Code of Practice for the Safe Use of Display Screen Equipment (DSE)

Contents

1. Policy Statement

It is the policy of the University that all work involving display screen equipment (DSE) is carried out in such a way as to prevent undue risk to those carrying out the work. The University will seek to ensure that all relevant statutory requirements are complied with.

In particular, work with display screen equipment will be assessed and suitable facilities will be provided, local procedures and organisational arrangements will be put in place.

The arrangements described below form a part of the University's Health and Safety Policy.

The purpose of this document and those linked to it, is to provide practical information on how to ensure that the health effects associated with the use of display screen equipment are properly assessed and suitable action taken to minimise the risks.

2. Health Effects Associated with DSE Work

It has been established that the following health problems may arise from the intensive use of display screen equipment:

- Upper limb disorders and lesser problems of temporary backache, muscle fatigue etc. caused by poor posture.
- Temporary visual fatigue caused by such factors as poor lighting, glare, reflections, flickering screen, concentrated DSE work and poorly positioned DSE. (There is no evidence of DSE work being associated with permanent damage to eyes).
- Soreness of the eyes from low humidity.
- Fatigue and general stress related to such factors as unfavourable environmental conditions and task planning.

There are other minor or alleged health effects, such as Epilepsy and Facial Dermatitis, that sometimes cause people concern but there is no medical evidence to suggest these conditions are caused by DSE work. Other concerns are effects on pregnant women (no medical evidence to suggest there is any link between DSE work and miscarriage or birth defects) and electromagnetic radiation (no harmful emissions).

Further detail concerning the above is given in Appendix 2 of the Guidance to the DSE Regulations.

3. Relevant Statutory Provisions and Guidance

3.1.   The Health and Safety (Display Screen Equipment) Regulations 1992 as amended by the Health and Safety (Miscellaneous Amendments) Regulations 2002 - these regulations seek to advise employers on how the

effects of DSE work can best be minimised through identification of those at risk and assessment of their workstations.

3.2. **L29 Guidance on the Health and Safety (Display Screen Equipment (Regulations)** - guidance notes on the above statute.

3.3. **The Management of Health and Safety at Work Regulations 1999** - these regulations require employers to assess the risk of all their work activities.

3.4. **The Workplace (Health, Safety and; Welfare) Regulations 1992** - these regulations require the environment (workplace) to be considered in terms of space, lighting, seating, temperature and humidity.

Appendix 6 of the DSE Regulations gives other sources of information and advice, plus further references.

4. Management Responsibilities

4.1. The Head of School/Department is responsible for ensuring that effective arrangements are in place such that the DSE regulations are complied with. ***See below for a summary of the regulations***.

4.2. Heads of School/Department should identify a suitable person(s) to be a DSE assessor who will coordinate DSE issues and undertake assessments of workstations where the user has identified problems they cannot deal with. Training for assessors is available through the Safety Office, see the Safety Office website (Assessing for Safe Use of DSE)

4.3. Arrangements in Schools should include checks that they are able to satisfy the DSE compliance indicators (ESM Section 6.5) listed in the University's Effective Safety Management document. Non-compliance issues should be raised through the School/Departmental management.

4.4. The University Safety Office and Occupational Health are available for assistance and advice, including assessment for users where unusual circumstances prevail, e.g. an individual has a medical condition that complicates the assessment process.

5. Application of Display Screen Equipment Regulations

5.1. **Staff**

The University has a statutory obligation under the DSE Regulations to employees; this includes anyone on a fixed term contract or temporary contract. The regulations require:

- Identification of those employees who are DSE users (see definition section)
- Assessment of users' workstations

- Provision of suitable equipment for users
- Provision of information and training in the safe use of DSE equipment for users
- Consideration of work routine to minimise prolonged periods of DSE use

- Review of arrangements to ensure appropriate action is on-going

As the DSE Regulations have been in force since 1992, Schools/Departments must comply with the Regulations for all current employees.

5.2. Students

The University has a duty of care (not statutory) to consider the workstations used by students:

Postgraduates

If the demands made by the contents or nature of their course or research project would clearly classify them as a DSE user were the student an employee, the School/Department should endeavour to apply the same standard of equipment and assessment to that individual. The postgraduate should also have access to a similar level of training. The School must seek to minimise the risk of ill-health effects resulting from poor workstation design, excessive demands for DSE work in the project or lack of information concerning safe use of DSE.

Undergraduates

It is less likely that an undergraduate would be required to make sufficient concentrated use of DSE for there to be any significant risk to health. It is therefore not necessary for Schools to assess every individual student but it is recommended that DSE facilities provided for their use (e.g. computer rooms), be provided with suitable equipment (firm steady work surface with sufficient space for hard copy and a standard DSE chair) and safety information be displayed (minimising long periods of DSE work and how to adjust the workstation to suit the user).

There is information for students, particularly those regularly using laptops, at the website of the Ergonomics Society: http://www.ergonomics.org.uk

Eye tests: There is no requirement to provide students or other non-employees with eye tests. However a student may use the University system at the discretion of his/her School/Department in terms of costs.

5.3. Non-University Employees (e.g. temporary workers, visiting academics)

Non-University employees must be treated as though they were employees of the University whilst working for the University. Within a short period of them starting, an assessment must be carried out (self-assessment or by DSE assessor) to ensure the workstation is suitably set up and the work routine is reasonable. However, the University is not required to provide eye tests or training in safe use of DSE. Their own employer must provide eye and eye-sight testing and any corrective appliances and they are responsible for generalised training.

Definitions

1. Display Screen Equipment means any alphanumeric or graphic display screen regardless of the display process involved (including conventional display screens, flat panel screens, touch screens and other emerging technologies. It is the legally used term for visual display equipment such as word processors, personal computers, micro-fiche readers. The definition is not limited to traditional office applications but includes use of DSE in laboratories and workshops.

   Exemptions: The Regulations do not apply to DSE related to a means of transport, DSE intended mainly for public operation (e.g. tourist information booths), window typewriters, calculators, cash register or similar. Hence computer terminal provided din libraries for occasional catalogue reference by readers are not covered by the Regulations.

   Display screens on instruments such as NMR and mass spectrometers; oscilloscopes, security surveillance cameras, etc. are not included. In such cases the main hazard will be visual fatigue which may need to be assessed separately.

   Laptops: portable systems not in prolonged used are also exempt. No guidance is given on the meaning of "prolonged" but a suitable guideline would be to reduce the relevant figures recommended in this document for non-portable workstations by a factor of one half to two =-thirds, i.e. if using a lap-top for an average of one hour continuously per day, class the operator as a user.

2. Workstation means an assembly comprising display screen equipment; any optional accessories to the DS; any disk drive, telephone, modem, printer, document holder, work chair, work desk, work surface or other item peripheral to the DES; the immediate work environment around the DSE. Guidance on workstation set up is given in a later section.

3. User means an employee who habitually used display screen equipment as a significant part of his/her normal work. See section below on how to identify users.

Criteria for identifying users:
Paragraphs 10 to 19 of the Guidance to the DSE Regulations detail the various criteria that can be applied to help identify users. In the University context these criteria are not always simple to apply and can lead to confusion. It is advised that duration of usage and the intensity of work (activity) are used as the main criteria for identifying users at the University.

Duration
Duration of usage may be divided into two categories: the total time spent and the length of a single session. Both should be considered.

The total time spent on DSE should be averaged over a period such as a week. If the average is about two hours a day or over (i.e. 10 hours per week) the individual should be designated a DSE user. If the average is less than one hour then, subject to an examination of the type of usage, the individual is not a user.

For a period between one and two hours the type of usage should be taken into account before a decision can be made.

If the length of single DSE sessions extends to ninety minutes or more on a regular basis, the individual should be classed as a user unless such sessions occur infrequently, e.g. once a month or less. However it is always recommended that prolonged periods of DSE work are broken up into shorter sessions (30 minutes is recommended) even if the individual is not classed as a user.

Activity

The more obvious categories of people who would be classed as users are those whose DSE work involves intense, uninterrupted period inputting data or viewing data on a screen, e.g. data input operator, a copy typist, accounts clerk, library book classifier. This, coupled with the time as stated above, helps decide whether a person is a user.

The following categories of staff within the University environment are indicative for determining those that might be users:

Secretarial/clerical/administration: a large proportion are most likely to be users because of the amount of time spent and the type of work (more likely to be data inputting, copy-typing, etc.).

Academic: In some subjects, mainly the non-practical courses, e.g. Computer Science, the majority are likely to be users. In other subjects where the individual might be more involved in practical work and DSE work is less significant, they might not be a user. Use the above criteria to decide.

Research staff: May be a user depending on type of research and whether it involves significant amounts of computing, data processing, spreadsheet applications, etc.

Other staff such as technicians, library staff, trades staff: increasingly, more of these staff are becoming users as DSE work might be a significant part of the job.

For further advice on classifying users, contact the Safety Office (ext. 13401).

6. Workstation Assessments
Workstation Checklist Form

The legal requirement is for the University to carry out suitable and sufficient assessment and, where necessary, bring up to acceptable standards, all workstations where the individual is classified as a user (see definition above).

The first step is to identify all users, using the criteria above. DSE workstations which are not used by users do not need to be assessed.

Assessment procedure:
The assessment is to include consideration of how far the DSE and workstations generally meet the requirements of the work environment and the work routine, posture of the user and the software should also be assessed.

- The initial assessment should be carried out by the user, using the [standard checklist](#), see below. Once completed it should be passed to the person responsible for co-ordinating DSE within the school/department / DSE assessor.
- The co-ordinator/DSE assessor should check completed checklists and ensure that actions /recommendations are reasonable and are being followed up. It may be necessary for the co-ordinator/DSE assessor to carry out further assessment and make their own recommendations.
- In exceptional cases where there are unresolved issues, perhaps because of unusual circumstances, the assessment should be referred to the Safety Office or Occupational Health.

Recording of Assessments
A standardised checklist has been developed to promote consistency of assessment. This can be accessed via the link at the top of this section.

The checklist meets the requirement to record assessments. The form includes an advice column that should enable the user to take action themselves or refer an issue to a specified role within the School/Department. Appendix 3, [Safe Use of Display Screen Equipment](#) and the training referred to, should assist users in being better informed and able to carry out a self-assessment.

DSE assessors should also use the form to record assessments. DSE Assessors should carry out assessments where the individual has not been able to satisfactorily complete the assessment or has unresolved issues.

Each School/Department should maintain records of who their users are, the workstation assessments and any relevant documentation relating to actions that have been taken and training/information that has been provided.

Shared workstations must be considered for each user of the workstation as it is likely that individuals will need to make adjustments to the workstation set-up to suite them and this requirement must be highlighted with each user.

Review of Assessments
Schools/Departments should review the validity of existing DSE assessments on a regular basis, every two years is recommended.

If a new employee is employed at an existing workstation, an assessment must be carried out. The assessment is relevant to each user, not the workstation.

If there are significant changes to a workstation, it must be re-assessed and actions implemented to meet the requirements of the Regulations. Examples of significant changes are:

- if the workstation is relocated;

- a major change in workstation furniture;
- a substantial increase in the amount of time required to be spent using display screen equipment;
- a substantial change in other task requirements (e.g. more speed or accuracy);
- a major change to software used;
- a major change to the hardware (screen, keyboard, input devices etc); this includes replacement of an unrepairable item with a new one, even if the replacement is the same model;
- if environmental conditions such as the lighting are significantly modified.

7. Minimising the Risk
There are two key ways in which the risks arising from the hazards associated with DSE work may be minimised:

1. Provision of suitable workstation equipment and its set-up
   As the standard of equipment now provided for University workstations is generally compliant with the minimum standards laid down in the DSE regulations, the key aspect to focus on is the layout, adjustment and use of that equipment.

2. Work Routine
   The work routine is both the time spent doing DSE work and the length of individual sessions that can have an effect on the risk of developing ill-health effects.

Workstation Equipment and Set-up
Users' workstation equipment must be compliant with the minimum standards as given in the guidance (Appendix 1) to the DSE Regulations. This applies to the display screen, the keyboard and other input devices, work desk/surface, work chair, working environment, space, lighting (reflections and glare), noise, heat and humidity and radiation. General guidance is also given on task design and software that must be suitable for the user, adaptable to the capabilities of the user and generally user-friendly.

Also in the guidance (Appendix 4) to the DSE Regulations there is information concerning work with a mouse, trackball or other pointing device. The pointing device must be suitable to the user and information relating to its positioning, cleaning and settings must be provided to the user.

If the workstation is intended for use by a person in a wheelchair there may be special requirements, but in any case the needs of the individual have priority over rigid application of the Regulations. This would also apply to anyone with certain back complaints and others who would need special items that might not conform to the specific requirements of the Regulations.

Once the workstation equipment is suitable, it is necessary to ensure it is set up ergonomically. This is checked during the workstation assessment and information should be provided to the user on how this may be achieved and maintained (see section below on Information and Training).

Work Routine

The principle is to arrange the work so that periods of DSE work are regularly interrupted by periods of other activity. The purpose of the change in activity is to prevent the onset of fatigue and muscular-skeletal problems, not for recuperation.

There are no specific requirements for the length of DSE sessions but the following is recommended:

- No single DSE session should exceed 90 minutes without a change of activity. Such as session is to be followed by a change of activity of not less than 15 minutes.
- Shorter sessions are preferable: such as 30 minutes followed by 5 minutes of change or 60 minutes followed by 10 minutes of change.

For some users, DSE sessions are frequently interrupted for brief periods by visitors, telephone calls, etc. These help to relieve fatigue and in some cases may be sufficient to act as the change of activity.

8. Information and Training

Users shall be provided with information on all aspects of health and safety relating to their workstations.

Appendix 2, Safe Use of DSE (Training and Self-Assessment information) should be brought to the attention of all users so that they may understand what training and information is available and be better equipped to undertake a self-assessment of their workstation.

An on-line training package is available via the Safety Office website and is the main training resource for users to obtain general DSE safety training.

There are other training options available:

- The University regularly holds Safe Use of Display Screen Equipment courses, see Safety Office Training page. These courses are run by Occupational Health.
- The Safety Office or Occupational Health may be requested to run courses for individual Schools/Departments (approx. 1 hour in duration).
- The local DSE Assessor may choose to organise his or her own course. A video ("Office Ergonomics") is available for loan from the Safety Office.

Training sessions should include:

- The recognised health effects associated with DSE work and how to recognise symptoms of upper limb disorders and the method of reporting such symptoms or other problems.
- The University standards for compliance with the DSE regulations and how these will be addressed, i.e. what the user can expect of the University.
- How workstations can be set up ergonomically and the correct manner of adjusting and checking a workstation.

- Information on the system for providing eye and eyesight tests.

Adequate training in the use of software should also be provided although this is generally not part of the above.

Records of who has had training should be maintained by the School/Department.

9. Eye and Eyesight Tests

Schools/Departments must bring to the attention of users the provisions of the Regulations relating to eye and eyesight tests. The legal situation is that *users* may request an eye and eyesight test which must be made available to them at no cost to the individual.

The procedure for provision of eye tests through the University is given at: dse-eye.htm. It is recommended that all uses are provided with a copy and the local DSE Assessor should ensure the requirements are understood and followed.

The University is not required by the DSE regulations to offer eye tests to students but if a student requests an eye test this can be arranged with Occupational Health at the discretion of School/Departmental management. Any cost incurred must be borne by the School/Department or the individual.

10. Home Working

Where employees are required to work at home, the School/Department must ensure that the requirements of the DSE Regulations in terms of provision of equipment and suitable set-up are implemented. An assessment should be carried out in the home setting; this should be carried out by the user using the standard checklist. Exceptionally it might be necessary for a home visit by the DSE Assessor.

In most cases, staff are not required to work at home but may choose to take work home. Where home-working is at the discretion of the employee, the School/Department is not required to ensure the workstation is compliant with the DSE regulations but it is recommended that employees are advised to ensure their set-up is as ergonomic as possible, e.g. suitable work surface, adjustable chair, good positioning of keyboard and pointing device and reasonable working environment.

11. Use of portable systems (Laptops)

This equipment is subject to the DSE Regulations if it is in prolonged use. The problems associated with DSE work can be exacerbated when portable equipment is involved because it generally has a smaller-than-normal keyboard and/or lack of keyboard/screen separation - this can make it difficult for a comfortable working posture to be achieved. By the nature of the equipment, it can be used in a wide range of environments, not all suited to allowing a good working posture. Prolonged use of portable systems is known to lead to postural problems such as upper limb

(neck, shoulder, back) stiffness and headaches arising from peering at low, fixed screens and wrist and arm problems related to fixed and/or small keyboards.

It is not necessary to assess the user of such equipment in every location but to concentrate on the locations where the risks are greatest, i.e. those where the user uses the equipment for prolonged periods.

In particular, where portable equipment is set up for prolonged use, Schools/Departments should be prepared to provide equipment such as docking stations, separate keyboards, separate pointing devices and/or separate monitors.

Users must be provided with information and training on using suitable locations for the equipment and to avoid prolonged periods of use when good posture is difficult, e.g. in transport. The importance of using docking stations and/or external equipment must be highlighted as well as the need to break up the DSE work with other activities.

Appendix 3 (Work with portable DSE) of the DSE Regulations gives practical advice when selecting portable computers. The key points are:

- Choose as large and clear a screen as possible.
- Choose tilt-adjustable keyboards
- Choose detachable or height adjustable screens or ensure a docking station is available
- Choose models that are capable of being used with docking stations and/or have the facility to attaching external pointing device and keyboard.
- Choose models where the casing incorporates a wrist pad space.

It should also be noted that beside the DSE risks, the other hazards associated specifically with portable equipment are personal safety (theft of equipment) and manual handling problems (carrying equipment long distances).

For further advice, please contact the Safety Office at bb-safety-office@exmail.nottingham.ac.uk

Appendix 1

DSE/VDU Workstation Assessment Form

Appendix 2

Safe Use of Display Screen Equipment (training and self-assessment information for users)

Guidance on Minimum Requirements

The Schedule and Appendix 1 in L26 (Display Screen Equipment Work, Guidance on the Regulations) lay down and give guidance on the minimum requirements for workstations. The Workstation Checklist is designed to ensure that the minimum requirements are addressed if all questions are positively answered.

Summary of minimum requirements:

Equipment	Minimum Requirement
Display Screen	Characters should be well-defined & clearly formed, of adequate size & with adequate spacing between the characters and lines.
	Image on the screen should be stable with no flickering.
	Should be able to achieve comfortable height and distance from the user
	Screen must swivel and tilt easily and freely to suit user
	Screen shall be free of reflective glare
	The brightness and contrast shall be easily adjustable by the user
Keyboard	Shall be tiltable and separate from the screen so as to allow user to find comfortable working position
	Shall have sufficient space in front of keyboard to provide support for hands and arms
	Should be directly in front of the user, an equal distance from each arm
	If the user wishes to have wrist support, a wrist rest should be available
Pointing Device (Mouse)	Should be comfortable and suitable for the user
	Should be positioned close to the user
	Should have wrist support if the user wants it
	Should be able to adjust the software settings for speed and accuracy of the mouse
Chair	Shall be stable and allow the user easy freedom of movement and a comfortable position.
	Shall be adjustable in back height, back tilt and seat height and should be adjusted to suit the user
	Shall be of sufficient pan depth (seat)
	Shall be in good condition with all adjusters working correctly
	A footrest shall be provided if the user's feet do not rest comfortably flat on the floor

Desk	Shall have a sufficiently large low reflectance surface to allow a flexible arrangement of the screen, keyboard, documents and related equipment.
	There shall be adequate space for users to find a comfortable position.
	A document holder for hard copy work should be stable and adjustable and shall be positioned so as to minimise the need for uncomfortable head and eye movements

Environment	**Minimum Requirement**
Space	Should be sufficient room for the number of people in the room and each individual workstation should be dimensioned and designed so as to provide sufficient space for the user to change position and vary movements
Lighting, Reflections, Glare	Should not create disturbing glare or reflections on the screen
	Room lighting and task lighting shall ensure satisfactory lighting conditions and an appropriate contrast between the screen and background environment
	Workstations shall be so designed that sources of light, such as windows and other openings and brightly coloured fixtures/walls cause no direct glare and no distracting reflections on the screen.
Heating, Ventilation and Noise	There shall be adequate ventilation and heating
	An adequate level of humidity shall be established and maintained
	There shall be minimal distracting noise