NEVILL'S DOCK, LLANELLI, CAMARTHENSHIRE

APPLICATION TO VARY
PERMIT REFERENCE EPR/BM2381IQ

FIRE PREVENTION PLAN

APPLICATION REFERENCE EPR/BM2381IQ (V007)

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ACRONYMS / TERMS USED IN THIS REPORT

AMG	AMG Resources Limited
BGS	British Geological Survey
CCTV	Closed Circuit Television
ELV's	End of Life Vehicles
EMS	Environmental Management System
EP Regulations	Environmental Permitting (England and Wales) Regulations 2016
FLT	Fork Lift Truck
FPP	Fire Prevention Plan
LNR	Local Nature Reserve
MAGIC	Multi-Agency Governmental Information for the Countryside
NRW	Natural Resources Wales
NVZ	Nitrate Vulnerable Zone
PAT	Portable Appliance Testing
RDF	Refuse Derived Fuel
SAC	Special Area of Conservation
SPA	Special Protection Areas
SPZ	Source Protection Zone
SRF	Solid Recovered Fuel
SSSI	Sites of Special Scientific Interest

1. INTRODUCTION

1.1. OVERVIEW OF THE FIRE PREVENTION PLAN

1.1.1. This Application (and its associated supporting documentation) has been prepared on behalf of AMG Resources Limited ("AMG") by Environmental Compliance Limited ("ECL"), and relates to the proposed variation of Permit EPR/BM2381IQ to reflect the main operations on site which involve the physical sorting and baling of scrap metals.

1.1.2. As per the requirements of the Natural Resources Wales ("NRW") '*Fire Prevention and Mitigation Plan Guidance' - Waste Management*' (Version 2, August 2017, a Fire Prevention Plan ("FPP") is required to be produced at the time of submitting the permit variation for determination by NRW.

1.1.3. This report follows NRW guidance for FPP and details the required mitigation and management methods to prevent a fire of combustible materials stored on site.

1.1.4. This FPP identifies measures to be employed to reduce the likelihood of fires at the site. In addition, the plan identifies measures to be employed in the event of a fire in order to limit the damage caused to the environment or human health.

1.1.5. Under current fire safety legislation[1] , a responsible person must carry out, or appoint a competent person to carry out, a suitable and sufficient assessment of the risks of fire to employees and others who may be affected by the site. A fire risk assessment will be carried out on an annual basis, or in the event of a change to operations on site.

1.2. THE APPLICANT

1.1.1. 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 since 1980. The site is currently regulated under NRW permit reference BM2381IQ, and subsequent variations. At present, main operations involve physical sorting and baling of scrap metals and a permit variation is required to reflect this change.

[1] Regulatory Reform (Fire Safety) Order 2005

1.3. THE SITE LOCATION AND SETTING

1.3.1. The installation is located at Nevill's Dock, Llanelli, SA15 2HD, and is centred on National Grid Reference 250504 198981. The exact location of the Installation is indicated on Drawing ECL.008.01.01-001 Site Location Plan contained within Appendix I which is provided as part of this submission. 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.

1.3.2. The site is situated within a predominantly residential area to the east and north, with ongoing building developments for future houses and a school in close proximity. The surrounding land uses are described in Section 2.2. Access to the site is from New Dock Road (B4304) located to the south and east of the site as illustrated on Drawing ECL.008.01.02-001 Site Location Plan. The wider local road network is also provided on the Site Location Plan Drawing.

1.3.3. The closest Fire Station is Llanelli Fire Station on Corporation Avenue, Llanelli SA15 3PF, 2.3 miles north of the site. The site benefits from a security fence around the entirety of the perimeter and security entrance gates which provide the only access route onto site. The entrance gates and building access doors are permanently locked outside of work hours to restrict unauthorised access. The site is covered by closed circuit television ("CCTV") which is monitored by senior management and Dyfed Alarms. Vegetation is cleared periodically to ensure the entirety of the site perimeter can be monitored.

1.4. SENSITIVE RECEPTORS

1.4.1. A summary of the immediate environmental site setting is provided in Table 1 below and the potential sensitive receptors within a 1km radius of the Environmental Permit boundary is shown on the Sensitive Receptors Plan (Drawing Reference ECL.008.01.03-003) contained in Appendix I.

Table 1: Surrounding Land Uses

Boundary	Description
North	Ysgol Pen Rhos Primary School, residential areas, small recreational parks
East	Predominantly residential areas.
South	New Dafen River, a small industrial area, woodland and golf course and small residential areas adjacent to the Loughor estuary and Machynys Ponds.
West	Burry Inlet and Loughor Estuary

1.4.2. Searches conducted on the Multi-Agency Governmental Information for the Countryside ("MAGIC") website[2] indicate that Burry Inlet is located within 1km of the site and is designated as a Ramsar Site, Site of Special Scientific Interest ("SSSI") and Special Protection Area ("SPA"). Also within 1km of the site, Carmarthen Bay and Estuaries is designated as a Special Area of Conservation ("SAC") and Machynys Ponds as a SSSI.

1.4.3. North Dock Dunes is designated as a Local Nature Reserve ("LNR") and is located within 1km of the permit boundary. However, none of the following ecological receptors have been identified within 1km of the proposed permit boundary:

- National Nature Reserves;
- World Heritage Sites;
- Registered Parks and Gardens;
- Area of Outstanding Natural Beauty;
- Ancient Woodlands;
- Woodland Trust Sites; and
- National Forest.

1.4.4. Searches on the MAGIC website confirms that there are none of the following within 1km of the application site:

- National Trust Properties;
- Registered Battlefields; and
- Scheduled Monuments.

1.5. GEOLOGY

1.5.1. The National Soils Institute – Soilscapes website[3] describes the regional soils as loamy and clayey soils of coastal flats with naturally high groundwater and naturally wet drainage.

1.5.2. According to the British Geology Survey ("BGS") 'Geology of Britain Viewer'[4], the 1:50 000 scale bedrock geology is described as Hughes Member – Mudstone, siltstone and sandstone, which is Sedimentary Bedrock formed during Carboniferous Period.

1.6. HYDROGEOLOGY AND SURFACE WATER

1.6.1. Mapping provided by the LLe - Geo-Portal for Wales[5] indicates that the site does not fall within a Groundwater Source Protection Zones ("SPZ") or Nitrate Vulnerable Zone ("NVZ").

1.6.2. New Dafen River is located to the south of the site, approximately 0.07km from the Environmental Permit boundary.

[2] http://magic.gov.uk/MagicMap.aspx, accessed October 2017
[3] http://www.landis.org.uk/soilscapes/ , accessed July 2018

[4] http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html , assessed July 2018

[5] http://lle.gov.wales/home?lang=en, accessed July 2018

1.7. FLOODING

1.7.1. Natural Resources Wales' Flood Risk Map Viewer[6] indicates that the site is not at risk of flooding from rivers or seas and is at low risk of surface water flooding in certain areas of the site.

6 https://naturalresources.wales/evidence-and-data/maps/long-term-flood-risk/?lang=en , accessed July 2018

2. SITE ACTIVITIES

2.1. The site's activities proposed will involve the storage of combustible waste covered by NRW's Fire Prevention and Mitigation Plan Guidance (V2.0, August 2017) and will be permitted under 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."*

2.1.1. The proposed 5.4. A(1)(b)(iv) Schedule 1 Activity and directly associated 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. This FPP only considers the proposed 5.4. activity and the associated areas on site.

2.2. The site is not open to the general public and there are no public rights of way through the site.

2.3. The site will be operational from 6.30am until 5.30pm Monday to Friday. No operations will take place on weekends or Bank Holidays.

2.4. The site is manned by up to 9 employees during normal operational hours including plant operatives, administrative and managerial staff, plus any drivers of delivery or collection vehicles.

2.5. All visitors are required to sign in to the visitor's register upon arrival and departure from the site. The visitor's register is located in the entrance of the main office building.

2.6. The site layout and waste storage locations have been identified on the Fire Prevention and Mitigation Plan (Drawing Reference ECL.008.01.03-004) contained within Appendix I.

2.7. Waste Types and Quantities

2.7.1. The Environmental Permit will allow for the following types of waste to be accepted on site, which are defined as 'combustible materials' in NRW's Fire Prevention Plan Guidance:

- Metal wastes from materials recovery facilities; and
- Scrap metals; and
- Depending on meeting required product specifications, waste fuels including residual combustible waste, Refuse Derived Fuel ("RDF") and Solid Recovered Fuel ("SRF").

2.7.2. During normal operations the maximum volume of waste stored on site at any one time for each stream of waste will be as follows:

Table 2: Total Waste Stored At Any One Time

Waste Stream Numbering as per Site Layout Plan (ECL.008.01.03-004)	Maximum Waste Piles (LxWxH)	Density Used to Calculate Tonnage (kg/m^3)	Total Waste Stored (Tonnes)
4	10m x 10m x 4m (x2)	800	**640**
6	20m x 20m x 4m	5,000	**8,000**
7	20m x 15m x 4m	5,000	**6,000**
8	20m x 15m x 4m	5,000	**6000**
9	13m x 20m x 4m	5,000	**5,200**
10	20m x 10m x 4m	5,000	**4,000**
Total Maximum Waste Storage (Tonnes)		**29,840**	

Note to Table: The density figures used to calculate the approximate total waste storage on site for mixed metal waste piles is 5,000kg/m^3 to take into account the different metals within waste piles and the possibility of contaminants, such as paper and plastic, being present. The density figure for magnetic separator waste used is 800kg/m^3.

2.8. Waste Storage and Quarantine Area

2.8.1. The waste will delivered by haulier lorries and will be stored in designated areas on concrete hardstanding within the confines of the discrete 5.4 activity boundary within the Installation.

2.8.2. The locations of waste are shown on the Fire Prevention and Mitigation Plan (ECL.008.01.03-004) which is contained in Appendix I. All plans are drawn to scale and waste pile dimensions are clearly provided on the plan. The separation distances as per Graph 1 contained within NRW's '*Fire Prevention and Mitigation Plan Guidance – Waste Management*' have been taken into consideration and as such, fire walls are not required.

2.8.3. As part of the insurance coverage at AMG, annual audits are undertaken at the site by the insurance specialists. The audit scope will include assessing the fire risk considering the current waste piles, waste storage arrangements and whether the mitigation measures in place are sufficient. Feedback is provided within the audit report and any recommendations are actioned by AMG personnel to ensure timely closure.

2.8.4. The Quarantine Area is also identified on the Fire Prevention and Mitigation Plan (ECL.008.01.03-004) and can be used to place burning wastes to extinguish them or to move unburnt wastes into the quarantine area to isolate and prevent them catching fire. The quarantine area is large enough to hold at least 50% of the volume of the largest waste pile and has a separation distance of 6 metres around the quarantined waste.

3. PREVENTION MEASURES

3.1. Table 3 below provides a summary of the associated preventative measures as per NRW's FPP guidance.

Table 3: Preventative Measures

Cause	Preventative Measures
Pile Sizes/Volumes and Dimensions	• See Table 2 for approximate volumes of stored on site any one time; • Markers will be drawn onto bay walls / floors to indicate approximate maximum stockpile sizes; and • The maximum height of waste stored will not exceed 4m or 4 bales high and the maximum length of waste stored will not exceed 20m or 10m if access cannot be achieved from both sides of the waste pile.
Arson and Vandalism	• The site benefits from a security fence around the perimeter of the site and a lockable main entrance gate; • The building access doors are locked out of hours to restrict unauthorised access into the installation; • The site is covered by CCTV which is monitored by senior management and Dyfed Alarms; • A visitor sign-in system is in place. In the event of a breach of security at the site, the cause will be investigated and appropriate mitigation measures implemented. This will be recorded in the Accident and Incident Record; and • Records will be maintained and will include inspections and maintenance of security fencing and doors, breaches of security, investigations and actions taken.
Storage Duration	• All waste will be stored and processed on impermeable surfacing; • Unprocessed and processed waste will be stored in bays, stockpiles, stacks and/or containers and the waste will be stored no longer than 3 months. The magnetic separator waste will only be stored for a maximum of 1 month. The aim of this is to process the incoming material and arrange for its export off site as soon as practically possible to minimise over-stocking which in-turn minimises the risk of overheating and spontaneous combustion. • All waste will be recorded and processed in date order; • Waste will be checked and monitored on a weekly basis by the Site Manager; • There are no seasonal variations in opening times.
Training	• Training will be provided to all site personnel in relation to how to prevent fires on site, how to identify fire risks and how to spot fires on site; • Site management will ensure that there is always a sufficient number of staff on site when the site is operational;

Table 3: Preventative Measures (Cont.)

Cause	Preventative Measures
Training (Cont.)	• All staff and contractors working on site will be made aware and understand the contents of the Fire Prevention Plan and the procedures that are in place in the event of a fire on site. • Training will be provided to all site personnel in relation to how to prevent fires on site, how to identify fire risks and how to spot fires on site; • Site management will ensure that there is always a sufficient number of staff on site when the site is operational; • All staff and contractors working on site will be made aware and understand the contents of the Fire Prevention Plan and the procedures that are in place in the event of a fire on site. • This familiarisation training will be undertaken as part of the company's induction process and staff will be required to provide a signature to confirm and record that they have read and understood the contents of the FPP and associated procedures; and • A fire drill will be held annually to simulate the processes which would be undertaken in the event of a fire or other similar emergency. It involves creating a situation which replicates what would happen if a real fire were to occur, with the inclusion of fire alarms, and requires the employees, contractors and visitors to evacuate. The drill enables familiarisation of the Fire Prevention Plan. Findings from the drill will be discussed and an action plan to address any opportunities for improvement will be implemented if necessary.
Employee Awareness	• Employees will be aware of: ➢ the actions to be taken on discovery of fire and on hearing a fire alarm; ➢ the location of manual fire alarm call points within the building and the method of operation; ➢ the location of firefighting equipment within the building and the method of operation; ➢ all escape routes within the site buildings; ➢ the purpose of fire resisting doors and their location within the site buildings; and ➢ evacuation procedures for the building and the location of the assembly point. • All employees will be aware of the methods of fire prevention as detailed below: ➢ should an employee consider that something or someone presents a fire risk within the building, they should report the matter to the Site General Manager; ➢ employees should not allow the accumulation of large amounts of combustible materials around workplaces or escape routes; ➢ employees should not obstruct fire escapes, fire exits or any fire-related equipment; ➢ employees should ensure that self-closing fire/smoke doors are not wedged in the open position; and ➢ employees should observe the smoking policy for the site;.

Table 3: Preventative Measures (Cont.)

Cause	Preventative Measures
Monitoring	• No waste will be stored on site longer than 3 months. Magnetic separator waste will only be stored on site for 1 month. • Site operatives will undergo training on the management of stockpiles, including, recognising hot spots within stockpiles and managing hotspots. A monitoring regime will be employed at the site applying a 10% representative sample based on the current stocklist and temperature readings from the centre of the bales will be taken if necessary. • The following action will be taken should a hotspot be identified: ➢ stockpile will be turned to bring the hotter areas to the surface to cool; and ➢ water sprays will be utilised if wastes are dry. • In order to ensure stockpiles are sufficiently rotated and waste storage time is minimised, site operatives will ensure that the oldest materials will always be removed or processed first. This ensures good stock rotation for all stored materials and a clear method to record and manage the storage of all waste on site. • Stockpiles will be visually inspected throughout the day and where appropriate findings logged within the Site Diary.
Actions to Limit Self Heating	• Effective stock management limits the likelihood of the self-combustion of materials stored on site. As such, the site has waste acceptance and stock management procedures which are followed by all employees at the site. • Stockpiles of unprocessed and processed materials will be managed as follows, to minimise self-combustion: ➢ stockpile storage times will be minimised on site and hence stored materials will be rotated whilst held on site; and ➢ where possible and practicable, material is stored in its largest form prior to processing. • Wherever possible, the following measures will be implemented on site to reduce self-combustion: ➢ separation of materials; ➢ isolation of combustible materials; and ➢ restriction of storage times.
Plant and Equipment	• Site vehicles will be kept to a minimum and include: ➢ Caterpillar Crane 325 and 318; ➢ Terex 1704 Crane; ➢ Caterpillar Loading Shovel x2; ➢ Fort Lift Truck (“FLT”) x2 ➢ Bobcat 753; and ➢ Manlift. • Vehicles will be fitted with fire extinguishers. • A number of measures will be implemented to prevent fuel and combustible liquids leaking from site vehicles. These will include: ➢ Site vehicles subject to annual servicing and maintenance checks; ➢ Daily checks, such as evidence of obvious leaks, hydraulic fluid levels, operating systems, will be undertaken prior to vehicle use; ➢ A procedure for reporting any faults or maintenance concerns to prevent any foreseeable breakdowns or leaks;

Table 3: Preventative Measures (Cont.)

Cause	Preventative Measures
	➢ A procedure for immediate reporting of fuel leaks or spillages; ➢ In the unlikely event of a fuel leak, spill kits will be deployed to clean up any fuel spillage and prevent entry to the onsite drainage systems; and ➢ Any delivery vehicle allowed entry onto site must be serviced and MOT road worthy. ➢ Any evidence of leaks from these vehicles will be recorded and communicated. Further entry to site will be refused until repairs have been made.
Plant and Equipment (Cont.)	• Operatives will be required to complete inspection records for all plant on a regular basis. All plant will be operated, maintained and serviced in line with manufacturer's recommendations and instructions. Instruction Manuals for plant and equipment will be held on site. • A service schedule will be displayed in the site office and records of all servicing and maintenance will be stored within the site office. • Plant and equipment will be visually inspected prior to every use to ensure it is fit for purpose. • Induction training and refresher training will be provided to staff in the safe operation of plant and equipment relevant to their role, in accordance with the site's Environmental Management System ("EMS"). • Inspection of plant and equipment will be undertaken on a weekly basis to check for faults and ensure appropriate safeguards are in place. • At the end of the working day, mobile plant will be stored away from any stockpiles of waste materials. • In the event of a failure or suspected fault with an item of plant or piece of equipment, the operator will ensure that the equipment is shut off in a safe manner and not used until the equipment can be repaired or replaced.
Infrastructure and Site Inspections	• The site will be continuously inspected by operatives throughout the working day. • Daily and weekly monitoring will be recorded within the site diary. • Waste will be visually inspected throughout the day and all findings logged in the site diary at the start and end of each working day as a minimum. All staff will be trained in how to identify fires and fire hazards on site. • The site will undergo regular cleaning to prevent a build-up of debris on site.
Electrical Faults	• Regular safety checks and daily site inspections will be recorded in the site diary; • All buildings electrics will be fully certified by a qualified electrician; and • Annual Portable Appliance Testing ("PAT") testing of any portable electrical appliances will be carried out.

Table 3: Preventative Measures (Cont.)

Cause	Preventative Measures
Ignition Sources	• No naked lights or burning will be permitted on site. • Sources of ignition will be kept at least 6 metres away from combustible and flammable materials. Sources of ignition will be minimal and waste stored on-site will not readily ignite. • Portable heaters will not be used. • A no smoking policy will be in effect in and around the building and this will be communicated to all staff and visitors with signage and training.
Heat and Spark Prevention	• No burning, reactive / reacting or visibly hot (producing steam or heat) loads will be accepted on site. Loads will be visually inspected at the site entrance to ensure compatibility with accompanying delivery notes, therefore minimising prohibited wastes. A quarantine area for hot loads is not required as hot loads are not received or processed at the site. In the very unlikely event that a hot load is identified on delivery, it would be rejected and immediately returned to the supplier and therefore, not accepted onto site. • Any hot works/cutting tools used for welding repairs and maintenance will be carried out at a safe distance from combustible materials. The site operate a Permit to Work system to control high risk activities, such as hot works. Only a Competent Person, one that is adequately trained and experienced, is authorised to undertake the welding and cutting on site. The control and preventative measures stipulated in the Permit to Work will be rigorously followed by the Competent Person and the other members of the team. The area will be made safe before the work starts and all the prescribed preventative precautions will be taken whilst the work is in progress. On completion of the hot work, the area will be cleared and checked. The competent person or deputy will re-visit the work area, after a suitable period of time. This will be undertaken one hour after the activity has ceased and also at the end of the working day. This ensures no signs of smouldering embers or hot surfaces are evident which could potentially cause a fire. An example of a blank Permit to Work is provided in Appendix II. • Vehicles will be turned off when not in use. Consideration will be given to the high risk time for hot exhausts (one hour after switch off when dust can settle on hot surfaces) and wherever possible vehicles will be given time to cool down prior to site staff leaving site at the end of each day.

Table 3: Preventative Measures (Cont.)

Cause	Preventative Measures
Heat and Spark Prevention (Cont.)	• Flammable/combustible materials will be stored in designated areas away from frequent vehicle movements. • Due to the nature of the waste, temperature and moisture content of materials within the site does not require checking, however, if advised by the Fire Brigade, thermometers will be installed on site to monitor heat.
Gas Bottles and Other Flammable Items	• Gas cylinders and bottles will not be accepted on site, however, in the event that a cylinder or bottle is detected it will be set aside and kept separate in a designated storage area. • Gas cylinders are used on site for welding repairs and maintenance. The cylinders are stored within designated locked gas cylinder cages.
Smoke/Heat/Flame Detectors	• The site has a Fire Alarm System installed. The design, installation and maintenance is undertaken by PES Systems Swansea and therefore covered by an appropriate UKAS-accredited third party certification scheme. • The Fire Alarm System is tested weekly and serviced in accordance with the manufacturer's recommendations. Records of the tests, servicing and any false alarms will be kept in the Site Diary. • There are a series of water hydrants located around the site which can be used as a suppression systems in the event of a fire.
Reactions between incompatible materials	• Strict waste acceptance procedures will be implemented on site to ensure only permitted materials are accepted. • All loads are pre-booked and covered by appropriate waste documentation. AMG employees are under instruction to reject the load if incoming waste or materials have been identified which have not been previously agreed and stated on the waste documentation • As a result, any incoming waste or material has been pre-inspected and determined and therefore, incompatible waste and material will not enter site.

4. FIRE MANAGEMENT AND IMPACT REDUCTION

4.1. WASTE ACCEPTANCE

4.1.1. Strict waste acceptance procedures will be implemented on site to ensure only permitted materials are accepted. This is explained in more detail within the Environmental Permit Technical Requirement Document (ECL.008.01.03/EPTR), which is to be submitted as part of this permit variation application.

4.1.2. All staff receiving waste will be fully trained and will be able to detect any non-conforming materials at point of arrival on site. All loads will then be checked upon receipt and a checking procedure will be in place to identify non confirming materials.

4.1.3. Any non-conforming waste is described as any waste that:

- the installation is not authorised to accept;
- is not recorded on the accompanying waste documentation;
- would not be expected to be present.

4.1.4. In the unlikely event that non-confirming materials arrive on site on arrival and at the unloading stage, the inventory stage would then identify non-conforming material. The non-conforming material will be not be accepted at the site and returned to the supplier.

4.1.5. A Waste Tracking System will be implemented which will record the waste description, date and time of arrival on site and original producer details.

4.1.6. The Waste Tracking System will also allow:

- accurate records of the nature and quantity of waste to be held on site;
- identification of where waste is located;
- identification of staff who may have taken decisions regarding acceptance/rejection of waste streams;
- comparison of total quantities of waste on site compared against total permitted; and
- log the time the waste has been on site enabling the implementation of the “first in, first out” principle.

4.2. SITE INFRASTRUCTURE

4.2.1. All waste will be stored on concrete hardstanding with sealed drainage. The 5.4. activity area will be bunded with ramps providing access to the areas. The infrastructure arrangements are illustrated on the Site Layout Plan (ECL.008.01.03-002) which is contained in Appendix I of this FPP.

4.2.2. Additionally, any potentially polluting spillages at the Installation will be subject to the robust spill management procedure.

4.2.3. Fire doors are an important part of a building's fire defences. The two functions of a fire door are:

- to compartment the building to prevent the spread of fire; and
- to provide a safe means of escape for those persons evacuating the building.

4.2.4. All employees are to ensure that all fire doors can be opened using a push bar in the event of the fire alarm sounding.

4.2.5. The site will not continue to accept waste if there is an active fire on site. Waste will be diverted to a nearby suitably licensed site and, if possible, waste producers will be notified in advance to prevent delivery vehicles arriving on site. An AMG representative will be stationed in an appropriate location on the access road outside of the site to redirect any delivery vehicles which were on route when the fire broke out.

4.2.6. Should fire compromise its stability or integrity of the building, all personnel on site will be immediately evacuated and the Fire and Rescue Services will be contacted.

4.3. CONTAINING AND MITIGATING FIRES

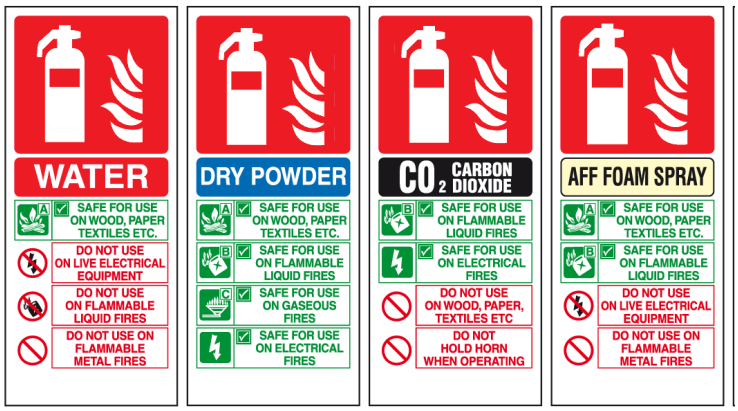
4.3.1. The site has foam, carbon dioxide, powder and water extinguishers (See Figure 1) and an inventory of the type of fire extinguisher and their location on site are provided in Appendix III. The fire extinguishers are serviced by Advanced Fire as part of an annual inspection contract.

4.3.2. An up-to-date site plan will be on display in the site office and will detail:

- site layout;
- waste storage arrangements;
- firefighting equipment locations;
- fire detection equipment; and
- PPE.

4.3.3. In addition, all procedures relating to emergency procedures on site, including fires, will be held within the site office and will be easily found and readily available.

Figure 1: Fire Extinguishers Type and Application



4.4. SITE PROCEDURES

4.4.1. The following procedures will be in place on site that will be followed in the event of a major fire onsite:

- the General Site Manager and Fire Brigade will be notified immediately and NRW as soon as practicable;
- if it is safe do so, a temporary bund (firewater booms) will be constructed to ensure that firewater is kept within the 5.4 activity boundary which benefits from impermeable surfacing (any firewater held within the bund will be tested before removal offsite to a suitably licensed facility once the fire has been extinguished);
- if possible, drains will be blocked with drain mats to prevent the ingress of the firewater;
- if possible, waste that is unburnt will be dampened down to prevent the fire from spreading further and any contaminated runoff will be withheld within the temporary bunded area;
- if possible, unburned material will be separated from the fire using heavy plant;
- the burning area will be isolated and attempts will be made to extinguish the fire utilising the onsite fire extinguishers if safe to do so; and
- depending on the scale of the fire, the site and buildings will be evacuated;
- the General Site Manager will notify adjacent businesses to the site directly by telephone.
- businesses in the surrounding area will be alerted by the fire alarms and the Fire Brigade will instigate evacuation of nearby businesses and residents if deemed necessary;

4.4.2. A Site Information and Key Contacts List is provided in Appendix IIII which outlines the contact details of internal and external contacts to notify in the event of a fire on site. Out of hours telephone numbers are also provided.

4.5. FIRE WATERS

4.5.1. Water to actively fight a fire will be available from 5 fire hydrants strategically located around the site. The locations of the fire hydrants are outlined on the Fire Prevention and Mitigation Plan (ECL.008.01.03-004), which is contained within Appendix I.

4.5.2. In the event of a fire, action will be taken to prevent potentially contaminated firewater from entering the drainage system including the deployment of drain barriers, booms and spill kit containment measures, as described in above in Section 5.5. The locations of these emergency spill kits are also provided on the Fire Prevention and Mitigation Plan.

4.5.3. Based upon the FPP guidance firewater calculations, it is estimated that based on a 1,600m^3 stockpile of waste, this being the maximum sized stockpile on site, 1,920,000 litres of water over a 3 hour period would be required. The water available for firefighting will be taken from the hydrants marked on the Fire Prevention and Mitigation Plan ECL.008.01.03-004. Any fire water that pools on site surfacing will be utilised by the firefighting team, if possible.

4.6. MANAGEMENT AFTER A FIRE EVENT

4.6.1. After a fire event, the following procedure will be implemented depending on the severity of the fire:

1. *A small and containable fire that can be dealt with in-house using suitably trained staff and firefighting equipment located on site*: the fire will be recorded in the site log, including the causes of the fire and methods used to manage the fire; or

2. *A larger fire that requires the presence of the Fire and Rescue Service*: if the site operatives have been told to evacuate or cease operations by the NRW and/or Fire and Rescue Service, the site personnel will wait until told safe to re-enter site. The fire will be recorded in the site log, including the causes of the fire and methods used to manage the fire.

4.6.2. The Site General Manager will liaise with NRW to determine a plan-of-action, as outlined in 4.7-4.9, to introduce waste transfer and storage operations at the site, and the timescales involved to achieve this.

4.7. FIRE DAMAGE EXTENT AND DECONTAMINATION

4.7.1. The extent of the fire damage will be assessed by the Site General Manager and depending on the scale of the fire, the Fire Brigade may also be present.

4.7.2. Should damage be sufficient to prevent the site from being able to treat and store waste, the site will cease accepting waste and will divert to a suitably licensed facility.

4.7.3. Depending on the scale of the fire, smoke particles may have been transported and deposited onto various surfaces within the affected building. The thermal degradation of certain material can cause corrosive deposits to be omitted within the smoke particulates. It is therefore important that such deposits are effectively neutralised. A specialist company will be commissioned to undertake post fire clean up and smoke damage decontamination.

4.7.4. The structural stability of fire damaged infrastructure will be assessed and approved by a professional prior to re-entry onto the site.

4.7.5. The fire and rescue service may have also isolated gas, electric and water supplies. These will be reconnected by a registered gas engineer, electrician or plumber. The integrity and functionality of the drainage system will also be assessed and approved by a professional prior to recommencement of operations.

4.8. FIRE DAMAGED WASTE

4.8.1. A visual assessment will be carried out by the Site General Manager to determine whether the waste can be treated on site. Wherever possible, unburnt wastes will be separated from fire damaged areas of waste. If waste piles have become mixed, then it is likely that the waste will be removed from site to a suitably licensed facility.

4.8.2. Any quarantined waste, waiting for removal from site, will be stored in the designated area to prevent the contamination of unburnt wastes on the site, as illustrated on the Fire Prevention and Mitigation Plan (Drawing Reference ECL.008.01.03-004).

4.8.3. The burnt waste will be removed off site within 24 hours. The quarantine area will benefit from at least 6m separation area to aid separation and management of wastes during an incident. Site staff are trained in how to safely move quarantined waste to this area.

4.9. RECOMMENCING OPERATIONS

4.9.1. An assessment will be carried out to determine whether further mitigation measures could have prevented the fire. Any outcomes to be implemented onsite will be incorporated within this Fire Prevention Plan and the site's EMS as required. Once this work has been undertaken, the Site General Manager will revisit the site to ensure all of the above have been undertaken and the site can recommence operations.

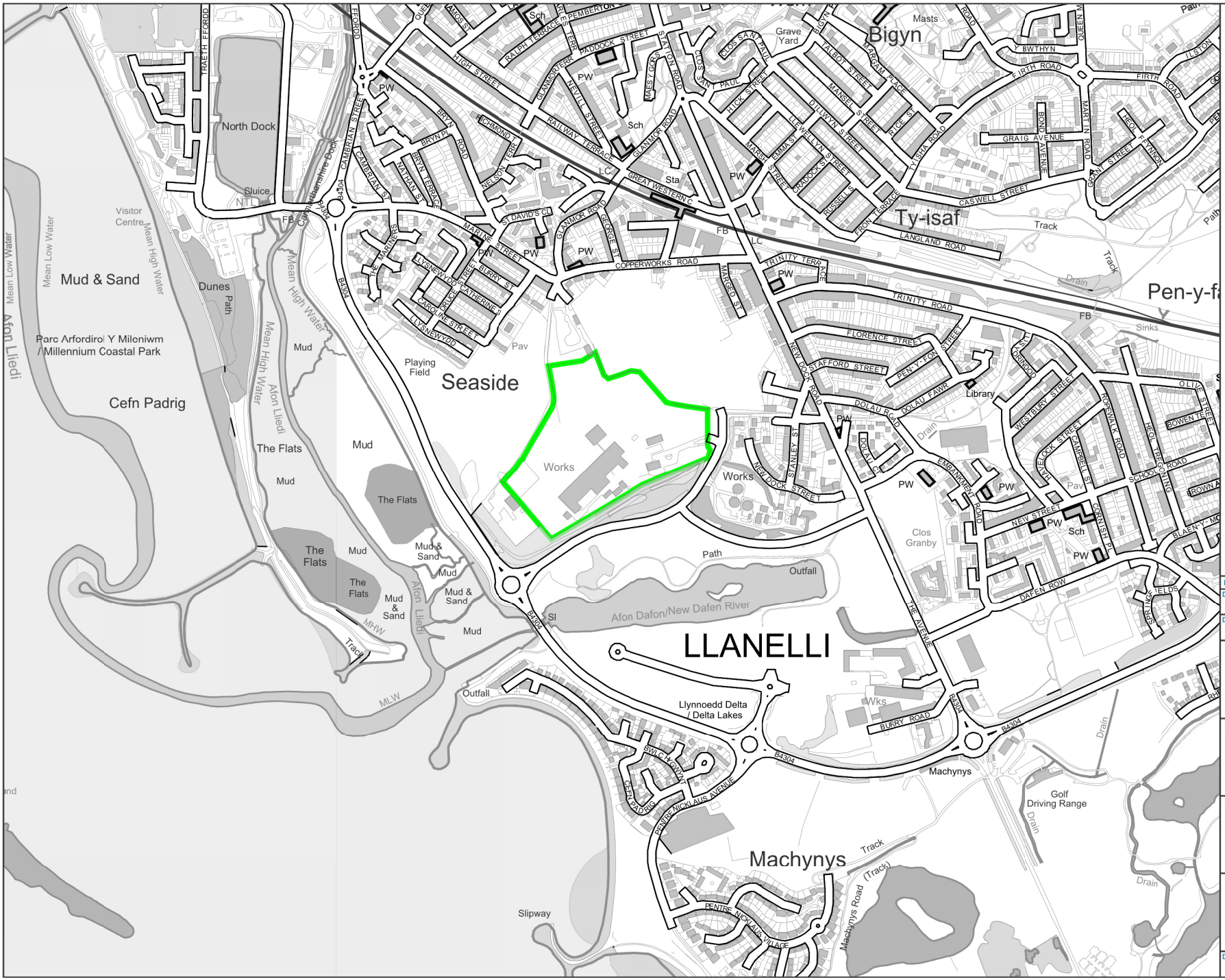
5. CLOSURE

5.1. Fire Prevention Plan is considered to be a 'working' document that will be reviewed and updated annually or as required should any of the following occur:

- a fire on site;
- a change or review of legislation;
- recommendations made by insurance assessors; or
- if the site is instructed to do so by NRW.

5.2. It will be the responsibility of the Site General Manager or nominated person to maintain this Fire Prevention Plan and to ensure it is adhered to in the event of a fire on site.

APPENDIX I
DRAWINGS



LEGEND

ENVIRONMENTAL PERMIT BOUNDARY

Rev	Date	Details	Chkd

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

Drawing Status

ISSUED

Environmental Compliance Ltd.
Unit G1, The Willowford,
Treforest Industrial Estate,
Main Avenue, Pontypridd. CF37 5YL

Tel: 01443 841760
Fax: 01443 841761
Email: info@ecl.world
Web: www.envirocompli.com

Client

A M G Resources Ltd

Project Title

AMG RESOURCES Ltd
NEVILLS DOCK
LLANELLI
SA15 2HD

Drawing Title

SITE LOCATION PLAN

Drawing Number	Rev
ECL.008.01.03-001	-

LEGEND

- ENVIRONMENTAL PERMIT BOUNDARY
- 5.4 ACTIVITY BOUNDARY
- BUILDINGS
- BUILDINGS FOR DEMOLITION
- RAMP
- CONCRETE HARDSTANDING
- MADE GROUND
- VEGETATED AREA
- SITE ROADWAYS
- Bh 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: A M G Resources Ltd

Project Title: AMG RESOURCES Ltd, NEVILLS DOCK, LLANELLI, SA15 2HD

Drawing Title: SITE LAYOUT PLAN

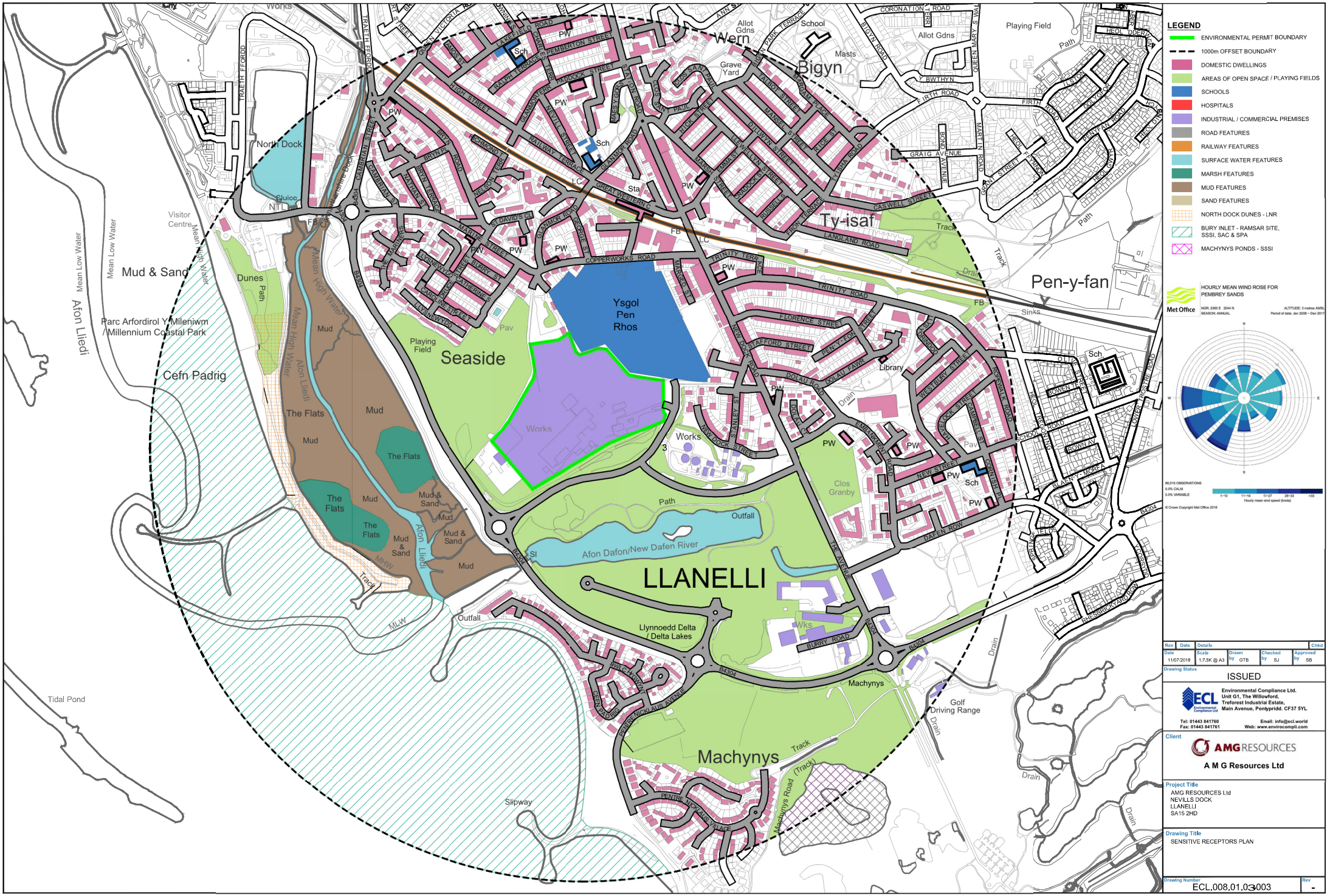
Rev	Date	Details	Chkd

Date	Scale	Drawn by	Checked by	Approved by
17/12/2018	1:2000 @ A3	GTB	SJ	SB

Drawing Status: ISSUED

Drawing Number: ECL.008.01.03-002

Rev: -



LEGEND

- ENVIRONMENTAL PERMIT BOUNDARY
- 1000m 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

HOURLY MEAN WIND ROSE FOR PEMBREY SANDS

Met Office

NGR: 2305 E 2044 N
SEASON: ANNUAL
ALTITUDE: 3 metres AMSL
Period of data: Jan 2008 – Dec 2017

86,515 OBSERVATIONS
0.0% CALM
0.0% VARIABLE

1–10 | 11–16 | 17–27 | 28–33 | >33
Hourly mean wind speed (knots)

Rev	Date	Details	Ckkd

Date	Scale	Drawn by	Checked by	Approved by
11/07/2018	1:7.5K @ A3	GTB	SJ	SB

Drawing Status: ISSUED

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Client: AMG RESOURCES
A M G Resources Ltd

Project Title:
AMG RESOURCES Ltd
NEVILLS 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
- Bh 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 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

0m 50m 100m

N

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Client: A M G Resources Ltd

Project Title: AMG RESOURCES Ltd, NEVILLS DOCK, LLANELLI, SA15 2HD

Drawing Title: FIRE PREVENTION & MITIGATION PLAN

Rev	Date	Details	Chkd

Date	Scale	Drawn by	Checked by	Approved by
03/01/2019	1:2000 @ A3	GTB	SJ	SB

Drawing Status: FINAL DRAWING

Drawing Number: ECL.008.01.03-004

Rev: -

APPENDIX II
PERMIT TO WORK EXAMPLE

AMG RESOURCES LTD. – LLANELLI

HOT WORK PERMIT

ORDER NO. .....

DATE: .....

(One copy to operative)
(One copy to be retained by authoriser)
Applicable to all operations involving flame, hot air or arc welding and cutting equipment, brazing and soldering equipment, blowlamps, bitumen boilers and other equipment producing heat or having naked flames including grinding and to any non-flameproof equipment which is required to operate in a flameproof area, e.g. power tools.

Validity Period

From:	To:

Job Location:
Description of Work Done:

Precautions Required	Tick Box
There are no highly flammable materials present in the area.	
All combustible materials have either been removed to a distance of 10m or suitably protected against heat and sparks.	
A person will be standing by on firewatch during the work, equipped with an extinguisher or hose.	
The operatives have had the nearest fire alarm/telephone pointed out to them and have been told what to do in the event of a fire.	

Special Instructions

Authorisation

I have inspected the area, all precautions have been taken and it is safe for work to start:

Authorising Signatory	Name (block capitals)

Acceptance

I/We understand and accept the precautions to be taken during the execution of this work

Performing Signatory	Name (block capitals)
Company Name:	

Hand back

Work is complete and area is safe*

Performing Signatory	Name (block capitals)

Completion

Work checked and is completed to my satisfaction*

Authorising Signatory	Name (block capitals)

* Work area and all adjacent areas to which sparks and heat might have spread **MUST** have a continuous fire watch of at least 60 minutes after the completion of any hot work activities.

APPENDIX III
FIRE EXTINGUISHER INVENTORY

AMG RESOURCES LTD
LLANELLI

INVENTORY OF FIRE EXTINGUISHERS

Type	Location
Powder	Weighbridge
Water	Office Block - Reception
Water	Office Block - Bev's Office
CO2	Office Block - Bev's Office
Powder	Office Block - Kitchen
CO2	Office Block - Server Room
Water	New Office Block - Hallway
Water	New Office Block - Hallway
Foam	Laboratory - Hallway
Foam	Laboratory - Hallway
Powder	Laboratory - Hallway
Powder	Laboratory - Hallway
Powder	Deposition Rows 2 & 3 Sub Station
Powder	Deposition Rows 2 & 3 Sub Station
CO2	Electrical Sub Station (Adjacent to First Aid Room)
CO2	Press Control Cabin
Powder	Fitting Shop - Side Door
Foam	Fitting Shop - Oil Stores
Foam	Fitting Shop - Main Door
Powder	Fitting Shop - Main Door
CO2	Main Electrical Stores
CO2	Main Sub Station
CO2	Outside Rear of Main Power House
CO2	Main Power House
CO2	Main Power House - Back Room
Powder	U.C.P - Discharge Conveyor Control Panel
Powder	Nos. 1 & 2 Cutler Main Switch Panels
CO2	No.2 Mill Sub Station
CO2	No.1 Mill Sub Station
CO2	Main Hammer Mill Sub Station
Foam	New Aluminium Plant

APPENDIX III
SITE INFORMATION AND KEY CONTACTS LIST

Site Information and Key Contacts List

Site Address:	Nevill's Dock, Llanelli, Carmarthenshire, SA15 2HD		
Site Operator:	**AMG Resources Limited**		
Contact	**Description**	**Office Hours**	**Out of Hours**
Internal			
Paul Tobin	General Site Manager	07711107267	07711107267
Mike Vaughan	Maintenance Manager and Deputy General Site Manager	07801101894	-
	Main Office	01554750971	-
External			
Fire Brigade	Fire and Rescue Service (emergency only)	999	999
Medical Assistance	Ambulance Service (emergency only)	999	999
	Local Doctor Surgery – Ty-Elli Surgery, The Avenue, Llanelli SA15 2DP	01554 772678	-
Police	Local Non-Emergency	101	101
	Emergency	999	999
NRW	Environmental Regulator	Incident Hotline 0300 065 3000	Incident Hotline 0300 065 3000
Environmental Compliance Ltd	Specialist Advisor (Environmental Permitting and Management)	01443 841 760	-