Waste hierarchy

What?

- construction generates waste and somtimes valuable materials are thrown away
- it is important to minimise waste by, in priority order:
 - prevention of waste
 - if it does occur preparing for reuse
 - before considering recycling
 - if it cannot be recycled, then other recovery (energy recovery)
 - disposal of the waste to landfill.
 - there will be a resource management plan (RMP) or site waste management plan (SWMP) in place on site to manage waste. Everyone on site must follow this plan when waste is produced.

Why?

- avoid environmental harm: reduction, reuse and recycling waste minimises the environmental effects of disposing waste to landfill
- **reduce costs:** the true cost of waste is more than just the disposal cost and is made up of the:
- original purchase price of the material
- cost of unloading, handling, storage and transporting the material around site

Include Using less material in design and manufacture. Keepin products for longer reuse. Using less hazardous materials Checking, cleaning, repairing, refurbishing whole items or spare parts or product. Includes composting if it meets quality protocols Includes anaerobic digestion, incineration with Other energy recovery, gasification and pyrolysis, which produce energy (fuels, heat and power) recovery and materials from waste. Some backfilling Landfill and incineration without energy recovery

- cost of collecting the waste or damaged materials, reloading, moving and storage waste on site
- cost of disposing waste (ie tipping charges, landfill taxes)
- cost of replacing damaged and wasted materials.
- **avoid costs:** by focusing on resource efficiency at the start of a project to avoid generating waste in the first place.

Questions

- 1 Are workers familiar with the site's RMP/SWMP?
- 2 Where are off-cuts stored for use in other activities on site?
- 3 What happens to the waste when it goes off site?

Do

Prevent

- ✓ store materials neatly to avoid damage and loss
- ✓ think of ways to reduce waste
- ✓ reduce the amount of waste created on site
- ✓ keep materials in their packaging to protect from damage.

Prepare for reuse

- ✓ keep significant off-cuts for use elsewhere
- reuse materials until no longer fit for purpose (eg shuttering, fencing)
- reuse materials for alternative purposes (eg use old shuttering ply for protection).

Recycle

✓ m5aterials where possible

- ✓ segregate different waste types
- ✓ store waste in the appropriate skip or container until
 removed from site
- ✓ make sure skips are labelled clearly
- ✓ add 'housekeeping' to site checklists
- ✓ clear up when work is carried out.

- put waste materials into the wrong waste container
- mix different types of waste it prevents recycling
- open new cans or pallets before the ones in use are empty
- leave materials unprotected and where they are likely to be damaged by, for example, rain or mud
- burn or bury waste it's illegal
- leave materials at risk from site traffic movement.







Segregation of waste

What?

- segregating wastes into hazardous/special, non-hazardous and inert for disposal can help minimise costs and maximise the opportunities for recovery and recycling
- there is a legal requirement to take all reasonable steps to segregate dry recyclables metal, glass, plastics, paper waste, and card and food waste (Scotland) for separate collection
- check waste containers use standard signs to encourage segregation of waste.

Why?

- avoid environmental harm: incorrectly disposing of waste could cause water pollution and damage habitats. Landfills and waste treatment centres are specially designed to be able to handle specific wastes without causing environmental harm
- avoid prosecution: it is illegal to mix different hazardous/ special wastes and to mix hazardous/special waste with other waste types. It is also illegal not to take all the reasonable steps to separate dry recyclables for collection
- reduce costs: segregating wastes can maximise recycling and can also allow certain types of waste to be recycled and reused on site.

Questions

- 1 Why segregate waste?
- 2 Where on this site is the waste storage area?
- 3 What type of storage containers for waste should be used?



Do

- ✓ look out for the standard signs. Where possible segregate wastes into the different types
- check what skips there are on site and ensure the correct wastes are placed in them
- close lids or doors on skips to prevent waste getting wet or escaping
- ask a line manager for advice if unsure about correct waste segregation on site.

- overfill skips
- × put liquids and flammable liquid wastes into skips
- mix non-hazardous and hazardous/special waste.





Storage of waste

What?

 allowing waste to escape into the environment not only causes nuisance to neighbours and generates a poor public image, it is illegal.

Why?

- avoid prosecution: it is the duty of all waste producers to prevent their waste escaping into the environment (ie windblown or as leachate)
- reduce costs: the segregation of waste into separate containers or skips can lead to lower costs by:
 - reducing disposal costs and landfill tax through preventing the contamination of inert wastes by nonhazardous and hazardous/special wastes
 - maximising the potential for reusing and recycling materials
 - making it easier to see how much of each type of waste is being produced and where efforts to reduce waste need to be targeted.



Questions

- 1 Where is the waste storage area on site?
- 2 What wastes cannot be mixed?
- 3 What type of waste needs to be bunded?

Do

- ✓ keep sites tidy and collect waste regularly
- use waste containers or skips suitable for the type of waste being stored
- use skips with lids or cover them with sheets or nets to prevent dust and litter being blown out
- check the condition of containers and skips to minimise risk of accidental spillages or leaks
- use colour coding to mark waste containers and skips clearly with their intended contents
- ensure labels on containers and skips are kept in good order
- segregate waste before putting it into the designated containers skips

- ✓ locate skips away from watercourses, gullies and drains
- place liquid hazardous/special waste containers within bunds or on drip trays
- ✓ ensure protection of waste against vermin (eg rats).

- * throw materials into the wrong container/skip
- contaminate one waste type with another
- x mix hazardous with non-hazardous waste it is illegal
- give waste away, all waste taken off site needs to be accompanied by paperwork
- overfill skips
- damage covers over or bunds around any skips or containers
- burn or bury waste it is illegal.







Hazardous/special waste (aerosols, COSHH)

What?

- material(s) containing properties that may make it harmful to human health or the environment
- some products such as fluorescent tubes are always classed as hazardous/special waste, while other materials may be hazardous/special if contaminated with dangerous substances such as oil or chemicals (ie materials from a site kit used to contain a spill)
- the controls of hazardous/special waste require inclusion of full duty of care information
- there are variations across the UK administrations as to how hazardous/special waste is managed.

Why?

- avoid environmental harm: inappropriate disposal of hazardous/special waste may result in water/ground contamination as this contains harmful substances (eg arsenic, mercury)
- avoid prosecution: waste producers have a responsibility to dispose of hazardous/special waste at an appropriate facility.

Questions

- 1 Has hazardous/special waste been produced? What kind?
- What should be done when producing hazardous/special waste?
- 3 How should this be segregated and disposed of?



Do

- make sure everyone knows what to do with hazardous/ special waste
- store hazardous/special waste in accordance with legislation specifying the quantity, time limit and condition of storage
- follow agreed procedures regarding hazardous/special waste ensuring that all documentation (eg Hazardous Waste Consignment Note [HWCN]) is passed to a line manager.

Don't

mix hazardous/special waste with inert or nonhazardous wastes or other hazardous/special waste.







Waste Electrical and Electronic Equipment (WEEE)

What?

- WEEE is waste electrical and electronic equipment
- examples of WEEE include:
 - small household appliances (eg kettles)
 - IT and telecoms equipment
 - lighting equipment
 - electronic tools
 - monitoring and control instruments (eg protection equipment)
- new products that are placed on the market and are classified WEEE must have one of the following symbols on the item or accompanying paperwork if the item is too small:

The image on the left (with the black line) shows that the item was produced after 13 August 2005.

Why?

- avoid environmental harm: inappropriate discharge of WEEE may result in water/ground contamination as some WEEE are hazardous (eg refrigerators)
- avoid prosecution: suppliers/producers (for items purchased after 13 August 2005) or end users (for items purchased before 13 August 2005) have the responsibility to dispose of WEEE at an appropriate facility.

Note that organisations can under the legislation arrange for alternative disposal if preferable to returning to supplier.

Questions

- 1 Who is responsible for the disposal of WEEE?
- 2 How are WEEE identified?
- 3 What should be done when purchasing Electrical and Electronic Equipment (EEE)?



Do

- ✓ know what waste on site is classed as WEEE
- ensure that disposal of the waste complies with the regulations

- ignore the requirements of duty of care/hazardous waste legislation when disposing of WEEE
- mix WEEE with general construction/demolition or hazardous waste.







Toolbox talks: nuisance

Be a good neighbour

What?

- many of the local community will regard construction works in their neighbourhood with great concern
- public concern of construction includes noise, dust, road closures, increased heavy traffic and disruption to normal life
- being a good neighbour means to act with consideration for all those who live and work in the area surrounding the construction site to minimise their inconvenience.

Why?

- avoid prosecution: if any problems being caused by dust or noise are not satisfactorily resolved the local authority can prosecute those responsible
- avoid prosecution: if neighbours make a complaint about work on site exceeding the agreed hours the local authority can take action against the site
- avoid programme delays: if neighbours make a complaint about dust or noise nuisance the local authority can stop works, which leads to delays
- reduce costs: if good relations can be established with neighbours, many issues such as access to site, material deliveries and working hours can be improved through friendly negotiation
- public relations: being a good neighbour creates a positive image for a company and the industry



public perception: many construction companies register with the Considerate Constructors Scheme (CSS) and abide the Code of Considerate Practice as a way improve the 'image' of construction and encourage best practice (ie beyond statutory requirements).

Questions

- 1 What should be done to avoid nuisance on this site?
- 2 Which parts of the site are close to houses, schools etc?
- 3 What are the activities likely to cause a nuisance on site?
- 4 What should be done if a complaint is received?

Do

- ✓ be polite and considerate to the public at all times
- take notice of any complaint made by a neighbour and pass it on to a line manager
- ✓ only use approved routes to access the site
- ✓ minimise reversing vehicles as much as possible
- use only designated parking areas, and always park vehicles with consideration for the needs of others
- keep dust and noise to a minimum
- always close any noise reducing engine covers while plant is in use
- direct site and activity lighting away from neighbouring properties
- ✓ tell a line manager if rubbish bins or skips are full or nearly full

notify a line manager immediately if any fly-tipped waste is found in the area.

- park vehicles in a way that obstructs driveways to neighbouring properties
- park on pavements, footpaths or bridleways
- trespass on neighbour's land
- leave engines running unnecessarily
- x shout on site or have noisy radios on
- shout or whistle at passers by
- drop litter or leave sites and surrounding areas untidy
- leave gates to the site open
- drag mud onto the roads outside the site by ensuring vehicle wheels are clean before leaving.





