



**Department of Environment, Food and Agriculture**

## **Contaminated Soil & Stone Disposal Guidance**

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## Introduction

This guidance document is designed to assist with determining the correct disposal route for soil & stone wastes contaminated with hazardous substances.

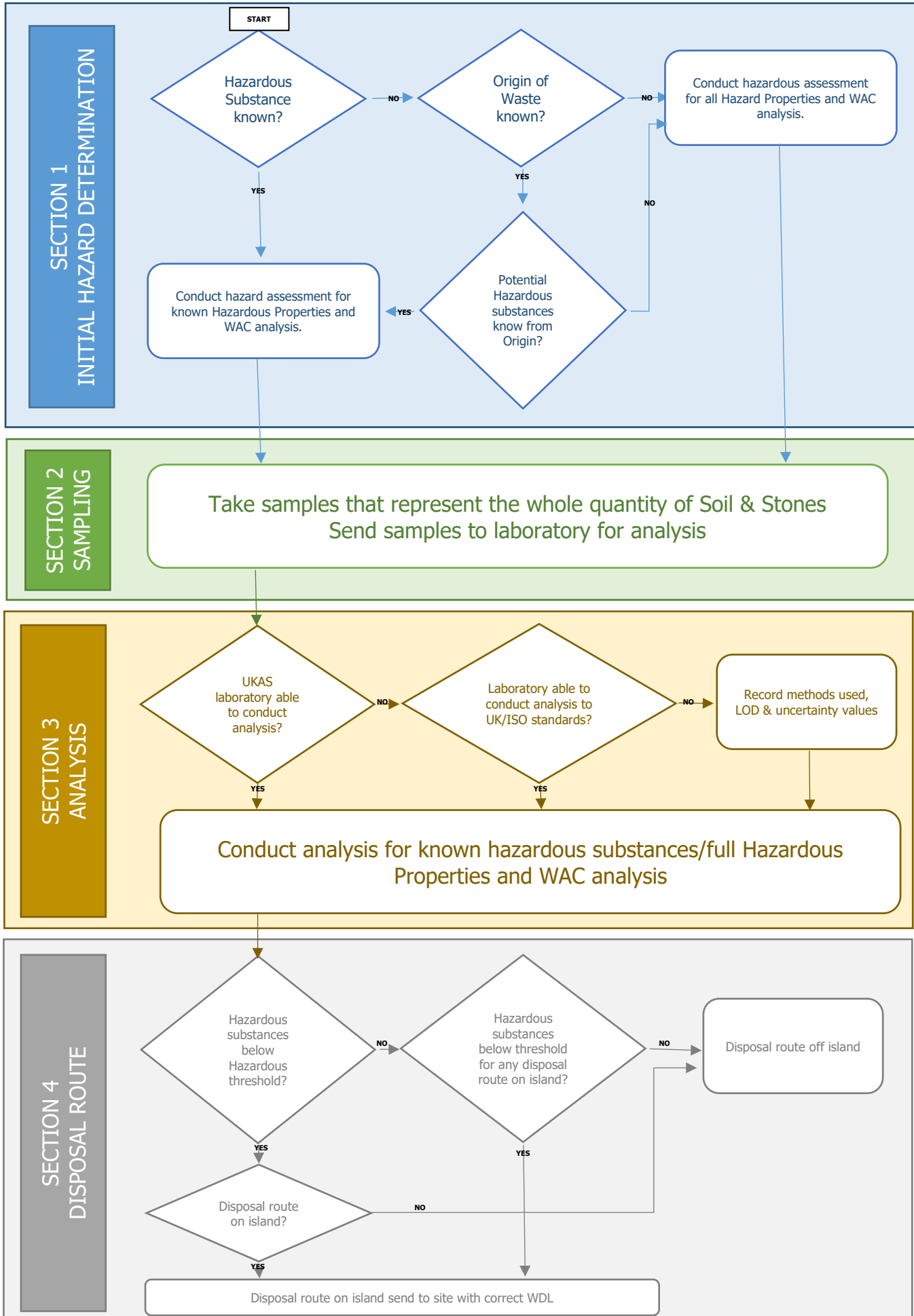
The flowchart displayed at the beginning of the document is aligned with the 4 sections in this guidance document and each section should be used to assist with the hazard assessment requirements and determine the correct disposal option.

The 4 sections include in this guidance document:

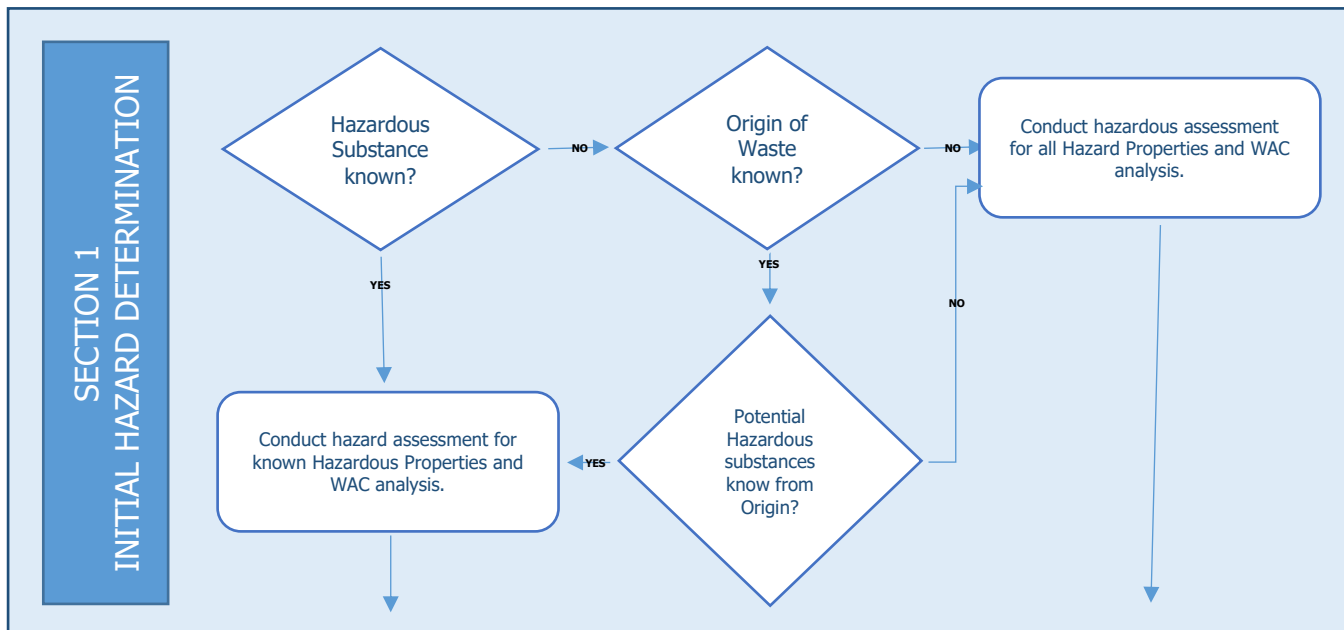
- Section 1** Initial Hazard Determination  
Is designed to assess the possible hazardous substance(s) in the waste stream without having to conduct any analysis. What is known about the hazardous substances that could be present to determine the scope of analysis required to conduct a hazard assessment
- Section 2** Sampling  
Taking representative samples in proportion to the type and quantity of the waste to ensure an accurate hazard assessment can be conducted.
- Section 3** Analysis  
External laboratory and analysis requirements. The laboratory analysis results should result in obtaining the concentration of hazardous substance(s) and/or the concentration of Persistent Organic Pollutants present.
- The Waste Acceptance Criteria (WAC) for landfill should also be conducted by the laboratory to determine if the waste can be sent to landfill for disposal either on/off island.
- Section 4** Disposal Route  
Determination of hazardous/non-Hazardous status, and disposal options by using the requirements in the UK's Guidance on the classification and assessment of waste Technical Guidance WM3 to determine if the hazardous thresholds have been breached.
- A WAC test does not determine if the waste is hazardous or non-hazardous. A WAC test should only be used to determine what category of landfill can accept the waste.



### WASTE ASSESSMENT FLOWCHART



## Section 1 – Initial Hazard Determination



### **1.1 HAZARDOUS SUBSTANCE KNOW**

Start with obtaining information on known hazardous substance(s) present in the waste. This could be from knowledge of any incident or accident that has caused the contamination, or previous industrial operations on the site and any Safety Data information available.



Chemical spillage that has soaked into the waste.  
Material used to clean up or contain a chemical spillage  
Contaminated packaging from the transport/storage of chemicals

If the hazardous substance(s) present is known take representative samples and only analyse for these substance(s) and the WAC testing requirements.

### **1.2 ORIGIN OF HAZARDOUS SUBSTANCE KNOWN**

If the waste is old especially from contaminated land the hazardous substance(s) present may not be known. To determine what possible hazardous substance(s) are present assess what processes or activities might have generated the waste.



Previous land use  
Industry that has generated the waste  
Any Safety Data Sheets available



Knowing the origin of the waste determine what hazardous substance(s) could be present, this will assist with reducing the amount of laboratory analysis required.

If the possible hazardous substance(s) present are known take representative samples and only analyse for these substance(s) and the WAC testing requirements.

### ***1.3 HAZARDOUS SUBSTANCES UNKNOWN***

If no information is available of the potential hazardous substance(s) present in the waste a specialist company should be consulted to assist with assessing the hazardous substance(s) present by in-depth analysis on representative samples and a process of Hazardous Properties elimination.

## Section 2 – Sampling

### SECTION 2 SAMPLING

Take samples that represent the whole quantity of Soil & Stones  
Send samples to laboratory for analysis

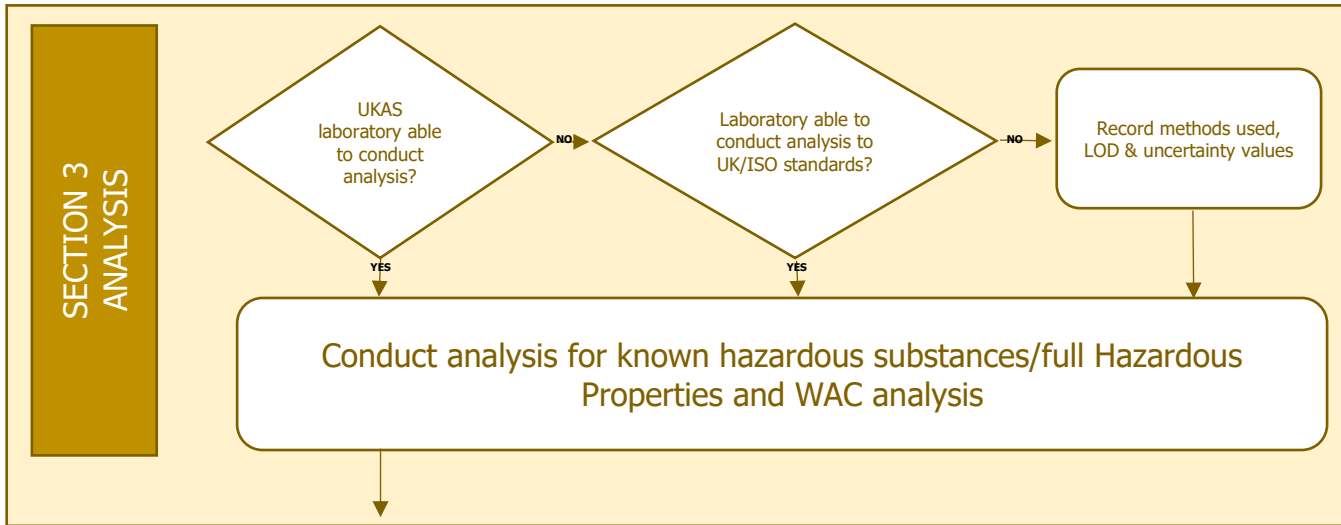
To obtain accurate analytical results for any waste analysis it is important that representative samples are taken of the waste to ensure a reliable waste classification and hazard assessments can be conducted. It is the waste producer's responsibility to ensure that any sample sent to the laboratory for analysis is representative of the source waste.

The type of sampling and number of samples taken should be sufficient to obtain accurate results especially for non-homogenous waste streams. The integrity of the samples during sampling and transporting to the laboratory should also be maintained. Contact the analysing laboratory in advance of sampling to discuss sample size/preparation/paperwork etc.



Use the Representative Sampling Guidance to determine the sampling requirements.

## Section 3 – Analysis



The integrity of the samples during sampling and transporting to the laboratory should be maintained.



The packaging, labelling and transport of waste samples should comply with any carriage of dangerous goods requirements.

Contact the laboratory to obtain the information on their sample acceptance criteria.



Sample acceptance times  
Paperwork requirements  
Sample containers and outer packaging

UKAS is a National Accreditation Body for the UK and are appointed by the government to assess and accredit organisations that provide testing services. Where possible a UKAS accredited laboratory should be used to conduct the hazardous substance(s) analysis, and the analytical method used is also UKAS certified.





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A UKAS certified method may not be available for all hazardous substance(s) analysis therefore UK/ISO standards should be used. All methods used to analyse the waste should be stated on the analytical report. The analytical report should also include:

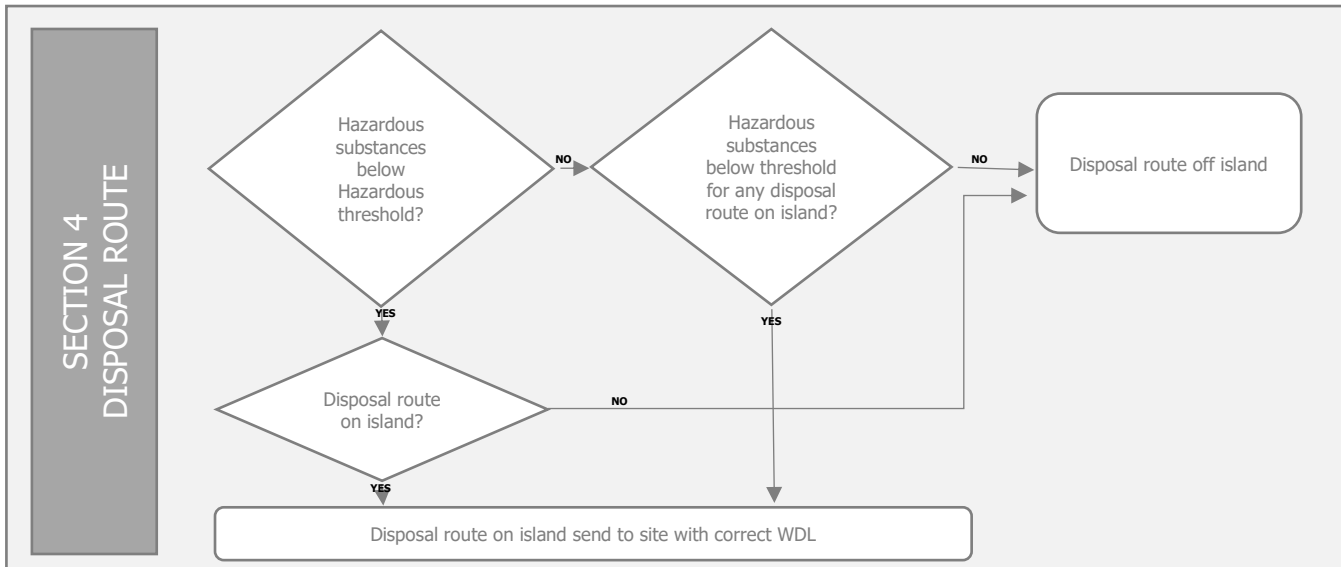
- Sample condition on receipt
- Limit of detection
- Uncertainty values
- Moisture content
- Reasons for discounting any of the sample
- Weight of any discounted sample
- Result corrected for moisture content and known inert material removed

From the analytical results the hazardous substance(s) present and concentration in the waste should be known. If there is a significant variance in the concentration of hazardous substance(s) between the different samples additional sampling is required along with a review of the sampling methods used.

At this point you should know what substances are present in the waste (or have assumed the worst case substances) and what hazard statement codes they have. These hazard statement codes determine what hazardous properties you need to consider for the hazard assessment.

The UK's Guidance on the classification and assessment of waste Technical Guidance WM3 should now be followed to determine if the waste is hazardous or non-hazardous.

## Section 4 – Disposal Route



As the hazardous substance(s) concentration and hazardous status is known the correct disposal route can be determined. Disposal in this context includes recycling, re-use, storage, transfer, incineration and landfill.

The Isle of Man Government's Policy for waste is designed towards a 'zero waste culture', where seeking to capture 'resource or value from waste' is preferred to disposal by incineration without energy recovery or landfill.

Soil Screening Guideline Values (SSV) should also be considered when determining the suitability of contaminated waste soils to be used to land. For use of the soil on land additional analysis may be required to assess that the concentrations of chemical substances found in soils will not cause any adverse effects on wildlife such as birds, mammals, plants and soil invertebrates, or on the microbial functioning of soils.

Generic Soil Screening Guideline Values although not legally binding can be used as tools in risk assessment as to whether or not soil is suitable for reuse at for example:

- Residential with consumption of home-grown vegetables
- Residential without consumption of home-grown vegetables
- Public Open Space (Residential)
- Public Open Space (Parks)
- Allotments
- Commercial

All disposal routes on-island should be assessed by reviewing the disposal options and the Waste Disposal Licence requirements of the island's waste operators.



Island Waste Disposal Operators WDL register

[https://www.gov.im/media/1371063/wdl\\_register\\_2021\\_v1.pdf](https://www.gov.im/media/1371063/wdl_register_2021_v1.pdf)



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If the only disposal route is landfill the WAC analysis should be used to determine if the waste can be accepted at a licenced landfill site:

- Inert waste landfill
- Stable non-reactive/Non-hazardous landfill
- Hazardous waste landfill

If no disposal option is available on island then disposal off island to a licenced facility is required.

Contact the Environmental Protection Unit for Transfrontier Shipment requirements. ([environmentalprotection@gov.im](mailto:environmentalprotection@gov.im)).



## Terminology

ISO	International Organization for Standardization
LOD	Limit of Detection
SSV	Soil Screening Values
UK	United Kingdom
UKAS	United Kingdom Accreditation Service
WAC	Waste Acceptance Criteria
WDL	Waste Disposal Licence

## References & Additional Information Sources

Environmental Protection Unit Guidance Document - Representative Sampling Guidance

UK Guidance on the classification and assessment of waste Technical Guidance WM3.  
Available online: <https://www.gov.uk/government/publications/waste-classification-technical-guidance>

UK Waste sampling and testing for disposal to Landfill (withdrawn) Available online:  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/862354/Sampling\\_and\\_testing\\_of\\_waste\\_for\\_landfill.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/862354/Sampling_and_testing_of_waste_for_landfill.pdf)

UK Derivation and use of soil screening values for assessing ecological risks Available online:  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/864078/Soil\\_screening\\_values\\_for\\_assessing\\_ecological\\_risk\\_report.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/864078/Soil_screening_values_for_assessing_ecological_risk_report.pdf)

Isle of Man Waste Regulation Home Page  
<https://www.gov.im/about-the-government/departments/environment-food-and-agriculture/environment-directorate/environmental-protection-unit/waste-regulation/>

Waste Disposal Licence Register  
Available online: [https://www.gov.im/media/1371063/wdl\\_register\\_2021\\_v1.pdf](https://www.gov.im/media/1371063/wdl_register_2021_v1.pdf)

Isle of Man Waste Management Home Page  
<https://www.gov.im/about-the-government/departments/infrastructure/waste-management/>

Isle of Man Waste Civic Amenity Sites Home Page  
<https://www.gov.im/categories/home-and-neighbourhood/civic-amenity-sites/>

Isle of Man Import and Export of Waste Home Page  
<https://www.gov.im/about-the-government/departments/environment-food-and-agriculture/environment-directorate/environmental-protection-unit/waste-regulation/import-and-export-of-waste/>