

Risks to be mitigated



8. Visibility / Collision Detection & Avoidance

Objective	The objective is to minimise (to ALARP) risks related to injury, illness or equipment damage from vehicle collisions as a result of poor operator visibility.
General outcome	<p>The equipment design outcome should achieve the following:</p> <p>Provide the operator with the ability to see, especially at night, and/or be aware of people, vehicles, structures, or other objects to ensure the safe and effective operation of the equipment to avoid collisions</p> <p>Provide the ability for the operator to appropriately warn persons in the vicinity of equipment operation.</p> <p>Optimise visibility of equipment to others operating in the vicinity.</p>
Risks to be mitigated	<ol style="list-style-type: none"> 1. Cab layout and windows/structures interfering with the operator's vision. (vision of surrounding environment as well tool operation) 2. Catwalks, handrails, and other external objects located or designed so operator vision is impeded. (Including line of site to mirrors) 3. Blind spots to the operator during machine start as well during operation. 4. Rear vision mirrors that distort the driver's vision; Mirrors located in such a way that they can not be safely adjusted and cleaned. 5. Insufficient number and type of mirrors to see both on the drivers and off drivers side 6. Ineffective windscreen wipers and washers with reservoirs of insufficient capacity 7. Inadequate lighting for headlights, tail, reversing, turn, brake, strobe, flashing light, and receptacles for light fittings that suit standard & alternative lights 8. No horn and directional reversing alarms capable of being heard over the general environment and other machine noise 9. No two-way radio provision in cabin 10. Intrusion into operator's environment e.g. ducktail collision
Examples of industry attempts to mitigate risks	<ol style="list-style-type: none"> a) Collision detection technology on equipment to warn the driver of an imminent collision with sufficient time to allow remedial actions, (Collision detection technology may include combinations of cameras with radar, radio frequency detection, GPS and computer network wireless, etc) b) Well designed cabs with open uncluttered view c) Highly reflective striping and numbers to clearly delineate the truck dimensions and number at night d) Adequate and good quality mirrors to help reduce blind spots on both sides of equipment e) Adequate and high quality lights f) Mirrors fitted with heaters (for demisting purposes) that operate when park lights / headlights are illuminated

Industry attempts to mitigate risks

