



**SUSTAINABLE
CONSTRUCTION
GROUP**

**GUIDANCE
FOR
PROJECT SPONSORS
AND
PROJECT MANAGERS**

GUIDANCE NOTE 3:

**CONSTRUCTION, DEMOLITION AND
EXCAVATION WASTE MATERIALS**

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Central Procurement Directorate
"Helping The Public Sector Deliver Better Public Services"

Central Procurement Directorate

GUIDANCE NOTE 3: CONSTRUCTION, DEMOLITION AND EXCAVATION WASTE MATERIALS

This note deals with the minimisation and proper disposal of construction, demolition and excavation waste in public procurement contracts. It aims to ensure legal compliance with waste related legislation and also to promote best practice in construction.

3.1 DEFINITION

Any substance or object that you discard, intend to discard, or are required to discard is waste and as such is subject to a number of regulatory requirements. The term 'discard' has a special meaning. Even if material is sent for recycling or undergoes treatment in house, it can still be waste.

3.2 WASTE RELATED LEGISLATION

Legislation has been provided with two main intentions:-

- Environmental Protection, administered by Northern Ireland Environment Agency;
- 'The Polluter pays' as exemplified in the Landfill Tax, which is administered by HM Customs & Excise.

3.2.1 Environmental Protection legislation

Nearly all waste is subject to some form of control and a duty of care in how it is stored, transported, transferred and disposed.

The main pieces of legislation with respect to construction are:

Waste and Contaminated Land (NI) Order 1997

The Controlled Waste (Duty of Care) Regulations (NI) 2002 Waste Management – The Duty of Care. A Code of Practice

Hazardous Waste Regulations (NI) 2005

The Controlled Waste (Registration of Carriers & Seizure of Vehicles) Regulations (NI) 1999

Controlled waste refers to household, industrial, commercial, agricultural, mining and quarry waste. Construction, demolition and excavation material that is not re-used on site is a controlled waste.

Some common construction wastes are shown in Appendix 3.1. Each type of waste has a 6-digit European Waste Code that must be used to describe the waste. This code description is used, for example, in transfer notes when waste is transferred between different holders.

Hazardous waste is subject to more stringent controls. It must always be separated and not mixed with other hazardous and/or non hazardous wastes types.

Each movement of hazardous waste (see Hazardous Waste Regulations NI. 2005) must be accompanied by a consignment note bearing a unique code. Consignment notes must be purchased from the Northern Ireland Environment Agency (NIEA). More details about the Hazardous Waste Regulations and Duty of Care can be found in Appendix 3.3.

The Landfill Regulations (NI) 2003 as amended by the Landfill (Amendment) Regulations (NI) 2004 was implemented on 16th July 2005. These regulations may require waste to be tested prior to acceptance at landfill sites. Further guidance will follow from the NIEA and other bodies.

3.2.2 The Polluter Pays – The Landfill Tax

The Landfill tax is chargeable by weight and there are currently (2008/09 tax year) 2 rates:-

- A lower rate of £2.50 per tonne applies to inactive (or inert) waste. Inactive waste could be concrete, stone and rock rubble. However this inactive waste must not be contaminated with active or hazardous waste otherwise the load will be charged at the rate for active or hazardous waste. (Active waste is anything that will decompose in the ground including timber, paper, domestic waste and asphalt plannings).
- The standard rate of £32 per tonne. The Government has stated that this would increase by at least £8 per tonne per year, to reach £48 per tonne as a minimum by 2010/11

In addition to the landfill tax the landfill operator will charge for the operational costs of the land fill site.

3.3 BACKGROUND

The construction industry produces a vast amount of waste and is therefore under pressure to play its part in more environmentally sustainable development.

- The Symonds Group Report (October 2003) estimated that in Northern Ireland Construction, Demolition and Excavation (CD&E) waste was in the range of 2.5 to 3.75 million tonnes per year.
- The Enviro survey for the Environment & Heritage Service (NIEA's predecessor) estimated that 33% of CD&E waste was re-used and recycled and the rest was disposed of, either to legal landfills and exempt sites or illegally.
- The Enviro report estimated legal land filling to be in the region of 0.8 million tonnes per year. This suggests that 0.85 to 1.7 million tonnes of CD&E waste is unaccounted for every year. Part of this unaccounted waste could be due to illegal dumping which is a significant problem.
- The EU Landfill Directive sets out targets of progressively reducing landfill to 35% of the present day levels by 2020.

It can be seen from the previous bullet points that there is great pressure on public procurement bodies to address the problems of:

- reduced available landfill sites; and
- illegal dumping.

A particular problem with illegal dumping is when it occurs in wetlands and flood plain areas. This dumping causes serious ecological damage to bogs and wetlands, which have been described by ecologists as Ireland's 'Rain Forests'. Illegal dumping in flood plain areas also increases the risks of serious flooding to housing and buildings.

The public sector needs to be vigilant to ensure that waste from construction contracts is disposed of legally.

3.4 ROLES AND RESPONSIBILITIES

3.4.1 Generally

The Public Sector should significantly reduce construction, demolition and excavation waste going to landfill by encouraging greater re-use of materials, the use of higher levels of recycled content in construction projects and checking that waste is properly disposed to legal landfill sites. Proper enforcement and observance of the Waste Management Regulations, together with the landfill tax should promote the financial benefits of recycling and re-use of Construction, Demolition and Excavation materials.

The amount of Construction, Demolition & Excavation waste going to landfill can be reduced by:-

- Greater use of cut and fill
- Trenchless technology
- Crushing and re-use of masonry and concrete on site
- Some construction waste can be re-used in bitmac, concrete or as road base materials
- Ensuring surplus materials are considered for recycling off-site
- Segregating waste.*
- Setting targets to ensure that a minimum recycled content of 10% of the total value of materials is used, wherever such materials are specification compliant.
- Setting targets for waste minimisation, recovery rates and waste diverted from landfill for the principal waste materials in the SWMP.

*Historically demolition has produced a lot of unsegregated waste, which was only previously suitable for landfill. However, through proper planning and with segregation of demolition materials, much of this material can be directed for recycling with consequential environmental and possible financial benefits.

3.4.1.1 Site Waste Management Plans (SWMP)

It is recommended that Site Waste Management Plans (or similar) should be required for all contracts over £200K. The contractor can be requested to produce an outline SWMP at tender stage as part of the quality assessment. A more detailed SWMP would be required at construction stage. "Site Waste Management Plans" can be downloaded or viewed from this link [http://www.cpdni.gov.uk/scg_guide_\(swmp\)-2.doc](http://www.cpdni.gov.uk/scg_guide_(swmp)-2.doc) and should be used in appropriate contracts. By using this tool a contractor should manage waste on site and gain operational improvements.

3.4.2. Contracting Authorities and Centres of Procurement Expertise.

The main role and responsibility of contracting authorities and Centres of Procurement Expertise is to ensure legal compliance with Waste Management Regulations.

Contract documentation should include:-

- An Environmental Protection Declaration (see appendix 3.2) which tenderers should sign and return with their tender.
- Specification clauses for Waste Management Duty of Care. Appendices 3.3 & 3.4 show examples of generic contract specification clauses for Waste Management Duty of Care and an example of a Waste Transfer Note. These can be amended or edited as required to suit individual contracts.

3.4.3 Project Managers

3.4.3.1 Pre-Contract Stage

In preparing tender documentation and quality assessment of tender submission, take into account, inter alia;

- Waste Management
- Disposal of Construction, Demolition & Excavation waste;

3.4.3.2 Construction Stage

- Ensure the method statement for disposal of Construction, Demolition & Excavation waste is implemented (see Waste Management Duty of Care Code of Practice, Section 5, Checking Up).

<http://www.ni-environment.gov.uk/dutyofcarecodeofpractise2005.pdf>

- Ensure that the Waste Management Duty of Care Code of Practice is followed
- Ensure waste is properly described (European Waste Catalogue). See Appendix 3.1 for some common construction wastes
- Ensure that the Waste Electrical and Electronic Equipment Regulations 2006 and the Waste Electrical & Electronic Equipment (Waste Management Licensing) Regulations (Northern Ireland) 2006 are complied with. It is expected that waste electrical & electronic equipment (WEEE) will be encountered in soft strip operations. Guidance on WEEE regulations and legislation can be found at:-

http://www.ni-environment.gov.uk/waste/regulation-and-legislation/regulations_weee.htm

A list of products which fall under the WEEE Directive can be found at:-

http://www.ni-environment.gov.uk/waste/regulation-and-legislation/regulations_weee/regulations_weee_annex1b.htm

A list of Authorised Treatment Facilities (ATFs) to which some waste electrical & electronic equipment together with relevant waste transfer notes can be sent to, can be found at:-

http://www.ni-environment.gov.uk/waste/regulation-and-legislation/regulations_weee/regulations_weee_approved_atfs_exporters.htm

- Ensure that the Contractor prepares a Site Waste Management Plan able to report in units of cubic metres, as specified in the Code of Practice. This should be used by the Contractor to monitor and report on performance achieved against the targets set within the SWMP data sheet.
- Ensure that the contractor has copies of the following documentation available for inspection:
 - Schedule of the waste that can be carried
 - All Waste Management Licenses or Exemptions (e.g. for Landfill sites, recycling and transfer stations)
 - Schedule of the Waste categories that can be accepted under the Waste Management Licenses
- Receive copies and check Waste Transfer Notes. These must be kept for 2 years by the producer of the waste
- Receive copies and check (if necessary) Consignment Notes for Hazardous Waste. These must be kept for 3 years by the producer of the waste.
- Check if site is exempt or licensed (NIEA Tel. No. 028 9056 9389 or e-mail wakeuptowaste@doeni.gov.uk)
- Check Effluent Discharge Consent where material is going to an exempt site (NIEA Water Management Unit, Industrial Consent Section, Tel No. 028 9262 3034).

3.5 IMPLEMENTATION

The requirements contained within this *Guidance Note* and all subsequent amendments are to be implemented from 1st April 2006 and from the date of each amendment.

3.6 AMENDMENTS

MARCH 2009

- References to Environment & Heritage Service changed to Northern Ireland Environment Agency (NIEA). (NIEA took over the functions of the Environment & Heritage Service on 1st July 2008.)
- Telephone contact details updated.
- WEEE regulations guidance added.

Appendix 3.1 - Waste Types

EU references for common construction wastes

Waste Type	EU Reference	Waste Type	EU Reference
Bituminous mixtures other than those containing coal tar, eg, road wearing and base courses	17.03.02	Bricks (eg, demolition of existing structures).	17.01.02
Soil and stones other than those containing dangerous substances (eg, road sub-base, laneway and land excavations).	17.05.04	Plastic (eg, abandoned pipework, fascia boards window frames).	17.02.03
Rock (eg, from roads and lands excavations).	17.09.99	Wood (eg, doors, frames, roof trusses).	17.02.01
Concrete (eg, demolition of existing structures, removal of concrete surrounds).	17.01.01	Glass	17.02.02
Mixed metals (eg, redundant M&E plant and panels, struct framework, bar and mesh reinforcement, ductile pipework, cladding, scrapper bridges, storage tanks).	17.04.07		

EU references for Hazardous Waste

Waste Type	EU Reference	Comments
Glass, plastic and wood containing or contaminated with dangerous substances.	17.02.04	
Bituminous mixtures containing coal tar.	17.03.01	Old gasworks sites are possible sources.
Coal tar and tarred products	17.03.03	
Metal waste contaminated with dangerous substances.	17.04.09	
Cables containing oil, coal tar and other dangerous substances.	17.04.10	
Insulation materials containing asbestos.	17.06.01	
Other insulation materials consisting of or containing dangerous substances.	17.06.08	
Gypsum-based construction materials contaminated with dangerous substances.	17.08.01	
Construction and demolition waste containing mercury.	17.09.01	Possible sources – Schools, Labs, Planetariums due to Mercury spills.
Construction and demolition wastes containing PCBs.	17.09.02	PCBs are either oily liquids or solids that are colourless under yellow light. They have no known smell or taste and can exist as a vapour in the air. PCBs can be found in some sealants, some resin-based floorings, sealed glazing units, capacitors and old fluorescent light fixtures made before 1977.
Other construction and demolition wastes (including mixed wastes) containing dangerous substances.	17.09.03	

Non-Hazardous waste is hazardous waste that has been treated.

Appendix 3.2 - Environmental Protection Declaration

Insert Contract Title

ENVIRONMENTAL PROTECTION DECLARATION

(DECLARATION AND UNDERTAKING TO BE SIGNED BY ALL MAIN CONTRACTORS OR CONSULTANTS TENDERING FOR THE EXECUTION OF WORKS OR THE SUPPLY OF GOODS OR SERVICES)

**Waste and Contaminated Land (Northern Ireland) Order 1997
The Controlled Waste (Duty of Care) Regulations (Northern Ireland) 2002
Waste Management - The Duty of Care - A Code of Practice**

DECLARATION AND UNDERTAKING

*I/We hereby declare that *I/we undertake to fully comply with the requirements of the above-mentioned documents in relation to all operations associated with the above contract.

Signed by

Duly authorised
to sign for and
on behalf of

Date

To be signed and returned with your tender.

Breaches of Duty of Care and Future Contracts: Any breaches of duty of care will be taken into account and may lead to exclusion from future public sector work.

***Delete as appropriate**

Appendix 3.3 - Example of Generic Contract Specification Clauses for Waste Management Duty of Care

The following template of generic clauses can be amended or edited by Contracting Authorities as required to suit their contracts.

Waste Management – Duty of Care

1. The Contractor shall, in respect of all waste material arising from all work required by or associated with the Contract, accept the responsibilities of a waste producer as understood by the code of practice issued by the Department of the Environment in accordance with Article 5(9) of the Waste and Contaminated Land (Northern Ireland) Order 1997 (the 1997 Order).
2. The treatment or disposal of any waste material falling within the code of practice definition of controlled waste shall be subject to the duty of care imposed by Article 5 of the 1997 Order. Requirements in respect of the duty of care are contained in the Controlled Waste (Duty of Care) Regulations 2002 (the 2002 Regulations).
3. As the waste producer, the Contractor shall be the initial holder of the waste as understood by the code of practice.
4. The Contractor shall, before work commences and when requested during the contract, provide the Employer with details of all contractual arrangements made for the treatment or disposal of all waste material including the identities of all future holders of the waste material.
5. The Contractor shall write a proper description of each category of waste material covering the following where appropriate:-
 - any problems it poses,
 - the type of premises the waste comes from,
 - what the waste is called,
 - the process that produced the waste, and
 - a full analysis.
6. The Contractor shall take all appropriate measures to ensure that waste materials are properly protected and stored while on site and vehicles used to transport the waste materials from the site are suitable for the purposes of protecting and storing the materials while in transit.
7. The Contractor shall complete and sign a copy of the Duty of Care: Controlled Waste Transfer Note:- *for an example see Appendix 3.4*

The transfer note may be for a single load or it may be in the form of a season ticket for a number of loads of material of the same description being transported from the site to the same destination over a period of time not greater than one year.
8. The Contractor shall provide the Employer with copies of all completed and signed Duty of Care: Controlled Waste Transfer Notes.
9. The Contractor shall ensure that arrangements for compliance with the code of practice are included in all further contracts between future holders of the waste materials. The Contractor

shall take measures to provide the Employer with copies of all season tickets arranged between future holders of the waste materials or, where season tickets are not used, as many of the individual load transfer notes as the Employer may require to comply with its responsibilities under the duty of care.

10. The Contractor shall retain copies of the Duty of Care: Controlled Waste Transfer Notes for at least two years and shall make them available to the Department of the Environment on request for the purpose of auditing waste management operations.
11. The Contractor shall provide at six monthly intervals and on completion of the Contract a summary of all transfers of waste materials arising from the Contract. The summary shall include the following minimum information:-
 - details of all holders of the waste materials,
 - site location and dates of transfer,
 - description of waste and European Waste Catalogue code, and
 - quantity of waste transferred.
12. The Contractor shall arrange for the provision of any receipts issued by the final holder of the waste. Where receipts are normally produced by the final waste holder in the usual course of his business, payment in respect of waste disposal shall only be made following the submission of the relevant receipts.

Hazardous Waste

13. Certain particularly dangerous or difficult wastes (hazardous wastes) are subject to strict legal controls apart from and additional to the requirements of the duty of care. The additional requirements are contained in the Hazardous Waste Regulations (Northern Ireland) 2005. Compliance with the duty of care shall not discharge the Contractor from his obligations under the said Hazardous Waste Regulations
14. The provisions of sub-Clauses 1 to 12 of this Clause shall apply to hazardous wastes, except to the extent that, when a consignment note for hazardous waste obtained from the Department of the Environment, Northern Ireland Environment Agency) has been properly completed so as to fulfil the duty of care requirements, it shall take the place of a Duty of Care: Controlled Waste Transfer Note in respect of the said provisions.

Contractor acting as a Broker

15. Where the Contractor fulfils the role of a broker as understood by the code of practice, he shall arrange for the requirements of sub-Clauses 1 to 14 of this Clause to be undertaken by the various holders involved.

Site Waste Management Plan*

16. The Contractor shall formulate a Site Waste Management Plan (SWMP) in accordance with the principles established in the Code of Practice entitled Site Waste Management Plans; Guidance for Construction Contractors and Clients, dated February 2006, or any subsequent revision. The SWMP shall include details of the provisions put in place by the Contractor to fulfil the requirements of this Clause.
17. The Contractor shall submit the SWMP to the Employer for approval before commencing any site operations, which would generate waste.

18. The Contractor shall submit Site Waste Management Plan data sheets in the form prescribed in Annex B of the “Site Waste Management Plans – Code of Practice”.

*The Site Waste Management Plan clauses (16-18) above should be used in all appropriate contracts.

