Safety & Wellbeing

Policy Arrangement

# Section 8 – Safe Use of Work Equipment

E-mail healthandsafety@northlan.gov.uk

**Arrangement Section 8 – Safe Use of Work Equipment**

## Contents



Further guidance on this matter can also be obtained from the safety team at healthandsafety@northlan.gov.uk

## 1. Introduction

1.1 The Provision and Use of Work Equipment Regulations 1998 (PUWER) came into force on 5 December 1998.

1.2 The regulations replace the Provision and Use of Work Equipment Regulations 1992 and carry forward their existing requirements with a few changes and additions, for example the inspection of work equipment and specific new requirements for mobile work equipment. In short, risks to employees' health and safety from equipment that they use at work are to be prevented or controlled.

1.3 The regulations require that equipment provided for use at work is:

- suitable for the intended use
- safe for use, maintained in a safe condition and inspected as circumstances dictate, to ensure this remains the case
- used only by employees who have received adequate information, instruction and training, and
- accompanied by suitable measures e.g. protective devices, markings and warning notices.

1.4 Whilst equipment used to lift/lower people and equipment will fall within the requirements of PUWER, it should be noted that the additional duties placed upon such equipment by the Lifting Operations and Lifting Equipment Regulations must also be satisfied. GD18 – Lifting Operations gives guidance on this matter.

## 2. Statement

The most Senior Managers within each Service will ensure that equipment provided for use within the workplace, or in relation to work activity, is safe and appropriate for use. They will further ensure, so far as is reasonably practicable, that employees will receive the appropriate documented information, instruction and training for the work equipment they are expected to use.

## 3. Examples of work equipment used in council services

a) Tool Box Tools, such as hammers, knifes, hand saws.
b) Single Machine, such as drilling machines, circular saws, photocopiers.
c) Apparatus, such as laboratory apparatus including bunsen burners.
d) Lifting Equipment, such as hoists, lift trucks, elevating platforms, lifting slings. (Separate regulations apply to lifting equipment).
e) Other Equipment**,** such as ladders, pressure water cleaners, dumper trucks, mobile scaffolds.
f) An Installation**,** such as enclosures to provide sound insulation or scaffold or similar.

## 4. Application of Regulations

4.1 The “use” element referred to in the title of the regulations includes starting and stopping the equipment, repairing, modifying, maintaining, servicing, cleaning and transporting the equipment.

4.2 These regulations **do not** apply to equipment used by the public (but if Council owned and used by the public, then the regulations and guidance contained herein **will** apply) or to domestic work in a private household, however, they do cover equipment used by employees working from home.

## 5. Risk Assessment

5.1 There is no specific risk assessment requirement in PUWER, however the Management of Health and Safety at Work Regulations 1999 do require risk assessments to be carried out, and by implication, work equipment should be assessed to ensure equipment is:

1. Suitably robust and sound
2. Suitable for place to be used
3. Suitable for the purpose intended
4. Suitable for safe maintenance.

Selection of suitable work equipment is important as it makes it possible to reduce or eliminate many of the risks to the health and safety of employees.

### a) Ergonomic risks

Ergonomic risks should be considered when selecting equipment, namely by design, to take account of:

- Size and shape of human body;
- Simple adaptation of operating positions, working heights, reach distances to the intended operator;
- No undue strain placed on the operator in the operation of the equipment;
- No undue physical exertion, stretch or reach expected by the operator in the normal operation of the equipment.

Ergonomics advice is available via AS31.

**b) Environmental risks**

Ensure that work equipment is installed and located to take account of any risks that may arise from particular workplaces or equipment. For example, forms of energy used or produced, all substances used or produced, and electrical/mechanical hazards. i.e. take account of the workplace issues and consider the implications of other regulations and guidance, e.g. COSHH, Control of Noise at Work, Vibration etc. Appropriate control measures should be introduced to control the risks identified. Be aware of any purchasing policies that may exist, e.g. purchase only low vibration equipment.

**c) Operational risks**

Where work equipment requires to be erected, assembled or dismantled, a formal procedure should be followed, together with safe working practice, which will ensure safe operation without risks to health.

**d) Disposal Risks**

Although not strictly part of the Regulations, consideration should be given to how the equipment is to be dismantled/ disposed of. What risks might there be to employees involved?

## 6. Appropriate Use of Work Equipment

6.1 Work equipment should only be used for the operation or particular process for which it is intended and services must ensure that it is used in the correct manner for the specific purpose intended and no other operation for which it was not intended.

6.2 Council equipment should only be used by Council employees or by others who have received, or are receiving, appropriate recorded information, instruction, training and supervision.

## 7. Maintenance of Work Equipment

7.1 Work equipment must be maintained in an efficient state, in good working order and in good repair. It is important that equipment is maintained so that its performance does not deteriorate to the extent that it puts people at risk. "Efficient" relates to how the condition of the equipment might affect health and safety. Maintenance activities, especially fixed systems, should take place under a permit to work system (see AS40 - Permits to Work) and consider the following:

**Note:** The use of any permit to work system requires appropriate information, instruction, training and supervision. Those issuing permits should be independent of the actual maintenance process.

**a) Frequency of maintenance**

The intervals between maintenance checks should take into account:

1) Intensity of use;
2) Frequency and maximum working limits;
3) Operating environment i.e. indoor, outdoor;
4) Variety of operations i.e. is the equipment performing the same;
5) Task all the time or does it vary?
6) Risk to health and safety from malfunction or failure.

**b) Type of maintenance**

Maintenance required on work equipment can be a simple check or extremely complex, requiring specialist expertise. However, in all circumstances, for maintenance to be effective, it needs to be targeted at all parts of the work equipment where failure or deterioration could lead to health and safety risks.

**c) Appropriate techniques of maintenance**

Decisions regarding maintenance techniques **should be determined by the risk assessment process** and maintenance used either independently (or in **combination)** to address, with the aid of the manufacturer of the equipment and/or risk assessments, the risks involved. Manufacturers' recommendations should be considered and included in all maintenance procedures.

## 8. Inspection

8.1 It should be noted that inspections are not a substitute for maintenance.

8.2 Work equipment requires to be inspected where the safety of the equipment depends on the correct installation and in the safety of its operation. An inspection should take place after installation and prior to the equipment being used for the FIRST time and after re-installation at a new site or in a new location.

8.3 Environmental conditions should also be considered as these may affect the equipment causing deterioration, which may result in a dangerous condition developing. Inspection at regular intervals, and immediately following any exceptional circumstances, will allow any shortcomings to be remedied in good time.

8.4 The risk assessment process should identify when inspection is required. The purpose of the inspection is to check whether equipment can be operated, adjusted and maintained safely so that any defect, damage, wear and tear can be detected and remedied.

### a) What an inspection should include

Inspections should include, where appropriate, visual checks, functional checks and testing. The extent of the inspection that is needed will depend on;

- the type of equipment;
- where it is to be used;
- how it is to be used.

An inspection should always include safety-related parts, for example safety-stop buttons/bars; overload warning and limit switches.

(Further information on the visual inspection of electrical equipment can be found within AS16, Electricity in the Workplace.)

It should be noted that some work equipment already requires examination under other legislation, for example scissors lifts, portable electrical appliances, therefore an inspection will only be required where those examinations do not fully cover the health and safety risks which arise in the use of the equipment. It may be appropriate for visual inspections to take place over and above statutory inspections, e.g. visual inspections of electrical equipment while arrangements are made for full portable electrical testing to take place, or where the type of use and handling may cause damage at any time between agreed full inspection dates.

The need for testing (e.g. non-destructive testing) should be assisted by the risk assessment process and decided in consultation with the competent person who determines the type of inspection regime that is appropriate.

**Note:** Where inspection determines an item of work equipment should be withdrawn from use, the equipment should be suitably labelled and quarantined.

## 9. Competent Persons

### a) Who should determine inspection requirements?

The knowledge and experience required by a person to determine the nature of the inspection needs to be sufficient for them to be able to decide what the inspection should include, how it should be done and when it should be carried out.

Experienced employees such as managers or supervisors may be able to determine the nature of inspection required. They should know what would need to be inspected to detect damage or find faults resulting from wear and tear. They should also be able to determine whether any tests are needed during the inspection to see if the equipment is working safely or is structurally sound. If there is any doubt, further advice should be sought.

### b) Who should carry out inspection requirements?

The person who undertakes to carry out the inspection may not necessarily be the same person who determines the inspection requirements. The actual inspection will be done by an employee who has appropriate knowledge of the equipment to:

- enable them to know what to look at (i.e. they know the key components)
- know what to look for (fault finding)
- know what to do (report faults, make a record, who to report to)

Where necessary, the employee should be given appropriate information, instruction and training so they can carry out the inspection properly and avoid danger. They should also be aware of and be able to avoid danger to themselves and others.

The necessary level of competence will vary according to the type of equipment and where and how it is to be used. For some equipment, the level of competence to determine the nature of the inspections or even carry them out may not be available within the Council, in which case the help of an outside agency with relevant competence may be necessary.

### c) Equipment for which an inspection is not required

If the failure or fault of the equipment is to be determined as "low risk", inspection may not be necessary e.g. office furniture, hand tools, non-powered machinery (and also powered machinery such as reciprocating fixed blade metal cutting saws).

Exceptional circumstances include major repair work, known or suspected serious damage or substantial change in the nature of the equipment's use, for example, re-activation after an extended period of inactivity.

## 10. Records

10.1 Records of inspection can be written or held on computer and should normally include;

- information on the type and model of equipment;
- any identification mark or number that is assigned;
- the normal location;
- the date the inspection was carried out;
- who carried out the inspection;
- any faults;
- to whom the faults had been reported;
- action taken;
- the date when repairs or other necessary action were carried out.

## 11. Physical evidence of inspection

11.1 For larger items of equipment a copy of the record of the last inspection is required. For smaller items of equipment a tagging, colour coding or labeling system can be used - e.g. portable electrical appliance labels.

## 12. Exemptions

1. Power presses covered by regulations 31-39 of PUWER.
2. Work equipment for lifting loads including people - see Lifting Operations and Lifting Equipment Regulations 1998 (See GD18 – Lifting Operations).
3. Scaffolding and excavation supports which require to be inspected under the Construction (Health, Safety and Welfare) Regulations 1996.

## 13. Control of specific risks

13.1 The risk assessment process will identify the risks and the control measures, which should be implemented to reduce these risks to an acceptable level. These control measures may include physical methods such as guarding, PPE etc. however it may also be necessary to establish a safe “systems of work” and where this is the case, staff must be provided with sufficient recorded information , instruction and training

13.2 These controls should apply both in normal operation and during repairs, modifications and maintenance.

## 14. Information, instruction and training

14.1 The Council has a duty to make available all relevant health and safety information and where appropriate, issue written instructions on the use of work equipment. These instructions can include information provided by manufacturers, for example instruction sheets or manuals, instruction placards, warning labels and training manuals.

### a) Who should receive information and instruction?

Written instructions should be directly issued to those employees using the work equipment. However, consideration should be given to supplying information to other appropriate people e.g. maintenance or repair personnel. Supervisors and managers will also need access to information and instructions. It is the responsibility of the Head of Service to decide on whether the information should be in writing or verbal, in either case a record of the information/instructions issued must be maintained for future reference.

Factors which need to be considered are the skill, experience and training, degree of supervision together with the complexity and length of the task. The instructions should cover:

- All health and safety aspects arising from use of work equipment;
- Any limitations on these uses;
- Any foreseeable difficulties that could arise;
- The method to deal with these difficulties;
- Conclusions drawn from experience of using the equipment.

**b) Training**

In order to decide what employee training may be required, it will be necessary to;

- Evaluate the existing competence of employees to operate the full range of work equipment that they will use;
- Evaluate the competence they need to manage or supervise the use of work equipment;
- Train the employee to make up any short fall between their competence and that required to carry out the work with due regard to health and safety;
- Consider if employee works alone or under the close supervision of a competent person.

Training is most likely to be needed on recruitment, however it is also required;

- If the risks to which people are exposed **CHANGE** in their job;
- Because of new technology or equipment is introduced;
- If the system of work changes;
- following a specific time period i.e. a REFRESHER training;
- to remedy “skills gaps” identified via competence assessments.

**c) Competency Assessments**

Employees who are expected to operate equipment and machinery, need to have their competency assessed. Once competency has been demonstrated, there then needs to be a record of this assessment. Assessment records can be kept in a number of ways, such as;

- Personal Record sheet, e.g. a record card kept within the work place;
- Authority card e.g. CITB cards, carried with the employee;
- Machinery records, e.g. a record card kept beside a particular machine listing authorised users.

The type of record will depend on the nature of the tasks and the training/assessments that have been undertaken. In reality a combination of the above 3 mechanisms will be used, e.g. fixed machinery such as photocopiers, circular saws, abrasive wheels etc. may suit a machinery record system, whilst “Hilti guns”, scaffold towers and hand held electrical equipment may suit an authority card system. Service based personal records should also be maintained of all competency assessments.

**d) Training for young people**

Induction training is particularly important for young people because of their relative immaturity and unfamiliarity with the workplace. It should be noted that there is an age restriction on some equipment.

The risk assessment process requires the assessment of specific risks that young people face due to their inexperience, lack of awareness of potential risks and their immaturity. The degree of supervision given to young persons may require to be enhanced.

**e) Driver training**

Self-propelled work equipment, including any attachments or towed equipment should only be driven by employees who have received appropriate training in the safe driving of that type of equipment. Such training and the subsequent competency assessment must be recorded in an appropriate fashion, using some of the mechanisms outlined in b) above.

**f) Chain saw operators**

All employees who use a chain saw should be competent and have received appropriate training before using the chain saw. Chain saw operators must be authorised and be in possession of a “card of authority” issued by an approved training organisation.

**g) Consultation with employees**

It will be necessary to ensure that employees are consulted about proposed decisions and changes. The Safety Representatives and Safety Committees Regulations 1977 and The Health and Safety (Consultation with Employees) Regulations 1996 require the Council to consult with employees on matters which are linked to the requirements of PUWER and in particular the requirements for information, instruction and training.

## 15. Conformity with European Community requirements

15.1 Checks must be made to ensure that adequate operating instructions have been provided with equipment and that there is information about other hazards such as noise and vibration. A check should be made for any obvious faults or hazards.

15.2 Products should carry a CE marking and be accompanied by relevant certificates of declarations of conformity.

## 16. Dangerous parts of machinery

16.1 The risk assessment process should identify hazards presented by machinery and identify the necessary control measures that require to be implemented.

16.2 The levels of protection are:

- Fixed enclosed guards
- Other guards or protection devices such as interlocked guards and pressure mats
- Protection appliances such as jigs, holders and push sticks
- The provision of information, instruction, training and supervision

16.3 The risk assessment should consider normal operating conditions AND setting, maintenance, cleaning or repair.

## 17. Protection against specific hazards

17.1 This covers the design of the equipment, which should be such that other events presenting a risk cannot occur.

For example, where sawdust is discharged as a result of using woodworking machinery; risks to employees must be controlled.

### a) Abrasive wheels

See PUWER ACOP No. L22 for application of principles as applied to abrasive wheels.

### b) High or very low temperature

This refers to accessible surfaces of equipment or machinery which when hot or cold is a potential source of risk e.g. a burn or frostbite. Appropriate engineering methods should be employed for example insulation or shielding and as a last resort, personal protective equipment.

## c) Controls and control equipment

The approved code of practice highlights a number of requirements in relation to the controls systems of work equipment, these are summarised below, and however more detailed guidance is available within the Approved Code of Practice.

Controls for starting or making a significant change in operation.

Appropriate controls must be provided for the starting of equipment and for any change in operation, e.g. speed , direction etc. The controls should be so designed as to prevent the operation except through a deliberate action on the controls provided, in other words an accidental start or change in speed should not be possible. Where automatic sequences are incorporated, special considerations are required and additional guidance should be sought from the Health and Safety section.

## d) Stop Controls

Where appropriate, work equipment must be provided with one or more readily accessible controls capable of stopping the equipment in a safe manner. Such a stopping mechanism may also need to isolate power to the equipment where this is deemed necessary and they should operate in priority to other controls within the equipment

## e) Emergency stop controls

Where appropriate, work equipment shall be fitted with one or more controls that can bring work equipment to a stop if the controls already provided to stop the equipment cannot do so. In most situations an emergency stop mechanism is required over and above the normal stop control. Emergency stop buttons will be positioned according to manufacturers specifications. Such emergency stop mechanisms must be readily identifiable and checked/ inspected on a regular basis. Emergency stop controls should not be used to provide a normal functional stop mechanism.

## f) Controls

Controls provided for use with work equipment need to be readily accessible and easily identifiable. So far as is reasonably practicable, the controls should not be positioned in a manner that exposes the user to any risk, start up times should also be considered when assessing operator risk

### g) Control Systems

So far as is reasonably practicable, all control systems must be safe and constructed in a manner that takes account of failures, faults and constraints during the normal planned use of the equipment. Control systems must incorporate a “fail to safe” mechanism appropriate for the type of risks identified, this may, where necessary, incorporate mechanisms to prevent operator override, accidental or otherwise, during machine operations.

### h) Isolation from sources of energy

This main purpose of isolation is to make equipment safe when maintenance or repair is being carried out, or when a component fails or overheats e.g. isolating of electrical equipment. Such isolation mechanisms should operate in tandem with appropriate “permit to work” systems (see AS40 – Permit to Work Systems) and “lock out” systems.

### i) Stability of equipment

Suitable precautions should be taken to ensure the equipment will not fall over, collapse or overturn. This can be achieved by fixing the equipment to an anchor point by bolting, tying, fastening or clamping. Ladders, for example, should be tied at the top, or tied and footed and be at the correct angle.

### j) Maintenance operations

Where a risk has been identified which is associated with maintenance, the installation should be designed so that the work, as far as reasonable practicable, is carried out with the equipment stopped.

Where equipment must be running during maintenance operations and presents a risk, other measures should be taken e.g. providing temporary guards or limited movement controls. It should be noted that Permit to Work systems may be required e.g. when "live" working on electrical apparatus (see arrangement Section 16 - Electricity in the Workplace).

### k) Markings and warnings

Health and safety equipment should be clearly marked, for example;

- Stop and start controls for equipment needs to be identified;
- Maximum safe working load should be marked on lifting equipment;
- Maximum rotation speed of an abrasive wheel;
- Gas cylinders should indicate (by colour) the contents.

Markings should conform to BS 5378 and to the Health and Safety (Safety Signs and Signals) Regulations 1996.

Warnings are normally in the form of a notice, for example "Hard Hats Must Be Worn".

Warning devices can be:

- Audible e.g. reversing alarms on construction vehicles
- Visible - a light on a control panel
- An indication on imminent danger
- Hazard linked, i.e. they respond to the presence of a potential hazard e.g. hot plate, excessive noise levels or a laser that is in operation.

## 18. Mobile work equipment

18.1 Mobile work equipment includes forklift trucks, cranes, tractors and relates to the equipment only when it is traveling. This equipment may be self-propelled, towed or remote controlled.

18.2 Equipment that is suitable for carrying employees should normally have seating provided.

18.3 Cabs, operator stations and work platforms should be properly designed and constructed to prevent employees from falling from them.

18.4 A suitably strong cage or safety cab to provide adequate protection, for example an enclosed platform within a cherry-picker providing protection from falling objects.

18.5 Measures should be included to minimise risks to employees where risk assessment indicates there is a risk of ”roll-over”. Roll-over protective structures (ROPS) should normally be fitted where there is a risk from 180 degrees, or more roll-over e.g. on all terrain vehicles.

18.7 Restraining systems should be fitted where there is a risk of employees falling out and being crushed should roll-over occur.

### 1) Tractors

When a tractor is fitted with a ROP rather than a cab, a restraining system will also be needed.

**2) Fork lift trucks (FLT)**

Measures should be taken to adapt or equip FLTs to reduce the risk of overturning to as low as reasonable practicable. Restraining systems should be provided where appropriate.

**3) Self propelled work equipment**

Access to starter keys and starting devices should be controlled to prevent unauthorised start up.

A suitable device should be fitted to allow for braking to permit slow down and stop, in a safe distance and park safely, giving due regard to the gradients on which the device will operate. Parking brakes should be adequate to hold the device on all relevant gradients whilst fully loaded.

If the main braking device has a significant risk of failure, a secondary braking system should be fitted.

Mirrors and CCTV should be considered to improve the driver's field of vision and appropriate lighting fitted for use in the dark.

If escape from the equipment cannot be easily achieved, a fire extinguisher should be carried in the equipment.

**4) Drive Shafts**

Measures should be taken to prevent seizure or ejection of parts. The shaft should be of adequate length with sufficient overlap to ensure stability and strength. The drive shaft should be supported on a cradle to prevent damage to the shaft and its guard.

**Schedule 1**

## Impact Assessments

**Document Title:** Health and Safety Policy - Arrangement Section 8 – Safe Use of Work Equipment

**Environmental Impact Assessment:** This document has been assessed for significant environmental impact; no detrimental impact has been identified.

**Equality Impact Assessment:** This document has been assessed for significant equality implications; no significant issues have been identified.

**General Comments**: This document is the arrangement section, relating to the safe use of work equipment and it is produced in association with the Council's health and safety policy as required by the Health and Safety at Work Act 1974. The general aims of the council are to ensure a healthy and safe working environment for all persons that work for or make use of Council Services. Nothing in the document serves to have a negative impact on either of the above topics. In general, this and associated documents will encourage positive consideration of relevant factors to ensure all members of the workforce and community are afforded access to the same safe and healthy workplace.