Main Installation Report (Bespoke Application) Celsa Manufacturing (UK) Ltd, Rotherham Steel Terminal, The Ickles, Sheffield Road, Rotherham, S60 1BN

On behalf of:
Celsa Manufacturing (UK) Ltd

Project Reference:
022-1917

Revision:
REV00

Date:
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Contents

Figures

Tables

Photographs

Abbreviations

AST	Above Ground Storage Tank
ASR	Application Site Report
BAT	Best Available Technique
BGS	British Geological Survey
BREF	Best Available Techniques Reference Documents
DEFRA	Department for Environment Food and Rural Affairs
EA	Environment Agency
EAME	Earth & Marine Environmental Consultants Ltd
EMS	Environmental Management System
EPR	Environmental Permit
FRA	Flood Risk Assessment
FPP	Fire Prevention Plan
IBC	Intermediate Bulk Container
mg/l	milligrams per litre
NGR	National Grid Reference
Opra	Operational Risk Appraisal
PPM	Planned Preventative Maintenance
SCR	Site Condition Report
SSSI	Site of Special Scientific Interest
µg/l	micrograms per litre

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1 Introduction

1.1 Background

This document has been prepared by Celsa Manufacturing (UK) Ltd ("Celsa") and its environmental consultant Earth & Marine Environmental Consultants Ltd ("EAME") in support of a bespoke permit application as required by the *Environmental Permitting (England and Wales) Regulations 2016* concerning current and proposed activities to be undertaken at the Rotherham Steel Terminal, The Ickles, Sheffield Road, Rotherham, S60 1BN (the "Site").

1.1.1 Previous Operator

The Site was historically operated by DB Schenker Rail (UK) Limited as a standard rules activity SR2009 No.7 (storage of furnace-ready scrap metal for recovery) – Ref. DB Schenker Rail (UK) Limited, Rotherham Steel Terminal, The Ickles, Sheffield Road, Rotherham, South Yorkshire, S60 1BN, Permit number: EPR/PB3431RJ, Dated 19/09/2013 (**Figure *1-1***).

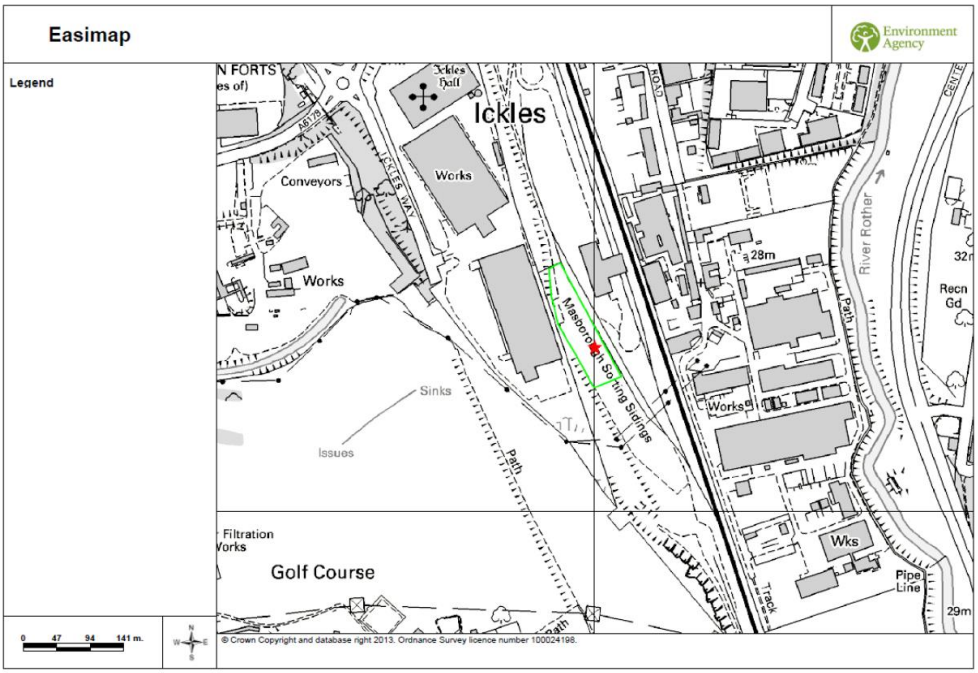


Figure 1-1: *Permit boundary*

As the EA is aware, to ensure compliance with the Standard Rules requirements, DB Schenker Rail (UK) Limited intentionally blocked up the surface water drains on the Site where upon collected run-off (liquids) was taken off-site in a tanker for disposal.

1.1.2 Permit Transfer

On 22 March 2023, the DB Schenker Rail (UK) Limited permit (Ref. EPR/PB3431RJ) was transferred to Celsa Manufacturing (UK) Ltd (Ref. EPR/PB3431RJ). The permit currently remains under Standard Rules (*i.e.* cannot be varied or changed).

Post permit transfer the Site has been subject to significant investment, including:

- new access road (with impermeable surfacing) from the entrance to the waste storage area;
- new impermeable surfacing for the waste storage area adjacent to the rail loading area; and
- new drainage system (with treatment) connected to the existing DB Schenker Rail (UK) Limited drainage system before discharge into the Yorkshire Water sewer.

As the liquids (from the newly engineered slab) are discharged into the sewer under the consent of DB Schenker Rail (UK) Limited /Yorkshire Water the Site remains in compliance with the current Standard Rules requirements outlined in SR2009 No.7.

1.1.3 Proposed Bespoke Application

The Celsa Rotherham Storage Site provides a scrap metal feed to the Part A(1) permitted Electric Arc Furnace (EAF) in Cardiff. Celsa wishes to expand the type of waste that can be stored and loaded to rail at the Site. Unfortunately, Standard Rules permits cannot be varied to include additional List of Waste (LoW) Codes, hence this application and conversion/variation to a bespoke permit. The scope of this application includes:

- expansion of the permit boundary to include the access road and oil/water separator (*i.e.* the final sewer discharge (compliance) point);
- description of the revised Site layout and new impermeable surfacing and drainage system; and
- inclusion of **one** new List of Waste Code *i.e.* 16-01-06 end-of-life vehicles, containing neither liquids nor other hazardous components (Absolute Non-hazardous) beyond that already contained within SR2009 No.7.

Figure 1-2: *Proposed permit boundary (Celsa Rotherham Storage Site)*

It is important to note that no waste storage would be undertaken within the area labelled as 'Internal Road Access' (**Figure *1-2***) but all inbound waste-containing vehicles would be

required to pass through this area to access the waste storage area. Given that the drainage from the waste storage area (red area in **Figure *1-2***) passes through the road access area Celsa requires that this area is included within the bespoke permit boundary.

It is important to note that this report and associated permit application relates to the current Celsa Manufacturing (UK) Limited permitted operations (Ref. EPR/PB3431RJ) referred to as the 'Celsa Rotherham Storage Site' and not the adjacent (but separate) 'Celsa Rotherham Processing Site' that is subject to a Standard Rules permit under SR2015 No.14 (Ref. EPR/WE4947AA).

The remainder of this document outlines the requirements requested by the EA to progress the permit application.

The Authorised company contact is Hannah Powell (Celsa Manufacturing (UK) Ltd, Environmental Manager). A letter authorising this application is provided as an attachment.

The document represents the Main Application Report submitted as part of the application package to the Environment Agency (EA) (EAME Ref. 022-1917).

1.2 Pre-Application Advice and Consultation

As stated above the Site currently operates under Standard Rules SR2009 No.7 (storage of furnace-ready scrap metal for recovery) permit reference EPR/PB3431RJ.

The conversion/variation from Standard Rules to a Bespoke permit has been discussed with the local responsible EA Waste Regulatory Specialist (Barnsley, Doncaster & Rotherham Waste Team) and a pre-application request was submitted to the EA on 20/02/2024. A standard formal response was provided by the EA (Ref. WasteBasicVariationPreAppAdvice – Version 1.0– 21/07/2022).

1.3 Permit Boundary

The current Standard Rules permit boundary is outlined in **Figure *1-1*** with the proposed bespoke permit boundary outlined in **Figure *1-2***.

1.4 Technical Standards

The application has been produced following the Environment Agency (EA) and the Department for Environment, Food & Rural Affairs (Defra) current guidance. Celsa has considered the following Appropriate Measures as representing the Best Available Techniques (BAT) for the sector and the proposed activity (***Table 1-1***).

Table 1-1: *Technical Standards and Guidance (Appropriate Measures)*

EPR Guidance	
UK Government (2023). Develop a management system: environmental permits.	https://www.gov.uk/guidance/develop-a-management-system-environmental-permits
Horizontal Guidance	
UK Government (2023). Guidance - Risk assessments for your environmental permit.	https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit
UK Government (2022). Guidance Noise and vibration management: environmental permits.	https://www.gov.uk/government/publications/noise-and-vibration-management-environmental-permits
UK Government (2013). Environmental permitting: H5 Site condition report.	https://www.gov.uk/government/publications/environmental-permitting-h5-site-condition-report
BATc and Bref Notes	
European Commission (2018). Best Available Techniques (BAT) Reference Document for Waste Treatment.	https://eippcb.jrc.ec.europa.eu/sites/default/files/2019-11/JRC113018_WT_Bref.pdf
European Commission (2018). Establishing best available techniques (BAT) conclusions for waste treatment, under Directive 2010/75/EU of the European Parliament and of the Council.	https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018D1147&from=EN
Monitoring	
EA (2021). Monitoring discharges to water: guidance on selecting a monitoring approach	https://www.gov.uk/guidance/monitoring-discharges-to-water-guidance-on-selecting-a-monitoring-approach
EA (2023). Monitoring discharges to water: CEN and ISO monitoring methods	https://www.gov.uk/government/publications/monitoring-discharges-to-water-cen-and-iso-monitoring-methods
EA (2020). Monitoring discharges to water: alternative monitoring methods	https://www.gov.uk/government/publications/monitoring-discharges-to-water-alternative-monitoring-methods
EA (2020). Monitoring discharges to water: analytical quality control charts	https://www.gov.uk/guidance/monitoring-discharges-to-water-analytical-quality-control-charts

EA (2014). M17 monitoring of particulate matter in ambient air around waste facilities	https://www.gov.uk/government/publications/m17-monitoring-of-particulate-matter-in-ambient-air-around-waste-facilities
EA (2019). MCERTS: performance standard for organisations undertaking sampling and chemical testing of water	https://www.gov.uk/government/publications/mcerts-performance-standard-for-organisations-undertaking-sampling-and-chemical-testing-of-water
Sector Specific Guides	
EA (2021). Fire Prevention Plan: environmental permits (Guidance) – January 2021.	https://www.gov.uk/government/publications/fire-prevention-plans-environmental-permits
EA (2023). Guidance - Non-hazardous and inert waste treatment: examples for your adapting to climate change risk assessment	https://www.gov.uk/government/publications/adapting-to-climate-change-industry-sector-examples-for-your-risk-assessment/non-hazardous-and-inert-waste-treatment-examples-for-your-adapting-to-climate-change-risk-assessment
EA (2023). Non-hazardous and inert waste: appropriate measures for permitted facilities, August 2023	https://www.gov.uk/guidance/non-hazardous-and-inert-waste-appropriate-measures-for-permitted-facilities
EA (2014). Metal Recycling Industry Environment Management Toolkit Waste Sector - Metal Recycling Sites, Final Version 1.4, 2009. (now archived)	http://www.environment-agency.gov.uk/static/documents/Business/Metals_Recycling_management_toolkit.pdf
EA (2013). S5.06 Guidance for the Recovery and Disposal of Hazardous and Non-Hazardous Waste, Version 5, May 2013.	https://www.gov.uk/government/publications/sector-guidance-note-s506-recovery-and-disposal-of-hazardous-and-non-hazardous-waste

1.5 Application Package

The application package includes completed application forms that are cross-referenced to various technical documents, which are intended to address all the areas required by the variation application. The various documents included with this application package are outlined in **Table *1-2***.

Table 1-2: *Application Documents*

Type	Reference
Application Forms	Form A - About You Form B2 – General new bespoke permit Form B4 – New bespoke waste operation permit Form B6 – New bespoke water discharge activity and groundwater point source activity Form F1- Charges-and-declarations
BAT and Impact Assessments	**BAT Assessment** 022-1917 Celsa Rotherham Bespoke Application - BAT Assessment REV00 **Environmental and Climate Change Risk Assessment** 022-1917 Celsa Rotherham Bespoke Application - General Risk and Climate Change Assessment REV00 **Noise Impact Assessment** 13222-001-R01 Noise Impact Assessment **Sewer Impact Assessment** Folder - Sampling Data - Emission Point S1 H1TOOL_2.78
Certification	Celsa BES 6001 Certificate Celsa ISO 45001 Certificate Celsa ISO9001 Certificate Celsa ISO14001 Certificate Celsa Suststeel Certification

Type	Reference
Drainage Strategy	240320 2421 Drainage Strategy, Bespoke Permit, Access Road & Storage Area, Rotherham - Issue 1. Note: This is the full report, due to the size it has been split into 13 sections (maximum size of 10 MB per section). **Technical Datasheets** Downstream defender select SPEL Stormceptor class 1 by-pass separators Hydro-brake optimum for contractors and developers Geocellular Attenuation Tank Polystorm-r datasheet Hydro-brake flow control series
EA Consultation	EA Pre-Application Response Data Feb-2024 Pre-application Basic Conservation Screening Report and Maps 28022024 Waste basic additional advice – ELV Waste variation basic pre-app advice
Ecological Appraisal	N19128E Celsa Preliminary Ecological Appraisal Updated 26.06.19
Environmental Management System	Celsa UK Environmental Policy CPA002_EMS Manual
Figures and Plans	022-1927 Figure A1 Site Location REV00 022-1927 Figure A2 Permit Site Plan (as per Form F1) REV00 022-1927 Figure A3 Permit Boundary and Layout REV00 022-1927 Figure A4 2421 C03 Rev D Overall Site Layout-1 Note: The plans show both the Celsa Scrap Metal Processing Area (under a standalone standards rules permit Ref. EPR/WE4947AA, SR2015 No.14) and the Celsa Scrap Metal Storage Area (this permit application).
General Information	021-1917 Celsa Companies House Certificate 022-1917 Celsa Companies House Current Officers 021-1917 Celsa Permit Application Authorisation
Main Installation Report	022-1917 Celsa Rotherham Bespoke Application - Installation Report REV00
Management Plans	ECP69 - Rotherham 1 Circular Hubs Management Plan - Rev 0 ECP70 - Rotherham 1 (Storage) Circular Hub FPMP Rev - 0

Type	Reference
Non-technical Summary	022-1917 Celsa Rotherham Bespoke Application - NTS Report REV00
Quality Management System	CELSA Quality Policy ISO 9001 CARES_21 CSYS6000.02 Reloading a Lorry CSYS6000.07 Scrap Classification
Site Condition Report	022-1917 Celsa Rotherham Bespoke Application - SCR REV00 **Phase I Contaminated Land Assessment** Multiple files **Phase II Contaminated Land Assessment** 12782 Celsa Site, Rotherham Site Investigation Report - Jan 2021 - Final
Sustainability Assessments	9432 CELSA Steel Sustainability Report 2023_AW_Print Celsa UK Mandatory Climate Disclosure - June 2023 crcular_ingles_web_22baja Suststeel Certification 2021-2026
Technical Competence	David Breslin - WAMITAB Certificate 08.08.2024

The above items should be regarded as constituting the variation application. In line with the Form F1 guidance the various application sections have been submitted via email to **PSC@environment-agency.gov.uk**

The remainder of this document outlines the requirements requested by the EA to progress the permit application.

1.6 Fees and Payments

A formal request for clarification was submitted to the EA within the pre-application submission, unfortunately only standard advice was provided. This was then discussed with the local responsible EA Waste Regulatory Specialist (Barnsley, Doncaster & Rotherham Waste Team). It was agreed that the variation seemed to meet the standard for a Normal Variation

under the current EA charging Scheme[1] Ref. Table 1.16 Waste Treatment, Activity 1.16.16 (Metal Recycling Site – Mixed Metals). The fee for a Normal Variation (not including charges for plans and assessments) is £4,732.

It is important to note that this remains a storage and rail loading activity only. There is no waste treatment associated with the permitted installation either now or post-variation. Given the storage of waste EAME has also included (within the total fee) allowance for the assessment of the Fire Prevention Plan (Ref. 1.19.3, £1,241).

Celsa Manufacturing (UK) Ltd has paid the application fee via BACS using the following payment reference – PSCAPPCELSA0001.

Notification of payment has been sent (including reference number) to: **ea_fsc_ar@gov.sscl.com**

1 https://assets.publishing.service.gov.uk/media/62fa3271d3bf7f4c641d0ee7/Environment_Agency_EPR_and_Abstraction_Licensing_Charging_Scheme_2022.pdf

2 Permitted Activities

2.1 Scope of Permitted Activities

2.1.1 Storage of Scrap Metal

Celsa proposes to store furnace-ready scrap metal for recovery before loading to rail for movement to Cardiff. The specific criteria which will apply to the activity are outlined below.

- R13: Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced).
- There will not be any treatment of the scrap metal or the burning of any waste, either in the open, inside buildings or in any form of incinerator.

This activity should be captured as a new Part A activity under *The Environmental Permitting (England and Wales) Regulations 2016*, Schedule 1.

2.2 Waste Types

The specific waste types that shall be accepted at the Site are outlined in **Table *2-1***

Table 2-1: *Proposed list of waste codes*

Waste Code	Description
02 01	Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing
02 01 10	Waste metal
12 01	Wastes from shaping and physical and mechanical surface treatment of metals and plastics
12 01 01	Ferrous metal filings and turnings
12 01 02	Ferrous metal dust and particles
12 01 03	Non-ferrous metal filings and turnings
12 01 04	Non-ferrous metal dust and particles
15 01	Packaging (including separately collected municipal packaging waste)
15 01 04	Metallic packaging

Waste Code	Description
16 01	End-of-life vehicles from different means of transport [including off-road machinery] and wastesfrom dismantling of end-of-life vehicles and vehicle maintenance (except 13,14, 16 06 and 16 08)
16 01 06	End-of-life vehicles, containing neither liquids nor other hazardous components
16 01 17	Ferrous metal
16 01 18	Non-ferrous metal
16 01 22	Components not otherwise specified (comprising only of depolluted metallic vehicle parts,components and engines)
16 02	Discarded equipment and its components
16 02 14	Discarded equipment other than those mentioned in 16 02 09 to 16 02 13 (ferrous and nonferrous metal waste only)
16 02 16	Components removed from discarded equipment other than those mentioned in 16 02 15 (ferrousand non-ferrous metal waste only)
17 04	Metals (including their alloys)
17 04 01	Copper, bronze, brass
17 04 02	Aluminium
17 04 03	Lead
17 04 04	Zinc
17 04 05	Iron and steel
17 04 06	Tin
17 04 07	Mixed metals
17 04 11	Cables other than those mentioned in 17 04 10
19 01	Wastes from incineration or pyrolysis of waste
19 01 02	Ferrous materials removed from bottom ash
19 10	Wastes from shredding of metal-containing wastes
19 10 01	Iron and steel waste
19 10 02	Non-ferrous waste

Waste Code	Description
19 12	Wastes from the mechanical treatment of waste (for example sorting, crushing, compacting,pelletising) not otherwise specified
19 12 02	Ferrous metal
19 12 03	non-ferrous metal
20 01	Separately collected fractions (except 15 01)
20 01 40	Metals
Notes: All LoW codes within **Table *2-1*** are as identified in SR2009 No.7 except for 16-01-06.	

As per SR2009 No.7 waste consisting solely or mainly of dust, powders, loose fibres or wastes that are in the form of either sludge or liquid shall not be accepted at the Site.

2.3 Waste Volumes

The total quantity of waste that can be accepted at the Site will be less than 1,000,000 tonnes a year. Wastes shall be stored for no longer than 3 years before recovery.

This condition is as stated in SR2009 No.7.

2.4 Process Flow

The basic process flow associated with the Site is outlined in **Figure *2-1***.

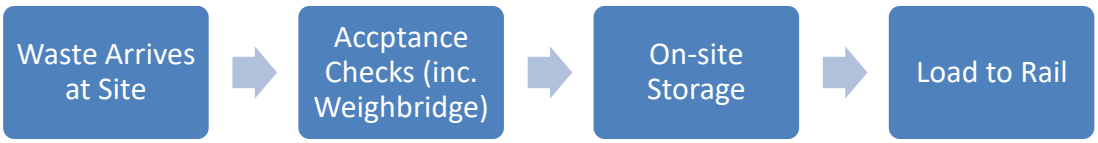


Figure 2-1: *Waste Process Flow*

This is the process flow associated with the current Standard Rules permit. No changes are proposed. There is no waste processing on-site.

2.5 Use of Cleaner Technology

The term 'following cleaner technologies' is not defined within the BATC Guidance but is generally used to mean the avoidance of environmental damage through the use of materials, processes, or practices to eliminate or reduce the creation of pollutants or wastes. It is important to remember that the installation is for the storage of furnace-ready scrap metal. The materials are moved (via rail) to Cardiff for processing/recovery within an Electric Arc Furnace (EAF). This is inherently a cleaner technology than the standard Blast Furnace-Basic Oxygen Furnace approach (*i.e.* use of primary materials).

CELSA Group is an integrated company with a fully circular industrial process: all the products it manufactures are 100% recyclable countless times; the steel it produces contains 93.5% recycled steel (scrap); recovers 90% of the waste generated in its processes; it contributes to the recovery and recycling of 9.5 Mt of waste each year. Celsa Group is already a low-emission company today, with CO_2 emissions of scope 1, 2 and 3, six times lower than those of the traditional steel manufacturing route, thanks to the production via EAF.

Celsa Steel UK's long-term goals and commitments to the circular economy are outlined within a publicly available Sustainability Statement. Cleaner technology and improvement are a core company objective.

2.6 Operating Hours

The operational hours will remain in line with the current planning permission.

- Monday to Friday: 06:00 – 18:00;
- Saturday: 06:00 – 17:00; and
- Sundays and Bank Holidays: 06:00 – 14:00.

No changes are proposed from the current SR2009 No.7 operations.

3 General Management Measures

3.1 Management System

Celsa Manufacturing (UK) Ltd has implemented and maintains an Environmental Management System (EMS) that is certified to ISO14001:2015 (Certificate No. ES113432).

The EMS continues to be maintained and is externally audited (by Bureau Veritas) whilst delivering all indicative Best Available Technique (BAT) requirements for an effective management system. The current management systems will be updated to include the proposed operations as the activities at this site will provide a direct connection to the existing operations at the Cardiff site (*i.e.* the activity is directly associated with the operation of an electric arc furnace (EAF).

Celsa Manufacturing (UK) Ltd also operates a certified ISO 45001:2018 Occupational health and safety management system and a certified ISO9001:2015 quality management system. These systems will also be applied to the shredding process.

3.2 Management Plans

In line with the statutory guidance and BAT requirements the following management plans have been established and will be maintained as part of the EMS, as outlined in **Table *3-1***.

Table 3-1: *Management Plans*

Plan	Comments
Accident management plan	The installation operates under **ECP69 - Rotherham 1 Circular Hubs Management Plan - Rev 0** and is part of the Company-wide certified ISO14001 and ISO 45001 management systems.
Site condition report (SCR)	A revised and updated SCR has been provided with the variation application (**Ref. 022-1917 Celsa Rotherham Bespoke Application - SCR REV00**).
Fire prevention plan	The installation operates under **ECP70 - Rotherham 1 (Storage) Circular Hub FPMP Rev – 0** and is part of the Company-wide certified ISO14001 and ISO 45001 management systems.
Noise and vibration management plan	A noise and vibration management section has been included within **ECP69 - Rotherham 1 Circular Hubs Management Plan - Rev 0**.

Plan	Comments
Dust management plan	A dust management section has been included within **ECP69 - Rotherham 1 Circular Hubs Management Plan - Rev 0**.
Pest Management Plan	Given the limited nature of the potential pest issues, a pest management plan has not been produced.

The draft plans are provided within the application package. It is important to note that these are subject to amendment as they form a part of the Celsa operational QEHS Management System.

3.3 Fire Prevention Planning

The installation operates under **ECP70 - Rotherham 1 (Storage) Circular Hub FPMP Rev – 0** and is part of the Company-wide certified ISO14001 and ISO 45001 management systems. This document describes the prevailing management controls employed at the site and how they align with the current EA guidance (Environment Agency, 2021).

This section provides some additional discussion on the materials, risks and mitigation measures employed at the site.

3.3.1 Nature of the Stored Materials

No firewalls, bays, bunkers or containers will be utilised for the storage of furnace-ready scrap metal. Loose open piles are proposed.

In general, ferrous metals (iron and steel) are reactive with oxygen (thermodynamically) and will burn (combust) in the air under certain conditions such as in finally divided forms (*e.g.* iron filings in a flame). The ferrous metals outlined below are classified as having an extremely low or low combustibility risk as they will not burn in the air due to the massive form that they exist in. In physical-chemical terms, they may in theory react thermodynamically with oxygen in the air (*i.e.* oxidise slowly) but not kinetically and therefore exothermically with oxygen (*i.e.* combust) and will slowly form iron oxides *e.g.* ferric oxide or rust on the surface.

The plan within **ECP70 - Rotherham 1 (Storage) Circular Hub FPMP Rev – 0** shows the following materials stored on-site (**Table *3-2***).

Table 3-2: *Material storage risks vs. scrap grades*

Material	Discussion and Risk
Grade 1 and Grade 2 Iron and Steel	**LOW RISK** No. 1 / 2 (HMS – Heavy Metal Scrap Iron and steel) is the next grade down from OA in terms of size and comprises large pieces of iron or steel including plates, tubes (scaffold poles) *etc.* Similarly, to OA the large size of this ferrous material renders it kinetically stable in the air (due to the large volume-to-surface area ratio) and No. 1 /2 will therefore not combust. Contamination levels are still extremely low but can be slightly higher than those exhibited by OA but are normally at levels of less than 1.5%. This material is furnace-ready.
Grade OA plate and structural scrap	**VERY LOW RISK** OA is one of the largest ferrous grades normally encountered *e.g.* cut girders are normally at the lower sized end of this particular grade of iron and steel and much larger lumps of iron and steel are found in this grade (*e.g.* demolition scrap). Due to the large volume-to-surface area ratio of this grade, this material is kinetically stable in oxygen in the air and therefore will not combust even at extremely high temperatures. Contamination levels are normally very low (< 0.3%) and any contamination which is present is also of limited combustibility (normally comprising very small amounts of brick dust, concrete, stones *etc.*) or has low combustibility; additionally, much of it will normally fall out on to the floor (especially when being transferred by grab crane).
Incinerator scrap	**LOW to MEDIUM RISK** Incineration scrap is the residue after reprocessing the slag remaining after a process of waste incineration. Incineration scrap comes in various qualities, depending on the format (coarse or fine) and the degree of contamination. The risk will largely depend on the volume-to-surface area ratio of the received/stored materials.

3.3.2 Availability of Fire Fighting Water

Celsa consulted with the Landlord (DB Cargo UK) and there are no suitable on-site water supplies which the South Yorkshire Fire & Rescue Services (SYFRS) could use (*e.g.* ponds,

hydrants *etc.*) for firefighting purposes. Typically, a tender will contain approximately 1,800 litres of water. According to SYFR Service, the closest fire hydrants are on Sheffield Road:

- Grid Reference - E441851 N391814 (5" main); and
- Grid Reference E441779 N391788 (8" main).

EAME spoke to Phil Simmonett (SYFRS Operational Support Team) on 06/09/19 regarding firefighting operations in the event of an incident at the premises. He stated:

'….we have is guidance which details the generic risks and hazards we may face, the control measures we may need to adopt and the operational tactics we may need to employ. Each incident we attend however is unique and our operational response will be governed by the individual circumstances on the day….'

Furthermore:

'….it doesn't seem that the product being processed would ordinarily have any combustion concerns (large chunks of metal don't tend to burn that easily!) however, in the circumstance of a fire and in particular a large fire, our operational considerations in addition to extinguishing the fire would be to look at issues such as the environmental impact created by a smoke plume/airborne contaminant, fire water run-off etc. We have specialist HMEPOs (Hazardous Material & Environmental Protection Officers) who would provide guidance and advice to limit any environmental impact which in most cases would be conducted in liaison with the Environment Agency and/or Local Authority Environmental Protection Team. In terms of a tactical approach, it would very much be based on individual circumstances and discussion with the site operator (yourselves), the EA and other partner agencies. It may be that in certain circumstances, allowing a fire to burn out creates less of an environmental impact than extinguishing it, or vice versa; that decision can only be made at the time based on a variety of factors.

In terms of our choice of firefighting media, again this would be based on the specific incident and therefore if a foam application was appropriate to the circumstances it would be an option available to us although, we would have to consider containment of that foam application, prevention from entering local drainage systems or water courses etc.'

3.4 Operations and Maintenance

The company uses a "risk" based approach for assessing the criticality of site equipment in terms of Health, Safety, and Environment requirements. As well as the criticality of the plant

the equipment is given a priority which determines how quickly an unplanned failure of said equipment is responded to.

Celsa will ensure, to maximise site availability, that spare and wear parts are readily available.

The site will establish and maintain a Planned Preventative Maintenance (PPM) schedule in line with the manufacturer's recommendations. This will identify all critical environmental equipment that is used to mitigate or prevent environmental impacts. All records associated with these activities will be maintained on-site and controlled as part of the ISO14001 management system. Any breakdown or malfunction of plant or equipment that could result in abnormal emissions of dust or odours and/or increased energy or resource consumption will be dealt with promptly and process operations adjusted until normal operations can resume. Any such events are recorded in the site diary and on the company ProSafety system.

3.5 Accidents

The site has established and maintains **ECP69 - Rotherham 1 Circular Hubs Management Plan - Rev 0** which is subject to regular review and update and is controlled via the EMS. The plan details site drainage, site services, location of hazardous materials (*e.g.* fuels), emergency response equipment, pollution control points *etc.* Where required the emergency plan will be revised to take into account any identified deficiencies.

Appropriate spill kits and absorbents will be available throughout the site. These will be subject to regular inspection to ensure stock levels are maintained. All operatives will be trained in their use.

In response to fire prevention and mitigation requirements, the controls are outlined within **ECP70 - Rotherham 1 (Storage) Circular Hub FPMP Rev - 0.**

The management of accidents, Incidents, complaints, and non-conformances are managed through the existing processes that form part of the ISO 14001 EMS. These processes are detailed within the EMS Manual (Ref. CPA002).

3.6 Incidents and non-conformances

Accidents, Incidents, complaints, and non-conformances are to be handled through the existing processes that form part of the ISO 14001 EMS.

3.7 Site Security

There are multiple levels of security to prevent/control unauthorised access to the Site.

- **Level 1** – Gated security-controlled entrance managed by DB Cargo UK. No unauthorised access is permitted as this is an active railyard.

Photograph 3-1: *Access point into DB Cargo area from Sheffield Road*

- **Level 2** – The Site itself is partially surrounded by a 2.4-metre-high palisade fence whilst the rail loading area is wholly contained within the DB cargo UK area. All access to the Celsa Storage Site is controlled. No unauthorised access is permitted.

As with the other Celsa-operated scrap yard operations (*i.e.* Swansea, Bristol, Cardiff), a CCTV system has been installed which includes remote monitoring and provides full-service maintenance. Escalation (*i.e.* post-detection/alarm response) is provided. The monitoring systems are integrated with the main site entrance point operated and maintained by the landlord (DB Cargo).

3.8 Staff Competence

The total manning of the activity can vary depending upon the level of activity being undertaken. At the current time, there are 6 full-time operators (4 x grab drivers and 2 x scrap inspectors) and the site manager.

Celsa Manufacturing (UK) Ltd will provide centralised engineering, technical, transport, administration, and environmental support (as required). Celsa Manufacturing (UK) Ltd will provide a comprehensive training programme for the site and the proposed operations in line with the required competency requirements (*e.g.* general environmental awareness,

maintenance and operational activities, accident, and emergency response). This training will be provided to all site operatives.

3.8.1 Technical Competence

The proposed technically competent person is outlined in **Table *3-3***. Copies of all certificates are provided as attachments.

All site operatives will be made aware of the requirements of the EPR Permit and will be briefed as to the contents of the various environmental management plans including the Fire Prevention Plan.

Table 3-3: *Technical Competence*

Name	Description	TCM Site Responsibilities
Dave Breslin	TSH – Transfer Hazardous Waste TMH – Treatment Hazardous Waste WEEE – Waste electrical and electronic equipment Verification date – 04/08/22 Learner ID – 14614 Certificate no. 5204079 Expiry date – 08/08/2024	Celsa Rotherham Scrap Metal Storage Yard (Permit Ref. EPR/PB3431RJ. This is under SR2009 No.7) Celsa Rotherham Scrap Metal Processing Yard (Permit Ref. EPR/WE4947AA). This is under SR2015 No.14)

3.9 Records that demonstrate your management system

Records relating to the operation of the site are to be handled through the existing processes that form part of the ISO 14001 EMS. All records relating to the operation of the installation will be maintained as per the stated procedures.

Non-hazardous waste transfer documentation will be maintained on-site for a period of 2 years. If any consignments of hazardous waste are removed (*i.e.* residuals or maintenance derived) the consignment notes will be maintained on-site for a period of 3 years.

The site condition at the start of the permitted period was recorded within a photographic record. In addition, the site operator will keep records of the:

- design, construction, inspection, monitoring and maintenance of all pollution prevention infrastructure;
- spills and incidents and any resulting corrective and/or preventative actions;
- actions taken if the EA identify relevant non-conformances or failures; and
- off-site impacts such as pollution incidents that caused, or are alleged to have caused harm or health effects.

3.10 Access to your permit

Access to the permit will be through existing internal systems (*i.e.* intranet and on-site noticeboard). Where contractors undertake work within the site the requirements of the permit will be actively brought to their attention.

3.11 Permit surrender and closure

Upon cessation of activities, the following site closure plan will be initiated:

- disconnection of electrical supply and make safe;
- drain down and empty any fuel storage tanks;
- remove all plant and equipment down to slab level;
- remove and dispose of all remaining waste materials in line with current regulatory requirements; and
- undertake site surrender SCR monitoring (*i.e.* provide the evidence necessary to demonstrate to the EA that the site does not pose a pollution risk and is in a satisfactory state).

4 Waste Management Processes

4.1 Waste Pre-acceptance

Waste will only be accepted on to site based on prior information, and where necessary, relevant analysis. Where analysis is required, it will be undertaken by suitably qualified laboratories against current industry-approved standards. Wastes will not be accepted on to site without a clear method or defined treatment and/or disposal route being determined in advance before the waste is accepted at the installation.

The process for pre-acceptance is outlined below:

- **Initial enquiry** – Details regarding the waste producer (address and contact details), specific process source from where the waste streams would arise and an indication of the waste stream characteristics (*i.e.* quantity, form, composition, properties, classification, and description *etc.*).

- **Determination of potential suitability (Technical Assessment)** – Celsa would assess the potential suitability of the potential waste stream(s) concerning safety and EHS compliance (including the ability to store it within the installation).

All records relating to pre-acceptance processes will be maintained for a minimum of 3 years.

4.2 Waste Acceptance and Tracking

Upon arrival of any waste at the site the amount of waste is weighed, and the gross weight is recorded.

All wastes must be accompanied by a waste transfer note, and this shall be inspected to ensure it matches the load of waste being delivered. Visual inspection will be carried out by the weighbridge operative. The vehicle then proceeds to the correct area of the site for that waste stream to be tipped. If the waste arrives in a sealed or high-sided vehicle, inspection will be carried out by the operative supervising the waste as it is tipped in the compound.

When the vehicle leaves the site, it is weighed again and the net weight of waste is calculated, and a receipt is issued.

In line with the requirements of the *Scrap Metal Dealers Act 2013,* the following information shall be recorded for all scrap metal received at the facility:

- a description including type, form, condition, weight, and any marks identifying previous owners or distinguishing features;
- the date and time;
- the registration mark of the vehicle it was delivered in or on;
- the full name and address of the person received from; and
- the full name of the person who makes the payment acting for the dealer.

In addition, Celsa will keep a record of all scrap metal disposals, this will include:

- a description including type, form, and weight;
- the date and time;
- the full name and address of the person disposed to; and
- if payment is made (by sale or exchange), the price of other consideration is received.

All records will be maintained for a minimum of 3 years.

If it appears that any waste does not comply with the description on the waste transfer note, or that it may be hazardous or otherwise not acceptable under the site's permit, then the waste will either be re-loaded and rejected (if the person delivering the waste remains on site), or it will be isolated from the rest of the waste in the quarantine area for removal. Where required, the EA shall be notified.

Since Celsa's procedures for scrap inspection (included as attachments) require us to reload material, which is non-specification, we would not need a quarantine area that is 50% volume of the largest pile. Celsa would prefer to rely on robust waste acceptance procedures in preference to post-tipping sorting, observations, inspection and subsequent quarantine. However, to ensure compliance with EA requirements, the quarantine base will take 50% of the maximum scrap volume.

4.3 Waste Storage and Segregation

The scrap metal storage areas are outlined within **ECP69 - Rotherham 1 Circular Hubs Management Plan - Rev 0** and **ECP70 - Rotherham 1 (Storage) Circular Hub FPMP Rev - 0.** The plans include pile location, pile types and references (based on scrap metal grade and LoW Code), pile tonnage and pile sizes (volume in m^3).

All scrap metal piles are in line with the requirements of the FPP Guidance (Environment Agency, 2021) *i.e.* no piles are higher than 4 metres (from the slab) and all piles are (at a minimum) 6 metres apart.

5 Process Efficiency

5.1 Energy Efficiency

As part of Celsa's ISO 14001 Environmental Management System, Celsa has identified its potentially significant environmental aspects, whilst considering its legal requirements. Objectives and targets are set on an annual basis to deliver continual improvement in the management of these environmental aspects, this includes energy usage. Celsa is careful to ensure that its processes are efficient to minimise the use of energy and avoid waste.

5.1.1 Energy Use within the Installation

The electrical energy usage within the installation is minimal *i.e.* administration block only. All plant and equipment are currently diesel-powered.

The use of alternative fuels (such as electrical or hybrid supply) is not yet commonplace within the mobile plant industry. Some manufacturers are in the process of bringing to market hybrid technology dual power equipment. The dual-powered machines are electrically driven allowing the end user to run from the mains supply to give significant savings on energy costs. These machines are also fitted with an on-board generation set allowing the operator to move and use the machine where there is no electric supply, giving them the flexibility and versatility of the current standard models. However, at the current time, the range of models is limited and largely untested.

The Centre for Low Emission Construction (CLEC), part of the Environmental Research Group at King's College London[2], has stated that:

"This technology is still in its early days and the fuel savings, which will be a driver behind sales, and emission reductions in real-world operation are still being evaluated. A fuel saving of up to 28% and a reduction in emissions of up to 90% compared with conventional equipment has been reported. Some tests found these to be significantly less when tested in comparison with the latest non-hybrid equipment with new engine technology and tail-pipe scrubbers and these are not representative of many of the older diesel equipment commonly in use today."

Celsa is committed to reviewing available equipment (as it comes to market) and assessing suitability on a site-by-site basis. At the current time, until the hybrid market matures, we feel

2 http://www.clec.uk/

diesel-powered equipment (fitted with efficient clean engines and abatement systems) represents BAT.

5.1.2 Climate Change Levy

Climate change agreements are voluntary agreements made by UK industry and the Environment Agency to reduce energy use and carbon dioxide (CO_2) emissions. In return, operators receive a discount on the Climate Change Levy (CCL), a tax added to electricity and fuel bills. The Environment Agency administers the CCA scheme on behalf of the whole of the UK.

The permitted activity is not covered by a Climate Change Levy Agreement (CCLA).

5.1.3 Management of Energy Use

Celsa is committed to managing and reducing the environmental impact of its operations (wherever possible). Energy reduction programmes are established and maintained throughout the business. The aim of this is to evaluate the environmental impact of Celsa's activities (*i.e.* buildings, processes and transport) and identify opportunities for improvement. These opportunities can be reflected in the site improvement objectives (if deemed feasible). In all cases, these objectives form part of the ISO 14001 EMS. In addition, the regular monitoring of site energy consumption and the planned preventative maintenance of equipment is carried out on a regular inspection cycle.

5.2 Raw Materials

There is minimal use of raw material use associated with the installation apart from when mobile work equipment requires routine maintenance (*e.g.* hydraulics (oils), and grease lubrication).

5.3 Water Use

Water is used across the installation for general cleaning, portable use (within the administration block) and fugitive dust suppression purposes (where required).

As there is no continuously active dust suppression system systemic failure is very unlikely. Most of the controls relate to active management practices that are aligned with the BAT requirements. Low water supply (during drought conditions) could represent an issue where water is utilised for cleaning and dust suppression purposes. If everything fails (very unlikely) the ultimate mitigation measure would be to stop work.

5.4 Waste Minimisation, Recovery and Disposal

It is important to note that the plant will undertake R13 (storage of waste pending any of the operations numbered R1 to R12). The whole purpose of the plant is the store scrap metals (thus limiting the generation of residuals) for onward transfer for processing in Cardiff within the Part A(1) permitted Electric Arc Furnace (EAF).

Where residuals are produced, they shall be managed and disposed of off-site in line with the current ISO14001 EMS procedures.

6 Emissions to Air, Water and Land

6.1 Point Source Emissions to Air

There are **no** point source emissions to air associated with the installation.

6.2 Point Source Emissions to Surface Water

There are **no** point source emissions to surface water associated with the installation.

6.3 Point Source Emissions to Sewer

6.3.1 Site Access Roads

The internal Site access roads have been fully resurfaced and now include a formal drainage system as outlined within the Drainage Strategy. This is an improvement over the previous unsurfaced ground that was present when the Site was operated under Standard Rules. The simplified drainage system (from the access road) is as follows:

- Run-off from the roadway is collected within the drainage system and passed through a SPEL Stormceptor class 1 by-pass separator (208 C1/SC) which is compliant with the European Standard BS EN 858-1:2002, the EA's Pollution Prevention Guidelines PPG3 (now withdrawn) and the Construction Products Regulations.

- The discharge then enters a Polystorm R Attenuation Tank (22.8 m^3) before entering a Hydrobrake Chamber (9.5 l/s) before combining with the discharge from the waste storage area in manhole S14 **(Permit Emission Point Ref: S1)**. The combined discharge then enters the DB Cargo drainage system at manhole EXS-3 before entering the Yorkshire Water sewer located on Sheffield Road.

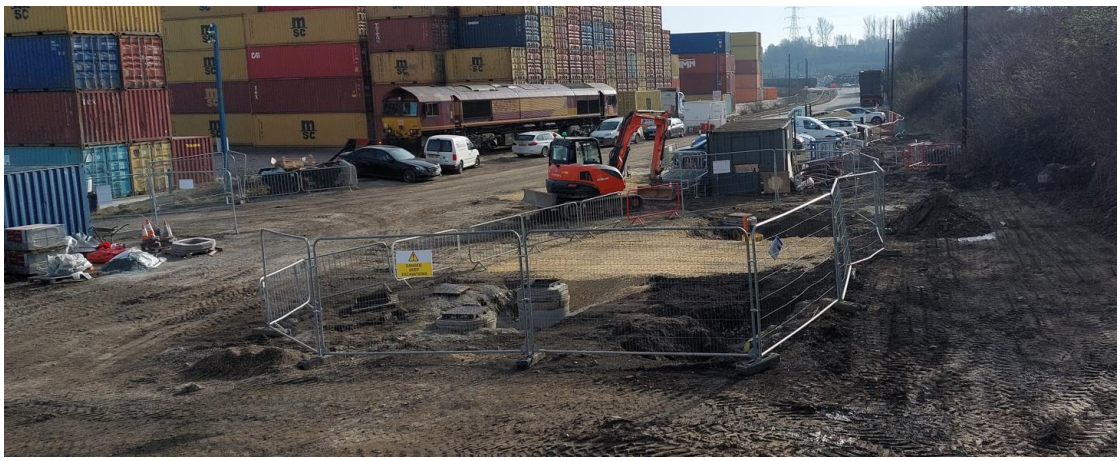
6.3.2 Waste Storage Area

The entire waste storage area has been recently upgraded to a fully impermeable surface with an integrated drainage system as outlined within the Drainage Strategy. The simplified drainage system is as follows:

- Run-off from the waste storage and handling pad is directed through the drainage system to a Hydro International Downstream Defender. The Downstream Defender is an advanced hydrodynamic vortex separator that reliably captures and retains sediments, oil, trash and floatables from surface water runoff. A compact, low-maintenance stormwater treatment the Downstream Defender enables effective pollutant removal at

a single point in the drainage system. The Downstream Defender stormwater treatment system is designed to enhance vortex separation by minimising turbulence and headloss, increasing efficiency, and preventing washout of stored pollutants. Initially, stormwater is introduced tangentially into the side of the vessel, generating a rotating flow that spirals around the outside of the dip plate. Oils, waste, and floatable debris rise to the water surface and are trapped in the oil and floatables storage volume. As flow continues to spiral down around the dip plate cylinder, low energy vortex motion directs sediment inward along the benching skirt and into the protected sediment storage zone. The benching skirt and centre cone redirect the rotating flow up and inward between the centre shaft and dip plate cylinder away from the stored sediment. The outlet pipe discharges treated effluent from within the dip plate cylinder ensuring the longest possible residence time.

- The discharge then enters a Geocellular Attenuation Tank (182.4 m^3) before entering a below-ground pump station. The discharge rate into Manhole S14 (from the waste storage area) is constrained to 18.3 l/s. The pump can be manually switched-off (within the adjacent GRP cabinet) during a fire which would isolate the waste storage area from the release to sewer. The system has been designed to contain (upon pump switch-off) 323.26 m^3 of water (173.28 m^3 within attenuation tanks, 41.63 m^3 in pipework and 108.35 m^3 on the impermeable slab).



Photograph 6-1: *Installation of infrastructure and manhole S14 (Feb-2023)*

The maximum discharge rate from the combined areas (roadways and waste storage area) is 27.8l/s.

Full details on the design and operation of the system are provided within the James and Nicholas Drainage Strategy. All sampling is undertaken from Manhole S14 (Permit Ref, S1).

6.4 Point Source Emissions to Groundwater

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

6.5 Point Source Emissions to Land (via Soakaway)

There are **no** point source emissions to the ground from the installation.

6.6 Fugitive Emissions to Air

There are two principal sources of fugitive emission to air from the installation:

- dust (potential suspended and nuisance dust) from the handling of incoming scrap metal; and
- combustion products from the use of diesel plant, equipment, and vehicles.

6.6.1 Dust – Storage Piles and Handling

Dust emissions can occur at several points in the storage cycle, such as material loading onto the storage piles, disturbance by strong wind currents, and loadout from the storage piles. The movement of trucks and loading equipment in the storage pile area can also be a source of dust.

Dust control techniques include source reduction (mass transfer reduction), source handling improvement (*e.g.* work practices, transfer equipment, loading and unloading, drop heights, wind sheltering, moisture retention) and source treatment (*e.g.* water sprays or dust suppression).

6.6.2 Vehicle and Plant Emissions

Movement of diesel-powered vehicles (*i.e.* material handlers and road transport) into and around the site will generate diesel particulate emissions. All plant and equipment shall be maintained following manufacturers' recommendations. Where unplanned emissions are noted, corrective actions shall be instigated.

In the UK, the legislation governing emissions produced by engines fitted in Non-Road Mobile machinery (NRMM) is the *Non-Road Mobile Machinery (Emission of Gaseous and Particulate Pollutants) Regulations 1999*, as amended. This sets emission standards for carbon monoxide, hydrocarbons, oxides of nitrogen and, for diesel engines, particulate matter. The proposed equipment will meet specified current standards.

Where available, the equipment will be fitted with Selective Catalytic Reduction (SCR). SCR technology is used to reduce the NOx content in the exhaust gases. A chemical process is started by injecting reductant, a urea and water mixture (Ad-blue), into the exhaust gas stream. During injection, the water evaporates, and the urea breaks down to form ammonia. The ammonia then reacts with the nitrogen gases in the catalytic converter and forms harmless products such as nitrogen gas and water.

The use of alternative fuels (such as electrical or hybrid supply) is not yet commonplace within the mobile plant industry. At the current time, until the hybrid market matures, Celsa feels diesel-powered equipment (fitted with efficient clean engines and abatement systems) represents BAT.

6.7 Fugitive Emissions to Land, Surface Water, Sewer and Groundwater

6.7.1 Introduction

Some types of emission may cause pollution but do not have set limits within permit conditions. In permits, these are called emissions not controlled by emissions limits or fugitive emissions. For there to be a potential impact there needs to be a source, pathway, and receptor (**Figure 6-1**).

Figure 6-1: *Fugitive emissions (Source - Pathway - Receptor)*

The principal means of pollution prevention is the careful handling and storage of potentially polluting substances. In most cases, this is determined by the level of containment of a substance, *i.e.* spill prevention. Three levels of containment have been considered:

- **Primary Containment** – *e.g.* a drum, vessel, pipe, bag, *etc.* containing the substance.
- **Secondary Containment** – *e.g.* a bund, double wall vessel or pipe, vent pipe, catch-pit *etc.* designed to retain the substance in the event of a failure of primary containment.
- **Tertiary Containment** – additional measures provided to contain an unplanned release (*e.g.* an oil interceptor in a surface water drain, a concrete hardstanding for road tankers offloading to a bulk storage tank, *etc.*).

In all cases, the actual technique (*i.e.* the physical control) is supplemented by effective management control through the development and use of appropriate operational procedures with the overall aim of breaking the S-P-R pollution linkage.

6.7.2 Sources

On-site sources that could lead to potential fugitive emissions to land, surface water, sewer or groundwater include:

- leaks and spills from the handling, storage and use of maintenance chemicals and vehicle and plant fuels;
- leaks and spills from on-site vehicles and plant during use and refuelling;
- losses to ground from the handling and loose storage of dry materials; and
- fire water run-off.

The full site history is outlined within the LCRM compliant (UK-Government, 2023) Phase I assessment Ref. 020-1822 Phase I Contaminated Land Assessment - Rotherham - REV00).

6.7.3 Pathways and Receptors

It is important to note that a pathway, such as groundwater, can be both a pathway and a receptor for site-derived fugitive emissions.

The Site Condition Report (SCR) (022-1917 Celsa Rotherham Bespoke Application - SCR REV00) indicates that the installation is directly underlain by:

- **Artificial ground** – The Site area is classified by the BGS as artificial-made ground (undivided).
- **Superficial deposits** – No superficial deposits are recorded.
- **Bedrock deposits** – The majority of the Site is underlain by Pennine middle coal measures formation (mudstone, siltstone, and sandstone). The southern end of the Site is underlain by Mexborough Rock (Sandstone).

From a review of the environmental database, the hydrogeological deposits are classified as:

- **Artificial ground** – Not classified.

- **Bedrock Deposits** – The bedrock deposits have been designated by the EA as a Secondary A Aquifer (medium/high vulnerability). These are permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers. The EA classification is a 'moderately productive aquifer'.

The site is not within a groundwater Source Protection Zone (SPZ).

There are no on-site water features. The closest surface water features are the River Rother approximately 250 metre east of the Site, flowing in a northerly direction, the River Don approximately 230 metres north of the Site, flowing in an easterly direction and Holmes Goit also known as the Sheffield to Keadby Canal, approximately 650 metres north of the Site.

6.7.4 Site Surfacing

The operator has designed appropriate impermeable tertiary containment surfaces for all operational areas, taking into consideration collection surface water capacities, surface thicknesses, strength/ reinforcement, falls, materials of construction, permeability, resistance to chemical attack and inspection and maintenance procedures.

Photograph 6-2: *Installation of new surfacing (Feb-2023)*

Where required (based on risk) the operational areas have been equipped with impervious surfaces, spill containment kerbs, sealed construction joints and a connection to a sealed drainage system.

The surfacing before and after the c. **£1.5 million** upgrade programme are outlined in **Photograph *6-3*** and **Photograph *6-4***.

Photograph 6-3: *Site surfacing before upgrade (February 2023)*

Photograph 6-4: *Site surfacing, exit from internal road, post-upgrade (February 2023)*

Photograph 6-5: *Site surfacing, within the storage area, post-upgrade (March 2023)*

6.7.5 Subsurface Structures

The operator has established and recorded the routing of all the installation drains and subsurface pipework. Inspection and maintenance programmes for all subsurface structures have been established and will be implemented as per the planned preventive maintenance schedule.

6.7.6 Above Ground Storage Tanks (ASTs)

There is a single 5,000-litre diesel AST associated with the installation used for vehicle refuelling. The AST is self-bunded and compliant with *The Control of Pollution (Oil Storage) (England) Regulations 2001*. All vehicle refuelling will take place on impermeable hard standing (**Photograph *6-6***).

There is a spill kit and metal waste bin for oil and spill rags located adjacent to the AST/refuelling area.

Photograph 6-6: *Diesel storage AST*

6.7.7 Storage areas for IBCs, drums, bags

The following storage areas are located on-site:

- 4 x yellow metal material storage cabinets (with internal bunds) (**Photograph 6-7**). The types of materials contained within the cabinets include Ad-blu (maximum of 1000 litres in total), hydraulic oil (maximum of 1000 litres in total), engine oil (maximum of 1000 litres in total) and coolant (maximum of 1000 litres in total). In addition, there is one IBC of waste oil (maximum of 1000 litres in total). There is a spill kit and metal waste bin for oil and spill rags located adjacent to the storage cabinets.

- 4 x metal waste bins for oil, spill rags *etc.*

- gas cylinder storage cage.

A standalone oil storage area is located on-site. The storage area is located away from drains and sensitive boundaries and is protected against vandalism. The site (public boundary) is protected by a 2.4 m high palisade fence.

Storage areas shall have appropriate signs and notices and shall be clearly marked out, and all containers and packages should be clearly labelled. All raw materials are supplied and stored in labelled UN-approved containers. Incompatible substances shall be kept apart, segregated and/or isolated in line with HSG71 (Health and Safety Executive, 2009).

Photograph 6-7: *Material storage arrangements*

Where spillage of any stored substance could be harmful to the environment, the area shall be appropriately kerbed or bunded.

The maximum storage capacity of storage areas shall be stated (within management system documentation) and not exceeded, and the maximum storage period for containers should be specified and adhered to.

Containers shall be stored with lids, caps and valves secured and in place. This approach shall also be applied to nominally emptied containers.

All containers, drums and small packages should be regularly inspected (at least weekly). Procedures shall be in place to deal with damaged or leaking containers.

Gas cylinders (when present on-site) shall be located within a Health and Safety Executive (HSE) approved static gas cylinder storage cage. Should incompatible cylinders be stored they shall be separated following the British Compressed Gases Association (BCGA) Codes of Practice and Guidance Notes.

6.7.8 Management Controls

All on-site vehicles have diesel and hydraulic tanks. The total loss of the fuel/oil within these tanks is rare but there is a potential risk. There is also a potential risk of spillage during refuelling operations, but this will only ever take place on the impermeable hard standing. Emergency spillage kits will be available and will be regularly inspected. Emergency spill kit training is provided to all employees.

All accidents will be logged and investigated, and actions will be undertaken to prevent reoccurrence. The site environmental management plans will be reviewed annually.

6.8 Odour

Based upon the nature of the proposed operations, the wastes being stored, and their location (concerning sensitive receptors) no significant odour issues are anticipated. Thus, an odour management plan has not been produced.

Although the installation represents a very low risk, monitoring will be undertaken by site staff as part of the weekly site inspections. The presence or otherwise of any offensive odours shall be recorded in the site Diary. If an odour is recorded, the possible source(s) shall be investigated by site staff and preventative action taken. All actions taken shall be recorded within the site diary.

Celsa Manufacturing (UK) Ltd believe that the operations give no reasonable cause for offence or annoyance regarding odour.

6.9 Pests

Based upon the nature of the proposed operations, and the wastes being stored, no significant pest issues are anticipated. Given the limited nature of the potential pest issues, a pest management plan has not been produced.

Although the installation represents a very low risk, monitoring will be undertaken by Site staff as part of the weekly site inspections. The presence or otherwise of any pests shall be recorded in the site diary.

7 Noise and Vibration

7.1 Introduction

Within this section, noise should be taken to refer to noise and/or vibration as appropriate, and detectable beyond the site boundary. Where noise issues are likely to be relevant, the operator is required, in the application, to provide information on the following:

- the main sources of noise and vibration associated with the installation;
- the nearest noise-sensitive sites;
- conditions/limits imposed under other regimes (*e.g.* planning);
- the local noise environment;
- any environmental noise measurement surveys, modelling or any other noise measurements; and
- any specific local issues and proposals for improvements.

The level of detail supplied should be in keeping with the risk of causing noise-related annoyance at sensitive receptors.

7.2 Noise Impact Assessment

An assessment has been undertaken considering the potential sources and associated impacts on the nearest sensitive receptors in the vicinity of the proposed site following the most relevant national and local standards and guidelines. The assessment is presented within a standalone report Ref. 13222-001-R01 Noise Impact Assessment. It is important to note that the presented noise assessment covers both the Celsa Storage Yard (this application) and the adjacent Celsa Processing Yard (covered by a standalone Standard Rules permit under SR2015 No.14 (Ref. EPR/WE4947AA).

7.3 Noise and Vibration Management Plan

A separate noise and vibration management plan has not been produced; however, noise and vibration controls and management systems are considered within **ECP69 - Rotherham 1 Circular Hubs Management Plan - Rev 0**.

8 Emission Limits and Monitoring

8.1 Monitoring of emissions to air

8.1.1 Point source emissions to air – Shredder

There are **no** point source emissions to air.

8.1.2 Fugitive Emissions to Air

As outlined in *Section 6.6* there is limited evidence (since the site started operating in 2013) of significant fugitive emissions from the handling and storage of furnace-ready scrap metal.

No ambient air quality monitoring is proposed.

8.2 Monitoring of emissions to surface water

There are **no** point source emissions to surface water.

8.3 Monitoring of emissions to sewer

As stated in *Section 6.3* there is a single emission point from the installation. The discharge from the compliance point Ref. S1 (manhole 14) initially enters the DB Cargo UK drainage system whereupon it is combined with the DB Cargo UK's surface water and sanitary waste before entering the Yorkshire Water sewer located in Sheffield Road. As the Celsa discharge does not enter the Yorkshire Water sewer directly there is a formal discharge agreement between Celsa and DB Cargo UK.

A monitoring point has been established within Manhole S14 that allows safe access and egress. The scope of the monitoring has been aligned to consider the BAT-7 and BAT-20 requirements and the nature of the stored materials (furnace-ready scrap). These results are provided within the application and summarised in **Table *8-1***. It is important to note that none of the monitoring of indirect associated emission levels (AELs) relate to the storage of waste (*i.e.* they all relate to a waste treatment process).

To aid in the identification of the appropriate AELs the discharge from point S1 has been subject to two rounds of monitoring to assess prevailing discharge characteristics:

- Ref. Test Report 23/14413 Batch 1 – 1st September 2023
- Test Report 23/20670 Batch 1 – 7th December 2023

These results are provided within the application and are also presented in **Table *8-1***.

Table 8-1: *Emission Point S1*

Source	Surface water (process water) from the waste storage area (furnace-ready scrap metal) and an internal roadway.				
Parameter	**S1 (mg/l) 09-23**	**S1 (mg/l) 12-23**	**BAT-20 AEL (mg/l)**	**DB Cargo UK Limits**	**Proposed Frequency**
Hydrocarbon oil index (HOI) (2)	<0.01	<0.01	0.5 – 10	None set	Quarterly
Arsenic (1)	<0.0025	<0.0025	0.01 – 0.05	None set	Quarterly
Cadmium (1)	<0.0005	<0.0005	0.01 – 0.05	None set	Quarterly
Chromium (1)	<0.0015	0.0041	0.01 – 0.15	None set	Quarterly
Iron	0.054	-	N/A	None set	Quarterly
Mercury (1)	<0.001	<0.001	0.0005 – 0.005	None set	Quarterly
Nickel (1)	0.006	<0.002	0.05 – 0.5	None set	Quarterly
Zinc (1)	0.04	0.037	0.1 – 1	None set	Quarterly
COD (Settled)	59	31	N/A	None set	Quarterly
pH	8.03	8.16	N/A	None set	Quarterly
Suspended solids	57	23	N/A	None set	Quarterly
Discharge rate (S1, manhole S14)	-	-	N/A	27.8 l/s	N/A

Notes:

(1) In the case of an indirect discharge to a receiving water body, the monitoring frequency may be reduced if the downstream wastewater treatment plant abates the pollutants concerned.

(2) Celsa monitoring used EPH (C8-C40) instead of HOI.

Cells in green are at or below the laboratory (Element Materials Technology) limit of detection

Based on the results within **Table *8-1*** there were no exceedances of any of the stated BAT-20-AELs for indirect releases. Please note there are no performance criteria set by the Landlord (DB Cargo UK) beyond a maximum discharge rate into their drainage system.

8.4 Monitoring of emissions to land

There are **no** emissions to land from the installation.

8.5 Monitoring of emissions to groundwater (via soakaway)

There are **no** emissions to groundwater from the installation.

8.6 Monitoring of noise emissions

No formal (ongoing/planned) environmental noise surveys are proposed once the installation is operational. This will be subject to review if complaints are received.

8.7 Monitoring of odorous emissions to air

Based upon the nature of the proposed operations and their location (concerning sensitive receptors) no significant odours are anticipated (*i.e.* the installation represents a very low risk). No formal odour monitoring is therefore proposed.

9 Environmental Risk and Impact Assessment

9.1 Introduction

This section of the technical submission provides a summary of the assessment of the environmental significance of the emissions from the installation by looking at the Site in the context of its environmental setting and UK guidance for such assessments.

9.2 Air Quality Impact Assessment

There are **no** point source air emissions associated with the proposed activity.

9.3 Best Available Techniques (BAT) Assessment

A BAT assessment has been undertaken against the current relevant standards:

- Commission Implementing Decision (EU) 2018/1147 of 10 August 2018 establishing best available techniques (BAT) conclusions for waste treatment, under Directive 2010/75/EU of the European Parliament and of the Council (notified under document C(2018) 5070; and
- Non-hazardous and inert waste: appropriate measures for permitted facilities, August 2023.

A line-by-line assessment has been made including statements outlining how BAT is achieved. The results are summarised within a separate attachment Ref. 022-1917 Celsa Rotherham Bespoke Application - BAT Assessment REV00.

No actions have been identified.

9.4 Flood Risk Assessment

According to EA mapping the Site is in Flood Zone 1 (low risk) as outlined within the drainage strategy.

No actions have been identified.

9.5 Fugitive Dust Assessment

A desktop assessment of fugitive dust emissions has been undertaken considering the environmental performance of the site since the permit was issued in 2013. Control measures

(where required) are outlined within the site-specific operating plans (Ref. **ECP69 - Rotherham 1 Circular Hubs Management Plan - Rev 0**).

No actions have been identified.

9.6 Environmental and Climate Change Risk Assessment

A risk assessment using the Standard Rules template (SR2009 No.7) and the current EA guidance on adapting to climate change risk (Environment Agency, 2023) has been undertaken for the site (Ref. 022-1917 Celsa Rotherham Bespoke Application - General Risk and Climate Change Assessment REV00.

No actions have been identified.

9.7 Noise Impact Assessment

An assessment has been undertaken considering the potential sources and associated impacts on the nearest sensitive receptors in the vicinity of the site following the most relevant national and local standards and guidelines. The assessment is presented within a standalone report Ref. 13222-001-R01 Noise Impact Assessment.

The summary of the assessment states:

To assess the impact of noise emissions from the proposed development, TNEI has produced a noise propagation model following ISO9613-2, which predicts the noise immission levels at the nearest identified NSRs. The assessment has been made against the existing background sound levels, which were quantified through baseline sound level monitoring during early morning and regular weekday working hours.

During the consultation with Rotherham Council, it was agreed that if noise immission levels were predicted to be more than 10 dB below the existing noise levels then no further assessment would be necessary.

The assessment has determined that noise immission levels are likely to be more than 10dB below the existing background sound levels at all receptor locations. Accordingly, it is considered that the Proposed Development will not have an adverse noise impact on the local area.

Based on the information presented within this assessment there is a low likelihood of adverse impacts due to the activities.

9.8 Emissions to Sewer Impact Assessment

The discharge from the installation combines with the drainage from the DB Cargo UK area before it enters the Yorkshire Water sewer located within Sheffield Road. The effluent is then transferred to the Yorkshire Water Wastewater Treatment Works (WWTW) located at Aldwarke (Discharge Consent Ref. SAI00037747/ALDWARKE/STF).

According to Yorkshire Water (YW), Aldwarke wastewater treatment works serve the vast majority of Rotherham's population (over 100,000 people). It treats 26,000m^3 of waste water from local homes and businesses every day. YW has invested £7.7 million at the site, a significant proportion of which has gone towards reducing the level of ammonia discharged from the site from 10 mg/l to 3 mg/l. By doing this YW will ensure a much higher quality of water is put back into the Don, which will create a healthier river environment for people, fish and wildlife. This work will ensure compliance with the Water Framework Directive and move the River one step closer to having good ecological status.

The treatment provided at wastewater treatment plants can involve preliminary treatment (removal of grit and gravel and screening large solids), primary treatment (settlement of larger suspended, generally organic matter), secondary treatment (biological breakdown and reduction of residual organic matter) and tertiary treatment (methodology to address different pollutants using different treatment processes). The Yorkshire Water Treatment Works provides treatment up to and including secondary treatment.

The secondary treated effluent from the off-site Yorkshire Water WWTP is discharged to the River Don at point SK 44758 94180 (approximate location only).

In line with the current guidelines, H1 has been used to undertake a screening assessment of the proposed discharge to the sewer via emission point S1 (manhole S14). The various screen captures from the assessment process are outlined below.

9.8.1 Receiving Water Body

The outfall from the off-site WWTP is located in the Humber Catchment, Don and Rother Management Catchment, Don Middle Operational Catchment and Don from River Rother to River Deane Water Body. According to the EA Catchment Explorer, the classification of the water body is, under Cyele 3:

- Ecological Classification – Moderate (2019 and 2022)
- Specific Pollutants Classification – High (2019 and 2022)

- Chemical Classification – Fail (2019) and does not require assessment (2022)

The water quality is typical of a heavily modified water body located within an urban environment combined with sewage discharges (continuous and intermittent).

The Freshwater Q95 flow rate for the River Don has been obtained from the National River Flow Archive. The closest available monitoring site is 27022 - Don at Rotherham Forge Island (NGR: SK426927)[3]. The reported Q95 for the period 1960 – 2022 is 3.85 m^3/s.

9.8.2 Water Discharge Release and Flow Data

The maximum rate the Celsa operations can release into the DB Cargo UK drainage system (before the release to the Yorkshire Water sewer) is 27.8 l/s (0.0278 m^3/s). The maximum discharge rate is controlled by physical constriction and cannot be exceeded. It is important to note that the release to sewer is heavily rainfall dependent *i.e.* it only contains treated rainfall from the waste storage pad/roadway, therefore the mean effluent flow rate is also highly variable. A conservative estimate for the mean flow rate has been estimated using 50% of the maximum flow rate.

9.8.3 Release Concentrations

The release concentrations used within the assessment are outlined in **Table *9-1***. Where the monitoring demonstrates results less than the limit of detection (LoD) a value of 50% has been utilised within H1. Where results are above the LoD the highest value has been used as the maximum value.

Table 9-1: *Input parameters into H1 (release to sewer)*

Parameter	S1 (µg/l) 09-23	S1 (µg/l) 12-23	Value used within H1 (µg/l)
Arsenic (1)	<2.5	<2.5	1.25
Cadmium (1)	<0.5	<0.5	0.25
Chromium (1)	<1.5	4.1	4.1
Iron	54	-	54
Mercury (1)	<1	<1	0.5

3 https://nrfa.ceh.ac.uk/data/station/info/27022

Parameter	S1 (µg/l) 09-23	S1 (µg/l) 12-23	Value used within H1 (µg/l)
Nickel (1)	6	<2	6
Zinc (1)	40	37	`40

To represent a worst-case scenario the maximum concentration has been also utilised as the average concentration within the effluent.

The relevant Sewage Treatment Factors are outlined in ***Table 9-2***.

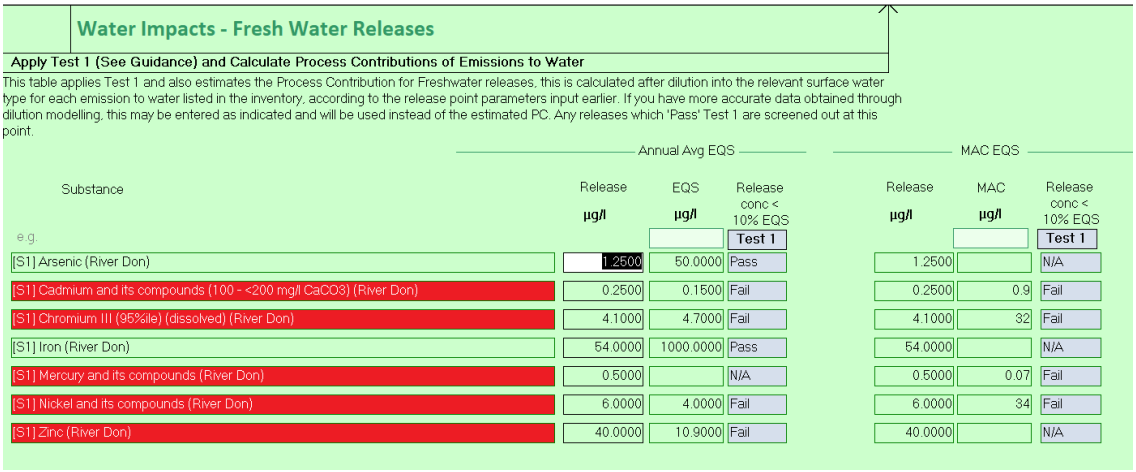
Table 9-2: *Sewage Treatment Factors (proportion remaining)*

Substance	STRF - activated sludge plant	STRF for water filter
Arsenic and compounds - as As	0.89	0.89
Cadmium (dissolved)	0.89	0.89
Chromium and compounds - as Cr	0.16	0.52
Iron (dissolved)	0.77	0.77
Lead (dissolved)	0.67	0.67
Mercury (dissolved)	1	1
Nickel (dissolved)	1	1
Zinc (dissolved)	1	1

9.8.4 Water Impacts – Freshwater Water Releases (Part A)

Test 1 Freshwater Screening – Does the concentration of the substance in the discharge exceed 10 per cent of the EQS?

This test is devised to quickly screen out substances. If the concentration of the substance in the discharge is <10 per cent EQS (AA and/or MAC (or 95 percentile), depending on which EQS(s) the substance has), the substance cannot cause more than 10 per cent deterioration in the watercourse, even if it receives no dilution. If a substance causes less than 10 per cent deterioration in the watercourse, it is not liable to cause pollution.



Water Impacts - Fresh Water Releases

Apply Test 1 (See Guidance) and Calculate Process Contributions of Emissions to Water

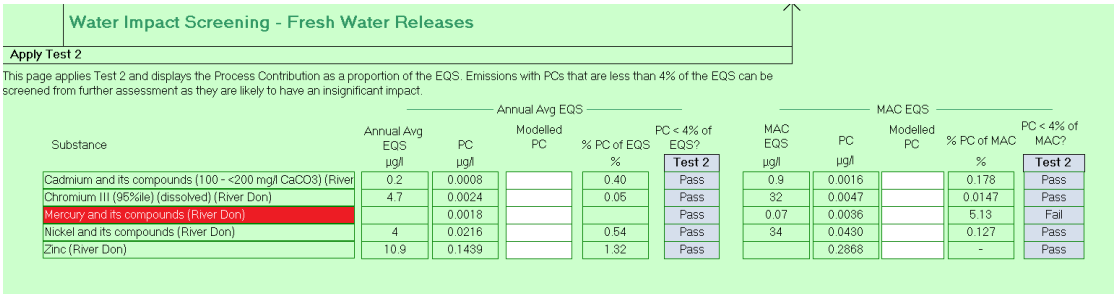
This table applies Test 1 and also estimates the Process Contribution for Freshwater releases, this is calculated after dilution into the relevant surface water type for each emission to water listed in the inventory, according to the release point parameters input earlier. If you have more accurate data obtained through dilution modelling, this may be entered as indicated and will be used instead of the estimated PC. Any releases which 'Pass' Test 1 are screened out at this point.

Substance	Annual Avg EQS Release µg/l	Annual Avg EQS EQS µg/l	Annual Avg EQS Release conc < 10% EQS Test 1	MAC EQS Release µg/l	MAC EQS MAC µg/l	MAC EQS Release conc < 10% EQS Test 1
e.g.						
[S1] Arsenic (River Don)	1.2500	50.0000	Pass	1.2500		N/A
[S1] Cadmium and its compounds (100 - <200 mg/l CaCO3) (River Don)	0.2500	0.1500	Fail	0.2500	0.9	Fail
[S1] Chromium III (95%ile) (dissolved) (River Don)	4.1000	4.7000	Fail	4.1000	32	Fail
[S1] Iron (River Don)	54.0000	1000.0000	Pass	54.0000		N/A
[S1] Mercury and its compounds (River Don)	0.5000		N/A	0.5000	0.07	Fail
[S1] Nickel and its compounds (River Don)	6.0000	4.0000	Fail	6.0000	34	Fail
[S1] Zinc (River Don)	40.0000	10.9000	Fail	40.0000		N/A

Test 2 Freshwater Screening - Does the process contribution (PC) exceed 4 per cent of the EQS?

This step introduces the dilution available in the receiving watercourse.

If the PC exceeds 4 per cent of the EQS, it is potentially significant and should be carried forward to Test 3. If it does not, the substance is insignificant and is screened out *i.e.* it is not liable to cause pollution and requires no control.



Water Impact Screening - Fresh Water Releases

Apply Test 2

This page applies Test 2 and displays the Process Contribution as a proportion of the EQS. Emissions with PCs that are less than 4% of the EQS can be screened from further assessment as they are likely to have an insignificant impact.

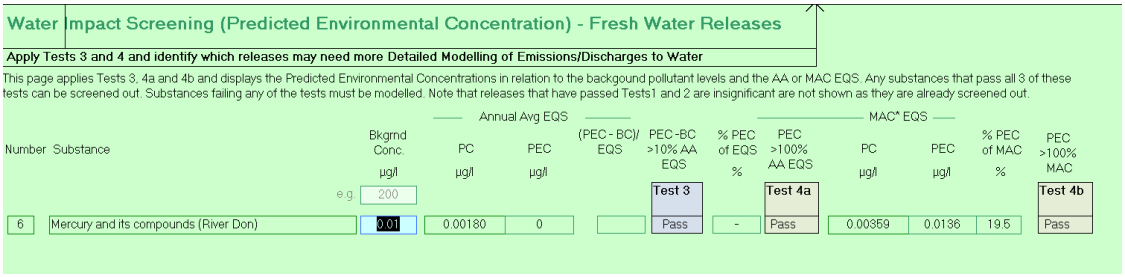
Substance	Annual Avg EQS Annual Avg EQS µg/l	Annual Avg EQS PC µg/l	Annual Avg EQS Modelled PC	Annual Avg EQS % PC of EQS %	Annual Avg EQS PC < 4% of EQS? Test 2	MAC EQS MAC EQS µg/l	MAC EQS PC µg/l	MAC EQS Modelled PC	MAC EQS % PC of MAC %	MAC EQS PC < 4% of MAC? Test 2
Cadmium and its compounds (100 - <200 mg/l CaCO3) (River	0.2	0.0008		0.40	Pass	0.9	0.0016		0.178	Pass
Chromium III (95%ile) (dissolved) (River Don)	4.7	0.0024		0.05	Pass	32	0.0047		0.0147	Pass
Mercury and its compounds (River Don)		0.0018			Pass	0.07	0.0036		5.13	Fail
Nickel and its compounds (River Don)	4	0.0216		0.54	Pass	34	0.0430		0.127	Pass
Zinc (River Don)	10.9	0.1439		1.32	Pass		0.2868		-	Pass

A substance must pass both Tests 3 and 4 to be screened out.

Test 3 Freshwater Screening – Does the difference between upstream quality and the Predicted Environmental Concentration (PEC) exceed 10 per cent of the EQS?

This step introduces the existing concentration of the substances in the receiving watercourse. This step therefore requires upstream chemical quality data or assumed upstream chemical quality data.

The PEC is the predicted concentration in the receiving water downstream of the discharge. The PEC is a combination of the Process Contribution (PC) and background concentration.



Water Impact Screening (Predicted Environmental Concentration) - Fresh Water Releases

Apply Tests 3 and 4 and identify which releases may need more Detailed Modelling of Emissions/Discharges to Water

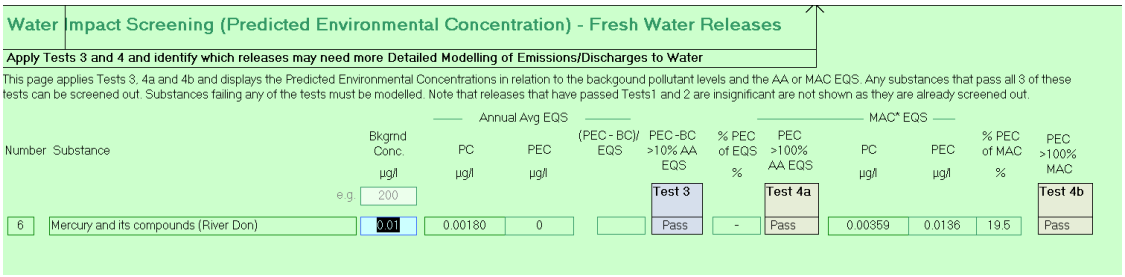
This page applies Tests 3, 4a and 4b and displays the Predicted Environmental Concentrations in relation to the backgound pollutant levels and the AA or MAC EQS. Any substances that pass all 3 of these tests can be screened out. Substances failing any of the tests must be modelled. Note that releases that have passed Tests1 and 2 are insignificant are not shown as they are already screened out.

Number	Substance	Bkgrnd Conc. µg/l	Annual Avg EQS PC µg/l	Annual Avg EQS PEC µg/l	(PEC - BC)/ EQS	PEC - BC >10% AA EQS	% PEC of EQS %	PEC >100% AA EQS	MAC* EQS PC µg/l	MAC* EQS PEC µg/l	% PEC of MAC %	PEC >100% MAC
	e.g.	200				Test 3		Test 4a				Test 4b
6	Mercury and its compounds (River Don)	0.01	0.00180	0		Pass	-	Pass	0.00359	0.0136	19.5	Pass

If the difference between upstream quality and the PEC is greater than 10 per cent of the EQS, the substance is potentially significant and needs to be assessed in Phase 2 modelling. If it is not, proceed to Test 4.

Test 4 Freshwater Screening – Does the PEC exceed the EQS in the receiving water downstream of the discharge?

This test assesses whether the discharge, when combined with the existing upstream water quality, will contribute to an EQS failure in the receiving water. It therefore takes account of in-combination effects with existing discharges. If the PEC exceeds the EQS, the substance is potentially significant and needs to be assessed in Phase 2 modelling. If it is not exceeded, the substance is insignificant and is screened out *i.e.* it is not liable to cause pollution and requires no control.



Water Impact Screening (Predicted Environmental Concentration) - Fresh Water Releases

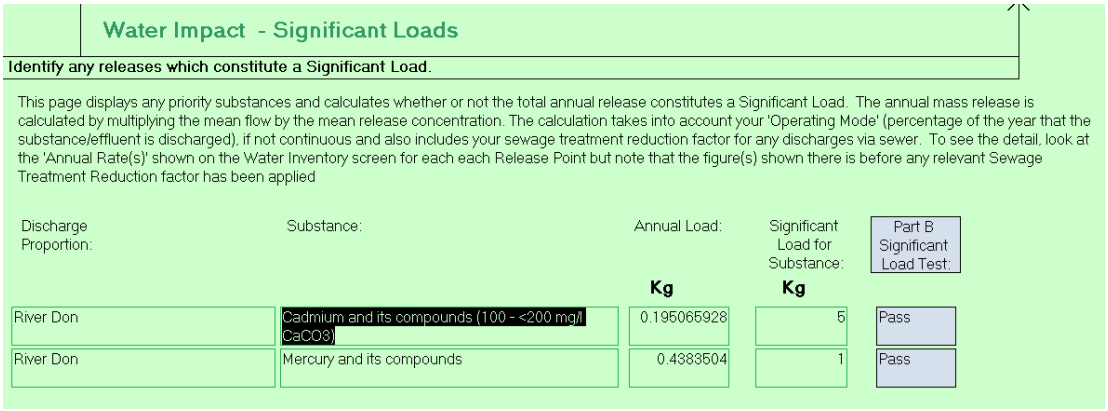
Apply Tests 3 and 4 and identify which releases may need more Detailed Modelling of Emissions/Discharges to Water

This page applies Tests 3, 4a and 4b and displays the Predicted Environmental Concentrations in relation to the backgound pollutant levels and the AA or MAC EQS. Any substances that pass all 3 of these tests can be screened out. Substances failing any of the tests must be modelled. Note that releases that have passed Tests1 and 2 are insignificant are not shown as they are already screened out.

Number	Substance	Bkgrnd Conc. µg/l	Annual Avg EQS PC µg/l	Annual Avg EQS PEC µg/l	(PEC - BC)/ EQS	PEC - BC >10% AA EQS	% PEC of EQS %	PEC >100% AA EQS	MAC* EQS PC µg/l	MAC* EQS PEC µg/l	% PEC of MAC %	PEC >100% MAC
	e.g.	200				Test 3		Test 4a				Test 4b
6	Mercury and its compounds (River Don)	0.01	0.00180	0		Pass	-	Pass	0.00359	0.0136	19.5	Pass

Part B Screening – Is the Significant Load Exceeded?

Part B screening must be completed for all priority hazardous substances, even if the substance has been screened out by Part A screening.



Water Impact - Significant Loads

Identify any releases which constitute a Significant Load.

This page displays any priority substances and calculates whether or not the total annual release constitutes a Significant Load. The annual mass release is calculated by multiplying the mean flow by the mean release concentration. The calculation takes into account your 'Operating Mode' (percentage of the year that the substance/effluent is discharged), if not continuous and also includes your sewage treatment reduction factor for any discharges via sewer. To see the detail, look at the 'Annual Rate(s)' shown on the Water Inventory screen for each each Release Point but note that the figure(s) shown there is before any relevant Sewage Treatment Reduction factor has been applied

Discharge Proportion:	Substance:	Annual Load: Kg	Significant Load for Substance: Kg	Part B Significant Load Test:
River Don	Cadmium and its compounds (100 - <200 mg/l CaCO3)	0.195065928	5	Pass
River Don	Mercury and its compounds	0.4383504	1	Pass

According to the H1 assessment, both Cadmium and Mercury pass the significant load test.

9.8.5 Assessment Summary

According to EA Guidance, the discharge is “therefore insignificant and is not liable to cause pollution”.

No actions have been identified.

9.9 Improvement Programme

No potential improvement actions have been identified.