Appendix 10: Lifts – recommended safe work practices

All work health and safety risks need to be managed in accordance with HSWA and relevant regulations. This appendix outlines our expectations about how to manage risks when working with lifts.

- The safe work practices outlined in this section should be read together with the related content in the main section of these guidelines, to ensure that all risks are identified and managed.
- These safe work practices reflect good practice. You can carry out work using different practices, but the practices must achieve or exceed the same levels of safety provided by the practices described below.

Warning sign required for prescribed electrical work (PEW)

The Electricity (Safety) Regulations 2010 require this sign to be in place when PEW is being carried out.

TOPIC	RECOMMENDED SAFE WORK PRACTICES
Working in the lift shaft	
Common risks	Work should not start until all risks have been identified, assessed, and either eliminated or minimised so far as is reasonably practicable. Risks to be managed may include: – being struck by a falling object – electric shock – inadequate lighting – lone work – tripping hazards – working at height – working in a confined space.
Unauthorised people	Unauthorised people should not be allowed to access the lift shaft at any time.
Before work starts in the shaft	Before starting work in the lift shaft: – perform a risk assessment of the environment – identify what control measures need to be in place to eliminate or minimise the risks identified – lockout and tagout, so far as is reasonably practicable. Confirm that: – two independent safety devices (such as the emergency stop switch and the door switch) are in place and functioning – working conditions in the lift shaft are suitable for work to take place (for example, temperature and lighting).
Landing doors	It is good practice for landing doors to remain closed to prevent people or objects falling into the lift shaft. If landing doors need to be open: – put secure barriers in place – barrier systems should be between 900mm and 1100mm in height with a mid-rail and a toe board, or be a solid enclosure – display warning signs stating that access is restricted to authorised people only – fix a portable device (such as a wedge) within the lift shaft to restrain a landing door from opening or closing within 75mm of the closed position. If the shaft entrance cannot be secured, a barrier the full width of the entrance should be put in place. If a worker needs to move away from the open shaft, close and secure the shaft entrance immediately.

TOPIC	RECOMMENDED SAFE WORK PRACTICES
Working in the lift shaft	Before entering the lift shaft, plan how to safely enter and exit the shaft. While a worker is working in the shaft, there should be no other work taking place unless it is directly related to the work that the worker is carrying out. No more than two workers should be in the lift shaft at any time. If the work requires more than two workers, or multiple work groups, the installation manager or service manager should provide written authorisation for the work to take place. Critical work sometimes needs to take place with the lift car operating while work is being carried out beneath it. A full risk assessment must be undertaken, recorded, discussed and agreed to by all parties. Use an approved unlocking device or access key switch to unlock landing doors and enter the lift shaft. The lift car should first be positioned a safe distance away from its normal position at a landing.
Power supply for lift shaft work	Before opening the landing doors to enter the lift shaft, decide whether power is needed. If power is not needed: – turn off the main switch, or – remove the fuses and store them securely. Then attach appropriate lockout and tagout devices to: – the main switch, or – the fuse carrier, if the fuses are removed. Live fuse carriers should be protected from accidental contact.
Working under a counterweight	Work must not take place under a lift counterweight unless there are control measures in place to prevent the counterweight from falling.
Working on the lift car top	**Car top inspection** If inspections need to be carried out from the car top, fit a car top control station. The station should have both a common button and direction buttons wired so that both buttons need to be depressed to operate the car. Check for correct operation before work begins. Down travel is safer than up travel. **Power requirements** Before accessing the car top, decide whether power is needed. If power is not needed: – turn off the main switch, or – remove the fuses and store them securely. Then attach appropriate lockout and tagout devices to: – the main switch, or – the fuse carrier, if the fuses are removed. Live fuse carriers should be protected from accidental contact. If the work requires power to operate the lift car, run the lift in inspection mode only. **Car top access** Make sure that the car top is of adequate strength: – to support the worker/s and the required tools and equipment, and – to provide a safe work platform. If the car top is not of adequate strength, it should be clearly labelled ‘No Access’. If access to the car top is required: – take control of the car by activating two independent safety devices – make sure the car top stop switch is functioning correctly – check the car top is clean and dry, with no slippery substances or surfaces – place tools and equipment away from the edge of the car top – keep body well inside the limits of the lift shaft to avoid: - contact with adjacent lifts - contact with counterweights – be aware when and how the car is to be moved – only one person should be in control of moving cars – have a process so that people working together in the lift shaft can communicate with each other.

TOPIC	RECOMMENDED SAFE WORK PRACTICES
	Driving upwards Avoid driving the car upwards when operating from the car top. If driving upwards is necessary, identify and be aware of all potential trap points - including landing sills, toe guards, brackets and switches. **Lighting** Make sure that lighting in the lift shaft and on the car top is adequate for the work. **When car top work is complete** – remove all tools and equipment from the top of the car – leave the top of the car clean and tidy – return the lift to normal service.
Working in the pit	
Common risks	Work – even short duration activities such as retrieval of dropped objects – should not start until all risks have been identified, assessed, and either eliminated or minimised so far as is reasonably practicable. Risks to be managed may include: – being struck by a falling object – electric shock – inadequate lighting – lone work – risks associated with the retrieval of dropped objects (including items such as tools, keys, money or mobile phones) – tripping hazards – unsafe or missing pit ladders – working at height – working in a confined space.
Before starting work in the pit	A worker can only enter the pit when the lift has been shut off. For example: – where reasonably practicable, lockout and tagout the lift before work begins. If power is not needed: – turn off the main switch, or – remove the fuses and store them securely. Then attach appropriate lockout and tagout devices to: - the main switch, or - the fuse carrier, if the fuses are removed. Live fuse carriers should be protected from accidental contact. OR Take control of the lift by using two independent safety devices, such as: – activating the stop switch, and – opening the door lock. Before starting work in the pit, the worker should check that all stop switches are working. There should always be two separate and independent ways of stopping the lift car. If either one of the two independent safety devices are found to be inoperative, workers should not enter the pit until safe access has been established. Where a stop, or safety, switch is found to be in an operational, serviceable and safe condition but of a type not currently accepted as best practice, consider replacing and upgrading that switch. If more than one stop switch is present, they should be wired in series so that one switch cannot override the other when it is in the off position.

TOPIC	RECOMMENDED SAFE WORK PRACTICES
Entering and exiting the pit	**Emergency stop switch** All pits should have at least one emergency stop switch that is easily accessible from the pit access. Put in place a process for entering and exiting the pit, including safe methods for: – verifying control of the car before entering the pit – moving the car away from the pit, and – maintaining control of the car until the worker has exited the pit safely. **Mechanical props** If mechanical props are required, they must be erected before entering the pit. **Pit stop switch** A PCBU must ensure the safety of workers carrying out work in their building. A PCBU with management or control of the workplace could be asked to: – install an additional pit stop switch, or – reposition an existing switch.
Lift pit working conditions	**Working safely in the pit** Always let other workers know when a lift car is, or will be, moving up or down. To prevent anyone getting into the lift or falling into the pit, place suitable barriers and warning signs in front of every access point. **Keep pit clean and dry** The lift pit should be kept clean and dry. This will help to prevent the risk of electric shock, as well as the risk of slips. **Wet pits** If the pit is wet, where practicable water should be removed and the pit dried out before any work takes place, including pit inspections. Always isolate the power before entering a wet pit. **Lighting and the position of light switches** The lighting level in the pit should be suitable for the work to be done. All lighting should be protected against mechanical damage. All lighting circuits and bulbs should work. If the lighting switch is co-located in the pit with the emergency stop switch, the two switches should be clearly identified and separately positioned so that they cannot be confused. **Portable electrical equipment** Use RCDs for any portable electrical equipment, including portable lighting.
Hydraulic lifts	When working under a hydraulic lift: – the lift should be landed on a support that will prevent accidental downward movement, and – the support should be in position before work starts. Clearly display a sign that warns workers that the support should be in position before work starts. The sign should be visible from the access point to the pit.
Entry and exit of lift car/lift car top or riding a moving car	Put in place safe procedures for: – entering and exiting the lift car – taking and verifying control of the lift car before getting on top of it – maintaining control until the work has finished and the worker has safely left the car. **Exiting the car top** To exit the car top safely: – stop the car at a suitable height and step carefully onto the landing – activate the car top stop switch – check that all tools, keys, rags and any other equipment have been removed – open the landing doors slowly to prevent anyone entering from the landing – put the car back into service

TOPIC	RECOMMENDED SAFE WORK PRACTICES
	– exit the car top – release the stop switch – close the landing doors – check normal service. **Counterweights** Be aware of the position of all counterweights. Workers should be protected from counterweights and any other moving equipment near the work area. **Fall hazards** Where practicable, guardrails should be in place on all car tops to prevent falls. Make sure that the car top is of adequate strength: – to support the worker/s and the required tools and equipment, and – to provide a safe work platform. If the car top is not of adequate strength, it should be clearly labelled 'No Access'. **Riding a moving car** To reduce the possibility of falling while riding a moving car, the worker should: – always position themselves near the centre of the car away from moving parts, and – consider holding onto the crosshead. **Other risks/hazards** Where practicable, workers should not: – hang a light or other equipment from the hoist ropes – hold onto the ropes, sheaves or sheave guard – slide, swing or climb on cables, ropes or guide rails – stand or sit on the crosshead when the car is moving – store anything on top of the car – turn the elevator to normal service when working on the car top – wear anything that could catch or tangle (such as a scarf or other loose clothing) while on top of a moving car.
Returning the lift to normal service	After maintenance or other work in the shaft has been completed, confirm that all workers, tools and equipment are out of the shaft before returning the lift to normal service.
Running platforms and false cars	Running platforms or false cars: – may be used for work in the lift shaft during construction and on some modernisation job – should be assembled at the lowest floor available – should only be built and operated by competent people who have been authorised to do the work – should use an audio-visual alarm while in operation – should be checked daily in line with manufacturers' instructions – and the results should be recorded. **Working load limit** The working load limit of the running platform or false car should be clearly visible on the car or platform and in the user instructions. **Shaft entry during construction** Only workers who are trained and competent, or those adequately supervised, should be able to enter the shaft during construction. Before landing doors are installed, the entrance to the lift shaft should be fully protected and always locked when not working directly from the landing. This will help to prevent untrained workers or other people entering the shaft. **Safety mechanisms** Test the following safety mechanisms every day before work begins. – Control mechanisms should have positive pressure buttons to prevent accidental operation. – Running platforms should have a governor cable installed, with permanent safety systems operational. – False cars should be equipped with functional redundant safety systems or fall-arresting equipment.

TOPIC	RECOMMENDED SAFE WORK PRACTICES
Working in the machine room	
Common risks	Work should not start until all risks have been identified, assessed, and either eliminated or minimised so far as is reasonably practicable. Risks to be managed may include: – electric shock – inadequate lighting – lone work – machinery-related hazards – noise – tripping hazards – working in a confined space.
Access and working conditions	There should be safe access to the machine room. Unauthorised people should not be able to access the room. The machine room should have: – adequate lighting and ventilation – appropriate guards on rotating machinery and electrical equipment – a minimum number of holes in the machine room floor, with guards over any openings to prevent objects falling through – a clean floor, with no oil or debris.
Electrical schematics	There should be accurate electrical schematic diagrams for all installations. If any changes are made to circuitry or software, the PCBU that modifies the equipment: – should make sure that the person making the changes accurately records all changes to the circuitry or software – should clearly indicate these changes inside the lift control panel (for example, on electrical schematic diagrams). See Section 3.10 of these guidelines: Modifications to circuitry and software.

PPE

PPE is only used when other control measures alone cannot adequately manage the risk. PPE includes items such as protective helmets, hi-vis clothing, ear protection, eye protection, and RPE.

PPE should not be the first or only control measure considered.

Only consider PPE after taking all other reasonable steps to eliminate or minimise risks.

We expect the first choice to be control measures that protect multiple at-risk workers at once.

The GRWM Regulations cover the provision, use, and maintenance of PPE. There are also standards that PPE should meet.

For more information, see our guidance:

- Personal protective equipment (PPE)
- Personal protective equipment – a guide for businesses
- Safe use of machinery
- RCD safety information
- Electrical safety on small construction sites
- Working at height