



Ardula Limited is a registered waste carrier engaged in the haulage of construction and demolition wastes, and supply of recycled aggregates. In order to ensure compliance with all relevant environmental legislation, the company has produced the following guidance for issue to customers and their clients, to improve client understanding of what is considered waste, how it is managed, and what options are available for re-use and reduction of construction waste through recycling, recovery, and use under defined codes of practice.

Complying with Waste Management Regulations

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2. Is it Waste?

The legal definition of waste is contained within the 2008 revised Waste Framework Directive ([Directive 2008/98/EC](#)). The definition is:

“...any substance or object that the holder discards, or intends, or is required to discard.”

In this context, the term ‘discard’ means not only the disposal of a material, but also its recovery or recycling (i.e. if the material is being sent for recovery or recycling, it is waste).

If a material requires some form of treatment before it can be used, it is likely to legally be waste. For example:

- Demolition material consisting of concrete, bricks, tiles and ceramics that needs either crushing or screening or both prior to use
- Soils requiring screening, treatment for contamination, or improvement prior to reuse
- Uncontaminated soils that are intended for use on a site other than that from which they originated

The **only** soil material that is legally not waste is: “uncontaminated soil and other naturally occurring material excavated in the course of construction activities where it is certain that the material will be used for the purposes of construction in its natural state on the site from which it was excavated” (from the Waste Framework Directive).

3. Waste Carrier / Broker / Dealer Registrations

Any organisation that arranges waste disposal on behalf of others should be registered as a **waste broker** (not just as a carrier). This includes where a contractor arranges for waste haulage to be by others.

All haulage companies removing waste must be individually registered (i.e. are not covered by the company subcontracting the work), and all owner / drivers carrying waste must be individually registered.

4. Duty of Care Paperwork

Copies of duty of care documentation (waste carrier / broker registration certificates, Environmental Permits, exemption certificates etc.) are required for all waste movements.

Prior to waste being removed from site, details of all carriers and waste destinations (waste transfer stations, materials recycling facilities, landfill sites, exempt sites etc.) must be provided.

This includes full copies of Environmental Permits (previously called Waste Management Licences), or as a minimum the front page showing the permit number and the schedule of accepted wastes (displaying the permit number).

Checks must be made that carrier registration certificates and Environmental Permits are genuine and valid. This can be done using the ‘public registers search’ on the Environment Agency website:

A copy of the search result should be attached to each certificate / permit.

5. Checking Waste Types

For waste destinations, the Environmental Permit should be checked to ensure that the specific waste types to be disposed of or recycled are listed within the permit (usually with reference to the European Waste Catalogue / EWC). The European Waste Catalogue is translated into UK law by the List of Wastes (LoW) Regulations.

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[The List of Wastes \(England\) Regulations 2005](#)

For some permits, the schedule of accepted waste forms part of the main document. For 'Standard Permits', the schedule of accepted waste is listed in the 'standard rules' document, which doesn't always form part of the main Permit. In this case, the Permit will refer to the relevant standard rules that apply (e.g. SR2010No8). These can be downloaded from the Environment Agency website and should be attached to the main Permit.

[Standard Permits for Waste Operations](#)

For sites that are 'exempt' (i.e. are registered with the Environment Agency as exempt from the requirement to hold a full Environmental Permit), the site must operate in accordance with the exemption guidance.

Exemptions come in four types; U, S, T and D. (U = use, S = storage, T = treatment and D = disposal). The most common exemption for demolition and excavation waste is a 'U1' exemption which allows the use of **limited quantities** of specific waste types for construction purposes. The wastes that are acceptable under the exemption are listed in the relevant guidance.

Exemptions must be registered prior to waste being taken to the exempt site, this cannot be done retrospectively.

6. Waste Transfer Notes

All non-hazardous waste (including inert / crushed concrete / demolition material / soil etc.) must be accompanied by a properly completed waste transfer note. All waste transfer notes must include the following by law:

1. A written description of the waste (e.g. non-hazardous subsoil, sand etc.)
2. The relevant European Waste Catalogue / EWC Code
3. Whether the waste is loose or in a container and the type of container (e.g. skip, truck etc.)
4. The quantity of waste (m³ or tonnes)
5. The date and place of transfer
6. The Standard Industry Classification (SIC) code* of the waste producer
7. The name and address of the waste producer and waste carrier
8. The waste carrier's registration number
9. If the waste carrier holds an Environmental Permit (or Waste Management Licence), the permit / licence number
10. If the waste carrier is also a broker, their waste broker registration number
11. Confirmation that the producer has applied the waste hierarchy to the waste described on the waste transfer note (reduce, reuse, recycle)
12. The document must be signed by the waste producer / site **and** waste carrier at the time of transfer

It is good practice to include details of the waste destination on all waste transfer notes.

7. Hazardous Waste Consignment Notes

Hazardous waste may not leave site unless accompanied by a hazardous waste consignment note. Hazardous waste consignment notes should include all information on a standard waste transfer note, and the following:

- Waste destination address and permit / licence number
- Site Premises Code / hazardous waste registration code of the site the waste comes from (if the site produces more than 500kg of hazardous waste per year)
- Consignment note code – a unique number produced by waste producer/carrier

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- SIC code of the waste producer
- Hazardous property code (H1-H15)
- Details of hazardous component and %'s

A standard format hazardous waste consignment note is available on the Environment Agency website, click [here](#).

Details of the requirements for hazardous waste consignment notes are contained within the [Hazardous Waste \(England and Wales\) Regulations 2005](#).

8. Classifying Waste

Wastes are defined as 'hazardous' or 'non-hazardous' in the LoW and EWC. Some wastes are always hazardous (absolute entries) and some are hazardous if specific substances exceed certain levels (mirror entries). Thus 'soil' is a mirror entry, where '17 05 03' is hazardous (soil and stones containing dangerous substances), and '17 05 04' is non-hazardous (soil and stones other than those mentioned in 17 05 03). Soil needs testing to classify it as hazardous or non-hazardous. Wastes listed with an asterisk (*) are hazardous wastes.

[Hazardous Waste - Technical Guidance WM2](#) (shows which hazardous wastes are absolute or mirror entries and gives details of classifying hazardous waste).

It is the waste producer's responsibility to classify the waste and pass this information to any subsequent waste carriers / destinations (and to include it on the waste transfer note).

Waste classification testing is required to classify soils. The substances tested for will depend on the previous site uses.

Test results and an interpretive report are used to demonstrate that waste has been classified correctly. An example of a tool for classifying waste is [HazWaste Online](#). This system allows test report data to be entered into an online system that then provides a report clearly stating whether the material is hazardous or non-hazardous and what the EWC code is.

9. Waste Acceptance Criteria (WAC) Testing

Since the introduction of the Hazardous Waste Regulations in 2005, there have been three types of landfill; hazardous, non-hazardous and inert. Disposal of hazardous waste with non-hazardous waste in landfills was banned by these Regulations.

Inert landfills can only accept materials that will not change over time (i.e. rot, corrode, degrade etc.); such as concrete, bricks, ceramics etc. Some soils are accepted by inert landfills where the organic matter content is low enough that the material won't change its physical composition in the landfill. Topsoil is unlikely to be suitable for an inert landfill site.

Where soils are likely to be suitable for an inert landfill or require disposal at a hazardous waste landfill (based on the initial waste classification testing), a WAC test will be required to demonstrate material suitability. The WAC test includes leachate testing to see how the material will behave in a landfill.

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Waste Type	Landfill Type	Example Accepted Wastes (each Environmental Permit lists landfill-specific accepted wastes)	
Non-Hazardous	Inert	17 01 01 - 17 01 02 - 17 01 03 - 17 02 02 - 17 05 04 -	concrete bricks tiles and ceramics glass soils and stones (where WAC test demonstrates that soil is suitable)
	Non-Hazardous	17 02 01 - 17 03 02 - 17 08 02 - 17 05 04 -	wood bituminous mixtures (tarmac) not containing coal tar gypsum based material (plasterboard) soils and stones (not suitable for inert landfill, but contamination low enough for material to be non-hazardous)
Hazardous	Hazardous	17 06 04 -	insulation
		17 03 01 - 17 05 03 -	bituminous mixtures containing coal tar soil and stones containing dangerous substances (where WAC test demonstrates that soil is not suitable for inert / non-hazardous landfill)
		17 06 01 - 17 08 01 -	insulation materials containing asbestos gypsum material contaminated with dangerous substances

[Waste Accepted at Landfills](#) - guidance on WAC testing etc.

[Landfill tax](#) is currently (as of April 2017) £2.70 per tonne for inert landfills and £86.10 per tonne for non-hazardous and hazardous landfill. Non-hazardous waste landfill tax is set to rise annually for the foreseeable future.

Wherever possible, soils should be diverted from landfill. Ideally soils should be sent to:

- Recycling facilities
- Soil treatment facilities
- Sites importing soils for beneficial reuse (for example under a Standard Rules Permit such as SR2010No10 - use of waste for reclamation, restoration or improvement of land)
- Sites holding an exemption from Environmental Permitting (e.g. a 'U1' exemption)
- Sites using the CL:AIRE 'definition of waste - industry code of practice'

None of the above are subject to landfill tax.

Demolition waste should also be diverted from landfill wherever possible. Ideally, suitable demolition material should be used on the site of origin or on other suitable sites (either under an exemption, or following application of the WRAP Recycled Aggregate Quality Protocol).

The material must be geotechnically and chemically suitable for use.

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10. CL:AIRE Definition of Waste - Industry Code of Practice

[CL:AIRE](#) (Contaminated Land: Applications in the Real Environment) is an organisation that aims to assist in the regeneration of contaminated land.

CL:AIRE has produced a [code of practice](#) that can be used when looking at soils waste management. The code allows waste soils to be reused on other sites by including steps that demonstrate that the soils material can be 'signed off' by a Qualified Person as ceasing to be a waste. The Definition of Waste: Code of Practice, commonly known as DoW CoP, provides a clear, consistent and efficient process which enables the reuse of excavated materials on-site or their movement between sites.

Use of the DoW CoP supports the sustainable and cost effective development of land. It can provide an alternative to Environmental Permits or Waste Exemptions.

The DoW CoP enables:

- the direct transfer and reuse of clean naturally occurring soil materials between sites
- the conditions to support the establishment/operation of fixed soil treatment facilities
- the reuse of both contaminated/uncontaminated materials on their site of origin and between sites within defined Cluster projects

A 'Materials Management Plan' is used to track soil origin, testing and deposit site.

Suitable projects need to meet four factors, in order to be considered suitable

1. INTRODUCTION

Since its initial release in September 2008 the Code of Practice has built a portfolio of successful sites which indicate a range of benefits to its users

Economic

- Lower development costs, especially when compared with traditional landfilling of materials. CL:AIRE has a Case Study Bulletin (CSB 9) showing savings of over a million pounds in landfill tax alone.
- Lower transport costs as less distance to another development site than a landfill.
- Reduced need for importation of other materials, e.g. natural quarried products.
- Working to the Code of Practice is considered less expensive than applying for, working under and formally surrendering an Environmental Permit.
- Provides a clear, consistent, systematic and more certain approach utilising documentation normally associated with land development procedures
- Quicker to marshal information into a Materials Management Plan and have it reviewed by a Qualified Person than applying for a Standard Rules Environmental Permit or Bespoke Environmental Permit.
- Less complex than waste legislation.

Environmental

- Promotes the use of materials in accordance with the waste hierarchy w
 - waste being minimised
 - o waste that is produced is recovered and reused;
 - o less waste will be sent to landfill.
- Natural resource consumption will be less, e.g. quarried product and fuel.

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- Reduced vehicle emissions and contribution to a reduced carbon footprint of the development process.
- Pollution of the environment and harm to human health is prevented.

Social

- Bringing brownfield and contaminated land back in to beneficial use
 - hence preserving greenfield land
 - creating communities on the developed land
- Blight issues associated with the use of materials classified as waste on a development site will no longer exist.
- Reduced vehicle movements (e.g. less congestion, improved air quality and less disturbance).

Overall the Code of Practice helps promote the sustainable development agenda; it can become an indicator for an organisation's commitment to this subject as well as becoming part of their Corporate Social Responsibility.

2. BACKGROUND

This Code of Practice sets out good practice for the development industry to use when assessing whether excavated materials are classified as waste or not. It also allows the determination, on a site specific basis, when treated excavated waste can cease to be waste for a particular use. Further it describes an auditable system to demonstrate that this Code of Practice has been adhered to. If materials are dealt with in accordance with this Code of Practice the Environment Agency (EA) considers that those materials are unlikely to be waste if they are used for the purpose of land development. This may be because the materials were never discarded in the first place, or because they have been submitted to a recovery operation which has been completed successfully so that they have ceased to be waste.

CL:AIRE guidance bulletins describe good practice as it applies to the characterisation, monitoring or remediation of contaminated soil or groundwater. This guidance bulletin provides a summary of the Definition of Waste: Development Industry Code of Practice, which was published in 2008 and is regularly updated.

Good practice has three basic steps:

1. Ensuring that an adequate Materials Management Plan (MMP) is in place, covering the use of materials on a specific site;
2. Ensuring that the MMP is based on an appropriate risk assessment, that underpins the Remediation Strategy or Design Statement, concluding that the objectives of preventing harm to human health and pollution of the environment will be met if materials are used in the proposed manner; and
3. Ensuring that materials are actually treated and used as set out in the MMP and that this is subsequently demonstrated in a Verification Report.

To confirm that steps 1 and 2 have been taken, a "Qualified Person" reviews the relevant project documents and provides a Declaration to the EA prior to the use or dispatch of materials.

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Intended Audience

The Code of Practice is directly applicable to those who commission earthworks, their appointed engineers, contractors (including specialist remediation contractors), consultants and regulatory authorities. All of these parties have a role to play if a site is being developed under this approach. It will be of particular

interest to landowners and developers due to its potential to save significant amounts of money in comparison to traditional disposal alternative.

Scope

The Code of Practice is voluntary and applies to England and Wales only; the arrangements and requirements are different in Scotland and Northern Ireland for which separate guidance exists. It relates to excavated material, which includes:

- Soil, both top soil and sub-soil, parent material and underlying geology;
- Soil and mineral based dredgings (only if appropriate dewatering has taken place);
- Ground based infrastructure that is capable of reuse within earthworks projects, e.g. road base, concrete floors (permitted controls may apply);
- Made ground;
- Source segregated aggregate material arising from demolition activities, such as crushed brick and concrete, to be reused on the site of production within earthworks projects or as sub-base or drainage materials; and
- Stockpiled excavated materials that include the above.

The Code of Practice applies to both uncontaminated and contaminated material from man-made and natural sources excavated:

- For use on the site from which it has been excavated, either without treatment or after on-site treatment (required treatment is an indication a material is a waste) as part of the development of that land (i.e. Site of Origin scenario);
- For use directly without treatment at another development site subject to the material meeting the requirements set out in Appendix 2 of the Code of Practice (i.e. Direct Transfer scenario);
- For the use in the development of land other than the site from which the material has been excavated, following treatment at a Hub site which is covered by an Environmental Permit including a fixed Soil Treatment Facility (STF) acting in this capacity (i.e. Cluster Project scenario); or
- Combination thereof.

Depending on the sites involved and the nature of the projects other options may be more appropriate than using this Code of Practice in excavating and reusing those materials, for example:

- Waste Exemption – small volumes, non-hazardous waste classification, recovery only;
- Standard Rules Environmental Permit – replaces the traditionally used Waste Exemptions - Paragraph 9 and 19 but can take several months to obtain;
- Bespoke Environmental Permit – greater volumes than standard rules, applicable to more waste streams but can take several months to obtain; and
- WRAP Aggregates Quality Protocol – allows for inert aggregate waste to be recovered and used at any site subject to meeting set standards.

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3. THE PRINCIPLES FOR THE USE OF MATERIALS AS NON-WASTE

Materials are only considered to be waste if they are discarded, intended to be discarded or required to be discarded by the holder. Once discarded, they remain a waste until fully recovered. This remains the case even when the holder of the waste changes and the subsequent holder has a use for it. When deciding whether or not a material is discarded it is important to take account of the aims and objectives of the Waste Framework Directive and the need to ensure that they are not undermined. The primary aim of the Waste Framework Directive is the protection of human health and the environment. There is no single factor that can be used to determine if something is a waste or when it ceases to be waste. However in the context of excavated materials used on sites undergoing development the following factors are considered to be of particular relevance.

Factor 1: Protection of human health and protection of the environment.

Ensure that the aim of the Waste Framework Directive is not undermined. All measures to protect the environment and prevent harm to human health have to be assessed and found to be adequate given the proposed use of the materials. If the use of the material will create an unacceptable risk of pollution of the environment or harm to human health it is likely to be waste.

Factor 2: Suitability for use.

The material must be suitable for its intended purpose in all respects, in particular, both its chemical and geotechnical properties. Certain excavated materials may be suitable for their intended use in the proposed development without any treatment at all. If they are used in that way those materials are unlikely to be waste. If treatment is needed in order to make the material ready for use the material will be waste but may cease to be waste once treated so as to be suitable for use.

Factor 3: Certainty of Use.

Demonstrate that the material will actually be used and that the use is not just a probability. For example, if materials are stockpiled with no pre-defined destination and use, they will still be waste.

Factor 4: Quantity of Material.

Materials should only be used in the quantities necessary for that use, and no more. The use of an excessive amount of material will indicate that it is being disposed of and is still waste.

In order to demonstrate these four factors a Materials Management Plan is produced which helps to ensure that the above matters are considered and a correct determination is made in relation to the nature of the materials.

4. MATERIALS MANAGEMENT PLAN

The Materials Management Plan should set out the objectives relating to the use of the materials and should accompany a Remediation Strategy or Design Statement, which has been derived using an appropriate risk assessment. It should bring together all the relevant information to demonstrate that all four key factors will be met and include a tracking system and contingency arrangements. The Materials Management Plan template is hosted on the CL:AIRE website and available as a separate downloadable document.

A Verification Plan has to be set out in the Materials Management Plan. It must identify how the placement of materials will be recorded and the quantity of material to be used. Further, it should contain a statement on how the use of the materials relate to the remediation or design objectives. Once the development has

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been completed a Verification Report must be produced that demonstrates that the materials have been located in the correct place within the development or dealt with appropriately.

5. QUALIFIED PERSON

A Qualified Person must review the evidence relating to the proposed use of materials on a specific site and if satisfied, will sign a Declaration and submit it to the EA. A copy of the declaration is also immediately supplied to the person commissioning the excavation. The Declaration serves as a notification to the EA that a site is to be developed using the Code of Practice. The copy sent to the person commissioning the Qualified Person serves as a reminder that the Materials Management Plan must be followed and that a Verification Report has to be completed.

In order to act as a Qualified Person an individual must possess certain attributes which are fully outlined in the Code of Practice document – Appendix 6.

6. VERIFICATION REPORT

As mentioned in Section 4, a Verification Report must be produced which provides an audit trail to show that materials and wastes have gone to the correct destination. The Report needs to show how the use of materials links with the objectives defined in the Remediation Strategy or Design Statement such that they have been furthered or fully met. The Verification Report is not part of the Materials Management Plan and is often prepared anyway as part of existing site requirements (e.g. as part of a planning consent or as part of the 'as-built' site file on handover). Nevertheless, the Verification Report must document any changes that may have been made to the Materials Management Plan i.e. what alterations to the project have been formally made and/or contingency arrangements have been implemented.

7. SCENARIOS COVERED BY THE CODE OF PRACTICE

Use on the Site of Origin

The Site of Origin for the purpose of this Code of Practice is a single readily identifiable site which can include:

- The area covered by a specified planning permission;
- The area covered by a single detailed Remediation

Strategy;

- The area covered by a single detailed Design Statement, e.g. pipeline route, proposed road; and
- The area covered by an agreed Deployment Form in relation to the use of an Environmental Permit which encompasses the development activity where materials are to be used. Excavated materials can be used directly within the development subject to it being suitable for use, or following on site treatment. The on site treatment should be progressed under an appropriate Environmental Permit or Waste Exemption.

Direct Use of Clean Naturally Occurring Soil and Mineral Materials on another Development Site (Direct Transfer). Clean naturally occurring soils and mineral materials can be directly transferred from one site to another development site for use, without the need for waste legislation being applied (i.e. the receiving development site does not require an Environmental Permit or Waste Exemption). Clean for the purpose of this document is defined as “devoid of anthropogenic contamination to a degree or level that is considered harmful to living organisms”.

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“Clean naturally occurring soil and mineral materials” includes:

- Soil, both top soil and sub-soil;
- Parent material such as underlying rock from which constituent parts make up part of the soil;
- Clays, silts, sands and gravels;
- Underlying geology; and
- Made Ground consisting of the above materials only, e.g. embankment which is to be removed and is suitable for use without any processing.

The materials must be sourced from either greenfield sites not subject to past contaminative use (for example, from chemical spillage, on-farm landfills / carcass burial), or from brownfield sites where the natural soils have been extensively characterised and proven to be clean. Such materials must be capable of direct use without the need for treatment in line with the key factors described in Section 3.

Cluster Projects

The Cluster approach is designed to aid the remediation and / or development of a number of sites that are located in relative close proximity by sharing a decontamination/treatment facility located on one of the sites - the Hub. A key principle of a Cluster Project is that the activity is temporary. It may be established in relation to the transfer and use of excavated materials between sites and the remediation of one or more sites affected by contamination. Excavated materials from Donor sites are sent for treatment at the Hub site as waste and upon successful treatment are returned or used at the Hub site as non-waste. The Hub site treatment activities are regulated under the Environmental Permitting regime.

Fixed Soil Treatment Facilities

Fixed Soil Treatment Facilities are established on a permanent basis and accept wastes from a variety of waste producers. A fixed Soil Treatment Facility may perform the role of a Hub site within a defined Cluster project as described in the previous section. Operators of Soil Treatment Facilities may not always have a pre-determined plan for where treated wastes will ultimately be used in relation to development sites.

Excavated wastes are taken to a fixed Soil Treatment Facility under waste legislation, e.g. by a registered waste carrier, Duty of Care Transfer notes (non-hazardous and inert waste) or consignment notes (hazardous waste). The wastes are treated, as appropriate, at the Soil Treatment Facility and are tracked from acceptance, through treatment and subsequent stockpiles. Potential receiving development site operators need to provide the Facility operators with their derived suitable for use criteria. The Soil Treatment Facility then approaches the EA to gain approval to transfer and use treated materials via establishment of a new Cluster project.

CL:AIRE maintain [a register](#) of soil ‘donor’ sites and ‘receptor’ sites to try and encourage the beneficial reuse of soils rather than landfill. When arranging disposal of soils, the register should be checked for suitable receiving sites within reasonable distances of the site producing waste soil. This provides an alternative to landfill.

Landfill tax doesn’t apply to soils that cease to be waste under the code of practice. A site receiving soils under the code of practice would not need to be registered as exempt under Environmental Permitting Regulations, as the material is not waste at the point it is received by that site.

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11. Recycled Aggregates

Recycled aggregate is **always a waste material** (whether it has been produced on site via crushing of demolition materials or has been purchased as 6F2 / Type 1 from a materials supplier), unless it has been produced in accordance with the [WRAP](#) (Waste & Resource Action Programme) [Recycled Aggregate Quality Protocol](#), or an alternative accepted factory production control for the manufacture of recycled aggregate

The WRAP Quality Protocol sets out how recycled aggregate should be produced (i.e. under an Environmental Permit), and tested to demonstrate that it is no longer waste.

If it cannot be demonstrated that recycled aggregates have been produced in accordance with an accepted Quality Protocol, they are still waste and any construction site that wants to import the material would need an exemption (e.g. a 'U1' - allows up to 5000 tonnes of crushed concrete, brick etc., and up to 1000 tonnes of non-hazardous soils).

If the material was produced on site without application of the WRAP protocol, it is still waste when it leaves the site and must be accompanied by properly completed waste transfer notes and taken to a permitted / licensed facility.

When purchasing recycled aggregate, the WRAP Protocol information should be requested, in order to confirm end of waste.

12. Asphalt and Tarmac

Asphalt material and road dressing binders used before the 1980s contained coal tar. The presence of this substance in asphalt usually results in the material being hazardous waste, limiting the options for recycling and disposal. Coal tar contains a range of dangerous substances including benzo(a)pyrene (a carcinogenic Polycyclic Aromatic Hydrocarbon or PAH) and phenol (a neurotoxin).

The use of coal tar in asphalt construction in the UK discontinued by the mid-1980s, when bitumen became the sole binder for macadam mixes. Coal tar was still used in surface dressing until the late 1980s.

Tarmac and asphalt waste produced during excavation and groundworks **can therefore be hazardous waste**, depending on whether it contains coal tar which depends on when the material was laid. These wastes are defined as:

- Bituminous mixtures containing coal tar (European Waste Code: 17 03 01) - hazardous
- Bituminous mixtures not containing coal tar (European Waste Code: 17 03 02) - non-hazardous

A simple test can be done on site to indicate whether tarmac / asphalt (or treated roofing material, timber etc.) is likely to be hazardous. The test involves using a 'PAK Marker'.

'PAK Marker' has been specially developed for the detection of Polycyclic Aromatic Hydrocarbons (PAHs) including coal tar substances in asphalt products. It can also be applied to other PAH containing materials, for example, tarmac / asphalt, rubble, roofing material and wood treated with tar-like preservatives.

The marker is applied to the material in question and discolouration indicates presence of PAHs (including coal tar). If the test indicates the presence of coal tar, a laboratory analysis should be undertaken to confirm whether the material is hazardous.

The number of waste facilities (whether they are waste transfer stations, recycling facilities or landfill sites) that can accept hazardous asphalt is limited. The Environmental Permit for the facility must be checked to make sure they can accept the waste prior to any material being removed.

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All hazardous tarmac must be transported accompanied by hazardous waste consignment notes, and only taken to waste facilities that can accept hazardous tarmac.

PAK Marker is available in the UK from [LabQuip](#):

The Black Barn

White Ox, Scotland Road

Penrith, Cumbria

CA11 9NQ

Tel: 01768 895080

Other suppliers may be available. A COSHH assessment must be undertaken when using PAK Marker.

If PAK Marker is not available, then suitable laboratory testing should be done to establish the correct waste classification. It is the waste producer's responsibility to classify the waste and provide this information to persons responsible for arranging transport and disposal.

13. Soil improvement

If existing soils on site cannot be reused as they require improvement to make them suitable topsoil etc., then the soil material is classed as waste. This is because it is not suitable for use in its existing form, and requires treatment prior to use.

Any blending of soils or soil improvements works (including addition of organic material / compost, nutrients, sand etc.) is therefore considered as waste treatment activity.

This is likely to require an Environmental permit, or may be within exemption parameters. The most likely exemption that would be used is a T5 (screening and blending) exemption, allowing the treatment of 5000 tonnes of waste soil over a three-year period.

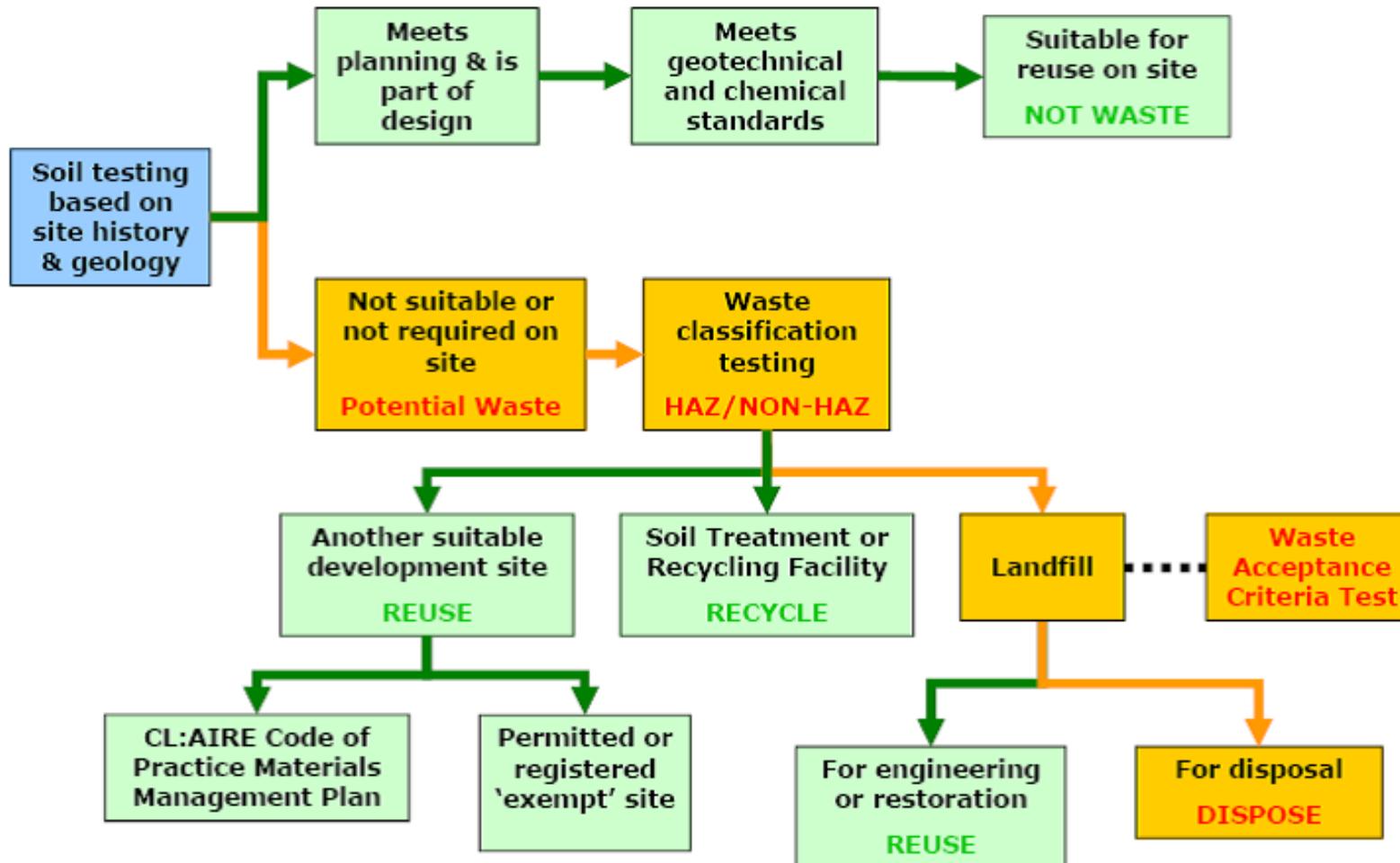
Soils requiring improvement for geotechnical reasons can be processed in situ using a range of proprietary stabilisation techniques, typically using lime and cement binders, usually without the need for a permit, but clarification should be sought from the local environment agency office before commencement of any work. Soil imported under an environmental mechanism such as DoWCoP, which then requires further improvement using soil stabilisation methods will require the site specific deployment of a Mobile Treatment Licence. This is a generic permit for the remediation and treatment of soil and soils substitutes which then has a site specific deployment depending on the requirement. This process can take many weeks to put in place, and so consideration to its need should be given as early as possible in the construction process.

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14. Appendix 1 - Soil Testing Flowchart



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15. Appendix 2 - List of Relevant Legislation & Guidance

This list is for guidance only, and is not exhaustive.

Legislation / Guidance	Key Points
The Environmental Protection Act 1990	<p>Section 33 relates to deposit of waste on land and how this must be done without harm to the environment or human health. No waste can be deposited on land unless an Environmental Permit is in place deposits are in accordance with it.</p> <p>Section 34 sets out the duty of care in relation to waste. This places duties of waste producers, holders, carriers, and processors to ensure waste is managed in accordance with regulations. The requirement for a waste transfer note is described in this section.</p>
Waste Framework Directive 2008/98/EC	<p>European directive setting out the definition of waste etc.</p>
The Hazardous Waste (England and Wales) Regulations 2005	<p>Sets out the requirement for any premises producing greater than 500kg of hazardous waste per year to register the premises with the Environment Agency.</p> <p>Prohibits the mixing of non-hazardous and hazardous waste, bans the disposal of tyres and liquids to landfill.</p> <p>Sets out the requirement for hazardous waste consignment notes.</p>
Environmental Permitting (England and Wales) Regulations 2010	<p>Supersedes the Waste Management Licensing Regulations 1994.</p> <p>Requires any facility receiving waste to operate under an Environmental Permit (or exemption). Environmental Permits contain details of accepted wastes for the facility.</p> <p>Describes 'exempt operations', i.e. in what circumstances an exemption can be used rather than a full Permit. Requires exemptions to be registered with the Environment Agency (or in some circumstances, the Local Authority).</p>
Controlled Waste (Registration of Carriers and Seizure of Vehicles) Regulations 1991	<p>The regulations require the registration of carriers of controlled waste with the Environment Agency / SEPA and provide for the seizure of vehicles used for the illegal deposit of controlled waste.</p>

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Legislation / Guidance	Key Points
List of Wastes (England) Regulations 2005	Transposes the European waste Catalogue in UK law and lists the six-digit codes for each waste type. Hazardous wastes are denoted by an asterisk, but the Regulations don't indicate which hazardous wastes are absolute or mirror entries.
Waste (England & Wales) Regulations 2012	Supersedes the Duty of Care Regulations 1991. Includes requirements for registering waste carriers etc., application of the waste hierarchy, waste segregation and waste transfer notes.
Site Waste Management Plan Regulations 2008	Requirements for principal contractors and clients to develop, implement and maintain a site waste management plan for construction projects >£300k. Includes requirements for all waste movements to be logged in the plan.
Technical Guidance WM2	Technical Guidance WM2; Hazardous Waste - interpretation of the definition and classification of hazardous waste (Second Edition, version 2.3), Environment Agency, April 2011.
Legal Definition of Waste Guidance	Guidance on the legal definition of waste and its application (PB13813), Defra, August 2012. Guidance on the legal definition of waste and its application (a practical guide for business and other organisations) (PB13813a), Defra, August 2012.
European Waste Catalogue	Classifies waste materials and categorises them according to what they are and how they were produced. The UK and other member states are fulfilling their requirement to integrate the catalogue into their domestic legislation. One example of this in the UK is the requirement to make a reference to an EWC code on all duty of care transfer notes.
WRAP Recycled Aggregate Quality Protocol	The document details a formalised quality procedure for the production of aggregates from inert waste. Recycled aggregates that have been produced in accordance with the protocol cease to be classified as a waste.
CL:AIRE Code of Practice	The code of practice sets out good practice for the development industry to use when assessing on a site specific basis whether excavated materials are classified as waste or not. Also includes determining on a site-specific basis when excavated waste can cease to be a waste for a particular use.
Waste carrier, broker, dealer - who should register?	Details from the Environment Agency website.

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16. Appendix 3 - U1 Exemption Guidance – Environment Agency

This exemption allows use of suitable waste rather than virgin raw material or material which has ceased to be waste - for example by complying with a Quality Protocol.

Construction means building or engineering work - including repairing, altering, maintaining or improving existing work and preparatory or landscaping work.

Land reclamation is only allowed when it is an integral part of the construction activity.

Types of activity that can be carried out

These include:

- using crushed bricks, concrete, rocks and aggregate to create a noise bund around a new development and then using soil to landscape the area
- using road planings and rubble to build a track, path or bridleway
- using woodchip to construct a track, path or bridleway
- bringing in soil from somewhere else to use in landscaping at housing developments

Types of activity that can't be carried out

It is not possible to:

- treat waste to make it suitable to use - see related exemptions T5, T6 and T7 (you need to register T7 with your local authority), for treatment options
- dispose of waste by using waste that is unsuitable or by using more waste than is needed. You need to be able to justify the amount needed
- use waste for land reclamation, for example by infilling a hollow
- register this exemption more than once at the same place for 3 years after registration
- de-register and then re-register this exemption at the same place within a 3 year period
- store the waste for longer than 12 months before you use it

Types of waste that can be used

The types of waste that can be used under this exemption have been grouped together into 5 tables. These show the maximum quantities and conditions for using the specific types of waste.

The waste codes are those listed in the List of Wastes (LoW) Regulations. The producer needs to make sure the waste fits within the waste code and the description in the table.

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It is possible to use up to a total of 5,000 tonnes of the waste from this list for any type of construction:

Waste code/Types of waste

- 010102 Waste from mineral non-metalliferous excavation
- 010408 Waste gravel and crushed rock not containing hazardous substances
- 010409 Waste sand and clays
- 020202 Shellfish shells from which the soft tissue or flesh has been removed only
- 101208 Waste ceramics, bricks, tiles and construction products (after thermal processing)
- 101314 Waste concrete and concrete sludge
- 170101 Concrete
- 170102 Bricks
- 170103 Tiles and ceramics
- 170107 Mixtures of concrete, bricks, tiles and ceramics not containing hazardous substances
- 170508 Track ballast not containing hazardous substances
- 191205 Glass
- 191209 Minerals (for example, sand and stones)
- 191212 Aggregates only

Within the 5,000 tonnes total, the waste described below can only be used for drainage work carried out under the Land Drainage Act 1991, the Water Resources Act 1991 or the Environment Act 1995. This is work that can be carried out only by drainage authorities such as Inland Drainage Boards, local authorities or the Environment Agency:

Waste code/Types of waste

- 170506 Dredging spoil not containing hazardous substances

It is possible to use up to a total of 1,000 tonnes of the waste in this list for construction:

Waste code/Type of waste

- 020399, 020401 Soil from cleaning and washing fruit and vegetables only
- 170504 Soil and stones not containing hazardous substances
- 170506 Dredging spoil not containing hazardous substances
- 191302 Solid waste from soil remediation not containing hazardous substances
- 200202 Soil and stones

Within the 1,000 tonnes total, it is possible to only use the waste below to build tracks, paths, bridleways or car parks. The waste must be processed into chips before you use it.

Waste code/Type of waste

- 170302 Bituminous mixtures not containing coal tar
- 020103 Plant tissue waste
- 030101, 030301 Untreated waste bark, cork and wood only
- 030105 Untreated wood, including sawdust, shavings and cuttings from untreated wood only
- 170201 Untreated wood only
- 191207 Untreated wood not containing hazardous substances
- 200138 Untreated wood not containing hazardous substances

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It is possible to use up to a total of 50,000 tonnes of the waste in this list for building roads only. The road should be constructed to a specific engineering standard and have a sealed surface in order to qualify for this larger limit:

Waste code	Type of waste
170302	Bituminous mixtures not containing coal tar
170504	Road sub base only

It is possible to use a combination of wastes from each of the tables, provided the limits for each table are not exceeded.

What else is needed with a U1 exemption

As well as registering this exemption, the registrant may also need to ensure that the site complies with other legislation. This could include:

- planning permission – contact the local planning authority to find out if the client needs to make an application
- flood defence consent – call 03708 506 506 (see call charges) and ask for the Partnership and Strategic Overview team for the area concerned
- if the building is in the floodplain or near an ordinary watercourse, contact lead local flood authority (county council, unitary authority or Internal Drainage Board) to discuss whether any consent other than planning permission is needed
- this exemption can be carried out along a linear place such as a highway

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17. Appendix 4 - Waste Transfer Note Example

Ardula Ltd

Barn Oast, Woodfalls, Gravelly Ways, Laddingford, Maidstone, Kent ME18 6DA.
Tel: 01622 873300 Fax: 01622 873311
www.ardula.co.uk

CONTROLLED WASTE TRANSFER NOTE

SECTION A. DESCRIPTION OF WASTE MATERIALS	
(tick as appropriate)	
<input type="checkbox"/> Inert Soil and Stones EWC 170504	Vehicle Reg No
<input type="checkbox"/> Non-hazardous Soil and Stones EWC 170504	Driver's Name
<input type="checkbox"/> Mixed Construction Waste EWC 170904	Gross vehicle weight permitted tonnes
<input type="checkbox"/> Concrete EWC 170101	One full load carried loose in bulk
<input type="checkbox"/> Tarmac EWC 170302	If not full, approx cu.m
<input type="checkbox"/> Other EWC	
Description of Waste	

SECTION B. CURRENT HOLDER OF WASTE
NAME
ADDRESS
By signing in Section D below I confirm that I have fulfilled my duty to apply the waste hierarchy as required by Regulation 12 of the Waste (England and Wales) Regulations 2011

SECTION C. PERSON COLLECTING WASTE	
Ardula Limited	Registered Waste Carrier No CB/CE5694LL
Barn Oast, Woodfalls, Gravelly Ways,	Issued by ENVIRONMENT AGENCY
Laddingford, Maidstone, Kent ME18 6DA	SIC No 38210

SECTION D. AUTHORISED DISPOSAL/RECOVERY FACILITY/DAYWORK
NAME
ADDRESS
ENVIRONMENTAL PERMIT/OTHER (if applicable)
WAITING TIME ON SITE/DAYWORK
ARRIVAL TIME DEPARTURE TIME
ALLOWANCE/TT HRS CHARGEABLE
Signed on behalf of Customer
PRINT NAME

N.B. to Customers, Authorised Agents, Representatives, or Responsible Persons signing this delivery ticket. The customer certifies that the above particulars are correct, waste is as described and non-hazardous, and accepts responsibility for vehicles entering, on, and leaving site while they are required to be off the public highway.

Signed by Driver	Signed on behalf of the Customer
Date	Date

Customers ordering vehicles off the public roads do so entirely at their own risk

White copy - Office / Green copy - Invoice / Pink copy - Landfill / Yellow copy - Site