



## DESIGN PHILOSOPHY 8: CONFINED SPACES AND RESTRICTED WORK AREAS



### Objective

The objective is to prevent harm to people working in confined spaces and restricted work areas to as low as reasonably practical, including consideration in design for foreseeable human error.



### General outcome

The intended design outcome should eliminate the need to enter confined spaces or restricted work areas.

Where elimination cannot be achieved, the intended design outcome should include consideration of the following:

- Reduce frequency of entering or working in confined spaces or restricted work areas

- Ergonomic positioning (fit-for-purpose) and diversity in anthropometric range
- Adequate ventilation
- Adequate lighting
- Adequate access and egress, including rescue
- Protection from external hazards (heat, energy, noise, chemical, electrical) during installation, maintenance and operation

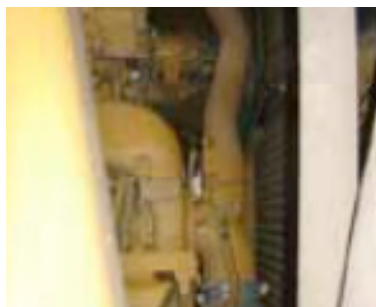


### Causal Pathways

#### 8.1 Asphyxiation from irrespirable atmosphere due to lack of adequate ventilation.



**8.2** Harm from excessive heat due to lack of adequate ventilation or proximity to heat radiating components.



**8.3** Physical harm due to inadequate ergonomic and diversity of anthropometric range that restricts worker movement to perform work or access/egress.



**8.4** Harm or illness from fire or chemical hazards due to the routing of hosing or piping within confined space.



**8.5** Burns from contact with hydraulic hoses or piping within confined space.



**8.6** Harm due to engulfment from materials or inundation by gas or liquids.



**8.7** Entrapment due to lack of alternate route of egress in an emergency.



**8.8** Harm due to rescue hazards from inadequate access and egress.

