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## Importation Protocol and Construction Controls

May 2022

*Report for:*  
GRS Stone Supplies Ltd  
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Revision	Date	Author	Purpose	Summary of Changes

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## 1. INTRODUCTION AND SCOPE

- 1.1 This Importation Protocol has been prepared by AA Environmental Limited (AAe) in support of the inert landfill permit for the restoration of land near Lower Hare Farm by GRS Stone Supplies Limited (hereafter referred to as the Operator). In total circa 700,000 tonnes of inert engineered fill, engineering GSL fill, and restoration soils is required to restore the site. Following restoration, the land will be returned to agricultural land use. The engineered fill is proposed to come from imported sources as well as re-use of acceptable materials on-site from the enabling works.
- 1.2 The importation protocol set out in this document details the processes through which the importation of material to the site will be controlled, ensuring that the environmental and physical properties of the material are deemed suitable and in compliance with the site requirements.
- 1.3 Importation of material will only progress once an area of the site has been prepared in line with the construction controls, as set out in this plan.

## 2. IMPORTATION CONTROLS

- 2.1 The importation protocol details the processes through which the material brought to the site will be controlled. This process will ensure that the environmental and physical properties of the material are deemed suitable and are compliant with the standards outlined in the Hydrogeological Risk Assessment (May 2022).
- 2.2 Importation will only progress once an area of the site has been prepared in line with section 3 of this plan.

### Material Acceptance Control

- 2.3 It is proposed that fill materials will be imported to the site for the restoration works. The material will be obtained from a variety of local sources as well as re-use of site won materials. The material will meet general fill engineering specifications in line with Series 600 of the Specification for Highway Works (Table 6/1 and 6/2).
- 2.4 To determine a material's acceptability for use at the site, the Operator will apply this protocol ensuring the properties are fully assessed, and that importers of the material are suitably licensed.

### Waste Carriers Licence

- 2.5 A Waste Carriers Licence will need to be provided to the Operator prior to importation of any material by a third party. The certificate will be checked to ensure that it is valid. If there is any doubt as to the certificate's validity, the Operator will restrict access to the site whilst clarification is provided regarding validity and status.

### Prior Assessment of Material Characteristics

- 2.6 Due to the volume of material required it is not possible to source from one site. It is proposed to import material predominantly from demolition and construction sites in surrounding Devon area. Where significant contamination may have occurred, material will only be accepted following receipt of the necessary contamination reports, sampling methodologies and analysis. All wastes will undergo classification in accordance with WM3 prior to its acceptance at the site or the Operator will carry out suitable checks to ensure producers have classified their waste correctly.
- 2.7 Prior to the importation of any material, the Operator will evaluate the source of the material to be accepted under this protocol. The Operator will employ a Waste Acceptance Form (WAF) to document the evaluation process for each material stream to be deposited at the site, for example, the tracking process. The WAF will identify the material type and its source. If the material is not composed of natural soil, stone or rock, the WAF will determine its environmental characteristics. As appropriate, this will include chemical solid test results on metals, hydrocarbons, and non-metals, as well as the leachate assessment detailed in the Waste Acceptance Criteria (WAC). The WAF, along

with any supporting information, will be retained at the Operator's office. Each WAF will have a unique reference. A schematic of the material acceptance procedure is attached in the Appendix A. Details required prior to acceptance include the following:

- Source details (location, volume, previous land uses); and
- Material characteristics (chemical test results where available, texture and colour, process producing the waste).

2.8 The material types to be accepted at the site are presented in the Permit. The use of the materials must comply with the conditions in the Permit table.

#### Natural and Construction Inert Materials

2.9 Where a material can be proven as fully complying with the Landfill Directive definition of inert, including brick, clay, concrete, tiles and ceramics, they can be imported to the site without chemical testing. The material stream must be inspected prior to import, to determine there is no potential cross contamination. Suitable material streams that can be imported without chemical analysis are presented in Table 1.

**Table 1. Inert Materials Acceptable at the Site**

Fill Material	Description	European Waste Catalogue (EWC) Code
	Concrete	17 01 01
	Bricks	17 01 02
	Tiles and ceramics	17 01 03
	Mixtures of the concrete, bricks, tiles and ceramics	17 01 07
	Soil and stones (natural arisings confirmed by inspection, not including peat and topsoil and not from contaminated sites)	17 05 04 20 02 02

2.10 Details of the inspection will be recorded in the WAF for each material stream. The management of the import is detailed in Section 2.15.

#### Potentially Suitable Materials

2.11 Soils from brownfield land or industrial processes (shown below in Table 2) will not be accepted at the site unless they can be definitively proven to be inert and in accordance with the standards set out in Appendix B, C and D. The following checks and tests will be undertaken prior to the material being imported:

- The Operator will visually inspect the waste, to ensure that there is no unacceptable detritus within the materials matrix or suspicious odours. In the event that there is any doubt the material will not be determined as acceptable;
- The Producer or Operator will undertake sufficient sampling and chemical analysis at an accredited laboratory to determine suitability. Testing must follow good industry practice and the minimum frequency must comply with the Level 1 characterisation of the EA Guidance<sup>1</sup> and as presented below<sup>2</sup>;
- Where a material is below potentially contaminated material there must be a clear policy of segregation demonstrated; and
- In the event that detritus is presented but considered to be acceptable, definitive quantification must be undertaken and the amount of waste proven to be less than 1 % weight by weight<sup>3</sup>.

<sup>1</sup> Environment Agency 'Dispose of waste to landfill'

<sup>2</sup> In the event the producer provides insufficient data, but it is compliant, the Operator will undertake the residual testing during initial importation.

<sup>3</sup> An acceptable standard for use in capping below highways. Series 800 of the Highways Specification

**Table 2. Potentially Acceptable Materials**

Potentially Acceptable Material	Description	European Waste Catalogue (EWC) Code
	Soil and stones	17 05 04 or 20 02 02

- 2.12 The sample analysis provided must show the material complies with both human health and controlled water criteria (either Table A1; or in absence of this testing, Table A2 leachate criteria). The testing frequency completed must include all parameters anticipated from a desktop review of the material and must fully characterise the waste using the principles set out in Level 1 and 2 EA Guidance 'Waste Sampling and Testing for Disposal to Landfill'. It should be noted that no soils with the potential for significant PCB, VOC (other than BTEX) will be accepted at the site. The required testing frequency by the Producer is presented in the extract from the EA guidance, 'Table 4.1'.

	Population (tonnes)	Homogeneous (number of samples)	Heterogeneous and new wastes (number of samples)
Level 1 Characterisation for Descriptive, Total Concentration & Leaching Tests	<100 t	2	5
	< 500 t	3	8
	<1000 t	5	14
	10,000 t	11	22
	plus per additional 10,000 t	+5 (pro rata)	+10 (pro rata)

- 2.13 The representative analysis will be assessed against the requirements of Appendix B to D (depending on activity type). The soils will be deemed acceptable if both the visual inspection and the chemical assessment are passed. A WAF will be completed documenting the acceptable nature of the material.
- 2.14 All imported or re-used materials must also comply to the derived soil thresholds for the protection of groundwater and environment, as set out in Appendix B to D.
- 2.15 Verification testing by the Operator for the waste streams listed above, whether waste was imported or re-used, will be tested on a basis of 1 test per 5,000 m<sup>3</sup> and screened against the standards in Appendix B to D.
- 2.16 Waste to be placed in the top 1.25 m of the engineered formation will be required to meet the human health standards for Allotment, as set out in Table D2 in Appendix D. This is in addition to the waste acceptance criteria and thresholds for groundwater protection.

**Prohibited Material**

- 2.17 The following wastes are not permitted at the site:

- Hazardous wastes;
- Wastes in liquid form;
- Asbestos fragment containing material; and
- Wastes consisting solely or mainly of powder or loose fibres.

**Site Controls of Imported Material**

- 2.18 Once waste/material has been accepted for importation, it will be subjected to further checks on the site, including:

- The WAF form will be issued to site;
- Every load will be inspected at the gatehouse to ensure the material arriving is acceptable. The operator will inspect the imported materials at the point of placement. Records of the time/date and materials being inspected will be maintained in a site diary;

- Additional visual inspections will be made on an adhoc basis during placement and formation;
  - 1 test per 5,000 m<sup>3</sup> of imported material will be screened against the standards in Appendix B to D (depending on material type). Note, Table A1 or Table A2 leachate testing will be undertaken to determine risk to groundwater; and
  - Any non-conforming material will be segregated and placed in quarantine.
- 2.19 If there are any concerns regarding the material (including odour, visual discolouration or sheen, potential presence of asbestos) the importation will cease immediately and only recommence once any discrepancies have been fully resolved. The material will be transferred to the quarantine area as detailed in the Operational Plan. Any materials which are suspected to be contaminated or appear to contain unacceptable materials (e.g. asbestos fragments or deleterious matter including plastics) will be placed in the quarantine area. If a material cannot be readily moved, the affected area will be fenced off to avoid disturbance. The Producer (person or organisation) of the material will be contacted with a view to removal and off-site disposal, with further soil testing undertaken as necessary.
- 2.20 The documentation (completed WAF and Certificates of Analysis, as required) will be retained by the Operator for all materials imported onto the site, for at least 2 years. The Operator will record all sources of materials imported onto the site and calculate the total imported volume on a weekly basis. All records will be made available to the Environment Agency for inspection, as required.
- 2.21 Certain waste types can only be used for certain activities as per Table 3 below. To note, temporary haul road waste materials will be removed once non-operational and will not form part of the final landform.

**Table 3. EWC codes for each activity**

Activity	Description	European Waste Catalogue (EWC) Code
Inert landfilling	Soil and stones	17 05 04 or 20 02 02
Temporary haul road construction	Concrete	17 01 01
	Bricks	17 01 02
	Tiles and ceramics	17 01 03
	Mixtures of the concrete, bricks, tiles and ceramics	17 01 07
	Soil and stones	17 05 04 or 20 02 02
Geological Barrier	Soil and stones	17 05 04 or 20 02 02
Restoration Soils	Soil and stones	17 05 04 or 20 02 02

### 3. CONSTRUCTION CONTROLS

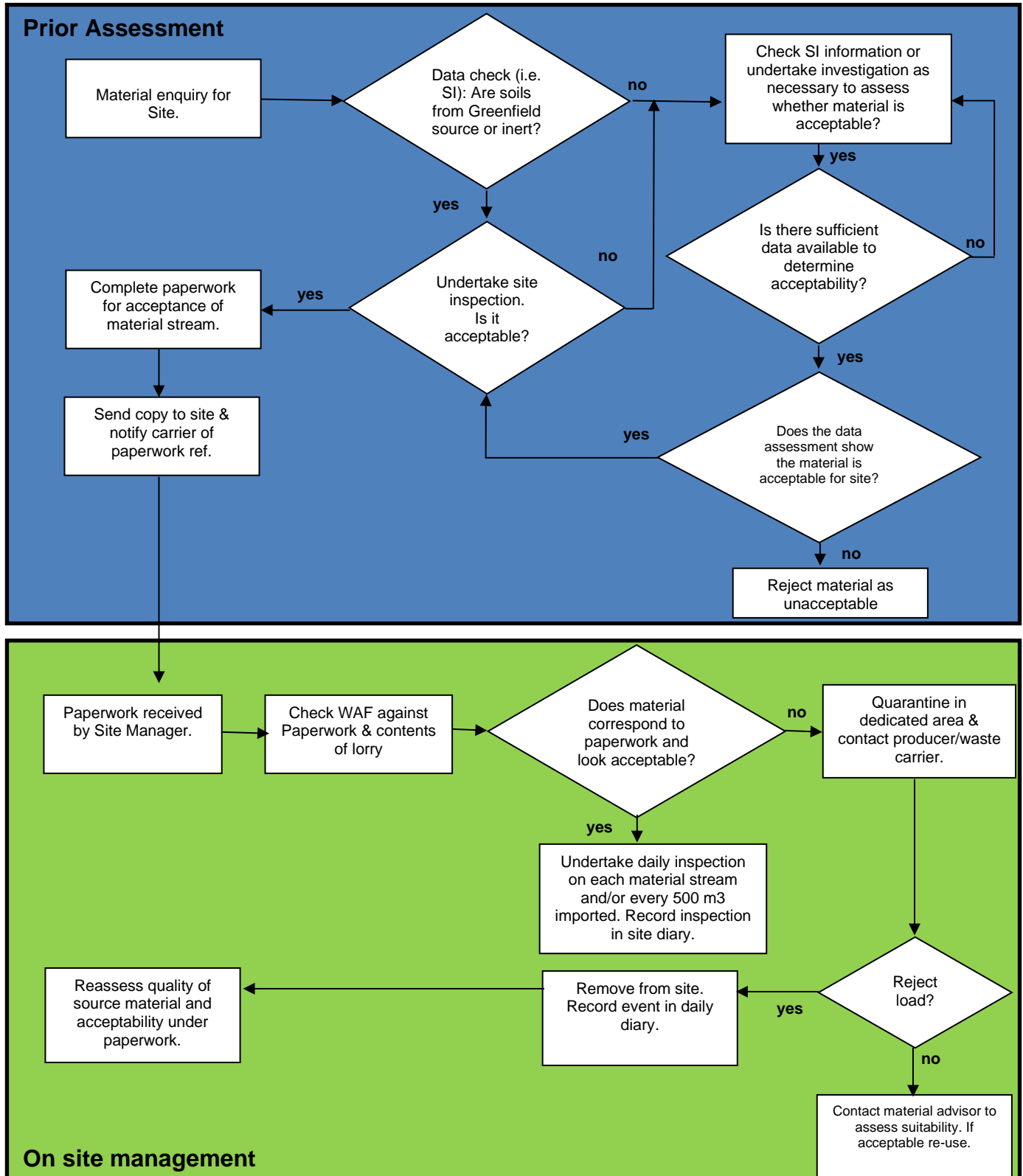
#### Site preparation

- 3.1 Prior to each phase of the works, vegetation will be stripped in a controlled fashion. The stripping of existing and grasses will be limited to the quarry phase being worked only. This should minimise potential for run-off and silt.
- 3.2 Prior to each phase of works, topsoil and subsoil on the site will be stripped, segregated, and stockpiled in bunds adjacent to the site works prior to the commencement. There will be no mixing of topsoil with sub soils, underlying strata or hardcore. The stockpile will be loosely compacted and sealed on the sides. The stockpiles will be clearly demarcated to ensure they are not trafficked or damaged during the works.

#### Placement of general fill

- 3.3 All imported/ re-used material is subject to the checks and inspection set out in section 2.
- 3.4 Acceptable fill will be directly placed, inspected, and then compacted by dozer in a maximum of 500 mm layers. The material will be progressively worked until it is within 1 m of the finished profile level which will be recorded by the project surveyor.
- 3.5 The final layer will be ripped by the dozer or by the excavator to loosen the fill material prior to reinstatement of the sub and topsoil, where required.

## Appendix A Waste Acceptance Procedure





## Appendix B

### Derived Acceptance Criteria for Inert Waste, Temporary haul road / lay down materials and geological barrier

- B.1 *Controlled water assessment:* All materials, as presented in Table 2 of main report, should be accompanied by representative solid and leachate test results for WM3 and leachate analysis. The acceptable criteria is set out in Table B1. If the pre-acceptance review identifies a potential for additional parameters other than that set out in the table, then additional leaching tests will be completed. It should be recognised that leachate tests are not acceptable for compounds with a volatile component as the testing process loses the compound to volatilisation.

**Table B1. Derived Acceptable Criteria**

Determinant	WAC Leachate Criteria (LS=10l/kg) (mg/kg)	Solid results (mg/kg)	Notes
Arsenic (total)	0.5		
Barium (total)	20		
Cadmium (total)	0.04		
Chromium (total)	0.5		
Copper (total)	2.0		
Mercury (inorganic)	0.01		
Nickel (total)	0.4		
Lead (total)	0.5		
Selenium (total)	0.1		
Zinc (total)	4.0		
Chloride (total)	800		See Notes
Fluoride (total)	10		
Sulphate (as SO <sub>4</sub> )*	1000		See Notes
Phenol (total)	1.0		
TDS	4000		
DOC	500		
BTEX (TPH C5-C10)		6	BTEX concentration must not exceed the soils total value
TPH Speciated (Aliphatic / Aromatic)		500	Speciated TPH concentrations must not exceed soils total value
PCB		Not permitted	
PAH Speciated 16		100	Speciated 16 PAH concentration must not exceed soils total value
VOC / SVOC / Pesticides / Herbicides	To be considered and extended as appropriate based on knowledge of the source material. If found to be present (above the limit of detection), a quantitative risk assessment should be carried out to determine thresholds for identified contaminants which are protective of Controlled Waters. No import permitted until a revised standard has been agreed with the Environment Agency.		
1. The values of TDS can be used instead of Cl or SO <sub>4</sub> . 2. If the waste does not meet the values for sulphate, it may still be considered as complying with the acceptance criteria if the leaching does not exceed either of the following values: 1,500 mg/l as C0 at L/S = 0,1 l/kg; and 6,000 mg/kg at L/S = 10 l/kg. 3. DOC will be used instead of TOC. TOC is not used as not considered applicable to land use.			

- B.2 There is no requirement for human health limits as this material will not be within the top 1.25 m. In the event there are internal haul roads at landform surface, the haul road and lay down areas will conform to Appendix D restoration soils criteria.

- B.3 The geological barrier will also confirm to the engineering requirements set out in the CQA Strategy Plan.

## Appendix C

### Derived Acceptance Criteria for geological barrier for infilling of the temporary water lagoons in Phase 2/ 3

- C.1 In the event site derived subsoils cannot be re-used to infill the lagoons, there will be the importation of materials for this. The imported materials will be in accordance with the importation criteria in Appendix C.
- C.2 All imported materials, as presented in Table 1 and 2 of main report, should be accompanied by representative solid and leachate test results for WAC analysis. The material must adhere to WM3 solids assessment, inert solids criteria, and WAC acceptable criteria is set out in Table C1. Table C1 thresholds are based on baseline subsoil maximum leachate values. The baseline data is shown in the ESSD.

**Table C1. Derived Acceptable Criteria**

Determinant	WAC Leachate Criteria (LS=10l/kg) (mg/kg)	Notes
Arsenic (total)	0.012	Maximum subsoil leachate value
Barium (total)	0.05	Maximum subsoil leachate value
Cadmium (total)	0.001	Maximum subsoil leachate value
Chromium (total)	0.005	Maximum subsoil leachate value
Copper (total)	0.021	Maximum subsoil leachate value
Mercury (inorganic)	0.001	Maximum subsoil leachate value
Nickel (total)	0.005	Maximum subsoil leachate value
Lead (total)	0.007	Maximum subsoil leachate value
Selenium (total)	0.005	Maximum subsoil leachate value
Zinc (total)	0.04	Maximum subsoil leachate value
Chloride (total)	42	Maximum subsoil leachate value
Fluoride (total)	0.54	Maximum subsoil leachate value
Sulphate (as SO <sub>4</sub> ) <sup>*</sup>	110	Maximum subsoil leachate value
Phenol (total)	0.3	Maximum subsoil leachate value
TDS	520	Maximum subsoil leachate value
DOC	190	Maximum subsoil leachate value
1. The values of TDS can be used instead of Cl or SO <sub>4</sub> . 2. If the waste does not meet the values for sulphate, it may still be considered as complying with the acceptance criteria if the leaching does not exceed either of the following values: 1,500 mg/l as C0 at L/S = 0,1 l/kg; and 6,000 mg/kg at L/S = 10 l/kg. 3. DOC will be used instead of TOC. TOC is not used as not considered applicable to land use.		

- C.3 There is no requirement for human health limits as this material will not be within the top 1.25 m.
- C.4 The geological barrier will also confirm to the engineering requirements set out in the CQA Strategy Plan.

## Appendix D

### Derived Acceptance Criteria for restoration soils (subsoils and topsoils)

- D.1 Site derived subsoils and topsoils may be re-used as part of the restoration soils. In the event materials are to be imported, they must comply with this Appendix D.
- D.2 All imported subsoil materials, as presented in 2 of main report, should be accompanied by representative solid test results for human health and WAC analysis. The imported subsoil materials must comply to WM3 assessment and Table D1 and Table D5 below.

**Table D1. Subsoil Derived Acceptable Criteria**

Determinant	WAC Leachate Criteria (LS=10l/kg) (mg/kg)	Solid results (mg/kg)	Notes
Arsenic (total)	0.5		
Barium (total)	20		
Cadmium (total)	0.04		
Chromium (total)	0.5		
Copper (total)	2.0		
Mercury (inorganic)	0.01		
Nickel (total)	0.4		
Lead (total)	0.5		
Selenium (total)	0.1		
Zinc (total)	4.0		
Chloride (total)	800		See Notes
Fluoride (total)	10		
Sulphate (as SO <sub>4</sub> )*	1000		See Notes
Phenol (total)	1.0		
TDS	4000		
DOC	500		
BTEX (TPH C5-C10)		6	BTEX concentration must not exceed the soils total value
TPH Speciated (Aliphatic / Aromatic)		500	Speciated TPH concentrations must not exceed soils total value
PCB		Not permitted	
PAH Speciated 16		100	Speciated 16 PAH concentration must not exceed soils total value
VOC / SVOC / Pesticides / Herbicides	To be considered and extended as appropriate based on knowledge of the source material. If found to be present (above the limit of detection), a quantitative risk assessment should be carried out to determine thresholds for identified contaminants which are protective of Controlled Waters. No import permitted until a revised standard has been agreed with the Environment Agency.		
1. The values of TDS can be used instead of Cl or SO <sub>4</sub> . 2. If the waste does not meet the values for sulphate, it may still be considered as complying with the acceptance criteria if the leaching does not exceed either of the following values: 1,500 mg/l as C0 at L/S = 0,1 l/kg; and 6,000 mg/kg at L/S = 10 l/kg. 3. DOC will be used instead of TOC. TOC is not used as not considered applicable to land use.			

- D.3 All imported topsoil materials, as presented in 2 of main report, should be accompanied by representative solid test results for human health and WAC analysis. The imported topsoil materials must comply to WM3 assessment and Table D5 (human health criteria) and Table D2/D3 below.

**Table D2. Topsoil Derived Acceptable Criteria**

Determinant	WAC Leachate Criteria (LS=10l/kg) (mg/kg)	Solid results (mg/kg)	Notes
Arsenic (total)	0.5		
Barium (total)	20		
Cadmium (total)	0.04		
Chromium (total)	0.5		
Copper (total)	2.0		
Mercury (inorganic)	0.01		
Nickel (total)	0.4		
Lead (total)	0.5		
Selenium (total)	0.1		
Zinc (total)	4.0		
Chloride (total)	1133.2		Equivalent mg/kg taken from Restoration Plan assessment.
Fluoride (total)	10		
Sulphate (as SO <sub>4</sub> ) <sup>*</sup>	1046.8		Equivalent mg/kg taken from Restoration Plan assessment.
Ammoniacal Nitrogen	46		Equivalent mg/kg taken from Restoration Plan assessment.
Phenol (total)	1.0		
TDS	4000		
DOC	500		
BTEX (TPH C5-C10)		6	BTEX concentration must not exceed the soils total value
TPH Speciated (Aliphatic / Aromatic)		500	Speciated TPH concentrations must not exceed soils total value
PCB		Not permitted	
PAH Speciated 16		100	Speciated 16 PAH concentration must not exceed soils total value
VOC / SVOC / Pesticides / Herbicides	To be considered and extended as appropriate based on knowledge of the source material. If found to be present (above the limit of detection), a quantitative risk assessment should be carried out to determine thresholds for identified contaminants which are protective of Controlled Waters. No import permitted until a revised standard has been agreed with the Environment Agency.		
1. If the waste does not meet the values for sulphate, it may still be considered as complying with the acceptance criteria if the leaching does not exceed either of the following values: 1,500 mg/l as C0 at L/S = 0,1 l/kg; and 6,000 mg/kg at L/S = 10 l/kg.			
2. DOC will be used instead of TOC. TOC is not used as not considered applicable to land use.			

- D.4 *Sub-soil and topsoil characteristics:* All soils within the top 1.25 m must meet the multi-purpose parameters as defined in Table D4, in accordance with BS 8601 and BS3882. Reference will also be made to the Sewage Sludge Code of Practice, to ensure maximum permissible concentrations of potentially toxic elements are not present in the soil. This is to ensure potential phytotoxic elements are not present in the soil.

**Table D3. Topsoil and sub-soil characteristics**

PTE	Maximum permissible concentration of PTE in soil (mg/kg dry solid)			
	pH 5.0<5.5	pH 5.5<6.9	pH 6.0<7.0	pH(3) >7.0
Zinc	200	200	200	300
Copper	80	100	135	200
Nickel	50	60	75	110
	<b>For pH 5.0 and above</b>			
Cadmium	3			
Lead	300			
Mercury	1			
Chromium	400			
Molybdenum	4			
Selenium	3			
Arsenic	50			
Fluoride	500			
1. It should be recognised that the recovery topsoils and subsoils can be nutrient low. Full compliance is not required and additional nutrients can be added post-placement.				

- D.5 The pre-acceptance and acceptance checks and testing regime should ensure that incoming topsoils have been assessed against the main analytical suites required by Environment Agency Technical Guidance Note TGN EPR 8.01, section 4 Waste and Waste analysis. Table D.5 indicates the main analytical suites and how they are addressed at Lower Hare.

**Table D.4 Main Analytical Suites TGN EPR 8.01**

Suite	Potential Parameters	Measures for Lower Hare
Nutrients	Nitrogen, Phosphate Potassium Magnesium, Sulphur	Laboratory testing in line with BS3882 and BS8601. 1. It should be recognised that the recovery topsoils and subsoils can be nutrient low. Full compliance is not required and additional nutrients can be added post-placement.
Physical properties	% dry matter % organic matter	Laboratory testing in line with BS3882 and BS8601
Chemical properties	Neutralising value Conductivity pH	Laboratory testing in line with BS3882 and BS8601
Metals (PTE's)	All those set out in 'Code of practice for agricultural use of sewage sludge'.	Compliance with Table D4 above.
Organics	Dioxins, PAH's	Source material will not include ash. PAHs tested within inert WAC
Pathogens - to demonstrate biologically active waste is sanitised	E. coli Salmonella	No acceptance of sewage sludge
Physical contaminants – particularly important in compost to demonstrate material is fit for use	Metal Glass Plastic	Laboratory testing in line with BS3882 and BS8601

Suite	Potential Parameters	Measures for Lower Hare
Other contaminants	Notifiable disease Noxious weeds	These will be screened out at the pre-acceptance stage based on desk study information
Waste specific analysis	C:N ratio in composts Sodium levels in salty wastes Demonstration of waste stability, e.g. for compost	Laboratory testing in line with BS3882 and BS8601.  No acceptance of salty wastes No direct acceptance of compost.

- D.6 Human health assessment: All soils within the top 1.25 m of the formation, must also meet the human health limits as defined in Table D5; as well as the protective standards for Controlled Waters. The standards are based upon the Allotment guidance values available from the Environment Agency, DEFRA Level 4 Screening Values and LQM/CIEH Generic Assessment Criteria. Cyanide level has been set at the Atrisk residential cyanide limit.

**Table D5. Allotment Human Health Criteria**

Parameter	Human Health limit (units mg/kg (source))	
Arsenic	43 (DEFRA Level 4 screening value)	
Cadmium	1.9 (LQM/CIEH)	
Cyanide (total)	34 (Atrisk Soils – Residential Threshold)	
Chromium III	18,000 (LQM/CIEH)	
Chromium VI	1.8 (LQM/CIEH)	
Copper	520 (LQM/CIEH)	
Lead	80 (DEFRA Level 4 screening value)	
Inorganic Mercury	19 (LQM/CIEH)	
Nickel	230 (LQM/CIEH)	
Selenium	88 (LQM/CIEH)	
Zinc	620 (LQM/CIEH)	
Aliphatic (5-6)	1,700 (LQM/CIEH)	Capped at 500 mg/kg total TPH (WAC Criteria)
Aliphatic (6-8)	5,600 (LQM/CIEH)	
Aliphatic (8-10)	770 (LQM/CIEH)	
Aliphatic (10-12)	4,400 (LQM/CIEH)	
Aliphatic (12-16)	13,000 (LQM/CIEH)	
Aliphatic (16-35)	270,000 (LQM/CIEH)	
Aliphatic (35-44)	270,000 (LQM/CIEH)	
Aromatic (5-7 benzene)	27 (LQM/CIEH)	
Aromatic (7-8 toluene)	51 (LQM/CIEH)	
Aromatic (8-10)	21 (LQM/CIEH)	
Aromatic (10-12)	31 (LQM/CIEH)	
Aromatic (12-16)	57 (LQM/CIEH)	
Aromatic (16-21)	110 (LQM/CIEH)	
Aromatic (21-35)	820 (LQM/CIEH)	
Aromatic (35-44)	820 (LQM/CIEH)	
Total phenols	140 (LQM/CIEH)	
PCB	1 (WAC Criteria)	
Naphthalene	10 (LQM/CIEH)	Capped at 100 mg/kg total PAHs (WAC Criteria)
Acenaphthene	85 (LQM/CIEH)	
Acenaphthylene	69 (LQM/CIEH)	BTEX capped at 6 mg/kg (WAC Criteria)
Fluorene	67 (LQM/CIEH)	
Anthracene	950 (LQM/CIEH)	
Fluoranthene	130 (LQM/CIEH)	
Phenanthrene	38 (LQM/CIEH)	
Pyrene	270 (LQM/CIEH)	
Benzo(a)anthracene	6.5 (LQM/CIEH)	

Parameter	Human Health limit (units mg/kg (source))
Chrysene	9.4 (LQM/CIEH)
Benzo(b)fluoranthene	2.1 (LQM/CIEH)
Benzo(k)fluoranthene	75 (LQM/CIEH)
Benzo(ghi)perylene	470 (LQM/CIEH)
Benzo(a)pyrene	2.0 (LQM/CIEH)
Dibenzo(ah)anthracene	0.27 (LQM/CIEH)
Indeno(123-cd)pyrene	21 (LQM/CIEH)
<p><b>Notes</b></p> <ul style="list-style-type: none"> <li>• Materials must comply with non-hazardous limits for WM3 assessment and controlled waters Table D1 or D2 criteria.</li> <li>• Speciated PAH, TPH and Phenols are all based on 1% SOM.</li> <li>• TPH Aliphatic Aromatic &gt;C10-C44 total is not permitted to exceed 500 mg/kg for the protection of the water environment.</li> <li>• TPH &gt;C5-C10 Aliphatic Aromatic total is not permitted to exceed 6 mg/kg for the protection of the water environment.</li> <li>• PAH total is not to exceed 100 mg/kg total for the protection of the water environment.</li> <li>• PAH Benzo(a)anthracene is not permitted to be in excess of 25 mg/kg as this exceeds the waste hazardous threshold.</li> </ul>	