

For: Heads of all Establishments/Settings  
OCC Managers  
Governors/Management Committees  
Trade Union Safety Representatives  
Employee Notice Boards  
Intranet



## Non-Ionising Radiation

### Control of Artificial Radiation at Work Regulations 2010

Health and Safety at Work etc. Act 1974

Management of Health and Safety at Work Regulations 1999 (as amended)

RIDDOR Regulations 1995

### General

Radiation is energy that is emitted in the form of non-ionising or ionising radiation. Non-ionising Radiation is made up of two parts namely Optical Radiation which includes (ultraviolet UV, visible and infrared) light and Electromagnetic Fields (EMF's) which include power frequencies, microwaves and radio frequencies).

### Optical Radiation

Optical Radiation is another term for light and one of the greatest risks to health is that associated with radiation from the sun. Exposure to the eyes of UV radiation can damage the cornea and produce pain, and exposure to the skin can result in redness, burning, and various types of skin cancer.

Serious damage including blindness can also occur with misuse of powerful lasers; and whilst undertaking gas or arc welding, if the proper protective measures are not followed.

### Electro-magnetic fields

Electro-magnetic fields arise whenever electrical energy is used and can be found all around us ranging from power lines, broadcasting masts, to electrical appliances used at home, eg microwave, televisions, security detection devices to mobile phones and wireless communications technologies used at home and at work.

Exposure to high levels of electro-magnetic fields can give rise to acute effects dependent on the frequency and at a low level the central nervous system can be affected and at high levels, can cause a rise in body temperature. These effects are rare and would not normally occur in everyday work environments, however the risks should be considered and the appropriate preventative measures adopted, if required.

## **Serious injuries and conditions**

Associated with optical radiation and electro-magnetic fields such as eye injury, temporary blindness and skin burns, contact a first aider immediately and, at the same time summon emergency services assistance by phoning 999 or 112. Complete an incident report form with full details of how the injured person came to be injured.

## **What does the Manager/Head of Establishment/Setting need to do?**

Managers/Heads of Establishments/Settings will need to consider the following;

Sources of non ionising radiation used in Establishments/Settings are unlikely to cause a problem, unless you do not follow the manufacturer's instructions.

- Any activities where there is a risk of ill health effects as a result of exposure to non-ionising radiation these may include:-
  - employees that work outdoors
  - areas where welding or laser equipment may be used
  - contractors who may use welding or laser equipment on site
  - The testing of equipment such as microwaves for leakage
  - The use of two-way radios
  - Use of infra red equipment

## **What to do**


- Carry out a risk assessment using the HSE's 5 step process
- Identify workplace hazards by focusing on the risks that really matter ie (the ones with the potential to cause real harm)
- Decide who might be harmed and how
- Evaluate the risks (by considering how likely the risk is to occur and how severe the outcome might be and then decide on the precaution/s – these could include:-
  - If working outside;
  - *Avoiding exposure to direct sunlight during the period around noon in summer*
  - *Seeking shade*
  - *Using clothing and eyewear that are designed to provide a high level of absorption of UVR*
  - *Using a hat that will provide shade to the face and neck*
  - *Using appropriate sunscreen*
- Record your findings and implement them
- Review your risk assessment and update if necessary.

Part of the responsibility of an employer is to provide the necessary information, instruction, training and supervision for employees at risk and this is something that you will need to organise.

In addition to considerations that affect employees your duty of care extends to those within your care such as vulnerable individuals and you may wish to assess the risks to them in terms of radiation from the sun using the attached link.

<http://info.cancerresearchuk.org/healthyliving/sunsmart/schools/schoolpolicyguidelines>

For further information and advice:

	email and web addresses	
<b>Specialist:</b>	<b>Dr Keith Bowker</b> <b><a href="mailto:kwb@osrm.co.uk">kwb@osrm.co.uk</a></b>	
<b>HSE</b>	<b>Homepage:</b> <b><a href="http://www.hse.gov.uk">www.hse.gov.uk</a></b> <b>Web address:</b> <b><a href="http://www.hse.gov.uk/radiation/nonionising/whiteboards.htm">http://www.hse.gov.uk/radiation/nonionising/whiteboards.htm</a></b>	<b>0845</b> <b>345</b> <b>0055</b>
<b>Occupational Health</b>	<b>email:</b> <a href="mailto:occupational.health@oxfordshire.gov.uk">occupational.health@oxfordshire.gov.uk</a> <b>web address:</b> <a href="http://intranet.oxfordshire.gov.uk/links/intranet/occupationalhealth">http://intranet.oxfordshire.gov.uk/links/intranet/occupationalhealth</a>	<b>01865</b> <b>815421</b>
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<b>Cancer Research</b>	<b>Web address:</b> <a href="http://info.cancerresearchuk.org/healthyliving/sunsmart/schools/schoolpolicyguidelines">http://info.cancerresearchuk.org/healthyliving/sunsmart/schools/schoolpolicyguidelines</a>	
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<b>Health, Safety &amp; Wellbeing Team</b>	<b>email:</b> <a href="mailto:healthandsafetyhelp@oxfordshire.gov.uk">healthandsafetyhelp@oxfordshire.gov.uk</a> <b>web address:</b> <a href="http://intranet.oxfordshire.gov.uk/links/intranet/healthandsafety">http://intranet.oxfordshire.gov.uk/links/intranet/healthandsafety</a>	<b>01865</b> <b>797222</b>