

Health & Safety, Edinburgh Napier University

Provision and Use of Work Equipment Regulations (PUWER)

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1. Introduction

The primary objective of the Provision and Use of Work Equipment Regulations (PUWER) is to ensure the provision of safe work equipment and its use and to ensure that work equipment should not result in health and safety risks, regardless of its age, condition or origin. This applies to all sectors; industrial, commercial and service occupations, including hospitals, universities, etc..

The PUWER amplifies and makes explicit the University has general duties to provide safe plant and equipment, including mobile and lifting equipment. The PUWER overlaps with existing legislation, but compliance with the more specific Regulations, for example Display Screen Equipment Regulations or the Electricity at Work Regulations will normally be sufficient to comply with the general requirement contained in the PUWER.

When existing work equipment is sold by one company to another and brought into use by the purchasing company, it becomes new work equipment therefore the purchasing company will need to ensure that the work equipment meets the provision of PUWER before it is put into use.

Because of the general risk assessment requirements in the Management of Health and Safety at Work Regulations no specific mention is made within PUWER. The Management of Health and Safety at Work Regulations requires risk assessments to be carried out and must consider:

- Type of work equipment
- Substances
- Electrical or mechanical hazards to which people are exposed
- Action to eliminate/control any risk

The main factors to be taken into account are the severity of any injury or ill-health likely to result from any hazard present, the likelihood of that happening and the numbers exposed to the hazard, to identify and implement preventative measures to eliminate or reduce the risk to an acceptable level.

Employers Duties

The University has a duty to ensure that items of work equipment provided for employees comply with PUWER.

Staff Duties

Staff are legally required by the Health and Safety at Work Act and the Management of Health and Safety at Work Regulations to take reasonable care of their own health and safety and that of others who may be affected by what they do or don't do and should use correctly all work items provided by the University in accordance with their training and the instructions they receive to enable them to use the items safely. Staff are obliged to co-operate with the School or Service on health and safety and not misuse or interfere with anything provided for their health, safety and welfare.

If staff provide their own work equipment for use at work these are covered under PUWER. Therefore staff are not to bring in and use equipment that falls under this policy and the regulations.

2. Commencement (Regulation 1)

All work equipment provided has to comply with all the PUWER.

Second-hand equipment which is purchased will be treated as new equipment and subject to all the PUWER. Purchasers must therefore ensure that the equipment meets Regulations 11 to 24 of the PUWER before the equipment is used. Regulations 11 to 24 prescribe features that relate to the equipment itself.

Those hiring and leasing equipment will need to ensure that the equipment meets Regulations 11 to 24 before putting it into use.

3. Interpretation (Regulation 2)

Use

This policy will include all activities involving work equipment such as stopping, starting, programming, repairing, modifying, maintaining, setting, servicing, cleaning and transporting of equipment.

Work Equipment

Work equipment means any machinery, appliance, apparatus, tool or installation for use at work.

The scope of 'work equipment' is extremely wide. It covers almost any equipment used at work including:

- Tool box tools, such as hammers, knives, handsaws, meat cleavers, etc.
- Single machines such as drilling machines, circular saws, photocopiers etc.
- Apparatus such as laboratory apparatus, e.g. Bunsen burners, etc.
- Lifting equipment such as hoists, lift trucks, elevating work platforms, lifting slings etc.
- Other equipment such as ladders, pressure water cleaners etc.
- An installation such as a series of machines connected together e.g. scaffolding or similar access equipment, etc.

Items which are not regarded as work equipment under these Regulations include:

- Substances
- Private cars
- Structured items, e.g. walls, stairs and roofs.

4. Application (Regulation 3)

This policy will build on the University's duties contained in the Health and Safety at Work Act by requiring the University to provide and maintain, so far as is reasonably practicable, machinery, equipment and other plant in a safe condition, and safe systems of work.

Items of work equipment to be used by others at work must comply with the Regulations. The School/Service will provide all necessary equipment. Staff must not bring in equipment.

Where the use of equipment is shared by University staff of different employers, employers are required to co-ordinate activities, co-operate with each other and share information to ensure that each complies with their responsibilities under health and safety legislation. Each employer retains a duty to ensure that such arrangements are adequate and effective in guaranteeing that any work equipment used by their employees complies with the Regulations. Risk assessments and checks must be in place to ensure that the equipment is safe for use and that the user has the competency prior to use.

5. Suitability of work equipment (Regulation 4)

This addresses the safety of work equipment from three aspects:-

- a) Its initial integrity
- b) The place where it will be used; and
- c) The purpose for which it will be used

The School/Service must select equipment which is suitable by design, construction or adaptation for the actual work it is provided to do. The School/Service are required to ensure that equipment is used in accordance with the manufacturer's specification and instructions. Where equipment is adapted or modified by the School/Service, they must ensure that it is still suitable for its intended purpose.

Consideration needs to be given by the School/Service to the working conditions and the risk to health and safety when selecting equipment and to the risks existing in the premises or undertaking for example, flammable atmospheres, wet conditions, etc.

Equipment must be suitable for the process and condition of use.

Staff are required to check all equipment prior to use and also during and after use. If something is found to be non-compliant or a problem with the equipment then they must report it and quarantine the equipment. Equipment that is repaired and to be put back into commission must be identified on an equipment register as suitable.

6. Maintenance (Regulation 5)

Work equipment must be maintained in an efficient state, in efficient working order and in good repair. Where a maintenance log is provided for machinery this must be kept up to date.

The efficiency referred to in the above statement relates to health and safety and not to any aspects of productivity.

The extent and complexity of maintenance varies enormously, e.g. hand tool checks, vehicle servicing to integrated programmes for complex plant. The frequency of equipment checks will be dependent on the equipment and the risk involved. Minimum requirements for maintenance, inspection or test are established for some items of equipment, e.g. lifts and scaffolding by legislation.

Checks on safety devices need to be built into any maintenance programmes.

Maintenance staff need to be trained, informed and instructed on the reasons for maintenance activities and procedures and any particular techniques applicable.

All maintenance carried out to comply with the necessary legislation and manufacturers requirements.

Routine Maintenance

This includes periodic lubrication, inspection and testing based on the recommendations of equipment manufacturers and any specific legal requirements.

Planned Preventative Maintenance

Planned Preventative Maintenance aims to prevent failures occurring when equipment is in use. Formal systems of Planned Preventative Maintenance should be introduced when equipment guards or other protective devices may fail in a dangerous way through inadequate maintenance.

Written instructions, based as appropriate on the manufacturers recommendations or experience from previous service and condition monitoring, should be provided. Specific servicing schedules require to be followed.

Maintenance Log

It is recommended that such logs should be kept providing information for future planning and informing maintenance personnel of previous actions. This will also record certification and insurance inspections.

7. Inspection (Regulation 6)

“The University shall ensure that, where the safety of work equipment depends on the installation conditions, it is inspected –

- (a) after installation and before being put into service for the first time; or*
- (b) after assembly at a new site or in a new location,*

To ensure that it has been installed correctly and is safe to operate.

The University shall ensure that work equipment exposed to conditions causing deterioration which is liable to result in dangerous situations is inspected –

- (a) at suitable intervals; and*
- (b) each time that exceptional circumstances which are liable to jeopardise the safety of the work equipment have occurred,*

To ensure that health and safety conditions are maintained and that any deterioration can be detected and remedied in good time.”

This requirement for the inspection of work equipment builds on the current but often informal practice of regular in-house inspection of work equipment, some of which is already recommended in other HSE guidance.

Inspection does not normally include the checks that are a part of the maintenance activity although certain aspects may well be common. Nor, for the purposes of this regulation, does inspection include a pre-use check that an operator may make before using the work equipment. Additionally, while inspections need to be recorded, such checks do not.

Identifying what needs to be inspected

Where the risk assessment under regulation 3 of the Management of Health and Safety at Work Regulations has identified a significant risk to the operator or other workers from the installation or use of the work equipment, a suitable inspection should be carried out.

8. Specific risk (Regulation 7)

Where the use of work equipment is likely to involve a specific risk to health and safety of a member of staff/student, the School/Service should restrict the use of it to those who are competent and who have the authority to use it.

Repair, modifications, maintenance and servicing of this type of equipment should be restricted to designated persons.

Adequate regular training should be provided for such personnel.

9. Information and instructions (Regulation 8)

All persons who use the work equipment must have available to them adequate health and safety information and, where appropriate, written instructions pertaining to the use of the work equipment.

Information can be in writing or verbal; it is the School/Service's responsibility to decide which, given the individual circumstances. Where the situations are unusual or complicated the information should be in writing. The factors which need to be taken into account include the degree of skill of the users, their experience and training and the degree of supervision and the complexity and length of a particular task.

Written instructions refer primarily to the information provided by manufacturers or suppliers such as instruction sheets or manuals, instruction cards, warning labels and training manuals. Manufacturers and suppliers have a duty to supply sufficient information including drawings to make possible the correct installation, safe operation and maintenance of the work equipment they supply. Such written instructions must be made available to those directly using the work equipment by the School/Service. Similarly, maintenance instructions should be made available to those involved in the maintenance of the work equipment.

Adequate health and safety information and where appropriate, written instructions pertaining to the use of equipment, should also be made available to the supervisors, managers, staff and students.

The information or instructions required under these Regulations shall include information and where appropriate written instructions on:

- a) The conditions in which, and the methods by which, the work equipment may be used.
- b) Foreseeable abnormal situations and the action to be taken if such a situation were to occur.
- c) Any conclusions to be drawn from experience in using the work equipment.

These conclusions should be acted upon and either recorded or measures taken to ensure that all appropriate staff/students are aware of them.

Information and instructions required by these Regulations shall be readily comprehensible to those concerned. In order to meet this requirement account should be taken of the users level of training, knowledge and experience. The information and written instructions should be presented clearly in English and in other languages where necessary, and be in a logical sequence with good illustrations where appropriate.

10. Training (Regulation 9)

All persons who use the work equipment must receive adequate training for the purposes of health and safety, including training in the methods which may be adopted when using the work equipment, any risks which such use may entail, and the precautions to be taken. The short-fall between the users existing competence and that necessary to use, supervise or manage the use of work equipment with due regard to health and safety will need to be evaluated and made up. Account should be taken of the circumstances in which a user is to work (e.g. alone, under close supervision of a competent person, in a supervisory or management capacity).

The development of specific statements of what users need to do and to what level (i.e. statements of competence) will assist the University to evaluate any short-fall in the users competence.

The requirement to train users on the use of work equipment for the purposes of health and safety extends to those who have to supervise or manage them; the training also needs to be adequate for the circumstances.

Ensure all identified training is recorded on the training matrix and recorded on the HR Connect system. If required any refresher training intervals noted and flagged at the required timescale.

Training Requirements in Other Legislation

The Management of Health and Safety at Work Regulations also requires the University to provide users with general health and safety training. This should be supplemented as necessary with more specific training on the use of work equipment. The detailed training requirements in, for example, the Woodworking Machinery Regulations and the Abrasive Wheels Regulations are not replaced by these Regulations and will continue to apply.

Additional Requirements for Young People

Training, coupled with proper supervision, is particularly important for all young people including induction training. There are no general age restrictions in legislation relating to the use of work equipment although there is some ACOP material in the relevant publications dealing with lifting, power presses and wood working. All users should be competent to use work equipment with due regard to health and safety regardless of their age.

The Management Regulations contain specific requirements relating to the employment of young people under the age of 18. These require the School/Service to assess risks to young people before they start work, taking into account their inexperience, lack of awareness of potential risks and their immaturity. The School/Service must provide information to parents of school-age children (for example when they are on work experience) about the risks and the control measures introduced and take account of the risk assessment in determining whether the young person should undertake certain work activities (refer: [Access to the University by Children](#)).

11. Conformity to community requirements (Regulation 10)

When first providing work equipment for use in the work place, the School/Service should ensure that it has been made to the requirements of the legislation implementing any product directive which is relevant to the equipment. In practice this means that where as previously the School/Service would have specified to the supplier that work equipment should comply with current health and safety legislation, they would in future also specify that it should comply with the legislation implementing any relevant EC Directives. Where appropriate the School/Service can check to see that the equipment bears a CE mark and ask for a copy of the EC Declaration of Conformity. Not all work equipment however is covered by a product directive at present and in addition, product directives are not retrospective. The presence of CE marking on equipment, machinery etc. does not necessarily mean it meets the requirements of PUWER.

It places a duty on the School/Service that complements those on manufacturers and suppliers in other legislation regarding the initial integrity of equipment. Designers, manufacturers, importers and suppliers of equipment are obliged to ensure so that as far as is reasonably practicable the equipment is safe for use.

12. Dangerous parts of machinery (Regulation 11)

This section covers risk arising from most mechanical hazards and replaces much of the existing legal requirements for the guarding of machinery. The principal duty of the School/Service is to take effective measures to prevent contact with dangerous parts of machinery. As well as parts of the machine, this also applies to contact with a rotating stock bar which projects beyond the headstock of a lathe. Employers are required to take measures to stop the movement of any dangerous machinery or rotating stock bar before any part of a person enters a danger zone.

The measures that may be taken are in a hierarchy of four levels. The four levels are:-

- a) Fixed enclosing guards.
- b) Other guards or protection devices.
- c) Protection appliances (jigs, holders, push sticks etc.).
- d) The provision of information, instruction, training and supervision.

It is necessary to consider each level of the hierarchy in turn from the top, and to use measures from that level as far as it is practical to do so, provided they contribute to the reduction of risk. Often this will result in a combination of measures being chosen.

All guards and protection devices provided in compliance with this policy shall be suitable for the purpose they are provided, be of good construction, be of sound material and adequate strength and be maintained in an efficient state, in efficient working order and in good repair. These protective measures should not give rise to any increased risk to health and safety nor be easily bypassed or disabled and should be situated at sufficient distance from the danger zone. Protection devices should not unduly restrict the view of the operating cycle of the machinery where such a view is necessary, and should be so constructed or adapted that they enable operations necessary to fit or replace parts and for maintenance work to be carried out, restricting access allowed only to the area where the

work is to be carried out and where possible without having to dismantle the guard or protection device.

13. Protection against specified hazards (Regulation 12)

The School/Service shall take measures to ensure that the exposure of a person using work equipment to any risk to their health or safety from any of the following hazards is either prevented, or, where that is not reasonably practicable, adequately controlled.

- a) Any article, material or substance falling or being ejected from work equipment.
- b) Rupture or disintegration of parts of work equipment.
- c) Work equipment catching fire or over-heating.
- d) The unintended or premature discharge of any article or of any gas, dust, liquid, vapour or other substance which in each case is produced, used or stored in the work equipment.
- e) The unintended or premature explosion of the work equipment or any article or substances, used or stored in it.

The primary aim of this policy is to prevent any of the above events arising, if that event exposes a person(s) to risk. Where possible the equipment should be designed so that events presenting a risk cannot occur. If this is not reasonably practicable, steps should be taken to reduce the risk.

A Risk Assessment as required by Regulation 3 of the Management of Health and Safety at Work Regulations should identify these hazards and assess the risks associated with them. The assessment will need to consider the likelihood of such events occurring and the consequent danger if they do occur, in order to identify measures to be taken to comply with this Regulation. While manufacturers may have designed equipment to eliminate or reduce the likelihood of any of the types of events described occurring, the equipment suppliers cannot control the materials used in equipment or the environment in which it is used, and it is up to employers therefore to ensure that the equipment is suitable for their application.

This Regulation shall not apply where any of the following Regulations apply:-

- a) The Control of Lead at Work Regulations.
- b) The Ionising Radiation Regulations.
- c) The Control of Asbestos at Work Regulations.
- d) The Control of Substances Hazardous to Health Regulations (COSHH).
- e) The Noise at Work Regulations.
- f) The Construction (Head Protection) Regulations.

14. High or very low temperatures (Regulation 13)

The School/Service are obliged to ensure that work equipment, parts of work equipment, and any article or substance produced, used or stored in work equipment which, in each case, is at a very high or very low temperature shall have protection where appropriate so as to prevent injury to any person from burn, scald or sear.

This section deals with injuries from contact with hot or very cold work equipment or parts of work equipment or articles and substances in the work equipment and does not cover any related risks such as radiant heat or glare. Examples of high or very low temperatures are Liquid Nitrogen tank, gas cooker, cold store, steam pipes, etc.

15. Controls for starting or making a significant change in operating conditions (Regulation 14)

The School/Service must ensure that where appropriate, work equipment is provided with one or more controls for the purposes of:-

- a) Starting the equipment (including re-starting after stoppage for any reason); or
- b) Controlling any speed change, pressure or other operating conditions of the equipment where such changes in the conditions after the change would result in an increase in the risk to health and safety.
- c) Starting and restarting after any sort of stoppage should only be possible therefore by using a control.

These requirements do not apply to restarting or changing the operating condition as a result of the **normal** operating cycle of an automatic device.

16. Stop controls (Regulation 15)

Where appropriate, work equipment must be provided with one or more readily accessible controls which when operated will bring the equipment to a safe condition in a safe manner.

Such controls will bring the equipment to a complete stop where necessary for health and safety reasons.

In addition, these controls shall, if necessary for health and safety reasons, switch off all sources of energy after stopping the equipment from functioning.

The stop controls should operate in priority to any control which starts or changes operating conditions of equipment.

17. Emergency stop controls (Regulation 16)

Where appropriate, work equipment must be provided with one or more readily accessible emergency stop controls unless it is not required by reason of the nature of the hazards and time taken for work equipment to come to a complete stop as a result of the action of any normal stop control. The location of emergency stop controls should be determined as a follow-up to the risk assessment required under the Management Regulations. Although it is desirable that emergency stops rapidly

bring work equipment to a halt, this must be achieved under control so as not to create any additional hazards.

Emergency stop controls should be easily reached and actuated. Common types are mushroom-headed buttons, bars, levers, kick-plates, or pressure-sensitive cables. Guidance on specific features of emergency stops is given in national, European and international standards.

18. Controls (Regulation 17)

All controls for work equipment shall be clearly visible and identifiable, including by appropriate marking where necessary.

Persons operating controls for work equipment must not be in a position where they are exposed to a health and safety risk except where necessary.

The School/Service are obliged to ensure where appropriate that operators of the equipment controls are in a position to check that no person is in a situation where they would be exposed to a health and safety risk as a result of the control being operated. Where this is not reasonably practicable, effective systems of work should be implemented to ensure no persons are in a place which would expose them to a health and safety risk so far as is reasonably practical when the work equipment starts.

Where neither of the above two requirements can be met, so far as is reasonably practicable, an audible or visual suitable warning system whenever work equipment is about to start should be established.

Where persons may be in a place which exposes them to a health and safety risk as a result of work equipment starting or stopping, the School/Service are obliged to ensure that sufficient means to avoid that risk e.g. sufficient space, warning devices, are provided.

19. Control system (Regulation 18)

The School/Service are obliged to ensure, so far as reasonably practicable, that all control systems of work equipment are safe. The operation of the control system must not create an increase to health and safety risk nor should it impede the operation of any control required by Regulations 15 or 16, i.e. stop and emergency stop controls.

In addition any fault in, or damage to, any part of the control system or the loss of supply of any source of energy used by the work equipment must not result in additional or increased risk to health and safety, i.e. a failure must result in a “fail-safe” condition.

Another way of defining a control system is:

‘a control system is a system or device which responds to input signals and generates an output signal which causes the equipment under control to operate in a particular manner.’

There are national, European and international standards available (BS EN 60204, BS EN ISO 13849) which provide guidance on design of control systems so as to achieve high levels of performance related to safety. Though they are aimed at new machinery, they may be used as guidance for existing work equipment.

20. Isolation from sources of energy (Regulation 19)

A means of isolating work equipment from all sources of energy where appropriate should be provided.

Measures must be taken to ensure re-connection of any source of energy to the equipment cannot expose persons using the equipment to any health and safety risk.

The means of isolation from energy sources shall be clearly identifiable and readily accessible. Where deemed a requirement and to stop non authorised use, the isolation equipment must be lockable. Keys are to be controlled by the School/Service.

21. Stability (Regulation 20)

All work equipment, or any part of it, shall be stabilised by clamping or otherwise where necessary for the purposes of health and safety.

Most machines used in a fixed position should be bolted or otherwise fastened down so that they do not move or rock during use. This can be done by fastening the equipment to an appropriate foundation or supporting structure. Other means could include lashing or tying to a supporting structure or platform.

Certain types of mobile work equipment, for example access platforms, while inherently stable, can have their stability increased during use by means of outriggers or similar devices. While this equipment cannot be 'clamped' or 'fixed', steps must be taken to ensure that the equipment is always used within the limits of its stability at any given time.

22. Lighting (Regulation 21)

Suitable and sufficient lighting, which takes account of tasks undertaken, shall be provided at any place where persons use work equipment. Consideration into the type of lighting for the equipment must be taken into account, e.g. strobing and also where the machine part looks like it is stationary and is still moving.

Lighting should be adequate for the needs of the task. HSE Guidance on lighting is available HSG38 – Lighting at Work.

23. Maintenance operations (Regulation 22)

Appropriate measures must be taken to ensure equipment is so constructed or adapted such that, so far as is reasonably practicable, maintenance operations involving health and safety risks can be undertaken while the equipment is shut down or, in other cases, the maintenance work can be done without risk to the health and safety of maintenance persons, or the maintenance personnel can be protected by other appropriate means.

24. Markings (Regulation 23)

Equipment must be marked in a clearly visible manner with any marking appropriate for health and safety reasons. Markings may use words, letters, numbers or symbols and the use of colour or shape may be significant. There are nationally or internationally agreed markings relating to some hazards, for example the international symbols for radiation and lasers. Markings should as far as possible conform to such published standards as BS 5378 or as required by any appropriate legislation such as the Health and Safety (Safety Signs and Signals) Regulations.

25. Warnings (Regulation 24)

Where appropriate for health and safety reasons, equipment shall incorporate warnings or warning devices. The warnings or devices must be unambiguous and easily perceived and understood.