

Compliance Assessment Report CAR_NRW0039612

Permit being assessed: KP3135KV.

For: Royal Mint EPR/KP3135KV, held by The Royal Mint Ltd

At: Royal Mint Llantrisant , Pontyclun, Rhondda Cynon Taf, CF72 8YT.

Type of assessment carried out: Report/Data Review, Reason: Routine.

On 16/03/2022 between 10:00 and 14:00.

Parts of permit assessed: Monitoring and decommissioning work

NRW Lead Officer: Andi Kemp, accompanied by Dale Padfield.

Report sent to: Martyn Grant, Environmental Manager on 25/03/2022.

1. Summary of our findings (full details in section 4)

Part of permitted activity assessed (criteria)	Assessment result	Permit condition
A1 - Specified by permit	Assessed (A)	
B1 - Infrastructure - Engineering for prevention and control of emissions	Assessed (A)	
B4 - Infrastructure - Containment of stored materials	Assessed (A)	
E3 - Emissions - Surface water	Assessed (A)	
E4 - Emissions - Sewer	Assessed (A)	
G1 - Monitoring and Records, Maintenance and Reporting - Monitoring of emissions and environment	Assessed (A)	
G4 - Monitoring and Records, Maintenance and Reporting - Reporting and notification to Natural Resources Wales	Assessed (A)	

Result types are explained in more detail in the 'Important Information' section below.

Total number of non-compliances recorded	Total non-compliance score
0	0

How we use the non-compliance score to calculate your annual fee is explained in the 'Important Information' section below.

2. What action is required?

No action required.

3. What will happen next?

Any non-compliance we have identified and recorded on this form is an offence. It can result in criminal prosecution and/or suspension or revocation of your permit.

At this time, we do not intend to take any further action.

This statement does not stop us from taking additional enforcement action if further relevant information comes to light or offences continue.

4. Details of our assessment

Compliance Assessment Report Form: The Royal Mint – KP3135KV, 24th March 2022

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Purpose Of Compliance Assessment

This compliance assessment covers the following aspects of regulation of the Royal Mint environmental permit:

- Previous actions
- Latest routine submissions
- Abstraction meter inspection – 16th March 2022
- Meeting and brief site inspection of parts of the main site – 16th March 2022
- Outcome of discussions on site 16th March 2022 with regard to the various sampling, monitoring, remediation and reporting regimes
- Latest update on the (as yet not started) WEEE trial

Previous Actions

The only open actions at the moment are from the latest previously issued CAR1 report: 27th January 2022 (NRW0039224). That report contained three actions and three recommendations. Only the actions are assessed here – the recommendations are something to be considered by the operator and the subject matter surrounding them will be revisited in due course in future regulatory work.

A response was received from the operator on 31st January 2022 ahead of the 7th February deadline.

Action 1 Royal Mint January 2022: *Please confirm if 6 samples were taken for the W1 period of January – June 2021 as there appears to be only two sample dates for free chlorine, one for suspended solids and five for temperature. Due: 7th February 2022*

After checking the footnotes in the permit the operator (as pointed out by the operator in their response) only has to report the maximum result of the 6 required spot samples. Further note 3 seems to indicate that only the date of that maximum result be included in Sample Date & Time column. However, this is unusual in terms of the sample dates – what is normally seen is, yes only the maximum result reported (unless several results exceed – in which case all exceedances must be reported), but still the 6 monthly dates / times are reported (no result) as this confirms the monitoring took place at the required frequency. **Action 1 closed.**

Recommendation 1 The Royal Mint 24th March 2022: *Consider this aspect and include in current permit variation.*

Action 2 Royal Mint January 2022: Please provide the Part B to this notification. **Due: 7th February 2022**

This considered the April gas release from one of the annealing furnace gas lines. A confidential investigation with several recommendations was received along with the EPR Schedule 5 Notification. NRW accepts the candid response and recommendations. Even though not a RIDDOR event (<500 kg), this may be something to update the COMAH CA on in terms of changes made to prevent a future occurrence which was a simple isolation failure. NRW are surprised that the completed work was not checked during a handover. At least lessons have been learned. **Action closed.**

Action 3 Royal Mint January 2022: A check of the applicable EQS from the regulator spreadsheets on the How To Assessment Environmental Impact pages of .GOV.UK needs to be made and ensure the correct EQS is on the graphs within the SPMP reports. See Cu graphs for CBH6 and BHNP2, page 11. **Due: For future reporting and assessment.**

The operator's response is below:

This will be discussed with our contractor Ramboll to ensure the data in subsequent reports is correct. We are also in discussion with Ramboll to arrange a meeting as per Recommendation 2: "A meeting should be arranged where NRW, TRM and Ramboll discuss the additional surface water monitoring, SPMP reports and data, including discussion about decommissioning boreholes and preventing these as acting as pathways. Ideally this should occur before the end of June 2022."

Thanks for information on the revised EQS.

I have contacted Celtic / Englobe and the feedback is that the remedial target of 20ug/l (0.02mg/l) came from the remedial strategy implementation plan (2011) attached.

I am told that the monitoring results to date (for the outfall locations and surface water monitoring locations) look to be within the EQS of 4 ug/l based on the Oct 21 to Jan 22 monitoring.

This has been acknowledged and the correct EQSs will be used going forward – discussed further below. **Action closed.**

Latest Routine Submissions

The last submissions assessed were up to and including: 6 monthly W1 – June 2021; quarterly S1 – September 2021; annual performance and data – 2020 and 2021.

W1 July – December 2021 – the results are declared as compliant. Emissions monitoring, sampling and analysis will be covered in the 2022 OMA.

S1 October – December 2021 – all compliant. Same comment applies about OMA to examine in more detail.

Abstraction Meter Inspection

The Royal Mint (TRM) currently holds two abstraction licences: WA/057/0031/003/R002, for remediation of former NP1 nickel contaminated area; and WA/057/0031/002/R001, the main once through cooling water abstraction. The former abstraction licence has never been used. It was intended that pump and treat of groundwater and route to the ETP to get Ni levels down, but this tactic was never applied. Instead, electrokinetic remediation, depositing Ni onto cathodes has successfully reduced Ni concentrations in this small area to below risk to surface water levels – see several previous progress reports covered in CAR1 27th

Jan. 2022 and expanded upon further on.

TRM report abstracting substantially below the annual limit of 657,000 cumec. See photographs below of abstraction weir, pumps, filters and meter reading. The cumulative total abstracted on this meter is 964,056 cumec. TRM abstracted 205,884 cumec in 2021.



Fig. 1 Filters



Fig. 2 Abstraction weir



Fig. 3 Main pumps

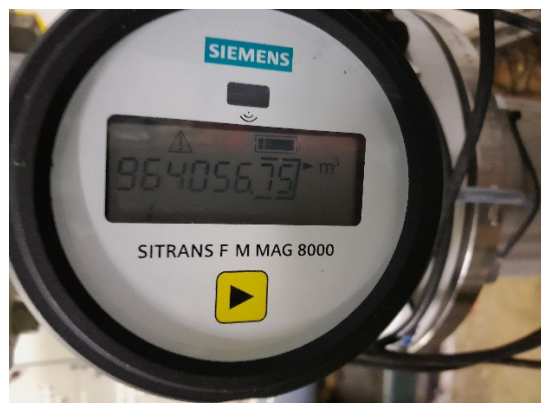


Fig. 4 Siemens SITRANS F M Mag 8000 flowmeter

A calibration certificate was requested for the flow meter. This was submitted just after the site inspection. The inspection report by Critical Flow from 13th December 2021.

Action 1 Royal Mint 24th March 2022: *Operator to provide justification for installing against manufactures recommendations and whether this could represent a potential future performance / accuracy issue. See text from Critical Flow Dec. 2021 report:*

“flow meter has been installed a downward flowing section of pipe. This is not recommended by the manufacturer, although there appears to be enough back pressure in the system to maintain satisfactory hydraulics”

Due: 30th April.

The Environment Agency MCerts Performance Standard For Minimum Requirements For Flow Measurements states an accepted uncertainty of 8%. The December 2021 report quotes an uncertainty of 4.3 %. TRM also included the 2018 factory calibration and quality testing by the manufacture. Serial number of the flow meter is: 654405H148.

Site Inspection 16th March 2022

This was a brief visual inspection (partly familiarisation for a new NRW IR Team member) and covered the following:

- The decommissioning of the former furnaces and A14 air emission point
- Several borehole locations that show elevated levels of specific parameters
- The former NP1 Ni contaminated area

The operator no longer uses the furnaces for preparing non-ferrous alloys and associated A14 emission point. These should be varied out of the permit during the current Direct Brass permit variation being determined by NRW presently.



Fig. 5 Former hot end being decommissioned

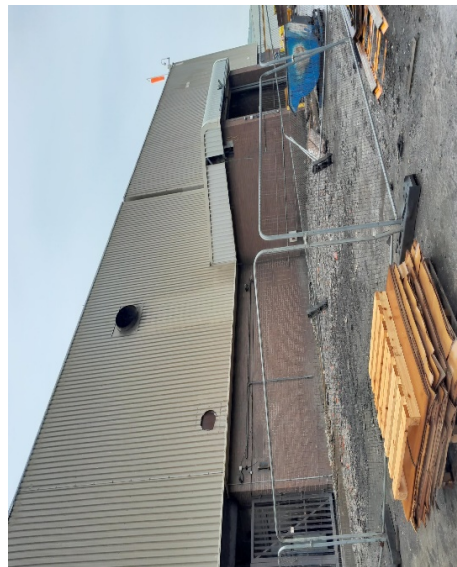


Fig. 6 Former A14 decommissioned emission point

In terms of groundwater monitoring boreholes, there are a couple of installations that are showing possible increasing trends – although this is not necessarily to be taken as exceeding the relevant EQS. BH201, which is south east of the MRB building is reported as showing increasing Cu concentrations. The effluent sumps from the MRB cooling system are just upgradient of this borehole. The operator asserts that the pipework and route of coolant effluent is in good condition and not the source of any ongoing contamination plume.

Action 2 Royal Mint 24th March 2022: *Operator to provide some basic information on the coolant sump design, structure and details on the maintenance regime for the sump and associated pipework. Due: 31st July 2022*

It is recognised that emptying this tank and inspecting it is difficult and has not been done in recent times, hence Action 2 above, to supply some additional information that the regulator will use to determine how best to validate the integrity of the sump.

Borehole 32 is also showing an increasing trend in Cu concentration. Again, it is believed that this is legacy contamination movement and not an ongoing source. TRM has over the last eight years improved surveillance on underground culverts and drainage, bund assessments and moved several key pieces of infrastructure (e.g. sulphuric acid line) above ground. The contamination picture and future of the various

monitoring regimes is discussed further below in a separate section of this CAR1 report.

The former NP1 building is currently being transformed and groundworks are taking place – this presents the possibility of making records of the state of the ground in that area. It also could be a route for pollution from contractors and works.

Recommendation 1 Royal Mint 24th March 2022: *Where relevant the operator to make records of the state of the ground beneath former nickel plating building; record any pollution identified and make proposals to deal with it; and manage the works and contractors so that pollution does not enter the ground and GW here.*

Whilst the operator did say the actual seal and caps etc. are in place on individual boreholes, either the top cover plates were off to the side or bolts were missing from the headworks cover plate of several boreholes.

Recommendation 2 Royal Mint 24th March 2022: *Operator to ensure all boreholes are sealed from entry of foreign substances.*

Discussion About The Future Of The Monitoring Regimes

There are several monitoring programmes taking place (see CAR1 27th January 2022):

- Annual SPMP of groundwater
- Additional surface water and groundwater
- Surface water follow up from EKR project

The operator turned off the EKR electrodes in October 2021 and it was previously agreed that 6 months of surface water sampling will take place to confirm no Ni migration. During this time, whilst not actually operating, the EKR installation remains in place until monitoring data confirms no migration. These six points are marked SWA, SWO, SW1 – SW4 incl. on drawing D1813 June 2021. The last EKR report was from September 2021. This surface water report is due sometime in April or early May.

It is anticipated that should the data support the conclusions from the CWRA, then the EKR installation will be removed and also the cessation of the 6 monthly surface water monitoring.

In terms of the (now) annual SPMP groundwater monitoring, the last round was the XVIIth October 2021. It has been decided that certain EQS exceeding boreholes from the Additional Surface Water and Groundwater sampling will be included into the annual SPMP. The operator at this point wants to keep the annual SPMP monitoring (plus additional) round ongoing, even though, in the absence of ongoing pollution sources and years' worth of data, the operator could default to the lifetime records approach as outlined in NRW guidance H5 and RGN9.

In terms of the Additional SW & GW Sampling programme, it has been agreed that exceeding boreholes be included in a slightly expanded suite of borehole installations within the annual SPMP. In terms of surface water, this 6 monthly monitoring should remain throughout the rest of 2022, with a round into 2023 – when a decision will be made about the future need for this monitoring. All current parameters will still be monitored.

From the above and the presentation supplied from Raboll, below are the main points agreed in summary:

- Additional SW sampling every 6 months and a decision made after a first round in 2023
- All current SW parameters to be analysed for

- The EQS exceeding boreholes from the “Additional” monitoring are to be transferred to the SPMP
- The expanded SPMP will revert to an annual round
- Correct EQSs to be referred to with correct alkalinity range
- MCerts accredited analysis
- VOCs only analysed for in boreholes where they are detected: BH003, BHNP2D, CBH6 – the latter two are in a location of a former solvents store / process
- The operator at this stage will not be seeking to identify potential other sources of pollution not coming from TRM, but being picked up in the additional 6 monthly SW monitoring
- A borehole risk assessment will take place to ensure any boreholes not used in the SPMP (but the operator wants to keep for future due diligence) do not present a pathway to GW pollution from polluting substances likely to be present in their vicinity

The regulator requested the sampling procedures from both consultants used – not necessarily policy documents, rather the actual “how we sample to get a representative sample...” work instruction, for example the sampling standard operating procedures. Any analytical data will only be sound if the associated sampling (well purging, sample bottles, preservation, avoiding contamination, storage, labelling, transit and field measurements) is performed correctly.

Action 3 Royal Mint 24th March 2022: TRM to forward these SOPs from Celtic & Raboll. **Due: 30th April 2022**

Waste Trial Latest Update

TRM submitted an update by email on 22nd February 2022, with narrative in the body of the email and an attached timeline.

Operator update text copied below:

As per my email of 25th August 2021, please find the quarterly update on the progress on the Waste Trial Project.

During the last quarter we have been able to produce technical specifications for equipment and the processes required to implement the waste operation. We have established that the most time critical equipment will be 38 weeks delivery from the placement of a contract, which is expected to be during March 2022.

We have also conducted the initial HAZID for the surface treatment process.

The attachment is a summary of our current project plan although this, as previous plans, may change during the coming months.

At present we have not received any waste, the expected 1.5 tonne, which was planned during December 2021 – Jan 2022 did not occur, as we are undertaking civil works in the areas we are setting aside for the processes and the equipment. A strategy meeting is to be held early March to formulate a plan for receipt of waste, which is likely to coincide with testing and commissioning of equipment. Provisionally I have put May as the expected date but will update you should we be receiving waste before then.

We have started collating, the known information in preparation for the permit application and this is currently expected to be submitted at the end of April.

Since the last update The Royal Mint has determined that we should apply to become an Approved Authorised Treatment Facility, which we will be making following determination of the permit to receive waste. As it is my understanding of how this process should work and I do not believe that the concession is sufficient for

AATF status.

I will provide a further update at the end May 2022 but if you require any further information on the project before that date please do not hesitate to contact me.

The main points from the timeline, which could be subject to change are:

- First trial amount of waste – May / June 2022
- Design ongoing
- Civil work commenced
- Evaluation of evidence and NRW updates ongoing
- At some point if successful submit an application for an Authorised Treatment Facility

END

If you have any queries about this report, or to discuss completion of any actions, please contact the NRW Officer named above.

Important information

Legal status of this report

Your permit is issued to you under the Environmental Permitting Regulations. You have a responsibility to comply with the conditions of your permit and prevent pollution/harm of the environment. You must also ensure that you comply with any other relevant legislation that may apply to your site's operations.

This report explains the findings of our assessment and any action you are required to take. We categorise non-compliance using our guidance for assessing non-compliance at regulated sites.

When we find potential non-compliance/s we will normally give you advice on how to maintain compliance.

To correct non-compliance, we may:

- require you to take specific actions
- issue a notice
- review the conditions of your permit.

Any advice and guidance we give will be without prejudice to any other enforcement response that we consider may be required.

Assessment results and non-compliance categories (used in section 1):

Assessment result	Description
Assessed (A)	Assessed or assessed in part, no evidence of non-compliance found
Action only (X)	Action only relating to the activity assessment
Ongoing (O)	Ongoing non-compliance, not scored

Non-compliance category	Description	Score
C1 Major	Potential to have a major, serious, persistent and/or extensive impact or effect on the environment, people and/or property	60
C2 Significant	Potential to have a significant impact or effect on the environment, people and/or property	31
C3 Minor	Potential to have a minor or minimal impact or effect on the environment, people and/or property	4
C4 No environmental impact	Non-compliance at a regulated site that cannot foreseeably have any impact on the environment, people and/or property	0.1

How we use assessment scores

The number and severity of non-compliances recorded in a year will affect your annual subsistence fee the following year. A non-compliance factor is added to your site's Operator

Performance Risk Appraisal (OPRA) score when we calculate your fee to reflect the additional resource we use to assess permit compliance.

What are suspended scores?

In line with our guidance, we may suspend scores for up to six months to allow time for remedial action to be taken. Suspended scores will be re-instated if the action is not completed.

Full list of Industry and Waste action criteria (used in section 1 and 2):**A: Permitted activities**

- A1 Specified by permit

B: Infrastructure

- B1 Infrastructure – Engineering for prevention and control of emissions
- B2 Infrastructure – Closure and decommissioning
- B3 Infrastructure – Site drainage engineering (clean and foul)
- B4 Infrastructure – Containment of stored materials
- B5 Infrastructure – Plant and equipment

C: General management

- C1 General management – Staff competency/training
- C2 General management – Management system and operating procedures
- C3 General management – Materials acceptance
- C4 General management – Storage, handling, labelling and segregation

D: Incident management

- D1 Incident management – Site security
- D2 Incident management – Accidents, emergency and incident planning

E: Emissions

- E1 Emissions – Air
- E2 Emissions – Land and groundwater
- E3 Emissions – Surface water
- E4 Emissions – Sewer
- E5 Emissions – Waste

F: Amenity

- F1 Amenity – Odour
- F2 Amenity – Noise
- F3 Amenity – Dust/fibres/particulates and litter
- F4 Amenity – Pests/birds and scavengers
- F5 Amenity – Deposits on road

G: Monitoring and records, maintenance and reporting

- G1 Monitoring and records, maintenance and reporting – Monitoring of emissions and environment
- G2 Monitoring and records, maintenance and reporting – Records of activity, site diary/journal/events
- G3 Monitoring and records, maintenance and reporting – Maintenance records
- G4 Monitoring and records, maintenance and reporting – Reporting and notification to Natural Resources Wales

H: Resources efficiency

- H1 Resource efficiency – Efficient use of raw materials
- H2 Resource efficiency – Energy efficiency

Enforcement response

Any permit condition non-compliance is an offence and we may take legal action against you. Action we take can include prosecution, serving a notice on you and/or suspension or revocation of your permit. See our Enforcement and Sanctions Guidance for further information.

Data protection notice

You should make sure that anyone named in this report knows that the information it contains will be processed by Natural Resources Wales to fulfil its regulatory and monitoring functions and to maintain the relevant public register(s).

We may also use and/or disclose the report in connection with:

- offering or providing you with our literature or services relating to environmental matters
- consulting with the public, public bodies and other organisations (e.g. Health and Safety Executive, local authorities) on environmental issues
- carrying out statistical analysis, research and development on environmental issues
- providing public register information to enquirers
- investigating possible breaches of environmental law
- assessing customer service satisfaction and improving our service
- Freedom of Information Act or Environmental Information Regulations requests.

We may also pass it on to our agents or representatives to do these things on our behalf.

Disclosure of information – this report will be available to view on-line

If you think this report contains commercially confidential information that should not be placed on our public register, you must contact your local Natural Resources Wales office within **fifteen working days** of receiving this report, using the contact details in the accompanying email or letter. You must give a full explanation of why it should not be added to our public register, including specifying which information is commercially confidential. We will assess your request and respond to you within 20 working days to let you know if we agree to your request.

What do I do if I disagree with the report or have a complaint?

If you disagree with this compliance assessment report, you should contact the lead officer without delay to discuss your concerns.

If you are unable to resolve the issue with the lead officer or their line manager you should contact our Customer Contact team on 0300 065 3000 (Monday to Friday 08:00 – 18:00), or email enquiries@naturalresourceswales.gov.uk for details of how to raise your dispute further through our Complaints and Commendations procedure.

If you are dissatisfied with our response, you can contact the Public Services Ombudsman for Wales by phone on 0300 7900203 or by email at ask@ombudsman.wales

Welsh Language Standards

We are committed to establishing Natural Resources Wales as a naturally bilingual organisation. We will provide compliance reports in your preferred language.