Waste & Recycling Sector Workplan 2019-20: Targeted Inspections

Open Government status: Open

Audience: FOD Inspectors, Mechanical, Occupational Hygiene & Process Safety Specialists

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1. **Inspection programme**

1.1. **What are we inspecting and why?**

The purpose of this inspection programme is to target waste and recycling sites. The Waste and Recycling sector has one of the highest rates of workplace injury and work-related ill-health of all the main industry sectors.

This is a long-term intervention aimed at delivering sustained industry improvements in risk control particularly transport, machinery guarding and isolation and exposure to bioaerosols.

1.2. **What is the extent of the problem?**

Over the last 5 years, there has been an average of 8 fatalities annually in the waste industry. In 2017/18 there were 12 fatal injuries. 74% of all fatal injuries were related to transport, machinery and being struck by objects. The fatality rate is 16 times greater than the rate across all industries and 4 times higher than the rate in construction.

According to the Labour Force Survey data, an average of 5,000 workers (around 4.5% of workers) suffer from a work-related illness each year. Ill health types include musculoskeletal disorders and Occupational Lung Disease (OLD) – linking in with the [Health & Work strategy](#). The rate is statistically higher than the rate for workers across all industries (3.1%).

There were also an average of 5,000 non-fatal injuries to workers each year (around 3.9% of workers). The rate is statistically significantly higher than the rate for workers across all industries (1.9%). Main kind of accidents involve slips & trips, falls from height and lifting & handling.

The top 3 priorities for the sector are:
- To reduce the number of people being struck by moving vehicles.
- To reduce the number of workers being caught in moving machinery.
- To reduce the number of ill-health cases suffered by workers.

**Workplace transport**

Workplace transport continues to remain a key risk within the waste and recycling industry. Over a five-year period between 2013 and 2018, 27% of deaths in the sector involved moving vehicles. During the 2017/18 targeted waste and recycling inspection campaign, 35% of Notices served related to transport activities, whilst 94% of all letters issued as part of the campaign highlighted transport related material breaches. The key factors remain workplace transport arrangements on site; suitability and maintenance of vehicles; and the competence and management of drivers.
Machinery guarding and isolation

Machinery guarding and isolation also remain a key risk within the waste and recycling industry. Over a five-year period between 2013 and 2018, 32% of deaths in the sector were the result of persons coming into contact with dangerous parts of machinery. During the 2017/18 targeted waste and recycling inspection campaign, 35% of Notices served related to machinery guarding and isolation deficiencies, whilst 62% of all letters issued as part of the campaign highlighted machinery related material breaches. The key factors remain preventing access to dangerous of machinery; and the failure to develop, implement and supervise appropriate procedures for clearing blockages and maintenance (i.e. isolation and lock-off).

Bioaerosols

Bioaerosols are a complex mixture of bacteria, fungal spores and other biological particles suspended in air. They will be released during the handling and processing of waste streams that contain anything organic e.g. domestic, garden and food waste, particularly where this is energetic.

Regular and repeated exposure to high concentrations of bioaerosols may result in the development of respiratory illness including inflammation and irritation of the airways, irritation of the eyes and gastro-intestinal disorders. Waste and recycling bioaerosols potentially contain a species of fungus called Aspergillus fumigatus. This is common in low concentrations in the environment but grows prolifically in organic materials, and exposure to high airborne concentrations is known to cause occupational asthma.

The health issues associated with bioaerosol exposure have been well known within certain waste and recycling processes for some time, e.g. composting, but there is a lack of awareness about bioaerosols across other parts of the waste industry. There is some evidence that workers in waste and recycling can develop asthma as a result of exposure to bioaerosols however, the scale and prevalence of this within the industry is yet to be established by epidemiological investigation. Exposure to bioaerosols should therefore be adequately controlled by applying the Principles of Good Control Practice at Schedule 2A of COSHH. Guidance on some of the controls considered proportionate to the health risk is provided in the IEE table and reflects industry guidance to be published by WISH.

1.3. What must be covered at the inspections?

- The key safety risks from transport and machinery through suitable control measures
- The key health risks of exposure to bioaerosols through an assessment of the management arrangements for preventing and / or controlling the risk of exposure
- Any matters of evident concern (MEC) – see Appendix 5.2
- Any matters of potential major concern (MPMC) - see Appendix 5.2
1.4. **What sectors and topics are we inspecting and when?**

<table>
<thead>
<tr>
<th>Sub Sector</th>
<th>Topic(s)</th>
<th>When</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste sites – all types</td>
<td>Transport Machinery</td>
<td>Q3 (including dedicated fortnight in November).</td>
</tr>
<tr>
<td>All waste sites that process/control organic waste</td>
<td>Bioaerosols</td>
<td>Q3 (including dedicated fortnight in November).</td>
</tr>
<tr>
<td>Impact Evaluation inspections</td>
<td>All topics</td>
<td>Q3 (including dedicated fortnight in November).</td>
</tr>
</tbody>
</table>

Further information on targeting of premises including SIC codes is contained in the [Targeting and Inspection Guide 2019/2020](#).

1.5. **Application of the Enforcement Management Model (EMM)**

See [Section 5.3](#) for EMM Initial Enforcement Expectations and industry appendix pages.

2. **Guidance & Support Available**

<table>
<thead>
<tr>
<th>Specialist Support type</th>
<th>Relevant specialist</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioaerosol Control strategies &amp; enforcement</td>
<td>Occupational Hygiene Specialist Inspectors</td>
</tr>
<tr>
<td>Machinery Safety Standards</td>
<td>Mechanical Specialist Inspectors</td>
</tr>
<tr>
<td>Transport Safety Standards</td>
<td>Mechanical Specialist Inspectors (vehicle)</td>
</tr>
<tr>
<td>Anaerobic digestion and Energy from Waste</td>
<td>Process Safety Specialist Inspectors</td>
</tr>
<tr>
<td>Industry standards &amp; enforcement benchmarks</td>
<td>Waste and Recycling Sector</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:wasteandrecycling@hse.gov.uk">wasteandrecycling@hse.gov.uk</a></td>
</tr>
</tbody>
</table>

**Important Other Guidance for Inspections**

<table>
<thead>
<tr>
<th>Guidance location</th>
<th>Important Other Guidance for Inspections</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM9</td>
<td>Machinery Information sheets (internal only)</td>
</tr>
<tr>
<td>WISH GUIDANCE</td>
<td>Waste Industry Safety and Health Forum (WISH) guidance – the industry standards for benchmarking</td>
</tr>
</tbody>
</table>

The above support and guidance is supplemented by in-year work briefings, webinars and targeted sector-specific training.
3. Recording of inspections
Answers to the following six questions must be recorded in the text area of the appropriate ‘risk area’ under DO IT for all HRS, Bioaerosol and Evaluation inspections. Answers should be kept short and succinct but include sufficient information to give a clear understanding of the issues and action taken.

For all bioaerosol inspections, the keyword “#Bioaerosol” should be included in the Case summary field.

Capturing this information is essential to enable us to effectively analyse the inspection outcomes and impact.

Questions

1. What processes are carried out and equipment used?
2. Are the control measures used, checked and maintained?
3. What are the specific control failings?
4. Are there any management failings such as training, instruction etc.?
5. Was there any SG involvement?
6. Was there a Material Breach(es) or Enforcement action taken?

The following structure should be used (including the question number):

Q1: [answer]
Q2: [answer]
Q3: [answer]
Q4: [answer]
Q5: [answer]
Q6: [answer]

For impact evaluation inspections, the following additional questions below must be answered:

7. Has there been sustained compliance in the control of those health and safety risks discussed at the previous visit?
8. If not what are the reasons for failing to maintain continued control?
9. Were additional uncontrolled risks identified and if so what were they?

4. Health and Safety
Sub-sector-specific health and safety information is detailed in the appendices 5.1.1. – 5.1.13. General health & safety information for visiting staff is on the intranet

The inspection of waste and recycling sites does not automatically necessitate the need for additional health and safety precautions e.g. two-person inspections.

Inspectors are particularly reminded of the need to wear appropriate safety footwear (ankle support, mid-sole protection, steel toe caps) and a high visibility tabard or jacket. Other PPE maybe required dependent on-site rules / conditions e.g. eye
protection, hearing protection and hard hat. Please note that it is HSE’s policy across all industries that Inspectors should not enter any area where there is evidence of a respirable hazard or a need to wear respiratory protective equipment (RPE) to control exposures to substances hazardous to health unless they are identified as authorised RPE wearers. For further information see http://intranet.hse.int/yourhealthsafety/safety/respiratory.htm.
## 5. Appendices

### Appendix 5.1. Industry specific information, Initial Enforcement Expectation (IEE) tables and examples of Matters of Potential Major Concern (MPMC)

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<th>Page no.</th>
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<td>5.1.4.</td>
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<td>5.1.5.</td>
<td>Composting</td>
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<td>5.1.6</td>
<td>Energy from Waste</td>
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<td>5.1.7</td>
<td>Material Recovery Facility (MRF)</td>
<td>24</td>
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<td>5.1.8</td>
<td>Mechanical Biological Treatment (MBT)</td>
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</tr>
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<td>5.1.9.</td>
<td>Metal Recycling inc ELV</td>
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<td>5.1.10.</td>
<td>National Lead Inspector Companies</td>
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<td>5.1.11</td>
<td>Skip Safety</td>
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<td>5.1.12</td>
<td>Waste Electrical &amp; Electronic Equipment (WEEE)</td>
<td>35</td>
</tr>
<tr>
<td>5.1.13.</td>
<td>Waste Transfer Stations</td>
<td>38</td>
</tr>
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Appendix 5.1.1: Anaerobic Digestion

Introduction

Anaerobic Digestion (AD) is the simple, natural breakdown of organic matter (such as commercial and household food waste, garden waste and farm slurry) into carbon dioxide, methane and water, by two groups of microorganisms, bacteria and archaea. Since many of these are intolerant to oxygen, this process is known as anaerobic. There are two main types of AD called thermophilic and mesophilic (the primary difference between them being that thermophilic processes reach temperatures of up to 60°C and mesophilic normally runs at about 35-40°C).

The main products resulting from the AD process is a mixture of methane and carbon dioxide gases (biogas), water and organic material (digestate). Biogas can be burned to produce both heat and electricity, while methane can be used as vehicle fuel or injected into the gas grid. Digestate is a stable, nutrient-rich substance and can be used for a range of products and purposes: most usefully as a fertiliser, rich in nutrients, but also as feedstock for ethanol production, and in low-grade building materials, like fibreboard. Water, after treatment within the AD process, may be returned to the watercourses.

This is a very diverse sector with multiple technologies being developed on a range of scales, from the small-scale farm processing animal manure through to large industrial scale premises processing sewage sludge, and municipal waste. All processes will contain DSEAR and process safety related risks, but the extent of these risks will differ depending on the size and complexity of the plant and/or processes.

Health and safety

Inspectors are reminded of the need to wear appropriate safety footwear (ankle support, mid-sole protection, steel toe caps) and a high visibility tabard or jacket. Other PPE maybe required dependent on-site rules / conditions e.g. eye protection, hearing protection and hard hat.

Please note that it is HSE’s policy across all industries that Inspectors should not enter any area where there is evidence of a respirable hazard or a need to wear respiratory protective equipment (RPE) to control exposures to substances hazardous to health unless they are identified as authorised RPE wearers. For further information see http://intranet.hse.int/yourhealthsafety/safety/respiratory.htm. If you still are unsure as to the implications of this policy then please seek advice from Occupational Hygiene Specialist Inspectors. If you are on site and encounter a designated RPE area, then do not enter, and seek support from an authorised RPE wearer.

If areas have been classified as having (potential) explosive and/or flammable atmospheres – do not use equipment unless it is intrinsically safe in these areas. For further information see http://intranet.hse.int/yourhealthsafety/safety/visiting-explosives.htm.

Be aware of risks whilst working in close proximity to vehicles.

Ensure good personal hygiene and wash hands on leaving site.

Inspection

Establish the contractual arrangements for the operation and management of the site to allocate responsibilities to the correct duty holder (e.g. check the site permit for the correct legal entity of the operator).

Inspect in accordance with priorities below. Due to the technical nature of the processes, there are a number of additional hazards associated with these processes e.g. process safety and explosion risks. As such Inspectors may need to initially seek assistance from their local Process Safety Specialist Champions.

Identify and record the following information on your inspection case as per Section 3.

Priorities

For each of the sections below, please also assess how site management ensure sustained compliance with their procedures through monitoring and review to complete the plan, do, check, act management system.

Transport

Safe site

- Have they assessed the risks from workplace transport at the site?
- Is there a clear directional flow of traffic around the site?
- Has a one-way system been considered/implemented?
- Has reversing been eliminated sfarp?
- Are vehicles suitably segregated from pedestrians?
- Have blind corners been eliminated? If not, have mirrors etc. been introduced to improve a driver’s view of obscured areas?
<table>
<thead>
<tr>
<th>Safe vehicles</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Have risks arising from reverse tipping been controlled eg to prevent vehicles reversing into reception pits?</td>
</tr>
<tr>
<td>- Are all vehicles fit for use and suitable for the activities they are performing?</td>
</tr>
<tr>
<td>- Are all brakes, lights, mirrors, horns etc. suitably maintained?</td>
</tr>
<tr>
<td>- Have reversing alarms/beacons been fitted?</td>
</tr>
<tr>
<td>- Have all lifting equipment and accessories been thoroughly examined?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Safe drivers</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Are only trained workers allowed to drive vehicles?</td>
</tr>
<tr>
<td>- Are there clear instructions for visiting drivers?</td>
</tr>
<tr>
<td>- Are visiting drivers supervised and monitored whilst on site?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Machinery</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Has access to all dangerous parts of the machine been eliminated or restricted safely?</td>
</tr>
<tr>
<td>- Is guarding fixed or interlocked (if access required)?</td>
</tr>
<tr>
<td>- Are all in-running nips on conveyors guarded (safe by position for operation does not mean safe by position for maintenance)?</td>
</tr>
<tr>
<td>- Is there a daily / pre-shift guard check system in place?</td>
</tr>
<tr>
<td>- How are machines maintained and/or cleaned?</td>
</tr>
<tr>
<td>- How are blockages removed from machines?</td>
</tr>
<tr>
<td>- Can the machine be isolated and locked off (e.g. maintenance or clearing blockages)?</td>
</tr>
<tr>
<td>- Are there the means to lock off e.g. personal padlocks, multiclasp locks?</td>
</tr>
<tr>
<td>- Have all operators been suitably trained in the use of the machine they are operating?</td>
</tr>
<tr>
<td>- Have risk assessments considered engineering/maintenance activities?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DSEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>- All AD processes will contain risks from dangerous substances and explosive atmospheres.</td>
</tr>
<tr>
<td>- Has a suitable and sufficient DSEAR assessment been undertaken? e.g.:</td>
</tr>
<tr>
<td>o Have the risks arising from dangerous substances been identified and controlled?</td>
</tr>
<tr>
<td>o Have any areas of the workplace where explosive atmospheres may occur been identified and classified, and measures taken to avoid ignition sources?</td>
</tr>
<tr>
<td>o Have plans and procedures been developed to deal with accidents, incidents and emergencies and cascaded to staff?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Asphyxiation / Confined Spaces</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Have all areas likely to be designated as “confined spaces” been identified and risks suitably assessed?</td>
</tr>
<tr>
<td>- Have the risks associated with working in an oxygen deficient atmosphere been suitably assessed?</td>
</tr>
<tr>
<td>- Have the asphyxiation risks associated with Hydrogen Sulphide exposure been assessed; including use of fixed and/or portable detectors?</td>
</tr>
<tr>
<td>- Is it possible to perform the work without the need to enter the confined space?</td>
</tr>
<tr>
<td>- Have suitable and sufficient arrangements been introduced to ensure persons (including contractors) required to work in a confined space are not placed at risk (e.g. planned, safe system of work, suitable equipment, competent workers, emergency rescue procedures, etc.)?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bioaerosols</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Are they aware of what bioaerosols are? Are they aware of health risks and symptoms of exposure?</td>
</tr>
<tr>
<td>- Have they considered the increased risk of bioaerosol generation during the following activities:</td>
</tr>
<tr>
<td>o Manual sorting or picking through waste;</td>
</tr>
<tr>
<td>o Maintenance and cleaning activities e.g. compressed air, dry brushing etc.;</td>
</tr>
<tr>
<td>o Working inside buildings near to where waste is being moved by heavy plant e.g. tipping halls.</td>
</tr>
<tr>
<td>- Have cleaning and maintenance tasks generating bioaerosols e.g. pressure hosing, compressed air use, dry sweeping been eliminated where reasonably practicable?</td>
</tr>
<tr>
<td>- Where exposure to bioaerosols cannot be adequately controlled, has suitable and sufficient Respiratory Protective Equipment (RPE) been provided (e.g. disposable FFP3 half masks, reusable half mask with P3 filter, powered hood/helmet with P3 filter) in combination with other control measures?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Musculoskeletal Risks (MSDs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Have the risks associated with manual handling activities been suitably assessed?</td>
</tr>
<tr>
<td>- Are there opportunities to use mechanical aids to replace manual handling?</td>
</tr>
<tr>
<td>- Are workers appropriately trained?</td>
</tr>
<tr>
<td>- Checks etc.?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Guidance</th>
</tr>
</thead>
</table>

WISH Info 02 - Practical advice on lock-off recycling/recovery machinery

Waste 09 - Safe transport at waste and recycling sites

Contacts
wasteandrecycling@hse.gov.uk

For IEEs and examples of MPMC see Appendix 5.2 & 5.3 in addition to those listed below

<table>
<thead>
<tr>
<th>Potential Catastrophic Event</th>
<th>Due to:</th>
<th>Examples of indicative issues:</th>
<th>Existing Guidance:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure to oxygen deficient atmospheres; exposure to noxious / toxic gases; engulfment (solids / liquids).</td>
<td>Entry into a confined space / tanks / silos</td>
<td>Need to enter confined space has not been designed-out.</td>
<td><a href="http://www.hse.gov.uk/pUbns/priced/l101.pdf">http://www.hse.gov.uk/pUbns/priced/l101.pdf</a></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lack of / inadequate safe system of work for necessary confined space entry.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Failure to use detectors to monitor for accidental release</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fire &amp; explosion.</td>
<td>Ignition of flammable gases (e.g. methane, hydrogen sulphide).</td>
<td>Inadequate control/release of combustible and flammable liquids/gases.</td>
<td><a href="http://www.hse.gov.uk/fireandexplosion/about.htm">http://www.hse.gov.uk/fireandexplosion/about.htm</a></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><a href="http://www.hse.gov.uk/fireandexplosion/ds">http://www.hse.gov.uk/fireandexplosion/ds</a> ear-regulations.htm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inadequate control of ignition sources in hazardous areas e.g. non-ATEX certified equipment, ineffective permits for hot work etc.</td>
<td>INDG370(rev1) Controlling Fire and Explosion Risks in the Workplace</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inadequate explosion relief</td>
<td>HSG 51 Safe Storage of Flammable Liquids in containers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inadequate storage and use of flammable liquids.</td>
<td>Safe use and handling of flammable liquids - HSG140</td>
</tr>
</tbody>
</table>
Appendix 5.1.2: Catalytic Converter Recycling

Introduction

Catalytic converters are emission control devices fitted to a vehicle exhaust system. They have a ceramic monolith core with a honeycomb structure containing a catalyst that includes a mix of ‘precious metals’ (e.g., platinum, palladium and rhodium). These precious metals are highly valuable and due to the fine particle size of them, an effective LEV system is required to maximise capture. As such it is not normally cost effective for smaller metal recyclers to do this work themselves. NB effective LEV for precious metal capture does not necessarily equate to effective LEV to reduce exposure.

The honeycomb centre is insulated by support matting. This matting may contain refractory ceramic fibres (RCF). RCF is a known/presumed human carcinogen, inhalation of respirable fibres can cause lung cancer. There is no simple way for operators to determine whether a catalytic converter contains RCF until it is cut open. Operators should therefore treat all catalytic converters as containing RCF until they are able to identify that it is not present. RCF has a Workplace Exposure Limit (WEL) of 1 fibre/millilitre (5mg.m⁻³). RCF is classified as a carcinogen under COSHH i.e. exposure to RCF should be reduced as low a level as reasonably practicable.

To obtain the precious metals, a process known as "de-canning" occurs. This process involves cutting open the metal casing (usually using either a guillotine or crocodile (alligator) shear), and removing the ceramic core contained inside. Other dusts may be released during de-canning.

Health and safety

Inspectors are reminded of the need to wear appropriate safety footwear (ankle support, mid-sole protection, steel toe caps) and a high visibility tabard or jacket. Other PPE maybe required dependent on-site rules / conditions e.g. eye protection, hearing protection and hard hat.

Please note that it is HSE’s policy across all industries that Inspectors should not enter any area where there is evidence of a respirable hazard or a need to wear respiratory protective equipment (RPE) to control exposures to substances hazardous to health unless they are identified as authorised RPE wearers. For further information see http://intranet.hse.int/yourhealthsafety/safety/respiratory.htm. If you still are unsure as to the implications of this policy then please seek advice from Occupational Hygiene Specialist Inspectors. If you are on site and encounter a designated RPE area, then do not enter, and seek support from an authorised RPE wearer.

Be aware of risks whilst working in close proximity to vehicles.

Ensure good personal hygiene and wash hands on leaving site.

Inspection

If you are intending to inspect a site that is believed to recycle catalytic converters, then it is recommended that you discuss the specific health issues with an Occupational Hygiene Specialist Inspector.

Identify and record the following information on your inspection case as per Section 3.

Full site inspection in accordance with priorities required in addition to the inspection of exposure to RCF.

Priorities

For each of the sections below, please also assess how site management ensure sustained compliance with their procedures through monitoring and review to complete the plan, do, check, act management system.

Catalytic converter recycling

- Where is this work performed e.g. in a dedicated enclosure or in an open area where others may be affected by the work activity?
- How do they cut open the catalytic converters to extract precious metals inside? Is the machinery used appropriately guarded?
- Are they aware of the potential for the catalytic converter to contain Refractory Ceramic Fibre (RCF)?
- Have they introduced suitable and sufficient control measures to reduce (potential) exposure to RCF to as low as reasonably practicable during de-canning?
- Where is the LEV capture point positioned – e.g. at the base of the machine being used to de-can, or is it at a higher level (thereby potentially drawing captured materials past the operators)?
- How do they extract the honeycomb core? Have they minimised the “drop” distance between the point at which the core is extracted and where it is captured by the LEV?
- What is the position of the operator during this process e.g. are they “leaning into” the capture zone?
- During de-canning, do they ensure that the metal casings are empty of any material (including RCF), or is there potential for matting to remain in those being sent for recycling?
- Have they introduced suitable measures to control exposure during cleaning and/or maintenance activities?
- Has suitable and sufficient information, instruction and training been provided for workers involved in any stage of this process?

**Machinery**
- Has access to all dangerous parts of the machine been eliminated or restricted so far?
- Is guarding fixed or interlocked (if access required)?
- Are all in-running nips on conveyors guarded (safe by position for operation does not mean safe by position for maintenance)?
- Is there a daily / pre-shift guard check system in place?
- How are machines maintained and/or cleaned?
- How are blockages removed from machines?
- Can the machine be isolated and locked off (e.g. maintenance or clearing blockages)?
- Have all operators been suitably trained in the use of the machine they are operating?
- Have risk assessments considered engineering/maintenance activities?

**Transport**

**Safe site**
- Have they assessed the risks from workplace transport at the site?
- Is there a clear directional flow of traffic around the site?
- Has a one-way system been considered/implemented?
- Has reversing been eliminated so far?
- Are vehicles suitably segregated from pedestrians?
- Has the positioning of skips/containers been considered with a view to eliminating blind corners? If not, have mirrors etc. been introduced to improve a driver’s view of obscured areas?
- Are physical control measures in place to restrict access during collection activities?

**Safe vehicles**
- Are all vehicles fit for use and suitable for the activities they are performing?
- Are all brakes, lights, mirrors, horns etc. suitably maintained?
- Have reversing alarms/beacons been fitted?
- Have all lifting equipment and accessories been thoroughly examined?

**Safe drivers**
- Are only trained workers allowed to drive vehicles?
- Are there clear instructions for visiting drivers?
- Are visiting drivers supervised and monitored whilst on site?

**Musculoskeletal Risks (MSDs)**
- Have the risks associated with manual handling activities been suitably assessed?
- Are there opportunities to use mechanical aids to replace manual handling?
- Are workers appropriately trained?

**Guidance**
- PM65 “Worker protection at crocodile (alligator) shears” [http://www.hse.gov.uk/pubns/books/pm65.htm](http://www.hse.gov.uk/pubns/books/pm65.htm)
- “Scrap and metal recycling” [http://www.hse.gov.uk/waste/metals.htm](http://www.hse.gov.uk/waste/metals.htm)
- WISH Info 02 - Practical advice on lock-off recycling/recovery machinery

**Contacts**
- wasteandrecycling@hse.gov.uk
For IEEs and examples of MPMC see Appendix 5.2 & 5.3 in addition to those listed below

### Site specific IEEs

<table>
<thead>
<tr>
<th>Task</th>
<th>Situation</th>
<th>PN/IEE</th>
<th>Comment</th>
</tr>
</thead>
</table>
| **Cutting and removal of the ceramic core material (referred to as ‘decanning’)** | No or ineffective LEV | PN/IN | Refractory Ceramic Fibre (RCF) is classified as a carcinogen and currently has a WEL of 1 fibre/millilitre (5mg.m⁻³).
LEV required for removal of the ceramic core material (referred to as ‘decanning’) |
| | | | COSHH Reg. 7 |
| | | | Consider a PN and possible PR where there is evidence of repeated and/or prolonged exposure to high concentrations of RCF and where there are no controls in place. |
| | | | An IN should be considered where the controls in place are only partially effective and improvements are needed e.g. to the LEV, segregation arrangements or RPE provision. |
| | No consideration of exposure during cleaning/maintenance (and therefore no control measures introduced) | PN/IN | Refractory Ceramic Fibre (RCF) is classified as a carcinogen and currently has a WEL of 1 fibre/millilitre (5mg.m⁻³).
Where cleaning and maintenance tasks generate airborne RCF suitable and sufficient RPE is required (e.g. disposable FFP3 half masks, reusable half mask with P3 filter, powered hood/helmet with P3 filter). COSHH Reg. 7 |
| | | | Consider a PN and possible PR where there is evidence of repeated and/or prolonged exposure to high concentrations of RCF and where there are no controls in place. |
| | | | An IN should be considered where the controls in place are only partially effective and improvements are needed e.g. to RPE provision. |
| | LEV is present but poorly:  
• Designed; and/or  
• Maintained; and/or  
• Operated/adjusted;  
as residual visible dust present | IN | Suitably designed LEV to control fume:  
• Extracted enclosure. |
| | | | Evidence of adequately maintained LEV includes no signs of damage e.g. split/compressed ducting, filters changed when blocked, pre-use checks to ensure sufficient air flow e.g. manometer. |
| | | | Evidence of correct use of LEV (extracted enclosure) will include;  
• Operative not leaning into the enclosure;  
• Ensuring levering/scraping matting from the canisters takes place well inside the enclosure (but without leaning inside);  
• Minimising the drop height which the ceramic core material / loose mat has to fall;  
• Working with minimal force (to reduce generation of dust). |
Appendix 5.1.3: Civic Amenity / Bring / Household Waste Recycling Sites

Introduction

A civic amenity site (CA site) or household waste recycling centre (HWRC) is a facility where the public can dispose of household waste and also often containing recycling points. Civic amenity sites are usually owned by the local authority but maybe contracted out and operated by a private company.

Bring Sites are bottle, clothing and paper banks found in public places e.g. supermarket car parks.

Hand sorting of residual black bag waste is an activity which is increasingly taking place at HWRCs. The aim is to increase recycling rates and educate members of the public and may be carried out by the operatives or the MOPs themselves. HSE have clarified the legal position with the industry and stated that, if these activities are to continue, an assessment of the risks must be completed and necessary control measures put in place whether it be for operatives or members of the public. (See Priorities below).

Health and safety

Inspectors are reminded of the need to wear appropriate safety footwear (ankle support, mid-sole protection, steel toe caps) and a high visibility tabard or jacket. Other PPE maybe required dependent on-site rules / conditions e.g. eye protection, hearing protection and hard hat.

Be aware of risks whilst working in close proximity to vehicles.

Ensure good personal hygiene and wash hands on leaving site.

Inspection

Establish the contractual arrangements for the operation and management of the site to allocate responsibilities to the correct duty holder.

Identify and record the following information on your inspection case as per Section 3.

Priorities

For each of the sections below, please also assess how site management ensure sustained compliance with their procedures through monitoring and review to complete the plan, do, check, act management system.

Transport

Safe site

- Have they assessed the risks from workplace transport at the site?
- Is there a clear directional flow of traffic around the site?
- Has a one-way system been considered/implemented?
- Has reversing been eliminated siparp?
- Are vehicles suitably segregated from pedestrians, including members of the public?
- Has the positioning of skips/containers been considered with a view to eliminating blind corners? If not, have mirrors etc. been introduced to improve a driver’s view of obscured areas?
- Are there physical control measures to prevent access by members of the public to the area during collection of full skips/containers?
- Are skips/containers clearly marked to reduce risk of late adjustments and reversing by visiting members of the public?

Members of the Public

- Are there clear signs at site entrance directing Members of the public to clear parking / drop off zones that are as close as possible to unloading bays?
- Have vulnerable users such as the elderly/disabled/distracted been considered? Are children left in cars?
- Are all provisions in Wish Waste 26 relating to members of the public adhered to?

Safe vehicles

- Are all vehicles fit for use and suitable for the activities they are performing?
- Are all brakes, lights, mirrors, horns etc. suitably maintained?
- Have reversing alarms/beacons been fitted?
- Have all lifting equipment and accessories been thoroughly examined?

Safe drivers

- Are only trained workers allowed to drive vehicles?
<table>
<thead>
<tr>
<th>Slips/Trips</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are there clear instructions for visiting drivers, especially members of the public?</td>
</tr>
<tr>
<td>Are visiting drivers and MOPs supervised and monitored whilst on site?</td>
</tr>
<tr>
<td>Are there systems to monitor overflow / waste left outside receptacles (unattended sites)?</td>
</tr>
<tr>
<td>Are there systems for the immediate clean up of spills?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Musculoskeletal Risks (MSDs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have the risks associated with manual handling activities been suitably assessed?</td>
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<tr>
<td>Are there opportunities to use mechanical aids to replace manual handling?</td>
</tr>
<tr>
<td>Are workers appropriately trained?</td>
</tr>
<tr>
<td>Are workers expected to assist members of the public?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Is the ground stable and even around skips / receptacles?</td>
</tr>
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<td>Are visiting drivers and MOPs supervised and monitored whilst on site?</td>
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</tbody>
</table>

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<td>Are workers expected to assist members of the public?</td>
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<table>
<thead>
<tr>
<th>Guides</th>
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</thead>
<tbody>
<tr>
<td>Waste 03 – Orphaned gas cylinders in the waste &amp; recycling industry</td>
</tr>
<tr>
<td>Waste 09 - Safe transport at waste and recycling sites</td>
</tr>
<tr>
<td>Waste 11 - Safety at ‘Bring Sites’ in the waste management and recycling industry</td>
</tr>
<tr>
<td>Waste 26 – Managing health and safety at Civic Amenity Sites</td>
</tr>
</tbody>
</table>
Contacts

wasteandrecycling@hse.gov.uk

For IEEs and examples of MPMC see Appendix 5.2 & 5.3
## Appendix 5.1.4 Collections

### Introduction / Description / Background

Generally, it is the local authority that has responsibility for municipal waste and recycling collections. The collection service may be provided directly by the local authority, contracted to a private contractor or undertaken by an arm's length in-house contractor (sometimes referred to as a TECKAL company).

Some Local Authorities operate a “waste partnership” – i.e. LAs work in partnership to create shared services. This sometimes occurs when there is a two-tier system (County and District) e.g. where the local authorities collect the waste and the counties are the waste disposal authority. More often though it is a group of neighbouring authorities working together to reduce costs (fleet savings, management etc).

There are many factors to consider when selecting the most appropriate collection/transfer/treatment systems for waste and recyclables. Comprehensive risk assessment is essential to ensure that services are delivered with risks controlled so far as is reasonably practicable.

When assessing the risks and evaluating the various options available it is essential that all hazards are identified and evaluated (eg Musculoskeletal injury, cuts, slips and trips, transport etc).

Any assessment process may also need to consider the hazards and level of risk presented across the entire process, from collection to final re-use/recycling/disposal. This may allow the consequential effects of each step in the process to be accounted for. For example, a particular collection system may result in greater/less manual handling in subsequent processes.

"Waste and recyclables health and safety final report incorporating Risk Comparator Tool user guide" RSU/RA/07/01 [http://www.hse.gov.uk/research/rhhtm/rr609.htm](http://www.hse.gov.uk/research/rhhtm/rr609.htm) - provides a means for local authorities and others to compare the level of risk from different waste and recyclables management systems.

### Health and safety

Inspectors are reminded of the need to wear appropriate safety footwear (ankle support, mid-sole protection, steel toe caps) and a high visibility tabard or jacket. Other PPE maybe required dependent on site rules / conditions e.g. eye protection, hearing protection and hard hat.

Be aware of risks whilst working in close proximity to working vehicles and road traffic.

Ensure good personal hygiene and wash hands on leaving site / completing inspection.

### Inspection

Establish contractual arrangement and responsibilities between Local Authorities and/or Contractors.

Understand the policy and procedures utilised from discussion with management / supervisors / workers / employee representatives.

Assess the policy and procedures by shadowing collection rounds and speaking to the employees.

The WISH Waste 03 Information sheet on Monitoring can be used as aide memoire.

Identify and record the following information on your inspection case as per Section 3.

### Priorities

For each of the sections below, please also assess how site management ensure sustained compliance with their procedures through monitoring and review to complete the plan, do, check, act management system.

#### Transport

**Route Risk Assessments**

- Route risk assessments must be in place, clearly communicated and followed.
- Does the assessment consider times of day, traffic flow, schools, type of vehicle, size of vehicle, position of receptacles been considered?
- Has reversing been eliminated / minimised in the assessment?
- Is there a mechanism for reviewing and reporting back issues with the assessment?
- Is there an example where assessments have been updated?

**Safe vehicles**

- Are all vehicles fit for use and suitable for the activities they are performing in accordance with the route risk assessment?
- Have health issues (e.g. msd, noise) and safety risks (size of vehicles required to reach households) been considered during procurement?
- Are daily checks of the vehicle undertaken and recorded?
How are defects actioned / which ones are safety critical?
Have reversing alarms/beacons been fitted?
Have all lifting equipment and accessories been thoroughly examined?

Safe drivers
Are only trained workers allowed to drive vehicles?
Are there clear instructions for agency / temporary drivers?
How is the route risk assessment communicated to drivers?

Machinery safety
Do workers understand the safe operation of lifting equipment eg emergency stops, safe loading?

Musculoskeletal Risks (MSDs)
Have the risks associated with manual handling activities been suitably assessed? NB there is no restriction on moving 2 wheelie bins at a time if risk has been assessed appropriately (dynamic risk assessment)
Has an assessment determined the suitable receptacle for the resident in conjunction with housing type, manual handling and vehicle?
Are there opportunities to use mechanical aids to replace manual handling?
Are workers appropriately trained?

Monitoring
How does the Local Authority monitor the contractors or shared arrangements?

Bioaerosols
Are they aware of what bioaerosols are? Are they aware of health risks and symptoms of exposure?
Have they considered the increased risk of bioaerosol generation during the following activities:
  o Manual sorting or picking through waste;
  o Maintenance and cleaning activities e.g. compressed air, dry brushing etc.;
  o Working inside buildings near to where waste is being moved by heavy plant e.g. tipping halls.
Have cleaning and maintenance tasks generating bioaerosols e.g. pressure hosing, compressed air use, dry sweeping been eliminated where reasonably practicable?
Where exposure to bioaerosols cannot be adequately controlled, has suitable and sufficient Respiratory Protective Equipment (RPE) been provided (e.g. disposable FFP3 half masks, reusable half mask with P3 filter, powered hood/helmet with P3 filter) in combination with other control measures?

Noise
Noise is an issue for kerbside collection of glass. HSE’s Waste & Recycling team is currently working with manufacturers and procurers to reduce the risk from noise by design measures. This does not negate the need for employers to assess the risks and implement control measures.

Guidance
WISH Waste 03 Information sheet - Effective Proactive Monitoring in Waste and Recycling Collection Activities
Waste 04 (Under revision) – Waste and Recycling Vehicles in Street Collection
Waste 05 (Under revision) – Safe use of Refuse Collection Vehicle hoists and bins
Waste 16 – Reducing noise risks from “kerbside” glass collection
Waste 23 – Safe Waste and Recycling Collection Services
http://www.hse.gov.uk/waste/services/index.htm

Contacts
wasteandrecycling@hse.gov.uk

For IEEs and examples of MPMC see Appendix 5.2 & 5.3
**Appendix 5.1.5 Composting**

**Introduction**

Composting is the recycling of organic wastes such as vegetation and food waste to primarily produce fertiliser. Micro-organisms (fungal/mould spores such as the fungus Aspergillus fumigatus and certain types of bacteria called actinomycetes) are encouraged to grow to break down the organic waste - a process that also results in a very large number of these micro-organisms.

Any handling of the material that generates dust will create a bioaerosol (micro-organisms made airborne). Commercial scale composting is performed either in open windrows (long heaps of composting material) or in-vessel systems (where the composting material is enclosed; a requirement for treating material containing animal waste). To encourage efficient composting, the material must be well aerated. Aeration of open windrows is achieved by regular turning of the material, which will create bioaerosols. In-vessel systems usually have forced air ventilation which is less likely to create bioaerosols. However, at the end of either process often the compost is screened (sieved) to produce a quality soil supplement and this could create bioaerosols.

**Health and safety**

Inspectors are reminded of the need to wear appropriate safety footwear (ankle support, mid-sole protection, steel toe caps) and a high visibility tabard or jacket. Other PPE maybe required dependent on on-site rules / conditions e.g. eye protection, hearing protection and hard hat.

Please note that it is HSE’s policy across all industries that Inspectors should not enter any area where there is evidence of a respirable hazard or a need to wear respiratory protective equipment (RPE) to control exposures to substances hazardous to health unless they are identified as authorised RPE wearers. For further information see http://intranet.hse.int/yourhealthsafety/safety/respiratory.htm. If you still are unsure as to the implications of this policy then please seek advice from Occupational Hygiene Specialist Inspectors. If you are on site and encounter a designated RPE area, then do not enter, and seek support from an authorised RPE wearer.

Be aware of risks whilst working in close proximity to working vehicles.

Ensure good personal hygiene and wash hands on leaving site.

Do not stand in close proximity to jet washing/high pressure hosing, which could release bioaerosols into the air.

**Inspection**

The 2019/20 Inspection campaign includes a limited number of inspections of pre-selected sites performing a range of processes and activities that involve the handling of organic waste, some of which may involve composting. These visits should be recorded as HRS but please insert the keyword ‘#Bioaerosol’ in the COIN case summary field.

Identify and record the following information on your inspection case as per Section 3.

**Priorities**

For each of the sections below, please also assess how site management ensure sustained compliance with their procedures through monitoring and review to complete the plan, do, check, act management system.

**Machinery**

- Has access to all dangerous parts of the machine been eliminated or restricted sfarp?
- Is guarding fixed or interlocked (if access required)?
- Are all in-running nips on conveyors guarded (safe by position for operation does not mean safe by position for maintenance?)
- Is there a daily / pre-shift guard check system in place?
- How are machines maintained and/or cleaned?
- How are blockages removed from machines?
- Can the machine be isolated and locked off (e.g. maintenance or clearing blockages)?
- Are there the means to lock off e.g. personal padlocks, multiclasp locks?
- Have all operators been suitably trained in the use of the machine they are operating?
- Have risk assessments considered engineering/maintenance activities?

**Transport**

Safe site

- Have they assessed the risks from workplace transport at the site?
Is there a clear directional flow of traffic around the site?
Has a one-way system been considered/implemented?
Has reversing been eliminated entirely?
Are vehicles suitably segregated from pedestrians?
Has the positioning of skips/containers been considered with a view to eliminating blind corners? If not, have mirrors etc. been introduced to improve a driver’s view of obscured areas?
Are there physical control measures to prevent access to area during collection of full skips/containers?

**Safe vehicles**
Are all vehicles fit for use and suitable for the activities they are performing?
Are all brakes, lights, mirrors, horns etc. suitably maintained?
Have reversing alarms/beacons been fitted?
Have all lifting equipment and accessories been thoroughly examined?

**Safe drivers**
Are only trained workers allowed to drive vehicles?
Are there clear instructions for visiting drivers?
Are visiting drivers supervised and monitored whilst on site?

**Bioaerosols**
Are they aware of what bioaerosols are? Are they aware of health risks and symptoms of exposure?
Have they identified tasks/activities that could generate bioaerosols, for example:
- turning actively composting material
- screening composted material
- maintenance and cleaning equipment.
For those working within a vehicle cab, with an adequate, well maintained, filtration system then RPE may not be needed, but can the duty holder demonstrate the effectiveness of the cab filter and a proper system of work such as ensuring staff keep their cab doors and windows closed.
Where exposure to bioaerosols cannot be adequately controlled, has suitable and sufficient Respiratory Protective Equipment (RPE) been provided (e.g. FFP3 or air-fed masks) in combination with other control measures? RPE is likely to be required by workers when shredding, turning, screening or moving composting material or whenever leachate is either sprayed or transferred from one place to another. This precaution is likely to be required by anyone within 30 metres of such a procedure, and for five minutes afterwards.

**Musculoskeletal Risks (MSDs)**
Have the risks associated with manual handling activities been suitably assessed?
Are there opportunities to use mechanical aids to replace manual handling?
Are workers appropriately trained?

**Guidance**
WISH Info 02 - Practical advice on lock-off recycling/recovery machinery.
Waste 09 - Safe transport at waste and recycling sites.
Waste 27 - Health and hazardous substances in waste and recycling.

**Contacts**
wasteandrecycling@hse.gov.uk

For IEEs and examples of MPMC see Appendix 5.2 & 5.3
Appendix 5.1.6 Energy from Waste

Introduction

Energy-from-waste (EfW) is a process of generating energy in the form of electricity and/or heat from the primary treatment of waste, usually through incineration (combustion of organic waste material). Energy can be recovered from a range of organic feedstocks (biomass) making it an attractive prospect, as at the same time as diverting waste material from landfill it provides economic and environmental benefits.

Biomass is a generic term for forestry and plant material, agricultural crops, food and garden waste and the biodegradable or combustible fractions of municipal waste. It can be used as a fuel or an energy source. Sources of biomass include specifically grown crops such as oil seed rape, agricultural by-products, waste wood, animal waste such as slurry, food processing waste and biodegradable or combustible fractions of municipal waste.

All biomass energy generation technologies require the feedstock material to be pre-processed into a suitable form e.g. sorted, shredded, pulped or pelleted etc. depending on the needs of the process. A wide range of solid biomass crops, agricultural and industrial waste can be turned into wood chips, fuel pellets or briquettes for use as energy feedstocks.

Health and safety

Inspectors are reminded of the need to wear appropriate safety footwear (ankle support, mid-sole protection, steel toe caps) and a high visibility tabard or jacket. Other PPE maybe required dependent on-site rules / conditions e.g. eye protection, hearing protection and hard hat.

Please note that it is HSE’s policy across all industries that Inspectors should not enter any area where there is evidence of a respirable hazard or a need to wear respiratory protective equipment (RPE) to control exposures to substances hazardous to health unless they are identified as authorised RPE wearers. For further information see http://intranet.hse.int/yourhealthsafety/safety/respiratory.htm. If you still are unsure as to the implications of this policy then please seek advice from Occupational Hygiene Specialist Inspectors. If you are on site and encounter a designated RPE area, then do not enter, and seek support from an authorised RPE wearer.

Be aware of risks whilst working in close proximity to working vehicles.

Ensure good personal hygiene and wash hands on leaving site.

Inspection

Due to the technical nature of the processes, there are a number of additional hazards associated with these processes e.g. process safety and explosion risks. As such Inspectors may should initially seek assistance from their local Process Safety Specialist Champions.

Identify and record the following information on your inspection case as per Section 3.

Priorities

For each of the sections below, please also assess how site management ensure sustained compliance with their procedures through monitoring and review to complete the plan, do, check, act management system.

Transport

Safe site
- Have they assessed the risks from workplace transport at the site?
- Is there a clear directional flow of traffic around the site?
- Has a one-way system been considered/implemented?
- Has reversing been eliminated sfarp?
- Are vehicles suitably segregated from pedestrians?
- Have blind corners been eliminated? If not, have mirrors etc. been introduced to improve a driver’s view of obscured areas?
- Are physical control measures in place to restrict access during collection activities?
- Have risks arising from reverse tipping been controlled eg to prevent vehicles reversing into reception pits?

Safe vehicles
- Are all vehicles fit for use and suitable for the activities they are performing?
- Are all brakes, lights, mirrors, horns etc. suitably maintained?
- Have reversing alarms/beacons been fitted?
- Have all lifting equipment and accessories been thoroughly examined?
## Safe drivers
- Are only trained workers allowed to drive vehicles?
- Are there clear instructions for visiting drivers?
- Are visiting drivers supervised and monitored whilst on site?

## Machinery
- Has access to all dangerous parts of the machine been eliminated or restricted if required?
- Is guarding fixed or interlocked (if access required)?
- Are in-running nips on conveyors guarded (safe by position for operation does not mean safe by position for maintenance)?
- Are there a daily / pre-shift guard check system in place?
- How are machines maintained and/or cleaned?
- How are blockages removed from machines?
- Can the machine be isolated and locked off (e.g. maintenance or clearing blockages)?
- Are all operators been suitably trained in the use of the machine they are operating?
- Have risk assessments considered engineering/maintenance activities?

### DSEAR
- Has a suitable and sufficient DSEAR assessment been undertaken? e.g.:
  - Have the risks arising from dangerous substances been identified and controlled?
  - Have plans and procedures been developed to deal with accidents, incidents and emergencies and cascaded to staff?
- Is there suitable ventilation to control the risk of explosion from hydrogen release during storage and weathering of Industrial Bottom Ash (IBA)?

## Bioaerosols
- Are they aware of what bioaerosols are? Are they aware of health risks and symptoms of exposure?
- Have they considered the increased risk of bioaerosol generation during the following activities:
  - Manual sorting or picking through waste;
  - Maintenance and cleaning activities e.g. compressed air, dry brushing etc.;
  - Working inside buildings near to where waste is being moved by heavy plant e.g. tipping halls.
- Have cleaning and maintenance tasks generating bioaerosols e.g. pressure hosing, compressed air use, dry sweeping been eliminated where reasonably practicable?
- Where exposure to bioaerosols cannot be adequately controlled, has suitable and sufficient Respiratory Protective Equipment (RPE) been provided (e.g. disposable FFP3 half masks, reusable half mask with P3 filter, powered hood/helmet with P3 filter) in combination with other control measures?

## Musculoskeletal Risks (MSDs)
- Have the risks associated with manual handling activities been suitably assessed?
- Are there opportunities to use mechanical aids to replace manual handling?
- Are workers appropriately trained?

## Guidance
- WISH Info 02 - Practical advice on lock-off recycling/recovery machinery.
- Waste 09 - Safe transport at waste and recycling sites.
- Waste 18 – Hand sorting of recyclables (‘totting’) with vehicle assistance.

## Contacts
- wasteandrecycling@hse.gov.uk
For IEEs and examples of MPMC see Appendix 5.2 & 5.3 in addition to those listed below

<table>
<thead>
<tr>
<th>Potential Catastrophic Event</th>
<th>Due to:</th>
<th>Examples of indicative issues:</th>
<th>Existing Guidance:</th>
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<tbody>
<tr>
<td>Fire &amp; explosion.</td>
<td>Ignition of combustible dusts</td>
<td>Inadequate control/release of combustible substances.</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Inadequate control of ignition sources in hazardous areas</td>
<td>HSG 103 Safe handling of combustible dusts: Precautions against explosions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inadequate explosion relief on dust collection units.</td>
<td>INDG370(rev1) Controlling Fire and Explosion Risks in the Workplace</td>
</tr>
<tr>
<td>Ignition of IBA</td>
<td>Poor ventilation during weathering / storage</td>
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</tr>
</tbody>
</table>
## Appendix 5.1.7 Materials Recovery Facilities (MRFs)

### Introduction

Materials Recovery Facilities (MRFs), also known as Materials Recycling Facilities or Materials Reclamation Facilities, may be designed to handle materials collected from a single municipal/household kerbside collection system, or more typically, to sort materials from kerbside collection programmes, as well as recyclables from commercial and industrial sources. These operations range in size and are operated by local authorities, major private contractors, the third sector and SMEs who may also operate waste transfer stations.

They play an important role in reducing the amount of waste sent to landfill sites. They use specialised plant that receives, separates and prepares dry recyclable materials. The recyclables go through a variety of mainly mechanical and some manual processes to obtain maximum recovery of materials that will re-enter the manufacturing process as a valuable commodity.

MRFs use a range of technologies to sort recyclables by their physical and chemical properties; shape, size, weight, magnetism and optical scanning.

### Health and Safety

Inspectors are reminded of the need to wear appropriate safety footwear (ankle support, mid-sole protection, steel toe caps) and a high visibility tabard or jacket. Other PPE maybe required dependent on-site rules / conditions e.g. eye protection, hearing protection and hard hat.

Please note that it is HSE’s policy across all industries that Inspectors should not enter any area where there is evidence of a respirable hazard or a need to wear respiratory protective equipment (RPE) to control exposures to substances hazardous to health unless they are identified as authorised RPE wearers. For further information see [http://intranet.hse.int/yourhealthsafety/safety/respiratory.htm](http://intranet.hse.int/yourhealthsafety/safety/respiratory.htm). If you still are unsure as to the implications of this policy then please seek advice from Occupational Hygiene Specialist Inspectors. If you are on site and encounter a designated RPE area, then do not enter, and seek support from an authorised RPE wearer.

If areas have been classified as having (potential) explosive and/or flammable atmospheres – do not use equipment unless it is intrinsically safe in these areas. For further information see [http://intranet.hse.int/yourhealthsafety/safety/visiting-explosives.htm](http://intranet.hse.int/yourhealthsafety/safety/visiting-explosives.htm).

Be aware of risks whilst working in close proximity to working vehicles.

Ensure good personal hygiene and wash hands on leaving site.

### Inspection

Identify and record the following information on your inspection case as per Section 3.

**Priorities**

For each of the sections below, please also assess how site management ensure sustained compliance with their procedures through monitoring and review to complete the plan, do, check, act management system.

#### Transport

**Safe site**

- Have they assessed the risks from workplace transport at the site?
- Is there a clear directional flow of traffic around the site?
- Has a one-way system been considered/implemented?
- Has reversing been eliminated sfarp?
- Are vehicles suitably segregated from pedestrians?
- If hand sorting “totting” is being performed, have safe refuges been provided or transport movements eliminated in those areas whilst totting is ongoing?
- Have blind corners been eliminated? If not, have mirrors etc. been introduced to improve a driver’s view of obscured areas?
- Are physical control measures in place to restrict access during collection activities?

**Safe vehicles**

- Are all vehicles fit for use and suitable for the activities they are performing?
- Are all brakes, lights, mirrors, horns etc. suitably maintained?
- Have reversing alarms/beacons been fitted?
- Have all lifting equipment and accessories been thoroughly examined?
Safe drivers
- Are only trained workers allowed to drive vehicles?
- Are there clear instructions for visiting drivers?
- Are visiting drivers supervised and monitored whilst on site?

Machinery
- Has access to all dangerous parts of the machine been eliminated or restricted sufficiently?
- Is guarding fixed or interlocked (if access required)?
- Are all in-running nips on conveyors guarded (safe by position for operation does not mean safe by position for maintenance)?
- Is there a daily / pre-shift guard check system in place?
- How are machines maintained and/or cleaned?
- How are blockages removed from machines?
- Can the machine be isolated and locked off (e.g. maintenance or clearing blockages)?
- Have all operators been suitably trained in the use of the machine they are operating?
- Have risk assessments considered engineering/maintenance activities?

Musculoskeletal Risks (MSDs)
- Have the risks associated with manual handling activities been suitably assessed?
- Are there opportunities to use mechanical aids to replace manual handling?
- Are workers appropriately trained?
- Has ergonomics been assessed on sorting/picking lines?

Structural stability
- Are structures being used to support a load (e.g. wall / bay) adequately monitored and maintained? e.g.:
  - Is the site operator aware of the safe work load/capacity of the structure?
  - How do they ensure that this loading is not exceeded?
- Are the structures routinely inspected (for signs of wear or damage)?
- Are items being stacked in a safe manner e.g. vehicles, bales etc.? e.g. have they considered:
  - The type of material being stacked (e.g. will it disintegrate over time or under excessive loading)?
  - Does the material easily lend itself to stacking (e.g. compacted bales stack more safely than non-compact vehicles)?
  - How good are the ground conditions (e.g. how flat and firm)?
  - Is the stack inside or outside of a building?
  - If outside, will it get affected by adverse weather conditions (weather, vehicle movements etc.)?
  - Does the stack need some form of stability aid (lengths of wood within the stack, or use of a bay)?
  - What is the volume of traffic movements around the stack, and are there any preventative measures in place to prevent accidental damage?
  - How frequently will operators need access to the stack?

DSEAR
- Has a suitable and sufficient DSEAR assessment been undertaken? e.g.:
  - Have the risks arising from dangerous substances been identified and controlled?
  - Have any areas of the workplace where explosive atmospheres may occur been identified and classified, and measures taken to avoid ignition sources?
  - Have plans and procedures been developed to deal with accidents, incidents and emergencies and cascaded to staff?

Bioaerosols
- Are they aware of what bioaerosols are? Are they aware of health risks and symptoms of exposure?
- Have they considered the increased risk of bioaerosol generation during the following activities:
  - Manual sorting or picking through waste;
  - Maintenance and cleaning activities e.g. compressed air, dry brushing etc.;
  - Working inside buildings near to where waste is being moved by heavy plant e.g. tipping halls.
- Have cleaning and maintenance tasks generating bioaerosols e.g. pressure hosing, compressed air use, dry sweeping been eliminated where reasonably practicable?
- Where exposure to bioaerosols cannot be adequately controlled, has suitable and sufficient Respiratory Protective Equipment (RPE) been provided (e.g. disposable FFP3 half masks, reusable half mask with P3 filter, powered hood/helmet with P3 filter) in combination with other control measures?

Asbestos
- Are workers suitably trained to identify asbestos waste?
- Are there appropriate arrangements to deal with unexpected asbestos waste?
<table>
<thead>
<tr>
<th>Guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Waste 03</strong> – Orphaned gas cylinders in the waste &amp; recycling industry</td>
</tr>
<tr>
<td><strong>Waste 08</strong> - Compactor Equipment : Public and User Safety</td>
</tr>
<tr>
<td><strong>Waste 09</strong> - Safe transport at waste and recycling sites</td>
</tr>
<tr>
<td><strong>Waste 13</strong> - Designing and Operating Material Recovery Facilities (MRFs) safely</td>
</tr>
<tr>
<td><strong>Waste 18</strong> – Hand sorting of recyclables ('totting') with vehicle assistance</td>
</tr>
<tr>
<td>Noise - <a href="http://www.hse.gov.uk/waste/noise-material-recovery-facilities.htm">http://www.hse.gov.uk/waste/noise-material-recovery-facilities.htm</a></td>
</tr>
</tbody>
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<tr>
<th>Contacts</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="mailto:wasteandrecycling@hse.gov.uk">wasteandrecycling@hse.gov.uk</a></td>
</tr>
</tbody>
</table>

For IEEs and examples of MPMC see Appendix 5.2 & 5.3
## Appendix 5.1.8 Mechanical Biological Treatment (MBT)

### Introduction

MBT is a generic term used to describe several different residual waste treatment processes that involve both mechanical and biological treatment of municipal solid waste (MSW). MBT plants are used to separate mixed waste streams, typically from MSW, into a range of dry products (typically ferrous and non-ferrous metals and glass), high calorific value refuse derived fuels (RDF) suitable for incineration, and wet biodegradable slurries suitable for either composting or anaerobic digestion (AD).

MBT technology uses the naturally generated heat produced during biological degradation to dry and stabilise MSW. There are two main approaches and the difference between them is the stage at which the biological part of the waste is treated – either before the mechanical separation process or after it has taken place.

MBT itself is a two-stage process where on receipt at a processing plant MSW will be, after mixing and shredding (required to ensure waste is evenly mixed and sized), separated into different fractions using a range of different processes such as:

- **Screening** – removal of larger pieces of waste;
- **Magnetic separation** – removal of ferrous materials such as tin cans;
- **Eddy current separation** – removal of non-ferrous metals such as aluminium cans;
- **Optical separation** – separation of certain types of plastic; and
- **Air classification** – removal of light materials such as paper.

Once separated the materials can go on to be further recycled and the RDF used in energy production. The quality of the end products will depend upon the process that is used. Dry materials are generally of poor quality and only some types can be recycled e.g. glass is used as an aggregate in road construction. The residual biological material is generally of quality that is only suitable for landfill restoration.

### Health and safety

Inspectors are reminded of the need to wear appropriate safety footwear (ankle support, mid-sole protection, steel toe caps) and a high visibility tabard or jacket. Other PPE maybe required dependent on-site rules / conditions e.g. eye protection, hearing protection and hard hat.

Please note that it is HSE’s policy across all industries that Inspectors should not enter any area where there is evidence of a respirable hazard or a need to wear respiratory protective equipment (RPE) to control exposures to substances hazardous to health unless they are identified as authorised RPE wearers. For further information see [http://intranet.hse.int/yourhealthsafety/safety/respiratory.htm](http://intranet.hse.int/yourhealthsafety/safety/respiratory.htm). If you still are unsure as to the implications of this policy then please seek advice from Occupational Hygiene Specialist Inspectors. If you are on site and encounter a designated RPE area, then do not enter, and seek support from an authorised RPE wearer.

If areas have been classified as having (potential) explosive and/or flammable atmospheres – do not use equipment unless it is intrinsically safe in these areas. For further information see [http://intranet.hse.int/yourhealthsafety/safety/visiting-explosives.htm](http://intranet.hse.int/yourhealthsafety/safety/visiting-explosives.htm).

Be aware of risks whilst working in close proximity to working vehicles.

Ensure good personal hygiene and wash hands on leaving site.

### Inspection

Identify and record the following information on your inspection case as per Section 3.

### Priorities

For each of the sections below, please also assess how site management ensure sustained compliance with their procedures through monitoring and review to complete the plan, do, check, act management system.

#### Machinery

- Has access to all dangerous parts of the machine been eliminated or restricted sfarp?
- Is guarding fixed or interlocked (if access required)?
- Are all in-running nips on conveyors guarded (safe by position for operation does not mean safe by position for maintenance)?
- Is there a daily / pre-shift guard check system in place?
- How are machines maintained and/or cleaned?
- How are blockages removed from machines?
- Can the machine be isolated and locked off (e.g. maintenance or clearing blockages)?
Are there the means to lock off eg personal padlocks, multiclasp locks?
Have all operators been suitably trained in the use of the machine they are operating?
Have risk assessments considered engineering/maintenance activities?

Transport

Safe site
- Have they assessed the risks from workplace transport at the site?
- Is there a clear directional flow of traffic around the site?
- Has a one-way system been considered/implemented?
- Has reversing been eliminated sfarp?
- Are vehicles suitably segregated from pedestrians?
- If hand sorting “totting” is being performed, have safe refuges been provided or transport movements eliminated in those areas whilst totting is ongoing?
- Have blind corners been eliminated? If not, have mirrors etc. been introduced to improve a driver’s view of obscured areas?
- Are physical control measures in place to restrict access during collection activities?

Safe vehicles
- Are all vehicles fit for use and suitable for the activities they are performing?
- Are all brakes, lights, mirrors, horns etc. suitably maintained?
- Have reversing alarms/beacons been fitted?
- Have all lifting equipment and accessories been thoroughly examined?

Safe drivers
- Are only trained workers allowed to drive vehicles?
- Are there clear instructions for visiting drivers?
- Are visiting drivers supervised and monitored whilst on site?

Structural stability
- Are structures being used to support a load (e.g. wall or bay) adequately monitored and maintained? e.g.:
  - Is the site operator aware of the safe work load/capacity of the structure?
  - How do they ensure that this loading is not exceeded?
- Are the structures routinely inspected (for signs of wear or damage)?
- Are items being stacked in a safe manner e.g. vehicles, bales etc.? e.g. have they considered:
  - The type of material being stacked (e.g. will it disintegrate over time or under excessive loading)?
  - Does the material easily lend itself to stacking (e.g. compacted bales stack more safely than non-compacted vehicles)?
  - How good are the ground conditions (e.g. how flat and firm)?
  - Is the stack inside or outside of a building?
  - If outside, will it get affected by adverse weather conditions (weather, vehicle movements etc.)?
  - Does the stack need some form of stability aid (lengths of wood within the stack, or use of a bay)?
  - What is the volume of traffic movements around the stack, and are there any preventative measures in place to prevent accidental damage?
  - How frequently will operators need access to the stack?

DSEAR
- Has a suitable and sufficient DSEAR assessment been undertaken? e.g.:
  - Have the risks arising from dangerous substances been identified and controlled?
  - Have any areas of the workplace where explosive atmospheres may occur been identified and classified, and measures taken to avoid ignition sources?
  - Have plans and procedures been developed to deal with accidents, incidents and emergencies and cascaded to staff?

Bioaerosols
- Are they aware of what bioaerosols are? Are they aware of health risks and symptoms of exposure?
- Have they considered the increased risk of bioaerosol generation during the following activities:
  - Manual sorting or picking through waste;
  - Maintenance and cleaning activities e.g. compressed air, dry brushing etc.;
  - Working inside buildings near to where waste is being moved by heavy plant e.g. tipping halls.
- Have cleaning and maintenance tasks generating bioaerosols e.g. pressure hosing, compressed air use, dry sweeping been eliminated where reasonably practicable?
- Where exposure to bioaerosols cannot be adequately controlled, has suitable and sufficient Respiratory Protective Equipment (RPE) been provided (e.g. disposable FFP3 half masks, reusable half mask with P3 filter, powered hood/helmet with P3 filter) in combination with other control measures?

Musculoskeletal Risks (MSDs)
- Have the risks associated with manual handling activities been suitably assessed?
Are there opportunities to use mechanical aids to replace manual handling?
Are workers appropriately trained?

**Guidance**

WISH Info 02 - Practical advice on lock-off recycling/recovery machinery.
Waste 03 – Orphaned gas cylinders in the waste and recycling industries.
Waste 08 - Compactor Equipment : Public and User Safety
Waste 09 - Safe transport at waste and recycling sites.
Waste 18 – Hand sorting of recyclables (‘totting’) with vehicle assistance.

**Contacts**

wasteandrecycling@hse.gov.uk

For IEEs and examples of MPMC see Appendix 5.2 & 5.3
# Appendix 5.1.9 Metal Recycling inc End of Life Vehicles

## Introduction

Metal recycling sites (previously referred to as scrapyards) recycle, process and/or store waste metal. Sites obtain unwanted or unrepairable items (often referred to as "end of life") such as vehicles, electronic equipment, appliances and general waste metal to remove valuable components for reuse or selling to other traders or the public. Operators utilise a range of processes and equipment to strip, cut or burn waste to extract key metals or components. The industry has a high proportion of small to medium sized enterprises (SMEs).

Certain sites will be authorised to process and recycle end of life vehicles (ELV). An ELV is any motor vehicle that has been designated as waste (due to its age and/or condition) and must be appropriately "de-polluted" - the safe and controlled removal of harmful components and substances such as car batteries, engine oil and fuel.

## Health and safety

Inspectors are reminded of the need to wear appropriate safety footwear (ankle support, mid-sole protection, steel toe caps) and a high visibility tabard or jacket. Other PPE maybe required dependent on-site rules / conditions e.g. eye protection, hearing protection and hard hat.

Be aware of risks whilst working in close proximity to working vehicles.

Ensure good personal hygiene and wash hands on leaving site.

## Inspection

Identify and record the following information on your inspection case as per Section 3.

## Priorities

For each of the sections below, please also assess how site management ensure sustained compliance with their procedures through monitoring and review to complete the plan, do, check, act management system.

### Machinery

- Has access to all dangerous parts of the machine been eliminated or restricted sfarp?
- Is guarding fixed or interlocked (if access required)?
- Are all in-running nips on conveyors guarded (safe by position for operation does not mean safe by position for maintenance)?
- Is there a daily / pre-shift guard check system in place?
- How are machines maintained and/or cleaned?
- How are blockages removed from machines?
- Can the machine be isolated and locked off (e.g. maintenance or clearing blockages)?
- Are there the means to lock off eg personal padlocks, multiclasp locks?
- Have all operators been suitably trained in the use of the machine they are operating?
- Have risk assessments considered engineering/maintenance activities?

### Transport

#### Safe site

- Have they assessed the risks from workplace transport at the site?
- Is there a clear directional flow of traffic around the site?
- Has a one-way system been considered/implemented?
- Has reversing been eliminated sfarp?
- Are vehicles suitably segregated from pedestrians?
- If hand sorting “totting” is being performed, have safe refuges been provided or transport movements eliminated in those areas whilst totting is ongoing?
- Has the positioning of skips/containers been considered with a view to eliminating blind corners? If not, have mirrors etc. been introduced to improve a driver’s view of obscured areas?
- Are physical control measures in place to restrict access during collection activities?

#### Safe vehicles

- Are all vehicles fit for use and suitable for the activities they are performing?
- Are all brakes, lights, mirrors, horns etc. suitably maintained?
- Have reversing alarms/beacons been fitted?
- Have all lifting equipment and accessories been thoroughly examined?
Safe drivers
- Are only trained workers allowed to drive vehicles?
- Are there clear instructions for visiting drivers?
- Are visiting drivers supervised and monitored whilst on site?

Structural stability
- Are structures being used to support a load (e.g. wall or bay) adequately monitored and maintained? e.g.:
  - Is the site operator aware of the safe work load/capacity of the structure?
  - How do they ensure that this loading is not exceeded?
- Are the structures routinely inspected (for signs of wear or damage)?
- Are items being stacked in a safe manner e.g. vehicles, bales etc.? e.g. have they considered:
  - The type of material being stacked (e.g. will it disintegrate over time or under excessive loading)?
  - Does the material easily lend itself to stacking (e.g. compacted bales stack more safely than non-compacted vehicles)?
  - How good are the ground conditions (e.g. how flat and firm)?
  - Is the stack inside or outside of a building?
  - If outside, will it get affected by adverse weather conditions (weather, vehicle movements etc.)?
  - Does the stack need some form of stability aid (lengths of wood within the stack, or use of a bay)?
  - What is the volume of traffic movements around the stack, and are there any preventative measures in place to prevent accidental damage?
  - How frequently will operators need access to the stack?

Catalytic convertor recycling
- See Appendix 5.1.2 for guidance on catalytic convertor recycling.

Petrol drainage
- Are they using a safe method to remove petrol e.g. a proprietary fuel retriever or depollution rig?
- Have they controlled fire and explosion risks e.g. piercing fuel tanks, draining petrol, potential flammable atmospheres, sources of ignition etc.?

Musculoskeletal Risks (MSDs)
- Have the risks associated with manual handling activities been suitably assessed?
- Are there opportunities to use mechanical aids to replace manual handling?
- Are workers appropriately trained?
- Are workers expected to assist members of the public?

Guidance
PM65 “Worker protection at crocodile (alligator) shears” http://www.hse.gov.uk/pubns/books/pm65.htm
PM66 “Scrap baling machines” http://www.hse.gov.uk/pubns/books/pm66.htm
“Scrap and metal recycling” http://www.hse.gov.uk/waste/metals.htm
“End of life vehicle (ELV) industry” http://www.hse.gov.uk/waste/dismantling.htm
WISH Info 02 - Practical advice on lock-off recycling/recovery machinery
Waste 03 – Orphaned gas cylinders in the waste and recycling industries
Waste 08 - Compactor Equipment : Public and User Safety
Waste 09 - Safe transport at waste and recycling sites
Waste 10 - Recovery of petrol from ELV
Waste 18 – Hand sorting of recyclables (‘totting’) with vehicle assistance

Contacts
wasteandrecycling@hse.gov.uk

For IEEs and examples of MPMC see Appendix 5.2 & 5.3
Appendix 5.1.10 National Lead Inspector Companies

Introduction

The NLI initiative has been in place since 2009 and there are currently 14 companies participating in the scheme. The aim has been to improve health and safety standards by establishing a co-ordinated and consistent approach to inspection within these companies, assessing their management systems and establishing benchmarking standards.

The NLI scheme has matured over the years and now concentrates on inspecting individual sites for regulatory compliance. The NLI scheme is currently being reviewed. In 2019-20 there will be no specific programme of inspections for NLI companies, although inspectors can choose to visit sites operated by NLI companies as part of the general waste inspection campaign in accordance with the normal criteria. Some sites that are operated by NLI companies may be randomly selected for evaluation visits.

Until further notice the National Lead Inspector is to act as the central point of contact with their NLI Company.

Health & Safety

Inspectors are reminded of the need to wear appropriate safety footwear (ankle support, mid-sole protection, steel toe caps) and a high visibility tabard or jacket. Other PPE maybe required dependent on-site rules / conditions e.g. eye protection, hearing protection and hard hat.

Be aware of risks whilst working in close proximity to vehicles.

Ensure good personal hygiene and wash hands on leaving site.

Inspection

NLIIs should continue to ensure that all central management issues are entered onto their existing Master Case for the company. Inspectors should consult the Master Case linked to their case and contact the NLI if they have any queries.

Inspectors should deal with site specific issues as normal. If any system / management / companywide issues are identified, these should be raised with the NLI following their visit and together agree a suitable course of action. The fact that the Company is dealing with e.g. a transport/machinery review on a national level should not stop an inspector dealing with a risk on a site level and taking appropriate enforcement action.

Inspection cases should be linked to the NLI Company Master case – See the Targeting and Inspection Guide

The NLI Inspector will be marked on the company page and will be visible on the Site Overview printout.

PLEASE NOTE THAT THE OLD OG CONTAINING NLI NAMES IS NOW OBSOLETE

The NLI Companies with relevant Master Cases are: - Amey, Biffa, Cory, EMR, FCC, Grundon, Kier, Serco, Renewi (formerly Shanks), Sims, Suez, Veolia, Viridor, Enva Scotland (previously William Tracey), Serco and Kier

Identify and record the information on your inspection case as per Section 3 in the same way as any other site.

Priorities

Local site conditions as per risks identified in ‘Type of Premises’ appendices in this OG.

Guidance

See guidance provided in the other Appendices to this OG.

Contacts

wasteandrecycling@hse.gov.uk
**Appendix 5.1.11 Skip Safety**

<table>
<thead>
<tr>
<th>Introduction</th>
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<tbody>
<tr>
<td>A skip is a large open-topped waste container designed for loading onto a skip loader lorry. Instead of being emptied into another vehicle, (as is the case with a wheelie bin and a Refuse Collection Vehicle), a skip is removed, or replaced by an empty skip, and its contents disposed of elsewhere (normally at a waste transfer station or landfill). To facilitate its removal, there are usually lugs at the ends of the skip onto which chains can be attached, permitting it to be lifted onto and off the skip lorry. There are several types of skip containers, but the majority can be classified in three groups: Open skips (which allow easier loading of waste materials and are commonly found on construction sites); Closed skips (more secure, prevent unauthorised use of the skip and can help to ensure that the volume of waste does not exceed the maximum limit), and Roll-On and Roll-Off (RORO) skips that are similar to open skips, but instead of being lifted onto a skip lorry by chains, they are rolled on with a hook.</td>
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One end of the skip sometimes has a large door that hinges down to allow manual loading and unloading. Skips are usually durable and tough, made to withstand rough use by tradesmen and labourers. There are no BS/EN standards for the manufacture of skips and containers – though some industries may have their own standards e.g. offshore. Due to the multi-purpose nature of their use, skips can be found on almost any type of site. |

Road Traffic legislation requires that the contents of full skips be covered to prevent accidental loss of material – this is normally achieved by sheeting. Automated/mechanical sheeting systems are at the top of the hierarchy of control measures because these systems allow the driver to sheet the load from ground level. Manual sheeting from the vehicle is to be discouraged unless it is not reasonably practicable to use automated sheeting systems or sheet from the ground. Loads can be sheeted from platforms removing the need to climb onto the vehicle or the load. Under no circumstances should anyone be allowed to stand or walk on the load. |

There has been an issue with skip loader vehicles ‘running away’ whilst lifting skips on slopes. Most manufacturers now offer all-wheel braking on the chassis of vehicles suitable for converting to skip loaders, but if it is not possible to purchase all-wheel braking on a new vehicle, flat plates should be fitted to stabiliser legs instead of rollers. Similarly, on older vehicles it should be possible to fit all-wheel braking retrospectively, but the converted vehicle must conform with all the current construction and use regulations and it must be approved by application to the DVSA or equivalent. Where this is not possible, flat plates should be fitted to the stabiliser legs. |

<table>
<thead>
<tr>
<th>Health and safety</th>
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<tbody>
<tr>
<td>Inspectors are reminded of the need to wear appropriate safety footwear (ankle support, mid-sole protection, steel toe caps) and a high visibility tabard or jacket. Other PPE maybe required <strong>dependent on-site rules</strong> / conditions e.g. eye protection, hearing protection and hard hat.</td>
</tr>
</tbody>
</table>

Be aware of risks whilst working in close proximity to vehicles. |

Ensure good personal hygiene and wash hands on leaving site. |

<table>
<thead>
<tr>
<th>Inspection</th>
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<tbody>
<tr>
<td>Skips and containers themselves do not require thorough examination under LOLER, but do require inspection under PUWER.</td>
</tr>
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</table>

Identify and record the following information on your inspection case as per Section 3. |

<table>
<thead>
<tr>
<th>Priorities</th>
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</thead>
<tbody>
<tr>
<td>For each of the sections below, please also assess how site management ensure sustained compliance with their procedures through monitoring and review to complete the plan, do, check, act management system.</td>
</tr>
</tbody>
</table>

**Collection/transfer of skips** |
- Does the hoisting mechanism (including any wire ropes or chains that form part of the mechanism) for skip loaders and hook loaders comply with LOLER? |
- Are skips/containers routinely examined to ensure that they remain in good repair and are fit for purpose? |
- Do drivers report hazardous situations (e.g. grossly overloaded or unsafely loaded skips or containers)? |
- Is there a safe system for sheeting skips (if necessary)? |
- Are duty holders transporting loaded skips that are stacked on top of each other? This is regarded by DVSA to be unsafe. DVSA would enforce on the highway. HSE should address the matter if seen leaving / entering site. |
- Are duty holders transporting stacked empty skips? If so they should not be stacked more than 3 high. |
Skip management

- Have operators selected the correct type of skip for the intended task (e.g. load, stability etc.)?
- Are operators and/or collection workers competent to recognise faults and/or damage to skips/containers that could make them unsafe to use?
- Is there a system to ensure that damaged and unsafe skips or containers are removed from service for disposal, repair or returned to supplier?
- Has the stability of stacked empty skips been considered (e.g. ground conditions, accessibility etc.)?
- Loaded skips should never be stacked on top of each other.

Transport

Safe site

- Have they assessed the risks from workplace transport at the site?
- Is there a clear directional flow of traffic around the site?
- Has a one-way system been considered/implemented?
- Has reversing been eliminated if at all possible?
- Are vehicles suitably segregated from pedestrians?
- Has the positioning of skips/containers been considered with a view to eliminating blind corners? If not, have mirrors etc. been introduced to improve a driver’s view of obscured areas?
- Physical control measures to prevent access to area during collection of full skips/containers?

Safe vehicles

- Are all vehicles fit for use and suitable for the activities they are performing?
- Are all brakes, lights, mirrors, horns etc. suitably maintained?
- Have reversing alarms/beacons been fitted?
- Have all lifting equipment and accessories been thoroughly examined?
- On skip loaders, has the potential for “runaway” during loading been suitably prevented? I.e.
  - Is it fitted with all wheel braking? Retrofitting is possible
  - If all wheel braking cannot be fitted, have the rollers been replaced with flat plates on the stabiliser legs?

Safe drivers

- Are only trained workers allowed to drive vehicles?
- Are there clear instructions for visiting drivers?
- Are visiting drivers supervised and monitored whilst on site?

Asbestos

- Are workers suitably trained to identify asbestos waste?
- Are there appropriate arrangements to deal with unexpected asbestos waste?

Guidance

HSE webpage “Skip hire and waste transfer” [http://www.hse.gov.uk/waste/skiphire.htm](http://www.hse.gov.uk/waste/skiphire.htm)
HSE webpage “Preventing ‘runaway’ skip loader incidents” [http://www.hse.gov.uk/waste/skiploaders.htm](http://www.hse.gov.uk/waste/skiploaders.htm)
HSE webpage “Hook Loaders and Skips, Load security when raising and lowering” [www.hse.gov.uk/waste/hookloader.htm](http://www.hse.gov.uk/waste/hookloader.htm)
HSE webpage “Wishbone bale bars – Failure of lifting bars on waste compaction containers (hook bar)” [www.hse.gov.uk/waste/wishbone.htm](http://www.hse.gov.uk/waste/wishbone.htm)
Waste 06 - Skip and Container Safety in Waste Management and Recycling
Waste 09 - Safe transport at waste and recycling sites
HSE webpage – Waste Management Frequently asked questions When does LOLER apply to Waste & Recycling equipment [http://www.hse.gov.uk/waste/faqs.htm](http://www.hse.gov.uk/waste/faqs.htm)

Contacts

wasteandrecycling@hse.gov.uk

For IEEs and examples of MPMC see Appendix 5.2 & 5.3
Appendix 5.1.12 Waste Electrical and Electronic Equipment (WEEE)

Introduction

Waste Electrical and Electronic Equipment recycling (WEEE) is a specialist part of the waste and recycling industry, and includes most products that have a plug or need a battery. There are 10 broad categories of WEEE:

- Large household appliances e.g. fridges, cookers, microwaves, washing machines and dishwashers;
- Small household appliances e.g. vacuum cleaners, irons, toasters and clocks;
- IT and telecommunications equipment e.g. computers, copying equipment, telephones and calculators;
- Consumer equipment e.g. radios, televisions, hi-fi equipment, camcorders ad musical instruments;
- Lighting equipment e.g. straight and compact fluorescent tubes and high intensity discharge lamps;
- Electrical and electronic tools – e.g. drills, saws and sewing machines, electric lawnmowers;
- Toys, leisure and sports equipment e.g. electric trains, games consoles and running machines;
- Medical devices e.g. (non-infected) dialysis machines, analysers, medical freezers, cardiology equipment;
- Monitoring and control equipment e.g. smoke detectors, thermostats and heating regulators; and
- Automatic dispensers e.g. hot drink dispensers and money dispensers.

A wide range of materials e.g. metal, glass, plastics, ceramics and precious metals can be found in WEEE, and treatment varies enormously according to the type of WEEE and technology that is used. Some facilities utilise large-scale shredding technologies, others use a disassembly process (manual, automated or a combination). Various standards exist for both disassembly and shredding operations and in particular for the removal of certain hazardous substances and components in order to avoid risks to health and safety and damage to equipment.

Health and safety

Inspectors are reminded of the need to wear appropriate safety footwear (ankle support, mid-sole protection, steel toe caps) and a high visibility tabard or jacket. Other PPE maybe required dependent on-site rules / conditions e.g. eye protection, hearing protection and hard hat.

Please note that it is HSE’s policy across all industries that Inspectors should not enter any area where there is evidence of a respirable hazard or a need to wear respiratory protective equipment (RPE) to control exposures to substances hazardous to health unless they are identified as authorised RPE wearers. For further information see http://intranet.hse.int/yourhealthsafety/safety/respiratory.htm. If you still are unsure as to the implications of this policy then please seek advice from Occupational Hygiene Specialist Inspectors. If you are on site and encounter a designated RPE area, then do not enter, and seek support from an authorised RPE wearer.

Be aware of risks whilst working in close proximity to vehicles.

Ensure good personal hygiene and wash hands on leaving site.

Inspection

Inspectors could potentially discover a range of hazardous substances at a WEEE Recycling Plant, including:

- Mercury (which can be found in fluorescent lamps, medical equipment, and mobile phones);
- Phosphorous pentachloride (liberated when processing some glass to remove the fluorescent coating);
- Polychlorinated biphenyls – PCBs (found in capacitors and transformers manufactured before 1986);
- Refractory Ceramic Fibre – RCF (some domestic and building heating appliances);
- Asbestos (found in older appliances such as electric coffee pots, toasters, irons and electric heaters);
- Lead (liberated when processing some glass);
- Radioactive substances (fill level detectors, static eliminators, radium luminised dials, smoke detectors).

Identify and record the following information on your inspection case as per Section 3.

Priorities

For each of the sections below, please also assess how site management ensure sustained compliance with their procedures through monitoring and review to complete the plan, do, check, act management system.

Machinery

- Has access to all dangerous parts of the machine been eliminated or restricted sfarp?
- Is guarding fixed or interlocked (if access required)?
- Are all in-running nips on conveyors guarded (safe by position for operation does not mean safe by position for maintenance)?
Is there a daily / pre-shift guard check system in place?

How are machines maintained and/or cleaned?

How are blockages removed from machines?

Can the machine be isolated and locked off (e.g. maintenance or clearing blockages)?

Are there means to lock off eg personal padlocks, multiclasp locks?

Have all operators been suitably trained in the use of the machine they are operating?

Have risk assessments considered engineering/maintenance activities?

Transport

Safe Site

Have they assessed the risks from workplace transport at the site?

Is there a clear directional flow of traffic around the site?

Has a one-way system been considered/implemented?

Has reversing been eliminated so far?

Are vehicles suitably segregated from pedestrians?

Have blind corners been eliminated? If not, have mirrors been introduced to improve driver’s view?

Are systems and physical control measures in place to restrict access during collection activities?

If hand sorting “totting” is being performed, have safe refuges been provided or transport movements eliminated in those areas whilst totting is ongoing?

Safe Vehicles

Are all vehicles fit for use and suitable for the activities they are performing?

Are all brakes, lights, mirrors, horns etc. suitably maintained?

Have reversing alarms/beacons been fitted?

Have all lifting equipment and accessories been thoroughly examined?

Safe Drivers

Are only trained workers allowed to drive vehicles?

Are there clear instructions for visiting drivers?

Are visiting drivers supervised and monitored whilst on site?

Structural stability

Are structures being used to support a load (e.g. wall or bay) adequately monitored and maintained? e.g.:

- Is the site operator aware of the safe work load/capacity of the structure?
- How do they ensure that this loading is not exceeded?

Are the structures routinely inspected (for signs of wear or damage)?

Are items being stacked in a safe manner e.g. bales, white goods etc.? e.g. have they considered:

- Have they considered an alternative way of stacking?
- The type of material being stacked (e.g. will it disintegrate over time or under excessive loading)?
- Does the material easily lend itself to stacking (e.g. compacted bales stack more safely than non-compacted items)?
- How good are the ground conditions (e.g. how flat and firm)?
- Is the stack inside or outside of a building?
- If outside, will it get affected by adverse weather conditions; (weather, vehicle movements etc.)?
- Volume of traffic movement around the stack? Any measures to prevent accidental damage?
- How frequently will operators need access to the stack?

Substances hazardous to health

Does the WEEE being processed contain substances hazardous to health?

Has a COSHH assessment been performed? Do any substances have a WEL? Are any classified as carcinogens, mutagens or asthmagens?

If relevant, have suitable control measures been introduced to ensure exposure below the WEL and for substances classified as carcinogens, mutagens or asthmagens to as low a level as reasonably practicable?

Are control measures maintained in a clean state and in good working order?

For substances not covered by COSHH (e.g. lead, asbestos and radioactive substances) have control measures (in accordance with those specific regulations) been introduced?

Have adequate emergency procedures been established (if required) and is everyone trained in what to do?

Has any health surveillance been carried out (if required)?

Musculoskeletal risks (MSDs)

Have the risks associated with manual handling activities been suitably assessed?

Are there opportunities to use mechanical aids to replace manual handling?

Bioaerosols

Are they aware of what bioaerosols are? Are they aware of health risks and symptoms of exposure?
Have they identified tasks/activities that could generate bioaerosols, for example:
- Cleaning of surfaces where organic waste residues are present e.g. pressure hosing insides of skips, dry sweeping etc.
- Dismantling of equipment which may have collected or grown organic matter over time (e.g. food deposits/mould in fridges).

Have cleaning and dismantling tasks generating bioaerosols been eliminated or adequately controlled e.g. pressure hosing or dry sweeping?

Where exposure to bioaerosols cannot be adequately controlled, has suitable and sufficient Respiratory Protective Equipment (RPE) been provided (e.g. FFP3 or air-fed masks) in combination with other control measures?

Guidance

"Waste Electrical and Electronic Equipment recycling (WEEE) [http://www.hse.gov.uk/waste/waste-electrical.htm](http://www.hse.gov.uk/waste/waste-electrical.htm)

WISH Info 02 - Practical advice on lock-off recycling/recovery machinery.

Waste 03 – Orphaned gas cylinders in the waste & recycling industry.

Waste 08 - Compactor Equipment.: Public and User Safety

Waste 09 - Safe transport at waste and recycling sites.

Waste 18 – Hand sorting of recyclables (‘totting’) with vehicle assistance.

Contacts

wasteandrecycling@hse.gov.uk

For IEEs and examples of MPMC see Appendix 5.2 & 5.3
Appendix 5.1.13 Waste Transfer Stations

Introduction

A waste transfer station is a building or processing site for the temporary deposition of waste. They are used as a convenient tipping point for general waste and recyclable materials. Local waste collection vehicles will deposit their waste, the waste is then bulked up before being loaded and transported in larger vehicles to another location for further treatment or disposal.

Often Waste transfer stations may be a combination of different processes.

Health and safety

Inspectors are reminded of the need to wear appropriate safety footwear (ankle support, mid-sole protection, steel toe caps) and a high visibility tabard or jacket. Other PPE maybe required dependent on-site rules / conditions e.g. eye protection, hearing protection and hard hat.

Be aware of risks whilst working in close proximity to vehicles.

Ensure good personal hygiene and wash hands on leaving site.

Inspection

Identify and record the following information on your inspection case as per Section 3.

Priorities

For each of the sections below, please also assess how site management ensure sustained compliance with their procedures through monitoring and review to complete the plan, do, check, act management system.

Transport

Safe site

➢ Have they assessed the risks from workplace transport at the site?
➢ Is there a clear directional flow of traffic around the site?
➢ Has a one-way system been considered/implemented?
➢ Has reversing been eliminated sfarp?
➢ Are vehicles suitably segregated from pedestrians?
➢ Has the positioning of skips/containers been considered with a view to eliminating blind corners? If not, have mirrors etc. been introduced to improve a driver’s view of obscured areas?
➢ Physical control measures to prevent access to area during collection of full skips/containers?
➢ If hand sorting “totting” is being performed, have safe refuges been provided or transport movements eliminated in those areas whilst totting is ongoing?
➢ Have risks arising from reverse tipping been controlled e.g. to prevent vehicles reversing into reception pits?

Safe vehicles

➢ Are all vehicles fit for use and suitable for the activities they are performing?
➢ Are all brakes, lights, mirrors, horns etc. suitably maintained?
➢ Have reversing alarms/beacons been fitted?
➢ Have all lifting equipment and accessories been thoroughly examined?

Safe drivers

➢ Are only trained workers allowed to drive vehicles?
➢ Are there clear instructions for visiting drivers?
➢ Are visiting drivers supervised and monitored whilst on site?

Machinery

➢ Has access to all dangerous parts of the machine been eliminated or restricted sfarp?
➢ Is guarding fixed or interlocked (if access required)?
➢ Are all in-running nips on conveyors guarded (safe by position for operation does not mean safe by position for maintenance)?
➢ Is there a daily / pre-shift guard check system in place?
➢ How are machines maintained and/or cleaned?
➢ How are blockages removed from machines?
➢ Can the machine be isolated and locked off (e.g. maintenance or clearing blockages)?
➢ Are there the means to lock off eg personal padlocks, multiclasp locks?
➢ Have all operators been suitably trained in the use of the machine they are operating?
Have risk assessments considered engineering/maintenance activities?

**Musculoskeletal Risks (MSDs)**
- Have the risks associated with manual handling activities been suitably assessed?
- Are there opportunities to use mechanical aids to replace manual handling?
- Are workers appropriately trained?
- Has ergonomics been assessed on sorting/picking lines?

**Structural stability**
- Are structures being used to support a load (e.g., wall or bay) adequately monitored and maintained? e.g.:
  - Is the site operator aware of the safe work load/capacity of the structure?
  - How do they ensure that this loading is not exceeded?
- Are the structures routinely inspected (for signs of wear or damage)?
- Are items being stacked in a safe manner e.g., vehicles, bales etc.? e.g. have they considered:
  - The type of material being stacked (e.g., will it disintegrate over time or under excessive loading)?
  - Does the material easily lend itself to stacking (e.g., compacted bales stack more safely than non-compacted vehicles)?
  - How good are the ground conditions (e.g., how flat and firm)?
  - Is the stack inside or outside of a building?
  - If outside, will it get affected by adverse weather conditions (weather, vehicle movements etc.)?
  - Does the stack need some form of stability aid (lengths of wood within the stack, or use of a bay)?
  - What is the volume of traffic movements around the stack, and are there any preventative measures in place to prevent accidental damage?
  - How frequently will operators need access to the stack?

**Asbestos**
- Are workers suitably trained to identify asbestos waste?
- Are there appropriate arrangements to deal with unexpected asbestos waste?

**Bioaerosols**
- Are they aware of what bioaerosols are? Are they aware of health risks and symptoms of exposure?
- Have they considered the increased risk of bioaerosol generation during the following activities:
  - Manual sorting or picking through waste;
  - Maintenance and cleaning activities e.g., compressed air, dry brushing etc.;
  - Working inside buildings near to where waste is being moved by heavy plant e.g., tipping halls.
- Have cleaning and maintenance tasks generating bioaerosols e.g., pressure hosing, compressed air use, dry sweeping been eliminated where reasonably practicable?
- Where exposure to bioaerosols cannot be adequately controlled, has suitable and sufficient Respiratory Protective Equipment (RPE) been provided (e.g., disposable FFP3 half masks, reusable half mask with P3 filter, powered hood/helmet with P3 filter) in combination with other control measures?

**Guidance**

For those carrying out hand totting, tatting or picking from floor activities, a [Checklist](#) is available. Although it is not comprehensive, the self-audit can be used as an aide memoire.

- [WISH Info 02](#) - Practical advice on lock-off recycling/recovery machinery.
- [Waste 03](#) – Orphaned gas cylinders in the waste & recycling industry.
- [Waste 09](#) - Safe transport at waste and recycling sites.
- [Waste 18](#) – Hand sorting of recyclables (‘totting’) with vehicle assistance.

**Contacts**

wasteandrecycling@hse.gov.uk

For IEEs and examples of MPMC see Appendix 5.2 & 5.3
Appendix 5.2. Examples of industry specific Matters of Evident Concern (MEC) and Matters of Potential Major Concern (MPMC)

Inspectors must consider action in relation to Matters of Evident Concern (MEC) or Matters of Potential Major Concern (MPMC) at all visits (see OC18/12).

Included in the industry-specific appendices, 5.1.1.-5.1.13. are industry-specific examples of situations that could lead to potentially catastrophic events. There are other events common across the industry included here. See OC18/12 for more details.

Inspectors should discuss with Specialist Inspectors if further assistance is required.

<table>
<thead>
<tr>
<th>Potential Catastrophic Event:</th>
<th>Due to:</th>
<th>Examples of indicative issues:</th>
<th>Existing Guidance:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire &amp; explosion.</td>
<td>Lack of General Fire Precautions NB verbal advice only then refer immediately to the local Fire Authority and EA</td>
<td>Stack separation Lack of escape routes</td>
<td>WISH Waste 28 - Fire Guidance EA Fire Prevention Plans</td>
</tr>
<tr>
<td>Orphan Cylinders</td>
<td>Inadequate pre-sorting of waste Inadequate storage arrangements</td>
<td>Waste 03 – Orphaned gas cylinders in the waste &amp; recycling industry</td>
<td></td>
</tr>
<tr>
<td>Storage of Oily Rags</td>
<td>Inadequate DSEAR assessment Inadequate storage</td>
<td>HSG 140 The Safe Use and Handling of Flammable Liquids Paragraph 118</td>
<td></td>
</tr>
<tr>
<td>Exposure to oxygen deficient atmospheres; exposure to noxious gases; engulfment (solids / liquids).</td>
<td>Entry into a confined space / silo / tank</td>
<td>Need to enter confined space has not been designed-out. InDG258 (rev1) Safe Work in Confined Spaces: A Brief Guide to Working Safely Safe Work in Confined Spaces. ACOP to the Confined Spaces Regulations 1997</td>
<td></td>
</tr>
<tr>
<td>Structural Safety / structural collapse</td>
<td>Collapse of large size precast panels</td>
<td>Poorly designed storage Loading waste against non-load bearing walls</td>
<td>Consult SG</td>
</tr>
</tbody>
</table>
Appendix 5.3: Initial Enforcement Expectations for Waste and Recycling Activities

NB: Should an Inspector identify that there is (or is likely to be) a risk of serious personal injury arising from any of the situations below, then they should consider issuing a Prohibition Notice, regardless of the IEE indicated in the table.

<table>
<thead>
<tr>
<th>MACHINERY (Specific and General)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type of Machine</strong></td>
</tr>
<tr>
<td>Baler Compactor Baling Press</td>
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<tr>
<td>Conveyor</td>
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<td></td>
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<tr>
<td>Machine</td>
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<tr>
<td>----------------------</td>
</tr>
<tr>
<td>Crocodile Shears</td>
</tr>
<tr>
<td>Shredder Granulator</td>
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<tr>
<td>Fragmentiser</td>
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<td></td>
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<tr>
<td></td>
</tr>
<tr>
<td>Shredder Granulator</td>
</tr>
<tr>
<td>Trommel</td>
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<tr>
<td>All Machinery and/or work equipment</td>
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<tr>
<td>Poor housekeeping arrangements (which could result in persons tripping and falling into dangerous parts of machine).</td>
</tr>
</tbody>
</table>

### TRANSPORT

<table>
<thead>
<tr>
<th>Situation</th>
<th>IEE</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inadequate segregation of pedestrians and vehicles</td>
<td>IN</td>
<td>Vehicles may use a traffic route without causing danger to the health or safety of persons at work near it – WHSWR Reg. 17</td>
</tr>
<tr>
<td>Inadequate collection route risk assessments</td>
<td>IN</td>
<td>Suitable and sufficient assessment of the risks to the health and safety of employees to which they are exposed whilst they are at work – MHSWR Reg. 3</td>
</tr>
<tr>
<td>No safe refuges for totters / drivers</td>
<td>PN</td>
<td>Sufficient separation for vehicles and pedestrians using the same traffic route – WHSWR Reg. 17</td>
</tr>
<tr>
<td>Untrained drivers/operators</td>
<td>PN &amp; IN</td>
<td>All persons who use work equipment have been provided training in the methods which may be adopted when using the work equipment – PUWER Reg. 9</td>
</tr>
<tr>
<td>Inadequate maintenance on vehicles</td>
<td>IN</td>
<td>Work equipment is maintained in an efficient state, in efficient working order and in good repair – PUWER Reg. 6</td>
</tr>
<tr>
<td>Failure to thoroughly examine lifting equipment</td>
<td>IN</td>
<td>Lifting equipment which is exposed to conditions causing deterioration which is liable to result in dangerous situations is thoroughly examined – LOLER Reg. 9</td>
</tr>
<tr>
<td>Raising persons unsafely eg on forks of a lift truck / bucket on excavator</td>
<td>PN</td>
<td>Risk of serious personal injury from fall – Work at Height Reg. 6</td>
</tr>
</tbody>
</table>

### HEALTH

<table>
<thead>
<tr>
<th>Task</th>
<th>Situation</th>
<th>IEE</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cleaning and Maintenance activities that generate bioaerosols.</td>
<td>No or inadequate RPE.</td>
<td>IN</td>
<td>Cleaning of surfaces where organic waste residues are present e.g. pressure hosing insides of skips, dry brushing/machine/conveyor surfaces, floors inside tipping halls etc. Some maintenance tasks may require surface cleaning e.g. use of compressed air to clean air filters. Elimination of dust or aerosol raising cleaning methods should be encouraged. Alternatives such as mechanical</td>
</tr>
<tr>
<td>Manual sorting or picking through waste (exposure to bioaerosols)</td>
<td>No or inadequate RPE.</td>
<td>IN</td>
<td></td>
</tr>
</tbody>
</table>
| Employees working for prolonged periods near to where waste is being moved e.g. tipping halls. (exposure to bioaerosols) | No or inadequate RPE. | IN | shovels, vacuums or damp methods used whenever practicable.  
Where this is not practicable, suitable RPE will be required to achieve adequate control (e.g. disposable FFP3 half masks, reusable half mask with P3 filter, powered hood/helmet with P3 filter) - COSHH Reg 7  
Wearers not face fit tested (tight fitting masks) (see INDG 479) – COSHH Reg 7  
Wearers not trained in how to wear RPE correctly  
Evidence includes: facial hair, hats, glasses, other PPE interfering with RPE tight fit - COSHH Reg 8.  
No suitable arrangements for maintenance and cleaning (non-disposable RPE only), storage and replacement.  
Evidence includes filters with signs of clogging - COSHH Reg 9. |
|---|---|---|---|
| Welding and allied processes | MMA/MIG welding indoors with no LEV or RPE provided. | IN | Where reasonably practicable suitably designed LEV to control fume should be provided:  
• Extracted bench for small - medium sized workpiece which can be transported to a workshop and positioned on a table or bench.  
• Capture hood on a flexible arm for large – extra-large sized workpiece which is much larger than an adult person.  
• On-torch extraction (MIG welding only).  
Suitable RPE will also be required to control residual risk e.g. powered welding helmet with P3 filter.  
COSHH Reg 7  
LEV is present but inadequately:  
• Designed; and/or  
• Maintained; and/or  
• Operated/adjusted;  
Evidence of inadequately maintained LEV includes:  
• signs of damage e.g. split/compressed ducting;  
• poor fume capture (check with a piece of paper close to capture hood) indicating blocked ducting, or filter;  
• no pre-use checks to ensure sufficient air flow.  
• no current LEV TEXT.  
Evidence of incorrect use of LEV will include:  
• failing to position (and re-position) flexible welding hood as close as possible to the source to ensure as much fume is captured as possible.  
COSHH Regs 7, 8 and 9  
Welding outdoors in the open air with no controls | Suitable RPE e.g. powered welding helmet with P3 filter.  
COSHH Reg 7 |
| Health Surveillance | Flame cutting/burning metal waste with no controls | IN | Flame cutting/burning can produce significant fume, the following should be considered:

**Exclusion Zone:** The extent of any zone around burning work and downwind should be reviewed. Other workers should not be in the vicinity of the fume unless using appropriate RPE.

**‘Enclosed’ Work:** Engineering controls should be considered for flame cutting work in enclosed areas or where there is no natural dispersion away from the burner.

**Surface Coatings:** Surface coatings e.g. old paint, resins may contain other highly toxic components e.g. lead and organic thermal breakdown products. Suitable RPE e.g. powered welding helmet with a A2P3 (organic vapour/particulate) filter should be worn.

COSHH Reg 7 |

| Information, Instruction and Training | No health surveillance programme in place where there is a risk from inhalation exposure to a substance that will or may result in occupational asthma. | IN | Inadequate provision: IEE NOC – COSHH Reg 11
Discuss with SG Occupational Health where necessary. |

| Asbestos storage | None provided to employees who may be at risk from exposure to bioaerosols, welding fume, RCF (catalytic converters). | IN | Employees should be aware of the ill health risks/symptoms associated with exposure and the controls in place to prevent or reduce exposure in their work areas/activities - COSHH Reg 12 |

| Asbestos awareness | Not bagged/wrapped or stored within a lockable skip. | IN | Control of Asbestos Regs 6, 7,11,16 & 24 |

| Asbestos Handling | No/inadequate training. | IN | Topics should include identification of asbestos products, potential risks to health from exposure, safe handling and storage of asbestos waste, emergency procedures including decontamination and RPE. - Control of Asbestos Regs 10 |

| Asbestos Handling | Lack of / inadequate procedures for handling asbestos waste. | IN / PN | A PN would be appropriate where there is evidence of mechanical handling of bagged asbestos waste and/or evidence of significant amounts of asbestos debris around the premises. - Control of Asbestos Regs 6, 7,11,12,13,15 & 16 |