Solvents in Certain Paints, Varnishes and Vehicle Refinishing Products Regulations 2007* ' are used however, the phasing in of complaint paints is not as yet complete as specifications provided to Waterford Plating Company Ltd. from customers will required re-validation at source to ensure quality finishes on components.

Dry Powder Painting Booth (Air Emission Ref AE2-2)

Dry powder paints are sprayed on to components in an open booth (with associated air emission point AE2-2) with air extraction in conjunction with PROART concertina extraction filters for spray booths. Dry powder particulates are captured on the filter and the filter is treated as hazardous waste and is disposed of with an approved waste contractor.

Waterford Plating Company Ltd. is obliged to comply with Directive 2002/95/EC on the '*Restriction of the use of certain Hazardous Substances in Electrical and Electronic Equipment'*, since a large makeup of their client base is for computer component parts. This 'RoHS' directive prohibits the placing on the market of electrical and electronic equipment containing lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) or polybrominated diphenyl ethers (PDBE). To this end all paint products that are used at Waterford Plating Company Ltd. on electrical and electronic equipment must comply with this directive.

Consent of copyright owner required for any other use.
For inspection purposes only.

Wet Spray Paint/Dry Powder Paint Booth (Air Emission Ref AE2-3)

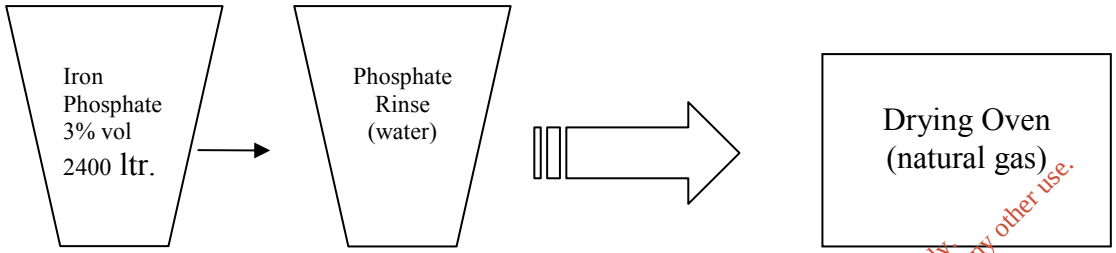
Wet spray paint and dry powder paint operations are performed in an open booth (associated air emission point AE2-3). Abatement is in the form of air extraction and a water scrubber with a baffle located on the exit stack. The baffle is routinely cleaned. Particulates and wet paint are scrubbed into the water and this paint sludge which is treated as hazardous waste is transferred from the unit to IBC's and disposed of with Rilta Environmental.

Waterford Plating Company Ltd. provides surface treatment to customer components which must comply with Directive 2002/95/EC of the European Parliament and of the Council on the restriction of the use of certain hazardous substances in electrical equipment. This Directive, from 1st July 2006, prohibited the use of Lead, Mercury, Cadmium, Hexavalent Chromium, polybrominated biphenyls (PBB) and polybrominated diphenly ethers (PDBE). For this reason, paints used at the facility in the wet and dry painting process must also comply with Directive 2002/95/EC. The paint suppliers certify the paint products conform to this Directive and do not contain the substances prohibited.

.

EPA Export 26-07-2013:00:56:44

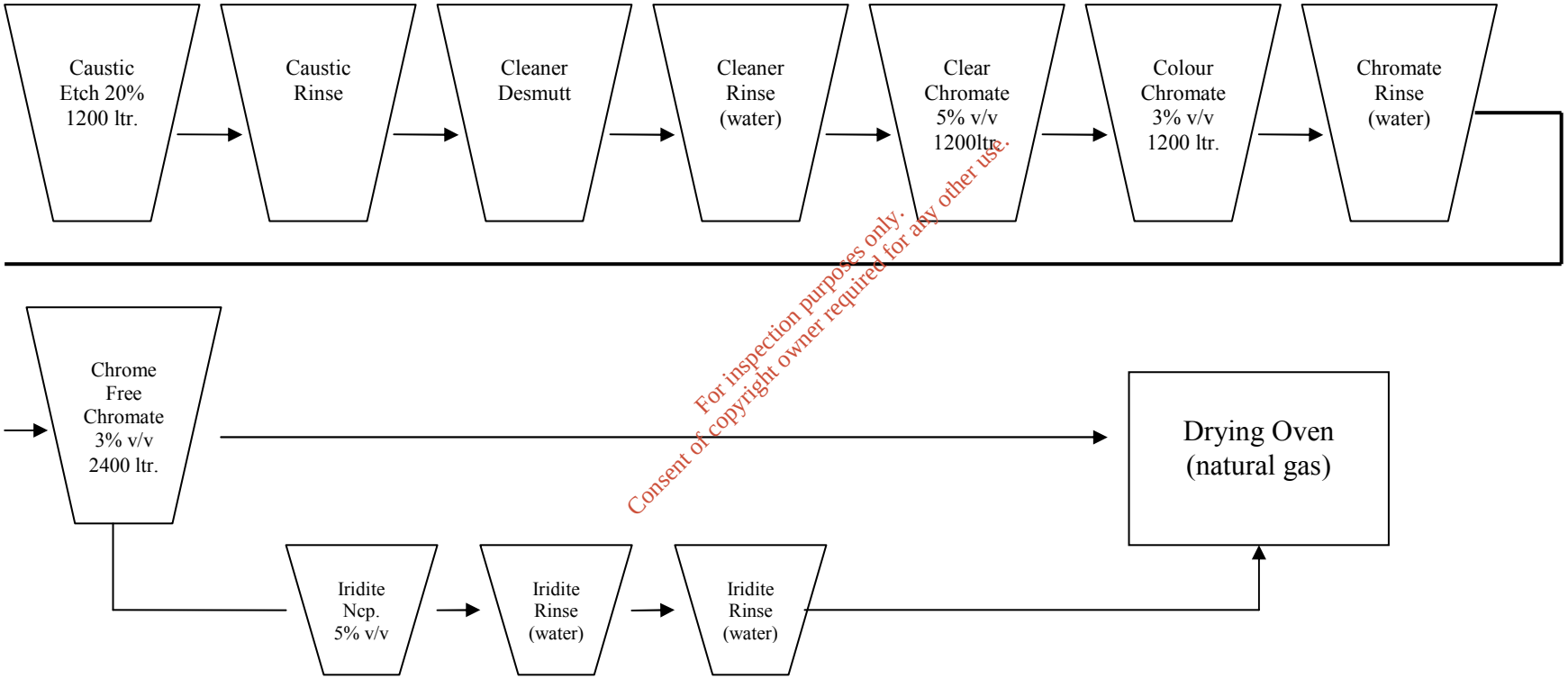
Iron Phosphate Line



For inspection purposes only.
Consent of copyright owner required for any other use.

EPA Export 26-07-2013:00:56:44

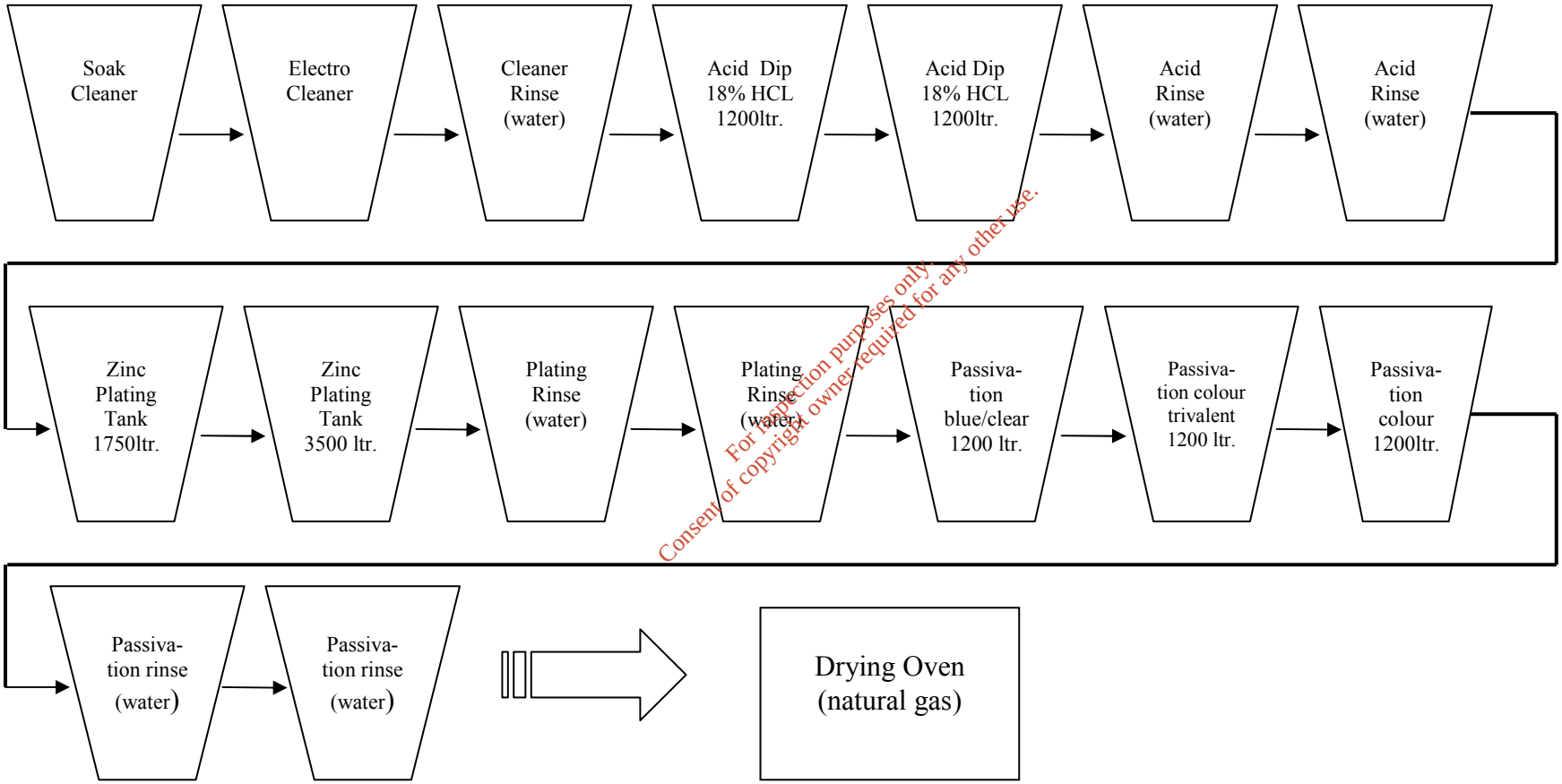
Chromate Conversion Line



For inspection purposes only.
Consent of copyright owner required for any other use.

EPA Export 26-07-2013:00:56:44

Cyanide Zinc Electroplating Line



For inspection purposes only.
Consent of copyright owner required for any other use.

EPA Export 26-07-2013:00:56:44

E1. EMISSIONS TO ATMOSPHERE

The following drawings included in Attachment E presents the emissions to atmosphere as licensed, existing and proposed in Irish Grid Projection for Waterford Plating Company Ltd. facility.

Drawing Reference	Description
WPP280-01-Rev-05	Air emissions as per IPPC Licence P0280-01
WPP280-01-Rev-06	Existing air emissions
WPP280-01-Rev-07	Proposed air emissions

The existing IPPC Licence P0280-01 for Waterford Plating Company Ltd. includes two controlled air emission points A2-1, a wet spray booth located in the exterior wall of Unit 605/606; and A2-2, a dry powder paint booth located in the exterior wall of Unit 604. Drawing WPP280-01-Rev-05 shows the air emission locations as per the original licence application in 1997 to the Agency for IPPC Licence P0280-01 and is included in Attachment E of this application.

The existing locations of air emission points A2-1 and A-2-2, as shown on drawing WPP280-01-Rev-06 (Attachment E), have been transferred to alternative locations at the facility from their original locations as shown in Drawing WPP280-01-Rev-05. The introduction of a third emission point A2-3 for a wet spray/dry powder paint booth located in Unit 604 as shown in WPP280-01-Rev-06 has not, as yet, been incorporated into the facility's IPPC Licence P0280-01 and is shown on WPP280-01-Rev-06 (Attachment E).

Consent of copyright owner required for any other use. For inspection purposes only.

It is intended by Waterford Plating Company Ltd. to relocate the dry powder paint booth with associated air emission point AE2-2 and wet/dry powder paint booth with associated air emission point AE2-3 spray booths from the currently leased industrial Unit 604 into Unit 655, which will also be leased by Waterford Plating Company Ltd. This move is to accommodate the expiration of the lease on Unit 604 in autumn of 2008. Drawing WPP280-01-Rev-7 (Attachment E) shows the proposed locations of air emission points AE2-1, AE2-3 and AE2-3. The stack infrastructure, temperature, pressure, diameter & air flow velocities for these air emissions will not be altered for each stack associated with emission points AE2-1, AE2-3 and AE2-3. The proposed painting activities will remain consistent with current operations at the installation.

The table overleaf details a summary of the emission points proposed for the purposes of this application for review of IPPC Licence P0280-01.

REF	LOCATION	SOURCE	STACK HEIGHTS
A2-1	**Unit 605/606**	**Wet spray booth**	**6.00m from concrete base**
A2-2	**Unit 655**	**Dry spray booth**	**Existing height at 4.28m from concrete base at Unit 604, height to be confirmed for Unit 655 from Air Dispersion Modelling**
A2-3	**Unit 655**	**Wet/dry spray booth**	**Existing height at 5.18m from concrete base at Unit 604, height to be confirmed for Unit 655 from Air Dispersion Modelling**

EPA Export 26-07-2013:00:56:44

Monitoring has been conducted for the existing stacks in 2007, and it is anticipated that results reported for the stacks at these locations should be constant with the characteristics of the emission points at the proposed locations considering that the stack infrastructure, paint product and procedures will be consistent with current operations. A copy of this report is available on request by the Agency.

EMISSION CHARACTERISATION

Air Emission point AE2-1 (wet spray painting booth) will not be relocated from its existing location as shown in both Drawings WPP280-01-Rev-06 and WPP280-01-Rev-07. However, its existing location has been changed from the original licence application although it is in close proximity to its original position.

For the purpose of characterising emission points AE2-2 and AE2-3 in Table E.1 at the proposed locations; the stack diameter, temperature, pressure, and airflow have been taken for the existing stacks as parameters will remain equal to those in place at present.

The table below details a summary of the National Grid Reference of the proposed emissions to atmosphere at the installation. The monitoring/sampling locations are reported as the same location given the small diameter of the stacks.

PROPOSED EMISSIONS TO ATMOSPHERE NATIONAL GRID REFERENCE (12 DIGIT 6E,6N)				
Ref	**Source**	**Licensed**	**Existing**	**Proposed**
A2-1	**Wet Spray Booth**	**258316E,111878N**	**258319E,111869N**	**258319E,111869N**
A2-2	**Dry Powder Booth**	**258311E,111897N**	**258332E,111843N**	**258317E,111875N**
A2-3	**Wet Spray/dry Powder Booth**	**n/a**	**258317E,111841N**	**258316E, 11878N**

For inspection purposes only.
Consent of copyright owner required for any other use.

BOILER EMISSIONS

There area no boiler emissions at the facility.

MINOR EMISSIONS

There area no minor emissions at the facility.

FUGITIVE EMISSIONS

While Waterford Plating Company endeavours to eliminate or reduce fugitive emissions, there are unavoidable emissions from tank surfaces, hot air dryer and open booth painting operations. As part of the original licence application, a fugitive emission study was undertaken to identify fugitive emissions arising the plating line and dry spray booth at the installation. It was concluded that the fugitive emissions were low and did not pose a potential environmental impact on the surrounding atmosphere.

Cellulose based cleaners are also solvent based and are used for the degreasing of steel components prior to painting and only a small volume is used daily, approximately 6-7 litres. It is an objective of the Company to replace solvent based degreasers with non-solvent alternatives to reduce fugitive emissions for this operation.

EPA Export 26-07-2013:00:56:44

ABATEMENT

Wet Spray Painting Booth (Air Emission Ref AE2-1)

Solvent based paints are used in an enclosed wet spray painting booth (associated air emission point AE2-1) where painting operatives conduct painting with spray guns while wearing air filter masks. Approximately 90% of wet spray paint are solvent based. Transfer to water based paints will be encouraged to customers to reduce environmental impact. In conjunction with solvent based paints: thinners, primers and hardeners containing a VOC content are used in air extraction booths only at the facility.

The abatement consists of air extraction in conjunction with PROCART concertina extraction filters for spray booths. The Procart filter is manufactured with 100% natural materials, recycled cardboard and water-based glue, preventing the electrostatic effect and environmental disposal concerns of traditional staples. Its accordion design enables air to flow continuously whilst inhibiting any type of paint or lacquer. The PROCART filter is replaced monthly; used filters are treated as hazardous waste is disposed of with an approved waste contractor.

Where possible, compliant paints in accordance with S.I. No. 199 of 2007 *'Limitation of Emissions of Volatile Organic Compounds due to the use of Organic Solvents in Certain Paints, Varnishes and Vehicle Refinishing Products Regulations 2007* ' are used however, the phasing in of complaint paints is not as yet complete as specifications provided to Waterford Plating Company Ltd. from customers will required re-validation at source to ensure quality finishes on components.

Consent of copyright owner required for any other use. For inspection purposes only.

Dry Powder Painting Booth (Air Emission Ref AE2-2)

Dry powder paints are sprayed on to components in an open booth (with associated air emission point AE2-2) with air extraction in conjunction with PROART concertina extraction filters for spray booths. Dry powder particulates are captured on the filter and the filter is treated as hazardous waste and is disposed of with an approved waste contractor.

Waterford Plating Company Ltd. is obliged to comply with Directive 2002/95/EC on the '*Restriction of the use of certain Hazardous Substances in Electrical and Electronic Equipment'*, since a large makeup of their client base is for computer component parts. This 'RoHS' directive prohibits the placing on the market of electrical and electronic equipment containing lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) or polybrominated diphenyl ethers (PDBE). To this end all paint products that are used at Waterford Plating Company Ltd. on electrical and electronic equipment must comply with this directive.

Wet Spray Paint/Dry Powder Paint Booth (Air Emission Ref AE2-3)

Wet spray paint and dry powder paint operations are performed in an open booth (associated air emission point AE2-3). Abatement is in the form of air extraction and a water scrubber with a baffle located on the exit stack. The baffle is routinely cleaned. Particulates and wet paint are scrubbed into the water and this paint sludge which is treated as hazardous waste is transferred from the unit to IBC's and disposed of with Rilta Environmental.

EPA Export 26-07-2013:00:56:44

Environmental Protection Agency (Licensing) (Amendment) Regulations 2004

The emissions to atmosphere where fixing of emission limit values is required under the Schedule of S.I. 394 of 2004 includes:

Air

(4) Volatile organic compounds
(5) Metals and their compounds
(6) Dust (particulates)

Considering that the paint products are compliant with Directive 2002/95/EC on the '*Restriction of the use of certain Hazardous Substances in Electrical and Electronic Equipment'* there will be no requirement to fix emission limits for lead, mercury and cadmium. Under the current IPPC Licence P0280-01 chromium is required to be monitored on air emission point AE2-2.

FIXED EMISSION LIMIT VALUES AS PER SCHEULDE OF S.I. 395 OF 2004		
Ref	**Source**	**Substance**
A2-1	**Wet Spray Booth**	**Volatile Organic Compounds**
A2-2	**Dry Powder Booth**	**Particulates**
A2-3	**Wet Spray/dry Powder Booth**	**Particulates, Volatile Organic Compounds**

For inspection purposes only.
Consent of copyright owner required for any other use.

EPA Export 26-07-2013:00:56:44

TABLE E.1(ii) MAIN EMISSIONS TO ATMOSPHERE (Emission point 1 of 4)

Emission Point Ref. Nº:	A2-1
Source of Emission:	Wet spray booth extraction
Location:	Through wall of Unit 605/606
Grid Ref. (12 digit, 6E,6N):	258319E, 111869N
Vent Details Diameter: Height above Ground(m):	 400mm 6m
Date of commencement:	1992

Characteristics of Emission:

(i) Volume to be emitted:			
Average/day	50,724 Nm^3/d	Maximum/day	50,724 Nm^3/d
Maximum rate/hour	5,636 Nm^3/h	Min efflux velocity	13.26 $m.sec^{-1}$
(ii) Other factors			
Temperature	21.2 ºC(max)	21.2 ºC(min)	21.2 ºC(avg)
For Combustion Sources: Volume terms expressed as : ☐ wet. X dry. _____ $\%O_2$			

For inspection purposes only.
Consent of copyright owner required for any other use.

(iii) Period or periods during which emissions are made, or are to be made, including daily or seasonal variations (*start-up /shutdown to be included):*

Periods of Emission (avg)	60 min/hr 9 hr/day 240 day/yr

EPA Export 26-07-2013:00:56:44

TABLE E.1(ii) MAIN EMISSIONS TO ATMOSPHERE (Emission point 2 of 4)

Emission Point Ref. Nº:	A2-2
Source of Emission:	Dry Powder Paint Booth Extraction
Location:	Through wall of Unit 655
Grid Ref. (12 digit, 6E,6N):	258319E, 111869N
Vent Details Diameter: Height above Ground(m):	 600mm To be confirmed through air dispersion model
Date of commencement:	To be confirmed- estimated Autumn 2008

Characteristics of Emission:

(i) Volume to be emitted:			
Average/day	64,45 8 m^3/d	Maximum/day	64,458 Nm^3/d
Maximum rate/hour	7,162Nm^3/h	Min efflux velocity	7.50 $m.sec^{-1}$
(ii) Other factors			
Temperature	22.3 ºC(max)	22.3 ºC(min)	22.3 ºC(avg)
For Combustion Sources: Volume terms expressed as : ☐ wet. X dry. _____ $\%O_2$			

For inspection purposes only.
Consent of copyright owner required for any other use.

(iii) Period or periods during which emissions are made, or are to be made, including daily or seasonal variations (*start-up /shutdown to be included):*

Periods of Emission (avg)	60 min/hr	9 hr/day	240 day/yr	

EPA Export 26-07-2013:00:56:44

TABLE E.1(ii) MAIN EMISSIONS TO ATMOSPHERE (Emission point 3 of 4)

Emission Point Ref. Nº:	A2-3
Source of Emission:	Wet & Dry Spray Booth Extraction
Location:	Through wall of Unit 655
Grid Ref. (12 digit, 6E,6N):	258316E, 111878N
Vent Details Diameter: Height above Ground(m):	600mm 5.18m
Date of commencement:	To be confirmed through air dispersion model

Characteristics of Emission:

(i) Volume to be emitted:				
Average/day	92,394 Nm^3/d	Maximum/day		92,394 Nm^3/d
Maximum rate/hour	10,266Nm^3/h	Min efflux velocity		10.77 $m.sec^{-1}$
(ii) Other factors				
Temperature	22.0 ºC(max)	22.0 ºC(min)		22.0 ºC(avg)
For Combustion Sources: Volume terms expressed as : ☐ wet. X dry. _____ $\%O_2$				

For inspection purposes only.
Consent of copyright owner required for any other use.

(iii) Period or periods during which emissions are made, or are to be made, including daily or seasonal variations (*start-up /shutdown to be included):*

Periods of Emission (avg)	60 min/hr	9 hr/day	240 day/yr	

TABLE E.1(iii): MAIN EMISSIONS TO ATMOSPHERE - Chemical characteristics of the emission (1 table per emission point)

EPA Export 26-07-2013:00:56:44

Emission Point Reference Number AE2-1

Parameter	Prior to treatment(1)				Brief description of treatment	As discharged(1)					
	mg/Nm^3		kg/h			mg/Nm^3		kg/h.		kg/year	
	Avg	Max	Avg	Max		Avg **note 1**	Max	Avg	Max	Avg	Max
Ta Luft Class I	Not availalbe	Not availalbe	Not availalbe	Not availalbe	Enclosed booth, air extraction, filter	<0.08	20	0.0004	0.1127	8.64	243
Ta Luft Class II	Not availalbe	Not availalbe	Not availalbe	Not availalbe	Enclosed booth, air extraction, filter	96.4	100	0.543	0.564	1174	1218
Ta Luft Class III	Not availalbe	Not availalbe	Not availalbe	Not availalbe	Enclosed booth, air extraction, filter	100.55	150	0.567	0.845	1224	1825

For inspection purposes only. Consent of copyright owner required for any other use.

1. Concentrations should be based on Normal conditions of temperature and pressure, (i.e. 0^{o}C,101.3kPa). Wet/dry should be the same as given in Table E.1(ii) unless clearly stated otherwise.

Note 1: Figures use as supplied from Axis report Number 2100-07-01 Version 0; available on request

EPA Export 26-07-2013:00:56:44

TABLE E.1(iii): MAIN EMISSIONS TO ATMOSPHERE - Chemical characteristics of the emission (1 table per emission point)

Emission Point Reference Number AE2-2

Parameter	Prior to treatment(1)				Brief description of treatment	As discharged(1)					
	mg/Nm^3		kg/h			mg/Nm^3		kg/h.		kg/year	
	Avg	Max	Avg	Max		Avg **note 1**	Max	Avg	Max	Avg	Max
Particulates	Not availalbe	Not availalbe	Not availalbe	Not availalbe	Open booth, air extraction, filter	4.4	20	0.032	0.143	68	309

For inspection purposes only.
Consent of copyright owner required for any other use.

1. Concentrations should be based on Normal conditions of temperature and pressure, (i.e. 0^{o}C,101.3kPa). Wet/dry should be the same as given in Table E.1(ii) unless clearly stated otherwise.

Note 1: Figures use as supplied from Axis report Number 2100-07-01 Version 0; available on request

TABLE E.1(iii): MAIN EMISSIONS TO ATMOSPHERE - Chemical characteristics of the emission (1 table per emission point)

EPA Export 26-07-2013:00:56:44

Emission Point Reference Number AE2-3

Parameter	Prior to treatment(1)				Brief description of treatment	As discharged(1)					
	mg/Nm^3		kg/h			mg/Nm^3		kg/h.		kg/year	
	Avg	Max	Avg	Max		Avg **Note 1**	Max	Avg	Max	Avg	Max
Particulates	Not availalbe	Not availalbe	Not availalbe	Not availalbe	Open booth, water scrubber, air extraction, baffle	0.6	20	0.006	0.20	13.3	443
Ta Luft Class I	Not availalbe	Not availalbe	Not availalbe	Not availalbe	Enclosed booth, air extraction, filter	n/a	20	n/a	0.205	n/a	443
Ta Luft Class II	Not availalbe	Not availalbe	Not availalbe	Not availalbe	Enclosed booth, air extraction, filter	n/a	100	n/a	1.027	n/a	2217
Ta Luft Class III	Not availalbe	Not availalbe	Not availalbe	Not availalbe	Enclosed booth, air extraction, filter	n/a	150	n/a	1.54	n/a	3326

For inspection purposes only.
Consent of copyright owner required for any other use.

1. Concentrations should be based on Normal conditions of temperature and pressure, (i.e. 0^{o}C,101.3kPa). Wet/dry should be the same as given in Table E.1(ii) unless clearly stated otherwise.

Note 1: Figures use as supplied from Axis report Number 2100-07-01 Version 0; available on request

EPA Export 26-07-2013:00:56:44

TABLE E.1(iv): EMISSIONS TO ATMOSPHERE - Minor atmospheric emissions

Emission point Reference Numbers	Description	Emission details[1]				Abatement system employed
		material	mg/Nm^3[2]	kg/h.	kg/year	
n/a	n/a	n/a	n/a	n/a	n/a	n/a

For inspection purposes only.
Consent of copyright owner required for any other use.

1 The maximum emission should be stated for each material emitted, the concentration should be based on the maximum 30 minute mean.
2 Concentrations should be based on Normal conditions of temperature and pressure, (i.e. 0^{o}C101.3kPa). Wet/dry should be clearly stated. Include reference oxygen conditions for combustion sources.

EPA Export 26-07-2013:00:56:44

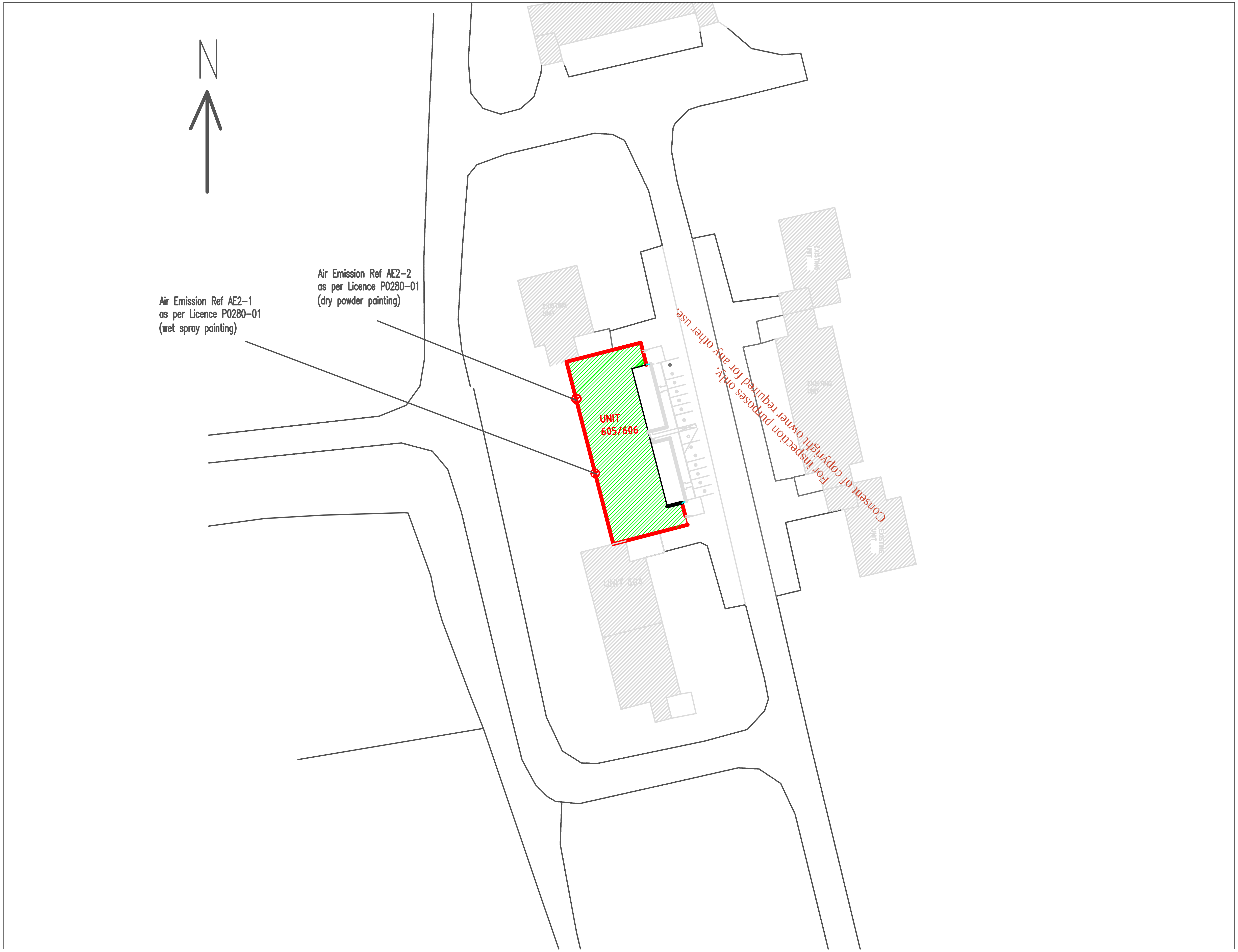
TABLE E.1(v): EMISSIONS TO ATMOSPHERE – Fugitive and Potential atmospheric emissions

Emission point ref. no. (as per flow diagram)	Description	Malfunction which could cause an emission	Emission details (Potential max. emissions)[1]		
			Material	mg/Nm^3	kg/hour
n/a	Degreasing of steel components using Thinners	n/a	VOC	Not available	Not available
n/a	Drier oven on painted components	n/a	VOC	Not available	Not available
n/a	Door seals on wet spray paint booth	n/a	VOC	Not available	Not available
n/a	Vats surfaces	n/a	based on raw materials	Not available	Not available
n/a	Drier oven on surface treated components	n/a	based on raw materials	Not available	Not available

For inspection purposes only.
Consent of copyright owner required for any other use.

[1] Estimate the potential maximum emission for each malfunction identified.

EPA Export 26-07-2013:00:56:44



For inspection purposes only.
Consent of copyright owner required for any other use.

Leased Unit

Other Industrial Units

Boundary of Facility as per IPPC Licence P0280-01

Stacks

National Grid Reference Co-ordinates

Emission to Air AE2-1 258316E, 111878N
Emission to Air AE2-2 258311E, 111897N

ATTACHMENT E

Client
WATERFORD PLATING COMPANY LTD.

Project
IPPC Reg No. P0280-01
Licence Review Application

Title: Attachment E
Original Emissions to Air as per IPPC Licence P0280-01

Drawing Ref:
WPP0280-01Rev-05

Scales 1:1000

surveyed	drawn	checked	date
	HB	SC	May '08

© COPYRIGHT OF
BORD NA MÓNA
BORD NA MÓNA ENVIRONMENTAL LIMITED
Main St, Newbridge, Co. Kildare
Phone 045 431201 Fax 045 432207
www.bnm.ie/environmental
Email: ed.info@bnm.ie

EPA Export 26-07-2013:00:56:44

EPA Export 26-07-2013:00:56:44

Current Leased Units

Other Industrial Units

Existing Boundary of Facility

Stacks

National Grid Reference Co-ordinates

Emission to Air AE2-1 258319E, 111869N
Emission to Air AE2-2 258332E, 111843N
Emission to Air AE2-2 258317E, 111841N

ATTACHMENT E

Client
WATERFORD PLATING COMPANY LTD.

Project
IPPC Reg No. P0280-01
Licence Review Application

Title: **Attachment E**
Exsiting Emissions to Air

Drawing Ref:
WPP0280-01Rev-06

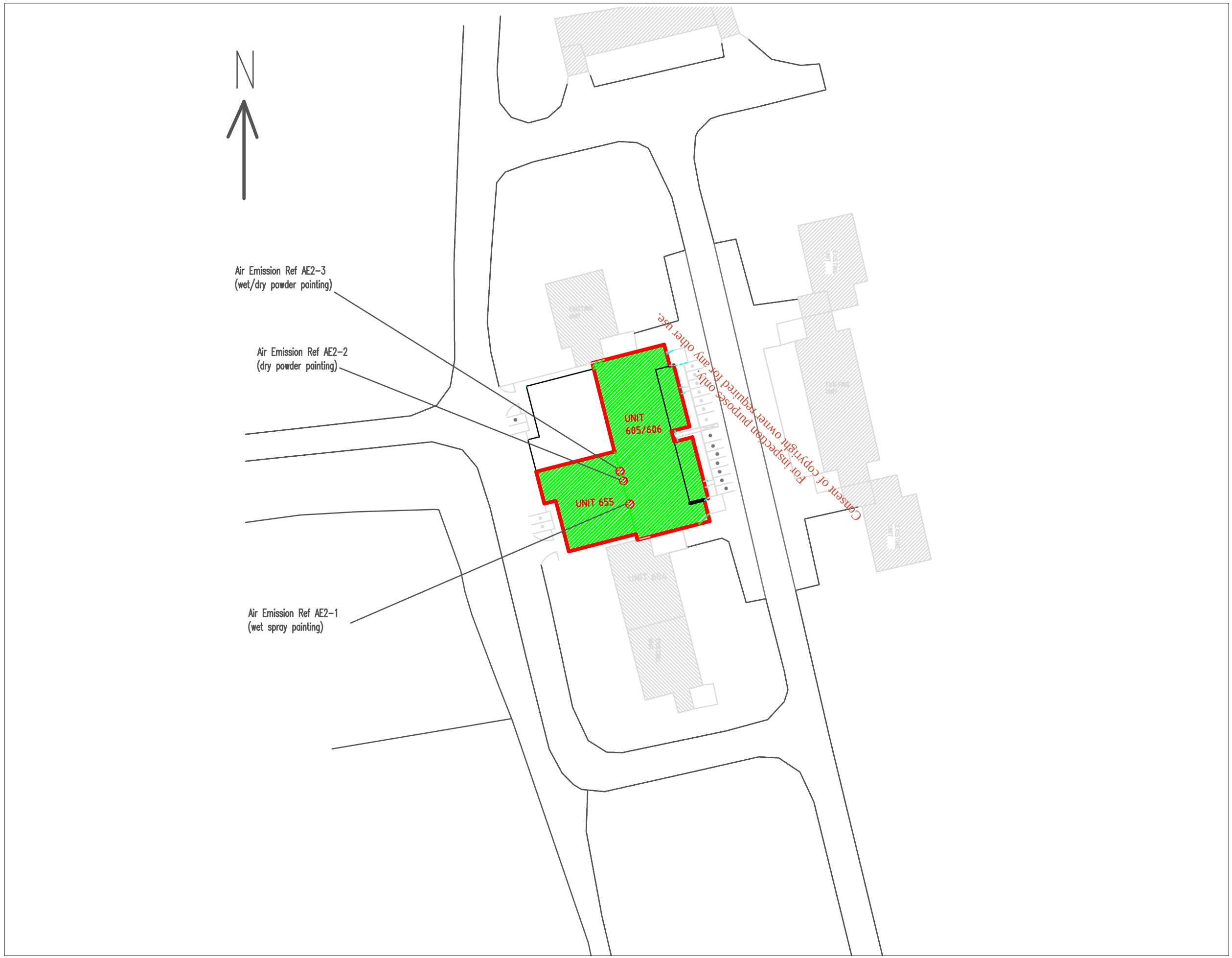
Scales 1:1000

surveyed	drawn	checked	date
	HB	SC	May '08

© COPYRIGHT OF

BORD NA MÓNA
BORD NA MÓNA ENVIRONMENTAL LIMITED
Main St, Newbridge, Co. Kildare
Phone 045 431201 Fax 045 432207
www.bnm.ie/environmental
Email: ed.info@bnm.ie

EPA Export 26-07-2013:00:56:44



Leased Unit

Other Industrial Units

Proposed Boundary of Facility

Stacks

National Grid Reference Co-ordinates

Emission to Air AE2-1 258319E, 111869N
Emission to Air AE2-2 258317E, 111875N
Emission to Air AE2-3 258316E, 111878N

ATTACHMENT E

Client
WATERFORD PLATING COMPANY LTD.

Project
IPPC Reg No. P0280-01
Licence Review Application

Title: Attachment E
Proposed Emissions to Air

Drawing Ref:
WPP0280-01Rev-07

Scales 1:1000

surveyed	drawn	checked	date
	HB	SC	May '08

© COPYRIGHT OF

BORD NA MÓNA
BORD NA MÓNA ENVIRONMENTAL LIMITED
Main St, Newbridge, Co. Kildare
Phone 045 431201 Fax 045 432207
www.bnm.ie/environmental
Email: ed.info@bnm.ie

E1.B. EMISSIONS TO ATMOSPHERE

Council Directive 1999/13/EC on the '*Limitation of Emissions of Volatile Organic Compounds due to the use of Organic Solvents in Certain Activities and Installations'.*

Waterford Plating Company Ltd. falls under the category of activity 8 *'Other coating, including metal, plastic, textile, fabric, film and paper coating'.*

The threshold of solvent consumption for the activity comes under 5-15 TPA corresponding to emission limit value in waste gas of 100 mg C/Nm^3.

The fugitive emissions value for the percentage of solvent input is 20%.

Waterford Plating Company Ltd. intends to maintain low fugitive emissions and reduce the risk of potential fugitive emissions with a system of combining responsible practices during painting and degreasing operations where solvents are used in conjunction with efficient air abatement techniques.

For inspection purposes only.
Consent of copyright owner required for any other use.

EPA Export 26-07-2013:00:56:44

E.2 EMISSIONS TO SURFACE WATERS

SW1 discharges into the Northern Industrial Estate stormwater drain which discharges into the River Suir in Waterford. Surface water at the facility comprises of roof run-off and surface run-off from hardstanded areas during rain events only. A new Kingspan roof installed in 2007 has replaced the asbestos roof. Following the expansion plan, the surface water is sampled at the location indicated on Drawing Ref WPP280-01-Rev-08.

Results have demonstrated that there is no potential polluting substance arising as a result of roof and surface water runoff. Routine weekly inspections of surface water and good environmental management are in place at Waterford Plating Company Ltd. Considering this, it is requested that surface water analysis be removed from the IPPC licence and monitoring be in the form of weekly inspections.

COD Results mg/l has been within the 100mg/l limit.

May 2007	COD	11 mg/l
December 2007	COD	4 mg/l
March 2008	COD	12 mg/l
May 2008	COD	<5 mg/l

For inspection purposes only.
Consent of copyright owner required for any other use.

EPA Export 26-07-2013:00:56:44

TABLE E.2(i): EMISSIONS TO SURFACE WATERS (One page for each emission)

Emission Point:

Emission Point Ref. Nº:	SW1
Source of Emission:	Storm water
Location :	Drain at north east of facility
Grid Ref. (12 digit, 6E,6N):	258335E, 111911N
Name of receiving waters:	Not applicable
Flow rate in receiving waters:	Not applicable_____$m^3.sec^{-1}$ Dry Weather Flow Not applicable_____$m^3.sec^{-1}$ 95%ile flow
Available waste assimilative capacity:	Not applicable kg/day

For inspection purposes only.
Consent of copyright owner required for any other use.

Emission Details:

(i) Volume to be emitted			
Normal/day	**n/a** m^3	Maximum/day	n/a m^3
Maximum rate/hour	**n/a** m^3		

(ii) Period or periods during which emissions are made, or are to be made, including daily or seasonal variations (*start-up /shutdown to be included):*

Periods of Emission (avg)	_____min/hr _____hr/day _____day/yr

EPA Export 26-07-2013:00:56:44

TABLE E.2(ii): EMISSIONS TO SURFACE WATERS - Characteristics of the emission (1 table per emission point)

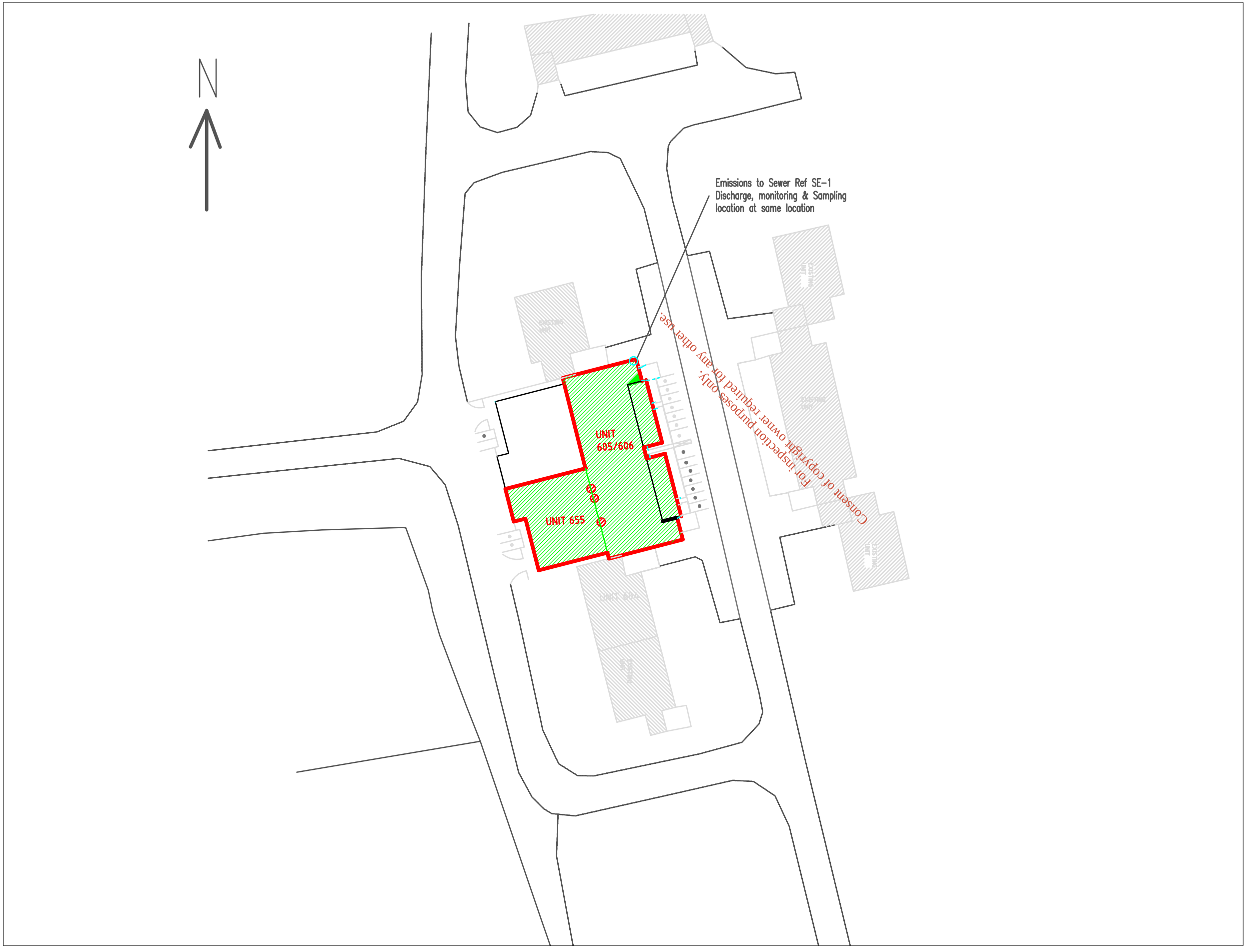
Emission point reference number : SW1

Parameter	Prior to treatment				As discharged				% Efficiency
	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	kg/year	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	kg/year	
COD	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available

For inspection purposes only.
Consent of copyright owner required for any other use.

EPA Export 26-07-2013:00:56:45

EPA Export 26-07-2013:00:56:45



Leased Unit

Other Industrial Units

Proposed Boundary of Facility

Discharge to Sewer

National Grid Reference Co-ordinates

Emission to Sewer SE-1 25828E, 111912N

ATTACHMENT E

Client
WATERFORD PLATING COMPANY LTD.

Project
IPPC Reg No. P0280-01
Licence Review Application

Title: Attachment E
Emission to Sewer

Drawing Ref:
WPP0280-01Rev-08

Scales 1:1000

surveyed	drawn	checked	date
	HB	SC	May '08

© COPYRIGHT OF

BORD NA MÓNA
BORD NA MÓNA ENVIRONMENTAL LIMITED
Main St, Newbridge, Co. Kildare
Phone 045 431201 Fax 045 432207
www.bnm.ie/environmental
Email: ed.info@bnm.ie

E.3 EMISSIONS TO SEWER

Waterford Plating Company Ltd. completed an upgrade of the onsite Waste Water Treatment Plant at the facility in 2007. Treated wastewater is discharged into Waterford Corporation sewer under Licence to Discharge S3/90/R1, a copy of the licence is included in this Attachment E.3. There currently is no wastewater treatment provided by Waterford Corporation. Waterford Corporation sewers are discharged to the River Suir. Treated wastewater is discharged, sampled and monitored in the same location as indicated on Drawing Ref WPP280-01-Rev-09.

The total flow for 2007 was 2,768m^3. The WWTP is only operated during hours of operation at the facility. Based on 240 days per year where surface treatment operations take place at Waterford Plating Company Ltd. This provides an average daily flow of c. 12m^3, the maximum daily flow limit is 100 m^3. Under the current IPPC Licence P0280-01 the license is required to perform 24 hr composite sampling monthly and analyse for the parameters set out in Schedule2 (i). The maximum daily average set out in Table E (iii) is the maximum monthly result encountered for a 24 hour composite sample over the 12 month period for 2007.

The design of the WWTP meets the requirements of the BAT Guidance note for the Surface Treatment of Metals and Plastic Sector July 2007 where a combination of flocculation, precipitation and settlement ensure the maximum removal of contaminants from the wastewater. Specifications in the design of the WWTP include:

- Dosing of hypochlorite to neutralise cyanide
- Dosing of sodium metabisulphite to precipitate chromium compounds
- Settlement tank to separate metal hydroxides and precipitated compounds
- Sand filtration to ensure removal of suspended solids
- pH control to precipitate contaminants

Consent of copyright owner required for any other use.
For inspection purposes only.

Continuous pH and flow monitoring on the discharge to sewer are in place at the facility. The sludge holding tank contents are treated as hazardous waste and are removed for disposal with an approved waste contractor. A schematic of the WWTP is included in this Attachment E.3 on page 6.

The current BAT- Associated Emission levels for Discharges to Water are complied with under the current IPPC Licence P0280-01. The company also continues to analyse for aluminium and chloride levels as support to monitoring the efficiency of the WWTP.

A study of the results for the parameters laid out in Schedule 2 (i) of IPPC Licence P0280-01 from a period October 2006 to April 2008 have shown that the facility has demonstrated a compliance rate of 99.2%. The facility was 100% compliant on Emissions to Sewers in 2007. Parameters monitored on a monthly basis are stable as shown in the Table 3.1 overleaf, and for this reason the licensee requests a reduction in the monitoring frequency to quarterly of all parameters excluding Chromium (VI), total chromium and cyanide.

It would also be requested that the parameters are monitored for compliance on a mass loading basis rather than an ELV

EPA Export 26-07-2013:00:56:45

Table 3.1 Evaluation of Results for the Period October 2006 to April 2008		
Parameter	**ELV per Schedule 2 (i) of P0280-01**	**% Compliance with ELV**
BOD	25 mg/l	100
Chromium	0.5 mg/l	94.7
Chromium VI	0.1 mg/l	94.7
COD	100 mg/l	100
Copper	0.5 mg/l	100
Cyanide	0.2 mg/l	100
Nitrate as N	30 mg/l	100
Oils, Fats & Greases	10 mg/l	100
Phosphate (Total)	5 mg/l	100
Solids (Total Suspended)	125 mg/l	100
Sulphate as SO_4	100 mg/l	100
Surfactants as MBAS	10 mg/l	100
Zinc	0.5 mg/l	100

.

For inspection purposes only.
Consent of copyright owner required for any other use.

EPA Export 26-07-2013:00:56:45

WATERFORD CORPORATION

Local Government (Water Pollution) Act 1977

Schedule of Conditions attached to Licence issued to Waterford Plating Ltd., by Waterford Corporation under the Local Government (Water Pollution Act) 1977, to discharge trade effluent to a sewer.

Ref. No. W.P. 53/90/R1

---

1. The max. volume of effluent shall not exceed 5 cu.m/hr or 40 cu.m/day.

2. The pH of the effluent shall lie in the range of 6 - 9.

3. The concentration of zinc in the effluent shall not exceed 5mg/l and the load shall not exceed 25 grams/hr or 0.2kg/day.

4. The concentration of cyanide in the effluent shall not exceed 1 mg/l. The load shall not exceed 5 grams/hr or 40 grams per day.

5. The concentration of chromium in the effluent shall not exceed 1mg/l. The load shall not exceed 5 grams/hr or 40 grams/day.

6. The concentration of Suspended Solids shall not exceed 300mg/l. The load shall not exceed 1.5kg/hr or 12 kg/day.

7. The BoD of the effluent shall not exceed 300mg/l. The load shall not exceed 1.5kg/hr or 12kg/day. ✗

8. The CoD of the effluent shall not exceed 1000mg/l. The load shall not exceed 5 kg/hr or 40 kg/day. ✗

9. Discharge Temperature of the effluent shall not exceed 43 degrees celsius. ✓

10. A manhole is to be maintained at the position of entry of effluent to the IDA drainage system. A 90 degree V-notch is to be installed in the manhole to enable flow measurements to be taken. Position of manhole is to be agreed with Waterford Corporation.

11. The Company shall monitor its industrial effluent discharge. At least once per month, flow proportional composite effluent samples shall be taken over a representative production period. Results shall be kept at the factory and a copy sent to City Engineer's Office, Waterford Corporation, The Mall, Waterford.

12. In the event of an accidental spillage, or the ingress of materials not normally a constituent of the trade effluent to the effluent discharge, immediate steps shall be taken to remedy the situation. Waterford Corporation shall be notified immediately of the occurance and samples of contaminated effluent shall be taken for subsequent analysis. Any costs incurred by Corporation as a result of the above shall be reimbursed by licencee.

Consent of copyright owner required for any other use.
For inspection purposes only.

IPC Licensing

EPA Export 26-07-2013:00:56:45

BÁRDAS PHORTLÁIRGE
WATERFORD CORPORATION

Office of City Manager and Town Clerk
City Hall
Waterford
Tel. (051) 73501

3

LOCAL GOVERNMENT (WATER POLLUTION) ACT, 1977.

ence to discharge Trade effluent to sewer

Waterford Plating Co. Ltd.
Unit 606,
Northern Extension,
IDA Industrial Estate,
Cork Road, Waterford.

Reference Number in Register:-
W.P. S3/90/R1

rford Corporation in exercise of the powers conferred on it by the Local ernment (Water Pollution) act, 1977 hereby grants a Licence to discharge

Trade effluent from

Zinc Plating Process located at Unit 606, IDA Industrial Estate

to Corporation Sewer (via IDA drain)

at Paddy Brown's Road

ject to the condition(s) set out in the schedule attached hereto.

Dated this day of

Signed on behalf of Waterford Corporation

y Engineer

CITY MANAGER AND TOWN CLERK.

For inspection purposes only.
Consent of copyright owner required for any other use.

Environmental Protection Agency
IPC Licensing

TE:

ppeal under Section 8 of the Local Government (Water Pollution) Act, 1977 be made by any person to An Bord Pleanala against a decision made by a al Authority under Section 4 and/or Section 7 of the said Act. The appeal ld state the subject matter of the appeal and the grounds of appeal. e of £30.00 must accompany each appeal to An Bord Pleanala.

eals should be made within ONE MONTH beginning on the date of the Local ority's decision. Appeals should be addressed to the Secretary, An Pleanala, Floor 3, Irish Life Centre, Dublin 1. A party to an appeal ll give to An Bord Pleanala any documents, information or evidence in his ession or procurement which An Bord Pleanala consider necessary for the ose of determining the appeal.

EPA Export 26-07-2013:00:56:45

Waterford Plating Company Ltd.

Unit 605/606, Northern Industrial Estate, Waterford, Eire.

Date: 14th May 2008

Ms. Helen Behan
Environmental Consultant
Bord Na Mona Environmental Consultancy Services
Main Street,
Co. Kildare.

Re: Discharge Licence WP 53/90/R1

Dear Helen,

We contacted Waterford City Council regarding the Discharge Licence as above. They informed us that the Licence is 18 years old and they would not have a copy of it anymore. The person dealing with this query was Chris O'Sullivan and his number is 051-849934.

Regards,

Edward Roche

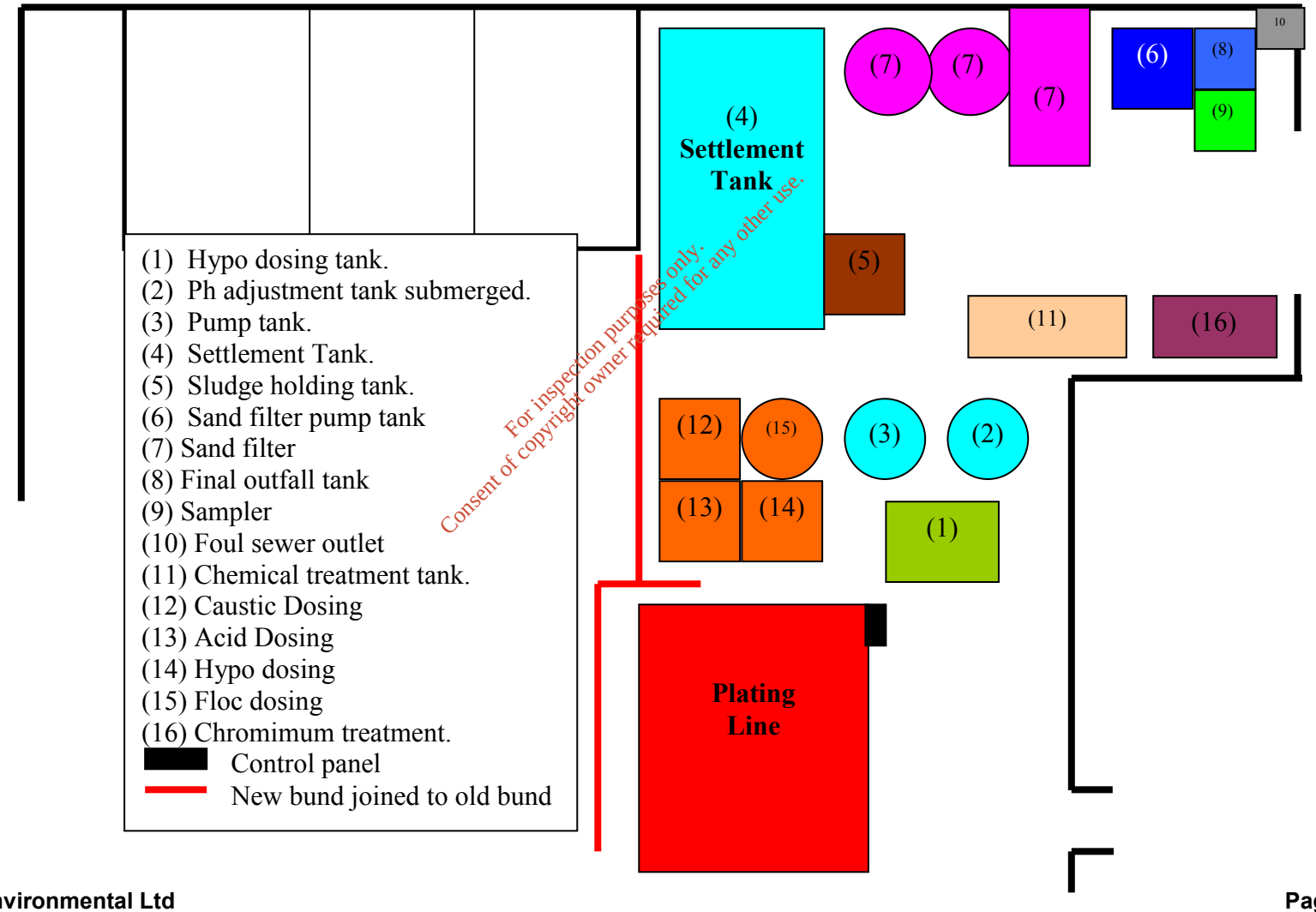
For inspection purposes only.
Consent of copyright owner required for any other use.

T: (051) 378695
F: (051) 378778

E-mail: waterfordplating@indigo.ie
Web: www.iftltd.ie

EPA Export 26-07-2013:00:56:45

Wastewater Treatment Plant



For inspection purposes only.
Consent of copyright owner required for any other use.

EPA Export 26-07-2013:00:56:45

TABLE E.3(i): EMISSIONS TO SEWER (One page for each emission)

Emission Point:

Emission Point Ref. Nº:	SE1
Location of connection to sewer:	North east corner of Unit 605/606
Grid Ref. (12 digit, 6E,6N):	258328E, 111912N
Name of sewage undertaker:	Waterford City Council

Emission Details:

(i) Volume to be emitted			
Normal/day	12m^3	Maximum/day	100 m^3
Maximum rate/hour	1.3m^3		

For inspection purposes only.
Consent of copyright owner required for any other use.

(ii) Period or periods during which emissions are made, or are to be made, including daily or seasonal variations (*start-up /shutdown to be included):*

Periods of Emission (avg)	60 min/hr 9 hr/day 240 day/yr

EPA Export 26-07-2013:00:56:45

TABLE E.3(ii): EMISSIONS TO SEWER - Characteristics of the emission (1 table per emission point)

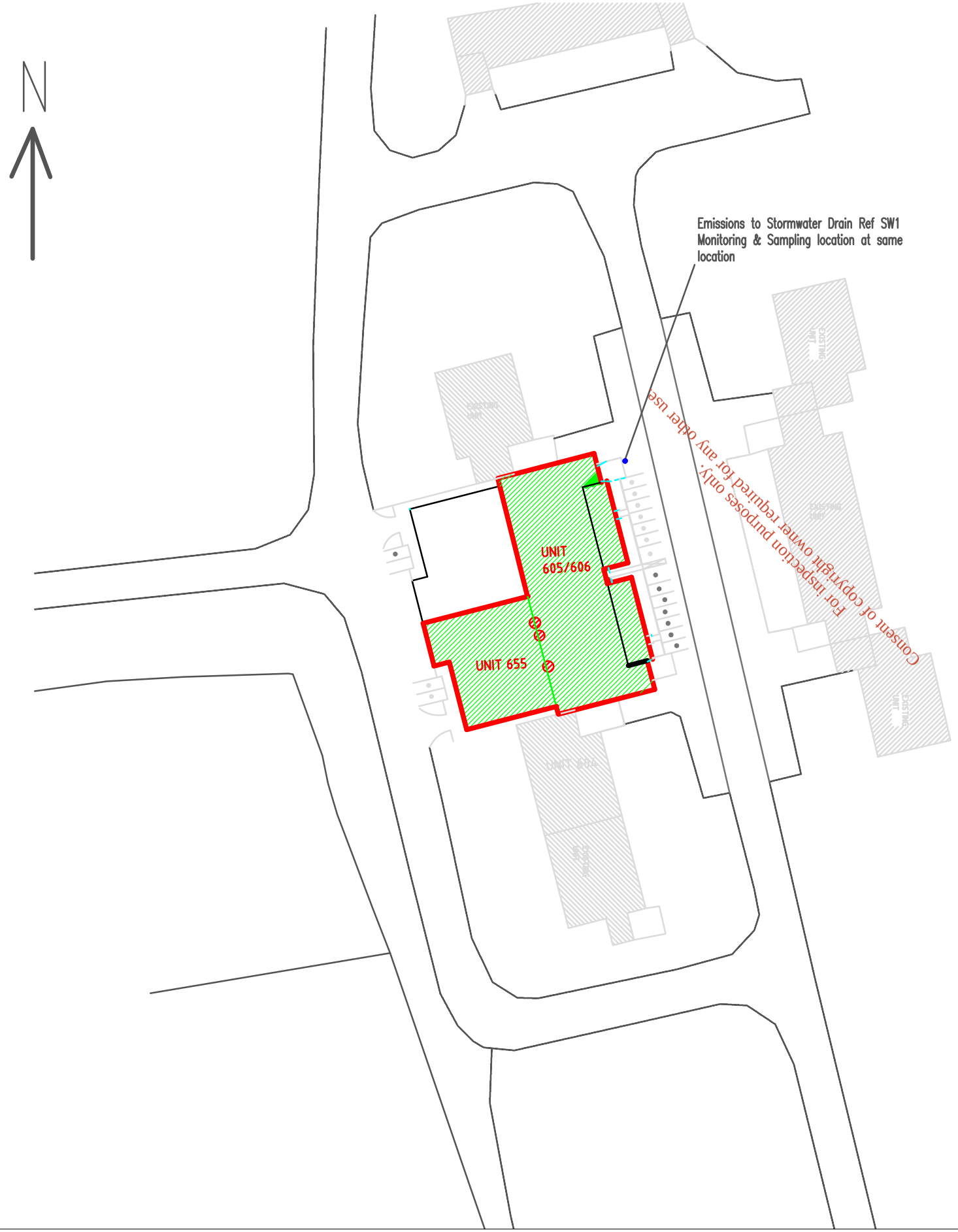
Emission point reference number : SE1

Parameter	Prior to treatment				As discharged				% Efficiency
	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	kg/year	Max. hourly average (mg/l)	Max. daily average (mg/l) 24 hr composite	kg/day	kg/year	
Aluminium	Not available	Not available	Not available	Not available	Not available	0.22	0.003	0628	Not available
BOD	Not available	Not available	Not available	Not available	Not available	2.0	0.024	5.76	Not available
Chloride	Not available	Not available	Not available	Not available	Not available	111	1.328	318	Not available
Chromium	Not available	Not available	Not available	Not available	Not available	0.11	0.001	0325	Not available
Chromium VII	Not available	Not available	Not available	Not available	Not available	0.05	0.001	0147	Not available
COD	Not available	Not available	Not available	Not available	Not available	17	0.204	48.96	Not available
Copper	Not available	Not available	Not available	Not available	Not available	0.11	0.001	0.323	Not available
Cyanide	Not available	Not available	Not available	Not available	Not available	0.05	0.001	0.144	Not available
Nitrate	Not available	Not available	Not available	Not available	Not available	6.53	0.078	18.816	Not available
Oils, Fats & Greases	Not available	Not available	Not available	Not available	Not available	1.00	0.012	2.88	Not available
Phosphate (total)	Not available	Not available	Not available	Not available	Not available	1.15	0.014	3.3	Not available
Total Suspended Solids	Not available	Not available	Not available	Not available	Not available	3.00	0.036	8.64	Not available
Sulphate	Not available	Not available	Not available	Not available	Not available	38	0.456	109.44	Not available
Detergents	Not available	Not available	Not available	Not available	Not available	0.12	0.001	0.331	Not available
Zinc	Not available	Not available	Not available	Not available	Not available	0.16	0.002	0.464	Not available

Consent of copyright owner required for any other use. For inspection purposes only.

EPA Export 26-07-2013:00:56:45

EPA Export 26-07-2013:00:56:45



Leased Unit

Other Industrial Units

Proposed Boundary of Facility

Discharge to Stormwater Drain

National Grid Reference Co-ordinates

Emission to Surface Waters SE-1
25828E, 111912N

ATTACHMENT E

Client
WATERFORD PLATING COMPANY LTD.

Project
IPPC Reg No. P0280-01
Licence Review Application

Title: Attachment E
Emission to Surface Water

Drawing Ref:

WPP0280-01Rev-09

Scales 1:1000

surveyed	drawn	checked	date
	HB	SC	May '08

© COPYRIGHT OF

BORD NA MÓNA
BORD NA MÓNA ENVIRONMENTAL LIMITED
Main St, Newbridge, Co. Kildare
Phone 045 431201 Fax 045 432207
www.bnm.ie/environmental
Email: ed.info@bnm.ie

F.1 TREATMENT, ABATEMENT AND CONTROL SYSTEMS

F.1.1 EMMISIONS TO ATMOSPHERE

Wet Spray Painting Booth (Air Emission Ref AE2-1)

Solvent based paints are used in an enclosed wet spray painting booth (associated air emission point AE2-1) where painting operatives conduct painting with spray guns while wearing air filter masks. Approximately 90% of wet spray paint are solvent based. Transfer to water based paints will be encouraged to customers to reduce environmental impact. In conjunction with solvent based paints: thinners, primers and hardeners containing a VOC content are used in air extraction booths only at the facility.

The abatement consists of air extraction in conjunction with PROCART concertina extraction filters for spray booths. The Procart filter is manufactured with 100% natural materials, recycled cardboard and water-based glue, preventing the electrostatic effect and environmental disposal concerns of traditional staples. Its accordion design enables air to flow continuously whilst inhibiting any type of paint or lacquer. The PROCART filter is replaced monthly; used filters are treated as hazardous waste is disposed of with an approved waste contractor.

Where possible, compliant paints in accordance with S.I. No. 199 of 2007 *'Limitation of Emissions of Volatile Organic Compounds due to the use of Organic Solvents in Certain Paints, Varnishes and Vehicle Refinishing Products Regulations 2007* ' are used however, the phasing in of complaint paints is not as yet complete as specifications provided to Waterford Plating Company Ltd. from customers will required re-validation at source to ensure quality finishes on components.

Consent of copyright owner required for any other use.
For inspection purposes only.

Dry Powder Painting Booth (Air Emission Ref AE2-2)

Dry powder paints are sprayed on to components in an open booth (with associated air emission point AE2-2) with air extraction in conjunction with PROART concertina extraction filters for spray booths. Dry powder particulates are captured on the filter and the filter is treated as hazardous waste and is disposed of with an approved waste contractor.

Waterford Plating Company Ltd. is obliged to comply with Directive 2002/95/EC on the '*Restriction of the use of certain Hazardous Substances in Electrical and Electronic Equipment'*, since a large makeup of their client base is for computer component parts. This 'RoHS' directive prohibits the placing on the market of electrical and electronic equipment containing lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) or polybrominated diphenyl ethers (PDBE). To this end all paint products that are used at Waterford Plating Company Ltd. on electrical and electronic equipment must comply with this directive. Paint supplier certification of paint products complying with Directive 2002/95/EC is supplied in Attachment E.

Wet Spray Paint/Dry Powder Paint Booth (Air Emission Ref AE2-3)

Wet spray paint and dry powder paint operations are performed in an open booth (associated air emission point AE2-3). Abatement is in the form of air extraction and a water scrubber with a baffle located on the exit stack. The baffle is routinely cleaned. Particulates and wet paint are scrubbed into the water and this paint sludge which is treated as hazardous waste is transferred from the unit to IBC's and disposed of with Rilta Environmental.

EPA Export 26-07-2013:00:56:45

F.1.2 EMISSIONS TO SURFACE WATERS

Surface water which includes roof water from the building and rain water from the hard standing area around the facility flows to the Northern Industrial Estate storm water drains.

F.1.3 EMISSIONS TO SEWER

Waterford Plating Company Ltd. completed an upgrade of the onsite Waste Water Treatment Plant at the facility in 2007. Reduction in contaminant is achieved by the WWTP which include:

- Dosing of hypochlorite to neutralise cyanide
- Dosing of sodium metabisulphite to precipitate chromium compounds
- Settlement tank to separate metal hydroxides and precipitated compounds
- Sand filtration to ensure removal of suspended solids
- pH control to precipitate contaminants

Continuous pH and flow monitoring on the discharge to sewer are in place at the facility. The sludge holding tank contents are treated as hazardous waste and are removed for disposal with an approved waste contractor. A schematic of the WWTP is included in Attachment E.3 on page 6.

F.1.2 EMISSIONS TO GROUND

There are no emissions to ground.

F.1.2 NOISE EMISSIONS

The facility is located within an industrial estate and the operations are such that they generate low noise levels. The operations are in enclosed within the Units.

Consent of copyright owner required for any other use.
For inspection purposes only.

EPA Export 26-07-2013:00:56:45

TABLE F.1(i): ABATEMENT / TREATMENT CONTROL

Emission point reference number : *AE2-1*

Control[1] parameter	Equipment [2]	Equipment maintenance	Equipment calibration	Equipment back-up
Air Flow Particle filtration	Air extractor fan Procart Filter	Annual air velocities Replace monthly	n/a n/a	none Overstock held on site

Control[1] parameter	Monitoring to be carried out[3]	Monitoring equipment	Monitoring equipment calibration
Air Flow Particle filtration	Annual air velocities n/a	Manometer, pitot n/a	Contracted out n/a

For inspection purposes only.
Consent of copyright owner required for any other use.

[1] List the operating parameters of the treatment / abatement system which control its function.
[2] List the equipment necessary for the proper function of the abatement / treatment system.
[3] List the monitoring of the control parameter to be carried out.

EPA Export 26-07-2013:00:56:45

TABLE F.1(i): ABATEMENT / TREATMENT CONTROL

Emission point reference number : *AE2-2*

Control[1] parameter	Equipment [2]	Equipment maintenance	Equipment calibration	Equipment back-up
Air Flow Particle filtration	Air extractor fan Procart Filter	Annual air velocities Replace monthly	n/a n/a	none Overstock held on site

Control[1] parameter	Monitoring to be carried out[3]	Monitoring equipment	Monitoring equipment calibration
Air Flow Particle filtration	Annual air velocities n/a	Manometer, pitot n/a	Contracted out n/a

For inspection purposes only.
Consent of copyright owner required for any other use.

[1] List the operating parameters of the treatment / abatement system which control its function.
[2] List the equipment necessary for the proper function of the abatement / treatment system.
[3] List the monitoring of the control parameter to be carried out.

EPA Export 26-07-2013:00:56:45

TABLE F.1(i): ABATEMENT / TREATMENT CONTROL

Emission point reference number : *AE2-3*

Control[1] parameter	Equipment [2]	Equipment maintenance	Equipment calibration	Equipment back-up
Air Flow	Air extractor fan	Annual air velocities	n/a	none
Particle filtration	Baffle	Replace monthly	n/a	Overstock held on site
Extraction	Water Scrubber	None at present	n/a	n/a

Control[1] parameter	Monitoring to be carried out[3]	Monitoring equipment	Monitoring equipment calibration
Air Flow	Annual air velocities	Manometer, pitot	Contracted out
Particle filtration	n/a	n/a	n/a
Extraction	n/a	n/a	n/a

For inspection purposes only.
Consent of copyright owner required for any other use.

[1] List the operating parameters of the treatment / abatement system which control its function.
[2] List the equipment necessary for the proper function of the abatement / treatment system.
[3] List the monitoring of the control parameter to be carried out.

EPA Export 26-07-2013:00:56:45

TABLE F.1(i): ABATEMENT / TREATMENT CONTROL

Emission point reference number : *SE1*

Control[1] parameter	Equipment [2]	Equipment maintenance	Equipment calibration	Equipment back-up
pH control	pH meter/probe	Cleaned weekly	monthly	Spare held on site
Flow	Flowmeter	ongoing	Annually	n/a
Zinc removal	Acid & Caustic dosing pump	Visual inspection for normal operation	n/a	n/a
Settlement	Flocculant dosing pump	Visual inspection for normal operation	n/a	n/a
Excess Hypochlorite for cyanide removal	Redox probe	Visual inspection for normal operation	Monthly	Spare held on site

Control[1] parameter	Monitoring to be carried out[3]	Monitoring equipment	Monitoring equipment calibration
pH control	Outside laboratory	n/a	n/a
Flow	Contracted calibration	n/a	n/a
Zinc removal	Outside laboratory	n/a	n/a
Settlement	n/a	n/a	n/a
Excess Hypochlorite for cyanide removal	Visual inspection for normal operation	n/a	n/a

For inspection purposes only.
Consent of copyright owner required for any other use.

[1] List the operating parameters of the treatment / abatement system which control its function.
[2] List the equipment necessary for the proper function of the abatement / treatment system.
[3] List the monitoring of the control parameter to be carried out.

EPA Export 26-07-2013:00:56:45

TABLE F.2(i) : EMISSIONS MONITORING AND SAMPLING POINTS (1 table per monitoring point)

Emission Point Reference No. : AE2-1

Parameter	Monitoring frequency	Accessibility of Sampling Points	Sampling method	Analysis method/ technique
Organics	Annually	Roof Access	EN 13649	Desorption/GC/FID
Flow	Annually	Roof Access	EN 13284-1	Manometer, Pitot

For inspection purposes only.
Consent of copyright owner required for any other use.

EPA Export 26-07-2013:00:56:45

TABLE F.2(i) : EMISSIONS MONITORING AND SAMPLING POINTS (1 table per monitoring point)

Emission Point Reference No. : AE2-2

Parameter	Monitoring frequency	Accessibility of Sampling Points	Sampling method	Analysis method/ technique
Flow	Annually	Roof Access	EN 13284-1	Manometer, Pitot
Metals	Annually	Roof Access	EN 14385	Desorption, ICPMS
Particulates	Annually	Roof Access	EN 13284-1	Filter/Gravimetry

For inspection purposes only.
Consent of copyright owner required for any other use.

EPA Export 26-07-2013:00:56:45

TABLE F.2(i) : EMISSIONS MONITORING AND SAMPLING POINTS (1 table per monitoring point)

Emission Point Reference No. : AE2-2

Parameter	Monitoring frequency	Accessibility of Sampling Points	Sampling method	Analysis method/ technique
Flow	Annually	Roof Access	EN 13284-1	Manometer, Pitot
Metals	Annually	Temporary Platform Access	EN 14385	Desorption, ICPMS
Particulates	Annually	Roof Access	EN 13284-1	Filter/Gravimetry

For inspection purposes only.
Consent of copyright owner required for any other use.

TABLE F.2(i) : EMISSIONS MONITORING AND SAMPLING POINTS (1 table per monitoring point)

EPA Export 26-07-2013:00:56:45

Emission Point Reference No. : AE2-3

Parameter	Monitoring frequency	Accessibility of Sampling Points	Sampling method	Analysis method/ technique
Flow	Annually	Roof Access	EN 13284-1	Manometer, Pitot
Metals	Annually	Temporary Platform Access	EN 14385	Desorption, ICPMS
Particulates	Annually	Roof Access	EN 13284-1	Filter/Gravimetry

For inspection purposes only.
Consent of copyright owner required for any other use.

EPA Export 26-07-2013:00:56:45

TABLE F.2(i) : EMISSIONS MONITORING AND SAMPLING POINTS (1 table per monitoring point)

Emission Point Reference No. : SE-1

Parameter	Monitoring frequency	Accessibility of Sampling Points	Sampling method	Analysis method/ technique
Flow	Continuous	Manhole	Grab	Flowmeter
pH	Continuous	Manhole	Grab	Online pH meter
BOD	Monthly	Manhole	Grab	Electrometry
Chromium	Monthly	Manhole	Grab	ICPMS
Chromium (VI)	Monthly	Manhole	Grab	Colorimetry
COD	Monthly	Manhole	Grab	Colorimetry
Copper	Monthly	Manhole	Grab	ICPMS
Cyanide	Monthly	Manhole	Grab	Colorimetry
Nitrate	Monthly	Manhole	Grab	Colorimetry
Oils, Fats & Greases	Monthly	Manhole	Grab	Solvent Extraction/Gravimetry
Phosphate (Total)	Monthly	Manhole	Grab	Digestion/colorimetry
Solids (Total Suspended)	Monthly	Manhole	Grab	Filtration/drying @ 104°C
Sulphate	Monthly	Manhole	Grab	Colorimetry
Surfactants as MBAS	Monthly	Manhole	Grab	Solvent Extraction/ Colorimetry
Zinc	Monthly	Manhole	Grab	ICPMS

For inspection purposes only.
Consent of copyright owner required for any other use.

EPA Export 26-07-2013:00:56:45