

**ESSENTIAL
STANDARD
no.7**

Fixed Plant and Equipment



KEY MESSAGES

- Ensure new plant and equipment is fit for purpose and safe to operate/maintain.
- Check new items of plant/equipment before they are put into service.
- Prepare risk assessments if significant hazards are associated with using equipment/plant.
- Consider additional health and safety hazards and risks when maintaining plant/equipment.

1. Introduction

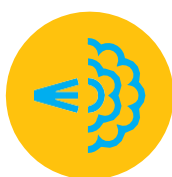
Operating and maintaining fixed plant and equipment can be extremely hazardous unless appropriate control measures are in place. Hazards associated with operating and maintaining fixed plant and equipment include:



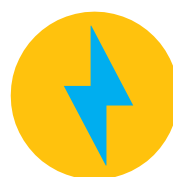
Moving parts that can rush and entangle



Falls from height, e.g. during maintenance activities



Stored energy, e.g. inertia, air or steam



Electrical energy supplying the plant



Harmful or flammable materials

2. Selection of equipment

Choosing the correct plant and equipment and ensuring they are 'fit for purpose' are vital in reducing risks. Consider the following when selecting new plant and equipment:



Location of use and limitations



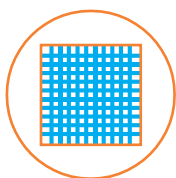
Space required to operate the plant/equipment safely



How the plant will be unloaded and positioned



Availability of competent persons to operate the equipment



Specific requirements for guarding



Maintenance requirements – what and how often

3. Acceptance

Before putting plant or equipment into operation, you must

-  perform a thorough check
-  ensure it meets the selection specifications
-  ensure it's safe to use



Put specific control measures, identified during the risk assessment, in place before operating plant or equipment. Don't use plant or equipment if it's not in a safe working condition.



All fixed plant and equipment requiring statutory inspection must be identified to ensure that they are programmed, planned and conducted, with records maintained, by the appointed service provider and must only be operated by trained and competent persons.

4. Using plant and equipment

Risk assessments help identify the hazards, risks and control measures required to ensure safe operation and maintenance of plant/equipment. Risk assessments must consider whether there is protection from:



ejected materials - check guards and PPE



electrical hazards - conductors, earthing of plant and provision of suitable fuses/circuit breakers



moving parts, such as belts cogs or drive shafts - fixed guarding, interlocked guarding and trips



falls from height - safe access, safe working platform and guard rails/toe boards



over pressurisation or pressure vessels - limit switches, pressure relief valves and bursting disks



escape of harmful substances - contained within the plant or adequate ventilation

5. Operation and maintenance by third parties

Where fixed plant is being operated or maintained by a third party, prior to the work commencing, a thorough assessment of risk, method, safe system of work and competence must be undertaken and recorded.

6. Maintenance

Subject all maintenance activities to a risk assessment. In addition, develop a safe system of work and a permit to work to ensure plant is locked off to prevent it from being accidentally set into motion. E.g. where local isolation is not possible.



All fixed plant and equipment requiring maintenance as per the manufacturer's specification must be identified to ensure that they are programmed, planned and conducted with records maintained, and maintenance must only be carried out by trained and competent persons.



Maintaining plant and equipment can be more hazardous than operating them as it often involves removing existing controls, such as guards when replacing a drive belt, to carry out the work.

Practical measures to ensure safety during maintenance activities include:



Effective isolation, lock off and permit to work



Temporary working platforms or mobile elevated work platforms if there is a risk of falling



Drain down, isolation and lock off valves



Drain down, ventilate, atmospheric tests and safe access to confined spaces in plant



Any defects (such as guarding/interlocks) identified during maintenance or inspection of fixed plant and equipment must be, where practicable, immediately fixed or reported to ensure that it is taken out of service until rectified. Any fixed plant and equipment taken out of service must be suitably identified with appropriate lock off, isolations and signage to prevent its use.