

Three large black arrows are arranged in a descending staircase pattern from the top left towards the right side of the page.

5 steps to risk assessment

CASE STUDIES

HSG183

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Introduction

If you are an employer, or self-employed, you have to carry out a risk assessment of your work activities. This is nothing more than a careful examination of what in your work could cause harm to people, so that you can weigh up whether you have taken enough precautions or should do more to prevent harm.

To help you carry out your assessment, HSE issued a free leaflet *5 steps to risk assessment* giving practical guidance on how to assess risks and record the findings; it was aimed particularly at firms in the commercial, service and light industrial sector.

To support the *5 steps* leaflet and illustrate what it involves in practice, HSE has commissioned a series of risk assessment case studies of typical small firms in those sectors.

The case studies were carried out in individual firms. Don't be too concerned with the detailed findings of their assessments. The point of this booklet is to illustrate the way the firms went about their assessments and how and why they reached the decisions they made. Whatever business you are in, this leaflet will be of help to you in carrying out your own risk assessment.

If you are involved in the same activities as those covered in the case studies, you will find much of the detail directly relevant to you. However, beware! You should not simply read across to your own business - this leaflet does not provide you with a short cut to your own assessment. All businesses have their unique features and a particular case study may cover some hazards you do not have to deal with in your own workplace, and not mention some you do - **you will have to take your own 5 steps when carrying out your own risk assessment.** Even where the hazards are the same, the control measures you adopt may have to be different from those in the case studies so as to meet the particular conditions in your workplace.

Though the case studies each deal with very different activities, you will see that there is a common approach involving the following stages.

Stage 1: Preparation

Don't jump in feet first! Take time to prepare.

Read the *5 steps* leaflet. This will present you with a systematic approach and make clear what sort of information you are going to have to collect and what decisions you are going to have to make to complete the assessment.

You will find it a great help to get hold of and read health and safety publications which cover your work activities and give a guide to the hazards that are likely to be in your type of workplace, and what you have to do to control the risks from them. HSE produces a vast range of such publications: you will see references to some of these in the case studies. Other organisations such as trade associations and unions also produce health and safety information.

The firms who supply you with the things you use at work (equipment, chemicals etc) should also supply you with health and safety information about their products - they have a legal obligation to do so.

But remember, nobody knows your business better than you and the people who work for and with you - make sure you use your knowledge and experience, and theirs, in carrying out the risk assessment. See what your accident book has got to tell you.

Doing the above will enable you to prepare a preliminary list identifying likely potential hazards and the issues to consider when deciding upon control measures. This leads to the next stage.

Stage 2: Touring the workplace

Risk assessment is not meant to be a theoretical exercise. Tour the workplace to confirm, amend and add detail to your preliminary list - what's actually there on the shop floor. You may want to do this by systematically going from work area to work area, identifying the hazards associated with equipment and activities in each area; another approach is to shadow employees to see what hazards they meet while going about their work.

Make sure you talk to your employees, tap their experience, listen to their concerns. The employees' safety representative, if there is one at your workplace, will have a particularly valuable contribution to make.

Stage 3: Completing the risk assessment

With all this information, you can now sit down and complete your assessment (if you have five or more employees, you have to write down the significant findings - you can use the form provided with the *5 steps* leaflet). You will have to decide, for each hazard identified, whether you have done enough to control the risk from it or whether you need to do more and, if so, what.

You should always consider first whether you can get rid of the hazard altogether or replace it with something safer (eg water-based paints are usually a lesser hazard than solvent-based paints). Then, consider whether the control measures you have already taken are enough, or are more needed? In the vast majority of cases, it will be relatively straightforward for you to decide - compare the controls you have got with the good practice set out in the published guidance you read at Stage 1.

If you cannot find guidance covering a particular hazard in your workplace and/or you are uncertain what to do, have a word with your local HSE office. Your trade association or other firms in your line of business may also be able (and willing) to help you out.

Make sure you pass on the significant findings of your risk assessment to your employees.

Finally, remember that the risk assessment is a 'means' and not an 'end'. If your assessment showed that you had more to do to control risk, then do it!

Case study: Risk assessment for an office

Setting the scene

The company employs 18 office staff in a two-storey building consisting of seven offices, a meeting room, a store room containing the photocopier, two toilets and washroom, and a wash-up area containing a small fridge. All offices are equipped with typical office furniture including display screen workstations, filing cabinets, etc.

The office activities include purchasing, sales, financial control and secretarial back-up. All staff access a networked computer system that supports and monitors these activities. Customers are not normally allowed to enter the building, and access by 'others' (sales personnel and contractors, eg window cleaners) is strictly controlled.

The office manager carried out the risk assessment. Although he had a good understanding of general office procedures, (developed over many years of office work), his knowledge of health and safety matters was not so comprehensive. It focused on specific issues, for example the importance of emergency procedures. He therefore took some care in preparing for the assessment.

Preparation

The manager began by reading the 5 *steps* leaflet, which explained the risk assessment procedure. He then read through the HSE leaflet *Officewise* and the more general *Essentials of health and safety at work* which enabled him to develop a **preliminary** checklist, outlining the main hazards and the associated issues he would have to consider further. This was his list:

Hazard	Issues to consider
Manual handling	Heavy loads, lifting equipment, training.
Display screen equipment	Level of use, comfort of staff, training.
Electrical equipment	Visual checks, routine maintenance.
Fire	Means of escape, fire alarm and fire-fighting, housekeeping, storage, smoking.
Slips, trips and falls	Maintenance, housekeeping, training.
Hazardous substances	Can use of existing chemicals be eliminated, or safer substitutes used? Also consider data sheets, procedures for use.
Others	Toilets, washrooms, temperature, welfare.

The manager also made an another initial list identifying the people who might be affected by hazards in the office. He found that the checklist under 'Who might be harmed?' in the 5 *steps* leaflet proved useful for this stage of the process. His list was:

Firm's own employees: office workers, office cleaner.

Others: delivery people, sales personnel, contractors.

Members of the public: not normally allowed into the building.

Tour of the office

Having completed his preparation, the manager continued the risk assessment by making a tour of the office. He did this so that he would be able to identify where and how hazards arose in practice in the workplace and how harm could actually occur. He:

- ☐ made sure all areas and activities were covered;
- ☐ used the preliminary assessment checklist as a prompt;
- ☐ talked to supervisors and staff to learn from their more detailed knowledge of areas and activities, and to find out their concerns and opinions about health and safety issues in their workplace;
- ☐ looked at the accident book; and
- ☐ recorded what controls, if any, were in place to manage these hazards.

During the tour, the manager identified the particular examples in his workplace of the hazards on his preliminary checklist, and added some not on the list. For example, the falling of items stored at height; and talking to a supervisor revealed that staff were bringing their own electric kettles into work.

Completing the risk assessment

The manager used the information gathered during the tour to set down the particular hazards he had identified, the people at risk from those hazards and the existing control measures.

He then considered the advice in *5 steps*, *Officewise* and *Essentials of health and safety at work*, in consultation with his supervisors to complete the assessment. For each hazard identified, he had to judge whether the control measures currently in place were sufficient or, if more were needed, what should be done. He wrote down any additional control measures required.

The manager's record of the assessment is shown on the attached table.

Copies of the assessment were then given to all members of staff by their supervisors with whom they discussed the findings. The assessment was also used as a basis for induction training of new staff. The manager decided that a review and update should be made annually or at any time when major changes in the workplace occurred.

Costs and time taken

The time taken by the manager in consultation with the supervisors to perform the risk assessment was:

Preparation (obtain and read documentation)	2 person hours
Gathering information	3 person hours
Recording and considering further controls	2 person hours
<i>5 steps to risk assessment</i>	free publication
<i>Officewise</i>	free publication
<i>Essentials of health and safety at work</i>	£5.95

Hazard	Who might be harmed ?	Existing controls	Standard to be reached	Future actions
			(This column has been included to explain the link between 'existing controls' and 'future actions'. It would not normally appear in a written risk assessment)	
<p>Manual handling Deliveries: paper (regular); office equipment (infrequent).</p>	<p>All staff - paper.</p> <p>Named staff - office equipment and other heavy loads.</p> <p>Staff of contract paper suppliers.</p>	<p>Trolley used to transport boxes of paper etc.</p> <p>Only named staff move computers and other heavy loads.</p> <p>Top shelves used for storage of light boxes only.</p>	<p>Avoid risk of injury by removing need for manual handling or provide mechanical aids.</p> <p><i>Essentials</i> p22.</p> <p>If risk cannot be avoided, more detailed assessment, as required by Manual Handling Operations Regulations, is needed.</p>	<p>Need for manual handling training of named staff to be kept under review.</p> <p>Supervisors to remind staff that heavy equipment to be moved by named staff only.</p> <p>Agree, by contract, with suppliers of paper for delivery to point of store, ie the store cupboard.</p>
<p>Display screen equipment Work station and surrounding area.</p>	<p>All office staff use equipment intermittently, no habitual users.</p>	<p>Adjustable equipment and foot rest.</p> <p>Free eye test if requested.</p> <p>Venetian blinds provided to control ambient light. (One member of staff complained of slight discomfort. Did not know how to adjust the equipment correctly.)</p>	<p>Suitable lighting, comfortable adjustable seating.</p> <p><i>Essentials</i> p8.</p> <p>For habitual users, more detailed assessment of work stations as required by the Health and Safety (Display Screen Equipment) Regulations, is needed.</p>	<p>Supervisors to ensure that staff know how to adjust equipment for own comfort.</p>

Hazard	Who might be harmed ?	Existing controls	Standard to be reached	Future actions
<p>Electrical Office equipment, portable heaters, tea/coffee making equipment, fridge.</p>	<p>All staff.</p>	<p>Sufficient sockets provided. Staff trained to report defective plugs or cables to manager. Photocopiers and computer systems maintained on contract. (Staff bringing in own kettles.)</p>	<p>Equipment must be used and maintained to prevent danger. <i>Officewise</i> p8. Eg visual checks by users; periodic formal visual inspections. More detailed inspection and testing of equipment liable to damage. Avoid overloaded sockets.</p>	<p>Arrangements to be made for periodic formal visual inspection. Periodic inspection and testing of portable heaters. Staff instructed not to bring in their own kettles, as maintenance cannot be assured. Water heater and coffee machine to be provided.</p>
<p>Fire</p>	<p>All staff and visitors.</p>	<p>Fire evacuation procedures displayed at each fire alarm point. Fire drills twice yearly. Exits and fire exits clearly marked. Access to exits and extinguishers to be kept clear at all times. Fire alarms maintained and tested by manufacturer. Waste bins emptied daily by cleaners.</p>	<p>Escape routes, fire alarms and fire-fighting equipment should be managed and staff trained. Minimise opportunities for fire to occur. <i>Essentials</i> p9. (Fire certificate from local fire authority would be required if more than 20 work in building, or more than 10 working elsewhere than on the ground floor.)</p>	<p>Fire extinguishers inspection to be put out to contract urgently. The office manager to make regular inspections to ensure that fire rules are followed and housekeeping standards are maintained. Training on use of extinguishers to be organised.</p>
<p>Slips, trips and falls Floors, staircases and entrances.</p>	<p>All staff and visitors.</p>	<p>Reasonable house-keeping standards maintained. Cabinet drawers and doors kept closed when not in use. Trailing cables from electrical machinery managed. Floors, staircases and doors cleaned on a regular basis by the cleaners. Repairs and maintenance carried out when necessary. Stairs well lit and handrail provided. Entrance well lit.</p>	<p>Condition and type of flooring, amount of lighting and standard of housekeeping should be such to prevent injury. <i>Officewise</i> p11.</p>	<p>Housekeeping to be discussed at regular staff meetings. Supervisors given the responsibility of maintaining standards in their areas. Office manager to carry out occasional inspections to ensure adequate standards are maintained.</p>

Hazard	Who might be harmed ?	Existing controls	Standard to be reached	Future actions
Bleach and strong detergents	Cleaner.	None.	Exposure to hazardous substances minimised as required by Control of Substances Hazardous to Health (COSHH) Regulations. Firstly, prevent exposure by not using substance or using safer substitute; otherwise adequately control exposure. <i>Officewise</i> p10.	Cleaner to try safer alternative to bleach. Information on correct use obtained from product instructions for use and data sheet. Cleaner to be made aware of these and what to do in case of splashing or spillage. Protective rubber gloves to be provided.
Photocopier Ozone	All staff, mainly office junior responsible for photocopying.	Photocopier located in large well-ventilated storeroom. Volume of photocopying carried out not large.	COSHH applies.	No further action required.
Smoking	Employees.	'No smoking' policy adopted in the building. Smokers to go outside for a cigarette, etc.	Arrangements must be in place to protect non-smokers from tobacco smoke in rest areas. <i>Essentials</i> p8.	No further action required.
Hygiene and welfare	All staff.	Toilets supplied with hot and cold water and soap/towels. Wash-up area provided with drinking water and a fridge and cleaned daily.	Adequate sanitary and washing facilities, drinking water, rest facilities and a place to dry, change and store clothes must be supplied. <i>Essentials</i> p8. <i>Officewise</i> p14.	No further action required.
Environmental comfort factors	All staff.	Building kept reasonably warm and light, windows open to provide fresh air, plenty of space in offices. (No complaints from employees concerning personal comfort.)	Adequate heating lighting and ventilation and space required. <i>Officewise</i> p14,	No further action required.
Falling objects Items stored in high places.	All staff and others.	Light materials stored on the upper shelves. Step-ladders used to access upper shelves in storage areas.	Always provide well-maintained steps (or stool) for access to upper shelves. <i>Essentials</i> p11.	Supervisor to make occasional checks of the ladders and record findings.

Case study: Risk assessment in a motor vehicle repair workshop

Setting the scene

The risk assessment was carried out on the vehicle repair and maintenance activities of a retail garage. Twenty mechanics are employed on these activities, including two apprentices. Eight of the mechanics work in the bodyshop which contains body repairs and spray/bake facilities. The mechanics all have City and Guilds qualifications. A further two employees work in the stores.

Access of non-employees is carefully controlled. Customers report to reception and do not normally enter the work areas. Suppliers are escorted when visiting the stores, while other personnel, including insurance inspectors and maintenance engineers, are the direct responsibility of the relevant supervisor.

The risk assessment was undertaken by the garage manager. He was familiar with the various work areas but not with the detailed work practices and their associated hazards. He realised that some care would be needed in carrying out the assessment.

Preparation

The manager began by reading the *5 steps* leaflet which explained the risk assessment procedure. He then read through the HSE publications *Essentials of health and safety at work* and *Health and safety in motor vehicle repair*. The manager was particularly concerned with the safe storage and disposal of various waste materials on site, so he went over the arrangements with the licensed disposal contractor on the telephone. He also asked the supervisor of the paint spray facility to provide him with the manufacturer's manual of recommended procedures, as he was aware that this facility presented a number of hazards.

He was now in a position to make a **preliminary** checklist of the main hazards and the associated issues which he would need to consider further. This was his list:

Hazard	Issues to consider
Hazardous substances used and arising from work activity	Can use of existing chemicals be eliminated, or safer substitutes used? Data sheets, procedures for use and storage, personal protective equipment, training, disposal. Exhaust fumes, asbestos arising from work activity.
Fire	Means of escape, fire alarm and fire-fighting, use and storage of flammable gas cylinders, flammable liquids, housekeeping, smoking.
Electrical	Visual checks, routine maintenance.
Mechanical	Guarding, failure of equipment; inspection and maintenance, training.
Manual handling	Heavy loads, lifting equipment, training.
Noise	Assess noise level, improve machinery, isolate noisy activities, ear defenders.
Welding	Protective equipment, adequate ventilation.
Slips, trips and falls	Cleaning, housekeeping, defined work areas, dealing with spillages.
Compressed air	Regular examinations, avoid injections into body.
Others	Waste disposal, hand tools, welfare.

The manager also made another initial list identifying the people who might be affected by hazards in the garage. He found the checklist under 'Who might be harmed?' in the 5 steps leaflet useful for this stage of the process. His list was:

- firm's own mechanics and store staff, and office and sales force; and
- visitors, ie customers delivering or collecting cars, goods suppliers, contractors, inspectors, sales personnel.

Members of the public were not allowed in the areas under consideration.

Tour of the garage

Having completed his preparation, the manager made a tour of the garage with a supervisor. During the tour he:

- made sure all areas and activities were covered;
- used the preliminary checklist to help identify where and how in practice particular examples of the hazards arose in the workplace and how harm could occur;
- talked to staff to find out what work methods were in use and what training they had been given;
- listened to the employees' own concerns about health and safety;
- looked in the accident book; and
- recorded the hazards identified and what controls, if any, were in place to manage them.

Completing the risk assessment

The manager used the information gathered during the tour to set down the particular hazards he had identified, the people at risk from those hazards and the existing control measures. After discussing each hazard with the supervisor and considering the guidance in the HSE documentation, he was able to decide whether their present controls were adequate and what, if any, additional controls were required. This information was then also recorded.

The manager's record of the assessment is shown on the attached table.

The assessment was discussed by the supervisors and their teams of mechanics. The manager decided that a review and update was to be made annually or at any time when major changes in the workplace occurred. He also agreed to the supervisor's suggestion that the assessment should be used as the basis for induction training of new staff.

Costs and time taken

The time taken in consultation with the supervisor to perform the risk assessment was:

Preparation (obtain and read documentation)	4 person hours
Gathering information	6 person hours
Recording and considering further controls	3 person hours
<i>5 steps to risk assessment</i>	free publication
<i>Health and safety in motor vehicle repair</i>	£4.50
<i>Essentials of health and safety at work</i>	£5.95

Hazard	Who might be harmed?	Existing controls	Standard to be reached	Future actions
			<p>(This column has been included to explain the link between 'existing controls' and 'future actions'. It would not normally appear in a written risk assessment)</p>	
<p>Hazardous substances (i) Isocyanate paints; petroleum paints; thinners used in spray booth.</p>	<p>Employees working in the spray booths.</p> <p>Employees storing and mixing paints.</p>	<p>Spray booths totally enclosed, general exhaust extraction in operation during spraying and baking. Spraying work only undertaken by trained staff. Air-fed respirator, disposable overalls, gloves and safety boots worn at all times. Spray/ bake booths maintained on regular basis by contract.</p> <p>Paints stored in separate room with extraction system. Proprietary mixing system used.</p> <p>Inventory kept. Colour-coded metal drum used for waste.</p> <p>Health surveillance carried out on all body shop staff.</p>	<p>Exposure to hazardous substances minimised as required by Control of Substances Hazardous to Health (COSHH) Regulations. Firstly, prevent exposure by not using substance or using safer substitute; otherwise adequately control exposure. Health surveillance may be necessary. Effectiveness of control measures should be monitored, and equipment maintained.</p> <p><i>Health and safety in motor vehicle repair</i> p32-39, 47.</p> <p><i>Essentials</i> p33-37.</p>	<p>Supervisor to monitor the use of personal protective equipment by all body shop workers. Manager to introduce system to record issue and inspection of personal protective equipment.</p>
<p>(ii) Handling of fillers, dust from grinding of fillers.</p>	<p>Employees, particularly panel beater.</p>	<p>Latex gloves worn when handling fillers. During grinding, local exhaust used. Full face mask and cartridge, gloves and overalls used.</p>	<p>COSHH applies.</p>	<p>As above.</p>

Hazard	Who might be harmed?	Existing controls	Standard to be reached	Future actions
(iii) Cleaning solvents, engine oil.	All employees.	Kept in small amounts. Disposed of in colour-coded drums. Gloves and overalls used.	COSHH applies.	As above.
(iv) Car engine running inside, toxic exhaust fumes eg carbon monoxide.	All employees.	Car exhaust attached to extractor system when engine is running. Extractor system maintained and tested to prevent leaks.	COSHH applies.	Supervisor to periodically check carbon monoxide levels in the workshop when engine running and extractive system operating.
(v) Brake and clutch linings and discs (may contain asbestos).	All employees, particularly those involved in the task.	Proprietary drum cleaning equipment used. Dust removed with special vacuum cleaner. Overalls and respirator worn. Overalls cleaned by designated contractor and not taken home.	Exposure to asbestos must be minimised. <i>Health and safety in motor vehicle repair p17.</i>	No further action required.
Fire (i) Sparks and dust from grinding; welding;	All employees, visitors.	Smoking prohibited in all work areas. Fire alarms maintained and tested by manufacturer. Extinguishers provided and inspected under contract. Special fire exits not needed as all work areas have immediate access to outside.	Escape routes and fire-fighting equipment should be managed. Staff should be trained in fire drill, fire-fighting and good housekeeping. Minimise opportunities for fire to occur. <i>Essentials p9.</i>	Manager to arrange some training on use of extinguishers for all staff.
(ii) Use of flammable substances;	All employees, visitors.	Flammables purchased in minimum quantities and stored in well ventilated locations. Flammable liquid waste stored away from main building. Good housekeeping standards.	Flammable substances should be stored separately in secure well-ventilated environments. <i>Essentials p38-41.</i> Fire certificate and petroleum licence required.	No further action required.
(iii) Petrol fires;	All employees, visitors.	Fuel retriever used in emptying vehicle fuel tanks if necessary. Component cleaning in recirculating paraffin system.	Minimise likelihood of petrol spillage. <i>Health and safety in motor vehicle repair p16.</i>	No further action required.

Hazard	Who might be harmed?	Existing controls	Standard to be reached	Future actions
(iv) Charging batteries; build-up of hydrogen, explosion.	All employees, others.	Operation carried out in a well-ventilated area so the hydrogen can disperse. Trained to follow manufacturers' recommendations.	Prevent build-up of explosive atmosphere. <i>Health and safety in motor vehicle repair</i> p19.	No further action required.
Electrical equipment Fixed equipment; range of portable appliances eg hand lamps.	All employees, particularly from portable equipment which is liable to damage.	Testing carried out annually on all portable equipment and users trained to carry out visual checks and report defects. Installed equipment receives regular maintenance.	Equipment must be used and maintained to prevent danger. <i>Essentials</i> p30-32. Eg visual checks by user, periodic formal inspection and testing of equipment liable to damage.	No further action required.
Falling objects Car lift failure. Car jack failure.	Employees, especially in vehicle repair.	Car lifts inspected and serviced every six months by insurers. Jacks and axle stands maintained on a regular basis. Axle stands used after lifting vehicle with jack. Safe working loads not exceeded.	Lifting equipment must be examined every six months by a competent person. <i>Health and safety in motor vehicle repair</i> p10-11. Use jacks that are in good condition. <i>Health and safety in motor vehicle repair</i> p10.	No further action required.
Mechanical equipment Eg grinding equipment.	Employees.	All mechanical equipment checked before use and faults reported to supervisor. Equipment not to be left running unattended. Guarding provided. Protective equipment worn.	Dangerous parts of mechanical equipment must be provided with guards where practicable. The equipment must be adequately checked and maintained. It should only be used by those with suitable training. <i>Essentials</i> p14,48.	No further action required.
Operation of fork-lift truck	Drivers. Other staff visitors.	All operators trained and certified for use of the lift truck. Truck serviced regularly and examined every six months. Stores laid out to enable truck to load and unload safely and pedestrians to pass safely. Flooring maintained to reasonable standard.	Lift truck must be regularly maintained . Operators must be trained. <i>Essentials</i> p24.	No further action required.

Hazard	Who might be harmed?	Existing controls	Standard to be reached	Future actions
Manual handling In the stores; movement of components.	All employees, particularly those in the stores.	Fork-lift truck used to move materials into store and take components to workshop. Manual handling still required.	Avoid the risk of injury by removing the need for manual handling or provide mechanical aids. <i>Essentials</i> p22. If risk cannot be avoided, a more detailed assessment, as required by the Manual Handling Operations Regulations is needed.	Manager to arrange manual handling training for the staff in the store. More detailed assessment to be carried out.
Noise Particularly in body repair work.	All employees, particularly those involved with body work.	Ear defenders must be worn when panel beating. Ear defenders available in vehicle repair for use with certain equipment, eg air saw.	Exposure to noise must be assessed and controlled. Where risk cannot be adequately reduced, hearing Protection should be provided. <i>Health and safety in motor vehicle repair</i> p28.	Supervisors to monitor use of ear defenders.
Welding Toxic fumes, sparks, arc eye.	Employees Performing the task. Others nearby.	A range of head and body protection used depending on the type of welding operation. Local exhaust extraction (LEV) in place.	Exposure to radiation must be prevented. COSHH applies. <i>Health and safety in motor vehicle repair</i> p26.	Screens to be provided to protect others from radiation. Arrange periodic testing of LEV plant.
Slips, trips and falls on the level	All employees. Visitors.	Good housekeeping standards maintained through training and monitoring. Floors degreased weekly. Absorbent granules and sawdust put on spills as soon as possible. Entrances and exits maintained.	Condition and type of flooring, amount of lighting and standard of housekeeping should be such to prevent injury. <i>Essentials</i> p7. <i>Health and safety in motor vehicle repair</i> p48-49.	Walkways and storage areas designated by yellow lines.
Compressed air (i) Explosion of equipment, tyres. (ii) Injection of air in the body.	All employees.	All employees trained in safe working procedures. Air line has deadman's handle. System inspected and serviced every six months by insurers.	Equipment regularly maintained. <i>Health and safety in motor vehicle repair</i> p14. Tyres should be handled with appropriate tools and inflated to correct pressure. <i>Health and safety in motor vehicle repair</i> p18. Accidental injection of air or material must be avoided. <i>Health and safety in motor vehicle repair</i> p14.	No further action required.

Hazard	Who might be harmed?	Existing controls	Standard to be reached	Future actions
Waste disposal	All employees, and others who remove the waste.	Materials disposed of in colour-coded waste bins. Waste removed by firm of specialist contractors.	Other people (waste disposal personnel) who may be affected by the work activity must be protected. <i>Essentials p2.</i>	No further action required.
Hand tools	All employees.	Tool box provided for correct storage when not in use. Damaged tools taken out of use immediately.	Hand tools must be properly maintained and only used for the appropriate job. <i>Essentials p20.</i>	Supervisor to monitor maintenance and use.
Hygiene and comfort	All employees.	Heated mess room with kitchen area provided. Toilets and sinks available, cleaned daily. Locker room for drying and storage of own clothes and work clothing/equipment provided. Portable heaters used during the winter in the workshop.	Adequate sanitary and washing facilities, supply of drinking water, rest facilities and a place to dry, change and store clothes must be supplied. Also facilities for eating food so that it does not become contaminated. <i>Health and safety in motor vehicle repair p48.</i> An adequate working temperature should be provided. <i>Health and safety in motor vehicle repair p50.</i>	No further action required.

Case study: Risk assessment in a warehouse

Setting the scene

The assessment was carried out in a warehouse which is used for the receipt, storage and despatch of cardboard and plastic packaging materials. Twelve staff are employed over two shifts, including the manager and deputy manager. The company also employs a full-time cleaner who has a broad range of cleaning and housekeeping duties.

A small office used for recording receipts and despatches by the manager and his deputy, and a staff mess room, are located inside the warehouse between two roller-shutter delivery doors. The remainder of the building is filled with heavy duty metal racking upon which the palletised goods are stored. Toilet and washroom facilities are provided in an adjacent building.

Most movements of goods involve lift trucks but some manual handling is required when non-palletised goods are handled and when packaging is damaged. All pallets leaving the warehouse are stretch-wrapped.

The warehouse manager did the assessment of the warehouse and delivery area following the advice of an Environmental Health Officer who had visited to inspect the warehouse some weeks before. The manager had a general understanding of the majority of work procedures and their associated hazards (through experience rather than training). He was particularly aware of the need for fire precautions as his insurers had insisted on the highest standards for fire management.

Preparation

The warehouse manager based his risk assessment on the 5 steps leaflet. He began by reading this and then went through HSE's publication *Health and safety in retail and wholesale warehouses*, and the more general *Essentials of health and safety at work*. Using information in these publications he was able to construct a **preliminary** assessment checklist which identified the main hazards he was likely to find in the warehouse and the associated issues he would have to consider further. This was his checklist:

Hazard	Issues to consider
Fire	Means of escape, fire alarm and fire fighting, housekeeping, no smoking, fire certification.
Operation of lift trucks and other machines	Maintenance, training.
Traffic movements (internal and external)	Segregation of pedestrians, well-maintained and cleaned floors.
Manual handling	Avoid where possible, mechanise, training.
Electricity	Visual checks, routine maintenance.
Fall of objects	Adequate racking, regular inspections, handling of pallets.
Others	Noise, lighting, slips, trips and falls, cleaning agents.

The manager then thought about who might be harmed by the hazards in the warehouse. This included not only:

- his own employees; but also
- others including delivery drivers, sales representatives and contractors.

The list provided in the 5 steps helped him to identify particular groups.

Tour of the warehouse

The warehouse manager next made a systematic tour of the four main work areas - the receipt and despatch area, the main storage area, the office and mess rooms and the outside area where traffic movements and parking took place. He was accompanied by his deputy who also had many years practical experience of warehouse work. He did this so that he would be able to identify where and how hazards arose in practice in the workplace and how harm could actually occur. He:

- made sure all areas and activities were covered;
- used the preliminary checklist as a prompt;
- talked to his colleagues to learn from their more detailed knowledge of particular jobs and areas;
- looked at the accident book to gather information on current problems: and
- recorded what controls, if any, were in place to manage the hazards identified.

During the tour, the manager was able to add a hazard not on his preliminary list, ie hazardous substances such as the fumes from the fork-lift truck and from recharging their batteries. He also discounted a hazard, ie noise was considered as a potential hazard but was not included in the assessment as the level of risk was judged as insignificant.

Completing the risk assessment

The manager and his deputy used the information gathered during the tour to set down the particular hazards they had identified, the people at risk from those hazards and the existing control measures.

They then discussed each hazard identified to decide whether present control measures were adequate, checking back against the HSE documents where necessary. The additional controls that they agreed to introduce were recorded.

Their record of the assessment is shown on the attached table.

The manager gave copies of the assessment to all members of staff and the findings were discussed at the next staff meeting. He decided that a review and update was to be made annually or at any time when major changes to the work place occurred.

Costs and time taken

Preparation (obtain and read documentation)	3 person hours
Gathering information	3 person hours
Recording and considering further controls	2 person hours
<i>5 steps to risk assessment</i>	free publication
<i>Essentials of health and safety at work</i>	£5.95
<i>Health and safety in retail and wholesale warehouses</i>	£7.50

Hazard	Who might be harmed?	Existing controls	Standard to be reached	Future actions
			(This column has been included to explain the link between 'existing controls' and 'future actions'. It would not normally appear in a written risk assessment.)	
<p>Fire Bulk storage of easily burnt materials. Ignited through electrical fault, smoking materials, battery recharging etc.</p>	<p>All employees, visitors.</p>	<p>Building designed with fire-resisting materials. Exits and fire exits clearly marked. Fire extinguishers located throughout warehouse. Access to all exits and fire extinguishers kept clear at all times. Fire detection and alarm system in place. Fire evacuation procedures displayed at each fire alarm point. Maintenance contracts for extinguishers and detection/alarm system. Fire drill and training in use of extinguishers held once year. Smoking prohibited in the warehouse. Cleaner ensures no debris left around warehouse. All staff trained in good housekeeping during induction.</p>	<p>Escape routes and fire fighting equipment should be managed. Staff should be trained in fire drill, fire fighting and good housekeeping. Minimise opportunities for fire to occur. Advice from the local fire authority may be needed, depending on the warehouse activity. <i>Essentials</i> p9.</p>	<p>Discussions with insurer on the provision of automatic closing of roller-shutter doors linked to fire alarm are being considered.</p>
<p>Operation of lift trucks</p>	<p>All employees, visitors.</p>	<p>All operators trained and certified for the appropriate type of lift truck. Trucks serviced regularly and examined every six months. Trucks parked in separate bay and locked off when not in use.</p>	<p>Lift trucks regularly maintained. Operators must be trained and competent. <i>Health and safety in retail and wholesale warehouses</i> p35.</p>	<p>Truck driver to check trucks each day before starting.</p>

Hazard	Who might be harmed?	Existing controls	Standard to be reached	Future actions
<p>Machinery Stretch-wrap machine.</p> <p>Conveyor belt for unloading from lorries.</p>	<p>All employees.</p> <p>All employees.</p>	<p>Only standard palletised loads wrapped. Emergency stop button provided. Fixed guards on moving parts. Mechanical parts maintained regularly. Staff trained to use correctly.</p> <p>Guards provided for moving parts. Emergency stop button provided. Regular maintenance.</p>	<p>Dangerous parts of mechanical equipment must be provided with guards where practicable. The equipment must be adequately checked and maintained, and used by those with suitable training.</p> <p><i>Essentials</i> p14. <i>Health and safety in retail and wholesale warehouses</i> p24.</p> <p><i>Health and safety in retail and wholesale warehouses</i> p44-45.</p>	<p>Area around machine to be kept unobstructed at all times and to be indicated by use of markings in fluorescent orange-red.</p> <p>Guard rails to be installed to keep non-users away from conveyor system.</p>
<p>Traffic movements (Inside and outside)</p>	<p>All employees, visitors.</p>	<p>Internal -</p> <p>Gangways and aisles of sufficient space to enable fork-lift trucks to load and unload from the racking safely and allow safe passage of pedestrians in the warehouse. Access to warehouse restricted to employees. Floor condition maintained on a regular basis, housekeeping standards maintained by cleaner and workforce. Warning signs located around the traffic route.</p> <p>External -</p> <p>Parking of cars and vans only allowed in marked spaces well away from external delivery/dispatch area. Outside area gritted when frosty, snow cleared. Reversing of delivery vehicles overseen by warehouse worker.</p>	<p>A safe system of traffic management must be devised to allow vehicles/pedestrians to move about safely.</p> <p><i>Health and safety in retail and wholesale warehouses</i> p51.</p>	<p>Separate pedestrian entrance(s) with protective barrier rail to be provided next to roller-shutter doors.</p> <p>Housekeeping standards and floor condition to be covered by a monthly inspection by manager and brief record kept.</p> <p>Worker overseeing reversing to be given 'high visibility' bib.</p>

Hazard	Who might be harmed?	Existing controls	Standard to be reached	Future actions
<p>Manual handling Regular movement of cartons to pallets. Rolls of stretch wrap, and flat pallets.</p>	All employees.	<p>Conveyor system available to reduce manual handling of materials in and out of delivery trucks.</p> <p>A range of manual handling tasks still required.</p>	<p>Avoid the risk of injury by removing the need for manual handling or provide mechanical aids.</p> <p><i>Health and safety in retail and wholesale warehouses</i> p31-34.</p> <p>If risk cannot be avoided, a more detailed assessment, as required by Manual Handling Operations Regulations, is needed.</p>	<p>Manual handling training to be given to all warehouse staff.</p> <p>More detailed manual handling assessment to be carried out.</p>
<p>Portable electrical equipment Including conveyor and wrapper, industrial cleaner, kettle, fridge, heater in mess room.</p>	All employees.	<p>Installed electrical equipment receives regular maintenance.</p>	<p>Equipment must be used and maintained to prevent danger eg. visual checks by users, periodic formal inspection and testing of equipment liable to damage.</p> <p><i>Essentials</i> p30-32.</p> <p><i>Health and safety in retail and wholesale warehouses</i> p11-13.</p>	<p>Inspection and testing of portable equipment to be arranged and recorded by manager.</p> <p>Training for staff to include visual checks of electrical equipment.</p>
<p>Falling objects From racking and during movement .</p>	All employees, others.	<p>Racking not modified in any way by staff.</p> <p>Racking not overloaded.</p> <p>Staff report any damage to racking immediately.</p> <p>Defective pallets withdrawn from use immediately.</p> <p>Protective footwear and hard hats used by all entering storage areas.</p> <p>Protective gloves provided to handle pallets.</p>	<p>The method of storage and system of work should minimise risk of falling materials.</p> <p><i>Health and safety in retail and wholesale warehouses</i> p20.</p>	<p>Head protection signs posted at entrance into storage areas.</p>
<p>Slips, trips and falls</p>	All employees, others.	<p>Quality of flooring maintained.</p> <p>All staff trained to maintain good housekeeping standards and ensure stock does not project into gangways.</p> <p>Cleaner removes packing debris daily and tidies all areas of warehouse.</p> <p>Pallets stored safely in designated area.</p>	<p>Condition/type of flooring, amount of lighting and standard of housekeeping should be such to prevent injury.</p> <p><i>Essentials</i> p7.</p> <p><i>Health and safety in retail and wholesale warehouses</i> p7.</p>	<p>Suitable absorber to be made available for liquid spills.</p>

Hazard	Who might be harmed?	Existing controls	Standard to be reached	Future actions
<p>Hazardous substances</p> <p>Vehicle exhaust fumes.</p> <p>Bleach and cleaning fluids.</p> <p>Recharging of fork lift truck batteries -potential explosion by release of hydrogen, spillage of acid.</p>	<p>All employees.</p> <p>Cleaner.</p> <p>All employees. Fork-lift truck drivers.</p>	<p>Number of vehicles delivering materials is relatively low; this prevents build-up of fumes.</p> <p>Cleaner made aware of safe procedures. Rubber gloves used.</p> <p>Batteries charged in designated bay that is well ventilated. Safe system of work used which includes provision and use of goggles and gloves. Potential sources of ignition controlled.</p>	<p>Exposure to hazardous substances minimised as required by Control of Substances Hazardous to Health (COSHH) Regulations.</p> <p>Firstly, prevent exposure by not using substance or using safer substitute; otherwise adequately control exposure Health surveillance may be necessary. Effectiveness of control measures should be monitored, and equipment maintained.</p> <p><i>Health and safety in retail and wholesale warehouses p14 -16.</i></p> <p>A safe system of work must be followed to prevent build-up of hydrogen, or spillage of concentrated acid. <i>Health and safety in retail and wholesale warehouses p40 - 41.</i></p>	<p>Investigate availability of safer alternatives for cleaner.</p> <p>Supervisor to monitor to ensure protective equipment is being worn.</p>
<p>Lighting</p>	<p>All employees, visitors.</p>	<p>Good quality lighting provided throughout the warehouse. Cleaner checks that light units are operating and replaced by electrician when necessary. Floodlighting in the external area.</p>	<p>Adequate lighting levels appropriate to the activity should be provided.</p> <p><i>Health and safety in retail and wholesale warehouses p7.</i></p>	<p>No further action required.</p>
<p>Hygiene/ comfort</p>	<p>Employees.</p>	<p>Heated mess room provided with hot and cold water and water for beverages. Area kept clean. Lockers available for employees' belongings. Toilets a short walk away, cleaned daily.</p>	<p>Adequate sanitary and washing facilities, supply of drinking water, rest facilities and a place to dry, change and store clothes must be supplied. Also facilities for eating food which would otherwise become contaminated.</p> <p><i>Health and safety in retail and wholesale warehouses p8-9.</i></p>	<p>No further action required.</p>

Case study : Risk assessment of contract bricklayers

Setting the scene

A two storey block of 16 flats is being built on a compact site off a quiet road. Overall control of health and safety is in the hands of the principal contractor who also has responsibility for site security, all traffic movements on site and for determining, in consultation with sub-contractors, the locations for delivery and storage of materials.

The principal contractor gave prospective tenderers for the brickwork contract relevant information from the principal contractor's health and safety plan. This included details of the physical conditions on site and advised tenderers that the principal contractor would make arrangements for:

- ▣ providing scaffolding on-site;
- ▣ accepting deliveries of palletised bricks and ready mixed mortar;
- ▣ lifting the bricks onto the loading platforms using a fork-lift truck with trained drivers; and
- ▣ ensuring the mortar is moved to the work areas by the lift truck.

This allowed the bricklayers to plan for safety and include the cost of the necessary protective measures in their tender bids. The principal contractor requested that outline method statements be submitted with the tenders, and used these to assess the competence of the bricklaying firms.

Visiting the site

The manager of the successful bricklaying firm visited the site before beginning work. He examined the work area, access, and surrounding environment as well as other site activities.

Preparation

With this information, and his outline method statement, the manager was able to prepare a detailed risk assessment. He followed the general approach adopted in the *5 steps* leaflet but modified the steps slightly since the assessment was carried out before work began.

The manager began by referring to HSE's publications *Health and safety in construction* and *Essentials of health and safety at work*. These publications provided extensive information on the likely site hazards and standard safe working procedures. They also confirmed the approach he had outlined in the method statement for dealing with a number of safety-related issues.

He worked his way systematically through the sections of the outline method statement and, with the aid of HSE's publications, identified the significant hazards at each stage of the job. Having visited the site he was aware of the location and of any special features needing to be taken into account.

He then considered who might be harmed by the hazards identified. His earlier discussions with the main contractor were very important here as he had to consider the safety of:

- other contractors' employees, delivery drivers;
- site visitors, members of the public; and
- his own workforce.

The manager then outlined what controls he planned to adopt. The information provided in HSE's publications was very helpful in addition to his own knowledge and that of the supervisor.

Completing the risk assessment

The manager set down the particular hazards he had identified, the people at risk from those hazards and the control measures he proposed to adopt. This risk assessment enabled the manager to turn the outline method statement into a detailed statement.

The manager's record of the assessment is shown on the attached table.

The manager gave copies of the assessment to the main contractor. They were also issued to all members of the bricklaying team by their supervisor. He made sure they were fully aware of all the workplace hazards and the controls to reduce the risk. Once the work had begun the assessment was reviewed by the manager to take into account any change of circumstances encountered on-site.

Costs and time taken

Preparation (site meeting, gathering documents)	3 person hours
Gathering information	1 person hours
Considering controls and recording	3 person hours
<i>5 steps to risk assessment</i>	free publication
<i>Essentials of health and safety at work</i>	£5.95
<i>Health and safety in construction</i>	£7.95

Hazard	Who might be harmed?	Control measures to be adopted	Standard to be reached
			(This column has been included to explain the control measures to be adopted. It would not normally appear in a written risk assessment)
Falling from a height Off scaffolding.	All operatives using scaffolding.	Bricklayers' supervisor to check that scaffolding was erected to adequate standards by qualified subcontractors and that statutory inspections have been carried out and recorded. Scaffolding not to be interfered with or misused. Scaffolding not to be overloaded or overcrowded with people or objects. Ladders to be in good condition, adequately secured (lashed) and placed on firm surface.	Scaffolding must be designed, erected, altered and dismantled by competent workers under competent supervision. It must be suitable for the work undertaken and must be provided with adequate boarding, toe boards and hand rails. It must be provided with adequate means of access. <i>Health and safety in construction</i> p30-31.
Falling objects Hitting head or body, including feet.	All operatives site visitors, members of the public in the vicinity of scaffolding or of unloading operations.	Brick guards kept in position on scaffold lifts. Waste materials to be removed from scaffolding and placed in skip. Safety hats and protective footwear to be worn at all times.	In the first place, avoid risk of injury by preventing materials falling, then reduce remaining risk with personal protective equipment. <i>Health and safety in construction</i> p42.
Slip, trips and falls Around the site.	All operatives.	Good housekeeping to be maintained at all times. Waste including brick bands and pallet debris to be disposed of in skip. Temporary storage locations to be agreed with site manager.	Surfaces to be kept free of obstruction, so far as is reasonably practicable. <i>Essentials</i> p6.
Manual handling Bricks, mortar loads, equipment movement up and down ladders and scaffolding.	Bricklayers.	Manual handling hazards to be minimised by use of mechanical aids. Wheelbarrows and hods to be used to move bricks from pallets on to leading platforms. Mortar to be moved similarly.	Avoid risk of injury by removing the need for manual handling or provide mechanical aids. Mechanise where possible. <i>Health and safety in construction</i> p62-63. <i>Essentials</i> p22. As the risk cannot be avoided, a more detailed assessment, as required by Manual Handling Operations Regulations, is required.
Hazard to eyes Cutting bricks grinding.	Bricklayers.	Eye protection to be worn when breaking bricks.	Suitable eye protection should be provided and worn to protect against flying objects. <i>Health and safety in construction</i> p81.

Hazard	Who might be harmed?	Control measures to be adopted	Standard to be reached
Mechanical equipment Cement mixer angle grinder.	Bricklayers and other operatives in the vicinity.	All mechanical equipment to be checked daily and defects reported to the site supervisor. Mechanical equipment not to be left running unattended. Cement mixer to be located on firm level ground. Guards to be in place during operation.	Dangerous parts of mechanical plant and machinery must be provided with guards where practicable. Mechanical equipment must be adequately checked and maintained. <i>Essentials</i> p14.
Noise From use of equipment eg angle grinder.	Those using the equipment.	Noise suppressed equipment to be used where available. Ear defenders available for use with equipment.	Exposure to noise must be assessed and controlled. Where risk cannot be eliminated hearing protection should be provided. <i>Health and safety in construction</i> p77-78
Hand tools	Bricklayers.	Damaged tools to be taken out of use immediately.	Hand tools must be properly maintained and only used for the appropriate job. <i>Essentials</i> p20.
Fire/explosion From ignition of fuel or rubbish.	All operatives in the vicinity.	Diesel fuel and petrol to be held in minimum quantities and stored in lockable cage with appropriate fire hazard sign affixed. Suitable fire extinguisher to be kept in vicinity. Good housekeeping to be monitored by supervisor.	Minimise opportunities for fire to occur. <i>Health and safety in construction</i> p14-16
Hazardous substances Mortar. Dust from angle grinding.	Bricklayers. Bricklayers.	Data sheet for mortar to be made available to all operatives. Direct skin contact to be avoided, gloves to be used in handling mortar. Exposure to be treated with soap/water or eyewash. Dust mask and eye protection to be worn when angle grinder in use. Grinding wheels to be changed and set by trained operatives only. Situation to be kept under review in case new hazardous substances are introduced on site.	Exposure to hazardous substances minimised as required by Control of Substances Hazardous to Health (COSHH) Regulations. Firstly, prevent exposure by not using substance or using safer substitute; otherwise adequately control exposure. Health surveillance may be necessary. Effectiveness of control measures should be monitored, and equipment maintained. <i>Health and safety in construction</i> p71-74.
Hygiene/comfort	Bricklayers.	Mobile mess room with propane gas heater and hot and cold water to be provided. Arrangements made for portable toilets, provided by the principal contractor, to be used by bricklayers.	Adequate sanitary and washing facilities, supply of drinking water, rest facilities and place to change and store clothes must be supplied as is appropriate in line with the duration of the work. <i>Health and safety in construction</i> p8-12.

Case study: Risk assessment in a landscape gardening company

Setting the scene

The company is an established family firm of landscape gardeners who prepare ground and maintain grass, plants, shrubs and trees for commercial clients. This includes, for example, laying turf and planting shrubs surrounding newly-built dwellings and maintaining the grass and grounds surrounding business premises.

The company is managed by two directors and employs 25 full-time staff. The premises consist of an office and a secured compound used to store the landscaping and gardening equipment including chemicals such as herbicides.

Since the work takes place in a variety of locations, it was necessary for the company director to devise a generic assessment of the risks posed by the equipment and substances used in the landscaping tasks.

Preparation

The assessment was carried out by one of the company directors who followed the protocol detailed in the 5 steps leaflet. He had collected a range of documents to assist in this process. These included:

- company accident book;
- HSE publication *Essentials of health and safety at work*;
- guidance on safe use of machinery from machinery manufacturers;
- data sheets on safe use of pesticides etc from chemical suppliers.

The director used the information in these documents to make a **preliminary** checklist outlining the main hazards he would be likely to find and the associated issues he would have to consider further. This was his list:

Hazards	Issues to consider
Contact with buried services	Discuss with utilities, locate accurately.
Mechanical	Guarding, inspection and maintenance, training, personal protective equipment.
Manual handling	Heavy loads, lifting equipment, training.
Job design	Repetitive tasks, frequency.
Hazardous substances	Are existing chemicals necessary? Procedures for use, personal protective equipment, training.
Storage and transport of petrol	Small amounts, correct containers, safe system of work assess noise level, improve machinery, isolate noisy activities.
Noise	Provide ear defenders.
Other	Transport, welfare, comfort.

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The director also made a preliminary list identifying the people who might be affected by hazards, as follows:

- the firm's workforce;
- members of the public,

Visiting locations

Having completed his preparation, the director continued the assessment by visiting a number of contract locations. He did this so that he would be able to identify where and how hazards arose in practice in the workplaces and how harm could actually occur. He:

- made sure he saw a representative range of different work activities;
- used the preliminary checklist to identify how and where hazards arose and the sort of accident that would occur and how severe it would be for those harmed;
- talked to employees to identify what they thought were the significant hazards;
- recorded evidence of the working practice actually in use to control the hazards.

Completing the risk assessment

The director used the information collected during the site visits to set down the particular hazards he had identified, the people at risk from those hazards and the existing control measures.

By using the manufacturer's guidance and the other literature he then judged whether the existing control measures for each hazard were adequate. He identified additional control measures for some of the hazards and noted which could be introduced now at minimal cost and those for which there would be a significant expenditure. He wrote down any additional control measures required.

The director's record of the assessment is shown on the attached table.

The director made sure that copies of the assessment were given to all staff and he arranged a meeting to discuss the implications of any changes. As this was a generic assessment, staff were reminded that they might have to tailor the assessment to fit the actual conditions which would vary in practice from site to site. The director decided that a review and update should be made annually or at any time when major changes to the work practices occurred.

Costs and time taken

The time taken to conduct the assessment was:

Preparation	3 person hours
Gathering information	2 person hours
Visiting locations, conducting the assessment and recording the results	6 person hours
<i>5 steps to risk assessment</i>	free publication
<i>Essentials of health and safety at work</i>	£5.95

Hazard	Who might be harmed?	Existing controls	Standard to be reached	Future actions
			(This column has been included to explain the link between 'Present Control Conditions' and 'Future Action'. It would not normally appear in a written risk assessment.)	
Contact with buried underground services Eg cutting live electric cables.	Employees.	Consultation with client, public utilities and other contractors to identify location of buried services. Secure permit-to-dig where required.	System of work required to avoid striking underground services, by detecting services, safe digging practice. <i>Essentials</i> p32.	Company to purchase a cable detector and arrange for training of staff.
Mechanical equipment Mowers, strimmers, shredders, chainsaw, hedgecutters, sprayers .	Employees (contact with moving parts).	Equipment operated only by authorised trained personnel. Guards provided by machine suppliers. A range of personal protective equipment (PPE). Equipment regularly maintained by contract.	Dangerous parts of mechanical plant and machinery must be provided with guards where practicable. Mechanical equipment must be adequately checked and maintained. Operated by those with suitable training and wearing appropriate PPE. <i>Essentials</i> p14, 48.	Users to be trained to report faults immediately. Director to monitor the wearing of PPE.: Formal check of machine guarding to be carried out.
Falling objects and objects striking body While using the machinery and when working on construction sites.	Employees, others.	Employees wear PPE, particularly hard hats and safety footwear. Work area cordoned off and signed to keep members of the public away.	Head and foot protection required as necessary. <i>Essentials</i> p48.	Director to monitor the wearing of PPE.
Noise From machinery.	Those using the machinery.	Ear defenders worn when working with some machinery.	Exposure to noise must be assessed and controlled. Where risk cannot be eliminated, hearing protection should be provided. <i>Essentials</i> p25.	Director to monitor the wearing of PPE.

Hazard	Who might be harmed?	Existing controls	Standard to be reached	Future actions
<p>Hazardous substances Mixing and using; spillage during transport.</p> <p>Pesticides (eg Roundup, Dextrone, Checkmate) Fertilisers (eg Enmag).</p>	Employees, public.	Supervisors hold a certificate of competence in pesticide use. Chemicals, transported and used in small quantities. All users receive instruction in safe working practice and wearing of PPE. Substances carried in minimal amounts in approved storage boxes/vessels.	Exposure to hazardous substances minimised as required by Control of Substances Hazardous to Health (COSHH) Regulations. Firstly, prevent exposure by not using substance or using safer substitute; otherwise adequately control exposure. Effectiveness of control measures should be monitored, and equipment maintained. <i>Essentials</i> p33-37.	Review COSNN assessments. Introduce safer substitutes and safer means of application where possible.
Storage and use of petrol	Employees; public.	Petrol kept under conditions as specified by the licensing authority. Petrol stored and transported in approved containers.	Petroleum licence must be obtained when storing and using even small amounts of petrol. Licence issued by the local fire authority. <i>Essentials</i> p38-41.	No further action required.
Manual handling (moving/ laying turf). Regular (movement of machinery on/off truck, chemicals). Garden refuse.	Employees.	Job rotation to ensure no single employee performs same repetitive task all day. All employees undergo training in manual handling.	Avoid risk of injury by removing the need for manual handling or provide mechanical handling aids. <i>Essentials</i> P22. If the risk cannot be avoided, a more detailed assessment, as required by Manual Handling Operations Regulations, is required.	Request employees to report if they experience upper limb pain - refer to occupational doctor. Director to review manual handling assessments.
Transport Trucks to carry machinery, chemicals, garden refuse etc. Other contractors' transport.	Employees, others.	Trucks only driven by authorised staff. All vehicles on regular maintenance contract.	Vehicles must be adequately maintained, and driven by competent operators. <i>Essentials</i> p24. Ensure pedestrians are conspicuous to vehicle operators. <i>Essentials</i> p24.	No further action required. Obtain high visibility clothing. Director to monitor use.
Welfare/ comfort	Employees.	Depending on duration of the work, the director negotiates the use of main contractor facilities.	Adequate sanitary and washing facilities, supply of drinking water, rest facilities and place to change and store clothes must be supplied as is appropriate in line with the duration of the work. <i>Essentials</i> p8.	No further action required.

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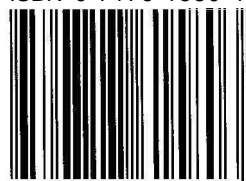
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