ENVIRONMENTAL RISK ASSESSMENT

Mekatek Ltd

Maerdy Industrial Estate

Prepared for:
Mekatek Ltd

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Sol Environment Ltd | Malvern | Bristol | Edinburgh
enquiries@sol-environment.co.uk | t. +44(0)1684 572727 (Switchboard) | +44(0)117 9372811 (Bristol)

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Authors Name:	Emily Hingston		
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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 at the Waste Recovery and Recycling Facility are:

- Odour;
- Noise;
- Fugitive emissions; and
- Accidents.

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 following tables:

- Table 1 Assessment of odour risks
- Table 2 Assessment of noise risks
- Table 3 Assessment of fugitive emission risks
- Table 4 Assessment of accident risks

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

Table 1: Odour Risk Assessment						
Hazard	Receptor	Pathway	Risk Management Techniques	Probability of Exposure	Consequence	Overall Risk (following Mitigation)
Odour from receipt of odorous material or decomposition of material	Local residents (nearest residential receptors approx.50 m east on Forge Crescent)	Airborne	• Despite EWC codes for *potentially* odourous materials (i.e. food packaging, EWC 15 01, EWC 20 01 & 20 03) no odourous wastes will be accepted on site. • All processing operations take place internally within an enclosed building. • Stringent pre-acceptance, acceptance and rejection procedures will be in place to prevent any malodourous materials ever arriving onsite. • Should any incoming materials be deemed odourous upon arrival at the site, it shall be immediately rejected at the site boundary and diverted to alternative premises. • Monitoring of odour will be included within the monthly perimeter walk around. Any issues will be recorded and enacted upon according to site procedures. • An Odour Management Plan has been produced and will be enacted should odour ever be an issue at the site. • Any complaints will be recorded and enacted upon according to the site management complaints procedure.	Moderate: due to proximity of closest receptors	Nuisance	**Low –** due to the proposed management techniques

Table 2: Noise Risk Assessment						
Hazard	Receptor	Pathway	Risk Management Techniques	Probability of Exposure	Consequence	Overall Risk (following Mitigation)
Noise emanating from the shredding machinery Noise from HGV movements during delivery / collection	Local Residents	Airborne	• Processing operations take place within an enclosed building. • All building doors are to be closed during night time operational hours to prevent escape of noise from eth building. • All equipment has been designed in accordance with best practice and to ensure that any internal noise does not present an issue to the employees at the site under the Control of Noise at Work Regulations, and also to ensure that noise breakout does not lead to noise nuisance at the identified sensitive receptors. • Delivery / collections are to be restricted to between the hours of 06:00 – 19:30 Monday to Friday and 08:00 – 13:00 Saturdays. No deliveries shall take place on Sundays or bank holidays. • A noise monitoring assessment has been undertaken and is provided within Annex D. • The facility will not give rise to reasonable cause for annoyance. In the unlikely event that complaints are received measures described in the integrated management system will be put in place.	Moderate: due to proximity of closest receptors	Nuisance	**Low –** due to the proposed management techniques

Table 3: Fugitive Emissions Risk Assessment						
Hazard	Receptor	Pathway	Risk Management Techniques	Probability of Exposure	Consequence	Overall Risk (following Mitigation)
Leaks / spillages from equipment / chemical / fuel storage	Land, Groundwater & Surface Water	Waterborne	• The site is surfaced in impermeable concrete hardstanding. • Limited potential for leachate production from the wastes accepted and processed onsite. Any water present on waste sis as a result of external storage prior to arrival on site (rainwater) and be limited in volume. • There is no internal drainage system within the building. Any spillages are contained using spill kits and collected within IBCs prior to offsite disposal. • Chemicals / oils / greases / lubricants stored onsite are appropriately stored within cages and bunds which will contain any spillages. • The sites diesel tank (500 l) is stored externally upon hardstanding and is self-bunded. • Uncontaminated surface water run-off from the building roof is directed to the existing drainage system. • Spill kits (oil or chemical specific) will be 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.	Low	Contamination	**Very Low: –** due to the proposed management techniques

Dust	Local Residents	Airborne & inhalation	• 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. • Good housekeeping practices keep dust to a minimum with sweeping & cleaning of work stations as part of 'end of shift' good practice.	Low: Low potential for dust generation and all within an enclosed building	Harm to human respiratory health – irritation & illness	**Very Low: -** due to proposed management techniques
Litter	Local residents	Windblown	• The site access and external concrete hardstanding shall be swept as necessary. • Wastes are stored within an enclosed building in stillages, bales or bags. • Any waste generated onsite will be disposed of at the appropriate onsite location and subject to the general site waste management plan. • Good housekeeping practices will be in place onsite with daily visual inspections. • Monthly site perimeter walk arounds will be undertaken and shall include monitoring for litter. Any litter or accumulated debris shall be dealt with immediately.	Low: Little potential for waste to be generated	Nuisance	**Very Low: –** due to the proposed management techniques
Pests	Local Residents	Airborne & via land migration	• Pests are not likely to become a problem on site. • No putrescible and biodegradable wastes are to be accepted onsite. • Monitoring for evidence of pests to be included during the monthly site perimeter inspections.	Low: the occurrence of pests on site is highly unlikely.	Nuisance	**VERY LOW** due to the proposed risk management techniques

			• However, if a problem does develop, reasonable measures will be taken to use commercially available products and services to control pests.			

Table 4: Accidents Risk Assessment						
Hazard	Receptor	Pathway	Risk Management Techniques	Probability of Exposure	Consequence	Overall Risk (following Mitigation)
Fire	Emissions to atmosphere & firewater contamination of land, groundwater & surface water	Airborne, via land / water	• A Fire Prevention Plan is in place for the site which manages storage of the wastes, quarantine and procedures in the event of a fire. • Arson by intruders is controlled via security. • The site is well lit and secured by a fence. • The site is currently manned between 7am – 5pm. Once operational, these hours will change, with the intention of 24/7 operation should the workload require; • Machinery is regularly cleaned to remove any dust, etc; • A number of fire extinguishers are placed at strategic locations around the plant. • 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 outside the operational area. • Firewater will be contained within the concrete lined WEE Reception Bay which is isolated from the external site drainage system, prior to offsite disposal utilising the companies own tanker fleet.	Low: fire within the building is considered unlikely	Nuisance, damage, contamination	VERY LOW due to the proposed risk management techniques
Operator Error	Air / land / water	Various dependant on the nature of the error	• Processing activities carried out within the site are relatively simple. The plant includes an automatic alarm system to alert the operator of potential operational problems and where relevant will be triggered with sufficient safety margin to permit	Low	Various dependant on the nature of the error	VERY LOW due to proposed management techniques

			operator intervention to prevent an actual problem occurring. • All operational staff will be fully trained against the site operating procedures. • Training will include awareness raising of key plant parameters and the potential implications of failure to control operations as designed and the associated potential impact on the environment. • All incidents will be recorded and investigated appropriately according to the site incident procedure.			
Loss of containment of fuels / spillages etc.	Land / water	Site drainage system	• An emergency spillage management plan will be produced and will be incorporated within the accident management plan. • All bunds will be visually checked weekly to ensure that they are empty. All storage tanks will be built of suitable materials which are resistant to the vessel content. A maintenance programme will be established for the inspection of all storage tanks and bunds. • Potential release to groundwater would require simultaneous failure of the tank and its containment. • Fuel deliveries will be overseen by a trained member of staff who will be responsible for checking that there is sufficient capacity in the storage vessel to receive the delivery. • Spill kits will be available to contain and clean up the spill. Site procedures will be in place to ensure that spill kit inventories are routinely checked and replacements ordered as required. • Spillages within the bunds will be pumped into IBC's and sent offsite for disposal.	Low	Contamination	VERY LOW due to proposed management techniques

			• All incidents will be recorded and investigated appropriately according to the site incident procedure.			
Flood	Flood waters	Local residents & surface water	• The site is located within an area at medium risk of flooding from the River Rhymney (between 1% to 3.3% each year). • Flood warning sites to be monitored to allow preparations prior to flooding. • In the event of flooding, all hazardous wastes are stored within an enclosed building and can therefore be contained and prevented from contaminating downstream. Only waste wood is stored externally, and will be recovered as part of the floodwater clean-up.	Low: flood risk is medium	Nuisance, contamination	VERY LOW due to the proposed risk management techniques
Vandalism	Operator	The site could be subject to intentional vandalism and damage by intruders / trespassers who could cause damage or harm to the site or cause fires.	• Site is secure and has perimeter fencing. • The site is currently manned between 7am – 5pm. Once operational, these hours will change, with the intention of 24/7 operation should the workload require; • CCTV is in operation. • Site access is via secure gates at the main entrance which will be locked out of normal operating hours. • Unauthorised access is prohibited onsite. • Fencing is inspected monthly by operations staff to identify deterioration and damage and the need for repair. • Fencing is maintained and repaired to ensure its continued integrity. If damage is sustained, repair will be made within the same working day. If this is not possible, suitable measures will be taken to prevent unauthorised access to the site and permanent repairs will be affected as soon as is practicable.	Low: the occurrence of vandalism taking place on site is highly unlikely.	Nuisance, Damage or Fire	VERY LOW due to the proposed risk management techniques