



The Waste Hierarchy - Explained

What is the waste hierarchy?

The waste hierarchy/waste management routes are the ranking of waste management practices in order of preference to the environment, as detailed in the EU Waste Framework Directive ¹. These hierarchies are Reuse, Recycling, Recovery, Disposal.

At Qflow, we understand the need for these high-level hierarchies to be subcategorised. For example, "Disposal" can be split out into "Disposal to landfill", "Disposal after treatment" and so on.

The primary objective of many construction projects being to understand their diversion from landfill rates; having waste hierarchy subcategories allows us to demonstrate this for you.

How is it calculated?

There are two sources of data from the Environment Agency (EA) - the **Waste Data Interrogator** and the **Waste Operations**.

Each waste facility in England reports to the EA on how they have managed their waste. This is available in the Waste Data Interrogator. The management routes are explained via Recovery & Disposal codes (R&D codes), as detailed in the EU Waste Framework Directive². This is a requirement as part of the permit and must be completed every quarter.

We also use the facility Site Type³ which is drawn from the EA's Waste Operations (note: Site Type is also referred to as Permit Type by the EA and is different from a facility permit). The Site Type determines the type of waste a facility can accept and the ability to treat the waste.

It is important the Site Type is considered alongside the R&D code as the R&D code alone does not show the whole picture. For example, a facility could list R&D code D01 (Deposit into or onto land, e.g. landfill), but their Site Type is A25 (Deposit of waste to land as a recovery operation). The R&D code alone would categorise the waste management route as Disposal, but by taking into context the Site Type we can see it is better categorised as Recovery, i.e. landfill capping is taking place.

Qflow has translated the formal guidance of 'Recovery' and 'Disposal' (R&D) codes alongside Site Types into a summary and detailed description of the Waste Management Routes. For each specific facility, for each specific EWC code, we have produced percentages to each waste management route based on the tonnage data reported to the EA. These percentages are applied to the waste tonnage data you send to Qflow via Waste Transfer Notes (WTNs).

- 1. Waste hierarchy https://environment.ec.europa.eu/topics/waste-and-recycling/waste-framework-directive_en
- 2. Recovery & Disposal codes http://www.wastesupport.co.uk/recovery-and-disposal-codes/

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3. Guide to Environment Agency Site Types https://www.360environmental.co.uk/documents/Guide%20to%20EA%20data%20waste%20facility%20type%20codes.pd

How is it calculated?

To ensure the best data is provided to you, we firstly ensure information on the ticket is valid. This includes the likes of tidying EWC codes with unnecessary punctuation, and finding the valid waste facility permit of the operator and address written on a ticket. These steps improve the quantity and accuracy of your waste management route results.

We have also taken additional steps to ensure you are provided with waste management routes even when data may be lacking. This may be a lack of data on the ticket or a lack or data on the EA. The preference order for these steps is as follows:

- First preference is to use the best case scenario, which is management routes from the waste facility and EWC code specified on the ticket (after our 'cleaning'): Specific facility & specific EWC
- 2. If EWC code is not present, we use the overall waste management routes from the waste facility specified on the ticket: specific facility alone.
- 3. If the facility has not reported its waste returns to the EA, we use the Site Type and specific EWC. Management routes from the Site Type are assumed using national averages created through data available in the Waste Data Interrogator from other facilities with the same Site Type.
- 4. Finally, we take waste management routes from the facility Site Type alone.

There are some exclusions to our waste management route data, these are:

- We do not currently take waste exemptions into consideration. The data is not reported in a dataset like the waste data interrogator as it is for waste permits.
- At present, there is no publicly available data on waste hierarchies for waste facilities located in Scotland, Wales, or Northern Ireland.

NB: The Waste Management Routes shown in Qflow are correct as of the waste returns submitted in 2020, made available via the Environment Agency in October 2021. Any facility data reported in 2021 is used if they did not report in 2020, likewise for 2022.

How can I reduce the Unknown section of my Waste Management Route pie chart?

The Unknown section is due to a lack of available information. Steps that you can take to reduce the size of this section include:

1) Ensure there is a facility permit present.

The "Open Record Issues" table of your "Waste Compliance" page will link to records with missing information. We also notify if a permit is expired. Please allow time for your dashboards to update, as data is also "cleaned" in house.

2) Ensure that an EWC code is present.

Although we have measures to gap-fill missing data, results are more certain when WTN data is complete. The "Open Waste Item Issues" table of your "Waste Compliance" page will point to records with missing EWC codes.

3) Ensure there is a container type present.

We are able to estimate volume/weight from this information in absence of these items on the WTN.

There may still be Unknown data following the above steps, with the cause being one of the following:

- No Environment Agency data available
- Environment Agency data is available for England only, which excludes Welsh, Scottish and Northern Irish facilities
- Results are correct for submissions from 2020, reported in 2021
- Waste exemptions are not currently included due to a lack of easily accessible data

• Why are the figures for "Disposal" and "Disposal to Landfill" different?

The formal group of "Disposal" can be broken down into subcategories. One of those subcategories is "disposal to landfill". So while "disposal" as a whole is the least preferable of the high-level management routes, the subcategory of "disposal to landfill" is the least preferable of all.

This site gives more details about the different Disposal codes, DOI being to landfill.

• Why is "Diversion from Landfill" showing as 100% when my Waste Management Route chart shows a percentage of my waste as "unknown"?

The Diversion from Landfill figure excludes all waste with an unknown route. See previous FAQ on how to reduce your waste unknowns.

