

Natural Resources Wales permitting decisions

**Real Alloy UK Limited
(Waunarlwydd Works)
Decision Document**

Contents

Variation	1
The Variation number is: EPR/EP3935UC/V008 (PAN-017925)	1
The operator is: Real Alloy UK Limited.....	1
The Installation is located at: Waunarlwydd Works, Waunarlwydd, Swansea SA5 4SF	1
Purpose of this document	2
Key issues of the decision	3
Receipt of application	3
Confidential information	3
Identifying confidential information	3
Request for further information.....	3
Consultation	4
The facility and changes to the listed activity	4
Legislation	5
The site.....	5
Site condition report	5
Biodiversity, Heritage, Landscape and Nature Conservation	5
SAC, SPA and Ramsar Sites	5
Sites of Special Scientific interest SSSI	6
Non statutory sites	6
Environmental Risk Assessment	7
Air.....	7
Water	9
Soil	9
Odour	9
Noise.....	9
Fugitive emissions.....	10
Monitoring	11
Reporting	11
Operating techniques.....	12
Fire prevention and mitigation plan.....	12
Raw materials	13
Waste types	13
Improvement conditions	13
Incorporating the application	14

Operator Competence	14
Environment management system	14
OPRA.....	14
ANNEX 1: Improvement Conditions.....	15

Variation

The Variation number is: [EPR/EP3935UC/V008 \(PAN-017925\)](#)

The operator is: [Real Alloy UK Limited](#)

The Installation is located at: [Waunarlwydd Works, Waunarlwydd, Swansea SA5 4SF](#)

We have decided to issue the variation for Waunarlwydd Works operated by Real Alloy UK Limited.

We consider in reaching that decision we have taken into account all relevant considerations and legal requirements and that the permit will ensure that the appropriate level of environmental protection is provided.

Real Alloy UK Limited have applied to vary the permit for their installation Waunarlwydd Works located at Waunarlwydd, Swansea. There are three main changes the applicant wants to make to their permit are as follows;

- Addition of a shredder and baler for the treatment of waste (up to 3000 kg/hour) prior to the main processing activity.
- Increase the annual waste throughput limit (in Table S2.2 of the permit) from 65,000 tonnes per year to 80,250 tonnes per year.
- Increase the maximum salt slag storage on site from 15,000 tonnes to 25,000 tonnes.

Purpose of this document

This decision document:

- explains how the application has been determined
- provides a record of the decision-making process
- shows how all relevant factors have been taken into account
- justifies the specific conditions in the permit other than those in our generic permit template.

Unless the decision document specifies otherwise we have accepted the applicant's proposals.

Key issues of the decision

Receipt of application

The permit was received on the 04/05/2022 and picked up for duly making assessment including claim on commercial confidentiality on 27/06/2022. A not duly made letter requesting more information was sent on the 25/08/2022. The application was duly made on the 08/09/2022.

Confidential information

A claim for commercial or industrial confidentiality has been made.

We have accepted the claim for confidentiality. We consider that the inclusion of the relevant information on the public register would prejudice the applicant's interests to an unreasonable degree. The reasons for this are given in the notice of determination for the claim. The decision was taken in accordance with our guidance on commercial confidentiality.

Identifying confidential information

We have identified information provided as part of the application that we consider to be confidential. The decision was taken in accordance with our guidance on commercial confidentiality.

Request for further information

Further information was also requested by way of a Schedule 5 Notice further details on the impacts to air on using both furnaces. The Schedule 5 Notice was sent on 10/11/2022 with a response date of 25/11/2022. The Applicants initial response to the Schedule 5 Notice was provided on 16/11/2022 and the additional response was provided on the 10/02/2023.

The second Schedule 5 notice requesting a fire prevention and mitigation plan was sent on 12/12/2022 with a response date of 06/01/2023. A response was received on 06/01/2023.

A copy of the information notice and e-mails requesting further information were placed on our public register as were the responses when received.

Consultation

Consultation was not requirement for this type of variation. The decision was taken in accordance with RGN 6 High Profile Sites, our Public Participation Statement and our Working Together Agreements.

The facility and changes to the listed activity

The variation will add a new waste activity: shredding and bailing which is classified as a waste operation, R4: Recycling/reclamation of metals and metal compounds. The applicant has stated that the shredding activity will not exceed 75 tonnes per day threshold and therefore will not fall under an installation Section 5.4 activity.

Following the variation, the installation consist of the activities listed in Part 2 of Schedule 1 to the Environmental Permitting Regulations and the following directly associated activities.

- S2.2 A1(b) i: Melting, including making alloys, of non-ferrous metals, including recovered products and the operation of non-ferrous metal foundries where the plant has a melting capacity of more than 4 tonnes per day for lead or cadmium or 20 tonnes per day for all other metals'

The regulated facility is also a waste operation at which the following recovery operations will be undertaken.

- R4: Recycling/reclamation of metals and metal compounds
- R13: Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)

The following directly associated activities

- Sampling and analysis of aluminium alloys and aluminium scrap material.
- Storage of salt slag on site (limited to 25000 tonnes)

Legislation

NRW is satisfied that this decision is compatible with its general purpose of pursuing the sustainable management of natural resources in relation to Wales and applying the principles of sustainable management of natural resources.

All applicable European directives have been considered in the determination of the application.

The site

There are no changes to the site boundary as a result of the variation. The additional salt slag storage location had already been incorporated into the permit in a previous variation (V007).

Site condition report

There is no change to the site boundary as a result of the variation and as such a site condition report was not required.

Biodiversity, Heritage, Landscape and Nature Conservation

The application is within the relevant distance criteria of a site of heritage, landscape or nature conservation, and/or protected species or habitat.

SAC, SPA and Ramsar Sites

The following Natura 2000 and Ramsar Sites were identified within 10 km of the installation;

Ramsar

- Burry Inlet
- Crymlyn Bogs

SPA

- Burry Inlet

SAC

- Gower Commons (Tiroedd Comin Gwyr)
- Limestone Coast of South West Wales (Arfordir Calchfaen De Orllewin Cymru)
- Gower Ash Woods (Coedydd Ynn Gwyr)
- Crymlyn Bog (Cors Crymlyn)

- Carmarthen Bay and Estuaries (Bae Caerfyrddin ac Aberoedd)

A full assessment of the application and its potential to affect the sites/species and habitats has been carried out as part of the permitting process. We consider that the application will not affect the features of the site, species and habitats.

A OGN 200 form 1 habitats regulation assessment (HRA) was written and sent to the local environment team for consultation (statutory consultee). A copy of the OGN 200 form 1 and the environment teams' response (OGN 200 form 2) can be found on our public register.

Sites of Special Scientific Interest SSSI

No SSSI were identified within 2 km screening distance of the installation, therefore an Appendix 4 assessment was not required for this variation.

Non statutory sites

The following non statutory sites were identified within 2 km of the Installation

Local wildlife sites:

- Nant Ilwyd Valley
- West Gowerton Woods
- Mynydd Garn Goch Common
- Stafford Common
- Penyfodau Fawr To Llewitha
- Dunvant Brickworks
- Alcoa Wet Meadows
- Mynydd Bach-Y-Glo
- Bishwell Common
- Gowerton Mart Woods
- Lower Lliw Corridor & Llan Confluence
- Cwmmawr Woods
- Waungron to Gowerton Railway Line
- Main Swansea-Fishguard Railway Line

The highest annual concentrations of NO_x and SO_x and the weekly concentration of HF are all below 100% of the critical level of those substances. As per current guidance these emissions screen out as insignificant for non-statutory site and have not been considered for further assessment.

There are no other impact pathways from the installation that could cause damage to the non-statutory ecological receptors.

Environmental Risk Assessment

Air

There are no new point source emissions to air as a result of the variation and there will be no changes to any existing emissions limits.

The increase in annual throughput would allow both furnaces to run at full capacity all year. Presently only one to change the operation time of the furnaces from 1 furnace running 24 hours a day 7 days a week and the second furnace running 24 hours a day for 5 days. The variation will allow both furnaces to run at full capacity all year round.

The applicant has submitted modelling to support the original H1 assessment done in 2009 for the worst case scenario from the site operating at full capacity all year. This modelling assessed the impacts on human health and designated sites (see Biodiversity, Heritage, Landscape and Nature Conservation section for details on protected sites).

Human Health

As both furnaces have been permitted to run at full capacity for, on average, 5 of the 7 days per week, the variation will not change the maximum short term (hourly) concentration on either the human or ecological receptors.

Particulate matter

The air quality assessment of particulate matter showed that the predicted environmental concentration of annual PM₁₀ of 1.7 µg/m³ which is 29% of the environmental assessment level and PM_{2.5} annual predicted environmental

concentration was 37% of the environmental assessment level. As such the emission of particulate matter screen out as insignificant.

Particulate matter currently has an annual limit on the permit. This will not change as a result of the variation, therefore the maximum potential annual impact from particulate matter will not change as a result of the variation.

Sulphur dioxide

Sulphur dioxide only has a short term (hourly and daily) limits for assessment. As such the proposal would not change the maximum impact on the nearest receptors.

Oxide of nitrogen NO_x

The maximum predicted long term impacts of NO_x (as NO₂) was 5 µg/m³ or 12.5% of the environmental assessment level of 40 µg/m³, however the predicted environmental concentration was 12.3 µg/m³ or 30.8% of the environmental assessment level. As the PEC is less than 70% of the assessment level the emissions screen out as insignificant.

Hydrogen fluoride and Hydrogen chloride

The process contribution of the monthly hydrogen fluoride was assessed as both furnaces would be running 7 days a week. The process contribution of HF was 0.36 µg/m³ or 2.2% of the environmental assessment level (EAL) and the predicted environmental concentration was 0.86 µg/m³ or 5.4% of EAL. As monthly is considered a short term the emission of hydrogen fluoride screen out as insignificant (<10%).

Hydrogen chloride does not have a long term EAL. As the maximum short term emission will remain unchanged as a result of the variation, we have not assessed this any further.

VOC as benzene

The maximum process contribution of volatile organic compounds, assessed as benzene was 3.6 µg/m³ which was 71.5% of the environmental assessment level. The predicted environmental concentration was 76.9% of the EAL using detailed modelling. As this is less than 100% of the environmental assessment level using detailed modelling the emission screens out as insignificant.

Emission limits

There are no new point source emissions and there are no changes to existing limits as a result of the variation. The existing emission limits would remain sufficient to be protective to the environment and human health.

Water

There is no change to discharge to surface water as a result of this variation. The new activities will take place indoor within the existing site boundary.

Emission limits

There are no changes to emission limit to surface water as a result of this variation.

Soil

There is no change to the site boundary or any emissions to ground as a result of this variation.

Odour

The addition of the shredder and baler should not lead to any new sources of odour from site. The operator will have techniques in place to reject odours waste that comes in and remove from site as soon as possible.

Based upon the information in the application we are satisfied that the appropriate measures will be in place to prevent or where not practicable to minimise the effects of odour.

Noise

The nearest residential receptor is located 50 meters to the south of the installation boundary and the next nearest receptor are located 480-500 meters to the west and south west of the installation. Given the close proximity of the installation to the nearby residential receptors the operator submitted a noise impact assessment (NIA) to determine the current impacts from the site and the impacts from the proposed addition of the shredder and baler.

Noise impact assessment

The NIA outlined the impact from the existing site, the impact of the new activity when considered alone and the combined impacts of both the new and existing activities.

The NIA concluded that the noise impact from the proposed shredder and baler would be 8-9 dB below the existing sound pressure level from the site and therefore is unlikely to significantly increase the noise level from the site.

However, the site at present has a 9 dB above background during daytime and 5 dB above background at night, which means that the site at present has an adverse impact or significant adverse impact (depending on context) at the nearest receptor.

The noise impact assessment (NIA) and modelling was reviewed by NRW's air quality and noise specialist team.

Noise management plan

The applicant has also proposed a noise management plan. Only a provisional noise management plan was submitted for the new activities as part of the variation. The noise management plan outlines the measures the operator will need to take including the use of acoustic enclosure to achieve a sound pressure level (1 meter from the building) of 75 dB or less for the shredder and 70 dB or less for the baler.

We have found that the proposal laid out in the noise management plan are sufficient to ensure that the shredder and baler would not lead to increase in sound level. We have also considered that the mitigation laid out in the noise management plan would not hinder long term reduction in sound levels from the site.

Fugitive emissions

The new shredder and baler could lead to potential fugitive emissions of dust. The operator has stated that it is not possible for them to use water spray for treatment of fugitive dust as the shredder is located in the same building as the salt slag which would react with water to produce flammable gases and as such was not suitable as

abatement. We agree with this justification for not using water spray. All activities relating to the use of the shredder and baler occur indoors.

The additional salt slag will be stored indoors away from moisture to prevent the formation and emission of gases. The area where the salt slag is to be placed was added to the permit in the previous variation.

Based upon the information in the application we are satisfied that the appropriate measures will be in place to prevent or where that is not practicable to minimise fugitive emissions and to prevent pollution from fugitive emissions.

Monitoring

There are no changes to monitoring parameters as a result of the variation.

Reporting

There are no changes to the reporting as a result of the variation.

Operating techniques

We have reviewed the techniques used by the operator and compared these with the relevant guidance notes. We have accepted these operating techniques and integrated these into the operating techniques table (Table S1.2).

The operator will continue to meet the BAT AEL as set by the BAT reference document (BRef) for non-ferrous metals.

Fire prevention and mitigation plan

It was deemed during the determination process that an fire prevention and mitigation plan was required for the site due to the addition of the shredding activity. The fire prevention and mitigation plan was therefore request as part of a schedule 5 on the 12/12/2022 and a response was received on the 06/01/2023.

We have assessed the response using the appropriate checklist and guidance and highlighted areas that are lacking from the report. As the issues identified are part of the existing permitted site, (with the variation not changing key aspects of the plan) and a recent inspection from the local Fire Rescue Service, we have decided, that our assessment of the FPMP was sufficient. This decision was taken in line with the relevant guidance.

The applicant has stated that fire water is not suitable due to the presence of salt slag at the site.

We have decided that the information should be addressed in a revised FPMP as an improvement condition. We have made this decision for the following reasons:

- The site is an existing permitted installation and there are no new waste types being accepted on site as a result of the variation or any changes to storage or amount of waste stored on site. As such the majority of the information identified as inefficient in the FPMP are out of scope of the proposals that the applicant has outlined and are part of the existing installation.
- The shredded waste is only stored on site for 24 hours prior to passing into the blast furnace.

- Salt slag is not subject to FPMP as it is a waste product from the installation activity but has been considered in the FPMP due to the potential for it to react with water to produce flammable gases. The salt slag is already permitted to be stored on site and as such the mitigation measures will not change significantly as a result of the increase in tonnage on site.
- The site has not had a recent incident associated with the waste accepted on site.
- The site has had a recent inspection from the Mid and West Wales Fire and Rescue.

A copy of the improvement condition used in the permit can be found in annex 1 of this document.

Raw materials

There are no changes to the raw materials outlined in the permit.

Waste types

There are no additional waste codes or types are being added as a result of this variation.

Improvement conditions

Based on the information on the application, we consider that we need to impose improvement conditions. Details of the improvement conditions used can be found at Annex 1.

Incorporating the application

We have specified that the applicant must operate the permit in accordance with descriptions in the application, including all additional information received as part of the determination process.

These descriptions are specified in the Operating Techniques table (Table S1.2) in the permit.

Operator Competence

Environment management system

There is no known reason to consider that the operator will not have the management systems to enable it to comply with the permit conditions. The decision was taken in accordance with RGN 5 on Operator Competence.

The only change to the environmental management system as a result of the variation is the addition of the work instruction relating to the shredder. The rest of the EMS has already been assessed under previous variation.

OPRA

The OPRA score at permit issue is 67

ANNEX 1: Improvement Conditions

Table S1.3 Improvement programme requirements

Reference	Requirement	Date
IC7a	The Operator shall undertake noise monitoring to demonstrate that the maximum sound pressure levels does not exceed the limits outlined in the preliminary noise impact assessment. An addendum to the existing noise impact assessment for the site shall be submitted to Natural Resources Wales for approval. This shall: • Meet BS4142:2014+A1:2019 standards • Reference to the Welsh Government Noise and soundscape action plan 2018-2023 • 1/3rd octave and narrow band (FFT) measurements to identify any tonal elements or low frequency noise. The amended noise impact assessment should also contain confirmation of the sound power level of the ID fan stack is equal or less than the modelled result The Operator shall submit the revised noise impact assessment to Natural Resources Wales for approval. The report shall make reference to the predictions and noise level outlined in the preliminary noise impact assessment.	Within 3 months of commissioning of the shredder and baler or as otherwise agreed in writing with Natural Resources Wales
IC7b	The Operator shall submit an finalised noise management plan. This should include any additional mitigations measures if the noise levels in the noise impact assessment for IC7a exceed any of the predictions outline in the original noise impact assessment and preliminary noise management plan submitted for permit variation V008. The report shall be completed in line with the current relevant guidance and submitted to Natural Resources Wales for approval.	Within 6 months of commissioning of the shredder and baler or as otherwise agreed in writing with Natural Resources Wales

Table S1.3 Improvement programme requirements

Reference	Requirement	Date
IC8	The Operator shall submit to Natural Resources Wales, and obtain Natural Resources Wales written approval to it, a revised Fire Prevention and Mitigation Plan (FPMP) for the installation. The report shall follow the FPMP requirements in the most recent guidance available on the Natural Resource Wales website (https://naturalresources.wales/permits-and-permissions/environmental-permits/guidance-to-help-you-comply-with-your-environmental-permit/?lang=en) or demonstrate equivalence to this, and shall address all outstanding information issues identified by the Operator or Natural Resources Wales. These outstanding issues to be include, but is not limited to the following: • More details on the storage of the baled waste • More information on the fire resistance period of the walls • Risk of tramp metal getting into move machinery • More details on any circumstances that would warrant a review of the Plan	6 Months following variation of V008