

POPs – LEGISLATION AND WASTE MANAGEMENT

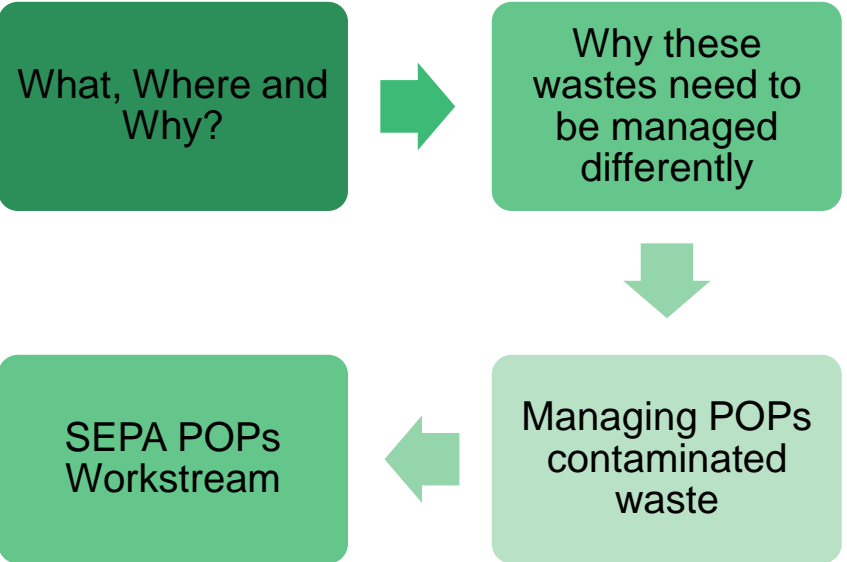
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What we will be covering ...



POPs – Where are we now?

What Are POPs?

POP POPs are a group of Hazardous manmade chemicals:

2009

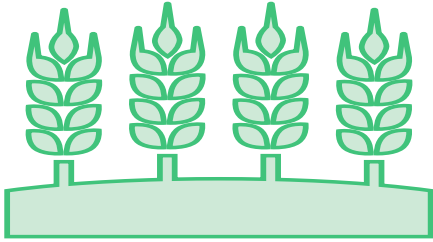
- Alpha hexachlorocyclohexane (hexachlor)
 - Used widely during the production boom after WWII
- Hexachlorobiphenyl
 - Initially beneficial however unforeseen effects on human health and environment
- Pentabromodiphe.
 - Initially beneficial however unforeseen effects on human health and environment
- Chlordecone
 - Remain intact in the environment for a long time
- Perfluoroo.
 - Remain intact in the environment for a long time
- Beta-endosulfa
 - Can be distributed long distances

2015

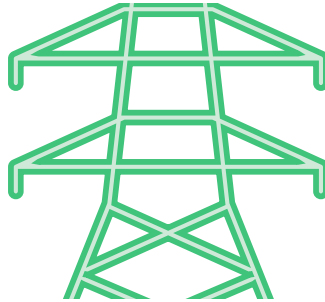
- Hexachlorobutadiene (HCBD)
 - They accumulate in the fatty tissue of humans and wildlife
- Pentachlorophenol
 - They accumulate in the fatty tissue of humans and wildlife
- Forever Chemicals.....

Other chemicals shown: Toxaphene, DDT, Polychlorinated Dibenzo p-dioxin (PCDDs), p,p'-dicofol, o,p'-dicofol, Pentadecafluorooctanoic acid (PFDA).

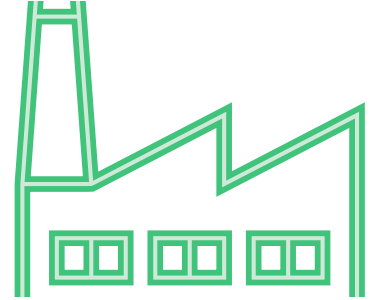
POPs Waste Streams - Current



Pesticides - DDT, Aldrin, Eldrin, Mirex, etc.



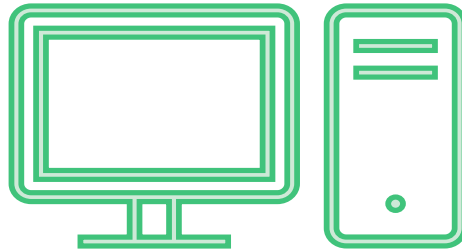
PCBs - Transformers, Capacitors, Plastics, Paints, etc.



Dioxins and Furans - Industrial processes, waste treating, uncontrolled combustion, etc.



Fire Fighting Foams - PFOS and PFOA, PFAS



WEEE - POP BDEs

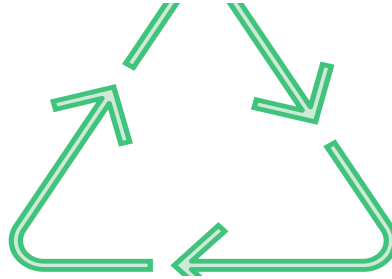


WUDS - POP BDEs

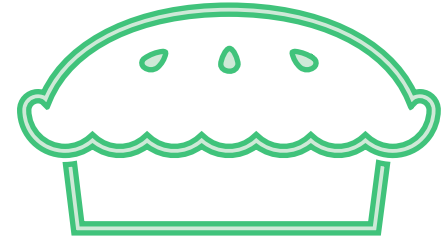
POPs Waste Streams - Future



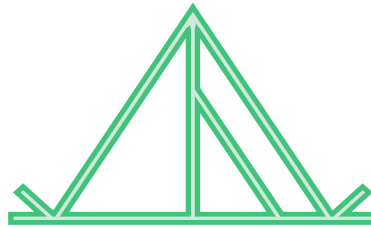
C & D Waste



Recycled Materials



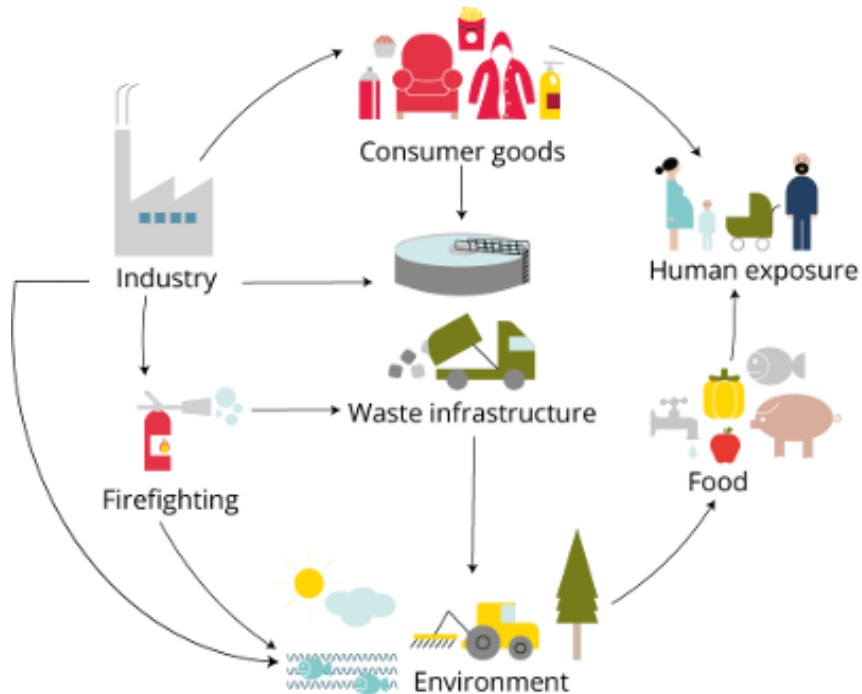
Non-Stick Cookware



Waterproof Textiles

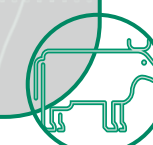
POPs – Where are we now?

Why Do POPs Matter?



Human Health and Environment Impacts

- Endocrine disruption
- Cardiovascular diseases
- Cancers
- Diabetes
- Birth defects
- Dysfunctional immune and reproductive systems



POPs – Forever Chemicals and Your Waste

POPs Framework

Stockholm
Convention

European
POPs
Regulations

UK POPs
Regulations

Stockholm Convention



Global Treaty

- Protect human health and the environment from POPs
- Adopted in 2004
- 152 Signatories
- UK is one of the original members

Parties must take measures to:

- Eliminate the production and use of chemicals listed in Annex A
- Restrict the production and use chemicals listed in Annex B
- Reduce the unintentional releases of chemicals listed in Annex C

Additional duties on signatories include:

- Identification and management of stockpiles
- Identification of competent authority
- Reporting, etc.



UK POPs Regulations – summary of key duties

Reg. 5: Stockpile

- Permitted uses for some POPs wastes (transition) - Notification to CA
- When no longer permitted, stockpile is a waste.

Reg. 7: Waste Management & Annex V

- Storage, Movement, Treatment and Disposal restrictions

Reg. 9: Implementation Plan

- UK is required produce a National Implementation Plan detailing past, present and future commitments under the convention.

Reg. 19: Competent Authority (CA)

- MS to designate a CA
- SEPA are the CA for Scotland

Annexes I to IV

- List of POPs, POPs subject to restrictions and POPs subject to release reduction provisions
- Waste Management controls incl. disposal and recovery options

Regulation 7 - Waste Management

Avoid Contamination

- Producers/Waste Holders to avoid where feasible contamination of POPs or POPs contaminated waste with other wastes (Reg. 7(1))

Treatment Standard

- Disposal/Recovery must destroy or irreversibly transform POPs content (Reg. 7(2))

Treatment Limitations

- Disposal or recovery operations that may lead to recovery, recycling, reclamation or re-use on their own of POPs is prohibited (Reg. 7(3))

Limited Derogation

- Derogation allowing disposal to permanent storage under certain conditions (Reg. 7(4))

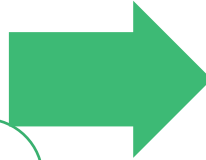
Traceability

- Member States to ensure the control and traceability of waste containing POPs or contaminated by POPs (Reg. 7(6))

Managing POPs Contaminated Waste (1)

Check if your waste contains POPs

- MSDS and/or Manufacturer Information
- Chemical Analysis
- XRF testing
- Refer to Agency guidance
- If you don't know assume POPs!!!!

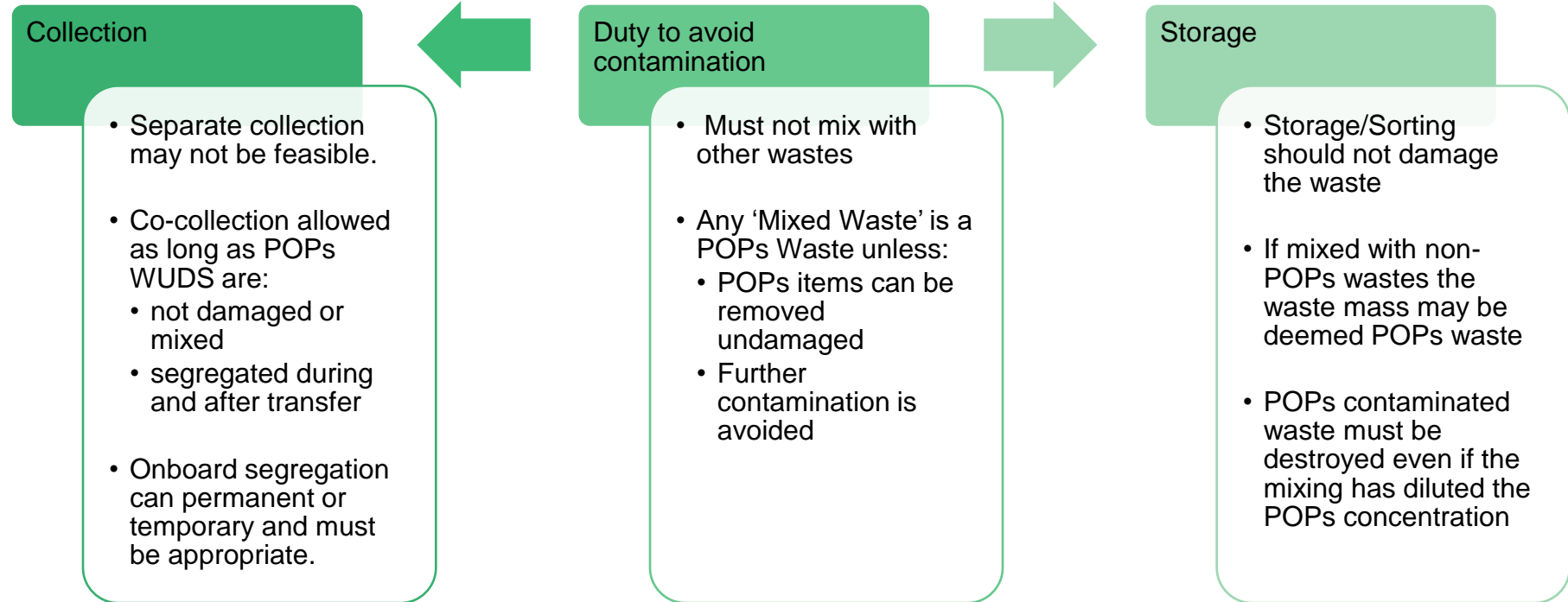


Classify your waste correctly

- Waste holders have a duty to describe their waste fully, to ensure that it is handled appropriately
- EWC and description must reflect presence of POPs
- SWCN and WTN should detail likely POPs present
- Appropriate EWC may not always be Hazardous!!!

Waste holders have a duty of care to ensure the person receiving the waste is authorised to do so!

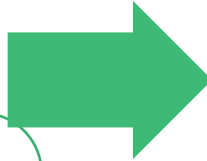
Managing POPs Contaminated Waste (2)



Managing POPs Contaminated Waste (3)

Treatment (Removing POPs)

- POPs waste can go to a suitably authorised treatment plant that can separate the items, components, or materials containing POPs from the other waste or materials
- The separated items, components, or materials containing the POPs must be destroyed
- POPs waste must not be mixed with other waste before or during separation
- Processes must control and mitigate the release of POPs

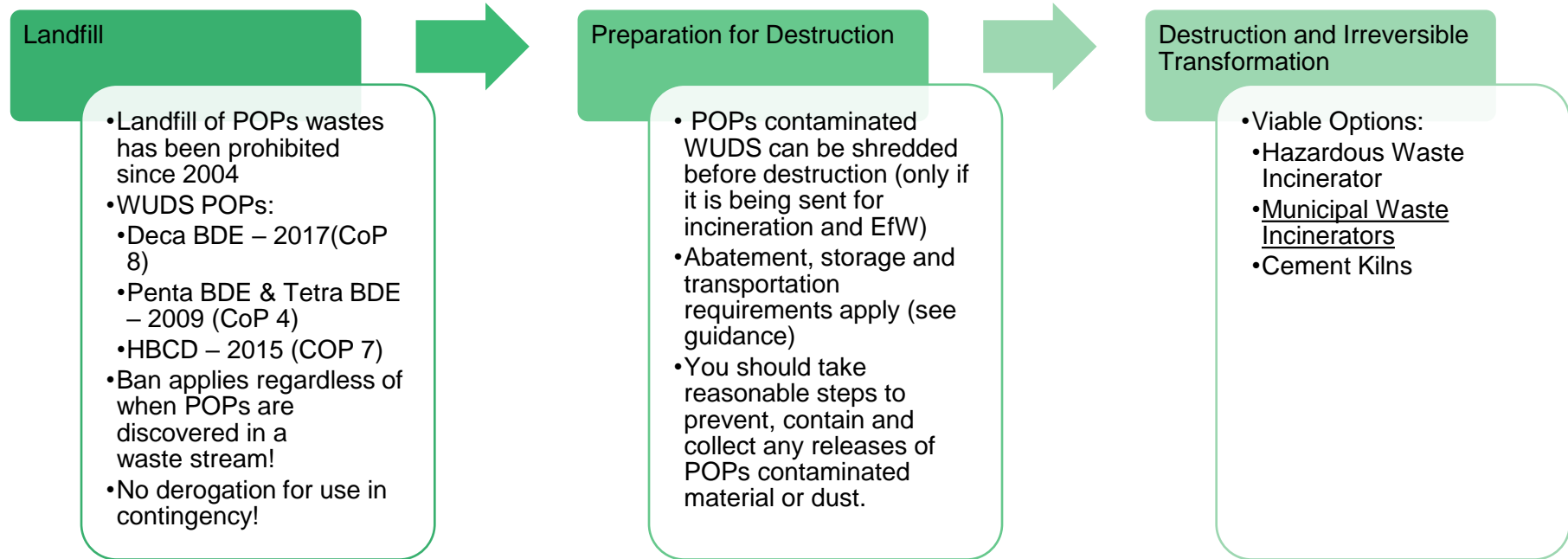


Treatment (Recovery)

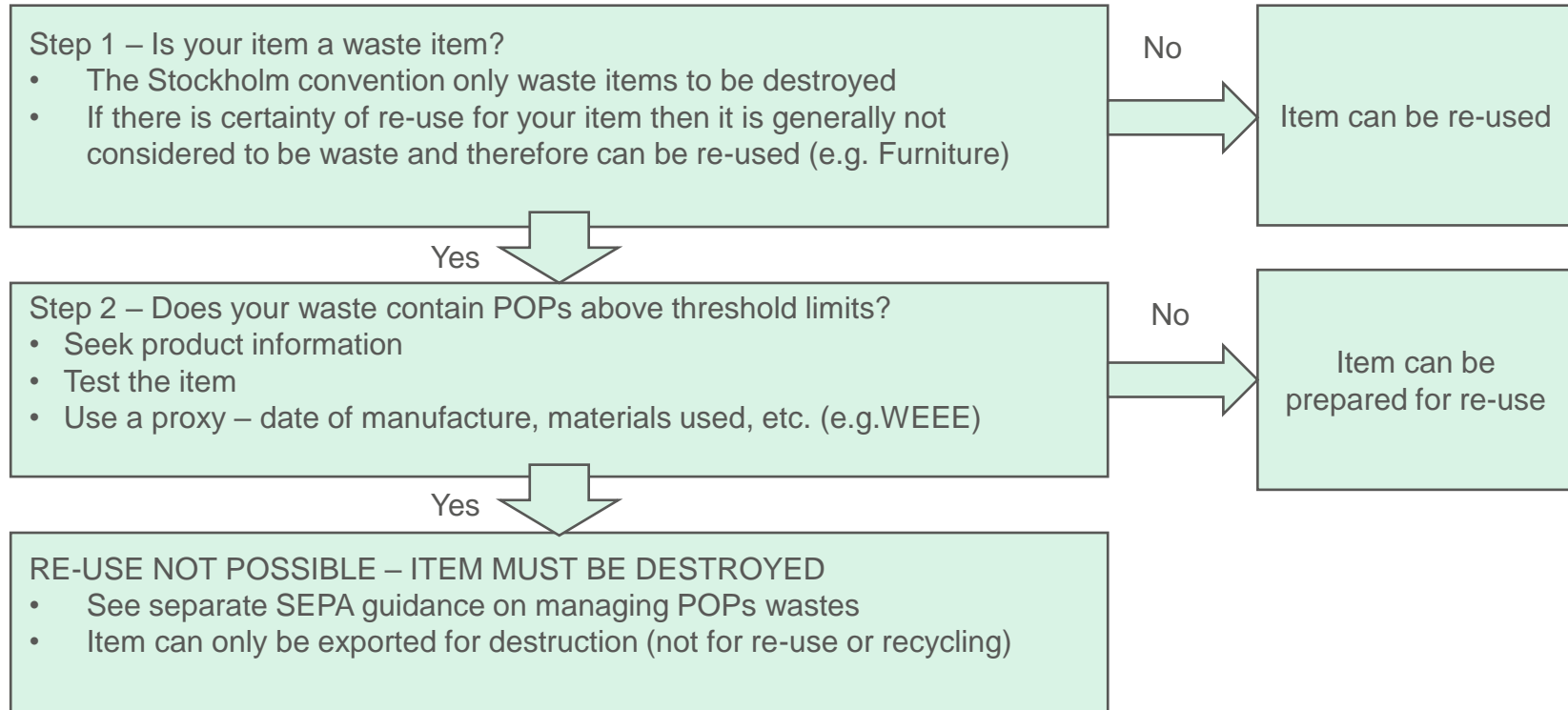
- You can recover waste containing POPs where the recovery process destroys the POP (ex. incineration with energy recovery)
- Operator can treat the waste to remove or separate materials that contain POPs from those that do not
- Any POPs or POPs wastes must be destroyed
- Any separated non-POPs material can be recycled or recovered
- Processes must control and mitigate the release of POPs

If receiving waste ask for evidence to confirm presence of POPs.

Managing POPs Contaminated Waste (4)



Re-use of Items containing POPs



POPs - Where are we now?

What have SEPA been doing?

- Chemicals Strategy
- SEPA working groups
- Engagement with DAs and other UK Environment Agencies
- PCBs: maintenance of PCB register, ongoing engagement with Scottish Government to ensure 2025 deadline is met, cohort methodology ...
- Guidance:
 - WEEE: Engagement with industry, development and publication of Classification guidance, developing Re-use position...
 - Fire Fighting Foams: Engagement with industry, development and publication of Classification guidance, collation of stockpile information
 - Waste Upholstered Domestic Seating (WUDS): Engagement with industry, publication of guidance, tRPS for Shredding, tRPS for Storage, SEPA officer pack, FAQs, developing re-use position, etc.



 Incoming ELVs and Construction Waste

Thank you

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