

Source	Pathway	Receptor	Harm	Likelihood	Consequence	Magnitude of Risk	Justification of Magnitude	Risk Management	Residual Risk
Release of Emissions to Air (Volatile Organic Compounds)	Atmosphere and then inhalation	Local human population	Harm to human health (respiratory irritation, central nervous system depression, and potential toxicity)	High	High	High	Processing paint containers or other off specification products generates volatile organic compounds (VOCs) due to the vaporisation of residual fluids during mechanical crushing. Solvent based paints are processed elsewhere. Products are water based and principal releases will be low risk VOC like ethanol and propanol (IPA). A fume extraction fan with a 750m³/hr capacity extracts these gases from inside the processing area.	A fume extraction system pulls potentially explosive ATEX gases and vapours away from the processing mechanism. However, to lower the magnitude of environmental risk a carbon filter is used to treat the air before release where non water based products are treated.	Low
Release of particulate matter (dusts) and heavy metals	Atmosphere and then inhalation and deposition	Local human population & Site staff	Harm to human health (respiratory irritation) and nuisance	Low	Medium	Low	The mechanical action of crushing compacting metal and plastic containers coated in dried paint sludges may	The machine utilises special spray guards, including a steel guard over the perforated matrix,	Low

							generate airborne particulate matter.	that close tightly against the unit to contain spray and dust. The incline feed elevator is also fitted with a removable enclosed top cover and feed-off hood to contain emissions.	
Odour	Atmosphere and then inhalation	Local human population	Nuisances, loss of amenity	Medium	Medium	Medium	The crushing of paint cans releases odorous solvents into the extracted air stream. Local residents are often sensitive to odour.	Unprocessed waste is strictly containerised prior to processing. Processed liquid waste is immediately discharged through a butterfly valve into sealed IBC containers with screw tops.	Low to Medium
Spillage of waste / contaminated rainwater run-off	Direct runoff from site across ground surface to surface water or ground water	Surface water, Ground water, and Soil	Surface water pollution (harm to ecology) and soil/groundwater contamination	Low	Medium	Low	Liquid paint is squeezed out of the crushed buckets and could spill or leak during transfer, potentially contaminating runoff.	The incline feed elevator features a full-length undertray and a sump fitted with an outlet valve to catch any paint drips. The loading reservoir features a draining tap for	Negligible

								accidental spillage. Extracted paint flows into an acid-resistant stainless steel (AISI316) fluid collection tray controlled by a butterfly valve. Pad run-off (any spillages) will be routed into sealed drainage systems.	
Fire and Explosion (ATEX risks)	Air and physical blast	Site staff and local human population	Harm to human health, severe injury, and property damage	Low	High	Low	The mechanical processing of containers holding residual flammable solvents creates a risk of sparks igniting volatile fumes, resulting in an explosion.	The RUNI compactor uses a slow-rotating screw specifically designed to prevent sparks and explosion risks. Equipment includes a fume extraction fan to pull explosive gases from the hopper. The machine is zoned with ATEX Category 2 / Zone 1 internally and Zone 1 & 2 externally. All ATEX	Low

								assumptions must be formally inspected and re-estimated by an authorised ATEX engineer on-site prior to operation.	
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