ENVIRONMENTAL RISK ASSESSMENT

The Royal Mint Limited

EPR/KP3135KV

Prepared by:
Sol Environment Ltd

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1. INTRODUCTION

As part of an application for an environmental permit Operators must assess the risk to the environment and human health from the activities they seek to permit. This Environmental Risk Assessment has been undertaken in accordance with the online Environment Agency Guidance for undertaking environmental risk assessments. Environmental risks relevant to the activities proposed are:

- Air;
- Water;
- Land;
- Noise;
- Odour;
- Fugitive emissions;
- Fire; and
- Incompatible Feedstock.

For each of the above environmental criteria the approach to the assessment has followed the following four stage process:

- Identify the risks;
- Assess the risks (assuming those control measures proposed are in place);
- Choose appropriate further measures to control these (if required); and
- Present the assessment.

Results of the assessment are provided in the below table.

In completing the assessment prevention and control measures proposed by The Royal Mint Ltd are assumed to be in place. Where relevant details of these measures are identified within the assessment.

Table 1: Environmental Risk Assessment						
Hazard	Receptor	Pathway	Risk Management Techniques	Probability of Exposure	Consequence	Overall Risk (following Mitigation)
Point Source \ Releases to Air	Atmosphere	Airborne	• All existing permitted emission to air sources will remain as currently permitted. • The permit variation will introduce four new emission points which are small scale and minor in their nature. • The scrubbing plants (A1 – A3) have all been specified to abate acid gas emissions to below the BAT ELV levels and are low volume in their nature, as such the emissions are considered to be negligible and have been screened from assessment. • Accordingly, it is concluded that there will be no adverse impacts to air emissions resulting from this permit variation.	Low: offsite receptor impacts	Air Pollution	VERY LOW due to the proposed processes on site
Emissions to Water	Groundwater / Geology / Surface Water	Waterborne	• There are no process emissions to controlled waters. • There are no proposed changes to the sites existing drainage arrangements. • All process effluents, waste water and liquid effluent are contained and removed for further treatment using third party specialist waste contractors. • Any releases to controlled water via W1 will remain as currently permitted. • Any emissions to sewer via S1 will remain as currently permitted. All emissions to sewer will remain in accordance with the sites current Trade Effluent Discharge consent (Ref No. TE409). • All new activities relating to the WEEE storage processing line are located within the former buildings and do not give rise to any contaminated or potentially contaminated discharges.	Low: all runoff is controlled on site; therefore, the probability of exposure is low.	Contamination	VERY LOW due to the proposed management techniques and drainage arrangements

			• All process and storage areas are fully enclosed, therefore any spillages / runoff will be effectively contained within the building and tankered off site.			
Emissions to Land	Groundwater / Geology	Spills / Leaks	• There will be no emissions to land arising from the existing site and the proposed variation. • All new activities relating to the WEEE storage processing line are located within the former buildings and do not give rise to any contaminated or potentially contaminated discharges. • All process and storage areas are fully enclosed, therefore any spillages / runoff will be effectively contained within the building and tankered off site. • Spill kits are strategically located around site. • Minor spills to be cleaned up immediately, using spill kits. Resultant materials to be placed in container for off-site disposal to appropriate facility, if necessary. • Immediate action to be taken in event of any major spills. Spillage to be cleared immediately and placed in containers for offsite disposal. NRW to be informed. • Although the risk from potentially polluting leaks and spillages at the site is low, in the event of a spillage immediate measures will be taken to contain and manage it in accordance with the above procedures.	Low: spills / leaks could potentially contaminate the ground / groundwater underneath the site.	Contamination	VERY LOW due to the proposed risk management techniques
Noise	Local Residents	Airborne	• The location of the proposed process is in two existing repurposed buildings, and internally uses equipment specifically for the WEEE reprocessing process. • The processing plant and associated equipment has been designed in accordance with best practice and to ensure that internal noise does not present an issue to the employees at the site under the Control of Noise at Work Regulations and to ensure that noise	Medium: due to the nature of the activities, noise emissions from the plant are inevitable and could cause	Nuisance	LOW due to the proposed risk management techniques

			breakout does not lead to noise nuisance at the identified sensitive receptors. • Appropriate preventative maintenance will be provided for the plant to ensure no deterioration of plant or equipment that would give rise to increases in noise. • The location of the site is in an active industrial site and therefore background noise levels are already high resulting in the impact from the proposed plant being minimal in comparison. • Therefore, during normal operating conditions there are no potential emissions of noise or vibration that are considered to have the potential to impact the environment.	offsite receptor impacts		
Odour	Local residents	Airborne	• There are no emissions to odour arising from this permit variation. • WEEE wastes are not odorous wastes and all processing takes place within existing buildings on site. • There is potential of odour from the use of acetic acid which is used within the surface gold reactor however this will be controlled by the use of the scrubber.	Moderate: due to proximity of closest receptors	Nuisance	VERY LOW – due to the proposed management techniques
Dust	Local Residents	Airborne	• Permitted waste types do not include dusts, powders or loose fibres, however shredding and other processing activities may produce dust. • All processing activities take place within an enclosed building. • All processing plant is equipped with internal dust abatement systems to minimise loss of particulates. • Gathered dust from machinery is further recycled where possible, and kept internally in lidded dumpy bags prior to disposal where recycling is not possible.	Moderate: the occurrence of dust processing is likely	Nuisance	LOW due to the proposed risk management techniques

			• Good housekeeping practices keep dust to a minimum with sweeping and cleaning of work stations as part of 'end of shift' good practice.			
Fire on site	Operator / Residential Properties	Windborne	• This permit variation introduces waste storage on site therefore fire risk is considered. • Arson by intruders is controlled via CCTV, 24/7 security and perimeter fencing. • The site is well lit and secured. • Machinery is regularly cleaned to remove any dust, etc. • All necessary equipment on site is equipped with dedicated fire suppression. • A number of fire extinguishers are placed at strategic locations around the plant. • The potential for sparks is regularly monitored by site staff. • The risk of damaged or exposed electrical cables is controlled via the regular inspection and maintenance programme. • Staff and visitors are only permitted to smoke within the designated smoking area. • There is no smoking permitted within the operational area of the site. • All firewater will be contained on site and tankered off site for removal. • The site has a stringent Fire Prevention Plan.	Low: the occurrence of a fire taking place on site is highly unlikely	Fire	VERY LOW due to the proposed risk management techniques
Incompatible Feedstock	Operator / Residential Properties	If incorrect waste is accepted on site, it could result in adverse emissions /	The following methods will be implemented to ensure that incompatible feedstocks do not compromise the safe operation of the plant: • All wastes accepted onto site have been subject to 'pre-acceptance' in accordance with the sites Environmental Management System;	Low: offsite receptor impacts	Nuisance / Adverse Emissions	VERY LOW due to the proposed risk management techniques

		breaking of equipment	• All incoming wastes are accepted in accordance with the sites Environmental Management System; • Any non-conforming waste will be quarantined and rejected from site in accordance with the sites Environmental Management System. • Records of incidents involving incompatible substances will be kept on site together with a summary of the remedial action taken.			