



Total Waste Management

| A Strategic Partnership Approach |

Waste classification and assessment - WM3

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WM3

➡ WM3 is the Environment Agency's guidance on waste classification and assessment.

➡ It is in essence:

- a procedure (chapter 2)
- 4 supporting appendices
- and some examples

to enable you to classify your waste



The legal side – what has changed?

Waste classification in England is now based directly on:

- EU List of Waste Decision
- Annex III of the Waste Directive
- CLP Regulation

Revoked:

- List of Waste (England & Wales) Regulations 2005

By: The Hazardous Waste (Miscellaneous Amendments) Regulations 2015, came into force on 1st July 2015.

How is waste classified?

There is seven step procedure for waste classification

1. Check if it needs to be classified
2. Identify the possible code(s)
3. Identify the assessment needed (if any)
4. Determine the composition of the waste
5. Identify the hazardous substance(s)
6. Assess the hazardous properties
7. Assign the correct EWC code.

How the List of EWC codes works

This list contains

- 20 chapters numbered 01 to 20
- Each chapter has sub-chapters (xx 01..xx 02 etc.)
- Individual waste codes are in the sub chapters (xx xx 01..xx xx 02 etc.)

Creating 6 digit individual waste codes where

01 01 01

Chapter Sub-chapter Individual waste



Code	Chapter Description	Step (Order of precedence)
01	WASTES RESULTING FROM EXPLORATION, MINING, QUARRYING, AND PHYSICAL AND CHEMICAL TREATMENT OF MINERALS	1
02	WASTES FROM AGRICULTURE, HORTICULTURE, AQUACULTURE, FORESTRY, HUNTING AND FISHING, FOOD PREPARATION AND PROCESSING	1
03	WASTES FROM WOOD PROCESSING AND THE PRODUCTION OF PANELS AND FURNITURE, PULP, PAPER AND CARDBOARD	1
04	WASTES FROM THE LEATHER, FUR AND TEXTILE INDUSTRIES	1
05	WASTES FROM PETROLEUM REFINING, NATURAL GAS PURIFICATION AND PYROLYTIC TREATMENT OF COAL	1
06	WASTES FROM INORGANIC CHEMICAL PROCESSES	1
07	WASTES FROM ORGANIC CHEMICAL PROCESSES	1
08	WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS	1
09	WASTES FROM THE PHOTOGRAPHIC INDUSTRY	1
10	WASTES FROM THERMAL PROCESSES	1
11	WASTES FROM CHEMICAL SURFACE TREATMENT AND COATING OF METALS AND OTHER MATERIALS, NON-FERROUS HYDRO-METALLURGY	1
12	WASTES FROM SHAPING AND PHYSICAL AND MECHANICAL SURFACE TREATMENT OF METALS AND PLASTICS	1
13	OIL WASTES AND WASTES OF LIQUID FUELS (except edible oils, and those in chapters 05, 12 and 19)	2
14	WASTE ORGANIC SOLVENTS, REFRIGERANTS AND PROPELLANTS (except 07 and 08)	2
15	WASTE PACKAGING, ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED	2
16	WASTES NOT OTHERWISE SPECIFIED IN THE LIST	3
17	CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)	1
18	WASTES FROM HUMAN OR ANIMAL HEALTH CARE AND/OR RELATED RESEARCH (except kitchen and restaurant wastes not arising from immediate health care)	1
19	WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE	1
20	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS	1

Using the List

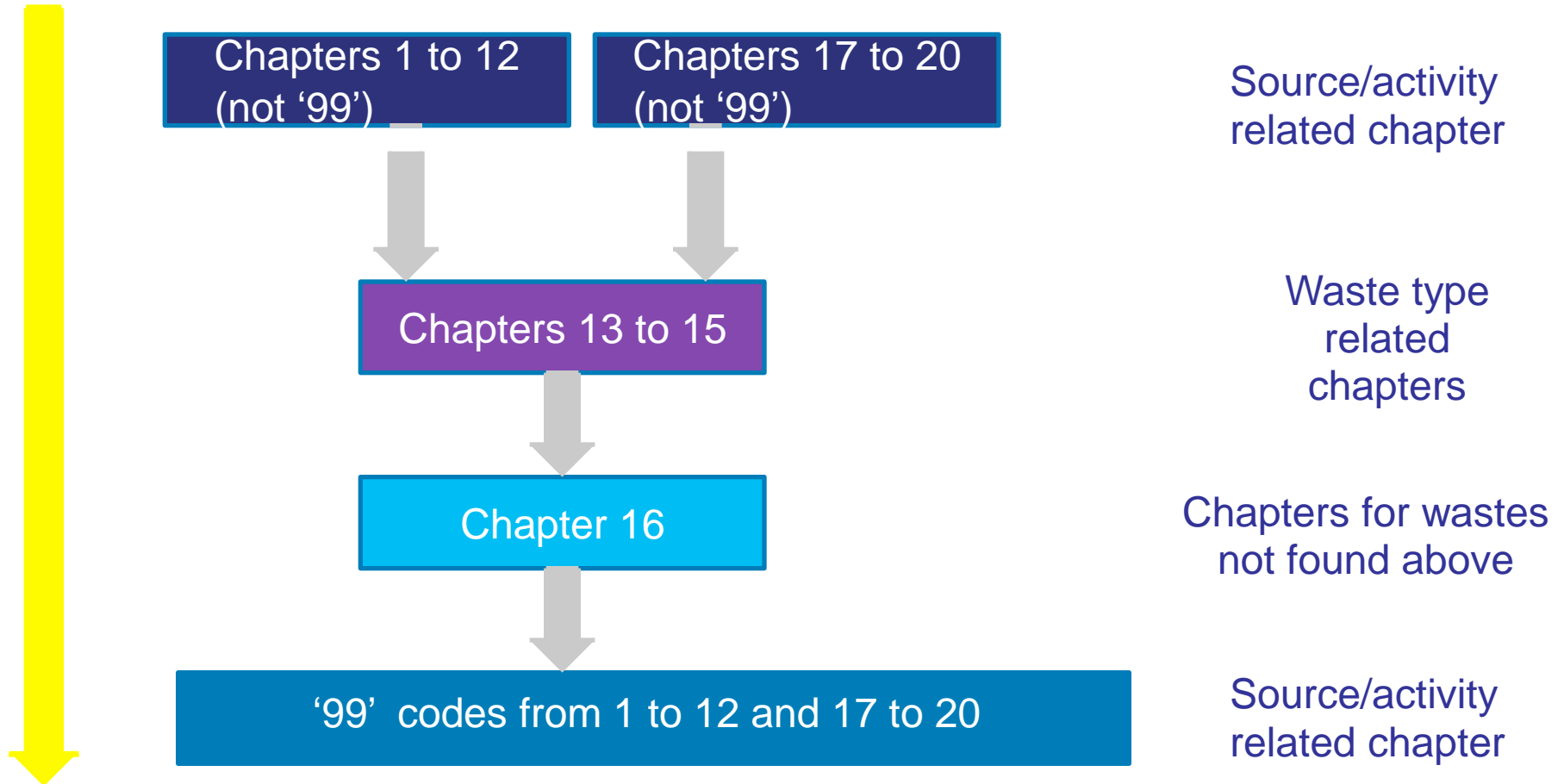
The list has legal instructions for use

- These must be followed
- They assign an order of precedence to chapters
- And determine what assessment is needed

Please note, it is not just a look up table for wastes.



Using the List



Using the List

One consequence of the order of precedence is

- '99' codes are very rarely accurate
- They usually fit into chapters 13 to 16
- There are very few sites that are permitted to accept them

Municipal offensive waste (20 01 99) is one of only a very few that are correct.

Types of list of waste codes

Appendix A of WM3 classifies waste as

- **Absolute hazardous (AH)**
- Absolute non-hazardous (AN)
- Mirror hazardous (MH) / **Mirror non-hazardous (MN)**

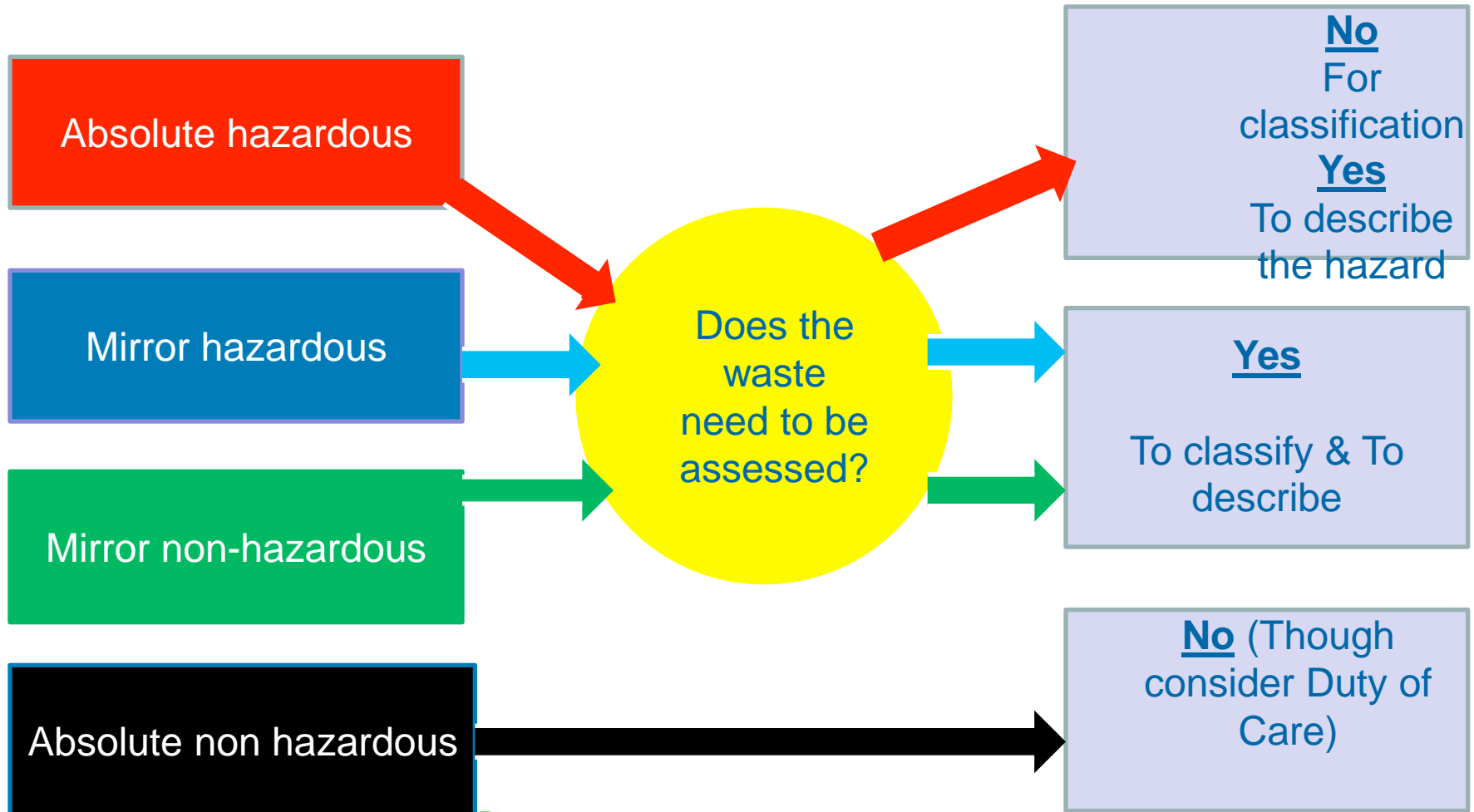
Types of List of Waste Code

Mirror hazardous / Mirror non-hazardous codes

08	WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS		
08 01	wastes from MFSU and removal of paint and varnish		
08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances	MH	
08 01 12	waste paint and varnish other than those mentioned in 08 01 11	MN	

- The classification can only be determined by the assessment of hazardous properties.

The assessment of different types of entry



Assessment of mirror entry wastes

Assessment of the waste is based upon

- Determining its composition
- Identifying any hazardous components
- Comparing these to hazardous property thresholds (appendix C of WM3)

Determining the composition

Three methods may contribute

- product information
- process knowledge
- sampling and analysis (sampling plan)

Including combinations of the above

Note: To move a hazardous waste the composition must be determined in order to complete the consignment note



Hazardous substances

Using the right data sources is critical:

- Up to date Material Safety Data sheet for the specific product(s)
- Table 3.1 of the CLP Regulation ('harmonised')
- Any other available and relevant information
- REACH registered substances database

A quick 'Google' search rarely gives a robust answer



Hazardous substances




✓ Harmonised classification - Annex VI of Regulation (EC) No 1272/2008 (CLP Regulation)

General Information

Index Number	EC Number	CAS Number	International Chemical Identification
603-001-00-X	200-659-6	67-56-1	methanol

ATP Inserted / Updated: CLP00
CLP Classification (Table 3.1)

Classification		Labelling			Specific Concentration limits, M-Factors	Notes
Hazard Class and Category Code(s)	Hazard Statement Code(s)	Hazard Statement Code(s)	Supplementary Hazard Statement Code(s)	Pictograms, Signal Word Code(s)		
Flam. Liq. 2	H225	H225		GHS02 GHS06 GHS08 Dgr	* STOT SE 1; H370: C ≥ 10% STOT SE 2; H371: 3% ≤ C < 10%	
Acute Tox. 3 *	H301	H301				
Acute Tox. 3 *	H311	H311				
Acute Tox. 3 *	H331	H331				
STOT SE 1	H370 **	H370 **				

Signal Words	Pictograms		
Danger			
	Flame	Skull and crossbones	Health hazard

Hazardous Properties

The Hazardous statement codes are grouped together into Hazardous Property (HP) codes in table 2.1 of WM3.

Hazard statement	Description	Hazard Class and Category In Table 3.1 of CLP		Threshold ²	Hazardous Property
H225	Highly flammable liquid and vapour.	Flam. Liq.	2	See Appendix C3	HP 3

There are 15 ‘new’ hazardous properties

- HP1 to HP 15
- For example HP 3 is flammable. Look this up in Appendix C3 “Assessment of HP 3: Flammable” in WM3

Hazardous Properties

Hazard statement	Description	Hazard Class and Category In Table 3.1 of CLP		Threshold ²	Hazardous Property
H200	Unstable explosives	Unst. Expl	n/a	See Appendix C1	HP 1
H201	Explosive; mass explosion hazard.	Expl.	1.1	See Appendix C1	HP 1
H202	Explosive, severe projection hazard	Expl.	1.2	See Appendix C1	HP 1
H203	Explosive; fire, blast or projection hazard	Expl.	1.3	See Appendix C1	HP 1
H204	Fire or projection hazard.	Expl.	1.4	See Appendix C1	HP 1
H205	May mass explode in fire.	Expl.	1.5	See Appendix C15	HP 15
H220	Extremely flammable gas.	Flam. gas	1	See Appendix C3	HP 3
H221	Flammable gas.	Flam. gas	2	See Appendix C3	HP 3
H222	Extremely flammable aerosol.	n/a	n/a	See Appendix C3	HP 3
H223	Flammable aerosol.	n/a	n/a	See Appendix C3	HP 3
H224	Extremely flammable liquid and vapour.	Flam. Liq.	1	See Appendix C3	HP 3
H225	Highly flammable liquid and vapour.	Flam. Liq.	2	See Appendix C3	HP 3
H226	Flammable liquid and vapour.	Flam. Liq.	3	See Appendix C3	HP 3
H228	Flammable solid.	Flam. Sol.	1	See Appendix C3	HP 3
H230	May react explosively even in the absence of air	Chem. Unst. Gas	A	n/a	n/a
H231	May react explosively even in the absence of air at elevated pressure and/or temperature	Chem. Unst. Gas	B	n/a	n/a
H240	Heating may cause an explosion.	Self-React.	A	See Appendices C1 & C3	HP 1 HP 3
		Org. Perox.	A		
H241	Heating may cause a fire or explosion.	Self-React.	B	See Appendices C1 & C3	HP1 HP 3
		Org. Perox.	B		

Hazardous Properties

- Flammable (HP3)
- Toxic for reproduction (HP10)
- Sensitising (HP13)
- Ecotoxic (HP14)

Changes

- More waste will now be flammable (e.g. Diesel)
- Changes from previous thresholds
- Effects of chemical classification changes



Persistent Organic Pollutants

- Mirror entries must also be assessed for POPs
- This is included in the instructions for the list of waste.
- They are listed in WM3 along with their thresholds in Appendix C16.
- To assign a mirror entry code you must have considered the POP concentration.

What you need to do

Waste classifications

- Assessments prior to the 1st July 2015 are out of date because

Wastes may have changed their:

- classification,
- hazardous/non-hazardous status, and/or
- hazardous properties.

So they will need reclassification



Examples and Guidance

- Chapter three gives further guidance on specific waste types
 - including waste soils and Waste contaminated with oils
- There are seven worked examples at the end of Appendix A
 - Co-collected and mixed wastes
 - Aqueous liquids or concentrates
 - End of Life vehicles
 - Municipal batteries
 - WEEE
 - Packaging wastes and contents



Packaging waste and its contents

- If the container clearly contains material, or it is empty but still contains residues it should be classified based upon its contents.
- Where a container has been subject to a decontamination process then it may be classified in accordance with its material of construction.

Reconomy's Safe Practice Plan for FeFRA Members

- Gathering of Material Safety Data Sheets from FeFRA Members
- Classification of MSDS in accordance with WM3 Regulations
- Verification of our Classification is completed & recorded on HazWasteOnline (copies available on request)
- Waste Producers to confirm products being used on site
- Services supplied to cater for sites needs depending on volume
- A consignment note is always completed on every Hazardous Waste Collection (available on our Portal)
- We work along side experienced, qualified waste experts to reuse and recycle your waste keeping diversion from landfill rates high

Thank you for your time