Cyfoeth Naturiol Cymru
Natural Resources Wales

Natural Resources Wales Permitting Decisions

Morganite Electrical Carbon Ltd – Electrical Carbon, Swansea

Decision Document

Application for a Normal Variation and Permit Consolidation

The application number is: PAN-024653

The permit variation number is: EPR/VP3339PD/V014

The applicant / operator is: Morganite Electrical Carbon Ltd

The Installation is located at: Upper Fforest Way, Morriston, Swansea, West Glamorgan, SA6 8PP.

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.

Contents

1. Executive summary

1.1. Application summary

Morganite Electrical Carbon Ltd have applied for a normal variation to their existing environmental permit (permit number EPR/VP3339PD). The variation application is for the addition of a new graphitisation furnace, inspection table with dust extraction and a 0.77MWth standby generator fired on diesel.

The variation application also includes the removal of the Long-Metallised Carbon Process and associated emission points, as well as the Theta process and its associated air emission point A10. Overall, 4 new air emission points are being added, and 6 existing air emission points are being removed as part of this variation. Emission limits for sulphur dioxide on the three existing kilns have also been tightened as a result of this variation.

It is noted that the only NOx release from the three proposed new plant items is from the standby generator. This is scheduled to operate 50 hours per year for testing. There are no combustion gases associated with the new furnace as it is electrically heated.

A small volume of process effluent generated by the new furnace's wet scrubber is discharged to sewer in accordance with the Operator's existing trade effluent consent granted by Dŵr Cymru Welsh Water. There are no changes to current releases to water associated with this variation.

The variation has been incorporated into a consolidated permit at the request of the Operator.

1.2. Our decision

We have decided to issue the variation and consolidated permit for Electrical Carbon, Swansea operated by Morganite Electrical Carbon Ltd.

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.

2. Receipt of the application

The application was received on 31 January and 27 February 2024**.** In order for us to be able to consider the application duly made, we needed more information. We requested the following:

- Updated site plan;
- Updates to Air Quality Assessment;
- Clarification on the Noise Impact Assessment; and
- Specific questions relating to application of the CIRIA C736 standard for the diesel tank associated with the standby generator, discharge of trade effluent to sewer and the technical specification of the bag filter serving the new inspection table.

A letter requesting this information was sent to the applicant on 18 June 2024. Upon receipt of this information, on 14 August 2024, we were able to consider the application duly made. This means we considered it was in the correct form and contained sufficient information for us to begin our determination, but not that it necessarily contained all the information we would need to complete that determination.

3. Confidential information

A claim for commercial or industrial confidentiality has been made. We have accepted the applicants claim for commercial confidentiality and the relevant information has

been excluded from the public register. The decision was taken in accordance with our guidance on commercial confidentiality. A Notice confirming this was issued to the applicant on 4 July 2024 and is available on the public register to view.

4. Legislation

The variation and consolidation is issued, under Regulation 20 of the Environmental Permitting Regulations (England and Wales) 2016 (EPR). The Environmental Permitting regime is a legal vehicle which delivers most of the relevant legal requirements for activities falling within its scope. In particular, the regulated facility is:

- an *installation* as described by the IED;
- subject to aspects of the Well-Being of Future Generations (Wales) Act 2015 and the Environment (Wales) Act 2016 which also have to be addressed.

We address the legal requirements directly where relevant in the body of this document. NRW is satisfied that the decision on this application is consistent with its general purpose of pursuing the sustainable management of natural resources (SMNR) in relation to Wales and applying the principles of SMNR.

We are satisfied that the 0.77MWth diesel generator to supply emergency power to the installation is not subject to medium combustion plant regulation under Schedule 25A of EPR. This is because it's rated thermal input is less than 1MWth. We are also satisfied that the generator is excluded from specified generator regulation under Schedule 25B of EPR. This is based on its size, and the fact it is a backup generator operated for the purpose of testing for no more than 50 hours per year and is also technically connected to a Part A(1) installation where Chapter II of the Industrial Emissions Directive applies. Furthermore the electricity generated is just for the installation and is not exported to the National Grid.

As the EPR regulator in Wales, NRW are required to determine any duly made permit application. This means that we must decide either to grant, or to refuse the variation based upon an objective assessment of the proposals against the detailed legal

requirements of EPR. Our public participation statement[1] gives more information on what can, and cannot, be taken into account when making our permitting decision.

The application, and this decision document, only considers the permitting of the facility under EPR as described throughout the document. We only assess the installation and its impacts and cannot take into consideration indirect impacts which are not as a direct result of activity within the installation boundary.

Any proposed development and wider associated activities will be required to be compliant with all relevant and applicable law, for example, environmental law, health and safety law, planning law. This other legislation acts largely independently of EPR (although they may be inter-related). Such other matters are beyond both the scope of this document, and of our regulatory remit and expertise and are not relevant to our EPR permitting decision. Ensuring compliance with all other regulation and obtaining any required consents (such as planning permission) is the responsibility of those undertaking the development and is regulated by the relevant appropriate authority for each.

5. Requests for information

Further information was requested during determination by way of a Schedule 5 Notice requiring the applicant to provide further information relating to:

- the modelling predictions for Benzo A Pyrene (BaP) at human receptors; and
- the modelling predictions for short term oxides of nitrogen at ecological receptors.

The Schedule 5 Notice was sent on 16 October 2024 with a deadline for response of 6 November 2024. The applicant's response to the Schedule 5 Notice was provided on 4 November 2024. The additional information supplied satisfied the requirements of the Schedule 5 Notice.

[1] Natural Resources Wales / Public participation: how you can take part in our permit and licence consultations

Several informal information requests were also made via email. These related to seeking:

- clarification on which Non-ferrous Metals Best Available Techniques conclusions (BATc) BAT-Associated Emission Levels (BAT-AELs) had been used to set modelled emission limits for the new furnace and inspection table;
- confirmation that standby diesel generator is the only combustion plant on site;
- clarification on if activity 4.2 A(1)(c)(vi) – Inorganic Chemicals – Manufacturing activity involving lead was still required in the varied and consolidated permit; and
- confirmation that air emission point A11 “LMC pre-heat furnaces” can be removed from the permit.

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

6. The Installation

6.1. The permitted activities

The regulated facility is an installation which comprises the following activities listed in Part 2 of Schedule 1 to the Environmental Permitting Regulations:

- 6.2 A(1)(a) Carbon Activities - Production of carbon by means of graphitisation; and
- 4.2 A(1)(c)(vi) Inorganic Chemicals - Manufacturing activity involving the use of Lead.

An installation may also comprise “directly associated activities”, which at this Installation includes:

- 1 x 0.77 MWth Standby diesel generator;
- Discharge of process effluent to sewer;
- Operation of systems for the receipt and storage of raw materials; and

- Operation of systems and facilities for the storage, handling and disposal of all process wastes and by-products.

Together, these listed and directly associated activities comprise the Installation.

6.2. Changes to the installation

The new graphitisation furnace has been added to the S6.2 A(1)(a) Carbon Activities as part of this variation. The theta process has been removed from the 4.2 A(1)(c)(vi) Inorganic Chemicals - Manufacturing activity involving the use of Lead activity. However other production activities using lead remain, which is why the entire activity hasn't been removed from the permit.

Prior to this variation, there were no directly associated activities (DAAs) listed in the Permit. The only new activity DAA introduced by this variation is the standby diesel generator. The other DAAs are existing activities which have been captured in the permit (under Table S1.1) for completeness.

The new inspection table is considered to be an inherent part of the graphitisation furnace process (S6.2 A(1)(a) Carbon Activities), so has not been identified separately. The operation of cooling circuits for the provision of process cooling water and the storage of nitrogen are also considered to be part of the overall process envelope, so have also not been separately identified.

7. Operation of the installation

7.1. Operator competence

The applicant is the sole operator of the Installation. We are satisfied that the applicant is the person who will have control over the operation of the Installation after the variation is issued; and that they will be able to operate the Installation so as to comply with the conditions included in the permit. The decision was taken in accordance with EPR RGN 1 "Understanding the meaning of Operator"[2].

[2] RGN 1 Understanding the meaning of 'operator' (naturalresources.wales)

Relevant Convictions

The applicant has declared they have no relevant convictions. NRW's COLINS Database has been checked to confirm there are no relevant convictions. No relevant convictions were found.

Financial Provision

The applicant has declared they have no current or past bankruptcy or insolvency proceeding against them. There is no known reason to consider that the operator will not be financially able to comply with the permit. The decision was taken in accordance with RGN 5 on Operator Competence.

The operator satisfies the criteria in RGN 5 on Operator Competence[3].

7.2. Environmental Management System

The applicant has stated in the application that they will update the existing Environmental Management System (EMS) to incorporate the changes associated with this variation. The EMS covers all activities connected to the installation and is certified to ISO 14001:2015, which satisfies the requirements for an EMS in our "How to comply with your environmental permit" guidance[4]. We have reviewed the application and are satisfied that appropriate management systems and management structures are in place for this Installation, and that sufficient resources are available to the Operator to ensure compliance with all the Permit conditions. We are also satisfied that the EMS meets the requirements of BAT 1 in the Non-ferrous Metals BAT Conclusions.

Accident management

Accident prevention and management are addressed as part of the EMS. Potential accidents arising from the variation have been identified with appropriate controls applicable to the proposed changes in Appendix E of Application Supporting

[3] regulatory-guidance-note-5-operator-competence.pdf (naturalresources.wales)
[4] Natural Resources Wales / Guidance to help you comply with your environmental permit

Information (AtkinsRéalis V2 January 2024). The applicant has also stated that Emergency Preparedness and Response procedures will be updated in section 4.9 of the Application Supporting Information report. We are satisfied that appropriate controls are in place to help reduce the occurrence and impact of any accidents that occur.

In order to ensure that the management system continues to sufficiently manage the residual risk of accidents, permit condition 1.1.1a requires the implementation of a written management system which addresses the pollution risks associated with, amongst other things, accidents. Appendix E of the Application Supporting Information has also been incorporated into Table S1.2 of the permit as an operating technique, so is enforceable.

7.3. Operating techniques

Installation activities and assessment of Best Available Techniques

The applicant has described the proposed equipment and operating techniques and compared these against the relevant Best Available Techniques conclusions (BATc) which for this variation is the Non-ferrous Metals Industries BATc (published June 2016)[5]. The applicant has identified that BATc 1 – 10, 14, 15, 18, 19, 178, 180, 182 and 184 are applicable to the changes proposed in this variation. BATc 11 – 13, 16, 17, 20 – 176, 177, 179, 181 and 183 are not relevant to this variation. We agree with this conclusion, with the exception of BAT 180 which is for baking and rebaking. The new plant is a graphitisation furnace, so we have applied the BAT-AELs from BAT 178, which is more appropriate, and we are satisfied that the use of a bag filter for furnace and inspection table abatement meets the narrative BAT requirements.

We have reviewed the techniques proposed and consider them to represent BAT at this installation. Compliance with the relevant BAT Conclusions is assessed in the relevant subject areas of this document. Compliance with other BAT is described below.

[5] COMMISSION IMPLEMENTING DECISION (EU) 2016/1032 of 13 June 2016 establishing best available techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council, for the non-ferrous metals industries

7.3.1 Process Control

We are satisfied that the new plant and equipment will employ computerised process controls to optimise performance. The Operator has provided evidence to show they comply with BAT 3 including:

- use of feed weighing and metering systems and careful input control to ensure desired finished product quality;
- control of combustion systems and furnaces based on temperature and pressure; and
- monitoring of key abatement plant controls such as pressure, liquor flow and pH.

7.3.2 Maintenance Management

We are satisfied that the new plant items will be subject to the same standard of preventative maintenance which is currently in place for the rest of the installation. The Operator is compliant with BAT 4, in that they carry out scheduled maintenance as part of a management system that includes all furnaces, extraction and abatement plant with a view to reducing channelled dust and metal emissions to air.

We have specified that the applicant must operate the permit in accordance with descriptions in the application. See section 11 of this document for more information on how we have incorporated the application/variation into the permit and how emission limit values have been set.

Efficient use of raw materials, water and energy

There will be increased quantities of raw materials stored on site as part of this variation. The Operator has quantified and assessed all additional raw materials as part of this variation application. All potentially polluting materials will either be stored in secure locations within buildings or are provided with appropriate primary and secondary containment and all are stored on sealed concrete hardstanding. There will

be a reduction in raw material use associated with the operation of the LMC process as it is no longer operating. There is no change to the techniques used to minimise raw materials use as part of this variation.

The Operator monitors water use on site in line with BAT 14 of the non-ferrous metals BATC. We consider that permit condition 1.3.1 will maintain improvements in efficient use of raw materials and water.

We consider that the applicant is compliant with BAT 2 of the non-ferrous metals BATc, in that they have a proactive energy targeting system that has significantly reduced specific energy use on site. Variable frequency drives will be employed in the new processes and air abatement equipment will be designed with energy efficiency in mind and where possible, tailored to warm-up and felt-processing phases.

The operator is required to report energy usage under condition 4.2.2 and Schedule 4 of the permit. These enable us to monitor energy recovery efficiency at the Installation. There are no changes to any of the reporting requirements for energy use as a result of this permit variation.

Having considered the information submitted in the application, we are satisfied that the applicant will ensure that raw materials, water and energy is used as efficiently as possible.

Avoidance, recovery or disposal of wastes produced by the activities

There is no change to the waste minimisation techniques and waste storage arrangements as a result of this variation. There will be some additional waste streams associated with the operation of the new furnace, most notably waste generated by the replacement of the furnace lining which is expected to arise approximately once per month. There will be a reduction in waste generation associated with the operation of the LMC process as it is no longer operating.

The Operator has quantified the additional waste streams which will be generated by the new graphitisation furnace and stated their disposal routes. The Operator recycles

all recoverable waste and materials arising from their process and ensures that the highest waste recovery rates are achieved by applying waste hierarchy principles. The Operator is seeking possible recycling routes as an alternative to landfill for those wastes that are not currently recovered, specifically particulates containing furnace component erosion products and porous coke blocks.

Having considered the information submitted in the application, we are satisfied that the waste hierarchy referred to in Article 4 of the Waste Framework Directive will be applied to the generation of waste and that any waste generated will be treated in accordance with this Article. We also consider that the techniques employed by the operator are compliant with BAT 184 of the Non-Ferrous Metals BATC.

We are satisfied that waste from the Installation that cannot be recovered will be disposed of offsite using a method that minimises any impact on the environment. Condition 1.4.1 of the permit will ensure that this position is maintained.

8. The site

8.1. Site Plan

The applicant has provided an updated plan which we consider is satisfactory, showing the extent of the site of the facility and the new emission points. The updated plan will be included in the permit and the operator will be required to carry on the permitted activities within the site boundary.

The drainage plan which was originally appended to Schedule 7 of the Permit has been removed as part of this variation. This is because the plan itself is not referenced by a permit condition and is subject of further refinement as the site develops. An updated version of the drainage plan is available as Appendix A in the Application Supporting Information (AtkinsRéalis V2 January 2024) document, which is on our public register.

8.2. Site Condition Report

The proposal does not include the addition of any land and so a Site Condition Report was not required to support this application.

8.3. Site protection: potentially polluting substances and prevention measures

The operator has a duty to ensure that soil and groundwater are protected in order to meet the requirements of Articles 14 (1)(b), 14(1)(e) and 16(2) of the IED. The operator has provided a list of additional raw materials which will be used as a result of this variation in Section 2.9 of the Application Supporting Information (AtkinsRéalis V2 January 2024) document. We are satisfied that all potentially polluting materials will either be stored in secure locations within buildings or are provided with appropriate primary and secondary containment. In addition, the operator has stated that all substances are stored on sealed concrete hardstanding.

More specifically, liquid raw materials such as lubricating oil and diesel for the standby generator, as well as cooling water chemicals and sodium hydroxide will be stored in tanks bunded to 110% of the container capacity. There will also be a reduction in raw material use associated with the removal of the Long Metallised Carbon (LMC) process which is no longer operating.

Based upon the information in the application we are satisfied appropriate measures will be in place to protect the site and its surroundings from polluting substances. Finally permit condition 3.2.3 requires that all liquids in containers are provided with secondary containment unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container. We consider this is sufficiently protective.

9. Environmental Risk Assessment

We have reviewed the operator's assessment of the environmental risk from the facility. The operator’s risk assessment is satisfactory.

In line with our guidance, the applicant has provided an environmental risk assessment with the application which identifies the sources of key risks from the graphitisation furnace, inspection table and standby generator, together with possible pathways and receptors. This risk assessment is discussed in further detail below.

9.1. Assessment of impact on air quality

This section of the decision document deals primarily with the dispersion modelling of point source emissions to air and the impact on local air quality. The applicant has assessed the Installation's potential emissions to air against the relevant air quality standards, and the potential impact upon human health in line with relevant guidance[6].

The applicant used ADMS 6 to model predicted Process Contributions (PCs) from the new air emission point sources associated with this variation, specifically: A70 (graphitisation furnace), A71 (standby generator) and A72 (inspection table). Existing emission contributions were also presented and included within the Predicted Environmental Concentrations (PECs). Emission rates are based on a combination of the relevant non-ferrous metals BATC BAT-AELs (for A70 and A72), existing permit limits for existing plant and monitoring data. We are satisfied that the dispersion modelling is sufficiently precautionary in that emission rates from the new stacks were calculated based on maximum permitted emission concentrations and volumetric flow rates. Also, modelling has been undertaken assuming the process is operational 24 hours per day for 365 days per year at permitted limits for existing and new emission sources (with the exception of the kiln emissions and standby generator). As the standby generator will be tested for less than or equal to 50 hours per year, a scaling factor was applied to the modelling. For the existing kilns (A27, A28 and A61), a time varying emission profile for sulphur dioxide (SO_2) was used to reflect the typical temporal variation of SO_2 emissions from the kilns over 24 hours. The emission profile reflects the process where much of the sulphur in the kiln is burned off in the early stages as the temperature increases, causing short term emission peaks characteristics. The modelling of SO_2 releases also reflects the fact that all three existing kilns do not operate concurrently. The applicant has modelled the maximum predicted pollutant concentrations at identified human and ecological receptors representing the worst year from 5 years of meteorological data.

We are in agreement with this approach following the response to the Schedule 5 notice (received 4 November 2024), which provided further clarification on modelling results for Benzo[A]Pyrene (BaP) and Short-Term oxides of nitrogen (NOx), at

[6] Air emissions risk assessment for your environmental permit - GOV.UK (www.gov.uk)

ecological receptors. The assumptions underpinning the model have been checked and are reasonably precautionary. The way in which the applicant used dispersion models, its selection of input data, use of background data and the assumptions it made have been reviewed to establish the robustness of the applicant's air impact assessment. The output from the model has then been used to inform further assessment of health impacts.

The main releases to air associated with the installation are Particulate Matter (PM), Benzo[A]Pyrene (BaP), sulphur dioxide (SO_2), oxides of nitrogen expressed as NO_2 (NOx) and Volatile Organic Compounds (VOC). The applicant has calculated process contributions (PC) and predicted environmental concentrations (PEC) at locations within the immediate vicinity and all identified sensitive receptor locations. The modelling results for each pollutant are discussed separately below. PCs were calculated for new emission sources separately and combined emissions, i.e. (releases from existing installation + proposed variation). The PCs discussed below represent the predicted combined emissions, unless otherwise stated.

Oxides of Nitrogen as NO_2 (NO_x)

Emissions of NOx were assessed against the long-term air quality standard (AQS) of 40 µg/m^3 (annual) and short term AQS of 200 µg/m^3 (hourly). At all human sensitive receptor locations, the maximum predicted long-term PC was <1 % of the long-term AQS. Therefore, in accordance with the relevant gov.uk guidance (footnote 5), we are satisfied that the long-term predicted impacts from NOx as a result of this variation can be considered insignificant. At all human sensitive receptor locations, the maximum predicted short-term PC was <10 % of the short-term AQS. Therefore, we are satisfied that the short-term impacts from NOx can be considered insignificant.

Particulate Matter (PM_{10})

Emissions of PM_{10} were assessed against the long-term AQS of 40 µg/m^3 (annual) and short-term AQS of 50 µg/m^3 (24-hourly mean). At all human sensitive receptor locations, the maximum predicted long-term PC was <1 % of the long-term AQS.

Therefore, we are satisfied that the long-term predicted impacts from PM_{10} as a result of this variation can be considered insignificant.

At all human sensitive receptor locations, the maximum predicted short-term PC was <10 % of the short-term AQS, with the exception of receptor HR11 (Premier Inn Swansea North Hotel). Specifically, the maximum predicted combined site (releases from existing installation + proposed variation) PC was 22.1%. However, when the existing background concentrations of PM_{10} are added to the combined site PC, the PEC is 40.7% of the AQS. As such, we are satisfied that the AQS will not be exceeded at this location and that PCs are insignificant at the other human receptors.

Particulate Matter ($PM_{2.5}$)

Emissions of $PM_{2.5}$ were assessed against the long-term AQS of 20 µg/m^3 (annual). At all human sensitive receptor locations, the maximum predicted long-term PC was <1 % of the long-term AQS, with the exception of receptor HR13 (Pant-y-Blawd Road Travellers Site). Specifically, the maximum predicted combined site (releases from existing installation + proposed variation) PC was 1.4%. However, when the existing background concentrations of $PM_{2.5}$ are added to the combined site PC, the PEC is approximately 39% of the AQS. As such, we are satisfied that the AQS will not be exceeded at this location and that PCs are insignificant at the other human receptors.

Total Organic Carbon (TOC) as Benzene

The Non-Ferrous Metals BAT Conclusions specify BAT-AELs for Total Volatile Organic Compounds (TVOC). The applicant's modelling uses TOC as benzene for the purpose of assessing predicted releases to air, as benzene is a VOC. Emissions of TOC (as Benzene) were assessed against the long-term AQS of 5 µg/m^3 (annual) and short-term AQS of 30 µg/m^3 (24-hourly mean). At all human sensitive receptor locations, the maximum predicted long-term PC was <1 % of the long-term AQS, with the exception of receptors HR3 (Bush Road, Morriston), HR4 (Cwrt Llwyn Fedwen, Morriston) and HR13 (Pant-y-Blawd Road Travellers Site). There are no existing site emissions of TOC, so these PCs represent releases from the new plant associated with the variation application only. Specifically, the maximum PC was 3.1% at receptor HR13. However, when the existing background concentrations of TOC are added to

the site PC, the PEC is 9.8% of the AQS. As such, we are satisfied that the long-term AQS will not be exceeded at HR13, HR3 and HR4 and that PCs are insignificant at the other human receptors.

At all human sensitive receptor locations, the maximum predicted short-term PC was <10 % of the short-term AQS. We are therefore satisfied that the short-term predicted impacts from TOC as a result of this variation can be considered insignificant.

Sulphur Dioxide (SO_2)

Most of the modelled SO_2 is emitted by existing sources at the installation. Emission limits from the three existing kilns have been significantly tightened as a result of this variation. (See **Emission Limits** section below).

There is no long term AQS for SO_2 for the protection of human health. However predicted releases of SO_2 have been assessed against the three short-term AQSs, specifically 125 µg/m^3 (24-hour mean), 350 µg/m^3 (1-hour mean) and 266 µg/m^3 (15-minute mean.

At all human sensitive receptor locations, the maximum predicted short-term 24-hour mean PC was <10 % of the short-term AQS, with the exception of receptors HR11 (Premier Inn Swansea North Hotel) and HR13 (Pant-y-Blawd Road Travellers site). Specifically, the maximum predicted combined site (releases from existing installation + proposed variation) PC was 25.7% at HR11. However, when the existing background concentrations of SO_2 are added to the combined site PC, the PEC is approximately 28.3% of the AQS. As such, we are satisfied that the AQS will not be exceeded at HR11 and HR13 and that PCs are insignificant at the other human receptors.

The maximum predicted short-term 1-hour mean PC was <10 % of the short-term AQS, with the exception of receptors HR11 (Premier Inn Swansea North Hotel), HR13 (Pant-y-Blawd Road Travellers site) and HR14 (Asda). Specifically, the maximum predicted combined site (releases from existing installation + proposed variation) PC was 29.2% at HR11. However, when the existing background concentrations of SO_2

are added to the combined site PC, the PEC is approximately 30% of the AQS. As such, we are satisfied that the AQS will not be exceeded at HR11, HR13 and HR14 and that PCs are insignificant at the other human receptors.

The maximum predicted short-term 15-minute mean PC was <10 % of the short-term AQS, with the exception of receptors: HR2 (40 Clase Road, Morriston), HR3 (31 Bush Road, Morriston), HR4 (59 Cwrt Llwyn Fedwen, Morriston), HR5 (14 Cwrt Cilmeri, Morriston), HR11 (Premier Inn Swansea North Hotel), HR12 (Runtech Ltd), HR13 (Pant-y-Blawd Road Travellers site) and HR14 (Asda). Specifically, the maximum predicted combined site (releases from existing installation + proposed variation) PC was 69% at HR11. However, when the existing background concentrations of SO_2 are added to the combined site PC, the PEC is approximately 70.2% of the AQS. As such, we are satisfied that the AQS will not be exceeded at HR2, HR3, HR4, HR5, HR11, HR12, HR13 and HR14 and that PCs are insignificant at the other human receptors. We are also satisfied that SO_2 exceedances due to the operation of the standby generator are unlikely.

Benzo[a]Pyrene (BaP)

Predicted emissions of BaP were assessed against the long-term annual mean AQS of 0.25 ng/m^3. At all human sensitive receptor locations, the maximum predicted long-term PC was >1 % of the long-term AQS, with a maximum PC of 34.6% at HR13 (Pant-y-Blawd Road Travellers Site). Monitored background levels of BaP have been falling since 2022 at Swansea Cwm Level Park and the DEFRA background air quality maps show that the site and all human receptors (except HR6 Riverside Holiday Park) are located in an area where the ambient background levels of PAH are 0.1 ng/m^3 and below. As such we consider the background concentration we have applied of 0.125 ng/m^3 (an average of the most recent 12 months of monitoring data from Swansea Cwm Level Park spanning from last part of 2022 to all results for 2023) to be reasonably precautionary. When this background concentration is added to the combined site PC, the PEC is approximately 84.6% of the AQS at this receptor. As such, we are satisfied that the AQS will not be exceeded at any of the human receptors within the area where ambient background levels are 0.1 ng/m^3.

Receptor HR6 Riverside Holiday Park is in an area on the DEFRA background maps where the ambient background is 0.2 ng/m^3. The predicted combined process contribution (releases from existing site + proposed variation) at HR6 is 4.2% of the long term AQS. When the predicted PC is added to the ambient background of 0.2 ng/m^3 at this receptor, the PEC is 84.2% of the AQS. As such we are also satisfied that the AQS will not be exceeded at receptor HR6, where ambient background levels are 0.2 ng/m^3.

9.2. Assessment of impact to surface and ground water

There is no change to any discharge to surface water associated with this variation application. Only uncontaminated surface water can be discharged from emission point W1. There are no releases to groundwater from the installation. Based upon the information in the application we are satisfied that the appropriate measures will be in place to prevent pollution of ground and surface water.

9.3. Emissions to sewer

The proposal includes a discharge to sewer via emission point S1. The discharge will consist of Cooling water and Wet Scrubber blowdown from the new graphitisation furnace and associated plant. The quantities involved are small with 0.3m^3/hr and 0.05m^3/hr predicted from the cooling water blowdown and scrubber liquor respectively. The discharges comprise suspended solids, sodium salts and trace levels of cooling water chemicals.

Morganite Electrical Carbon Ltd already holds a valid trade effluent discharge consent from Dŵr Cymru Welsh Water and has provided a copy of the consent as Appendix H of Application Supporting Information (AtkinsRéalis V2 January 2024). In addition, the applicant has stated in their response (dated 15 July 2024) to our Not Duly Made Letter that:

> *"We confirm that Dŵr Cymru Welsh Water are aware of and accept the inclusion of the two additional effluent streams; blowdown associated with the new furnace and wet scrubber waste, for discharge".*

As the new discharge associated with the wet scrubber and furnace cooling system is low volume, does not contain any chemicals of particular concern and is being discharged for further treatment under the terms of an existing trade effluent consent, we are satisfied that a detailed quantitative assessment of the impacts from the discharge is not required.

We are also satisfied that by sending the new process discharge to sewer, the Operator meets the requirements of BAT 15 of the Non-Ferrous Metals BATC, by segregating process effluent from uncontaminated surface water to prevent pollution and reduce emissions to water.

9.4. Fugitive emissions

The applicant has identified and assessed potential fugitive releases to air and water which may arise from the new slot furnace, associated inspection table and standby generator. We agree with the operator's overall conclusion that there are unlikely to be any material increases in fugitive emissions to air, land and water as a result of this variation. Potential fugitive emission sources associated with the Long-Metallised Carbon process have been removed following the cessation of manufacturing.

Potential sources of fugitive emissions to air comprise dusts arising from the routine dismantling of the furnace and releases in the event of a failure of the abatement plant. Potential fugitive emissions to water are those resulting from accidental spills of chemicals and fuels stored on site.

The application details measures which will be in place for preventing and minimising fugitive emissions, which include:

- Diesel fuel, cooling water chemicals and maintenance fluids will be stored in small quantities and will be provisioned with secondary containment;
- Operation of the new slot furnace inside a building, thereby minimising the potential release of dust and odour.

The full control measures employed by the Operator are specified in Tables 4.7 and 4.8 of the Application Supporting Information (AtkinsRéalis V2 January 2024) document. These have been incorporated into Table S1.2 of the Permit as operating techniques and are therefore enforceable.

BAT Conclusions 5 – 9 are set to prevent and reduce diffuse emissions mainly from dust and stored liquids. We are satisfied that the Operator is employing BAT in this regard by:

- including emissions management in the installation's EMS;
- storing dusty materials internally to prevent release;
- regular housekeeping inspections and cleaning as necessary;
- use of oil / water separators throughout the site;
- site layout designed to minimise transportation distances for materials;
- bagging of waste prior to transport; and
- using suitable air emissions abatement plant to optimise efficiency of off-gas collection and treatment.

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.

Permit condition 3.2.1 requires that emissions of substances not controlled by emission limits (i.e., fugitive emissions) shall not cause pollution. Condition 3.2.2 requires that a management plan shall be developed if pollution is subsequently identified.

9.5. Assessment of odour impact

The applicant has explained that potential odour emissions from the site are limited to the release of Polycyclic Aromatic Hydrocarbons (PAH) and Volatile Organic Compounds (VOC) emissions from the impregnation and baking of the carbon products. Also, that operations are carried out within a building minimising the potential for such releases.

The application details measures which will be in place for preventing and minimising odour pollution. We have compared the measures proposed to minimise odour from the new process to BAT 19 of the Non-ferrous Metals BATC and are satisfied the techniques represent all applicable appropriate measures for this process.

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.

Condition 3.3.1 in the permit also requires that emissions from the activities are free from odour at levels likely to cause pollution outside the site. We are satisfied that this is sufficiently protective in conjunction with the measures described by the applicant for minimising odour at the installation.

9.6. Noise and vibration assessment

As part of the application, the Operator has submitted a noise impact assessment (NIA) and noise modelling to assess the potential risk of noise impact at the nearest receptors. The noise modelling software used is CadnaA. The NIA assesses typical operations at the installation, the new standby generator and cumulative noise from both, using BS4142:2014+A1:2019 “Methods for rating and assessing industrial and commercial sound”.

The applicant identified three sensitive receptors within the vicinity of the installation:

AL01 – Pant-y-Blawd Road Travellers Site (approx. 90m north of installation boundary)

AL02 – Premier Inn (adjacent to eastern boundary of installation)

AL03 – Bush Road (approx. 148m to west of installation boundary)

The new operations are concentrated to the southeastern area of the site with the bulk of the noise generating sources located outside the building envelope. The external new noise sources are listed in Table 4.1 of the Enzygo Noise impact assessment report (final, 2024) (Appendix G of the variation application) and include:

- process exhaust;
- dust extraction system filtration unit and exhaust air fans;
- scrubber; and
- containerised diesel generator.

The proposed operations at the site will see no significant alterations or extensions to the existing building envelope. Whilst there will be some new openings in the façade for vents/exhausts, the main structure will remain unchanged.

The installation operates 24 hours a day, 7 days a week. The background sound measurements used in the operator's noise impact assessment (NIA) report include the existing site operations and therefore do not meet the criteria for a background sound level as outlined in BS4142 and UK environment agencies noise guidance. However, Tables 4-8 and 4-9 in the NIA report shows the difference in the existing ambient levels and the predicted specific sound levels of the variation are negligible and therefore the impact of the variation is insignificant. Based on the fact that the site has been in operation for over 50 years and during this time the footprint of the site has decreased, the noise emissions from site have also reduced. There will also be a reduction in noise levels associated with the LMC process as it is no longer operating as a result of this variation. We therefore accept the noise assessment methodology in this particular case.

The NIA first considers predicted noise from the new process plant in isolation and then implications of the cumulative noise arising from operations at the wider installation on the prevailing noise climate in the area. Table 4-4 of the NIA presents the results for typical operation of the new plant items (excluding the standby generator) and shows that the impact at all receptors except AL02 Premier Inn (+3dB above ambient levels during the night-time) are below ambient levels.

Table 4-5 presents the results from the emergency generator. The impact at receptors AL01 and AL03 are below ambient sound level, whereas at receptor AL02 Premier Inn, the impact is +8dB (daytime) and +17dB (night-time) above ambient sound levels, based on this the consultant has proposed mitigation for the generator and has

reduced the impact (Table 4-7) to 0dB (daytime) and +8dB (night-time) above ambient. It should be noted that the Permit restricts the generator testing to less than or equal to 50 hours per year.

Finally, a cumulative noise assessment has been conducted, which considers the predicted impact of noise arising from the entire installation, (including the new process plant) on the prevailing noise climate in the area. This is detailed in section 4.10 of the NIA report. Tables 4-8 and 4-9 have added the predicted specific sound associated with the new plant items to the existing ambient sound levels to obtain the cumulative noise level. This cumulative noise level has then been compared to the existing ambient noise level and demonstrates that there is a negligible difference. The +0.4dB increase at receptor AL02 Premier in at night should not be perceptible in the prevailing ambient sound level. The same is true for the 50 hours per year when the generator is in use, with the predicted +1.2 dB increase in the prevailing ambient noise level at receptor AL02 Premier Inn, also not likely to be perceptible.

We agree with the Operator's conclusion that vibration is not a key concern for the new furnace and associated equipment, so no further assessment is required in this regard.

The application details measures which will be in place for preventing and minimising noise. We are satisfied that the Operator will comply with BAT 18 of the Non-Ferrous metals BATC, because the new furnace is located inside a building to minimise external noise at receptors and the new standby generator is housed in an acoustic enclosure. We are satisfied that these techniques represent appropriate measures for the installation. The NIA explains more specifically the mitigation measures for the generator, which consist of:

- more robust cladding of the container including internal linings to reduce breakout through the container envelope;
- attenuated air intake/outlet points including louvred openings; and,
- appropriately specified exhaust silencing system.

As the predicted impact of the generator alone, fitted with these mitigation measures, was predicted to be +8dB (night-time) above ambient at AL02 Premier Inn, we have decided to impose Improvement Condition 16 as detailed in the **Improvement Conditions Section** below. The purpose of this condition is to obtain measurements of actual operation of the new plant, which can be compared to the predictions in the application NIA report for all three human receptors. If noise levels are detected which are likely to cause adverse and / or significant adverse impact at these receptors, the operator is required to look at further means of mitigation and propose a timetable for implementation of any additional measures. We have also required that the operator conducts an assessment of whole site noise against a background sound level that does not include the existing site, in line with the BS4142 standard and associated guidance cited in Improvement Condition 16. The purpose of this is to obtain an updated representative background noise level, which will provide a foundation against which to assess any future proposed changes.

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 noise.

Conditions 3.4.1 of the permit requires noise from the activities to be below that which could cause pollution outside the site. We are satisfied that this will be sufficiently protective in conjunction with improvement condition 16 and the measures described by the applicant for minimising noise at the installation.

10. Impact on European Sites, SSSIs and non-statutory sites

The applicant has used the relevant screening distance criteria in “Air Emissions Risk Assessment for your Environmental Permit” on the gov.uk website to identify relevant protected conservation sites which could be at risk from the proposal. We are in agreement with the screening distances used.

A full assessment of the variation application and its potential to affect the identified sites has been carried out as part of the permit determination process. European sites,

Sites of Special Scientific Interest (SSSI) and non-statutory conservation sites will be discussed separately below.

10.1. European Sites

The following European sites are located within 10 km of the installation:

- Crymlyn Bog / Cors Crymlyn (SAC) (UK0012885)
- Crymlyn Bog (Ramsar) (UK14006)
- Carmarthen Bay and Estuaries / Bae Caerfyrddin ac Aberoedd (SAC) (UK0020020)
- Burry Inlet (SPA) (UK9015011)
- Burry Inlet (Ramsar) (UK14001)

A Habitat Regulations Assessment (HRA) was completed to assess the potential to affect any of the sites identified. The project was screened for likelihood of significant effects and is considered not likely to have a significant effect on any European site alone (as documented in section 3.2 of OGN 200 Form 1).

In light of the conclusions of an appropriate assessment and taking account of the advice received from NRW's protected sites advisors, it has also been established that the project will not adversely affect the integrity of any European site, either alone or in-combination with other plans and projects (as documented in section 5 of OGN 200 Form 1). The full assessment is available to view on the public register, entitled "V014 Morganite Form 1 HRA".

10.2. Sites of Special Scientific Interest (SSSI)

The following SSSIs are located within 2 km of the installation:

- Six Pit, Swansea Vale and White Rock 32WY5

As a Section 28G Authority as defined in the Countryside Rights of Way Act 2000 permitting teams within NRW has a legal duty, under Section 28I of the Wildlife and

Countryside Act 2981, to consult with NRW for formal advice when permitting an activity which has been determined to be likely to damage the features of a SSSI.

To determine if consultation is required, a SSSI Assessment was completed. The assessment concluded that the proposed permission is not likely to damage any of the flora, fauna or geological or physiological features which are of special interest. Therefore, no consultation with NRW's protected sites advisors is required.

A copy of the assessment is available to view on the public register, entitled "V014_Morganite Appendix 4 SSSI Assessment".

10.3. Non-statutory conservation sites

The following relevant non-statutory sites re located within 2 km of the installation:

- Tawe Corridor (Local Wildlife Site)
- Swansea Vale / Fendrod NR (Local Wildlife Site)
- Fendrod Lake and Nant-y-Fendrod (Local Wildlife Site)
- Llansamlet Marshes (Local Wildlife Site)
- Main Swansea – Fishguard Railway Line (Local Wildlife Site)
- Trallwn Marsh and Wood (Local Wildlife Site)
- Trewyddfa Slopes (Local Wildlife Site)
- Llewellyn Heath (Local Wildlife Site)
- Pluck Lake (Local Wildlife Site)
- Cwm Rhydyceirw to Birchgrove Railway (Local Wildlife Site)
- Llangyfelach Golf Course and Surrounds (Local Wildlife Site)
- M4 Corridor (Local Wildlife Site)
- Ynystanglws (Local Wildlife Site)
- Upper Bran grazing-marshes and Heol Las Coalyard (Local Wildlife Site)
- Pen-Rhiw-Forgan Woods (Local Wildlife Site)

There are 12 Ancient Woodland sites within 2km of the search point, the closest of which is small area of unnamed semi-natural ancient woodland (receptor ER43 Ancient Woodland 9) located approximately 1.1km to the northeast of the installation search point. There are no National Nature Reserves or Local Nature Reserves within 2km of the search point.

For non-statutory sites, Natural Resources Wales impact assessment criteria considers whether or not an installation can cause significant pollution. If the process contribution from an installation is less than 100% of the relevant critical level or load for a site, we consider that no significant pollution will be caused.

Tawe Corridor Local Wildlife Site is the closest non-statutory site to the installation at approximately 186 metres, adjacent to the western installation boundary.

The applicant has modelled the predicted Process Contributions (PCs) at each of the non-statutory sites for the following pollutants: annual and 24-hourly nitrogen oxides (as NO_2) (NOx), annual sulphur dioxide (SO_2), annual nitrogen deposition and acidification. As the predicted PCs for all pollutants decline quickly with distance from the source, this assessment focuses on predicted PCs at Tawe Corridor Local Wildlife Site where the maximum predicted PCs occur. As such, it follows that if predicted PCs are less than 100% of the relevant Critical Level (CLe) and Critical Loads (CLo) at the closest non-statutory site, they can be expected to be even less at those non-statutory sites which are further from the release sources.

Critical levels for nitrogen oxides (as NO_2) (NO_x)

We are satisfied that the 30 µg/m^3 annual mean CLe for NO_x will not be exceeded at any of the non-statutory sites. The highest predicted PC is 6.3% of the annual mean NOx CLe at Tawe Corridor LWS.

We are also satisfied that the 75 µg/m^3 daily mean CLe for NOx won't be exceeded at any of the non-statutory sites. The highest predicted PC is 11.9% of the daily mean NOx Cle at Tawe Corridor LWS.

Critical levels for sulphur dioxide (SO_2)

We are satisfied that the precautionary 10 µg/m^3 annual mean CLe for SO_2 (used where lichens and bryophytes are present) will not be exceeded at any of the non-statutory sites. The highest predicted PC is the combined PC for the existing site releases plus those associated with the new development. This is 15.8% of the annual mean SO_2 CLe at Tawe Corridor LWS.

Nitrogen Deposition

We are satisfied that the habitat specific lower CLos for nitrogen deposition will not be exceeded at any of the non-statutory sites. The highest predicted PC is the combined PC for existing site releases plus those associated with the new development. This is 0.6% at Tawe Corridor LWS.

Acidification

The highest predicted PC is the combined PC for existing site releases plus those associated with the new development. This is 12.35% at Tawe Corridor LWS. We are satisfied that this will not exceed the site specific CLo. The percentage PC is lower at all the other non-statutory sites.

Based upon the information in the application we are satisfied that there will be no risk of significant pollution at the non-statutory nature conservation sites identified.

11. The Permit Conditions

11.1. Updating permit conditions during consolidation

We have updated previous permit conditions to those in the new generic permit template as part of permit consolidation. The new conditions have the same meaning as those in the previous permit(s).

The operator has agreed that the new conditions are acceptable.

11.2. Incorporating the variation

We have specified that the applicant must operate the permit in accordance with descriptions in the application. These descriptions have been specified in the Operating Techniques table in the permit (Table S1.2).

11.3. Emission Limits

Article 14(3) of IED states that BAT conclusions shall be the reference for permit conditions. Article 15(3) further requires that under normal operating conditions;

emissions do not exceed the emission levels associated with the best available techniques as laid down in the decisions on BAT conclusions.

BAT conclusions set out specific limits that the operator must comply with. Modelling has been used to demonstrate that the operator will be able to comply with the air emission limits described as BAT. for graphitising in the Non-Ferrous Metals BATC. We have decided that emission limits should be set for the parameters listed in the permit.

The following substances have been identified as being emitted in significant quantities from the new slot furnace at air emission point A70: Sulphur dioxide (SO_2), Dust, and Benzo[a]Pyrene (B[a]P) Total Volatile Organic Compounds (TVOC). Emission Limit Values (ELVs) based on the Non-ferrous Metals BATC have been set for these substances. Specifically, BAT 178, Table 51 applies to dust and B[a]P and BAT 183, Table 55 is applies to TVOC.

There is no BAT-AEL for SO_2, but BAT 182 specifies that *"In order to reduce SO2 emissions to air when there is a sulphur addition in the process, BAT is to use a dry and/or wet scrubber".* The operator has confirmed that a caustic wet scrubber and carbon filter abatement plant will be installed on emission point A70, which is specified to achieve a >98% SO_2 removal efficiency. They have used an emission concentration of 100 mg/Nm^3 in their air quality risk assessment and we have imposed this value as an emission limit in Table S3.1 of the permit.

We have imposed an ELV of 5 mg/Nm^3 on emission point A72, which serves as the dust extraction for the new inspection table. As the inspection table only exists because of the new slot furnace, we consider it forms an inherent part of the overall graphitisation process. As such, we have applied the upper end of the 2 – 5 mg/Nm^3 range for dust from BAT 178, Table 51.

Emission limits have not been set for air emission point A71 (standby generator), because under normal operation, the generator will be tested for just 50 hours per year and falls below the regulatory threshold for a medium combustion plant / specified generator. Similarly, we have not set ELVs for A73 (nitrogen storage tank pressure

release valves), as these are safety release valves, rather than a source of ongoing point source emissions from the regulated manufacturing process. Finally, air emission points A3, A10 – A11, A62 and A65-A69 have been removed from table S3.1 of the permit as a result of the cessation of the Long-Metallised Carbon manufacturing process. Air emission point A63 associated with Small Batch Plating (tin, copper, silver Plant) has also been removed, as the Operator has confirmed that this process has not operated since 2020.

We have tightened emission limits to air for sulphur dioxide (SO_2) for the three existing kilns (emission points A27, A28 and A61) as a result of this variation. Specifically, the SO_2 24-hourly average has been reduced from 2900 mg/Nm^3 to 500 mg/Nm^3 for all three emission points, based on the Operator's modelling which shows the tighter limits are achievable.

Based upon the information in the application and the measures that will be imposed by the permit we are satisfied that the appropriate measures will be in place to protect air quality for the environment and human health.

We have decided that emission limits on emission point S1 are not required, as the discharge is taking place under the terms of a current trade effluent consent from Dŵr Cymru Welsh Water. The applicant must undertake monitoring and reporting as part of this consent, so duplication in regulation by both NRW and Dŵr Cymru Welsh Water. is not required.

Based upon the information in the application we are satisfied that the appropriate measures will be in place to prevent pollution of surface waters as a result of the sewer discharge.

11.4. Monitoring

We have decided that monitoring should be carried out for the parameters listed in Schedule 3 of the permit using the methods and to the frequencies specified in those tables. These monitoring requirements have been imposed in order to demonstrate compliance with the emissions limits in the permit.

For emissions to air, the methods for periodic monitoring are in line with BAT 10 requirements set out in the Non-Ferrous Metals BATC. Monitoring frequencies have also been considered in line with BAT requirements.

Based on the information in the application and the requirements set in the conditions of the permit we are satisfied that the monitoring techniques, personnel and equipment employed by the Operator will have either MCERTS certification or MCERTS accreditation as appropriate.

We have updated the monitoring reference period for B[a]P from “hourly average” to “Average value of three consecutive measurements of at least 30 minutes each, unless otherwise stated” in Table S3.1 of the permit as a result of this variation. This is linked to table note (1), which clarifies “for batch processes, the average of a representative number of measurements taken over the total batch time or the result of a measurement carried out over the total batch time can be used”. We have also updated the monitoring standard used for this pollutant from “ISO 11338” to “ISO 11338 Parts 1 and 2”. This change has been made to ensure that monitoring for B[a]P is undertaken consistently for all relevant emission points in line with the Non-Ferrous Metals BATC. The monitoring standard for SO_2 on the three existing kilns (A27,A28 and A61) has been updated from CEN/TS 17021 to EN14791 for consistency with all the air emission points in Table S3.1 of the permit.

11.5. Reporting

We have specified the reporting requirements in Schedule 4 of the Permit to ensure that emissions are within ELVs and that the installation is being operated in an efficient manner. The reporting frequency for the slot furnace (A70) and inspection table (A72) is every 12 months in line with other existing emission points on site. We have updated reporting form Air 1 to include emission points A70 and A72.

11.6. Improvement conditions

Based on the information on the application, we consider that we need to impose improvement condition 16 to ensure that the appropriate measures are in place to prevent pollution from noise off-site (see Section 9.6 for details).

Improvement Condition 16 requires that:

> Following successful commissioning and establishment of routine steady operation[1] of the graphitisation furnace, associated inspection table and standby diesel generator, the Operator shall undertake noise monitoring at Receptors AL01, AL02 and AL03 (identified in the Enzygo Noise Impact Assessment report (Final 2024)). The purpose of this monitoring is to ensure that actual impacts from the graphitisation furnace, associated inspection table and standby diesel generator do not exceed those predicted in the Enzygo report.
>
> This work shall include:
>
> - An assessment of whole site noise against a background sound level that does not include the existing site; and
> - A full noise monitoring survey and assessment meeting the BS4142:2014 + A1:2019 standard; following the guidance set out in Noise and Vibration Management: Environmental Permits and Method Implementation Document (MID) for BS4142.
>
> Upon completion of the work, a written report shall be submitted to Natural Resources Wales for approval. The report shall make reference to the predictions in the Final 2024 Enzygo report. If rating levels likely to cause adverse and/or significant adverse impact at sensitive receptors are detected, the report shall include an assessment of the most suitable abatement techniques, an estimate of the cost and a proposed timetable for their installation.

Improvement Condition 16 is required to be completed within 3 months of the start of operation of the graphitisation furnace. A footnote has been added to Table S1.3 of the permit defining “Routine Steady Operation” as “normal operation” consists of any operation of the plant not including shutdown and abnormal operation, unless additional definitions are agreed in writing with Natural Resources Wales.

Permit table S3.1 “Point Source Emissions to Air – Emission Limits and Monitoring Requirements” originally contained footnote 1 against the Benzo[A]Pyrene emission

limit value (ELV) prior to this variation. Footnote 1 stated: “Compliance will be shown through completion of Improvement Condition 13”. As Improvement Condition IC13 has been completed, note 1, no longer applies and has been removed from the table.

Improvement conditions 12, 13 and 15 have been verified as complete as part of this variation and improvement condition 14 has been superseded. Table S1.3 of the permit has been updated to reflect this.

12. OPRA

The OPRA spreadsheet for the installation has been updated as a result of this variation. The agreed score which will form the basis for ongoing subsistence fees is 108.

End of decision document.