Waste Management

(SHEMS-STD-GR-065)

Unitas
Stoke-on-Trent Ltd.

Contents

1. Introduction ... 4
2. Scope ... 4
2.1 External References ... 4
2.2 Definitions and Acronyms ... 5
3. Process Map ... 7
3.1 Duty of care compliance process ... 7
3.2 Resource management plan process ... 8
4. Unitas Requirements for Managing Waste ... 9
4.1 Waste classification ... 9
4.2 Specific wastes ... 9
4.2.1 Recycled aggregate ... 9
4.2.2 Soils ... 10
4.2.3 Asphalt / bituminous waste ... 12
4.2.4 Plasterboard and gypsum waste ... 13
4.2.5 Road sweeper and gully arisings ... 13
4.3 Duty of care ... 13
4.4 Hazardous waste premises registration and consignment note codes ... 14
4.4.1 Wales ... 14
4.4.2 England ... 14
4.5 Waste storage ... 14
4.6 Pre-treatment of landfill waste ... 15
4.7 Waste management facilities ... 15
4.8 Exemptions ... 15
4.9 Waste transfer ... 16
4.9.1 Waste transfer notes ... 16
4.9.2 Hazardous / special waste consignment notes ... 17
4.9.3 Disposal of PCB Contaminated Equipment ... 17
4.10 Public registers ... 17
4.11 Records ... 18
4.12 Waste Management ... 18
4.13 Site waste/Resource management plans ... 18
4.13.1 Waste targets ... 18
4.13.2 Minimising non-hazardous waste ... 19
4.13.3 Minimising hazardous waste ... 19
4.13.4 Sorting, reusing and recycling construction waste ... 19
4.13.5 Monitoring, measuring and reporting non-hazardous waste ... 20
4.13.6 Responsibilities ... **Error! Bookmark not defined.**
4.13.7 Ongoing review ... 20
4.13.8 Post-completion review ... 20
4.14 Waste reporting ... 20
4.15 Monitoring ... 20
4.16 Incidents ... 21

4.16.1 Enforcement activity 21
Appendix A1 - Crushing and screening on site flow chart - England and Wales 22
Appendix A2 - Using recycled aggregate on site flow chart - England and Wales 23
Appendix A3 - Using imported soil on site flow chart - England and Wales..... 24
Appendix A4 - Waste exemptions - differences between England / Wales and Scotland 25
Appendix A5 - Company Premises Codes for Hazardous Waste (England Only) 26

1. Introduction

The purpose of this standard is to set out the requirements for managing waste associated with Unitas activities, products and services that it controls and those over which it can be expected to have influence, to implement adequate systems of control for complying with legal and other requirements in respect of waste management and to reduce the environmental impact of waste generated by Unitas activities.

2. Scope

The scope of the SHEMS covers all persons, workplaces and Operations in the Unitas business.

Exceptions will be documented through a SHEMS Appendix B process (SHEMS-FOR-GR-999), authorised by the Operations Director responsible for coordinating SHE.

Unitas SHEMS manual (SHEMS-STD-GR-003) provides guidance and signposting for the compliance, implementation, monitoring, audit and review of our systems, and demonstrating continual improvement.

2.1 External References

- CIRIA Environmental Good Practice on Site Guide (4th edition)
- CIRIA Toolbox Talks
- PPG6 Working on Construction and Demolition Sites
- HTMA Environment Training Videos
- MAGIC website - interactive maps of designated sites (e.g. SSSIs)
- UKCG What is Waste Guide
- CL:AIRE Definition of Waste, Development Industry Code of Practice
- ENCORD Construction Waste Measurement Protocol
- Standard Industry Classification (SIC) list 2007 - for waste transfer documents
- NEIA Regulation of Soils from Greenfield Sites
- SEPA Regulation of Soils from Greenfield Sites
- Technical Guidance WM3 Classification of Waste
- SEPA Guidance on Recycled Aggregates from Inert Waste
- WRAP (Waste and Resources Action Programme) Recycled Aggregate Quality Protocol

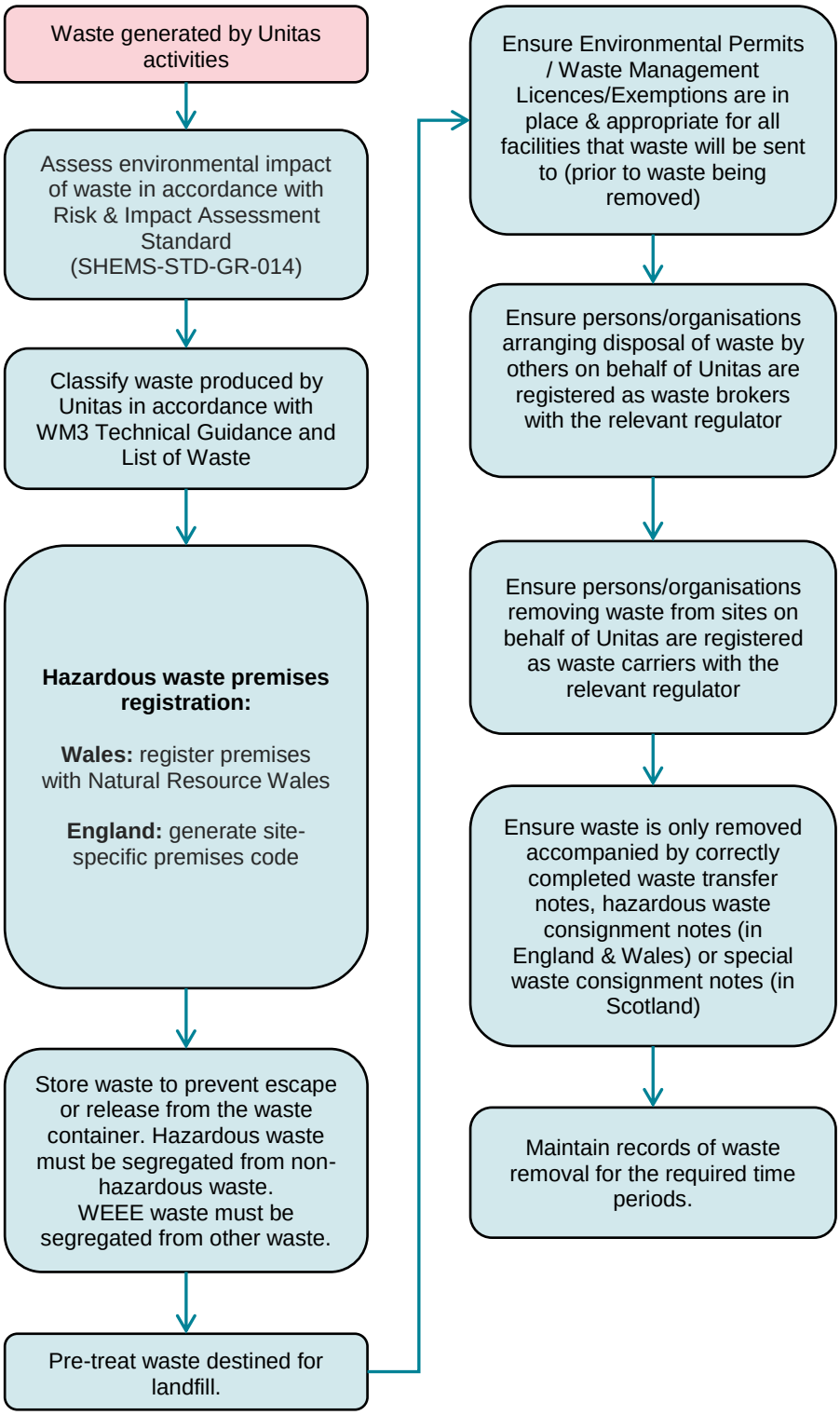
2.2 Definitions and Acronyms

Controlled waste	Any substance or object that the holder discards, intends to discard, or is required to discard. All controlled waste is classified as either 'non-hazardous' or 'hazardous'.
Waste hierarchy	Hierarchy to be applied to managing waste in order of priority: **Reduce** - eliminate the waste by using a different material / technique / design **Reuse** - reuse a substance or object in its original form. Where materials or objects are reused, they usually avoid becoming a waste (except soils, or where a form of treatment is required before the material can be used) **Recycle** - process a waste material into another form for use in a different application **Recover** - a form of recycling where a waste is processed prior to recycling, for example sorting at a waste transfer station. Can also mean incinerating for heat / energy recovery **Dispose** - discard a waste that has no further use, for example land-filling Managing waste in this order delivers environmental and cost benefits.
Inert waste (all 'inert' waste is classified as non-hazardous)	The term 'inert' is used to describe waste materials that will not change composition or degrade over time e.g. ceramics, concrete, masonry and brick rubble, minerals, stone etc. Under the waste classification system, these waste types are known as 'non-hazardous'. Clean subsoils (not topsoil) can sometimes be sent to an 'inert' waste landfill, but are classified as non-hazardous. Soils can only be sent to inert landfills if they meet the requirements under the specific Waste Acceptance Criteria (WAC) for that landfill.
Non-hazardous waste	Waste materials that may change composition and degrade over time but any resultant compounds do not pose a risk to the environment or human health.
Hazardous waste (in Scotland 'Special Waste')	There can be two types of material that can be classed as hazardous; those which are inherently harmful to the environment and or human health in any concentration and those which are deemed hazardous due to the concentration of substances within the material. For example, coal tar on its own is always hazardous, but asphalt that contains coal tar may be hazardous depending on the concentration of coal tar within the sample.
Hazardous waste premises registration	Code provided by Natural Resources Wales (in Wales) in the form 'ABC123' specific to a premises or site that produces hazardous waste. In England, codes must be generated by the business. Required before hazardous waste can be removed from the premises, and must be included on hazardous waste consignment notes.
Waste producer	Anyone whose activities produce waste or who carries out pre-processing, mixing or other operations resulting in a change in its nature or composition.
Waste carrier	Any organisation involved in removing waste from sites must hold a valid waste carrier's registration certificate issued by the Environment Agency / SEPA.
Waste management facility	Any facility or site that accepts waste for use, treatment (e.g. sorting, processing), storage or disposal. A valid Environmental Permit, exemption, or Pollution Prevention and Control (PPC) Permit must be held by any site or facility accepting waste. This includes development / construction sites accepting waste recycled aggregates or soils for reuse / recycling.
EWC	European Waste Catalogue / Code: six-digit reference number for specific waste types.

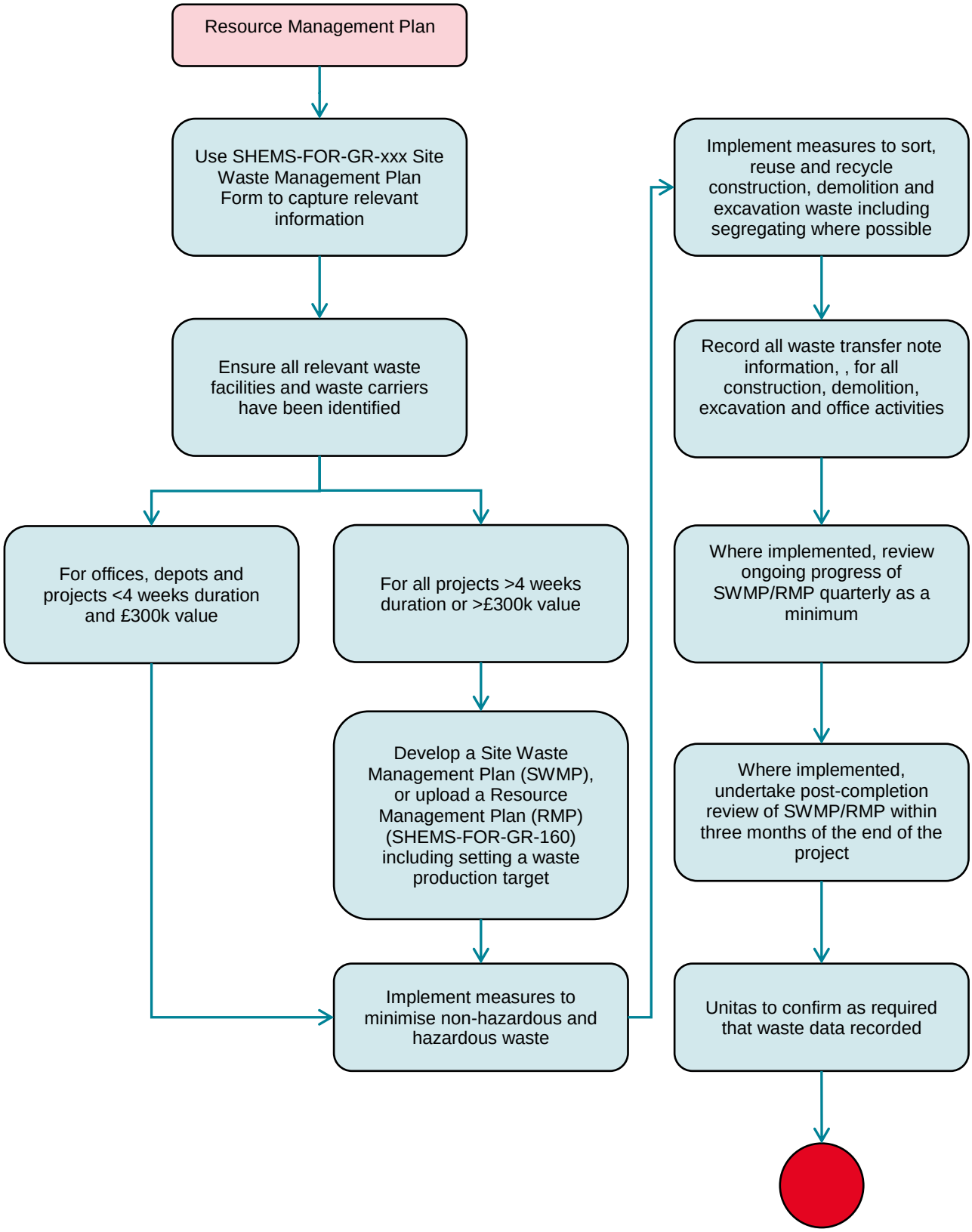
Waste classification / characterisation test	Most wastes do not need sampling / testing in order to classify them in accordance with the European Waste Catalogue e.g. metals, timber, plastics etc. Some wastes must be sampled and analysed to identify which EWC code should be used to classify them. This includes soils, asphalt suspected of containing coal tar, materials containing asbestos etc.
Waste Acceptance Criteria (WAC) Test	Required for wastes intended for disposal at landfill sites. Criteria are in place for inert waste landfill and hazardous waste landfills. **A WAC test must not be used to classify waste.**
WRAP	Waste and Resources Action Programme - a government funded body
CL:AIRE	Contaminated Land: Applications in the Real Environment - an independent body that promotes the sustainable remediation of contaminated land and groundwater. CL:AIRE has developed a Code of Practice that when followed, allows suitable soils to be de-classified as waste and reused on other sites.
Standard Industry Classification (SIC) code	A Standard Industrial Classification (SIC) is used for administrative purposes as a convenient way of classifying industrial activities into a common structure. It is required on waste transfer notes and hazardous waste consignment notes to demonstrate which type of industry has produced the waste described on the document. Currently, the **2007 list of codes must be used for all waste transfer notes and hazardous waste consignment notes**. There are a number of codes relevant to Unitas activities including (but not limited to): ▪ 41.20 - construction of buildings ▪ 42.11 - construction of roads ▪ 43.11 - demolition ▪ 43.21 - electrical installation ▪ 43.22 - plumbing / heating / AC ▪ 43.99 - specialist activities e.g. steam cleaning, sand blasting ▪ 38.11 - collection of non-hazardous waste
Animal Health and Veterinary Laboratories Agency (AHVLA) Now known as Animal & Plant Health Agency (APHA)	The UK regulator for animal by-products including food waste. Relevant to Unitas in relation to the collection and disposal of animal carcasses from highways (road kill).

3. Process Map

3.1 Duty of care compliance process



3.2 Resource management plan process



4. Unitas Requirements for Managing Waste

Prior to any works commencing, the potential impacts from generating, handling, storing, treating and disposing of waste must be assessed in accordance with the Risk and Impact Assessment Standard (SHEMS-STD-GR-014). This assessment must include identifying any control measures required to reduce the impact of our activities.

Requirements for managing waste must be communicated to relevant staff and subcontractors including the use of site inductions and Toolbox Talks.

For construction CDM F10 notifiable projects (as defined in Construction, Design and Management (CDM) Standard - SHEMS-STD-GR-025), the Project Environmental Co-ordinator must be appointed using the appropriate appointment sheet (Environmental Co-ordinator Appointment Sheet - SHEMS-FOR-GR-004). The person appointed must be a senior member of the project team.

4.1 Waste classification

Article 3(1) of the Waste Framework Directive defines waste as 'any substance or object which the holder discards or intends or is required to discard'.

Waste must be classified in accordance with the European Waste Catalogue (or List of Wastes). The six-digit waste code that applies to the waste must be used on waste transfer notes and hazardous waste consignment notes. The List of Wastes codes are in Appendix A of Technical Guidance WM3 Classification of Waste.

Some wastes may require chemical analysis testing in order to establish the correct waste code, particularly soils, asphalt and other excavated materials. Chemical tests must be accompanied by interpretive reports giving the waste code for the waste. Waste Acceptance Criteria tests must not be used to classify waste, these are used to identify suitable landfill sites.

4.2 Specific wastes

4.2.1 Recycled aggregate

Recycled aggregates are classed as waste, whether they are imported or generated as part of Unitas activities. Only recycled aggregates that have been produced in accordance with the WRAP (Waste and Resources Action Programme) Recycled Aggregate Quality Protocol (in England and Wales) are no longer waste. Both of these documents are considered approved guidance from a regulatory point of view.

The approved guidance aims to clearly set out the steps that must be taken for certain waste streams to become a non-waste product or a material that can be either reused by business or industry, or supplied into other markets. This enables recovered products to be used without the need for waste regulation controls.

Demonstrating conformity with the approved guidance during the procurement or production of recycled aggregates means that the material can be produced or used without the need to apply waste legislation, as the material has been recovered and ceases to be a waste.

Where practicable all procurement and production of secondary or recycled materials should be done in accordance with the approved guidance. Specifying the use of the approved guidance must be considered prior to works commencing on site and as such consultation with the SHE Manager/ Advisors is required.

Material produced in accordance with the approved guidance can be used once verification of compliance with the protocol has been confirmed. When this material is received on site, it should not be accompanied by waste transfer notes, but by delivery notes or invoices stating that the material meets the requirements of the approved guidance.

Recycled aggregates that don't meet the approved guidance can still be used on site within specific limits, and must consist of inert material only (e.g. concrete, bricks, tiles, ceramics). The site must have the relevant environmental permit or permit exemption from the Regulator in order to use material that does not meet the requirements of the approved guidance. For example, a local authority permit (PPC permit) will be required for crushing plant and an environmental permit or exemption will also be required to use the crushed material on site.

Application for an environmental permit can be a time consuming and costly process. Therefore the project team must inform the SHE Manager/Advisors at the earliest opportunity to ensure compliance with the regulations.

Most permit exemptions are free of charge and can be obtained within five working days. Contact the Environmental Manager / SHE Manager for further guidance.

Refer to Unitas Minimum Standard for Recycled Aggregate (SHEMS-MST-GR-0008) for details of testing and certification required for imported and site-generated recycled aggregate. This includes details of asbestos sampling and testing as follows:

- Asbestos screening certificates must be provided for every 200m^3 of imported recycled aggregate, unless confirmation can be obtained that there is no risk of asbestos in the materials used to generate recycled aggregate on site (written statement)
- In relation to asbestos screening test results:
  - Any material found to contain a visible fragment of asbestos containing material (ACM), where the concentration of asbestos in the piece of ACM is ≥ 0.1% (weight for weight), or asbestos fibres at concentrations ≥ 0.1% (weight for weight), must be rejected and disposed of as hazardous waste (special waste in Scotland).
  - Any material found to contain asbestos fibres where the concentration of fibres is < 0.1%, but ≥ 0.01%, must be rejected and disposed of as non-hazardous waste.
  - Material containing asbestos fibres at concentrations < 0.01% may be used as recycled aggregate.

Refer to appendix A1 for a flow chart to be used where crushing or screening on site is intended.

Refer to appendix A2 for a flow chart to be used where use of recycled aggregate on site is intended.

4.2.2 Soils

Excavated soils are not waste if the following applies:

The material is: 'uncontaminated soil or 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**' (Waste Framework Directive 2008/98/EC).

Whether soil is contaminated or not must be confirmed in associated site investigation / chemical analysis / borehole records. Other naturally occurring material means; stones, gravel, rock, etc. Man-made materials such as concrete, made ground, hard core etc., are not considered to be 'naturally occurring'.

Certainty of use must be demonstrated for example by:

- Construction plans or designs for the site in question. These may contain estimates of excavated amounts and whether there will be a surplus or deficit of such material
- Planning-permission conditions
- Site waste management plans or resource management plans

'The site' in relation to construction activities is usually defined in relation to associated planning permissions.

Soils that are not suitable for use or are surplus to requirements are waste. The use, treatment (including blending and soil improvement), storage and disposal of waste soils are subject to environmental permitting legislation. The transport of waste soils is subject to the duty of care.

Soils must be classified as either non-hazardous or hazardous in accordance with Technical Guidance WM3. This involves chemical analysis to determine the presence and concentrations of potential contaminants. Waste soil must be classified as either non-hazardous (EWC: 17 05 04) or hazardous (EWC: 17 05 03). Soil analysis must be accompanied by interpretive reports that provide the EWC classification. The preference for these interpretive reports is to be in the format of those produced by HazWasteOnline™ or similar.

Soil that contains visible fragments of asbestos is classified as hazardous waste. Where soil contains <0.1% concentration of asbestos fibres only (and no other substances that result in it being hazardous), it will be non-hazardous and may be used on site subject to risk assessment by competent persons but **only as subsoil** i.e. not as surface topsoil.

For topsoil, refer to Unitas Minimum Standard for Topsoil (SHEMS-MST-GR-0009) for details of testing and

certification required for imported and pre-existing on site (but moved during the works rather than left in-situ). This includes details of asbestos sampling and testing as follows:

- Topsoil found to contain a visible fragment of asbestos containing material (ACM), where the concentration of asbestos in the piece of ACM is ≥ 0.1% (weight for weight), or asbestos fibres at concentrations ≥ 0.1% (weight for weight), will mean the soil must be rejected and disposed of as hazardous waste (special waste in Scotland).
- Topsoil found to contain asbestos fibres where the concentration of fibres is < 0.1% but ≥ 0.01% must be rejected, and disposed of as non-hazardous waste.
- Topsoil containing asbestos fibres at concentrations < 0.01% may be used further to risk assessment by a competent person (e.g. environmental consultancy) and with local planning authority approval.

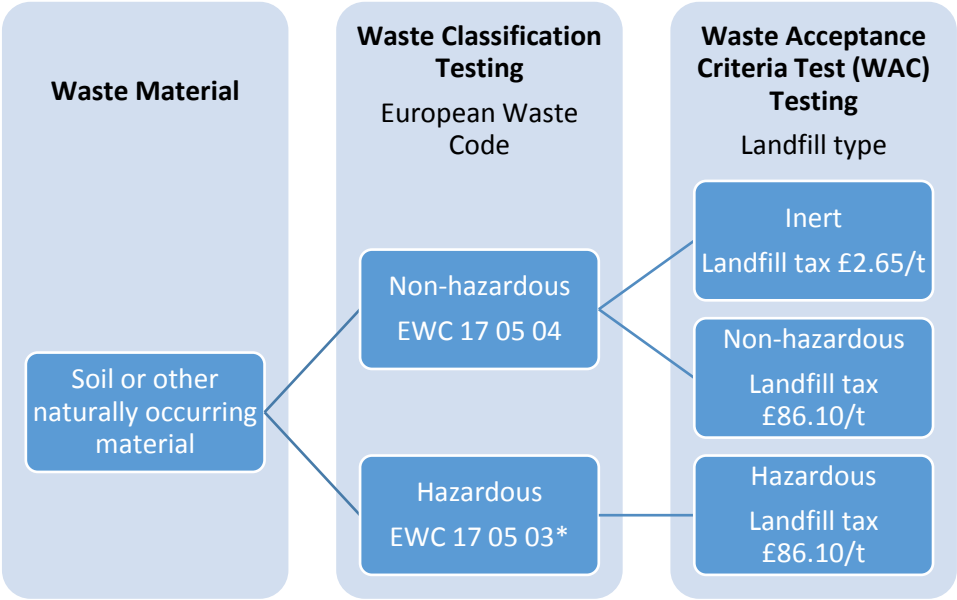
Asbestos screening and concentration analysis should be specified separately when commissioning waste classification testing / analysis.

Where the site history suggests a risk of Persistent Organic Pollutants being present (i.e. sites with high levels of ash or former combustion sites, pre-1990s substation & transformer sites and agricultural land with pre-1980s pesticide use) these should be included in waste classification tests.

The suitability of soils for reuse depends on the levels of potential contaminants on the site of use and the final use of the site (i.e. residential, commercial etc.). Refer to the Earthworks and Contaminated Land Standard (SHEMS-STD-GR-061), which includes guidance on commissioning and reviewing site investigations.

Some soils (not usually top soils) may be suitable for disposal at 'inert' landfill sites. This is subject to Waste Acceptance Criteria testing against the criteria for inert waste landfills. Disposal at inert landfill is inexpensive compared to non-hazardous landfill due to differences in landfill tax; therefore Waste Acceptance Criteria testing must be used to identify the most suitable option for all soils.

Contaminated soils may require disposal at hazardous waste landfill sites. This is subject to Waste Acceptance Criteria testing against the criteria for hazardous waste landfills.



The results of all tests undertaken must be forwarded to both the company removing the soil and the facility receiving the soil.

Undertaking thorough sampling and testing of soils may result in significant cost savings where soils are suitable for disposal at inert landfill sites.

Sampling and testing of soils destined for landfill must be done in accordance with the Environment Agency 'Waste Sampling and Testing for Disposal to Landfill' guidance.

Hazardous soils must not be mixed with non-hazardous material/soils.

The CL:AIRE Definition of Waste, Industry Code of Practice provides a framework for the sustainable reuse of clean and contaminated soils on the site of production or on other sites. The Code can be applied to de-classify soils as waste and allow beneficial reuse, using a Materials Management Plan to record all relevant information.

The Code should be considered for all works generating large quantities of surplus soils as significant cost savings can be achieved. Any project wishing to use CL:AIRE and Materials Management Plans must first contact their SHE Manager.

Refer to appendix A3 for a flow chart to be used where the use of imported waste clay, sand, subsoil or topsoil is intended.

4.2.3 Asphalt / bituminous waste

Asphalt and tarmac can be hazardous waste if it contains coal tar substances that were used in asphalt binders prior to approximately 1990. If asphalt /tarmac destined for disposal was laid after this time (including any layers beneath the surface), then it will not be hazardous waste.

If asphalt / tarmac destined for disposal was laid prior to 1990 or has older layers beneath the surface, then the material must be tested to demonstrate whether or not it is hazardous waste.

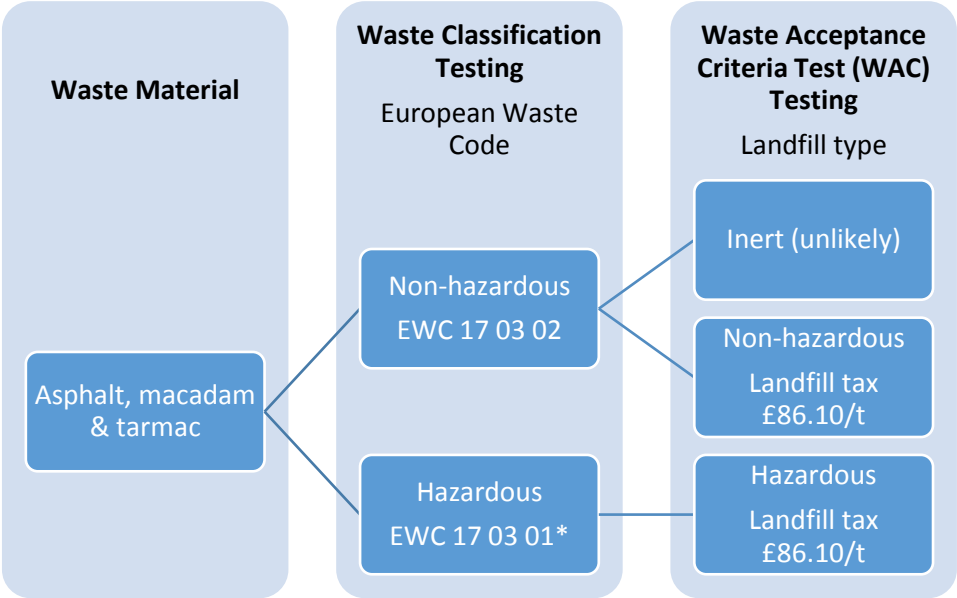
Chemical analysis must be undertaken and interpreted in accordance with Technical Guidance WM3 to provide the relevant European Waste Code as follows:

- 17 03 01 - bituminous mixtures containing coal tar (hazardous waste), or
- 17 03 02 - bituminous mixtures other than those mentioned in 17 03 01 (non-hazardous waste)

The preference for interpretive reports is to be in the format of those produced by HazWasteOnline™ or similar.

The re-use and recycling of asphalt, including asphalt containing coal tar, should be considered in preference to disposal. Compliance requirements are covered in Environment Agency Regulatory Position Statement 075. Disposal of asphalt containing coal tar will require transfer to a hazardous waste facility or permitted recycling facility. In all cases, consult your SHE Manager / AdvisorS.

Asphalt / tarmac waste destined for disposal at landfill must also be subject to Waste Acceptance Criteria (WAC) testing to identify what type of landfill is suitable for the material (inert, non-hazardous or hazardous).



4.2.4 Plasterboard and gypsum waste

Uncontaminated plasterboard and plaster products are classified as non-hazardous waste. They cannot however, be disposed of in the same landfill as biodegradable wastes.
Plasterboard products can therefore only be placed in a mixed waste skip with permission of the waste contractor who will separate the plasterboard from the other wastes prior to sending any material to landfill. Otherwise they will require segregated waste containers.

4.2.5 Road sweeper and gully arisings

Road sweeper and gully arisings are to be removed from site directly to a permitted waste facility accompanied by compliant waste transfer notes. Should it be impracticable to send arisings directly off-site to a permitted facility, the appropriate environmental regulator must be contacted to discuss and agree a method of on-site storage, treatment and / or re-use. A member of the environmental team and the project's / contract's allocated SHE professional must be fully involved in this process. Under no circumstances should road sweeper or gully arisings be discharged on site without first obtaining written authorisation from the regulator.

4.3 Duty of care

Anyone who imports, produces, carries, keeps, treats or disposes of waste is subject to a duty of care whereby they must take all reasonable and applicable measures to:

- Prevent another person illegally treating, keeping, depositing or otherwise disposing of the waste
- Prevent the escape of waste
- Ensure that transfer of the waste only occurs to an 'authorised person' and that the transfer is accompanied by a written description of the waste

All Unitas that carry waste as part of their activities shall hold a valid waste carrier registration certificate issued by the relevant authority.

4.4 Hazardous waste premises registration and consignment note codes

All offices and depots must complete and maintain a Hazardous Waste Register (SHEMS-FOR-GR-042) which records each collection of hazardous waste from the premises. This register must be used to generate unique hazardous waste consignment note codes for each collection of hazardous waste (in England and Wales). These codes include a six-digit code (to denote the premises) followed by a five-digit code (to identify the individual consignment of hazardous waste). The first six digits must be obtained or generated as per 4.4.1 and 4.4.2 below.

4.4.1 Wales

Any Unitas premises or site in Wales that will produce >500kg of hazardous waste per year must be registered as a hazardous waste producer with the Natural Resource Wales, and use the hazardous waste premises code on all hazardous waste consignment notes.

4.4.2 England

Any Unitas premises or sites in England that will produce more than 500kg of hazardous waste per year must use the specific premises codes listed in Appendix 5. Individual sites, depots or premises within the Business Units must generate the second five digits of the hazardous waste consignment note code as follows:

- For projects the first four digits are to be the last four digits of the project number, and the fifth digit a letter to denote the movement number (e.g. 1234A).
- For depots and premises, the business unit is to create a unique two digit premises code as the first two digits, with the last three digits being consecutive numbers (e.g. XX001, XX002 etc.).

4.5 Waste storage

Unitas must ensure that waste materials are stored in such a way as to prevent any escape or release from the waste container.

Where practicable waste should be segregated and as a minimum requirement hazardous waste streams must be stored separately from non-hazardous waste streams.

All waste electrical and electronic equipment (WEEE) must be stored in segregated containers. WEEE items must not be disposed of with other waste and any disposal site must be checked to ensure they can accept this waste stream. This also applies to mechanical and electrical components. Fluorescent tubes must be kept in appropriate storage containers (often known as coffins) to prevent damage during storage, preferably separated from other wastes including other WEEE wastes due to their fragility.

All Unitas IT equipment must be returned to the IT department for assessment to determine whether it can be repaired, recycled or re-used as a whole or in part. As such no Unitas IT equipment can be classified as waste until such checks have been completed.

It is a legal requirement for waste batteries and accumulators to be collected and recycled separately from other waste. Unitas sites and premises must make arrangements to comply with this requirement.
All waste storage containers must be regularly inspected to ensure that:

- They are labelled to identify their contents
- Waste should be securely stored to prevent unauthorised access
- Containers should be of good quality and stored in designated areas so as to prevent damage
- Waste storage areas and containers must be located away from watercourses or drains, or these features must be protected
- Waste storage containers and areas must be checked regularly for spills, leaks, escapes of waste and deterioration of containers

All reasonable steps must be taken to ensure the separate collection of dry recyclable wastes (i.e. glass, metal, plastic, paper and card).

Refer to Unitas Minimum Standard for Hazardous Waste Storage (SHEMS-MST-GR-0010) for details of storing hazardous waste at Unitas premises and temporary sites.

4.6 Pre-treatment of landfill waste

Any waste materials sent to landfill must be pre-treated. The definition of treatment includes any of the following actions:

- Reducing the volume of the waste, e.g. removal of water from sludge
- Reducing the hazardous nature of the waste, e.g. remediation of soils
- Making handling or recovery easier, e.g. segregation of waste streams

The treatment of waste does not have to be carried out on site, the use of a waste transfer station to separate waste fractions for recovery or disposal is considered as off-site pre-treatment. Refer to the Environment Agency 'Treatment of Waste for Landfill' guidance for further information.

Liquid waste, electrical & electronic equipment and tyres (whole or shredded) are banned from landfill.

4.7 Waste management facilities

Facilities accepting waste such as waste transfer stations, materials recycling facilities and landfill sites are required to have an environmental permit or exemption notification which is issued by the environmental regulator.

Before allowing any waste to leave its sites or premises, Unitas must:

- Ensure that the facility has a valid environmental permit, licence or exemption notification
- Check that the environmental permit, licence or exemption notification allows the facility to accept all the types of waste materials that they are planning to send there

If there is any concern about the facility or location where the waste is being taken, the Unitas SHE manager must be notified immediately.

Unitas sites or premises receiving or storing waste may require an environmental permit or exemption. This includes Unitas sites receiving waste from another Unitas site or premises. Contact the SHE Manager for further advice.

4.8 Exemptions

Some low-risk activities involving the treatment, storage or use of waste may require an exemption from the relevant regulator. These activities include:

- Treatment of waste such as screening, blending and crushing or chipping / shredding of plant matter
- Use of waste such as using crushed concrete for construction purposes (where it has not been produced in accordance with the relevant approved guidance - see Section 4.2.1)
- Storage such as temporary storage at premises other than where the waste was generated

Exemptions are typically free of charge and are valid for a few years. Specific conditions must be met. Exemptions should be registered by or with the advice of the relevant SHE Manager / Advisers and details of exemptions held by Unitas should be held on file.

In England, exemptions can be registered with the Environment Agency, in Wales with Natural Resources Wales and in Scotland with SEPA.

Refer to appendix A1 for a flow chart to be used where crushing or screening on site is intended and an exemption may be required.

Refer to appendix A2 for a flow chart to be used where use of recycled aggregate on site is intended and an exemption may be required.

Refer to appendix A4 for a table showing the key differences between exemptions in England / Wales and in Scotland.

4.9 Waste transfer

Any business or organisation removing any waste from Unitas sites or premises must provide details of their waste carrier registration certificate, details of the waste facility to be used and evidence that the proposed destination can legally accept the waste. **All waste carrier certificates and environmental permits must be checked with the relevant Regulator to ensure they are genuine and valid**. In addition to this the business or organisation must provide Unitas with a record of the waste movements in the form of a fully completed waste transfer note or hazardous waste consignment note (special waste consignment note in Scotland).

Unitas waste transfer notes can be used where required (see Section 4.8.1).

Any business or organisation arranging waste collection services on behalf of Unitas must hold a valid waste broker's registration certificate. Waste brokers must ensure that all organisations removing waste from Unitas sites are individually registered as waste carriers with the relevant regulator. Evidence of these registrations must be provided to Unitas prior to any waste being removed by these contractors.

Unitas must obtain details of where waste from Unitas premises or sites is taken to, and ensure that a valid environmental permit or exemption is in place for that facility.

4.9.1 Waste transfer notes

All non-hazardous waste removed from Unitas premises or sites must be accompanied by a completed waste transfer note, with a copy retained by the premise or site. Electronic waste transfer notes (e.g. Edoc) are also acceptable. Where waste transfer notes are produced electronically the electronic copy of the note must be available to view by Unitas (either online or by email) by 10:00 on the next working day following the transfer. Legible copies of waste transfer notes must be kept for two years following date of issue.

Waste transfer notes are required for all movements of excavated soils, skips, road sweeper arisings, septic tank / toilet waste, wheelie bins etc.

All waste transfer notes (including electronic notes) must include:

- A written description of the waste (e.g. mixed metals, wood, plasterboard, mixed construction waste, uncontaminated soil & stones, etc.)
- The relevant European Waste Catalogue (EWC) Code
- Whether the waste is loose or in a container and the type and size of container (e.g. skip, drum, bin, bag, tanker etc.)
- The time, date and place of transfer (i.e. site, depot or office address)
- The standard industry classification (SIC) code of the waste producer (from the 2007 list)[1]
- The company name and address of the waste producer and waste carrier
- The waste carrier's registration number
- If the waste carrier holds an environmental permit, the permit number[1]
- If the waste carrier is also a broker, their waste broker registration number[1]
- Confirmation that the waste producer has applied the waste hierarchy according to Regulation 12 of the Waste England and Wales) Regulations[1]
- The document must be signed by the waste producer and the waste carrier at the time of transfer

In addition, Unitas require the name and address of the first point of disposal to be noted on the waste transfer note (e.g. waste transfer station, materials recovery facility, landfill site, etc.).

Unitas waste transfer note templates are available for use as follows:

- SHEMS-FOR-GR-162 - this form may be used for sending waste away from any Unitas site undertaking construction, refurbishment, maintenance, infrastructure, rail, waterways or utilities works and other Unitas activities except the operation of waste transfer stations / household waste recycling centres. The form is not mandatory unless specified by the relevant and can be used where waste / subcontractor formats for waste transfer notes are not sufficient or where the project / contract want to use it.
- SHEMS-FOR-GR-164 - this form must be used by Unitas Environmental for sending waste away from waste transfer stations and household waste recycling centres.
- The Waste Transfer Note Guidance Poster can be displayed on site or used during Toolbox Talks to demonstrate how the form should be completed.

[1] England and Wales only

4.9.2 Hazardous / special waste consignment notes

All hazardous waste removed from Unitas premises or sites must be accompanied by a completed hazardous waste consignment note (including the hazardous waste premises code - see Section 4.4) or a special waste consignment note in Scotland. A copy of each hazardous/special waste consignment note must be taken before the waste leaves site. The waste carrier is responsible for ensuring that following disposal of the waste at the relevant permitted / licensed facility, a further copy of the hazardous/special waste consignment note is provided within 3 months showing acceptance of the waste at the facility named on the hazardous/special waste consignment note (Part E). Legible copies of hazardous/special waste consignment notes must be kept for three years following collection.
Hazardous/special wastes must be segregated at source for subsequent treatment / disposal and must not be mixed with non-hazardous wastes.

In England and Wales the hazardous waste consignment notes must contain all information as listed in Section 4.8.1; Waste Transfer Notes, plus the following:

- Consignment note code (or number), starting with the hazardous waste premises code
- Hazardous waste premises code
- The standard industry classification (SIC) code of the process giving rise to the waste (from the 2007 list)
- The chemical / biological components in the waste and their concentrations
- Physical form of the waste (gas, liquid, solid, powder, sludge or mixed)
- The relevant Hazard Property Code (from WM3), e.g. HP1 - explosive, HP7 - carcinogenic
- Part E - where the receiving facility signs to acknowledge that they have received the waste (this should be received within three months of the waste being removed)

The Environment Agency standard format hazardous waste consignment note can be used, or Business Units can generate their own templates provided they meet with these requirements.

The Hazardous Waste Consignment Note Guidance Poster can be displayed on site or used during Toolbox talks to demonstrate how the form should be completed.

In Scotland, hazardous waste is known as 'special waste' and must be transferred using special waste consignment notes obtained from SEPA prior to the waste being moved. Process as follows:

- Five copies of the special waste consignment note must be completed (Part A - Consignment Details and Part B - Description of the Waste) by the waste producer (or Consignor)
- One copy must be sent to SEPA prior to waste being removed
- The Waste Carrier must complete Part C - Carriers Certificate, on all four remaining copies
- The Consignor must complete Part D - Consignor's Certificate and retain one copy (for three years)
- The Waste Carrier must take the remaining three copies, ensure they travel with the waste and are given to the receiving waste facility (Consignee) on delivery of the waste
- The waste facility must complete Part E - Consignee's Certificate on receipt of the waste then;
    - Retain one copy (for three years)
    - Give one copy back to the waste carrier
    - Issue one copy to SEPA
- The Waste Carrier keep their copy of the fully completed Consignment Note for three years

4.9.3 Disposal of PCB Contaminated Equipment

There are additional requirements on the disposal of Polychlorinated Biphenyl (PCB) Contaminated Equipment. In addition to the completion of the hazardous (special) waste consignment note the following is to be actioned:

- Notify the Environmental Regulator prior to transfer to tell them how you plan to dispose of the PCB contaminated equipment. This must confirm that the PCB contaminated equipment will be disposed of in such a way that the PCB will either be destroyed (e.g. by incineration) or by permanently storing underground if the PCB cannot be destroyed. Contact details for Regulators as follows:
- Environment Agency/NRW: chemicalrestrictions@environment-agency.gov.uk
- SEPA: PCB Registration Unit, Tel: 01786 457700
- NIEA: Waste Management and Contaminated Land, Tel: 028 9025 4720
- Records must be kept to enable Unitas to confirm to the Environmental Regulator that the PCBs were disposed of by one of the above methods.

4.10 Public registers

Environmental regulators hold public registers of Waste Carrier Certificates, Environmental Permits and exemptions. These can be used to check the validity of such authorisations.
England:

- Environmental permits for waste facilities
- Waste carriers, brokers and dealers, waste exemptions

Wales

- Waste carriers, brokers and dealers, waste exemptions, hazardous waste registrations, environmental permits etc.

Scotland

- Waste carriers and brokers
- Other registers via email

4.11 Records

Copies of waste carrier registration certificates must be retained for contractors removing waste.

Copies of environmental permits / exemptions must be retained for facilities where waste is being sent.

Waste transfer notes must be held for two years, while hazardous waste (and special waste) consignment notes must be held for three years. Therefore legible copies of all waste transfer notes and hazardous waste consignment notes (or special waste consignment notes in Scotland) must be held on the relevant site or premises as hard copies, This includes all movements of skips, wheelie bins, excavated soils, road sweeper arisings, septic tank / toilet waste, asbestos waste removals, etc., whether arranged by Unitas or by a subcontractors.

Refer to Unitas Standard Documentation (SHEMS-STD-GR-010) and Records Retention Register (SHEMS-REG-GR-010).

4.12 Waste Management

Unitas must manage the waste generated by its activities, sites or premises in accordance with current legislation. Therefore all waste movements off site must be recorded for every Unitas site or premise. In addition appropriate steps must be taken to reduce the amount of waste generated and the percentage that is sent to landfill.

The Waste Project Registration Form (SHEMS-FOR-GR-043) should be used to capture the key details required to register the project/premises on Waste. This form should be completed.

4.13 Site waste/Resource management plans

All Unitas projects that are greater than four weeks duration or £300,000 in value (excluding VAT) are required to complete a site waste management plan (SWMP), a Resource Management Plan (RMP) (SHEMS-FOR-GP-160) prior to starting works on site. The SWMP/RMP is used to:

- Comply with duty of care regulatory requirements
- Reduce the amount of waste generated
- Improve waste recovery and diversion from landfill
- Maintain duty of care records

The project team must ensure all duty of care paperwork described in 4.11 above is accessible on site at all times.

4.13.1 Waste targets

Projects must set a target benchmark for resource efficiency (e.g. m^3 of construction waste per $100m^2$ GIFA) and include this in the plan/RMP.

Project targets for waste resource efficiency are aimed at reducing the quantity of construction waste generated by the works. In this context, construction waste means materials off-cuts, packaging etc. It excludes all demolition and excavation wastes and waste such as office waste, septic tank wastes etc. that are not generated directly by construction activities.

Projects aiming to achieve BREEAM or other environmental performance schemes may have project-specific construction waste targets dictated by the scheme requirements.

Unitas should set waste generation targets for other projects based on industry data or previous performance.

4.13.2 Minimising non-hazardous waste

Materials must be managed on site to reduce the volume on non-hazardous waste. This may include (where appropriate):

- Cut and fill design balanced to reduce off-site disposal / import of virgin material
- Recycled aggregates specified for fill purposes
- Value Engineering exercises that drive leaner design e.g. use of post-tensioned concrete slabs which are thinner than typical in-situ concrete slabs, resulting in a reduction in the volume of concrete required and associated waste
- Site-won demolition material used for construction purposes (with an appropriate Environmental Permitting Exemption or which was produced in accordance with the WRAP Recycled Aggregate Quality Protocol)
- Contaminated soils to be remediated and used on site as opposed to disposed of off-site (in accordance with the CL:AIRE code of practice)
- Standardisation of building dimensions to reduce off-cuts of plasterboard, tiles etc.
- Off Site Manufacture of building elements resulting in less waste on site
- Salvage and reuse of existing building elements as opposed to purchasing new materials
- Floor levels adjusted to reduce off-site disposal of excavated material
- Use of building materials with a high recycled content
- Hard standing on site retained as materials storage area
- Soil stabilisation used to improve ground bearing capacity and reduce disposal of excavated material and replacement with hard core
- Just in time materials deliveries to reduce periods materials are stored on site to prevent damage
- Secure materials storage areas to prevent damage to materials

4.13.3 Minimising hazardous waste

Hazardous waste must be segregated from non-hazardous waste, both to ensure compliance with legislation and also to prevent non-hazardous waste becoming contaminated by hazardous waste.

Where possible, the use of hazardous substances should be avoided to prevent generation of hazardous waste directly from those materials and from containers / packaging relating to those materials.

Care should be taken when storing hazardous materials (e.g. fuel, oil and other COSHH substances) to prevent damage and spillage resulting in hazardous waste.

Where hazardous waste is expected from excavations (from contamination, including hydrocarbons, heavy metals or asbestos etc.), consideration must be given to possible treatment methods to reduce the hazardous proportion of the waste. This could include further testing to better delineate areas of hazardous material, on or off-site treatment of heavy metals and hydrocarbons, or screening material to remove visible asbestos fragments which can result in material being classified as non-hazardous rather than hazardous.

4.13.4 Sorting, reusing and recycling construction waste

Where there is space available on site and an environmental or economic benefit can be gained, waste segregation must be implemented.

As a minimum, hazardous waste must be segregated from non-hazardous waste. Waste electrical and electronic equipment (whether hazardous or non-hazardous - EWC 16 02 series) must also be segregated for recycling.

The most beneficial waste streams to segregate on site are:

- Concrete, bricks / blocks, tiles, ceramics, stone and glass (waste considered easily recyclable and attracting the lower rate of landfill tax - often referred to as 'inert' waste) - EWC 17 01 series
- Metals - EWC 17 04 series
- Timber (preferably to be collected by members of the National Community Wood Recycling Project) - EWC 17 02 01
- Gypsum and plasterboard products - EWC 17 08 02
- Packaging - EWC 15 01 series
- Soils and stones - EWC 17 05 04

Scotland only: It is a requirement that all reasonable steps are taken to segregate dry recyclable waste on site (including glass, metals, plastics, paper and cardboard). A canteen producing more than 5kg of food waste per week must also present this food waste for separate collection.

All construction waste must be sent to appropriately licensed waste facilities for recovery and recycling. This includes all projects covered by the CDM regulations including non-notifiable projects.

Excavation wastes should be diverted from landfill wherever possible, for example by sending to other construction projects holding appropriate exemptions (such as a U1 exemption) or by implementing the CL:AIRE code of practice.

4.13.5 Monitoring, measuring and reporting non-hazardous waste

As described in Section 4.1, all projects and premises must record their waste movements to confirm that our duty of care obligations have been met and to allow Unitas to monitor waste production. All waste transfer notes must be retained.

4.13.6 Ongoing review

The SWMP/RMP should be reviewed every three months as a minimum and amended as necessary to ensure that it accurately reflects the progress of the project. The waste forecast should be compared to the waste generated to assess significant differences between the figures. This review should be recorded within the SWMP/RMP.

4.13.7 Post-completion review

The post-completion review of the SWMP/RMP must be undertaken and recorded, within the RMP, within three months of project completion, but as soon as is practical.

The post-completion review must include:

- Confirmation that the SWMP/RMP has been regularly monitored
- Comparisons of the actual quantity of each waste produced with the initial estimated quantity
- Consideration of any deviation from the plan (i.e. changes to project scope, design etc.)
- Any cost savings made
- Any Best Practice achieved on sit

4.14 Waste reporting

All business units must confirm in writing to the Unitas Environmental Manager, by the 14th of the month following quarter end, that all data is up to date and has been checked. The Unitas Environmental Manager will then obtain the relevant turnover data for each business unit and generate the required waste reports

Waste must be reported in accordance with the ENCORD Construction Waste Measurement Protocol.

4.15 Monitoring

Monitoring of environmental impacts should be included in weekly site inspections undertaken in accordance with the Audit, Inspection and Weekly Monitoring Standard (SHEMS-STD-GR-008). The monitoring should include any corrective or preventive measure required and must be closed out in a timely manner.

4.16 Incidents

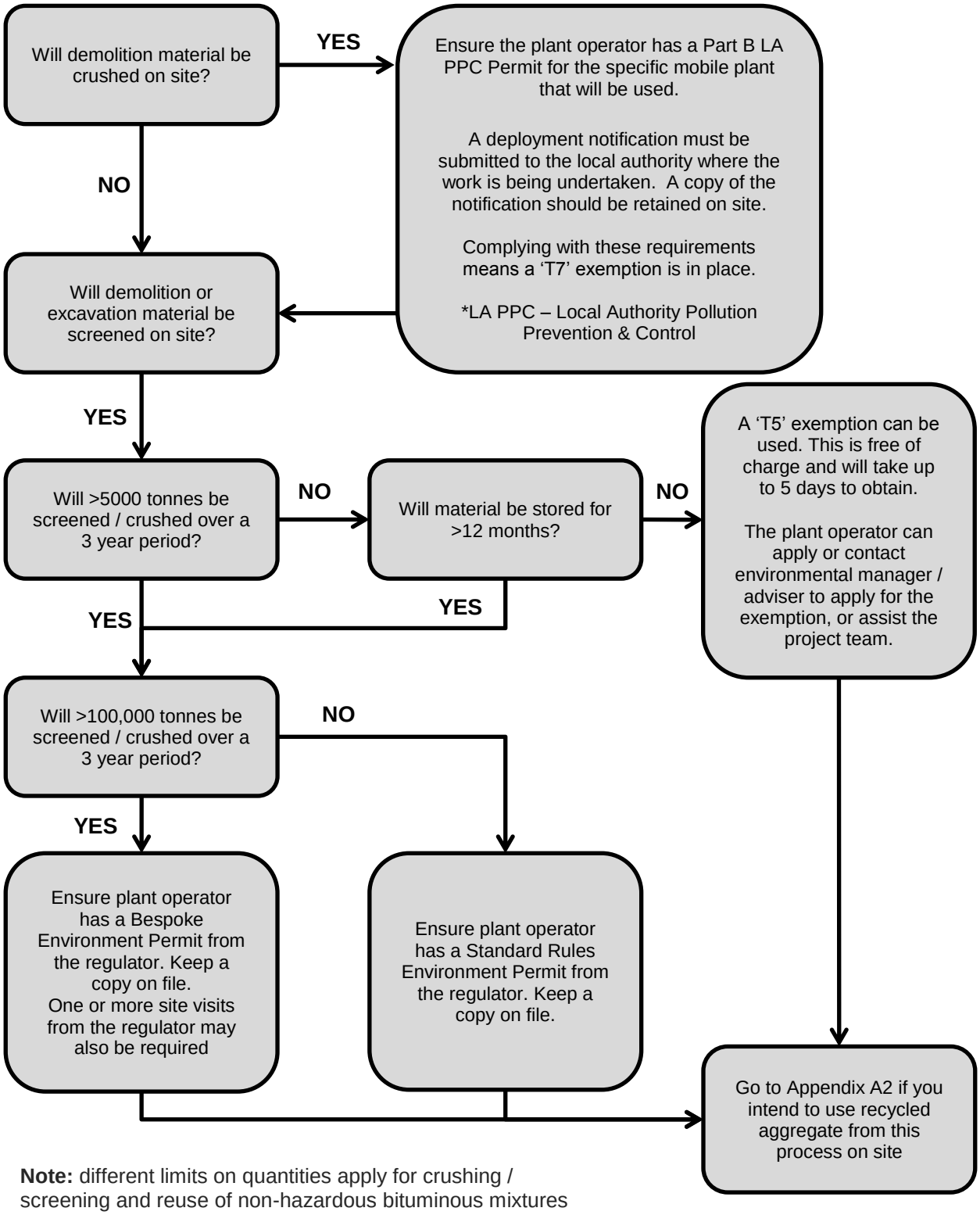
Incidents relating to waste management (e.g. unauthorised treatment, use, storage or disposal of waste including fly-tipping, or sending of waste to facilities not permitted to accept it, using crushed demolition waste on site without an exemption etc.) must be reported internally in accordance with the Incident and Near Miss Reporting Standard (SHEMS-STD-GR-011).

4.16.1 Enforcement activity

Contact with relevant environmental regulators relating to waste activities (e.g. local authority environmental health or planning department, Environment Agency, SEPA etc.) must be internally reported within 24 hours to the SHE team or via the Enforcement Authority Contact Standard (SHEMS-STD-GR-022).

Appendix A1 - Crushing and screening on site flow chart - England and Wales

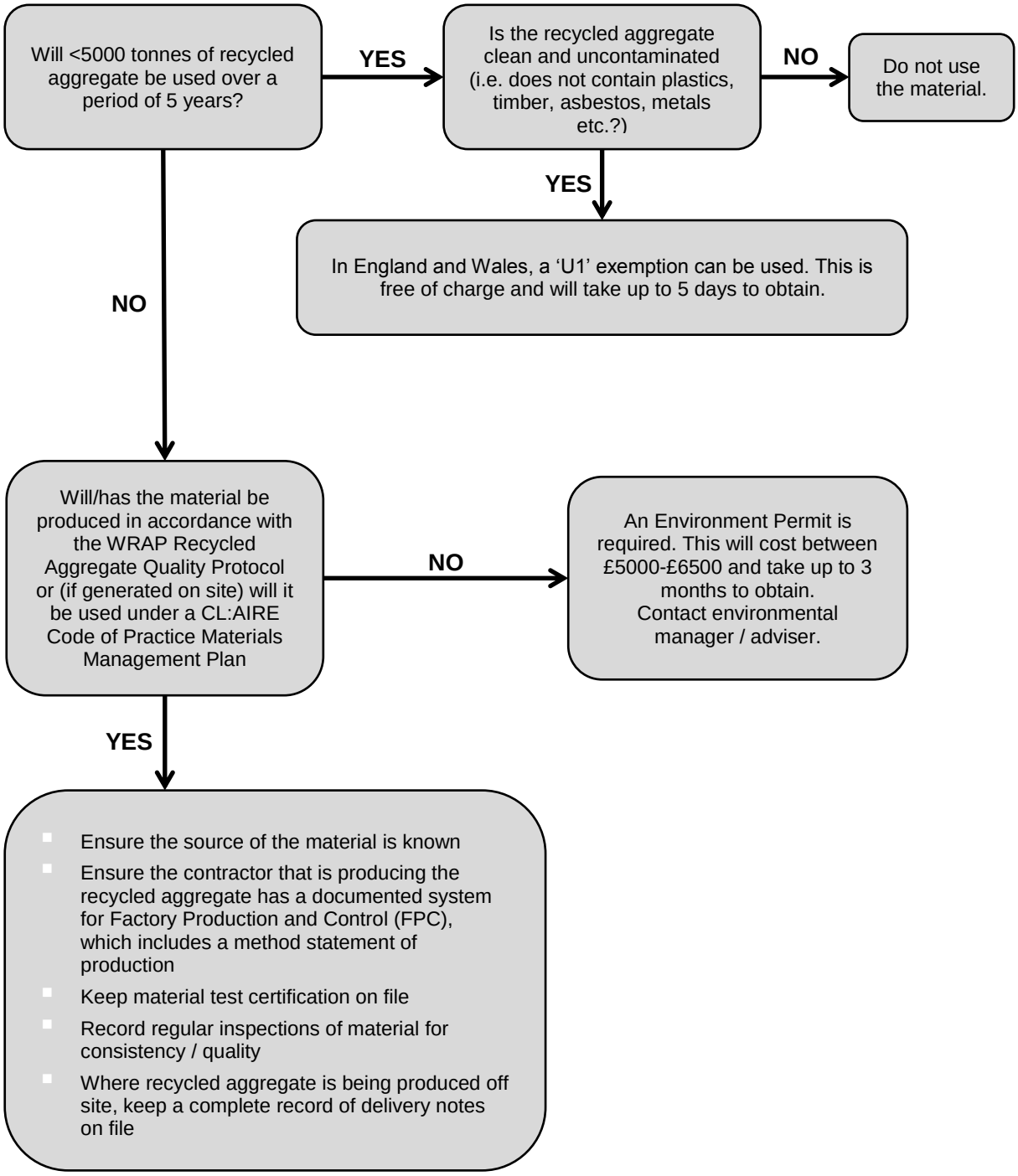
Follow this flow chart if you intend to **crush or screen** demolition or excavation material on site.



Note: different limits on quantities apply for crushing / screening and reuse of non-hazardous bituminous mixtures (i.e. non-hazardous tarmac / road-planings). Contact your SHE Manager/Advisors for further guidance.

Appendix A2 - Using recycled aggregate on site flow chart - England and Wales

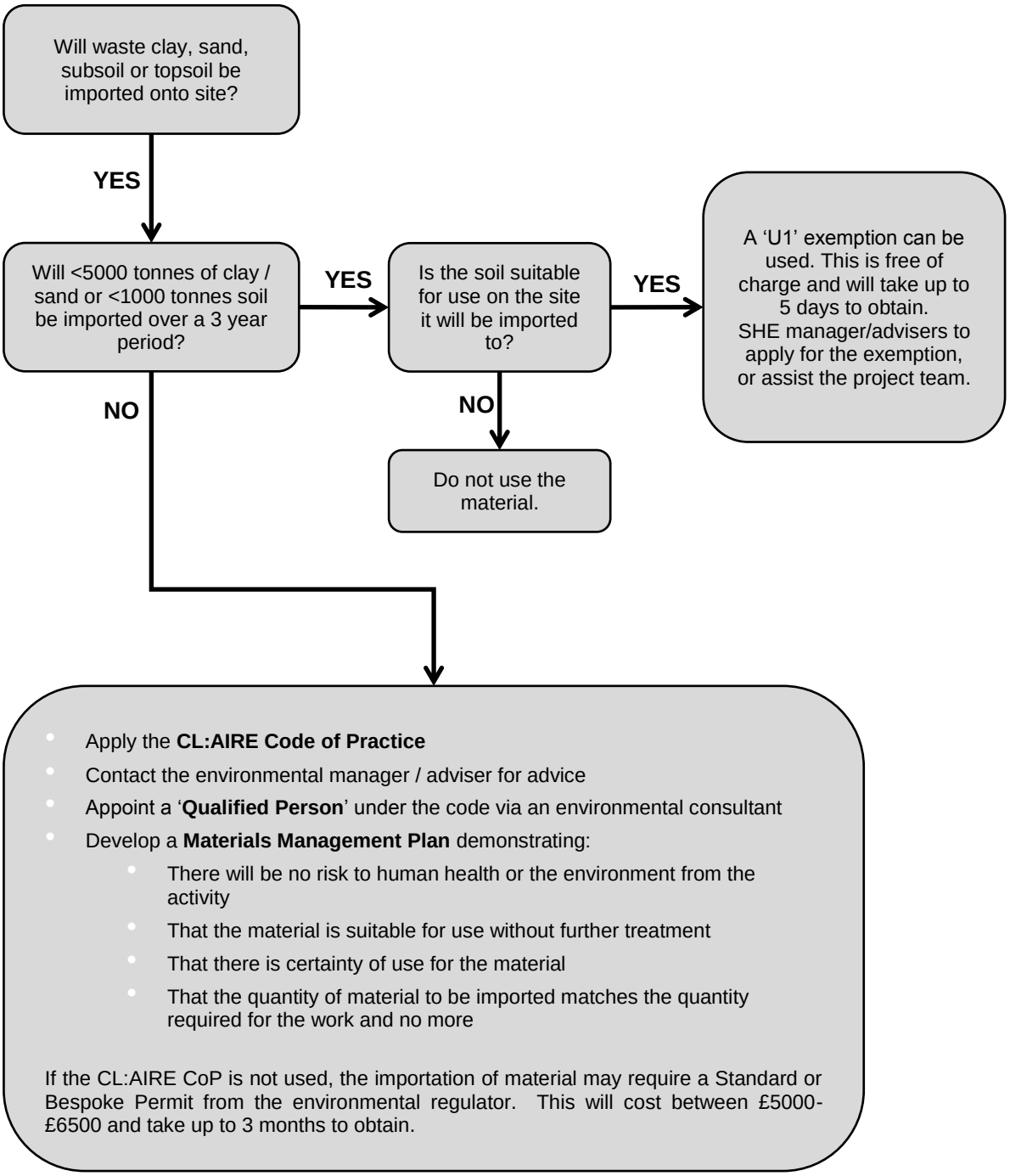
Follow this flow chart if you intend to **use** recycled aggregates or crushed bricks, blocks, concrete, tiles and ceramics that originate on or off site.



Note: different limits on quantities apply for crushing / screening and reuse of non-hazardous bituminous mixtures (i.e. non-hazardous tarmac / road-planings). Contact your SHE Manager/Advisors for further guidance.

Appendix A3 - Using imported soil on site flow chart - England and Wales

Follow this flow chart if you intend to **use** imported waste* clay, sand, subsoil or topsoil.
*surplus to requirements or not suitable for use at the site of origin.



Appendix A4 - Waste exemptions - differences between England / Wales and Scotland

England / Wales	Description	Scotland	Description
Use of waste			
U1	Use of waste in construction	Para 9	Land reclamation or improvement
U3	Construction of entertainment or educational installations	Para 19	Waste for construction or other relevant work
U8	Using waste for a specified purpose	Para 14	Manufacture of finished goods & repair / refurbishment of waste goods
Treatment of waste			
T5	Screening and blending of waste	Para 13	Manufacture of specified goods from specified wastes
T6	Treating waste wood and waste plant matter by chipping, shredding, cutting or pulverising	Para 21	Chipping etc. waste plant matter
T7	Crushing of waste concrete, bricks, tiles and ceramics	Para 24	Size reduction of bricks, tiles and concrete
Storage of waste			
S1	Storing waste in secure containers	Para 18	Secure storage of specified wastes on any premises
S2	Storing waste in a secure place	Para 17	Storage of specified wastes in a secure place
		Para 41	Temporary storage of waste at the place of production

Appendix A5 - Company Premises Codes for Hazardous Waste (England Only)

In England businesses are now required to generate unique hazardous waste consignment note (HWCN) numbers. HWCN numbers must now consist of a six digit company code, followed by a unique five digit HWCN generated by the company, for example: ABCDEF / 12345. To prevent Unitas businesses from duplicating HWCN numbers, the six-digit codes below must now be used for the first part of all hazardous waste consignment note numbers.

Individual sites, depots or premises within the Business Units must then generate the second five digits of the hazardous waste consignment note code as follows:

For projects the first four digits are to be the last four digits of the project number, and the fifth digit a letter to denote the movement number (e.g. 1234A).

For depots and premises, the business is to create a unique two digit code for each premise as the first two digits, with the last three digits being consecutive numbers (e.g. XX001, XX002 etc.).