Green Element

How to Manage your Organisation's Waste

A Comprehensive Guide



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About This Guide

This guide is designed to help organisations understand their responsibilities concerning waste management. The guide discusses obligations and requirements imposed by regulation as well as information about different treatment options most suited to different waste types.

To ensure efficient management of your organisation's waste, opportunities for waste minimisation should be considered before anything else. Avoiding waste is as much a part of reducing our environmental impact as reducing the resources that we consume – these two are inextricably linked.

Keeping goods and materials in use at their highest value and potential prevents unnecessary waste. This is the way to transition to a circular economy from the more traditional linear economy where we typically 'take, make, use, and dispose' of goods and resources.

Find out more about the circular economy by reading this blog: Making the Linear Circular: a short guide to the Circular Economy.



What is Waste Management and Why is it Important?

Waste management is a term used to describe the various ways and processes used to dispose of waste. Good waste management practice accords with legal requirements and keeps environmental impact in mind. This would include being mindful of waste prevention opportunities, separating waste into different streams or types, and arranging collection and transport by licensed carriers for treatment or disposal at permitted sites.

Choosing the right treatment option for each waste type is an important part of good practice. Where there is the potential to reuse or recycle items, or to convert them to energy (for example, by anaerobic digestion or energy from waste processes) this should always be kept in mind. Landfill and incineration without energy recovery are options of last resort as no benefit is retained from the materials thrown away. Even the best-run landfill and incinerators have an impact on the environment.

> **Poorly managed waste is contaminating the world's oceans, clogging drains, and causing flooding, transmitting diseases, increasing respiratory problems from burning, harming animals that consume waste unknowingly, and affecting economic development such as through tourism.**
>
> World Bank, 2018

Poor waste management practice may happen where legal requirements are breached or in areas where there are no legal requirements or guidance for waste disposal. Examples are dumping or fly tipping of waste at sites that are not permitted for waste disposal or burning of waste at sites not permitted for the purpose without any pollution prevention controls.

Obligation to Consider the Waste Hierarchy

Regulation 12 of The Waste (England and Wales) Regulations 2011 introduced into English Law an obligation on everyone involved in the waste management chain to apply the Waste Hierarchy to satisfy the requirements of EU Waste Framework Directive 2008/98/EC.

The five-step waste hierarchy lies at the heart of waste management regulation and establishes an order of preference for managing and disposing of waste. Although preventing waste is the preferred option, other treatment options are listed in descending order of preference, with disposal (sending waste to landfill or incineration without energy recovery) as the option of last resort.

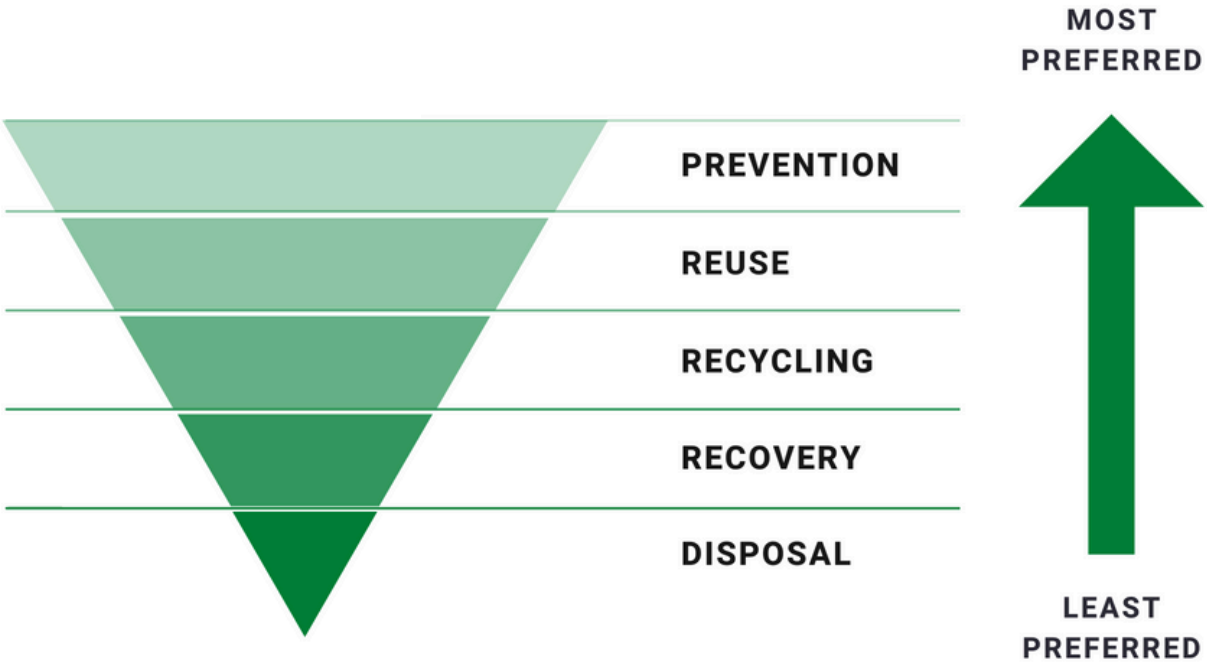


Figure 1: The Waste Hierarchy. Author's Own.

WASTE HIERARCHY

Regulation 12 sets out the duty to consider the Waste Hierarchy:

"An establishment or undertaking which imports, produces, collects, transports, recovers or disposes of waste, or which as a dealer or broker has control of waste must, on the transfer of waste, take all such measures available to it as are reasonable in the circumstances to apply the following Waste Hierarchy as a priority order—

(a) prevention;

(b) preparing for re-use;

(c) recycling;

(d) other recovery (for example energy recovery);

(e) disposal."

Regulation 12 goes on to explain that it is possible to depart from the Waste Hierarchy to achieve "the best overall environmental outcome".



Duty of Care for Waste Management

The legal obligations relating to waste disposal are set out in Section 34 of the Environmental Protection Act 1990 and are collectively described there as 'the Duty of Care'. Section 34 (1) describes how everyone in the waste disposal chain – from producer to carrier, to the treatment facility, and final disposal – has a duty to ensure that all participants are authorised and that every step is monitored so that the full journey can be traced.

Section 34 outlines the Duty of Care while practical guidance on how to fulfil the Duty of Care can be found in the Waste duty of care: code of practice **('the Code'). The Duty of Care and the Code apply to anyone who imports, produces, c**arries, keeps, treats, disposes of, or, as a dealer or broker has control of, certain waste. A few key aspects to note are:

- A waste producer is someone who produces controlled waste which includes household, industrial, and commercial waste.
- The Duty and the Code apply to most businesses.
- Hazardous waste requires separate collections. Examples include batteries, chemicals, some waste electrical and electronic equipment (also known as WEEE).

Further information on waste classification and knowing the appropriate treatment route (hazardous or non-hazardous) can be found here.

Producer Responsibility Regulations in England and Wales

Special regulations apply to businesses that manufacture, import, or sell certain products. They impose additional requirements relating to product design, waste minimisation, and opportunities for reuse and recycling targets, all intending to reduce the impact of these products on the environment. The products governed by the Producer Responsibility regulations are:

- Packaging
- Electrical and electronic equipment (EEE)
- Batteries
- End-of-life vehicles

Further information can be found here.



Penalties

A failure to comply with the Duty of Care under section 34 of the Environmental Protection Act 1990 which results in "unlawful deposit, treatment, or disposal" of waste (defined by section 33 of the Act) (such as fly-tipping) is an offence. The possible outcomes, which depend on the factors involved, include a warning, a formal caution, or prosecution.

Where cases are prosecuted, they are heard in either the Magistrates' or Crown Court, depending on the seriousness of the offence. If found guilty, a fine can be imposed by the court: up to £5000 in the Magistrates' Court and no limit in the Crown Court. For those directly involved in activities that amount to unlawful deposits etc. (see above), including cases that cause damage to the environment or human health, the outcome can be both fines and custodial sentences. The sentencing regime is dictated by several factors including:

- The degree of culpability
- The harm caused
- The defendant's income or revenue

Further details can be found here.

Individuals can additionally be disqualified from being company directors. By way of example, a 2019 prosecution relating to illegal waste activities resulted in:

- A £25,000 fine and a £40,000 order for contribution towards prosecution costs for the company.
- A 12-month suspended sentence and 3-year disqualification for the director.

How to Manage your Organisation's Waste

An essential element of good waste management practice that will assist in fulfilling your legal obligations is to understand which types of waste your organisation produces. With this information, you will be able to consider opportunities for reuse and recycling, identify the different collection bins required for different waste types (both inside and outside the building), and whether there are materials that need special treatment in terms of storage and collection (such as hazardous waste).

Knowing the types of waste produced will allow you to decide on the most appropriate treatment option and to find a waste collection service that is able and licensed to offer this service.

Waste types produced will vary from organisation to organisation depending on the type of business. By way of example, a small office, a restaurant, and a manufacturer will have different waste types and treatment needs.

To confirm that you have fulfilled the requirements of the Duty of Care the necessary documentation and record-keeping processes are also explained.



Understanding Your Waste Composition

Identifying the type of waste material produced will allow an organisation to comply with its obligations under the Duty of Care, including any obligations to separate some waste types from others, storage requirements, optimal treatment options, and the need for specialist disposal contractors.

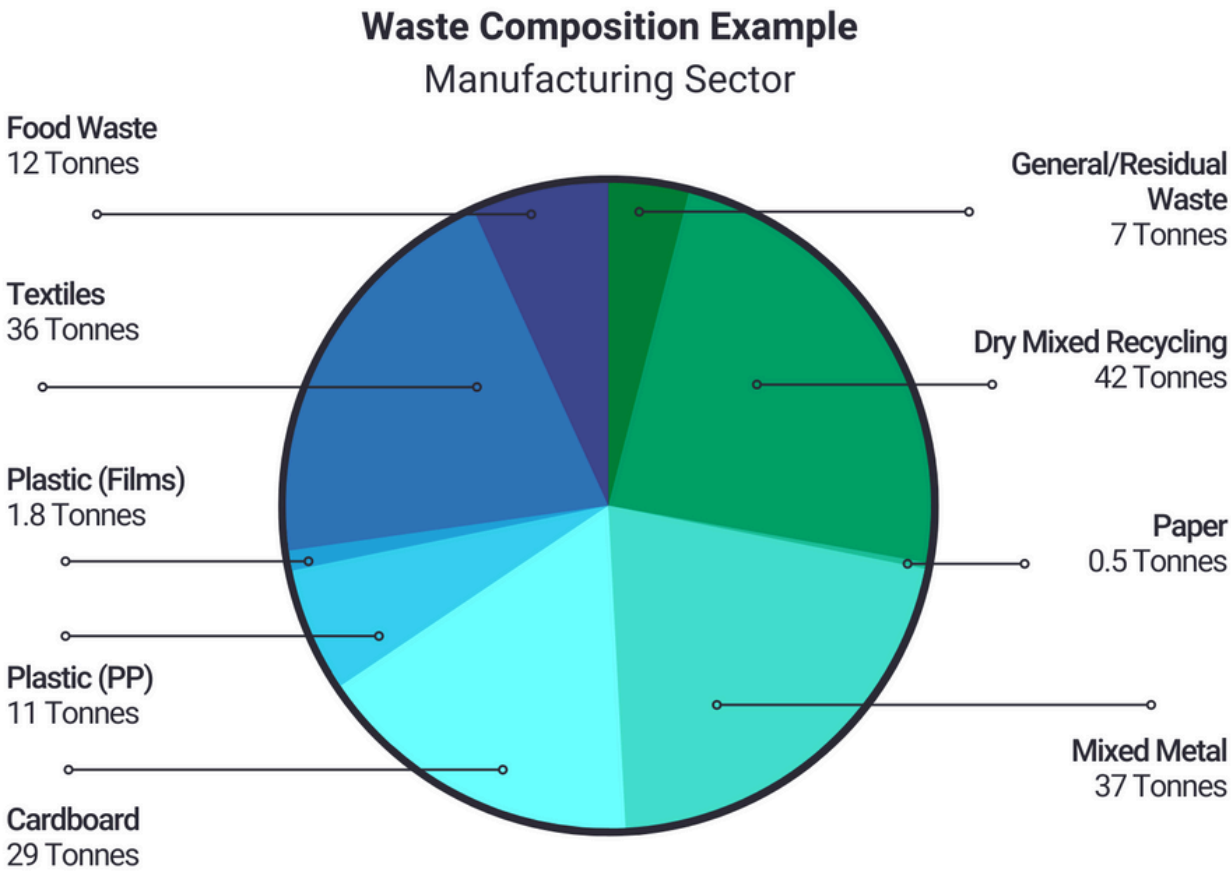


Figure 2: Waste Composition Example - Manufacturing Sector. Author's Own.

Conducting a waste audit will help with this identification process as well as indicate the quantity of each waste type. In simple terms, a waste audit is an inspection of what the organisation has thrown away which is done by looking at what is in the waste bins and weighing the different waste components.

Some organisations, such as small offices and shops, should be able to conduct an audit themselves. Larger organisations, such as manufacturing processes, may need assistance; most waste contractors offer this service. Conducting a waste audit will help you:

- Understand the composition of your waste: What are your waste streams and how much of each is there?
    - Recyclable material e.g. paper, metal, plastic, glass
    - Food waste
    - Identify material requiring separate collection e.g. WEEE, batteries
    - Non-recyclable / residual waste
- Identify opportunities for waste prevention.
- Minimise the amount of residual waste and maximise recycling.
- Identify opportunities for additional recycling - are people using the bins properly? Is recyclable material ending up in the general waste collection?
- Identify the optimum waste treatment options (to satisfy the Waste Hierarchy).

A DIY waste audit guide is available from WRAP (the Waste and Resource Action Programme).

Proper Treatment of Waste at your Premises

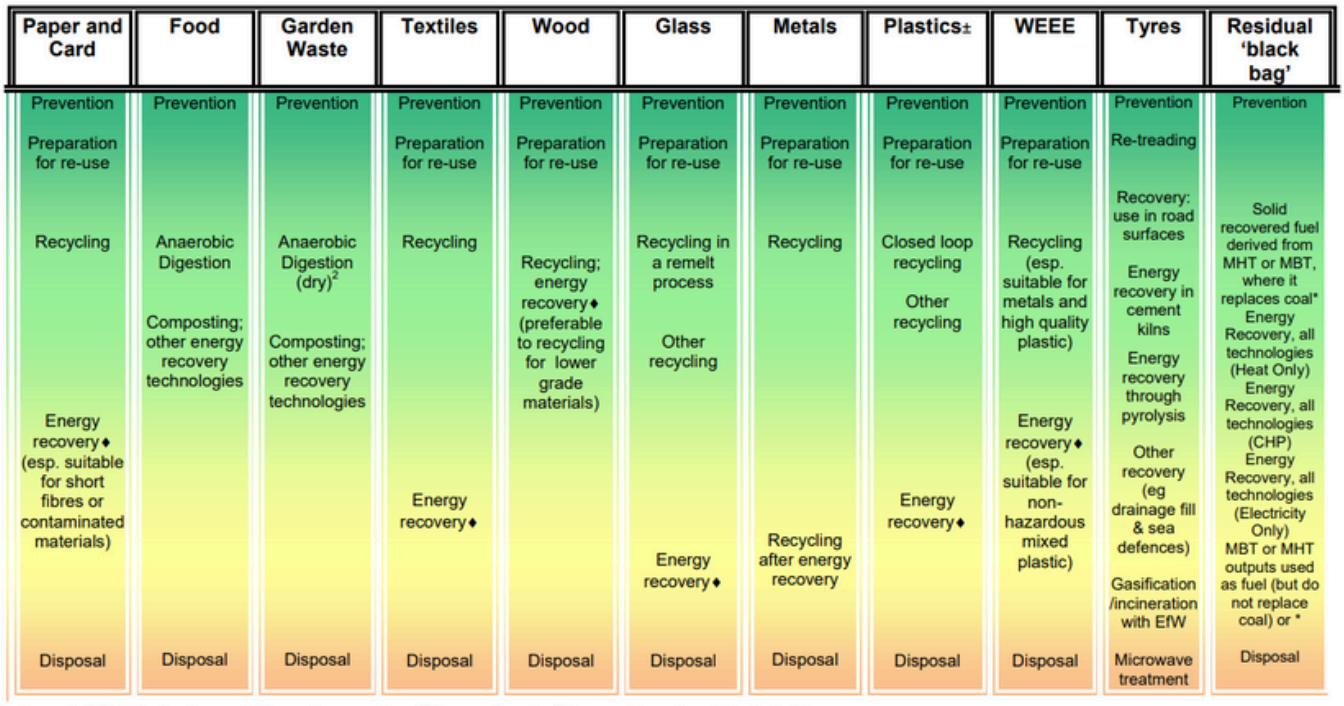
The Code of Practice (paragraph 3.3) gives directions on how to treat the waste created at your premises. Waste generated on any site:

- Must be stored in suitable and labelled containers which meet the needs of the particular waste type (such as spill and leak free for liquid wastes) to ensure it remains in designated areas while on-site.
- Access should be limited to those authorised, such as site managers and waste collection service operatives.
- The containers must also be suitable for all stages of the process including transport and ultimate treatment or disposal.

Waste Treatment Options

There are different processes available for treating waste materials that satisfy the requirements of the Duty of Care. Treatment happens at facilities that must be permitted for all stages of the particular processes they offer. This section explains the different types of processes available and reflects the order of the Waste Hierarchy which organisations need to keep in mind to fulfil their obligations under the Duty of Care.

Matching individual waste types to the optimal treatment method for that material will achieve the best overall environmental outcome. The infographic below will help you to identify the best treatment options for the waste that your organisation produces.



Paper and Card	Food	Garden Waste	Textiles	Wood	Glass	Metals	Plastics±	WEEE	Tyres	Residual 'black bag'
Prevention	Prevention	Prevention	Prevention	Prevention	Prevention	Prevention	Prevention	Prevention	Prevention	Prevention
Preparation for re-use			Preparation for re-use	Preparation for re-use	Preparation for re-use	Preparation for re-use	Preparation for re-use	Preparation for re-use	Re-treading	
Recycling	Anaerobic Digestion	Anaerobic Digestion (dry)[2]	Recycling	Recycling; energy recovery♦ (preferable to recycling for lower grade materials)	Recycling in a remelt process	Recycling	Closed loop recycling	Recycling (esp. suitable for metals and high quality plastic)	Recovery: use in road surfaces	Solid recovered fuel derived from MHT or MBT, where it replaces coal* Energy Recovery, all technologies (Heat Only) Energy Recovery, all technologies (CHP) Energy Recovery, all technologies (Electricity Only) MBT or MHT outputs used as fuel (but do not replace coal) or *
	Composting; other energy recovery technologies	Composting; other energy recovery technologies			Other recycling		Other recycling		Energy recovery in cement kilns	
Energy recovery♦ (esp. suitable for short fibres or contaminated materials)			Energy recovery♦		Energy recovery♦	Recycling after energy recovery	Energy recovery♦	Energy recovery♦ (esp. suitable for non-hazardous mixed plastic)	Energy recovery through pyrolysis	
									Other recovery (eg drainage fill & sea defences)	
									Gasification /incineration with EfW	
Disposal	Disposal	Disposal	Disposal	Disposal	Disposal	Disposal	Disposal	Disposal	Microwave treatment	Disposal

Figure 3: Extract from Guidance on applying the Waste Hierarchy (p6). Available here.

Preparation for Reuse

Discarded items are cleaned, repaired, or refurbished so that they can be used again for their original purpose. Examples include clothes, tools, furniture, and electrical and electronic equipment.

Recycling - segregated or mixed

Recycling involves reprocessing waste into new products or materials for either the original or other purposes. Examples include aluminium cans recycled into new aluminium cans, card and paper recycled into new card and paper products, and plastic items made into different grades of secondary raw material (as a replacement for new) for use in various industries.

Segregated recycling is preferable where possible. This involves separating individual recyclable waste material into separate streams such as paper, cardboard, metals, plastic, and glass. This increases the chance of creating better-quality recycled material by removing the risk of contamination from other waste streams.

It is also possible to separate further into specific material grades to ensure that the material retains as much of its value as possible. Examples include office-grade paper, different types of plastics such as PET (Polyethylene Terephthalate) and HDPE (High-Density Polyethylene), as well as different grades of individual metals, such as aluminium.

This may not be possible to organise due to constraints on site or because local providers do not offer segregated recycling services, offering instead a mixed collection, often referred to as 'DMR' – Dry Mixed Recyclables. In this case, the material will go to a Materials Recovery Facility (MRF) for further separation into individual recyclable streams.

Composting (green waste)

Composting biodegrades organic waste (garden and certain food waste materials) turning it into valuable fertiliser. This is classified as recycling for the purposes of the Waste Hierarchy. Many local authorities offer garden waste collection and composting schemes to meet regulatory recycling targets. Composting is the most appropriate treatment method for this waste type.

Where possible, composting at home or on-site is the most environmentally friendly option as it avoids the emissions associated with transporting to other treatment facilities.

Energy Recovery – Anaerobic Digestion

Energy recovery is the term given to any process by which waste material is converted into energy, usually (but not always) in the form of gas or electricity. This can be achieved via various processes of which Anaerobic Digestion and Energy from Waste are the two most common examples relevant to household and commercial waste disposal.

Anaerobic Digestion is the process by which microorganisms convert material such as food waste, crop residues, and manure, into biogas (methane) which can be used on-site or fed into the gas or electricity grids. The material left at the end of the process is known as digestate which can be treated and made suitable for use as soil fertiliser.

Energy Recovery - Energy from Waste (EfW) for residual waste

Energy from waste should be used to treat residual waste material only. That is, material left over after all other treatment methods have been considered and applied, i.e., there is no option to prevent, reuse, recycle, use anaerobic digestion, or composting.

Energy is created by the incineration of this waste stream resulting in hot flue gases which convert water to steam. This drives a turbine which generates electricity. Most facilities are also heat-enabled, allowing them to provide steam for district heating (where this infrastructure is available) or for local industrial processes.

Disposal – Landfill or Incineration (without energy recovery) for residual waste

Disposal at landfill sites or incineration without energy recovery should be options of last resort, although there may be local service limitations or issues specific to a particular waste type (such as clinical waste) which means that other options are not available.

Government guidance confirms that the Waste Hierarchy must be kept in mind, and lists waste types that are not permitted in landfill and for which separate/specialist disposal methods are required.

Due Diligence: Carrying out Checks

The responsibilities under the Duty of Care require you to take all reasonable steps to make sure that the waste your organisation produces is managed correctly throughout its journey. This means checking that the waste carriers you use are properly licensed to carry the waste type they have contracted to carry and that the treatment or disposal destination is also duly permitted.

If you suspect that there may be someone unlicensed in any part of the chain, or that the waste is not being treated properly, you should make additional enquiries. Paragraph 2.4 of the Code provides relevant guidance.

To check if someone is licensed, check the **Environment Agency register**.

Correct Documentation and Record-Keeping

Correct documentation is essential. The parties involved in any waste transfer must be named, a full and accurate description of the waste must be given, and the document must be signed and dated.

These are the acceptable forms of documentation:

- A 'waste transfer note' is a form to complete with the relevant details or you can use alternative documentation e.g. an invoice, as long as it contains all the required information. A sample waste transfer note template can be found here.
- A 'season ticket' is a single waste transfer note that covers a series of non-hazardous waste transfers.

Documentation must be retained for:

- Two years for non-hazardous waste.
- Two years for seasonal tickets.
- Three years for hazardous waste consignment notes.

Different retention periods apply for consignees (receivers) of hazardous waste.

It is also advisable to keep a record of the checks made to ensure the carrier is authorised/licensed. Although this is not a legal requirement, if the waste is subsequently fly-tipped and investigated, such records can quickly show that the Duty of Care has been met.

Service Providers

Waste Management Services

Waste management companies offer waste collection and treatment services. Service offerings may differ, with some providers better suited to smaller office-type organisations and others to those with larger and more varied waste outputs.

Businesses may have a choice of providers in their area. Where there is a choice, it is worth looking at several options to see who can offer not only the best price but the best service in terms of waste treatment and support including:

- Waste audit service (DIY waste audits are also possible – see above).
- Waste management service tailored to your individual needs.
- Provide you with data on waste to facilitate record keeping for carbon footprinting/Environmental Management Systems (e.g. ISO 14001) /reporting for various purposes.
- Offer staff training, engagement, and incentivisation and other resources for education and raising awareness.

Reuse and Sharing Networks

Finding new homes for items that your organisation may no longer need but which are still in usable condition prevents them from being wasted by giving them a new lease of life with another user. Sharing equipment with other organisations and allowing them to make use of it while you are not helps to prevent unnecessary equipment purchasing with the associated consumption of new resources.

Adopting these waste prevention and resource-efficient practices not only accords with the Waste Hierarchy but is also circular economy thinking. Reuse and sharing organisations form an essential part of this process by facilitating these opportunities. These include charities, Freecycle, WarpIt, Facebook groups, online platforms such as eBay, local and business equipment sharing groups, and a growing number of clothes rental organisations.

Advice and Support

Ready to optimise your waste management?

Whether you're new to waste management or have a well-established system, there's always room to boost efficiency and sustainability. Green Element's experts are here to help you identify the optimal strategies for your business.

Get in touch with our team today to discover how we can support your environmental goals while ensuring full compliance.

GET IN TOUCH