

EMS INDEX

To comply with '*Treating metal waste in shredders: appropriate measures for permitted facilities*'

1. Mechanical treatment in shredders

Definition of mechanical treatment in shredders, when appropriate measures apply, implementing measures at new and existing facilities, site design and suitability.

<u>Appropriate Measure</u>	<u>Location within EMS</u>
1.1 When Appropriate Measures Apply	1.3. Management Systems
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1.3 Implementing Appropriate Measures at New and Existing Facilities	1.3. Management Systems
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2. General management appropriate measures

These are the appropriate measures for the environmental management of a regulated facility with an environmental permit to mechanically treat metal waste in shredders.

<u>Appropriate Measure</u>	<u>Location within EMS</u>
<p>2.1 Management System</p> <p>You must have and follow an up-to-date, written management system. It must incorporate the following features:</p> <p>management commitment, including from senior managers;</p> <p>an environmental policy that is approved by senior managers and includes the continuous improvement of the facility's environmental performance;</p>	<p>1.3. Management Systems</p> <p>1.3. Management Systems</p>
<p>You plan and establish the resources, procedures, objectives and targets needed for environmental performance alongside your financial planning and investment.</p>	1.3. Management Systems
<p>You implement environmental performance procedures, paying particular attention to:</p> <p>staff structure and relevant responsibilities;</p> <p>staff recruitment, training, awareness and competence;</p> <p>communication (for example, of performance measures and targets);</p> <p>employee involvement;</p> <p>documentation;</p> <p>effective process control;</p> <p>maintenance programmes;</p>	<p>1.4. Staff Competence, 31. Organogram</p> <p>1.4. Staff Competence</p> <p>1.4. Staff Competence</p> <p>1.4. Staff Competence</p> <p>1.3. Management Systems</p> <p>1.3. Management Systems</p> <p>1.5.3. Maintenance of Plant</p>

<p>the management of change (including legislative changes and waste classification changes);</p> <p>emergency preparedness and response;</p> <p>making sure you comply with environmental legislation;</p>	<p>31. Legal Register</p> <p>1.5. Accident Prevention and Management, 21. Accident Management Plan</p> <p>31. Legal Register</p>
<p>You check environmental performance and take corrective action paying particular attention to:</p> <p>monitoring and measurement;</p> <p>learning from incidents, near misses and mistakes, including those of other organisations;</p> <p>records maintenance;</p> <p>independent (where practicable) internal or external auditing of the management system to confirm it has been properly implemented and maintained.</p>	<p>5. Emissions control, 6. Emission limits and monitoring, 7. Process efficiency</p> <p>1.5. Accident Prevention and Management, 21. Accident Management Plan, 1.3.3.EMS Review</p> <p>1.3.1. Auditing (and per section)</p> <p>1.3.1. Auditing</p>
<p>Senior managers review the management system to check it is still suitable, adequate and effective.</p>	<p>1.3.3. EMS Review</p>
<p>You review the development of cleaner technologies and their applicability to site operations.</p>	<p>1.3.3. EMS Review</p>
<p>When designing new plant, you make sure you assess the environmental impacts from the plant's operating life and eventual decommissioning.</p>	<p>1.7. Decommissioning Plan, 24. Decommissioning Plan</p>
<p>You consider the risks a changing climate poses to your operations. You have appropriate plans in place to assess and manage future risks.</p>	<p>1.8. Climate Change, 16 Site Specific environmental risk assessment.</p>
<p>You compare your site's performance against relevant sector guidance and standards on a regular basis, known as sectoral benchmarking.</p>	<p>1.3.3. EMS Review</p>
<p>You have and maintain the following documentation:</p> <p>inventory of emissions to air and water;</p> <p>residues management plan;</p> <p>accident management plan;</p> <p>site infrastructure plan;</p> <p>site condition report;</p> <p>fire prevention plan;</p>	<p>6.1. Emissions to air, 6.2 Emissions to water, 26. Inventory of emissions to air and water</p> <p>29. Residues Management Plan</p> <p>21. Accident Management Plan</p> <p>19. Site Operations Plan</p> <p>25. Site Condition Report</p> <p>22. Fire Prevention Plan</p>
<p>If required, you have and maintain the following documentation:</p>	

deflagration management plan	Not required, see 16. Site-Specific Environmental Risk Assessment, 5.2. Fugitive emissions to air
odour management plan;	Not required, see 16. Site-Specific Environmental Risk Assessment, 5.2. Fugitive emissions to air
noise and vibration management plan;	Not required, see 16. Site-Specific Environmental Risk Assessment, 5.3. Emissions of noise and vibration
dust management plan;	Not required, see 16. Site-Specific Environmental Risk Assessment, 5.2. Fugitive emissions to air
pest management plan;	Not required, see 16. Site-Specific Environmental Risk Assessment, 5.2. Fugitive emissions to air
2.2 Staff Competence	
Your site must be operated at all times by an adequate number of staff with appropriate qualifications and competence.	1.4. Staff Competence
The design, installation and maintenance of infrastructure, plant and equipment must be carried out by competent people.	1.4. Staff Competence
You must have appropriately qualified managers for your waste activity who are either:	
qualified under a technical competence scheme;	1.4. Staff Competence, Technically Competent Manager WAMITAB certificates
operating under a government approved technical competence scheme;	1.4. Staff Competence
Non-supervisory staff must be reliable and technically skilled. Their skills may be based on experience and relevant training	1.4. Staff Competence
2.3 Accident Management Plan	
As part of your management system you must have a plan for dealing with any incidents or accidents that could result in pollution.	1.5. Accident Prevention and Management, 21. Accident Management Plan, 16. Site-Specific Environmental Risk Assessment
The accident management plan must identify and assess the risks the facility poses to human health and the environment.	1.5. Accident Prevention and Management, 21. Accident Management Plan
Areas to consider <u>may</u> include:	
waste types and the risks that they pose;	1.5. Accident Prevention and Management, 21. Accident Management Plan, 22. Fire Prevention Plan, 2.1. Pre acceptance, 2.2. Waste acceptance
robust waste acceptance procedures (see section 3) to avoid receiving unwanted items, such as gas cylinders, undepolluted end-of-life vehicles (ELVs) and radioactive items;	2.1. Pre acceptance, 2.2. Waste acceptance

failure of abatement system;	1.5. Accident Prevention and Management, 21. Accident Management Plan, 16. Site-Specific Environmental Risk Assessment
failure of plant and equipment (for example over-pressure of vessels and pipework, blocked drains);	1.5. Accident Prevention and Management, 21. Accident Management Plan, 16. Site-Specific Environmental Risk Assessment
failure of containment (for example, bund failure, or drainage sumps overflowing);	1.5. Accident Prevention and Management, 21. Accident Management Plan, 16. Site-Specific Environmental Risk Assessment
damaged Li-ion batteries;	1.5. Accident Prevention and Management, 21. Accident Management Plan, 16. Site-Specific Environmental Risk Assessment
failure to contain firefighting water;	1.5. Accident Prevention and Management, 21. Accident Management Plan, 16. Site-Specific Environmental Risk Assessment
making the wrong connections in drains or other systems;	1.5. Accident Prevention and Management, 21. Accident Management Plan, 16. Site-Specific Environmental Risk Assessment
checking the composition of an effluent before emission;	1.5. Accident Prevention and Management, 21. Accident Management Plan, 16. Site-Specific Environmental Risk Assessment
vandalism and arson;	1.5. Accident Prevention and Management, 21. Accident Management Plan, 16. Site-Specific Environmental Risk Assessment
extreme weather conditions for example flooding or very high winds;	1.5. Accident Prevention and Management, 21. Accident Management Plan, 16. Site-Specific Environmental Risk Assessment
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You must assess the risk of accidents and their possible consequences. Risk is the combination of the likelihood that a hazard will occur and the severity of the impact resulting from that hazard. Having identified the hazards, you can assess the risks by addressing 6 questions:	1.5. Accident Prevention and Management, 21. Accident Management Plan
how likely is it that the accident will happen?	1.5. Accident Prevention and Management, 21. Accident Management Plan
what may be emitted and how much?	1.5. Accident Prevention and Management, 21. Accident Management Plan, 16. Site-Specific Environmental Risk Assessment
where will the emission go – what are the pathways and receptors?	1.5. Accident Prevention and Management, 21. Accident Management Plan, 16. Site-Specific Environmental Risk Assessment
what are the consequences?	1.5. Accident Prevention and Management, 21. Accident Management Plan, 16. Site-Specific Environmental Risk Assessment
what is the overall significance of the risk?	1.5. Accident Prevention and Management, 21. Accident Management Plan

what can you do to prevent or reduce the risk?	1.5. Accident Prevention and Management, 21. Accident Management Plan, 16. Site-Specific Environmental Risk Assessment
In particular, you must identify any fire risks that may be caused, for example by:	
arson or vandalism	22. Fire Prevention Plan
self-combustion, for example within the finer fractions of the shredder residue or within swarf piles	22. Fire Prevention Plan
plant or equipment failure and electrical faults	22. Fire Prevention Plan
naked lights and discarded smoking materials	22. Fire Prevention Plan
hot works (for example welding or cutting), industrial heaters and hot exhausts	22. Fire Prevention Plan
reactions between incompatible materials	22. Fire Prevention Plan
neighbouring site activities	22. Fire Prevention Plan
sparks from loading buckets	22. Fire Prevention Plan
hot loads deposited at the site	22. Fire Prevention Plan
damaged Li-ion batteries in waste electronic and electrical equipment (WEEE) and light iron, heavy melting steel piles and waste from household waste recycling centres	22. Fire Prevention Plan
batteries left connected in ELVs which can short circuit	22. Fire Prevention Plan
batteries (storage, processing and handling)	22. Fire Prevention Plan
ELV depollution activities (if carried out on your site)	22. Fire Prevention Plan
deflagrations within the shredder and pre-shredders	22. Fire Prevention Plan
This list is not exhaustive and you must have a fire prevention plan that identifies the risks at your site and meets the requirements of our fire prevention plan guidance.	22. Fire Prevention Plan
The depth and type of accident risk assessment you do will depend on the characteristics of the plant and its location. The main factors to take into account are the:	
scale and nature of the accident hazard presented by the plant and its activities	1.5. Accident Prevention and Management, 21. Accident Management Plan
risks to areas of population and the environment (the receptors)	1.5. Accident Prevention and Management Plan, 21. Accident Management Plan, 18. Sensitive Receptors within 1 km, 21. Site-Specific Environmental Risk Assessment
nature of the plant and complexity of the activities and how difficult it is to decide and justify adequate risk control techniques	1.5. Accident Prevention and Management, 21. Accident Management Plan

<p>Through your accident management plan, you must also identify the roles and responsibilities of the staff involved in managing accidents. You must provide them with clear guidance on how to manage each accident scenario.</p>	<p>1.5. Accident Prevention and Management, 21. Accident Management Plan</p>
<p>You must appoint one facility employee as an emergency co-ordinator who will take lead responsibility for implementing the plan. You must train your employees so they can perform their duties effectively and safely and know how to respond to an emergency.</p>	<p>1.5. Accident Prevention and Management, 21. Accident Management Plan, 22. Fire Prevention Plan</p>
<p>You must also:</p> <p>establish how you will communicate with relevant authorities, emergency services and neighbours (as appropriate) both before, during and after an accident</p> <p>have appropriate emergency procedures, including for safe plant shutdown and site evacuation</p> <p>have post-accident procedures that include assessing the harm that may have been caused by an accident and the remediation actions you will take</p> <p>test the plan by carrying out emergency drills and exercises</p>	<p>1.5. Accident Prevention and Management, 21. Accident Management Plan, 22. Fire Prevention Plan</p> <p>1.5. Accident Prevention and Management, 21. Accident Management Plan, 22. Fire Prevention Plan</p> <p>1.5. Accident Prevention and Management, 21. Accident Management Plan, 22. Fire Prevention Plan</p> <p>1.5. Accident Prevention and Management, 21. Accident Management Plan, 22. Fire Prevention Plan</p>
<p>2.4 Accident Prevention Measures</p> <p>You must take the following measures, where appropriate, to prevent events that may lead to an accident:</p> <p>You must have clear and detailed procedures for pre-acceptance and acceptance of waste and for rejected and quarantined wastes.</p> <p>These should be produced and maintained as set out in the waste pre-acceptance, acceptance and tracking appropriate measures section.</p>	<p>2.1. Pre-acceptance, 31. Waste pre-acceptance form</p> <p>2.1. Pre-acceptance, 31. Waste pre-acceptance form</p>
<p>You must keep apart incompatible wastes. Examples could include but are not limited to:</p> <p>storing lead acid batteries separately to nickel metal hydride batteries</p> <p>segregating flammable gas cylinders in cages away from oxygen cylinders</p>	<p>3.4. Battery Storage</p> <p>3.1. Storage locations, 14. Site Operations Plan</p>
<p>You must make sure you contain the following (where appropriate) or route to the effluent system (where necessary):</p> <p>process waters</p> <p>site drainage waters</p>	<p>5.4. Point source emissions to water and sewer</p> <p>5.4. Point source emissions to water and sewer</p>

emergency firefighting water	22. Fire Prevention Plan
oil or chemical contaminated waters	1.5. Accident Prevention and Management, 21. Accident Management Plan, 22. Fire Prevention Plan
spillages of oils and chemicals	1.5. Accident Prevention and Management, 21. Accident Management Plan
You must be able to contain surges and storm water flows. You must provide enough buffer storage capacity to make sure you can achieve this. You can define this capacity using a risk-based approach, for example, by taking into account the:	1.5. Accident Prevention and Management, 21. Accident Management Plan, 21. Site-Specific Environmental Risk Assessment
nature of the pollutants	1.5. Accident Prevention and Management, 21. Accident Management Plan, 21. Site-Specific Environmental Risk Assessment
effects of downstream waste water treatment	1.5. Accident Prevention and Management, 21. Accident Management Plan, 21. Site-Specific Environmental Risk Assessment
sensitivity of the receiving environment	1.5. Accident Prevention and Management, 21. Accident Management Plan, 21. Site-Specific Environmental Risk Assessment
You can only discharge waste water from this buffer storage after you have taken appropriate measures, to control, treat or reuse the water.	1.5. Accident Prevention and Management, 21. Accident Management Plan, 21. Site-Specific Environmental Risk Assessment
You must have spill contingency procedures to minimise the risk of an accidental emission of raw materials, products and waste materials, and to prevent their entry into water.	1.5. Accident Prevention and Management, 21. Accident Management Plan
Your emergency firefighting water collection system must take account of additional firefighting water flows or firefighting foams. You may need emergency storage lagoons to prevent contaminated firefighting water reaching a receiving water body. This should be considered as part of your fire prevention plan.	22. Fire Prevention Plan
You must consider and, if appropriate, plan for the possibility that you need to contain or abate accidental emissions from:	
overflows	1.5.3. Accident Prevention and Management, 21. Accident Management Plan, 21. Site-Specific Environmental Risk Assessment
vents	1.5.3. Accident Prevention and Management, 21. Accident Management Plan, 21. Site-Specific Environmental Risk Assessment
safety relief valves	1.5.3. Accident Prevention and Management, 21. Accident Management Plan, 21. Site-Specific Environmental Risk Assessment

bursting discs	1.5.3. Accident Prevention and Management, 21. Accident Management Plan, 21. Site-Specific Environmental Risk Assessment
You must have security measures in place to prevent:	1.5. Accident Prevention and Management, 21. Accident Management Plan, 21. Site-Specific Environmental Risk Assessment, 22. Fire Prevention Plan
entry by vandals and intruders	1.5. Accident Prevention and Management, 21. Accident Management Plan, 21. Site-Specific Environmental Risk Assessment, 22. Fire Prevention Plan
damage to equipment	1.5. Accident Prevention and Management, 21. Accident Management Plan, 21. Site-Specific Environmental Risk Assessment, 22. Fire Prevention Plan
theft	1.5. Accident Prevention and Management, 21. Accident Management Plan, 21. Site-Specific Environmental Risk Assessment, 22. Fire Prevention Plan
fly-tipping	1.5. Accident Prevention and Management, 21. Accident Management Plan, 21. Site-Specific Environmental Risk Assessment, 22. Fire Prevention Plan
arson	1.5. Accident Prevention and Management, 21. Accident Management Plan, 21. Site-Specific Environmental Risk Assessment, 22. Fire Prevention Plan
Facilities must use an appropriate combination of the following measures:	1.5. Accident Prevention and Management, 21. Accident Management Plan, 21. Site-Specific Environmental Risk Assessment, 22. Fire Prevention Plan
security guards	1.5. Accident Prevention and Management, 21. Accident Management Plan, 21. Site-Specific Environmental Risk Assessment, 22. Fire Prevention Plan
total enclosure (usually with fences)	1.5. Accident Prevention and Management, 21. Accident Management Plan, 21. Site-Specific Environmental Risk Assessment, 22. Fire Prevention Plan
controlled entry points	1.5. Accident Prevention and Management, 21. Accident Management Plan, 21. Site-Specific Environmental Risk Assessment, 22. Fire Prevention Plan
adequate lighting	1.5. Accident Prevention and Management, 21. Accident Management Plan, 21. Site-Specific Environmental Risk Assessment, 22. Fire Prevention Plan
warning signs	1.5. Accident Prevention and Management, 21. Accident Management Plan, 21. Site-Specific Environmental Risk Assessment, 22. Fire Prevention Plan

24-hour surveillance, such as CCTV	1.5. Accident Prevention and Management, 21. Accident Management Plan, 21. Site-Specific Environmental Risk Assessment, 22. Fire Prevention Plan
There are 3 fire prevention objectives. You must:	
<ul style="list-style-type: none"> - minimise the likelihood of a fire happening - aim for a fire to be extinguished within 4 hours - minimise the spread of fire within the site and to neighbouring sites 	22. Fire Prevention Plan
You must have a fire prevention plan that meets the requirements of our guidance.	22. Fire Prevention Plan
You must maintain plant control in an emergency using <u>one or a combination</u> of the following measures:	
alarms	1.5. Accident Prevention and Management, 21. Accident Management Plan, 22. Fire Prevention Plan
process trips and interlocks	4.1. General Waste Treatment, 4.2. Metal shredding plant and downstream processes
manual interventions	1.5. Accident Prevention and Management, 21. Accident Management Plan, 22. Fire Prevention Plan
You must:	
make sure all the measurement and control devices you would need in an emergency are easy to access and operate in an emergency situation	1.5. Accident Prevention and Management, 21. Accident Management Plan, 22. Fire Prevention Plan
maintain the plant so it is in a good state of repair through a preventive maintenance programme and a control and testing programme	1.5.3 Maintenance of Plant, 21. Accident Management Plan
use techniques such as suitable barriers to prevent moving vehicles damaging equipment	1.5.3 Maintenance of Plant, 21. Accident Management Plan
have procedures in place to avoid incidents due to poor communication between operating staff during shift changes, or following maintenance or other engineering work	1.5. Accident Prevention and Management, 21. Accident management plan
where relevant, use equipment and protective systems designed for use in potentially explosive atmospheres	3.3. Dangerous Substances and Explosive Atmosphere Regulations 2022 (DSEAR)
You must:	
keep an up-to-date record of all accidents, incidents, near misses, changes to procedures, abnormal events, and the findings of maintenance inspections;	21. Accident Management Plan - Incident Record Form, 31. Non-conformance Report Form, 31. Site Inspection Sheet.

<p>carry out investigations into accidents, incidents, near misses and abnormal events and record the steps taken to prevent their reoccurrence;</p> <p>maintain an inventory of substances, which are present (or likely to be) and which could have environmental consequences if they escape – many apparently innocuous substances (for example, AdBlu) can damage the environment if they escape;</p> <p>have procedures for checking raw materials and wastes to make sure they are compatible with other substances they may accidentally come into contact with;</p> <p>make sure that any documents that may be needed in the event of an incident are accessible;</p>	<p>21. Accident Management Plan - Incident Record Form, 31. Non-conformance (preventative Action) Report Form, 23. Contingency Plan</p> <p>31. Fluid Storage Inventory</p> <p>2.1. Pre-acceptance, 2.2. Waste acceptance, 3.1. Storage locations</p> <p>1.5. Accident Prevention and Management</p>
<p>2.5 Contingency Plan and Procedures</p> <p>You must have and implement a contingency plan and management procedures to make certain you comply with all your permit conditions and operating procedures during maintenance or shutdown at your site.</p>	<p>1.6 Contingency Plan, 23. Contingency Plan</p>
<p>Your contingency plan must also contain provisions and procedures to make sure that you:</p> <p>do not exceed storage limits in your permit and you continue to apply appropriate measures for storing and handling waste</p> <p>stop accepting waste unless you have a clearly defined method of recovery or disposal and enough permitted storage capacity</p> <p>as far as possible, know in advance about any planned shutdowns at waste management facilities where you send waste</p>	<p>3.2. Storage duration and capacity , 1.6 Contingency Plan, 23. Contingency Plan</p> <p>1.6 Contingency Plan, 23. Contingency Plan</p> <p>1.6 Contingency Plan, 23. Contingency Plan</p>
<p>Your contingency plan must include plans and procedures for circumstances where you cannot send your wastes to other sites due to their planned or unplanned shutdown.</p>	<p>1.6 Contingency Plan, 23. Contingency Plan</p>
<p>If you produce an end-of-waste material at your facility, your contingency planning must consider issues with storage capacity for end-of-waste products. Iron, steel, aluminium and copper produced in accordance with the end-of-waste regulations remain waste and subject to waste controls until they are passed to the next holder.</p>	<p>1.6 Contingency Plan, 23. Contingency Plan</p>
<p>You must make your customers aware of your contingency plan, and of the circumstances in which you would stop accepting waste from them.</p>	<p>1.6 Contingency Plan, 23. Contingency Plan</p>
<p>You must consider whether the sites or companies you rely on in your contingency plan:</p>	

can take the waste at short notice	1.6 Contingency Plan, 23. Contingency Plan
are authorised to do so in the quantities and types likely to be needed – in addition to carrying out their existing activities	1.6 Contingency Plan, 23. Contingency Plan
Where circumstances mean you could exceed your permitted storage limits or compromise your storage procedures, you must look for alternative disposal or recovery options. You must not discount alternative disposal or recovery options on the basis of extra cost or geographical distance.	1.6 Contingency Plan, 23. Contingency Plan
You must not include unauthorised capacity in your contingency plan. If your contingency plan includes using temporary storage for additional waste on your site, then you must:	1.6 Contingency Plan, 23. Contingency Plan
make sure your site is authorised for this storage	1.6 Contingency Plan, 23. Contingency Plan
have the appropriate infrastructure in place	1.6 Contingency Plan, 23. Contingency Plan
Your management procedures and contingency plan must also:	
identify known or predictable malfunctions associated with your technology and the procedures, spare parts, tools and expertise needed to deal with them	23. Contingency Plan
include a record of spare parts held, especially critical spares – or state where you can get them from and how long it would take to receive them	23. Contingency Plan
have a defined procedure to identify, review and prioritise items of plant which need preventative maintenance	23. Contingency Plan
include all equipment or plant whose failure could directly or indirectly affect the environment or human health	23. Contingency Plan
identify 'non-productive' or redundant items such as tanks, pipework, retaining walls, bunds, reusable waste containers, ducts, filters and security systems	23. Contingency Plan
make sure you have the spare parts, tools, and competent staff needed before you start maintenance	23. Contingency Plan
Your management system must include procedures for auditing your performance against all these contingency measures and for reporting the audit results to the site manager.	1.3.1. Auditing, 1.3.2. Corrective Action Process
2.6 Plant Decommissioning	

<p>You must consider the decommissioning of the plant at the design stage and make suitable plans to minimise risks during later decommissioning.</p>	<p>1.7 Decommissioning Plan, 24. Decommissioning Plan</p>
<p>For existing plant, identify potential decommissioning risks and take steps to address these. You should make changes and design improvements as and when plant is upgraded, or when construction and development works are carried out at your site</p>	<p>1.7 Decommissioning Plan, 24. Decommissioning Plan</p>
<p>You must have, and maintain, a decommissioning plan to demonstrate that:</p> <p>plant will be decommissioned without causing pollution</p> <p>the site will be returned to a satisfactory condition</p>	<p>1.7 Decommissioning Plan, 24. Decommissioning Plan</p> <p>1.7 Decommissioning Plan, 24. Decommissioning Plan</p>
<p>Your decommissioning plan should include details on:</p> <p>whether you will remove or flush out pipelines and vessels (where appropriate) and how you will empty them of any potentially harmful contents</p> <p>site plans showing the location of all underground pipes and vessels</p> <p>how asbestos or other potentially harmful materials will be removed, unless we have agreed it is reasonable to leave such liabilities to future owners</p> <p>methods for dismantling buildings and other structures, and for protecting surface water and groundwater during construction or demolition at your site</p> <p>any soil testing needed to check for any pollution caused by the site activities, and information on any remediation needed to return the site to a satisfactory state when you cease activities, as defined by the initial site condition report</p> <p>the measures proposed, once activities have definitively stopped, to avoid any pollution risk and to return the site of operation to a satisfactory state (including, where appropriate, measures relating to the design and construction of the plant)</p> <p>clearing deposited residues, waste and any contamination resulting from the waste treatment activities</p>	<p>1.7 Decommissioning Plan, 24. Decommissioning Plan</p> <p>30. Subsurface structures</p> <p>1.7 Decommissioning Plan, 24. Decommissioning Plan</p> <p>1.7 Decommissioning Plan, 24. Decommissioning Plan</p> <p>1.7 Decommissioning Plan, 24. Decommissioning Plan</p> <p>1.7 Decommissioning Plan, 24. Decommissioning Plan</p> <p>1.7 Decommissioning Plan, 24. Decommissioning Plan</p>
<p>You should make sure that equipment taken out of use is decontaminated and removed from the site.</p>	<p>1.7 Decommissioning Plan, 24. Decommissioning Plan</p>

3. Waste pre-acceptance, acceptance and tracking appropriate measures

These are the appropriate measures for waste pre-acceptance, acceptance and tracking at regulated facilities with an environmental permit to mechanically treat metal waste in shredders.

<u>Appropriate Measure</u>	<u>Location within EMS</u>
<p>3.1 Waste pre-acceptance</p> <p>You must implement waste pre-acceptance procedures so that you know enough about a waste (including its composition) before it arrives at your facility. You need to do this to assess and confirm the waste is technically and legally suitable for your facility and processes.</p>	2.1. Pre-acceptance, 31. Waste pre-acceptance form
<p>Your procedures must follow a risk-based approach, considering:</p> <p>the source and nature of the waste</p> <p>its hazardous properties</p> <p>potential risks to process safety, occupational safety and the environment (for example, from deflagrations and other emissions such as noise or particulates)</p>	<p>2.1. Pre-acceptance, 31. Waste pre-acceptance form</p> <p>2.1. Pre-acceptance, 31. Waste pre-acceptance form</p> <p>2.1. Pre-acceptance, 31. Waste pre-acceptance form</p>
<p>You must get the following information in writing when you receive a customer query:</p> <p>details of the waste producer including organisation name, address and contact details</p> <p>the specific source of the waste – for example, ELV depollution site, general scrap metal transfer station, car manufacture, or metal from other types of manufacturing processes</p> <p>a description of the waste including its composition and quantity</p> <p>the List of Waste code (European Waste Classification, EWC, code)</p> <p>if the waste has an EWC code showing it is a non-hazardous mirror entry - you should request evidence of the assessment from the producer</p> <p>any hazardous properties or whether it contains any regulated chemicals, for example, POPs</p> <p>confirmation from the producer that ELVs have been depolluted to ELV directive requirements</p> <p>confirmation from the producer that drums will be accompanied by a certificate of cleanliness</p>	<p>2.1. Pre-acceptance, 31. Waste pre-acceptance form</p> <p>2.1. Pre-acceptance, 31. Waste pre-acceptance form</p> <p>2.1. Pre-acceptance, 31. Waste pre-acceptance form</p> <p>2.1. Pre-acceptance, 31. Waste pre-acceptance form</p> <p>2.1. Pre-acceptance, 31. Waste pre-acceptance form</p> <p>2.1. Pre-acceptance, 31. Waste pre-acceptance form</p> <p>2.1. Pre-acceptance, 31. Waste pre-acceptance form</p> <p>2.1. Pre-acceptance, 31. Waste pre-acceptance form</p>

<p>You must also get confirmation that the waste does not contain a radioactive source. If there is a risk of radioactive contamination you must get confirmation that the waste is not radioactive, unless your facility is permitted to accept such waste.</p>	<p>2.1. Pre-acceptance, 31. Waste pre-acceptance form</p>
<p>You must consider whether specific wastes, from among those you are permitted to receive, have properties that can pose unacceptable risks to the site or process, for example, due to:</p> <p>a risk of deflagration (for example, gas or aerosol canisters, baled ELVs or undepolluted ELVs)</p> <p>a risk of fire (for example, small mixed WEEE containing Li-ion batteries, or Li-ion batteries within metal loads from other sources)</p> <p>You should establish a list of these wastes and procedures for managing the risks from them.</p> <p>You can verify the pre-acceptance information by contacting or visiting the producer. Dealing with staff directly involved in waste production can help to fully characterise a waste</p> <p>You must keep pre-acceptance records for at least 3 years in a computerised waste tracking system following receipt of the waste. If an enquiry from a waste producer does not lead to the receipt of waste, you do not need to keep records.</p>	<p>2.1. Pre-acceptance</p> <p>2.1. Pre-acceptance</p> <p>22. Fire Prevention Plan</p> <p>2.1. Pre-acceptance</p> <p>2.1. Pre-acceptance</p>
<p>You must reassess the information required at pre-acceptance if the:</p> <p>waste changes</p> <p>process giving rise to the waste changes</p> <p>waste received does not conform to the pre-acceptance information</p> <p>In all cases you must reassess the information required at pre-acceptance annually. The information required and the assessment made at the pre-acceptance stage is to make sure you:</p> <p>only accept wastes that are suitable for the site</p> <p>avoid accumulating waste</p> <p>have enough storage and treatment capacity</p>	<p>2.1. Pre-acceptance</p> <p>2.1. Pre-acceptance</p> <p>2.1. Pre-acceptance</p> <p>2.1. Pre-acceptance</p> <p>2.1. Pre-acceptance</p> <p>2.1. Pre-acceptance</p> <p>2.1. Pre-acceptance</p>
<p>3.2 Waste Acceptance and Tracking Appropriate Measures</p>	

<p>You must implement waste acceptance procedures to check that the characteristics of the waste received matches the information you obtained during waste pre-acceptance. This is to confirm that the waste is as expected and that you can accept it.</p>	<p>2.2. Waste acceptance, 31. Waste Acceptance and Rejection Policy and Procedure</p>
<p>If the waste is not as expected, you must confirm that you can accept it as a non-conforming waste, or you must reject it. If you are rejecting hazardous waste you must follow the guidance on the procedure for rejecting hazardous waste.</p>	<p>31. Waste Acceptance and Rejection Policy and Procedure, 31. Waste Rejection Register</p>
<p>Procedures should be documented and auditable and must follow a risk-based approach, considering:</p> <p>the source, nature and age of the waste</p> <p>the waste’s hazardous properties</p> <p>the waste’s potential to contain POPs</p> <p>potential risks to process safety, occupational safety and the environment (for example, from odour and other emissions)</p> <p>knowledge about the previous waste holders</p>	<p>2.2.3. Waste reception, 31. Waste Acceptance and Rejection Policy and Procedure</p> <p>2.2.3. Waste reception, 31. Waste Acceptance and Rejection Policy and Procedure</p> <p>2.2.3. Waste reception, 31. Waste Acceptance and Rejection Policy and Procedure</p> <p>2.2.3. Waste reception, 31. Waste Acceptance and Rejection Policy and Procedure</p> <p>2.2.3. Waste reception, 31. Waste Acceptance and Rejection Policy and Procedure</p>
<p>Some facilities receive waste on an ad hoc basis, which may occur with loads of metal waste. In those instances you can still do pre-acceptance checks before you accept the waste. For example, by exchanging information at the weighbridge before accepting the waste on site</p>	<p>2.2.3. Waste reception, 31. Waste Acceptance and Rejection Policy and Procedure</p>
<p>You must assess the load to make sure it is technically (and legally) suitable for the plant. Your checks and assessment must be risk-based considering, for example, the:</p> <p>hazardous properties of the waste</p> <p>risks posed by the waste in terms of process safety, occupational safety and environmental impact</p>	<p>2.2.3. Waste reception, 2.2.4. Waste inspection, 31. Waste Acceptance and Rejection Policy and Procedure</p> <p>2.2.3. Waste reception, 2.2.4. Waste inspection, 31. Waste Acceptance and Rejection Policy and Procedure</p>
<p>All relevant storage areas (quarantine, reception and general) and treatment processes in your facility must have the physical capacity needed for the waste you receive. You must not receive wastes if this capacity is not available. The amount of waste you receive must also comply with storage limits in your permit.</p>	<p>2.2.3. Waste reception, 2.2.4. Waste inspection, 31. Waste Acceptance and Rejection Policy and Procedure</p>

<p>The waste offloading, reception and quarantine areas must have impermeable surfaces with a sealed drainage system. This system must collect all surface water run off and channel it to a blind sump, unless you can lawfully discharge it in another way.</p>	<p>2.2.3. Waste reception, 2.2.4. Waste inspection, 31. Waste Acceptance and Rejection Policy and Procedure</p>
<p>You must clearly designate a materials reception area (or areas). Staff controlling the inspection, reception and validation of materials at the installation, must be trained in their respective roles.</p>	<p>2.2.3. Waste reception, 2.2.4. Waste inspection, 31. Waste Acceptance and Rejection Policy and Procedure</p>
<p>You must weigh each load of waste on arrival to confirm the quantities against the accompanying paperwork, unless alternative reliable systems are available (for example, based upon volume). You must record the weight in the computerised waste tracking system.</p>	<p>2.2.3. Waste reception, 2.2.4. Waste inspection, 31. Waste Acceptance and Rejection Policy and Procedure</p>
<p>You must check and validate all transfer documentation and resolve discrepancies before you accept the waste. If you believe the incoming waste classification and description is incorrect or incomplete, then you must address this with the customer during waste acceptance. You must record any non-conformances. If you have assessed the waste as acceptable for on-site storage or treatment, you must document this.</p>	<p>2.2.3. Waste reception, 2.2.4. Waste inspection, 31. Waste Acceptance and Rejection Policy and Procedure</p>
<p>You must use clear criteria for rejecting non-conforming wastes. You must also have a written procedure for recording, reporting and tracking non-conforming wastes, including notifying the relevant customer or waste producer to prevent reoccurrence.</p>	<p>2.2.3. Waste reception, 2.2.4. Waste inspection, 31. Waste Acceptance and Rejection Policy and Procedure</p>
<p>You must have fixed radiation detectors on weighbridges to monitor waste delivered to the site for any radioactive substances or materials. These detectors must have both a visual and audible alarm. You must also have a hand held detector to investigate alarms generated by the fixed radiation detectors</p>	<p>2.2.6. Radiation detectors</p>
<p>The radiation detection equipment must include solid state scintillation detectors and have a sensitivity to gamma radiation that is consistent with the minimum performance recommended by the International Atomic Energy Agency. These are specified in Annex IV of 'Recommendations on Monitoring and Response Procedures for Radioactive Scrap Metal', UNECE, 2006.</p>	<p>2.2.6. Radiation detectors</p>
<p>You must maintain, calibrate and test the radiation monitoring equipment in accordance with the manufacturer's specification.</p>	<p>2.2.6. Radiation detectors</p>
<p>You must have clear procedures for responding to radiation detector alarms.</p>	<p>2.2.6. Radiation detectors, 21. Accident Management Plan</p>

<p>There is a standard rules permit available for radioactive material or radioactive waste that you receive unintentionally: SR2017 No1: Unintentional receipt of radioactive materials and radioactive waste by the operator of any facility which uses a radiation detection system.</p>	<p>Not applicable</p>
<p>You must make sure you only receive and accept drums or tanks: that have a certificate of cleanliness with prior notice with hazard warning symbols obliterated</p>	<p>31. Waste Acceptance and Rejection Policy and Procedure 31. Waste Acceptance and Rejection Policy and Procedure 31. Waste Acceptance and Rejection Policy and Procedure</p>
<p>You must produce and follow a detailed procedure for accepting and inspecting baled material before accepting bales for processing. For example, batch acceptance, inspection and upstream auditing.</p>	<p>31. Waste Acceptance and Rejection Policy and Procedure</p>
<p>You must carry out risk-based assessments for baled and other infeed materials. You must base your inspection and pre-processing procedures on these assessments before fragmentising. This may include, but not be limited to, different inspection frequencies for different customers, depending on risk.</p>	<p>31. Waste Acceptance and Rejection Policy and Procedure</p>
<p>You must establish quarantine areas for materials that are prohibited, awaiting full inspection, or awaiting testing or removal.</p>	<p>2.2.8. Quarentine Storage, Rejection of Wastes and Prohibited Wastes, 22. Fire Prevention Plan</p>
<p>Quarantine storage must be for a maximum of 14 working days. For some limited and specific cases (for example gas cylinders and beer barrels) you can extend the quarantine storage time if the Environment Agency agrees</p>	<p>2.2.8. Quarentine Storage, Rejection of Wastes and Prohibited Wastes</p>
<p>You must have written procedures for dealing with wastes held in quarantine, and a maximum storage volume</p>	<p>2.2.8. Quarentine Storage, Rejection of Wastes and Prohibited Wastes, 22. Fire Prevention Plan</p>
<p>Quarantine storage must be separate from all other storage and clearly marked as a quarantine area.</p>	<p>2.2.8. Quarentine Storage, Rejection of Wastes and Prohibited Wastes, 22. Fire Prevention Plan</p>
<p>You must identify and isolate gas cylinders and other prohibited items to remove them from the waste stream. You must store gas cylinders in locked cages. Where possible, you must send prohibited items back to the appropriate owner.</p>	<p>2.2.8. Quarentine Storage, Rejection of Wastes and Prohibited Wastes</p>
<p>3.3 Waste Tracking You must use a computerised tracking system to hold up-to-date information about the available capacity of the waste quarantine, reception, general and bulk storage areas of your facility. This must also include treatment residues and end-of-waste product materials.</p>	<p>2.3. Waste Tracking</p>

<p>Your waste tracking system must hold all the information generated during:</p> <ul style="list-style-type: none"> pre-acceptance acceptance non-conformance or rejection storage repackaging treatment removal off site 	<ul style="list-style-type: none"> 2.3. Waste Tracking 2.3. Waste Tracking 2.3. Waste Tracking 2.3. Waste Tracking 2.3. Waste Tracking 2.3. Waste Tracking 2.3. Waste Tracking
<p>You must create records and update them to show deliveries, on-site treatment and despatches. Your tracking system will also operate as a waste inventory and stock control system. It must include this information as a minimum:</p> <ul style="list-style-type: none"> the date the waste arrived on-site the original producer's details (or unique identifier) a unique reference number waste pre-acceptance and acceptance information the intended treatment or disposal route accurate records of the nature and quantity of wastes held on site, including all hazards (identifying the primary hazards) where the waste is physically located on site 	<ul style="list-style-type: none"> 2.3. Waste Tracking 2.3. Waste Tracking 2.3. Waste Tracking 2.3. Waste Tracking 2.3. Waste Tracking 2.3. Waste Tracking 2.3. Waste Tracking
<p>The tracking system must be able to report:</p> <ul style="list-style-type: none"> the total quantity of waste present on site at any one time a breakdown by type of the waste quantities you are storing pending treatment or transfer the quantity of waste on site compared with the limits authorised by your permit the length of time the waste has been on site the quantity of end-of-waste product materials on site at any one time, and where applicable, details of any non-conformances and rejections <p>You must store back-up copies of computer records off site. Records must be readily accessible in an emergency.</p>	<ul style="list-style-type: none"> 2.3. Waste Tracking 2.3. Waste Tracking 2.3. Waste Tracking 2.3. Waste Tracking 2.3. Waste Tracking 2.3. Waste Tracking

<p>You must hold acceptance records for a minimum of 2 years after you have treated the waste or removed it off site. You may have to keep some records for longer if they are required for other purposes, for example, hazardous waste consignment notes.</p>	<p>2.3. Waste Tracking</p>
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4. Waste storage, segregation and handling appropriate measures

These are the appropriate measures for waste storage, segregation and handling at regulated facilities with an environmental permit to mechanically treat metal waste in shredders.

<u>Appropriate Measure</u>	<u>Location within EMS</u>
<p>4.1 Storage Locations</p> <p>You must store waste in locations that minimise the handling of waste. Waste handling must be carried out by competent staff using appropriate equipment</p>	<p>3.1. Storage locations, 14. Site Operations Plan</p>
<p>You should design and operate your facility in a way that minimises waste handling.</p>	<p>3.1. Storage locations, 14. Site Operations Plan</p>
<p>You must store shredder non-metallic fractions under cover.</p>	<p>3.1. Storage locations, 14. Site Operations Plan</p>
<p>Where possible, you should locate storage areas away from watercourses and sensitive boundaries (for example, those close to public rights of way, housing or schools).</p>	<p>3.1. Storage locations, 14. Site Operations Plan</p>
<p>You must store all waste within the security protected area of your facility to prevent unauthorised access and vandalism.</p>	<p>3.1. Storage locations, 14. Site Operations Plan</p>
<p>4.2 Storage Duration and Capacity</p> <p>You must clearly establish the maximum storage capacity of the site and the designated storage areas. You must not exceed these maximum capacities</p>	<p>3.2. Storage duration and capacity, 22. Fire Prevention Plan</p>
<p>You must define capacity in pile sizes as well as tonnage. You must regularly monitor the quantity of stored waste on the site and within the designated areas to check against the allowed maximum capacity. You must also monitor the quantities and pile sizes against those set out in your fire prevention plan.</p>	<p>3.2. Storage duration and capacity, 22. Fire Prevention Plan</p>
<p>You must not accumulate waste. You must treat wastes, or remove them from the site, as soon as possible. Generally all wastes must be removed within a maximum of 6 months of receipt. If you have a shorter time period as a permit condition, you must comply with that condition for that waste</p>	<p>3.2. Storage duration and capacity, 22. Fire Prevention Plan</p>

<p>You must store all waste in a way that allows easy inspection. You must maintain safe access between piles of wastes. There must be pedestrian and vehicular access (for example shovel loader, crane, grab loader) at all times to the whole of the storage area.</p>	<p>3.2. Storage duration and capacity, 22. Fire Prevention Plan</p>
<p>You must store and handle waste in a way that prevents pests and vermin, see our guidance on pest management plans. You must have specific measures and procedures in place to identify and manage any wastes that attract pests or vermin at your site.</p>	<p>3.1. Storage locations</p>
<p>You must inspect storage areas, containers and infrastructure daily. You must deal with any issues immediately. You must keep written records of the inspections. You must rectify and log any waste spillages.</p>	<p>3.1. Storage locations</p>
<p>You must not carry out activities that represent a clear fire risk within any storage area unless they are clear of waste. Examples include:</p> <p>grinding and cutting repairs within the storage area</p> <p>welding or brazing of metalwork within the storage area</p> <p>smoking</p> <p>parking of normal road vehicles except while unloading or loading</p> <p>recharging forklift truck or power tool batteries</p>	<p>22. Fire Prevention Plan</p> <p>22. Fire Prevention Plan</p> <p>22. Fire Prevention Plan</p> <p>22. Fire Prevention Plan</p>
<p>4.3 Dangerous Substances and Explosive Atmospheres Regulations 2002 (DSEAR)</p> <p>You should assess areas of the site where explosive atmospheres could occur (for example, ELV depollution bays). Where appropriate, you must classify these into hazardous zones, following the Dangerous Substances and Explosive Atmospheres Regulation 2002 (DSEAR).</p>	<p>3.3. Dangerous Substances and Explosive Atmospheres Regulations 2022 (DSEAR)</p>
<p>4.4 Battery Storage</p> <p>You must check for damage and the chemistry type of any batteries:</p> <p>produced through depollution activities on site</p> <p>accepted as discrete loads</p> <p>You must isolate damaged batteries from other batteries.</p> <p>You must store batteries in either appropriate weatherproof containers, or in appropriate containers within a building.</p>	<p>3.4. Battery Storage</p> <p>3.4. Battery Storage</p> <p>3.4. Battery Storage</p> <p>3.4. Battery Storage</p>

<p>You must store:</p> <p>lead acid batteries upright with terminals taped off or capped in acid proof containers to prevent leaks and short circuits</p> <p>nickel metal hydride (Ni-MH) batteries in a way that will prevent them being damaged</p> <p>You must not mix batteries of incompatible chemistries, for example lead acid batteries with Ni-MH batteries.</p>	<p>3.4. Battery Storage</p> <p>3.4. Battery Storage</p> <p>3.4. Battery Storage</p>
<p>You must store Li-ion batteries from electric vehicles separately from other batteries. You must store them in a way that prevents them from:</p> <p>coming into contact with any liquids</p> <p>being damaged</p> <p>being exposed to high temperatures</p>	<p>3.4. Battery Storage</p> <p>3.4. Battery Storage</p> <p>3.4. Battery Storage</p>

5. Waste treatment appropriate measures

These are the appropriate measures for waste treatment at regulated facilities with an environmental permit to mechanically treat metal waste in shredders.

<u>Appropriate Measure</u>	<u>Location within EMS</u>
<p>5.1 General Waste Treatment</p> <p>Waste treatment must have a clear and defined benefit. You must fully understand, monitor and optimise the waste treatment process to make sure you treat waste effectively and efficiently. You must not treat waste to deliberately dilute it.</p>	<p>4.1. General Waste Treatment</p>
<p>The treated output material must meet your expectations and be suitable for its intended disposal or recovery route.</p>	<p>4.1. General Waste Treatment</p>
<p>You must identify and characterise emissions from the process and take appropriate measures to control them at source.</p>	<p>4.4. Minimising diffuse emissions from the process, 5. Emissions control</p>
<p>You must have up-to-date written details of your treatment activities, and the abatement and control equipment you are using. This should include information about the characteristics of the waste you will treat and the waste treatment processes, including:</p> <p>simplified process flow sheets that show the origin of any emissions</p>	<p>31. Process Flow Diagram, 16. Site-specific environmental risk assessment</p>

details of emission control and abatement techniques for emissions to air and water, including details of their performance	4.4. Minimising diffuse emissions from the process, 5. Emissions control
diagrams of the main plant items where they have environmental relevance – for example, storage, tanks, treatment and abatement plant design	4.4. Minimising diffuse emissions from the process
details of physical treatment processes, for example shredding, separation, compaction or washing	4.1. General Waste Treatment, 4.2. Metal shredding plant and downstream processes
details of any chemical treatment processes	4.1. General Waste Treatment
details of any biological treatment processes	4.1. General Waste Treatment
details of any effluent treatment, including a description of any flocculants or coagulants used	4.1. General Waste Treatment
an equipment inventory, detailing plant type and design parameters – for example, time, temperature, pressure	4.1. General Waste Treatment
waste types undergoing the process	4.1. General Waste Treatment
the control system and how it incorporates environmental monitoring information	5. Emissions Control
process flow diagrams (schematics)	31. Process Flow Diagram
venting and emergency relief provisions	4.2. Metal shredding plant and downstream processes
a summary of operating and maintenance procedures	4.1. General Waste Treatment, 1.5.3 Maintenance of Plant
process instrumentation diagrams	4.2. Metal shredding plant and downstream processes
<hr/>	
You must have up-to-date written details of the measures you will take during abnormal operating conditions to make sure you continue to comply with permit conditions. Abnormal operating conditions include:	
unexpected releases	4.1 General Waste Treatment, 21. Accident Management Plan
start-up	4.1 General Waste Treatment, 21. Accident Management Plan
momentary stoppages	4.1 General Waste Treatment, 21. Accident Management Plan
shut-down	4.1 General Waste Treatment, 21. Accident Management Plan
deflagrations	4.1 General Waste Treatment, 21. Accident Management Plan

<p>You should use material flow analysis for relevant contaminants in the waste to help identify their flow and fate. You should use the analysis to determine the appropriate treatment for the waste either directly at the site or at any subsequent treatment site.</p>	<p>4.1.1. Material Flow Analysis</p>
<p>Material flow analysis considers the contaminant quantity in the:</p> <p>waste input</p> <p>different waste treatment outputs</p> <p>waste treatment emissions</p>	<p>4.1.1. Material Flow Analysis</p> <p>4.1.1. Material Flow Analysis</p> <p>4.1.1. Material Flow Analysis</p>
<p>You should use the analysis and your knowledge of the fate of the contaminants to make sure you correctly treat and either destroy or remove them.</p>	<p>4.1.1. Material Flow Analysis</p>
<p>The use of material flow analysis is risk-based and should consider:</p> <p>the hazardous properties of the waste</p> <p>the risks posed by the waste in terms of process safety</p> <p>occupational safety and environmental impact</p> <p>knowledge of the previous waste holders</p>	<p>4.1.1. Material Flow Analysis</p> <p>4.1.1. Material Flow Analysis</p> <p>4.1.1. Material Flow Analysis</p> <p>4.1.1. Material Flow Analysis</p>
<p>A treatment process may destroy certain substances in the waste. It could also put substances into the air, water or the ground, or have residues which are sent for disposal. You should minimise the weight of these outputs. The treatment may produce residues for recovery or reuse and you should maximise the weight of these substances.</p>	<p>4.1.1. Material Flow Analysis</p>
<p>You must not proceed with the treatment if your risk assessment or material flow analysis show that losses from a process will cause:</p> <p>the breach of an environmental quality standard</p> <p>the breach of a benchmark</p> <p>a significant environmental impact</p>	<p>4.1.1. Material Flow Analysis</p> <p>4.1.1. Material Flow Analysis</p> <p>4.1.1. Material Flow Analysis</p>
<p>5.2 Metal Shredding Plant and Downstream Processes</p> <p>The metal shredding plant and downstream plant and processes must be specifically designed, commissioned and operated to be fit for purpose.</p>	<p>4.2. Metal shredding plant and downstream processes</p>

<p>The designs need to consider physical hazards and include an assessment of the environmental risks and emissions from the plant and processes. They also need to consider prevention and protective measures and process management, <u>such as</u>:</p> <p>working instructions</p> <p>staff training</p> <p>appropriate process control measures</p> <p>monitoring systems, alarms and interlocks</p> <p>plant maintenance</p> <p>checks</p> <p>audits</p> <p>emergency procedures</p>	<p>4.1 General Waste Treatment</p> <p>1.4. Staff competence</p> <p>4.2. Metal shredding plant and downstream processes</p> <p>4.2. Metal shredding plant and downstream processes</p> <p>4.2. Metal shredding plant and downstream processes, 1.5.3. Maintenance of Plant</p> <p>4.2. Metal shredding plant and downstream processes</p> <p>1.3.1. Auditing</p> <p>21. Accident Management Plan</p>
<p>You must process shredder non-metallic fractions under cover. You may use a range of separation technologies to further segregate and purify shredded fractions. Examples include:</p> <p>air classification</p> <p>all-metal separator</p> <p>electromagnetic separation of non-ferrous metals</p> <p>manual separation</p> <p>magnetic separation</p> <p>density separation</p>	<p>4.2. Metal shredding plant and downstream processes, 4.4. Minimising diffuse emissions from the process</p> <p>4.2. Metal shredding plant and downstream processes, 4.4. Minimising diffuse emissions from the process</p> <p>4.2. Metal shredding plant and downstream processes, 4.4. Minimising diffuse emissions from the process</p> <p>4.2. Metal shredding plant and downstream processes, 4.4. Minimising diffuse emissions from the process</p> <p>4.2. Metal shredding plant and downstream processes, 4.4. Minimising diffuse emissions from the process</p> <p>4.2. Metal shredding plant and downstream processes, 4.4. Minimising diffuse emissions from the process</p> <p>4.2. Metal shredding plant and downstream processes, 4.4. Minimising diffuse emissions from the process</p>

vibration tables either at the shredding facility or elsewhere	4.2. Metal shredding plant and downstream processes, 4.4. Minimising diffuse emissions from the process
You must sample and analyse the fractions produced by these treatment processes to accurately classify and code the waste. You should do this in accordance with the waste classification guidance.	4.5. Record keeping for all treatment residues
You must not use a waste code for a single material fraction, such as plastic, unless the process is specifically aimed to produce that single fraction. Contamination by other materials must be negligible.	4.5. Record keeping for all treatment residues
You must also fully characterise and classify process solutions and washings from density separation processes before determining suitable disposal options.	4.5. Record keeping for all treatment residues
<p>5.3 POPs</p> <p>You must assess fractions containing plastic (including process solutions and washings from density separation processes) for POPs.</p>	4.3. POPs and Antimony Trioxide
You must treat any POPs waste as required by article 7 of Regulation (EU) 2019/1021 of the European Parliament and of the Council of 20 June 2019 on POPs.	4.3. POPs and Antimony Trioxide
You must therefore assess plastic containing fractions at each stage in the treatment process to establish whether the threshold is exceeded. See further information on identifying and disposing of POPs contaminated waste.	4.3. POPs and Antimony Trioxide
You can treat any plastic that is POPs waste to separate the POPs containing fraction from the non-POPs containing plastic.	4.3. POPs and Antimony Trioxide
<p>You must fully characterise and classify the following (including for POPs) before deciding on suitable disposal options:</p> <p>process solutions and washings from density separation processes</p> <p>solid fractions produced by any process</p>	<p>4.3. POPs and Antimony Trioxide</p> <p>4.3. POPs and Antimony Trioxide</p> <p>4.3. POPs and Antimony Trioxide</p>

5.4 Antimony Trioxide

Antimony trioxide has been widely used as a synergist with a range of BFRs. It is present in some plastics at concentrations which exceed the hazardous waste threshold. You must therefore consider antimony trioxide when you are classifying any plastic containing fraction.

4.3. POPs and Antimony Trioxide

5.5 Minimising Diffuse Emissions from the Process

You must minimise the release of diffuse emissions to air from activities which may create them, for example shredding or granulating. You must do this by:

carrying out the activity using enclosed equipment or in a closed building

4.4. Minimising diffuse emissions from the process

maintaining the enclosed equipment or building under an appropriate pressure

4.4. Minimising diffuse emissions from the process

collecting and directing the emission to an appropriate abatement system

4.4. Minimising diffuse emissions from the process

using a shredder system with water or foam injection into the mill

4.4. Minimising diffuse emissions from the process

To track and control changes to processes, you must have a written procedure for proposing, considering and approving changes to both:

4.4. Minimising diffuse emissions from the process

technical developments

4.4. Minimising diffuse emissions from the process

procedural or quality changes to the plant and processes

4.4. Minimising diffuse emissions from the process

Where you expect an emission, you must enclose all treatment plants and only vent to air using an appropriate scrubbing and abatement system (subject to deflagration relief).

4.4. Minimising diffuse emissions from the process

5.6 Record Keeping for all Treatment Residues

You must record in the computerised waste tracking system:

that a waste has been treated

4.5. Record keeping for all treatment residues

what the treatment residues are and their weight

4.5. Record keeping for all treatment residues

what end-of-waste products have been made and their weight

4.5. Record keeping for all treatment residues

6. Emissions control appropriate measures

These are the appropriate measures for emissions control at regulated facilities with an environmental permit to mechanically treat metal waste in shredders

<u>Appropriate Measure</u>	<u>Location within EMS</u>
<p>6.1 Point Source Emissions to Air</p> <p>You must contain the waste treatment plant (including shredders) to make sure you collect, extract and direct all process emissions to an appropriate abatement system for treatment before release.</p>	5.1. Point source emissions to air
<p>You must identify the main chemical constituents of the site’s point source emissions as part of the site’s inventory of emissions to air. You must include the speciation of volatile organic compounds (VOCs) if you have identified them in the emissions inventory and it is practicable to do so.</p>	5.1. Point source emissions to air, 26. Inventory of emissions to air and water
<p>You must assess the fate and impact of the substances emitted to air, following the Environment Agency’s air emissions risk assessment methodology.</p>	5.1. Point source emissions to air, 26. Inventory of emissions to air and water
<p>To reduce point source emissions to air (for example, dust, VOCs and odour) from waste treatment, you must use an appropriate combination of abatement techniques, including one or more of the following systems:</p> <p>cyclonic filtration</p> <p>fabric filters</p> <p>wet scrubbing</p> <p>high efficiency particulate (HEPA) filter</p>	<p>5.1. Point source emissions to air</p> <p>5.1. Point source emissions to air</p> <p>5.1. Point source emissions to air</p> <p>5.1. Point source emissions to air</p>
<p>You must assess and design vent and stack locations and heights to make sure dispersion capability is adequate</p>	5.1. Point source emissions to air
<p>Where monitoring is required, you must install suitable monitoring points. Monitoring points will be required to meet MCERTS standards. You can find further guidance in the Environment Agency’s M1 – Guidance on sampling requirements for monitoring stack emissions.</p>	5.1. Point source emissions to air
<p>Your procedures must make sure you correctly install, operate, monitor and maintain abatement equipment. For example, this includes monitoring and maintaining:</p> <p>appropriate flow and chemical concentration of scrubber liquor</p>	5.1. Point source emissions to air

the handling and disposal or regeneration of spent scrubber or filter medium	5.1. Point source emissions to air
6.2 Fugitive emissions to air (including odour)	
You must use appropriate measures to prevent emissions of dust, mud and litter and odour. See our guidance on suggested appropriate measures to control dust, mud and litter and to control odour.	5.2. Fugitive emissions to air
You must design, operate and maintain storage and treatment plant in a way that prevents fugitive emissions to air, including dust, organic compounds and odour. Where that is not possible, you must minimise these emissions.	5.2. Fugitive emissions to air
You must minimise the number of potential diffuse dust and particulates emission sources, using a combination of the following:	
limiting the drop height of material	5.2. Fugitive emissions to air
using wind barriers	5.2. Fugitive emissions to air
covering conveyor belts, including enclosure of transfer points	5.2. Fugitive emissions to air
fitting spray nozzles or rubber flaps to the inlet and outlet of the shredder mill	5.2. Fugitive emissions to air
using misting systems and wind barriers in areas with significant dust formation	5.2. Fugitive emissions to air
venting pipe work and ducting to an appropriate abatement system to prevent fugitive emissions	5.2. Fugitive emissions to air
To make sure fugitive emissions are collected and directed to appropriate abatement, your treatment plant must use high integrity components (for example, seals or gaskets).	5.2. Fugitive emissions to air
You must use your waste pre-acceptance, waste acceptance and site inspection checks and procedures to identify and manage wastes that could cause, or are causing, fugitive emissions to air. Examples could include gas cylinders, items concealed in baled waste, or poorly depolluted ELVs. When you identify any of these wastes you must:	5.2. Fugitive emissions to air, 2.1. Pre-acceptance, 2.2. Waste acceptance
take appropriate, risk assessed measures to prevent and control emissions	5.2. Fugitive emissions to air
prioritise their treatment or transfer	5.2. Fugitive emissions to air
Where necessary, to prevent fugitive emissions to air from storing and handling odorous or dusty wastes, you should use a combination of the following measures:	

<p>You should store and handle the waste within an enclosed building including:</p> <p>light fractions of the shredder residue</p> <p>dust derived from sweeping the waste treatment and storage areas</p> <p>dust derived from the abatement equipment</p>	<p>5.2. Fugitive emissions to air</p> <p>5.2. Fugitive emissions to air</p> <p>5.2. Fugitive emissions to air</p>
<p>You should use fully enclosed material transfer and storage systems and equipment, for example:</p> <p>conveyors</p> <p>hoppers</p> <p>containers</p> <p>tanks and skips</p>	<p>5.2. Fugitive emissions to air</p>
<p>You should keep enclosed buildings and equipment under adequate negative pressure with an appropriate abated air circulation and extraction system. Where possible, locate air extraction points close to potential emissions sources.</p>	<p>5.2. Fugitive emissions to air</p>
<p>You should:</p> <p>use fast-acting or 'airlock' doors that default closed</p> <p>dampen potential sources of diffuse dust emissions (such as the shredder inlet and outlet, traffic areas and open handling processes) with water or fog</p>	<p>5.2. Fugitive emissions to air</p> <p>5.2. Fugitive emissions to air</p>
<p>You must fully enclose and contain pre- and post-treatment shredder plant to prevent emissions.</p>	<p>5.2. Fugitive emissions to air</p>
<p>You must design and operate the shredder plant using appropriate process interlocks. The plant should not operate unless it is enclosed and contained, for example, only working when the loading door on the hopper is closed or sealed.</p>	<p>5.2. Fugitive emissions to air</p>
<p>You must contain and extract dust emissions from the shredder plant to an appropriate abatement system, for example HEPA air filtration.</p>	<p>5.2. Fugitive emissions to air</p>
<p>Where ambient dust monitoring is required it must be carried out by MCERTS qualified staff.</p>	<p>5.2. Fugitive emissions to air</p>
<p>You must use monitoring equipment that meets as a minimum the MCERTS Performance Standards for Indicative Ambient Particulate Monitors. You must calibrate the equipment following the manufacturer's recommendations and it must be capable of providing representative data that accurately reflect PM10 levels produced operations at the site.</p>	<p>5.2. Fugitive emissions to air</p>
<p>Where a dust management plan is required, you must develop and implement it following our guidance.</p>	<p>5.2. Fugitive emissions to air</p>

<p>You must set up a leak detection and repair programme and use it to promptly identify and mitigate any fugitive emissions from treatment plant and associated infrastructure (for example, pipework, conveyors, tanks).</p>	<p>5.2. Fugitive emissions to air</p>
<p>You must regularly inspect and clean all waste storage and treatment areas, equipment (including conveyor belts) and containers. You must contain any residues collected during cleaning.</p>	<p>5.2. Fugitive emissions to air</p>
<p>Your maintenance and cleaning schedules must make sure that tanks and plant are regularly cleaned to avoid large-scale decontamination activities.</p>	<p>5.2. Fugitive emissions to air</p>
<p>You must take measures to prevent the corrosion of plant and equipment (for example, conveyors or pipes). This includes:</p> <p>selecting and using appropriate construction materials</p> <p>lining or coating equipment with corrosion inhibitors</p> <p>regularly inspecting and maintaining plant</p>	<p>5.2. Fugitive emissions to air</p> <p>5.2. Fugitive emissions to air</p> <p>5.2. Fugitive emissions to air</p>
<p>You must have an appropriate regular maintenance programme covering all buildings, plant and equipment. This must also include protective equipment such as air ventilation and extraction systems, curtains and fast-action doors used to prevent and contain fugitive releases.</p>	<p>5.2. Fugitive emissions to air</p>
<p>If you wash out drums or containers, you must design and operate the washing process and associated equipment in a way that prevents fugitive emissions to air. For example, you could carry out this activity in a contained or enclosed system.</p>	<p>5.2. Fugitive emissions to air</p>
<p>You must have procedures to minimise the amount of time odorous wastes spend in your storage and handling systems (for example, pipes, conveyors, hoppers, tanks). In particular, you must have provisions to manage waste during periods of peak volume.</p>	<p>5.2. Fugitive emissions to air</p>
<p>You must have measures to contain, collect and treat odorous emissions, including using contained buildings and plant or equipment with appropriate air extraction and abatement. We do not consider masking agents to be appropriate measures to treat odorous emissions.</p>	<p>5.2. Fugitive emissions to air</p>

<p>You must monitor odour abatement systems to ensure optimum performance. For example, you should make sure that scrubber liquors are maintained at the correct pH and replenished or replaced at an appropriate frequency.</p>	<p>5.2. Fugitive emissions to air</p>
<p>Contaminated waters have potential for odours. You must store them in covered or enclosed tanks that are vented to abatement systems, or store them in containers.</p>	<p>5.2. Fugitive emissions to air</p>
<p>Where you expect odour pollution at sensitive receptors, or it has been substantiated, you must periodically monitor odour emissions using European (EN) standards, for example either:</p> <p>dynamic olfactometry according to EN 13725 to determine the odour concentration and EN 16841-1 or -2 to determine the odour exposure</p>	<p>5.2. Fugitive emissions to air</p>
<p>Where you expect odour pollution at sensitive receptors, or it has been substantiated, you must also set up, implement and regularly review an odour management plan. It must be part of your management system and include all the following elements:</p> <p>actions and timelines to address any issues identified</p> <p>a procedure for conducting odour monitoring</p> <p>a procedure for responding to identified odour incidents, for example, complaints</p> <p>an odour prevention and reduction programme designed to identify the sources, to characterise the contributions of the sources and to implement prevention and reduction measures</p>	<p>5.2. Fugitive emissions to air</p> <p>5.2. Fugitive emissions to air</p> <p>5.6. Responding to complaints</p> <p>5.2. Fugitive emissions to air</p>
<p>Where an odour management plan is required, you must develop and implement it following our odour management guidance.</p>	<p>5.2. Fugitive emissions to air</p>
<p>To prevent deflagrations and to reduce emissions where deflagrations have occurred, we may require a deflagration management plan. This should include:</p> <p>a deflagration reduction programme designed to identify the source, and to implement measures to prevent deflagrations, for example, inspecting waste input and removing dangerous items such as gas cylinders and undepolluted ELVs</p> <p>a review of historical deflagration incidents and remedies and sharing deflagration knowledge</p> <p>a protocol for responding to deflagration incidents</p>	<p>5.2. Fugitive emissions to air</p> <p>5.2. Fugitive emissions to air</p> <p>5.2. Fugitive emissions to air</p>
<p>You must also have one or both of the following:</p>	

pressure relief dampers, to relieve pressure waves from deflagrations that may otherwise cause damage and subsequent emissions	5.2. Fugitive emissions to air
pre-shredding – a low speed shredder installed upstream of the main shredder	5.2. Fugitive emissions to air
Where there are a large number of deflagration incidents at a site, and other measures taken do not reduce the number, we may require you to install a pre-shredder.	5.2. Fugitive emissions to air
6.3 Emissions of noise and vibration	
You should design the layout of the facility to locate potential sources of noise (including building exits and entrances) away from sensitive receptors and boundaries. You should locate buildings, walls, and embankments so they act as noise screens.	5.3. Emissions of noise and vibration
You must use appropriate measures to control noise, including for example:	
adequately maintaining plant or equipment parts which may become more noisy as they deteriorate – for example, bearings, air handling plant, building fabric, and specific noise attenuation kit associated with plant or machinery	5.3. Emissions of noise and vibration
closing doors and windows of enclosed areas and buildings	5.3. Emissions of noise and vibration
avoiding noisy activities at night or early in the morning	5.3. Emissions of noise and vibration
minimising drop heights and the movement of waste and containers	5.3. Emissions of noise and vibration
using broadband (white noise) reversing alarms and enforcing the on-site speed limit	5.3. Emissions of noise and vibration
using low-noise equipment, for example, drive motors, fans, compressors and pumps	5.3. Emissions of noise and vibration
adequately training and supervising staff	5.3. Emissions of noise and vibration
where possible, providing additional noise and vibration control equipment for specific noise sources – for example, noise reducers or attenuators, insulation, or sound-proof enclosures	5.3. Emissions of noise and vibration
including pressure relief control on shredder plant enclosures to take account of possible deflagration incidents	5.3. Emissions of noise and vibration

<p>Where you expect noise or vibration pollution at sensitive receptors, or it has been substantiated, you must create, use and regularly review a noise and vibration management plan. This must be part of your environmental management system, and must include:</p> <p>actions and timelines to address any issues identified</p> <p>a procedure for conducting noise and vibration monitoring</p> <p>a procedure for responding to identified noise and vibration events, for example, complaints</p>	<p>5.3. Emissions of noise and vibration</p> <p>5.3. Emissions of noise and vibration</p> <p>5.3. Emissions of noise and vibration</p> <p>5.6. Responding to complaints</p>
<p>The noise and vibration management plan should also include a noise and vibration reduction programme designed to:</p> <p>identify the source(s) of noise and vibration</p> <p>measure or estimate noise and vibration exposure</p> <p>characterise the contributions of the sources</p> <p>implement prevention and reduction measures</p>	<p>5.3. Emissions of noise and vibration</p> <p>5.3. Emissions of noise and vibration</p> <p>5.3. Emissions of noise and vibration</p> <p>5.3. Emissions of noise and vibration</p>
<p>Where a noise management plan is required, you must develop and implement it following our noise management plan guidance.</p>	<p>5.3. Emissions of noise and vibration</p>
<p>6.4 Point Source Emissions to Water and Sewer</p> <p>You must identify the main chemical constituents of the site's point source emissions to water and sewer as part of the site's inventory of emissions.</p>	<p>5.4. Point source emissions to water and sewer, 26. Inventory of emissions to air and water</p>
<p>You must assess the fate and impact of the substances emitted to water and sewer following the Environment Agency's risk assessment guidance.</p>	<p>26. Inventory of emissions to air and water</p>
<p>Discharges to water or sewer must comply with the conditions of an environmental permit or trade effluent consent. Relevant sources of waste water include (but are not limited to):</p> <p>water or condensate collected from treatment processes</p> <p>vehicle washing</p> <p>vehicle oil and fuel leaks</p> <p>washing of containers</p> <p>spills and leaks in waste storage areas</p> <p>loading and unloading areas</p> <p>uncovered storage areas</p>	<p>5.4. Point source emissions to water and sewer</p> <p>5.4. Point source emissions to water and sewer</p> <p>5.4. Point source emissions to water and sewer</p> <p>5.4. Point source emissions to water and sewer</p> <p>5.4. Point source emissions to water and sewer</p> <p>5.4. Point source emissions to water and sewer</p> <p>5.4. Point source emissions to water and sewer</p>

<p>To reduce emissions to water and sewer, if you need to treat waste water before discharge or disposal, you must use an appropriate combination of treatment techniques, including one or more of the following:</p> <p>preliminary or primary treatment – for example, physical separation</p> <p>physico-chemical treatment – for example, adsorption, precipitation, chemical oxidation or reduction</p> <p>solids removal – for example, coagulation, sedimentation, filtration or flotation</p>	<p>5.4. Point source emissions to water and sewer</p> <p>5.4. Point source emissions to water and sewer</p> <p>5.4. Point source emissions to water and sewer</p>
<p>6.5 Fugitive Emissions to Land and Water</p>	
<p>You must use appropriate measures to control potential fugitive emissions and make sure that they do not cause pollution. See the guidance on emissions to water and leaks from containers.</p>	<p>5.5. Fugitive emissions to land and water</p>
<p>You must have the following in all operational areas of the facility:</p> <p>an impermeable surface</p> <p>spill containment kerbs</p> <p>sealed construction joints</p> <p>a sealed drainage system</p>	<p>5.5. Fugitive emissions to land and water</p> <p>5.5. Fugitive emissions to land and water</p> <p>5.5. Fugitive emissions to land and water</p> <p>5.5. Fugitive emissions to land and water</p>
<p>The sealed drainage system must contain all surface water run off and channel it to a blind sump unless you can lawfully discharge it.</p>	<p>5.5. Fugitive emissions to land and water</p>
<p>You must collect and treat separately each water stream generated at the facility. For example, surface run-off water or process water. You must base separation on pollutant content and the treatment required. In particular, you must make sure you segregate uncontaminated water streams from those that require treatment.</p>	<p>5.5. Fugitive emissions to land and water</p>
<p>You must use suitable drainage infrastructure to collect surface drainage from areas of the facility where you store, handle and treat waste. Drainage must be effective to make sure waste is not stored or treated in standing water.</p>	<p>5.5. Fugitive emissions to land and water</p>
<p>Depending on the pollutant content, you must either:</p>	

recirculate what you have collected	5.5. Fugitive emissions to land and water
discharge it in accordance with an environmental permit or trade discharge consent	5.5. Fugitive emissions to land and water
send it for further treatment	5.5. Fugitive emissions to land and water
You must have design and maintenance provisions in place to detect and repair leaks. These must include regularly monitoring, inspecting and repairing equipment and minimising underground equipment and infrastructure.	5.5. Fugitive emissions to land and water
You should provide appropriate buffer storage capacity at your facility to store waste waters, taking into account:	
potential abnormal operating scenarios and incidents	5.5. Fugitive emissions to land and water
the nature of any polluting substances and their impact on the downstream waste water treatment plant and receiving environment	5.5. Fugitive emissions to land and water
You must have appropriate measures in place to monitor, treat and reuse the water held in the buffer storage before discharging.	5.5. Fugitive emissions to land and water
You must take measures to prevent emissions from washing and cleaning activities, including:	
directing liquid effluent and wash waters to foul sewer or collecting them in a sealed system for off-site disposal – you must not discharge them to surface or storm drains	5.5. Fugitive emissions to land and water
where possible, using biodegradable and non-corrosive washing and cleaning products	5.5. Fugitive emissions to land and water
storing all detergents, emulsifiers and other cleaning agents in suitable bunded or containment facilities, within a locked storage area, or in a building away from any surface water drains	5.5. Fugitive emissions to land and water
preparing cleaning or disinfection solutions in contained areas of the site and never in areas that drain to the surface water system	5.5. Fugitive emissions to land and water
Where relevant, you must have measures to prevent pollution from the on-site storage, handling and use of oils and fuels. See the guidance on oil storage regulations for business.	5.5. Fugitive emissions to land and water

<p>You must produce and implement a spillage response plan and train staff to follow it and test it.</p>	<p>21. Accident Management Plan</p>
<p>Your procedures and associated training must make sure you deal with spillages immediately.</p>	<p>5.5. Fugitive emissions to land and water, 21. Accident Management Plan</p>
<p>You must keep spill kits at locations close to areas where a spillage could occur and make sure relevant staff know how to use them. Make sure kits are replenished after use.</p>	<p>5.5. Fugitive emissions to land and water, 21. Accident Management Plan</p>
<p>You must stop spillages from entering drains, channels, gullies, watercourses and unmade ground. You must make available absorbent materials, sand or drain mats for use when required.</p>	<p>21. Accident Management Plan</p>
<p>You must make sure your spillage response plan includes information about how to recover, handle and correctly dispose of waste produced from a spillage.</p>	<p>21. Accident Management Plan</p>
<p>For subsurface structures, you must:</p> <p>establish and record the routing of all site drains and subsurface pipework</p> <p>identify all sub-surface sumps and storage vessels</p> <p>engineer systems to minimise leakages from pipes and make sure they are detected quickly if they do occur, particularly where hazardous substances are involved, see the list of hazardous substances</p> <p>provide secondary containment or leakage detection for sub-surface pipework, sumps and storage vessels</p> <p>establish an inspection and maintenance programme for all subsurface structures, for example, pressure tests, leak tests, material thickness checks or CCTV</p>	<p>30. Subsurface structures</p> <p>30. Subsurface structures</p> <p>30. Subsurface structures</p> <p>30. Subsurface structures</p> <p>30. Subsurface structures</p>
<p>For surfacing, you must design appropriate surfacing and containment or drainage facilities for all operational areas, taking into account:</p> <p>collection capacities</p> <p>surface thicknesses</p>	<p>5.5. Fugitive emissions to land and water</p> <p>5.5. Fugitive emissions to land and water</p>

strength and reinforcement	5.5. Fugitive emissions to land and water
falls	5.5. Fugitive emissions to land and water
construction materials	5.5. Fugitive emissions to land and water
permeability	5.5. Fugitive emissions to land and water
resistance to chemical attack	5.5. Fugitive emissions to land and water
inspection and maintenance procedures	5.5. Fugitive emissions to land and water
You must have an inspection and maintenance programme for impermeable surfaces and containment facilities.	31. Site Inspection Sheet
You must bund all above-ground tanks containing liquids whose spillage could be harmful to the environment. Bunds must:	
be impermeable and resistant to the stored materials	5.5. Fugitive emissions to land and water
have no outlet (that is, no drains or taps) and drain to a blind collection point	5.5. Fugitive emissions to land and water
have pipework routed within bunded areas with no penetration of contained surfaces	5.5. Fugitive emissions to land and water
be designed to catch leaks from tanks or fittings	5.5. Fugitive emissions to land and water
have a capacity greater than 110% of the largest tank or 25% of the total tankage, whichever is the larger	5.5. Fugitive emissions to land and water
have regular visual inspections – any contents must be pumped out or otherwise removed under manual control after checking for contamination	5.5. Fugitive emissions to land and water
be fitted with a high-level probe and an alarm (as appropriate) if not frequently inspected	5.5. Fugitive emissions to land and water
have tanker connection points within the bund (where possible), otherwise provide adequate containment	5.5. Fugitive emissions to land and water
have programmed engineering inspections – normally visual, but extending to water testing if structural integrity is in doubt	5.5. Fugitive emissions to land and water
be emptied of rainwater regularly to maintain their containment capacity	5.5. Fugitive emissions to land and water

7. Emission limits, monitoring and appropriate measures

These are the emissions limits and appropriate measures for monitoring emissions to air and water at regulated facilities with an environmental permit to mechanically treat metal waste in shredders.

<p>Where you are required to monitor emissions to comply with the requirements of your environmental permit you must follow our monitoring your emissions guidance.</p> <p>You must create and maintain an inventory (emissions inventory) of point source emissions to air and water (including emissions to sewer) for your facility.</p>	<p>6. Emission limits and monitoring</p> <p>26. Inventory of emissions to air and water</p>
<p>7.1 Emissions to Air</p> <p>Your facility’s emissions inventory must include information about the relevant characteristics of point source emissions to air, such as the:</p> <p>average values and variability of flow and temperature</p> <p>average concentration and load values of relevant substances and their variability</p> <p>flammability, lower and higher explosive limits and reactivity</p> <p>presence of other substances that may affect the waste gas treatment system or plant safety – for example, oxygen, nitrogen, water vapour, dust</p> <p>Monitoring locations must meet MCERTS standards. Monitoring must use MCERTS qualified accredited methods and be done by MCERTS certified staff. You can find further guidance in the Environment Agency’s M1 – Guidance on sampling requirements for monitoring stack emissions.</p>	<p>26. Inventory of emissions to air and water, 6.1. Emissions to air</p> <p>26. Inventory of emissions to air and water, 6.1. Emissions to air</p> <p>26. Inventory of emissions to air and water, 6.1. Emissions to air</p> <p>26. Inventory of emissions to air and water, 6.1. Emissions to air</p> <p>26. Inventory of emissions to air and water, 6.1. Emissions to air</p>
<p>7.2 Emissions Limits and Monitoring Requirements</p> <p>You must apply the following emission limits and monitoring requirements for point source emissions to air.</p>	<p>6.1. Emissions to air</p>
<p>You must comply with any other emission limits or monitoring requirements set in your environmental permit. There may be situations where we set lower emission limits for the following substances listed.</p>	<p>6.1. Emissions to air</p>

<p>You must make sure dust monitoring is done every 6 months using method BS EN 13284-1.</p> <p>The emission limits are as follows. When using:</p> <p>fabric filters – 5 mg/m³ other abatement techniques – a higher emission limit of 10 mg/m³ may be appropriate</p> <p>You must report results as the average value of 3 consecutive measurements of at least 30 minutes each. The 3 consecutive measurements must be representative of the dust and particulate emissions from the operations at the site.</p>	<p>6.1. Emissions to air</p> <p>6.1. Emissions to air</p>
<p>You must apply the following emission limits and monitoring requirements for point source emissions to air where they are relevant, based on your facility's emissions inventory and environmental risk assessment.</p>	<p>6.1. Emissions to air</p>
<p>You must also comply with any other emission limits or monitoring requirements set in your environmental permit.</p>	<p>6.1. Emissions to air</p>
<p>BFRs</p> <p>You should:</p> <p>do annual monitoring report results as the average value of 3 consecutive representative measurements of at least 30 minutes each</p>	<p>6.1. Emissions to air</p>
<p>Dioxin-like polychlorinated biphenyls</p> <p>Where these are identified in your inventory of point source emissions to air you should:</p> <p>do annual monitoring following standard EN1948-4 report results from one sampling period of at least 6-8 hours</p>	<p>6.1. Emissions to air</p>
<p>Metals and metalloids except mercury</p> <p>Where these are identified in your inventory of point source emissions to air you should:</p> <p>do annual monitoring following standard EN14385 report results as the average value of 3 consecutive representative measurements of at least 30 minutes each</p>	<p>6.1. Emissions to air</p>
<p>Polychlorinated dibenzo-p-dioxin/furan(s)</p> <p>Where these are identified in your inventory of point source emissions to air you should:</p> <p>do annual monitoring following standard EN1948-1 Parts 1, 2 and 3 report results from one sampling period of at least 6-8 hours</p>	<p>6.1. Emissions to air</p>

<p>Total VOCs You should:</p> <p>do 6-monthly monitoring following standard BS EN 12619 report results as the average value of 3 consecutive representative measurements of at least 30 minutes each</p>	<p>6.1. Emissions to air</p>
<p>7.3 Emissions to Water and Sewer</p> <p>Your facility's emissions inventory must include information about the relevant characteristics of point source emissions to water or sewer, such as:</p> <p>average values and variability of flow, pH, temperature, and conductivity</p> <p>average concentration and load values of relevant substances and their variability – for example, chemical oxygen demand (COD) and total organic carbon (TOC), nitrogen species, phosphorus, metals, priority substances or micro pollutants</p> <p>data on bio-eliminability – for example, biological oxygen demand (BOD), BOD to COD ratio, Zahn-Wellens test, biological inhibition potential, for example, inhibition of activated sludge</p>	<p>26. Inventory of emissions to air and water, 6.2. Emissions to water</p> <p>26. Inventory of emissions to air and water, 6.2. Emissions to water</p> <p>26. Inventory of emissions to air and water, 6.2. Emissions to water</p> <p>26. Inventory of emissions to air and water, 6.2. Emissions to water</p>
<p>For relevant emissions to water or sewer identified by the emissions inventory, you must monitor key process parameters (for example, waste water flow, pH, temperature, conductivity, or BOD) at key locations. For example, these could be at one of the following, the:</p> <p>inlet or outlet (or both) of the pre-treatment</p> <p>inlet to the final treatment</p> <p>point where the emission leaves the facility boundary</p>	<p>26. Inventory of emissions to air and water, 6.2. Emissions to water</p> <p>26. Inventory of emissions to air and water, 6.2. Emissions to water</p> <p>26. Inventory of emissions to air and water, 6.2. Emissions to water</p>
<p>You must comply with any other emission limits or monitoring requirements set in your environmental permit. We may set lower emission limits for the parameters that follow.</p> <p>In addition to any other parameters specified by your permit, you must monitor the following emissions to water:</p>	

<p>Hydrocarbon Oil Index (HOI) You must comply with the following:</p> <p>monthly monitoring following EN ISO-9377-2 the emission limit for metal is 10mg/l whether direct or indirect (to water body or to sewer) if you discharge directly to a water body, you must monitor TOC or COD – TOC is the preferred monitoring parameter</p>	<p>26. Inventory of emissions to air and water, 6.2. Emissions to water</p>
<p>TOC You must comply with the following:</p> <p>monthly monitoring following EN1484 an emission limit of 60mg/l</p>	<p>26. Inventory of emissions to air and water, 6.2. Emissions to water</p>
<p>COD You must comply with the following;</p> <p>monthly monitoring an emission limit of 80 mg/l</p>	<p>26. Inventory of emissions to air and water, 6.2. Emissions to water</p>
<p>Total suspended solids (TSS) If you discharge directly to a water body:</p> <p>you must monitor TSS monthly in accordance with EN 872 the emission limit is 60 mg/l</p>	<p>26. Inventory of emissions to air and water, 6.2. Emissions to water</p>
<p>If your waste water emissions inventory identified the following parameters are relevant, then you must monitor for them. You should monitor them monthly. There are various standards available for these parameters (for example, EN ISO 11885, EN ISO 17294-2, EN ISO 15586).</p> <p>These emission limits apply whether the discharge is to a water body or to the sewer:</p> <p>arsenic (As) – emission limit 0.05 mg/l cadmium (Cd) – emission limit 0.05 mg/l chromium (Cr) – emission limit 0.15 mg/l copper (Cu) – emission limit 0.5 mg/l nickel (Ni) – emission limit 0.5 mg/l lead (Pb) – emission limit 0.3 mg/l zinc (Zn) – emission limit 2 mg/l mercury (Hg) – emission limit is 5 ug/l (SORT microgram) and the relevant standards are EN ISO 17852, EN ISO 12846)</p>	<p>26. Inventory of emissions to air and water, 6.2. Emissions to water</p>
<p>Perfluorooctanoic acid and perfluorooctanesulphonic acid You should monitor 6-monthly. There is no EN standard available for the monitoring and no emission limit has been set.</p>	<p>26. Inventory of emissions to air and water, 6.2. Emissions to water</p>

8. Process efficiency appropriate measures

These are the appropriate measures for process efficiency at regulated facilities with an environmental permit to mechanically treat metal waste in shredders.

<p>For your facility, you must monitor and review the annual quantity of:</p> <p>water, energy and raw materials used residues and waste water produced You must do this at least once every year.</p>	<p>7. Process efficiency</p>
<p>8.1 Energy Efficiency</p> <p>You must create and implement an energy efficiency plan at your facility. This must:</p> <p>define and calculate the specific energy consumption of the activity (or activities) you carry out and the waste streams you treat</p> <p>set annual key performance indicators – for example, specific energy consumption (expressed in kWh/tonne of waste processed)</p> <p>plan regular improvement targets and related actions</p> <p>You must regularly review and update your energy efficiency plan as part of your facility’s management system.</p>	<p>27. Energy Efficiency Plan, 7.1. Energy efficiency</p> <p>27. Energy Efficiency Plan, 7.1. Energy efficiency</p> <p>27. Energy Efficiency Plan, 7.1. Energy efficiency</p> <p>27. Energy Efficiency Plan, 7.1. Energy efficiency</p>
<p>You must have and maintain an energy balance record for your facility. This must provide a breakdown of your energy consumption and generation (including any energy or heat exported) by the type of source (electricity, gas, conventional liquid fuels, conventional solid fuels, and waste). You should provide Sankey diagrams or energy balances to show how energy is used in your waste treatment processes.</p>	<p>27. Energy Efficiency Plan, 7.1. Energy efficiency</p>
<p>You must regularly review and update your energy balance record as part of your facility’s management system, alongside the energy efficiency plan.</p>	<p>27. Energy Efficiency Plan, 7.1. Energy efficiency</p>
<p>You must have operating, maintenance and housekeeping measures in place in relevant areas, for example, for:</p> <p>air conditioning, process refrigeration and cooling systems (leaks, seals, temperature control, evaporator or condenser maintenance)</p>	<p>7.1. Energy efficiency</p>

operating motors and drives	7.1. Energy efficiency
compressed gas systems (leaks, procedures for use)	7.1. Energy efficiency
steam distribution systems (leaks, traps, insulation)	7.1. Energy efficiency
space heating and hot water systems	7.1. Energy efficiency
lubrication to avoid high friction losses	7.1. Energy efficiency
boiler operation and maintenance, for example, optimising excess air	7.1. Energy efficiency
other maintenance relevant to the activities within the facility	7.1. Energy efficiency
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You must have measures in place to avoid gross energy inefficiencies. These should include, for example:	
keeping the shredder infeed stable	7.1. Energy efficiency, 7.1. 1. Process Efficiency and Energy Consumption
insulation	7.1. Energy efficiency, 7.1. 1. Process Efficiency and Energy Consumption
containment methods (such as seals and self-closing doors)	7.1. Energy efficiency, 7.1. 1. Process Efficiency and Energy Consumption
avoiding unnecessary discharge of heated water or air (for example, by fitting simple control systems such as timers and sensors)	5. Emissions control, 6. Emission limits and monitoring
You should implement additional energy efficiency measures at the facility as appropriate, following our guidance Energy efficiency standards for industrial plants to get environmental permits.	7.1. Energy efficiency
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8.2 Raw Materials	
You must maintain a list of the raw materials used at your facility and their properties. This includes auxiliary materials and other substances that could have an environmental impact.	31. Fluid storage inventory, 7.2 Raw materials
You must regularly review the availability of alternative raw materials and use any suitable ones that are less hazardous or polluting. This should include, where possible, substituting raw materials with waste or waste-derived products.	7.2. Raw materials
You must justify the continued use of any substance for which there is a less hazardous alternative.	7.2. Raw materials

<p>You must have quality assurance procedures in place to control the content of raw materials.</p>	<p>7.2. Raw materials</p>
<p>8.3 Water use</p> <p>You must make sure you optimise water consumption to:</p> <p>reduce the volume of waste water generated</p> <p>prevent or, where that is not practicable, reduce emissions to soil and water</p>	<p>28. Water saving plan, 7.3 Water use</p> <p>28. Water saving plan, 7.3 Water use</p>
<p>You must take these measures:</p> <p>implement a water saving plan (involving establishing water efficiency objectives, flow diagrams and water mass balances)</p> <p>optimise the use of washing water (for example, dry cleaning instead of hosing down, using trigger control on all washing equipment)</p> <p>recirculate and reuse water streams within the plant or facility, if necessary after treatment</p> <p>reduce the use of water for vacuum generation (for example, using liquid ring pumps with high boiling point liquids) where relevant</p> <p>reuse in a closed circuit water injected into the mill</p> <p>collect run off water and damping water for dust suppression</p>	<p>28. Water saving plan, 7.3 Water use</p> <p>28. Water saving plan, 7.3 Water use</p> <p>28. Water saving plan, 7.3 Water use</p> <p>28. Water saving plan, 7.3 Water use</p> <p>28. Water saving plan, 7.3 Water use</p> <p>28. Water saving plan, 7.3 Water use</p> <p>28. Water saving plan, 7.3 Water use</p>
<p>You must regularly review your water use (a water efficiency audit), at least every 4 years.</p>	<p>28. Water saving plan, 7.3 Water use</p>
<p>You must also:</p> <p>produce flow diagrams and water mass balances for your activities</p> <p>establish water efficiency objectives and identify constraints on reducing water use beyond a certain level (usually this will be site specific)</p> <p>identify the opportunities for maximising reuse and minimising use of water</p> <p>have a timetabled improvement plan for implementing additional water reduction measures</p>	<p>7.3 Water use</p> <p>28. Water saving plan, 7.3 Water use</p> <p>28. Water saving plan, 7.3 Water use</p> <p>28. Water saving plan, 7.3 Water use</p>
<p>To reduce water use and associated emissions to water, you should apply these general principles in sequence:</p>	<p>28. Water saving plan, 7.3 Water use</p>

use water efficient techniques at source where possible	7.3 Water use
reuse water within the process, by treating it first if necessary – if not practicable, use it in another part of the process or facility that has a lower water quality requirement	7.3 Water use
If you cannot use uncontaminated roof and surface water in the process, you should keep it separate from other discharge streams – at least until after you have treated the contaminated streams in an effluent treatment system and have carried out final monitoring.	7.3 Water use
You should establish the water quality requirements associated with each activity and identify whether you can substitute water from recycled sources. Where you can, include it in your improvement plan.	7.3 Water use
Where there is scope for reuse (possibly after some form of treatment) you should keep less contaminated water streams, such as cooling waters, separate from more contaminated streams.	7.3 Water use
You must minimise the volume of water you use for cleaning and washing down by:	
vacuuming, scraping or mopping rather than hosing down	7.3 Water use
reusing wash water (or recycled water) where practicable	7.3 Water use
using trigger controls on all hoses, hand lances and washing equipment	7.3 Water use
You must directly measure fresh water consumption and record it regularly at every significant usage point, ideally on a daily basis.	28. Water saving plan, 7.3 Water use
8.4 Waste Minimisation, Recovery and Disposal	
You must have and implement a residues management plan that:	
minimises the generation of residues arising from waste treatment	29. Residues Management Plan, 7.4. Waste minimisation, recovery and disposal
optimises the reuse, regeneration, recycling or energy recovery of residues, including packaging	29. Residues Management Plan, 7.4. Waste minimisation, recovery and disposal
makes sure you properly dispose of residues where recovery is technically or economically impractical	29. Residues Management Plan, 7.4. Waste minimisation, recovery and disposal

<p>Where you must dispose of waste, you must do a detailed assessment identifying the best environmental options for waste disposal.</p>	<p>29. Residues Management Plan, 7.4. Waste minimisation, recovery and disposal</p>
<p>You must regularly review your options for recovering and disposing of waste produced at the facility. You must do this as part of the management system to make sure you are still using the best environmental options and promoting the recovery of waste.</p>	<p>29. Residues Management Plan, 7.4. Waste minimisation, recovery and disposal</p>