

Dear Sir or Madam

Waste Upholstered Domestic Seating

Information to help you ensure you comply with the existing legal requirements for waste containing Persistent Organic Pollutants (POPs)

We are sending this letter because, as a Waste Collection and/or Disposal Authority, or the operator of a Household Waste Recycling Centre, you are responsible for the collection and management of waste domestic seating.

This letter contains advice about managing waste domestic seating containing persistent organic pollutants. You should read this letter to check and ensure your current activities comply with the law.

Background

Persistent Organic Pollutants (POPs) remain intact in the environment for long periods, and if not disposed of properly become widely distributed geographically. They accumulate in the fatty tissue of humans and wildlife and have harmful impacts on human health and on the environment.

The Environment Agency has undertaken an investigation and confirmed the widespread presence of very large quantities of Persistent Organic Pollutants (POPs) and other hazardous chemicals in both the textiles and foam of upholstered domestic seating.

The law¹ requires that POPs in waste are destroyed to prevent lasting environmental harm and impacts on the food chain. This means waste containing POPs must be incinerated and must not be re-used, recycled or landfilled.

Your Duty of Care means you must make sure the waste you or your contractors handle is described and managed appropriately both by you, and by anyone the waste is transferred to.

Requirements for waste domestic seating containing POPs

We have set out the requirements that apply to upholstered domestic seating waste containing POPs in the Annex to this letter. The following sections are particularly pertinent to waste collection and disposal authorities and their contractors:

- 1: Background Information
- 2: Describing Waste Domestic Seating
- 3: Management and Segregation of Waste Domestic Seating
- 4: Reuse of Upholstered Domestic Seating Waste Containing POPs

¹ The Persistent Organic Pollutants Regulations 2007 (as amended) and Retained Regulation (EU) 2019/1021 on persistent organic pollutants as amended by the Persistent Organic Pollutants (Amendment) (EU Exit) Regulations 2020.

In summary

Waste upholstered domestic seating containing POPs must not be:

- landfilled
- mixed with other non-POPs containing wastes
- re-used or recycled

Waste upholstered domestic seating containing POPs must only be

- sent for incineration, or
- used as a fuel in for example a cement kiln.

What action should you take?

You must review your procedures to ensure they are compliant with the requirements set out in Annex 1 and make any changes necessary to prevent non-compliance.

Please respond to this letter to confirm your waste management activities are compliant and all the upholstered domestic seating you are responsible for is being sent for incineration.

You should respond no later than 31st December 2022 to POPsinSOFAS@environment-agency.gov.uk.

Compliance and Enforcement

We want to help you comply with the law. We will undertake an assessment of compliance across the sector from 1st January 2023. We will then consider our response to any non-compliance we find.

Where we identify non-compliance, we will work with those responsible to bring them into compliance.

You can find information on our approaches to enforcement in our Enforcement and Sanctions policy. <https://www.gov.uk/government/publications/environment-agency-enforcement-and-sanctions-policy/environment-agency-enforcement-and-sanctions-policy>

Contacting Us

We will continue to work with our key Stakeholders, which includes the Local Government Association (LGA), National Association of Waste Disposal Officers (NAWDO), Environmental Services Association (ESA), Chartered Institute of Waste Management (CIWM), Charity Retail Association and Re-Use Network to help deliver a high level of compliance. They will be invited to participate in a 'Resolver Group' to support customers in delivering compliance.

If you are a member of one of these bodies, you may wish to seek advice from them and raise any questions through them.

Alternatively, if you need additional advice or support on the matters referenced in this letter, and want to contact us, please use the following e-mail address, refer specifically to this letter on Waste Domestic Seating and POPs, and indicate clearly which section of the guidance your question is about.

creating a better place
for people and wildlife



This will help us respond to your enquiry more quickly.

E-mail: POPsinSOFAS@environment-agency.gov.uk

A handwritten signature in black ink, appearing to read "Vernon Smith", written over a horizontal line.

Vernon Smith BSc(Hons) CBiol MRSB
Waste and Industry Regulatory Services Manager



Operations
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Annex

POPs Guidance for Domestic Seating

Section 1: Background Information

1.1: Introduction

Many items of waste upholstered domestic seating contain high levels of persistent organic pollutants (POPs). These were used as flame retardants in covers and foams.

The [Persistent Organic Pollutants Regulations 2007](#) place strict controls on the management of these waste. You must ensure that the POPs are destroyed (or irreversibly transformed), which will require incineration.

The controls apply to both items of upholstered domestic seating that have been segregated and those that have been mixed with other waste. In addition, any residues from treatment of items of waste upholstered domestic seating (or mixed waste containing them) that contain POPs also need to be destroyed.

The controls apply to these items irrespective of whether they are individual items, a separate fraction of such items, or items present in mixtures of other wastes. They also apply to any waste stream arising from the treatment of these items that the POPs (that the law requires to be destroyed) end up in.

This guidance provides advice on how to comply with the law to businesses, local authorities, and charities. It is not intended for use by householders.

1.2: What are POPs and why are they important?

Persistent organic pollutants are chemicals that remain intact in the environment for long periods, become widely distributed geographically, accumulate in the fatty tissues of humans and wildlife, and have harmful impacts on human health or on the environment.

There is an international agreement, The Stockholm Convention, under which the UK has committed to manage waste containing POPs in a way that prevents these impacts from occurring.

1.3: What is domestic seating waste, and which items may contain POPs, and how can I tell?

Waste domestic seating includes any item of seating of a household type from households or businesses that is waste, for example sofas, sofa beds, armchairs, kitchen and dining room chairs, stools and foot stools, home office chairs, futons, bean bags, floor, and sofa cushions.

Upholstered items of domestic seating waste may contain POPs. This includes items with any part made of or containing leather, synthetic leather, other fabric, or foam.

If an item of domestic seating waste is upholstered you should assume that it contains POPs, and manage it as a POPs waste, unless you can demonstrate that it does not contain POPs. Further information can be found in the section on [identification and separation](#) of items containing POPs.

The following items are not considered 'domestic seating' for the purposes of this letter:

- Items that are not upholstered (for example a wooden chair without a cushioned or textile back, seat, or arms). These should not contain POPs.
- Deckchairs, mattresses, curtains, blinds, and beds
- Wastes from the manufacture of new domestic seating that are known not to contain POPs

Section 2: Describing upholstered domestic seating waste.

This description applies to these items even if they have been mixed with other waste, for example in a skip or bay of residual municipal or other waste.

2.1: How should I describe and classify items of upholstered domestic seating waste on waste transfer notes?

Items of upholstered domestic seating waste that may contain POPs must be

- Described as items of '*domestic seating waste containing POPs*' on waste transfer notes
- Classified with list of waste code 20 03 07, and

The relevant chemicals (see 2.2) should also be identified on the document.

2.2: What POPs and other chemicals could upholstered domestic seating waste contain?

You need to know what chemicals may be present to describe your waste and comply with [Duty of Care](#). You must clearly identify the presence of POPs in your description and should identify the following chemicals. You may rely on the information below, and are not expected to undertake additional sampling and analysis unless you intend to demonstrate that POPs are absent.

From our sampling and analysis of items of upholstered domestic seating waste we know that many contain one of the following POPs on the rear of the covers and in the foam

- Decabromodiphenyl Ether (DecaBDE) (the most common)
- Hexabromocyclododecane (HBCDD)
- Pentabromodiphenyl Ether (PentaBDE)
- Tetrabromodiphenyl Ether (TetraBDE)

These chemicals may also contaminate lining and wadding in contact with foam or covers.

In addition, the following hazardous chemicals are likely to be present

- Antimony Trioxide – a carcinogenic synergist often used with DecaBDE.
- Medium Chain Chlorinated Paraffins (MCCP) – often used in synthetic leather to make it flexible

Other flame retardants, and hazardous components of PVC, may also be present.

Section 3: Management and Segregation of Waste Domestic Seating

3.1: How must I manage items of upholstered domestic seating waste?

You and your contractors must incinerate items of upholstered waste domestic seating containing POPs, or mixed waste containing such items.

You must not²

- use any other waste recycling, treatment, or disposal methods for waste, or mixed waste containing, items of upholstered domestic seating waste containing POPs
- [Reuse](#) items of upholstered waste domestic seating waste containing POPs (see section 5 on Reuse)

You may send the waste to an intermediate site that

- will [prepare it for destruction](#) if the destination incinerator requires this, or
- [identifies and separates](#) items of seating containing POPs from other items of seating before sending them for destruction.
- [Separates the materials](#) containing POPs from the other materials in the waste domestic seating.

3.2: Can I Landfill items of upholstered domestic seating waste?

No, you and your contractors must not landfill items of upholstered domestic seating, or wastes arising from their treatment, that may contain POPs.

This includes

- segregated items of upholstered domestic seating waste
- mixed waste containing items of upholstered domestic seating waste
- shredded or broken up waste arising from the treatment of waste containing items of upholstered domestic seating waste ((including refuse-derived fuel (RDF) and solid recovered fuel (SRF))
- trommel fines from processes treating waste containing items of upholstered domestic seating waste, including the dust from air filtration systems.

Landfill operators will be expected to include appropriate checks in their waste acceptance procedures and waste acceptance criteria testing to ensure they exclude wastes of this type.

They may only landfill items of upholstered domestic seating that have been confirmed to contain no POPs by a site that have documented processes and procedures to [identify and separate](#) items of seating containing POPs.

3.3: Do I have to segregate upholstered domestic seating waste?

Yes, you must take all reasonable steps to avoid mixing these items with other waste during waste production, storage, collection, and treatment. They should not be mixed with other waste, for example in a skip, on a vehicle, or a bay at a Household Waste Recycling Centre.

You should ensure that suitable arrangements are put in place to ensure that your business and your customers segregate these items.

You can collect them on the same vehicle with other waste if you keep them separate, to remove the risk of contamination of other waste with POPs.

² *The Law allows only four Recovery or Disposal options for waste containing POPs, and only then if they reliably destroy the POPs or irreversibly transform them. Incineration and cement kilns (D10 and R1) are the only ones currently available in the UK for domestic seating.

If you do mix, POPs containing waste with non-POPs waste it must all be managed as POPs waste. You must still destroy the POPs even if the mixing has diluted the POPs to below the concentration limit.

We have issued separate advice to incineration operators on mixing that is necessary to [prepare a waste for destruction](#).

3.4: Can I separate items of upholstered domestic seating from mixed waste (e.g., a skip)?

Yes, if you can demonstrate that they have not contaminated the other waste.

Contamination may occur if the item is damaged and the underside of the seating cover is exposed and in contact with other waste, or if pieces of foam, cover, lining, or wadding material are released from the item.

If any contamination has occurred (or you are unsure if it has), for example if textile or foam has been released, or if you are unable to remove the item then the whole mixed waste should be managed as POPs waste.

You should also review your procedures and take steps to ensure that further mixing does not occur in future.

3.5: Can I compact upholstered domestic seating waste?

You may compact upholstered domestic seating waste for storage or transport provided you have procedures in place to prevent, contain and collect any releases of POPs contaminated material and dust, that compaction may generate, to send for destruction.

3.6: How do I incinerate upholstered waste domestic seating?

Waste upholstered domestic seating can be incinerated at a suitably authorised municipal or hazardous waste incinerator (or cement kiln).

The operator of the incinerator or cement kiln should review their procedures and identify what treatment is necessary to [prepare the waste for destruction](#).

Where an incinerator is unable to accept waste, for any reason, waste containing upholstered domestic seating may be stored until the incinerator is able to accept waste or diverted to another incinerator or cement kiln for destruction. Waste must not be diverted to other disposal or recovery options, for example landfill. This applies to both planned and unplanned outage.

The incinerator operator should ensure that suitable plans are in place with customers to anticipate and manage such occurrences.

3.7: How do I prepare the waste for destruction?

Different incinerators may need the waste to be presented in different ways. The incinerator operator may require the waste to be broken up or shredded, and mixed with other waste, to facilitate loading, control calorific value, and optimise combustion.

The law does not allow the mixing with other waste for incineration. However, in accordance with guidance from the Basel Convention, we may allow this in certain circumstances where it is technically necessary for that incinerator.

This preparation should be done at the incinerator site or, where that is not possible, it can be done at an intermediary site to meet your specification. You must ensure that for shredding activities:

- Any plant used is located inside a building
- Appropriate measures are in place to prevent dust and other particles escaping the building,
- Any fines, dust, or particulates produced by the process are sent for destruction (or irreversible transformation).
- Any material removed from the waste **after** the domestic seating is broken up or shredded (for example removal of metal for recycling) is sent for destruction (or irreversible transformation) if it is contaminated with dust or particulates (note: destruction may include R4 smelting for metal)
- Waste is suitably contained to prevent loss of material and escape of dust/particulates during storage and transport.

Appropriate measures to contain dust may include abated local exhaust ventilation (LEV) for both new and existing shredders, particularly where the shredder is not located in the fuel hall of an incinerator.

Where the waste is broken up, rather than shredded, you should consider if your activities may release POPs and what measures are needed to prevent and capture any emissions.

Requirements are likely to be site specific so you should contact the environment agency for advice on your management system and permit if you wish to install plant to prepare waste on your permitted site.

Shredded material prepared to the specification required for destination incinerator or cement kiln may be classified with a 19 12 10 waste code but must be clearly described as containing POPs from domestic seating.

Fines should be assessed and classified as 19 12 11*/12 as explained in the Joint Agencies' technical guidance on waste classification (WM3), and clearly described as containing POPs from domestic seating and managed as such.

We recommend that you seek health and safety advice on [local exhaust ventilation](#).

3.8: Can I export waste for incineration?

You may only export upholstered domestic seating waste for incineration with energy recovery (R1) in the EU and EFTA.

For processes outside the UK, EU and EFTA the Environment Agency may request information on the operational parameters of the incinerator to ensure that it is suitable for POPs.

You may also [prepare the waste for destruction](#) where the destination incinerator specifically requires this for the destruction of POPs.

The export of RDF or SRF derived wholly or partly from items of upholstered waste domestic seating under a notification that clearly states that this waste contains POPs and is subject to the destruction requirements of the Stockholm Convention.

The Environment agency will provide support to the export of waste domestic seating for destruction. If you have an existing notification for RDF, that is or will be partly derived from waste domestic seating and does not clearly identify the presence of POPs, please contact us for advice. POPsInWaste@environment-agency.gov.uk

3.9: Can I Identify and separate items containing POPs?

Yes, you can identify and separate items of upholstered domestic seating that contain POPs from those that do not. For example, to

- identify items of waste upholstered domestic seating that do not contain POPs and can be reused for domestic seating.
- Reduce the volume of upholstered domestic seating that you must incinerate.

You can demonstrate that the item does not contain POPs by using X-Ray Fluorescence (XRF) scanning for bromine in the foam and rear of leather, synthetic leather or other fabric covers. A level less than 0.1% bromine in these components would demonstrate that there is insufficient brominated flame retardant present to be a concern.

You should note that not all brominated flame retardants are POPs, however about 80% of bromine in covers identified in the Environment Agency (2020-21) study were confirmed to be POPs.

Before you do this, you should

- have appropriate training in use of XRF and are using a suitable device before attempting this.
- Read the Environment Agency's study of POPs in domestic seating waste, that used this technique, to understand what is required (copies are available on request).
- Contact the Environment Agency for advice to help identify if any changes to your permit and management system are required

3.10: Can I separate the materials containing POPs from the other materials?

Yes, individual items can be manually dismantled to remove **all** the textiles and foam for incineration. The remaining metal, wooden and plastic frame can then be recycled or reused (e.g., re-upholstered).

You must hold a suitable authorisation to do so, for example an environmental permit.

You must ensure that

- all foam and textiles are reliably removed. Any residual pieces or material attached to the frame would remain subject to destruction requirements.
- releases of material containing POPs, as dust or fragments, are prevented or contained and managed as POPs waste.
- Removed materials should be stored in a building or under cover.
- There are no releases of POPs to sewer or surface water

We recommend you seek appropriate advice on the health and safety aspects of your procedures.

Mechanical treatment processes that shred the waste before separating materials may result in contamination of the other materials. These processes should not process mixed waste. If you want to use a mechanical treatment process, you should contact the

Environment Agency for advice. We would expect it to be capable of reliably separating the foam and textiles, and any particulates arising from treatment, containing POPs from the other materials in the domestic seating waste without contaminating them. Where appropriate, the Environment Agency may provide you with an authorisation to do so on a case-by-case basis.

4: Reuse of Upholstered Domestic Seating Waste Containing POPs.

Reuse of waste containing POPs

The focus of the Stockholm Convention is on ensuring that products are managed safely, as waste, at the end of their life. It does not apply to reuse of second-hand products that are not waste.

To enable you to comply with the law it is important to understand which items of upholstered domestic seating are waste, and which are not.

- You must not reuse waste containing POPs.
- You may reuse products that are not, and have not previously been, waste.
- You may reuse products (or waste) that do not contain POPs

You must send waste containing POPs for destruction (or irreversible transformation). This means that you cannot turn the waste into a product for reuse. It must remain waste and waste controls apply.

Collection of items from a household or business by a Charity, Local Authority or Business

A collector who is calling at different premises to pick up used items of domestic seating would normally classify the collected items as waste, and these would be covered by a waste transfer note.

Where the collector is solely collecting those items that are suitable for reuse and an assessment is carried **out before** accepting the items, these can normally be considered to be second hand goods (not waste) if the assessment demonstrates that all of [the conditions for remaining a product](#) and not becoming waste are met.

Where the collector is collecting items that include those that are both reusable and those that are not (Examples of this may include retailer takeback schemes, bulky item collection services, or house clearance where the expectation of the householder (or business) is that unwanted items will be removed).

- Where the primary assessment is carried **out before** removing or accepting the transfer of the items from their owner, those that are reusable can normally be second hand goods (not waste) if the assessment demonstrates that all [the conditions for remaining a product](#) and not becoming waste are met. Those that are not reusable would normally be classified as waste. The collector may collect both product and waste items on the same vehicle provide the two are not mixed and the products are managed appropriately.
- Where the assessment is carried **out after** accepting the items, these would normally be classified as waste. The collector would remove items irrespective of whether

they are reusable and would identify those that are or are not reusable later.

[Additional checks](#) would be needed to demonstrate that no POPs are present in the waste before the item can be legally reused.

Items accepted without being assessed for re-use would normally be classified as waste.

Re-use criteria can be communicated to householders and businesses with unwanted items to enable them to assist the collector with assessment.

Delivery to a Household Waste Recycling Centre by a householder

If a householder delivers an item to the reuse area of a household waste recycling centre, it can be assumed that the intention of the householder is for the item to be re-used and it will not normally be considered waste unless when held and assessed by the HWRC any of [the conditions for remaining a product](#) and not becoming waste are not met.

Staff at the HWRC may engage with householders to discuss whether the item could be taken to the reuse area before it is deposited in the waste area. If, after the engagement, the householder takes the item to the reuse area, as above, it can be assumed that the intention of the householder is for the item to be re-used.

Once an item has been deposited in a waste area of the site it would normally be classified as waste. [Additional checks](#) would be needed to demonstrate that no POPs are present before the item can be legally reused.

If the HWRC has no reuse area, then the items delivered there by the householder would normally be classified as waste. [Additional checks](#) would be needed to demonstrate that no POPs are present before the item can be legally reused.

Conditions for remaining a product/second hand good and not becoming waste

An item that is going to be reused will only remain a product and not become waste if the following conditions are met:

- It will be reused for the same purpose for which it was designed
- 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
- The use is lawful (for example, it has the appropriate fire safety labels)
- 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 (such as placement in a skip with items of waste)

The primary assessment should normally take place at the place where the transfer of the item from its owner takes place (for example at the home or business it is collected from, or at the Household Waste Recycling Centre or charity shop the householder takes it to).

For further information, see the guidance on how to [check if your material is waste](#)

Additional checks to demonstrate that the waste does not contain POPs

Where indicated in the preceding text that the item would normally be classified as waste, additional checks will be needed to demonstrate that no POPs are present before the item can be reused. This can be done by demonstrating that the levels of bromine on the rear of the covers of the item, and in the foam of the item, are below the concentration limit for PBDE POPs in waste (currently 1000 mg/kg). Further information on [how to identify items](#) containing POPs is provided.