



NEVILL'S DOCK, LLANELLI, CARMARTHENSHIRE

**APPLICATION TO VARY
PERMIT REFERENCE EPR/BM2381IQ**

**ENVIRONMENTAL PERMITTING TECHNICAL
REQUIREMENTS DOCUMENT**

APPLICATION REFERENCE EPR/BM2381IQ (V007)

ECL Ref: ECL.008.01.03/EPTR

Date: January 2019

Version: Issue 1.0

ENVIRONMENTAL PERMITTING TECHNICAL REQUIREMENTS DOCUMENT



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ACRONYMS / TERMS USED IN THIS REPORT

AMG	AMG Resources Limited
AMP	Accident Management Plan
ASCR	Application Site Condition Report
BAT	Best Available Techniques
BAT	Best Available Techniques
BMRA	British Metals Recycling Association
BREF	Best Available Techniques Reference Documents
CCA	Climate Change Agreement
CCTV	Closed Circuit Television
DAA	Directly Associated Activities
EA	Environment Agency
EMP	Emissions Management Plan
EMS	Environmental Management System
EP Regulations	Environmental Permitting Regulations
FLT	Fork Lift Truck
FPP	Fire Prevention Plan
IED	Industrial Emissions Directive
MRF	Materials Recovery Facilities
NRW	Natural Resources Wales
NVMP	Noise and Vibration Management Plan
PMP	Pest Management Plan
PPE	Personal Protective Equipment
PPMR	Planned Preventative Maintenance Regime
QA	Quality Assurance
QC	Quality Control
RPA	Radiation Protection Advisor
SSSI	Site of Special Scientific Interest
TON	Total Oxidised Nitrogen

1. INTRODUCTION

1.1. OVERVIEW OF CHANGES AT THE INSTALLATION

AMG Resources Limited (“AMG”) is submitting this application to vary the conditions of its existing Environmental Permit (EPR/BM2381IQ). At present, main operations involve physical sorting and baling of scrap metals. Consequently, a permit variation is required to reflect this change. Discussions with Natural Resources Wales (“NRW”) have been ongoing since the cessation of the tin recovery.

1.2. INSTALLATION LOCATION

The Installation is located at Nevill’s Dock, Llanelli, SA15 2HD, and is centred on National Grid Reference 250504 198981. The Installation occupies an area of approximately 7.7ha. The exact location of the Installation and the Environmental Permit boundary (outlined in green) is indicated on the Site Location Plan (Drawing Reference ECL.008.01.02-001). The proposed 5.4. A(1)(b)(iv) Schedule 1 Activity will be located in a discrete area on the Installation site occupying an area of approximately 1 hectare. The boundary of the proposed 5.4. activity is outlined in red on the Site Layout Plan (Drawing Reference ECL.008.01.03-002), which is provided in Appendix I of this document.

1.3. THE APPLICANT

AMG Resources Corporation is a large Anglo-American company specialising in the processing of ferrous and non-ferrous scrap metal and is a leading supplier of prime and secondary steel products. AMG has been operating a post-consumer metal packaging Installation located in Nevill’s Dock, Llanelli under an Environmental Permit (formerly a PPC Permit) since 2003, an IPC Authorisation prior that time, and has been operating at the Nevill’s Dock since 1907.

2. LISTED ACTIVITIES

2.1. INSTALLATION ACTIVITIES

- 2.1.1. Previously, tin recovery was the primary operation at the Llanelli site. However, as a result of fluctuations in tin prices, the operations have focused on the physical sorting, compaction and baling of scrap metals for the ferrous sector to manufacture steel since 2014.
- 2.1.2. Consequently, the purpose of the permit variation is to include Section 5.4. A(1)(b)(iv) (See Table 2) as an additional Schedule 1 Activity under the EP Regulations to best reflect the current practices at the Installation.
- 2.1.3. The currently permitted Schedule 1 Activities at the Installation are detailed in Table 1.

Table 1: Schedule 1 Activities

Activity Reference	Activity listed in Schedule 1 of the EP Regulations	Description of Specified Activity	Limits of Specified Activity
A1	S2.2 A(1)(a) – Producing non ferrous metals from secondary raw materials by metallurgical, chemical or electrolytic activities	Chemical treatment of scrap metals and cans and electrolyte recovery of tin from the chemical liquor.	From chemicals added to shredded metal to the recovery of tin following electrolysis.

- 2.1.4. The proposed additional listed activity under Schedule 1 is detailed in Table 2.

Table 2: Schedule 1 Activities

Activity Reference	Activity listed in Schedule 1 of the EP Regulations	Description of Specified Activity	Limits of Specified Activity
A8	5.4. A(1)(b)(iv)	Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day involving...treatment in shredders of metal waste, including waste electrical and electronic equipment and end-of-life vehicles and their components.	From material entering site to final dispatch off site.

2.2. DIRECTLY ASSOCIATED ACTIVITIES

2.2.1. The current Directly Associated Activities (“DAAs”) at the Installation are detailed in Table 3.

Table 3: Current DAAs

Activity Reference	Activity listed in Schedule 1 of the EP Regulations	Description of Specified Activity	Limits of Specified Activity
Directly Associated Activities			
A2	Storage and handling of raw materials	Raw material storage, handling, sorting and preparation including the hammer mills, magnetic separators, shredders, oils, chemicals and the aluminium recovery plant.	Receipt of raw materials, to transfer, to chemical treatment or usage on site.
A3	Site generated energy supply for process	Generation of heat, steam etc.	Boiler that provides energy for the process
A4	Processing of product	Cathode melting, furnace melting and casting of tin	Production of solid tin and the final product storage areas.
A5	Handling and storage of solid waste	From the generation of solid wastes to the determination of their fate and transfer off site.	Point of production of any solid wastes to their collection, storage and transfer off site.
A6	Handling and storage of liquid waste	Spent process liquors, wash waters, other effluents	Point of production of any liquid wastes to their collection, storage and transfer off site.
A7	The operation and control of emissions abatement systems	Operation of abatement systems for air emissions and effluent treatment	To ensure the efficient and effective operation of emission abatement plant.

2.2.2. The proposed additional DAA at the Installation is detailed in Table 4.

Table 4: Proposed DAA

Activity Reference	Activity listed in Schedule 1 of the EP Regulations	Description of Specified Activity	Limits of Specified Activity
Directly Associated Activities			
A9	Storage of baled material prior to dispatch	Storage of baled material prior to discharge	Point of production of bales to transfer off site

3. MANAGEMENT TECHNIQUES

3.1. TECHNICAL COMPETENCE

- 3.1.1. AMG are required to demonstrate Technical Competence in order to undertake the specified waste management activities under Section 5.4. of the EP Regulations. Accordingly, a Technically Competent Manager will be required. Paul Tobin, AMG's Site General Manager, will fulfil this role. WAMITAB and the Course Assessor have confirmed that a Letter of Registration is no longer issued and NRW have access to the WAMITAB system to check the registration details.

3.2. OVERVIEW OF EXISTING ENVIRONMENTAL MANAGEMENT SYSTEM

- 3.2.1. AMG operate an environmental management system ("EMS") which addresses environmental aspects of the activities at the Installation. The EMS is based on the requirements of the international EMS standard BS EN ISO 14001 and adopts the Standard's Plan, Do, Check, Act approach. The existing system is based on the 14001:1996 standard, however, the system will be updated as described below to follow the 14001:2015 standard.
- 3.2.2. AMG's Site General Manager has overall responsibility for the site. Responsibility for environmental matters at the Installation also rests with the Site General Manager.
- 3.2.3. AMG employ external Environmental Consultants to undertake monthly site visits to perform environmental management duties, including site walkovers and ensuring Environmental Permit reporting requirements are duly completed and submitted to NRW.
- 3.2.4. AMG has established a documented EMS which:
- ensures compliance with all relevant legislation;
 - ensures compliance with the conditions of the Installation's environmental permit;
 - identifies, assesses and minimises the risks of pollution arising from the Installation's activities;
 - comprises a range of written procedures that cover all aspects of the Installation's activities;
 - identifies, sets, monitors and reviews environmental objectives and key performance indicators; and
 - includes a requirement to report annually on environmental performance, objectives, targets and future planned improvements.

3.3. ENVIRONMENTAL POLICY

AMG has an Environmental Policy that covers the operation of the installation. A copy of the Environmental Policy Statement is provided in Appendix II of this document.

3.4. DETAILS OF THE ENVIRONMENTAL MANAGEMENT SYSTEM

3.4.1. Plan

3.4.1.1. The planning element of the EMS includes:

- identification of environmental impacts and aspects associated with the Installation's activities, and assessing their significance; including an assessment of the potential environmental risks posed by the work of contractors;
- identification and evaluation of relevant legal and other relevant requirements;
- identification of environmental objectives and targets that will be focussed on reducing the impact of the identified significant environmental aspects;
- a series of risk assessments to cover a range of issues, including site operations, maintenance, accidents, training and records; and
- details of how AMG ensure that any relevant standards, guidance and codes of practice are met on an ongoing basis.

3.4.1.2. The outcomes of the above are:

- a comprehensive understanding of the potential and actual impacts of the permitted activities on the surrounding environment and people's health;
- the correct appropriate measures selected to manage environmental risks and prevent or minimise their effects so as not to cause pollution;
- a series of documented procedures covering all aspects of the Installation's activities; and
- a series of documented environmental objectives and targets, together with an action plan/development programme to ensure that these are met.

3.4.2. Implementation and Operation (Do)

3.4.2.1. This element includes:

- ensuring that EMS roles and responsibilities are clearly defined and documented, and that site staff are made aware of these;
- ensuring that the installation is operated by suitably competent staff who have received the necessary training in all aspects of the plant's operation, including where contractors are used, ensuring that they are suitably competent; in this regard:
 - the skills and competencies necessary for key posts are documented; these key posts include contractors, those responsible for liaising with contractors and those purchasing equipment and materials,
 - training requirements are identified by means of a documented training needs analysis,
 - documented training records are kept and updated as required,
 - training specifically addresses environmental awareness and environmental permit requirements, and
 - the requirement for ongoing/refreshers training is identified;
- ensuring that there are site layout plans - including drainage plans - and that they are revised as required to reflect any changes at the Installation;

- ensuring that there are documented procedures covering internal and external communications;
- ensuring that there are procedures in place for staff and contractors to have access to the Installation's permit and management system requirements; with regard to contractors, ensuring that suitable instructions are provided with regard to protecting the environment whilst working on site;
- the establishment of a documented planned preventative maintenance regime ("PPMR") to ensure that all plant and site infrastructure are kept in suitable condition and operating effectively; this PPM programme details what maintenance, tests and inspections need to be done and when; this also details the measures required to ensure continuing compliance with the permit conditions during maintenance/shutdown. The PPMR also:
 - identifies known or predictable malfunctions associated with the operations and the procedures, spare parts, tools and expertise required to deal with them,
 - includes a record of spare parts held, or details on where they can be sourced from, together with an assessment of how long they would take to obtain,
 - includes a defined procedure for identifying, reviewing and prioritising items of plant for which a preventative regime is appropriate,
 - includes all "Critical Equipment List" i.e. equipment or plant whose failure could directly or indirectly lead to an impact on the environment or human health and 'non-productive' items,
 - ensure the necessary spare parts, tools, and competent staff are available prior to commencing maintenance;
- ensuring that there are documented procedures covering document control;
- ensuring that there are suitable documented record-keeping arrangements in place;
- ensuring that there are documented operational procedures and work instructions covering all aspects of the Installation's operation;
- ensuring that there are documented procedures covering emissions monitoring undertaken at the Installation; these will specifically include details of the relevant standards/methods used, the equipment used, its maintenance and calibration requirements and the frequency required (i.e. continuous or periodic, and if periodic, the associated schedules);
- ensuring that there are documented procedures that incorporate environmental issues into the control of process/equipment change, capital approval and purchasing policy;
- ensuring that there are documented procedures to address non-conformities/non-compliances and the associated corrective and preventative action; these will detail the means by which any such non-conformities/non-compliances are reported to management and the means by which they are reported to NRW;

- ensuring that there is a documented procedure for dealing with complaints; this includes requirements to ensure that:
 - an appropriate person deals with the complaint,
 - the complaint is properly recorded,
 - the complaint is properly investigated,
 - any action necessary to deal with the cause of the complaint is recorded,
 - the impact of the activity causing the problem is minimised,
 - steps are taken to ensure that the problem is not repeated,
 - details of any justified complaints are reported to senior management,
 - that the complainant (or NRW, as appropriate) is responded to in writing,
 - if the complaint came via NRW, a suitable documented response is provided to NRW,
 - if the complaint has come from a neighbour or a member of the public, a suitable documented response is provided to the complainant, and, if the complaint is substantiated, a report is provided to NRW, and
 - the EMS is amended accordingly to reflect any changes;
- ensuring that there are documented procedures covering emergency preparedness and response; these will cover such incidents as major plant failures, significant spillages of potentially polluting substances, loss of mains electrical power etc.; these are incorporated into an Accident Management Plan; AMG ensure that suitable measures are in place to communicate the Plan to all employees, management and contractors who work at the site; the Plan details:
 - the arrangements for response to an emergency, including defining specific responsibilities,
 - the measures for dealing with the consequences of an incident,
 - communicating with NRW and other relevant regulatory bodies,
 - communicating with the Installation's neighbours and the local community,
 - the measures for investigating incidents (and near-misses), including identifying suitable corrective action and following up implementation of that action,
 - the measures for recording incidents (and near-misses),
 - the measures for reporting incidents (and near misses) to Senior Management, and
 - the measures for reporting incidents to NRW;
- ensuring that there are documented procedures for carrying out internal audits; these describe how to schedule, conduct, report and manage internal audits;
- ensuring that there is a documented contingency plan in place that:
 - ensures compliance is maintained with all permit conditions and operating procedures during maintenance/shutdown at the Installation or elsewhere,
 - ensures that permitted storage limits are not exceeded and appropriate measures for waste storage and handling continue to be applied, and
 - includes ceasing the acceptance of waste unless a clearly defined method of recovery or disposal has been determined and sufficient permitted storage capacity is available.

- 3.4.2.2. The outcome of the above is evidence that day-to-day activities are taking place in accordance with the requirements of the EMS and the Installation's permit, specifically:
- that control measures and procedures are an integral part of the business operation;
 - that the EMS is easy for staff to access, understand and use;
 - that staff are suitably trained and competent to carry out procedures and control measures; and
 - that the requirements of the EMS are effectively communicated to management, staff and contractors.

3.4.3. **Check**

3.4.3.1. This element includes:

- ensuring that all regulatory requirements in relation to monitoring and measurement are complied with, specifically:
 - the requirements relating to inspection and testing required under the applicable environmental legislation and the Installation's permit (including a list of the scheduled monitoring programmes) and the associated procedures and work instructions,
 - the requirements relating to inspection and testing required under the applicable health and safety legislation and the associated procedures and work instructions, and
 - the requirements relating to the control of all inspection, measuring and test equipment relating to environmental requirements;
- ongoing evaluation of compliance with environmental legal requirements, policy requirements and objectives and targets; this will include:
 - an annual review of AMG's environmental legal register,
 - regular plant inspections, and
 - internal audit procedures (as detailed below);
- ensuring that non-conformities/non-compliances are properly recorded, investigated and that the appropriate corrective action is taken by the due date;
- ensuring that the necessary reporting and record-keeping required under the various permits, licences and consents are complied with;
- ensuring that internal audits are carried out in accordance with the documented procedures and that any audit actions are followed up ;and
- ensuring that the results of all audits are made available to Senior Management on a regular basis.

3.4.3.2. The outcomes of the above will be:

- that checks are carried out to ensure that the EMS is being implemented as intended, i.e. as documented; and
- the necessary preventative and corrective actions are undertaken to minimise non-compliances.

3.4.4. Review

3.4.4.1. This element will include:

- an annual management review of the EMS to ensure that it is appropriate, being implemented and kept up to date, e.g. that any supplementary plans have been included into the EMS;
- A management review of the EMS when:
 - there are changes on site (in activities and/or plant/equipment),
 - if there is an accident, complaint, or breach of permit conditions.
- an annual review of both individual and organisational training needs;
- ensuring that all changes to the EMS are properly recorded, and, if there are any major changes, NRW is informed;
- an assessment of whether the Installation's objectives, and any targets, have been met and reported;
- a review of the Installation's objectives and targets, and, where appropriate, any revisions to these so as to effect continual improvement.

3.4.4.2. The outcomes of the above will be:

- the EMS is kept up to date, and
- the EMS is continually improved.

3.5. EMS CHANGES TO ADDRESS THE VARIATION PROPOSAL

3.5.1. The existing EMS has been in place since the original permit issue in 2013. A system overhaul to update it to the new ISO 14001:2015 Standard was planned in 2017. However, due to the uncertainty of the site activities and whether de-tinning operations would recommence, the EMS update was postponed.

3.5.2. The existing system will be updated to ensure the EMS remains applicable taking account of the changes proposed as part of this permit variation application and will follow the ISO 14001:2015 standard.

3.5.3. *Context of the Organisation and Scope of the EMS (ISO Standard Ref – Section 4)*

3.5.3.1. The context of the organisation will be reassessed in light of the changes being proposed as part of the variation to take account of the external issues, such as economic, competition, supply chain, market and public demand, as well as the internal issues, such as legal compliance, vision, mission, capacity and capability of the site and the internal interested parties.

3.5.3.2. The existing vision and mission of the company will remain unchanged but will include the waste operations which will be undertaken at the site.

3.5.3.3. The needs and expectations of interested parties will be reassessed. This will be achieved through interaction with investors, employees, suppliers, contractors, regulatory bodies and the local community. It is anticipated that one of the major changes will be in regards to legal compliance when assessing the needs and expectations of interested parties.

3.5.3.4. Following the identification of the needs and expectations of the interest parties, AMG will then establish new compliance obligations. This is one of the main changes in the new ISO standard and therefore, a new procedure for determining and setting compliance objectives will be produced. For example, the Legal Register will be updated to include all relevant waste legislation. The permit requirements and specific monitoring limits will be added to the Legal Register following issue of the varied permit. Additionally, customer requirements linking to the compliance objectives will also be amended to the environmental standards expected of new customers.

3.5.3.5. The scope of the EMS will be reviewed by Senior Management. The scope of the EMS is expected to cover all waste operations, from the acceptance, storage, processing, transfer and delivery. A life cycle approach will be adopted taking into account the supply chain, as well as the product afterlife. For example, the results of the life cycle analysis assessment will include AMG undertaking baling of metal packaging which is then sold for the manufacture of steel products in the construction industry, achieving a reduction in the consumption of raw materials and waste being sent to landfill.

3.5.4. ***Leadership and Commitment (ISO Standard Ref – Section 5)***

3.5.4.1. Senior Management will be briefed by the Site General Manager on the EMS changes. The commitment, such as providing physical and financial resources, will remain the same but also discussed in the context of the new waste operations. This will include investment for the improvement requirements outlined in Section 11 of this document.

3.5.4.2. The leadership and commitment of Senior Management will be reinforced to all employees at the AMG site.

3.5.4.3. The Environmental Policy has been updated to include the details of the waste operations and the vision and commitment of the company. The Environmental Policy is included in Appendix II of this document.

3.5.4.4. The company organogram will be updated to reflect the changes to the relevant roles and responsibilities following the variation, such as the Technically Competent Person who is also responsible for ensuring waste pre-acceptance and acceptance procedures are implemented and adhered to.

3.5.5. ***Planning (ISO Standard Ref - Section 6)***

3.5.5.1. The procedure for determining risks and opportunities at the Installation will remain the same. The Environmental Risk Assessment (ECL.011.01.03/ERA) will be used to inform the new risks and opportunities at the Installation.

3.5.5.2. The risk and opportunities are related to the environmental aspects, which are the elements of the organisation's activities, products or services that can interact with the environment. The Environmental Aspects Register will be updated to include waste acceptance, storage of unprocessed and processed waste, waste processing operations, waste transfer and dispatch, as well as utility consumption (namely energy use) and maintenance of plant and machinery.

- 3.5.5.3. Following the identification and risk rating of the identified aspects, control measures will be proposed and implemented. These will control measures will address impacts such as fugitive emissions to air and noise. The Environmental Aspects Register updates will inform the continued development of the site, including the location of certain activities and the operational procedures required. The environmental aspects and associated control measures will also include the practices of subcontractors.
- 3.5.5.4. The Legal Register will be updated to include all waste related legislation.
- 3.5.5.5. Environmental objectives will be discussed and set by Senior Management. Anticipated environmental objectives and performance indicators following the variation are described in Table 5.

Table 5: Anticipated Environmental Objectives and Performance Indicators

Environmental Objectives	Performance Indicators
All waste accepted onto site will be processed and dispatched from site as a product.	1) % of waste produced per quantity of finished product; and/or 2) Downtime due to mechanical failure/repair required.
Reduction in the energy consumption associated with waste processing (the first year following permit variation issue will be used as a baseline).	% reduction in energy consumption.
No environmental complaints (such as noise and dust nuisance) received.	Number of substantiated complaints received in the year.
All AMG employees trained in the updated EMS and are able to identify the environmental aspects related to their specific job role.	Number of personnel trained and signed off in the training records.

3.5.6. Support (ISO Standard Ref - Section 7)

- 3.5.6.1. The Site General Manager and Maintenance Manager already possess experience in EMS implementation. External Environmental Consultants will be commissioned to undertake the EMS amendments, which will also include training in the new ISO 14001:2015 standard requirements.
- 3.5.6.2. Environmental training will be provided for all employees. Operators will be briefed on the environmental aspects and impacts associated with their specific job role. This will act as a refresher in regards to EMS principles and will focus on the EMS amendments and the varied Environmental Permit.
- 3.5.6.3. Senior Management will continue to build awareness of the EMS and associated environmental performance.

- 3.5.6.4. The methods for communication will remain the same. Notice boards will be updated, toolbox talks will be held with employees and if required, community dialogue, website updates and emails will be used.
- 3.5.6.5. AMG will continue to develop and maintain documented information to ensure the EMS is operating effectively. All changes will be documented, such as the Aspects Register, Legal Register, environmental objectives and performance indicator data, as well as training material and records.
- 3.5.7. **Operation (ISO Standard Ref – Section 8)**
- 3.5.7.1. The majority of changes within the EMS will fall within the Operation Section.
- 3.5.7.2. The process flow diagram within the EMS will be updated to Figure 1 in this document.
- 3.5.7.3. New operational procedures will be prepared and issued. The operational procedures required will be determined by the significant aspects identified. The significance is based on a risk threshold calculated using the severity of the risk multiplied by the frequency.
- 3.5.7.4. Each operational procedure will detail the sequence of activities to be undertaken, personnel responsibilities and environmental compliance required, for example, a description of Duty of Care requirements for waste paperwork.
- 3.5.8. Operational procedures which will be prepared include the following:
- waste pre-acceptance procedure (Section 4.6 of this document);
 - waste acceptance procedure (Section 4.7 of this document);
 - waste storage arrangement procedure;
 - waste processing procedures, split into different processing activities, such as shredding, baling etc; and a
 - waste transfer and dispatch procedure.
- 3.5.9. The Planned Preventative Maintenance Regime (“PPMR”) will be updated by the Maintenance Manager detailing the maintenance work which will be required and associated frequency for the new plant and equipment.
- 3.5.10. As identified in the Environmental Risk Assessment (ECL.008.01.03/ERA) undertaken as part of the permit variation, specific management plans have been created. The following management plans will be implemented as part of the EMS:
- Emissions Management Plan (ECL.008.01.03/EMP)
 - Noise and Vibration Management Plan (ECL.008.01.03/NVMP); and
 - Pest Management Plan (ECL.008.01.03/PMP).
- 3.5.11. The management plans contain a Daily Site Monitoring Check Sheet (see the relevant appendix of all management plans), which records a site inspection. The check sheet will be completed by the General Site Manager and/or Maintenance Manager to monitor and record any visual observations, such as any environmental/housekeeping issues, as well as noise nuisance and presence of pests within the Installation boundary.

- 3.5.12. The Accident Management Plan (“AMP”) will be updated and continue to form part of the EMS. The emergency response procedure contained within the AMP relating to spillages of potentially contaminating substances will remain in place. A new emergency response procedure related to the safe start-up and shutdown of plant and equipment will be prepared.
- 3.5.13. Additionally, the Fire Prevention Plan (ECL.008.01.03/FPP) which is to be submitted as part of the permit variation will be implemented and held within the EMS.
- 3.5.14. All employees will be trained in the new EMS procedures and management plans as per Section 2.4 of this EMS Summary.
- 3.5.8. ***Performance Evaluation (ISO Standard – Section 9)***
- 3.5.8.1. The procedure for a systematic approach for monitoring, measurement, analysis and evaluation of environmental performance on a regular basis will remain the same but will be updated for the specific monitoring required. For example, energy consumption data will be monitored and evaluated and the risk ratings for the new aspects will be reviewed annually. The groundwater and surface water monitoring will continue to be evaluated as per permit requirements.
- 3.5.8.2. Monthly site walkovers will continue to be undertaken by an external Environmental Consultant, in addition to the daily site inspections being undertaken by AMG personnel.
- 3.5.8.3. In order to evaluate performance, AMG will also interact with employees to discuss their views regarding the environmental performance of the site since the addition of the waste operations.
- 3.5.8.4. NRW site visits and correspondence, such as Compliance Assessment Record (“CAR”) forms, will be taken into consideration when evaluating performance.
- 3.5.8.5. The internal audit schedule will be updated to include the new operational waste procedures. In the first year of the permit variation issue, all waste operational procedures will be audited by an external Environmental Consultant, including a detailed audit of the Duty of Care waste paperwork. Following the implementation and operation of the Installation under the variation over a prolonged period of time, the frequency of the internal audits for operational procedures will be reduced and a representative sample will be selected annually.
- 3.5.8.6. The Management Review structure will remain the same.
- 3.5.9. ***Improvement (ISO Standard Ref – Section 10)***
- 3.5.9.1. The procedure for non-conformity and corrective action will remain the same.
- 3.5.9.2. In the ISO 14001:2015 Standard, greater emphasis is now placed on continual improvement. A new procedure will be prepared to outline the methods in which AMG will achieve continual improvement, such as benchmark against best practice specifically related to waste operations, engage with trade associations and experience gained from non conformity and corrective actions.

4. OPERATING TECHNIQUES

4.1. CURRENT ARRANGEMENTS

- 4.1.1. AMG currently operate under permit EPR/BM2381IQ which allows the de-tinning of scrap tinplate by a chemical process and the recovery of the tin from the liquors used using an electrochemical process.
- 4.1.2. As a result of fluctuations in tin prices, the operations have focused on the physical sorting, compaction and baling of scrap metals for the ferrous sector to manufacture steel since 2014.
- 4.1.3. Consequently, the purpose of the permit variation is to include Section 5.4. A(1)(b)(iv) (See Table 2) as an additional Schedule 1 Activity under the EP Regulations to best reflect the current practices at the Installation.

4.2. PROPOSED ARRANGEMENTS

- 4.2.1. AMG's main operations involve physical sorting, compaction and baling of scrap metals. AMG therefore, wish to vary the permit to include the activities covered by the description in Section 5.4 A(1)(b)(iv) in Part 2 of Schedule 1 of the Environmental Permitting (England and Wales) Regulations 2016, referred to as the "EP Regulations", namely:
- "recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day involving...treatment in shredders of metal waste, including waste electrical and electronic equipment and end-of-life vehicles and their components."*

4.3. TECHNICAL STANDARDS

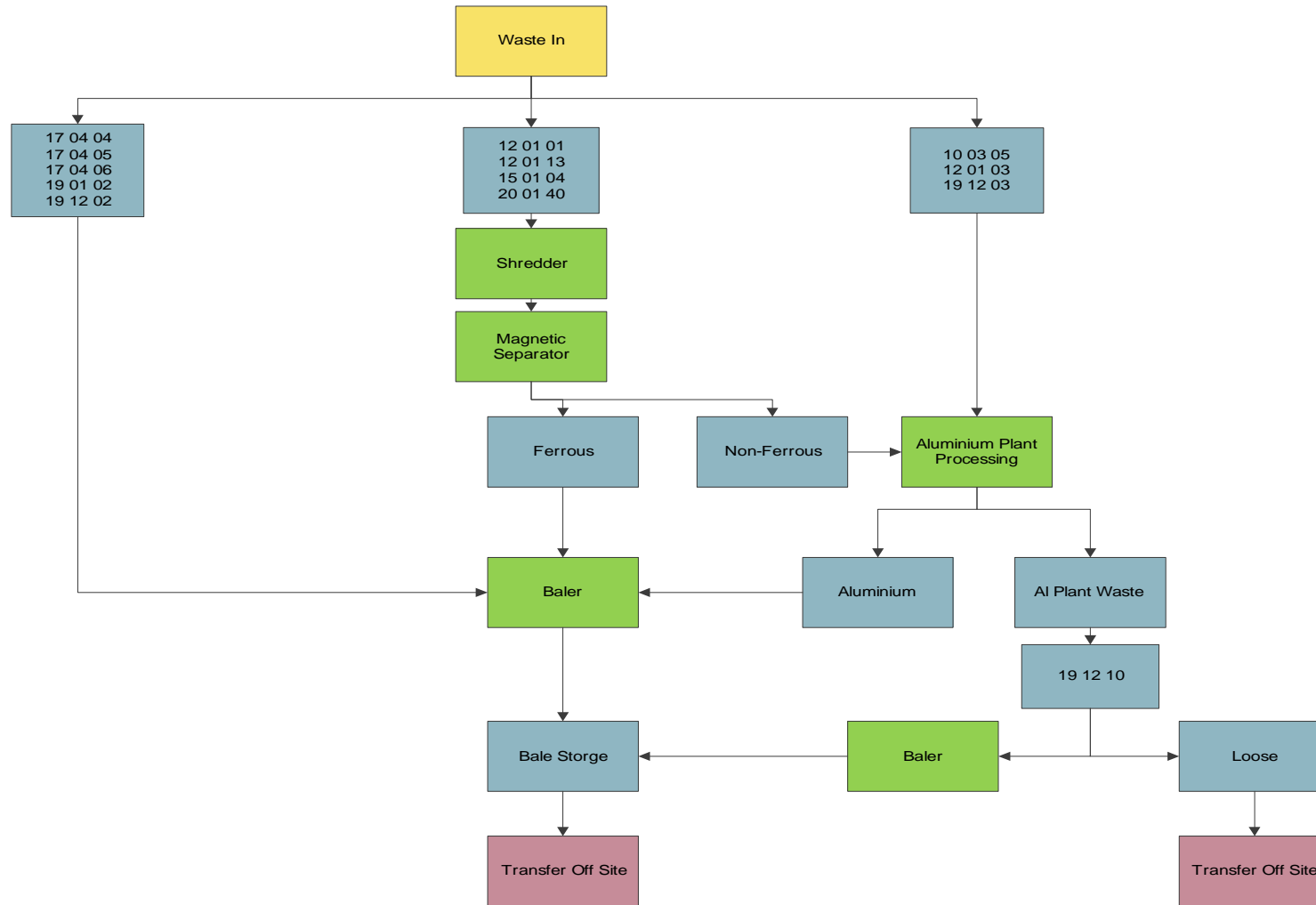
- 4.3.1. **European Legislation** - The following European Legislation will be used to inform the variation application:
- the Industrial Emissions Directive ("IED") is intended to be a single legislative instrument for permitting, compliance and enforcement of environmental legislation across all member states. The requirement of the IED will therefore be considered relevant at this time; and
 - the Best Available Techniques Reference Document ("BREF") for Waste Treatment, published in October 2018, will be considered as it covers Installations associated with a number of waste treatments, including recovery and disposal of waste.

- 4.3.2. **National Legislation** - Natural Resources Wales (“NRW”) implement the requirements of the IED via the EP Regulations and have provided a number of guidance documents to assist in the preparation of permit applications and the ongoing management of permitted installations. The NRW guidance documents that will be used in the preparation of this variation application will be:
- ‘How to comply with your environmental permit’ (Version 8, October 2014), which is applicable to all permitted activities; and
 - Environment Agency (“EA”) Sector Guidance Note IPPC S5.06 ‘Guidance for the Recovery and Disposal of Hazardous and Non-Hazardous Waste’ (Issue 5, Date 2013). At the time of writing, Natural Resources Wales (“NRW”) do not have an equivalent guidance note.

4.4. OVERVIEW OF THE ACTIVITIES

- 4.4.1. An overview of the activities is provided in Figure 1, and a Site Layout Plan (Drawing Reference ECL.008.01.03-002) is also contained in Appendix I (see Section 4.5 for an explanation of the waste codes).

Figure 1: Process Flow Diagram



- 4.4.2. The main operations associated with the variation will be as follows:
- shredding;
 - magnetic separation;
 - bulking
 - baling; and
 - storage of baled material prior to dispatch.
- 4.4.3. The equipment required for the proposed activities include:
- mobile baler;
 - shredder;
 - magnetic separator; and
 - aluminium baler.
- 4.4.4. All waste activities and storage will be on concrete hardstanding with sealed drainage. The proposed activities falling under the 5.4 Listed Activity will be confined to the area marked by the red line on the Site Layout Plan (ECL.008.01.03-002) which is contained in Appendix I of this document. The 5.4 activities will not commence until the infrastructure has been brought up to standard.
- 4.4.5. In the event of a prolonged periods of maintenance/shutdown, AMG will ensure planning meetings are held prior to shutdowns to preventing the accumulation of waste.
- 4.4.6. The metal bales will be sold as product. All waste material delivered to the Installation will be recovered with the intention to remove off site as product.

4.5. WASTE CODES TO BE ACCEPTED AT THE INSTALLATION

- 4.5.1. The type of waste that AMG will treat, in addition to those currently accepted at the Installation are wastes arising from materials recovery facilities (“MRFs”), and other scrap metals. A full list of EWC codes AMG are proposing to accept at the Installation is provided in Table 6.

Table 6: EWC Codes to be Accepted at the Installation

EWC Code	Description
10	WASTES FROM THERMAL PROCESSES
<i>10 03</i>	<i>wastes from aluminium thermal metallurgy</i>
<i>10 03 05</i>	<i>waste alumina</i>
12	WASTES FROM SHAPING AND PHYSICAL AND MECHANICAL SURFACE TREATMENT OF METALS AND PLASTICS
<i>12 01</i>	<i>wastes from shaping and physical and mechanical surface treatment of metals and plastics</i>
<i>12 01 01</i>	<i>ferrous metal filings and turnings</i>
<i>12 01 03</i>	<i>non-ferrous metal filings and turnings</i>
<i>12 01 13</i>	<i>welding wastes</i>
15	WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED
<i>15 01</i>	<i>packaging (including separately collected municipal packaging waste)</i>
<i>15 01 04</i>	<i>metallic packaging</i>
17	CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)
<i>17 04</i>	<i>metals (including their alloys)</i>
<i>17 04 04</i>	<i>zinc</i>
<i>17 04 05</i>	<i>iron and steel</i>
<i>17 04 06</i>	<i>tin</i>
19	WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE
<i>19 01</i>	<i>wastes from incineration or pyrolysis of waste</i>
<i>19 01 02</i>	<i>ferrous materials removed from bottom ash</i>
<i>19 12</i>	<i>wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified</i>
<i>19 12 02</i>	<i>ferrous metal</i>
<i>19 12 03</i>	<i>non-ferrous metal</i>
20	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
<i>20 01</i>	<i>separately collected fractions (except 15 01)</i>
<i>20 01 40</i>	<i>metals</i>

4.6. WASTE PRE-ACCEPTANCE ARRANGEMENTS

- 4.6.1. AMG will put in place a fully documented waste pre-acceptance procedure, the purpose of which will be to ensure that wastes are subject to appropriate technical appraisal prior to acceptance. In turn, this will ensure that unsuitable wastes, are not accepted. These checks will be carried out before any decision is made to accept a waste.
- 4.6.2. When a waste disposal enquiry is received the following information must be provided in writing by the waste producer:
- details of the waste producer, including address and contact details;
 - the specific process from which the waste derives; and
 - an indication of the waste streams produced, their quantity, physical form, composition, properties, classification and description.
- 4.6.3. Pre-acceptance checks and subsequent assessments will be conducted. The waste producer must also provide representative audit analysis of the waste they have produced. Repeat audits must also be undertaken if significant changes are made to the waste segregation arrangements.
- 4.6.4. The information to be contained in the waste audit will include:
- the start and end date of the audit;
 - description of the audit;
 - the procedures employed;
 - the auditors and their affiliation;
 - for each unit or area audited, identification of the waste items produced, the type (including colour), the segregation practices and waste composition identified;
 - where relevant, the audit must include visual observation and examination of the segregation of waste;
 - a summary report indicating the findings, highlighting any issues identified, including proposed waste descriptions and classifications derived from the audit findings for each waste stream.
- 4.6.5. The audit report will also include the following:
- any changes implemented as a result of issues identified with confirmatory evidence to demonstrate that this has occurred; and
 - information on waste policies, staff training, internal audit regimes, and environmental management systems.
- 4.6.6. Following characterisation of the waste, a technical assessment of the waste will be undertaken with regard to its suitability for treatment at the Installation.
- 4.6.7. The General Site Manager and/or Weighbridge Manager will assess the waste producer's audit report. They will keep a record of the assessment, its conclusions, and any actions taken.
- 4.6.8. Where the audit report is partially incomplete or inadequate, the General Site Manager will request and obtain the required information (or another audit report) prior to accepting the waste.

- 4.6.9. Should the Technical Assessment be undertaken by a third party, AMG will:
- ensure that all details of the content of any audit tools or methodologies and assessment criteria used by that party are provided to AMG;
 - ensure that the methodology used by the third party meets AMG's own procedures in relation to pre-acceptance;
 - keep a summary report from the third party which will demonstrate that pre-acceptance and assessment has been conducted on waste from the relevant producer with regard to the Installation which contains the following and that will be updated should any information contained within it change:
 - confirmation of the producer types, waste types, containers etc.
 - certification that the methodology in Section 4.6.4 of this document has been completed, and what has been done where this is not the case,
 - confirm a composite waste classification, description, composition, and properties for each waste stream and container type destined for the Installation, derived from each of the pre-acceptance audits and with reference to the permitted wastes for the site,
 - confirmation of any issues that have been identified and what action has been taken with regard to the producers and wastes affected;
 - annually audit a random and representative cross-section of the other party's pre-acceptance checks to ensure both the quality of pre-acceptance checks, subsequent assessments, waste classification and descriptions;
 - keep records of all audits; and
 - keep electronic records of the pre-acceptance report and assessment.
- 4.6.10. All records relating to pre-acceptance at the site will be kept for a minimum of two years at the AMG Llanelli Site Office. Electronic copies will be held on site to ensure direct access to those records for cross-reference and verification at the waste acceptance stage.

4.7. WASTE ACCEPTANCE ARRANGEMENTS

- 4.7.1. AMG will put in place a fully documented incoming waste acceptance procedure at the Installation, the primary purpose of which is confirm that the characteristics of the incoming waste matches the information provided at the pre-acceptance stage.
- 4.7.2. The waste will delivered by haulier lorries and on arrival, the lorry will be weighed and issued with waste acceptance paperwork and the following information will be recorded:
- weight;
 - date of arrival on-site;
 - time;
 - original producers details (or unique identifier); and
 - a unique reference number.
- 4.7.3. This information will be incorporated into a waste tracking system which will:
- allow accurate records of the nature and quantity of wastes held on site;
 - identify where the waste is physically located in relation to a site plan;
 - identify where the waste is in the designated treatment route;
 - identify staff that have taken any decisions re-acceptance or rejection of waste

- streams and decided upon options;
 - breakdown by type of waste quantities being stored pending treatment;
 - compare the total quantity of waste on site against total permitted;
 - log the time the waste has been on site.
- 4.7.4. Waste will only be accepted when there is sufficient treatment capacity within the Installation.
- 4.7.5. All documents will be checked by the Site General Manager or Weighbridge Manager prior to the waste being accepted.
- 4.7.6. Each delivery will be visually checked prior to acceptance to ensure that the waste has been classified and transported correctly. Additional visual checks will be undertaken when the waste is emptied. This will include random sampling to check for any evidence of pest infestation. Any non-conforming waste observed will be immediately removed off site and sent back to the supplier. The supplier will be contacted without delay to inform them of the non-conforming waste and identify measures that can be implemented to prevent recurrence.
- 4.7.7. Non-conforming waste is described as any waste that:
- the Installation is not authorised to accept;
 - is not recorded on the accompanying waste documentation; or
 - would not be expected, for any other reason, to be present.
- 4.7.8. Waste delivered to the site must:
- be accompanied by a written description of the waste describing its composition and information specifying the original waste producer and process where required;
- 4.7.9. A record of the inspection regime for each load will be maintained on site.
- 4.7.10. AMG have radiation detectors on the weighbridge to screen each incoming load for the presence of radiation. The radiation detectors have set levels, if the radiation detected is of low level and safe to be transported on the road, the load will be rejected and returned to the supplier. If the radiation level is high, the load will be quarantined and an external Radiation Protection Adviser (“RPA”) will be asked to attend site to identify and remove the radiation source from the load. The radiation source will then be disposed of to an appropriately licenced site once the RPA has issued a report detailing the disposal route required. NRW will be informed throughout this process. It should be noted that a radiative source has never been received at the site to date.
- 4.7.11. AMG will develop a procedure containing clear and unambiguous criteria for the rejection of wastes, together with a written procedure for tracking and reporting such non-conformance.
- 4.7.12. Back up copies of computer records will be maintained off site by the Site General Manager.

4.8. WASTE HANDLING, STORAGE AND DISPATCH

4.8.1. Waste Handling and Storage

- 4.8.1.1. Waste will be delivered directly to the Installation via haulage lorries and all tipping operations will be supervised by AMG personnel to ensure only the area permitted for the 5.4. activity will be used.
- 4.8.1.2. All staff wear the appropriate Personal Protective Equipment (“PPE”) which, as a minimum, will comprise hard hats, protective footwear, protective eyewear, a weather proof jacket and over trousers. Staff will also be issued with ear defenders where appropriate.
- 4.8.1.3. At the weighbridge office, each load will be directed to the appropriate waste storage/treatment area.
- 4.8.1.4. The storage areas have been located away from watercourses and sensitive perimeters.
- 4.8.1.5. No more than 30,000 tonnes of waste will be stored at any one time at the Installation.
- 4.8.1.6. A detailed breakdown of the different waste types and associated quantities and locations on site is provided in AMG’s Fire Prevention Plan (Document Reference ECL.008.01.03/FPP) which has been prepared and submitted as part of this permit variation application.

4.8.2. Waste Dispatch

- 4.8.2.1. The metal bales will be sold as product to the ferrous metal sector, such as steel manufactures for recycling to produce steel reinforcements products to be used in construction projects.
- 4.8.2.2. Lead will be sent to a suitably licenced facility for reprocessing.
- 4.8.2.3. The magnetic separator waste will leave the site, either loose or as bales, under the anticipated EWC Code 19 12 10. If the material meets the required quality specifications, it will be sent to an appropriate Energy from Waste facility.
- 4.8.2.4. Collection vehicles used to remove waste materials from the site will be loaded using a loading shovel or Fork Lift Truck (“FLT”) depending on the material leaving site.
- 4.8.2.5. Removal of waste materials from the site will be documented in accordance with Duty of Care requirements. All waste materials will be weighed prior to being removed from site. This will be carried out by the passage of vehicles carrying waste over the weighbridge prior to departure.

4.9. EXISTING INFRASTRUCTURE AND DRAINAGE ARRANGEMENTS

- 4.9.1. The Installation is located at Nevill's Dock, Llanelli, SA15 2HD, and is centred on National Grid Reference SS 50535 98985 and occupies a total area of approximately 8 hectares.
- 4.9.2. The Installation is located within a secure compound, which is completely enclosed by metal palisade fencing. Access to the Installation is via a security gate, which is served by the weighbridge, manned during operational hours. AMG hold a contract with a specialist security company who maintain and review the site's closed circuit television ("CCTV") surveillance and provide alerts to the Site Manager of any intruders.
- 4.9.3. Existing drainage arrangements at the Installation are provided in Site Layout Plan (Drawing Reference ECL.008.01.03-002) contained within Appendix I.
- 4.9.4. Additionally, an emergency action plan is in place to respond to any spillages.

4.10. PROPOSED INFRASTRUCTURE AND DRAINAGE ARRANGEMENTS

- 4.10.1. The proposed 5.4. Listed Activity will be undertaken in a discrete area on the current site which will occupy approximately 1 hectare. The waste operations associated with the proposed variation will be kept entirely separate from the other permitted activities on the site.
- 4.10.2. The waste operations under the 5.4. Listed Activity will be undertaken on impermeable concrete. The concrete areas will be bunded with proposed ramps illustrated on the Site Layout Plan (Drawing Reference ECL.008.01.03 – 002), which is contained in Appendix I of this document. This will prevent any possible spillages from escaping the bunded 5.4. activity area and will be dealt with in accordance with the site's Environmental Incident Procedure (EAP05) - Spillages.
- 4.10.3. The majority of any surface water runoff will evaporate or if required, will be tankered offsite to an appropriate facility.
- 4.10.4. The integrity of all hardstanding and building structures will be subject to inspection following the rearrangement and/or removal of existing plant for the new activities. If required, areas will be upgraded (see Section 11 – Site Infrastructure Improvements).
- 4.10.5. AMG will implement a regime of weekly visual site condition checks to ensure that the infrastructure is maintained in good condition. The site condition checks are to be included within the site's Environmental Management System and cover:
- the condition of the impermeable hardstanding; and
 - the condition of the site walls, fences and gates.
- 4.10.6. The results of these checks will be recorded, together with details of any remedial action that may be required.

5. EMISSIONS

5.1. EMISSIONS TO AIR – CURRENT ARRANGEMENTS

- 5.1.1. As per EPR/BM238IQ (V006), AMG currently have two point source emissions to air, designated as A2 and A3. The emission limits and monitoring requirements are provided in Table 7 below.
- 5.1.2. Since the boiler was decommissioned on 29th April 2015, there have been no emissions from A2 or A3.

Table 7: Current Emissions and Monitoring To Air (until 12th June 2020)

Emission Point	Source	Parameter	Limit (including unit)	Monitoring Frequency
A2	Tin melt recovery plant at a height of 2.65m	Particulate matter	10.0 mg/m ³	Biannual
		Oxides of nitrogen		Biannual
		Copper, lead, zinc and their compounds taken together (as metal)	2.0 mg/m ³	Biannual
		Cadmium, arsenic, nickel and their compounds taken together (as elements)	0.2 mg/m ³	Biannual
		Tin and its compounds (as Sn)	2.0 mg/m ³	Biannual
		Dioxins (ITEQ)	0.1 ng/m ³	Annual
A3	Boiler (usually gas fired) (steam and heat generation) at a height of 8.40m	Particulate matter	25 mg/m ³	Biannual
		Oxides of nitrogen	200 mg/m ³	Biannual

5.2. EMISSIONS TO AIR – PROPOSED ARRANGEMENTS

There will be no emissions to air associated with the proposed change.

5.3. EMISSIONS TO WATER – CURRENT ARRANGEMENTS

- 5.3.1. As per EPR/BM238IQ (V006), AMG currently has one point source emission to water; designated as W1. The emission limits and monitoring requirements are provided in Table 8 below.

Table 8: Current Emissions and Monitoring To Water (until 12th June 2020)

Emission Point	Source	Parameter	Limit (including unit)	Monitoring Frequency
W1	Clean Roof Water Runoff	Total Oxidised Nitrogen (TON) as N mg l ⁻¹	3 mg/l	Monthly

5.4. EMISSIONS TO WATER – PROPOSED ARRANGEMENTS

There will be no changes to emissions to water associated with the proposed change.

5.5. EMISSIONS TO SEWER – CURRENT ARRANGEMENTS

There are no emissions to sewer.

5.6. EMISSIONS TO SEWER – PROPOSED ARRANGEMENTS

There will be no changes to emissions to sewer associated with the proposed change.

5.7. EMISSIONS TO LAND – CURRENT ARRANGEMENTS

There are no emissions to land.

5.8. EMISSIONS TO LAND– PROPOSED ARRANGEMENTS

There will be no changes to emissions to land associated with the proposed change.

5.9. FUGITIVE EMISSIONS TO AIR

5.9.1. The potential sources of fugitive emissions to air from the site include:

- movement of transport vehicles into and out of site;
- tipping of waste materials;
- storage of the waste materials prior to processing;
- the main operation and processing activities, including shredding and baling material and using the magnetic separator; and
- loading of finished product.

- 5.9.2. An Emissions Management Plan (“EMP”) has been prepared and will form part of AMG’s Environmental Management System (“EMS”). The EMP (Document Reference ECL.008.01.03/EMP) has been submitted as part of the permit variation application.

5.10. FUGITIVE EMISSIONS TO SURFACE WATER, SEWER AND GROUNDWATER

- 5.10.1. Only minimal roof water runoff will be discharged from the Installation to the existing surface water drainage system.
- 5.10.2. Any potentially polluting spillages at the Installation which could potentially enter surface water drainage will be subject to the Installation’s robust spill management procedure which would prevent such an occurrence.
- 5.10.3. Fugitive releases to the groundwater will be prevented by conducting all operations, including the unloading of deliveries, storage of raw materials and product, processing and handling in areas sealed with an impervious barrier to prevent a pathway for migration to ground. Adjacent to the old diesel tank is a concrete pad used for re-fuelling which drains to a three stage oil water interceptor prior to discharge to soakaway.
- 5.10.4. The process and storage areas are not directly linked to the sewage drainage network and therefore, there is no risk of fugitive emissions to sewer from the proposed AMG operations.
- 5.10.5. The drainage arrangements at the AMG site are displayed on the Site Layout Plan and Fire Prevention and Mitigation Plan (Drawing ECL.008.01.03-002 and 004), which are contained within Appendix I of this document.

6. GENERAL REQUIREMENTS

6.1. EMISSIONS MANAGEMENT PLAN

- 6.1.1. As described in Section 5.9 of this document, an Emissions Management Plan (“EMP”) has been prepared. The control measures outlined within the plan should prevent any dust nuisance from reaching the identified receptors.
- 6.1.2. The EMP will form part of AMG’s EMS and will be reviewed annually to ensure the continuing effectiveness of the plan. The reviews will take account of compliance records, complaints history, site records and any recent sensitive developments on neighbouring land. The plan will be amended as necessary, including any changes to the control measures.
- 6.1.3. The EMP shall be submitted as part of the permit variation application (Document Reference ECL.008.01.03/EMP).

6.2. ODOUR MANAGEMENT PLAN

- 6.2.1. The AMG site will only accept and process metallic waste with little to no organic matter present. Therefore, it is considered that the changes will not give rise to any significant odour emissions.

6.3. PEST MANAGEMENT PLAN

- 6.3.1. The potential sources of pests at the site include:
- rodents attracted to any litter; and
 - fly larvae present inside the metal bales.
- 6.3.2. As part of this permit variation, a Pest Management Plan (“PMP”) has been prepared. The PMP will form part of AMG’s EMS. The control measures outlined within the plan should reduce the likelihood of the presence of pests and prevent any pest nuisance from reaching the identified receptors.
- 6.3.3. The PMP shall be submitted as part of the permit variation application (Document Reference ECL.008.01.03/PMP).

6.4. FIRE PREVENTION PLAN

- 6.4.1. As per the requirements of NRW ‘Fire Prevention & Mitigation Plan Guidance – Waste Management’ (Version 2.0, August 2017), the guidance applies to operators that store any amount of combustible water material including (but not limited to); fragmentiser waste (metal waste from materials recovery facilities) and scrap metals.

- 6.4.2. The Fire Prevention Plan (“FPP”) shall be submitted as part of the permit variation application (Document Reference ECL.008.01.03/FPP). The FPP will form part of AMG’s EMS and will be reviewed and updated annually or if any of the following occur:
- a fire on site;
 - a change or review of legislation; or
 - if the site is instructed to do so by NRW.

6.5. NOISE AND VIBRATION MANAGEMENT PLAN

- 6.5.1. The potential sources of noise and vibration at the site include:
- movement of transport vehicles into and out of site;
 - mechanical equipment, such as the hammer mill processing the raw material, which has the potential to give rise to a clatter sound; and
 - tipping of waste materials, which can give also give rise to beeping during reversing, intermittent for 10-20 seconds.
- 6.5.2. As part of this permit variation, a Noise and Vibration Management Plan (“NVMP”) has been prepared. The NVMP will form part of AMG’s EMS. The control measures outlined within the plan should reduce the likelihood of the noise and vibration emissions and prevent any noise or vibration nuisance from reaching the identified receptors
- 6.5.3. The NVMP shall be submitted as part of the permit variation application (Document Reference ECL.008.01.03/NVMP).

7. APPLICATION SITE REPORT

It is considered that, as the proposed changes at the site are within the existing Installation boundary, the original Application Site Condition Report (“ASCR”) submitted in support of the Installation’s permit application remains valid. Accordingly, no further work is proposed. The types of waste to be accepted are also of a similar nature to those already accepted, consequently there would be no change to the potentially polluting substances stored on site. Accordingly, no further work is proposed.

8. MONITORING

8.1. MONITORING OF EMISSIONS TO AIR

- 8.1.1. There are no point source emissions to air associated with the variation, therefore, no monitoring of emissions to air is proposed.

8.2. MONITORING OF GROUNDWATER

- 8.2.1. There will be no changes to the monitoring arrangements associated with the proposed variation. Monitoring arrangements will remain the same as currently permitted – G1, G2, G4, G5, G6 and G7.

8.3. MONITORING OF SURFACE WATER

- 8.3.1. There will be no changes to the monitoring arrangements associated with the proposed variation. Monitoring arrangements will remain the same as currently permitted – W1.

9. RESOURCE EFFICIENCY AND CLIMATE CHANGE

9.1. ENERGY EFFICIENCY MEASURES

- 9.1.1. A number of energy efficiency measures will be implemented at the AMG site, such as:
- ensuring regularly inspection and maintenance of equipment to achieve optimum efficiency. For example, frequent lubrication to avoid high friction losses. This will be contained within the PPMR as part of the EMS.
 - optimising start up time, power down time and equipment sequencing;
 - optimising operational planning to streamline equipment use;
 - all lights will be turned off when not in use or when natural daylight is sufficient;
 - employees will be trained in the importance of energy management and basic energy saving practices.
- 9.1.2. Energy use will be monitored monthly to produce an energy balance record and any opportunities for energy efficiency improvement will be addressed as part of the EMS.

9.2. ENERGY CONSUMPTION

The predicted energy consumption resulting from the proposed processes is provided in Table 9 below.

Table 9: Predicted Energy Consumption (kWh/pa) of Proposed Processes

Equipment	Energy Consumption (kWh/pa)
Baler	69,000
Shredder	460,000
Magnetic Separator	41,400
Aluminium Baler	27,600
TOTAL	598,000

9.3. CLIMATE CHANGE AGREEMENT

The AMG site is not subject to a Climate Change Agreement (“CCA”).

9.4. WASTE MINIMISATION

The proposed process undertaken at AMG is a waste avoidance and recovery process in its own right. Through the application of the waste hierarchy, all waste material delivered to the Installation will be processed for recovery with the intention of being removed off site as product. It should also be noted that AMG are committed to reusing packaging to reduce the site’s waste disposal where appropriate.

10. COMPLIANCE WITH BAT CONCLUSIONS

10.1. OVERVIEW

- 10.1.1. It is considered that the techniques that will be in use at the proposed Installation will constitute Best Available Techniques (“BAT”) and will be appropriate and proportionate for the scale of the activities at the Installation and the risks that are posed to the environment by these activities.
- 10.1.2. The BAT requirements for the proposed variation have been taken from the Best Available Techniques Reference Document (“BREF”) for Waste Treatment, published in October 2018, as it covers Installations associated with a number of waste treatments, including recovery and disposal of waste.
- 10.1.3. Consideration has also been given to the EA’s Sector Guidance Note IPPC S5.06 Guidance for the Recovery and Disposal of Hazardous and Non-Hazardous Waste’ (Issue 5, Date 2013). At the time of writing, NRW do not have an equivalent guidance note.
- 10.1.4. In addition, where necessary, reference has been made to NRW’s Guidance Note ‘How to comply with your environmental permit’ (Version 8, October 2014).
- 10.1.5. A demonstration of compliance with BAT is provided in Tables 9 to 14. Reference is made to the WT BREF BAT Conclusions in Tables 9-11 and BAT Conclusions contained in IPPC S5.06 in Tables 12 to 14.

Table 9 Waste Treatment BREF – General BAT Conclusions

BAT Ref No.	BAT Requirement	Section of EPTR Document
6.1.1. Overall Environmental Performance		
In order to improve the overall environmental performance, BAT is to implement and adhere to an EMS that incorporates all of the following features:		
1	<ul style="list-style-type: none"> I. Commitment of the management, including senior management; II. Definition, by the management, of an environmental policy that includes the continuous improvement of the environmental performance of the installation; III. Planning and establishing the necessary procedures, objectives and targets, in conjunction with financial planning and investment; IV. Implementation of procedures; V. Checking performance and taking corrective action; VI. review, by senior management, of the EMS and its continuing suitability, adequacy and effectiveness; VII. following the development of cleaner technologies; VIII. consideration for the environmental impacts from the eventual decommissioning of the plant at the stage of designing a new plant, and throughout its operating life; IX. application of sectoral benchmarking on a regular basis; X. waste stream management (see BAT 2); XI. an inventory of waste water and waste gas streams (see BAT 3); XII. residues management plan (see description in Section 6.6.5); XIII. accident management plan (see description in Section 6.6.5); XIV. odour management plan (see BAT 12); XV. noise and vibration management plan (see BAT 17). 	3.4 & 3.5

Table 9 Waste Treatment BREF – General BAT Conclusions (Cont.)

BAT Ref No.	BAT Requirement	Section of EPTR Document
6.1.1. Overall Environmental Performance		
In order to improve the overall environmental performance of the plant, BAT is to use all of the techniques given below:		
2	a) Set up and implement waste characterisation and pre-acceptance procedures;	4.6, 4.7, 4.8 & 11.3
	b) Set up and implement waste acceptance procedures;	
	c) Set up and implement a waste tracking system and inventory;	
	d) Set up and implement an output quality management system;	
	e) Ensure waste segregation;	
	f) Ensure waste compatibility prior to mixing or blending of waste; and	
	g) Sort incoming solid waste.	
In order to facilitate the reduction of emissions to water and air, BAT is to establish and to maintain an inventory of waste water and waste gas streams, as part of the EMS that incorporates the following features:		
3	(i) information about the characteristics of the waste to be treated and the waste treatment processes, including: (a) simplified process flow sheets that show the origin of the emissions; and (b) descriptions of process-integrated techniques and waste water/waste gas treatment at source including their performances;	5.2 & 5.4.
	(ii) information about the characteristics of the waste water streams, such as: (a) average values and variability of flow, pH, temperature, and conductivity; (b) average concentration and load values of relevant substances and their variability (e.g. COD/TOC, nitrogen species, phosphorus, metals, priority substances / micropollutants); (c) data on bioeliminability (e.g. BOD, BOD to COD ratio, Zahn-Wellens test, biological inhibition potential (e.g. inhibition of activated sludge)) (see BAT 52);	
	(iii) information about the characteristics of the waste gas streams, such as: (a) average values and variability of flow and temperature; (b) average concentration and load values of relevant substances and their variability (e.g. organic compounds, POPs such as PCBs); (c) flammability, lower and higher explosive limits, reactivity; (d) presence of other substances that may affect the waste gas treatment system or plant safety (e.g. oxygen, nitrogen, water vapour, dust).	

Table 9 Waste Treatment BREF – General BAT Conclusions (Cont.)

BAT Ref No.	IPPC S5.06 Ref No.	BAT Requirement	Section of EPTR Document
6.1.1. Overall Environmental Performance (Cont.)			
		In order to reduce the environmental risk associated with the storage of waste, BAT is to use all of the techniques given below.	4.8 & FPP (ECL.008.01.03/FPP)
4		<ul style="list-style-type: none"> a) Optimised storage location; b) Adequate storage capacity; c) Safe storage operation; and d) Separate area for storage and handling of packaged hazardous waste. 	
5		In order to reduce the environmental risk associated with the handling and transfer of waste, BAT is to set up and implement handling and transfer procedures.	4.8
6.1.2. Monitoring			
10		BAT is to periodically monitor odour emissions.	6.2
11		BAT is to monitor annual consumption of water, energy and raw materials as well as the annual generation of residues and waste water, with a frequency of at least once per year.	3.4 & 9.1
6.1.3. Emissions to Air			
12		<p>In order to prevent or, where that is not practicable, to reduce odour emissions, BAT is to set up, implement and regularly review an odour management plan, as part of the EMS, that includes all of the following elements:</p> <ul style="list-style-type: none"> • A protocol containing actions and timelines; • A protocol for conducting odour monitoring as set out in BAT 10; • A protocol for response to identified odour incidents e.g. complaints; and • An odour prevention and reduction programme designed to identify the source(s), to characterise the contributions of the sources and to implement prevention and/or reduction measures. 	6.2
13		<p>In order to prevent or, where that is not practicable, to reduce odour emissions, BAT is to use one or a combination of the techniques</p> <ul style="list-style-type: none"> a) Minimising residence times; b) Using chemical treatment; and c) Optimising aerobic treatment. 	6.2

Table 9 Waste Treatment BREF – General BAT Conclusions (Cont.)

BAT Ref No.	BAT Requirement	Section of EPTR Document
6.1.3. Emissions to Air (Cont.)		
14	In order to prevent, or where that is not practicable, to reduce diffuse emissions to air, in particular of dust, organic compounds and odour, BAT is to use an appropriate combination of the techniques given below.	6.1 & 6.2
	(a) Minimising the number of potential diffuse emission sources;	
	(b) Selection and use of high-integrity equipment;	
	(c) Corrosion prevention;	
	(d) Containment, collection and treatment of diffuse emissions;	
	(e) Dampening;	
	(f) Maintenance;	
	(g) Cleaning of waste treatment and storage areas; and	
(h) Leak detection and radar (LDAR) programme.		
6.1.4. Noise and Vibrations		
17	In order to prevent or, where that is not practicable, to reduce noise and vibration emissions, BAT is to set up, implement and regularly review a noise and vibration management plan, as part of the EMS, that includes all of the following elements:	6.5
	I. a protocol containing appropriate actions and timelines;	
	II. a protocol for conducting noise and vibration monitoring;	
	III. a protocol for response to identified noise and vibration events, e.g. complaints; and	
IV. a noise and vibration reduction programme designed to identify the source(s), to measure/estimate noise and vibration exposure, to characterise the contributions of the sources and to implement prevention and/or reduction measures.		
18	In order to prevent or, where that is not practicable, to reduce noise and vibration emissions, BAT is to use one or a combination of the techniques given below.	6.5
	(a) Minimising the number of potential diffuse emission sources;	
	(b) Selection and use of high-integrity equipment;	
	(c) Corrosion prevention;	
	(d) Containment, collection and treatment of diffuse emissions;	
(e) Dampening;		

Table 9 Waste Treatment BREF – General BAT Conclusions (Cont.)

BAT Ref No.	BAT Requirement	Section of EPTR Document
6.1.6. Emissions from Accidents and Incidents		
21	<p>In order to prevent or limit the environmental consequences of accidents and incidents, BAT is to use all of the techniques given below, as part of the accident management plan.</p> <ul style="list-style-type: none"> (a) Protection measures; (b) Management of incidental/accidental emissions; and (c) Incident/accident registration and assessment system. 	3.4 & 3.5
6.1.7. Material Efficiency		
22	In order to use materials efficiently, BAT is to substitute materials with waste.	9.4
6.1.8. Energy Efficiency		
23	<p>In order to use energy efficiently, BAT is to use both the techniques given below.</p> <ul style="list-style-type: none"> (a) Energy efficiency plan; and (b) Energy balance record 	9.1
6.1.9. Reuse of Packaging		
24	In order to reduce the quantity of waste sent for disposal, BAT is to maximise the reuse of packaging, as part of the residues management plan.	4.8

Table 10 Waste Treatment BREF – BAT Conclusions for the Mechanical Treatment of Waste

BAT Ref No.	BAT Requirement	Section of EPTR Document
6.2.1. General BAT Conclusions for the Mechanical Treatment of Waste		
6.2.1.1. Emissions to Air		
25	<p>In order to reduce emissions to air of dust, and of particulate-bound metals, PCDD/F and dioxin like PCBs, BAT is to apply BAT 14d and to use one or a combination of the techniques given below.</p> <ul style="list-style-type: none"> a) Cyclone; b) Fabric filter; c) Wet scrubbing; d) Water injection into the shredder. 	5.2 & 6.1
6.1.6. Emissions from Accidents and Incidents		
21	<p>In order to prevent or limit the environmental consequences of accidents and incidents, BAT is to use all of the techniques given as part of the EMS.</p>	3.4 & 3.5

Table 11 Waste Treatment BREF – BAT Conclusions for the Mechanical Treatment in Shredders of Metal Waste

BAT Ref No.	BAT Requirement	Section of EPTR Document
6.2.2. General BAT Conclusions for the Mechanical Treatment in Shredders of Metal Waste		
6.2.2.1. Overall Environmental Performance		
26	<p>In order to improve the overall environmental performance, and to prevent emissions due to accidents and incidents, BAT is to use BAT 14g and all of the techniques given below:</p> <ul style="list-style-type: none"> a) Implementation of a detailed inspection procedure for baled waste before shredding; b) Removal of dangerous items from the waste input stream and their safe disposal (e.g. gas cylinders etc.); c) Treatment of containers only when accompanied by a declaration of cleanliness. 	4.6 & 4.7
6.2.2.3. Energy Efficiency		
28	In order to use energy efficiently, BAT is to keep the shredder feed stable.	9.1

Table 12 **IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements**

BAT Ref No.	BAT Requirement	Section of EPTR Document
IPPC S5.06, Section 2.1.1, Pre-Acceptance Procedures to Assess Waste		
1	From the waste disposal enquiry the Operator should obtain information in writing relating to: <ul style="list-style-type: none"> • The type of process producing the waste; • The specific process from which the waste derives; • The quantity of waste; • Chemical analysis of the waste (individual constituents and as a minimum their percentage compositions); • The form the waste takes (solid, liquid, sludge etc.); • Hazards associated with the waste; and • Sample storage and preservation techniques. 	
2	Unless a sample and analysis has already been completed by a third party and the Operator has a sufficient written information from them, then the Operator should in every case obtain representative sample(s) of the waste from the production process/current holder and compare it against the written description to ensure it is consistent.	4.6
3	Other than for pure product chemicals or laboratory smalls, the chemical analysis should relate to an actual analysis and not simply be based on product data sheets or an extrapolation of information on product data sheets. For example, taking the concentrations as specified and applying a dilution factor is not acceptable.	
4	Wastes should not be accepted at the installation without a clear method or defined treatment and disposal route being determined in advance and costed before the waste is accepted at the installation.	
5	The Operator should ensure that the sample is representative of the waste and has been obtained by a person who is technically competent to undertake the sampling process.	

Table 12 IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)

BAT Ref No.	BAT Requirement	Section of EPTR Document
IPPC S5.06, Section 2.1.1, Pre-Acceptance Procedures to Assess Waste		
6	<p>The type of information that would demonstrate the reliability of the sample includes:</p> <ul style="list-style-type: none"> • Location of sample point, for example, effluent tank; • Capacity of vessel sampled (for samples from drums an additional parameter would be the total number of drums) ; • Method of sampling, e.g. sampling tap (mid flow), “top” sample; • Number of samples and degree of consolidation; • Operating conditions at time e.g. normal operation, shut-down, maintenance and/or cleaning; and • Preservation techniques. 	
7	Samples should be clearly labelled and any hazard identified.	
8	Sample tracking systems within the installation should be established and be auditable.	
9	Analysis should be carried out by a laboratory with robust quality assurance and quality control methods and record keeping.	4.6
10	<p>Analysis required will vary depending upon the nature of the waste, the process to be used and what is known about the waste already. Results of analysis should be kept within the tracking system. These details should include:</p> <ul style="list-style-type: none"> • Check on constituents declared by waste producer/holder to ensure Permit compliance, treatment plant specification and final disposal; • All hazardous characteristics; • Physical appearance; • Colour; • pH; • presence, strength and description of odour assessment (note COSHH implications). 	
14	Following characterisation of the waste, a technical assessment should be made of its suitability for treatment or storage to ensure Permit conditions are being met.	

Table 12 IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)

BAT Ref No.	BAT Requirement	Section of EPTR Document
IPPC5.06, Section 2.1.1, Pre-Acceptance Procedures to Assess Waste		
15	There must be a clear distinction between sales and technical staff roles and responsibilities. If non-technical sales staff are involved in waste disposal enquiries, then a final technical assessment prior to approval should be made. It is this final technical checking that should be used to avoid build-up of accumulation of waste.	4.6
16	All records relating to pre-acceptance should be maintained at the installation for cross-reference and verification at the waste acceptance stage. These records should be kept for a minimum of 3 years.	
IPPC5.06, Section 2.1.2, Acceptance Procedure When Waste Arrives At The Installation		
Load Arrival		
1	On arrival loads should: <ul style="list-style-type: none"> • be weighed, unless alternative reliable volumetric systems linked to specific gravity data are available; • not be accepted into site unless sufficient storage capacity exists and site is adequately manned to receive waste; • have all documents checked and approved, and any discrepancies resolved before the waste is accepted; and • have any labelling that does not relate to the contents of the drum removed before acceptance on site. 	4.7
2	Hazardous wastes should only be received under the supervision of a suitably qualified person (HNC qualified chemist or higher).	
Load Inspection		
3	Visual inspection. Where possible, confirmatory checks should be undertaken before offloading where safety is not compromised. Inspection must in any event be carried out immediately upon offloading at the installation.	
4	Check every container to confirm quantities against accompanying paperwork. All containers should be clearly labelled and should be equipped with well-fitting lids, caps and valves secure and in place. Any damaged, corroded or unlabelled drums should be put into a quarantine area and dealt with appropriately. Following inspection, the waste should then be unloaded into a dedicated sampling/reception area.	4.7
5	At this stage, the waste tracking system unique reference number should be applied to each container. Each container should be also labelled with the date of arrival on-site and primary hazard code.	

Table 12 IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)

BAT Ref No.	BAT Requirement	Section of EPTR Document
IPPCS5.06, Section 2.1.2, Acceptance Procedure When Waste Arrives At The Installation		
6	Where containers are bulked, the earliest date of arrival of the bulked wastes should be transposed from the original container on to the bulk container.	4.7
7	The inspection, unloading and sampling areas should be marked on a plan and have suitably sealed drainage systems.	
Sampling – checking - testing of wastes - storage		
8	Other than pure product chemicals and laboratory smalls, no wastes should be accepted at the installation without sampling, checking and testing being carried out. Reliance solely on the written information supplied is not acceptable, and physical verification and analytical confirmation are required. All wastes, whether for on-site treatment or simply storage, must be sampled and undergo verification and compliance testing.	
9	<p>The Operator should ensure that waste delivered to the installation is accompanied by a written description of the waste describing:</p> <ul style="list-style-type: none"> • the physical and chemical composition; • hazard characteristics and handling precautions; • compatibility issues; and • information specifying the original waste producer and process. 	4.7
10	<p>On-site verification and compliance testing should take place to confirm:</p> <ul style="list-style-type: none"> • the identity of the waste; • the description of the waste • consistency with pre-acceptance information and proposed treatment method; and • compliance with permit. 	
11	The Operator should have clear and unambiguous criteria for the rejection of waste, together with a written procedure for tracking and reporting such non-conformance. This should include notification to the customer/waste producer and the Regulator. Written/computerised records should form part of the waste tracking system information.	

Table 12 IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)

BAT Ref No.	BAT Requirement	Section of EPTR Document
IPPC5.06, Section 2.1.2, Acceptance Procedure When Waste Arrives At The Installation		
12	Documentation provided by the driver, written results of acceptance analysis, details of offloading point or off-site transfer location should be added to the tracking system documentation.	
13	A record of sampling regime for each load and justification for the selection of this option should be maintained at the installation.	
14	Wastes must not be deposited within a reception area without adequate space.	
16	Should the inspection or analysis indicate that the wastes fail to meet the acceptance criteria (including damaged or unlabelled drums), and then such loads should be stored in a dedicated quarantine area and dealt with appropriately. Such storage should be more a maximum of five working days. Written procedures should be in place for dealing with wastes held in quarantine, together with a maximum storage volume.	
17	If the cause of failure to meet acceptance criteria is due to incompatibility, then the wastes should be segregated immediately to remove the hazard.	
20	The installation should have a designated sampling point or reception area. These should be in close but safe proximity to the laboratory/checking facility and the sampling point should be visible (or covered by CCTV), if sampling is not directly supervised by, for example, laboratory staff.	4.7
21	The offloading, sampling point/reception and quarantine areas should have impervious surface with self-contained drainage, to prevent any spillage entering the storage systems or escaping off-site. Most spills and leaks during sampling are on a small scale, resulting from releases from the back valve of a tanker if the sample is being obtained in this way. Attention should be given to ensuring that incompatible substances do not come into contact resulting from spills from sampling, for example, within a sump serving the sampling point. Absorbents should be made available.	
Waste Rejection Procedures		
34	The operator should have clear and unambiguous criteria for the rejection of wastes, together with a written procedure for tracking and reporting such non-conformance. This should include notification to the customer/waste producer and the Environment Agency.	

Table 12 IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)

BAT Ref No.	BAT Requirement	Section of EPTR Document
34 (Cont.)	<p>Written/computerised records should form part of the waste tracking system information. The operator should also have a clear and unambiguous policy for the subsequent storage and disposal of such rejected waste. This policy should achieve the following:</p> <ul style="list-style-type: none"> • identifies the hazards posed by the rejected wastes; • labels rejected wastes with all information necessary to allow proper storage and segregation arrangements to be put in place; and • segregates and stores rejected wastes safely pending removal. 	4.7
Records		
35	<p>The waste tracking system should hold all the information generated during pre-acceptance, acceptance, storage, treatment and/or removal off-site. Records should be made and kept up to date on an ongoing basis to reflect deliveries, on-site treatment and despatches. The tracking system should operate as a waste inventory/stock control system and include as a minimum:</p> <ul style="list-style-type: none"> • date of arrival on-site; • producers details; • all previous holders; • a unique reference number; • pre-acceptance and acceptance analysis results; • package type and size; • intended treatment/disposal route; • record accurately the nature and quantity of wastes held on site, including all hazards and identification of primary hazards; • where the waste is physically located in relation to a site plan; • where the waste is in the designated disposal route; and • identification of operator staff that have taken any decisions re acceptance or rejection of waste streams and decided upon recovery/disposal options. 	4.7
36	<p>All records relating to pre-acceptance should be maintained and kept readily available at the installation for cross-reference and verification at the waste acceptance stage. Records should be held for a minimum of two years after the waste has been treated or removed off-site. Records should be held in an area well removed from hazardous activities to ensure their accessibility during any emergency.</p>	4.6 & 4.7

Table 12 IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)

BAT Ref No.	BAT Requirement	Section of EPTR Document
37	<p>The system adopted should be capable of reporting on all of the following:</p> <ul style="list-style-type: none"> • total quantity of waste present on-site at any one time, in appropriate units; • breakdown of waste quantities being stored pending on-site treatment, classified by treatment route; • indication of where the waste is located on site relative to the site plan; • comparison of the quantity on site against total permitted; • comparison of time the waste has been on-site against permitted limit. <p>These records should be held in a designated area, as agreed with the Agency, well removed from hazardous activities to ensure their accessibility during any emergency.</p>	4.7
38	Back-up copies of computer records should be maintained off-site.	
IPPC S5.06, Section 2.1.3, Waste Storage		
Offloading/discharge of waste		
1	<p>The Operator should have in place a system to ensure that the correct discharge point or storage area is used. The options for this include:</p> <ul style="list-style-type: none"> • ticket systems; • supervision by site staff and if relevant CCTV; • keys; and • colour-coded points/hoses or fittings of a specific size. 	4.8
2	Offloading and quarantine points should have an impervious surface with self-contained drainage, to prevent any spillages entering the storage systems or escaping off-site.	4.9 & 4.10
6	Storage areas are often the most visible aspects of the installation. Storage areas should be located away from watercourses and sensitive perimeters, for example, those which may be adjacent to public rights of way, housing or schools, and within the security-protected area of the installation to prevent vandalism.	4.8 & 4.9

Table 12 IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)

BAT Ref No.	BAT Requirement	Section of EPTR Document
7	Storage areas should be located to eliminate or minimise the double handling of wastes within the installation	
9	The total maximum storage capacity of the site should be clearly and unambiguously stated in writing, accompanied with details of the method used to calculate the volumes held against this maximum and set out in the site plan. The stated maximum capacity of storage areas should not be exceeded and the site plan updated to reflect any changes before they are implemented.	4.8
11	Storage area drainage infrastructure should ensure that all contaminated run-off is contained, that drainage from incompatible wastes cannot come into contact with each other and that fire cannot spread between storage / treatment areas via the drainage system.	4.8, 4.9, 4.10 & FPP
12	Procedures must be in place for the regular inspection and maintenance of storage areas, including drums, vessels, pavements and bunds. Inspections should pay particular attention to signs of damage, deterioration and leakage. Records should be kept detailing action taken. Faults must be repaired as soon as practicable. If containment capacity or capability of bund, sump or pavement is compromised, (unless effecting a repair is more expedient and working with wastes in close proximity does not compromise safety), then waste must be immediately removed until the repair is completed.	4.9
15	There should be vehicular, for example, forklift, and pedestrian access at all times to the whole of the storage area	
16	All spillages of hazardous wastes should be logged, where spillages >200 litre then additionally the Regulator should be informed.	
17	Activities that create a clear fire risk should not be carried out within the storage area, even if it is not formally classified as hazardous. Examples include grinding, welding or brazing of metalwork, smoking, parking of normal road vehicles except while unloading, charging of the batteries of fork lift trucks.	FPP
Turnover		
18	Storage within the reception area should be for a maximum of five working days. Following receipt, wastes should be treated or removed off-site as soon as possible. The total storage time will depend upon the characteristics of a particular site and the waste types being stored.	FPP
Storage of aerosols		
27	Storage of aerosols should take place under cover in closed containers or cages. Aerosols should not be stored in open containers.	FPP

Table 12 IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)

BAT Ref No.	BAT Requirement	Section of EPTR Document
IPPCS5.06, Section 2.2.4, Fugitive Emissions to Air		
1	<p>Dust - The following general techniques should be employed where appropriate:</p> <ul style="list-style-type: none"> • covering of skips and vessels • avoidance of outdoor or uncovered stockpiles (where possible) • where dust creation is unavoidable, use of sprays, binders, stockpile management techniques, windbreaks and so on • regular wheel and road cleaning (avoiding transfer of pollution to water and wind blow) • closed conveyors, pneumatic or screw conveying (noting the higher energy needs), minimising drops. Filters on the conveyors to clean the transport air prior to release • regular housekeeping • enclosed silos (for storage of bulk powder materials) vented to fabric filters. The recycling of collected material should be considered under Section 2.6; and • enclosed containers or sealed bags used for smaller quantities of fine materials. 	5.9 & EMP (ECL.008.01.03/EMP)
IPPCS5.06, Section 2.2.5, Fugitive Emissions to Surface Water, Sewer and Groundwater		
3	<p>For surfacing:</p> <ul style="list-style-type: none"> • design appropriate surfacing and containment or drainage facilities for all operational areas, taking into consideration collection capacities, surface thicknesses, strength/reinforcement; falls, materials of construction, permeability, resistance to chemical attack, and inspection and maintenance procedures; • have an inspection and maintenance programme for impervious surfaces and containment facilities; and • unless the risk is negligible, have improvement plans in place where operational areas have not been equipped with: <ul style="list-style-type: none"> ○ an impervious surface ○ spill containment kerbs ○ sealed construction joints – connection to a sealed drainage system. 	4.9 & 5.10

Table 12 IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)

BAT Ref No.	BAT Requirement	Section of EPTR Document
4	<p>All above-ground tanks containing liquids whose spillage could be harmful to the environment should be bunded. Bunds should:</p> <ul style="list-style-type: none"> • be impermeable and resistant to the stored materials; • have no outlet (that is, no drains or taps) and drain to a blind collection point; • have pipework routed within bunded areas with no penetration of contained surfaces; • be designed to catch leaks from tanks or fittings; • have a capacity greater than 110 percent of the largest tank or 25 percent of the total tankage, whichever is the larger; • be subject to regular visual inspection and any contents pumped out or otherwise removed • under manual control after checking for contamination; • where not frequently inspected, be fitted with a high-level probe and an alarm, as appropriate; • where possible, locate tanker connection points within the bund, otherwise provide adequate containment; • be subject to programmed engineering inspection (normally visual, but extending to water testing where structural integrity is in doubt). 	11.3
IPPCS5.06, Section 2.3., Management		
Operations and Maintenance		
1	<p>Effective operational and maintenance systems should be employed on all aspects of the process whose failure could impact on the environment, in particular there should be:</p> <ul style="list-style-type: none"> • documented procedures to control operations that may have an adverse impact on the environment; • a defined procedure for identifying, reviewing and prioritising items of plant for which a preventative maintenance regime is appropriate ; • documented procedures for monitoring emissions or impacts; 	3.4.2.

Table 12 IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)

BAT Ref No.	BAT Requirement	Section of EPTR Document
IPPCS5.06, Section 2.3., Management (Cont.)		
2	The maintenance system should include auditing of performance against requirements arising from the above and reporting the result of audits to top management.	3.4.3 & 3.4.4
Competence and Training		
3	Training systems, covering the following items, should be in place for all relevant staff which cover: <ul style="list-style-type: none"> • awareness of the regulatory implications of the Permit for the activity and their work activities; • awareness of all potential environmental effects from operation under normal and abnormal circumstances • awareness of the need to report deviation from the Permit; and • prevention of accidental emissions and action to be taken when accidental emissions occur. 	3.4.2
4	The skills and competencies necessary for key posts should be documented and records of training needs and training received for these post maintained.	
5	The key posts should include contractors and those purchasing equipment and materials;	
6	The potential environmental risks posed by the work of contractors should be assessed and instructions provided to contractors about protecting the environment while working on site.	
7	Where industry standards or codes of practice for training exist (e.g. WAMITAB) they should be complied with.	3.1
Accidents/non conformances		
8	There should be an accident plan which: <ul style="list-style-type: none"> • identifies the likelihood and consequence of accidents; and • identifies actions to prevent accidents and mitigate any consequences 	3.4.2
9	There should be written procedures for handling, investigating, communicating and reporting actual or potential non-compliance with operating procedures or emission limits	
10	There should be written procedures for handling, investigating, communicating and reporting environmental complaints and implementation of appropriate actions.	

Table 12 IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)

BAT Ref No.	BAT Requirement	Section of EPTR Document
IPPCS5.06, Section 2.3., Management(Cont.)		
11	There should be written procedures for investigating incidents, (and near misses) including identifying suitable corrective action and following up.	3.4.2
Organisation		
12	The following are indicators of good performance which may impact on the Regulator’s resources, but not all will necessarily be insisted upon as Permit Conditions:	
	The company should adopt an environmental policy and programme which:	3.3
13	<ul style="list-style-type: none"> • includes a commitment to continual improvement and prevention of pollution; • includes a commitment to comply with relevant legislation and other requirements to which the organisation subscribes; and • identifies, sets, monitors and reviews environmental objectives and key performance indicators independently of the Permit. 	
	The company should have demonstrable procedures (e.g. written procedures) which incorporate environmental considerations into the following areas:	3.4.2
14	<ul style="list-style-type: none"> • the control of processes and engineering change on the installation; • design, construction and review of new facilities and other capital projects (including provision of decommissioning) • capital approval; and • purchasing policy. 	
15	The company should conduct audits, at least annually, to check that all activities are being carried out in conformity with the above requirements. Preferably, these should be independent.	3.4.3
16	The company should report annually on environmental performance, objectives and targets, and future planned improvements. Preferably, these should be published environmental statements.	3.4.4
17	The company should operate a formal Environmental Management System. Preferably, this should be registered or certified EMS/ISO 140001 system (issued and audited by an accredited certification body).	3.2

Table 12 IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)

BAT Ref No.	BAT Requirement	Section of EPTR Document
IPPC5.06, Section 2.3., Management(Cont.)		
18	<p>The company should have a clear and logical system for keeping records of, amongst others:</p> <ul style="list-style-type: none"> • policies; • roles and responsibilities; • targets; • procedures; • results of audits; • results of reviews. 	3.4
IPPC5.06, Section 2.4., Raw Materials		
1	The Operator should maintain a list of raw materials and their properties as noted above.	n/a
2	The Operator should have procedures for the regular review of new developments in raw materials and for the implementation of any suitable ones with an improved environmental profile.	n/a
3	The Operator should have quality-assurance procedures for controlling the impurity content of raw materials.	n/a
4	The Operator should complete any longer-term studies needed into the less polluting options and should make any material substitutions identified.	n/a
IPPC5.06, Section 2.6., Waste Recovery or Disposal		
1	Waste production should be avoided wherever possible. Any waste that is produced should be recovered, unless it is technically or economically impractical to do so.	9.4
2	Where waste must be disposed of, the Operator should provide a detailed assessment identifying the best environmental options for waste disposal – unless the Regulator agrees that this is unnecessary. For existing disposal activities, this assessment may be carried out as an improvement condition to a timescale to be approved by the Regulator.	9.4

Table 12 IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)

BAT Ref No.	BAT Requirement	Section of EPTR Document
IPPC5.06, Section 2.6., Waste Recovery or Disposal		
Contaminated Containers		
5	Most drums and IBC's are designed, manufactured and marked to enable reconditioning/refurbishment. As such, 250l drums, 800l and 1000l IBCs should be cleaned and reconditioned to enable re-use where technically and economically possible.	9.4
6	Containers that cannot be re-used where there is no reconditioning market and which have been cleaned can be released into the secondary materials market.	
IPPC5.06, Section 2.7., Energy		
1a	The Operator should provide the energy consumption information, shown in the table on page 86 of IPPC S5.06 Sector Guidance Note, in terms of delivered energy and also, in the case of electricity, converted to primary energy consumption.	9.2
2b	The Operator should provide the following Specific Energy Consumption (SEC) information. Define and calculate the SEC of the activity (or activities) based on primary energy consumption for the products or raw material inputs that most closely match the main purpose or production capacity of the installation. Provide a comparison of SEC against any relevant benchmarks available for the sector.	
1b	<p>Operating, maintenance and housekeeping measures should be in place in the following areas, where relevant:</p> <ul style="list-style-type: none"> • operation of motors and drives; • lubrication to avoid high-friction losses; • boiler operation and maintenance e.g. optimising excess air; and • other maintenance relevant to the activities within the installation. 	9.1
2b	Basic low cost physical techniques should be in place to avoid gross inefficiencies. These should include insulation, containment methods (such as seals and self-closing doors) and avoidance of unnecessary discharge of heated water or air (fitting simple control systems such as timers and sensors).	

Table 12 IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)

BAT Ref No.	BAT Requirement	Section of EPTR Document
IPPCS5.06, Section 2.7., Energy (Cont.)		
5b	<p>An energy efficiency plan should be provided that:</p> <p>Identifies all techniques relevant to the installation, estimates of CO₂ savings that would be achieved by each measure over its lifetime and in the case that the activities are not covered by CCA or DPA, provides information on the equivalent annual costs of implementation of the technique, the costs per tonne CO₂ saved and the priority for implementation.</p>	
2c	<p>The following techniques should be considered:</p> <ul style="list-style-type: none"> • use of Combined Heat and Power (CHP); • generation of energy from waste; and • use of less polluting fuels. 	9.1
3c	<p>The Operator should provide justification that the proposed or current situation represents BAT, irrespective of whether or not a CCA or DPA is in place, where there are other BAT considerations involved e.g.:</p> <ul style="list-style-type: none"> • the choice of fuel impacts upon emissions other than carbon dioxide e.g. sulphur dioxide; and • the potential for practical energy recovery from waste conflicts with energy efficiency requirements. 	
IPPCS5.06, Section 2.8., Accidents		
1	A formal structured accident management plan (“AMP”) should be in place.	3.4.2

Table 12 IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)

BAT Ref No.	BAT Requirement	Section of EPTR Document
IPPC5.06, Section 2.8., Accidents (Cont.)		
2	<p>The AMP should include: A – Identification of hazards to the environment posed by the installation using a methodology akin to a Hazop study. Areas to consider include, but should not be limited to, the following:</p> <ul style="list-style-type: none"> • arrangements for the receipt, and checking of incoming wastes, including rejection and quarantine; • arrangements for the storage, segregation and separation of differing waste types; • procedures for the internal transfers, including “bulking up” of waste materials; • transfer of substances (e.g. filling or emptying vessels); • overfilling of vessels; • emissions from plant or equipment (e.g. leaking from joints, over-pressurisation of vessels, blocked drains); • failure of containment (e.g. physical failure or overfilling of bunds or drainage sumps); • failure to contain firewaters; • wrong connections made in drains or other systems; • incompatible substances allowed to come into contact; • unexpected reactions or runaway reactions; • failure of main services (e.g. power, steam, cooling water); • operator error; and • vandalism. 	3.4.2
3	<p>C – identification of the techniques necessary to reduce the risks. The following techniques are relevant to most installations;</p> <ul style="list-style-type: none"> • there should be an up to date inventory of substances, present or likely to be present, which could have environmental consequences if they escape. This should include apparently innocuous substances that can be environmentally damaging if they escape. The Permit will require the Regulator to be notified of any significant changes to the inventory; 	

Table 12 IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)

BAT Ref No.	BAT Requirement	Section of EPTR Document
IPPCS5.06, Section 2.8, Accidents(Cont.)		
3	<ul style="list-style-type: none"> • there should be an up-to-date site plan showing the precise location of wastes having specific hazard characteristics (e.g. oxidising, flammable, dangerous when wet etc.) with clear identification of the perimeters of the various designated storage areas and their maximum storage capacity; • procedures should be in place for checking and handling raw materials and wastes to ensure compatibility with other substances with which they may accidentally come into contact; • storage arrangements for raw materials, products and wastes should be designed and operated to minimise risks to the environment; • there should be automatic process controls backed-up by manual supervision, both to minimise the frequency of emergency situations and to maintain control during emergency situations. Instrumentation will include, where appropriate, microprocessor control, trips and process interlocks, coupled with independent level, temperature, flow and pressure metering and high or low alarms; • physical protection should be in place where appropriate (e.g.. barriers to prevent damage to equipment from the movement of vehicles); • there should be appropriate secondary containment (e.g.. bunds, catchpots, building containment); • techniques and procedures should be in place to prevent overfilling of tanks - liquid or powder - (e.g. level measurement displayed both locally and at the central control point, independent high-level alarms, high-level cut-off, and batch metering); • where the installation is situated in a floodplain, consideration should be given to techniques which will minimise the risk of the flooding causing a pollution incident or making one worse; • security systems to prevent unauthorised access should be provided where appropriate; • there should be formal systems for the logging and recording of all incidents, near-misses, abnormal events, changes to procedures and significant findings of maintenance inspections. • there should be procedures for responding to and learning from incidents, near-misses, etc. 	3.4.2.

Table 12 IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)

BAT Ref No.	BAT Requirement	Section of EPTR Document
IPPCS5.06, Section 2.8, Accidents		
3	<ul style="list-style-type: none"> • the roles and responsibilities of personnel involved in incident management should be formally specified. • clear guidance should be available on how each accident scenario might best be managed (e.g. containment or dispersion, to extinguish fires or to let them burn). • procedures should be in place to avoid incidents occurring as a result of poor communications between staff at shift change or during maintenance or other engineering work. • safe shutdown procedures should be in place. • communication channels with emergency services and other relevant authorities should be established, and available for use in the event of an incident. Procedures should include the assessment of harm following an incident and the steps needed to redress this • appropriate control techniques should be in place to limit the consequences of an accident, such as; fire walls, firebreaks isolation of drains, provision of oil spillage equipment, alerting of relevant authorities and evacuation procedures. • personnel training requirements should be identified and training provided. • the systems for the prevention of fugitive emissions are generally relevant and in addition, for drainage systems: <ul style="list-style-type: none"> ○ procedures should be in place to ensure that the composition of the contents of a bund sump, or sump connected to a drainage system, are checked before treatment or disposal; ○ drainage sumps should be equipped with a high-level alarm or with a sensor and automatic pump to storage (not to discharge); ○ there should be a system in place to ensure that sump levels are kept to a minimum at all times; ○ high-level alarms and similar back-up instruments should not be used as the primary method of level control. • duplicate or standby plant should be provided where necessary, with maintenance and testing to the same standards as the main plant; • spill contingency procedures should be in place to minimise accidental release of raw materials, products and waste materials and then to prevent their entry into water. 	3.4.2

Table 12 IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)

BAT Ref No.	BAT Requirement	Section of EPTR Document
IPPC5.06, Section 2.8, Accidents		
3	<ul style="list-style-type: none"> • process waters, potentially contaminated site drainage waters, emergency firewater, chemically-contaminated waters and spillages of chemicals should be contained and, where necessary, routed to the effluent system and treated before emission to controlled waters or sewer. Sufficient storage should be provided to ensure that this can be achieved. Any emergency firewater collection system should take account of the additional firewater flows and fire-fighting foams, and emergency storage lagoons may be needed to prevent contaminated firewater reaching controlled waters • consideration should be given to the possibility of containment or abatement of accidental emissions from vents and safety relief valves/bursting discs. Where this may be inadvisable on safety grounds, attention should be focused on reducing the probability of the emission. • spillage prevention controls must be in place during the transfer of substances (for example, transfer of bulk liquid waste from tanker to storage vessels) <ul style="list-style-type: none"> ○ The weakest link and subsequently the main source of spillage during transfer from the vehicle to storage arises from the transfer hoses. This is due to either: <ul style="list-style-type: none"> ○ “tanker drive-off” - a vehicle pulling away whilst still coupled (systems should be in place to prevent this); ○ or because the hose couplings have become damaged or are incompatible. Although the spillages tend to be relatively small, measures should be taken to ensure that the couplings are the correct fit and system. This will prevent the coupling loosening or becoming detached, and in turn will also be helped by the installation providing and maintaining its own hoses. ○ A more serious event would occur if the coupling were unable to withstand the maximum shut valve pressure of the transfer pump ○ Although the volume lost during routine operations due to ill-fitting or damaged hoses may be relatively small, persistent spillage may have a cumulative effect on the surface of the area, which in the long term may damage the surface and lead to a fugitive emission 	3.4.2.

Table 12 IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)

BAT Ref No.	BAT Requirement	Section of EPTR Document
IPPCS5.06, Section 2.8, Accidents		
3	<ul style="list-style-type: none"> ○ spillages of this nature may also be a source of odour (see Section 2.2.6 on page 72) and represent poor “housekeeping” practice, requiring constant attention and cleaning. Protection of the transfer hose may not be necessary where a gravity feed system is in place. It will however still be important to maintain a sound coupling at each end of the transfer hose. ○ a more acute accident situation may arise due to the failure of plant or equipment. This may include the failure of a pump seal or the blockage of a filter pot commonly used at transfer points. The prevention of these situations should be addressed by the provision of routine maintenance. A further type of acute incident is associated with the failure of the seal on the road tanker. The prevention of such an incident is outside the control of the Operator of the installation (though not necessarily beyond that of the company that operates the installation). Some provision should be made within the installation for emergency storage for leaking vehicles. ○ in addition to accidents connected with some failure in the transfer equipment, measures should be taken to ensure that the correct waste is discharged to the correct transfer point and that the waste is then transferred to the correct storage point. In order to prevent an unauthorised discharge, a lockable isolating valve should be fitted to loading connection. It should be kept locked during periods when there is no supervision of the unloading points. ○ drainage from discharge points can be connected or transferred to relevant storage for wastes that have been sampled and checked. ● unloading/movement of drums and containers <ul style="list-style-type: none"> ○ – typically drums and containers are delivered on wooden pallets and the pallets are unloaded by forklift. The drums are usually secured together often by shrink-wrap. All pallets should be sound and undamaged and forklift drivers should be trained in the handling of palletised goods. 	3.4.2

Table 12 IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)

BAT Ref No.	BAT Requirement	Section of EPTR Document
IPPC5.06, Section 2.8, Accidents		
3	<ul style="list-style-type: none"> ○ any damaged pallets should be replaced on arrival and not transferred into storage. Transfer of damaged pallets may lead to other pallets being stored on top, resulting in further damage and possible collapse of the stack ○ adequate space should be provided within drum storage areas and drivers should be adequately trained to minimise forklift truck damage to the integrity of drums ○ accumulations of liquids in bunds, sumps, etc., should be dealt with promptly ○ such accumulations requiring removal should be analysed to ensure the correct disposal route, for example, pH, COD, heavy metals and other known contaminants from the spillage 	3.4.2
IPPC5.06, Section 2.9, Noise		
1	The Operator should employ basic good practice measures for the control of noise, including adequate maintenance of any parts of plant or equipment whose deterioration may give rise to increases in noise (for example, bearings, air handling plant, the building fabric, and specific noise attenuation kit associated with plant or machinery).	
2	The Operator should employ such other noise control techniques necessary to ensure that the noise from the installation does not give rise to reasonable cause for annoyance, in the view of the Regulator. In particular, the Operator should justify where Rating Levels (LAeq, T) from the installation exceed the numerical value of the Background Sound Level (LA90, T).	6.5.& 11
3	Further justification will be required should the resulting field rating level (LAR,TR) exceed 50 dB by day and a facade rating level exceed 45 dB by night, with day being defined as 07:00 to 23:00 and night 23:00 to 07:00.	NVMP (ECL.008.01.0 3/NVMP)
4	In some circumstances “creeping background” (i.e. creeping ambient) may be an issue. Where this has been identified in pre-application discussions or in previous discussions with the local authority, the Operator should employ such noise control techniques as are considered appropriate to minimise problems to an acceptable level with the BAT criteria.	
5	Noise surveys, measurements, investigations (e.g. on sound power levels of individual items of plant) or modelling may be necessary for either new or for existing installations, depending upon the potential for noise problems. Where appropriate, the Operator should have a noise management plan as part of its management system.	

Table 12 IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)

BAT Ref No.	BAT Requirement	Section of EPTR Document
IPPCS5.06, Section 2.10 Monitoring		
1	Monitoring should generally be undertaken during all phases of operation (i.e. commissioning, start up, normal operation and shutting down) unless the Regulator agrees that it is inappropriate.	8
4	Where monitoring shows that substances are not emitted in significance quantities, it may be reasonable to reduce the monitoring frequency.	8
5	Monitoring and reporting of emissions to water and sewer should include at least parameters page 96 of the IPPC S5.06.	
Monitoring and Reporting of Emissions to Air		
6	Where appropriate, periodic visual and olfactory assessment of releases should be undertaken to ensure that all final releases to air should be essentially colourless, free from persistent trailing mist or fume and free from droplets.	8
Monitoring and Reporting of Waste Emissions		
10	For waste emissions, the following should be monitored and recorded: <ul style="list-style-type: none"> • the physical and chemical composition of waste; • its hazard characteristics; and • handling precautions and substances with which it cannot be mixed. 	4.7
Environmental Monitoring (beyond the installation)		
1	The Operator should consider the need for environmental monitoring to assess the effects of emissions to controlled water, groundwater, air or land, or emissions of noise or odour.	5 & 6

Table 12 IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)

BAT Ref No.	BAT Requirement	Section of EPTR Document
IPPCS5.06, Section 2.10 Monitoring (Cont.)		
3	<p>The need should be considered for:</p> <ul style="list-style-type: none"> groundwater, where it should be designed to characterise both quality and flow and take into account short- and long-term variations in both. Monitoring will need to take place both up gradient and down-gradient of the site; surface water, where consideration will be needed for sampling, analysis and reporting for upstream and downstream quality of the controlled water air, including odour land contamination, including vegetation, and agricultural products; and assessment of health impacts; and noise. 	5 & 6
4	<p>Where environmental monitoring is needed, the following should be considered in drawing up proposals:</p> <ul style="list-style-type: none"> determinands to be monitored, standard reference methods, sampling protocols monitoring strategy, selection of monitoring points, optimisation of monitoring approach determination of background levels contributed by other sources uncertainty for the employed methodologies and the resultant overall uncertainty of measurement quality assurance (QA) and quality control (QC) protocols, equipment calibration and maintenance, sample storage and chain of custody/audit trail reporting procedures, data storage, interpretation and review of results, reporting format for the provision of information for the Regulation. 	8
Monitoring of Emissions to Groundwater		
7	<p>Groundwater monitoring should take place where:</p> <ul style="list-style-type: none"> there are any subsurface structures carrying or holding waste or other harmful substances for example, fuel ; and there is uncertainty about surfaces on operational areas and drainage systems, especially on older sites. 	8.2

Table 12 IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)

BAT Ref No.	BAT Requirement	Section of EPTR Document
IPPCS5.06, Section 2.10 Monitoring (Cont.)		
Monitoring of Process Variables		
1	Some process variables may affect the environment and these should be identified and monitored as appropriate.	n/a
IPPCS5.06, Section 2.11 Closure		
1	<p>Operations during the life of the IPPC Permit should not lead to any deterioration of the site if the requirements of the other sections of this and the specific-sector notes are adhered to. Should any instances arise which have, or might have, impacted on the state of the site, the Operator should record them along with any further investigation or ameliorating work carried out. This will ensure that there is a coherent record of the state of the site throughout the period of the IPPC Permit. This is as important for the protection of the Operator as it is for the protection of the environment. Any changes to this record should be submitted to the Regulator.</p>	11
3	<p>A site closure plan should be maintained to demonstrate that, in its current state, the installation can be decommissioned to avoid any pollution risk and return the site of operation to a satisfactory state. The plan should be kept updated as material changes occur. Common sense should be used in the level of detail, since the circumstances at closure will affect the final plans. However, even at an early stage, the closure plan should include:</p> <ul style="list-style-type: none"> • either the removal or the flushing out of pipelines and vessels where appropriate and their complete emptying of any potentially harmful contents ; • plans of all underground pipes and vessels; • the method and resource necessary for the clearing of lagoons; • the removal of asbestos or other potentially harmful materials unless agreed that it is reasonable to leave such liabilities to future owners; • methods of dismantling buildings and other structures, see Closure references which gives guidance on the protection of surface and groundwater at construction and demolition-sites; • testing of the soil to ascertain the degree of any pollution caused by the activities and the need for any remediation to return the site to a satisfactory state as defined by the initial site report 	11

Table 13 IPPC S5.06 Guidance Document - Emission Benchmarks: BAT Requirements

BAT Ref No.	BAT Requirement	Section of EPTR
IPPC S5.06, Section 3 Emissions Benchmarks		
Emissions Inventory		
1	The Operator should compare the emissions with the benchmark values given in the remainder of this Section.	5

Table 14 IPPC S5.06 Guidance Document - Impact: BAT Requirements

BAT Ref No.	BAT Requirement	Section of EPTR
IPPC S5.06, Section 4 Impact Assessment		
1	Provide a description, including maps as appropriate, of the receiving environment to identify the receptors of pollution. The extent of the area may cover the local, national and international (for example, transboundary effects) environment as appropriate.	
2	Identify important receptors, which may include: areas of human population including noise or odour-sensitive areas, flora and fauna (that is, Habitat Directive sites, special areas of conservation, Sites of Special Scientific Interest (“SSSI” or in Northern Ireland “ASSI”) or other sensitive areas), soil, water, groundwater and watercourses (for example, ditches, streams, brooks, rivers), air, including the upper atmosphere, landscape, material assets and the cultural heritage.	Environmental Risk Assessment (ECL.008.01.03/ERA)
3	Identify the pathways by which the receptors will be exposed (where not self-evident)	
4	Carry out an assessment of the potential impact of the total emissions from the activities on these receptors.	
7	Consider whether the responses to Sections 2 and 3 and this assessment adequately demonstrate that the necessary measures have been taken against pollution, in particular by the application of BAT, and that no significant pollution will be caused. Where there is uncertainty about this, the measures in Section 2 should be revisited as appropriate to make further improvements.	

11. SITE IMPROVEMENT PROGRAMME

- 11.1. A gap analysis against the BAT Conclusions outlined in Section 10 and the proposed operating techniques as described in Section 4 has been undertaken to identify areas of planned works and associated investment required to ensure both the BAT and operating techniques can be achieved.
- 11.2. Table 15 - 17 describes the documentation improvements, general site preparation works and infrastructure improvements required, respectively. Each action required has an associated timescale and responsible person.

11.3. DOCUMENTATION IMPROVEMENT

Table 15: Documentation Improvements

No.	WT BREF BAT Ref	IPPC S5.06 BAT Ref	Improvement Action Required	Timescale	Responsible Person
1	1 & 21	17 & the entirety of Section 2.8 'Accidents'	EMS to be updated to include new waste types accepted and waste operational procedures. EMS will include an updated Accident Management Plan.	Q1 2019	Site General Manager
2	2, 5 & 26	Section 2.1.1; 1-14 & Section 2.1.2; 1-21 & 34- 38	Training and implementation of the pre-acceptance and acceptance waste procedures	On issue of the draft permit variation	Site General Manager & Weighbridge Manager
3	-	Section 2.11; 3	Site Closure Plan to be updated to include the proposed activities	6 months after issue of permit variation	Site General Manager
4	2d	-	Creation of an output Quality Management System	On issue of the draft permit variation	Site General Manager & Weighbridge Manager

11.4. INFRASTRUCTURE IMPROVEMENT

Table 16: General Site Preparation Works

No.	Improvement Action Required	Timescale	Responsible Person
	Presses have been decommissioned.		
5	Balers at end of the screw line to be decommissioned. Motors to be removed in screw line. Screw line then fully removed.	Q1 2019	Site General Manager & Maintenance Manager
6	Empty and remove Filter Plant	Q1 2019	Site General Manager & Maintenance Manager
7	Boilers removed	Q2 2019	Site General Manager & Maintenance Manager
8	Oil tanks removed	Q3 2019	Site General Manager & Maintenance Manager
9	Hammer Mill – Infrastructure upgrade	Q3 2019	Site General Manager & Maintenance Manager

11.4.1. Following the completion of the general site preparation works outlined above, a number of infrastructure improvements will be undertaken as described in Table 17.

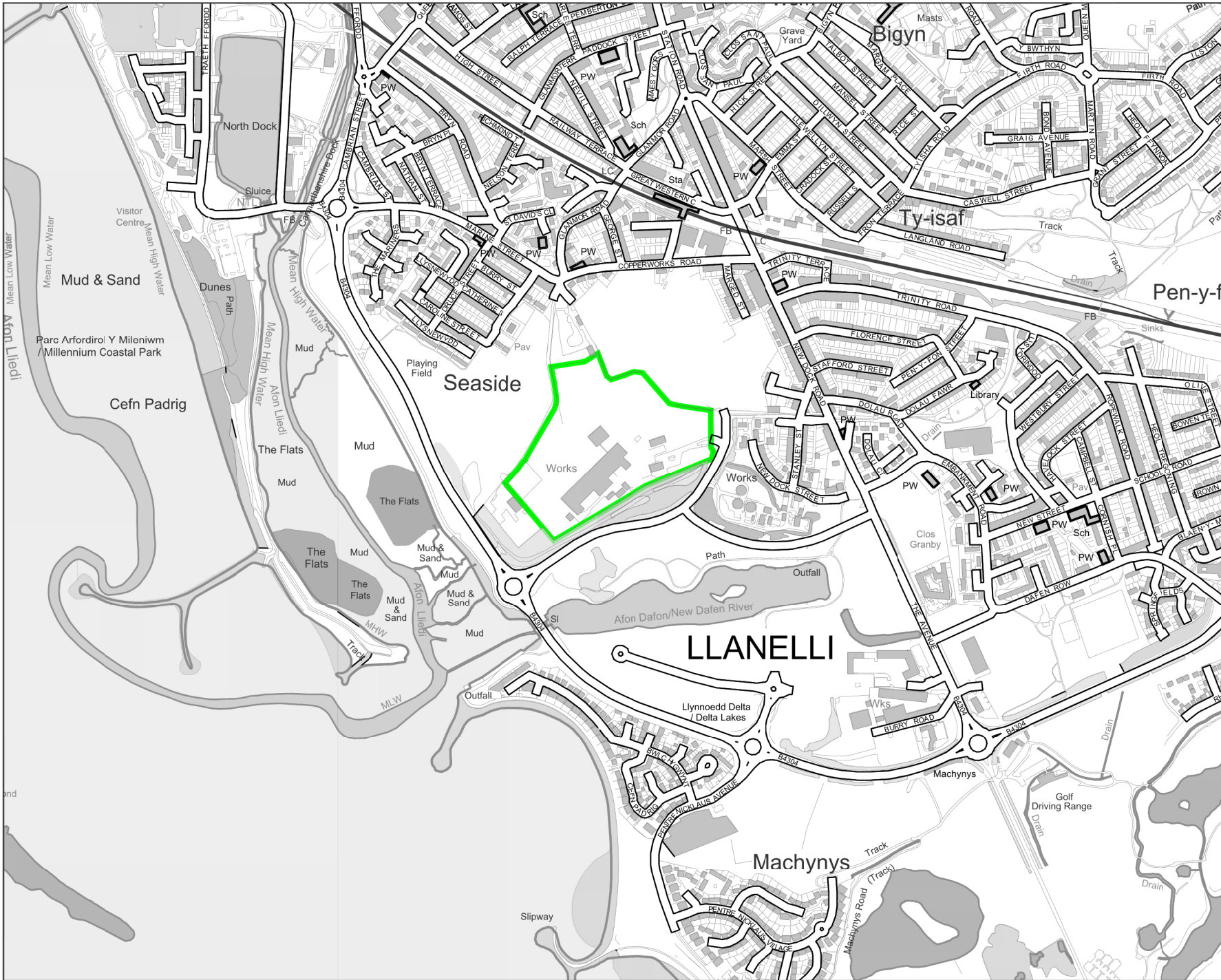
Table 17: Infrastructure Improvements

No.	WT BREF BAT Ref	IPPC S5.06 BAT Ref	Improvement Action Required	Timescale	Responsible Person
10	17 & 18	Section 2.9, 1-5	Assess the integrity of the building including extent and condition of panel coverage.	Q1 2019	Site General Manager
11	21	Section 2.2.4, 3	Assess the integrity of the concrete hardstanding inside the buildings to ensure it is fit for purpose.	Q2 2019	Site General Manager
12	14	Section 2.2.4, 1	Installation of a roof canopy to achieve entire coverage of the magnetic separator waste storage area.	Q2 2019	Maintenance Manager

11.4.2. Following the assessment of the suitability and integrity of the buildings and concrete hardstanding, the assessment report will be submitted to NRW in Q2 2019.

11.4.3. If subsequent improvements are required as detailed within the assessment report, these works will be undertaken within an appropriate timescale as agreed with NRW.


APPENDIX I DRAWINGS



LEGEND
 ENVIRONMENTAL PERMIT BOUNDARY

Rev	Date	Details	Chkd
11/07/2018	Scale	1:10K @ A4	Drawn by GTB
			Checked by SJ
			Approved by SB

Drawing Status: **ISSUED**

 Environmental Compliance Ltd.
 Unit G1, The Willowford,
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 Main Avenue, Pontypridd, CF37 5YL
 Tel: 01443 841760 Email: info@ecl.world
 Fax: 01443 341761 Web: www.envirocompli.com

Client:  **AMG RESOURCES**
A M G Resources Ltd

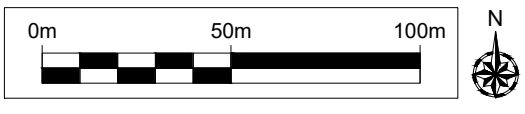
Project Title
 AMG RESOURCES Ltd
 NEVILLS DOCK
 LLANELLI
 SA15 2HD

Drawing Title
 SITE LOCATION PLAN

Drawing Number: **ECL.008.01.03-001** Rev: -



- LEGEND**
- ENVIRONMENTAL PERMIT BOUNDARY
 - - - 5.4 ACTIVITY BOUNDARY
 - BUILDINGS
 - BUILDINGS FOR DEMOLITION
 - RAMP
 - CONCRETE HARDSTANDING
 - MADE GROUND
 - VEGETATED AREA
 - SITE ROADWAYS
 - Bore Holes
 - SUBSTATION
 - RED DIESEL TANK
 - S SOAKAWAY
 - I 3 STAGE OIL/WATER INTERCEPTOR
 - SURFACE WATER DRAINAGE SYSTEM
 - W SURFACE WATER DISCHARGE POINT
 - 1 MAGNETIC SEPARATION
 - 2 MOBILE BALER
 - 3 FIXED BALER
 - 4 MAGNETIC SEPARATOR WASTE 19 12 10
 - 5 SHREDDER
 - 6 STORAGE AREA FOR 17 04 04, 17 04 05, 17 04 06, 19 01 02, 19 12 02
 - 7 STORAGE AREA FOR 10 03 05, 12 01 03, 19 12 03
 - 8 STORAGE AREA FOR 17 04 04, 17 04 05, 17 04 06, 19 01 02, 19 12 02
 - 9 SEPARATED FERROUS
 - 10 DE-TINNERS MUD SHED - QUARANTINE AREA FOR PEST MANAGEMENT



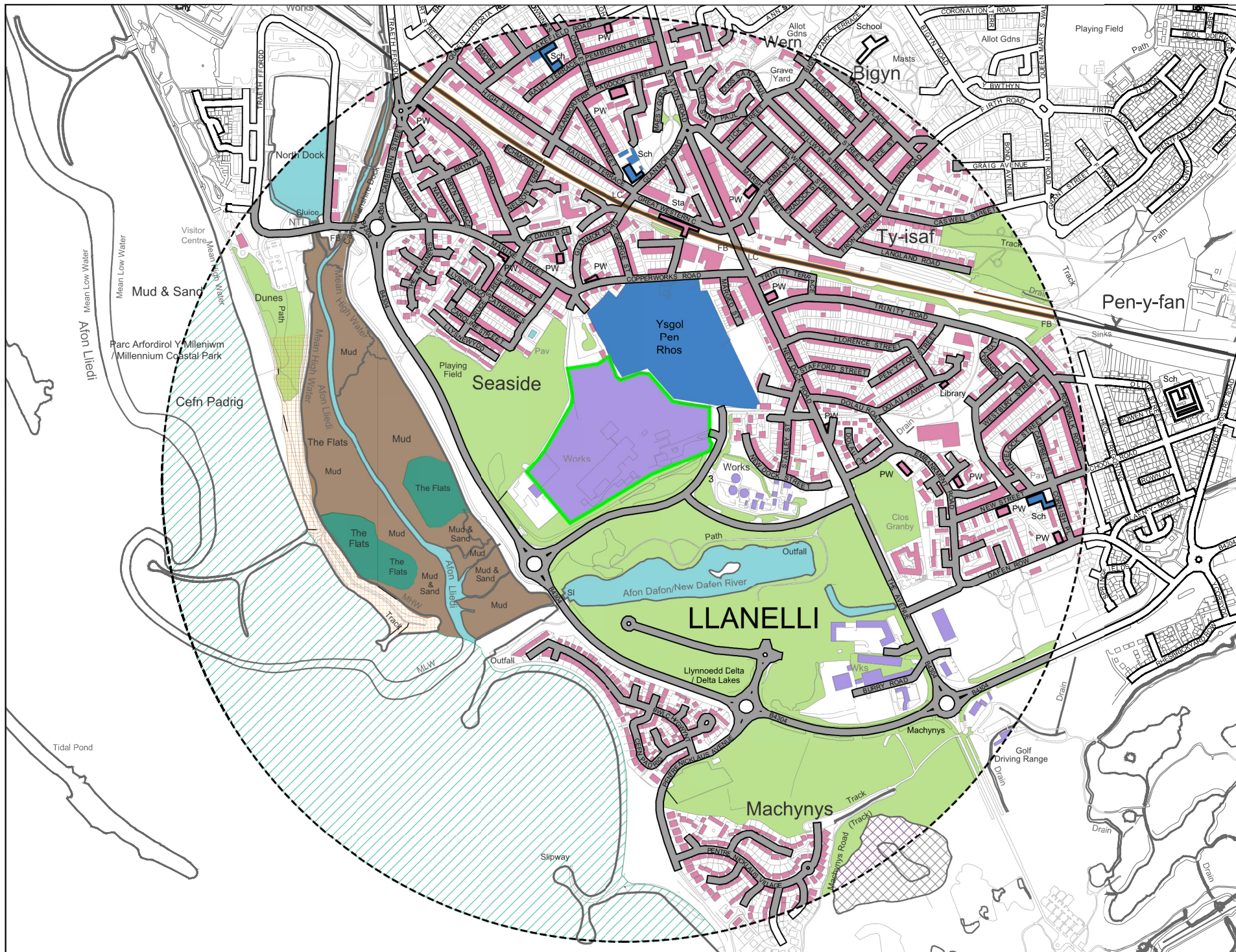
Environmental Compliance Ltd.
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Client
AMG RESOURCES
 A M G Resources Ltd

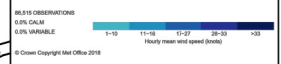
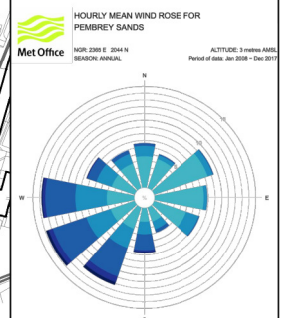
Project Title
 AMG RESOURCES Ltd
 NEVILLS DOCK
 LLANELLI
 SA15 2HD

Drawing Title
 SITE LAYOUT PLAN

Rev	Date	Details	Drawn	Checked	Approved	Chkd
	17/12/2018	Scale 1:2000 @ A3	by GTB	by SJ	by SB	
Drawing Status						ISSUED
Drawing Number						ECL.008.01.03-002
						Rev
						-



- LEGEND**
- ENVIRONMENTAL PERMIT BOUNDARY
 - - - 100m OFFSET BOUNDARY
 - DOMESTIC DWELLINGS
 - AREAS OF OPEN SPACE / PLAYING FIELDS
 - SCHOOLS
 - HOSPITALS
 - INDUSTRIAL / COMMERCIAL PREMISES
 - ROAD FEATURES
 - RAILWAY FEATURES
 - SURFACE WATER FEATURES
 - MARSH FEATURES
 - MUD FEATURES
 - SAND FEATURES
 - NORTH DOCK DUNES - LNR
 - BURY INLET - RAMSAR SITE, SSSI, SAC & SPA
 - MACHYNYS PONDS - SSSI



Rev	Date	Details	Drawn	Checked	Approved	Chkd
1	11/07/2018	Scale: 1:7.5K @ A3	PV	GTE	SJ	SB

Drawing Status: **ISSUED**

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Client: **AMG RESOURCES**
AMG Resources Ltd

Project Title
AMG RESOURCES Ltd
NEVELLS DOCK
LLANELLI
SA15 2HD

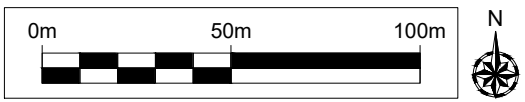
Drawing Title
SENSITIVE RECEPTORS PLAN

Drawing Number
ECL.008.01.03-003

Rev -



- LEGEND**
- ENVIRONMENTAL PERMIT BOUNDARY
 - 5.4 ACTIVITY BOUNDARY
 - RAMP
 - BUILDINGS
 - BUILDINGS FOR DEMOLITION
 - CONCRETE HARDSTANDING
 - MADE GROUND
 - VEGETATED AREA
 - SITE ROADWAYS
 - F.P.P. QUARANTINE AREA (10m x 10m x 2m)
 - WASTE PILES
 - Bore Holes
 - SUBSTATION
 - RED DIESEL TANK
 - SOAKAWAY
 - 3 STAGE OIL/WATER INTERCEPTOR
 - SURFACE WATER DRAINAGE SYSTEM
 - SURFACE WATER DISCHARGE POINT
 - 1 MAGNETIC SEPARATION
 - 2 MOBILE BALER
 - 3 FIXED BALER
 - 4 MAGNETIC SEPARATOR WASTE 19 12 10 2x (10m x 10m x 4m)
 - 5 SHREDDER
 - 6 STORAGE AREA FOR 17 04 04, 17 04 05, 17 04 06, 19 01 02, 19 12 02 (20m x 20m x 4m)
 - 7 STORAGE AREA FOR 10 03 05, 12 01 03, 19 12 03 (20m x 15m x 4m)
 - 8 STORAGE AREA FOR 17 04 04, 17 04 05, 17 04 06, 19 01 02, 19 12 02 (20m x 15m x 4m)
 - 9 SEPARATED FERROUS (20m x 13m x 4m)
 - 10 NON-FERROUS (20m x 10m x 4m)
 - 11 DE-TINNERS MUD SHED - QUARANTINE AREA FOR PEST MANAGEMENT
 - G GAS CYLINDER CAGE
 - H FIRE HYDRANTS
 - ↻ PEDESTRIAN FIRE EXITS
 - FIRE ASSEMBLY POINT
 - ▲ EMERGENCY INFORMATION PACK
 - EMERGENCY SPILL KIT



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AMG RESOURCES
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Project Title
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Drawing Title
 FIRE PREVENTION & MITIGATION PLAN

Rev	Date	Details	Chkd
03/01/2019	Scale 1:2000 @ A3	Drawn by GTB	Checked by SJ
Approved by SB			
Drawing Status			
FINAL DRAWING			
Drawing Number			Rev
ECL.008.01.03-004			-

APPENDIX II

ENVIRONMENTAL POLICY

ENVIRONMENTAL POLICY

AMG Resources Limited ("AMG") main operations include shredding, magnetic separation, bulking and baling of waste materials. The process undertaken at AMG is a waste avoidance and recovery process in its own right. Through the application of the waste hierarchy, all waste material delivered to site will be recovered and removed off site as a product, hence diverting a considerable quantity of waste from landfill.

AMG regards environmental protection as an integral part of its operation and is committed to conducting business in a manner which will protect the environment, health and safety of its employees, customers and the community in which they operate.

The company recognises that its operation could have an impact on the environment and will manage its operation to ensure that any impact is as low as practically possible by: -

- *establishing and maintaining an Environmental Management System ("EMS") that will ensure continual environmental performance;*
- *identify, monitor and comply with all applicable environmental legislation, regulations and other company requirements and policies;*
- *prevent pollution by adopting best industry practice, undertaking emission monitoring and giving consideration to the design, manufacture, installation and maintenance of relevant equipment;*
- *minimise waste production by setting targets and re-using or recycling waste wherever practicable;*
- *ensure efficient use of raw materials and other resources, such as electricity and water, by monitoring and measuring consumption and setting targets;*
- *ensuring all employees have the knowledge, training and resources required to identify the potential environmental effects of their work and by implementing the above guiding principles, thus reducing the impact of their activities on the environment;*
- *promoting continuous improvement by setting and reviewing environmental objectives and targets; and*
- *ensuring that the environmental policy is communicated to all employees working on or on behalf of AMG (including contractors) as part of the company training programme and made available to the public on request.*



Paul Tobin
Site General Manager

Date: January 2019