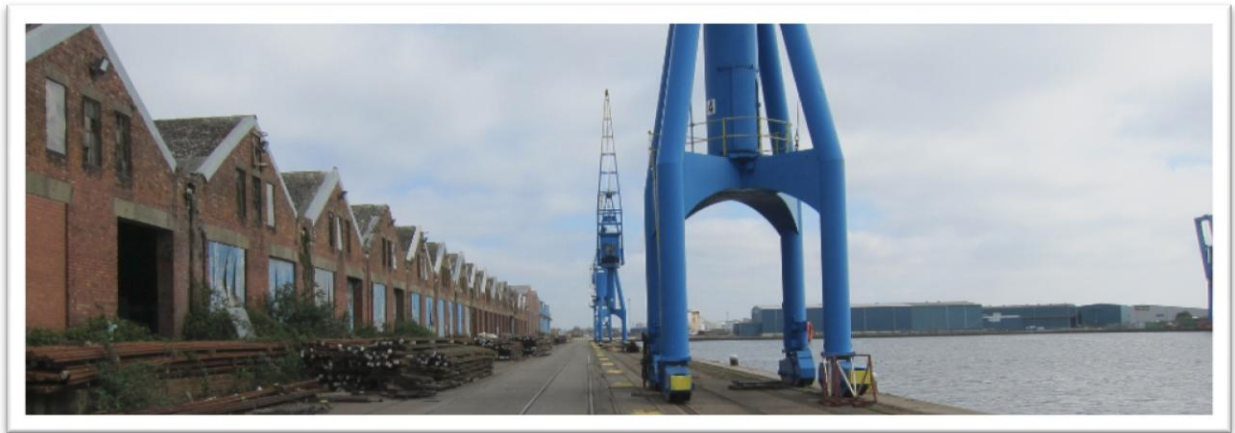




Main Application Report

**Cargo Services (UK) Limited, Port of Cardiff,
Cardiff, CF10 4LA, Wales**

Permit No. EPR/QP3035WK

On behalf of:
Cargo Services Limited

Project Reference:
015-1347

Revision:
REV 00

Date:
May 2015

Earth & Marine Environmental Consultants Limited
8 Low Friar Street,
NEWCASTLE,
NE1 5UE,
United Kingdom

enquiry@eame.co.uk
www.eame.co.uk

Document Control Record

Revision	Date	Author(s)	Authorised by	Reason for Change
00	05/05/15	MS	SPR	First draft issue to Client

COMMERCIAL-IN-CONFIDENCE

This document and all the information contained within it are proprietary to Earth & Marine Environmental Consultants Ltd (hereinafter called EAME) and are supplied in confidence. This document is not to be reproduced in whole or in part nor disclosed to any third party without the prior written permission of EAME. Nor shall it be used otherwise than for the purpose for which it has been supplied.

Contents

	Page
1 Introduction	1
1.1 Background	1
1.2 Compliance Status	1
1.3 Application Package	2
1.4 Operational Risk Appraisal (Opra)	3
1.5 Payment Details	3
2 Low Impact Justification	4
2.1 Introduction	4
3 Operations	6
3.1 Site Location	6
3.2 Process Description	9
4 Managing the Activity	16
4.1 General Management and Operation	16
4.2 Accidents	16
4.3 Incidents and non-conformances	16
4.4 Site security	16
4.5 Sufficient competent persons and resources	16
4.6 Records that demonstrate your management system	16
4.7 Access to your permit	16
4.8 Permit surrender and closure	17
5 Energy	18
5.1 Basic Energy	18
5.2 Energy Supply Techniques	18
5.3 Sector Specific Energy Requirements	18
6 Use of Raw Materials and Water	19
6.1 Raw Material Selection	19
6.2 Waste minimisation	19
6.3 Minimising water use	19

6.4	Avoidance, recovery and disposal of waste	19
7	Emissions to Air, Water and Land	20
7.1	Emissions to Air	20
7.2	Emissions to surface water	20
7.3	Emissions to Sewer	20
7.4	Emissions to Groundwater	20
7.5	Odour	21
7.6	Noise and Vibration	21
8	Monitoring	22
8.1	Monitoring of emissions to air	22
8.2	Monitoring of emissions to surface water	22
8.3	Monitoring of emissions to sewer	22
8.4	Monitoring of noise emissions	22
8.5	Monitoring of odorous emissions to air	22
9	Environmental Impact Assessment	23
9.1	Introduction	23
9.2	Environmental Risk Assessment	23
9.3	Conclusions	27

Annex A: Attachments

Abbreviations

ABP	Associated British Ports
BAT	Best Available Technique
BGS	British Geological Survey
COMAH	Control of Major Accident Hazards
DEFRA	Department for Environment Food and Rural Affairs
EA	Environment Agency
EAF	Electric Arc Furnace
EPR	Environmental Permit
EU	European Union
EWC	European Waste Catalogue
FRA	Flood Risk Assessment
HGV	Heavy Goods Vehicle
HSE	Health and Safety Executive
IED	Industrial Emissions Directive
IMO	International Maritime Organisation
IPPC	Integrated Pollution Prevention and Control
ISPS	International Ship and Port Security
IWS	International Waste Shipment
MAGIC	Multi-Agency Geographic Information for the Countryside
NGR	National Grid Reference
NRW	Natural Resources Wales
SAC	Special Areas of Conservation
SCR	Site Condition Report

Cargo Services (UK) Limited

SOP	Standard Operating Procedure
SPA	Special Protection Area
SPZ	Source Protection Zone
SSSI	Site of Special Scientific Interest
UN	United Nations
VOC	Volatile Organic Compounds

1 Introduction

1.1 Background

This document has been prepared by Cargo Services (UK) Limited (Cargo Services) and its environmental consultant Earth and Marine Environmental Consultants Limited (EAME) in support of a Part A1 Environmental Permit application as required under Regulation 20 of the *Environmental Permitting (England and Wales) Regulations 2010* (as amended).

This application is to apply for a bespoke environmental permit in relation to activities undertaken at Cargo Services Terminal, Cargo Road, Port of Cardiff, Cardiff, Wales, CF10 4LA. The Authorised company contact is Mr. Lloyd Davey (Cargo Services).

An Environmental Permit (EPR) is required where an operator carries out certain prescribed activities, namely installations that undertake Schedule 1 activities, a waste operation or a mobile plant (carrying out either one of the Schedule 1 activity or a waste operation). Cargo Services undertakes Schedule 1, Section 5.6, Part A(1)(a) permitted activity (*i.e.* 'temporary storage of hazardous waste with a total capacity exceeding 50 tonnes pending any of the activities listed in Sections 5.1, 5.2, 5.3 and paragraph (b) of this Section, except— (i) temporary storage, pending collection, on the site where the waste is generated, or (ii) activities falling within Section 5.2.').

The operator proposes to store up to 3,500 tonnes of Electric Arc Furnace (EAF) waste (EWC Ref. 100207*) within a dock side warehouse (leased from Associated British Ports (ABP)) prior to loading and transportation to Italy for recovery.

1.2 Compliance Status

The storage of EAF waste has previously been undertaken at the current location through the use of an S2 Waste Exemption (EPR/ZE5584PL/A001) that was last issued on 05/08/13 and was to remain valid until 04/08/16.

The *Environmental Permitting (England and Wales) (Amendment) Regulations 2013* were made on 20th February 2013 and came into force on 27th February 2013. These Regulations transpose the requirements of the Industrial Emissions Directive (IED). IED brings together existing Directives so there is no fundamental overhaul of the existing permitting system, permits or controls. From 7th January 2013, the IED applied to all new installations, and from 7th January 2014 it applied to all existing installations. In addition the IED applies to some 'newly prescribed activities' that require permitting by 7th July 2015.

As a result of the IED the *Environmental Permitting (England and Wales) (Amendment) Regulations 2013* amended the 2010 Regulations by inserting a new Part A(1) activity in relation to the temporary or underground storage of hazardous waste (Section 5.6).

Cargo Services has been in contact with the local Natural Resources Wales (NRW) Compliance Officer (Mr. Richard Taylor) and it has been agreed that the activity requires a bespoke permit and could possibly meet the criteria of a 'Low Impact Installation' (Tier 2). The Low Impact justification is outlined in *Section 2*.

The document represents the Main Application Report submitted as part of the application package to the NRW (EAME Ref. 015-1347).

The main application report has been produced in accordance with the NRW's current Guidance:

- Defra (2013), Environmental Permitting Guidance Core guidance For the Environmental Permitting (England and Wales) Regulations 2010, March 2013.
- Environment Agency (2013), Guidance for the Recovery and Disposal of Hazardous and Non Hazardous Waste (EPR 5.06), May 2013¹.
- Joint Research Centre (2013), Reference Report, Best Available Techniques (BAT) Reference Document for Iron and Steel Production, Industrial Emissions Directive 2010/75/EU (Integrated Pollution Prevention and Control), 2013.
- Environment Agency (2004), Integrated Pollution Prevention and Control (IPPC) Guidance for the Production of Coke, Iron and Steel, Sector Guidance Note IPPC S2.01, May 2004.
- Environment Agency (2011), Horizontal Guidance Notes H1 (V2.1 December 2011).
- NRW (2014), Environmental Permitting Charging Scheme & Guidance 2014.
- Environment Agency (2012), Generic risk assessment for standard rules set number SR2009No2 v4.0, Low Impact Part A Installation.

1.3 Application Package

The application package includes completed application forms that are cross-referenced to this technical submission, which is intended to address all of the areas required by the application and a Site Condition Report (SCR) with supporting appendices. The various documents included with this application package are set out below:

- completed application forms (Part A, Part B2, Part B3 and Part F1);

¹ NOTE: There is no specific sector guidance note for Section 5.6 activities hence specific requirements from Sector Guidance S5.06 have been utilised in the BAT assessment.

- non-technical summary;
- technical submission and supporting information (this document);
- Site Condition Report (SCR); and
- the application fee.

The above items should be regarded as constituting the application. In-line with the NRW guidance the application includes 1 x CD and 3 x paper copies of the application package.

The remainder of this document outlines the requirements requested by the NRW in order to progress the permit application.

1.4 Operational Risk Appraisal (Opra)

As Cargo Services feel that the activity qualifies for the 'Low Impact Installation' status (*Section 2*) completion of an Opra Assessment is not required. The fees associated with this application are outlined within Table 21 of the NRW document Environmental Permitting Charging Scheme & Guidance 2014 (pp. 43).

Based on the 2014 NRW charging scheme the Installations - Tier 2 bespoke permits (non-standard Low impact Part A Installation) application fee is £2,570.

1.5 Payment Details

Cargo Services has paid the 'Low Impact' application fee via BACS to the following account:

- Natural Resources Wales, Income Dept., Cambria House, 29 Newport Road, Cardiff CF24 0TP
- Citigroup Centre, Canada Square, London, E14 5LB
- Sort Code: 08-33-00,
- Account No: 12800578
- Payment reference number: PSCAPPCARGO001

Notification of payment has been sent (including reference number) to: online@naturalresourceswales.gov.uk.

The application has been submitted (via recorded delivery) to the Permit Receipt Centre (Cardiff), Natural Resources Wales, 29 Newport Road, Cambria House, Cardiff, CF24 0TP.

2 Low Impact Justification

2.1 Introduction

NRW Form B2 outlines a formal low impact installation checklist. The form and associated justifications are outlined in *Table 2.1*.

Table 2.1: Low Impact Installation Assessment		
Condition	Response	Standard Met (Y/N)
A – Management Techniques	Cargo Services has developed a standalone Standard Operating Procedure (SOP) for the management of the stored EAF waste material. This SOP has been aligned to ISO14001:2004 and hence therefore represents the management system used at the facility.	Yes
B – Aqueous Waste	There is no aqueous effluent generated by the activity.	Yes
C – Abatement Systems	There are no air emissions from the activity hence no abatement systems are employed.	Yes
D – Groundwater	There are no planned or fugitive emissions from the storage of the EAF material. The EAF material is stored within sealed bags wholly within a covered building.	Yes
E – Producing Waste	The activity purely relates to the temporary storage of a hazardous waste. No hazardous or non-hazardous wastes are generated as a result of the activity.	Yes
F – Using Energy	The storage of the EAF waste does not use any energy.	Yes
G – Preventing Accidents	The measures to prevent fugitive emissions are outlined within the EAF Storage SOP. There is no defined pathway for stored EAF materials to impact surface water, sewers and/or land.	Yes
H – Noise	There is only a very low potential for noise related issues. All materials are transported to site (located within Cardiff docks) on a HGV low loader. All materials are unloaded wholly within a building.	Yes
I – Emissions of polluting substances	There is no foreseeable mechanism for emissions from the installation.	Yes

Table 2.1: Low Impact Installation Assessment		
J – Odours	There is only a very low potential for odour related issues. All materials are transported to site (located within Cardiff docks) within sealed bags on a low loader. All materials are unloaded wholly within a building. The EAF material does not emit any discernible odour.	Yes
K – History of keeping to the regulations	Cargo Services has not been subject to prosecution, formal caution, suspension notice or any other form of environmental sanction.	Yes

It is also important to note that the activities are not carried out on or immediately adjacent to a European Site, Ramsar Site, Site of Special Scientific Interest (SSSI), National Nature Reserve, Local Nature Reserve or Ancient Woodland *i.e.* the site is located 510 metres NNE of the Severn Estuary and there is no direct discharge of any aqueous waste from the installation.

Based on the above information and that outlined in *Table 2.1* it is presumed that that Cargo Services meets the requirements of a Low Impact Installation.

3 Operations

3.1 Site Location

The installation is located at Cargo Services Terminal, Cargo Road, Port of Cardiff, Cardiff, Wales, CF10 4LA (*Figure 3.1*).

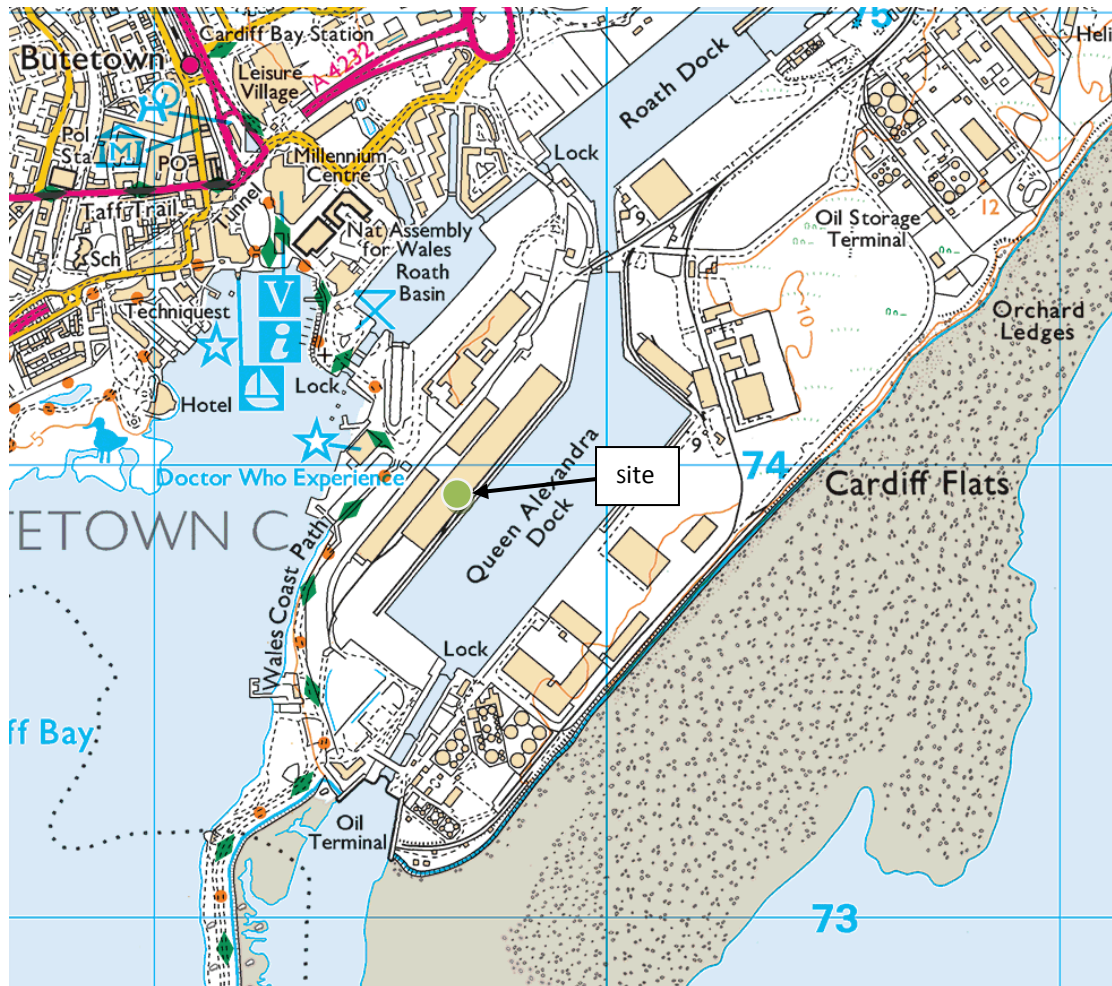


Figure 3.1: Site location (Ordnance Survey 1:25,000)

Ordnance Survey 1: 25,000 scale map with the permission of The Controller of Her Majesty's Stationery Office, Crown Copyright
 Earth and Marine Environmental Consultants Ltd, Licence No. 100050755

The layout of Cardiff Docks is outlined in *Figure 3.2*. The proposed installation boundary is outlined in *Figure 3.3*.

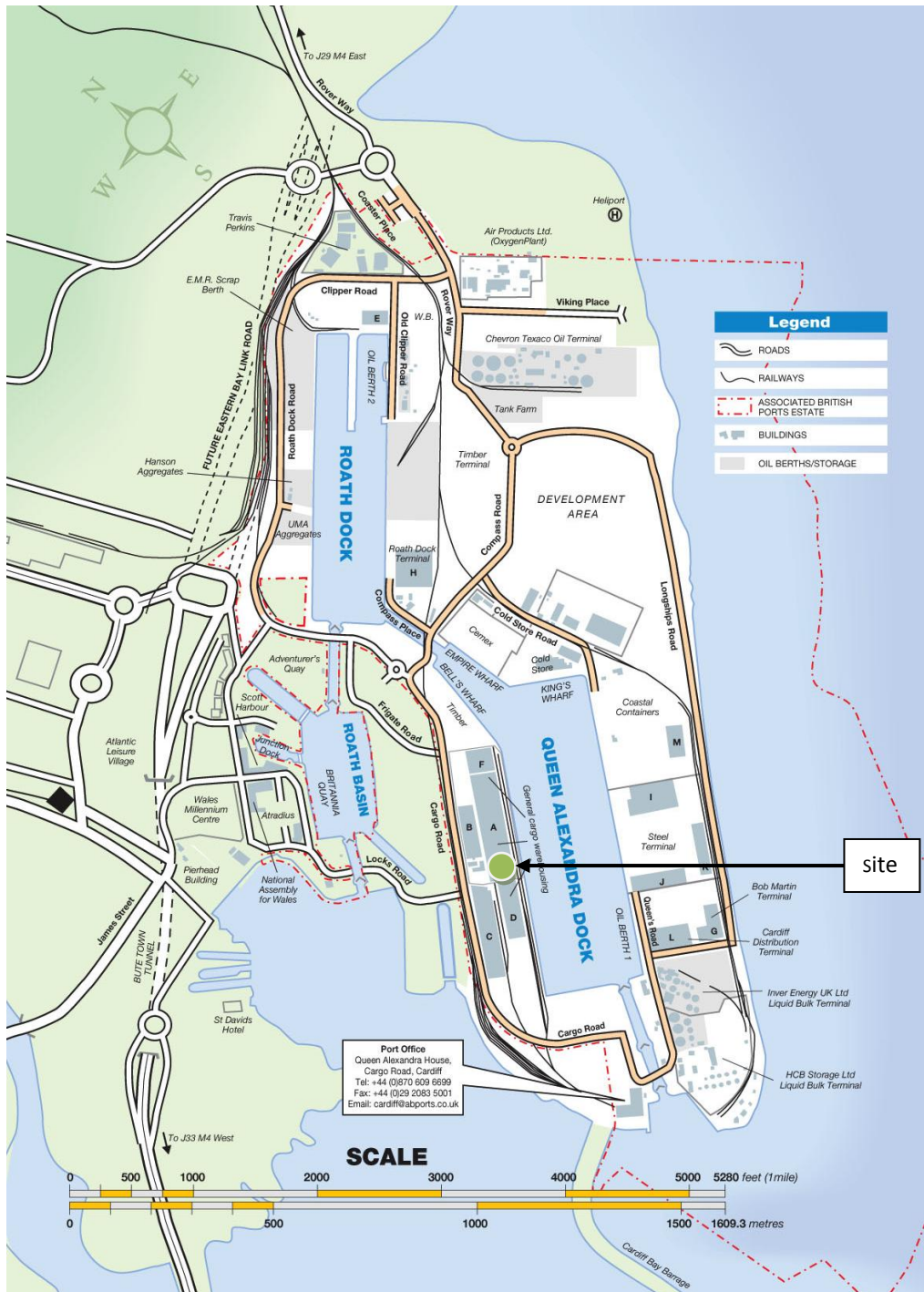


Figure 3.2: Cardiff docks layout²

² http://www.southwalesports.co.uk/Port_Information/Cardiff/Cardiff_Port_Plan/

Modified from UK Dredging Plan, Cardiff Docks, 17/01/08, PTS004/CD/000

3.2 Process Description

The process flow for the EAF material is outlined in *Figure 3.4*.

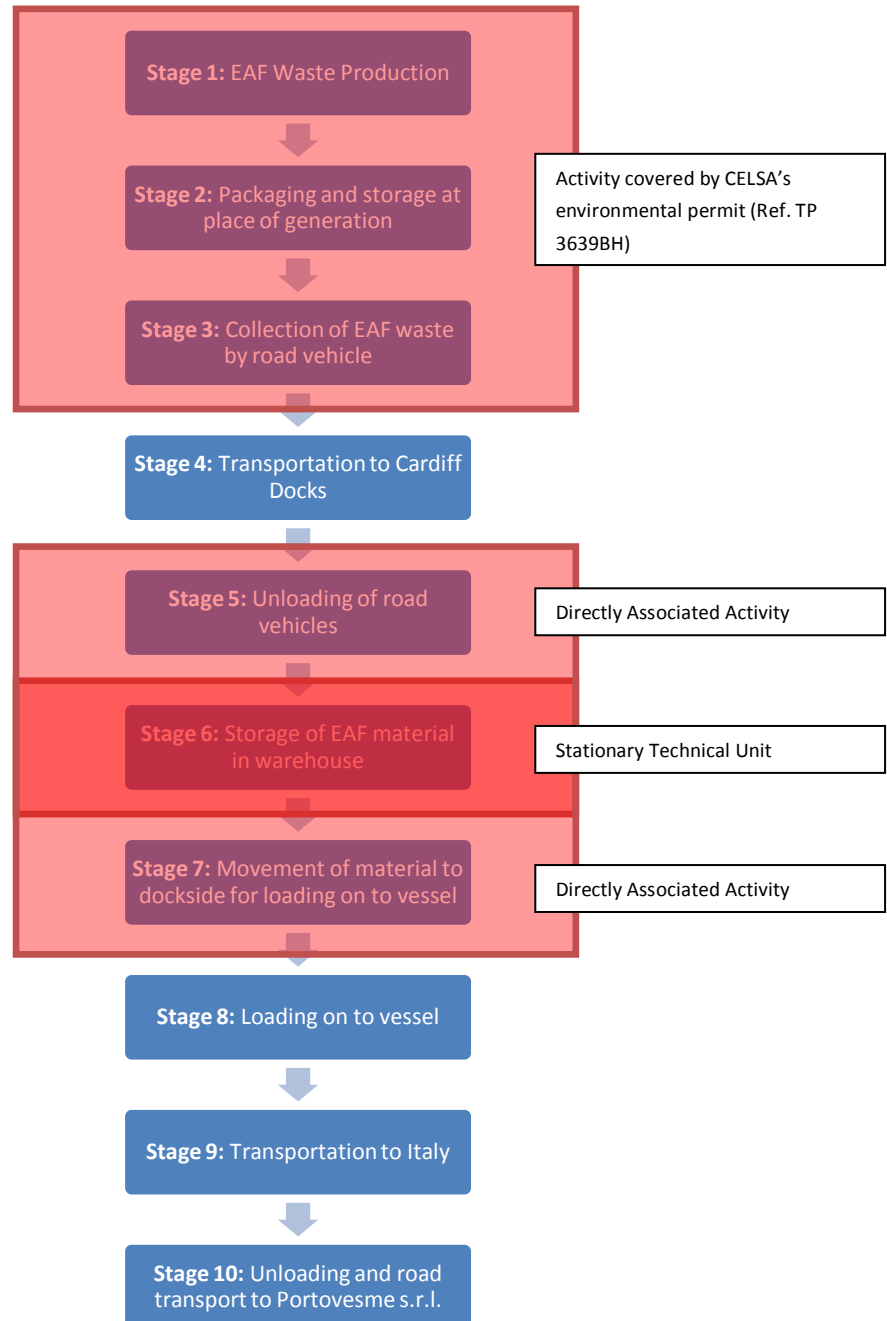


Figure 3.4: EAF process flow

3.2.1 Stage 1 – EAF production

The activity relates to the storage of Electric Arc Furnace (EAF) waste that is solely produced at the nearby CELSA Manufacturing (UK) Ltd (CELSA), Tremorfa Works, Seawall Road, Cardiff, South Glamorgan, CF24 5TH.

Melting of ferrous material which have low or zero iron oxide content (such as steel scrap) is performed in an EAF which plays an important role in the recycling of ferrous materials recovered by the scrap metal industry. The by-product of the process is EAF dust. EAF dust contains iron, zinc, lead and cadmium which can be recovered by recycling and treatment.

The key characteristics of the material are outlined in *Table 3.1*.

Table 3.1: Waste Characteristics	
Section	Description
Material	Red-brown solid - Electric Arc Furnace (EAF) Waste (solid waste from gas treatment containing hazardous substances)
EC List of Waste Code	10-02-07*
Components	Zinc iron metal oxides (also containing Cadmium, Lead and Chromium)
Concentration	24-28%
Y Code	Y23(Zinc Compounds) As defined in Council Decision c(92)39/final on the control of transboundary movements of wastes destined for recovery operations.
Hazard Code	H12 (Ecotoxic)
Flashpoint (°C)	N/A
Melting point (°C)	1600 °C
Solubility	Insoluble
Odour Potential	Odourless
UN Class	Class 9 (<i>i.e.</i> substances and articles which, during transport present a danger not covered by other classes).
UN ID No.	3077
UN Shipping Name	Waste-Environmentally Hazardous Substance, Solid, N.O.S.

This activity is controlled by the current CELSA environmental permit (Ref. TP 3639BH).

3.2.2 Stage 2 – Packaging and storage and the place of generation

The EAF waste stream is packaged at the CELSA site within the primary containment system *i.e.* UN approved lined and sealed 1 tonne polypropylene big bags (*Photograph 3.1*).



Photograph 3.1: EAF Big Bags (showing plastic liner)

This activity is controlled by the current CELSA environmental permit (Ref. TP 3639BH). These bags are used throughout the journey from the point of generation until the final destination (Italy).

3.2.3 Stage 3 – Collection of EAF waste by road vehicle

Prior to removal of EAF waste from the CELSA site a hazardous waste consignment note is raised (by CELSA) for each load. Copies of these are maintained by CELSA and Cargo Services for a minimum of three years.

The bags (around 22 per HGV flatbed trailer) are loaded awaiting collection. All bags/loads are weighed at CELSA before dispatch. This activity is controlled by the current CELSA environmental permit (Ref. TP 3639BH).

3.2.4 Stage 4 – Transportation by road vehicle

The HGV flatbed trailers containing the EAF waste are moved by a registered waste carrier to the Cargo Services site within Cardiff Docks (approximately 3 km away).

The carrier is currently Ryan Transport (Carrier No. CB/UP/3899 MK). The registration is currently valid and is due to expire on 02/04/16³.

³ <http://epr.environment-agency.gov.uk/ePRIInternet/SearchDetails.aspx?rt=VOM=>

3.2.5 Stage 5 – Unloading of road vehicles

Upon arrival at the docks the HGV flatbed trucks are directed into A-Shed where the bags are unloaded and stored (*Photograph 3.2*).



Photograph 3.2: Flatbed trucks waiting unloading within A-Shed

The bags are unloaded and stored on good quality tertiary containment surfaces located wholly within a building (A-Shed).

3.2.6 Stage 6 – Storage of EAF Waste

The EAF bags are stored within A-Shed until such time as there is an economic volume that would permit shipping of the material (*Photograph 3.3*). In general this is 2,500 tonnes but Cargo Services would like to be able to store up to 3,500 tonnes in exceptional circumstances. This constitutes the stationary technical unit in relation to the Schedule 1 activity.

No materials or substances within the permitted installation exceed (in isolation and/or combination) either the lower or upper tier thresholds stated in the *Control of Major Accident Hazards (Amendment) Regulations 2005* (COMAH).



Photograph 3.3: *Storage arrangements within A-Shed*

The size and shape of A-Shed is such that it is easily able to store up to 250 bags in a 10 bag x 25 bag layout (*Photograph 3.4*). A-Shed is solely used for the storage of EAF waste. No secondary containment is considered necessary.



Photograph 3.4: *Storage arrangements within A-Shed*

All surfaces both within and external to the installation area are constructed of good quality concrete that is free from significant damage.

3.2.7 Stage 7 – Movement of EAF waste to dockside

Upon arrival of the vessel radiation testing/screening is undertaken⁴ to ensure that the EAF material is below the acceptable EU limit of 20.0 mSv/hr prior to loading. Subsequent to this forklift trucks fitted with clamps move 2 bags at a time to the dockside.

3.2.8 Stage 8 – Movement and loading of the vessel

The dockside cranes (*Photograph 3.5*) use a spreader beam to lift 6 bags at a time into the hold of the ship. This activity carries on until the ship is filled, usually around 2.5 days.



Photograph 3.5: Dockside cranes used to load vessel (A-Shed shown on the left)

The typical vessel used to move the EAF waste is outlined below (*Photograph 3.6*).



Photograph 3.6: MV Randzel (MMSI: 236339000)⁵

⁴ McAusland Turner (International Marine Surveyors & Consultants)

⁵ <http://www.marinetraffic.com/en/photos/of/ships/shipid:205586/#forward>

3.2.9 Stage 9 – Transportation to Italy

Each shipment of EAF waste to Italy is moved using a pre-notified International Waste Shipment (IWS) or Transfrontier shipment of waste documentation. All vessels moving the EAF waste carry the following documents:

- Bill of lading *i.e.* a document issued by a carrier which details a shipment of merchandise and gives title of that shipment to a specified party.
- Manifest/T2L *i.e.* document listing the cargo.
- IMO dangerous goods manifest *i.e.* as required by SOLAS 74.
- Stow plan *i.e.* positioning of cargo on the vessel
- Safety data sheets
- Approval of UK and Italian Authorities
- Shipments of waste forms

3.2.10 Stage 10 – Unloading, transportation and processing of EAF material

Upon arrival in Italy the EAF materials are unloaded and transported to Portovesme s.r.l. S.P. n.2 carbonia/Portoscuso-km. 16.5 IT 09010 Portoscuso (CA) (*Photograph 3.7*) where they are processed using the Waelz zinc line (rotary kiln and washing plant). This is in-line with the BAT guidance for the treatment/recover of EAF waste (R4 – Recycling/reclamation of metals and metal compounds).



Photograph 3.7: *Portovesme s.r.l.*⁶

⁶ <http://www.portovesme.it/EN/Pages/Home.aspx>

4 Managing the Activity

4.1 General Management and Operation

Cargo Services operates a quality management system (QMS) that is aligned to ISO9001. The Standard Operating Procedure (SOP) for the management of EAF waste (Management of EAF Waste) will be maintained as part of that system (*Annex A*).

4.2 Accidents

Cardiff Docks has established and maintains an emergency plan. The plans are subject to review and update.

A supply of over-bags will be maintained by Cargo Services and used where damage occurs to the original big bags. It is reported that this is a rare occurrence.

4.3 Incidents and non-conformances

Incidents and non-conformances are to be handled through the existing processes that form part of the QMS.

4.4 Site security

Cardiff Docks site is subject to ABP security controls and procedures in-line with the International Ship and Port Security (ISPS) Code including operation of the port security plan.

4.5 Sufficient competent persons and resources

Cargo Services provides sufficient and on-going training regarding the safe handling of big bags in-line with the statutory requirements and the guidelines outlined within the Health and Safety Executive (HSE), Approved Code of Practice, Safety in Docks (L148, 2014).

4.6 Records that demonstrate your management system

Records relating to the operation of the installation shall be maintained for at least 3 years. All records shall be stored within the Cargo Services offices within Cardiff Docks.

4.7 Access to your permit

Access to the permit will be through the Cargo Services main office at Cardiff Docks. A copy of the permit will be displayed on the public notice board. Where contractors undertake work within the permitted area the requirements of the permit will be actively brought to their attention.

4.8 Permit surrender and closure

Upon cessation of the EAF contract Cargo Services shall:

- remove all stored EAF materials either via vessel for recovery or via road back to the CELSA facility; and
- A-Shed shall be subject to clean-up via the use of a road sweeper.

5 Energy

5.1 Basic Energy

Energy use is not considered applicable to the installation.

5.2 Energy Supply Techniques

This is not considered applicable to the installation.

5.3 Sector Specific Energy Requirements

This is not considered applicable to the installation.

6 Use of Raw Materials and Water

6.1 Raw Material Selection

This is not considered applicable to the installation.

6.2 Waste minimisation

This is not considered applicable to the installation as no waste is produced.

6.3 Minimising water use

This is not considered applicable to the installation as no water is used within the installation.

6.4 Avoidance, recovery and disposal of waste

This is not considered applicable to the installation as no waste is produced in the installation.

7 Emissions to Air, Water and Land

7.1 Emissions to Air

7.1.1 Point source emissions to air

There are no point source emissions associated with the activity.

7.1.2 Fugitive emissions to air

The bags of EAF waste are only stored within A-Shed. There are no handling or bulking activities undertaken. In the event of damage occurring to the original bags oversize bags can be used to over bag the damaged bag.

Cargo Services employs (as required) a road sweeper to clean internally within A-Shed where small volumes of dust collect on the internal hard standing. This dust is derived from the external parts of the bags and not due to leaks and spills.

There are no fugitive emissions to air as the vehicle unloading and storage activities are wholly contained within A-Shed.

7.2 Emissions to surface water

7.2.1 Point source emissions to surface water

There are no point source emissions to surface water from the installation.

7.2.2 Fugitive emissions to surface water

All EAF materials are stored and handled internally within A-Shed. The building features good quality concrete hardstanding throughout and there are no surface water drains internally within the building.

7.3 Emissions to Sewer

7.3.1 Point source emissions to sewer

There are no discharges from the installation to sewer.

7.4 Emissions to Groundwater

7.4.1 Point source emissions to groundwater

There are no point source emissions to groundwater from the installation.

7.4.2 Fugitive emissions to groundwater

As the EAF is a solid, insoluble material, located in well sealed bags and located on good quality hardstanding, the potential to impact the ground (and hence groundwater) is deemed a very low risk.

7.5 Odour

EAF is an odourless material.

7.6 Noise and Vibration

There is only a very low potential for noise related issues. All materials are transported to the site (located within Cardiff docks) on a HGV low loader. All materials are unloaded wholly within a building.

8 Monitoring

8.1 Monitoring of emissions to air

There are no point source discharges from the installation to air. No monitoring is required.

8.2 Monitoring of emissions to surface water

There are no point source discharges from the installation to air. No monitoring is required.

8.3 Monitoring of emissions to sewer

There are no discharges from the installation to sewer. No monitoring is required.

8.4 Monitoring of noise emissions

There have been no recorded complaints with regards to noise from the existing activities. Cargo Services does not propose to conduct any routine monitoring.

8.5 Monitoring of odorous emissions to air

The potential for the installation to emit an odorous emission has been assessed as very low (*i.e.* the EAF waste is a non-odorous material). Cargo Services does propose to undertake any monitoring.

9 Environmental Impact Assessment

9.1 Introduction

This section of the technical submission provides an assessment of the environmental significance of the installation by looking at the site in the context of its environmental setting and UK guidance for such assessments.

The SCR which is provided within the application submission gives a detailed account of the environmental setting of the site, including physical conditions and environmental sensitivity. This is summarised in *Table 9.1*.

Table 9.1: Environmental Setting Summary	
Category	Description
Location	Located centrally within Cardiff docks at NGR ST 19683 73984.
Site Surfacing	The EAF material is stored and handled on good quality concrete
Surface waters	The site is near to Cardiff Bay (man-made 500 acre fresh-water lake) and the Severn Estuary.
Flood Plain	The site is not within a flood zone (Rivers or Sea).
Groundwater	The bedrock Mercia Mudstone Group is classified as a Secondary B Aquifer.
Residential areas	The closest residential receptors are 590 metres north.
Human receptors	There are principally three third-party activities within 300 metres of the installation centre, namely Doctor Who exhibition (250 metres), BBC Cymru studios (200 metres) and the Gloworks business centre (300 metres) apart from the other dock related activities and operators.
Habitats	The proposed activity is undertaken approximately 510 metres NNE from the edge of the statutory defined Severn Estuary (<i>i.e.</i> SPA, SAC, SSSI, Ramsar).

9.2 Environmental Risk Assessment

As there is no direct point or fugitive emissions from the installation it has not been possible to make use of the EA's Horizontal Guidance Note H1 – Environmental Assessment and Appraisal of BAT (V2.1 December 2011) process. As a result an assessment has been undertaken through the use of the Generic Risk Assessment for Standard Rules Set No. SR2009 No2 v4.0 (Low Impact Part A Installation) as provided by the NRW (by email) to Cargo Services on 29/09/14 (*Table 9.1*).

Table 9.1: Environmental Risk Assessment

Source	Pathway	Receptor	Risk Management	Residual Risk
Releases of particulate matter (dusts) and volatile organic compounds (VOCs).	Air transport then inhalation.	Local human population	There are no VOCs associated with the material. The bags are fully sealed at the point of generation and are not opened again until receipt in Italy (<i>i.e.</i> there is no further bulking within the installation). All materials are moved to and stored within a building at the dock side. The bags are lined and (in exceptional circumstances) where bags become damaged large over-bags are available for use.	Very Low
Releases of particulate matter (dusts).	Air transport then deposition.	Local human population	Control measures as detailed above.	Very Low
Odour	Air transport then inhalation.	Local human population	The EAF material is an odourless material.	Very Low
Noise and vibration	Noise through the air and vibration through the ground	Local human population	There is no processing of the material within the installation just unloading, storage and movement of big bags. All vehicle unloading is undertaken within an enclosed building located within the confines of Cardiff Docks. The closest residential receptors are 590 metres north.	Very Low

Table 9.1: Environmental Risk Assessment

Source	Pathway	Receptor	Risk Management	Residual Risk
Flooding of site	Flood waters	Local human population and local environment	The site is not within a flood zone (Rivers or Sea). There have been no losses of material associated with the installation due to the ingress of water.	Very Low
All on-site hazards: materials; machinery and vehicles.	Direct physical contact	Local human population and / or livestock after gaining unauthorised access to the installation	The installation is located wholly within Cardiff Docks. Access to the Docks is fully controlled via a manned security point. The ABP run Cardiff Docks has to comply with the International Ship and Port Security (ISPS) Code including operation of a port security plan.	Very Low
Arson and/or vandalism causing the release of polluting materials to air (smoke or fumes), water or land.	Air transport of smoke. Spillages and contaminated firewater by direct run-off from site and via surface water drains and ditches.	Local human population and local environment	The EAF material is insoluble. The installation is located wholly within Cardiff Docks. Access to the Docks is fully controlled via a manned security point. The ABP run Cardiff Docks has to comply with the International Ship and Port Security (ISPS) Code including operation of a port security plan.	Very Low

Table 9.1: Environmental Risk Assessment

Source	Pathway	Receptor	Risk Management	Residual Risk
Accidental fire causing the release of polluting materials to air (smoke or fumes), water or land.	Air transport of smoke. Spillages and contaminated firewater by direct run-off from site and via surface water drains and ditches.	Local human population and local environment	The EAF material is insoluble. The EAF material is solely stored within A-Shed. There are no flammable materials stored in the building and the sources of ignition are minimal.	Very Low
Spillage of liquids, contaminated rainwater run-off from materials.	Direct run-off from site across ground surface, via surface water drains, ditches etc	All surface waters close to and downstream of site.	The EAF material is in a solid form. There are no liquids associated with the installation.	Very Low
Spillage of liquids, contaminated rainwater run-off from materials.	Direct run-off from site across ground surface, via surface water drains, ditches etc.	Abstraction from watercourse downstream of facility (for agricultural or potable use).	The EAF material is in a solid form. There are no liquids associated with the installation. There is no water abstraction from the Cardiff Docks.	Very Low
Spillage of liquids, contaminated rainwater run-off from materials.	Transport through soil/groundwater then extraction at borehole	Groundwater	The EAF material is in a solid form. There are no liquids associated with the installation. No obvious pathway for the material to impact groundwater.	Very Low
Contaminated waters used for recreational purposes	Direct contact or ingestion	Local human population	The EAF material is in a solid form. There are no liquids associated with the installation. No obvious pathway for the material to impact water used for recreational purposes.	Very Low

Table 9.1: Environmental Risk Assessment

Source	Pathway	Receptor	Risk Management	Residual Risk
All sources identified	All pathways identified	Protected nature conservation sites	The proposed activity is undertaken approximately 510 metres NNE from the edge of the statutory defined Severn Estuary (<i>i.e.</i> SPA, SAC, SSSI, Ramsar). However, as the installation wholly contained within a building located at the dock side there is no obvious pollution linkage by which the operation could impact any of the protected habitats. The operations have very low capacity to cause harm to and deterioration of nature conservation sites as their capacity to cause pollution is insignificant.	Very Low

9.3 Conclusions

Based on the information provided it is clear that the operation is undertaken in a manner that controls and prevents the release of hazardous waste into the local environment during the associated transport, storage and handling activities. The risks to the environmental have been assessed as Very Low.

Although nature conservation sites (*i.e.* Severn Estuary SPA, SAC, SSSI, Ramsar) are adjacent to the site (510 metres NNE), there are no impacts associated with the historic or current uses of the facility for the storage of bagged EAF waste.

In conclusion, Cargo Services operates an installation that meets or possibly exceeds current BAT requirements. The activity has indeed a positive environmental outcome through the active recovery of a hazardous waste stream *i.e.* application of the waste hierarchy as outlined in Section 12 of the *Waste (England and Wales) Regulations 2011*. The environmental impacts of the operation are insignificant.

Annex A: Attachments