



## ACCIDENT MANAGEMENT PLAN

### Phoenix Green Solutions Green Waste Composting Facility

Prepared by:  
**Sol Environment Ltd**

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# 1 INTRODUCTION

This document has been prepared by Sol Environment Ltd on the behalf of Phoenix Green Solutions for their AgBag Composting Facility located at Mays Hill Industrial Estate, Frampton Cotterell.

This document represents the Accident Management Plan (AMP) which forms part of the sites Environmental Management System.

The PGS site is located at Mays Hill Industrial Estate, Frampton Cotterell, Bristol, South Gloucestershire, BS36 2NS.

The site is permitted under EPR/KB3031AV to accept 60,000 tonnes per annum of green waste for composting within an In-Vessel Composting System known as the AgBag system.

This Accident Management Plan has been produced in accordance with EA guidance Document '*How to comply with your Environmental Permit (EPR 1.00)*'.

It is stipulated under this guidance document that the Accident Management Plan fulfils the following four key requirements:

- Identifies events or failures that could damage the environment;
- Assesses how likely they are to happen and the potential environmental consequences;
- Actions to minimise the potential causes and consequences of accidents; and
- The actions that are required to be carried out if an accident happens.

This Accident Management Plan is implemented and maintained at the site as part of the company's Environmental Management System and will ensure the site and all operatives within are fully prepared for such incidents.

The Accident Management Plan will be reviewed at least every four years or as soon as practicable after an incident, with changes made accordingly to minimise the risk of occurrence / recurrence.

## 2 RISK MAGNITUDE ESTIMATIONS

The Accident Management Plan (Table 2.2 overleaf) has adopted a risk assessment approach to each potential hazard by combining the probability and magnitude of the potential risk to give an estimation of the risk prior to any mitigation measures. The risk management measures, which are designed to reduce the likelihood of occurrence, are then detailed followed by an estimation of the actual risk post-mitigation (Residual Risk Rating).

The DEFRA guide to risk assessment<sup>1</sup> indicates the approach of subjectively classifying the magnitude of potential consequences into four categories depending upon the degree of the impact that the potential risk could have and the context in which the risk is being assessed. The classification is used as a guide in this Risk Assessment.

The four categories are as follows:

- **Severe:** Possible irreparable damage to environmental resources;
- **Moderate:** Possible damage to environmental resources which are limited within a regional context;
- **Mild:** Possible effects might be transient damage to environmental resources which are commonplace on a regional basis and alternative sources are readily available;
- **Negligible:** The effects are negligible or might cause very slight temporary deterioration in the current environmental resource quality.

The matrix shown below considers the probability of the potential risk against the magnitude of the potential impact, thereby giving an estimation of the resulting likelihood of the risk occurring.

Probability of potential Risk	Magnitude of Potential Impact			
	Severe	Moderate	Mild	Negligible
High	High	High	Medium/Low	Near Zero
Medium	High	Medium	Low	Near Zero
Low	Medium	Medium	Low	Near Zero
Negligible	Medium	Medium/Low	Low	Near Zero

The qualitative risk assessment for the Accident Management Plan has been based on the matrix outlined above.

The final stage of the risk assessment is the judgement of the severity of the residual risk following implementation of the mitigation measures.

<sup>1</sup> A Guide to Risk Assessment and the Risk Management for Environmental Protection, 1995.

Table 2.2: Accident Management Plan

Accident Scenario	Probability of Accident Occurring	Magnitude of Potential Impact	Risk Rating before mitigation	Risk Management	Residual Risk Rating (following Mitigation)
1 – Spills and Leaks / Loss of containment / Waste Storage	Medium	<p>Moderate to Severe</p> <p>Spillage and leakage could occur during waste deliveries, vehicle refueling and vehicle breakdowns / accidents.</p> <p>Loss of containment could result in potentially polluting materials being discharged in surface water drainage systems and to controlled waters.</p>	Low	<ul style="list-style-type: none"> <li>• There are no direct process emissions to controlled water arising from the Installation. All external surface water runoff from the concrete slab drains to a sealed lagoon.</li> <li>• The unloading of delivery vehicles and storage of waste takes place externally upon on concrete hardstanding. In the event of a spillage, the spillage will be contained and cleaned up immediately.</li> <li>• Any waste storage and pre-processing is carried out on good quality concrete hardstanding.</li> <li>• The AgBag composting process is completely sealed and therefore takes place on made ground as previously agreed by the EA. There is no risk to groundwater from this activity as it is a sealed operation.</li> <li>• No rainwater ingress into the bags is possible and no leachate is produced from the composting process.</li> <li>• The drainage system is regularly inspected and maintained.</li> <li>• In the unlikely event of a fire, the firewater will be contained within the lagoon and tankered off site for disposal.</li> <li>• There are no tanks containing hazardous substances stored on site.</li> <li>• Spill kits will be strategically located around site.</li> <li>• Minor spills will be cleaned up immediately, using sand or proprietary absorbent. Resultant materials to be placed in container for off-site disposal to appropriate facility, if necessary.</li> <li>• Immediate action will be taken in event of major spill which is likely to cause polluting emissions to the environment or any adjacent unsurfaced ground. Spillage to be cleared immediately and placed in containers for offsite disposal. EA to be informed.</li> </ul>	Low
2 – Vandalism	Low	<p>Moderate</p> <p>The site could be subject to</p>	Low	<ul style="list-style-type: none"> <li>• On-site security measures.</li> <li>• The site has CCTV monitoring and 24/7 security.</li> <li>• The site is accessed via an electrical gate with an emergency code.</li> </ul>	Low

		intentional vandalism and damage by intruders/ trespassers who could cause damage or harm to the plant and equipment's, spills and leaks to tanks or cause fires.		<ul style="list-style-type: none"> <li>The site is well lit and secure.</li> <li>Gates will be locked whenever the site is closed.</li> <li>Gates and fencing are inspected daily by site operatives to identify deterioration, damage and the need for repair.</li> <li>Fencing and gates are maintained and repaired to ensure their 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.</li> <li>All visitors to the site are required to register in the visitor's book and sign out again on exit, thereby minimising the risk of unauthorised visitors on the site.</li> <li>Operational procedures are in place including regular inspections, ensuring continual monitoring of security provision at the site.</li> </ul>	
3 – Flooding	Medium:  The site is located in Flood Zone 1 (low risk).	Severe	Medium	<ul style="list-style-type: none"> <li>The waste reception, waste storage and screening / screening takes place on concrete hardstanding with a sealed drainage system that drains into the sites lagoon. The AgBag composting process is completely sealed and therefore takes place on made ground as previously agreed by the EA.</li> <li>In cases of extreme rainfall, the site containment systems will contain all water falling on site.</li> </ul>	Low
4 – Fire on site.  Plant malfunction.  Waste products that may support combustion	Medium	Severe	Medium	<ul style="list-style-type: none"> <li>All mobile plant is subject to a planned preventative maintenance schedule.</li> <li>The site is managed in strict accordance with the sites Fire Prevention Plan that details the relevant fire protection measures that are carried out on site.</li> <li>There are no flammable process consumables stored on site.</li> <li>In the event of a fire, the following actions will be taken: <ul style="list-style-type: none"> <li>The fire brigade will be notified immediately and the EA as soon as practicable.</li> <li>The site will be immediately evacuated.</li> </ul> </li> <li>Records of fire incidences will be kept on site together with a summary of remedial action taken.</li> <li>The EA will be advised of all incidents of fire as soon as is practicable.</li> <li>Smoking will not be permitted on site.</li> </ul>	Low

<p>5 – Incompatible Feedstock:</p> <p>Some of the waste inputs at the site could contain impurities that cause damage the process and unexpected emissions.</p>	<p>Low</p>	<p>Moderate / Severe</p>	<p>Low</p>	<p>The following methods will be implemented to ensure that incompatible feedstocks do not compromise the safe operation of the site:</p> <ul style="list-style-type: none"> <li>• All wastes accepted onto site have been subject to 'pre-acceptance' in accordance to established procedure PGS-E01.</li> <li>• All incoming wastes are inspected in accordance with established procedure PGS-E02.</li> <li>• When in the waste reception areas, any non conforming waste will be removed prior to acceptance in accordance with established procedure PGS-E03.</li> <li>• Records of incidents involving incompatible compatible will be kept on site together with a summary of the remedial action taken.</li> </ul>	<p>Low</p>
<p>6 – Operator Error / Failure of Equipment:</p> <p>The unexpected breakdown of any part of the plant could result in short term build up of waste in the reception areas or the incomplete treatment of waste.</p> <p>The result of operator error could result in the plant not functioning efficiently or a risk of fugitive emissions to air through uncontrolled decomposition of biological waste.</p>	<p>Medium</p>	<p>Low</p>	<p>Low</p>	<ul style="list-style-type: none"> <li>• The design of the plant includes sufficient storage capacity for a number of weeks production and waste storage.</li> <li>• Should the above storage capacity be exceeded, incoming waste will be diverted to nearby processing and / or landfill facilities.</li> <li>• This allows waste to be received while equipment repairs are affected.</li> <li>• All equipment is subject to a Planned and Preventative Maintenance Programme (PPM), to minimise unplanned failures.</li> </ul>	<p>Negligible</p>



### 3 SUMMARY AND CONCLUSION

This document has been prepared to meet the requirements pertaining to Accident Management Plans within the Environment Agency guidance document EPR1.00 *'How to Comply with your Permit'*.

It is concluded that despite the Installation having the potential for a low-moderate environmental impact to the environment, the mitigation measures incorporated into the design of the plant and the site infrastructure are sufficient to mitigate the risks

The company operates and continues to operate using an established Environmental Management System. The EMS details the required actions to be taken in the event of an emergency and should be used in the first instance for any accident and emergency at site.