Guidance

Check if your material is waste

When a material is waste, is a by-product or meets ‘end of waste’ status.

From: **Environment Agency**
(/government/organisations/environment-agency)

Published 31 August 2021

Last updated 11 July 2024 —

Applies to England

Contents

You must try to prevent and minimise the production of waste as much as possible.

If you are the producer or holder of a material and you’re unsure if it’s waste or not, you can use this guidance to check the status of your material. A material can include any substance or object.

You should work out if your material:

- is waste – it has been discarded
- was never waste – it meets the ‘by-product’ test or the ‘reuse’ requirements

- has stopped being waste – it meets the ‘end of waste’ test

When a material is waste – discard

A material is waste if the holder has discarded it. The holder is the person or legal entity who has the material at the time it’s discarded. This may not be the owner – for example, if someone has leased the material, they become the holder.

Assessment of whether a material has been discarded is based on the actions of the holder.

A holder may unintentionally, involuntarily or accidentally discard a material. They may also be required to discard it.

The Environment Agency considers all the following factors when they assess if a material is discarded and therefore classed as waste:

- burden
- certainty of use
- fit for purpose
- a specific purpose
- management
- environmental harm
- common classification as waste
- disposal or recovery
- fuel or waste
- an item returned for a refund
- reuse

All the factors must be considered. It’s not possible to decide if something has been discarded based on a single factor, unless the law specifically says that it must be disposed of.

When assessing whether a material has been discarded, the Environment Agency must make sure that the aims of the Waste Framework Directive (WFD), which include protection of the environment and human health, are not undermined. They must take a precautionary approach.

Burden

A material is generally considered to be discarded if it is unsuitable, unwanted or surplus to requirements, making it a burden. The holder is more likely to dispose of it in a way that might harm human health or the environment.

Considering the business objective of why a holder deals with a material in a particular way can help assess whether it is a burden to them.

Certainty of use

If there is no certainty that a material will be used it suggests that it has been discarded. The less certain the use of a material, the more likely that it is a burden. Certainty of use is more than just the possibility of use in the future.

Fit for purpose

If a material cannot be used in the way it is meant to be, or it does not meet relevant standards, it strongly suggests that it has been discarded. This is because it's unlikely to have a value to the holder or a market, so will be a burden.

If the law states that a material has to be disposed of, the material is waste.

Specific purpose

If a holder's material has no specific purpose, it is likely to have been discarded. It is unlikely to have a benefit to the holder and so is likely to be a burden.

Value

A material is likely to be discarded if it has low, no or negative economic value because it is likely to be a burden. But it may not be a burden if it has some other value to the holder.

A material with a high economic value can still be discarded and classed as waste, such as scrap metal.

Management

A material is likely to be discarded if it is managed, for example transported or stored, in a way that could damage it. Damage does not have to have occurred. If damage has occurred however, this makes it even more likely that a material has been discarded.

Environmental harm

If a material is contaminated, and that contamination means there is a significantly greater risk of harm to the environment or human health if the

material is not regulated as a waste, it is likely to be considered to have been discarded. For example, if, due to the treatment used, the burning of treated wood will cause a significantly greater risk of harm to the environment if not regulated as a waste, for example due to preservatives, the treated wood is likely to be considered waste. Whether there is significantly greater risk of harm to the environment or human health is a judgment for a technically competent person.

Where a material has not been contaminated, it is not relevant to consider whether its storage or use is potentially harmful, as many non-waste substances can also be harmful. The environmental impact of the process to create a material or how it will be used also have no bearing on assessing if it is waste.

Common classification of waste

A material that is commonly regarded as waste is likely, but not certain, to be waste. Just because something is called waste, does not mean that it is waste. A material that is listed in the List of Waste code (https://www.gov.uk/how-to-classify-different-types-of-waste) is not necessarily waste.

Disposal or recovery

If a material has gone through an operation that is commonly regarded as disposal or recovery, it is likely to have been discarded. This will not always be so, as sometimes such an operation is not actually disposal or recovery because the material involved is not a waste.

For example, landspreading where, depending on the circumstances, the application of material to land can be recovery, disposal or neither (when spreading non-waste material for benefit to land).

If you get material under a contractual agreement requiring recovery or disposal, this is evidence it's been discarded and so is waste.

Fuel or waste

If a material is commonly used as a fuel in certain circumstances, it suggests that it is likely to be fuel and not waste when used in similar circumstances.

When deciding whether a material is a fuel or a waste, it is important to look at why it is being burnt and whether it is a disposal activity. If the calorific content of a material that will be burnt is significantly less than a fuel that would be burnt as an alternative, it is likely that it is not fit for purpose and is being disposed of, making it waste.

Return for a refund

Where a material is returned for a refund, it will not have been discarded by the holder returning it.

The person receiving the returned material is in a different position. Whether the material is discarded by them depends on the factors previously set out.

When a material has not become waste

Reuse

A material will not be waste if all the following apply:

- it is used for the same purpose for which it was designed – the use must not be subordinate or incidental to the original use
- the previous holder intended for it to be reused
- no repair, or no more than minor repair, is required to it when it is transferred from the previous holder to the new holder, and the previous holder knows this
- any necessary repair is going to be done
- its use is lawful
- it is not managed in a way that indicates that it is waste, for example it is not transported or stored in a way that could cause it to be damaged

If a material becomes waste before it is reused, you will have to apply the end of waste test to it.

The by-product test

A production process with the primary aim of producing intended new products from non-waste materials may also produce unavoidable residues. These residues will have by-product (non-waste) status if they meet all 4 conditions (a) to (d) under WFD article 5 (1) (https://www.legislation.gov.uk/eudr/2008/98/article/5).

Condition (a) – further use of the substance or object is certain

To decide if your material's use is certain, consider if there is a market or demand for all the material.

To decide if there is a market for your material, consider:

- why it will be purchased – if it does not have a specific purpose there's unlikely to be a market
- if it is fit for purpose – if it is not there is unlikely to be a market

- how many potential purchasers there are – one potential purchaser can be evidence of a market, but your evidence will be stronger if there are larger and more established potential purchasers
- the predicted sales – if there are no predicted sales there is unlikely to be a market
- the proposed sale price and how that compares to similar products – if the proposed sale price is similar it is more likely that there is a genuine market
- if there is an established market and if so its size, history, purchasing ability and your experience of the market – this will help show that there is a clearly established market
- how it will meet the requirements of the market and your confidence of it selling – this will help show that the established market is the correct one for your material
- what evidence you have that it will be purchased by the market – for example, if you have a contract in place or written confirmation of interest that includes details of quantity, quality and price this is likely be good evidence that there is a market
- if it is a fuel, does it have sufficient calorific value to market as a fuel – if not there is unlikely to be a market for it
- if it is stored and treated in a way that keeps it fit for purpose – if not there is unlikely to be a market
- if it is going to be stored, how long that will be for – storing indefinitely suggests there is not a market
- if there is a market, if it is only going to exist for a short amount of time – if so, the market may not be considered certain enough

If there is not an established market for the material, consider:

- if there is still a demand for it and, if so, what it is
- what evidence you can use to show that the demand exists
- if it is stored and treated in a way that keeps it fit for purpose – if not, there is unlikely to be a demand
- if it is going to be stored how long that will be for – storing indefinitely suggests there is not a demand

Condition (b) – the substance or object can be used directly without any further processing other than normal industrial practice

To decide if your material can be used directly with no further processing, consider if there is any extra processing. If there is, is it covered by ‘normal industrial practice’?

Normal industrial practice covers the steps taken to produce a product from non-waste materials, including:

- filtering, washing and drying the material
- modifying the size or shape by mechanical treatment, for example grinding slag for using in construction

Treating the production residue like you would a waste material is not normal industrial practice. For example, if it's contaminated with components which are hazardous or not useful and must be removed before it can be used, this removal will not be normal industrial practice.

You should compare how an equivalent new product is processed for your assessment. Where more steps are required in the processing of the production residues, this is likely to mean that your material cannot be used without further processing other than normal industrial practice.

Condition (c) – the substance or object is produced as an integral part of the production process

To decide if your material is an integral part of a production process, consider:

- how it's connected to the manufacturing process – look at the machinery and processes used to produce the material, including where they are located, as this will help you work out if production of the material is an essential part of the main production process
- if it's produced unavoidably – if you can make the intended product without the material being produced it will not be an integral part of the production process

Condition (d) – further use is lawful, that is the substance or object fulfils all relevant product, environmental and health protection requirements for the specific use and will not lead to overall adverse environmental or human health impacts

To decide if your material fulfils all relevant product, environmental and health protection requirements, consider:

- if it meets all relevant technical specifications and standards – not just those that relate to the environment and human health
- if it meets any relevant legislation

To decide if your material will have an overall adverse environmental or human health impact:

- if there is an appropriate non-waste derived comparator, do a risk assessment using the comparator approach
- if there is not an appropriate non-waste derived comparator, do a general risk assessment of all substances of potential concern

The comparator approach compares how the material and equivalent non-waste-derived product is:

- stored
- transported
- handled
- used

The material must be of no significantly greater risk to the environment or human health than the non-waste-derived product.

You must carry out an initial assessment of the 2 materials which should include (where relevant):

- composition – the basic elements
- physical parameters, such as water content
- advance analysis where needed, such as speciation of elements or ecotoxicity
- calorific value (relevant to fuels)

Check the definition of waste service guidance and form (https://www.gov.uk/government/publications/get-an-opinion-from-the-definition-of-waste-service) for the data you need to assess.

You will need to do a full risk assessment for substances of potential concern in the material if the initial assessment shows they:

- are of a higher concentration or quantity than the non-waste equivalent, including when emitted to the environment
- are lower weight for weight but will be higher than the comparator, because a larger volume of the material will be used for the same effect, for example fertiliser application rates to meet crop need

The full risk assessment will be the same as that done where there is no appropriate non-waste comparator. Risk assessments are based on the source-pathway-receptor model and use a ‘reasonable worst-case scenario’. When doing a risk assessment, you need to consider that non-waste status can lead to a material becoming unregulated, if relevant. The risk assessment must show that the use of the material does not lead to overall adverse environmental and human health harm – that is, a material must be of no significant risk to the environment or human health.

The full risk assessment will follow the same format as that done where there is no appropriate non-waste comparator. Where there is no non-waste comparator, however, all substances of potential concern must be assessed. Risk assessments are based on the source-pathway-receptor model and use a ‘reasonable worst-case scenario’. The risk assessment

must show that the use of the material does not lead to overall adverse environmental and human health harm – that is, a material must be of no significant risk to the environment or human health. When doing a risk assessment, you need to consider the effect of the material being unregulated as a result of non-waste status, if relevant.

Check the definition of waste service guidance and form (https://www.gov.uk/government/publications/get-an-opinion-from-the-definition-of-waste-service) for the data you need to assess. You can also contact dowservices@environment-agency.gov.uk for more advice on risk assessments.

Choosing the correct comparator

A product will only be an appropriate comparator if it's:

- a non-waste material
- a likely competitor in the market
- used in the same way as the material, including how its stored, transported, handled and used

Some minor differences in final use are likely to be acceptable as long as:

- the market will remain the same as the non-waste comparator
- any differences in use are taken into account in a risk assessment

If your material has more than one use, the most suitable comparator will also have all these uses. If such a comparator is not available, it's likely you will need to assess end of waste or by-product status for each use, using a comparator specific to each use.

Here are some examples of correct and incorrect comparators.

An appropriate comparator for a waste-derived biomass fuel pellet is an equivalent non-waste-derived biomass fuel pellet. You could not, for example, use coal as a comparator, as biomass is not a genuine replacement for coal.

An appropriate comparator for waste derived construction material might be either:

- the new construction product your material intends to replace, for example a building block
- the ingredient it intends to replace in a blended product such as sand or cement

Incinerator bottom ash aggregate is not an appropriate comparator for waste derived construction material as it is regarded as a waste.

Additional considerations

If it is not clear whether the conditions (a) to (d) have been met, you should take a precautionary approach by deciding they have not been.

Make all by-product decisions in line with any future relevant by-product regulation (there are not any now) and take into account any guidance about by-products (https://www.gov.uk/topic/environmental-management/waste) published by the Environment Agency and the Department for Environment, Food and Rural Affairs (Defra), which includes this guidance. See the section on 'How to work out if you meet the by-products and end of waste tests' later in this guide for more information.

Example of a by-product

An example of a potential by-product is wood shavings from furniture production, for use as animal bedding, if all the following apply:

- they are certain to be used
- they are an unavoidable residue from producing wooden furniture
- the wood used to produce the furniture is not waste
- no further treatment is needed to use them as animal bedding
- the wood is free from preservatives and treatments

When a material meets the end of waste test

Waste materials must have been through a recycling or other recovery operation and meet all the conditions of the end of waste test to be classed as non-waste. Once they are classed as non-waste, waste controls do not apply to these materials.

Recycling or other recovery takes place when something has been done to the waste to remove any waste properties that exist (such as contamination) and turn it into a useful material that will be used in place of another non-waste material. The operation can range from a check or test to establish there are no waste properties to highly complex processes which remove contaminants or change the material.

End of waste is usually achieved at the completion of the recycling or other recovery process when the material can replace the non-waste comparator. This could be at the point that it becomes a feedstock, where the appropriate comparator is a feedstock, or where it is ready for its final use, if the comparator is a final product. For material where no appropriate comparator is available, it's likely that recovery and therefore end of waste is only achieved when it is ready for its final intended use.

Article 6 (1) WFD (https://www.legislation.gov.uk/eudr/2008/98/article/6) sets out the end of waste test. It contains 4 conditions that all recycled or recovered

material must meet to achieve end of waste status.

Condition (a) – the substance or object is to be used for specific purposes

To assess if the material will be used for a specific purpose, consider:

- if there is a clear use – if not, there is unlikely to be a specific use
- if there is more than one use – if so, the material is only likely to be considered to have a specific use if those uses can exist alongside each other

If the material has more than one use, you need to consider if you need to make an end of waste assessment for each use.

Condition (b) – a market or demand exists for such a substance or object

To assess if a market or demand exists for the material, use the same criteria as set out under condition (a) of the by-products test.

Condition (c) – the substance or object fulfils the technical requirements for the specific purposes and meets the existing legislation and standards applicable to products

To assess if the material meets all the relevant technical requirements, standards and laws, use the same criteria as set out for the first part of condition (d) of the by-products test.

Condition (d) – the use of the substance or object will not lead to overall adverse environmental or human health impacts

To assess if the material has overall adverse impacts on the environment or human health, use the same criteria as set out for the second part of condition (d) of the by-products test.

If it is not clear whether any of the conditions (a) to (d) have been met, you should take a precautionary approach and decide that they have not.

As well as considering conditions (a) to (d) when making end of waste decisions, the criteria in Article 6 (2) of the WFD (https://www.legislation.gov.uk/eudr/2008/98/article/6) must also be considered. These criteria must be included in any detailed criteria that operators follow to meet the end of waste test for a particular material, for example quality protocols or resource frameworks, and must be considered when assessing end of waste on a case-by-case basis where appropriate.

Permissible waste input material for the recovery operation

You will need to define the input waste if it could impact the:

- technical specification of the material
- amount of harm to the environment or human health

The input waste should be defined in relation to the:

- type of waste – its origin and composition where appropriate
- quantity of waste

Allowed treatment processes and techniques

You will need to define the treatment processes and techniques if they could:

- affect the technical specification of the material
- impact the amount of harm to the environment or human health

Quality criteria for end of waste materials resulting from the recovery operation in line with the applicable product standards, including limit values for pollutants where necessary

You should make sure quality criteria and limit values for pollutants are set if the quality of the material can vary and if this variation could:

- affect the technical specification of the material
- impact the amount of harm to the environment or human health

You are likely to have covered this part of the assessment when you assessed the overall adverse effects on the environment and human health.

Requirements for management systems to prove compliance with the end of waste criteria, including for quality control and self-monitoring, and accreditation, where appropriate

You should have a management system that shows how you will follow the end of waste criteria, including:

- quality control procedures
- self-monitoring procedures
- how you achieve accreditation where appropriate

Additional considerations

The Environment Agency must consider limit values for pollutants and any possible adverse environmental and human health impacts when making end of waste decisions. These will have been covered in the assessment of

whether use will lead to overall adverse environmental or human health impacts.

Make all end of waste decisions in line with any relevant end of waste regulation (explained later in this guide) and take into account any guidance about end of waste (https://www.gov.uk/topic/environmental-management/waste) published by the Environment Agency and Defra, which includes this guidance.

How to work out if your material meets the by-products and end of waste tests

You can work out if your material meets end of waste status by:

- following a relevant end of waste regulation
- meeting quality protocols and resource frameworks
- doing a self-assessment
- getting an opinion through the Environment Agency's definition of waste service

You can work out if your material meets by-product status by:

- doing a self-assessment
- getting an opinion through the Environment Agency's definition of waste service

End of waste regulations

After 1 January 2021, the UK kept the EU regulations that relate to:

- iron, steel and aluminium scrap (https://www.legislation.gov.uk/eur/2011/333/introduction)
- glass cullet (https://www.legislation.gov.uk/eur/2012/1179)
- copper scrap (https://www.legislation.gov.uk/eur/2013/715)

If your material falls within these regulations, you will need to check if your waste-derived material can meet the requirements to achieve end of waste. If you cannot meet the relevant regulation requirements for your waste, then the material remains waste. If you can meet all the requirements, end of waste is achieved.

The Secretary of State for Environment, Food and Rural Affairs has the power to make further regulations in the future.

Quality protocols and resource frameworks

There are 13 quality protocols available. They are voluntary end of waste frameworks for specific wastes and end uses. If you follow all the criteria in a quality protocol, your material will not be classed as waste. If you do not comply with a relevant quality protocol the Environment Agency will consider your material to be waste unless you can show that the end of waste test has been met.

Check if your waste material or operation can meet a quality protocol (https://www.gov.uk/government/collections/quality-protocols-end-of-waste-frameworks-for-waste-derived-products).

The Environment Agency is reviewing all of the quality protocols. After review, each quality protocol will be republished as a resource framework or withdrawn. See the progress on the waste quality protocols review (https://www.gov.uk/government/publications/waste-quality-protocols-review).

Find out how to request a new resource framework for a waste material (https://www.gov.uk/guidance/request-a-resource-framework-to-show-when-a-material-has-ceased-to-be-waste). The Environment Agency expects industry to pay for developing a new resource framework that they plan to benefit from.

Self-assessment

You can come to an opinion whether your material is classed as non-waste by applying the relevant by-product or end of waste test.

You must take into account any guidance published by the Environment Agency and Defra when making a self-assessment, which includes this guidance.

The Environment Agency may check your self-assessment and they may disagree with the result.

Check the definition of waste service guidance and form (https://www.gov.uk/government/publications/get-an-opinion-from-the-definition-of-waste-service) which explains the information the Environment Agency need to assess if a material meets end of waste status. You should consider this information when doing your own self-assessment.

Definition of waste service

You can ask the Environment Agency for an opinion on if they consider your material:

- is waste
- is a by-product

- has reached end of waste status

Send a request to the definition of waste service (https://www.gov.uk/government/publications/get-an-opinion-from-the-definition-of-waste-service).

Published 31 August 2021
Last updated 11 July 2024 + show all updates