

HIGH POTENTIAL RISK GROUPS IN RISK ASSESSMENT

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INTRODUCTION

Risk assessment is “person-specific”; the risks are assessed for particular staff doing particular tasks. Some individuals are more likely to be at risk, or the risk is likely to be greater. Example groups include:

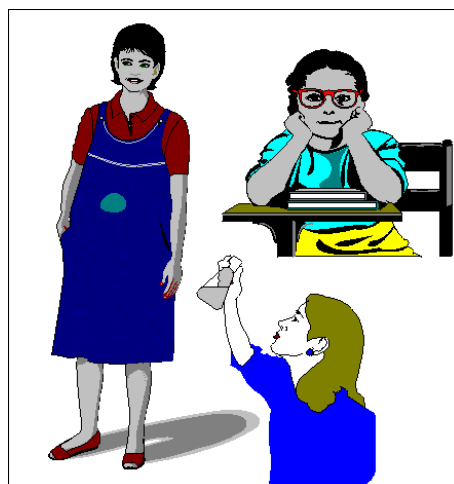
- The inexperienced such as young people, students, or those making radical changes in the type of work they do, irrespective of age
- Women who are pregnant
- Women of childbearing age who may be pregnant but, as yet, are unaware of their pregnancy
- Those whose mother tongue is not English and who may not understand the implications in phrasing of safety information and instruction
- Volunteer or casual workers who have no background experience of the full safety systems of the organisation
- Those suffering illness or returning to work after long-term sick leave

The **Health & Safety at Work etc. Act (1974)** and the **Management of Health & Safety at Work Regulations (1999)** recognise a greater duty-of-care of the employer to such individuals. Specific regulations emphasised this duty-of-care specifically towards young people in the **Health & Safety (Young Persons) Regulations (1997), revoked in 1999 and subsumed into the Management of Health & Safety at Work Regulations (1999)**; guidance has been issued and reprinted by HSE covering **New and expectant mothers at work: a guide for employers (1994 to 1999)**.

All injuries, and near misses, must be entered in the local Accident Book.

This procedure covers risk assessment for:

- Young persons
- Women of child-bearing age
- Pregnant women
- Nursing mothers
- Students
- Chronically sick staff
- Staff returning after long-term sick leave
- Casual workers
- Volunteer workers
- Those whose mother tongue is not English
- General guidance for high-risk groups



CONTENTS:

Operational procedures:

- [The inexperienced – young people and staff new to a task or area of work](#)
- [Chronically sick staff and staff returning after long-term sick leave](#)
- [Operational procedures: Women of child bearing age, pregnancy and women who have recently given birth](#)
- [Operational procedures: Students, visitors, casual workers and those whose mother tongue is not English](#)

- [Roles and responsibilities](#)
- [Management, monitoring and auditing](#)
- [System flow diagram for risk assessment for young people](#)

Appendices:

- [Appendix I: The Management of Health & Safety at Work Regulations \(1999\) – summary relating to young persons](#)
- [Appendix II: “New and expectant mothers at work: a guide for employers” \(1994\) \[latest reprint date 1999\] summary](#)
- [Appendix III: Sources of further information](#)

OPERATIONAL PROCEDURE: The inexperienced – young people and staff new to a task or area of work



All work within NERC is subject to risk assessment for health and safety. All risk assessments must take account of the experience of the staff conducting particular tasks. A summary of the relevant regulations can be found in [Appendix I](#).

Management involvement: Management are responsible for setting up, overseeing and monitoring risk assessments within their area of responsibility (see the [NERC Health & Safety Procedure Number 12: Risk Assessment and Risk management](#)). Line management at all levels must ensure that the risk assessment process has provision for linking risk to experience and that:

- young people (defined as less than 18 years of age) understand the risks in the areas in which they are to work, have been given clear instructions on how to work in safety, understand exclusions (see below) and are carefully supervised
- the provisions of the **Health & Safety (Young Persons) Regulations (1997), now subsumed into the Management of Health & Safety at Work Regulations (1999)** have been followed
- current risk assessments and Safe Systems of Work are re-visited and revised when young, new, or other inexperienced staff join existing teams
- new staff only begin tasks when risk assessments and, if medium or high risk is identified, Safe Systems of Work are in place
- a **specific supervisor** is appointed to take charge of young persons. The supervisor should specifically understand their responsibilities and must make specific arrangements to delegate those responsibilities when absent

Employment of Young Persons It is NERC policy **not to employ** young persons under the age of 16. However, young persons of this age do work on NERC sites for short periods as a result of local “Work Experience” programmes and through liaison arrangements with local schools and colleges. NERC encourages cooperation with education authorities and schools. Normally, the educational establishment and/or the local education authorities will require information on the health and safety provisions in place on the NERC site before students are placed. Once the student is working at the NERC site, local management has **full responsibility** for his/her health and safety. Young persons employed between the ages of 16 and 18 fall under the requirements of the **Health & Safety (Young Persons) Regulations (1997) , now subsumed into the Management of Health & Safety at Work Regulations (1999)**

The role of the Schools Liaison Officer NERC sites should have a local **Schools Liaison Officer** who will normally make arrangements for work experience placements at the site. There must be close cooperation at all sites between the senior management, local administration, the Local Safety Adviser and the Schools Liaison Officer in organising placements and making health and safety provisions. The Schools Liaison Officer should have:

- the NERC, Centre/Survey and local Safety Policy documents to copy to schools, colleges and/or local education authorities. It is useful to have a version of these which makes arrangements clear without prior knowledge of the organisation
- copies of the risk assessments and (if appropriate) Safe Systems of Work for the tasks in which the student will be involved **OR**
- where specific tasks are not yet known, a text describing how risk assessments and Safe Systems of Work will be generated

On the day the Young Person starts work The first tasks of the supervisor should be to:

- explain health and safety policy and sources of information
- explain the concepts of hazard and risk
- explain the basics of the tasks to be performed during the placement and get the student to try to identify the hazards and risks involved
- go through the existing risk assessments with the student and make any necessary modifications to take account of the student’s inexperience

- re-visit the Safe System of Work, make any changes necessary and **ensure that the student has a written record of discussions and safety documentation**

Consideration of health and safety issues should be seen as part of the training/work experience which the students receive from NERC.

At the end of the first day on site, a letter to the student's parents/guardians should state what health and safety provisions have been made; this should be copied to the student. The letter should be issued by the senior officer on site.

Exclusions should be identified It is probable that tasks, equipment, chemicals etc., which have been assessed as having substantial hazard or risk, are present in the physical areas where the student will work. The student should be aware of such hazards and risks and that he/she is excluded from particular areas or tasks. These exclusions should be listed in the letter to the student and his/her parents or guardians. NERC staff working in these areas should be made aware of exclusions.

Supervision ... must be close and **continuous if significant risk is identified** in the tasks the young person undertakes.

Authorisation. The normal authorisation procedures for risk assessments and Safe Systems of Work apply (see the [NERC Health & Safety Procedure Number 12: Risk assessment and Risk management](#)). Young persons should be made aware of what the authorisation procedures mean.

Record actions. Careful records are always important in risk assessment; particular care should be taken where young persons are involved.

Encourage and monitor feedback. Young persons should be involved at all stages of the preparation of Safe Systems of Work. Feedback is useful to refine and develop procedures.

Other inexperienced staff. The general principles applying to young persons should be applied to all inexperienced staff:

- information and training is essential before tasks are performed
- the staff should be involved in the generation of risk assessments and Safe Systems of Work
- existing risk assessments and Safe Systems of Work must be re-visited and modified to reflect inexperience
- operation of safety procedures must be monitored
- actions taken must be recorded

OPERATIONAL PROCEDURE: Chronically sick staff and staff returning after long-term sick leave



All work within NERC is subject to risk assessment for health and safety. Particular care must be taken where staff have **chronic illness** (see [“Definition of terms as used within the safety policy and procedures of NERC”](#)) which might change the risk assessment of particular tasks (for example physical weakness or psychological problems). Staff returning to work following extended periods of sick leave are also a potentially high risk group and risk assessment should be revisited with this in mind.

Management responsibilities: Guidance on the management of the chronically sick and those returning from long-term sick leave is given in Personnel Guidance Notices **PGN01** and **PGN02** for Managers and Personnel staff respectively. These are available on the NERC Website but require a password to download (the password is held by local Personnel staff).

Managers should be aware of the health & safety implications of staff sickness. Interaction with local and/or NERC **Welfare Officers** should be considered.

The following scenarios are possible:

WHERE STAFF REMAIN AT WORK DURING ILLNESS

Management aware of illness which might affect health & safety risk assessment: All risk assessments, risk control measures and Safe Systems of Work must be revisited. Measures put in place must be documented. The situation should be kept under review in the light of how the illness progresses. It is the individual staff member's choice whether or not to consult the local **Welfare Officer** about the illness. Management may engage the **Welfare system** if they want to obtain advice on how to manage the situation, but cannot insist on the staff member seeing a **Welfare Officer**. There are NERC policy and guidelines relating to alcoholism and mental illness; managers could seek advice in these areas from local officers or the **NERC Welfare Adviser**.

Management unaware of illness but staff consulting the Welfare Officer: All consultation between staff and **Welfare Officers** is confidential. Management will not normally even be informed that consultation is taking place. Guidance to **Welfare Officers** acknowledges only one situation where confidentiality should be broken – **where there is the indication of risk to the safety of the individual or to others**. In this very specific, extreme instance, Welfare Officers **must** inform management, but only after telling the staff member that this is the course of action being taken. In all other cases, the Welfare Officer should investigate if there are health & safety considerations with the staff member. Advice can be sought from **C/S or NERC Safety Advisers** rather than Local Safety Advisers, without naming the individual, if this is needed to preserve confidentiality. If potential problems are identified through consultation between the **Welfare and Safety Advisers**, the **Welfare Officer** should discuss this with the client. If residual doubts remain, and the client is unwilling to inform management, the **Welfare Officer** must decide if the situation is sufficiently serious to warrant breaking confidence. It is recognised that this may be a difficult decision for the Welfare Officer; advice may be sought from the **NERC Welfare Adviser** or through the **Occupational Health Service** as appropriate.

WHERE STAFF HAVE RETURNED TO WORK AFTER SICK LEAVE

Management

- should ascertain whether staff are fit enough to perform the job they did before taking sick leave. This is particularly relevant where staff return from sick leave on a part-time basis.
- **must** make necessary adjustments to the risk assessment, risk controls and Safe Systems of Work to take account of remaining weakness, tiredness etc.
- **must** monitor the situation and record decisions and actions
- may consult the **Welfare Officer** on management difficulties/options
- may ask medical staff to advise on what types of work the staff member can now perform
- should be aware that psychological adjustments needed by staff returning to work (see **PGN01**) might have health & safety implications



Particular health and safety risks are associated with pregnancy. Some of these risks may be present, or even greatest, in the early stages of pregnancy, when the woman might not be aware that she is pregnant. **For this reason, risk assessments for all tasks involving women of child-bearing age should take the possibility of pregnancy into account.** Women who are breast-feeding children need to be aware of substances they use during the course of their work which might appear in milk. A summary of the HSE guidance can be found in [Appendix II](#).

Management Management are responsible for setting up, overseeing and monitoring risk assessments within their area of responsibility (see the [NERC Health & Safety Procedure Number 12: Risk assessment and Risk management](#)). Management at all levels should ensure that the possibility of pregnancy has been covered in risk assessments for all women of child-bearing age and the following areas of concern addressed

Areas of concern during pregnancy The following areas of concern have been identified in the HSE guidance:

- **Physical agents:**
 - Shock or vibration (this includes regular NERC activities such as off-road driving) – the dangers include damage to, or dislodging of, the placenta and general stress to the mother leading to high blood pressure
 - Manual handling – guidance values for lifting, pushing and pulling loads should be reduced for pregnant women (see [NERC Health & Safety Procedure Number 8: Safe handling, lifting and movement of loads](#)). Susceptibility to injury from manual handling increases during pregnancy because hormonal changes affect ligaments and bone. Severe strain can affect the placenta directly.
 - Noise – stress leading to high blood pressure
 - Ionising radiation – a risk assessment must be conducted for the unborn foetus as a **separate individual** as soon as pregnancy is confirmed ([Ionising Radiations Regulations \(1999\)](#)). This should cover dose to the foetus through the tissues of the mother's body for external radiation sources (advice on how to do this can be obtained from the National Radiological Protection Board – your Radiation Protection Supervisor will have contact names). In addition, use of open sources of radioactive substances must be addressed. Pay particular attention to substances which can be transported across the placenta and/or are organ specific (an example would be the isotopes of iodine). If uncertain, consult the NRPB.
 - Electromagnetic (non-ionising) radiation – is only a risk if levels are sufficiently high to cause elevation of tissue temperatures. This is highly unlikely in NERC work areas. However, if there is concern, ask for advice. Dose levels of concern are tabulated in [Environmental Health Criteria Number 137: Electromagnetic Fields. Published by WHO \(1992\)](#).
 - Cold/heat – extremes of cold and heat will cause general stress in the mother leading to high blood pressure. Pregnant women are much more likely to faint at high temperatures.
 - Posture – prolonged standing, particularly late in pregnancy, may lead to problems in the mother which persist long after the birth of the child.
 - Diving – pregnant women **must not dive**; it is also inappropriate for pregnant women to work under conditions of compression
 - Use of Visual Display Equipment – re-assessment of workstations under the [Health & Safety \(Display Screen Equipment\) Regulations \(1992\)](#) should be conducted regularly throughout pregnancy as changing size and shape of the expectant mother will affect posture and support during computer use. There is no evidence of adverse effects of electromagnetic radiation from VDUs.
- **Biological agents**
 - Staff using dangerous pathogens (biological agents classified under hazard groups 2, 3 or 4) should be moved to other work during pregnancy
 - Staff handling materials from the environment which might contain pathogens should assume that these would fall in the above categories
 - Staff handling animals or animal tissues should discuss the risk with Safety Advisers; generally contact with laboratory animals should be avoided during pregnancy

- **Chemical agents**

- All COSHH assessments and Safe Systems of Work involving chemicals carrying the following risk phrases should be re-visited as soon as pregnancy is suspected or planned
 - **Risk phrase R40: possible risk of irreversible effects** – generally used for animal or suspect human carcinogens for which there is inadequate evidence for human carcinogenicity
 - **Risk phrase R45: may cause cancer** – used for proven human carcinogens
 - **Risk phrase R46: may cause heritable genetic damage** – mutagenic chemicals which may damage developing sperm or ova in adults or fetuses
 - **Risk phrase R47: may cause birth defects (should have been replaced with the more recent risk phrases below but might still be seen on older labels)**
 - **Risk phrase R61: may cause harm to the unborn child** – generally teratogenic chemicals causing birth defects
 - **Risk phrase R63: possible risk of harm to the unborn child**
 - **Risk phrase R64: may cause harm to breast-fed babies**
- Use of the following chemicals should also be assessed:
 - Antimitotic (cytotoxic) drugs used in specialist research
 - Dermal absorbed chemicals (identified by the “skin” notation in the HSE list of Occupational Exposure Limits **EH-40** published each year)
 - Carbon monoxide – pregnant women are particularly susceptible to the effects of carbon monoxide

Action by staff Staff who are planning to become pregnant, or suspect that they are pregnant, should re-assess relevant risk assessments and Safe Systems of Work. It is best to seek advice and assistance in this task. However, it is recognised that some staff will not want to tell line managers that they are pregnant at an early stage. **Welfare Officers** can be consulted in complete confidence and they will arrange for advice and assistance, outside the local line-management structure, through Centre/Survey or NERC Safety Advisers. The individual staff member will not be identified. **You should inform your local line-managers as soon as you feel able to do so.**

Action by managers when they are informed that a staff member is pregnant Ensure that all risk assessments and Safe Systems of Work have been re-visited. If COSHH, ionising radiation and other risk assessments have been conducted properly, they should already cover the possibility of pregnancy for all women of child-bearing age. If they have not, they should be re-done **as a matter of urgency**. Managers are required to eliminate or minimise any risks identified by:

- Adjustment of working conditions/hours
- Finding suitable alternative work **OR IF NEITHER OF THE ABOVE ARE POSSIBLE**
- Suspension of employment with paid leave

It is a requirement of the **Workplace (Health, Safety & Welfare) Regulations (1992)** that employers provide facilities and opportunities for pregnant staff to rest. It is also a requirement that breast-feeding mothers are provided with facilities to express and store milk whilst at work.

Whilst there is no prescribed list of other facilities which should be provided to pregnant staff, managers should assess the working environment and aim to provide flexible working conditions and equipment which will aid the expectant mother in her job. Driving may become difficult or uncomfortable for women in the later stages of pregnancy; prolonged driving should be avoided.

Senior officers on site may insist that heavily pregnant staff do not undertake specific tasks



The common characteristics of these potentially high risk groups are:

- Short or spasmodic presence on NERC sites
- A lack of background knowledge or experience of NERC safety practice
- Possible contradictory experience of culture or practice on safety elsewhere

Likely problems include:

- Movement of equipment onto or off NERC sites without proper safety checks
- Movement onto NERC sites of chemicals which have not had proper COSHH assessments performed because they were purchased elsewhere
- Lack of coordination of risk assessment and Safe Systems of work between NERC establishments and the parent establishment of the students or visitors
- The assumption that someone else has done the necessary safety assessments
- Misunderstanding of safety instructions or culture at the NERC site
- Safety instructions from NERC managers which require cross-reference to other material the visitors/casual staff may not have

Management action required NERC site management should place particular emphasis on such potentially high risk groups. **Clear lines of responsibility** must be established to ensure that proper risk assessment has been conducted along NERC guidelines and that Safe Systems of Work have been agreed. This, and the following, will normally be the responsibility of the immediate supervisor or sponsor, with the usual authorisation and ratification by line management.

Ensure that:

- Safety systems are fully explained
- Help is given during the process of risk assessment and the development of Safe Systems of Work
- The student/visitor/casual worker knows who is responsible for which aspects of work programmes at more than one establishment
- All NERC site documentation is fully stand-alone, clearly written and understood
- All documentation produced elsewhere is both available to, and has been checked by, the NERC supervisor or sponsor
- Materials (equipment and chemicals) flow is documented and loopholes in assessment avoided
- Proper training has been conducted; ask for confirmation of the adequacy of training/instruction performed elsewhere

ROLES AND RESPONSIBILITIES



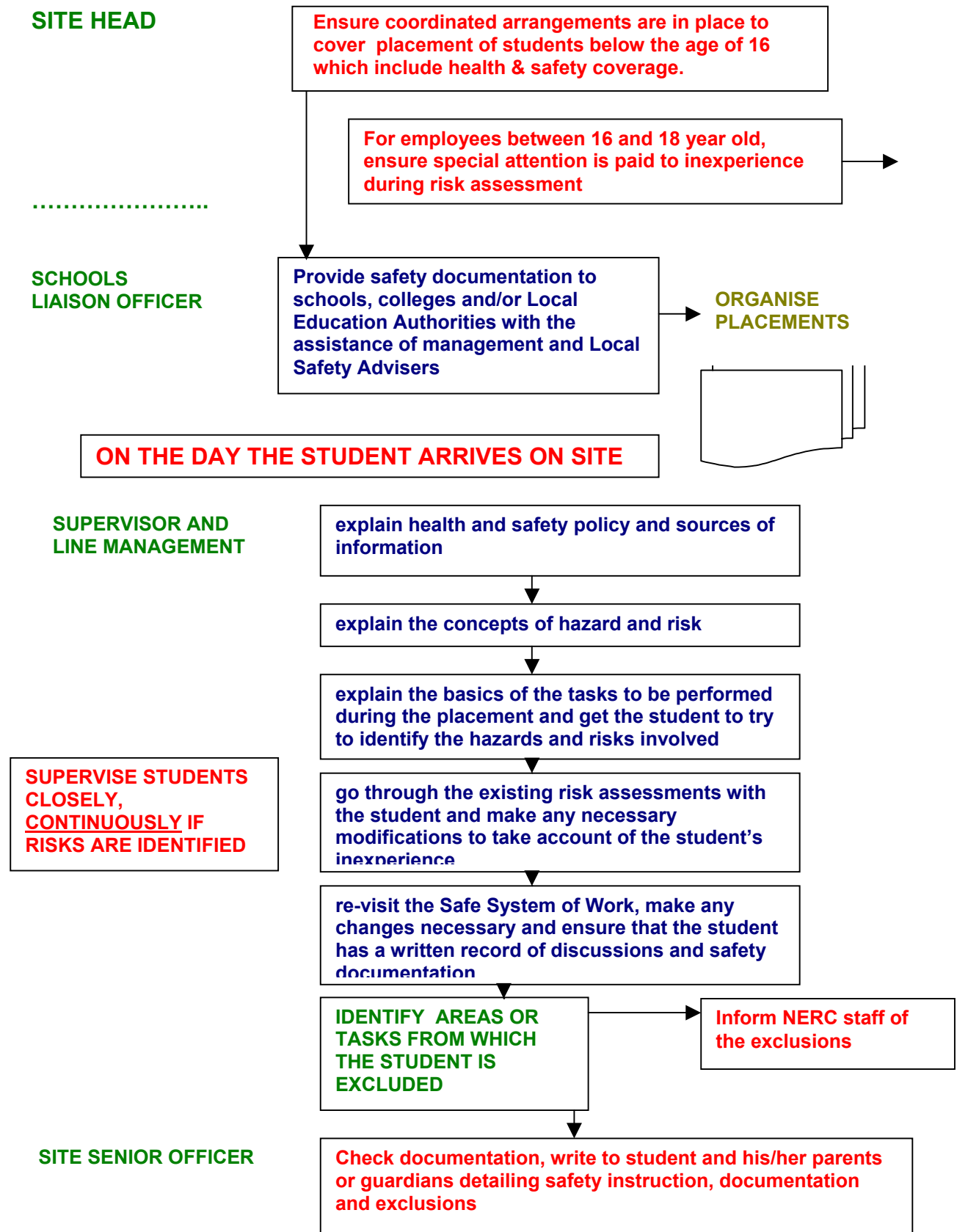
Responsibilities are the same as for any risk assessment under primary legislation or subsequent regulations.

MANAGEMENT, MONITORING AND AUDITING



Management, monitoring and auditing of risk assessment in safety systems is covered in the [NERC Health & Safety Procedure Number 12: Risk Assessment and Risk Management](#)

SYSTEM DIAGRAM for Young Persons under the Management of Health & Safety at Work Regulations (1999) (for all other groups covered in this Procedure, System Diagrams for risk assessment under primary legislation or specific regulations apply) ↑





Where employees (including “work experience students”) are under the age of 18, the employer must:

- conduct risk assessment before they start work
- take into account inexperience, immaturity and potential lack of awareness of risks
- address the risk identified
- inform parents of the risks identified and measures in place
- identify areas of work prohibited to the young person
- identify training needs and address them

Specific areas where risks to young people might be greater include:

- tasks beyond their physical capacity (manual handling)
- tasks beyond their psychological capacity (levels of responsibility and decision-making)
- use of hazardous chemicals (perception of risk)
- use of ionising radiation (acceptable doses are set at 30% of adult dose)
- compressed gases
- machinery
- electrical equipment
- work close to large tanks or vats or in enclosed spaces

Specific exclusions apply but are not relevant to work in NERC.



Employers are required to eliminate or minimise any risks identified by:

- Adjustment of working conditions/hours
- Finding suitable alternative work **OR IF NEITHER OF THE ABOVE ARE POSSIBLE**
- Suspension of employment with paid leave

It is a requirement of the **Workplace (Health, Safety & Welfare) Regulations (1992)** that employers provide facilities and opportunities for pregnant staff to rest. It is also a requirement that breast-feeding mothers are provided with facilities to express and store milk whilst at work.

The following areas of concern during pregnancy have been identified in the HSE guidance:

- **Physical agents:**
 - Shock or vibration
 - Manual handling
 - Noise
 - Ionising radiation
 - Electromagnetic (non-ionising) radiation
 - Cold/heat
 - Posture
 - Diving
 - Use of Visual Display
- **Biological agents**
 - Dangerous pathogens
 - Materials from the environment which might contain pathogens
 - Handling animals or animal tissues
- **Chemical agents**
 - Chemicals carrying the following risk phrases
 - **Risk phrase R40: possible risk of irreversible effects**
 - **Risk phrase R45: may cause cancer**
 - **Risk phrase R46: may cause heritable genetic damage**
 - **Risk phrase R47: may cause birth defects (should have been replaced with the more recent risk phrases below but might still be seen on older labels)**
 - **Risk phrase R61: may cause harm to the unborn child**
 - **Risk phrase R63: possible risk of harm to the unborn child**
 - **Risk phrase R64: may cause harm to breast-fed babies**
 - Antimitotic (cytotoxic) drugs
 - Dermally-absorbed chemicals (identified by the “skin” notation in the HSE list of Occupational Exposure Limits **EH-40** published each year)
 - Carbon monoxide

* There is a specific requirement under regulations on Lead and Asbestos at work to assess risk during pregnancy. This applies only to workers who are normally undergoing statutory health surveillance under these regulations. There are no such workers in NERC.

APPENDIX III: SOURCES OF FURTHER INFORMATION



The full text of regulations and guidance referred-to in this Procedure can be obtained at <http://www.tionestop.com>. Your local Safety Adviser has a password to access this site; material can be downloaded to wordprocessors.

The text of the Environmental Health Criteria Number 137: Electromagnetic Fields. Published by WHO (1992) can be obtained through CEH Monks Wood – contact Paul Howe (01487 772499 or PHO@ceh.ac.uk)

HSE have a web page at <http://www.hse.gov.uk/pubns>