

MANAGING HEALTH AND SAFETY AT CIVIC AMENITY SITES

This guidance has been developed by the Waste Industry Safety and Health (WISH) Forum to help control safety and health risks in the waste management industry associated with managing health and safety in civic amenity sites. The Health and Safety Executive (HSE) was consulted in the production of this publication. It endorses the sensible, proportionate, reasonable and balanced advice to owners on managing the risk from this guidance during the waste-related activities as set out in the guidance.

This guidance gives advice about health and safety management at civic amenity (CA) sites, also known as household waste and recycling centres. It is primarily aimed at designers, managers, supervisors and operators of such sites. The guidance explains how to reduce and control key general health and safety risks associated with designing and operating a CA site. It includes advice about how to assess hazards and provides solutions that will help eliminate or reduce the risk of serious injury or ill health. It also gives more detailed guidance about the reception, handling and storage of household hazardous wastes – such as asbestos, batteries, gas cylinders, paints etc – at such sites.

Contents

1. Introduction
2. Managing the risks
3. Workplace transport
 - 3.1 Safe site
 - 3.2 Safe user
 - 3.3 Safe vehicle
 - 3.4 Reversing
4. Moving skips and containers
5. Falls from height
 - 5.1 Falls from commercial vehicles/skips during sheeting
 - 5.2 Falls into/from skips and containers
6. Slips and trips
 - 6.1 Platforms (ramps and steps)
 - 6.2 Floors
 - 6.3 Contaminants
 - 6.4 Housekeeping
 - 6.5 Other slips and trips hazards
- 7 Manual handling
 - 7.1 Avoid manual handling
 - 7.2 Minimise risks
- 8 Machinery guarding
- 9 Stress and violence
- 10 Welfare and hygiene
- 11 Personal protective equipment
- 12 Information, instruction and training
- 13 Worker consultation and engagement
- 14 Reporting occupational diseases and incidents
- 15 Managing household hazardous waste and precautions for specific types
 - 15.1 Dangerous Substances and Explosive Atmospheres Regulations (DSEAR)
 - 15.2 Control of Substances Hazardous to Health Regulations (COSHH)
 - 15.3 Principles of good risk management
 - 15.4 Aerosols
 - 15.5 Asbestos cement
 - 15.6 Batteries
 - 15.7 Fluorescent tubes, cathode ray tubes etc
 - 15.8 Garden chemicals (pesticides etc)
 - 15.9 Gas cylinders
 - 15.10 Household chemicals

Waste Industry Safety and Health Forum

- 15.11 Paints and adhesives
- 15.12 Thinners, solvents and other flammable liquids
- 15.13 Waste oils
- 15.14 Other substances
- 16 Further reading and information
Disclaimer and WISH

1. Introduction

A CA site, also known as a household waste and recycling centre (HWRC), is a facility at a fixed location where members of the public (and, to a lesser extent, trade customers) can bring waste and recyclables. They are usually operated by local authorities, or private contractors on behalf of local authorities. The guidance explains how to reduce and control key general health and safety risks associated with designing and operating a CA site. Section 15 gives more detailed guidance about the reception, handling and storage of household hazardous wastes at such sites. The guidance cannot cover every risk and is not comprehensive. It is primarily aimed at designers, managers, supervisors and operators of CA sites. It may also interest safety advisors and those working at such sites.

2. Managing the risks

To manage the health and safety risks in workplaces, the Management of Health and Safety at Work Regulations 1999 require employers and self-employed people to carry out a suitable and sufficient risk assessment of their activities. This process helps you decide whether you are doing enough to prevent harm. Your risk assessment should identify:

- The activities, processes and substances that can cause harm
- Who is at risk (eg workers, contractors, subcontractors, agency and temporary workers, members of the public or visitors)
- How likely it is that harm will occur
- The appropriate controls needed to eliminate or reduce risks

Ask your employees what they think the hazards are, as they may notice things that are not obvious to you and have some good ideas on how to control the risks. See Section 13 for more information about worker consultation and engagement.

A risk assessment is not about creating huge amounts of paperwork, but rather about taking sensible measures to control the risks in your workplace. Concentrate on the real risks – those that are most likely to cause harm.

Make a record of your significant findings – the hazards, how people might be harmed by them and what you have in place to control the risks. Your record should be simple and focused on controls. Review your risk assessment regularly to ensure that the controls remain effective. When reviewing, consider the following:

- Are there safe systems of work in place that reflect the risks associated with the activities?
- Do your employees follow those systems of work? If not, why not?
- Are your systems adequate to control the risk? Do they need revising?

Waste Industry Safety and Health Forum

- Are the procedures and checks you have put in place sufficient?
- Do you need to do certain tasks more (or less) frequently?
- Are there any changes to the working environment that might have an impact?

This guidance provides information that will help you to comply with the law, and may be used to help with your risk assessment process. It is not, however, a substitute for a suitable and sufficient site- or task-specific risk assessment based on individual site conditions, layout, structure, the exact nature of the activities, the types of waste material involved and other factors. For more information about risk assessment, see www.hse.gov.uk/risk/index.htm.

3. Workplace transport

Vehicle movements in the waste and recycling industry represent a risk of serious or fatal accidents to workers and members of the public. The most hazardous activity on CA sites is the movement of vehicles near pedestrians. These include private vehicles (belonging to members of the public), private and commercial vehicles servicing the site and moving skips/containers. You should carry out a risk assessment for all workplace transport activities on site. Consider:

- All vehicles and people (especially members of the public) moving round your workplace
- Marking traffic and pedestrian movements on a plan, so you can see where pedestrians and vehicles interact
- Identifying improvements that will reduce the interaction between pedestrians and vehicles
- Including less frequent tasks, eg skip or container changes
- Visiting drivers, as they are particularly vulnerable

3.1 Safe site

Maintain a safe site by planning your workplace, so that pedestrians are safe from vehicles:

- Putting in place effective measures to: segregate vehicles and pedestrians
- Minimise reversing
- Direct people
- Slow vehicle speed
- Improve vision

Segregate HGV and heavy plant movements from other activities by:

- Planning heavy vehicle movements (eg HGVs and mobile plant) to times when there are no other activities being carried out on site (eg outside site opening times or when you have closed the whole or part of the site)

Waste Industry Safety and Health Forum

- Physically separate heavy vehicle activities from public areas of the site
- Preventing the entry of pedestrians into clearly marked vehicle movement zones
- Providing separate routes for pedestrians and vehicles where possible

Other controls can include:

- Make sure there is a clear route marked. Use 'Highway Code' signs to indicate vehicle routes, speed limits, pedestrian crossings etc
- Provide a one-way system that eliminates the need for reversing, if you can
- Provide separate designated car parking/unloading/drop-off zones (consider using bollards, kerbs, painted lines and clearly designated areas)
- When cones, bollards etc are used to segregate pedestrians and vehicles, they should be highly visible, eg by using reflectors or high-visibility paint
- Provide pedestrian paths and appropriate crossing points where pedestrians and traffic meet (eg open areas, away from blind spots and clearly marked, such as zebra crossings)
- Avoid reversing where possible. If you can't do this, reduce the time spent reversing by minimising the distance vehicles have to reverse, and the number of reversing operations. For example, position containers and skips to allow safe access to the vehicle for loading, unloading and exchange operations, avoiding unnecessary vehicle movement
- Use high-visibility speed retarders (eg humps) or similar devices, and/ or other traffic calming measures
- Have a prominent speed limit sign at the site entrance
- Provide clear signs so drivers know where to go on arrival
- Vehicle control can sometimes be enhanced by having a 'reception' employee to reduce congestion by controlling the level of vehicle access and giving clear directions
- Liaison with the highways authority/client or land owner may help identify steps to reduce queuing traffic at site entrances
- Provide skip content signs easily visible from all parts of the site, if reasonably practicable, to help visiting drivers to park at appropriate locations. High-level signage (eg mounted on poles or masts) can sometimes achieve this
- Avoid blind corners by appropriate location of containers, skips etc. Where you cannot avoid blind corners, use aids such as mirrors
- Make sure lighting is adequate where people and vehicles are working – consider variations in lighting levels caused by seasons and the time of day the site is operating
- Make sure road surfaces are firm and even
- Make sure there are safe areas for loading and unloading

3.2 Safe user

Employee and visiting drivers: Site operators should carry out adequate planning with site users before they start work, including the following:

- Supply maps, site directions, parking information, site rules (including traffic issues) and any hazard information to organisations which visit regularly to give to their drivers. Also include general issues, such as requirements for appropriate personal protective equipment (PPE)
- New drivers and non-routine customers will inevitably arrive at sites. In these cases your pre-planning is limited, but all of them should receive an adequate site induction, covering traffic management issues and site rules
- Provide appropriate training and instruction for drivers to operate the vehicle and related equipment safely

Members of the public: You should consider the following points relating to members of the public:

- Clear signs at the entrance should direct visitors towards traffic routes to unloading bays
- Routes for public use should, where possible, be separate from work activities-‘segregation’
- Provide clear parking/drop-off zones, as close as possible to the unloading bays
- Minimise movement by members of the public
- Children should stay in the car.
- Take account of elderly or disabled people, the distractions of dealing with families and customers not being aware of the hazards and risks of the workplace
- Make members of the public aware that they can ask for help from staff if they need to
- Exclude pedestrians from the immediate area during reversing operations
- Prevent unauthorised access to equipment

3.3 Safe vehicle

Ensure vehicle safety:

- Ensure vehicles are suitable for the purpose for which they are used
- Maintain vehicles in good repair, particularly the braking system
- Steering, tyres, mirrors and specific safety systems
- Remove the need for people to go up on vehicles where possible, eg by providing gauges and controls accessible from ground level
- Provide reversing aids, such as CCTV (closed-circuit television), as appropriate
- Fit roll-over protective structures and use seat belts where necessary
- Apply the handbrake and remove keys as standard measures to prevent premature or unauthorised vehicle movement

3.4 Reversing

In locations where reversing cannot be avoided:

- Plan out and clearly mark 'reversing areas'
- Keep people who do not need to be in reversing areas well clear
- Use a trained banksman (sometimes known as a signaller) to make sure the reversing areas are free of pedestrians and guide drivers when reversing, particularly where lifting operations are also involved
- Make sure the banksman wears high-visibility clothing
- Make sure the driver agrees the banksman's positioning with them before manoeuvring starts. This position needs to be safe, eg in a protected zone
- Make sure the driver and banksman have a clear, pre-agreed system of signalling
- Make sure the banksman is visible to drivers at all times
- If the driver loses sight of the banksman, they should stop

For more information on the use of a banksman (signaller) see www.hse.gov.uk/workplacetransport/information/reversing.htm and see Safe transport in waste management and recycling facilities.

A reversing assistant could be used as an alternative to a banksman (signaller), if appropriate to the site conditions. This is a trained employee who plays an active part in reversing manoeuvres by giving prearranged hand signals to the driver. Their role is normally to stop collisions by preventing the vehicle colliding with people and other roads users. More information on the use of reversing assistants can be found in Waste and recycling vehicles in street collection. For more information on preventing harm from workplace transport see www.hse.gov.uk/workplacetransport/index.htm.

4. Moving skips and containers

Provide a safe system of work for moving skips and containers to. Such a system might include:

- Confirming who the skip-loader driver should report to on arrival (see above)
- Where possible, checking the contents before removing the skip
- Segregating pedestrians and vehicles (see above)
- Positioning containers and skips to allow vehicles safe access for loading, unloading and exchange, avoiding unnecessary vehicle movement and minimising reversing movements
- Parking on firm level ground – avoid sloping, uneven or soft ground
- Applying the vehicle all-wheel braking where reasonably practicable. Or, where this is not possible, fit flat plates to the stabiliser legs or take other precautions such as using chocks. The effectiveness of chocks depends on factors such as ground conditions, slope, surface friction, vehicle surge and operator training/competence

Before moving the skip, checking that:

- The integrity of skip, lifting equipment and lifting points (look for wear and corrosion) to avoid skip or load-bearing points failure
- Hooks, chains lugs, bars etc are fully engaged
- It is able to move freely as intended (look for snagged chains, fluid power pipes, and mechanical/structural parts, and check that chains are not twisted or knotted) – this will avoid destruction or catastrophic failure of lifting equipment or unexpected movement of the skip when it becomes free

The Lifting Operations and Lifting Equipment Regulations 1998 (LOLER) outline general requirements for the safe use of lifting equipment. See Skip and container safety in waste management and recycling, Safe use of skip loaders and Guidance for the recovered paper industry for specific advice for the waste industry.

5. Falls from height

The major risks of falls from height in CA sites are:

- Falls from commercial vehicles/skips during sheeting
- Falls into/from skips and containers

5.1 Falls from commercial vehicles/skips during sheeting

It is unsafe to sheet a high-sided commercial vehicle by climbing onto the vehicle without adequate edge protection or without gantries/ harnesses to prevent a fall. You can prevent such falls from vehicles by following this hierarchy of measures (in priority order):

- Un-sheeting loads – leave the load un-sheeted, where appropriate
- Automated sheeting systems (auto-sheeters) – these systems allow the driver to sheet the load from ground level and so remove the need for access at height to sheet. They protect workers both on-site and out on collection, where there may not be other safety facilities
- Sheeting platforms (similar to scaffolding arrangements) – these platforms should be fully enclosed by guardrails on all sides to reduce the risk of a worker falling between the platform and the side of the vehicle or stepping off the end of the platform
- Gantries and harness systems. If a worker needs to leave the platform to carry out further tasks associated with sheeting, use overhead gantries and harness systems. These do not prevent a fall, but should reduce the risk from the effects of a fall. If harnesses and lanyards are used, you must train drivers in pre-use checks and how to use the equipment

For more information on sheeting see www.hse.gov.uk/workplacetransport/information/sheeting.htm

5.2 Falls into/from skips and containers

As well as the risks of associated falls during sheeting of skips and containers, there may also be the risk of falls into the skip or containers at split level sites and wherever raised platforms/ramps/steps are provided to above skip-height (to permit easy manual skip loading) or from the platform/ramps/steps itself. There is also the risk of falls from the sides, or into load voids, of skips and containers if they are entered, eg to trim loads, sheet loads or remove contaminants. You can control these risks by the following methods:

- Provide suitable edge protection barriers 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)
- Provide systems to ensure skips are loaded evenly and prevent overfilling of skips
- Where trimming of the load is necessary, do this by raking with plant buckets or plant fitted with compaction devices or other tools
- Provide alternatives to entering skips to retrieve contaminants or valuable items, eg by: Intercepting them before they enter the skip, or providing 'retrieval tools/poles' if you can't ensure interception of items before disposal

For more information on preventing falls from height, see www.hse.gov.uk/falls/index.htm.

6. Slips and trips

There is a high potential for slips and trips injuries to site operators and members of the public. Prime hazards include:

- Platforms (ramps and steps)
- The condition of floors etc
- The effects of weather
- Failure to clear away floor contaminants
- Failure to control spillages
- Walking on material piles and loaded skips
- Diminished visibility (poor lighting/carrying large loads that affect vision etc)

6.1 Platforms (ramps and steps)

Platforms to skips create increased risk of slips and trips. Ideally, consider designing split level sites, so that materials can be loaded into skips that are below floor level.

Waste Industry Safety and Health Forum

Where it is not reasonably practicable to operate a split-level site, you may need ramps or steps to access a loading platform. The decision on whether to provide ramps or steps can be difficult and there are pros and cons associated with each. For example, ramps can offer an easy, consistent incline, and may allow the use of mechanical handling aids (barrows etc). They also minimise the risks associated with sudden (and often unseen) changes in level.

Ramps/steps should be designed so that they:

- Are not excessively steep
- Have a 'dogleg' bend to minimise yard-space usage. It may also help to stop 'runaway' barrows etc if very heavy items are being moved
- Have handrails. These help prevent falls and can help people safely negotiate changes in level. Signs inviting users to use handrails have been shown to reduce trip frequencies at steps
- Include a yellow warning sign for trip hazards caused by a change of level

Steps should be designed so that:

- They have broad treads
- Gaps between treads are fitted with risers, to prevent feet being caught between treads
- Tread nosings are high-visibility (eg yellow painted) and rounded to prevent feet catching

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

- Resist the build-up of contaminants (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

Ramps and steps should be maintained in a sound condition and, so far as reasonably practicable, kept free of contaminants. Working procedures should include regular checks, clearance of contaminants and maintenance. Check bolts for tightness and welding for signs of failure.

6.2 Floors

Floors of sites should be constructed and maintained in a good, sound condition and, so far as reasonably practicable, without sudden changes in level such as steps, potholes or excessive inclines. Take account of bad weather and make sure there is good drainage for rainwater and methods to combat ice, if necessary. Drainage gullies should be suitably covered to prevent them being a trip hazard and becoming blocked by waste. In areas where liquids are moved, such as oil stores, there should be spillage controls in place, eg bunding and absorbent granules.

6.3 Contaminants

Skips and other containers should be regularly 'taken out of service' or emptied to prevent overfilling. This helps reduce the risk of people being struck by objects falling from overloaded skips where the contents are inadequately contained. Keep loose piles of materials stable and stored in designated areas. Access to these areas should be minimised by appropriate working procedures. Your systems of work should make walking on stacks unnecessary. Serious injuries have occurred where people have walked on material piles when the stack face has collapsed. Walking on waste also presents a slipping and tripping hazard.

6.4 Housekeeping

Rigorous procedures should be in place to remove spillages and breakages (eg broken glass) as soon as reasonably practicable. Make sure you quickly clear spilt fluids (especially oils etc) and solid materials that may become slippery underfoot (eg green waste) or create a tripping hazard.

6.5 Other slips and trips hazards

Other slips and trips hazards include the following.

- Walking on loaded skips and loose pile materials can cause slips and trips, and should be avoided by planning, good site management and appropriate working procedure (see above)
- Poor light levels. These can increase the risk of slips and trips. Only carry out work in daylight, or in adequately illuminated areas in twilight or dark conditions
- Handling loads which are bulky, heavy or awkward can result in slips and trips. Site working methods (eg team handling, stockpiling to permit later movement by mechanical handling aids etc) should be in place to minimise the risk of slips and trips (see below)

For more information on preventing slips and trips, see www.hse.gov.uk/slips/index.htm.

7.0 Manual handling

Manual handling injuries can happen almost anywhere in the workplace and heavy manual labour, awkward postures and previous or existing injury can increase the risk.

7.1 Avoid manual handling

To help prevent manual handling injuries, avoid such tasks as far as possible. Consider the following:

- Does the item need to be moved at all? There are instances where leaving the item where it is for a while can eliminate the need to move it (or to move it twice)

Waste Industry Safety and Health Forum

- Can the item be moved using lifting aids? Such aids might include barrow, sack truck, trolley or similar, or machinery (eg front loader, forklift truck, electric or hand-powered hoist). Can the item be left in a 'holding area' to be moved by machinery or other lifting aid later on?

7.2 Minimise risks

However, where it is not possible to avoid handling a load, employers must look at the risks of that task and put sensible health and safety measures in place to prevent and avoid injury.

Assessing the task will include considering:

- The nature of the load
- Environmental conditions (including workplace layout)
- Training
- Work organisation
- Individual capability

Think about:

- Reducing the amount of twisting, stooping and reaching
- Avoiding lifting from floor level or above shoulder height, especially heavy loads
- Assessing the weight, and whether the load can be broken down to smaller weights etc
- Assessing whether the worker can move the load safely, or needs help
- Reducing carrying distances

Improve workplace layout by:

- Removing any obstructions to free movement
- Providing better conditions underfoot
- Avoiding steps and steep ramps
- Providing adequate lighting
- Minimising carrying distances, eg allowing vehicles to get as close as possible to the disposal point to minimise distances items need to be carried
- Reducing the amount of twisting, stooping and reaching required for both picking up and disposing of items (eg lifting directly from vehicles is better than 'double handling', when an item is placed on the floor to be manually lifted again later)

Make the load safer by making it:

- Lighter or less bulky by breaking it down into smaller more manageable 'parcels'
- Easier to grasp (eg loose material could be placed into a suitable receptacle for handling)

Waste Industry Safety and Health Forum

As a general rule, the risk of injury should be regarded as unacceptable if the manual handling operation cannot be performed satisfactorily by most reasonably fit, healthy employees. As part of the assessment process, you should assess the capability of individuals to carry out the task.

Training is important in reducing the risk of manual handling injury. Suitable training is likely to cover the following elements:

- Manual handling risk factors and how injuries occur
- Safe manual handling, including good handling technique
- Appropriate systems of work for the individual tasks and environment
- Use of mechanical aids
- Practical work to allow the trainer to assess the trainee

For more information on manual handling, see www.hse.gov.uk/msd/index.htm.

8. Machinery guarding

Assess machines (eg compactors, balers etc) at CA sites to ensure they are safe to use. When choosing the appropriate safeguards, 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 existing safeguards are inconvenient to use or easily defeated
- Preventing unauthorised access to machinery (eg by members of the public). Effective electrical isolation, lockable controls and/or locks or dedicated key operation

When deciding what guarding is appropriate, consider the following:

- Use fixed guards to enclose dangerous parts, whenever practical. It is obvious when they are in place and they should be secured so they cannot be easily removed without a tool
- Use the best material for these guards – plastic may be easy to see through but easily damaged. Where you use wire mesh or similar materials, make sure the holes are not large enough to allow access to moving parts
- If fixed guards are not practical (eg regular access to dangerous parts is essential to clear blockages, lubricate or clean), use other methods, such as interlocking so that the machine cannot start before the guard is closed and cannot be opened while the machine is still moving
- In some cases trip systems such as photo-electric devices, pressure-sensitive mats or automatic guards may be used if other guards are not practical

Waste Industry Safety and Health Forum

Routinely check and maintain the guards:

- 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 and trip systems are working properly
- Institute a system of daily, weekly or 'before use' guarding checklists
- Workers should be encouraged to report faulty guards to get them repaired

Machine operators must be able to work safely:

- They should have received information, instruction and training to use machines safely
- They 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
- Emergency stop controls should be kept in good working condition and in easy reach
- During cleaning, repair or maintenance activities, prevent inadvertent powered movement by securely isolating the plant from power sources – usually the electricity supply. This can also involve hydraulic and pneumatic power, and take into account the dissipation of stored energy if applicable. Security ('lock-off') can be provided by padlocks on electrical isolator switches, for instance, and multi-user padlocks can be provided if more than a single maintenance worker is involved. Permits-to-work can be used for more extensive plant, more complex management systems, and where entry into confined spaces may be required

For more guidance on machinery safety see www.hse.gov.uk/waste/machinery.htm.

Table: Example of an operator's pre-use checklist for machinery

Before working on this machine:	Yes	No
Are you trained to use this 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?		
Are machine and safeguards working properly?		
Have you reported any defective safeguards to a supervisor?		
Have you made sure that dangling chains, loose hair, loose clothing etc can't get caught up in the moving machinery?		
NEVER: try to clean a machine while it is in motion or distract people using machines		

9. Stress and violence

The threat of abuse and physical violence to staff in CA sites can be a very real issue as well as a contributor to stress at work. Work-related violence is not just physical – it includes verbal abuse and threats. It is more common in those jobs where employees have face-to-face contact with the public. When physical violence is involved, the injuries to those workers affected are obvious. However, those subjected to constant and repeated verbal abuse and threats may suffer stress, anxiety or depression. You should:

- Think about suitable work areas and minimise the opportunity for violence to happen
- Talk to your employees and find out if and when they feel threatened and train them to handle difficult conversations
- Encourage staff to report all incidents – this may allow you to bar customers or identify potential risks
- Think about staff expected to work alone and how to ensure their safety
- Consider physical security measures, eg CCTV and alarms

For more information on managing violence at work see *Violence at work: A guide for employers*⁷ and www.hse.gov.uk/violence/index.htm. For more information on stress at work, see www.hse.gov.uk/stress/index.htm.

10. Welfare and hygiene

Workers should be provided with a clean, safe, and warm area to rest and eat. These facilities should be well maintained with an area for drying clothes in case work has to be carried out in the rain. Provide suitable sanitary conveniences and washing facilities. Washing facilities should have running hot and cold or warm water, soap and clean towels or other means of cleaning or drying. Workers should avoid hand to mouth contact (such as eating and drinking) unless their hands are clean.

11. Personal protective equipment

It is important that staff wear the correct equipment on your site. It must be provided free of charge, be appropriate for use and adequately maintained.

- High-visibility clothing should be worn at all times
- Gloves, giving adequate protection, should be worn whenever handling waste
- Trousers should normally be worn – and shorts only if the risk assessment process indicates their acceptability. Cut-resistant trousers may be needed wherever the risk assessment has shown there is a significant risk of cuts to the legs

Waste Industry Safety and Health Forum

- Boots with steel toecaps and steel soleplates should be worn; these can reduce crushing and piercing injuries. Many waste sites insist on boots with good ankle support, as these reduce the risk of twisted ankles, eg when workers are dismounting from cabs or walk on spillages
- Other equipment (eg helmets, eye protection, ear defenders, and respiratory protection) may be needed, depending on the work done

Consider advising the public to wear sensible clothing/footwear (eg via signage at the site entrance).

12. Information, instruction and training

All employees need to know how to work safely and without risks to health. Employers must provide clear instructions, information and adequate training for their employees on:

- The risks they may face
- Measures in place to control the risks
- How to follow any emergency procedures

It is particularly important to consider the training needs and supervision of:

- New recruits and trainees
- Young people who are particularly vulnerable to accidents
- People changing jobs, or taking on new responsibilities
- Health and safety representatives, who have particular laws relating to them

Any new worker, including temporary workers, should be properly inducted and trained before being allowed to start work. All workers will need to be informed/retrained as appropriate when risks and/or control are updated and may need to be reminded periodically. Information, instruction and training provided to workers may need to take account of situations where English is not the first language.

For more specific advice see *Health and safety training: A brief guide* and *Health and safety training: Guidelines for the waste management and recycling sector*.

13. Worker consultation and engagement

Involving and consulting your workers is essential in ensuring safe working practices in waste and recycling activities. Further information on worker involvement is available at www.hse.gov.uk/involvement/index.htm and in the HSE leaflet *Consulting employees on health and safety: A brief guide to the law*.

14. Reporting occupational diseases and incidents

All employers, the self-employed and people in control of work premises have duties under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013 (RIDDOR). You must report certain work-related injuries, cases of ill health and dangerous occurrences. HSE will pass details to the relevant enforcing authority.

RIDDOR applies to all work activities but not all incidents are reportable. For more information about what must be reported and how to report it, see www.hse.gov.uk/riddor and Reporting accidents and incidents at work.

15. Managing household hazardous waste and precautions for specific types

This section specifically addresses the implications of storing and handling household hazardous waste at CA sites. Such wastes cover a wide range of materials that occur in the domestic waste stream, including:

- Aerosols
- Asbestos cement
- Batteries
- Fluorescent tubes, cathode ray tubes etc
- Garden chemicals (pesticides etc)
- Gas cylinders
- Household chemicals
- Paints and adhesives
- Thinners, solvents and other flammable liquids
- Waste oils etc

Your risk assessment process should identify the risks associated with your particular site, and the methods of reducing those risks. Sections below, include information on precautions for specific types of household hazardous wastes, will help your risk assessment process.

The environment can be better protected if hazardous wastes are removed from the waste stream and treated separately by re-use, recycling, recovery or disposal. However, this process of segregation results in greater concentration of potentially hazardous waste and increased handling (with associated hazards of fire, exposure, handling etc).

Waste Industry Safety and Health Forum

Operators of CA sites accepting household hazardous wastes need to understand the requirements to classify hazardous waste and control its carriage on the road. To achieve this, operators will need to have access to competent advice, such as a dangerous goods safety advisor (DGSA), internal company environmental law specialists and/or the Environment Agency/Scottish Environment Protection Agency.

For more information on the Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2007, see www.hse.gov.uk/cdg/index.htm.

15.1 Dangerous Substances and Explosive Atmospheres Regulations (DSEAR)

DSEAR puts duties on operators of CA sites to protect people from risks to their safety from fires, explosions and similar events, and this includes members of the public who may be at risk. Many substances handled at CA sites can create a risk of fire or explosion; these include solvents, paints and flammable gases, such as liquefied petroleum gas (LPG).

At each site, operators will need to:

- Find out what dangerous substances are likely to be handled and what the fire and explosion risks are
- Put control measures in place to either remove those risks or, where this is not possible, control them
- Put controls in place to reduce the effects of any incidents involving dangerous substances
- Prepare plans and procedures to deal with accidents, incidents and emergencies involving dangerous substances
- Make sure employees are properly informed about and trained to control or deal with the risks from dangerous substances
- Identify and classify areas of the workplace where explosive atmospheres may occur and avoid ignition sources (eg from unprotected equipment) in those areas

For more information on DSEAR, see www.hse.gov.uk/fireandexplosion/dsear.htm.

15.2 Control of Substances Hazardous to Health Regulations (COSHH)

COSHH applies to most harmful substances in the workplace and requires employers to assess the risk from harmful substances and prevent or control exposure to them. You should identify the risks in your workplace. Once you know what they are, consider what measures are needed to reduce or remove the risk of people being harmed. You should always try to prevent exposure at source.

Waste Industry Safety and Health Forum

You can prevent or reduce workers' exposure to hazardous substances by:

- Finding out what the health hazards are
- Deciding how to prevent harm to health
- Providing control measures to reduce harm to health and making sure they are used
- Keeping all control measures in good working order
- Providing information, instruction and training for employees and others
- Providing monitoring and health surveillance in appropriate cases
- Planning for emergencies

For more information on complying with your duties under COSHH, see www.hse.gov.uk/coshh/index.htm and www.hse.gov.uk/coshh/essentials/index.htm. See also Working with substances hazardous to health.

15.3 Principles of good risk management

CA site operators should have procedures in place for each type of hazardous waste they handle. The procedures should cover:

- Reception
- Identification
- Segregation
- Handling
- Storage
- Security and emergency procedures
- Training, instruction and advice

If you cannot adequately provide any of the above for a type of hazardous waste, it should not be accepted at the site.

The controls described below are for receiving and storing household hazardous wastes, not their treatment, or for activities such as bulking materials into larger packaging. The site waste management licence will set out permitted activities.

Reception

Reception of hazardous waste is the first opportunity to control the risk to health, safety and the environment. The bulleted list of reception systems below is a useful hierarchy for control, providing the greatest opportunity to reduce risk at the top, and the least at the bottom.

Waste Industry Safety and Health Forum

- Household hazardous waste collections – collection direct from the household by a specialist, competent contractor
- Pre-separation at the CA site – separate containers at the CA site to ensure that hazardous wastes do not enter the general waste stream (eg battery boxes, gas cylinder cages)
- Interception of hazardous wastes as they are unloaded by members of the public – close supervision of members of the public to enable wastes to be intercepted before they are placed in the general waste stream
- Removal of hazardous wastes from the general waste stream – removal of items of hazardous waste directly

For example, higher-risk hazardous wastes, such as asbestos and pesticides, can be collected from the household directly. However, for medium-level hazardous wastes, such as batteries and oils, the public can bring them to the CA site and put them into clearly labelled containers.

Members of the public should be clearly informed by signs, directions and guidance from staff on how to handle each material. Local publicity may also help the public to understand the role of CA sites and how to dispose of hazardous wastes safely.

Identification, segregation and handling

Identification is key to safe management of potentially hazardous wastes.

Ask the public to make site operatives aware of the presence of wastes such as asbestos, flammable liquids, pesticides and compressed gases, so that they can be appropriately handled.

Site workers should have enough competence to ensure they can identify potentially hazardous waste and safely handle it. Competence includes the ability to:

- Identify the type of waste and its hazards
- Visually check the integrity of the packaging (leaks, damage etc)
- Allocate the waste to the appropriate storage container or area
- Remove any non-conforming wastes to quarantine

In most cases, identification and subsequent storage will be obvious. However, workers should seek advice if a waste is not readily identifiable and place it in secure quarantine until it can be identified.

Site workers should not place themselves in danger when inspecting wastes. For example, if the valve on a gas cylinder is damaged, they should not attempt to rectify the fault, but clear the area and seek help. When inspecting potentially hazardous wastes, employees should wear suitable personal protective equipment, such as eye protection, gloves and non-synthetic overalls.

Storage plan

CA sites storing hazardous wastes should have a site storage plan. This should include:

- A site plan indicating the storage locations for each waste type
- Conditions of storage (what type of containers are used to store the wastes)
- Storage requirements, such as daily checks on containers for leaks
- Reception and inspection procedures for specific wastes
- Handling requirements for the wastes
- Quarantine area for 'unknown' wastes and procedures for dealing with them

A competent person/s should draw up the plan. It should contain enough detail to make employees aware of where each hazardous waste is stored, how it is stored and how to handle it. Plans should include details of any separation distances between containers and any other isolation systems used, such as walls or sealed containers.

For many types of hazardous waste, such as gas cylinders and flammable liquids, an up-to-date inventory should be kept, eg a clipboard with a form kept in a weatherproof box at each gas cylinder cage. This information should be available to the emergency services.

When hazardous substances are stored in cupboards, ensure that unsuitable classes of material are not mixed. For example, pesticides should not be stored with flammable liquids. There should be adequate separation within mixed-class cupboards, including separate drip/spill trays to prevent spills mixing. Separate cupboards for each class of hazardous substance will reduce the risks of incidents.

The HSE guide *Chemical warehousing* gives more guidance on storage plans and arrangements, including compatibility of materials.

Security and emergency plans

You should draw up emergency plans for the foreseeable inventory of the site and workers should be competent in operating them. Typical emergency arrangements will include:

- Ensuring spillage containment/removal
- Providing suitable fire-fighting equipment
- Providing eyewash bottles
- Evacuation procedures and escape routes
- Contact numbers for specialist assistance, eg for damaged gas cylinders

Waste Industry Safety and Health Forum

Specific emergency provision will be required for many individual hazardous household wastes. For example, lithium batteries may split in a fire, exposing the lithium, which reacts violently with water – you must not tackle such fires with water extinguishers. Maintain escape routes at all times.

Keep a copy of the site storage plan and emergency plan in an 'emergency services box' near the gate of the site. This should include inventories of more hazardous wastes, updated daily.

CA sites are often open to trespass. This should be accounted for in site emergency and storage plans. For example, containers and compounds for hazardous wastes such as gases and flammable liquids should be clearly signed to describe their contents and the hazard posed. They should be:

- Kept secure and locked when not in use
- Constructed to resist attempts to break into them

Training, instruction and advice

Handling potentially hazardous waste at CA sites requires high levels of competence. Workers should be trained on site storage plans, waste identification and handling and emergency procedures.

Risk assessment should identify the extent of such training and is likely to include:

- Signs used on containers such as bottles, gas cylinders etc, eg hazard diamonds and packaging warning signs
- Physical identifying features, such as container shape, construction etc
- Classes of hazardous substances, their hazards and compatibilities
- Safe systems of work and protective equipment to be worn when handling hazardous wastes
- Safe storage
- Housekeeping
- Emergency procedures

Information on waste identification, such as on colour marking of gas cylinders, labelling of containers and packaging etc, must be kept on site and be readily available to employees for reference.

Displaying such identification on noticeboards is good practice.

CA sites that accept hazardous waste should make sure access to competent, specialist advice is available and readily accessible to those operating and working at the site. The advice may be from within the organisation or through an external adviser.

15.4 Aerosols

Aerosols contain less gas than larger cylinders. However, when stored together the cumulative volume of gas may be significant. Many aerosols use butane as a propellant and this is a significant fire risk.

- Aerosol containers should not be punctured, crushed or emptied. Specialist equipment is required for this and such activities may be outside the site's licence conditions
- Aerosols should be stored in a suitable ventilated container, such as a cage container or mesh stillage with a closing top
- Label the container with warning signs prohibiting smoking and naked flames
- Segregate storage from other flammable wastes and potential sources of ignition
- Make sure no combustible material is held in the storage area
- Identify where there may be explosive atmospheres and avoid ignition sources (eg from unprotected equipment) in those areas
- Do not expose aerosols to excessive heat, direct sunlight or ignition sources
- Wear eye protection and gloves when handling aerosols

You can get more guidance on aerosols from the British Aerosol Manufacturers' Association at www.bama.co.uk.

15.5 Asbestos cement

The following guidance covers situations when workers have to handle asbestos cement waste or manage its disposal at a CA site. It does not cover the planned reception and acceptance of other friable asbestos wastes (eg lagging, insulation and asbestos insulating board (AIB)), but gives advice on its inadvertent reception and what to do if it is discovered. Handle such waste according to the advice on the HSE website at www.hse.gov.uk/asbestos.

Training

Suitable training is required to enable workers to identify asbestos and ensure they are competent to accept and handle asbestos cement waste safely. The training should ensure they understand what asbestos is (including the different types of asbestos) and what the risks and health effects are from exposure. The training should also cover the procedures, controls and precautions needed to carry the work out safely.

Waste Industry Safety and Health Forum

Safe site and equipment

All CA sites that accept asbestos cement waste from the public should have suitable facilities and resources to accept this waste. This may include, but is not restricted to, the following:

- Skips/containers for storing asbestos cement waste should be dedicated to that sole purpose
- Signs should be posted at the site entrance and at the asbestos cement waste storage skip(s), asking members of the public with asbestos cement products to notify site staff before unloading
- There should be a lockable skip/waste container with well-fitting doors
- Keep the skip locked when not in immediate use – this includes during the working day. This will ensure disposal of waste into these skips can be controlled
- Skips used for asbestos cement waste should be clearly labelled with a sign on the skip, preferably on its door(s), stating 'Asbestos Cement Waste Only'. Skips containing asbestos cement products should be marked with the appropriate 'Warning Contains Asbestos' label (as per Schedule 2 of the Control of Asbestos at Work Regulations 2002)
- Skips containing asbestos cement should be located remotely from other waste containers, where reasonably practicable. This enables you to manage the disposal of asbestos cement waste in a segregated area away from the public involved in the disposal of other wastes.
- There should be enough trained and competent staff to accept asbestos cement
- Adequate stocks of personal protective equipment (PPE) and other equipment, such as water damping sprays
- A hose, fitted with a sprinkler head to 'damp down' the waste, should be located near the skip/container
- You may need to keep details and records of the control and disposal of asbestos waste. You may also need to contact other regulatory authorities for guidance on the information they may require you to keep
- Skips should be kept on a hard surface, eg tarmac, which will allow easy cleaning of any spills or contamination

Safe reception of asbestos cement waste on site

This guidance only deals with handling asbestos cement. However, you should have a policy and emergency plan for dealing with other non-bonded asbestos types (eg lagging, insulation and AIB) that may be brought onto site.

- Members of the public should be encouraged to make prior arrangements for delivering asbestos cement waste to your site
- Advise the public to double bag or suitably double wrap asbestos cement before bringing it to the site

Waste Industry Safety and Health Forum

- Workers trained in asbestos recognition and handling should check deliveries
- Some CA site operators have found it helpful to provide the public with suitable bags for the asbestos cement, and/or suitable plastic sheeting, before they arrive on site
- Householders should be advised not to break or cut the asbestos cement to fit plastic bags, but to double-wrap it in plastic sheeting and to damp the sheeting with water to help prevent the release of asbestos cement fibres
- Locate the skip as close as possible to the parking facility and make arrangements for transferring bags/sheets to the skip, eg a dedicated wheelbarrow/trolley
- Unlock the skip and damp the contents carefully to avoid dust being created when the new material is introduced (unless it is raining)
- To reduce the risk of fibres being disturbed and becoming airborne, place waste items as gently as reasonably possible, rather than throwing them violently into the skip
- Once the material has been placed in the container, the waste should be damped again (as above) and the container closed and locked.
- Skips should be cleaned out (but not using power washers) to remove all visible debris once they have delivered their load to the licensed tip. Waste water from this process should be filtered and any residue should be disposed of as asbestos cement waste.

Dealing with other asbestos

Treat other asbestos as follows:

- Labelled asbestos bags (or other 'UN' type approved bags) and 1000 gauge polythene sheeting (and tape) will also be needed on the CA site to deal with any spillages or unauthorised dumping of asbestos waste
- If the asbestos cannot be confirmed as AC or the items received look damaged (eg bags, wrapping ripped or torn), in poor condition, friable or is fibrous asbestos (such as lagging), then a site worker should put on a disposable coverall, gloves, and a FFP3 dust mask to place the item(s) into the new asbestos bag or sheeting. Such materials should be damped before being placed in the container

Personal protective equipment

Provide all workers involved in handling asbestos waste with suitable and appropriate personal protective equipment (PPE) to enable them to carry out the work safely, such as:

- Disposable coveralls (type 5) fitted with a hood
- Waterproof overalls may be required outside
- Boots without laces (laced boots can be difficult to decontaminate) or disposable boot covers

Waste Industry Safety and Health Forum

- Disposable respirator (FFP3) or reusable half masks with a P3 filter (worn according to manufacturer's instructions) – workers will need to be fit tested for the masks and clean shaven when the mask is worn

Only where the level of risk has been established and controlled (eg where the waste is double-bagged and sealed in approved type bags) should lower standards of PPE be considered.

Inspect all PPE before use, and report and rectify any. No work should be carried out without the appropriate PPE and other equipment, such as a damping spray, being in place.

When putting on RPE, employees should put the facemask straps on under the hood of the overalls, not over it.

Asbestos cement spillage procedures

There may be spillages of asbestos cement waste or debris on site, eg split bags or spillage from inappropriately or inadequately bagged waste. In these circumstances, take the following precautions (these procedures may also be suitable for dealing with small amounts of other asbestos materials):

- Clear the area of non-essential personnel
- Put on PPE
- Cordon off the area using cones, bunting and signs
- Dampen down the area to prevent particles becoming airborne
- Rewrap the asbestos cement in bags or plastic sheeting and seal with tape
- Place wrapped asbestos into an asbestos skip
- The asbestos symbol 'Warning Contains Asbestos' (as per Schedule 2 of the Control of Asbestos at Work Regulations 2002) should be displayed wherever asbestos waste is contained (eg bags, skips, wrappings etc)

If an emergency situation arises beyond the training and expertise of CA site staff, eg where there is gross contamination with other asbestos items (such as lagging, insulation or AIB), or these items have been dumped in general waste skips or discarded elsewhere on site, the area should be cleared of people and cordoned off. You should have procedures for obtaining expert advice and help to evaluate the risk and decontaminate the area if necessary.

Personal decontamination

- Set up procedures for removing PPE and dealing with situations where PPE is known or suspected to be contaminated
- Provide an area for removing PPE and RPE and cleaning footwear etc

Waste Industry Safety and Health Forum

- Coveralls can be reused if they are known not to be contaminated and are undamaged (ie not torn/ripped). 'Disposable' RPE could also be reused on the same shift if it is not contaminated. Half-mask RPE can be reused

When PPE is contaminated, take care to avoid disturbing any fibres, eg:

- Remove protective overalls by rolling inside out carefully and place them in a bag for asbestos waste
- Remove over-boots and place into the asbestos waste bag, or wash down boots/Wellingtons
- Remove gloves (by rolling inside out) avoiding skin contact and dispose of them in the asbestos waste bag
- Remove the mask last to avoid inhaling asbestos cement fibres while removing other PPE. Disposable masks should be disposed of in the asbestos waste bag. If using a FFP3 half mask, remove it and clean with wet wipes or similar
- Finally, securely tape the asbestos waste bag ready for storage in the asbestos waste container. Do not leave potentially contaminated PPE at the work area and never take it home

For more information on asbestos health and safety see *Work with materials containing asbestos* and www.hse.gov.uk/asbestos/index.htm .

15.6 Batteries

Two main hazards associated with batteries are acid and their potential as an ignition source. Typically, CA sites receive two types of battery – vehicle batteries (lead-acid etc) and domestic.

Vehicle and similar batteries

Vehicle batteries can produce high-energy sparks and heating if shorted-out by a metal item placed or dropped across the terminals. Shorting is often violent enough to 'weld' the metal item to the battery and provide a source of ignition (do not assume that waste batteries have been discharged).

Lead-acid batteries can also produce highly flammable hydrogen. This, combined with potential ignition by sparks if shorting occurs, makes vehicle batteries very hazardous. Lead-acid batteries can also split and explode if misused.

When handling vehicle and similar batteries, you should do the following:

- Wear a face shield, gloves and suitable clothing such as an apron or strong overalls
- Make sure eyewash bottles are provided, close to battery containers
- Remove conductive items, such as bracelets, long necklaces etc before handling batteries

Waste Industry Safety and Health Forum

- Clean up any spillage immediately, using suitable absorbent granules – lead-acid batteries contain sulphuric acid and full protective clothing, including eye protection, must be worn
- Double bag damaged batteries in polyethylene bags at least 85 micron thick

When storing vehicle batteries, take the following measures:

- Store them in a non-conductive (eg plastic) container fitted with a lid and well ventilated – the lid must be kept closed
- Ensure the containers do not have drainage holes – lids should be kept down to minimise the amount of water that can get in and containers should be inspected regularly
- Label containers 'for vehicle batteries only' and have the corrosive warning sign plus a written warning. Containers should be regularly inspected to ensure they are free from conductive objects that may cause shorting
- Ensure batteries are not located within 6 metres of a flammable gas cage or flammable liquids containers, nor where any spillage may leak into drainage systems
- Do not leave batteries outside containers
- Do not place metal or other conductive wastes in vehicle battery containers – this includes small domestic batteries
- Manage inventories to limit quantities on site
- Clean up any spillage immediately using suitable absorbent granules – lead-acid batteries contain strong sulphuric acid and you should wear full protective clothing, including eye protection
- Double bag damaged batteries in polyethylene bags of at least 85 micron thickness

Domestic batteries

These include lithium batteries and similar batteries used for torches, radios etc. They are generally smaller and lower risk than vehicle batteries. Lithium batteries exposed to water can react, releasing hydrogen and significant amounts of heat.

- Domestic batteries should be stored in non-conductive, well-ventilated containers
- Containers should have a lid (kept closed) or closed top (eg an enclosed plastic 'tub' with holes in its upper side to accept batteries) – to allow ventilation and prevent water getting in
- Entry holes in containers should be small enough to prevent vehicle batteries being placed in them
- Containers should be clearly marked as for dry batteries only – **not** vehicle batteries
- Containers for domestic batteries should be kept close to those for vehicle batteries (for easy use by the public), but at least 3 metres apart in case of spills from vehicle batteries
- Battery containers must not be dropped, knocked or maltreated
- Do not use water to fight fires that may contain lithium batteries

Waste Industry Safety and Health Forum

Lithium batteries often contain a copper powder. If fires containing lithium batteries are treated with water, they will release large amounts of hydrogen, making them more dangerous. You should get specialist advice on how to tackle fires containing lithium batteries.

15.7 Fluorescent tubes, cathode ray tubes etc

These items present various hazards, including potential exposure to hazardous substances. Fluorescent tubes can contain mercury, which if broken can be released as a vapour. Tubes should be handled carefully and placed in secure, robust containers with a closing lid or door.

- Tubes should be kept undamaged in suitable storage containers before specialist disposal/treatment
- Wear eye protection, gloves and suitable clothing (strong overalls with long sleeves) when handling tubes
- Don't store fluorescent tubes outside containers
- Clear up any breakages immediately, using a spill kit
- Respiratory protection may be required during clean-up operations

Cathode ray tubes contain a mixture of phosphors and aluminium oxide (applied to the inner surface of the tube's screen), but this is only a risk if the tube is broken. Therefore:

- Don't break cathode ray tubes
- Take great care not to drop televisions and monitors which contain tubes
- Store items with cathode ray tubes away from other wastes
- Do not 'stack' televisions etc, as weight or unstable 'piles' may result in breakage
- Clear up any breakages immediately and remove all debris

15.8 Garden chemicals (pesticides etc)

Garden chemicals are normally non-reactive toxic substances, such as pesticides (herbicides, insecticides, fungicides etc) and oxidising agents such as fertilisers. These two groups should be stored separately.

Pesticides should be stored in a secure cupboard (as for flammable liquids). Reactive substances (eg sulphides) should be stored separately. Pesticide handling and storage should include:

- A separate locked cabinet with ventilation and internal bunding/spill containment
- Shelves in the cabinet, which are ventilated to allow spills to fall through
- Placing the cabinet at least 3 metres away from other waste containers
- Warning signs indicating a toxic hazard (hazard diamond)

Waste Industry Safety and Health Forum

- Regular checks for spills – including checking for leaking containers in the cabinet
- Absorbent granules to clean up any spillages immediately and dispose of the contaminated granules correctly
- Protective clothing including eye protection, gloves, and suitable clothing, such as overalls
- Segregating solids (pellets) and liquids within the cabinet (solids at the top of the cabinet and liquids towards the bottom on separate shelves, to prevent liquids leaking onto solids)
- Managing inventories to keep stored quantities to a minimum

Fertilisers, either solid or liquid, can be classed as oxidising agents. Storage of fertilisers should be to the same standards as pesticides, with the addition of:

- A container with a closed lid – some oxidising agents will 'heat' when exposed to water and the container must be kept dry and not left open
- A label on the container with the oxidising agent hazard diamond

15.9 Gas cylinders

Fire/explosion and exposure to harmful gases are potential hazards presented by gas cylinders. The contents, condition and origin of cylinders received at CA sites can often be difficult to determine. Control measures should concentrate on inspection, handling, storage/ segregation and steps to minimise inventories.

Inspecting gas cylinders

Cylinders and their contents should be properly identified. Cylinder identification charts are available and can help operators in identification and allocation to correct storage. Inspection should then consider the condition, any valve damage and the type of gas contained (flammable or other). Isolate any damaged cylinders and get advice. If you cannot identify a cylinder, seek advice.

Handling gas cylinders

When handling cylinders, you should do the following.

- Wear eye protection and gloves when moving cylinders
- Don't lift a cylinder by its valve or valve guard
- Don't roll cylinders along the ground (for larger cylinders use a cylinder trolley)
- Don't cut into or attempt to puncture cylinders
- Don't drop cylinders, bang cylinders together or maltreat them
- Don't attempt to discharge or empty gas cylinders

Storing gas cylinders

At least two gas cylinder cages should be available, unless there is a larger gas cylinder cage with suitable internal firewall segregation. Stores should segregate flammable gases from non-flammable and non-toxic gases.

- Gas cylinders should be stored in fully enclosed stores or solid containers with a suitably strong and secured mesh roof to prevent ejection during fire. Standard cages are available
- Stores should be kept secure at all times except when cylinders are being moved in/out
- Cylinders must be stored upright (unless instructions on the cylinder state otherwise)
- Stores should be clearly marked to indicate the presence of flammable materials and the types of gas stored, and prohibit smoking and naked flames
- Stores should be well drained to prevent water accumulation (leading to corrosion of cylinders)
- Keep flammable gases (eg butane and propane) in one store and others such as oxidising and toxic gases in another
- Stores should be at least 3 metres apart or separated by a suitable firewall
- Flammable gas stores should not be located within 6 metres of any potential ignition sources, such as electrical systems – see HSE's advice on the Dangerous Substances and Explosive Atmospheres Regulations 2002 (DSEAR) at www.hse.gov.uk/fireandexplosion/dsear.htm
- Cages should not be located within 3 metres of the site boundary and should be sited to prevent, or be protected from, impact with vehicles
- The area around cages must be kept free of flammable materials such as paper, dry grasses and other vegetation etc
- Inventories should be managed to keep stored quantities to a minimum
- Acetylene fires are extremely energetic – so you should isolate any acetylene cylinders found on site from all other gases, in a separate cage and remove them from site as soon as possible

Further guidance is available in the UKLPG Code of Practice 10: Storage of Full and Empty LPG Cylinders and Cartridges and the BCGA publications The safe handling of gas cylinders at waste facilities and Handle gas cylinders safely.

Disposal of gas cylinders

Actively manage the inventory of cylinders to limit the quantities stored. Various schemes are in place, such as the UKLPG cylinder retrieval scheme. Some companies also specialise in disposal of scrap cylinders.

Further guidance is set out in Orphaned compressed gas cylinders in the waste and recycling industries.

15.10 Household chemicals

These can include a wide range of hazardous substances such as bleaches, hypochlorites, detergents and other cleaning products, usually as part-empty containers.

In general, household chemicals can be split into low-risk substances, such as detergents, washing powders etc, and more hazardous substances, such as bleaches and peroxides. Keep the more hazardous substances in a dedicated secure cabinet with drip and spill protection and internal segregation to prevent substances mixing.

Operators should consider segregation and the compatibility of the different substances stored. For example, some household chemicals can react together to produce toxic gases and vapours.

Specialist contractors may be required to sort and remove the more hazardous household chemicals for disposal or recycling.

Lower-hazard chemicals may be stored in a suitable container with a closing lid.

15.11 Paints and adhesives

CA sites receive a wide variety of paints and adhesives, usually as part-empty containers. These may be water- or solvent-based. Segregating hazardous and non/less-hazardous paints and adhesives will help to reduce specialist storage and disposal requirements, but will require at least two segregated storage areas.

To reduce mixing of hazardous and non/less-hazardous waste, it is recommended that members of the public place all paint/adhesive containers onto a bunded tray for sorting by site staff.

- Separate skips/containers for paints and adhesives may be used at CA sites
- Containers should be suitable for use and be capable of being locked and well ventilated
- Containers should be labelled to indicate contents and have 'flammable' and 'no smoking or naked light' signs where necessary
- If members of the public place paints directly into containers, they should be advised to place items carefully, not throw them, into the container
- Solvent-based paint containers should not be within 6 metres of a flammable gas cage or battery container
- Wear eye protection and gloves when handling paints and adhesives

15.12 Thinners, solvents and other flammable liquids

Small quantities of flammable liquids may be brought to CA sites. Typically, these will be liquids such as white spirits and thinners in small bottles (large containers should be isolated if they are received on site). Household collection for larger quantities may be appropriate.

Flammable liquids should be left in the containers/bottles they are presented in unless these are leaking or in poor condition (in which case spill kits and containers should be used). CA site workers should not attempt to bulk-up flammable liquids by pouring them into larger containers/bottles. This can result in a high risk of fire if anti-static precautions are not in place. Storage should consist of the following:

- A locked cabinet with internal isolation, bunding and ventilation
- Shelves in cabinet should be ventilated to allow spills to fall through and not sit on a shelf
- A cabinet located at least 6m from any battery container or other potential source of ignition
- Warning signs indicating 'flammable liquid' and 'no smoking and naked flames'

Additional control measures should include:

- An eyewash bottle close to the cabinet
- Suitable fire extinguishers close to the cabinet
- Regular checks for spills – including checking for leaking containers in the cabinet (during hot weather more frequent checks may be required)
- Using absorbent granules to clean up any spillages immediately and disposing of contaminated granules correctly
- Protective equipment, including eye protection, gloves, suitable clothing such as overalls – these should not be synthetic because of the fire risk
- Inventories managed to keep stored quantities to a minimum

Further guidance can be found in - The storage of flammable liquids in containers and The safe use and handling of flammable liquids.

15.13 Waste oils

Waste oils, typically from home car servicing, are accepted at many CA sites. Oils are flammable and pose a fire risk. However, the most common type of accident caused by oils is slips from spills.

- Waste oils should be stored in a suitably strong and bunded tank
- Waste oil stores should not be within 6 metres of any gas cage or vehicle battery container. They should be bunded to prevent leaks entering drainage systems

Waste Industry Safety and Health Forum

- Waste oil stores should be marked with a 'flammable' warning sign – also use signs to warn people of the risk of slips
- Spillage control, containment, suitable flooring and cleaning regimes can be used to reduce the risk of slips
- Tank access hatches should be lidded and lids kept closed – a prop or something similar should be provided to minimise the risk of trapping a finger when opening/closing the lid.
- A mesh over access hatches will reduce the risk of containers (eg filters) falling into tanks
- Provide a container to dispose of emptied oil cans next to the oil tank
- Clean up all spills promptly and keep a spill kit, including suitable absorbent granules, close to the tank
- Employees should wear gloves when there is the potential to come into skin contact with oil – used engine oils can cause dermatitis and, in extreme cases, skin cancer

15.14 Other substances

Other wastes may be brought to CA sites. Site operators should take account of this in their storage plans, particularly the reception, handling and quarantine of materials.

16. Further reading and information

WISH guidance

Safe transport in waste management and recycling facilities WISH WASTE 09

Skip and container safety in waste management and recycling WISH WASTE 06

Compaction equipment: User and public safety WISH WASTE 08

Health and safety training: Guidelines for waste management and recycling sector WISH WASTE 21

Orphaned compressed gas cylinders in the waste and recycling industries WISH WASTE 03

Other useful reading and information

Safe use of skip loaders INDG378 Pocket card HSE Books 2003 www.hse.gov.uk/pubns/indg378.htm

Recover paper safely: Guidance for the recovered paper industry Leaflet INDG392 HSE Books 2004 www.hse.gov.uk/pubns/indg392.htm

Chemical warehousing: The storage of packaged dangerous substances HSG71 (Fourth edition) HSE Books 2009 ISBN 978 0 7176 6237 1 www.hse.gov.uk/pubns/books/hsg71.htm

Code of Practice 10: Storage of Full and Empty LPG Cylinders and Cartridges UKLPG 2004 www.uklpg.org/shop/codes-of-practice/

The safe handling of gas cylinders at waste facilities British Compressed Gases Association 2010 www.bcga.co.uk/publications/l2.pdf

Handle gas cylinders safely Technical Information Sheet TIS12 British Compressed Gases Association 2010 www.bcga.co.uk/publications/tis12.pdf 18 The storage of flammable liquids in containers HSG51 (Second edition) HSE Books 1998 ISBN 978 0 7176 1471 4 www.hse.gov.uk/pubns/books/hsg51.htm

HSE waste website: www.hse.gov.uk/waste

Household Waste Recycling Centre Guide Waste Resource Action 2012 www.wrap.org.uk

Do you use a steam/water pressure cleaner? You could be in for a shock! Leaflet INDG68(rev) HSE Books 1997 www.hse.gov.uk/pubns/indg68.htm

Providing and using work equipment safely: A brief guide Leaflet INDG291(rev1) HSE Books 2013 www.hse.gov.uk/pubns/indg291.htm

Using work equipment safely Leaflet INDG229(rev2) HSE Books 2012

www.hse.gov.uk/pubns/indg229.htm Published by the Health and Safety Executive 12/13 WASTE26

Disclaimer and WISH

Nothing in this guidance constitutes legal or other professional advice and no warranty is given nor liability accepted (to the fullest extent permitted under law) for any loss or damage suffered or incurred as a consequence of reliance on this guide.

The guidance is not a substitute for duty holder judgment and/or professional safety advisor's judgment, Notwithstanding the good practice in this guidance, duty holders are responsible for ascertaining the sufficiency and adequacy of their internal and independent procedures for verifying and evaluating their organisation's compliance with health and safety law. WISH does not accept any liability (to the fullest extent permitted under law) for any act or omission of any persons using the guidance

The Waste Industry Safety and Health (WISH) Forum exists to communicate and consult with key stakeholders, including local and national government bodies, equipment manufacturers, trade associations, professional associations and trade unions. The aim of WISH is to identify, devise and promote activities that can improve industry health and safety performance. See WISH website

Further information

This guidance is issued by the Waste Industry Safety and Health (WISH) Forum to help control the safety and health risks associated with managing health and safety in civic amenity sites. Following the guidance is not compulsory, unless specifically stated, and you are free to take other action. But if you do follow the guidance you will normally be doing enough to comply with the law. Health and safety inspectors seek to secure compliance with the law and may refer to this guidance. Some parts of the guidance represent good practice and may go further than the minimum you need to do to comply with the law. This guidance is available free to download at the WISH web site.

This publication is based on guidance previously published by the Health and Safety Executive (HSE) known as Waste 26, which was withdrawn in 2015. © Crown copyright 2013.

WISH is re-using text provided by the HSE free of charge under the terms of the Open Government Licence v2.0. To view this licence visit <http://www.nationalarchives.gov.uk/doc/open-government-licence>, or write to the Information Policy Team, The National Archives, Kew, Richmond, Surrey, TW9 4DU; or email: psi@nationalarchives.gsi.gov.uk. Any enquiries regarding this document/publication should be directed to WISH or the HSE.

