



# Mine site reusable crib kits Infrastructure required

## Waste avoidance: Reducing single-use plastics on mine sites

Reusable containers and crib kits are effectively used on mine sites and in accommodation villages in Western Australia (WA). On some sites, crib kits and bring-your-own food containers have been the standard for decades.

Crib kits can be easily implemented in these closed-loop environments. Reusable containers reduce reliance on single-use packaging, whether plastic or paper based. It also prevents large volumes of disposable containers being sent to landfill. This is a positive outcome for the environment, sustainability goals and ESG targets.

Reusable crib kits can also cut costs by eliminating recurring expenditure on items that are only used once.



Courtesy BCI Minerals

Reusable crib kits not only reduce waste and environmental impacts but can also cut mining and catering company costs on disposable items.

The costs of disposable food containers and cups add up across the three meals a day. This cost is passed on by caterers to mining companies or contractors, built into quotes and invoices. A basic but functional crib kit, with an insulated crib bag, three containers and cutlery set, can be purchased for less than \$50. Costs can reduce by about 20 per cent when kits are purchased in greater quantities.

**Examples from WA mine sites show the cost of reusable crib kits can be recovered in three to eight months due to savings on no-longer-needed disposable containers. Savings of tens of thousands of dollars per month can be made. Over time, this is a significant business cost saving, an environmental win and a move towards a circular economy.**

## Washing stations

Reusable crib kits and food containers are standard on many mine sites. Whether the kit is bring-your-own or supplied, people are responsible for washing their containers and ensuring they are clean and ready. Site cleaners are not tasked with washing crib containers.

Other recommendations include:

- **Site infrastructure must include ready access to sinks for washing crib kits.** Multiple washing stations with two taps each can reduce waiting times. The number of washing stations can be determined by the size of teams in each work area.
- **Washing stations must offer warm water, soap and brushes or sponges.** Brushes are preferable from a food safety and microplastic perspective.
- **Paper towels and drying racks are optional. Paper towels can be helpful but are also messy.** Not offering paper towels avoids paper waste going to landfill.
- **Sinks are best placed near the dining hall or dry mess and at work areas where crib rooms are present.** If they are outdoors, consider awnings or shelter.
- **Five-litre detergent dispensers are recommended to reduce costs and plastic waste generated by smaller bottles.** Some detergents can negatively affect the bacteria in wastewater treatment systems that break down septic and grey water.
- **Cleaning of washing stations, sinks and troughs is best scheduled at least once, preferably twice, a day.** Detergents, brushes and paper towels, if provided, can be checked at the same time. On some sites, this is incorporated into the daily cleaning schedule of the village services team.



Courtesy Compass Group

## Hot water heaters and associated electrical demand

It is important to ensure instant water heaters and wiring can accommodate the increased electrical load when upgrading or installing additional washing stations. Electrical inspections prior to work should be factored into the workflow and costs.

## Water dispensers, drink fountains and ice machines

Water refill stations should be accessible and situated in multiple convenient locations on site to reduce single-use water bottles and increase reliance on refillable bottles. Some villages have installed reverse osmosis filtration systems to improve water quality on remote sites. This increases the likelihood of people refilling reusable water bottles, especially where water supplies might not be trusted. Ice machines are a 'nice-to-have' addition, especially in hot weather.

**“ FIFO workers washing their own reusable containers promotes personal responsibility and sustainability awareness, reduces operational cost and encourages staff in waste reduction efforts.”**

## Storage

Racks or hooks outside the dining hall or dry mess are recommended to provide a hanging spot or shelf to leave crib bags. It is an accepted industry standard that dirty uniforms, PPE and crib bags are not permitted in dining halls and dry mess areas for health and safety reasons.

Crib bags are considered a trip and hygiene hazard. They are often not permitted near food preparation areas. Due to their transportable nature, crib bags could be placed on mine site floors, where toxins can be present, on seats and floors in buses, in dongas, crib rooms and sometimes on toilet floors.

It is best practice for people eat breakfast before their shift starts, while wearing clean gear, then fetch their containers from crib bags and return to the food area to pack their lunch. Crib bags should stay outside.

NOTE: Crib bags can carry bacteria and toxins and should not be permitted in fridges for hygiene reasons. The bags also keep cool air out, presenting a food temperature and safety concern.

Underground sections of mine sites present unique challenges where reuse might be seen as insurmountable but some sites have already installed washing stations in underground areas. There are plans for other sites to do the same, where it is possible and accessible.