



## Revenue Scotland guidance on how to determine the rate of Scottish Landfill Tax chargeable on waste fines

### Consultation Analysis

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## Executive Summary

This report provides an analysis of the responses we received to the consultation on Revenue Scotland guidance on how to determine the rate of Scottish Landfill Tax chargeable on waste fines.

Revenue Scotland received ten responses to the consultation, eight of which have been published on our website. Two respondents indicated they did not want their identity or responses made public.

- Four responses were from landfill operators
- Two responses were from trade associations
- Two responses were from waste management companies
- One response was from a legal services firm
- One response was from a representative body for professionals

The published responses are available to download at <https://www.revenue.scot/scottish-landfill-tax/consultations>.

We have taken all the responses into account when finalising the new guidance, which is reproduced at Appendix A. This will be incorporated into existing guidance at [SLfT2006](#) and be effective for all disposals of waste fines made to landfill in Scotland on or after 1 October 2016.

## Introduction

During the development of SLfT legislation, Scottish Ministers committed to introducing a statutory testing regime for waste fines entering landfill sites for the purposes of SLfT. Scottish Government consulted on this proposal during November/December 2015 in order to gather views from landfill operators, waste managers, waste producers and wider industry stakeholders on the likely effectiveness and impact of such a statutory testing regime. In January 2016, following analysis of responses to this consultation, Scottish Ministers announced their intention to introduce legislation to put in place a statutory testing regime which would come into force with effect from 1 October 2016. The testing procedures have subsequently been incorporated into a replacement Qualifying Material Order (The SLfT (Qualifying Material) Order 2016) which includes a requirement that fines produced as part of a waste treatment process may not be treated as qualifying material, unless they have been subjected to a test in which the material was heated to a temperature of 440°C for a minimum of 5 hours and the Loss on Ignition ('LoI') percentage threshold did not exceed 10%.

The Scottish Government response to the consultation noted an intention that Revenue Scotland, with support from SEPA, would review their prescribed test which details the frequency of testing and sample taking procedures.

Revenue Scotland has, through its legislative guidance at SLfT2006, provided direction on the evidence required from 1 October 2015 to determine whether a load of waste fines is chargeable to the standard or the lower rate of SLfT. This guidance includes a flowchart and details of the existing Lol test requirements. We have worked collaboratively with SEPA and stakeholders from the wider waste management and waste treatment industry to prepare new guidance, effective from 1 October 2016, to support the implementation of the statutory Lol testing regime.

We prepared an initial draft of the new guidance in collaboration with SEPA. This included a new flowchart and a requirement for the landfill operator to undertake and record pre-acceptance checks. The draft was shared with a small focus group of industry representatives who offered helpful feedback and comment, enabling it to be further developed and refined in advance of publishing it for wider consultation. The responses to the consultation have given us a deeper insight into the operational implications of the new testing regime, and allowed stakeholders to suggest possible additions and amendments to the guidance that will help them understand and implement the new processes effectively and consistently. This has enabled us to publish the new guidance now, in advance of it coming into effect from 1 October 2016, so that those who will be impacted by the changes know what they will be expected to do and have time to prepare accordingly.

The new guidance is included as Annex B to this document. Please note that although it will not be incorporated into our SLfT legislative guidance until 1 October, operators can, if they wish, start using it before that date. There is however no statutory requirement for them to do so and the existing guidance remains effective for waste disposed of in Scotland before 1 October 2016.

## Main Findings from the Consultation

- The consultation was well received, with responses indicating a consensus that the guidance is a significant improvement on the previous version and that proposed revisions to the guidance will provide a level playing field for taxpayers in relation to the rate of SLfT chargeable on a load of waste fines.
- Respondents who attended the initial focus group confirmed that the guidance addressed points they raised at that meeting.
- The revised flowchart circulated with the consultation document was described as clear, easy to follow and an accurate representation of the process that should be followed in order to meet the requirements of the new statutory regime.
- Respondents welcomed clarification within the guidance that qualifying fines can be produced from loads containing mixed waste inputs, provided there was evidence to show the material had been subjected to a satisfactory treatment process either before or after generation of the fines.
- A majority of respondents indicated preference for a sample size of 20g to be used in the LOI test methodology, rather than the 5g sample size stipulated in the guidance.

## **Question 1: Revenue Scotland tries to operate to Adam Smith’s principle of certainty for the taxpayer about their tax liability.**

**How easy will it be to be sure of the tax due on each load of waste fines disposed of to landfill under the new guidance?**

### **Analysis**

- Of the ten respondents, eight **considered that the new guidance would help to inform the classification of the tax liability of waste fines disposed of to landfill**, describing it as a significant improvement on existing guidance and confirming it would make the process of determination clearer for both producers and operators. One respondent felt unable to provide comment on this question whilst one respondent considered the processes described were too open to interpretation.
- The new flowchart set out at appendix 2 of the consultation was described by the Chartered Institute of Taxation (CIOT) as “simpler to follow than the one contained in current guidance...**it contains all the necessary information in the chart and helpfully uses single questions, setting out a series of steps to follow.**”
- It was suggested that the very nature of the processes involved in the Lol regime means that absolute certainty for the taxpayer is difficult to achieve, but the proposed guidance increases the chance of it being attained. **Lol processes were noted to work in practice, and provide an objective assessment of waste fines.**
- A respondent made the recommendation that **the guidance should provide a definitive single description for landfill operators to use on waste transfer notes.** Other respondents requested further clarification around some processes that were inherently subjective (i.e. visual inspections).
- SUEZ Ltd stated that “the acknowledgement from Revenue Scotland that **qualifying fines can be derived from loads of mixed waste, but only once it has been satisfactorily treated through an appropriate process**” **was welcomed** though further clarity was sought on processes that can and cannot produce qualifying fines.

**Question 2: Part 8 of the guidance on Lol test methodology includes instruction to use a sample size of 5g. This sample size has been chosen because a larger one could risk incomplete combustion and therefore affect the Lol result.**

**Do you agree that specifying a sample size of 5g will lead to fair and consistent Lol test results?**

### **Analysis**

- Of the ten respondents, three did not feel able to provide comment on this question, stating that this particular question was outside their area of expertise. Six **respondents felt that 20g would be more representative of a load. 20g was also preferable as this amount was used elsewhere in the United Kingdom for Lol test sampling and there was no increased cost associated with that sample size.**
- Respondents stated that as long as a defined procedure was in place, this would ensure a consistent assessment of waste fines. Levensat Ltd indicated in their response that **“for the testing process to achieve its aims, it is vitally important that the sample tested is representative of the source material, and that the results obtained are consistent and reliable.”**
- It was noted that the **use of accredited laboratories would help to minimise any potential for incomplete combustion.** URoc Ltd stated **“the sample size should be as large as practicably possible.”**
- Respondents welcomed the acknowledgement that **weight loss during the initial drying phase of the process should not be included in the Lol calculation.** It was determined that the calculation should be based on the dried material only. One respondent queried whether this meant E should also be removed from the LOI calculation in s8 of the guidance
- It was also suggested that a larger sample size would not affect an Lol result or the combustion of a sample. The submission was made instead that the **most important parameter of sampling for Lol purposes would be particle size, not sample size.** It was noted that laboratories have a number of issues to get a comparable result, but these would be things like crucible size rather than sample size.

**Question 3: The frequency of testing table at part 12 of the guidance explains how certain indicators should be used to determine how frequently Lol tests should be carried out on waste fine streams.**

**Do you agree that the table supports a fair and consistent approach to the classification of waste?**

### **Analysis**

- Of the ten respondents, eight believed that the proposed frequency of testing was an improvement on the current guidance surrounding the classification of waste fines for tax purposes. It was noted that **a framework for testing frequency must be supportive of a level playing field in the industry and fall in line with the regime operated in the rest of the United Kingdom (RoUK) as much as possible to maintain consistency.**
- PricewaterhouseCoopers LLP stated **that the proposed frequency of testing will “help to ensure a consistent approach,** and avoid distortion of competition, as well as providing stakeholders with a familiar process, helping to minimise errors or inadvertent non-compliance.”
- It was recommended that **worked examples would help provide further certainty for all parties,** both taxpayers and waste producers, in respect of the more subjective sections of the proposed guidance.
- URoc suggested that **accredited training and assessment could be introduced to help waste producers understand the implications of the regime** on their working practices, systems and procedure. URoc explained “this would assist in terms of compliance, and provide a level of comfort for the industry in the adoption of the regime.”
- Levenseat Ltd stated that “whilst **the table indicates a good risk based approach to testing frequency,** there remains a degree of interpretation required which will result in inconsistency.” It was recommended that further clarity should be given on moving between different risk indicators and on what happens where the regulator and the taxpayer reach different conclusions as to what particular band of indicators a waste stream should fall into.

## Question 4: Do you have any other comments you would like to make about this guidance?

### Analysis

- A number of respondents supported the implementation of a **regime that supports investment and encourages innovation** in waste management operations.
- Landfill operators W.H Malcolm Ltd stated that they were “**pleased that Revenue Scotland had taken the time to produce the consultation** with a view to improving the guidance to producers and operators of waste management facilities.”
- A number of respondents commented that although the proposed guidance is prescriptive, **a clear understanding of its application in practice will have to evolve in taxpayers and waste producers during the early stages of its implementation.** This will need to be considered carefully by the regulator where compliance activity is undertaken.
- Respondents highlighted that the administrative burden and practical implications should be considered when formulating what evidential requirements form part of the regime. It was however also acknowledged that this evidence could assist the regulator when undertaking necessary compliance activity and in turn support a level playing field for the industry. **A pragmatic approach to resolution of any issues was welcomed.**
- Three respondents asked for **clarification of what information must be provided for Geographical Origin on the example pre-acceptance questionnaire** contained in the proposed guidance. Waste producers were concerned that if the geographical origin referred to the underlying waste stream as oppose to the Materials recovery facility (‘MRF’), this would place an additional administrative burden on an already complex regime and would often be impractical.
- Some landfill operators were concerned that the regime would be too onerous and that they would not be competent to assess the waste producer’s processes that created the fines. They preferred a **pre-production validation process by the relevant authority** (Revenue Scotland or SEPA).

## Revenue Scotland Response

Revenue Scotland would like to thank all those who took the time and effort to respond to this consultation, and those who took part in the initial stakeholder focus group held in June. The evidence and operational insight provided by this input will help us to develop and implement a waste fines regime in Scotland that provides taxpayers with clear supporting guidance for the statutory requirements of the new Qualifying Material Order.

Due to the nature of the consultation and the variety of suggestions made by respondents, it is not possible for us to respond to every point raised. In this section we will however respond to the most commonly raised points and key issues.

The Scottish Government has already considered the costing implications of introducing a statutory testing regime in the Scottish Landfill Tax Business and Regulatory Impact Assessment. This was published in the first quarter of 2016 and can be found on The Scottish Government website.<sup>1</sup>

### Response to key issues:

#### 1. Use of 5g sample size in sample preparation methodology

We originally proposed a sample size of 5g to limit the possibility of incomplete combustion. We have considered the arguments put forward in response to the consultation and have amended the guidance to specify a minimum sample size of 20g.

In considering the test methodology, we have also added a requirement for test reports to include a record of materials from the sample which were not ground down.

#### 2. Geographical Origin

The example pre-acceptance questionnaire lists the information that should be obtained from a waste producer in order to determine the composition and treatment of the fines waste stream they produce. The inclusion of a requirement to state the geographical origin was causing some confusion and we confirm that this has now been removed from the questionnaire.

#### 3. Provide further clarity around the frequency of testing table

The guidance includes an explanation as to how you can move between the testing bands and what happens when one indicator suggests one risk category and another indicator suggests another.

We acknowledge that the pre-acceptance checks are by nature subjective and each assessment of liability will be very fact specific. If you are uncertain how to interpret the results of the pre-acceptance checks in line with the guidance in the table, you should

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<sup>1</sup> <https://consult.scotland.gov.uk/fiscal-responsibility/landfill-tax-loss-on-ignition-testing>

discuss this with us and seek our agreement on the appropriate risk and frequency of testing.

#### **4. Remove the requirement to account for the weight loss during the initial drying process**

Under the heading of LoI calculation in s.8 of the draft guidance, there was a requirement to take into account the moisture loss during the initial drying process. We have removed this reference and the guidance now states the following:

*Calculate the loss on ignition between 180°C to 440° C as a percentage of the dried material taking into account the mass of removed Group 1 and Group 2 material.*

It has been suggested that, as a consequence of removing this requirement from s.8, the factor E should be removed from the LoI summary calculation shown below.

$$\text{LOI}\% = (A \times 100) / ((B \times C / D) - E)$$

In this formula, E is the weight loss after drying the 20g sub-sample at 180°

The reference to any weight loss during the initial drying process previously referred to in s.8 of the guidance relates to the first stage of the sample preparation; when the 1 kg sample is dried at a temperature of between 30°C and 50°C, until a constant weight is achieved.

In the LoI summary calculation, E is the weight loss when the 20g sub-sample is dried at 180°C. This is a different stage of the test and it would not be appropriate to remove E from the calculation.

#### **5. Consistently use 10% or under when referring to the LoI threshold in the guidance**

The draft guidance contained some references to “below the 10% threshold”. These have now been corrected and all references in the final version of the guidance refer to “10% or less” in relation to the LoI threshold.

#### **6. Provide a single description of qualifying waste fines for landfill operators to use on waste transfer notes**

Waste transfer notes are used to evidence the audit trail of waste, from when it is produced until it is disposed/recycled or no longer used. The duty of care provided by s.34 Environmental Protection Act 1990 specifies that waste is transferred with a written description in order to enable compliance with the statutory obligation.

The descriptions on waste transfer notes must comply with environmental legislation and it would not be appropriate for Revenue Scotland to determine the descriptions that should be used. We have however provided examples in the guidance of descriptions that we

accept do adequately describe waste fines for the purposes of SLfT. These examples are for illustration only and are not intended to be the only options.

**Note:** The description given on a waste transfer note is not sufficient on it's own as evidence to support applying the lower rate of SLfT to the waste. It can however be indicative when taken into account with other evidence.

## **7. Qualifying fines resulting from mixed loads of waste**

Revenue Scotland acknowledges that waste fines originating from mixed waste inputs may qualify for the lower rate of SLfT, if the material has been subjected to a satisfactory treatment process.

The revised SLfT2006 includes three examples of treatment processes to create fines: two that we accept could produce qualifying fines and one that cannot.

Due to the wide range of different processes undertaken by waste producers and landfill operators, it would be impossible to provide a comprehensive list of processes in the legislative guidance. These examples are therefore for illustration only and are not intended to be the only options.

## **8. Clarify if the 'General Guidance' will still be required following the amendments to SLfT2006 regarding waste fines**

The general guidance section at the start of SLfT2006 will still apply to waste fines and must be followed in addition to the new section of guidance.

The current guidance contains an introductory section headed "General Guidance", which applies to waste streams that contain a mix of both qualifying and non-qualifying material. This will remain part of chapter SLfT2006 after the new section on waste fines comes into effect . This consultation only relates to the section on waste fines.

## **9. Revenue Scotland or SEPA should validate the fines production process**

SLfT is a self-assessed tax and the landfill operator is responsible for ensuring the tax declared on their returns is accurate. However, the guidance recognises the important role of the waste producer and includes an example pre-acceptance questionnaire that should be filled out by the waste producer with a declaration from the waste producer that they believe the information on it is correct.

We amended the declarations on the draft pre-acceptance questionnaire to take account of concerns raised by the focus group to make it clearer that it is the waste producer not the landfill operator who is declaring the information on the form is accurate. The landfill operator must however be satisfied that the waste fines are correctly accounted for, and the other pre-acceptance checks, for example the visual inspection, are designed to assist them to do that.

## **Next Steps**

We have amended the draft guidance to take account of suggestions made by the focus group and the respondents to this consultation and included it as an annex to this document. The final version of the guidance is not significantly different from the draft version published on 27 June when the consultation opened and the changes have been highlighted in the response section above.

By publishing the guidance early, we hope to ensure that taxpayers and other affected parties have access to it sufficiently in advance of the new Qualifying Material Order coming into effect to enable them to prepare for the change. We will monitor the effectiveness of the guidance after it takes effect and welcome feedback on your experience of using it in practice.

# Annex A - List of Respondents

Avondale Environmental Ltd

The Chartered Institute of Taxation (CIOT)

Levenseat Ltd

PricewaterhouseCoopers Legal LLP

SUEZ Recycling and Recovery UK Ltd

URoc Ltd

W. H Malcolm Ltd

Scottish Environment Service Association (SESA)

# **Annex B – New waste fines section of SLfT2006 guidance - effective from 1 October 2016**

## **Waste Fines**

From the 1 October 2016, the Scottish Landfill Tax (Qualifying Material) Order 2016 requires the application of the following legislative guidance in order to determine whether a load consisting of waste fines is chargeable at the standard or lower rate of SLfT when disposed of to landfill.

### **Contents**

- 1. Waste Fines**
- 2. Flowchart for determining the rate of SLfT chargeable per load of waste fines**
- 3. What evidence must I keep for qualifying fines?**
- 4. WM3 Classification**
- 5. Pre-Acceptance Checks**
- 6. Loss on Ignition (LoI) Test for Fines**
- 7. Prescribed Test**
- 8. LoI Test Methodology**
- 9. What if a Tested Sample Is Above the LoI Threshold?**
- 10. Loss on Ignition Test Result Form**
- 11. Can a sample be retested that is above the LoI threshold?**
- 12. Frequency of Testing**
- 13. Power to direct a test**

## **1. Waste Fines**

Fines are defined in the Qualifying Material Order 2016 to be fractions of material produced by a waste treatment process that involves an element of mechanical treatment.

Qualifying fines, which are chargeable at the lower rate of SLfT, are defined in the Qualifying Material Order 2016 to be either:

- Fines that consist entirely of qualifying material, or
- Fines that consist entirely of qualifying material but for a small quantity of non-qualifying material

## **1.1 Entirely qualifying waste fines**

Where waste fines comprise entirely of materials listed in the Qualifying Material Order 2016, the first load of the material you receive must be subjected to Lol testing following the prescribed methodology [section 7]. The waste stream must return a Lol test result of 10% or less in order to qualify for the lower rate of SLfT. You are only required to test the waste stream again if you have any reason to think the waste stream has changed and is no longer entirely qualifying material.

The description of the waste on the waste transfer note must adequately identify that the waste consists of wholly qualifying fines. You should also issue a pre-acceptance questionnaire and declaration for completion by the waste producer that produces fines for disposal at your landfill site as detailed in section 5 below, and you should require the waste producer to notify you of any change to the waste stream that would cause its classification to vary.

## **1.2 Qualifying fines with a small amount of non –qualifying material**

In order to qualify for the lower rate, qualifying waste fines that contain a small amount of non-qualifying material must meet the conditions set out in this guidance (see in particular the flowchart at section 2); otherwise they are liable to the standard rate of SLfT.

Waste fines that originate from a waste producer that accept both non-qualifying and qualifying mixed waste inputs may qualify for the lower rate of SLfT, if the material has been subjected to a satisfactory treatment process. Such a treatment process could occur either before the mixed waste has been subjected to the mechanical process that produces fines or alternatively the process could involve the further separation of the fines after they have been produced.

The treatment process and evidence in support of the lower rate must demonstrate that either way the qualifying waste fines material have been separated from the non-qualifying material as much as reasonably possible. This treatment process must be detailed in the pre-acceptance questionnaire.

An example of the types of treatment process that could produce qualifying fines may include:

- the waste producer runs two separate lines, one for mixed waste from which the fines are not qualifying and are Standard Rated; and one for mainly qualifying waste with some non-qualifying material, from which the fines may be qualifying fines
  
- the waste producer produces fines through their treatment process from mixed waste sources but then subjects it to a further fines treatment process which can remove the majority of the non-qualifying material to leave qualifying fines.

However, if a waste producer shreds mixed municipal waste and subjects it to a basic treatment process, with no initial or further separation of non-qualifying material the waste would not be qualifying fines at this stage of processing.

Waste fines cannot qualify for the lower rate of SLfT if:

1. They result from any deliberate or artificial blending or mixing of any material before disposal at a landfill site.
2. If they are the output of a waste producer who accepts mixed waste inputs and they have not been subjected to any kind of satisfactory treatment process which separates out non-qualifying from qualifying material before disposal.
3. It contains non-qualifying material that could reasonably have been removed.

### **1.3 Fines produced by Landfill Operators**

A landfill operator who produces their own waste fines on-site before disposing of them to landfill is considered to be a waste producer for the purposes of this guidance. A landfill operator is therefore required to carry out the same processes outlined below for fines they produce themselves as they are with fines produced elsewhere (i.e. by a separate waste producer).

## **2. Flowchart for determining the rate of SLfT chargeable per load of waste fines**

All of the conditions of the qualifying fines flow chart and the Scottish Landfill Tax (Qualifying Material) Order 2016 must be met for each load of qualifying waste fines containing a small amount of non-qualifying material to be liable at the lower rate of SLfT. **New Flow Chart; see appendix 2.**

## **3. What evidence must I keep for qualifying fines?**

You are responsible for ensuring that you accurately declare the amount of SLfT due on waste disposed at your landfill site. You may need to justify your decision to classify waste fines as qualifying for the lower rate of SLfT to us. You must therefore keep and provide sufficient evidence to substantiate applying the lower rate of SLfT to any particular disposal of waste fines.

You must produce and retain appropriate records to show that waste fines disposed of at your landfill site are eligible for the lower rate of SLfT, for a period of 5 years. Evidence contained in the WM3 classification, pre-acceptance questionnaires, visual inspections, waste transfer notes and loss on ignition test results will help you to support your decision.

## **4. WM3 Classification**

As part of their duty of care, waste producers must classify the waste that their business produces and WM3 is the current UK standard that they must use. (See: Technical Guidance WM3: Guidance on the Classification and assessment of waste).

In order for the lower rate of SLfT to apply to the load of fines, it must not be classified as hazardous waste under WM3. You should review evidence of non-hazardous classification and be satisfied that it appears to be a true and accurate assessment. A copy of this evidence should be retained by you to support the lower rate of SLfT applied to the load. This requirement to obtain evidence of a waste streams WM3 classification is not intended to be an increase in the duty of care that already exists for the waste producer or for the landfill operator.

Chemical analysis will only be necessary if it is required under the WM3 procedure for classification of waste.

## **5. Pre-Acceptance Checks**

You should complete a number of pre-acceptance checks with waste producers to ensure the waste fines qualify for the lower rate. The nature of these pre-acceptance checks will vary depending on your individual circumstances and the particulars of your process of accepting waste.

In the absence of satisfactory evidence gathered from the pre-acceptance checks that demonstrate the waste fines qualifies for the lower rate of SLfT, the standard rate will apply to the waste fines.

### **5.1 Example Pre-acceptance Questionnaire**

You should issue a questionnaire and declaration for completion by the waste producer that produces fines for disposal at your landfill site. The questionnaire provided outlines the information that is required in order to determine that the fines received are qualifying. The answers to the questionnaire will also assist you in determining the appropriate frequency of testing required (Please see section 13.3 – frequency of testing table).

You may use your own questionnaire however you should ensure it contains all of the information indicated in the example questionnaire.

Where the waste producer disposes of more than one fines waste stream, you must obtain information and complete a questionnaire for each waste stream.

The information provided by the waste producer should be current, and should be reviewed at least annually or more frequently if you have any reason to think the information provided has changed. You should require the waste producer to notify you of any change to the waste stream that would cause it's classification to vary. You should be satisfied that it appears to be a true and accurate assessment.

For example, seasonal changes may impact on input materials that are used to produce waste fines. In these circumstances you would review the information provided for the waste stream in the pre-acceptance questionnaire and require the waste producer to notify you of the change to the waste fines input material.

Where the information supplied by the waste producer in the pre-acceptance questionnaire does not support that the material is liable for the lower rate of SLfT, the standard rate will apply to the material.

## **5.2 Waste Transfer Notes**

Where we refer to a waste transfer note in this guidance we mean a written description of the waste kept by the transferor and transferee of the waste. The description on the waste transfer note must adequately identify the type of waste and whether it is qualifying or non-qualifying material.

For example a description of 'waste fines' adequately describes the type of waste, but does not identify what rate of SLfT applies. Similarly, a description of 'lower rate' identifies the rate of SLfT, but not the type of waste, whereas 'qualifying fines – lower rate' provides both an adequate description of both the waste type and the applicable rate of SLfT.

Some examples of waste descriptions that would adequately identify the rate of SLfT payable are:

- Qualifying fines – lower rate
- Screened subsoil and particles from stones containing an incidental amount of paper and wood – lower rate
- Fines – standard rate
- Mixtures of materials from the mechanical treatment of waste – standard rate

This description should be supported by the detailed description of the waste given in the pre-acceptance questionnaire.

## **5.3 Visual Inspection**

For SLfT purposes, inspection of disposals is your responsibility when you accept delivery of the waste. A visual inspection should be conducted when the waste is accepted. If the inspection does not indicate the material is liable for the lower rate of SLfT, the standard rate should apply to the material.

The visual inspection should confirm that the description of the material on the waste transfer note accurately matches the material delivered to your site. This should be consistent throughout the load.

## **6. Loss on Ignition (LoI) Test for Fines**

An LOI test determines the organic content of material. The difference in the mass of the tested material before and after the ignition process is used to calculate the LOI result. The

LOI result will inform whether the waste is liable at the lower rate of SLfT, but is not the only determining factor as shown by the flowchart above. For fines to be treated as qualifying material, they must give an LOI result of 10% or less. For qualifying fines that include a small amount of non-qualifying material, the LOI test must be carried out along with the other procedures described i.e. WM3 classification, visual inspections, checking the waste transfer notes and completing a pre-acceptance questionnaire.

LOI test results that are 10% or less LOI threshold should be kept as supporting evidence of the lower rate of SLfT.

## **7. Prescribed Test**

### **Making a Representative Sample**

The sample of fines you send for testing must be representative of the whole load or stockpile. To take a representative sample the following methodology applies:

- the sample must be taken from across the whole load or stockpile of waste fines i.e. top, middle and bottom
- a composite (master) sample must be produced from a mix of sub-samples taken from at least 6 different places across the whole load of fines
- the sub-samples must be selected at random
- the sub-samples must be thoroughly mixed to ensure that a representative 1kg composite sample is sent for testing

## **8. LOI Test Methodology**

You must arrange to undertake the LOI test prescribed below for SLfT purposes:

### **Sample preparation**

1. dry the 1 kg sample at a temperature of between 30° C and 50° C, until a constant weight is achieved
2. cone and divide the 1kg sample to select a 200g sub-sample
3. remove material, exceeding 20 mm that conforms to Group 1 and Group 2 of the Scottish Landfill Tax (Qualifying Material) Order 2016 from the sub-sample. Record the weight of the sub-sample and of the removed material
4. grind the remaining part of the sub-sample to a particle size of 2mm or less to produce a homogenous sample. Any material not passing the 2mm sieve must be added back into the ground sample and the combined sample mixed and homogenised
5. Any material that does not pass the 2mm sieve must be weighed and recorded on the lab result form e.g. non-ground material – 15g comprising wood, metal nail, plastic

The prepared sample should be retained in case a retest is needed or Revenue Scotland wishes to test the material. You must preserve this prepared sample for 3 months from the date the Lol test is completed.

### **Sample treatment**

1. Place 20g of the homogenous ground sample in a dried, weighed dish and weigh
2. Dry the sample in an oven at 180° C to a constant weight,
3. Cool in a desiccator for a minimum of 45 minutes
4. Record the weight of the sample
5. Transfer the sample to a muffle furnace at a temperature of 440° C for a minimum of 5 hours
6. Cool in a desiccator as before and reweigh

### **Lol Calculation**

Calculate the loss on ignition at 440° C as a percentage of the material after the initial drying at 30° to 50° taking into account the mass of removed Group 1 and Group 2 material and the weight loss at 180°.

### **Lol Summary Calculation**

$$\text{Lol \%} = (A \times 100) / ((B \times C / D) - E)$$

*Where:*

- A is the loss on ignition at 440°
- B is 20 (the weight of the 20g sub-sample)
- C is 200 (the weight of the 200g sample)
- D is the weight of the sample after removal of the >20 mm Gp1 and Gp2 material
- E is the weight loss after drying the 20g sub-sample at 180°

Where a Lol result is 10% or less, you must keep a record of the test result.

## **9. What if a Tested Sample Is Above the Lol Threshold?**

**You must complete all of the following actions if a sample is above the Lol threshold:**

1. You must declare the quantity of waste fines to Revenue Scotland on your SLfT return and pay tax on it at the standard rate of Scottish Landfill Tax.

2. You must review all of the pre-acceptance checks completed for that particular waste stream for the waste producer. [s.5]

3. You must increase the frequency of testing of subsequent loads of the waste stream in reference to the frequency of testing table. [s.12]

4. You must notify Revenue Scotland of the test result, providing all the requested details on the Loss on Ignition Test Result Form. [s.10]

## **10. Loss on Ignition Test Result Form**

A Loss on Ignition Test Result Form must be completed each time a sample gives a loss on ignition test result of over 10%.

You should submit all such completed forms with the SLfT return for the period in which the test(s) took place and no later than 44 days after the end of the quarterly accounting period in which the test took place.

Loss on Ignition test result form, see appendix 4.

## **11. Can a sample be retested that is above the Lol threshold?**

If the prescribed test is conducted and the result is above the Lol threshold, you may conduct a single retest provided the following conditions are met:

1. The original prepared sample of fines must be retested.
2. The first Lol result must not exceed 10.5%
3. The prescribed retest must take place within 21 days of the first Lol result.

In such circumstances, if the retest result is within the Lol threshold, you may treat this as the test result for determining liability to SLfT.

## **12. Frequency of Testing**

From 1 October 2016, you must conduct the prescribed Lol test for each waste producer that disposes of qualifying fines at your landfill site. If a waste producer disposes of more than one qualifying fines waste stream at your landfill site, the test should be completed in respect of each separate line of waste fines. These requirements apply equally for fines derived from waste already at your site.

### **12.1 First Test**

From 1 October 2016, you must complete the first test during the period of when the first 500 tonnes of their waste fines is disposed of to your landfill site or within the first month, whichever is reached first.

## **12. 2 Subsequent Tests**

After you have completed the first Lol test the frequency of testing that will apply will vary depending on the particular waste stream. You can determine the frequency of testing that will apply using the risk indicators in the Frequency of Testing table below. A waste stream will be identified as low, medium or high risk by the risk indicators present.

### 12. 3 Frequency of Testing Table

Risk	Indicators	Frequency of testing
Low	<ul style="list-style-type: none"> <li>• Pre-acceptance checks indicate the fines waste stream is clearly and consistently producing qualifying fines.</li> <li>• Visual inspection confirms that the fines are qualifying materials with a small amount of non-qualifying material.</li> <li>• The last 20 Lol results are below the Lol threshold of 10%</li> </ul>	You must test 1 load of that waste stream for each 1,000 tonnes of waste fines received, or test 1 load every 6 months, whichever point is reached first.
Medium	<ul style="list-style-type: none"> <li>• Pre-acceptance checks indicate the fines waste stream are producing qualifying fines but with some variability</li> <li>• Inspection prior to disposal indicates the presence of potentially more than a small amount of non-qualifying materials.</li> <li>• If 1 in the last 20 Lol results were above the Lol threshold.</li> </ul>	You must test 1 load of that waste stream for each 500 tonnes of waste fines received, or test 1 load every 3 months, whichever point is reached first.
High	<ul style="list-style-type: none"> <li>• Pre-acceptance checks indicate the fines waste stream is producing qualifying fines inconsistently.</li> <li>• Inspections prior to disposal indicate the presence of more than a small amount of non-qualifying materials</li> <li>• 2 or more in the last 20 Lol results are above the Lol threshold of 10%.</li> </ul>	You must test every load of that waste stream.

If you have indicators that fall in more than one risk category, you should adopt the highest risk rating indicated. For example, if both the pre-acceptance checks and visual inspection indicates low risk, but 1 of the last 20 LOI tests have failed, the medium risk classification would apply. If a subsequent LOI test was failed so that more than one in the last 20 tests were failed, the high risk classification would apply, irrespective of the other indicators.

If the high risk classification applies, the standard rate of SLfT will apply to each load that fails. If the medium risk classification applies, then, on the assumption that all the other requirements in the flow chart are met, the standard rate of SLfT will only apply to the one load that has failed. The lower rate will apply to the other loads until such time that another test is failed, at which point the higher rate will again apply to that individual load that failed and each subsequent load will be tested to determine the rate of SLfT as indicated by the High Risk frequency of testing.

It is possible to go straight from a high risk classification to a low risk classification if all the low risk indicators are met.

#### **12.4 Tests outside the requirements of the Frequency of Testing Table**

You may conduct a test at times outside the prescribed frequency described in the Frequency of Testing table. In the event that you conduct a LOI test outside of the prescribed frequency, the timing of the next prescribed test will be determined by that test.

### **13. Power to direct a test**

Where we consider it necessary for the protection of the revenue against mistake or fraud, we can direct that a representative sample of fines is taken and sent for testing at your cost. We may also collect a sample of untested material from the waste stream and arrange for this to be tested. In such circumstances, the results of that test may be used to determine the liability of Scottish landfill tax. In cases of doubt, for example when there is insufficient material provided to carry out a test, tax will be charged at the standard rate for each load of waste fines.