Risk Matrix - BIN BYPASS

Likelihood VS Consequence	Insignificant	Minor	Moderate	Major	Catastrophic
Almost Certain	High	High	Extreme	Extreme	Extreme
Likely	Medium	High	High	Extreme	Extreme
Moderate	Low	Medium	High	Extreme	Extreme
Unlikely	Low	Low	Medium	High	Extreme
Rare	Low	Low	Medium	High	Extreme

Note - Extreme risk is not acceptable and mitigation has been applied to reduce risk level to High, Medium or Low

Likelihood Table

DESCRIPTOR	LIKELIHOOD
Almost Certain	Event expected to occur in most circumstances
Likely	Event will probably occur in most circumstances
Moderate	Event might occur in some circumstances
Unlikely	Event could occur at some time
Rare	Event may occur only in exceptional circumstances

Consequence Table

DESCRIPTOR	CONSEQUENCE
Insignificant	No injury
Minor	First Aid Requirement
Moderate	Medical Treatment Required
Major	Extensive Injuries
Catastrophic	Fatality or Permanent Injury

Risk Assessment - BIN BYPASS

Hazard	Consequence	Likelihood	Issue	Risk	Mitigation/Approach to reduce risk (High to Extreme not acceptable)	Post Mitigation Consequence	Post Mitigation Likelihood	Post Mitigation Risk
Process of docking containers								
Container falls out of unit onto ground once inserted	Insignificant	Unlikely	Container does not sit in the dock correctly and falls to the ground. Potential for broken glass and slip risks	Low	Ensure Bin Bypasses are installed vertically through using a spirt level or attaching to a vertical pole. The risk of containers falling from the unit is reduced when units are correctly installed vertically. The units must also be installed the correct way up so that containers are naturally held within the units by gravity.	Insignificant	Unlikely	Low
Container does not fit in the unit due to its design	Insignificant	Unlikely	An attempt is made for a non-standard container to be docked into the unit	Low	During the design process of Bin Bypass, a vast range of containers eligible for refunds were considered. A Bin Bypass unit is designed to dock the majority of eligible containers found in public waste streams. Ensure that Bin Bypass units are installed nearby to a general waste or recycling bin so that ineligible containers can be deposited there.	Insignificant	Unlikely	Low
Contamination prevents docking of appropriate container	Insignificant	Unlikely	Contamination of other litter items prevents eligible containers being deposited	Low	Bin Bypass units have a limited circular opening with a 70mm aperture that reduces the number of contaminating items that can be placed within them. Container collectors are inherently incentivised to remove contamination from the units to ensure the maximum number of refund eligible containers can be collected by them at each visit. Passive maintenance and inspection of units can be added to the responsiblities of maintenance staff to ensure the units are kept free of contamination and in good working order.	Insignificant	Unlikely	Low
Unit is at capacity and no further containers can be docked	Insignificant	Moderate	The maximum number of containers are docked in a Bin Bypass unit restricting further containers to be docked	Low	In areas that demand increased container capacity, Bin Bypass is designed for multiple units to be placed side-by-side on flat surfaces and back-to-back or above-and-below each other when attached to poles. If the unit is continuously found to be at maximum capacity, the installation of additional units should be considered. The Bin Bypass location selection guide also stipulates that installing Bin Bypasses in high traffic areas will increase the number of collectors that regularly empty the units.	Insignificant	Rare	Low
Process of removing containers								
Containers drop to ground while being removed	Minor	Rare	Containers in the process of being removed drop to the ground. Potential for broken glass and slip risks	Low	Appropriate messaging or a simple diagram can be placed on the side of the unit to communicate the correct process. Extensive testing and behavioural design considerations have informed the angular design of the Bin Bypass which inherently communicates that containers are to be inserted and removed at the same angle of the unit. Ensure Bin Bypasses are installed vertically through using a spirt level or attaching to a vertical pole. The risk of containers falling from the unit is reduced when units are correctly installed vertically. The units must also be installed the correct way up.	Minor	Rare	Low
Ineligible containers are deposited in the unit and are discarded	Minor	Unlikely	Non-refundable containers are discarded on the ground	Low	When not mounted on a pole, ensure installation is vertical through using spirt level. The risk of containers falling from the unit is increased when not installed vertically. Bin Bypass units have a limited circular opening with a 70mm aperture that reduces the number of contaminating items that can be placed within them.	Minor	Unlikely	Low

Hazard	Consequence	Likelihood	Issue	Risk	Mitigation/Approach to reduce risk (Extreme not acceptable)	Post Mitigation Consequence	Post Mitigation Likelihood	Post Mitigation Risk
Non-user conflicts								
Active transport users (pedestrians, bicycles, e-mobility devises) impact the bin bypass unit	Moderate	Likely	Street users or objects collide with a Bin Bypass unit full of containers	High	Ensure the location selection guide is followed and units are installed appropriately to ensure they do not impede travel movements. Bin Bypass has conducted extensive impact testing on units which has shown that trolleys, bicycles and prams impacting the units rarely dislodge containers when installed correctly.	Moderate	Unlikely	Medium
Active transport users (pedestrians, bicycles, e-mobility devises) impact containers protruding from bin bypass units	Moderate	Likely	Containers are impacted by street users. This may cause containers to fall from the units and cause breakage	High	Ensure the location selection guide is followed and units are installed to ensure they do not impede travel movements and are at a suitable height to reduce breakage if dislodged. Bin Bypass has conducted extensive impact testing on units which has shown it is extremely difficult to break containers once lodged within the units.	Moderate	Unlikely	Medium
Units contain broken glass	Minor	Unlikely	Public depositing broken glass inside unit. Glass containers breaking during depositing process, leaving reminants of broken glass in the unit	Low	Ensure the installation guide is followed and units are installed within nearby proximity to a general waste bin to ensure that broken glass from the local environment is placed in the bin and not in the Bin Bypass unit. The units are designed to hold glass bottles in place so that they do not fall inside the unit which removes the possibility of them breaking from height after being inserted.	Minor	Rare	Low
Aluminium containers causing lacerations to minors or animals	Minor	Rare	Minors insert fingers into the opening of an aluminium can causing lacerations	Low	Ensure the installation guide is followed and units are installed at a recommended height for both accessibility and to limit access by minors or animals.	Minor	Rare	Low
Liquid from containers spills onto the ground when inserted upside down	Moderate	Rare	Containers are inserted upside down which spill onto the ground causing a slip hazard	Medium	Units are designed to hold non-aluminium containers upright only, however aluminium cans can be held by the units in either direction. The units are designed to channel liquid towards the bottom of the unit and pass through designated cut outs on the bottom of the unit. Liquid that passes through the units generally pools directly beneath the units, reducing the potential interaction with pedestrians passing by.	Minor	Rare	Low