

# Waste Acceptance Procedures

Tovil Quarry – Application for a Waste Recovery Permit

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Procedures  
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## Quality Management

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## Contents

<b>1</b>	<b>INTRODUCTION</b> .....	<b>1</b>
1.1	Background .....	1
<b>2</b>	<b>PERMITTED WASTES</b> .....	<b>2</b>
2.2	Waste Types .....	2
<b>3</b>	<b>WASTE ACCEPTANCE PROCEDURES</b> .....	<b>3</b>
3.2	Waste Characterisation .....	3
3.3	Waste Acceptance Procedures .....	5
3.4	Compliance Testing .....	5
3.5	Waste Records / Tracking .....	5
3.6	Non-Permitted Wastes .....	6
	<b>REFERENCES</b> .....	<b>7</b>

## Tables

Table 2-1: Waste Types.....	2
Table 3-1: Knapp Hicks Site Investigations 2013 to 2019.....	3

## Appendices

- Appendix A Correspondence from Environment Agency
- Appendix B TP & BH Log and Monitoring Data

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# 1 INTRODUCTION

## 1.1 Background

- 1.1.1 These Waste Acceptance Procedures have been developed in support of an application for a waste recovery permit for land at Tovil Quarry, off Farleigh Hill, Maidstone.
- 1.1.2 The site benefits from a Planning Permission (Ref.) for the development of the Tovil Quarry landfill site to construct a housing scheme to serve the local area. Planning details can be found on the Maidstone Borough Council planning portal, reference 20/502266<sup>1</sup>.
- 1.1.3 The site is to be filled to the development level using inert waste materials already on site under a waste recovery permit. These materials have been assessed as being chemically suitable for placement at the site and capable of being engineered to facilitate reaching the required development platform.
- 1.1.4 This document details Waste Acceptance Procedures (WAPs) and Waste Acceptance Criteria (WACs) to demonstrate suitability for use setting out the following:
- Details of the types of materials to be used;
  - Sampling regime for materials prior to placement; and
  - Chemical analysis standards that must be met.
- 1.1.5 This document has been produced following the Environment Agency guidance - Waste Acceptance Procedures for waste recovery on land<sup>2</sup>

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<sup>1</sup> <https://pa.midkent.gov.uk/online-applications/simpleSearchResults.do?action=firstPage>

<sup>2</sup> <https://www.gov.uk/guidance/waste-acceptance-procedures-for-waste-recovery-on-land>

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## 2 PERMITTED WASTES

- 2.1.1 The hassock and ragstone present on site is naturally occurring indigenous material, quarried in-situ, from which selected ragstone was won as a building material during the former quarrying activity at the site; it will have been moved locally from its original position during this process.
- 2.1.2 The majority of the material to be used for the waste recovery activity will be the naturally occurring hassock and ragstone quarrying waste, along with small amounts of other non-hazardous/inert materials screened from the landfill excavation.
- 2.1.3 Advice from the EA regulatory officer has stated that where the waste is site-won material and therefore Waste Acceptance Procedures are not applied when the material is imported to a site, the criteria should be applied prior to the permitted activities taking place. A copy of this email advice is included in **Appendix A**.
- 2.1.4 Waste materials to be deposited as part of the recovery activity must comply with the permitted waste types and descriptions below. All materials to be used have been assessed to comply with the materials criteria detailed in the Specification for Highway Works, Series 600 Earthworks<sup>3</sup>.

### 2.2 Waste Types

- 2.2.1 The material to be used for the waste recovery activity is the non-hazardous/inert wastes that have been excavated from the landfill and then screened and stockpiled, along with the naturally occurring hassock and ragstone quarrying waste. No additional waste material is to be sourced for the development and final profiles of the site will be achieved using non-waste topsoil or locally sourced ragstone/hassock materials.
- 2.2.2 The materials to be used as fill must meet the grading requirements for Highways Specification Class 2A/2B/2C materials. Based on this specification, all materials must pass the 125mm sieve therefore all materials exceeding 125mm will be screened out using the trommel screen and crushed.
- 2.2.3 The list of wastes proposed for acceptance and use in the waste recovery and treatment activity are detailed in Table 2.1 below:

**Table 2-1: Waste Types**

EWC Code	Description	Area / Pile No
17 05 04	Soil and stones other than those mentioned in 17 05 03	Areas A, B & C, Area E materials that do not require further processing
19 12 09	Minerals (for example sand, stones) only. Restricted to wastes from treatment of waste aggregates that are otherwise naturally occurring minerals. Does not include fines from treatment of any non-hazardous waste or gypsum from recovered plasterboard.	Area E
19 12 12	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	Stockpiles 1 to 6

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<sup>3</sup> <https://www.standardsforhighways.co.uk/ha/standards/mchw/vol1/pdfs/600.pdf>

### 3 WASTE ACCEPTANCE PROCEDURES

- 3.1.1 The waste material to be used in the development is mainly historic material that was produced as a by-product of the quarrying activity (ragstone/hassock) or brought to site as part of the historic landfilling activity. In this case, there will be no import of materials from that already present on the site. Comprehensive testing has already undertaken on the existing materials at the site; however, further waste acceptance measures are proposed as part of the treatment and movement of materials around the site prior to deposit for recovery. Details of sampling and monitoring can be found in **Appendix B**.
- 3.1.2 The material to be used has been in place on the site for over thirty years, either in-situ in the landfill prior to excavation and screening or on site as a by-product of the quarrying activity.
- 3.1.3 When materials to be used are site won, waste acceptance procedures are unable to be applied to those materials as they have not been imported as part of the waste recovery activity, therefore, the waste acceptance criteria will be applied prior to the permitted activities taking place i.e when processing or filling.
- 3.1.4 All materials will undergo Waste Acceptance Procedures prior to final deposit to ensure that it is of inert nature and no contamination is present.
- 3.1.5 Any deficit of material will be met with non-waste material sourced from off site.

### 3.2 Waste Characterisation

- 3.2.1 Basic characterisation has been undertaken for all waste materials present on site. The contamination identified mainly derived from materials such as putrescible wastes, plastics, glass and wood.
- 3.2.2 As part of the waste screening, recyclable and non-inert wastes were removed from site for disposal or recovery. Inert wastes were stockpiled for future use in recontouring and reprofiling the site for future development. In total, 499 No. loads totalling 9,564.73 tonnes were removed to the Cory Greatness facility and Sevenoaks, 121 No. loads totalling 3,102.6 tonnes to the Waste Recycling Group landfill at Milton and a further 711 tonnes removed by skip. The materials removed mainly consisted of biodegradable and recyclable (glass and plastic) wastes.
- 3.2.3 The site has been the subject of a number of phases of intrusive site investigation, with associated laboratory testing of representative samples dating back to 2004, with the most recent investigation occurring in December 2019.
- 3.2.4 Site investigations have been carried out by Knapp Hicks & Partners between 2013 and 2019 to obtain representative samples from across the site. A summary of the findings of these investigations can be found in Table 3.1 below:

**Table 3-1: Knapp Hicks Site Investigations 2013 to 2019**

Year	Scope of Investigations	Summary of Findings
2013	40 No machine dug pits 30 No Contamination Suites	Rare asbestos fibres (4 samples) Rare slight exceedances of metals (lead, arsenic) in 2 out 30 samples All TPH & BTEX parameters below guidance values Localised exceedances of PAH's
2017	26 No Machine Dug Trial Pits 10 No Contamination Suites Asbestos Quantifications	Minor exceedances of lead in 2 samples Asbestos fibres in 2 samples. Asbestos quantifications generally relatively low at <0.001% to 0.002%
2019	40 No machine dug trial pits from areas where existing ground level will be reduced	Contamination testing of representative samples taken from areas to be excavated to provide fill for re-profiling the site have generally

Year	Scope of Investigations	Summary of Findings
	36 No Contamination Suites 36 No Waste Acceptance Criteria (leachate) tests 5 No Ground Gas Wells installed Ground Gas Monitoring Groundwater samples obtained from 4 No wells (2No on PJ Burke site, 2 No on adjacent landfill site)	found levels of contamination below assessment criteria for residential end use with private gardens. WAC testing identified sulphate levels above the assessment criteria for inert waste and antimony levels were close to the upper level for inert waste. 12 of the 36 samples identified asbestos fibres. Quantification analysis identified that 7 samples had asbestos levels below 0.001%w/w. The remaining 5 samples identified asbestos levels at between 0.002% and 0.007%. Groundwater samples did not identify any criteria exceeding drinking water quality standards with the exception of some elevated sulphates in KCC borehole TV-S3 located on the adjacent site to the south.

- 3.2.5 Stockpiles 1 to 6 have undergone chemical analysis at each phase of site investigation and the levels of contamination are below the accepted assessment criteria for residential end use. This therefore demonstrates that they are suitable materials to be used as general fill and therefore will be used to fill the lower levels of the quarry to ensure that any local levels of contaminants will be buried at significant depth.
- 3.2.6 Several phases of investigation and associated testing at the site have concluded that it is generally lacking in contamination that would represent a risk to construction workers or the end-users.
- 3.2.7 The results have indicated negligible to very low levels of contaminants and the Waste Acceptance Criteria (WAC)<sup>4</sup> testing has only detected the following in a small proportion of the samples:
- Sulphate levels exceeding the upper level for inert waste but not at a level requiring SR cement; and
  - Antimony levels close to the upper level for inert waste.
- 3.2.8 All samples were screened for asbestos and, where asbestos waste detected, a quantification analysis was carried out. Of 12 samples submitted for asbestos quantification, 7 had levels <0.001% w/w while the other samples had asbestos present at between 0.002% and 0.007% w/w. This is below the guidance threshold of 0.01%.
- 3.2.9 It is proposed that even though the asbestos detected is below guidance thresholds, the piles where asbestos is detected will be placed as fill materials in the base of areas to be filled so as to minimise any risk of contact once the site has been developed.
- 3.2.10 Groundwater testing has been carried out from 4 boreholes located around the site perimeter. Results have indicated reasonable water quality within the site when compared with Drinking Water Standards, and in comparison, to the water quality within the adjacent landfill, which is impacted by ammonia due to the waste materials still present,
- 3.2.11 The chemical testing has concluded that there is no significant contamination noted in any test areas.
- 3.2.12 A summary of soil analysis results can be found in Section 5.3 of the Waste Recovery Plan.
- 3.2.13 The results of the analysis undertaken were reported as part of planning permission requirements along with the proposed remediation strategy The EA was consulted on the proposed scheme by the planning authority and responded with the following comments stating that “overall we do not perceive there is any major difference to remediation proposals to those that were agreed originally. The outlined proposals are therefore acceptable from a groundwater protection point of view.” EA correspondence is included in **Appendix A**.

<sup>4</sup> <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2003:011:0027:0049:EN:PDF>

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### 3.3 Waste Acceptance Procedures

- 3.3.1 As discussed above, all materials have been through previous phases of assessment as part of historic screening activities at the site. Screening activities were undertaken as follows:
- Landfill excavation; and
  - Screening to remove recyclates or non-suitable waste such as plastics, metals, wood and textiles etc.
- 3.3.2 All materials will undergo visual inspection prior to use as fill material in the waste recovery activity. Waste materials may be rejected if they differ from the waste stockpiles identified in the Waste Recovery Plan for use as fill material or if signs of contamination are found (e.g. discoloured/odorous soils or evidence of asbestos containing materials).
- 3.3.3 Any ash or asbestos materials identified will be removed to the quarantine area for removal from site and therefore not used as fill materials in the waste recovery activity.

### 3.4 Compliance Testing

- 3.4.1 As detailed above, all areas of the site to be used as fill and all stockpiles have previously undergone sampling and testing. As there are no further waste materials proposed to be imported to the site, it is not proposed that there will be any additional testing of incoming waste.
- 3.4.2 If any obvious signs of previously unidentified contamination are found, further testing will be undertaken to assess the degree of contamination and whether the material is suitable for use in the recovery activity. Should it be found not to be suitable for use, it will be removed as detailed in Section 3.4.
- 3.4.3 As detailed in technical guidance WM3<sup>5</sup> - Guidance on the classification and assessment of waste, and EA guidance - Waste acceptance procedures for waste recovery on land<sup>6</sup> it is proposed that any further testing required in order to confirm that materials still match the materials previously tested at the site will be carried out against inert waste acceptance criteria parameters.

### 3.5 Waste Records / Tracking

- 3.5.1 As the waste material is already at site, there will not be any waste transfer notes available for material imports, however, waste will be treated as if it is being imported and paper records will be kept of all movements of waste in order to demonstrate that the phasing has been carried out as shown in Appendix B of the main application.
- 3.5.2 Waste records will contain a day by day account of material movements and treatment or processing and will contain the following information:
- Volume of material cut for each area;
  - Volume of material filled for each area;
  - Identification of material moved from area to area;
  - Volume of material moved to materials processing area and from which area/stockpile;
  - Volume of material processed;
  - Volume of material moved from materials processing area and to which area;

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<sup>5</sup>

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/948735/Waste\\_classification\\_technical\\_guidance\\_WM3.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/948735/Waste_classification_technical_guidance_WM3.pdf)

<sup>6</sup> <https://www.gov.uk/guidance/waste-acceptance-procedures-for-waste-recovery-on-land#this-table>



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- Description of materials included in movements;
  - Any non-conforming waste identified and removed to quarantine area; and
  - Any non-conforming waste removed from site and accompanying waste transfer note.

3.5.3 Records of all sampling, monitoring, testing and analysis results will be kept on record.

3.5.4 The above records will be held at the offices of P J Burke Properties Ltd for a period of at least six years from the date the records were made.

3.5.5 The site diary will be used to record any incidents that occur during the waste acceptance, discharge and emplacement process, including action taken in relation to unauthorised waste.

3.5.6 All records will be available for inspection as required.

### **3.6 Non-Permitted Wastes**

3.6.1 Waste materials on site have previously been screened to remove non-suitable waste as part of the historic landfill and screening exercise, however, there may be occasions where non-permitted waste such as plastics, metals, wood and textiles etc. are found as part of the operations. Where non-permitted wastes are found, these will be segregated and moved into the quarantine area of the materials processing area for storage within a sealed skip until removed from site.

3.6.2 Non-permitted waste will not be stored for more than 1 week and will be removed from site to an appropriately permitted facility.

3.6.3 Where hazardous materials such as asbestos are encountered, this will be handpicked, double-bagged and stored in a sealed covered container within the materials processing quarantine area for removal to an appropriately permitted facility by the end of the working day.

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## REFERENCES

1. Environment Agency guidance - Waste acceptance procedures for waste recovery on land - <https://www.gov.uk/guidance/waste-acceptance-procedures-for-waste-recovery-on-land>
2. Specification for Highway Works, Series 600 Earthworks - <https://www.standardsforhighways.co.uk/ha/standards/mchw/vol1/pdfs/600.pdf>
3. Landfill Waste Acceptance Criteria - <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2003:011:0027:0049:EN:PDF>
4. Technical guidance WM3: Guidance on the classification and assessment of waste - [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/948735/Waste\\_classification\\_technical\\_guidance\\_WM3.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/948735/Waste_classification_technical_guidance_WM3.pdf)

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## Appendices

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## Appendix A

# Correspondence from Environment Agency

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## Appendix B

### TP & BH Log and Monitoring Data