

REAL ALLOY

REAL ALLOY UK LTD
Swansea

Waunarlwydd Works,
SA5 4SF

Improvement Number 4.1.5

Fugitive emissions shall be reviewed on an annual basis and a summary report on this review shall be sent to the Agency at the reporting address by 31st March detailing such releases and the measures taken to reduce them. (2016)

REAL ALLOY UK LTD
Waunarlwydd Works,
Westfield Industrial Estate
Waunarlwydd
SWANSEA
SA5 4SF

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1. Introduction

The following report looks at identifying and quantifying all sources of fugitive in conjunction with the individual aspects covered under EMAS; of the fugitive releases, their significance and a timetable for reducing said fugitive emissions.

2. Emissions

The plant has been split into ten zones, each given a separate assessment. The zones are as follows:

Zone 1 – The Dome.

Zone 2– Bays X, Y, Z

Zone 3 – The Mudroom (includes former Bay C & D areas)

Zone 4 – The Furnace building.

Zone 5– The Office block

Zone 6 – Maintenance stores & workshop

Zone 7 – Bays 13, 14 and 15.

Zone 8– Ex-De-ox area

Zone 9– Concrete yard area

Zone 10 – Extrusion Area (Finished Goods and Raw Materials)

(The Site Layout Plan from our Permit is located at the end of the report for reference – Appendix 1).

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Zone 1 – The Dome

- a) Dust is generated from the tipping of dross material and charging from within the bays. The controls identified for dust control include dust skirts around the open end entrance to the building; which are maintained and replaced. The roller shutter doors are closed when not in use to minimise any dust blowing inside the building. All external gaps between the bottom of the sheeting and the bay walls have been plated to stop fugitive dust exiting the building. These identified controls minimise fugitive dust emissions from this area, resulting in a low environmental impact.
- b) The bays (1-12) are for storage of dross and scrap material. Deliveries of materials are made during day time hours only, during these deliveries the barrier controls (roller shutter door) is closed for all unloading operations to help minimise any noise emissions. Therefore there are limited noise emissions and low environmental impact.
- c) Dross materials are stored in this area to ensure it is kept dry. Keeping materials dry means Ammonia based odours and Hydrogen gas are eliminated. These controls mean that the environmental impact is low.
- d) The Dome roof is in good condition, this will ensure no wet weather can get in, ensuring no fugitive emissions are generated or can escape from water ingress. The large access door from the outside of the Dome building is in good working order. An internal task force was initially set to look at replacing the door, this was not taken further due to the door being in good working order.
- e) This area is subject to sweeping using a mechanical brush, this picks any floor residues up reducing fugitive emissions. The task is carried out daily by a contract sweeper.

Zone 3 –Bays X, Y, Z.

- a) Bays X, Y and Z are used to decant scrap material into, before charging into the furnace. The nature of the material (larger solids) means there is little dust generated from this process.
- b) When decanting scrap material into Bays X, Y and Z before charging into the furnaces, once raw material has been brought into this area, the roller shutter door is closed, this door is situated directly along side these bays (combined with the bay walls and roof means the noise generated is well contained). Therefore, there are little or no fugitive noise emissions from this area with minimal environmental impact.

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- c) The raw materials are decanted into bays X, Y and Z are clean types of scrap, so there with little to no odour from the raw materials stored in these bays. Therefore there is little or no fugitive odour emission from this area with minimal environmental impact

Zone 4 – The Mudroom

- a) Dust is generated when loading vehicle containers with salt cake. To minimise the dust generation, containers are loaded under a purpose built extraction hood which is directly over the loading area.

The hood is part of the plant preventative maintenance schedule. The extraction system is linked into the bag house that was installed during October 2011. The bag house system which services the mud room is subject to regular maintenance and is monitored daily through the use of the Scada system. The external sheeting of the mud room is inspected regularly and any damaged sheeting identified and promptly repaired. The mudroom walls are plated with 12mm sheet steel to a height of 4 meters this assists protecting the wall and sheeting, these plates are capped to ensure no stray materials can escape through the top of the sheeting. Periodically these are damaged, repair happens at the earliest time in conjunction with the process. A small gap at the top of an external roller door is covered to ensure limited dust emissions are experienced from the area, there is a minimal environmental impact. Mudroom sheeting was replaced during 2016.

- b) The mudroom is an enclosed building with two roller shutter doors. The area is used for storage of salt cake. Collections of the salt cake are during normal day time hours only and both roller shutter doors are closed during loading of this material, to minimise any noise emission. Therefore there are little or no fugitive noise emissions from this area so there is a minimal environmental impact.
- c) All salt cake material is stored in this area to ensure it is kept dry. This area had a complete new roof during 2013. Keeping materials dry means Ammonia based odours and Hydrogen gas are eliminated. These controls mean that the environmental impact is low.

Zone 5 – The Furnace Building

- a) The fitting of the secondary doors on the furnaces means the amount of smoke and dust being produced during production has been vastly reduced. The hood and vestibule are subject to regular maintenance, which includes

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replacing the skirt at the back of the furnace as required. Therefore, there is little or no fugitive dust emissions from this area so there is a minimal environmental impact.

- b) The furnace building is an enclosed building with three roller shutter doors; these doors are closed whenever possible to reduce any noise from the process. Therefore there is little or no noise from this area so there is a minimal environmental impact.
- c) The secondary door and extraction system on the furnaces further reduces potential odour from the furnace process. The furnace building is an enclosed building with three roller shutter doors; these doors are closed when ever possible to reduce any odour from the process. Controls are tightly monitored to ensure odour is minimised and it has minimal environmental impact.
- d) The bag house system has improved the draw from both furnace hoods reducing the possibility of any fugitive emission from the furnaces. In addition, the extraction fans are linked into a three stage operation. This can be controlled by the Furnace operators and is dependant on the materials being processed.
- e) The furnace building is also subject to a regular housekeeping using a mechanical brush, this is used to sweep/hover the floor several times a shift, reducing the displacement of fugitive emissions.

Zone 6 – The Office Block

- a) This area is used for office bases duties there are no dust fugitive emissions from this area so minimal environmental impact.
- b) The processes within the office result in limited noise emissions and minimal environmental impact.
- c) The offices have no odour emissions, so minimal environmental impact.

Zone 7 – Maintenance stores & Workshop

- a) Fugitive Emissions – Dust – this area is used for maintenance and repair work. There is little or no dust fugitive emissions from this area so there is minimal environmental impact.
- b) Suitable barrier controls during heavy repairs (during night-time operations) means there is limited noise emissions from this area so there is minimal environmental impact.

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- c) Occasionally the workshop will be used for welding and burning operations that will generate little odour emissions. Suitable extraction ensures this fume results in minimal environmental impact.
- d) The rear stores area is a storage area and not an operational area. Minor work only, is completed in this area; therefore keeping emission escape to a minimum.

Zone 8 – Bays 13, 14 and 15

- a) Small volumes of high recovery dross are stored in bays 13, 14, 15. A minimal amount of dust occurs from tipping loads in these bays. However, this is contained by the roller shutter doors being closed during unloading of this material, which minimises any dust blowing inside the building. All external gaps between the bottom of the sheeting and the bay walls have been plated to stop fugitive dust exiting the building from these bays.
- b) Bays 13, 14 and 15 are the main bays used for high recovery dross. Deliveries are during normal day-time hours and the roller shutter doors are closed during unloading of this material, this is to minimise any noise emission. Therefore there are little or no fugitive noise emissions from this area so there is a minimal environmental impact.
- c) Dross materials in these bays are kept dry. By keeping the material dry this eliminates any odour emissions ensuring minimal environmental impact.
- d) At the front of these three bays is a small amount of covered yard area, this forms part of the housekeeping area that is swept regularly.

Zone 9 – Ex-De-ox storage area

- a) Small volumes of materials are stored in this area, this could be in the form of dross or beverage can type material. Material is usually transported to this area by internal methods, a roller shutter door and good driving practices help to minimise any potential release.

Zone 10 – External storage area

- a) Aluminium ingots are stored on the yard area before shipping to customer. These ingots are clean finished product.

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- b) Clean scrap is stored on concrete areas, good housekeeping helps ensure no releases occur. Regular mechanical sweeping of the yard and monthly water sampling keeps a strong focus on ensuring no emission release occurs.

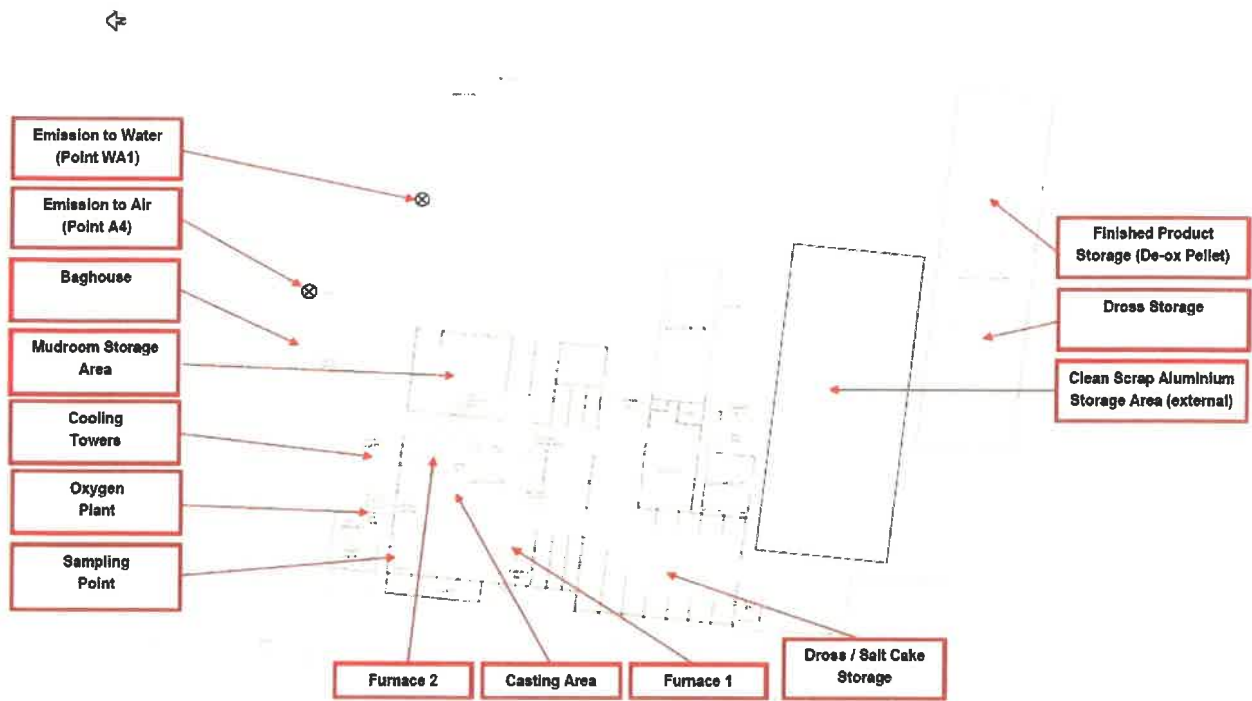
Zone 11 – Extrusion Building (Finished Product Storage (De-Ox Pellet) and Dross Storage

- a) The building (adjacent to main site) is split into two parts; one holding Finished Goods for direct shipment to customer, the other for the storage of Dross to be processed in the Furnaces.

Appendix 1 – Site Layout Plan, Real Alloy, Waunarlwydd, Swansea

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Site layout plan



- 1. Do not scale off the drawing
- 2. All dimensions to be confirmed on site
- 3. This drawing is copyright of Sol Environment Ltd
- 4. This drawing is to be read in conjunction with relevant consultation drawings and specifications

Rev:	Date:	Desc:
0	DEC 16	Original

Client:	REAL ALLOY RING LTD
Project:	WESTBURY INDUSTRIAL ESTATE
Drawing Title:	SITE PLAN

Job No:	SOL1512RAC1
Date:	DEC 16
Drawn By:	SCPHIE PERLIN

Drawing No:	RAC1
Revision:	0
Scale:	N75

 Sol Environment Ltd
2nd Floor,
10 The Lees Millers
Worcestershire - WPT14 9HT
t: +44(0)1854 572727
e: info@sol-environment.co.uk
www.sol-environment.co.uk

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