

OPERATING CIVIC AMENITY SITES SAFELY

INTRODUCTION

1 This document has **not yet been agreed** as representing good practice by either the Health and Safety Executive or the Waste Industry Safety and Health (WISH) forum. Its status remains that of a **discussion document** until comments and suggestions have been received, adopted and agreed. Comments and suggestions should be sent by e-mail to Trevor Hay at trevor.hay@hse.gsi.gov.uk. The deadline for submissions is 21 January 2005.

2 The draft guidance explains how you can reduce some of the **key** health and safety risks associated with designing and operating a civic amenity site. It does not aim to be comprehensive. The risks associated with your site, and the methods of reducing those risks, should be revealed during your risk assessment.

3 The Management of Health and Safety at Work Regulations 1999 make it a legal requirement for employers to carry out a risk assessment of their undertaking to identify the measures they need to have in place to comply with their duties under health and safety law (see 'Further sources of information' at the end of the document).

4 Risk assessments aim to:

- **avoid** the main hazards indicated below wherever reasonably practicable;
- **assess** the risks from these hazards if they cannot be avoided; and
- **reduce** the risks that remain by implementing risk reducing techniques.

5 It is important that work is **monitored** at appropriate intervals. This will help you identify potential flaws in your systems.

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- Do employees follow your agreed systems of work? If not, why not?
- Are your systems adequate to control the risk? Do they need revising?
- Is the procedure you have instituted sufficiently frequent? Do you need to do certain tasks more (or sometimes even less) frequently?

TRANSPORT

6 The most hazardous activity on civic amenity sites is the movement of vehicles in the proximity of pedestrians; of all vehicle movements, reversing is the most hazardous.

7 You can ease some of the problems caused by vehicle movements by doing the following things.

Slow vehicle speed

- Use high-visibility speed retarders (humps).
- Have a prominent speed limit sign at the site entrance.

Direct people

- Make sure there is a clear route (one-way systems are best).
- Skip contents signage should be easily visible from all parts of the site.
- Vehicle control can be enhanced by having a 'reception' employee who can reduce congestion by controlling vehicle access and giving clear directions.

Segregate vehicles and pedestrians

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- Ensure HGV and heavy plant movements are separated from other activities. The most effective methods of achieving this are by:
 - organising these movements when no other activities are being carried on (eg pre-work or at the end of the working day); or
 - effectively segregating the heavy vehicle movements by clear demarcation and prevention of entry of others to the movement zone.
- Provide clear parking/drop-off zones (consider bollards, kerbs, painted lines and clearly designated areas).
- Provide pedestrian paths, and road crossing points that are in open areas, away from blind corners, and clearly marked (eg zebra crossings).

Minimise reversing

- Use a one-way system that eliminates the need to reverse.
- Position skips so that reversing is unnecessary, or minimised.
- Consider the possible advantages of providing a 'banksman' to guide vehicles (but remember that this work is at high potential risk to the banksman and they should wear high-visibility clothing at all times). It may be an advantage to provide a 'protected zone' of impact-resistant bollards or raised masonry plinth with edge protection for traffic controllers or banksmen to use.

Improve vision

- Provide illumination if twilight/dark reception is carried out.
- Avoid blind corners by appropriate location of receptacles (where blind corners cannot be avoided, provide mirrors, traffic control lights etc).
- Ensure employees wear high-visibility clothing.
- Make obstructions, bollards etc prominent (eg by high-visibility paint or tape).

FALLS FROM HEIGHT

8 The **major** risks of falls from height in civic amenity sites are as follows.

Falls from commercial vehicles/skips during sheeting

9 The unsafe sheeting of high-sided commercial vehicles by climbing onto the vehicle without adequate edge protection or without gantries/harnesses to prevent falls is likely to invoke enforcement action from the Health and Safety Executive. Detailed advice is given on the HSE website at <http://www.hse.gov.uk/workplacetransport/information/sheeting.htm>. You can prevent such falls from vehicles by the following means.

- **Automatic sheeting systems** (autosheeters) remove the need to access the vehicle at height to sheet. They are becoming increasingly popular since they protect workers both on site and out on collection, where other safety facilities may not be provided.
- **Sheeting platforms** (looking similar to scaffolding arrangements) can often be provided.
- **Gantries and harness systems** are often used on site to prevent falls during sheet/unsheeting. The requirements of adequate training, supervision and maintenance should be addressed.

Falls into/from skips

10 Wherever raised platforms are provided above skip-lip height (to permit easy manual skip loading), there is the potential for falls either into the skip or from the platform itself. This risk can be controlled by providing:

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- edge protection barriers around the platform at waist height (similar to scaffolding edge protection);
- a system of work that does not require access at height (eg by leaving heavier items at ground level to be mechanically loaded later);
- prohibiting entry into skips to retrieve contaminants or for 'totting' (removing valuable items). Such items or any contaminants should be intercepted before they enter the skip. Entry into skips could lead to falls over the side of the skip to the ground, or even falls into load voids. 'Retrieval tools/poles' should be provided for staff if interception of items prior to disposal cannot be assured.

SLIPS AND TRIPS

11 There is a high potential for slips and trips injuries to site operators and members of the public. The prime hazards giving rise to the risks include:

- failure to control spillages;
- failure to clear away floor contaminants;
- the condition of floors, steps etc;
- the effects of weather;
- diminished visibility (poor lighting/carrying large loads that affect vision etc).

Floors

12 Floors of sites should be constructed and maintained in a good, sound condition and, so far as is reasonably practicable, without sudden changes in level such as steps, potholes or excessive inclines.

13 Take account of bad weather - good drainage for rainwater and methods to combat ice should be available if necessary. Drainage gulleys should be

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covered to prevent them being a trip hazard and becoming blocked by waste. In areas where liquids are moved, such as oil stores, then spillage controls should be in place, eg bunding and absorbent granules.

Contaminants

14 Keeping contaminants contained is important to prevent their contents encroaching onto walkways.

- Skips should be subject to routines of regular 'decommissioning' (effectively taking them out of service) or emptying to prevent overfilling. This helps prevent people from being struck by objects falling from overloaded skips where the contents are inadequately contained.
- Keep loose piles of materials stable; serious major injuries have occurred where persons have walked on these when the stack face has collapsed. Your systems of work should make walking on stacks unnecessary. Loose material piles should, so far as is reasonably practicable, be kept confined to designated areas, and on-foot access to these areas should be minimised by appropriate working procedures.

Housekeeping

15 Rigorous procedures should be in place to remove spillages as soon as is reasonably practicable. Make sure you quickly clear spilt fluids (especially oils etc) and solid materials that may become slippery underfoot (eg green waste).

Walking on loaded skips

16 Good site management can invariably remove the need to do this! Walking on loaded skips and loose piles of materials causes slips and trips. With thought, and the application of appropriate working procedures, it can nearly always be

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eliminated. The main reasons for walking on material piles are to trim loads, sheet loads or remove contaminants: these issues are addressed in Figure 3 (shortly after paragraph 30).

Impaired vision

17 Impaired vision can increase the risks. Work should only be carried out in adequately lit areas (daylight or adequately lit in twilight conditions). Site procedures, and appropriate working methods (eg two-man handling, stockpiling to permit later movement by mechanical handling aids etc) should be in place to minimise the following situations.

Figure 1 How handling loads can cause falls

Situation	Risk
Handling bulky item	<ul style="list-style-type: none">• Can't see where feet are going, can't assess condition of flooring, presence of contaminants, or changes in flooring level.• Possibly using both hands, therefore cannot grasp handrails etc.• Can't minimise the effects of a fall by using hands to break fall.
Handling heavy item	<ul style="list-style-type: none">• Off-balance due to exertions.• Possibly using both hands, therefore cannot grasp handrails etc.• Can't minimise the effects of a fall by using hands to break fall.

Platforms (ramps and steps)

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18 **Platforms to skips** offer increased risk of slips and trips. Ideally, sites should be designed to be split-level so that materials can be loaded into skips that are below floor level.

19 Where it is not reasonably practicable to operate a split-level site, then ramps or steps to access a loading platform may be necessary. Ramps are preferable as they permit an easy, consistent incline, and may permit the use of mechanical handling aids (barrows etc). They minimise the risks associated with sudden (and often unseen) changes in level.

Design of ramps

- They should not be excessively steep.
- They should be designed with a 'dog-leg' as this minimises yard space usage, and may help arrest 'runaway' barrows etc if very heavy items are being moved.

Design of steps

- They should have broad treads.
- Gaps between treads should be fitted with risers, to prevent feet being caught between treads.
- Tread nosings should be high-visibility (eg yellow contrast painted) and rounded to prevent feet catching.
- There should be a sign warning of step hazard.
- Make members of the public aware that they can ask for staff assistance if necessary.

Materials for ramps/steps

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20 Select slip-resistant materials for ramps/steps: gratings, chequer plate and proprietary applications incorporating grit have been used. The criteria for selecting and using materials include their abilities to:

- resist contaminant accumulation (fine gratings can permit the shedding of fluids, and allow finer solids to fall through);
- provide good grip to the sole without increasing the risk of feet catching in any excessively large gaps in the flooring material.

Maintenance

21 Maintenance of ramps and steps is essential. They should be maintained in a sound condition and kept free of contaminants. Working procedures should include regular checks and maintenance. Check bolts for tightness and welding for signs of failure.

Handrails

22 Provide handrails at steps and ramps. They prevent falls from the sides of these means of access and can help people safely negotiate the changes in level.

MANUAL HANDLING

23 The following guidelines may help you to devise improved ways of working to reduce the risks of injury caused by manual handling.

Avoid manual handling

Does the item need to be moved at all?

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24 There are instances where just leaving the item where it is for a while can eliminate the need to move it (or to move it twice).

Can it be moved using aids?

25 Although manually handling items is no doubt fast and convenient, the accumulated strains on a person can add up over the years. Trying to lift heavier items can cause immediate injury.

- Can the item be left in a 'holding area' to be moved by machinery (eg a skip loader bucket) later in the day?
- Can the item be moved by a barrow or similar?

Assess the task

Can the workplace layout be improved?

26 A well-laid out site will allow:

- vehicles to get as close as possible to the disposal point and therefore minimise distances that items need to be carried;
- a reduction in the amount of twisting and stooping required for both picking up and disposing of items. For example, lifting direct from vehicles is preferable to 'double handling' (when the item is placed on the floor to be manually lifted a second time later).

Can the load be made safer?

27 When assessing how a load could be handled, ask yourself the following questions:

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- Can it be made lighter or less bulky? Sometimes you can reduce manual handling risks by breaking down the load into smaller, more easily managed 'parcels'. This is often a practicable solution in civic amenity sites.
- Can it be made easier to grasp? Similarly, this can often be a practicable option. Loose loads of green waste, for example, could be placed into suitable receptacles for handling. It may be possible to stipulate the acceptable containers that the public may only use for handling their waste on site (eg bags not exceeding a certain capacity or weight).

Can the workplace be improved?

28 Could you improve safety on the site by:

- removing any obstructions to free movement;
- providing better conditions underfoot;
- avoiding steps and steep ramps;
- providing adequate lighting?

Could your staff be working more safely?

29 When looking at the working practices of your staff, it is worth asking yourself the following questions.

- Have your staff been assessed to take into account pre-existing physical weaknesses (bad backs etc)?
- Have they been trained in when and how to use the preferred methods of safer lifting?
- Do they adhere to the agreed safer manual handling procedures? If not, why not? Do your agreed working methods need revising, or do your staff need refresher training or greater supervision?

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- Do you promote less restrictive clothing and personal protective equipment?

GOOD SKIP/CONTAINER PRACTICE

30 The following two checklists summarise the actions you can take to minimise the risks from moving skips and also how you can avoid people walking on their contents.

Figure 2 Checklist for locating skips safely

Activity	Reason	Risk
Check the integrity of the: <ul style="list-style-type: none"> • skip; • lifting equipment; • lifting points. 	Look for: <ul style="list-style-type: none"> • wear; • corrosion. 	<ul style="list-style-type: none"> • Skip or load bearing points could fail.
Look for snagged: <ul style="list-style-type: none"> • chains; • fluid power pipes; • mechanical/structural parts. 	The skip should be able to move freely as intended.	<ul style="list-style-type: none"> • Destruction or catastrophic failure of lifting equipment. • Unexpected movement of skip when it becomes free.
Check the condition of the ground. Is it (and likely to remain): <ul style="list-style-type: none"> • firm; • reasonably level; 	<ul style="list-style-type: none"> • Soft ground can bog down a vehicle or affect the ability to carry out an efficient lift. • Inclines can affect safe 	<ul style="list-style-type: none"> • Stranded vehicles requiring subsequent towing.

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<ul style="list-style-type: none"> • well drained? 	<p>lifting.</p> <ul style="list-style-type: none"> • Standing pools of water can promote skip corrosion and affect their integrity. 	<ul style="list-style-type: none"> • Poor lifting conditions and possibility of overturning. • Catastrophic skip failure.
<p>Check the location and surrounding area. Does the skip's location:</p> <ul style="list-style-type: none"> • conform to your instructions of where it should be placed; • impede or interfere with traffic movement; • make a blind corner? <p>(Special precautions are required under any overhead lines and pipework. Ask site management.)</p>	<ul style="list-style-type: none"> • A skip's location is important for safe and efficient operation of the site. • Interfering with smooth and planned traffic flow can increase the risks of collisions. • Creating blind corners, or obstructing walkways can increase risks to pedestrians. 	<ul style="list-style-type: none"> • Collisions between vehicles/plant/ pedestrians. • Contact with electricity or dangerous fluids.
<p>Are all pedestrians well clear of the drop-zone? Are you absolutely sure there is no possibility of them coming dangerously close? Do you need to:</p>	<ul style="list-style-type: none"> • Effective exclusion of other people during the movement of skips is critical. • Effective skip location is important. Some 	<ul style="list-style-type: none"> • Collision risks to pedestrians • Risks of skip 'over-run' outside the designated

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<ul style="list-style-type: none"> • drop during 'quiet hours'; • have the zone demarcated (cones, bunting, signs etc); • have an assistant as a 'second pair of eyes' to check for or stop pedestrians? 	<p>premises have made this job easier by providing raised floor-guides (eg railway sleepers, kerbs) to ease skip location. Others use painted lines.</p> <ul style="list-style-type: none"> • Prevention of skip 'over-run' can be achieved by using similar materials for raised stops for the skip wheels. 	<p>zone.</p>
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Figure 3 Eliminating the need to walk on skip contents

Activity	Reason	Risk
<ul style="list-style-type: none"> • Good site management can often eliminate any need to walk on skip contents. • Contaminants should be excluded before contents are put in the skip. • Retrieval poles/tools may 	<p>The aim should be to adopt the following hierarchy.</p> <ul style="list-style-type: none"> • Eliminate the need to trim loads by adopting good loading practices. • Use plant to trim loads. • Manual load trimming is the last resort, and should be done from outside the skip using tools wherever practicable. 	<ul style="list-style-type: none"> • Trips and subsequent falls from the skip to the ground. • Trips on the same level. • Falls into hidden voids in the load. • Cuts from load contents.

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<p>be needed for any remaining contaminants.</p> <ul style="list-style-type: none">• Methods should be in place to ensure that skips are loaded evenly.• If you need to 'trim' the load, you can rake with plant buckets or plant fitted with compaction devices.• Any manual trimming should be done using tools from outside the skip.• Systems of work should prevent skip overfilling, eliminating the need to trim the load.		
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MACHINERY GUARDING

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31 Are your machines safe to use? Following the advice in the following section can help you too minimise the risks from machinery used on your site.

Assess the risks

32 Choose the appropriate safeguard and consider:

- normal work at the machine, as well as setting-up, maintenance, repair, cleaning, breakdowns and removing blockages;
- who uses the machine, including experienced staff, new starters and people who have changed jobs or are relief workers;
- whether the guard is inconvenient to use or is easily defeated;
- workers who may act foolishly or carelessly or make mistakes.

33 Suppliers should provide the right safeguards by law, but this is not always the case. A new machine should not be assumed to have appropriate safeguards, so it should be thoroughly checked before first being used.

Choose the right guards

34 When deciding which guards you need, take the following factors into account.

- Fixed guards that enclose the dangerous parts are often the best; it is obvious when they are in place. They should be secured etc so they can't be easily removed without a tool (eg by using nuts and bolts, allen bolts etc).
- Think about the best materials to use for the guard. Where wire mesh or similar materials are used, the holes should be small enough to prevent reaching the dangerous parts. Plastic is easily damaged.

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- For regular approach to the dangerous parts (to clear blockages, lubricate or clean), fixed guards may not be practicable. Interlocked guards, that prevent the machine operating unless the guard is shut, and cannot be opened while the machine is moving, are a common solution.
- Photoelectric devices, pressure-sensitive mats or automatic guards are used where fixed or interlocked guards are impractical. These devices need regular checking and maintenance.

Check and maintain the guards

35 Routinely check and maintain the guards:

- Regularly check that fixed guards are in position and give adequate protection before the machine is used. They must be replaced after removal for machinery repair or to clear blockages.
- Regularly check that interlocked guards are working properly - they can be prone to failure, or to being defeated.
- Institute a system of daily, weekly or 'before-use' guarding checklists.
- Report faulty guards to get them repaired. Your safety may depend on it!

Safe working

36 Machine operators must be able to work safely.

- Users should have received sufficient information, instruction and training to use machines safely.
- You should not be able to start the machine when dangerous moving parts can be touched, eg during maintenance, repair, clearing blockages etc.
- Controls should be clearly marked to show what they do.
- Controls should be designed and constructed to prevent accidental operation. Start buttons and pedals should be shrouded.

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- Emergency stop controls should be kept in good working condition and should be in easy reach.

Figure 4 Operators' pre-use checklist for machinery guarding

Before working on this machine	Yes	No
Are you authorised and trained to use the machine?		
Do you know how to stop the machine before you start it?		
Do the 'emergency stop' controls work?		
Are all guards in position and safety devices working properly?		
Is your working area clean, tidy and free from obstructions?		
Can you tell your supervisor immediately if the machine and safeguards are not working properly?		
Are you wearing appropriate protective clothing and equipment, eg safety glasses, shoes etc?		
Have you made sure that dangling chains, loose hair, loose clothing etc can't get caught up in the moving machinery?		
NEVER <ul style="list-style-type: none"> • try to clean a machine while it is in motion; • distract people who are using machines. 		

Conveyors

37 These machines regularly cause serious injuries when guarding has been removed to:

- clear spillages and blockages, and then not replaced;
- replace belts or adjust the tracking.

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38 Fixed guarding should be designed so that items routinely spilled can pass through the guarding and can be safely cleared away. However, such guarding should effectively prevent anyone touching the dangerous in-running nips between belt and any tensioners and pulleys.

39 Interlocked guards must effectively prevent access to dangerous moving conveyor parts, and prevent restarting until the guard is back in position. Interlocking switches should be robust to withstand foreseeable damage and regularly checked to ensure that they are still working properly.

40 Conveyors should **never** be set in motion without the guards being in place.

Compactors, balers and similar machines

41 Baler/compactor rams have caused serious injuries.

42 Ram shear traps should be suitably guarded, and access should not be possible to these dangerous parts while the machine is in motion or use.

43 In extremely unusual circumstances, and only when traps **cannot** be guarded:

- manual loading and machine working should be a one-person operation and all others effectively excluded from the working area;
- controls should be of a 'hold-to-run design'; release should stop ram movement and ideally return it to the safe 'home' position;
- it should be impossible to reach the ram traps from the controls;
- operators should have a good, unobstructed view of the whole operation and immediate vicinity;

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- under no circumstances should these machines be operated when members of the public cannot be effectively excluded from the vicinity of the machine during use, if it is possible to reach any dangerous moving part of the machine.

44 Depending upon the machine's usage, adequate precautions should be taken to control the risks of ejected materials during use. These may include:

- rigorous exclusion of materials likely to become ejected from the feedstock;
- enclosure (eg by doors, guards or well-maintained chain screens) of the compression chamber;
- ensuring safety by distance (eg feeding by conveyor etc to a remote compression chamber).

STAFF

Personal protective equipment

45 It is important that staff wear the correct equipment on your site.

- High-visibility jackets should be worn at all times.
- Gloves, giving adequate protection, should be worn whenever handling waste.
- Cut-resistant ('ballistic') trousers should be worn wherever there is a risk of cuts to the legs – shorts are inappropriate for work with such waste.
- Boots with steel toecaps and steel soleplates should be worn. Many waste sites insist upon boots with good ankle support since these reduce twisted ankles when dismounting from cabs or accidentally walking on spillages.
- Other equipment (eg helmets, eye protection, ear defenders, respiratory protection) may be needed, depending upon the work done.

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Welfare and hygiene

46 Welfare facilities should be well maintained in a good state with an area for drying clothes in case work has to be carried out in the rain. They should have an area where employees can wash their hands with cleaning materials and warm water. Employees should avoid hand-to-mouth contact (such as smoking, eating and drinking) unless their hands are clean.

Stress

47 The threat of abuse and physical violence to staff in civic amenity sites can be a very real contributor to stress at work but is outside the terms of reference for this document. Further information and guidance on this subject is available in HSE leaflet *Violence at work: A guide for employers* INDG69(rev), available from HSE Books (single copy free or priced packs of 10 ISBN 0 7176 1271 6).

FURTHER INFORMATION

For current information and advice, visit the HSE waste management and recycling homepage:

<http://www.hse.gov.uk/waste/index.htm>

HSE publications and videos: HSE Books, PO Box 1999, Sudbury, Suffolk CO10 2WA Tel: 01787 881165 Fax: 01787 313995 Website: www.hsebooks.co.uk

Health and safety information: HSE's Infoline Tel: 08701 545500 Fax: 02920 859260 e-mail: hseinformationservices@natbrit.com or write to HSE Information Services, Caerphilly Business Park, Caerphilly CF83 3GG HSE website: www.hse.gov.uk

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discussion document (<http://www.networkrecycling.co.uk/contact/index.html>).

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