



**Department of Environment, Food and Agriculture**

# **Hazard Assessment for Kerosene Contaminated Soil Guidance**

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## 1.0 Introduction

This guidance document is designed to assist with determining if soil contaminated with kerosene is hazardous/Non-hazardous for the Waste Acceptance Criteria at Wrights Pit North.



This guidance is only applicable to soil contaminated with kerosene. If other forms of contamination is present a complete waste classification must be completed to determine the correct disposal route.

Wright's Pit North has accepted kerosene contaminated soil from domestic spills since 2005, under EWC 17 05 04 – Soil and stones not containing hazardous substances. Based on this requirement, any contaminated soil and stones accepted by the landfill operator must be classified as non-hazardous, in line with the procedure detailed in WM3.

Kerosene contaminated soil is considered as 'Wastes, other than waste oils, that contain or are contaminated with oil, and a specific procedure is set out in WM3 to determine if the soil is hazardous/non-hazardous.

## 2.0 Hazard Assessment

Where the identity of a specific oil or petroleum group is known the classification is carried out based on the Safety Data Sheet, in this case the petroleum group classification is known to be Kerosene.

Further classification is required to determine the Hazardous Statement Hazard Class/Category and Hazardous Property for Kerosene these can be found in Table 1 – Kerosene Classification. From this information and using the requirements in WM3 the hazardous thresholds can be determined.

Table 1 Kerosene Classification

Hazard Statement	Description	Hazard Class & Category	Hazard Property	Hazardous Threshold
H304	May be fatal if swallowed and enters airways	Asp. Tox 1	HP 5	Threshold value of 10%
H226	Flammable liquid and vapour	Flam. Liq. 3	HP 3	No free draining liquid
H315	Causes skin irritation	Skin Irrit 2	HP 4	Cut-off value of 1% and threshold value of 20%
H336	May cause drowsiness or dizziness	STOT SE 3	n/a	
H411	Toxic to aquatic life with long lasting effects	Aquatic Chronic 2	HP 14	Cut-off value of 1% and threshold value of 2.5%

Waste soils are typically not flammable at concentrations below those that would mean the waste soil is classified as hazardous for HP3. Provided there is no free draining liquid phase in the waste soil the Hazardous Threshold for kerosene contaminated soil will be:

**HP14 Ecotoxic with a threshold value of 2.5% or 25 000 mg/kg**

## 3.0 Analysis requirements

Always ensure a representative soil sample is sent for analysis.



Use the Representative Sampling Guidance to determine the sampling requirements.

As kerosene is a combination of hydrocarbon chains it can be difficult to obtain the concentration of kerosene in the waste, but an analysis of Fat, Oil and Grease (FOG) analysis can determine the concentration of all the hydrocarbon fuels present. If the only source of contamination is known to be kerosene this quick and low-cost method can be used to determine the concentration of kerosene in the soil.

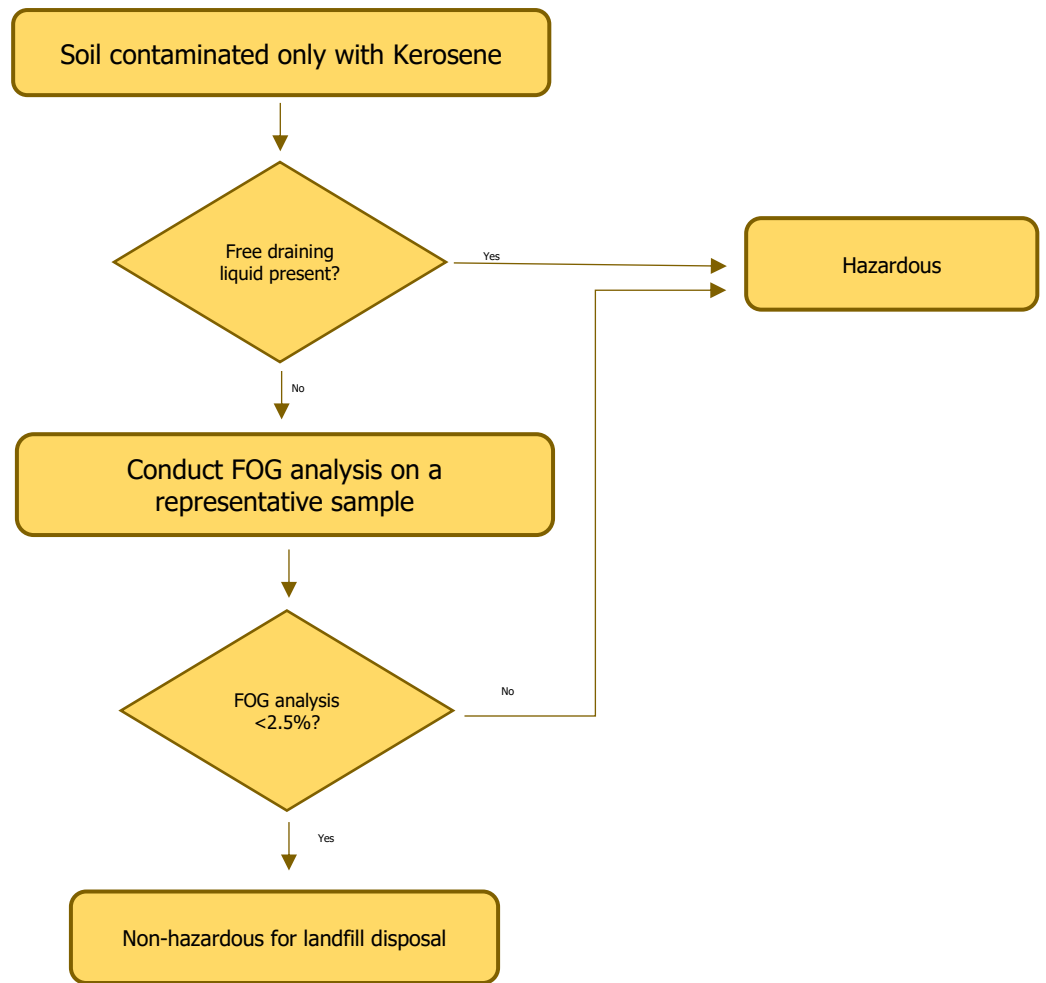


Non-Hazardous soil waste if FOG result <2.5%

If the FOG concentration is greater than 2.5% then the soil waste is classified as hazardous and should be sent to a suitable hazardous waste disposal site.



### Hazard Assessment Flow Chart





## Terminology

EWC	European Waste Catalogue
FOG	Fat, Oil & Grease
HP3	Flammable
HP4	Irritant
HP5	Harmful
HP14	Ecotoxic
WAC	Waste Acceptance Criteria
WM3	UK Guidance on the classification and assessment of waste Technical Guidance WM3



## References & Additional Information Sources

Environmental Protection Unit Guidance Document - Representative Sampling Guidance

Environmental Protection Unit Guidance Document - Contaminated Soil & Stones Disposal 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/>