

British Concrete Transport Association

Off-Site Disposal of Concrete Wash Water

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Off-Site Disposal of Concrete Wash Water

In the UK "waste" is defined within the Environmental Protection Act 1990 as:

- Any substance that constitutes a scrap material.
- Any unwanted surplus substance arising from the application of any process
- Any substance that requires to be disposed of as being broken, worn out, contaminated or otherwise spoiled.

This definition means that concrete wash water produced through the washing/cleaning of any piece of plant or equipment is a waste material and should be appropriately treated in accordance with the UK legislation relating to the storage, transport and disposal of wastes.

It is the responsibility of the waste producer to correctly describe the waste materials which he wants to dispose of and also to ensure that his waste is transported and subsequently received (treated and/or disposed) of by suitably licensed person/companies.

These responsibilities are often referred to as the "Duty of Care for Waste Management" and are summarised in our guide.





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Duty of Care for Waste Management

Overview

Legal obligation imposed on individuals and organisations involve in producing, handling or managing waste to ensure that waste is managed responsibly, safely and in a way that protects both human health and the environment.

Identification and Classification of Waste

Waste Classification: Producers of waste must identify whether their waste is hazardous or non hazardous, and classify it according to legal guidelines. Hazardous waste requires special handling due to its potential to harm health or the environment.

Waste Codes: Proper Waste Codes (EWC Codes) must be used to identify the type of waste.

Safe Handling and Storage

Segregation:

Different types of waste should be separated to avoid cross contamination of waste and ensure proper treatment or recycling.

Secure Storage:

Waste must be stored safely to prevent leaks, spills or environmental contamination. This includes using appropriate containers and keeping hazardous waste isolated from nonhazardous. Warning signs and safety barriers to warn site staff and prevent unautorised access to the storage area

Documentation and Storage Waste Transfer Notes (WTNs):

When waste is transferred from one party to another eg producer to carrier, a waste transfer note must be completed. This document details the nature of the waste, the quantity and the parties involved in the transfer.

Consignment Notes for Hazardous Wastes:

For hazardous waste, special consignment notes must be used, providing more detailed information about waste and its handling.

Consignment Notes for Hazardous Wastes:

Records of waste transfers should be kept for a minimum period (usually 2 years for nonhazardous and three years for hazardous) as evidence of compliance with legal duties







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Licensed Waste Carriers and Facilities Licensed Carriers:

Waste producers must ensure that only licensed waste carriers transport their waste. The carrier must be authorised to handle specific waste

Authorised Disposal of Treatment Sites:

Waste must be sent to facilities that are licensed or authorised to accept and process that type of waste, ensuring it is managed appropriately.

Preventing Illegal Waste Disposal

Preventing Fly-Tipping:

Producers must ensure that waste is not illegally dumped (fly-tipped). Producers, carriers, and waste managers must take reasonable steps to prevent this.

Responsibility for Waste:

Waste must be sent to facilities that are licensed or authorised to accept and process that type of waste, ensuring it is managed appropriately.

Environmental Protection & Pollution Prevention

Legal Compliance:

Waste management practices must comply with environmental and health and safety laws, such as regulations governing water and soil pollution air quality and health and safety. **Pollution Control:**

Proper measures must be taken to prevent pollution during the collection, transport, and disposal of waste, including safe storage of hazardous materials and preventing accidental release into the environment.







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Reporting and Monitoring Incident Reporting:

Any accidents, spills or illegal activities related to waste management should be recorded and reported to the site management and the appropriate authorities.

Waste Audits:

Regular audits should be conducted to access waste management practices including storage and disposal as a means of ensuring legal compliance, protection of the environment and the safety of employees.

Training and Awareness Staff Training:

Employers must ensure that all staff handling waste are trained in safe and compliant waste management practices. This should induce the classification segregation. storage and disposal requirements.

Awareness of Legal Obligations:

Businesses and individuals involved in waste management should be aware of their legal responsibilities and ensure they adhere to local, national and international regulations

Concrete Wash Water European Waste Catalogue (EWC) Codes

Untreated:

Compromising an aqueous liquid with highly elevated alkaline (ph 12-14) with associated hazard warning symbols, e.g. caustic being applicable.

16 10 01* Aqueous liquid wastes containing hazardous substances.

Treated:

Comprising an aqueous liquid that has been adjusted to achieve a near neutral pH in the range of pH 6-9.

16 10 02 Aqueous liquid wastes other than mentioned in 16 10 01*







Off-Site Disposal of Concrete Wash Water

The first stage in the disposal of a waste product/material is the development of an accurate description of the waste material and in particular any hazardous or dangerous properties that might be associated with the waste.

This description should include:

- The waste classification code, also referred to as LoW (List of Waste) or EWC (European Waste Catalogue) code -which give classification codes for common types of wastes.
- Whether the waste is hazardous or POPs (Persistent Organic Pollutants) waste.
- The type of premises or business where the waste was produced.
- The name or the substance or substances.
- The process that produced the waste.
- A chemical and physical analysis of the waste and its components.
- Any special problems, requirements or knowledge related to the waste.

Note: You must not use waste acceptance criteria (WAC) results for waste classification purposes.

In connection with the disposal of concrete wash water there is often confusion over the relevant EWC code which should be used.









Untreated Concrete Wash Water: Associated Hazards

A useful way of understanding the hazards associated with concrete wash water is to treat this waste as a product and develop a corresponding safety data sheet.

As a way educating their Clients Mudtech in conjunction with their safety advisors (Llewelyn) has developed an example concrete wash water safety data sheet.

The developed safety data sheet provides a useful way of understanding the hazards associated with untreated concrete wash water and is a useful tool in developing appropriate controls, management and treatment solutions.







Waste Codes

For most wastes you can check the waste code or codes associated with the waste to see if they are hazardous or Persistent Organic Pollutants (POPs) waste.

Some wastes have more than one classification, depending on the possible mix of substances in them. For these wastes, there is a need to work out exactly what is in the waste and how much of it is hazardous or POPs by reference to product safety data sheets and chemical composition (chemical analysis data).

The LoW/EWC is arranged in chapters with specific chapters corresponding to different business operations.

Chapter 17, "Construction and Demolition Wastes (Including Excavated Soil from Contaminated Sites) is frequently the first point of reference for the disposal of construction wastes.

Waste Code Sub heading 17 01 relates to concrete, bricks, tiles and cement with the sub category 17 01 01 covering waste concrete (defined by default as non-hazardous).

This code (17 01 01) relates to a solid material e.g. set concrete and is not relevant to the disposal of a liquid eg Concrete wash water and therefore should not be used in association with the disposal of concrete slurry or concrete wash water.

Inspection of the remaining waste codes included within Chapter 17 indicates that no waste codes relevant to the disposal of treated or untreated concrete wash water are listed within this Chapter.







So What Waste Code is Relevant to Concrete Wash Water?

As concrete wash water is not listed as a Chapter 17 Waste, there is a need to refer to Chapter 16 "Wastes Not Otherwise Specified in the List".

The relevant sub-section of this chapter being 16 10 "Aqueous liquid wastes destined for off site treatment".

Inspection of Chapter 16 10 enables the identification of waste codes

16 10 01* Aqueous liquid wastes containing hazardous substances 16 10 02 Aqueous liquid wastes other than those mentioned in 16 10 01. NOTE - An (*) asterisk at the end of a code means the waste is hazardous.

Both of which could be relevant to the off-site disposal of concrete wash water, but which one to choose?

Concrete wash water consigned for off-site disposal can be in one of two forms. These forms are:

- Untreated Concrete wash water: Comprising an aqueous liquid with highly elevated alkaline pH (pH 12 to 14) with associated hazard warning symbols eg caustic being applicable.
- Treated Concrete Wash water. Comprising an aqueous liquid that has been pH adjusted to achieve a near neutral pH in the range (pH6 to 9).

For the disposal of untreated concrete wash water, the code 16 10 01* (Aqueous liquid wastes containing hazardous substances) may be applicable and could be used.

For the disposal of treated (pH adjusted) concrete wash water, the code 16 10 02 (aqueous liquid wastes other than those mentioned in 16 10 01) may be applicable and could be used.

Waste Codes 16 10 01 and 16 10 02 relate to aqueous wastes and are not considered to being relevant to the disposal of concrete slurry (unset concrete) or the solids settled out of concrete wash water, they relate to the aqueous liquid phase.







Checklist for Removal of Treated or Untreated Concrete Wash Water by Tanker (Aqueous Liquid Phase) - If the answer to any of the questions below is NO then off-site disposal of the waste should be prevented.

In addition to the identification of the correct waste code there is a requirement to ensure that relevant paperwork and permit checks are undertaken in connection with the disposal of the waste.

- Has a Control of Substances Hazardous to Health (COSHH) Assessment been carried out?
- Has a waste carriers certificate for the carrier company been obtained and checked for validity?
- Is the waste carrier licensed to carry the waste ? Untreated Concrete Wash Water EWC 16 10 01* or Treated Concrete Wash Water EWC 16 10 02
- Has the environmental permit/waste management licence for the receiving waste facility been obtained and checked to ensure that they are approved to receive the waste ?
- Is the receiving waste facility licensed to receive/treat the waste? Untreated Concrete Wash Water EWC 16 10 01* or Treated Concrete Wash Water EWC 16 10 02
- For treated concrete wash water (EWC Code 16 10 02) has a waste transfer note being been completed?
- For untreated concrete wash water (EWC Code 16 10 01*) which is a hazardous waste has a hazardous waste consignment note being completed? If yes a signed copy showing the waste was received at the waste facility must be obtained.
- During transport is the waste securely stored in a suitable container to prevent spillages? Liquids must be fully contained during transport to prevent spillage.
- Does the vehicle transporting the waste have correct warning signs displayed? For untreated Concrete Wash Water (hazardous waste) the appropriate ADR placard must be displayed on the vehicle
- Has the waste carrier (driver) been briefed with essential information relating to the waste, eg hazards, spill control measures and emergency measures ?
- Has the quantity of waste that been recorded? Hazardous and Non Hazardous waste quantities need to be separately recorded. Sites producing more than 500 kg of hazardous waste a year must be registered
- Have details of the waste movement been recorded in the site records?



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