ERA8 Fugitive Emissions – to Air – Odour, Dust & Particulate Matter

Identifying the harm and what could be harmed			**Assessing the risk**			**Managing the risk**	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
What has the potential to cause harm?	*What is the risk? What do I wish to protect?*	*How can the hazard get to the receptor?*	*How likely is this contact?*	*What is the harm that can be caused?*	*What is the risk that still remains*	*What measures will we take to reduce the risk?*	*What risk remains following the application of management measures?*
ERP1 Reception (Delivery of waste to the site) **Vehicle Movements** (waste delivery and movement of waste to be compacted) **ERP2 Waste storage** **ERP3 Treatment processes** **ERP4 Material Dispatch**	**Humans & Property** **Environmentally Sensitive Sites** **Atmosphere** Inhalation of particles Deposition of dust/particles on property and land	**Air**	**LOW**	**MEDIUM**	**MEDIUM**	• All deliveries of waste originate from the tenants of BRC so will be limited in quantities in accordance with the Environmental Permit. • Majority of wastes containerised, reducing risk of odour or dust impacting receptors. Clinical and WEEE wastes stored internally. • Compacted wastes stored directly into container. • Containers checked daily for signs of frailty or leakage. • All vehicles, plant and machinery would be inspected and maintained regularly in line with maintenance schedule set out by the manufacturer's specifications. • Dust control systems are routinely maintained and serviced on all plant and machinery. • Process equipment on site will be regularly cleaned and maintenance checks carried out to minimize dust and remove particulates.	**LOW**

Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
What has the potential to cause harm?	*What is the risk? What do I wish to protect?*	*How can the hazard get to the receptor?*	*How likely is this contact?*	*What is the harm that can be caused?*	*What is the risk that still remains*	*What measures will we take to reduce the risk?*	*What risk remains following the application of management measures?*
						• Entire site is concreted to minimise dust, and subject to daily housekeeping procedures. • Vehicle speeds are restricted to a maximum of 10 mph. • Composting operation is of low-scale and in relation to the maintenance of the wider BRC site and use on pastureland. • Odour checks made on all wastes which have odour potential on a daily basis as part of daily inspections. • Site is operated in accordance with a Odour Management Plan.	

ERA9 Fugitive Emissions – to Air – Litter & Debris

Identifying the harm and what could be harmed			**Assessing the risk**			**Managing the risk**	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
What has the potential to cause harm?	What is the risk? What do I wish to protect?	How can the hazard get to the receptor?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains	What measures will we take to reduce the risk?	What risk remains following the application of management measures?
[ERP1 Reception (delivery of material to the site) **ERP2 Storage** **ERP3 Treatment processes** **ERP4 Material Dispatch**	***Humans & Property*** ***Environmentally Sensitive Sites*** *Litter/Debris/ Nuisance*	**Air; windblow, physical transport and deposition**	**LOW**	**MEDIUM**	**MEDIUM**	• Waste received within designated area. • Waste is transported and delivered in containers and are secure and appropriate for waste type. • Limited quantities of waste stored on site reduces risk of litter and debris leaving the site boundary. • Regular housekeeping of site surfaces to remove litter and debris and prevent spread. • SOPs and training provided to all relevant staff to prevent litter and debris accumulating. • Fencing around site collects all loose litter and is cleared appropriately.	**LOW**

ERA10 Fugitive Emissions – Pests, Vermin & Scavengers

Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
What has the potential to cause harm?	What is the risk? What do I wish to protect?	How can the hazard get to the receptor?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains	What measures will we take to reduce the risk?	What risk remains following the application of management measures?
ERP2 Storage **ERP3 Treatment processes**	***Humans & Property*** ***Environmentally Sensitive Sites***	**Air;** **Ground depending on vector**	**MEDIUM**	**MEDIUM**	**MEDIUM**	• Wastes accepted do have potential to attract pests and vermin, but those wastes are containerised. • Composting operation is of small scale from the maintenance of site and grounds. • Daily site inspections and housekeeping procedures in place. • All containers checked regularly for integrity.	**LOW**

ERA11 Fugitive Emissions – Mud & Debris

Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
What has the potential to cause harm?	What is the risk? What do I wish to protect?	How can the hazard get to the receptor?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains	What measures will we take to reduce the risk?	What risk remains following the application of management measures?
ERP1 Reception (delivery of waste to the site) **ERP4 Material Dispatch**	***Humans & Property*** *Amenity impact*	**Direct deposition**	**LOW**	**LOW**	**LOW**	• Compost operations will be low scale and in support of maintenance of the wider BRC site and grounds. • Daily inspections by site staff and records kept. • All vehicles accessing site should be kept to an appropriate condition and cleaned where necessary.	**VERY LOW**

ERA12 Fugitive Emission – to Water

Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
What has the potential to cause harm?	What is the risk? What do I wish to protect?	How can the hazard get to the receptor?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains	What measures will we take to reduce the risk?	What risk remains following the application of management measures?
ERP1 Reception (delivery of waste to the site) Vehicle movements (waste delivery and movement within site) **ERP2 Storage** **ERP3 Treatment processes** **ERP4 Material Dispatch**	***Environmentally Sensitive Sites*** ***Surface Water*** ***Groundwater*** *Contamination*	**Land, water, runoff**	**LOW**	**MEDIUM**	**MEDIUM**	• There will be no direct discharge to surface water from site. • Spill kits on-site and employees are trained in their use. • Waste is delivered and stored in appropriate containers for waste type. • Daily housekeeping of site surfaces to remove litter and debris to prevent spread. • Stored waste is located on an impermeable site surface within a sealed drainage system and serviced by an interceptor.	**LOW**

ERA13 Accidents

Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
What has the potential to cause harm?	What is the risk? What do I wish to protect?	How can the hazard get to the receptor?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains	What measures will we take to reduce the risk?	What risk remains following the application of management measures?
Transferring substances							
ERP1 Reception (delivery of waste to the site) Vehicle movements (waste delivery and removal of waste) **ERP2 Storage** **ERP3 Treatment processes** **ERP4 Material Dispatch**	***[Humans & Property*** ***Environmentally Sensitive Sites*** ***Surface Water*** ***Groundwater*** ***Atmosphere*** *Adverse impact*	**Land, air, water**	**LOW**	**MEDIUM**	**MEDIUM**	• All waste transfers are overseen by a competent person. • Waste streams are colour coded on BRC campus, arrive to site source segregated. Wastes for storage and transfer are labelled in accordance with wastes contained therein. • Loading / unloading occurs within a designated area. • Manual handling training provided to deal with sharps and other clinical wastes. • SOPs and training provided to all relevant staff to prevent overfilling containers. • Limited vehicle movements on site. • COSHH assessments available for commonly used chemicals.	**LOW**

Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
What has the potential to cause harm?	What is the risk? What do I wish to protect?	How can the hazard get to the receptor?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains	What measures will we take to reduce the risk?	What risk remains following the application of management measures?
Equipment Failure							
ERP1 Reception (delivery of waste to the site) **ERP3 Treatment processes** **ERP4 Material Dispatch**	***Humans & Property*** ***Environmentally Sensitive Sites*** ***Surface Water*** ***Groundwater*** ***Atmosphere*** *Adverse impact*	**Land, air, water**	**LOW**	**MEDIUM**	**MEDIUM**	• All vehicles and compacting machinery would be inspected and maintained regularly in line with maintenance schedule set out by the manufacturer's specifications • Storage containers are checked as part of periodic site inspection for integrity/leakage.	**LOW**

Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
What has the potential to cause harm?	What is the risk? What do I wish to protect?	How can the hazard get to the receptor?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains	What measures will we take to reduce the risk?	What risk remains following the application of management measures?
Flooding							
[ERP1 Reception (delivery of material to the site) **ERP2 Storage** **ERP3 Treatment processes** **ERP4 Material Dispatch]**	***Humans & Property*** ***Environmentally Sensitive Sites*** ***Surface Water*** ***Groundwater*** ***Atmosphere*** *Adverse impact*	**Water (site has a VERY LOW risk of flooding)**	**LOW**	**MEDIUM**	**MEDIUM**	• The site lies in a very low risk area for flooding from River, Sea and surface water. • Monitoring of weather warnings/flood alerts/EA warnings in case of flooding events from River Granta. • Spill kits on site and employees are trained in their use. • Majority of waste is kept in containers and all on an impermeable surface so produce little risk and hazard.	**LOW**

Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
What has the potential to cause harm?	What is the risk? What do I wish to protect?	How can the hazard get to the receptor?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains	What measures will we take to reduce the risk?	What risk remains following the application of management measures?
Vandalism							
Entire site	***Humans & Property*** ***Environmentally Sensitive Sites*** ***Surface Water*** ***Groundwater*** ***Atmosphere*** Adverse impact	**Land, air, water**	**LOW**	**MEDIUM**	**MEDIUM**	• Site is secured by fencing and gated. • Externally monitored security systems (CCTV). • Site is in rural location. • Site is based on the same plot and proximity to Babraham Research Campus with extended security 24/7 so at a reduced risk of vandalism and unauthorised access.	**LOW**

Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
What has the potential to cause harm?	What is the risk? What do I wish to protect?	How can the hazard get to the receptor?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains	What measures will we take to reduce the risk?	What risk remains following the application of management measures?
Fire							
ERP1 Reception (delivery of material to the site) **ERP2 Storage** **ERP3 Treatment processes** **ERP4 Material Dispatch**	***[Humans & Property*** ***Environmentally Sensitive Sites*** ***Surface Water*** ***Groundwater*** ***Atmosphere*** *Adverse impact]*	**Spread through physical contact; fanned by winds**	**LOW**	**HIGH**	**MEDIUM**	• Small quantities of waste accepted and stored on site at any one time. • Majority of wastes containerised and all stored on an impermeable surface with sealed drainage system. • Operational areas of site are non-smoking zones. • 24 hr CCTV system in place across site. • Site operated in accordance with a Fire Prevention Plan.	**LOW**

ERA14 Noise & Vibration

Identifying the harm and what could be harmed			Assessing the risk			Managing the risk	
Hazard	**Receptor**	**Pathway**	**Probability of exposure**	**Consequence**	**Overall risk**	**Risk Management**	**Residual risk**
What has the potential to cause harm?	What is the risk? What do I wish to protect?	How can the hazard get to the receptor?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains	What measures will we take to reduce the risk?	What risk remains following the application of management measures?
ERP1 Reception (delivery of waste to the site) **ERP2 Storage** **ERP3 Treatment processes** **ERP4 Material Dispatch**	***Noise sensitive locations***[1] ***Environmentally Sensitive Sites***	**Air, land**	**MEDIUM**	**LOW**	**MEDIUM**	• Compaction of wastes are limited and in small quantities. Receptors are some distance from boundary so are unlikely to be impacted. • Site operations are only undertaken during permitted operational hours. • Speed limit for deliveries and collections of waste material. • Site is not located within close proximity to residential or recreational areas so reduces impact further.	**LOW**

[1] Noise and vibration management: environmental permits - GOV.UK (www.gov.uk), Updated 31 January 2022