APPLICATION FOR AN ENVIRONMENTAL PERMIT UNDER THE ENVIRONMENTAL PERMITTING (ENGLAND AND WALES) REGULATIONS 2016 (AS AMENDED)

NON TECHNICAL SUMMARY

FORWARD WASTE MANAGEMENT, EAST MOORS ROAD HAZARDOUS WASTE TRANSFER STATION, CARDIFF

ECL Ref: ECL.010.02.01/NTS
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ACRONYMS/TERMS USED IN THIS REPORT

ASCR	**Application Site Condition Report**
BAT	**Best Available Techniques**
BREF	**Best Available Techniques Reference Document**
CCTV	**Closed Circuit Television**
CLP	**Classification, Labelling and Packaging**
DGSA	**Dangerous Goods Safety Advisor**
EA	**Environment Agency**
ECL	**Environmental Compliance Limited**
EMS	**Environmental Management System**
EP Regulations	**Environmental Permitting (England and Wales) Regulations 2016 as amended**
EP	**Environmental Permit**
ERA	**Environmental Risk Assessment**
FWM	**Forward Waste Management Limited**
IBCs	**Intermediate Bulk Container**
LED	**Light-emitting Diode**
NGR	**National Grid Reference**
NRW	**Natural Resources Wales**
OS	**Ordnance Survey**
PG	**Packing Group**
PPMR	**Planned Preventative Maintenance Regime**
WAMITAB	**Waste Management Industry Training and Advisory Board**

1. INTRODUCTION

1.1. Environmental Compliance Limited ("ECL") has been commissioned by Forward Waste Management Limited ("FWM") to produce a bespoke Environmental Permit application for a waste Installation located at 122-128 East Moors Road, Cardiff, CF24 5EE.

1.2. FMW is proposing to operate Forward Waste Management East Moors Road Hazardous Waste Transfer Station accepting approximately 22,000 tonnes of hazardous waste and approximately 3,000 tonnes of non-hazardous waste per annum at the Installation.

1.3. The Installation is located on East Moors Road, within a large commercial and industrial area to the south east of Cardiff City Centre and is centred on Ordinance Survey ("OS") National Grid Reference ("NGR") 319473 175780. The Installation will occupy an area of approximately 0.25ha.

1.4. The exact location of the Installation and the proposed Environmental Permit Boundary (outlined in green) is indicated on the Site Location Plan (Drawing ECL.010.02.01-01), which is contained in Section 3 of this application submission.

1.5. FMW was formed in 2006 and currently operates East Moors Waste Transfer Station permitted under Environmental Permit EPR/ AB3099FT. FWM delivers waste management solutions to all businesses and specifically those within the manufacturing industry. FWM operations are founded on the application of the waste hierarchy; preventing waste production and reusing and recycling redundant resources across the whole spectrum of wastes from recyclables to hazardous materials.

1.6. FWM is proposing to operate a second waste transfer station as detailed in this Environmental Permit application. This will enable the business to increase their waste acceptance and treatment and recovery capabilities in order to expand their operations in the UK waste market.

2. LISTED ACTIVITIES

2.1. The proposed Schedule 1 Activities under the Environmental Permitting (England and Wales) Regulations 2016 as amended ("EP Regulations") are detailed in Table 1.

Table 1: Proposed Schedule 1 Activities

Activity Reference	Schedule 1 Activity	Description of Specified Activity	Limits of Specified Activity
A1	Section 5.3 Part A(1) (a)	Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving one or more of the following activities: (iv) repackaging prior to submission to any of the other activities listed in this Section or in Section 5.1.	From material entering site to final dispatch offsite.
A2	Section 5.6 Part A(1)	(a) Temporary Storage of hazardous waste with a total capacity exceeding 50 tonnes pending any of the activities listed in Sections 5.1. 5.2., 5.3 and paragraph (b) of this Section.	From material entering site to final dispatch offsite.

2.2. FMW also propose to undertake two Specified Waste Operations as follows:

- the storage of non- hazardous waste with treatment limited to manual or mechanical bulking up of waste for onward transfer from site for disposal or recycling; and
- crushing of hazardous metal drums via mechanical means limited to a treatment capacity of 5 tonnes per day. The crushed containers will be sent for onward transfer from site for recycling and/or recovery.

2.3. The proposed waste codes to be accepted at the Installation are provided in Section 1 of this application submission.

2.4. The waste management operations to be carried out at the site as specified in Annex I and Annex II of the Waste Framework Directive 2008 are detailed below:

- **R3:** Recycling/reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes;
- **R4**: Recycling/reclamation of metals and metal compounds;
- **R5**: Recycling/reclamation of other inorganic materials; and
- **R12:** Exchange of wastes for submission to any of the operations numbered R1 to R11 (other than R3-R5);
- **R13**: Storage pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced);
- **D14**: Repackaging prior to submission to any of the operations numbered D1 to D13; and
- **D15**: Storage pending any of the operations numbered D1 to D14 (excluding temporary storage pending collection on the site where it is produced).

3. MANAGEMENT TECHNIQUES

3.1. Under the EP Regulations, the activities at the Installation are classified as a relevant waste operation, and, accordingly, a Technically Competent Manager will be required. Mr Craig Housley will fulfil this role; and a copy of his Waste Management Industry Training and Advisory Board ("WAMITAB") Certificate and Continuing Certificate of Competence are provided in Section 1 as part of this application submission.

3.2. Additionally, FWM will be employing a Senior Site Chemist and Reception Chemist at the Installation who will both hold relevant chemistry qualifications and will undertake the appropriate WAMITAB course on commencement of employment.

3.3. FWM will operate an Environmental Management System ("EMS") at the Installation which addresses environmental aspects of the proposed activities. The EMS will be based on the requirements of the international EMS standard BS EN ISO 14001 adopting the Standard's Plan, Do, Check, Act approach.

3.4. FWM'S EMS is externally certified to ISO 14001 at their existing East Moors Waste Transfer Station. FWM will expand the scope of their current EMS to incorporate the proposed Installation with the aim of the new Installation also possessing external certification.

4. OPERATING TECHNIQUES

4.1. Overview

4.1.1. The main purpose of the Installation will be waste transfer operations accepting and storing waste prior to dispatching to Approved Waste Contractors for recycling, recovery, re-processing or disposal if no other route is deemed possible. FWM will implement an Outbound Waste Procedure which provides details on the proposed waste types and associated recovery/disposal routes.

4.1.2. Waste categorisation and associated dedicated storage arrangements on site are crucial as FWM will abide by the UN Model Regulations on the Transport of Dangerous Goods classification system assigning each dangerous substance a class that defines the type of danger the substance presents. The packing group ("PG") then further classifies the level of danger according to PGI, PG II or PG III. The class system and PG dictate how dangerous goods are packaged, labelled and carried. FWM will have a Dangerous Goods Safety Adviser ("DGSA") possessing the required qualification.

4.1.3. Waste treatment at the Installation will be limited to the crushing of hazardous waste containers. FWM is proposing to crush nominally empty waste containers. Due to the flammable substance residue, the containers will be classified as hazardous waste (15 01 10*). Containers will be crushed using a Solutex Can Compactor 206. Any residual liquid resulting from the crushing will be directed to a bunded Intermediate Bulk Container ("IBC") ready for disposal to an appropriately licenced Facility.

4.1.4. Not all containers will be crushed on site. Uncrushed containers, such as 25l plastic containers or 205l drums will remain on pallets.

4.1.5. The empty containers will be removed from site and delivered to a single Approved Waste Contractor for refurnacing or shredding and onward recycling.

4.2. Pre-Acceptance and Acceptance Procedures

4.2.1. FWM will put in place fully documented waste pre-acceptance procedures, the purpose of which will be to ensure that wastes are subject to appropriate technical appraisal prior to acceptance at the Installation. 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.

4.2.2. All records relating to pre-acceptance at the Installation will be kept for a minimum of five years at the FWM 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.

4.2.3. FWM will put in place fully documented incoming waste acceptance procedures, the primary purpose of which is confirm that the characteristics of the incoming waste matches the information provided at the pre-acceptance stage.

4.2.4. FWM has developed a procedure containing clear criteria for the rejection of wastes, together with a written procedure for tracking and reporting such non-conformance.

4.2.5. Any non-conforming waste observed will be removed off site and sent back to the supplier as soon as practically possible, however, such waste will only be stored in the Non-Conforming Waste Quarantine Bay for a maximum of 5 working days. 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. Natural Resources Wales ("NRW") will also be informed as soon as practicable in the event of waste being rejected.

4.2.6. Back-up copies of electronic records will be maintained off site at FWM Head Office at Forward House on East Moors Road in Cardiff.

4.3. Waste Handling, Storage, Processing and Dispatch

4.3.1. On arrival into site, vehicles will be required to report to the weighbridge office for waste acceptance checks to be undertaken. Following weighing and initial checks, wastes will be offloaded into the reception area for full acceptance inspection and sampling.

4.3.2. Once the load has been accepted, the vehicle will be directed by a FWM Site Operative to unload into the dedicated covered unprocessed waste bay.

4.3.3. The storage areas chosen are located away from sensitive receptors where possible and all storage areas are within the secured perimeter covered by security fencing and Closed Circuit Television ("CCTV").

4.3.4. Aerosols will be stored within a dedicated covered caged bay.

4.3.5. All containers will be labelled clearly with the date of arrival, relevant hazard codes as per the Classification, Labelling and Packaging ("CLP") Regulations, chemical identity and composition and the unique reference number linked to the waste tracking system. FWM personnel will ensure labels are not obscured during handling or storage. This logging within the waste tracking system will prevent hazardous and non-hazardous wastes from being mixed as designated areas, such as hazardous and non-hazardous WEEE storage areas, will be in place at the Installation.

4.3.6. All waste received at the Installation will be removed from the Installation for recovery or disposal within 6 months of receipt. Suitable transport will be arranged to remove waste materials from the Installation.

4.3.7. The majority of wastes will remain in their original packaging, such as drums or IBCs and will be removed from site when the quantity is sufficient to be removed from site by haulage lorry for reprocessing at an approved and appropriately licenced facility.

4.3.8. Liquid materials subject to bulking will be removed from the Installation by road tanker. FWM will implement a liquid bulking operational procedure. This procedure includes controls to prevent adverse or unexpected reactions and releases from transfers. This transfer activity will be supervised by experienced FWM personnel following approval by the Senior Chemist.

4.3.9. Removal of waste materials from the Installation will be documented in accordance with Duty of Care requirements. All waste materials will be weighed prior to these being removed from the Installation. This will be achieved by the vehicles being weighed prior to loading and then prior to departure carrying such waste over the weighbridge.

4.4. Records

4.4.1.1. A waste tracking system will be implemented which will hold all the information generated during the pre-acceptance, acceptance, storage, treatment and removal off site.

4.4.1.2. Records will be kept up to date on an ongoing basis to reflect deliveries, on-site treatment and despatches. The tracking system operates as a waste inventory control system.

4.4.1.3. The reporting system can provide reports on the following:

- the total quantity of waste present on site at any one time;
- a breakdown of the waste quantities being stored pending on-site treatment, classified by treatment route;
- breakdown of waste quantities on site for storage pending onward transfer;
- breakdown of waste quantities by hazard classification;
- the physical locations of the waste in relation to the site layout plan. This will include a record of any movements to different locations on site, however, this would not be normal practice;
- a comparison of the quantity of waste stored on site against the total permitted to be stored; and
- a comparison of the time the waste has been stored on site against the permitted limit.

4.4.1.4. All records are held in hard copy and electronically within the office/laboratory building located away from hazardous waste storage areas. A backup copy is maintained and stored off site at FWM's Head Office at Forward House in East Moors Road, Cardiff. All digital records will be held for a maximum of 5 years.

4.5. Proposed Infrastructure and Drainage Arrangements

4.5.1. The entire Installation benefits from concrete hardstanding and is located within a secure compound, completely enclosed by a block wall, metal palisade fencing and a lockable main entrance gate which is locked out of hours.

4.5.2. FWM hold a contract with a specialist security company who maintain the site's CCTV surveillance. Nominated personnel will be available to attend site out of hours if needed.

4.5.3. Rainwater runoff from the building guttering and downpipes will be channelled to three storm drains. The flow from the drains is directed into the foul sewer drainage network. The foul water from the welfare facilities in the laboratory/office building also connects into this foul sewer drainage network.

4.5.4. Any surface run off from the external yard area will be directed via the site manhole drains into the foul sewer drainage network.

4.5.5. An emergency spill procedure will be implemented to respond to any spillages which is described in more detail in Section 5.

4.5.6. FWM will implement a regime of visual site condition checks to be undertaken weekly to ensure that the infrastructure is maintained in good condition. The results of these checks and details of any remedial action and maintenance that may be required in order to ensure good condition are recorded within the 'Facility Checks' file.

5. EMISSIONS

5.1. There will be no point source emissions to air. Additionally, there will be no tipping of loose waste material as all waste will be containerised. Therefore, the risk of fugitive emissions to air is considered to be low.

5.2. There will be no point source emissions to land or groundwater. Furthermore, the entire Installation benefits from impermeable surfacing of good condition with no evidence of cracks or imperfections. This impervious barrier prevents a pathway for the migration to land or groundwater, therefore, the risk of fugitive emissions is considered to be low.

5.3. There will be no point source emissions to water. Only clean surface runoff will be discharged to storm manholes which in turn connect into the foul sewer drainage network.

5.4. Control measures will be implemented in order to prevent any fugitive emissions to the Installation's drainage network. As discussed above, the operational areas are surfaced with impermeable concrete. The Installation boundary is also enclosed by a containment concrete bund wall to the north, east and west.

5.5. All storage vessels will be inspected on arrival at the Installation as part of the acceptance procedure to ensure that they are in good condition. Any evidence of leakage will result in the waste not being accepted. The inspections will also be repeated daily and faults repaired or contents transferred to another container.

5.6. All external storage concrete block bays will be covered by steel supported corrugated sheeting and will benefit from an impermeable rollover policeman. Although the bays will be covered, the sleeping policeman/kerbing will prevent any runoff (i.e. rainwater) within the bays from entering the drainage network.

5.7. Sufficient secondary containment bunding will provide 25% of the total capacity of all containers such as Intermediate Bulk Container ("IBC")/drums stored in each waste bay.

5.8. Any residual liquid resulting from the crushing of empty hazardous containers will be directed to a bunded IBC ready for disposal to an appropriately licenced Facility.

5.9. No fuel oil will be stored at the Installation and site vehicles will be refuelled at FWM's adjacent site at East Moors Waste Transfer Station. All chemicals associated with the maintenance of plant and machinery will also be stored at the other site.

5.10. Plant and equipment will be subject to regular maintenance and servicing. This will ensure they are in good working to reduce the likelihood of fuel leakage at the Installation.

5.11. Regular site inspections will be undertaken to observe any spillages and to guarantee the continued integrity of bunding and impermeable concrete surfacing. If remedial action is required, this will be undertaken immediately.

5.12. Any spillages at the Installation will be subject to the Installation's spill management procedure. This will prevent any potentially polluting materials from entering the drainage network. . All employees will be suitably trained in spill response. Spill kits will be strategically located and contents regularly inspected and maintained.

6. GENERAL REQUIREMENTS

6.1. The Environmental Risk Assessment ("ERA") (Document Reference ECL.010.02.01/ERA) submitted as part of this application submission has demonstrated that emissions of substances not controlled by emission limits (i.e. fugitive emissions) are not considered to be significant, consequently, an Emissions Management Plan is not required as part of this application.

6.2. FWM are not proposing to accept any waste which is likely to be odorous in nature. Consequently, an Odour Management Plan is not required as part of this application.

6.3. The Installation is located in a predominantly industrial setting and the only processing activity proposed is related to the crushing of empty waste containers. The ERA has demonstrated that noise emissions are not considered to be significant. Consequently, a Noise Management Plan is not required as part of this application.

6.4. Due to the nature of waste to be accepted, the risk of the attraction of pests, such as rodents and flies, is deemed not to be significant as detailed in the ERA. Consequently, a Pest Management Plan is not required as part of this application.

6.5. As per the requirements of NRW's '*Fire Prevention and Mitigation Plan Guidance – Waste Management*' (Version 2.0, August 2017), a Fire Prevention Plan is required for Operators that store any amount of combustible waste material listed within the guidance. As such, a Fire Prevention Plan (ECL.010.02.01/FPP) has been prepared and is contained within Section 8 of this application submission.

7. APPLICATION SITE CONDITION REPORT

7.1. An Application Site Condition Report ("ASCR") has been prepared to form part of the Environmental Permit application. The ASCR (Document Reference ECL.010.02.01/ASCR) is contained within Section 4 of this application submission.

7.2. The aim of the ASCR is to describe the condition of the land at the Installation and, in particular, to identify any substance in, on, or under the land that may present a pollution risk.

7.3. The ASCR, therefore, sets out the initial (i.e. current) condition of the site and takes into account any pollution incidents that may have occurred at the site and details of any measures put into place to mitigate the effects of any such incidents. It serves two main purposes:

- firstly, it will act as a reference point, along with operating records, for measuring any deterioration of the site whilst operating under the permit (on surrender of the permit, another site report must be prepared, identifying any changes to the condition of the site from that described in the original report); and
- secondly, the ASCR will give information on the physical attributes and vulnerability of the site; it will assist in understanding the environmental setting of the site, and understanding the nature, extent and behaviour of any contaminants that may be present; local hydrology, hydrogeology, geology and general setting are taken into account.

7.4. The desk study as part of the ASCR indicated that historic land usage at the Installation was part of the Bute Steel and Spring Works which may be a potential source of contamination. Changes in building footprint through history also indicate a potentially significant quantity of construction and demolition material may also be present underlying the Installation. Made Ground of unknown chemical composition may be a potential source of contamination.

7.5. Based on anecdotal evidence from the landlord, the site was operated as a metal recycling site for many years prior to the proposed land use as part of FWM's operations. Given the presence of concrete hardstanding across the entire site area, it is anticipated that this land usage would not have had a significant impact on soils and groundwater underlying the Installation.

7.6. A walkover survey was conducted on site in order to determine the current condition of the site, in particular to identify evidence of potential contamination in the area. During the site walkover survey, no visual or olfactory evidence of contamination was observed.

8. MONITORING

8.1. There are no point source (i.e. process contributions) emissions to air proposed as part of this application. Consequently, no monitoring is proposed.

8.2. Fugitive releases to the groundwater will be prevented by conducting all operations, including the unloading of deliveries, storage of waste materials, processing and handling in areas sealed with an impervious barrier to prevent a pathway for migration to ground or groundwater. Consequently, no monitoring is proposed.

8.3. There will be no point source (i.e. process contribution) to water. Only clean surface water runoff (rainwater) will be discharged via the storm manhole drains which in turn connect to the foul sewer drainage network. Therefore, no monitoring is proposed.

9. RESOURCE EFFICIENCY AND CLIMATE CHANGE

9.1. Energy Consumption and Efficiency

9.1.1. A number of energy efficiency measures will be implemented at the FWM Installation, such as ensuring regularly inspection and maintenance of equipment and plant to achieve optimum efficiency, optimising start-up time, power down time and equipment sequencing and installing energy efficient light-emitting diode ("LED" lighting.

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.

9.1.3. It is estimated that 30,000 kWh per annum of electricity will be consumed for general power on site, such as lighting, for the operation of equipment and for use within the main building, office and laboratory.

9.2. Raw Material Justification

9.2.1. Site vehicles will be refuelled at FWM's adjacent East Moors Road Waste Transfer Station. No storage of fuel oil is proposed at the Installation. Small quantities of lubricants will also be stored at FWM's adjacent East Moors Road Waste Transfer Station and used as and when required. No chemicals will be stored at the proposed Installation.

9.2.2. The Installation's EMS will include a procedure for the annual review of new developments in raw materials and for the implementation of any suitable ones with an improved environmental profile.

9.2.3. A procedure will be incorporated into the site's EMS describing the quality assurance procedures for controlling the impurity content of the raw materials. If required, long-term studies will be undertaken into any less polluting options and material substitutions will be identified and then implemented accordingly.

9.3. Waste Minimisation

9.3.1. The proposed activities to be undertaken at FWM are based on the application of the waste hierarchy and in particular, waste avoidance. All waste materials will be delivered to the Installation with the aim of dispatching to appropriately licenced Facilities or Installations for reprocessing, recycling or recovery, where possible.

9.3.2. FWM also commit to the reuse of non-hazardous containers following cleaning and reconditioning where technically and economically possible. Wood pallets used during the transportation of waste materials will be reused on site or sent to the Forward Waste East Moors Road Transfer Station for reuse.

9.3.3. Using the information recorded within the Waste Tracking System, a waste minimisation audit will be undertaken 12 months after Environmental Permit issue. This will allow FWM to set a baseline against which improvement targets can be set and for the availability of viable alternative routes other than disposal to be explored.

10. COMPLIANCE WITH BAT CONCLUSIONS

10.1. The BAT Requirements for the proposed Installation have been taken the Best Available Techniques Reference Document ("BREF") for Waste Treatment (October 2018) and the Environment Agency ("EA") IPPC S5.06 'Recovery and disposal of hazardous and non-hazardous waste' (Issue 5, May 2013).

10.2. 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.