

### 1. Processes and Activities

Storage and handling of materials and goods between stages of production, supply and distribution using both internal and external (contract) warehousing facilities. Duration varies from short term staging to long term storage.

Warehouses take a variety of shapes and sizes within purpose-built and converted buildings of varying age and construction types. Storage space is frequently maximised by vertical storage, typically on pallets and in racking which can be to considerable heights (e.g. well in excess of 20 metres).

Common ancillary operations include the loading and unloading of delivery vehicles, (re)packaging and dispatch of goods. Occasionally pallets may be manufactured or repaired and/or delivery vehicles maintained on site.

Mechanical handling equipment such as forklift trucks, conveyors and lifts is regularly used and automated systems are sometimes encountered. Manual handling is frequently undertaken.

Transport movements within and around a busy warehouse can be significant.

### 2. Material Damage

Risk	Hazard	Controls
Fire/ Explosion	General	Housekeeping; smoking controls; supervision; risk assessment; safe systems of work; automatic fire detection; firefighting equipment; training; maintenance; closing time inspections; Fire Protection Association (FPA)/Loss Prevention Council (LPC) recommendations and other official guidance
	Hot processes - shrink wrapping, heat sealing, staff kitchens, hot work by maintenance personnel or contractors, etc.	Safety (control/cutout) devices; automatic fire suppression; hot work permit; compartmentation
	Flammable/explosive liquids and gases	Limit quantities; correct storage, handling, use and disposal; ventilation; secondary containment; intrinsically safe electrics; control of ignition sources; compartmentation
	Oxidising agents, aerosols	Segregated/compartmented storage

### 2. Material Damage (cont'd)

Risk	Hazard	Controls
Fire/ Explosion (cont'd)	Arson	Perimeter security; physical protections; access control; security lighting; intruder alarm; CCTV surveillance; security guarding; denial of access to/remote storage of fuel; sprinklers
	Electrical installations and equipment	Suitability; safety devices; low voltage; avoid overloading; inspection/testing
	Space heating	Suitability; safety devices; positioning; maintenance
	Combustible linings	Fire stopping; regular inspection; replacement with non-combustible/LPC approved products; no hot work
Special Perils	Forklift trucks	Suitability; fuel storage; segregated charging area
	Malicious damage	Perimeter security; physical protections; access control; security lighting; intruder alarm; CCTV surveillance; security guarding
	Impact	Traffic controls; good lighting; driver training/instruction; impact protection
	Water damage	Regular inspection of roofs, rainwater goods, water installations, sprinklers and drains; weather protection; stillages; packaging
Theft	Stock and contents	Perimeter security; physical protections; access control; security lighting; intruder alarm; CCTV surveillance; security guarding; target hardening; security marking; asset/stock records

### 2. Material Damage (cont'd)

Risk	Hazard	Controls
Theft (cont'd)	Money	Cash office/strong room security; safe(s); key security; time/delay locks; deposit trap; intruder alarm limpet and personal attack devices; vehicle safes; bank night safe; money carrier
	Vehicles	Site security; surveillance; physical protection; key security; immobiliser; alarm; tracking devices; attendance; driver instruction
Business Interruption	General	Good fire and security protections; disaster recovery plan
	Premises	Separation/compartimentation; contingency planning
	Machinery, plant and equipment	Duplicate/spare machinery; avoidance of bottlenecks; maintenance; separation/compartimentation; contingency planning allowing for any extended replacement lead times, etc.
	Computers	Uninterruptible power supply (UPS); overvoltage protection; remote IT facilities; backing up and protection of critical data; contingency planning
	Services	Duplicate/alternative supplies; contingency planning
	Dependency	Avoidance of heavy customer/supplier dependency; contingency planning allowing for any extended stock replacement lead times, seasonal busy periods, etc.

### 3. Liability

Risk	Hazard	Controls
Health & Safety	General	Risk assessment; safe systems of work; information, instruction, training and supervision; monitoring; maintenance; personal protective equipment; enforcing authority and other guidance
	Working environment	Temperature; ventilation; space; lighting; welfare facilities; drinking water
	Slips, trips and falls	Suitability/condition of floors, steps, and stairs; provision of adequate handrails, edge protection and lighting; safe means of access; housekeeping; avoidance of trailing cables
	Racking/falling objects	Adequate stability/strength; impact protection; correct loading and stacking; regular safety inspection of racking and pallets
	Hazardous substances	Correct storage, handling, use and disposal; isolation; enclosure; ventilation; safety data sheets; spill kits; exposure monitoring; health surveillance
	Passive smoking	Designate smoke free facilities
	Manual handling	Training; manual handling aids; weight markings on goods
	Mechanical handling and work equipment	Guarding/other safety devices; correct loading; operator training; daily pre-use checks; statutory examination
	Traffic	Written rules including pedestrian safety and reversing; site layout; good lighting; driver training/instruction; daily pre-use vehicle checks
	Display screen equipment	Workstation analysis/design; regular breaks/changes of activity

### 3. Liability (cont'd)

Risk	Hazard	Controls
Health & safety (cont'd)	Electricity	Suitability; safety devices; low voltage; inspection/testing

### 4. Environment

Hazardous solids or liquids stored in bulk may be harmful to the environment if released accidentally, even in comparatively small quantities. Transport operations on site including the bulk storage of diesel and oils, discharge of vehicle washing water, etc. can create additional pollution exposures.