

Revisions to the display screen equipment Assessors Handbook

The following revisions have been made to the DSE Assessors Handbook;

Update number	Section	Page number	Brief summary of update
1	-	-	Legislation. Detailed information on the Health and Safety (Display Screen Equipment) Regulations 1992 has been removed as this is covered by the DSE policy and guidance document.
2	-	-	Minimum requirements for workstations. This has been removed and is now covered by the DSE policy and guidance document.
3	-	-	Loan of equipment. The list of ergonomic equipment available to borrow has been removed and is now available on the updated loan form: http://www.bris.ac.uk/safety/media/gn/work-equip-loan-gn.pdf
4	-	-	DSE flyer. This leaflet has been removed and will shortly be reviewed and made available on the Safety and Health Services website.
4	6	8	Setting up the workstation. A new section with a step by step guide to setting up the workstation is now included.
4	3	4	DSE assessor's responsibilities. A new section has been included outlining the role and responsibilities of the DSE assessor.
5	5.6	7	Laptops, tablets and mobile devices. Addition of information relating to the use of tablets and mobile devices.
6	11	14	Eye test procedure. Contribution increased from £20 to £25.
7	5.1	6	Occupational Health. Minor information update.

Display screen equipment assessors handbook

1. Scope

This document is aimed at School or Service Safety Advisers (SSAs) or nominated Display Screen Equipment (DSE) Assessors and provides information to manage the procedure for display screen equipment (DSE) risk assessments. This document should be read together with the DSE policy document

<http://www.bris.ac.uk/safety/media/po/dsecop-po.pdf>.

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2. Introduction

The Health and Safety (Display Screen Equipment) Regulations 1992 as amended are designed to protect users of DSE from the potential health risks. The regulations require that a suitable and sufficient assessment of workstations is carried out and also sets out the minimum requirements for a workstation. More information on this (including a definition of a DSE user) can be found in the DSE policy document <http://www.bris.ac.uk/safety/media/po/dsecop-po.pdf>.

This handbook aims to help the DSE Assessor:

- complete DSE risk assessments;
- identify poor workplace layout and practices;
- recommend control measures to minimise and prevent adverse health effects;
- understand how to find additional help and advice.

3. DSE assessor's responsibilities

It is the DSE assessor's responsibility to;

- Provide information to users on the risks associated with DSE work and local procedures.
- Arrange for completion of workstation risk assessments as appropriate.
- Review all workstation risk assessments and address issues highlighted.
- Identify where additional measures are required (e.g. workstation adjustments, new equipment or referrals to the Occupational Health Service).
- Ensure workstation risk assessments are reviewed as necessary.
- Maintain records of assessments and any follow up actions taken.

4. Health effects from DSE

The main health effects associated with DSE equipment are musculoskeletal disorders (MSDs), visual fatigue and mental stress. In 2011-12 80% of new work related health conditions were due to stress or MSDs. Whilst the risk to users of DSE equipment are generally low, it is important to follow good practice to prevent and minimise ill health.

4.1 Musculoskeletal disorders (MSDs)

In 2011-12 around half a million people were suffering from MSDs and an average of 17 days are lost per case of MSD. MSDs can affect any part of the body, but problems with the arms hands shoulders, neck and back are most commonly experienced when using DSE. Some cases may be temporary however others may develop over time into chronic health issues.

Important risk factors for developing MSDs include:

- prolonged static positions (especially of the back neck and head);

- awkward positions e.g. flexed wrists or uncomfortable seating positions;
- poorly adjusted equipment;
- repetitive movements;
- lack of adequate space.

4.2 Stress and fatigue

In 2011-12 approximately 40% of work related ill health was caused by stress. Many symptoms described by DSE users reflect stresses arising from their work. Stress and other psychological problems can play an important part in the development of MSDs. Stress causes increased muscle tension and general sensitising of the nervous system, which leads to an increased perception of pain. Stress factors, whether related to work, family or any other area can therefore be important contributors to developing a MSD.

Information on the University's Positive Working Environment programme can be found at: <http://www.bristol.ac.uk/pwe>.

4.3 Eye and eyesight effects

Evidence shows that using DSE is not associated with permanent damage to eyes or eyesight and it does not make existing defects worse. Although computer screens do not damage vision, eye strain may still be experienced.

Rearranging the computer workstation, taking more frequent rest breaks and where necessary getting suitable glasses or contact lenses can relieve these symptoms.

5. Workstation risk assessments

Assessments can be made by any person who has been trained to carry out the task. Please see the Staff Development website for more information on training for assessors and users of DSE.

Workstation assessments must be undertaken or reviewed:

- every 1-3 years (determined locally);
- if the user's health circumstances change (e.g. pregnancy, discomfort, temporary injuries or illness);
- if there are significant changes to the work being carried out;
- if there are significant changes to equipment, software or a desk/office move.

The most effective way to complete the workstation risk assessments process is by asking DSE users in the school or service to complete a workstation self-assessment checklist (<http://www.bris.ac.uk/safety/media/ra/dse-workstation-ra.docx>). The DSE assessor can then review the responses and deal with any issues highlighted.

If any problems are identified the DSE assessor will need to identify measures to reduce risks (e.g. adjustments to the workstation or obtain different equipment) and communicate the findings of the DSE assessment to the appropriate Manager and the

worker concerned. Records of the assessments and actions taken must be kept. Safety and Health Services can provide advice on the assessment process.

5.1 Occupational Health Service (OHS)

The OHS provides a range of services and advice to support both managers and individuals on how work and the work environment can affect an employee's health. The Occupational Health Service works closely with Safety and Health Services, HR, SSAs, managers and the Staff Counselling Service. If a member of staff has a health concern which they think may be related to their workstation they should report this to their SSA or line manager who will be able to investigate further and provide advice. In some cases where there is a significant health issue which cannot be resolved locally, a referral to the OHS may be appropriate. Where a referral to the OHS is needed, this should be completed and led by the individual's line manager. A workstation risk assessment must have been carried out before a referral is made. Further details on the referral process are available from <http://www.bristol.ac.uk/safety/health/staff> The OHS can be contacted on 0117 3317655 or bristol-occhealth@bristol.ac.uk.

5.2 New and expectant mothers

Expectant mothers may be more affected by hazards from the workstation such as:

- awkward postures, heavy lifting, repetitive forces and limited rest periods;
- hormonal changes can affect ligaments and joints, which can cause postural problems, backache and impairment of dexterity, agility, coordination and balance;
- reaching distance and lifting capability can be reduced.

SSAs must ensure that the existing DSE assessment is reviewed once they are notified of a new or expectant mother and also during and after the pregnancy as appropriate (e.g. if any pain or discomfort is experienced).

Further guidance on new and expectant mothers can be found on the Safety and Health Services website: <http://www.bris.ac.uk/safety/media/gn/new-expect-mothers-gn.pdf>.

5.3 DSE users with disabilities

The needs of disabled persons must be properly addressed through a suitable and sufficient risk assessment which takes into account the nature and extent of their disability. Further advice for members of staff responsible for the provision of, and setting up of workstations for disabled persons can be obtained from the Occupational Health Service <http://www.bristol.ac.uk/safety/media/fo/ws-referral-fo.doc>.

5.3.1 Access to work

Each school or service is responsible for funding appropriate equipment an individual may need. If a member of staff has a disability or their health is affecting the way they do their job, they may qualify for "Access to Work" funding and support. The HR

Manager for the school or service should be consulted initially. More information on Access to Work can be found at <https://www.gov.uk/access-to-work>.

The University Disability Services provides advice and support to students with disabilities further information is available from the Disability Services website <http://www.bristol.ac.uk/disability-services/currentstudents/services/>.

5.4 Designated computer areas for students

Schools or services must consider (where applicable) the work and workstations of undergraduate and taught postgraduate students. In practice this will usually mean carrying out a generic workstation assessment for the designated computer area, rather than an assessment for individual users.

5.5 Home workers

Designated home workers are subject to the DSE Regulations regardless of whether the workstation is supplied by the University. Home-based DSE users will require a risk assessment of their home workstation in addition to any workstations used whilst working on University premises.

Home working guidance is available at;
<http://www.bristol.ac.uk/safety/media/gn/homeworking-gn.pdf>

5.6 Use of laptops, tablets and mobile devices

There is an increase in workers using mobile devices classed as DSE. These include items such as smart phones, laptops and electronic notebooks. If any of these items are used intensively for long periods of time a risk assessment should be carried out using the workstation self-assessment form (<http://www.bris.ac.uk/safety/media/ra/dse-workstation-ra.docx>).

General guidelines for laptops:

- Laptops should be used with a docking station or with an external mouse, keyboard and monitor attached.
- Laptop keyboards should be arranged in the same ways as a regular keyboard (see 6.6 for details).
- A suitable adjustable chair should be used wherever possible (see 6.2 for details)
- If a separate keyboard is not available the user should avoid resting the forearm on the wrist rest area when typing. Whole hand and arm movements should be used to navigate around the keys.
- If the worker has to look down at the laptop screen, they should ensure that their neck and head are not held forward to see the screen as this can lead to musculoskeletal pain.
- A suitable bag should be supplied for carrying equipment.

General guidelines for using tablets:

- When reading, use a stand or tilt the tablet to reduce the need for you to bend your head forward to read.
- Whenever possible try to place the tablet on a surface rather than holding it. If you are using the on-screen keyboard for extended periods consider using a blue tooth external keyboard.
- Use a light touch when using the screen it will be more efficient as well as preventing problems.
- When typing or touching the screen regularly have the tablet flat or only slightly angled to ensure your wrists are not in awkward positions.
- If you find you are leaning forwards to view the tablet, enlarge the image or text.
- Keep your screen clean for good visibility and hygiene reasons.
- Remember movement is really important, if you find yourself using a tablet intensively for more than 10-20 mins take a short break, stretch your hands, shoulders and neck and look into the distance to relax your eyes.
- Due to the screen and keyboard being in the same place on a tablet – either your head is angled down or your arms are being held up – if extended periods of time are spent typing or inputting information, you will increase the risk of developing neck and upper limb conditions.

General guidelines for using portable devices:

- Avoid using mobile devices for long periods of time for activities such as using the internet, emailing or typing (using mobile devices for making standard voice calls is excluded for the purposes of this guidance). Instead use a correctly set up and risk assessed pc.
- Look away from the screen regularly when using portable devices to relax the eyes. Consider increasing font size. Vary the fingers that you use and stop frequently to stop.
- Consider using an external keyboard for portable devices. To reduce typing, consider calling instead.
- Hold up the device to reduce bending of the neck.

5.7 Shared workstation

In some work areas a workstation may be used by more than one person. Where this occurs, a workstation risk assessment must be conducted for each person using it.

The range of adjustments must meet the needs of each member of staff e.g. the chair must have a sufficient range in height adjustment for each user. In addition a shorter user may need a footrest which may not be necessary for a taller person using the same equipment.

6. Setting up the workstation

6.1 General office environment

The workstation not only includes equipment such as the computer, chair and desk but also the immediate work environment. It is important that factors such as lighting, temperature, noise and humidity are also considered when setting up the workstation.

- Background noise levels should allow staff to hold conversations and use equipment e.g., telephones in comfort.
- DSE users should not face windows, unshielded lamps or other sources of glare. Adjustable shades (blinds) should be used if workers must face a window.
- Task lighting can be used as necessary.
- The temperature of a workplace/room should provide reasonable comfort without the need for special clothing (the minimum temperature for an office is 16°C).
- There is no maximum temperature but if a reasonable temperature cannot be achieved, local heating or cooling should be provided.
- Humidity can be controlled by removing or adding moisture to the air. Humidity can be increased by having houseplants in the office or by using dishes of moistened pebbles.

6.2 Seating

The chair should allow the user to find a comfortable and well supported sitting position which minimises muscle strain.

- Chairs must be in good working order, comfortable, have good lumbar support, adjustable back rest height, back rest tilt and seat height as a minimum.
- Arm rests are not generally recommended as they can prevent the chair from getting under the desk, encouraging poor posture.
- Adjusting the chair:
 - sit well back into the chair with the lower back in contact with the back rest;
 - move the seat back up and down so that it supports the lower part of the back;
 - adjust the seat back tilt so that it feels comfortable;
 - adjust the seat height so that when sitting at the desk, the user's arms are at 90 degree and the forearms are resting lightly on the work surface (make sure the shoulders are not hunched).
- Once the chair height is correctly adjusted the user may not be able to place their feet flat on the floor. If this is the case a footstool may be required.
- Altering posture can help to relieve muscle fatigue, some chairs have a forward tilt control that allows the worker to sit forward, and this can help reduce fatigue to the muscles of the forearm, neck and shoulders.

6.3 Desks

A suitable and correctly located work surface will allow the chair and other equipment to be positioned appropriately.

- The work surface must be free from glare and reflection and large enough to allow flexible arrangement of the screen, keyboard, documents and other equipment.

- The height of the work surface for sitting postures should usually be between 705 to 735mm. Desk feet can be purchased to raise the height of the desk if necessary.

6.4 Document holders

A document holder may be necessary if the user is regularly transferring data from paper to a PC. It is important to position the document holder so that it does not cause twisting or strain.

- A document holder allows data to be positioned at the same focal length as the screen to minimize eye strain and improve productivity.
- If possible, place the document holder between the keyboard and monitor to avoid twisting to one side.
- A document holder will help eliminate repetitive head and neck movement as well as the need to twist.

6.5 Mouse

Intensive use and poor positioning of a mouse can lead to pain and discomfort. The following steps should be taken to ensure safe and comfortable mouse use:

- The mouse should be comfortable for the user with smooth, precise easy to use controls.
- The mouse should be positioned as close to the centre of the body as possible.
- There should be enough room on the work surface in front of the mouse to support the forearm.
- If the DSE user is experiencing pain or discomfort, an ergonomic mouse may be appropriate (e.g. a vertical mouse which places the hand in a more neutral position or a roller ball mouse where the pointer is moved by a roller ball).

6.6 Keyboards

Intensive use and poor positioning of a keyboard can lead to pain and discomfort. The following steps should be taken to ensure safe and comfortable keyboard use:

- There should be enough room in front of the keyboard to support the user's forearms on the work surface.
- The user should align the "H" key with the centre of the body.
- If a user is experiencing pain or discomfort, alternative designs of keyboard may be appropriate. Narrow keyboards encourage positioning of the mouse close to the body thereby avoiding forearm extension and excess wrist movement. Wave shaped or 'split' keyboards encourage a more neutral hand and wrist position.
- It is not usually necessary to deploy the feet at the back of the keyboard which increase the tilt.

6.7 Wrist support

Special wrist rests are not a requirement however If used, they should be chosen with

care to ensure they do not increase rather than decrease the risks. Aim to support the heel of the hands rather than the wrist.

6.8 Monitor

A correctly positioned monitor encourages good posture and reduces the risk of eye strain.

- Position the monitor so that the top of the screen is at eye level (monitor raisers may be required).
- The monitor should be placed at an appropriate distance (roughly at the end of the user's arm when sat at the desk).
- The screen should be free from glare and reflection and be easy to read.

6.9 Telephones

Heavy telephone users may consider using a headset, especially if they are inclined to cradle the telephone when multi-tasking.

7. Work and breaks

In addition to making physical adjustments to the workstation, consideration must be given to the way the work is organised including frequency of breaks and the mix of different activities and tasks. Whenever possible, jobs using DSE should be designed to consist of a mix of screen based and non-screen based work (e.g. paper-based work or attending a meeting). This prevents fatigue and varies the visual and mental demands placed on the worker.

7.1 Breaks

All DSE users should be encouraged to:

- Take natural / opportune breaks: including standing or changing posture when answering a phone call, or looking into the distance to relieve eye fatigue during a phone call.
- Take micro-breaks (less than two minutes) to rest intensively used muscles: these include resting the hands in a relaxed neutral position, standing up or moving around (e.g. to use the photocopier).
- Take lunch breaks away from the workstation to help relieve strain.
- Take eye breaks to allow the eye muscles to relax:
 - use the 20/60/20 rule (look 20 metres away for 60 seconds every 20 minutes);
 - close the eyes and cover them with the hands without pressing, while breathing eight or nine times;
 - DSE users blink less when looking at a screen for prolonged periods to counter this blink the eyes frequently for a few seconds;
- Take rest breaks:
 - Users should take short and frequent rest breaks (every 30 to 60 minutes)

- ideally standing up or moving around.
- Frequent small postural changes are recommended, individuals should regularly stretch and adjust their position.
 - Breaks should be taken before the onset of any pain or discomfort;
 - More frequent short break are better at relieving strain than a single longer break.
 - Where intensive periods of DSE work are unavoidable, these should be broken up by periods of non-intensive, non-DSE work. Where this is not possible (e.g. jobs requiring only data or text entry or screen monitoring requiring sustained attention and concentration), deliberate breaks or pauses must be introduced.
 - For sustained keying activity or repetitive tasks, a break of a few minutes every half hour should be taken and in some cases every fifteen minutes may be appropriate.

7.2 Work organisation

The following factors should be considered:

- The physical and mental demands on the worker should be well balanced;
- Are tasks and activities as varied as much as possible (e.g. is there a mixture of activities through the day) and if not can this be altered;
- What are the working patterns and working hours of the DSE user and do they need changing? Consider also amount of time spent on the phone, at the PC or on other tasks.
- Is the worker able to decide when they take breaks?

8. Loan of equipment

Safety and Health Services hold a range of equipment which can be borrowed for 2 week periods before deciding whether to purchase. Further details are available on the Safety and Health Services website <http://www.bristol.ac.uk/safety/media/gn/work-equip-loan-gn.pdf>.

9. Purchasing equipment

Most solutions can be achieved by making adjustments to the existing workstation and equipment, but sometimes the school or service will need to provide new equipment such as a chair or ergonomic equipment. The University's Restore website (<https://estates.bris.ac.uk/restore/>) run by Sustainability may have a suitable item available for reuse.

Equipment should be purchased from the University's approved suppliers including;

- Office Depot,
- Insight (for smaller equipment such as mice, keyboards and document holders),
and

- Godfrey Syrett (for chairs and other furniture).

Further information can be found on the Purchasing website:

<http://www.bristol.ac.uk/Depts/Bursar/Purchasing/>. Occasionally alternative specialist equipment may be needed which can be obtained from suppliers such as Back in Action and Posturite. Safety and Health Services can advise on sourcing this equipment as necessary.

Many suppliers will allow you to trial a piece of equipment for a few weeks before purchasing it. After that time it either has to be purchased or returned but this must always be checked with the supplier prior to purchase.

10. Training

All users should be provided with adequate health and safety training. This training should be aimed at reducing or minimising the main risks to health from using DSE and can be tailored to suit the individual school or service.

The following training is available:

- DSE e-learning training: provides DSE users with information on how to set their workstation up correctly <http://www.bristol.ac.uk/safety/training/#e-learning>.
- DSE Users course: run by Safety and Health Services and can be booked through the Staff Development website. This course is ideal for any member of staff who is a current DSE user or will be in future.
- DSE Assessors course: run by Safety and Health Services and can be booked through the Staff Development website. This course is aimed at anyone who carries out DSE assessments.
- Training on touch typing: a good typing technique reduces stress on upper limbs and can help prevent MSDs from developing.
 - <http://www.sense-lang.org/typing>
 - <http://www.typeonline.co.uk/lesson1.html>
- Other training is also available for example tailored training course to suit the needs of a particular school or service or a drop in session where a workstation is set up at the school or service, and members of staff can visit to learn how to set up their workstation and discuss any issues they may have.

11. University eye test procedure

DSE Users are entitled to eye and eyesight tests by a registered practitioner on the following occasions:

- when they first become a DSE user;
- when the user requests it;
- at regular intervals thereafter on the recommendation of the practitioner;
- when the user experiences visual difficulties attributed to display screen use.

Schools or services are responsible for making arrangements to manage eye testing of

DSE users locally and for providing information to staff on the school or service's procedures for eye testing. The local procedures for eye testing should be detailed in the Local Rules document. The school or service will contribute up to £25 towards the cost of the eye test, and up to £35 for glasses specifically required for DSE use (£60 in total).

Further guidance on managing eye testing for DSE users can be found in the DSE policy on the Safety and Health Services website:

<http://www.bristol.ac.uk/safety/media/po/dsecop-po.pdf>

12. Further information

- Safety and Health Services (including Occupational Health):
<http://www.bris.ac.uk/Depts/Safety/>
- Health and Safety Executive advice on working with VDU's:
<http://www.hse.gov.uk/pubns/indg36.pdf>
- University DSE policy:
<http://www.bristol.ac.uk/safety/media/po/dsecop-po.pdf>
- link to University eye test authorisation form
- <https://www.bristol.ac.uk/safety/uobonly/forms>
- Microsoft word keyboard shortcuts:
<http://support.microsoft.com/default.aspx?scid=kb;en-us;290938>