



Please enter available data in the rows associated with the test (grey) cells. Calculation cells initially display either "0.0000" or "#DIV/0!".
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Haswaste, developed by Dr. Iain Haslock.

Every Street, Bury

TP/WS/BH

Depth (m)

Envirolab reference

Ecotoxic HP14 amended v6	≥25%	<0.1% (except Be, V, Te, TL, Petrol, Diesel, Crude Oil, Kerosene, White Spirit, Cresols, TPH, TPHCWG, Phenol, Cresols, Xylenols, T- Phenols, CompCN, Thiocyanate, Toluene, Ethylbenzene, Xylene + BTX 1%).	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Ecotoxic HP14 amended v6	≥25%	<0.1% (except Be, V, Te, TL, Petrol, Diesel, Crude Oil, Kerosene, White Spirit, Cresols, TPH, TPHCWG, Phenol, Cresols, Xylenols, T- Phenols, CompCN, Thiocyanate, Toluene, Ethylbenzene, Xylene + BTX 1%).	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Persistent Organic Pollutant (PCB, PBB or POP Pesticides)	>0.005%		0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000
Persistent Organic Pollutant (Total Dioxins+Furans)	>0.0000015%		0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000
Persistent Organic Pollutant (Individual Dioxins+Furans)	>0.0000015%		0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000

If other contaminants need adding to Haswaste, please conta



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Every Street, Bury

TP/WS/BH

Depth (m)

Envirolab reference

% Moisture

pH (soil)

pH (leachate)

Arsenic
Cadmium
Copper
CrVI or Chromium
Lead
Mercury
Nickel
Selenium
Zinc

Barium

Beryllium

Vanadium

Cobalt

Manganese

Molybdenum

Antimony

Aluminium

Bismuth

Cadmium

Iron

Strontium

Tellurium

Thallium

Titanium

Tungsten

Ammoniacal N

ws Boron

PAH (Input Total PAH OR individual PAH results)

Acenaphthene
Acenaphthylene
Anthracene
Benzo(a)anthracene
Benzo(a)pyrene
Benzo(b)fluoranthene
Benzo(ghi)perylene
Benzo(k)fluoranthene
Chrysene
Dibenz(ah)anthracene
Fluoranthene
Fluorene
Indeno(123cd)pyrene
Naphthalene
Phenanthrene
Pyrene
Coronene
Total PAHs (16 or 17)

TPH

Petrol

Diesel

Lube Oil

Crude Oil

White Spirit / Kerosene

Creosote

Unknown TPH with ID

Unknown TPHCWG

Total Sulphide

Complex Cyanide

Free (or Total) Cyanide

Thiocyanate

Elemental/Free Sulphur

Phenols Input Total Phenols HPLC OR individual Phenol results.

Phenol

Cresols

Xylenols

Resorcinol

Phenols Total by HPLC

BTEX Input Total BTEX OR individual BTEX results.

Benzene

Toluene

Ethylbenzene

Xylenes

Total BTEX

PCBs (POPs)

PCBs Total (eq EC7/WHO12)

PBBs (POPs)

Hexabromobiphenyl (Total or

PBB 153; 2,2',4,4',5,5'- if only

available)

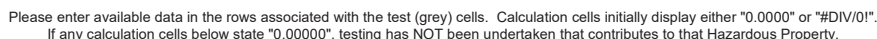
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%

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Every Street. Bury

TP/WS/BH

Depth (m)

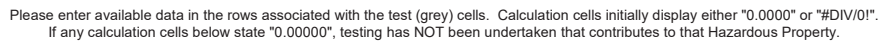
Envirolab reference

**POPs Dioxins and Furans Input Total Dioxins and Furans
OR individual Dioxin and Furan results.**

[illegible]

Some Pesticides (POPs unless otherwise stated)

Aldrin	mg/kg
α Hexachlorocyclohexane (alpha-HCH) (<i>leave empty if total HCH results used</i>)	
β Hexachlorocyclohexane (beta-HCH) (<i>leave empty if total HCH results used</i>)	
α Cis-Chlordane (alpha) OR Total Chlordane	
δ Hexachlorocyclohexane (delta-HCH) (<i>leave empty if total HCH results used</i>)	
Dieldrin	
Endrin	
γ Hexachlorocyclohexane (gamma-HCH) (lindane) OR Total HCH	
Heptachlor	
Hexachlorobenzene	
o,p'-DDT (<i>leave empty if total DDT results used</i>)	
p,p'-DDT OR Total DDT	
γ Trans-Chlordane (gamma) (<i>leave empty if total Chlordane results used</i>)	
Chlordecone (kepone)	
Pentachlorobenzene	
Mirex	
Toxaphene (campechlor)	
Tin	
Tin (<i>leave empty if Organotin and Tin excl Organotin results used</i>)	
Organotin	
Dibutyltin; DiBT	
Tributyltin; TriBT	
Triphenyltin; TriPT	
Tetrabutyltin; TeBT	
Tin excluding Organotin	
Tin excl Organotin	



Every Street, Bury

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If Asbestos in Soil above is "Y", the soil is Hazardous Waste HP6 and HP7								
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
If Asbestos in Soil above is "Y", but Asbestos % above is "<0.1%", the soil is Non Hazardous Waste. You can only use Asbestos % results where loose fibres or micro pieces are only present. You cannot use Asbestos % results when visual identifiable pieces are present.								

Identifiable Pieces are Cement, Fragments, Board, Rope etc. ie anything ACM that is not Loose Fibres.
All visual asbestos pieces need to be removed leaving only fibres (or micro pieces) with an Asbestos % Composition in Soil result of <0.1% for the soil to become non-hazardous waste.

[illegible]

Table 3 of the CLP, CL Inventory, ATPs, IARC, Concawe, MSDSs, REACH + Pesticide Properties databases. Worst case REACH + MSDS's used for *** STOT + Acute Toxicity.



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TP/WS/BH

Depth (m)

Envirolab reference

Ecotoxic HP14 amended v6	≥25%	<0.1% (except Be, V, Te, TL, Petrol, Diesel, Crude Oil, Kerosene, White Spirit, Cresols, TPH, TPHCWG, Phenol, Cresols, Xylenols, T- Phenols, CompCN, Thiocyanate, Toluene, Ethylbenzene, Xylene + BTEx 1%).	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Ecotoxic HP14 amended v6	≥25%	<0.1% (except Be, V, Te, TL, Petrol, Diesel, Crude Oil, Kerosene, White Spirit, Cresols, TPH, TPHCWG, Phenol, Cresols, Xylenols, T- Phenols, CompCN, Thiocyanate, Toluene, Ethylbenzene, Xylene + BTEx 1%).	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Persistent Organic Pollutant (PCB, PBB or POP Pesticides)	>0.005%		0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Persistent Organic Pollutant (Total Dioxins+Furans)	>0.0000015%		0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000
Persistent Organic Pollutant (Individual Dioxins+Furans)	>0.0000015%		0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000

If other contaminants need adding to Haswaste, please conta



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Every Street, Bury

TP/WS/BH

Depth (m)

Envirolab reference

% Moisture

pH (soil)

pH (leachate)

Arsenic
Cadmium
Copper
CrVI or Chromium
Lead
Mercury
Nickel
Selenium
Zinc

Barium

Beryllium

Vanadium

Cobalt

Manganese

Molybdenum

Antimony

Aluminium

Bismuth

Cadmium

Iron

Strontium

Tellurium

Thallium

Titanium

Tungsten

Ammoniacal N

ws Boron

PAH (Input Total PAH OR individual PAH results)

Acenaphthene
Acenaphthylene
Anthracene
Benzo(a)anthracene
Benzo(a)pyrene
Benzo(b)fluoranthene
Benzo(ghi)perylene
Benzo(k)fluoranthene
Chrysene
Dibenz(ah)anthracene
Fluoranthene
Fluorene
Indeno(123cd)pyrene
Naphthalene
Phenanthrene
Pyrene
Coronene
Total PAHs (16 or 17)

TPH

Petrol

Diesel

Lube Oil

Crude Oil

White Spirit / Kerosene

Creosote

Unknown TPH with ID

Unknown TPHCWG

Total Sulphide

Complex Cyanide

Free (or Total) Cyanide

Thiocyanate

Elemental/Free Sulphur

Phenols Input Total Phenols HPLC OR individual Phenol results.

Phenol

Cresols

Xylenols

Resorcinol

Phenols Total by HPLC

BTEX Input Total BTEX OR individual BTEX results.

Benzene

Toluene

Ethylbenzene

Xylenes

Total BTEX

PCBs (POPs)

PCBs Total (eq EC7/WHO12)

PBBs (POPs)

Hexabromobiphenyl (Total or PBB 153; 2,2',4,4',5,5'- if only available)

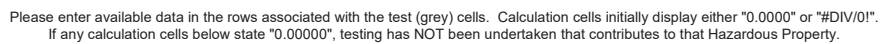
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Every Street, Bury

Depth (m)

Envirolab reference

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If Asbestos in Soil above is "Y", the soil is Hazardous Waste HP5 and HP7

[illegible]

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If visual identifiable pieces of asbestos are present, you cannot use Asbestos % results and the whole soil sample is Hazardous Waste HP5 and HP7 Construction material containing Asbestos 17 06 05. Therefore, if Asbestos in Soil above is "Y", the Asbestos % above is "<0.1%", but the Asbestos Identifiable Pieces visible with the naked eye is "Y", the soil is Hazardous Waste.

Identifiable Pieces are Cement, Fragments, Board, Rope etc. ie anything ACM that is not Loose Fibres

All visual asbestos pieces need to be removed leaving only fibres (or micro pieces) with an Asbestos % Composition in Soil result of <0.1% for the soil to become non-hazardous waste.

[illegible][illegible]



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Depth (m)

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Persistent Organic Pollutant (PCB, PBB or POP Pesticides)	>0.005%		0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000
Persistent Organic Pollutant (Total Dioxins+Furans)	>0.0000015%		0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000
Persistent Organic Pollutant (Individual Dioxins+Furans)	>0.0000015%		0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000

If other contaminants need adding to Haswaste, please conta



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Every Street, Bury

TP/WS/BH

Depth (m)

Envirolab reference

% Moisture

pH (soil)

pH (leachate)

Arsenic
Cadmium
Copper
CrVI or Chromium
Lead
Mercury
Nickel
Selenium
Zinc

Barium

Beryllium

Vanadium

Cobalt

Manganese

Molybdenum

Antimony

Aluminium

Bismuth

Cadmium

Iron

Strontium

Tellurium

Thallium

Titanium

Tungsten

Ammoniacal N

ws Boron

PAH (Input Total PAH OR individual PAH results)

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Benzo(a)anthracene
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Chrysene
Dibenz(ah)anthracene
Fluoranthene
Fluorene
Indeno(123cd)pyrene
Naphthalene
Phenanthrene
Pyrene
Coronene
Total PAHs (16 or 17)

TPH

Petrol

Diesel

Lube Oil

Crude Oil

White Spirit / Kerosene

Creosote

Unknown TPH with ID

Unknown TPHCWG

Total Sulphide

Complex Cyanide

Free (or Total) Cyanide

Thiocyanate

Elemental/Free Sulphur

Phenols Input Total Phenols HPLC OR individual Phenol results.

Phenol

Cresols

Xylenols

Resorcinol

Phenols Total by HPLC

BTEX Input Total BTEX OR individual BTEX results.

Benzene

Toluene

Ethylbenzene

Xylenes

Total BTEX

PCBs (POPs)

PCBs Total (eq EC7/WHO12)

PBBs (POPs)

Hexabromobiphenyl (Total or PBB 153; 2,2',4,4',5,5'- if only available)

%

mg/kg

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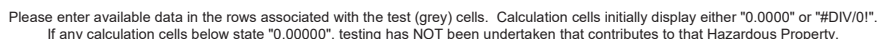
mg/kg

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Every Street. Bury

TP/WS/BH

Depth (m)

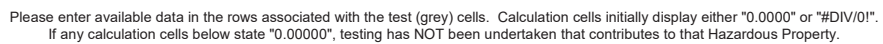
Envirolab reference

**POPs Dioxins and Furans Input Total Dioxins and Furans
OR individual Dioxin and Furan results.**

[illegible]

Some Pesticides (POPs unless otherwise stated)

Aldrin	mg/kg								
α Hexachlorocyclohexane (alpha-HCH) (leave empty if total HCH results used)	mg/kg								
β Hexachlorocyclohexane (beta-HCH) (leave empty if total HCH results used)	mg/kg								
α Cis-Chlordane (alpha) OR Total Chlordane	mg/kg								
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Dieldrin	mg/kg								
Endrin	mg/kg								
γ Hexachlorocyclohexane (gamma-HCH) (lindane) OR Total HCH	mg/kg								
Heptachlor	mg/kg								
Hexachlorobenzene	mg/kg								
o,p'-DDT (leave empty if total DDT results used)	mg/kg								
p,p'-DDT OR Total DDT	mg/kg								
γ Trans-Chlordane (gamma) (leave empty if total Chlordane results used)	mg/kg								
Chlordecone (kepone)	mg/kg								
Pentachlorobenzene	mg/kg								
Mirex	mg/kg								
Toxaphene (campechlor)	mg/kg								
Tin									
Tin (leave empty if Organotin and Tin excl Organotin results used)	mg/kg								
Organotin									
Dibutyltin; DiBT	mg/kg								
Tributyltin; TriBT	mg/kg								
Triphenyltin; TriPT	mg/kg								
Tetrabutyltin; TeBT	mg/kg								
Tin excluding Organotin									
Tin excl Organotin	mg/kg								



Every Street, Bury

Depth (m)

Envirolab reference

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[illegible]

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[illegible][illegible]



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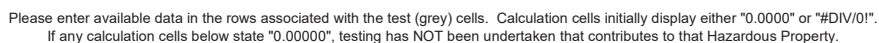
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Depth (m)

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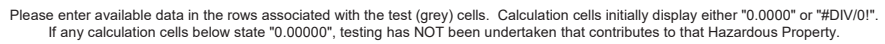
Ecotoxic HP14 amended v6	≥25%	<0.1% (except Be, V, Te, TL, Petrol, Diesel, Crude Oil, Kerosene, White Spirit, Cresols, TPH, TPHCWG, Phenol, Cresols, Xylenols, T- Phenols, CompCN, Thiocyanate, Toluene, Ethylbenzene, Xylene + BTX 1%).	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
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Persistent Organic Pollutant (PCB, PBB or POP Pesticides)	>0.005%		0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000
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If other contaminants need adding to Haswaste, please conta



Every Street. Bury

Table 3 of the CLP, CL Inventory, ATRs, IARC, Concave, MSDSs, REACH + Pesticide Properties databases. Worst case REACH + MSDS's used for *** STOT + Acute Toxicity



Every Street, Bury

Depth (m)

Envirolab reference

OR individual Dioxin and Furan results.

2,3,7,8-TeCDD	mg/kg								
1,2,3,7,8-PeCDD	mg/kg								
1,2,3,4,7,8-HxCDD	mg/kg								
1,2,3,6,7,8-HxCDD	mg/kg								
1,2,3,7,8,9-HxCDD	mg/kg								
1,2,3,4,6,7,8-HpCDD	mg/kg								
OCDD	mg/kg								
2,3,7,8-TeCDF	mg/kg								
1,2,3,7,8-PeCDF	mg/kg								
2,3,4,7,8-PeCDF	mg/kg								
1,2,3,4,7,8-HxCDF	mg/kg								
1,2,3,6,7,8-HxCDF	mg/kg								
2,3,4,6,7,8-HxCDF	mg/kg								
1,2,3,7,8,9-HxCDF	mg/kg								
1,2,3,4,6,7,8-HpCDF	mg/kg								
1,2,3,4,7,8,9-HpCDF	mg/kg								
OCDF	mg/kg								
Total Dioxins and Furans	mg/kg								

Aldrin
 α Hexachlorocyclohexane (alpha-HCH) (leave empty if total HCH results used)
 β Hexachlorocyclohexane (beta-HCH) (leave empty if total HCH results used)
 α Cis-Chlordane (alpha) **OR**
 Total Chlordane
 δ Hexachlorocyclohexane (delta-HCH) (leave empty if total HCH results used)
 Dieldrin
 Endrin
 γ Hexachlorocyclohexane (gamma-HCH) (lindane) **OR**
 Total HCH
 Heptachlor
 Hexachlorobenzene
 o,p'-DDT (leave empty if total DDT results used)
 p,p'-DDT **OR** Total DDT
 γ Trans-Chlordane (gamma) (leave empty if total Chlordane results used)

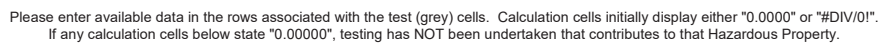
[illegible]

Tin	
Tin (leave empty if Organotin and Tin excl Organotin results used)	

Dibutyltin; DiBT
Tributyltin; TriBT
Triphenyltin; TriPT
Tetrabutyltin; TeBT

Tin excluding Organotin

Tin excl Organotin



Every Street, Bury

Depth (m)

Envirolab reference

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%

≥0.1%

≥0.1%

[illegible]

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Identifiable Pieces are Cement, Fragments, Board, Rope etc. ie anything ACM that is not Loose Fibres.
All visual asbestos pieces need to be removed leaving only fibres (or micro pieces) with an Asbestos % Composition in Soil result of <0.1% for the soil to become non-hazardous waste.

[illegible]

amended v6

[illegible]



Please enter available data in the rows associated with the test (grey) cells. Calculation cells initially display either "0.0000" or "#DIV/0!".
If any calculation cells below state "0.00000", testing has NOT been undertaken that contributes to that Hazardous Property.

Haswaste, developed by Dr. Iain Haslock.

Every Street, Bury

TP/WS/BH

Depth (m)

Envirolab reference

Ecotoxic HP14 amended v6	≥25%	<0.1% (except Be, V, Te, TL, Petrol, Diesel, Crude Oil, Kerosene, White Spirit, Cresols, TPH, TPHCWG, Phenol, Cresols, Xylenols, T- Phenols, CompCN, Thiocyanate, Toluene, Ethylbenzene, Xylene + BTX 1%).	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Ecotoxic HP14 amended v6	≥25%	<0.1% (except Be, V, Te, TL, Petrol, Diesel, Crude Oil, Kerosene, White Spirit, Cresols, TPH, TPHCWG, Phenol, Cresols, Xylenols, T- Phenols, CompCN, Thiocyanate, Toluene, Ethylbenzene, Xylene + BTX 1%).	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Persistent Organic Pollutant (PCB, PBB or POP Pesticides)	>0.005%		0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000
Persistent Organic Pollutant (Total Dioxins+Furans)	>0.0000015%		0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000
Persistent Organic Pollutant (Individual Dioxins+Furans)	>0.0000015%		0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000

If other contaminants need adding to Haswaste, please conta



Haswaste, developed by Dr. Iain Haslock.

Every Street, Bury

TP/WS/BH

Depth (m)

Envirolab reference

% Moisture

pH (soil)

pH (leachate)

Arsenic
Cadmium
Copper
CrVI or Chromium
Lead
Mercury
Nickel
Selenium
ZincBarium
Beryllium
Vanadium
Cobalt
Manganese
MolybdenumAntimony
Aluminium
Bismuth
Cadmium
Iron
Strontium
Tellurium
Thallium
Titanium
Tungsten
Ammoniacal N
ws Boron

PAH (Input Total PAH OR individual PAH results)

Acenaphthene
Acenaphthylene
Anthracene
Benzo(a)anthracene
Benzo(a)pyrene
Benzo(b)fluoranthene
Benzo(ghi)perylene
Benzo(k)fluoranthene
Chrysene
Dibenz(a,h)anthracene
Fluoranthene
Fluorene
Indeno(123cd)pyrene
Naphthalene
Phenanthrene
Pyrene
Coronene
Total PAHs (16 or 17)

TPH

Petrol
Diesel
Lube Oil

Crude Oil

White Spirit / Kerosene

Creosote

Unknown TPH with ID

Unknown TPHCWG

Total Sulphide

Complex Cyanide

Free (or Total) Cyanide

Thiocyanate

Elemental/Free Sulphur

Phenols Input Total Phenols HPLC OR individual Phenol results.

Phenol

Cresols

Xylenols

Resorcinol

Phenols Total by HPLC

BTEX Input Total BTEX OR individual BTEX results.

Benzene

Toluene

Ethylbenzene

Xylenes

Total BTEX

PCBs (POPs)

PCBs Total (eq EC7/WHO12)

PBBs (POPs)

Hexabromobiphenyl (Total or

PBB 153; 2,2',4,4',5,5'- if only

available)

%

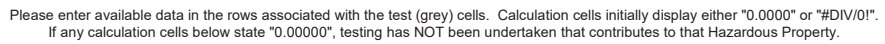
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If any calculation cells below state "0.00000", testing has NOT been undertaken that contributes to that Hazardous Property.



Every Street, Bury

Depth (m)

Envirolab reference

OR individual Dioxin and Furan results.

2,3,7,8-TeCDD	mg/kg								
1,2,3,7,8-PeCDD	mg/kg								
1,2,3,4,7,8-HxCDD	mg/kg								
1,2,3,6,7,8-HxCDD	mg/kg								
1,2,3,7,8,9-HxCDD	mg/kg								
1,2,3,4,6,7,8-HpCDD	mg/kg								
OCDD	mg/kg								
2,3,7,8-TeCDF	mg/kg								
1,2,3,7,8-PeCDF	mg/kg								
2,3,4,7,8-PeCDF	mg/kg								
1,2,3,4,7,8-HxCDF	mg/kg								
1,2,3,6,7,8-HxCDF	mg/kg								
2,3,4,6,7,8-HxCDF	mg/kg								
1,2,3,7,8,9-HxCDF	mg/kg								
1,2,3,4,6,7,8-HpCDF	mg/kg								
1,2,3,4,7,8,9-HpCDF	mg/kg								
OCDF	mg/kg								
Total Dioxins and Furans	mg/kg								

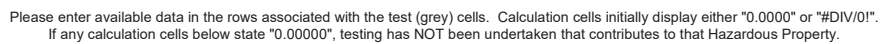
Aldrin
 α Hexachlorocyclohexane (alpha-HCH) (leave empty if total HCH results used)
 β Hexachlorocyclohexane (beta-HCH) (leave empty if total HCH results used)
 α Cis-Chlordane (alpha) **OR**
 Total Chlordane
 δ Hexachlorocyclohexane (delta-HCH) (leave empty if total HCH results used)
 Dieldrin
 Endrin
 γ Hexachlorocyclohexane (gamma-HCH) (lindane) **OR**
 Total HCH
 Heptachlor
 Hexachlorobenzene
 o,p'-DDT (leave empty if total DDT results used)
 p,p'-DDT **OR** Total DDT
 γ Trans-Chlordane (gamma) (leave empty if total Chlordane results used)

[illegible]

Tin	
Tin (leave empty if Organotin and Tin excl Organotin results used)	

Dibutyltin; DiBT
Tributyltin; TriBT
Triphenyltin; TriPT
Tetrabutyltin; TeBT

[illegible]



Every Street, Bury

Depth (m)

Envirolab reference

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If Asbestos in Soil above is "Y", the soil is Hazardous Waste HP5 and HP7

[illegible]

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Identifiable Pieces are Cement, Fragments, Board, Rope etc. ie anything ACM that is not Loose Fibres.
All visual asbestos pieces need to be removed leaving only fibres (or micro pieces) with an Asbestos % Composition in Soil result of <0.1% for the soil to become non-hazardous waste.

[illegible][illegible]



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If any calculation cells below state "0.00000", testing has NOT been undertaken that contributes to that Hazardous Property.

Haswaste, developed by Dr. Iain Haslock.

Every Street, Bury

TP/WS/BH

Depth (m)

Envirolab reference

Ecotoxic HP14 amended v6	≥25%	<0.1% (except Be, V, Te, TL, Petrol, Diesel, Crude Oil, Kerosene, White Spirit, Cresols, TPH, TPHCWG, Phenol, Cresols, Xylenols, T- Phenols, CompCN, Thiocyanate, Toluene, Ethylbenzene, Xylene + BTEx 1%).	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Ecotoxic HP14 amended v6	≥25%	<0.1% (except Be, V, Te, TL, Petrol, Diesel, Crude Oil, Kerosene, White Spirit, Cresols, TPH, TPHCWG, Phenol, Cresols, Xylenols, T- Phenols, CompCN, Thiocyanate, Toluene, Ethylbenzene, Xylene + BTEx 1%).	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Persistent Organic Pollutant (PCB, PBB or POP Pesticides)	>0.005%		0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000
Persistent Organic Pollutant (Total Dioxins+Furans)	>0.0000015%		0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000
Persistent Organic Pollutant (Individual Dioxins+Furans)	>0.0000015%		0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000

If other contaminants need adding to Haswaste, please conta



Haswaste, developed by Dr. Iain Haslock.

Every Street, Bury

TP/WS/BH

Depth (m)

Envirolab reference

% Moisture

pH (soil)

pH (leachate)

Arsenic
Cadmium
Copper
CrVI or Chromium
Lead
Mercury
Nickel
Selenium
ZincBarium
Beryllium
Vanadium
Cobalt
Manganese
MolybdenumAntimony
Aluminium
Bismuth
Cadmium
Iron
Strontium
Tellurium
Thallium
Titanium
Tungsten
Ammoniacal N
ws Boron

PAH (Input Total PAH OR individual PAH results)

Acenaphthene
Acenaphthylene
Anthracene
Benzo(a)anthracene
Benzo(a)pyrene
Benzo(b)fluoranthene
Benzo(ghi)perylene
Benzo(k)fluoranthene
Chrysene
Dibenz(a,h)anthracene
Fluoranthene
Fluorene
Indeno(123cd)pyrene
Naphthalene
Phenanthrene
Pyrene
Coronene
Total PAHs (16 or 17)

TPH

Petrol
Diesel
Lube Oil

Crude Oil

White Spirit / Kerosene

Creosote

Unknown TPH with ID

Unknown TPHCWG

Total Sulphide

Complex Cyanide

Free (or Total) Cyanide

Thiocyanate

Elemental/Free Sulphur

Phenols Input Total Phenols HPLC OR individual Phenol results.

Phenol

Cresols

Xylenols

Resorcinol

Phenols Total by HPLC

BTEX Input Total BTEX OR individual BTEX results.

Benzene

Toluene

Ethylbenzene

Xylenes

Total BTEX

PCBs (POPs)

PCBs Total (eq EC7/WHO12)

PBBs (POPs)

Hexabromobiphenyl (Total or

PBB 153; 2,2',4,4',5,5'- if only

available)

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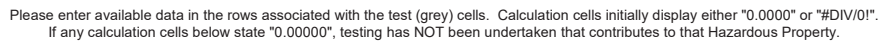
mg/kg

mg/kg

mg/kg

mg/kg

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If any calculation cells below state "0.00000", testing has NOT been undertaken that contributes to that Hazardous Property.



Every Street, Bury

Depth (m)

Envirolab reference

OR individual Dioxin and Furan results.

2,3,7,8-TeCDD	mg/kg							
1,2,3,7,8-PeCDD	mg/kg							
1,2,3,4,7,8-HxCDD	mg/kg							
1,2,3,6,7,8-HxCDD	mg/kg							
1,2,3,7,8,9-HxCDD	mg/kg							
1,2,3,4,6,7,8-HpCDD	mg/kg							
OCDD	mg/kg							
2,3,7,8-TeCDF	mg/kg							
1,2,3,7,8-PeCDF	mg/kg							
2,3,4,7,8-PeCDF	mg/kg							
1,2,3,4,7,8-HxCDF	mg/kg							
1,2,3,6,7,8-HxCDF	mg/kg							
2,3,4,6,7,8-HxCDF	mg/kg							
1,2,3,7,8,9-HxCDF	mg/kg							
1,2,3,4,6,7,8-HpCDF	mg/kg							
1,2,3,4,7,8,9-HpCDF	mg/kg							
OCDF	mg/kg							
Total Dioxins and Furans	mg/kg							

Aldrin
 α Hexachlorocyclohexane (alpha-HCH) (leave empty if total HCH results used)
 β Hexachlorocyclohexane (beta-HCH) (leave empty if total HCH results used)
 γ Cis-Chlordane (alpha) **OR**
 Total Chlordane
 δ Hexachlorocyclohexane (delta-HCH) (leave empty if total HCH results used)
Dieldrin
Endrin
 γ Hexachlorocyclohexane gamma-HCH) (lindane) **OR**
 Total HCH
Heptachlor
Hexachlorobenzene
 o,p'-DDT (leave empty if total DDT results used)
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 γ Trans-Chlordane (gamma) (leave empty if total Chlordane results used)

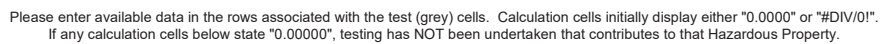
[illegible]

Tin	
Tin (leave empty if Organotin and Tin excl Organotin results used)	

Dibutyltin; DiBT
Tributyltin; TriBT
Triphenyltin; TriPT
Tetrabutyltin; TeBT

Tin excluding Organotin

Tin excl Organotin



Every Street, Bury

Depth (m)

Envirolab reference

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If Asbestos in Soil above is "Y", the soil is Hazardous Waste HP5 and HP7

[illegible]

--	--	--	--	--	--	--	--	--

If visual identifiable pieces of asbestos are present, you cannot use Asbestos % results and the whole soil sample is Hazardous Waste HP5 and HP7 Construction material containing Asbestos 17 06 05. Therefore, if Asbestos in Soil above is "Y", the Asbestos % above is "<0.1%", but the Asbestos Identifiable Pieces visible with the naked eye is "Y", the soil is Hazardous Waste.

Identifiable Pieces are Cement, Fragments, Board, Rope etc. ie anything ACM that is not Loose Fibres

All visual asbestos pieces need to be removed leaving only fibres (or micro pieces) with an Asbestos % Composition in Soil result of <0.1% for the soil to become non-hazardous waste.

[illegible][illegible]



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Haswaste, developed by Dr. Iain Haslock.

Every Street, Bury									
TP/WS/BH									
Depth (m)									
Envirolab reference									
Ecotoxic HP14 amended v6	≥25%	<0.1% (except Be, V, Te, TL, Petrol, Diesel, Crude Oil, Kerosene, White Spirit, Cresols, TPH, TPHCWG, Phenol, Cresols, Xylenols, T-Phenols, CompCN, Thiocyanate, Toluene, Ethylbenzene, Xylene + BTEX 1%).	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Ecotoxic HP14 amended v6	≥25%	<0.1% (except Be, V, Te, TL, Petrol, Diesel, Crude Oil, Kerosene, White Spirit, Cresols, TPH, TPHCWG, Phenol, Cresols, Xylenols, T-Phenols, CompCN, Thiocyanate, Toluene, Ethylbenzene, Xylene + BTEX 1%).	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Persistent Organic Pollutant (PCB, PBB or POP Pesticides)	>0.005%		0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000
Persistent Organic Pollutant (Total Dioxins+Furans)	>0.0000015%		0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000
Persistent Organic Pollutant (Individual Dioxins+Furans)	>0.0000015%		0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000

If other contaminants need adding to Haswaste, please conta



Haswaste, developed by Dr. Iain Haslock.

Every Street, Bury

TP/WS/BH

Depth (m)

Envirolab reference

% Moisture

pH (soil)

pH (leachate)

Arsenic
Cadmium
Copper
CrVI or Chromium
Lead
Mercury
Nickel
Selenium
Zinc

Barium

Beryllium

Vanadium

Cobalt

Manganese

Molybdenum

Antimony

Aluminium

Bismuth

Cadmium

Iron

Strontium

Tellurium

Thallium

Titanium

Tungsten

Ammoniacal N

ws Boron

PAH (Input Total PAH OR individual PAH results)

Acenaphthene
Acenaphthylene
Anthracene
Benzo(a)anthracene
Benzo(a)pyrene
Benzo(b)fluoranthene
Benzo(ghi)perylene
Benzo(k)fluoranthene
Chrysene
Dibenz(a,h)anthracene
Fluoranthene
Fluorene
Indeno(123cd)pyrene
Naphthalene
Phenanthrene
Pyrene
Coronene
Total PAHs (16 or 17)

TPH

Petrol

Diesel

Lube Oil

Crude Oil

White Spirit / Kerosene

Creosote

Unknown TPH with ID

Unknown TPHCWG

Total Sulphide

Complex Cyanide

Free (or Total) Cyanide

Thiocyanate

Elemental/Free Sulphur

Phenols Input Total Phenols HPLC OR individual Phenol results.

Phenol

Cresols

Xylenols

Resorcinol

Phenols Total by HPLC

BTEX Input Total BTEX OR individual BTEX results.

Benzene

Toluene

Ethylbenzene

Xylenes

Total BTEX

PCBs (POPs)

PCBs Total (eq EC7/WHO12)

PBBs (POPs)

Hexabromobiphenyl (Total or PBB 153; 2,2',4,4',5,5'- if only available)

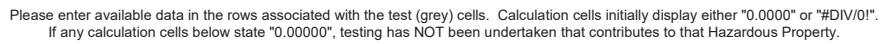
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Every Street, Bury

Depth (m)

Envirolab reference

OR individual Dioxin and Furan results.

2,3,7,8-TeCDD	mg/kg								
1,2,3,7,8-PeCDD	mg/kg								
1,2,3,4,7,8-HxCDD	mg/kg								
1,2,3,6,7,8-HxCDD	mg/kg								
1,2,3,7,8,9-HxCDD	mg/kg								
1,2,3,4,6,7,8-HpCDD	mg/kg								
OCDD	mg/kg								
2,3,7,8-TeCDF	mg/kg								
1,2,3,7,8-PeCDF	mg/kg								
2,3,4,7,8-PeCDF	mg/kg								
1,2,3,4,7,8-HxCDF	mg/kg								
1,2,3,6,7,8-HxCDF	mg/kg								
2,3,4,6,7,8-HxCDF	mg/kg								
1,2,3,7,8,9-HxCDF	mg/kg								
1,2,3,4,6,7,8-HpCDF	mg/kg								
1,2,3,4,7,8,9-HpCDF	mg/kg								
OCDF	mg/kg								
Total Dioxins and Furans	mg/kg								

Aldrin
 α Hexachlorocyclohexane (alpha-HCH) (leave empty if total HCH results used)
 β Hexachlorocyclohexane (beta-HCH) (leave empty if total HCH results used)
 α Cis-Chlordane (alpha) **OR**
 Total Chlordane
 δ Hexachlorocyclohexane (delta-HCH) (leave empty if total HCH results used)
 Dieldrin
 Endrin
 γ Hexachlorocyclohexane (gamma-HCH) (lindane) **OR**
 Total HCH
 Heptachlor
 Hexachlorobenzene
 o,p'-DDT (leave empty if total DDT results used)
 p,p'-DDT **OR** Total DDT
 γ Trans-Chlordane (gamma) (leave empty if total Chlordane results used)

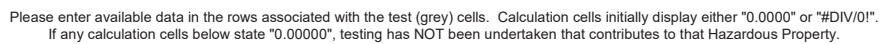
Aldrin	mg/kg								
α Hexachlorocyclohexane (alpha-HCH) <i>(leave empty if total HCH results used)</i>	mg/kg								
β Hexachlorocyclohexane (beta-HCH) <i>(leave empty if total HCH results used)</i>	mg/kg								
α Cis-Chlordane (alpha) OR <i>Total Chlordane</i>	mg/kg								
δ Hexachlorocyclohexane (delta-HCH) <i>(leave empty if total HCH results used)</i>	mg/kg								
Dieldrin	mg/kg								
Endrin	mg/kg								
γ Hexachlorocyclohexane (gamma-HCH) (lindane) OR <i>Total HCH</i>	mg/kg								
Heptachlor	mg/kg								
Hexachlorobenzene	mg/kg								
o,p'-DDT <i>(leave empty if total DDT results used)</i>	mg/kg								
p,p'-DDT OR <i>Total DDT</i>	mg/kg								
γ Trans-Chlordane (gamma) <i>(leave empty if total Chlordane results used)</i>	mg/kg								
Chlordecone (kepone)	mg/kg								
Pentachlorobenzene	mg/kg								
Mirex	mg/kg								
Toxaphene (camphechlor)	mg/kg								

Tin	
Tin (leave empty if Organotin and Tin excl Organotin results used)	

Dibutyltin; DiBT
Tributyltin; TriBT
Triphenyltin; TriPT
Tetrabutyltin; TeBT

Tin excluding Organotin

Tin excl Organotin



Every Street, Bury

Depth (m)

Envirolab reference

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If Asbestos in Soil above is "Y", the soil is Hazardous Waste HP5 and HP7

[illegible]

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If visual identifiable pieces of asbestos are present, you cannot use Asbestos % results and the whole soil sample is Hazardous Waste HP5 and HP7 Construction material containing Asbestos 17 06 05. Therefore, if Asbestos in Soil above is "Y", the Asbestos % above is "<0.1%", but the Asbestos Identifiable Pieces visible with the naked eye is "Y", the soil is Hazardous Waste.

Identifiable Pieces are Cement, Fragments, Board, Rope etc. ie anything ACM that is not Loose Fibres

All visual asbestos pieces need to be removed leaving only fibres (or micro pieces) with an Asbestos % Composition in Soil result of <0.1% for the soil to become non-hazardous waste.

[illegible][illegible]



Please enter available data in the rows associated with the test (grey) cells. Calculation cells initially display either "0.0000" or "#DIV/0!".
If any calculation cells below state "0.00000", testing has NOT been undertaken that contributes to that Hazardous Property.

Haswaste, developed by Dr. Iain Haslock.

Every Street, Bury

TP/WS/BH

Depth (m)

Envirolab reference

Ecotoxic HP14 amended v6	≥25%	<0.1% (except Be, V, Te, TL, Petrol, Diesel, Crude Oil, Kerosene, White Spirit, Cresols, TPH, TPHCWG, Phenol, Cresols, Xylenols, T- Phenols, CompCN, Thiocyanate, Toluene, Ethylbenzene, Xylene + BTX 1%).	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Ecotoxic HP14 amended v6	≥25%	<0.1% (except Be, V, Te, TL, Petrol, Diesel, Crude Oil, Kerosene, White Spirit, Cresols, TPH, TPHCWG, Phenol, Cresols, Xylenols, T- Phenols, CompCN, Thiocyanate, Toluene, Ethylbenzene, Xylene + BTX 1%).	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Persistent Organic Pollutant (PCB, PBB or POP Pesticides)	>0.005%		0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000
Persistent Organic Pollutant (Total Dioxins+Furans)	>0.0000015%		0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000
Persistent Organic Pollutant (Individual Dioxins+Furans)	>0.0000015%		0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000

If other contaminants need adding to Haswaste, please conta



Haswaste, developed by Dr. Iain Haslock.

Every Street, Bury

TP/WS/BH

Depth (m)

Envirolab reference

% Moisture

pH (soil)

pH (leachate)

Arsenic
Cadmium
Copper
CrVI or Chromium
Lead
Mercury
Nickel
Selenium
Zinc

Barium

Beryllium

Vanadium

Cobalt

Manganese

Molybdenum

Antimony

Aluminium

Bismuth

Cadmium

Iron

Strontium

Tellurium

Thallium

Titanium

Tungsten

Ammoniacal N

ws Boron

PAH (Input Total PAH OR individual PAH results)

Acenaphthene
Acenaphthylene
Anthracene
Benzo(a)anthracene
Benzo(a)pyrene
Benzo(b)fluoranthene
Benzo(ghi)perylene
Benzo(k)fluoranthene
Chrysene
Dibenz(a,h)anthracene
Fluoranthene
Fluorene
Indeno(123cd)pyrene
Naphthalene
Phenanthrene
Pyrene
Coronene
Total PAHs (16 or 17)

TPH

Petrol

Diesel

Lube Oil

Crude Oil

White Spirit / Kerosene

Creosote

Unknown TPH with ID

Unknown TPHCWG

Total Sulphide

Complex Cyanide

Free (or Total) Cyanide

Thiocyanate

Elemental/Free Sulphur

Phenols Input Total Phenols HPLC OR individual Phenol results.

Phenol

Cresols

Xylenols

Resorcinol

Phenols Total by HPLC

BTEX Input Total BTEX OR individual BTEX results.

Benzene

Toluene

Ethylbenzene

Xylenes

Total BTEX

PCBs (POPs)

PCBs Total (eq EC7/WHO12)

PBBs (POPs)

Hexabromobiphenyl (Total or PBB 153; 2,2',4,4',5,5'- if only available)

%

mg/kg

mg/kg

mg/kg

mg/kg

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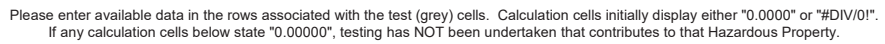
mg/kg

mg/kg

mg/kg

mg/kg

mg/kg



Every Street, Bury

Depth (m)

Envirolab reference

OR individual Dioxin and Furan results.

2,3,7,8-TeCDD	mg/kg								
1,2,3,7,8-PeCDD	mg/kg								
1,2,3,4,7,8-HxCDD	mg/kg								
1,2,3,6,7,8-HxCDD	mg/kg								
1,2,3,7,8,9-HxCDD	mg/kg								
1,2,3,4,6,7,8-HpCDD	mg/kg								
OCDD	mg/kg								
2,3,7,8-TeCDF	mg/kg								
1,2,3,7,8-PeCDF	mg/kg								
2,3,4,7,8-PeCDF	mg/kg								
1,2,3,4,7,8-HxCDF	mg/kg								
1,2,3,6,7,8-HxCDF	mg/kg								
2,3,4,6,7,8-HxCDF	mg/kg								
1,2,3,7,8,9-HxCDF	mg/kg								
1,2,3,4,6,7,8-HpCDF	mg/kg								
1,2,3,4,7,8,9-HpCDF	mg/kg								
OCDF	mg/kg								
Total Dioxins and Furans	mg/kg								

Aldrin
 α Hexachlorocyclohexane (alpha-HCH) (leave empty if total HCH results used)
 β Hexachlorocyclohexane (beta-HCH) (leave empty if total HCH results used)
 α Cis-Chlordane (alpha) **OR**
 Total Chlordane
 δ Hexachlorocyclohexane (delta-HCH) (leave empty if total HCH results used)
 Dieldrin
 Endrin
 γ Hexachlorocyclohexane (gamma-HCH) (lindane) **OR**
 Total HCH
 Heptachlor
 Hexachlorobenzene
 o,p'-DDT (leave empty if total DDT results used)
 p,p'-DDT **OR** Total DDT
 γ Trans-Chlordane (gamma) (leave empty if total Chlordane results used)

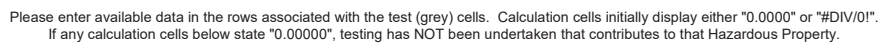
[illegible]

Tin	
Tin (leave empty if Organotin and Tin excl Organotin results used)	

Dibutyltin; DiBT
Tributyltin; TriBT
Triphenyltin; TriPT
Tetrabutyltin; TeBT

Tin excluding Organotin

Tin excl Organotin



Every Street, Bury

Depth (m)

Envirolab reference

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If Asbestos in Soil above is "Y", the soil is Hazardous Waste HP5 and HP7

[illegible]

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If visual identifiable pieces of asbestos are present, you cannot use Asbestos % results and the whole soil sample is Hazardous Waste HP5 and HP7 Construction material containing Asbestos 17 06 05. Therefore, if Asbestos in Soil above is "Y", the Asbestos % above is "<0.1%", but the Asbestos Identifiable Pieces visible with the naked eye is "Y", the soil is Hazardous Waste.

Identifiable Pieces are Cement, Fragments, Board, Rope etc. ie anything ACM that is not Loose Fibres

All visual asbestos pieces need to be removed leaving only fibres (or micro pieces) with an Asbestos % Composition in Soil result of <0.1% for the soil to become non-hazardous waste.

[illegible][illegible]



Please enter available data in the rows associated with the test (grey) cells. Calculation cells initially display either "0.0000" or "#DIV/0!".
If any calculation cells below state "0.00000", testing has NOT been undertaken that contributes to that Hazardous Property.

Haswaste, developed by Dr. Iain Haslock.

Every Street, Bury

TP/WS/BH

Depth (m)

Envirolab reference

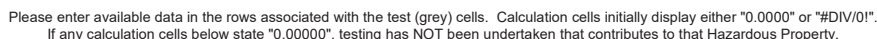
Ecotoxic HP14 amended v6	≥25%	<0.1% (except Be, V, Te, TL, Petrol, Diesel, Crude Oil, Kerosene, White Spirit, Cresols, TPH, TPHCWG, Phenol, Cresols, Xylenols, T- Phenols, CompCN, Thiocyanate, Toluene, Ethylbenzene, Xylene + BTX 1%).	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Ecotoxic HP14 amended v6	≥25%	<0.1% (except Be, V, Te, TL, Petrol, Diesel, Crude Oil, Kerosene, White Spirit, Cresols, TPH, TPHCWG, Phenol, Cresols, Xylenols, T- Phenols, CompCN, Thiocyanate, Toluene, Ethylbenzene, Xylene + BTX 1%).	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Persistent Organic Pollutant (PCB, PBB or POP Pesticides)	>0.005%		0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000
Persistent Organic Pollutant (Total Dioxins+Furans)	>0.0000015%		0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000
Persistent Organic Pollutant (Individual Dioxins+Furans)	>0.0000015%		0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000

If other contaminants need adding to Haswaste, please conta



If any calculation cells below state "0.00000": testing has NOT been undertaken that contributes to that Hazardous Property.

Every Street, Bury								
TP/WS/BH								
Depth (m)								
EnviroLab reference								
% Moisture	%							
pH (soil)								
pH (leachate)								
Arsenic	mg/kg							
Cadmium	mg/kg							
Copper	mg/kg							
CrVI or Chromium	mg/kg							
Lead	mg/kg							
Mercury	mg/kg							
Nickel	mg/kg							
Selenium	mg/kg							
Zinc	mg/kg							
Barium	mg/kg							
Beryllium	mg/kg							
Vanadium	mg/kg							
Cobalt	mg/kg							
Manganese	mg/kg							
Molybdenum	mg/kg							
Antimony	mg/kg							
Aluminium	mg/kg							
Bismuth	mg/kg							
Chlorine	mg/kg							
Iron	mg/kg							
Strontium	mg/kg							
Tellurium	mg/kg							
Thallium	mg/kg							
Titanium	mg/kg							
Tungsten	mg/kg							
Ammoniacal N	mg/kg							
ws Boron	mg/kg							
PAH (Input Total PAH OR individual PAH results)								
Acenaphthene	mg/kg							
Acenaphthylene	mg/kg							
Anthracene	mg/kg							
Benzo(a)anthracene	mg/kg							
Benzo(a)pyrene	mg/kg							
Benzo(b)fluoranthene	mg/kg							
Benzo(ghi)perylene	mg/kg							
Benzo(k)fluoranthene	mg/kg							
Chrysene	mg/kg							
Dibenzo(ah)anthracene	mg/kg							
Fluoranthene	mg/kg							
Fluorene	mg/kg							
Indeno(123cd)pyrene	mg/kg							
Naphthalene	mg/kg							
Phenanthrene	mg/kg							
Pyrene	mg/kg							
Coronene	mg/kg							
Total PAHs (16 or 17)	mg/kg							
TPH								
Petrol	mg/kg							
Diesel	mg/kg							
Lube Oil	mg/kg							
Crude Oil	mg/kg							
White Spirit / Kerosene	mg/kg							
Creosote	mg/kg							
Unknown TPH with ID	mg/kg							
Unknown TPHCWG	mg/kg							
Total Sulphide	mg/kg							
Complex Cyanide	mg/kg							
Free (or Total) Cyanide	mg/kg							
Thiocyanate	mg/kg							
Elemental/Free Sulphur	mg/kg							
Phenols Input Total Phenols HPLC OR individual Phenol results.								
Phenol	mg/kg							
Cresols	mg/kg							
Xylenols	mg/kg							
Resorcinol	mg/kg							
Phenols Total by HPLC	mg/kg							
BTEX Input Total BTEX OR individual BTEX results.								
Benzene	mg/kg							
Toluene	mg/kg							
Ethylbenzene	mg/kg							
Xylenes	mg/kg							
Total BTEX	mg/kg							



Every Street. Bury

TP/WS/BH

Depth (m)

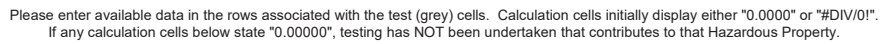
Envirolab reference

**POPs Dioxins and Furans Input Total Dioxins and Furans
OR individual Dioxin and Furan results.**

Dioxin and Furan Results								
2,3,7,8-TeCDD	mg/kg							
1,2,3,7,8-PeCDD	mg/kg							
1,2,3,4,7,8-HxCDD	mg/kg							
1,2,3,6,7,8-HxCDD	mg/kg							
1,2,3,7,8,9-HxCDD	mg/kg							
1,2,3,4,6,7,8-HpCDD	mg/kg							
OCDD	mg/kg							
2,3,7,8-TeCDF	mg/kg							
1,2,3,7,8-PeCDF	mg/kg							
2,3,4,7,8-PeCDF	mg/kg							
1,2,3,4,7,8-HxCDF	mg/kg							
1,2,3,6,7,8-HxCDF	mg/kg							
2,3,4,6,7,8-HxCDF	mg/kg							
1,2,3,7,8,9-HxCDF	mg/kg							
1,2,3,4,6,7,8-HpCDF	mg/kg							
1,2,3,4,7,8,9-HpCDF	mg/kg							
OCDF	mg/kg							
Total Dioxins and Furans	mg/kg							

Some Pesticides (POPs unless otherwise stated)

Aldrin	mg/kg								
α Hexachlorocyclohexane (alpha-HCH) (leave empty if total HCH results used)	mg/kg								
β Hexachlorocyclohexane (beta-HCH) (leave empty if total HCH results used)	mg/kg								
α Cis-Chlordane (alpha) OR Total Chlordane	mg/kg								
δ Hexachlorocyclohexane (delta-HCH) (leave empty if total HCH results used)	mg/kg								
Dieldrin	mg/kg								
Endrin	mg/kg								
γ Hexachlorocyclohexane (gamma-HCH) (lindane) OR Total HCH	mg/kg								
Heptachlor	mg/kg								
Hexachlorobenzene	mg/kg								
o,p'-DDT (leave empty if total DDT results used)	mg/kg								
p,p'-DDT OR Total DDT	mg/kg								
γ Trans-Chlordane (gamma) (leave empty if total Chlordane results used)	mg/kg								
Chlordecone (kepone)	mg/kg								
Pentachlorobenzene	mg/kg								
Mirex	mg/kg								
Toxaphene (campechlor)	mg/kg								
Tin									
Tin (leave empty if Organotin and Tin excl Organotin results used)	mg/kg								
Organotin									
Dibutyltin; DiBT	mg/kg								
Tributyltin; TriBT	mg/kg								
Triphenyltin; TriPT	mg/kg								
Tetrabutyltin; TeBT	mg/kg								
Tin excluding Organotin									
Tin excl Organotin	mg/kg								



Every Street, Bury

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If Asbestos in Soil above is "Y", the soil is Hazardous Waste HP6 and HP7								
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
If Asbestos in Soil above is "Y", but Asbestos % above is "<0.1%", the soil is Non Hazardous Waste. You can only use Asbestos % results where loose fibres or micro pieces are only present. You cannot use Asbestos % results when visual identifiable pieces are present.								

Identifiable Pieces are Cement, Fragments, Board, Rope etc. ie anything ACM that is not Loose Fibres.
All visual asbestos pieces need to be removed leaving only fibres (or micro pieces) with an Asbestos % Composition in Soil result of <0.1% for the soil to become non-hazardous waste.

[illegible][illegible]



Please enter available data in the rows associated with the test (grey) cells. Calculation cells initially display either "0.0000" or "#DIV/0!".
If any calculation cells below state "0.00000", testing has NOT been undertaken that contributes to that Hazardous Property.

Haswaste, developed by Dr. Iain Haslock.

Every Street, Bury

TP/WS/BH

Depth (m)

Envirolab reference

Ecotoxic HP14 amended v6	≥25%	<0.1% (except Be, V, Te, TL, Petrol, Diesel, Crude Oil, Kerosene, White Spirit, Cresols, TPH, TPHCWG, Phenol, Cresols, Xylenols, T- Phenols, CompCN, Thiocyanate, Toluene, Ethylbenzene, Xylene + BTX 1%).	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Ecotoxic HP14 amended v6	≥25%	<0.1% (except Be, V, Te, TL, Petrol, Diesel, Crude Oil, Kerosene, White Spirit, Cresols, TPH, TPHCWG, Phenol, Cresols, Xylenols, T- Phenols, CompCN, Thiocyanate, Toluene, Ethylbenzene, Xylene + BTX 1%).	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Persistent Organic Pollutant (PCB, PBB or POP Pesticides)	>0.005%		0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000
Persistent Organic Pollutant (Total Dioxins+Furans)	>0.0000015%		0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000
Persistent Organic Pollutant (Individual Dioxins+Furans)	>0.0000015%		0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000

If other contaminants need adding to Haswaste, please conta



Haswaste, developed by Dr. Iain Haslock.

Every Street, Bury

TP/WS/BH

Depth (m)

Envirolab reference

% Moisture

pH (soil)

pH (leachate)

Arsenic
Cadmium
Copper
CrVI or Chromium
Lead
Mercury
Nickel
Selenium
Zinc

Barium

Beryllium

Vanadium

Cobalt

Manganese

Molybdenum

Antimony

Aluminium

Bismuth

Cadmium

Iron

Strontium

Tellurium

Thallium

Titanium

Tungsten

Ammoniacal N

ws Boron

PAH (Input Total PAH OR individual PAH results)

Acenaphthene
Acenaphthylene
Anthracene
Benzo(a)anthracene
Benzo(a)pyrene
Benzo(b)fluoranthene
Benzo(ghi)perylene
Benzo(k)fluoranthene
Chrysene
Dibenz(a,h)anthracene
Fluoranthene
Fluorene
Indeno(123cd)pyrene
Naphthalene
Phenanthrene
Pyrene
Coronene
Total PAHs (16 or 17)

TPH

Petrol

Diesel

Lube Oil

Crude Oil

White Spirit / Kerosene

Creosote

Unknown TPH with ID

Unknown TPHCWG

Total Sulphide

Complex Cyanide

Free (or Total) Cyanide

Thiocyanate

Elemental/Free Sulphur

Phenols Input Total Phenols HPLC OR individual Phenol results.

Phenol

Cresols

Xylenols

Resorcinol

Phenols Total by HPLC

BTEX Input Total BTEX OR individual BTEX results.

Benzene

Toluene

Ethylbenzene

Xylenes

Total BTEX

PCBs (POPs)

PCBs Total (eq EC7/WHO12)

PBBs (POPs)

Hexabromobiphenyl (Total or PBB 153; 2,2',4,4',5,5'- if only available)

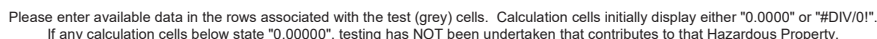
Please enter available data in the rows associated with the test (grey) cells. Calculation cells initially display either "0.0000" or "#DIV/0!".
If any calculation cells below state "0.00000", testing has NOT been undertaken that contributes to that Hazardous Property.

%

mg/kg
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Every Street. Bury

TP/WS/BH

Depth (m)

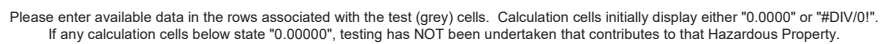
Envirolab reference

**POPs Dioxins and Furans Input Total Dioxins and Furans
OR individual Dioxin and Furan results.**

Dioxin and Furan results									
2,3,7,8-TCDD	mg/kg								
1,2,3,7,8-PeCDD	mg/kg								
1,2,3,4,7,8-HxCDD	mg/kg								
1,2,3,6,7,8-HxCDD	mg/kg								
1,2,3,7,8,9-HxCDD	mg/kg								
1,2,3,4,6,7,8-HpCDD	mg/kg								
OCDD	mg/kg								
2,3,7,8-TeCDF	mg/kg								
1,2,3,7,8-PeCDF	mg/kg								
2,3,4,7,8-PeCDF	mg/kg								
1,2,3,4,7,8-HxCDF	mg/kg								
1,2,3,6,7,8-HxCDF	mg/kg								
2,3,4,6,7,8-HxCDF	mg/kg								
1,2,3,7,8,9-HxCDF	mg/kg								
1,2,3,4,6,7,8-HpCDF	mg/kg								
1,2,3,4,7,8,9-HpCDF	mg/kg								
OCDF	mg/kg								
Total Dioxins and Furans	mg/kg								

Some Pesticides (POPs unless otherwise stated)

Aldrin	mg/kg								
α Hexachlorocyclohexane (alpha-HCH) (leave empty if total HCH results used)	mg/kg								
β Hexachlorocyclohexane (beta-HCH) (leave empty if total HCH results used)	mg/kg								
α Cis-Chlordane (alpha) OR Total Chlordane	mg/kg								
δ Hexachlorocyclohexane (delta-HCH) (leave empty if total HCH results used)	mg/kg								
Dieldrin	mg/kg								
Endrin	mg/kg								
γ Hexachlorocyclohexane (gamma-HCH) (lindane) OR Total HCH	mg/kg								
Heptachlor	mg/kg								
Hexachlorobenzene	mg/kg								
o,p'-DDT (leave empty if total DDT results used)	mg/kg								
p,p'-DDT OR Total DDT	mg/kg								
γ Trans-Chlordane (gamma) (leave empty if total Chlordane results used)	mg/kg								
Chlordecone (kepone)	mg/kg								
Pentachlorobenzene	mg/kg								
Mirex	mg/kg								
Toxaphene (campechlor)	mg/kg								
Tin									
Tin (leave empty if Organotin and Tin excl Organotin results used)	mg/kg								
Organotin									
Dibutyltin; DiBT	mg/kg								
Tributyltin; TriBT	mg/kg								
Triphenyltin; TriPT	mg/kg								
Tetrabutyltin; TeBT	mg/kg								
Tin excluding Organotin									
Tin excl Organotin	mg/kg								



Every Street, Bury

Depth (m)

Envirolab reference

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If Asbestos in Soil above is "Y", the soil is Hazardous Waste HP5 and HP7

[illegible]

--	--	--	--	--	--	--	--	--

If visual identifiable pieces of asbestos are present, you cannot use Asbestos % results and the whole soil sample is Hazardous Waste HP5 and HP7 Construction material containing Asbestos 17 06 05. Therefore, if Asbestos in Soil above is "Y", the Asbestos % above is "<0.1%", but the Asbestos Identifiable Pieces visible with the naked eye is "Y", the soil is Hazardous Waste.

Identifiable Pieces are Cement, Fragments, Board, Rope etc. ie anything ACM that is not Loose Fibres

All visual asbestos pieces need to be removed leaving only fibres (or micro pieces) with an Asbestos % Composition in Soil result of <0.1% for the soil to become non-hazardous waste.

[illegible][illegible]



Please enter available data in the rows associated with the test (grey) cells. Calculation cells initially display either "0.0000" or "#DIV/0!".
If any calculation cells below state "0.00000", testing has NOT been undertaken that contributes to that Hazardous Property.

Haswaste, developed by Dr. Iain Haslock.

Every Street, Bury

TP/WS/BH

Depth (m)

Envirolab reference

Ecotoxic HP14 amended v6	≥25%	<0.1% (except Be, V, Te, TL, Petrol, Diesel, Crude Oil, Kerosene, White Spirit, Cresols, TPH, TPHCWG, Phenol, Cresols, Xylenols, T- Phenols, CompCN, Thiocyanate, Toluene, Ethylbenzene, Xylene + BTX 1%).	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Ecotoxic HP14 amended v6	≥25%	<0.1% (except Be, V, Te, TL, Petrol, Diesel, Crude Oil, Kerosene, White Spirit, Cresols, TPH, TPHCWG, Phenol, Cresols, Xylenols, T- Phenols, CompCN, Thiocyanate, Toluene, Ethylbenzene, Xylene + BTX 1%).	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Persistent Organic Pollutant (PCB, PBB or POP Pesticides)	>0.005%		0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000
Persistent Organic Pollutant (Total Dioxins+Furans)	>0.0000015%		0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000
Persistent Organic Pollutant (Individual Dioxins+Furans)	>0.0000015%		0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000

If other contaminants need adding to Haswaste, please conta



Haswaste, developed by Dr. Iain Haslock.

Every Street, Bury

TP/WS/BH

Depth (m)

Envirolab reference

% Moisture

pH (soil)

pH (leachate)

Arsenic
Cadmium
Copper
CrVI or Chromium
Lead
Mercury
Nickel
Selenium
ZincBarium
Beryllium
Vanadium
Cobalt
Manganese
MolybdenumAntimony
Aluminium
Bismuth
Cadmium
Iron
Strontium
Tellurium
Thallium
Titanium
Tungsten
Ammoniacal N
ws Boron

PAH (Input Total PAH OR individual PAH results)

Acenaphthene
Acenaphthylene
Anthracene
Benzo(a)anthracene
Benzo(a)pyrene
Benzo(b)fluoranthene
Benzo(ghi)perylene
Benzo(k)fluoranthene
Chrysene
Dibenz(ah)anthracene
Fluoranthene
Fluorene
Indeno(123cd)pyrene
Naphthalene
Phenanthrene
Pyrene
Coronene
Total PAHs (16 or 17)

TPH

Petrol
Diesel
Lube Oil

Crude Oil

White Spirit / Kerosene

Creosote

Unknown TPH with ID

Unknown TPHCWG

Total Sulphide

Complex Cyanide

Free (or Total) Cyanide

Thiocyanate

Elemental/Free Sulphur

Phenols Input Total Phenols HPLC OR individual Phenol results.

Phenol

Cresols

Xylenols

Resorcinol

Phenols Total by HPLC

BTEX Input Total BTEX OR individual BTEX results.

Benzene

Toluene

Ethylbenzene

Xylenes

Total BTEX

PCBs (POPs)

PCBs Total (eq EC7/WHO12)

PBBs (POPs)

Hexabromobiphenyl (Total or

PBB 153; 2,2',4,4',5,5'- if only

available)

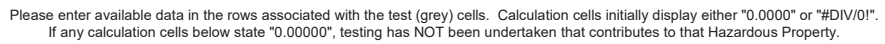
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Every Street, Bury

Depth (m)

Envirolab reference

OR individual Dioxin and Furan results.

2,3,7,8-TeCDD	mg/kg								
1,2,3,7,8-PeCDD	mg/kg								
1,2,3,4,7,8-HxCDD	mg/kg								
1,2,3,6,7,8-HxCDD	mg/kg								
1,2,3,7,8,9-HxCDD	mg/kg								
1,2,3,4,6,7,8-HpCDD	mg/kg								
OCDD	mg/kg								
2,3,7,8-TeCDF	mg/kg								
1,2,3,7,8-PeCDF	mg/kg								
2,3,4,7,8-PeCDF	mg/kg								
1,2,3,4,7,8-HxCDF	mg/kg								
1,2,3,6,7,8-HxCDF	mg/kg								
2,3,4,6,7,8-HxCDF	mg/kg								
1,2,3,7,8,9-HxCDF	mg/kg								
1,2,3,4,6,7,8-HpCDF	mg/kg								
1,2,3,4,7,8,9-HpCDF	mg/kg								
OCDF	mg/kg								
Total Dioxins and Furans	mg/kg								

Aldrin
 α Hexachlorocyclohexane (alpha-HCH) (leave empty if total HCH results used)
 β Hexachlorocyclohexane (beta-HCH) (leave empty if total HCH results used)
 α Cis-Chlordane (alpha) **OR**
 Total Chlordane
 δ Hexachlorocyclohexane (delta-HCH) (leave empty if total HCH results used)
 Dieldrin
 Endrin
 γ Hexachlorocyclohexane gamma-HCH) (lindane) **OR**
 Total HCH
 Heptachlor
 Hexachlorobenzene
 o,p'-DDT (leave empty if total DDT results used)
 p,p'-DDT **OR** Total DDT
 γ Trans-Chlordane (gamma) (leave empty if total Chlordane results used)

[illegible]

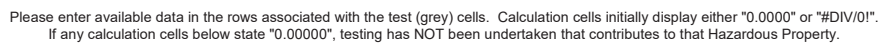
Tin (leave empty if Organotin and Tin excl Organotin results used)

Dibutyltin; DiBT
Tributyltin; TriBT
Triphenyltin; TriPT
Tetrabutyltin; TeBT

Tin excluding Organotin

Tin excl Organotin

[illegible]



Every Street, Bury

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If Asbestos in Soil above is "Y", the soil is Hazardous Waste HP6 and HP7								
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
If Asbestos in Soil above is "Y", but Asbestos % above is "<0.1%", the soil is Non Hazardous Waste. You can only use Asbestos % results where loose fibres or micro pieces are only present. You cannot use Asbestos % results when visual identifiable pieces are present.								

Identifiable Pieces are Cement, Fragments, Board, Rope etc. ie anything ACM that is not Loose Fibres.
All visual asbestos pieces need to be removed leaving only fibres (or micro pieces) with an Asbestos % Composition in Soil result of <0.1% for the soil to become non-hazardous waste.

[illegible]

Table 3 of the CLP, CL Inventory, ATPs, IARC, Concawe, MSDSs, REACH + Pesticide Properties databases. Worst case REACH + MSDS's used for *** STOT + Acute Toxicity



Please enter available data in the rows associated with the test (grey) cells. Calculation cells initially display either "0.0000" or "#DIV/0!".
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Haswaste, developed by Dr. Iain Haslock.

Every Street, Bury

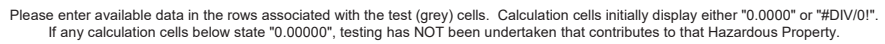
TP/WS/BH

Depth (m)

Envirolab reference

Ecotoxic HP14 amended v6	≥25%	<0.1% (except Be, V, Te, Tl, Petrol, Diesel, Crude Oil, Kerosene, White Spirit, Cresols, TPH, TPHCWG, Phenol, Cresols, Xylenols, T- Phenols, CompCN, Thiocyanate, Toluene, Ethylbenzene, Xylene + BTEx 1%).	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Ecotoxic HP14 amended v6	≥25%	<0.1% (except Be, V, Te, Tl, Petrol, Diesel, Crude Oil, Kerosene, White Spirit, Cresols, TPH, TPHCWG, Phenol, Cresols, Xylenols, T- Phenols, CompCN, Thiocyanate, Toluene, Ethylbenzene, Xylene + BTEx 1%).	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Persistent Organic Pollutant (PCB, PBB or POP Pesticides)	>0.005%		0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000
Persistent Organic Pollutant (Total Dioxins+Furans)	>0.0000015%		0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000
Persistent Organic Pollutant (Individual Dioxins+Furans)	>0.0000015%		0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000

If other contaminants need adding to Haswaste, please conta



Every Street, Bury

Depth (m)

Envirolab reference

OR individual Dioxin and Furan results.

2,3,7,8-TeCDD	mg/kg								
1,2,3,7,8-PeCDD	mg/kg								
1,2,3,4,7,8-HxCDD	mg/kg								
1,2,3,6,7,8-HxCDD	mg/kg								
1,2,3,7,8,9-HxCDD	mg/kg								
1,2,3,4,6,7,8-HpCDD	mg/kg								
OCDD	mg/kg								
2,3,7,8-TeCDF	mg/kg								
1,2,3,7,8-PeCDF	mg/kg								
2,3,4,7,8-PeCDF	mg/kg								
1,2,3,4,7,8-HxCDF	mg/kg								
1,2,3,6,7,8-HxCDF	mg/kg								
2,3,4,6,7,8-HxCDF	mg/kg								
1,2,3,7,8,9-HxCDF	mg/kg								
1,2,3,4,6,7,8-HpCDF	mg/kg								
1,2,3,4,7,8,9-HpCDF	mg/kg								
OCDF	mg/kg								
Total Dioxins and Furans	mg/kg								

Aldrin
 α Hexachlorocyclohexane (alpha-HCH) (leave empty if total HCH results used)
 β Hexachlorocyclohexane (beta-HCH) (leave empty if total HCH results used)
 α Cis-Chlordane (alpha) **OR**
 Total Chlordane
 δ Hexachlorocyclohexane (delta-HCH) (leave empty if total HCH results used)
 Dieldrin
 Endrin
 γ Hexachlorocyclohexane (gamma-HCH) (lindane) **OR**
 Total HCH
 Heptachlor
 Hexachlorobenzene
 o,p'-DDT (leave empty if total DDT results used)
 p,p'-DDT **OR** Total DDT
 γ Trans-Chlordane (gamma) (leave empty if total Chlordane results used)

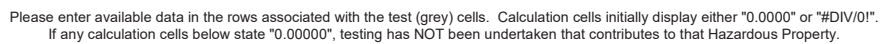
[illegible]

Tin	
Tin (leave empty if Organotin and Tin excl Organotin results used)	

Dibutyltin; DiBT
Tributyltin; TriBT
Triphenyltin; TriPT
Tetrabutyltin; TeBT

Tin excluding Organotin

Tin excl Organotin



Every Street, Bury

Depth (m)

Envirolab reference

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%

≥0.1%

≥0.1%

[illegible]

If visual identifiable pieces of asbestos are present, you cannot use Asbestos % results and the whole soil sample is Hazardous Waste HP5 and HP7 Construction material containing Asbestos 17 06 05. Therefore, if Asbestos in Soil above is "Y", the Asbestos % above is "<0.1%", but the Asbestos Identifiable Pieces visible with the naked eye is "Y", the soil is Hazardous Waste.

All visual asbestos pieces need to be removed leaving only fibres (or micro pieces) with an Asbestos % Composition in Soil result of <0.1% for the soil to become non-hazardous waste.

[illegible][illegible]



Please enter available data in the rows associated with the test (grey) cells. Calculation cells initially display either "0.0000" or "#DIV/0!".
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Haswaste, developed by Dr. Iain Haslock.

Every Street, Bury

TP/WS/BH

Depth (m)

Envirolab reference

Ecotoxic HP14 amended v6	≥25%	<0.1% (except Be, V, Te, TL, Petrol, Diesel, Crude Oil, Kerosene, White Spirit, Cresols, TPH, TPHCWG, Phenol, Cresols, Xylenols, T- Phenols, CompCN, Thiocyanate, Toluene, Ethylbenzene, Xylene + BTX 1%).	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Ecotoxic HP14 amended v6	≥25%	<0.1% (except Be, V, Te, TL, Petrol, Diesel, Crude Oil, Kerosene, White Spirit, Cresols, TPH, TPHCWG, Phenol, Cresols, Xylenols, T- Phenols, CompCN, Thiocyanate, Toluene, Ethylbenzene, Xylene + BTX 1%).	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Persistent Organic Pollutant (PCB, PBB or POP Pesticides)	>0.005%		0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Persistent Organic Pollutant (Total Dioxins+Furans)	>0.0000015%		0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000
Persistent Organic Pollutant (Individual Dioxins+Furans)	>0.0000015%		0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000

If other contaminants need adding to Haswaste, please conta



Haswaste, developed by Dr. Iain Haslock.

Every Street, Bury

TP/WS/BH

Depth (m)

Envirolab reference

% Moisture

pH (soil)

pH (leachate)

Arsenic
Cadmium
Copper
CrVI or Chromium
Lead
Mercury
Nickel
Selenium
ZincBarium
Beryllium
Vanadium
Cobalt
Manganese
MolybdenumAntimony
Aluminium
Bismuth
Cadmium
Iron
Strontium
Tellurium
Thallium
Titanium
Tungsten
Ammoniacal N
ws Boron

PAH (Input Total PAH OR individual PAH results)

Acenaphthene
Acenaphthylene
Anthracene
Benzo(a)anthracene
Benzo(a)pyrene
Benzo(b)fluoranthene
Benzo(ghi)perylene
Benzo(k)fluoranthene
Chrysene
Dibenz(a,h)anthracene
Fluoranthene
Fluorene
Indeno(123cd)pyrene
Naphthalene
Phenanthrene
Pyrene
Coronene
Total PAHs (16 or 17)

TPH

Petrol
Diesel
Lube Oil

Crude Oil

White Spirit / Kerosene

Creosote

Unknown TPH with ID

Unknown TPHCWG

Total Sulphide

Complex Cyanide

Free (or Total) Cyanide

Thiocyanate

Elemental/Free Sulphur

Phenols Input Total Phenols HPLC OR individual Phenol results.

Phenol

Cresols

Xylenols

Resorcinol

Phenols Total by HPLC

BTEX Input Total BTEX OR individual BTEX results.

Benzene

Toluene

Ethylbenzene

Xylenes

Total BTEX

PCBs (POPs)

PCBs Total (eq EC7/WHO12)

PBBs (POPs)

Hexabromobiphenyl (Total or

PBB 153; 2,2',4,4',5,5'- if only

available)

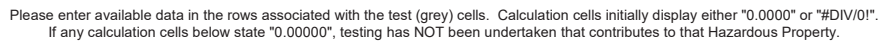
%

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Please enter available data in the rows associated with the test (grey) cells. Calculation cells initially display either "0.0000" or "#DIV/0!".
If any calculation cells below state "0.00000", testing has NOT been undertaken that contributes to that Hazardous Property.



Every Street, Bury

Depth (m)

Envirolab reference

OR individual Dioxin and Furan results.

2,3,7,8-TeCDD	mg/kg								
1,2,3,7,8-PeCDD	mg/kg								
1,2,3,4,7,8-HxCDD	mg/kg								
1,2,3,6,7,8-HxCDD	mg/kg								
1,2,3,7,8,9-HxCDD	mg/kg								
1,2,3,4,6,7,8-HpCDD	mg/kg								
OCDD	mg/kg								
2,3,7,8-TeCDF	mg/kg								
1,2,3,7,8-PeCDF	mg/kg								
2,3,4,7,8-PeCDF	mg/kg								
1,2,3,4,7,8-HxCDF	mg/kg								
1,2,3,6,7,8-HxCDF	mg/kg								
2,3,4,6,7,8-HxCDF	mg/kg								
1,2,3,7,8,9-HxCDF	mg/kg								
1,2,3,4,6,7,8-HpCDF	mg/kg								
1,2,3,4,7,8,9-HpCDF	mg/kg								
OCDF	mg/kg								
Total Dioxins and Furans	mg/kg								

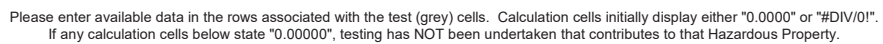
Aldrin
α Hexachlorocyclohexane (α -HCH) <i>(leave empty if total HCH results used)</i>

[illegible]

Tin (leave empty if Organotin and Tin excl Organotin results used)

Dibutyltin; DiBT

[illegible]



Every Street, Bury

Depth (m)

Envirolab reference

Asbestos in Soil	Thresholds
Asbestos detected in Soil (enter Y or N)	Y
Asbestos % Composition in Soil (Matrix Loose Fibres or Microscopic Identifiable Pieces only)	see "Carc HP7 % Asbestos in Soil (Fibres)" below
Carcinogenic HP7 % Asbestos in Soil (fibres or micro pieces) <i>Please be advised, if the calculation cell is "0.00000" DOES NOT MEAN asbestos testing has been undertaken and the result is zero.</i>	≥0.1%
Asbestos Identifiable Pieces visible with the naked eye detected in the Soil (enter Y or N)	Y

If Asbestos in Soil above is "Y", the soil is Hazardous Waste HP5 and HP7								
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
If Asbestos in Soil above is "Y", but Asbestos % above is "<0.1%", the soil is Non Hazardous Waste. You can only use Asbestos % results where loose fibres or micro pieces are only present. You cannot use Asbestos % results when visual identifiable pieces are present.								

If visual identifiable pieces of asbestos are present, you cannot use Asbestos % results and the whole soil sample is Hazardous Waste HP5 and HP7 Construction material containing Asbestos 17 06 05. Therefore, if Asbestos in Soil above is "Y", the Asbestos % above is "<0.1%", but the Asbestos Identifiable Pieces visible with the naked eye is "Y", the soil is Hazardous Waste.

Identifiable Pieces are Cement, Fragments, Board, Rope etc. ie anything ACM that is not Loose Fibres.
All visual asbestos pieces need to be removed leaving only fibres (or micro pieces) with an Asbestos % Composition in Soil result of <0.1% for the soil to become non-hazardous waste.

Hazardous Property	Thresholds	Cut Off Value	If cells below turn yellow and the text turns red, the samples should be classified as Hazardous Waste.									
Corrosive HP8	≥5%	<1%	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
Irritant HP4	≥10%	<1%	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
Irritant HP4	≥20%	<1%	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
Specific Target Organ Toxicity HP5	≥1%		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
Specific Target Organ Toxicity HP5	≥20%		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
Specific Target Organ Toxicity HP5	≥1%		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
Specific Target Organ Toxicity HP5	≥10%		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
Aspiration Toxicity HP5	≥10%		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
Acute Toxicity HP6	≥0.1%	<0.1%	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
Acute Toxicity HP6	≥0.25%	<0.1%	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
Acute Toxicity HP6	≥5%	<0.1%	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
Acute Toxicity HP6	≥25%	<1%	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
Acute Toxicity HP6	≥0.25%	<0.1%	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
Acute Toxicity HP6	≥2.5%	<0.1%	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
Acute Toxicity HP6	≥10%	<0.1%	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
Acute Toxicity HP6	≥55%	<1%	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
Acute Toxicity HP6	≥0.1%	<0.1%	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
Acute Toxicity HP6	≥5%	<0.1%	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
Acute Toxicity HP6	≥22.5%	<1%	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
Carcinogenic HP7	≥0.1%		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
Carcinogenic HP7	≥0.1%		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
Carcinogenic HP7 Unknown TPH with ID	≥1,000mg/kg		0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	
Carcinogenic HP7 b(a)p marker test (Unknown TPH with ID only) Cell only applicable if TPH >1,000mg/kg	≥0.01%		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
pH Corrosive HP8 pH (soil or leachate)	H8 ≥11.5		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
pH Corrosive HP8 pH (soil or leachate)	H8 ≤2		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Toxic for Reproduction HP10	≥0.3%		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
Toxic for Reproduction HP10	≥3%		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
Mutagenic HP11	≥0.1%		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
Mutagenic HP11 Unknown TPH with ID	≥1,000mg/kg		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Mutagenic HP11 b(a)p marker test (Unknown TPH with ID only) Cell only applicable if TPH >1,000mg/kg	≥0.01%		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
Mutagenic HP11	≥1%		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
Produces Toxic Gases HP12 Sulphide	≥1,400mg/kg		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Produces Toxic Gases HP12 Cyanide	≥1,200mg/kg		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Produces Toxic Gases HP12 Thiocyanate	≥2,600mg/kg		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
HP13 Sensitising	≥10%		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
Ecotoxic HP14 amended v6	≥25%	<0.1%	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	



Please enter available data in the rows associated with the test (grey) cells. Calculation cells initially display either "0.0000" or "#DIV/0!".
If any calculation cells below state "0.00000", testing has NOT been undertaken that contributes to that Hazardous Property.

Haswaste, developed by Dr. Iain Haslock.

Every Street, Bury

TP/WS/BH

Depth (m)

Envirolab reference

Ecotoxic HP14 amended v6	≥25%	<0.1% (except Be, V, Te, TL, Petrol, Diesel, Crude Oil, Kerosene, White Spirit, Cresols, TPH, TPHCWG, Phenol, Cresols, Xylenols, T- Phenols, CompCN, Thiocyanate, Toluene, Ethylbenzene, Xylene + BTX 1%).	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Ecotoxic HP14 amended v6	≥25%	<0.1% (except Be, V, Te, TL, Petrol, Diesel, Crude Oil, Kerosene, White Spirit, Cresols, TPH, TPHCWG, Phenol, Cresols, Xylenols, T- Phenols, CompCN, Thiocyanate, Toluene, Ethylbenzene, Xylene + BTX 1%).	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Persistent Organic Pollutant (PCB, PBB or POP Pesticides)	>0.005%		0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000
Persistent Organic Pollutant (Total Dioxins+Furans)	>0.0000015%		0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000
Persistent Organic Pollutant (Individual Dioxins+Furans)	>0.0000015%		0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000

If other contaminants need adding to Haswaste, please conta



Haswaste, developed by Dr. Iain Haslock.

Every Street, Bury

TP/WS/BH

Depth (m)

Envirolab reference

% Moisture

pH (soil)

pH (leachate)

Arsenic
Cadmium
Copper
CrVI or Chromium
Lead
Mercury
Nickel
Selenium
Zinc

Barium

Beryllium

Vanadium

Cobalt

Manganese

Molybdenum

Antimony

Aluminium

Bismuth

Cadmium

Iron

Strontium

Tellurium

Thallium

Titanium

Tungsten

Ammoniacal N

ws Boron

PAH (Input Total PAH OR individual PAH results)

Acenaphthene
Acenaphthylene
Anthracene
Benzo(a)anthracene
Benzo(a)pyrene
Benzo(b)fluoranthene
Benzo(ghi)perylene
Benzo(k)fluoranthene
Chrysene
Dibenz(ah)anthracene
Fluoranthene
Fluorene
Indeno(123cd)pyrene
Naphthalene
Phenanthrene
Pyrene
Coronene
Total PAHs (16 or 17)

TPH

Petrol

Diesel

Lube Oil

Crude Oil

White Spirit / Kerosene

Creosote

Unknown TPH with ID

Unknown TPHCWG

Total Sulphide

Complex Cyanide

Free (or Total) Cyanide

Thiocyanate

Elemental/Free Sulphur

Phenols Input Total Phenols HPLC OR individual Phenol results.

Phenol

Cresols

Xylenols

Resorcinol

Phenols Total by HPLC

BTEX Input Total BTEX OR individual BTEX results.

Benzene

Toluene

Ethylbenzene

Xylenes

Total BTEX

PCBs (POPs)

PCBs Total (eq EC7/WHO12)

PBBs (POPs)

Hexabromobiphenyl (Total or PBB 153; 2,2',4,4',5,5'- if only available)

%

mg/kg

mg/kg

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Haswaste, developed by Dr. Iain Haslock.

Every Street, Bury

TP/WS/BH

Depth (m)

Envirolab reference

POPs Dioxins and Furans Input Total Dioxins and Furans
OR Individual Dioxin and Furan results.

2,3,7,8-TeCDD	mg/kg								
1,2,3,7,8-PeCDD	mg/kg								
1,2,3,4,7,8-HxCDD	mg/kg								
1,2,3,6,7,8-HxCDD	mg/kg								
1,2,3,7,8,9-HxCDD	mg/kg								
1,2,3,4,6,7,8-HpCDD	mg/kg								
OCDD	mg/kg								
2,3,7,8-TeCDF	mg/kg								
1,2,3,7,8-PeCDF	mg/kg								
2,3,4,7,8-PeCDF	mg/kg								
1,2,3,4,7,8-HxCDF	mg/kg								
1,2,3,6,7,8-HxCDF	mg/kg								
2,3,4,6,7,8-HxCDF	mg/kg								
1,2,3,7,8,9-HxCDF	mg/kg								
1,2,3,4,6,7,8-HpCDF	mg/kg								
1,2,3,4,7,8,9-HpCDF	mg/kg								
OCDF	mg/kg								
Total Dioxins and Furans	mg/kg								

Some Pesticides (POPs unless otherwise stated)

Aldrin	mg/kg								
α Hexachlorocyclohexane (alpha-HCH) (leave empty if total HCH results used)	mg/kg								
β Hexachlorocyclohexane (beta-HCH) (leave empty if total HCH results used)	mg/kg								
α Cis-Chlordane (alpha) OR Total Chlordane	mg/kg								
δ Hexachlorocyclohexane (delta-HCH) (leave empty if total HCH results used)	mg/kg								
Dieldrin	mg/kg								
Endrin	mg/kg								
γ Hexachlorocyclohexane (gamma-HCH) (lindane) OR Total HCH	mg/kg								
Heptachlor	mg/kg								
Hexachlorobenzene	mg/kg								
o,p'-DDT (leave empty if total DDT results used)	mg/kg								
p,p'-DDT OR Total DDT	mg/kg								
γ Trans-Chlordane (gamma) (leave empty if total Chlordane results used)	mg/kg								
Chlordecone (kepone)	mg/kg								
Pentachlorobenzene	mg/kg								
Mirex	mg/kg								
Toxaphene (camphechlor)	mg/kg								
Tin									
Tin (leave empty if Organotin and Tin excl Organotin results used)	mg/kg								
Organotin									
Dibutyltin; DiBT	mg/kg								
Tributyltin; TriBT	mg/kg								
Triphenyltin; TriPT	mg/kg								
Tetrabutyltin; TeBT	mg/kg								
Tin excluding Organotin									
Tin excl Organotin	mg/kg								



Envirolab reference

If Asbestos in Soil above is "Y", the soil is Hazardous Waste HP6 and HP7								
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
If Asbestos in Soil above is "Y", but Asbestos % above is "<0.1%", the soil is Non Hazardous Waste. You can only use Asbestos % results where loose fibres or micro pieces are only present. You cannot use Asbestos % results when visual identifiable pieces are present.								

Identifiable Pieces are Cement, Fragments, Board, Rope etc. ie anything ACM that is not Loose Fibres
All visual asbestos pieces need to be removed leaving only fibres (or micro pieces) with an Asbestos % Composition in Soil result of <0.1% for

Table 3 of the CLP, CL Inventory, ATPs, IARC, Concawe, MSDSs, REACH + Pesticide Properties databases. Worst case REACH + MSDS's used for *** STOT + Acute Toxicity.



Haswaste, developed by Dr. Iain Haslock.

Every Street, Bury

TP/WS/BH

Depth (m)

Envirolab reference

Ecotoxic HP14 amended v6	≥25%	<0.1% (except Be, V, Te, TL, Petrol, Diesel, Crude Oil, Kerosene, White Spirit, Cresols, TPH, TPHCWG, Phenol, Cresols, Xylenols, T- Phenols, CompCN, Thiocyanate, Toluene, Ethylbenzene, Xylene + BTEx 1%).	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Ecotoxic HP14 amended v6	≥25%	<0.1% (except Be, V, Te, TL, Petrol, Diesel, Crude Oil, Kerosene, White Spirit, Cresols, TPH, TPHCWG, Phenol, Cresols, Xylenols, T- Phenols, CompCN, Thiocyanate, Toluene, Ethylbenzene, Xylene + BTEx 1%).	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Persistent Organic Pollutant (PCB, PBB or POP Pesticides)	>0.005%		0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000
Persistent Organic Pollutant (Total Dioxins+Furans)	>0.0000015%		0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000
Persistent Organic Pollutant (Individual Dioxins+Furans)	>0.0000015%		0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000	0.00000000000

If other contaminants need adding to Haswaste, please conta

HP4, HP6, HP8 or HP14 cut off / individual trace impurity threshold check.

Use this tab to convert dry weight results to wet weight results for the HP4, HP6, HP8 and HP14 individual trace impurity threshold check.

Example

Analyte	Dry weight result (mg/kg)	Moisture (%)	Corrected wet weight result (mg/kg)
Arsenic	250.00	2.00	245.00

[illegible]

Wet Weight (as received) to Dry Weight.

Use this tab to convert wet weight (or as received basis results) to dry weight results.

Example

Analyte	Wet weight result (mg/kg)	Moisture (%)	Corrected dry weight result (mg/kg)
Arsenic	245.00	2.00	250.00

[illegible]

APPENDIX D – EHO RESPONSE

Emma Hobbs

From: Scott, Judith <J.Scott@bury.gov.uk>
Sent: 17 October 2022 09:42
To: Samuel Diver
Cc: Emma Hobbs
Subject: RE: 11752: Fernhill Caravan Park, Every Street, Bury - Materials Management Plan
Attachments: CL686.121022.1.docx

Hi Sam

We have no objection to use of the CLAIRE DoW CoP to support the proposed development at Fernhill Caravan Park, please may I request a copy is forwarded to ourselves.

Are you in possession of the site investigations carried out? Contaminants including asbestos have been found in the soils, I've attached my response.

Many thanks

Regards

Judith Scott
Environmental Protection Officer
Department of Operations



Follow us on



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Please visit www.bury.gov.uk/privacy to read our recently updated Privacy Policy which explains how Bury Council uses and shares your personal data to give you the best possible experience across our services.

The banner is divided into three sections. The left section has a blue background with white text: "Let's manage tough times together" and "Immediate help and support is available". The middle section features a photograph of several stacks of coins on a wooden surface. The right section has a dark blue background with a yellow speech bubble containing the text "BURY LET'S do it!". To the right of the speech bubble, the text "Local Enterprise Together Strengths" is written in yellow. At the bottom right, a yellow bar contains the text "bury.gov.uk/hardshiphelp" in black.

<https://www.bury.gov.uk/index.aspx?articleid=16755>

From: Samuel Diver <SDiver@rsk.co.uk>
Sent: 13 October 2022 16:41
To: Scott, Judith <J.Scott@bury.gov.uk>
Cc: Emma Hobbs <ehobbs@rsk.co.uk>
Subject: FW: 11752: Fernhill Caravan Park, Every Street, Bury - Materials Management Plan

Good Afternoon Judith,

I have been passed your details by Mark Quinn at John Southworth Builders Ltd. Please see the below email. Any queries do let me know.

Kind regards,

Sam Diver
BSc(hons), FGS
Graduate Geo-environmental Consultant



Fourways House, 57 Hilton Street, Manchester, M1 2EJ, UK
Mobile: +44 (0)7831 990 323 · Email: sdiver@rsk.co.uk

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Before printing think about your responsibility and commitment to the ENVIRONMENT!

From: Samuel Diver
Sent: 12 October 2022 16:23
To: commercial@bury.gov.uk
Cc: Emma Hobbs <ehobbs@rsk.co.uk>
Subject: 11752: Fernhill Caravan Park, Every Street, Bury - Materials Management Plan

Dear Sir/Madam,

John Southworth Builders Ltd intend to re-use soil under the CL:AIRE The Definition of Waste: Development of Industry Code of Practice and associated Materials Management Plan, at the site of origin at Fernhill Caravan Park, Every Street, Bury as part of a development under planning permission 67596. I am therefore writing to you to establish whether or not you have any objections to the intended re-use of materials.

We would be grateful if you could either confirm that you have no objection to use of the CLAIRE DoW CoP to support the proposed development at Fernhill Caravan Park, Every Street, Bury as described above, or let us know if you would like further information before you are able to respond. If we do not receive a response within 21 days we will assume you have no objection to the proposals as set out above.

Kind regards,

Sam Diver

BSc(hons), FGS

Geo-environmental Consultant



Fourways House, 57 Hilton Street, Manchester, M1 2EJ, UK

Mobile: +44 (0)7831 990 323 · Email: sdiver@rsk.co.uk

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APPENDIX E – EA RESPONSE

Emma Hobbs

From: GMMCWasteEnquiries GMMCWasteEnquiries
<GMMCWasteEnquiries@environment-agency.gov.uk>
Sent: 20 October 2022 16:43
To: Samuel Diver
Subject: RE: 11752 Fernhill Caravan Park, Every Street, Bury - proposal for on-site reuse of site-won material

Good Afternoon

The GWCL team have the following comment to make

Thank you for informing us you intend to use the DoWCoP for materials re-use on this site, providing that the DoWCoP is followed in full we have no objections to materials use, in accordance with our Regulatory Position Statement.

Materials not used in accordance with the DoWCoP process in full may be deemed waste and will require a relevant permit for deposit. A formal Declaration must be submitted by a Qualified Person before any use of materials on site or transfer is permitted.

The Qualified Person should be aware that based on our records the Environment Agency has not reviewed any land quality documents associated with this development in respect of controlled waters.

Should you require the Environment Agency to review the relevant land quality documents associated with this development, for the purposes of addressing planning permission conditions, site specific advice can be provided via our cost recovery service. Further information on our cost recovery service can be obtained from our Sustainable Places Team SPPlanning.RFH@environment-agency.gov.uk

Kind regards

Stephen Bostock

The Waste Enquiries Helpdesk Team

Environment Agency | Richard Fairclough House, Knutsford Road, Warrington, WA4 1HT

GMMCWasteEnquiries@environment-agency.gov.uk

Environment incident hotline (24/7) | 0800 80 70 60

General Enquiries | 03708 506 506

From: Davies, Andy <Andy.Davies1@environment-agency.gov.uk>

Sent: 13 October 2022 15:41

To: GWCL_ GMMC <GWCL_GMMC@environment-agency.gov.uk>

Subject: FW: 11752 Fernhill Caravan Park, Every Street, Bury - proposal for on-site reuse of site-won material

Hi GWCL Team,

Please can you advise on the below query email . Assuming the response is 'no objection in principle' provided relevant Cl:AIRE criteria met.

Couple of associated notes to assist :

- Bury LPA – planning link: [67596 | Demolition of 17 no. existing Gypsy and Traveller pitches, amenity blocks and management blocks for the proposed redevelopment of the site to provide 12 no. permanent Gypsy and Traveller pitches including new amenity buildings and management block. | Fernhill Caravan Site, Every Street, Bury, BL9 5BE](#)
- GWCL not previously consulted on application standard GWCL comments applied to EA response (alongside recommendation for SWMP). Application has attracted as part of planning approval/decision notice condition (3) requiring submission of additional GI reporting as previous submissions not considered sufficient. Unclear if condition 3 has yet been addressed/ discharge under separate application.

Kind regards,
Andy

Andy Davies

Project Manager, Green Growth Team & Sustainable Places Team | Greater Manchester, Merseyside, Cheshire
Environment Agency | Richard Fairclough House, Knutsford Road, Latchford, Warrington WA4 1HT
SP Team Email: SPPlanning.RFH@environment-agency.gov.uk
Mobile: **0739 379 8325**
Pronouns: he/him/his



From: Samuel Diver <SDiver@rsk.co.uk>
Sent: 12 October 2022 16:50
To: Davies, Andy <Andy.Davies1@environment-agency.gov.uk>
Cc: Emma Hobbs <ehobbs@rsk.co.uk>
Subject: 11752 Fernhill Caravan Park, Every Street, Bury - proposal for on-site reuse of site-won material

You don't often get email from sdiver@rsk.co.uk. [Learn why this is important](#)

Good Afternoon Andy,

Our client, John Southworth Builders Ltd, has confirmed their intent to re-use soil under the CL:AIRE The Definition of Waste: Development of Industry Code of Practice and associated Materials Management Plan, at the site of origin at Fernhill Caravan Park, Every Street, Bury as part of a development under planning permission 67596. I am therefore writing to you to establish whether or not you have any objections to the intended re-use of materials.

We would be grateful if you could either confirm that you have no objection to use of the CLAIRE DoW CoP to support the proposed development at Fernhill Caravan Park, Every Street, Bury as described above, or let us know if you would like further information before you are able to respond. If we do not receive a response within 21 days we will assume you have no objection to the proposals as set out above.

Many thanks,

Sam Diver
BSc(hons), FGS
Graduate Geo-environmental Consultant

Global provider of environmental consultancy, health and safety, and ground engineering services

<http://www.rskgroup.com>



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COMPANY 2019

We're a partner in



Manchester
City of Trees

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Registered number: 115530

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APPENDIX F – PLANNING CONDITION

NOTICE OF PLANNING PERMISSION

Town and Country Planning Act 1990 Town and Country Planning (Development Management Procedure) (England) Order 2015

To:

Paddock Johnson Partnership
Studio 2
The Lyceum
Bath Street
Port Sunlight
CH62 4UJ

On Behalf Of:

Mr Peter Masters-Hall
Bury Council Housing Development
Town Hall
Bury
BL9 0EJ

PART 1 - Particulars of Application

Application Number: 67596

Date of Registration: 01/11/2021

Proposal:

Demolition of 17 no. existing Gypsy and Traveller pitches, amenity blocks and management blocks for the proposed redevelopment of the site to provide 12 no. permanent Gypsy and Traveller pitches including new amenity buildings and management block.

Location:

Fernhill Caravan Site, Every Street, Bury,
BL9 5BE

PART 2 - Particulars of Decision

Bury Metropolitan Borough Council hereby give notice in pursuance of the provisions of the Town and Country Planning Act 1990 that permission has been **GRANTED** for the carrying out of the development referred to in Part 1 hereof in accordance with the application and plans submitted subject to the following conditions:-

- 1 The development must be begun not later than three years beginning with the date of this permission.
Reason. Required to be imposed by Section 91 Town & Country Planning Act 1990.
- 2 This decision relates to drawings - 19144 - Location plan 010-A; Existing site layout 005; Proposed site layout 101-G; Office & pitch 1 - existing plans and elevations 110-A; Typical twin utility (14&15) - existing plans and elevations 111-A; Typical quad utility (2,3,4&5) - existing plans and elevations 112-A; Utility block - plan and elevations 103-C; Management block plan and elevations 104-C; Topographical survey; Perspective views 105-A, 106-A, 107-A, 108 -A; Transport Statement, Air quality statement, Odour assessment, Noise assessment by Azymuth Acoustics UK refs AA0239; Crime Impact Statement Version A 29/7/21
and the development shall not be carried out except in accordance with the drawings hereby approved.
Reason. For the avoidance of doubt and to ensure a satisfactory standard of design pursuant to the policies of the Bury Unitary Development Plan listed.

- 3 No development shall commence unless and until:-
- A contaminated land Preliminary Risk Assessment report to assess the actual/potential contamination and/or ground gas/landfill gas risks at the site shall be submitted to, and approved in writing by, the Local Planning Authority;
 - Where actual/potential contamination and/or ground gas/landfill gas risks have been identified, detailed site investigation and suitable risk assessment shall be submitted to, and approved in writing by the Local Planning Authority;
 - Where remediation/protection measures is/are required, a detailed Remediation Strategy shall be submitted to, and approved in writing by, the Local Planning Authority.

Reason. The scheme does not provide full details of the actual contamination and subsequent remediation, which is required to secure the satisfactory development of the site in terms of human health, controlled waters, ground gas and the wider environment and pursuant to National Planning Policy Framework Section 15 - Conserving and enhancing the natural environment.

- 4 Following the provisions of Condition 3 of this planning permission, where remediation is required, the approved Remediation Strategy must be carried out to the satisfaction of the Local Planning Authority within agreed timescales; and A Site Verification Report detailing the actions taken and conclusions at each stage of the remediation works, including substantiating evidence, shall be submitted to and approved in writing by the Local Planning Authority prior to the development being brought into use.

Reason. To secure the satisfactory development of the site in terms of human health, controlled waters and the wider environment and pursuant to National Planning Policy Framework Section 15 - Conserving and enhancing the natural environment.

- 5 Prior to occupation the applicant shall provide 1 Electric Vehicle Chargepoint (minimum 7kW*) for each pitch.

*Mode 3, 7kW (32A) single phase, or 22kW (32A) three phase, and for 50kW Mode 4 rapid charging may be required. British Standard BS EN 61851-1:2011 to be used (note this version is due to be replaced by BS EN 61851-1:2019 on 5 July 2022).

Reason. In accordance with the NPPF, to encourage the uptake of ultra-low emission vehicles and ensure the development is sustainable. To safeguard residential amenity, public health and quality of life.

- 6 No development shall commence until a surface water drainage scheme has been submitted to and approved in writing by the Local Planning Authority. The drainage scheme must include:

- (i) An investigation of the hierarchy of drainage options in the National Planning Practice Guidance (or any subsequent amendment thereof). This investigation shall include evidence of an assessment of ground conditions and the potential for infiltration of surface water;
- (ii) A restricted rate of discharge of surface water agreed with the local planning authority (if it is agreed that infiltration is discounted by the investigations); and
- (iii) A timetable for its implementation.

The approved scheme shall also be in accordance with the Non-Statutory Technical Standards for Sustainable Drainage Systems (March 2015) or any subsequent replacement national standards.

The development hereby permitted shall be carried out only in accordance with the approved drainage scheme.

Reason. The current application contains insufficient information regarding the

proposed drainage scheme to fully assess the impact. To promote sustainable development and reduce flood risk pursuant to Unitary Development Plan Policies EN5/1- New Development and Flood Risk , EN7/3 - Water Pollution and EN7/5 - Waste Water Management and chapter 14 - Meeting the challenge of climate change, flooding and coastal change of the NPPF.

- 7 Foul and surface water shall be drained on separate systems.
Reason. To promote sustainable development and reduce flood risk pursuant to Unitary Development Plan Policies EN5/1- New Development and Flood Risk , EN7/3 - Water Pollution and EN7/5 - Waste Water Management and chapter 14 - Meeting the challenge of climate change, flooding and coastal change of the NPPF.

- 8 No development shall commence unless and until a 'Construction Traffic Management Plan' (CTMP), has been submitted to and agreed in writing with the Local Planning Authority and shall confirm/provide the following:

- Photographic dilapidation survey of the unadopted footways and carriageways abutting the site in the event that subsequent remedial works are required following construction of the development and as a result of any statutory undertakers connections to the development;
- Access point(s) for demolition/construction traffic from Every Street;
- Proposed site hoardings (if proposed) clear of the visibility splays indicated on approved site plan reference 19144-101 Revision G;
- Hours of operation and number of vehicle movements;
- A scheme of appropriate warning/construction traffic speed signage in the vicinity of the site and its access;
- Arrangements for the turning and manoeuvring of vehicles within the curtilage of the site, including any requisite phasing of the development to accommodate this;
- Parking on site (or on land under the applicant's control) of operatives' and demolition/construction vehicles together with storage on site of demolition/construction materials, including any requisite phasing of the development to accommodate this;
- Measures to ensure that all mud and other loose materials are not spread onto the adjacent adopted highways as a result of the groundworks operations or carried on the wheels and chassis of any vehicles leaving the site and measures to minimise dust nuisance caused by the operations.

The approved plan shall be adhered to throughout the demolition and construction periods and the measures shall be retained and facilities used for the intended purpose for the duration of the both periods. The areas identified shall not be used for any other purposes other than the parking of vehicles and storage of demolition/construction materials. All remedial works to the unadopted Every Street identified as a result of the dilapidation survey shall be implemented to the written satisfaction of the Local Planning Authority prior to the development hereby approved being first occupied/brought into use.

Reason. Information not submitted at application stage. To maintain the integrity of the adopted highway, mitigate the impact of the construction traffic generated by the proposed development on the adjacent adopted highways, ensure adequate off street car parking provision and materials storage arrangements for the duration of the construction period and ensure that the adopted highways are kept free of deposited material from the ground works operations, in the interests of highway safety pursuant to Bury Unitary Development Plan Policies EN1/2 - Townscape and Built Design and HT6/2 - Pedestrian/Vehicular Conflict.

- 9 The development hereby approved shall not be first occupied/brought into use

unless and until the pedestrian and vehicular access improvements and bin storage arrangements indicated on approved plan reference 19144-101 Revision G, incorporating the provision of a sliding gate set back from Every Street and new access and hardstandings in porous/permeable materials and/or measures to prevent the discharge of surface water onto Every Street, have been implemented. Reason. To ensure good highway design and maintain the integrity of the adopted highway in the interests of highway safety pursuant to Bury Unitary Development Plan Policies EN1/2 - Townscape and Built Design, EN5/1 - New development and Flood Risk, HT2/4 - Car Parking and New Development and HT6/2 - Pedestrian/Vehicular Conflict.

- 10 The visibility splays indicated on approved plan reference 19144-101 Revision G shall be implemented to the written satisfaction of the Local Planning Authority before the development is first occupied/brought into use and subsequently maintained free of obstruction above the height of 0.6m. Reason. To ensure the intervisibility of the users of the site and the adjacent highways in the interests of road safety pursuant to Bury Unitary Development Plan Policies EN1/2 - Townscape and Built Design and HT6/2 - Pedestrian/Vehicular Conflict. .
- 11 The turning facilities indicated on approved plan reference 19144-101 Revision G shall be provided before the development hereby approved is first occupied/brought into use and shall subsequently be maintained free of obstruction at all times. Reason. To minimise the standing and turning movements of vehicles on the highway in the interests of road safety pursuant to Bury Unitary Development Plan Policies EN1/2 - Townscape and Built Design and HT6/2 - Pedestrian/Vehicular Conflict. .
- 12 The car parking indicated on approved plan reference 19144-101 Revision G shall be made available for use to the written satisfaction of the Local Planning Authority prior to the development hereby approved being first occupied/brought into use and thereafter maintained available for use at all times. Reason. To ensure adequate off street car parking provision in the interests of road safety pursuant to policy HT2/4 - Car Parking and New Development of the Bury Unitary Development Plan.

Statement in accordance with Article 35(2) Town and Country Planning (Development Management Procedure) (England) (Amendment) Order 2015

The Local Planning Authority worked positively and proactively with the applicant to identify various solutions during the application process to ensure that the proposal comprised sustainable development and would improve the economic, social and environmental conditions of the area and would accord with the development plan. These were incorporated into the scheme and/or have been secured by planning condition. The Local Planning Authority has therefore implemented the requirement in Paragraph 38 of the National Planning Policy Framework.

The following policies of the Bury Unitary Development Plan, National and Regional Government were considered relevant:

NPPF	National Planning Policy Framework
EC2/1	EC2/1 - Employment Generating Areas
H1/3	H1/3 - Provision for Gypsies and Travellers
H4	H4 - Housing Need
H5	H5 - Housing Improvement
EN1/2	EN1/2 - Townscape and Built Design
EN1/5	EN1/5 - Crime Prevention

EN5/1 EN5/1 - New Development and Flood Risk
EN7/1 EN7/1 - Atmospheric Pollution
HT2/4 HT2/4 - Car Parking and New Development
HT6/2 HT6/2 - Pedestrian/Vehicular Conflict

This decision relates only to the Town and Country Planning Acts and does not include any consent or approval under any other enactment or under the Building Regulations. Any other consent or approval which is necessary must be obtained from the appropriate authority.

Applicant Plan Numbers:

19144 - Location plan 010-A; Existing site layout 005; Proposed site layout 101-G; Office & pitch 1 - existing plans and elevations 110-A; Typical twin utility (14&15) - existing plans and elevations 111-A; Typical quad utility (2,3,4&5) - existing plans and elevations 112-A; Utility block - plan and elevations 103-C; Management block plan and elevations 104-C; Topographical survey; Perspective views 105-A, 106-A, 107-A, 108 -A; Transport Statement, Air quality statement, Odour assessment, Noise assessment by Azymuth Acoustics UK refs AA0239; Crime Impact Statement Version A 29/7/21

NOTES TO APPLICANT

Environment Agency position

Advice to applicant

The developer must apply the waste hierarchy as a priority order of prevention, re-use, recycling before considering other recovery or disposal options. Government guidance on the waste hierarchy in England can be found here:
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69403/pb13530-waste-hierarchy-guidance.pdf

Site Waste Management Plans (SWMP) are no longer a legal requirement, however, in terms of meeting the objectives of the waste hierarchy and your duty of care, they are a useful tool and considered to be best practice.

Groundwater and Contaminated Land

We have been unable to provide a site specific review at this time due to a high workload and limited resources. We note that due to the former land uses, adverse concentrations of soil and/or groundwater contamination may exist at the site so the associated risks to controlled waters should be addressed.

We recommend that developers should:

" Follow the risk management framework provided in Guidance on Land contamination risk management (LCRM), when dealing with land affected by contamination.

" Refer to our Guiding principles for land contamination for the type of information that we require in order to assess risks to controlled waters from the site - the local authority can advise on risk to other receptors, such as human health.

" Consider using the National Quality Mark Scheme for Land Contamination Management which involves the use of competent persons to ensure that land contamination risks are appropriately managed.

" Refer to the contaminated land pages on gov.uk for more information

All investigations of land potentially affected by contamination should be carried out by or under the direction of a suitably qualified competent person and in accordance with BS 10175 (2001) Code of practice for the investigation of potentially contaminated sites.

Note to applicant

Should you wish us to review any technical documents or want further advice to address any of the environmental issues raised in this response, we may be able to do this as part of our charged for planning advice service.

Further engagement will provide you with certainty of our position as to what our response to a planning application will be. It should also result in a better quality and more environmentally sensitive development.

As part of our charged for service we will provide a dedicated project manager to act as a single point of contact to help resolve any problems. We currently charge £100 per person per hour, plus VAT. We will provide you with an estimated cost for any further discussions or review of documents. Our standard terms and conditions are available to view online at www.gov.uk/government/publications/planning-and-marine-licence-advice-standard-terms-for-our-charges/planning-and-marine-licence-advice-standard-terms-for-our-charges.

If you would like more information on our planning advice service, including a cost estimate, please contact us at SPPlanning.RFH@environment-agency.gov.uk

The Air Quality (Air Quality Assessment, Every Street, Bury, BL9 5BE, Reference: AA0239, September 2021) assessment report has found that air quality factors are not considered a constraint to the development. However, due to complaints regarding dust received by the Council from residents of the site, this Section recommends that dust monitoring and assessment is carried out to identify if there is a significant issue and to identify the source of the dust. If the assessment indicates that dust is detrimental to the residents then mitigation measures are to be considered.

The applicant's attention is drawn to the recommendations for the implementation of the security measures in section 4 of the The Crime Impact Statement.

With regards to the above development proposal, United Utilities Water Limited ('United Utilities') wishes to provide the following comments.

Drainage

In accordance with the National Planning Policy Framework (NPPF) and the National Planning Practice Guidance (NPPG), the site should be drained on a separate system with foul water draining to the public sewer and surface water draining in the most sustainable way.

We request the following drainage conditions are attached to any subsequent approval to reflect the above approach detailed above:

Condition 1 – Surface water

No development shall commence until a surface water drainage scheme has been submitted to and approved in writing by the Local Planning Authority. The drainage scheme must include:

(i) An investigation of the hierarchy of drainage options in the National Planning

Practice Guidance (or any subsequent amendment thereof). This investigation shall include evidence of an assessment of ground conditions and the potential for infiltration of surface water;

(ii) A restricted rate of discharge of surface water agreed with the local planning authority (if it is agreed that infiltration is discounted by the investigations); and

(iii) A timetable for its implementation.

The approved scheme shall also be in accordance with the Non-Statutory Technical Standards for Sustainable Drainage Systems (March 2015) or any subsequent replacement national standards.

The development hereby permitted shall be carried out only in accordance with the approved drainage scheme.

Reason: To promote sustainable development, secure proper drainage and to manage the risk of flooding and pollution.

Condition 2 – Foul water

Foul and surface water shall be drained on separate systems.

Reason: To secure proper drainage and to manage the risk of flooding and pollution.

The applicant can discuss any of the above with Developer Engineer, Robert Brenton, by email at wastewaterdeveloperservices@uuplc.co.uk.

Please note, United Utilities are not responsible for advising on rates of discharge to the local watercourse system. This is a matter for discussion with the Lead Local Flood Authority and / or the Environment Agency (if the watercourse is classified as main river).

If the applicant intends to offer wastewater assets forward for adoption by United Utilities, the proposed detailed design will be subject to a technical appraisal by an Adoptions Engineer as we need to be sure that the proposal meets the requirements of Sewers for Adoption and United Utilities' Asset Standards. The detailed layout should be prepared with consideration of what is necessary to secure a development to an adoptable standard. This is important as drainage design can be a key determining factor of site levels and layout. The proposed design should give consideration to long term operability and give United Utilities a cost effective proposal for the life of the assets. Therefore, should this application be approved and the applicant wishes to progress a Section 104 agreement, we strongly recommend that no construction commences until the detailed drainage design, submitted as part of the Section 104 agreement, has been assessed and accepted in writing by United Utilities. Any works carried out prior to the technical assessment being approved is done entirely at the developers own risk and could be subject to change.

Management and Maintenance of Sustainable Drainage Systems

Without effective management and maintenance, sustainable drainage systems can fail or become ineffective. As a provider of wastewater services, we believe we have a duty to advise the Local Planning Authority of this potential risk to ensure the longevity of the surface water drainage system and the service it provides to people. We also wish to minimise the risk of a sustainable drainage system having a detrimental impact on the public sewer network should the two systems interact. We therefore recommend the Local Planning Authority include a condition in their Decision Notice regarding a management and maintenance regime for any sustainable drainage system that is included as part of the proposed development.

Water Supply

If the applicant intends to obtain a water supply from United Utilities for the proposed development, we strongly recommend they engage with us at the earliest opportunity. If

reinforcement of the water network is required to meet the demand, this could be a significant project and the design and construction period should be accounted for.

To discuss a potential water supply or any of the water comments detailed above, the applicant can contact the team at DeveloperServicesWater@uuplc.co.uk. Please note, all internal pipework must comply with current Water Supply (water fittings) Regulations 1999.

United Utilities' Property, Assets and Infrastructure

Where United Utilities' assets exist, the level of cover to the water mains and public sewers must not be compromised either during or after construction.

For advice regarding protection of United Utilities assets, the applicant should contact the teams as follows:

Water assets – DeveloperServicesWater@uuplc.co.uk

Wastewater assets – WastewaterDeveloperServices@uuplc.co.uk

It is the applicant's responsibility to investigate the possibility of any United Utilities' assets potentially impacted by their proposals and to demonstrate the exact relationship between any United Utilities' assets and the proposed development.

A number of providers offer a paid for mapping service including United Utilities. To find out how to purchase a sewer and water plan from United Utilities, please visit the Property Searches website; <https://www.unitedutilities.com/property-searches/>

You can also view the plans for free. To make an appointment to view our sewer records at your local authority please contact them direct, alternatively if you wish to view the water and the sewer records at our Lingley Mere offices based in Warrington please ring 0370 751 0101 to book an appointment.

Due to the public sewer transfer in 2011, not all sewers are currently shown on the statutory sewer records and we do not always show private pipes on our plans. If a sewer is discovered during construction; please contact a Building Control Body to discuss the matter further.

Should this planning application be approved the applicant should contact United Utilities regarding a potential water supply or connection to public sewers. Additional information is available on our website

<http://www.unitedutilities.com/builders-developers.aspx>

- . This recommendation relates to the revised plans received by this Section on 29 & 30 November 2021.
- . The applicant's attention is drawn to Section 80 of the Building Act 1984 and the need to give six weeks prior written notice to the Department for Business Growth and Infrastructure detailing any proposed demolition works in connection with the proposed development.
- . The Council currently operates a curtilage system of refuse collection. The applicant is advised to liaise with Waste Management, Bradley Fold Depot on 0161 253 6621/7010, regarding the operation of this system.

Signed:

A handwritten signature in black ink, appearing to read 'P. H. H.', written in a cursive style.

9 of 9

.....
On behalf of the Council

Date of Decision: 26/01/2022

APPENDIX G – TRACKING FORM

Site name

Materials Tracker

[illegible]

APPENDIX H – VERIFICATION PLAN



John Southworth Builders Ltd

Fernhill Caravan Park, Every Street, Bury

Verification Plan

Report Reference: 11752-R03 (00)

RSK GENERAL NOTES

Project No.: 11752

Title: Verification Plan: Fernhill Caravan Park, Every Street, Bury

Client: John Southworth Builders Ltd

Date: November 2022

Office: RSK Environment Limited, Fourways House, 57 Hilton Street, Manchester, M1 2EJ, tel: +44(0)161 236 2757, contact: Alex Smiles

Status: Rev 00

Author Emma Hobbs

Signature

Date: November 2022

Technical reviewer Tim Holding

Signature

Date: November 2022

Project manager Alex Smiles

Signature

Date: November 2022

Quality reviewer Poppy Whittle

Signature

Date: November 2022

Revision control sheet		
Revision reference	Date	Reason for revision
Rev 00	November 2022	First issue

RSK Environment Limited (RSK) has prepared this report for the sole use of the client, showing reasonable skill and care, for the intended purposes as stated in the agreement under which this work was completed. The report may not be relied upon by any other party without the express agreement of the client and RSK. No other warranty, expressed or implied, is made as to the professional advice included in this report.

Where any data supplied by the client or from other sources have been used, it has been assumed that the information is correct. No responsibility can be accepted by RSK for inaccuracies in the data supplied by any other party. The conclusions and recommendations in this report are based on the assumption that all relevant information has been supplied by those bodies from whom it was requested.

No part of this report may be copied or duplicated without the express permission of RSK and the party for whom it was prepared.

Where field investigations have been carried out, these have been restricted to a level of detail required to achieve the stated objectives of the work.

This work has been undertaken in accordance with the quality management system of RSK Environment Ltd.

1. INTRODUCTION

RSK Environment Limited (RSK) was commissioned by John Southworth Builder Ltd to complete this Verification Plan to support the re-use of material at the site known as Fernhill Caravan Park, Every Street, Bury for re-use of material at the site of origin. The project was carried out to an agreed brief as set out in RSK's proposal (Ref. 11752 TL01 (01), dated 15 September 2022).

This report is subject to the RSK service constraints given in Appendix A and limitations that may be described through this document; and should be read in conjunction with the following documents:

- Remediation strategy (Ref. 11752 R01 (00), dated October 2022).
- Material management plan (Ref. 11752 R01 (00), dated November 2022).

1.1 Project description

The Site boundary and current site layout are shown on Figure 1. The Site covers an area of approximately 0.69 hectares. It is currently occupied by Fernhill Caravan Park, a residential site for travellers with 17 plots and six facility blocks.

The site is roughly rectangular in shape and access is gained via Every Street, along the central northern boundary.

Each individual plot was separated by wooden fencing secured with concrete posts, approximately 1.20 m high, and occupied plots contain a mobile caravan, which have a lounge and bedrooms that are used by the occupants. The facility blocks include a food preparation area with plumbing for washing, cleaning, and toilets.

Proposed development plans show that the entire site is to be demolished and the 17 individual plots are to be reduced to 12, including six single-storey double-facilities blocks, around the margins of the site, with each block to be shared between two plots. There will still be an office building to the east of the site entrance in the north eastern corner of the site. Each plot will contain sufficient space for either one or two touring caravans, which will be used for sleeping and it will also have private soft landscaped areas.

Details from LK Remediate indicate an initial removal of hardstanding and obstructions up to 1.5m with turnover of shallow material including sorting and re-engineering, and if chemically and geotechnically suitable, re-use across the site to raise levels and create construction platforms.

Cut and fill calculations performed by LK Remediate indicate 3,700m³ of material will be excavated from the site. Approximately 650m³ of recycled aggregates is proposed to be won from crush for the construction of piling mats and 1,050m³ of validated clean soils proposed to be won for reuse as subsoil in the clean cover layer gardens. This will reduce the surplus of material to circa 2,000m³. Surplus material is to be removed from the site by a registered waste carrier to a suitably licenced facility. A cut/fill drawing is included in Appendix D.

The development is subject to approved planning application 67596 with Bury Council.

The movement of soils within the site from excavation to re-use to raise levels, construct piling mats and create soft landscaping areas will be managed under a Materials Management Plan (MMP) developed under the CL:AIRE Definition of Waste: Code of Practice.

This Verification Plan has been prepared to ensure that the excavation and placement of materials is in accordance with the Materials Management Plan (MMP).

The material management plan sets out the responsibilities of the interested parties and contingency arrangements should material not meet the agreed specification for re-use.

2. VERIFICATION PLAN

2.1 Objectives

The objective of the Verification Plan is to set out the data that should be collected by the contractor to show that the excavation and placement of materials is in accordance with the Materials Management Plan (MMP); and allow the completion of the Verification Plan. The validation measures are set out to verify that:

- Made ground re-used on the site of origin meet the chemical and physical re-use criteria set out in the Remedial Strategy.

2.2 Overview of works

2.2.1 Excavation

Approximately 3,883.52m³ of made ground will be excavated from beneath current hardstanding across the site and from within the perimeter bunds for sorting and re-use.

It is proposed that of this 3,883.52m³, concrete hardstanding and obstructions will be crushed to form approximately 650m³ of material for use in piling mats. A further 1050m³ will be won for use as clean validated subsoil for use in soft landscaping areas.

2.2.2 Transport

Material will be transported from excavations to the placement area/stockpile area. Transport will take place within the limits of the site boundary.

2.2.3 Stockpiling/temporary stockpiling

Temporary stockpiling of suitable materials may be required to permit effective programming of plant and personnel.

1.1.1 Sampling and Testing Requirements

The frequency of chemical testing of imported soils utilised in soil capping systems (either in landscaping zones or as part of clean fill potable water supply pipe runs) should be completed at a frequency of 1/250m³ used. Details of the range of determinants and the associated "suitable for use" values are provided in Table 1.

Table 1 **Table 1: Sampling and Testing Requirements**

	Number of samples	Testing schedule
Greenfield soils	Minimum 3, or 1 per 250m ³ (whichever is the greater)	As, Cd, Cr, CrVI, Cu, Hg, Ni, Pb, Se, Zn, PAH (16 USEPA speciation), asbestos
Brownfield / screened soils	Minimum 6 or 1 per 100m ³ (whichever is the greater)	As, Cd, Cr, CrVI, Cu, Hg, Ni, Pb, Se, Zn, PAH (16 USEPA speciation), TPH (CWG banded), asbestos and any additional analysis depending on the history of the donor site

Any materials proposed for reuse at the site (i.e. site-won made ground) under the provisions of the MMP will require testing in accordance with Table 2, below to confirm chemical suitability for reuse.

Table 2. Sampling and Testing Requirements

Type of material	Number of samples	Testing schedule
Site-derived made ground destined for reuse as general fill (i.e., >600 mm below final finish level in rear gardens/POS or below hardstanding)	Minimum 3, or 1 per 50 m ³ (whichever is the greater)	As, Cd, Cr, CrVI, Cu, Hg, Ni, Pb, Se, Zn, pH, PAH (16 USEPA speciation), TPH, asbestos screen
Imported aggregate	<u>Recycled material:</u> Minimum 3, or 1 per 50 m ³ (whichever is the greater)	Asbestos screen <i>And any additional analysis depending on the history/ nature of the supplier</i>
	<u>Natural quarry stone:</u> No testing requirements	No testing requirements provided it can be demonstrated that the material has originated from a natural source

2.2.4 Placement

Approximately 185.95m³ of made ground will be used to infill excavations and achieve proposed formation levels.

The material will be placed and compacted in accordance with the geotechnical/earthworks specification/lightly tracked to create the required topographic contours *etc.*

Works are planned to take place between November 2022 and January 2023 with a provisional date for the submission of the Verification Report being February 2023.

2.3 Material management

The material shall be excavated and assessed for suitability. Initial assessment of suitability will be based on visual and olfactory assessment at the point of excavation and placement to confirm that material are as expected.

All operatives and ground workers should remain vigilant for unforeseen or unusual ground conditions, including:

- Arisings that quickly change appearance or appear inconsistent with the anticipated materials.
- Oily (or free phase) pockets.
- Fibrous materials.
- Strong odours or vibrant colours associated with the soil.
- Foreign objects such as asbestos containing materials (ACM), cement board, brick, concrete, glass and general waste would also be considered unforeseen.

If any operative suspects that material may be contaminated, they should stop work and immediately consult their line manager. Potentially out of specification materials and what to look out for can form the subject of a tool box talk.

Material that is suitable for use shall be transported to the stockpile/re-use area at SP01 and SP02 located on the Material Movements drawing (reference LR221029_MMP_02) . Temporary stockpiling of suitable materials may be required to permit effective programming of plant and personnel.

Material that is considered unsuitable for use shall be segregated and stockpiled separately for further testing to ascertain suitability for use or for disposal off-site in accordance with the contingency arrangements set out in the MMP.

All material movements will be logged on a tracking spreadsheet that shall be maintained by the contractor to record the original location of arisings and their destination. The material tracking form is included in Appendix B for the site/project.

2.4 Site records (site/project specific)

The contractor shall collect the information set out below in order to verify the excavation and placement of suitable materials in accordance with the MMP:

- Keep a record of any revisions to the MMP or contingency enacted (e.g. if unexpected contamination is encountered). Record any changes to this Verification Plan and reasons.
- Record of visual inspection of loads.
- Completion of the Material Tracking Spreadsheets (import and export) including details of material quantities and location.
- Appropriate site plans (excavation and placement areas).
- Keeping a topographic survey record to show excavation locations, depths and final levels both prior to and following filling to enable volumes of re-use to be calculated.
- Keeping of a detailed photographic record and description of excavations/placement areas on a regular basis (state daily/weekly).
- Completion of the Material Tracking Spreadsheets (import and export) including details of material quantities; and location(s).
- Sampling and chemical analysis of site-won/imported soil prior to re-use at a frequency of one sample per 50 or 250 m³ depending on source. Chemical analysis is to comprise the analytes set out in the Schedule included as Appendix C. Chemical analyses should be compared against generic assessment criteria (GAC).

- Materials to be disposed of off-site will be sampled in accordance with the agreement and guidance received from the facility accepting the waste (e.g. WAC analysis for inert and hazardous wastes).
- Results of validation sampling.
- Details of how out of specification material has been identified (if applicable) during the watching brief and details of how this was dealt with will be included (if applicable).
- Details of any materials moved off-site with waste sheets.
- Final confirmation of the quantity of materials excavated at the source area and re-used at the placement area.
- Details of any site visits/correspondence with the LA or EA.

2.5 Audits

RSK shall attend site at regular intervals to verify excavation, transport and placement of materials. The frequency of site visits will vary depending on the programme of works. The works programme will be reviewed by contractor/developer/consultant on a regular basis to determine programme of site visits.

2.6 Completion

The data will be collated to form a Verification Report to be submitted to the regulators/CL:AIRE. All data will be kept in digital form by contractor/developer The LK Group Eton Business Park, Eton Hill Rd, Radcliffe, Manchester M26 2ZS for a minimum of two years.

FIGURES



LEGEND

00	09.12.2020	-	NP	LB	-
Rev.	Date	Amendment	Drawn	Chkd.	Appd.



The Old School,
Stillhouse Lane,
Bedminster,
Bristol.
BS3 4EB

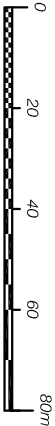
Tel: +44 (0)117 947 1006
Email: info@rsk.co.uk
Web: www.rsk.co.uk

Bury Council

Project Title
Fernhill Caravan Park, Every Street, Bury

Drawing Title
SITE LAYOUT PLAN

Drawn	Date	Checked	Date	Approved	Date
NP	09.12.20	LB	09.12.20	-	-
Dimensions	m	Scale	~1:1500	Original Size	A4
Project Number	11542	Drawing Number	Figure 2	Rev	00
Drawing File	11542 - Fig2 - R01(00) - Site Layout Plan				



APPENDIX A

RSK SERVICE CONSTRAINTS

1. This report and the site investigation carried out in connection with the report (together the "Services") were compiled and carried out by RSK Environment Limited (RSK) for John Southworth Builders Ltd in accordance with the terms of a contract [RSK Environment Standard Terms and Conditions] between RSK and the Client. The Services were performed by RSK with the reasonable skill and care ordinarily exercised by an environmental consultant at the time the Services were performed. Further, and in particular, the Services were performed by RSK taking into account the limits of the scope of works required by the client, the time scale involved and the resources, including financial and manpower resources, agreed between RSK and the Client.
2. Other than that, expressly contained in paragraph 1 above, RSK provides no other representation or warranty whether express or implied, in relation to the Services.
3. Unless otherwise agreed in writing, the Services were performed by RSK exclusively for the purposes of the Client. RSK is not aware of any interest of or reliance by any party other than the Client in or on the Services. Unless expressly provided in writing, RSK does not authorise, consent or condone any party other than the client relying upon the Services. Should this report or any part of this report, or otherwise details of the Services or any part of the Services be made known to any such party, and such party relies thereon that party does so wholly at its own and sole risk and RSK disclaims any liability to such parties. **Any such party would be well advised to seek independent advice from a competent environmental consultant and/or lawyer.**
4. It is RSK's understanding that this report is to be used for the purpose described in the introduction to the report. That purpose was a significant factor in determining the scope and level of the Services. Should the purpose for which the report is used, or the proposed use of the site change, this report may no longer be valid and any further use of or reliance upon the report in those circumstances by the client without RSK's review and advice shall be at the client's sole and own risk. Should RSK be requested to review the report after the date of this report, RSK shall be entitled to additional payment at the then existing rates or such other terms as agreed between RSK and the client.
5. The passage of time may result in changes in site conditions, regulatory or other legal provisions, technology or economic conditions which could render the report inaccurate or unreliable. The information and conclusions contained in this report should not be relied upon in the future without the written advice of RSK. In the absence of such written advice of RSK, reliance on the report in the future shall be at the Client's own and sole risk. Should RSK be requested to review the report in the future, RSK shall be entitled to additional payment at the then existing rate or such other terms as may be agreed between RSK and the client.
6. The observations and conclusions described in this report are based solely upon the Services which were provided pursuant to the agreement between the Client and RSK. RSK has not performed any observations, investigations, studies or testing not specifically set out or required by the contract between the client and RSK. RSK is not liable for the existence of any condition, the discovery of which would require performance of services not otherwise contained in the Services. For the avoidance of doubt, unless otherwise expressly referred to in the introduction to this report, RSK did not seek to evaluate the presence on or off site of asbestos, invasive plants, electromagnetic fields, lead paint, heavy metals, radon gas, persistent, bioaccumulative or toxic chemicals (including PFAS/ PFOS) or other radioactive or hazardous materials, unless specifically identified in the Services.
7. The Services are based upon RSK's observations of existing physical conditions at the Site gained from a visual inspection of the site together with RSK's interpretation of information, including documentation, obtained from third parties and from the Client on the history and usage of the site,

unless specifically identified in the Services or accreditation system (such as UKAS ISO 17020:2012 clause 7.1.6):

- a. The Services were based on information and/or analysis provided by independent testing and information services or laboratories upon which RSK was reasonably entitled to rely.
- b. The Services were limited by the accuracy of the information, including documentation, reviewed by RSK and the observations possible at the time of the visual inspection.
- c. The Services did not attempt to independently verify the accuracy or completeness of information, documentation or materials received from the client or third parties, including laboratories and information services, during the performance of the Services.

RSK is not liable for any inaccurate information or conclusions, the discovery of which inaccuracies required the doing of any act including the gathering of any information which was not reasonably available to RSK and including the doing of any independent investigation of the information provided to RSK save as otherwise provided in the terms of the contract between the Client and RSK.

8. The intrusive environmental site investigation aspects of the Services are a limited sampling of the site at pre-determined locations based on the known historic / operational configuration of the site. The conclusions given in this report are based on information gathered at the specific test locations and can only be extrapolated to an undefined limited area around those locations. The extent of the limited area depends on the properties of the materials adjacent and local conditions, together with the position of any current structures and underground utilities and facilities, and natural and other activities on site. In addition, chemical analysis was carried out for a limited number of parameters (as stipulated in the scope between the client and RSK, based on an understanding of the available operational and historical information) and it should not be inferred that other chemical species are not present.
9. Any site drawing(s) provided in this report is (are) not meant to be an accurate base plan but is (are) used to present the general relative locations of features on, and surrounding, the site. Features (intrusive and sample locations etc) annotated on site plans are not drawn to scale but are centred over the approximate location. Such features should not be used for setting out and should be considered indicative only.
10. The comments given in this report and the opinions expressed are based on the ground conditions encountered during the site work and on the results of tests made in the field and in the laboratory. However, there may be conditions pertaining to the site that have not been disclosed by the investigation and therefore could not be taken into account. In particular, it should be noted that there may be areas of made ground not detected due to the limited nature of the investigation or the thickness and quality of made ground across the site may be variable. In addition, groundwater levels and ground gas concentrations and flows, may vary from those reported due to seasonal, or other, effects and the limitations stated in the data should be recognised.
11. Asbestos is often observed to be present in soils in discrete areas. Whilst asbestos-containing materials may have been locally encountered during the fieldworks or supporting laboratory analysis, the history of brownfield and demolition sites indicates that asbestos fibres may be present more widely in soils and aggregates, which could be encountered during more extensive ground works.
12. Unless stated otherwise, only preliminary geotechnical recommendations are presented in this report and these should be verified in a Geotechnical Design Report, once proposed construction and structural design proposals are confirmed.

APPENDIX B

MATERIAL TRACKING FORM

Site name

Materials Tracker

[illegible]

APPENDIX C

GENERIC ASSESSMENT CRITERIA – RESIDENTIAL WITH HOME GROWN PRODUCE

Generic assessment criteria for human health: residential scenario with home-grown produce

Background

RSK's generic assessment criteria (GAC) were initially prepared following the publication by the Environment Agency (EA) of soil guideline value (SGV) and toxicological (TOX) reports, and associated publications in 2009⁽¹⁾. RSK GAC were updated following the publication of GAC by LQM/CIEH in 2009⁽²⁾. RSK GAC are periodically revised when updated information on toxicological, land use or receptor parameters is published.

Updates to the RSK GAC

In 2014, the publication of Category 4 Screening Levels (C4SL)^(3,4), as part of the Defra-funded research project SP1010, included modifications to certain exposure assumptions documented within EA Science Report SC050221/SR3 (herein after referred to as SR3)⁽⁵⁾ used in the generation of SGVs.

C4SL were initially published for six substances (cadmium, arsenic, benzene, benzo(a)pyrene, chromium VI and lead) for a sandy loam soil type with 6% soil organic matter, based on a low level of toxicological concern (LLTC; see Section 2.3 of research project report SP1010⁽³⁾). Further C4SL were published in 2021 for vinyl chloride, tetrachloroethene (PCE) and trichloroethene (TCE). Where a C4SL has been published, the RSK GAC duplicates the C4SL using all input parameters within the SP1010 final project report⁽³⁾ and associated chemical specific reports⁽⁶⁾, and adopts them as GAC for these substances. Due to the use of decimal places rather than significant figures applied to the Contaminated Land Exposure Assessment (CLEA) tool outputs, the GAC presented may be marginally differently to the C4SL values, however any differences between the values are minimal and would not equate to an unacceptable risk.

For all other substances the C4SL exposure modifications, with the exception of the “top two” produce type approach taken in the C4SL, have been applied to the current RSK GAC. These include alterations to daily inhalation rates for residential and commercial scenarios, reducing soil adherence factors in children (age classes 1 to 12 only) for residential land use, reducing exposure frequency for dermal contact outdoors for residential land use, and updated produce type consumption rates (90th percentile) based on recent data from the National Diet and Nutrition Survey.

The RSK GAC have also been revised with updated toxicology published by LQM/CIEH in 2015⁽⁷⁾ or by the USEPA⁽¹⁴⁾, where a C4SL has not been published.

RSK GAC derivation for metals and organic compounds

Model selection

Soil assessment criteria (SAC) were calculated using the CLEA tool v1.071, supporting EA guidance^(5,8,9) and revised exposure scenarios published for the C4SL⁽³⁾. The SAC are also termed GAC.

Conceptual model

In accordance with SR3⁽⁵⁾, the residential with home-grown produce scenario considers risks to a female child between the ages of 0 and 6 years old as the highest risk scenario. In accordance with Box 3.1 of SR3⁽⁵⁾, the pathways considered for production of the SAC in the residential with home-grown produce scenario are

- direct soil and dust ingestion
- consumption of home-grown produce
- consumption of soil attached to home-grown produce
- dermal contact with soil and indoor dust
- inhalation of indoor and outdoor dust and vapours.

Figure 1 is a conceptual model illustrating these linkages.

In line with guidance in the EA SGV report for cadmium⁽¹⁾, the RSK GAC for cadmium has been derived based on estimates representative of lifetime exposure. Although young children are generally more likely to have higher exposures to soil contaminants, the renal toxicity of cadmium, and the derivation of the TDI_{oral} and TDI_{inh} , are based on considerations of the kidney burden accumulated over 50 years or so. It is therefore reasonable to consider exposure not just in childhood but averaged over a longer period.

With respect to volatilisation, the CLEA model assumes a simple linear partitioning of a chemical in the soil between the sorbed, dissolved and vapour phase⁽⁹⁾. The upper boundaries of this partitioning are represented by the maximum aqueous solubility and pure saturated vapour concentration of the chemical. The CLEA model estimates saturated soil concentrations where these limits are reached⁽⁹⁾. The CLEA software uses a traffic light system to identify when individual and/or combined assessment criteria exceed the lower of either the aqueous- or vapour-based soil saturation limits. Model output cells are flagged red where the saturated soil concentration has been exceeded and the contribution of the indoor and outdoor vapour pathway to total exposure is greater than 10%. In this case, further consideration of the following is required⁽⁹⁾:

- Free phase contamination may be present.
- Exposure from the vapour pathways will be over-predicted by the model, as in reality the vapour phase concentration will not increase at concentrations above saturation limits
- Where the vapour pathway contribution is greater than 90%, it is unlikely the relevant health criteria value (HCV) will be exceeded at soil concentrations at least a factor of ten higher than the relevant HCV.

Where the vapour pathway is the predominant pathway (contributes greater than 90% of exposure) or the only exposure route considered and the cell is highlighted red (SAC exceeds saturation limit), the risk based on the assumed conceptual model is likely to be negligible as the vapour risk is assumed to be tolerable at maximum possible soil concentrations. In such circumstances, the vapour pathway exposure should be considered based on the presence of free phase or non-aqueous phase liquid sources and the measured concentrations of volatile organic compounds (VOC) in the vapour phase. Screening could be considered based on setting the SAC as the modelled soil saturation limits. However, as stated within the CLEA handbook⁽⁹⁾, this is likely to not be practical in many cases because of the very low saturation limits and, in any case, is highly conservative.

It should also be noted that for mixtures of compounds, free phase may be present where soil (or groundwater) concentrations are well below saturation limits for individual compounds.

Where the vapour pathway is only one of the exposure pathways considered, an additional approach can then be utilised as detailed within Section 4.12 of the CLEA model handbook⁽⁹⁾, which explains how to calculate an effective assessment criterion manually.

SR3⁽⁵⁾ states that, as a general rule of thumb, it is recognised that estimating vapour phase concentrations from dissolved and sorbed phase contamination by petroleum hydrocarbons are at least a factor of ten higher than those likely to be measured on-site. RSK has therefore applied an empirical subsurface to indoor air correction factor of 10 into the CLEA model chemical database for all petroleum hydrocarbon fractions (including BTEX, trimethylbenzenes and the polycyclic aromatic hydrocarbons (PAH) naphthalene, acenaphthene and acenaphthylene) to reduce this conservatism.

Input selection

The most up-to-date published chemical and toxicological data was obtained from EA Report SC050021/SR7⁽¹⁰⁾, the EA TOX⁽¹⁾ reports, the C4SL SP1010 project report and associated appendices^(3,6), the 2015 LQM/CIEH report⁽⁷⁾ or the USEPA IRIS database⁽¹⁴⁾. Where a LLTC^(3,6) has been published for a substance, RSK has used these input parameters to derive the RSK GAC. Toxicological and specific chemical parameters for 1,2,4-trimethylbenzene, barium, methyl tertiary-butyl ether (MTBE), 1,1,2-trichloroethane, 1,1-dichloroethene, 1,2-dichloropropane, 2-chloronaphthalene, chloroethane, chloromethane, cis 1,2-dichloroethene, dichloromethane, hexachloroethane and trans 1,2-dichloroethene were obtained from the CL:AIRE Soil Generic Assessment Criteria report⁽¹¹⁾.

For TPH, aromatic hydrocarbons C₅–C₈ were not modelled, as this range comprises benzene (>EC5-EC7) and toluene (>EC7-EC8), which are modelled separately.

Physical parameters

For the residential with home-grown produce scenario, the CLEA default building is a small, two-storey terrace house with a concrete ground-bearing slab. The house is assumed to have a 100m² private garden consisting of lawn and flowerbeds, incorporating a 20m² plot for growing fruit and vegetables consumed by the residents. SR3⁽⁵⁾ notes this residential building type to be the most conservative in terms of potential for vapour intrusion. The building parameters used in the production of the RSK GACs are the default CLEA v1.06 inputs presented in Table 3.3 of SR3⁽³⁾, with a dust loading factor detailed in Section 9.3 of SR3⁽⁵⁾. The parameters for a sandy loam soil type were used in line with Table 4.4 of SR3⁽⁵⁾. This includes a value of 6% for the percentage of soil organic matter (SOM) within the soil. In RSK's experience, this is rather high for many sites. To avoid undertaking site-specific risk assessments for SOM, RSK has produced an additional set of GAC for SOM of 1% and 2.5% for all substances using the CLEA tool.

Summary of modifications to the default CLEA SR3⁽⁵⁾ input parameters for residential with home-grown produce land-use scenario

In summary, the RSK GAC were produced using the default input parameters for soil properties, the air dispersion model, building properties and the vapour model detailed in SR3⁽⁵⁾. Modifications to the default SR3⁽⁵⁾ exposure scenarios based on the C4SL exposure scenarios⁽³⁾ are presented in Tables 2 and 3 below.

The final selected GAC are presented by pathway in Table 4 and the combined GAC in Table 5.

Figure 1: Conceptual model for residential scenario with home-grown produce

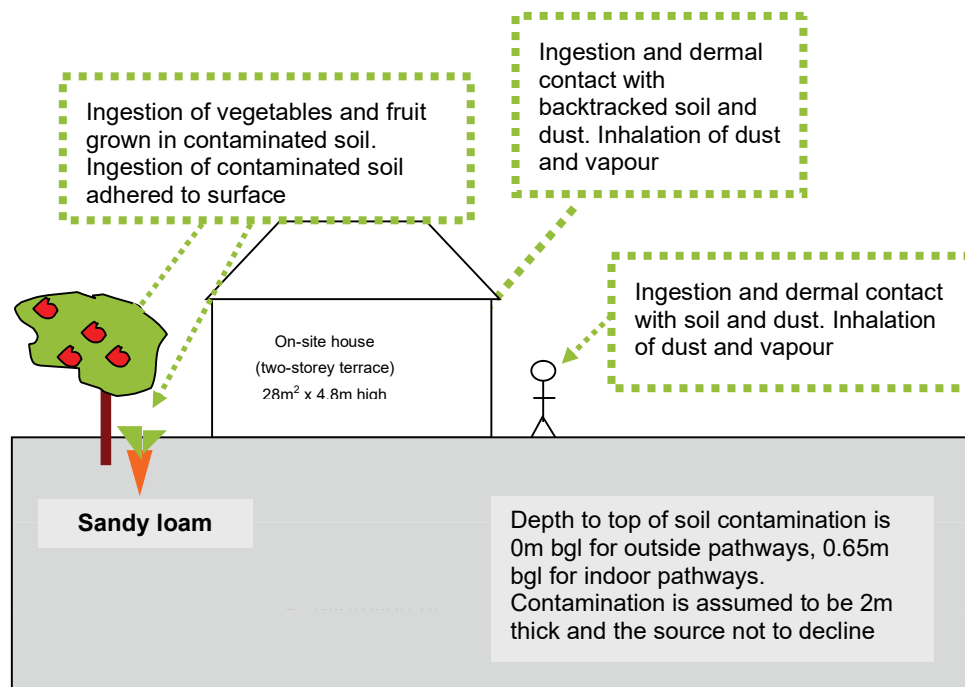


Table 1: Exposure assessment parameters for residential scenario with home-grown produce – inputs for CLEA model

Parameter	Value	Justification
Land use	Residential with homegrown produce	Chosen land use
Receptor	Female child age 1 to 6	Key generic assumption given in Box 3.1, SR3 ⁽⁵⁾
Building	Small terraced house	Key generic assumption given in Box 3.1, SR3. Small, two-storey terraced house chosen, as it is the most conservative residential building type in terms of protection from vapor intrusion (Section 3.4.6, SR3) ⁽⁵⁾
Soil type	Sandy Loam	Most common UK soil type (Section 4.3.1, from Table 3.1, SR3) ⁽⁵⁾
Start AC (age class)	1	Range of age classes corresponding to key generic assumption that the critical receptor is a young female child aged 0–6. From Box 3.1, SR3 ⁽⁵⁾
End AC (age class)	6	
SOM (%)	6	Representative of sandy loamy soil according to EA guidance note dated January 2009 entitled 'Changes We Have Made to the CLEA Framework Documents' ⁽¹³⁾
	1	To provide SAC for sites where SOM <6% as often observed by RSK
	2.5	
pH	7	Model default

Table 2: Residential with home-grown produce – modified home-grown produce data

Name	Consumption rate 90 th percentile (g FW kg ⁻¹ BW day ⁻¹) by age class						Dry weight conversion factor (g DW g ⁻¹ FW)	Home-grown fraction (average)	Home-grown fraction (high end)	Soil loading factor (g g ⁻¹ DW)	Preparation correction factor
	1	2	3	4	5	6					
Green vegetables	7.12	5.87	5.87	5.87	4.53	4.53	0.096	0.05	0.33	1.00E-03	2.00E-01
Root vegetables	10.7	2.83	2.83	2.83	2.14	2.14	0.103	0.06	0.4	1.00E-03	1.00E+00
Tuber vegetables	16	6.6	6.6	6.6	4.95	4.95	0.21	0.02	0.13	1.00E-03	1.00E+00
Herbaceous fruit	1.83	3.39	3.39	3.39	2.24	2.24	0.058	0.06	0.4	1.00E-03	6.00E-01
Shrub fruit	2.23	0.46	0.46	0.46	0.19	0.19	0.166	0.09	0.6	1.00E-03	6.00E-01
Tree fruit	3.82	10.3	10.3	10.3	5.16	5.16	0.157	0.04	0.27	1.00E-03	6.00E-01
Justification	Table 3.4, SP1010 ⁽³⁾						Table 6.3, SR3 ⁽⁵⁾	Table 4.19, SR3 ⁽⁵⁾		Table 6.3, SR3 ⁽⁵⁾	

Table 3: Residential with home-grown produce – modified use and receptor data

Parameter	Unit	Age class					
		1	2	3	4	5	6
EF (soil and dust ingestion)	day yr ⁻¹	180	365	365	365	365	365
EF (consumption of home-grown produce)	day yr ⁻¹	180	365	365	365	365	365
EF (skin contact, indoor)	day yr ⁻¹	180	365	365	365	365	365
EF (skin contact, outdoor)	day yr ⁻¹	170	170	170	170	170	170
EF (inhalation of dust and vapour, indoor)	day yr ⁻¹	365	365	365	365	365	365
EF (inhalation of dust and vapour, outdoor)	day yr ⁻¹	365	365	365	365	365	365
Justification		Table 3.5, SP1010 ⁽³⁾ ; Table 3.1, SR3 ⁽⁵⁾					
Soil to skin adherence factor (outdoor)	mg cm ⁻² day ⁻¹	0.1	0.1	0.1	0.1	0.1	0.1
Justification		Table 3.5, SP1010 ⁽³⁾					
Inhalation rate	m ³ day ⁻¹	5.4	8.0	8.9/f	10.1	10.1	10.1
Justification		Mean value USEPA, 2011 ⁽¹²⁾ ; Table 3.2, SP1010 ⁽³⁾					
Notes: For cadmium , the exposure assessment for a residential land use is based on estimates representative of lifetime exposure AC1-18. This is because the TDI _{oral} and TDI _{inh} are based on considerations of the kidney burden accumulated over 50 years. It is therefore reasonable to consider exposure not just in childhood but averaged over a longer period. See the Environment Agency Science Report SC05002/ TOX 3 ⁽¹⁾ , Science Report SC050021/Cadmium SGV ⁽¹⁾ and the project report SP1010 ⁽³⁾ for more information.							

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14. USEPA (2010). Hydrogen cyanide and cyanide salts. Integrated Risk Information Systems (IRIS) Chemical Assessment Summary. September 2010. <https://www.epa.gov/iris> (accessed 9 December 2015)

GENERIC ASSESSMENT CRITERIA FOR HUMAN HEALTH - RESIDENTIAL WITH HOME-GROWN PRODUCE



Table 4

Human Health Generic Assessment Criteria by Pathway for Residential With Home-Grown Produce Scenario

Compound	Notes	SAC Appropriate to Pathway SOM 1% (mg/kg)			Soil Saturation Limit (mg/kg)	SAC Appropriate to Pathway SOM 2.5% (mg/kg)			Soil Saturation Limit (mg/kg)	SAC Appropriate to Pathway SOM 6% (mg/kg)			Soil Saturation Limit (mg/kg)
		Oral	Inhalation	Combined		Oral	Inhalation	Combined		Oral	Inhalation	Combined	
Metals													
Arsenic	(a,b)	3.71E+01	5.26E+02	NR	NR	3.71E+01	5.26E+02	NR	NR	3.71E+01	5.26E+02	NR	NR
Barium	(b)	1.34E+03	NR	NR	NR	1.34E+03	NR	NR	NR	1.34E+03	NR	NR	NR
Beryllium		1.13E+02	1.72E+00	NR	NR	1.13E+02	1.72E+00	NR	NR	1.13E+02	1.72E+00	NR	NR
Boron		3.00E+02	5.20E+06	NR	NR	3.00E+02	5.20E+06	NR	NR	3.00E+02	5.20E+06	NR	NR
Cadmium	(a)	2.30E+01	4.88E+02	2.21E+01	NR	2.30E+01	4.88E+02	2.21E+01	NR	2.30E+01	4.88E+02	2.21E+01	NR
Chromium (III) - trivalent	(c)	1.84E+04	9.07E+02	NR	NR	1.84E+04	9.07E+02	NR	NR	1.84E+04	9.07E+02	NR	NR
Chromium (VI) - hexavalent	(a,d)	5.85E+01	2.06E+01	NR	NR	5.85E+01	2.06E+01	NR	NR	5.85E+01	2.06E+01	NR	NR
Copper		2.72E+03	1.41E+04	2.47E+03	NR	2.72E+03	1.41E+04	2.47E+03	NR	2.72E+03	1.41E+04	2.47E+03	NR
Lead	(a)	2.01E+02	NR	NR	NR	2.01E+02	NR	NR	NR	2.01E+02	NR	NR	NR
Elemental Mercury (Hg ⁰)	(d)	NR	2.35E-01	NR	4.31E+00	NR	5.60E-01	NR	1.07E+01	NR	1.22E+00	NR	2.58E+01
Inorganic Mercury (Hg ²⁺)		3.95E+01	3.63E+03	3.91E+01	NR	3.95E+01	3.63E+03	3.91E+01	NR	3.95E+01	3.63E+03	3.91E+01	NR
Methyl Mercury (Hg ⁴⁺)		1.26E+01	1.87E+01	7.52E+00	7.33E+01	1.26E+01	3.62E+01	9.34E+00	1.42E+02	1.26E+01	7.68E+01	1.08E+01	3.04E+02
Nickel	(d)	1.27E+02	1.81E+02	NR	NR	1.27E+02	1.81E+02	NR	NR	1.27E+02	1.81E+02	NR	NR
Selenium	(b)	2.58E+02	NR	NR	NR	2.58E+02	NR	NR	NR	2.58E+02	NR	NR	NR
Vanadium		4.13E+02	1.46E+03	NR	NR	4.13E+02	1.46E+03	NR	NR	4.13E+02	1.46E+03	NR	NR
Zinc	(b)	3.86E+03	3.63E+07	NR	NR	3.86E+03	3.63E+07	NR	NR	3.86E+03	3.63E+07	NR	NR
Cyanide (free)		1.37E+00	1.37E+04	1.37E+00	NR	1.37E+00	1.37E+04	1.37E+00	NR	1.37E+00	1.37E+04	1.37E+00	NR
Volatile Organic Compounds													
Benzene	(a)	2.62E-01	9.01E-01	2.03E-01	1.22E+03	5.39E-01	1.68E+00	4.08E-01	2.26E+03	1.16E+00	3.48E+00	8.72E-01	4.71E+03
Toluene		1.53E+02	9.08E+02	1.31E+02	8.69E+02	3.49E+02	2.00E+03	2.97E+02	1.92E+03	7.95E+02	4.55E+03	6.77E+02	4.36E+03
Ethylbenzene		1.10E+02	8.34E+01	4.74E+01	5.18E+02	2.61E+02	1.96E+02	1.12E+02	1.22E+03	6.00E+02	4.58E+02	2.60E+02	2.84E+03
Xylene - m		2.10E+02	8.25E+01	5.92E+01	6.25E+02	5.01E+02	1.95E+02	1.40E+02	1.47E+03	1.15E+03	4.56E+02	3.27E+02	3.46E+03
Xylene - o		1.92E+02	8.87E+01	6.07E+01	4.78E+02	4.56E+02	2.08E+02	1.43E+02	1.12E+03	1.05E+03	4.86E+02	3.32E+02	2.62E+03
Xylene - p		1.98E+02	7.93E+01	5.66E+01	5.76E+02	4.70E+02	1.86E+02	1.33E+02	1.35E+03	1.08E+03	4.36E+02	3.10E+02	3.17E+03
Total xylene		1.92E+02	7.93E+01	5.66E+01	6.25E+02	4.56E+02	1.86E+02	1.33E+02	1.47E+03	1.05E+03	4.36E+02	3.10E+02	3.46E+03
Methyl tertiary-Butyl ether (MTBE)		1.54E+02	1.04E+02	6.22E+01	2.04E+04	2.97E+02	1.69E+02	1.08E+02	3.31E+04	6.03E+02	3.21E+02	2.10E+02	6.27E+04
1,1,1,2-Tetrachloroethane		5.39E+00	1.54E+00	1.20E+00	2.60E+03	1.27E+01	3.56E+00	2.78E+00	6.02E+03	2.92E+01	8.29E+00	6.46E+00	1.40E+04
1,1,2,2-Tetrachloroethane		2.81E+00	3.92E+00	1.64E+00	2.67E+03	6.10E+00	8.04E+00	3.47E+00	5.46E+03	1.36E+01	1.76E+01	7.67E+00	1.20E+04
1,1,1-Trichloroethane		3.33E+02	9.01E+00	8.77E+00	1.43E+03	7.26E+02	1.84E+01	1.80E+01	2.92E+03	1.62E+03	4.04E+01	3.94E+01	6.39E+03
1,1,2 Trichloroethane		1.95E+00	1.25E+00	7.62E-01	4.03E+03	4.21E+00	2.55E+00	1.59E+00	8.21E+03	9.35E+00	5.59E+00	3.50E+00	1.80E+04
1,1-Dichloroethene		1.93E+01	3.29E-01	3.23E-01	2.23E+03	3.85E+01	5.82E-01	5.74E-01	3.94E+03	8.15E+01	1.17E+00	1.16E+00	7.94E+03
1,2-Dichloroethane		3.17E-02	9.20E-03	7.13E-03	3.41E+03	5.73E-02	1.33E-02	1.08E-02	4.91E+03	1.09E-01	2.28E-02	1.88E-02	8.43E+03
1,2,4-Trimethylbenzene		NR	1.76E+00	NR	4.74E+02	NR	4.26E+00	NR	1.16E+03	NR	9.72E+00	NR	2.76E+03
1,3,5-Trimethylbenzene	(e)	NR	NR	NR	2.30E+02	NR	NR	NR	5.52E+02	NR	NR	NR	1.30E+03
1,2-Dichloropropane		4.28E+00	3.40E-02	3.37E-02	1.19E+03	8.44E+00	6.00E-02	5.96E-02	2.11E+03	1.77E+01	1.21E-01	1.20E-01	4.24E+03
Carbon Tetrachloride (tetrachloromethane)		3.10E+00	2.58E-02	2.57E-02	1.52E+03	7.11E+00	5.65E-02	5.62E-02	3.32E+03	1.62E+01	1.28E-01	1.27E-01	7.54E+03
Chloroethane		NR	1.17E+01	NR	2.61E+03	NR	1.59E+01	NR	3.54E+03	NR	2.57E+01	NR	5.71E+03
Chloromethane		NR	1.17E-02	NR	1.91E+03	NR	1.38E-02	NR	2.24E+03	NR	1.85E-02	NR	2.99E+03
Cis 1,2 Dichloroethene		1.56E-01	NR	NR	3.94E+03	2.66E-01	NR	NR	6.61E+03	5.18E-01	NR	NR	1.29E+04
Dichloromethane		7.04E-01	3.05E+00	6.24E-01	7.27E+03	1.27E+00	4.06E+00	1.08E+00	9.68E+03	2.33E+00	6.42E+00	1.92E+00	1.53E+04
Tetrachloroethene (PCE)		1.33E+01	3.19E-01	3.11E-01	4.24E+02	3.11E+01	7.15E-01	6.99E-01	9.51E+02	7.12E+01	1.64E+00	1.60E+00	2.18E+03
Trans 1,2 Dichloroethene		6.45E+00	2.76E-01	NR	3.42E+03	1.29E+01	4.99E-01	NR	6.17E+03	2.74E+01	1.02E+00	NR	1.26E+04
Trichloroethene (TCE)		9.30E-03	3.61E-02	NR	1.54E+03	1.95E-02	7.57E-02	NR	3.22E+03	4.34E-02	1.68E-01	NR	7.14E+03
Vinyl Chloride (chloroethene)		1.13E-02	1.47E-02	6.38E-03	1.36E+03	2.09E-02	1.90E-02	9.97E-03	1.76E+03	3.88E-02	2.91E-02	1.68E-02	2.69E+03
Semi-Volatile Organic Compounds													
2-Chloronaphthalene		2.76E+02	5.39E+00	5.29E+00	1.14E+02	6.59E+02	1.33E+01	1.30E+01	2.80E+02	1.45E+03	3.17E+01	3.10E+01	6.69E+02

GENERIC ASSESSMENT CRITERIA FOR HUMAN HEALTH - RESIDENTIAL WITH HOME-GROWN PRODUCE



Table 4

Human Health Generic Assessment Criteria by Pathway for Residential With Home-Grown Produce Scenario

Compound	Notes	SAC Appropriate to Pathway SOM 1% (mg/kg)			Soil Saturation Limit (mg/kg)	SAC Appropriate to Pathway SOM 2.5% (mg/kg)			Soil Saturation Limit (mg/kg)	SAC Appropriate to Pathway SOM 6% (mg/kg)			Soil Saturation Limit (mg/kg)
		Oral	Inhalation	Combined		Oral	Inhalation	Combined		Oral	Inhalation	Combined	
Acenaphthene		2.27E+02	4.86E+04	2.26E+02	5.70E+01	5.41E+02	1.18E+05	5.38E+02	1.41E+02	1.18E+03	2.68E+05	1.17E+03	3.36E+02
Acenaphthylene		1.85E+02	4.59E+04	1.84E+02	8.61E+01	4.42E+02	1.11E+05	4.40E+02	2.12E+02	9.78E+02	2.53E+05	9.74E+02	5.06E+02
Anthracene		2.43E+03	1.53E+05	2.39E+03	1.17E+00	5.53E+03	3.77E+05	5.45E+03	2.91E+00	1.10E+04	8.76E+05	1.09E+04	6.96E+00
Benzo(a)anthracene		1.01E+01	2.47E+01	7.18E+00	1.71E+00	1.42E+01	4.37E+01	1.07E+01	4.28E+00	1.69E+01	6.26E+01	1.33E+01	1.03E+01
Benzo(a)pyrene	(a)	4.96E+00	3.51E+01	NR	9.11E-01	4.96E+00	3.77E+01	NR	2.28E+00	4.96E+00	3.89E+01	NR	5.46E+00
Benzo(b)fluoranthene		2.96E+00	1.93E+01	2.56E+00	1.22E+00	3.89E+00	2.13E+01	3.29E+00	3.04E+00	4.43E+00	2.22E+01	3.69E+00	7.29E+00
Benzo(g,h,i)perylene		3.77E+02	1.87E+03	3.14E+02	1.54E-02	4.09E+02	1.94E+03	3.38E+02	3.85E-02	4.23E+02	1.97E+03	3.48E+02	9.23E-02
Benzo(k)fluoranthene		8.92E+01	5.41E+02	7.66E+01	6.87E-01	1.10E+02	5.76E+02	9.22E+01	1.72E+00	1.21E+02	5.91E+02	1.00E+02	4.12E+00
Chrysene		1.66E+01	1.19E+02	1.46E+01	4.40E-01	2.54E+01	1.49E+02	2.17E+01	1.10E+00	3.19E+01	1.66E+02	2.67E+01	2.64E+00
Dibenzo(a,h)anthracene		2.90E-01	1.45E+00	2.41E-01	3.93E-03	3.43E-01	1.64E+00	2.84E-01	9.82E-03	3.69E-01	1.74E+00	3.04E-01	2.36E-02
Fluoranthene		2.87E+02	3.83E+04	2.85E+02	1.89E+01	5.63E+02	8.87E+04	5.60E+02	4.73E+01	9.00E+02	1.83E+05	8.96E+02	1.13E+02
Fluorene		1.77E+02	6.20E+03	1.72E+02	3.09E+01	4.19E+02	1.53E+04	4.07E+02	7.65E+01	8.98E+02	3.62E+04	8.77E+02	1.83E+02
Hexachloroethane		2.68E-01	NR	NR	8.17E+00	6.57E-01	NR	NR	2.01E+01	1.55E+00	NR	NR	4.81E+01
Indeno(1,2,3-cd)pyrene		3.09E+01	2.12E+02	2.70E+01	6.13E-02	4.22E+01	2.38E+02	3.59E+01	1.53E-01	4.92E+01	2.50E+02	4.11E+01	3.68E-01
Naphthalene		2.78E+01	2.33E+01	1.27E+01	7.64E+01	6.66E+01	5.58E+01	3.04E+01	1.83E+02	1.53E+02	1.31E+02	7.06E+01	4.32E+02
Phenanthrene		9.85E+01	7.17E+03	9.72E+01	3.60E+01	2.24E+02	1.76E+04	2.22E+02	8.96E+01	4.48E+02	4.07E+04	4.43E+02	2.14E+02
Pyrene		6.25E+02	8.79E+04	6.20E+02	2.20E+00	1.25E+03	2.04E+05	1.24E+03	5.49E+00	2.05E+03	4.23E+05	2.04E+03	1.32E+01
Phenol		1.60E+02	4.58E+02	1.20E+02	2.42E+04	2.96E+02	6.95E+02	2.09E+02	3.81E+04	5.86E+02	1.19E+03	3.93E+02	7.03E+04

Total Petroleum Hydrocarbons

Aliphatic hydrocarbons EC ₅ -EC ₆		4.99E+03	4.24E+01	4.23E+01	3.04E+02	1.13E+04	7.79E+01	7.78E+01	5.58E+02	2.50E+04	1.61E+02	1.60E+02	1.15E+03
Aliphatic hydrocarbons >EC ₅ -EC ₆		1.49E+04	1.04E+02	1.03E+02	1.44E+02	3.43E+04	2.31E+02	2.31E+02	3.22E+02	7.11E+04	5.29E+02	5.28E+02	7.36E+02
Aliphatic hydrocarbons >EC ₆ -EC ₁₀		1.61E+03	2.68E+01	2.67E+01	7.77E+01	2.91E+03	6.55E+01	6.51E+01	1.90E+02	4.26E+03	1.56E+02	1.54E+02	4.51E+02
Aliphatic hydrocarbons >EC ₁₀ -EC ₁₂		4.57E+03	1.33E+02	1.32E+02	4.75E+01	5.51E+03	3.31E+02	3.26E+02	1.18E+02	5.98E+03	7.93E+02	7.65E+02	2.83E+02
Aliphatic hydrocarbons >EC ₁₂ -EC ₁₆		6.27E+03	1.11E+03	1.06E+03	2.37E+01	6.34E+03	2.78E+03	2.41E+03	5.91E+01	6.36E+03	6.67E+03	4.34E+03	1.42E+02
Aliphatic hydrocarbons >EC ₁₆ -EC ₃₅	(b)	6.46E+04	NR	NR	8.48E+00	9.17E+04	NR	NR	2.12E+01	1.10E+05	NR	NR	5.09E+01
Aliphatic hydrocarbons >EC ₃₅ -EC ₄₄	(b)	6.46E+04	NR	NR	8.48E+00	9.17E+04	NR	NR	2.12E+01	1.10E+05	NR	NR	5.09E+01
Aromatic hydrocarbons >EC8-EC ₁₀		5.76E+01	4.74E+01	3.45E+01	6.13E+02	1.38E+02	1.16E+02	8.38E+01	1.50E+03	3.07E+02	2.77E+02	1.94E+02	3.58E+02
Aromatic hydrocarbons >EC ₁₀ -EC ₁₂		8.29E+01	2.58E+02	7.52E+01	3.64E+02	1.96E+02	6.39E+02	1.79E+02	8.99E+02	4.25E+02	1.52E+03	3.91E+02	2.15E+03
Aromatic hydrocarbons >EC ₁₂ -EC ₁₆		1.47E+02	2.85E+03	1.45E+02	1.69E+02	3.36E+02	7.07E+03	3.32E+02	4.19E+02	6.81E+02	1.68E+04	6.74E+02	1.00E+03
Aromatic hydrocarbons >EC ₁₆ -EC ₂₁	(b)	2.63E+02	NR	NR	5.37E+01	5.45E+02	NR	NR	1.34E+02	9.34E+02	NR	NR	3.21E+02
Aromatic hydrocarbons >EC ₂₁ -EC ₃₅	(b)	1.09E+03	NR	NR	4.83E+00	1.47E+03	NR	NR	1.21E+01	1.70E+03	NR	NR	2.90E+01
Aromatic hydrocarbons >EC ₃₅ -EC ₄₄	(b)	1.09E+03	NR	NR	4.83E+00	1.47E+03	NR	NR	1.21E+01	1.70E+03	NR	NR	2.90E+01

Notes:

EC - equivalent carbon. SAC - soil assessment criteria.

The CLEA model output is colour coded depending upon whether the soil saturation limit has been exceeded.

	Calculated SAC exceeds soil saturation limit and may significantly affect the interpretation of any exceedances as the contribution of the indoor and outdoor vapour pathway to total exposure is >10%.
	Calculated SAC exceeds soil saturation limit but the exceedance will not affect the SAC significantly as the contribution of the indoor and outdoor vapour pathway to total exposure is <10%.
	Calculated SAC does not exceed the soil saturation limit.

The SAC for organic compounds are dependant upon soil organic matter (SOM) (%) content. To obtain SOM from total organic carbon (TOC) (%) divide by 0.58. 1% SOM is 0.58% TOC. DL Rowell Soil Science: Methods and Applications, Longmans, 1994.

SAC for TPH fractions, PAHs naphthalene, acenaphthene and acenaphthylene, BTEX and trimethylbenzene compounds were produced using an attenuation factor for the indoor air inhalation pathway of 10 to reduce conservatism associated with the vapour inhalation pathway (Section 10.1.1, SR3)

(a) SAC for arsenic, benzene, benzo(a)pyrene, cadmium, chromium VI and lead are derived using the C4SL toxicology data.

(b) SAC for boron and selenium should not include the inhalation pathway as no expert group HCV has been derived; aliphatic and aromatic hydrocarbons >EC16 should not include inhalation pathway due to their non-volatile nature and inhalation exposure being minimal (oral, dermal and inhalation exposure is compared to the oral HCV); arsenic should only be based on oral contribution (rather than combined) owing to the relative small contribution from inhalation in accordance with the SGV report. The Oral SAC should be adopted for zinc and benzo(a)pyrene.

(c) SAC for CrIII should be based on the lower of the oral and inhalation SAC (see LQM/CIEH 2015 Section 6.8)

(d) SAC for elemental mercury, chromium VI and nickel should be based on the inhalation pathway only.

(e) SAC for 1,3,5-trimethylbenzene is not recorded owing to the lack of toxicological data, SAC for 1,2,4 trimethylbenzene may be used.

GENERIC ASSESSMENT CRITERIA FOR HUMAN HEALTH - RESIDENTIAL WITH HOME-GROWN PRODUCE



Table 5
Human Health Generic Assessment Criteria for Residential with home-grown produce

Compound	SAC for Soil SOM 1% (mg/kg)	SAC for Soil SOM 2.5% (mg/kg)	SAC for Soil SOM 6% (mg/kg)
Metals			
Arsenic	37	37	37
Barium	1,300	1,300	1,300
Beryllium	1.7	1.7	1.7
Boron	300	300	300
Cadmium	22	22	22
Chromium (III) - trivalent	910	910	910
Chromium (VI) - hexavalent	21	21	21
Copper	2,500	2,500	2,500
Lead	200	200	200
Elemental Mercury (Hg ⁰)	0.2	0.6	1.2
Inorganic Mercury (Hg ²⁺)	39	39	39
Methyl Mercury (Hg ⁴⁺)	10	10	10
Nickel	130	130	130
Selenium	258	258	258
Vanadium	410	410	410
Zinc	3,900	3,900	3,900
Cyanide (free)	1.4	1.4	1.4
Volatile Organic Compounds			
Benzene	0.20	0.41	0.87
Toluene	130	300	680
Ethylbenzene	50	110	260
Xylene - m	59	140	327
Xylene - o	61	143	332
Xylene - p	57	133	310
Total xylene	57	133	310
Methyl tertiary-Butyl ether (MTBE)	60	110	210
1,1,1,2 Tetrachloroethane	1.20	2.78	6.46
1,1,2,2-Tetrachloroethane	1.6	3.5	7.7
1,1,1-Trichloroethane	9	18	39
1,1,2 Trichloroethane	0.8	1.6	3.5
1,1-Dichloroethene	0.32	0.57	1.16
1,2-Dichloroethane	0.007	0.011	0.019
1,2,4-Trimethylbenzene	1.8	4.3	9.7
1,3,5-Trimethylbenzene	NR	NR	NR
1,2-Dichloropropane	0.034	0.060	0.120
Carbon Tetrachloride (tetrachloromethane)	0.026	0.056	0.127
Chloroethane	11.7	15.9	25.7
Chloromethane	0.012	0.014	0.019
Cis 1,2 Dichloroethene	0.16	0.27	0.52
Dichloromethane	0.62	1.08	1.92
Tetrachloroethene (PCE)	0.31	0.70	1.60
Trans 1,2 Dichloroethene	0.28	0.50	1.02
Trichloroethene (TCE)	0.009	0.020	0.043
Vinyl Chloride (chloroethene)	0.006	0.010	0.017
Semi-Volatile Organic Compounds			
2-Chloronaphthalene	5	13	31
Acenaphthene	230	540	1,170
Acenaphthylene	180	440	970
Anthracene	2,400	5,500	10,900
Benzo(a)anthracene	7	11	13
Benzo(a)pyrene	5	5	5
Benzo(b)fluoranthene	2.6	3.3	3.7
Benzo(g,h,i)perylene	310	340	350
Benzo(k)fluoranthene	77	92	100
Chrysene	15	22	27
Dibenzo(a,h)anthracene	0.24	0.28	0.30
Fluoranthene	290	560	900
Fluorene	170	410	880
Hexachloroethane	0.27	0.66	1.55
Indeno(1,2,3-cd)pyrene	13	30	71
Naphthalene	13	30	71
Phenanthrene	100	220	440
Pyrene	620	1,240	2,040
Phenol	120	210	390
Total Petroleum Hydrocarbons			
Aliphatic hydrocarbons EC ₅ -EC ₆	42	78	160
Aliphatic hydrocarbons >EC ₆ -EC ₈	100	230	530
Aliphatic hydrocarbons >EC ₈ -EC ₁₀	27	65	154
Aliphatic hydrocarbons >EC ₁₀ -EC ₁₂	130 (48)	330 (118)	760 (283)
Aliphatic hydrocarbons >EC ₁₂ -EC ₁₆	1,100 (24)	2,400 (59)	4,300 (142)
Aliphatic hydrocarbons >EC ₁₆ -EC ₃₅	65,000 (8)	92,000 (21)	110,000
Aliphatic hydrocarbons >EC ₃₅ -EC ₄₄	65,000 (8)	92,000 (21)	110,000
Aromatic hydrocarbons >EC ₈ -EC ₁₀	30	80	190
Aromatic hydrocarbons >EC ₁₀ -EC ₁₂	80	180	390
Aromatic hydrocarbons >EC ₁₂ -EC ₁₆	140	330	670
Aromatic hydrocarbons >EC ₁₆ -EC ₂₁	260	540	930
Aromatic hydrocarbons >EC ₂₁ -EC ₃₅	1,100	1,500	1,700
Aromatic hydrocarbons >EC ₃₅ -EC ₄₄	1,100	1,500	1,700
Minerals			
Asbestos	Stage 1 test – No asbestos detected with ID; Stage 2 test - <0.001% dry weight (exceedance of either equates to an exceedance of the GAC) ¹		
Notes:			
¹: Generic assessment criteria not calculated owing to low volatility of substance and therefore no pathway, or an absence of toxicological data.			
NR - SAC for 1,3,5-trimethylbenzene is not recorded owing to the lack of toxicological data, SAC for 1,2,4 trimethylbenzene may be used			
EC - equivalent carbon. SAC - soil assessment criteria.			
¹ LOD for weight of asbestos per unit weight of soil calculated on a dry weight basis using PLM, handpicking and gravimetry.			
The SAC for organic compounds are dependent on Soil Organic Matter (SOM) (%) content. To obtain SOM from total organic carbon (TOC) (%) divide by 0.58.			
1% SOM is 0.58% TOC. DL Rowell Soil Science: Methods and Applications, Longmans, 1994.			
SAC for TPH fractions, PAHs naphthalene, acenaphthene and acenaphthylene, BTEX and trimethylbenzene compounds were produced using an attenuation factor for the indoor air inhalation pathway of 10 to reduce conservatism associated with the vapour inhalation pathway, section 10.1.1, SR3.			
(VALUE IN BRACKETS)			
RSK has adopted an approach for petroleum hydrocarbons in accordance with LQM/CIEH whereby the concentration modelled for each petroleum hydrocarbon fraction has been tabulated as the SAC with the corresponding solubility or vapour saturation limits given in brackets.			

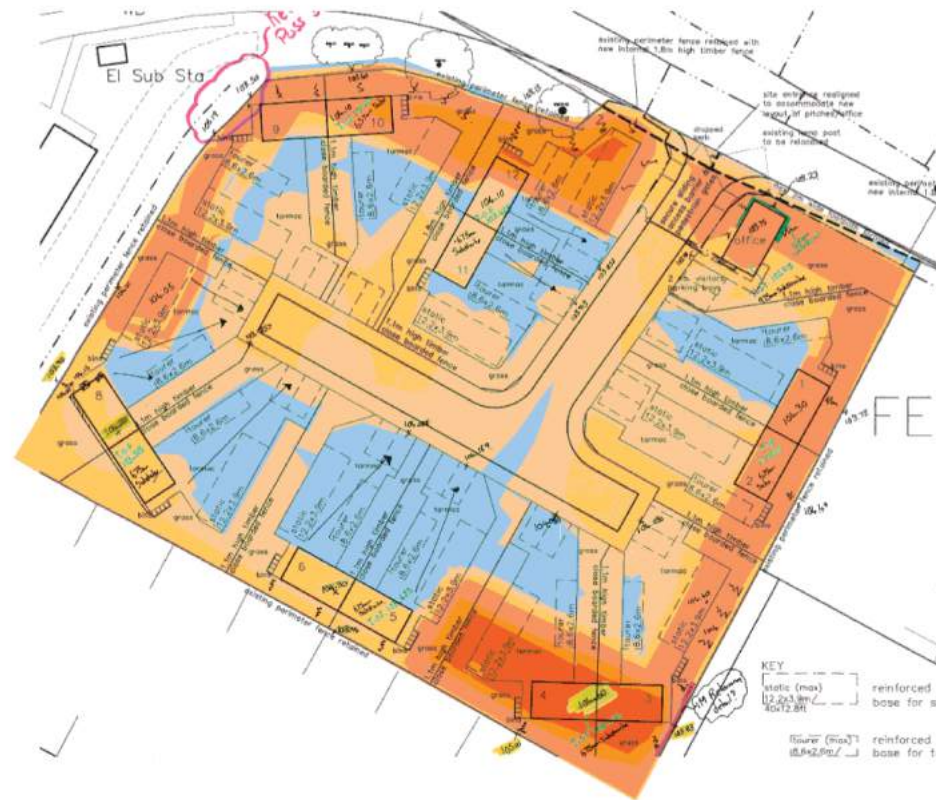
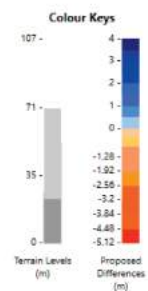
APPENDIX D

CUT/FILL DRAWING

Cut
Volume 3,883.52m³
2D Area 5,161.87m²
3D Area 5,311.54m²
Depths 0.75m Av., 3.23m Max.
Levels 102.42m to 107.00m

Fill
Volume 185.95m³
2D Area 1,398.38m²
3D Area 1,419.51m²
Heights 0.13m Av., 0.53m Max.
Levels 103.07m to 105.04m

Cut & Fill
Net Volume 3,697.57m³ cut
2D Area 6,560.25m²
3D Area 6,731.05m²
Differences -3.23m to 0.53m, -0.56m Av.
Levels 102.42m to 107.00m



KEY
state (max) reinforced concrete base for sto
102.243.8m/2 reinforced concrete base for sto
102.243.8m/2 reinforced concrete base for sto

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NOTES

1. ALL LEVELS TO ROAD
2. DO NOT SCALE FROM THIS DRAWING
- 3.

KEY

XXX

REV DESCRIPTION DATE BY

CLIENT

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JOB TITLE

EVERY STREET, BURY

DRAWING TITLE

CUT/FILL CALCULATIONS

DRAWN DATE 17/10/2022 APPROVED DATE 17/10/2022

SCALE NTS SHEET A4 DRAWING NUMBER LK221029_MMP_01 REVISION 0



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DOCUMENT QUALITY ASSURANCE

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1 INTRODUCTION

1.1 The Commission

- 1.1.1 LK Remediate Limited (LKR) were commissioned by John Southworth Builders (JSB) to undertake site remediation and enabling works for the development of the site at Fernhill Caravan Park, Every Street, Bury.

1.2 Site Description

- 1.2.1 The site is located off Every Street, Bury, BL9 5BN centred at approximate National Grid Reference 380511E, 411710N. The site occupies an area of approximately 7,000m², with elevation ranging between 103 - 107 mAOD.
- 1.2.2 The site location is shown below:



Figure 1 : Site Location

- 1.2.3 The site is located within a predominantly industrial and commercial area. Surrounding land uses are as follows:

Table 1 : Adjacent Land Usage

QUADRANT	LAND USE
NORTH	Residential properties and a primary school (St John with St Mark)
EAST	Industrial and commercial units, with residential properties beyond
SOUTH	Traveller residential site, with further industrial and commercial units beyond
WEST	Waste transfer station and civic amenity site, with railway beyond

- 1.2.4 The site was previously occupied by a residential site for travellers, with 17 caravan plots and 6 amenity buildings. The site was surrounded on all four sides by a screening bund, Within the screening bund, most of the site was laid to tarmac.

1.3 Proposed Development

- 1.3.1 The proposed development comprises the complete demolition of all existing facilities. The 17 existing plots will be reduced to 12, with six single-storey double-facilities blocks; each block is to be shared between two plots. A new administration building will be provided at the site entrance. Each plot will contain sufficient space for a mobile and a static caravan.
- 1.3.2 The proposed development layout is shown on Drawing 19144-101G prepared by Paddock Johnson Partnership (presented in Appendix 12).

1.4 Enabling Works Verification Report

- 1.4.1 The remediation strategy considered that the remediation works are split into 'pre-construction' (or enabling works) phase and the 'build phase' (i.e. during the development works) phase.
- 1.4.2 The scope of this verification report covers the 'pre-construction' enabling works phase. A 'post-construction' build phase verification report will also be required.
- 1.4.3 The aim of this report is to demonstrate to the Local Authority (LA) that the site has been suitably remediated to the extent that construction works may commence and the site is suitable for use (subject to regulatory approval of the 'post- construction' remediation works).
- 1.4.4 This Verification Report aims to:
- Summarise the background to the enabling works.
 - Describe site enabling and pre-construction remediation works undertaken.
 - Describe additions and variations to works outlined in the agreed pre-construction phase of remediation works.
 - Provide an assessment of site won material earmarked for reuse in the development.
 - Demonstrate that re-used site generated materials cannot be considered a waste.
 - Describe further 'build phase' remediation works to be completed.

2 BACKGROUND

2.1 Previous Reports

2.1.1 The following reports have previously been prepared in relation to the site and should be read in conjunction with this report:

- Preliminary Risk Assessment (ref: 11542-01 [R00], dated December 2020), prepared by RSK Environment Ltd;
- Geo-environmental and Geotechnical Site Investigation (ref: 11542-02 [R00], dated August 2021);
- Remediation Strategy (ref: 11752-01 [R00], dated October 2022), prepared by RSK Environment Ltd; and
- Materials Management Plan (ref: 11752 MMP [R Final], dated November 2022, prepared by RSK Environment Ltd.

2.2 Summary of Previous Work

2.2.1 The key findings of the previous assessments and investigation work are summarised below:

- Historic records show that the site was part of a large gravel pit, shown to be completely infilled by 1930. A rail line is shown cutting through the site in the early 20th century. The site was used as a council depot since 1978.
- Adjacent historic land uses were predominantly industrial, with maps showing the presence of woollen mills, hat/textile works, an iron foundry, chemical works and a saw mill. A refuse incinerator is shown from the late 19th century; it is considered possible that some or much of the former gravel pit may have been infilled using materials generated by the incinerator.
- The depth of made ground varied across the site and was generally recorded between depths of 0.50-1.90mbgl, although a depth of 5.4mbgl was recorded in Borehole 2, thought to coincide with the infilled gravel pit.
- The made ground was predominantly gravelly clay and silty sand with significant anthropogenic material (concrete, brick, bitumen, tar, glass, wood and clinker). The material encountered in Borehole 2 was found to be distinctly different and comprised ash and clinker with metal fragments.

2.2.2 The Remediation Strategy considered a number of pollutant linkages:

- **Pollutant Linkage 1** – Plausible contaminant linkage to future residents via oral, dermal and inhalation exposure with impacted soil and soil vapour inhalation. It was concluded that made ground present on site, both underlying and contained within the bund around the site boundary was not suitable to be present at the surface and accessible to residents for the proposed end use as a caravan park, as well as construction and maintenance workers who may be required to excavate where services are located.
- **Pollutant Linkage 2** – Plausible contaminant linkage to future residents by inhalation of airborne asbestos fibres from impact soil. It was concluded that a linkage exists between asbestos and future site users, and for construction workers and users of adjacent sites during the development period such that appropriate mitigation measures will be required.
- **Pollutant Linkage 3** – Plausible contaminant linkage to plant growth by vegetation

uptake of contaminants. It was concluded that phytotoxic metals were above threshold concentrations within the made ground, although not above human health threshold concentrations. As the made ground requires remediation and mitigation due to other compounds and elements, the phytotoxic assessment becomes irrelevant and is addressed within the mitigation requirements.

- » **Pollutant Linkage 4** – Plausible contaminant linkage to water supply pipes via permeation of plastic by organic soil contaminants (with implications for human health). It was concluded that a relevant linkage was likely to exist associated with organic contaminants due to polycyclic aromatic hydrocarbon compounds within the TPH CWG analysis, and that barrier pipework will be required for the potable water supply on site.
- » **Pollutant Linkage 5** – Plausible contaminant linkage to groundwater in the underlying aquifer via leaching of soil contaminants and dissolved phase migration from potentially impacted made ground. It was concluded that groundwater analysis of samples obtained from the boreholes did not indicate that mobile contamination is present.
- » **Pollutant Linkage 6** – Plausible contaminant linkage to future site residents from migration of on-site ground gases and vapours into indoor areas via preferential pathways (such as backfill around services or compromised drainage) with subsequent risk of inhalation, asphyxiation or explosion. Based on the current understanding of the conceptual site model, the site has been classified as CS1. In accordance with BS8485, ground gas protective measures are not considered necessary within proposed buildings.

2.2.3 The Remediation Strategy concluded that remediation and/or mitigation measures were required for Pollutant Linkages 1, 2 and 4.

2.3 Pre-Commencement Information

2.3.1 The following additional documentation was prepared prior to commencement on site. For brevity, copies are not included in this report but may be supplied on request:

Soil Segregation Plan

- » To facilitate removal of surplus soils to an appropriate waste stream, a Soil Segregation Plan was produced which outlined sources of surplus material to be removed from site. The plan incorporated relevant findings of the site investigation report, soils descriptions, laboratory analysis, waste classification and management strategy.
- » The report was sent to waste hauliers for consideration prior to the start of material being removed from site. The objective was to ensure that surplus materials generated from site were adequately classified and managed to identify a suitable disposal route.

Material Management Plan

- » A Material Management Plan was prepared by RSK Environment Ltd prior to start of works on site to cover re-use of materials on site. The reuse of materials under DoW CoP¹ was agreed with regulators (Bury Council and Environment Agency) and declaration was made. The declaration is included in Appendix 1.
- » Verification of the MMP is presented in Section 4 of this Report.

¹ CL:AIRE (March 2011). "The Definition of Waste: Development Industry Code of Practice. Version 2".

Health & Safety Construction Phase Plan

- A Construction Phase Plan (CPP) was produced under CDM Regulations prior to the start of the enabling works. The CPP is not considered in this report.

Notification of the Works

- Notification of the proposed works via Form F10 was prepared on behalf of Bury Council and submitted to the HSE on 21 July 2022.

3 PRE-CONSTRUCTION REMEDIATION AND ENABLING WORKS

3.1 Scope of Work

3.1.1 The site enabling and remediation works are summarised below:

- Site set-up, surveys, and site segregation;
- Installation of secure gates to entrance;
- Tree felling to eastern boundary;
- Diversion and/or disconnection of underground utility services;
- Collection and disposal of fly-tipped general waste;
- Stripping of topsoil and vegetation from perimeter bunds for disposal;
- Excavation of identified contamination hotspots in perimeter bunds, quarantine of arisings pending assessment of delineation samples, disposal of arisings to suitable hazardous waste management facility;
- Careful lifting and processing existing hardstanding and sub-base;
- Breaking out relic structures and removing soft spots or voids;
- Cut/fill with reduced level excavations and off-site disposal of contaminated soils not suitable to be retained on site, surplus made ground, vegetation and general construction waste;
- Construction of 150mm thick pile mats and capping to roads;
- Material tracking and site records to inform the MMP; and
- Provision of a Verification Report including all laboratory results, as-built drawings etc.

3.1.2 Photographs were taken throughout the enabling and remediation works; a selection is presented in Appendix 10.

3.2 Earthworks Plant

- 3.2.1 Excavation and remediation operations were undertaken by two 20-tonne excavators, depending on access constraints and depth of excavation, with an 8-tonne excavator used in conjunction with hand-digging to expose underground services.
- 3.2.2 Transport of material within the site was undertaken by two 9-tonne forward-tipping dumpers.
- 3.2.3 Compaction plant comprised a Hamm HD12V twin-drum roller. Manufacturer's published data was used to assign compaction plant to a particular class in Table 6/4 of the Specification for Highway Works (SHW) Series 600, based on their static linear load as follows:

Table 2 : Compaction Plant Data

ROLLER MAKE/MODEL	DRUM MASS (kg)	DRUM WIDTH (m)	STATIC LINEAR LOAD (kg/m)	ROLLER CLASS (TABLE 6/4)	N ²	D ³ (mm)
Hamm HD12 VV	1347	1.20	1120	Vibratory roller, ref #3	10	125

3.3 Supervision, Watching Brief and Verification

- 3.3.1 The enabling and pre-construction remediation works were supervised on a full-time basis by a suitably qualified LKR remediation site manager with additional support and part-time supervision by a geo-environmental engineer.
- 3.3.2 A watching brief for any unusual ground conditions or visual or olfactory evidence of contamination (including asbestos containing material) was maintained by a suitably qualified LKR remediation site engineer and briefed site personnel. No evidence of significant unexpected visual or olfactory contamination was identified during the enabling works.
- 3.3.3 A length of 75mm diameter asbestos cement duct was encountered in made ground in the centre of the site during the course of LKR's works. It was noted to be intact and in good condition with no evidence of significant deterioration. It was carefully exposed to the works boundary and was removed to a suitably licenced facility. A copy of the waste consignment note is presented in Appendix 2.
- 3.3.4 There were no significant variations to the remediation strategy based on the findings of the watching brief or unexpected contamination. Suitability for use, disposal or verification testing was undertaken by the LKR geo-environmental engineer as required and is discussed in the following Sections.

3.4 Control of Water

- 3.4.1 No groundwater was encountered during the enabling works, although wet ground conditions were experienced in the made ground due to the prolonged wet weather experienced.
- 3.4.2 Surface water resulting from long periods of persistent heavy rainfall especially during the winter period was controlled using pumps, grips and temporary shallow French drains in accordance with CIRIA Report 113⁴.

3.5 Management of Underground Utilities

- 3.5.1 As a result of the site's past development and use, numerous underground utilities were known to exist on and within the boundary of the site. Building on the pre-construction information supplied by the client, comprising utility company records, topographic surveys and ground penetrating radar (GPR) surveys, a phased programme of disconnections and diversions was undertaken during the works.
- 3.5.2 Site staff used a combination of CAT survey and hand-excavated trial trenches to locate and expose services within the site, and arrangements were then made with the individual utility companies for the diversion and/or disconnection and capping of these.

² N = Number of passes

³ D = Maximum layer thickness, based on Class 2B or Class 2C material

⁴ CIRIA (1986) "Control of Groundwater for Temporary Works" REP R113.

3.6 Site Clearance and Waste Management

- 3.6.1 The existing amenity buildings were demolished after soft-stripping the interiors. A selector grab was used to separate different materials from the demolition arisings (timber, metals, general waste), with the brick, block and concrete fractions being stockpiled for later aggregate processing.
- 3.6.2 Waste materials (including general demolition waste and quantities of fly-tipped general waste) were segregated into appropriate waste types and removed from the site by registered waste carriers to suitably licenced facilities (see Table 3). Surplus soils were managed with recourse to the soil segregation plan and disposed of off-site to licensed facilities.
- 3.6.3 Duty of Care records (comprising haulier registrations and the environmental permits for receiving destinations) are summarised in Table 3 below (volumes of inert made ground are assessed at 8.25m³/load, based on LKR's recent experience):

Table 3 : Waste Duty of Care Summary

HAULIER	WASTE CARRIER REGISTRATION	VOLUME (m ³)	WEIGHT (kg)	MATERIAL	DESTINATION	ENVIRONMENTAL PERMIT
W Maher & Sons	CBDU90617	2,327	N/A	Non-hazardous made ground (EWC 17:05:04)	Fletcher Bank Quarry	EPR/GP3733FE
W Maher & Sons	CBDU90617	99	N/A	Vegetation (EWC 20:02:01)	Fletcher Bank Quarry	EPR/GP3733FE
Clwyd Transport	CBDU3337	66	N/A	Hazardous made ground (EWC 17:05:03)	Maw Green Soil Treatment Facility	EPR-BS7722ID
Steptoe's Yard & Salvage	CBDU120649	120	N/A	Timber (EWC 20:01:38)	Steptoe's Yard Moorfield Industrial Estate	EPR/AB3402MB
Steptoe's Yard & Salvage	CBDU120649	60	N/A	General waste (EWC 20:03:01)	Steptoe's Yard Moorfield Industrial Estate	EPR/AB3402MB
Steptoe's Yard & Salvage	CBDU120649	132	N/A	Oversize (EWC 17:01:07)	Steptoe's Yard Moorfield Industrial Estate	EPR/AB3402MB

HAULIER	WASTE CARRIER REGISTRATION	VOLUME (m³)	WEIGHT (kg)	MATERIAL	DESTINATION	ENVIRONMENTAL PERMIT
LK Pollution Response	CBDU101884	N/A	460kg	Asbestos Cement Water Pipes (EWC 17:06:05)	Wheeldon Brothers Heap Bridge	EAWML/53823 WML00796/M01
Steptoe's Yard & Salvage	CBDU120649	N/A	11.860kg	Scrap metals (EWC 20:01:40)	Steptoe's Yard Moorfield Industrial Estate	EPR/AB3402MB

3.6.4 Waste transfer notes are held in paper copy by LKR and may be provided on request.

3.7 Earthworks Segregation and Reuse

- 3.7.1 Re-use of material was undertaken with reference to DoW CoP under a Materials Management Plan which was declared prior to the start of enabling works (see Section 4, below). A copy of the MMP declaration is presented in Appendix 1.
- 3.7.2 All areas of hardstanding, comprising buried floor slabs, historical foundations, roadways and former car-parking areas were broken out and excavated to stockpile. Redundant private drainage pipes and manholes were broken out and excavated to stockpile.
- 3.7.3 Significant relict in-ground structures associated with the former buildings were encountered and removed. Average depths of in-ground structures were approximately 0-2m below existing ground level. Made ground was turned over to a depth of 1.5m to confirm removal of structures.
- 3.7.4 All artificial hard materials (concrete, brick, etc) arising from removal of hardstanding, slabs foundations and other below-ground obstructions were crushed to form suitable graded material for reuse on site in construction platforms.
- 3.7.5 Subsoil generated during the works was stockpiled separately for later re-use by the client as part of the build phase remediation (clean cover soils). The quantities and locations of the two stockpiles is shown on Drawing LKR22_1029_05 presented in Appendix 12. Discussion of suitability of use is included in Section 3.10.
- 3.7.6 During processing, the suitability of crushed product was regularly checked for re-use and unsuitable elements (e.g. wood, plastics, metal, etc.) were removed and placed in skips for subsequent removal to a suitably licenced landfill site or recycling facility.
- 3.7.7 Due to prolonged periods of rain during the later stages of the enabling works, approximately 19t of granulated lime was used to dry and stabilise some of the re-engineered fill prior to final placement. The fill was loosely placed in layers of approximately 300mm thickness. Lime granules were spread over the surface of the fill and mixed through it using a hydraulic excavator; the lime was allowed time to act before the next layer was treated.
- 3.7.8 Site generated aggregates were used to form piling mats to a thickness of 150mm. In roadways, 150mm of site generated aggregate was placed as capping.

3.8 Earthworks Materials Testing

3.8.1 Earthworks materials utilised in the works were as follows:

Table 4 : Classification of Materials

MATERIAL	CLASSIFICATION	SOURCE
Made Ground	Designated unsuitable based on visual assessment of organic content (e.g. topsoil, plant remains and roots) and/or silt content	Site won - deemed unsuitable for use and removed from site to licenced facility
Made Ground	Designated as proposed suitable fill based on visual assessment, comprising cohesive and granular materials, subject to riddling to remove oversize concrete and brickwork, and picked to remove construction waste (PE pipes, timber, etc)	Site won
Crushed Brick & Concrete	Class 6F2 – Selected granular material	Site won (processed on site by LKR)

3.8.2 The quality assurance regime for re-engineered fill comprised (in-situ and laboratory geotechnical testing according to the type of material. A summary of testing undertaken is shown in Table 5 below:

Table 5 : Testing of Fill Material

TEST	# TESTS COMPLETED
Lightweight Deflectometer	41
Plate Load Tests (min equivalent CBR of 5%) – (FFL – 2m)	6

3.8.3 Test results are summarised in Appendix 4 and the test certificates are presented in Appendix 6; test locations are shown on Drawing LKR22_1029_07 presented in Appendix 12.

3.9 Assessment of Site Generated Aggregate

- 3.9.1 Material classification testing was undertaken on site generated aggregates. Four samples of site generated aggregate (CR01-CR04) were collected and sent for geotechnical laboratory testing.
- 3.9.2 Site generated aggregates were tested for a range of parameters taken from Table 6/1 of the Specification for Highway Works (SHW) Series 600 for selected granular material *inter alia* PSD, moisture content, maximum dry density/optimum moisture content, LA coefficient and determination of constituents of recycled aggregate.
- 3.9.3 Based on the testing undertaken, site generated aggregates were within the grading parameters for 6F2 material as described in Table 6/1 of the Specification for Highway Works (SHW) Series 600 for site generated recycled material.
- 3.9.4 Four samples (CR05-08) of site generated aggregates used in the works were also sent for geochemical laboratory analysis. Due to the coarse nature of site generated aggregate, representative samples were collected into laboratory supplied bulk bags - therefore were reported as 'deviating samples'. Given the material largely comprised brick and concrete fragments and there was no visual evidence of hydrocarbon contamination, this was not

thought to compromise the validity of the results. Indeed, the samples were crushed and homogenised prior to analysis, thereby increasing the surface area of components such as tarmacadam and is thereby considered a very conservative assessment.

- 3.9.5 Samples were scheduled for the following suites of testing:
- Metals / metalloids, pH, water soluble sulphate, speciated PAHs, TPHCWG, BTEX, MTBE, SOM and asbestos screen (including identification and type, if present).
- 3.9.6 All four samples were reported as containing less than 1.5 g/litre of water-soluble sulphate; the results ranged from 0.15 g/litre to 0.89 g/litre.
- 3.9.7 When compared to residential without uptake assessment criteria, exceedances of PAHs were observed in CR06, CR07 and CR08.
- 3.9.8 One sample (CR08) reported chrysotile asbestos fibres at <0.001%.
- 3.9.9 Whilst exceedances were noted, the testing indicates site generated 6f2 is suitable for use were no direct contact pathway exists, such as beneath plots, roadways are beneath clean cover soils.
- 3.9.10 Based on the above, the site-generated aggregates are considered suitable for use beneath buildings, roadways and clean cover soils.
- 3.9.11 Test results are summarised in Appendix 3 and test certificates are presented in Appendix 5.

3.10 Assessment of Site-Won Materials for use in Build Phase Remediation

- 3.10.1 Topsoil was recovered in very limited quantity and was found to be grossly mingled with fragments of waste material (from fly-tipping) as well as large quantities of roots. For this reason, it was deemed as unusable and removed from site.
- 3.10.2 The quality assurance regime for site-won subsoil for re-use as part of clean cover soils comprised geochemical testing in accordance with the frequencies specified in the remediation strategy.
- 3.10.3 Laboratory testing certificates for the site-won subsoil are presented in Appendix 11. The as-built positions and volumes of subsoil stockpiles are shown on Drawing LKR22_1029_05 in Appendix 12.
- 3.10.4 Site-won subsoil was categorised as being from a greenfield source on the basis that it was generated from natural strata >2m below original ground level and had not been subjected to what could be considered 'brownfield activity'.
- 3.10.5 Sampling frequencies taken from the remediation strategy and number of tests are summarised in the table below:

Table 6: Compliance Testing of Soils for Build Phase

MATERIAL TYPE	QUANTITY	TEST	FREQUENCY	# TESTS REQUIRED	# TESTS COMPLETED
Subsoil	602m ³	Suite A	1 per 200m ³	3	6

- 3.10.6 Seven samples of site generated natural subsoils (SS01 – SS07) were collected for laboratory analysis, although sample SS07 was lost in transit. Results were compared to the nearest appropriate SOM based a residential with plant uptake land use.
- 3.10.7 Samples were scheduled for the following suites of testing:

- Metals / metalloids, pH, water soluble sulphate, speciated PAHs, TPHCWG, BTEX, MTBE, SOM and asbestos screen (including identification and type, if present).

3.10.8 Site-won subsoil has been assessed using criteria included in Appendix 9. With regards to the soil risk assessment LKR will use the following hierarchy:

- Category 4 Screening Levels (C4SLs).
- LQM Suitable 4 Use Levels (S4ULs).

3.10.9 There were no exceedances of generic assessment criteria for site generated subsoil for use in private gardens and therefore this material is considered suitable for use.

3.10.10 Both retained subsoil stockpiles for use in build phase remediation were clearly demarcated. At the time of testing, site won subsoils were suitable for use as part of clean cover in gardens and soft landscaping. Steps should be taken to maintain segregation (site briefings, signage, fencing, material management, etc) to avoid cross contamination of clean site won material during construction phases. Should unsuitable material be mixed with clean soils on site, this may render them unsuitable for use.

4 MATERIAL MANAGEMENT

4.1 Material Management Plan

- 4.1.1 A Material Management Plan was produced prior to start of works on site to cover re-use of materials on site. The reuse of materials under the DoW CoP⁵ was agreed with regulators (Bury Council and Environment Agency) and declaration was made. The declaration is included in Appendix 1.
- 4.1.2 This Section has been prepared in accordance with the DoW CoP and is intended to provide a record of material used on site.

4.2 Regulatory Agreement

- 4.2.1 The Risk Assessment and Remediation Strategy were supplied to the Local Authority (Bury Council) and Environment Agency contacts listed in the Materials Management Plan prior to commencing site works.
- 4.2.2 Correspondence was received from both the Local Authority and EA regarding the re-use of materials under the DoW CoP. The Local Authority approved the Remediation Strategy which included a description of the proposed re-use of site won soil in accordance with the DoW CoP. Approval of the Remediation Strategy was given via a planning permission 67596 dated 26 January 2022. The EA provided no objection or amendments to the Remediation Strategy, Risk Assessment or MMP surrounding the re-use of materials under the DoW CoP. As such this is interpreted as acceptance.

4.3 Amendments to the MMP

- 4.3.1 The MMP and volume re-use estimates were based on the initial design reduced site levels and ground investigation information. Following submission of the MMP, the design strategy was changed by the client, including incorporating revised levels.
- 4.3.2 Furthermore, the volume estimates in the declaration were based on reasonable assumptions of the ground conditions on site and overall site 'turnover'. During the enabling works, some areas of the site were found to comprise significant thicknesses of made ground and by its very nature, this approach is variable.
- 4.3.3 The above amendments are not thought to materially affect the principles of the MMP and re-used materials are deemed to maintain the certainty of use criteria, the variation in volumes not considered to be excessive. Given the above, along with the project timescales a revised declaration was not considered necessary.

4.4 Tracking Systems and Reuse

- 4.4.1 Upon commencing the enabling works, a materials tracking system was implemented by LKR, as outlined in the site Materials Management Plan. The tracking data was reviewed and updated as necessary during progression of the earthworks. Summarised tracking sheets are presented in Appendix 7.
- 4.4.2 Based on the site investigation and risk assessment, and subject to a watching brief site, Made Ground was considered suitable for use beneath hardstanding and clean cover soils. The majority of made ground encountered during the remediation works comprised varying degrees of rubble, ash and reworked natural strata, as described in the site investigation reports. There was no significant variation in the type of made ground

⁵ CL:AIRE (March 2011). "The Definition of Waste: Development Industry Code of Practice. Version 2".

encountered across the site therefore segregation of made ground materials for re-use was not required.

- 4.4.3 Geotechnical and geochemical testing of site generated aggregates and subsoils is described in Section 3 of this report, which summarises the materials to be suitable for their intended use.
- 4.4.4 Site works comprised 'turnover' of made ground to a depth of 1.5m to allow removal of relict foundations and substructures and cut/fill to reduced levels. Therefore stockpiles of made ground for re-use were often small, transient and localised, with made ground generally being replaced within the same areas of site. The exceptions relate to recovery of hard materials following crushing and prior to placement to pile mats and road capping. Beyond crushing of oversized hard materials to generate aggregates, no other treatment of made ground was required and therefore no specific 'treatment' stockpiles were needed.
- 4.4.5 The final placement levels are shown Drawing LKR22_1029_06 presented in Appendix 12.
- 4.4.6 Throughout the works, LKR maintained appropriate site records relating to excavation, disposal and re-use of soils, including regular GPS surveys recording depths to natural strata and volumes of material contained within stockpiles. The interim stockpile survey drawing is included in Appendix 12. Drawing 22_1029_04 shows both the retained stockpiles of subsoil together with the transient stockpiles of material awaiting re-engineering and surplus fill awaiting disposal off-site, whilst Drawing LKR22_1029_05 shows the two stockpiles of site-won subsoil,

4.5 Treatment Records

- 4.5.1 On-site treatment of material for reuse solely comprised crushing of oversized relict foundations to generate suitable aggregates. Crushing was undertaken using a Sandvik QJ241 jaw crusher. The crusher mobile plant permit and transfer notification is included in Appendix 2.
- 4.5.2 Handpicking of small volumes of deleterious material such as wood, metal and unsuitable general waste from made ground or processed site-won aggregate was small scale and did not constitute a waste treatment process requiring licensing or permitting; a separate record of the process is not necessary. Such material was segregated and removed from site by registered waste carriers.

4.6 Quantity of Material Used

- 4.6.1 The MMP anticipated that the turnover of made ground and cut/fill to level was estimated to generate a surplus of approximately 3,698m³, comprising 650m³ of suitable aggregates for re-use in road capping and pile mats, 1,050m³ of subsoil and 1998m³ surplus for disposal during enabling works phase.
- 4.6.2 The table below details the actual measured volumes:

Table 7 : Quantities of Materials Used

ITEM	ANTICIPATED VOLUMES (m ³)	ACTUAL VOLUMES (m ³)
Surplus material for disposal	1,998	2,525
Clean subsoil for use in capping in gardens	1,050	602
Clean MOT for use as hard to dig part of subsoil capping in gardens	N/A	556
Suitable aggregates for use in pile mats and road capping	650	606

ITEM	ANTICIPATED VOLUMES (m ³)	ACTUAL VOLUMES (m ³)
TOTAL	3,698	4,289

4.6.3 The differences between anticipated and actual volumes are attributable to the following factors:

- The 3,698m³ was an estimate based on interpretation of the available site investigation and other data (made ground thicknesses encountered in site investigation locations, etc).
- A revision in design levels and layout undertaken by the client during the enabling works further affected the accuracy of this original figure.
- The quantity of clean subsoil recovered was 448m³ less than expected. As this material has been stockpiled above finished remediated levels, its (reduced) recovery has necessitated an equivalent volume of suitable fill material that had to be sent off site for disposal.
- Approximately 556m³ of MOT was recovered during the remediation works, this was subject to testing for reuse as subsoils as a hard to dig layer as part of the cover system. The MOT was placed in a 100mm layer over gardens and drives.

4.6.4 With the above in mind, the variation in material re-use from the original MMP is considered nominal and within an acceptable limit of the material re-use estimates when taking bulking, engineering and intrinsic unknown factors into account. LKR consider that works carried out are compatible with and within the spirit of what was originally proposed and not significantly different and therefore should be considered a non-waste.

5 CONCLUSIONS

5.1 Pre-Construction Remediation and Enabling Works

- 5.1.1 A watching brief was maintained by a suitably qualified remediation site manager and geo-environmental consultant. No unexpected visual or olfactory evidence of contamination was identified during the enabling works.
- 5.1.2 The site was cleared of small amounts of general waste and vegetation prior to enabling works. Small volumes of site generated wastes were segregated based on material type and placed in skips for removal from site by a suitably licenced contractor.
- 5.1.3 Areas of relict foundations and hard materials were grubbed out and processed for re-use on site in accordance with the declared MMP under recourse to the DoW COP. Suitable hard materials were re-used on site to form pile mats and road capping.
- 5.1.4 Surplus materials and general wastes were segregated based on material type and disposed of via registered hauliers to appropriate disposal facilities under duty of care requirements.
- 5.1.5 Geotechnical criteria were tested and in-situ performance has been confirmed as suitable based on information provided by the Client.
- 5.1.6 Testing of materials remaining on site for re-use was undertaken. Materials reused on site are considered suitable for use and the site is suitable for the proposed development, subject to the recommendations and subsequent verification of the outstanding build phase remediation works detailed in remediation strategy report.
- 5.1.7 Volumes of materials re-used under the MMP, although variations to the original declaration were undertaken, are similar to those submitted and LKR consider the four guiding principles of the MMP have been adhered to and materials can be considered as a non-waste.
- 5.1.8 The proposed site enabling and pre-construction remediation works have been carried out in accordance with the Remediation Strategy (reference 11752 R01, dated October 2021) and submitted to the Local Authority.
- 5.1.9 A photographic record of the works was maintained, and selected photographs are presented in Appendix 14.

5.2 Build Phase Remediation and Verification

- 5.2.1 Build phase remediation works are not part of this report and should be undertaken in accordance with the agreed remediation strategy report.
- 5.2.2 The scope of the build phase remedial works comprises:
 - » Provision of suitable Environmental Cover Layer in soft landscaping areas; and
 - » Potable water pipeline assessment.
- 5.2.3 The remaining 'build phase' remediation carried out on the site requires validation by a third party and suitable documentary evidence provided in a Site Completion Report, such as photographs, consignment documents and analytical results. This should include as a minimum:
 - » Environmental Capping Layer depth validation.
 - » Validation testing of imported or site won subsoil, topsoil and physical break layer materials, as required.

- » Evidence of the correct pipework installation and confirmation of the use of first-generation trench backfill, as required.

5.3 Recommendations for Construction Phase

Excavations & Control of Arisings

- 5.3.1 Groundworks should incorporate suitable material management. Excavations into made ground may yield arisings which, whilst they may be considered to be suitable for use, may be deemed hazardous for disposal purposes. Groundworkers should carefully segregate (and stockpile separately) aggregate, made ground, and clean natural soils, in order that an excessive volume of unsuitable material is not generated.
- 5.3.2 A geo-environmental consultant should be consulted and with their approval made ground arisings could be:
 - » Redistributed beneath concrete, or areas of hardstanding, where they would be satisfactorily isolated from end users;
 - » Isolated beneath the clean cover soils in landscaped areas or
 - » Exported from site to a suitably licensed landfill facility.
- 5.3.3 Whilst off-site disposal is not generally considered in line with current government philosophy regarding sustainable development, it may be the most practical solution if redistribution and retention on site is not feasible. Any material exported from site should be appropriately characterised and a suitable disposal route determined. Material removed from site should be hauled by a registered waste carrier under appropriate duty of care procedures.
- 5.3.4 Excavations should remain stable in the short term but if left open for any significant period of time may require shoring, most notably in granular made ground. Trench boxes/ shoring should be installed as soon as possible to minimise risk of sidewall collapse.
- 5.3.5 All retained stockpiled subsoils for use in build phase remediation were clearly demarcated on site (refer to photographic records in Appendix 10). At the time of testing, site-won subsoils were suitable for use as part of clean cover in gardens and soft landscaping. Steps should be taken to maintain segregation (site briefings, signage, fencing, material management, etc) to avoid cross contamination of clean site won material during construction phases. Should unsuitable material be mixed with clean soils on site, this may render them unsuitable for use.

Health & Safety

- 5.3.6 Workers involved in excavations for foundations, drainage, utilities etc. are likely to come into direct contact with the made ground.
- 5.3.7 Made ground on site is known to contain low concentrations of asbestos containing materials. An asbestos in soils management plan should be incorporated into risk assessments for any groundworks on site. Although workers will only be exposed to made ground for a relatively short time, simple precautionary measures, i.e., good personal hygiene and basic personnel protective equipment should be utilised. Maintaining made ground in a damp condition will also mitigate any potential risk.
- 5.3.8 In addition to the above, the atmosphere in shored trenches in excess of 1.2m should be monitored for oxygen and hazardous gas (methane & carbon dioxide), prior to personnel entering such excavations. Monitoring should continue whilst personnel are working in deep excavations.

5.4 Residual Risk

5.4.1 LKR has identified and assessed the following residual risks to remain following enabling and remediation works:

- » The use of granulated lime in treatment of elevated moisture content within localised areas of suitable fill in the south-eastern area of the works has the potential to have raised the pH of this fill. Disposal of excavation arisings from future groundworks in this area will require analysis to investigate whether the elevated pH classifies the arisings as hazardous waste. Similarly, the placement of any imported material in lime-treated areas should be of low water-soluble sulphate content as specified in Clause 602.16 of SHW in order to mitigate the potential for formation heave.
- » Analyses of the site-won crush indicates the presence of very small quantities of asbestos fibres in one of the eight samples tested (Sample CR08 <0.001%). All the site-won crush has been placed in areas which will be below hardstand or within building footprints, so the long-term potential risk from these fibres becoming airborne is considered negligible. During the remainder of the construction period, construction personnel should be aware of the potential risk, particularly in dry conditions, when any particles have a potential to become airborne if disturbed. In such conditions, spray misting with water would be sufficient to ensure any such particles remain bound within the crush material. Drawing LKR221029_08 in Appendix 12 shows the final placement of these materials.
- » LKR excavated and screened all made ground to natural strata and no contamination was identified. The residual risk is therefore considered low. As with all enabling and remediation works, it is important that future groundwork contractors maintain a watching brief in line with the remediation strategy with regard to potential visual and olfactory indicators of contamination not encountered during these works.

Appendix 1: MMP Declaration

Materials Management Plan (MMP) Form - October 2014

This form should be completed once the lines of evidence have been marshalled in relation to suitability for use, certainty of use and quantity required.

The answers to the questions posed within this form, together with the supporting information will constitute the MMP and must be provided to the Qualified Person.

A Qualified Person may comment on draft versions of this MMP, but will not complete the Declaration until all the relevant documents, demonstrating lines of evidence have been provided for each site.

The person / organisation who will pay the Declaration fee should confirm that they have read and understand the Terms and Conditions relating to the payment of the Declaration fee to CL:AIRE. These can be found on the CL:AIRE website.

The person / organisation agreeing to pay the Declaration Fee - Name, organisation and contact details inc. email address -	Mark Quinn John Southworth Building Ltd 10 Charles St, Dukinfield, Cheshire, SK16 4SD, United Kingdom Mark@johnsouthworth.co.uk Tel: 0161 339 3340
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✓ I confirm I have read and understood the Terms & Conditions.

Each question must be answered. If the question is not applicable please state this and provide a brief explanation.

1. Specify the scenario to which this MMP relates, as described in the Definition of Waste: Development Industry Code of Practice (DoW CoP) (1, 2, 3 or 4):

- ✓ 1. Reuse on the Site of Origin
- ☐ ~~2. Direct Transfer of clean naturally occurring soil / mineral materials~~
- ☐ ~~3. Cluster Project~~
- ☐ ~~4. Combination of any of the above~~

In the case of a combination of reuse scenarios, please describe it below (e.g. (i) Reuse on Site of Origin and Direct Transfer of clean naturally occurring unpolluted soils, (ii) Reuse on the Site of Origin with Direct Transfer of clean naturally occurring soil to x number of development sites etc: Re-use on site with direct transfer of clean naturally occurring unpolluted soils.

(NB: A Declaration is required for reuse on the Site of Origin and for any 2 site arrangement i.e. there is no facility for a combination Declaration)

2. Organisation and name of person preparing this MMP	Sam Diver RSK Environment Fourways House 57 Hilton Street Manchester M1 2EJ Tel: +44(0)161 236 2757
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Document Control

Date issued	November 2022
Revision date	
Summary of revision 1	
Summary of revision 2	

Insert additional lines to the table above for any subsequent revisions.

Note - revisions to the MMP do not trigger an additional Declaration by a Qualified Person, unless an additional site is added to the project.

Revisions to the MMP must be recorded and summarised in the document control box above.

Site Details

3. Site / Project name(s)	Fernhill Caravan Park, Every Street, Bury
Reuse / receiving site name :	As above
Donor site name (if Direct Transfer)	N/A

Landowners

4a. Name of Landowner(s) (full address and contact details) – where excavated materials are to be reused	Bury Council, Knowsley Place, Knowsley St, Bury BL9 0SW; Peter Masters-Hall 0161 686 8000
4b. Name of Landowner(s) (full address and contact details) – where excavated materials are arising from	Bury Council, Knowsley Place, Knowsley St, Bury BL9 0SW; Peter Masters-Hall 0161 686 8000

Summary and objectives

5a. Provide a brief description of the planned project and how excavated materials are to be reused.	Proposed development plans show that the entire site is to be demolished and the 17 individual plots are to be reduced to 12, including six single-storey double-facilities blocks, around the margins of the site, with each block to be shared between two plots. There will still be an office building to the east of the site entrance in the north-eastern corner of the site. Each plot will contain sufficient space for either one or two touring caravans, it will also have private soft landscaped areas. Cut and fill calculations performed by LK Remediate indicate a cut volume of 3,883.52m³ from made ground beneath current plots and material contained in the perimeter bunds,
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	and fill volume of 185.95m³ to raise site levels beneath proposed plots to levels shown on the development plan. Of the 3,697.57m³ cut/fill balance, approximately 650m³ of recycled aggregates is proposed to be won from crush for the construction of piling mats and 1,050m³ of validated clean soils proposed to be won for reuse as subsoil in the clean cover layer gardens. This will leave a surplus of 1,997.57m³ material which is to be removed from the site by a registered waste carrier to a suitably licenced facility. The overall volume of material to be re-used at the site is therefore approximately 1,885.95m³.
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General Plans and Schematics

6. Attach a location plan for the site(s) and a plan of the site(s) which identifies where different materials are to be excavated from, stockpile locations (if applicable), where materials are to be treated (if applicable) and where materials are to be reused.	Plan Document Reference(s): The following plans are included in Appendix A: • Site Location Plan drawing ref: Figure 1: 11542-R01(00) • Proposed Site Layout – Paddock Johnson ref: 19144-101H dated October 2020 • Proposed Levels Plan – Paddock Johnson ref: 19144-101G dated October 2020 • Private Highway General Arrangement – Shape Consulting Engineers ref: 2288-0004-P01 dated January 2022 • Topographical Survey – West Coast Geomatics ref: WCG 20-1352-T-1:1 dated March 2020 • Cut and fill volumes and proposed levels – LK group
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7. <u>Attach</u> a schematic of proposed materials movement. Where there is only one source area and one placement area briefly describe it. For all other projects a schematic is required.	Description & Schematic Document Reference: The following plan is included in Appendix B: • Schematic 1 – Confirmation of material suitability and Fernhill Caravan Site MMP Schematic 2
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Parties Involved and Consultation – if more than one party please provide additional details for them and identify the location that they will be working e.g. where a site is zoned

8a. Main earthworks contractor(s) (full address and contact details) – Where excavated materials are to be reused	The LK Group Eton Business Park, Eton Hill Rd, Raddliffe, Manchester M26 2ZS Tel: 0161 763 7200
8b. Main earthworks contractor(s) (full address and contact details) - Where excavated materials are arising from	As above
9. Treatment contractor(s) (full address and contact details) – for treatment on site of origin, or at a Hub site within a fixed STF / Cluster Project	The LK Group Eton Business Park, Eton Hill Rd, Raddliffe, Manchester M26 2ZS

		Tel: 0161 763 7200
10. Where wastes and materials are to be transported between sites, provide details of the transport contractor(s) (full address, contact details and waste carriers registration details (if applicable))		To be confirmed. Possibly: MICHAEL KISLUK LTD, 21, HOLLINS ROAD, WIGAN, WN2 4JZ, Registration CBDU75186, Company number 04526312, Expiry date: 08/01/2025.
11. Provide Local Authority contact details (full address and named contacts) where excavated materials are to be reused		Judith Scott (Environmental Protection Officer) Bury Council Knowsley Place, Knowsley St, Bury BL9 0SW Email: j.scott@bury.gov.uk
12a. For the site where materials are to be reused and for Hub Site locations provide Environment Agency contact details (full address and named contacts):		Stephen Bostock The Waste Enquiries Helpdesk Team Environment Agency Richard Fairclough House, Knutsford Road, Warrington, WA4 1HT Email: gmmcwasteenquiries@environment-agency.gov.uk Tel: 03708 506 506

For all Cluster Projects: 12b. Attach any relevant documentation from the EA relating to the excavation and reuse of the materials to demonstrate no objection to the proposals (see 3.37 of DoW CoP) If the EA has not been consulted please explain why (see paragraph 3.39 of the DoW CoP).	N/A
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Lines of Evidence

There is no one single factor that can be used to decide that a substance or object is waste, or when it is, at what point it ceases to be waste; as complete a picture as possible has to be created.

The following sections require completion to ensure the correct decision is made.

If a requested item is not relevant it is important to clearly state why this is so (e.g. no planning permission required because permitted development status exists).

Suitable for use criteria

13. Please describe or provide copies of the required specification(s) for the materials to be reused on each site.	Document Reference(s): As described within the Remediation Strategy Document RSK reference 11752-R01 (00) previous site investigations have been undertaken at the site with soil samples collected from made ground across the Site, which was described in four groups: recent made ground, deeper made ground, natural strata and the bund along the boundary of the Site. Test results showed slight contamination in the recent made ground associated with: lead and zinc; asbestos; polycyclic aromatic hydrocarbon compounds (PAHs) (principally benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, dibenzo(ah)anthracene); total petroleum hydrocarbon (TPH) compounds. In the Deeper Made Ground within BH2 (conjectured to comprise bi-product from a former waste destructor), elevated concentrations of arsenic, copper, lead, nickel and zinc were observed. 2 no. samples of natural strata were reported to be uncontaminated. Investigations of the bund within the boundary of the Site reported elevated concentrations of zina and lead, PAHs, TPH bands (C12-C16, C16 to C21 and C21 to C35). It was determined that these were most likely derived from the combustion of organic based materials in the form of ash and clinkers. It was concluded that made ground present both underlying the site and contained within the bund is not suitable to be present at the surface and accessible to residents for the proposed end use as a caravan park as well as maintenance workers who may be required to excavate where services are located.
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	Current estimates show there could be approximately 3,883.52m³ of material excavated and re-engineered assuming a conservative estimate of 1.5m soil turnover. Soils that are excavated are anticipated to be temporarily stockpiled and tested, where appropriate, to confirm suitability for the following categories of use: • Material suitable for use as general fill material beneath proposed buildings, e.g., as backfill, as re-grade materials. • Material suitable for inclusion within 600 mm of surface in soft landscaping areas. • Material suitable for placing beneath car parks and roadways. Soils found to be unsuitable for any of the above purposes will be consigned for off-site disposal. The Remediation Strategy is provided in Appendix C.
Where contamination is suspected or known to be present 14a. Please provide copies of or relevant extracts from the risk assessment(s) that has been used to determine the	Document Reference(s): The following referenced reports are included in Appendix C: • RSK Geo-environmental and Geotechnical Site investigation, ref: 11542-R02 (00) dated August 2021

specification for use on the site. This must relate to the place where materials are to be used. This must be in terms of (i) human health (ii) controlled waters and (iii) any other relevant receptors. If a risk assessment is not relevant for a particular receptor given the site setting please explain why below:	Risks from contaminant linkages associated with controlled waters were not considered to be present following RSK's Geo-environmental assessment: The analytical results for groundwater samples obtained from boreholes BH1 and BH3 are below the relevant GAC protective of groundwater receptors indicating contaminant linkages to the wider aquifer associated with contaminants in the dissolved phase are incomplete. Groundwater is not considered to be impacted by contamination. Therefore, specific criteria for assessing risks to controlled waters are not proposed. A response from Judith Scott, the Environmental Protection Officer at Bury Council is included in Appendix D. The response emails states they have no objection to use of the CLAIRE DoW CoP to support the proposed development at Fernhill Caravan Park.
14b. Please attach any relevant documentation from the LA relating to the excavation and reuse of the materials to demonstrate no objection (see 3.37 of the CoP)	Email response from Stephen Bostock, a member of the GMMC Waste Enquiries Team include in Appendix E. Response states providing that the DoWCoP is followed in full the Environment Agency have no objections to materials use, in accordance with our Regulatory Position Statement.
14c. Please attach any relevant documentation from the EA relating to the excavation and reuse of the materials to demonstrate no objection (see 3.37 and Table 2 of the CoP)	Document Reference(s): N/A
14d. Please attach any relevant documentation from any other regulators (if relevant) relating to the excavation and reuse of the materials to demonstrate no objection (see 3.37 of the CoP)	Document Reference(s): N/A

Where contamination is not suspected	Document Reference(s)
15a. Please attach copies or relevant extracts from the Desk Top Study that demonstrates that there is no suspicion of contamination.	N/A
15b. Please attach copies of or relevant extracts from the site investigation/testing reports that adequately characterise the clean materials to be used (if appropriate).	Document Reference(s): N/A
15c. Please attach copies of any other relevant information (if available) confirming that land contamination is not an issue.	Document Reference(s) N/A

NB: It is your responsibility to assess the nature of the material to be used and that it fits within the limitations of the scenario under which it is to be used

Certainty of use

Various lines of evidence are required to demonstrate that the materials are certain to be used. This includes:

- The production of this MMP
- An appropriate planning permission (or conditions that link with the reuse of the said materials)
- An agreed Remediation Strategy(ies)
- An agreed Design Statement(s)
- Details of the contractual arrangements

Please identify in the following sections what lines of evidence relate to the site(s) where the materials are to be used.

16a. Planning Permission(s) relating to the site where materials are to be reused Please provide a copy of the relevant planning permission	Document Reference: See attached in Appendix F : • Planning application number 67596
16b. Explain how the reuse of the excavated materials fits within the planning permission(s) for each site.	In line with cut/fill calculations outlined by LK Remediate, it is anticipated that 1885.95m³ of material will be re-used at the site to reduce site levels to those stated in approved level drawings. It is assumed the units will be either situated on a semi-stiff integral raft or ground beams supported on piles. The processing and crushing of obstructions and rubble will be done under the crusher's mobile plant licence provided by the local authority from where it is registered. The sub-contractor for this has not yet been appointed. Copies of the mobile plant licence and deployment notice will be included in the final verification report. Given the type and form of asbestos identified within the investigations, has been identified as chrysotile in both fibres and clumps, with one sample of chrysotile board with the bund containing loose fibres/clumps between 0.006% and 0.062% by weight, is unlikely to require licensing but is recommended to be notifiable to the HSE. It will be for a competent contractor to obtain all the required licenses and permits to ensure that the proposed works are undertaken within the current legal and regulatory frameworks. It will be for the contractor to prove that through the process of sorting the made ground, all unacceptable materials have been removed and those materials remaining on site are suitable for reuse and hence no longer should be considered waste.

	The processing of the soils will create a geotectonically suitable development platform, with sterile corridors (within a Terram wrap) to mitigate the risk of service contractors coming into contact with soils which may contain asbestos fibres. Given the proposed soil turnover to be used a construction development platform, soil materials will be re-used on site and additional chemical testing should be undertaken to inform suitability for re-use. Soils that are excavated are anticipated to be temporarily stockpiled and tested, where appropriate, to confirm suitability for the following categories of use: • Material suitable for use as general fill material beneath proposed buildings, e.g., as backfill, as re-grade materials. • Material suitable for inclusion within 600 mm of surface in soft landscaping areas. • Material suitable for placing beneath car parks and roadways. Soils found unsuitable for any of the above purposes will be consigned for offsite disposal. It is possible that soils will be disposed off-site despite suitability for re-use if stockpiling is impracticable or a surplus volume of material is present. In addition to general excavations, aggregate may also be generated from processing of concrete slabs and old foundations to a suitable granular fill material though at this stage likely volumes derived from these sources are considered to be small and it may be impractical to mobilise suitable equipment for small volumes of material.
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16c. If planning permission is not required for any one site please explain why below e.g. permitted development, clean-up of a chemical spill, surrender of an Environmental Permit, re-contouring within the existing permission.	N/A
Where contamination is suspected or is known to be present 17. Please provide a copy of any Remediation Strategy(ies) that have been agreed with relevant regulators.	Document Reference(s): See attached in Appendix C: • RSK Remediation Strategy – 11752 R01 (00)
Where contamination is not suspected 18. Please provide a copy of any Design Statement(s) that have been agreed (e.g. with the planning authority or in the case of permitted developments the client).	Document Reference(s): • N/A

Quantity of Use

19. Please provide a breakdown of the excavated materials for each site and how much will be placed at each site or sub area of each site. Where this is not specific to a single readily identifiable source refer to an annotated plan, schematic or attach a tabulated summary.	Document Reference(s): The following plans are included in Appendix A and Appendix B respectively: • Cut and fill and MMP schematics (1 and 2). The findings of the site investigation carried out by RSK in August 2021 indicate that the site is underlain by made ground beneath hardstanding of thicknesses ranging from 0.4m bgl (below ground level) and 1.90m. This made ground is described as relatively recently deposited gravel comparable to MOT road stone beneath a bitumen surface. In BH4, the thickness of bitumen was found to be 0.55m underlain by 0.50m gravel/MOT. Deeper made ground encountered in BH2 was found to comprise principally of ash and clinker with steel fragments. Natural strata were encountered at depths between 0.50-1.90m bgl below existing ground levels over the majority of the site, however in BH2 the natural stratum was encountered at 5.40m. The strata were noted to comprise a soft to firm clayey very sandy silt or very silty sand. The material within the raised mounds that surrounds most of the site was reported by Tergeo Consulting to be made ground comprising sandy, gravelly clay with fragments of brick, concrete, ceramic, plastics, fabrics, glass, macadam and mixed lithologies. Asbestos was detected in 2 no. samples (chrysotile) at 0.062% and 0.006% of total mass. A subsequent RSK soil assessment (October 2018) described the mound as consisting of two distinct layers: • Thin topsoil layer comprising light to dark brown slightly silty gravelly sand with sandstone, rare brick and concrete and abundant rootlets to 0.1m below the top of mound (BTM)
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	Made ground comprising dark brown gravelly sand with low to medium cobble content and manmade products making up between <5% to 30% of the volume between 0.1m to 0.4m. The made ground underlying the topsoil layer of the mound comprised of: brick, concrete, plastic sheeting, glass, asphalt, ceramic, clinker, plastic wrappers, string, wood (manufactured) and cloth. Items such as nails, tin cans, rubber tyres, a bin lid and concrete flagstones were identifiable. The mounds had variable levels of man-made material within them with the northern section comprising approximately 30%, the northwest of 1-15% and south and east <5%. The proposed cut and fill from existing levels to proposed levels gives a 3,697.57m³ surplus of material. The LK Group have stated that they will aim to generate circa 1,050m³ of clean soil and 650m³ of crushed aggregates for placement above reduced levels as 450mm thickness of subsoil in grassed areas and 150mm thickness capping layer and piling mats – reducing the surplus to 1,997.57m³ of material to be sent for off-site disposal.
20a. How has consolidation/compaction being considered in the above mass balance calculations?	It is assumed any small consolidation volumes will be offset by bulking volumes in aggregates produced for the construction platforms.
20b. How has loss due to treatment being considered in the above mass balance calculations (if applicable)?	Not applicable.

20c. How has the addition of treatment materials being considered in the above mass balance calculations (if applicable)? Note - An exact figure is not required but one that is reasonable in the circumstances and can be justified if challenged.	Not applicable.
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Contingency arrangements

Explain what is to happen in the following situations and **identify the appropriate clauses** in the contract(s) (Such clauses must be provided to the Qualified Person, preferably as a summary document): or

21a. What is to happen to, and who is to pay for out of specification materials?	LK Remediate will remove materials that aren't physically or chemically suitable for reuse on-site.
21b. What is to happen to, and who is to pay for any excess materials?	LK Remediate will remove excess materials from the site.
21c. What happens if the project programme slips in relation to excavated materials or materials under -going treatment?	To mitigate programme prolongation LK Remediate will remove materials that aren't physically or chemically suitable for reuse on-site.

21d. Other identified risk scenarios for the project (relating to excavated materials)?	There is the potential for contamination not previously identified to be present. In the event significant contamination is encountered this may preclude reuse of material previously identified for reuse. Should this occur or where this is suspected, the material will be disposed off-site under waste Duty of Care arrangements.
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The Tracking System

Where contamination is suspected or known to be present, state the procedures put in place to:

22a. For all sites please describe the tracking system to be employed to monitor materials movements.	Daily Records will be kept of all material movements at the site with periodic visits by a John Southworth Builders Ltd appointed geo-environmental engineer to inspect and test stockpiles of material proposed for re-use with written confirmation that material may be re-used provided. Annotated plans of excavations, stockpile locations and reuse areas will be maintained on-site for subsequent inclusion within the MMP Verification Report. Off-site disposal of unsuitable / excess materials will be undertaken in accordance with DoC requirements.
Where contamination is suspected or known to be present, state the procedures put in place to: 22b. Prevent contaminants not suitable for the treatment process being accepted	N/A – treatment not proposed
Where contamination is suspected or known to be present, state the procedures put in place to:	The availability of suitable storage areas on site to quarantine soils that are awaiting confirmation testing may be insufficient or unavailable, depending on the nature of the work being undertaken. If storage is unavailable, it may be necessary to place the cover system soils directly into place as they are received and schedule chemical testing from samples

22c. Prevent cross contamination of materials not in need of treatment, wastes awaiting treatment and treated materials	taken in-situ. In the event that the chemical test data shows an exceedance of the assessment criteria, there is a risk this soil would need to be excavated and removed from site or used in another location where it will be suitable. A general watching brief should be maintained throughout earthworks looking for visual and/or olfactory evidence of contamination. This will allow any unexpected areas of contamination to be identified and assessed. In the event that unexpected horizons of contaminated soils are identified during excavation works, the contractor will inform the site manager and/or contact the environmental consultant immediately. Work will be postponed in the area of discovery and the work area cordoned off. The soils will be inspected, sampled and/or analysed to assess the potential risks. The environmental consultant will document any findings. Stockpiled materials will be clearly marked and referenced on site to minimise the risk of materials that either not validated, unsuitable or destined for off-site disposal being reused in error.
<i>Where contamination is suspected or known to be present, state the procedures put in place to:</i> 22d. Demonstrate that materials that do not require treatment and successfully treated materials reach their specific destination	The tracking sheet shall be supported by surveying records, annotated plans and photographs collected as part of the daily record keeping maintained by the contractor. John Southworth Builders Ltd appointed geo-environmental engineer will undertake periodic visits throughout the earthworks programme to review the contractors' daily records and collect its own records in support.
<i>Where contamination is suspected or known to be present, state the procedures put in place to:</i>	All materials to be disposed off-site will be sampled, tested, assessed and classified in accordance with WM3. Where appropriate, further Waste Acceptance Criteria (WAC) analysis will be undertaken to identify the suitability of material for disposal at a specific class of landfill where WAC limits apply.

22e. Ensure that waste for off-site disposal or treatment is properly characterised and goes to the correct facility	
23. Please attach a copy of the tracking forms / control sheets that are to be used to monitor materials movements. To include transfer of loads on site into stockpiles prior to treatment (if applicable), stockpiled after treatment (if applicable), stockpiled awaiting use (as appropriate) and final placement.	Document reference(s); The following tracking sheet is included in Appendix G – Tracking Table
<i>For Hub Sites within Cluster Projects & where materials need treatment before reuse</i> 24. Please attach a copy of the Environmental Permit covering the treatment process.	Permit reference / EA letter reference: N/A

Alternatively if the treatment is covered by a Mobile Plant Permit and associated Deployment Form, attach a copy of the EA agreement to the Deployment Form.	
Records	
25. Where, and in what form, are records to be kept? Note – records e.g. transfer notes, delivery tickets, Desk Top Study, Site Investigation, Risk Assessment(s), Verification Report(s) need to be kept for at least 2 years after the completion of the works and production of the Verification Report	LK Remediate keeps digital site records. Paper copies of transfer notes and tickets will be retained in the site folder.

Verification Plan

26. Provide or explain the Verification Plan which sets out how you will record the placement of materials and prove that excavated materials have been reused in the correct location and in the correct quantities within the development works (see 3.4 of the DoW CoP).	Document Reference Verification plan specific for the MMP is provided as Appendix H.
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Appendix 2 : Duty of Care



ENVIRONMENT AGENCY

**THE ENVIRONMENTAL PROTECTION ACT 1990
WASTE MANAGEMENT SITE LICENCE
(MODIFICATION)**

John Bagshaw Wheeldon

**Unit 8-10
Bury New Road
Heap Bridge, Bury
Lancashire BL9 7HT**

SD 82687 10581

ENVIRONMENTAL LICENCE

**WML 00796/M01
EAWML/53823**



**ENVIRONMENT
AGENCY**

**ENVIRONMENTAL PROTECTION ACT 1990
SECTION 37**

**WASTE MANAGEMENT LICENCE
NOTICE OF MODIFICATION**

LICENCE REF No: WML 00796/M01	FACILITY TYPE: A9 Hazardous Transfer Station
LICENCE HOLDER: John Bagshaw Wheeldon Harwood Fields House, Off Castle Hill Road, Birtle, Bury, Lancashire BL9 6UL	LICENSED FACILITY: Unit 8-10 Bury New Road Heap Bridge, Bury Lancashire BL9 7HT
Company Registration No : 843156	

WHEREAS you are the licence holder of the said licensed facility

AND WHEREAS on the 1st April 1996 the powers and duties of all waste regulation authorities in England and Wales transferred to the Environment Agency ("the Agency") by virtue of section 2 of the Environment Act 1995

AND WHEREAS the conditions of the said licence may have been modified from time to time

NOTICE IS HEREBY GIVEN that the Agency modifies the conditions of the said licence in accordance with Section 37 (1) (b) of the Environmental Protection Act 1990 and as set out in the Schedule attached to this notice.

Signed

Name Steve Walters

Environment Management Team Leader

Dated 28th October 2005

This modification shall take effect on 28th October 2005 at 00.01 hours

**YOUR ATTENTION IS DRAWN TO THE RIGHTS OF APPEAL DETAILED AT THE END
OF THIS MODIFICATION.**

SCHEDULE – CONDITIONS RELATING TO THIS MODIFICATION

Modification of conditions under Section 37(1) (b) of the Environmental Protection Act 1990 as follows:

Complete update of old licence to new standard for purpose of remaining in Waste Management Licensing and avoiding requirement to apply for PPC Permit.

EXPLANATORY NOTES - including rights of appeal.

RIGHTS OF APPEAL

Section 43(1) of the Environmental Protection Act 1990 provides that:

Where, except in pursuance of a direction given by the Secretary of State, the conditions of a licence are modified, the licence holder may appeal from the decision to the Secretary of State.

Therefore, if you feel aggrieved by the decision detailed on the attached notice, you may obtain the appropriate form on which to give written notice of an appeal from :-

The Planning Inspectorate
Environment Appeals Team
Room 215, Regus Building
1 Friary
Temple Quay
Bristol
BS1 6EA

Tel: 0117 344 5680, 5682 or 5683
Fax: 0117 344 5242

For Wales, the address is –
The Planning Inspectorate
Crown Buildings
Cathays Park
Cardiff
CF10 3NQ

Tel: 02920 823859
Fax: 02920 825150

This notice of appeal should be accompanied by the following information:

A statement of the grounds of appeal;

A copy of any application to modify the licence

A copy of the licence;

A copy of any correspondence relevant to the appeal;

A copy of any other document relevant to the appeal including, in particular, any relevant consent, determination, notice, planning permission, established use certificate or certificate of lawful use or development and

A statement indicating whether you wish the appeal to be in the form of a hearing or on the basis of written representations.

You are also required to serve a copy of your notice of appeal, together with copies of any the above documents that have accompanied your notice of appeal, on the Environment Agency (at the address overleaf). You should appeal within 6 months of the date that this notice takes effect but the Secretary of State may allow notice of appeal to be given after the expiry of this time period.

1 General considerations

1.1 Specified waste management operations

- 1.1.1 No waste management operations shall be authorised by this licence unless:
- a** specified in and undertaken in accordance with the limitations in the working plan and in the following table; or
 - b** otherwise required by the conditions of this licence as being an integral part of those operations;

Table 1.1 Specified waste management operations

Specified Waste Management Operation	Permitted Waste Types which may be subject to the Specified Operation	Limits on Specified Waste Management Operations
D15: Storage pending, on this site any of the category "D" operations authorised under this column, or elsewhere than on this site, any of the operations listed in Part III of Schedule 4 of the 1994 Regulations, (excluding temporary storage, pending collection, on the site where it is produced). R13: Storage of waste consisting of materials intended for submission, on this site to any of the category "R" operations authorised under this column, or elsewhere than on this site, to any of the operations listed in Part IV of Schedule 4 of the 1994 Regulations, (excluding temporary storage, pending collection, on the site where it is produced).	All	• Maximum storage capacity 1500 tonnes • Maximum storage capacity of less than 10 tonnes hazardous waste being bonded asbestos only
D9: Physico-chemical treatment of waste not listed elsewhere in this table which results in final compounds or mixtures which are disposed of on this site by means of any of the category "D" operations authorised under this column, or elsewhere than on this site, by means of any of the operations listed in Part III of Schedule 4 of the 1994 Regulations. R2: Recycling or reclamation of organic substances which are not used as solvents R3: Recycling or reclamation of metals and metal compounds R4: Recycling or reclamation of other inorganic materials.	All solid wastes	Treatment consisting only of physical sorting or separation of waste into different components for [disposal (no more than 50 tonnes per day)], [recycling or reclamation

Specified Waste Management Operations and Exempt Waste Management Operations

- 1.1.2 Where wastes are being brought onto the site for waste management operations which are exempt from licensing under the 1994 Regulations, then the wastes which are subject to the specified waste management operations shall be kept clearly segregated and identified from those wastes which are being kept on the site for the exempt waste management operations.

1.2 **Permitted wastes**

Permitted categories and types of wastes

- 1.2.1 No wastes other than those, which are categorised below in Table 1.2A and specified in detail in Appendix A to these conditions shall be accepted at the site.

Table 1.2A. Permitted quantities of waste

Permitted Waste Categories	Maximum Permitted Quantities for each waste category (subject to maximum permitted total quantity in condition 1.2.2) (tonnes/year)
Inert wastes	No limit subject to maximum storage capacities detailed in Table 1.1.
Metal wastes (non-hazardous)	No limit subject to maximum storage capacities detailed in Table 1.1.
Hazardous Wastes being bonded asbestos only.	Limited to a maximum of less than 10 tonnes per day and a storage capacity of less than 10 tonnes.
Degradable Household wastes Degradable Commercial wastes Degradable Industrial wastes (non-hazardous)	No limit subject to maximum storage capacities detailed in Table 1.1.

Permitted quantities of wastes

- 1.2.2 The total quantity of waste accepted at the site per year shall be <75000 tonnes.

Exclusion of wastes with other specified characteristics

- 1.2.3 Notwithstanding the specification of permitted waste types under conditions 1.2.1 and 1.2.2 above, wastes shall not be accepted at the site which have any of the following characteristics:

Table 1.2B. Excluded wastes of specified form and type

Waste Characteristic	Type
Form and type:	Consisting solely or mainly of dusts, powders or loose fibres; Wastes that are in a form which is either sludge or liquid.

1.3 **Hours of operation**

- 1.3.1 The following specified waste management operations authorised by this licence shall only be carried out within the times specified in Table 1.3 below

Table 1.3. Permitted operating hours

Specified waste management operations	Permitted hours
Monday – Friday	0700-1800
Saturday	0800-1300
Sunday	No Operations
Bank Holidays & Public Holidays	0800-1300 (Maximum 25 tonnes waste received or treated)

1.4 **Staffing and understanding of requirements of licence conditions**

Minimum staffing and supervision

- 1.4.1 Whenever the site is open to receive or dispatch wastes, or is carrying out any of the specified waste management operations, it shall be supervised by at least one member of staff who is suitably trained and fully conversant with the requirements of the licence regarding:
- a** waste acceptance and control procedures;
 - b** operational controls;
 - c** maintenance;
 - d** record-keeping;
 - e** emergency action plans;
 - f** notifications to the Agency.

Availability of licence

1.4.2

A copy of this licence shall be kept available on site for reference when required by all site staff carrying out work under the requirements of the licence.

Understanding of licence

- 1.4.3 All site staff shall be, or shall work under the direct supervision of a member of staff who is, fully conversant with those aspects of the licence conditions which are relevant to their specific duties.

Attendance of Technically Competent Persons

- 1.4.4 Attendance of the technically competent person(s) at the site shall be recorded in the site diary on arrival and departure.

1.5 Changes in technically competent persons

- 1.5.1 Any changes in the technically competent management of the site and the name of any incoming person [together with evidence that such person has the required technical competence] shall be submitted to the Agency in writing within 5 working days of the change in management. Technically competent management and technical competence shall be as defined under section 74 of the Environmental Protection Act 1990 and Regulations 4 and 5 of the 1994 Regulations.

1.6 Relevant convictions

Notification of relevant convictions

- 1.6.1 In the event of the Licence Holder and/or any relevant person being convicted of any relevant offence and which is in addition to any already notified to the Agency, then full details shall be provided to the Agency within 14 days following sentencing, whether or not the conviction or sentence is subsequently appealed. Such details shall include, in respect of each relevant person (as defined in section 74(7) of the Environmental Protection Act 1990 or any subsequent amendments to that section), the nature of the offence, the place and date of conviction, and any fine or other penalty imposed.

Notifications of appeals against convictions

- 1.6.2 In the event that the Licence Holder and/or any relevant person lodges an appeal against any such conviction or sentence, the Licence Holder shall notify the Agency of this within 14 days of the lodging. The Licence Holder shall notify the Agency of the results of that appeal, within 14 days of the appeal being decided.

1.7 Amendments to working plan and supporting information

Amendments to working plan requiring prior consent from the Agency

- 1.7.1 The Licence Holder shall give the Agency prior notice in writing of any proposed change to those sections of the working plan which are specified in Table 1.7 below, and to any appendices, drawings and figures which are referenced in those sections.

Table 1.7 Sections of the working plan requiring prior consent for amendments

Number and Heading of Working Plan Sections And Appendices	Sections, Subsections and Appendices requiring Prior consent for Amendments
1. Waste received	1-4
2. Dust Problems	1-4
3. Harmful or offensive odours	1-3
4. Light wastes	1-4
5. Solid wastes which may produce contaminating or polluting run-off	1-5
6. Waste sludge or liquids	1-3
7. Combustible waste	1-7
8. Waste which attracts pests	1-5
9. Wastes attracting scavengers	1-3
10. Wastes giving rise to mud	1-3
11. Noise	1-5
12. Asbestos handling	1-6
13. Storage of fuels on-site	1-4

- 1.7.2 The notice shall be accompanied by a copy of the proposed changes, and by a written assessment of the effect that implementing the proposed change to the working plan would have on the risk posed by the site to human health and the environment.
- 1.7.3 The Licence Holder shall provide up to 6 additional copies of the proposed change and supporting risk assessment to the Agency, when required by the Agency in writing.
- 1.7.4 The proposed change to the working plan shall not be implemented unless the Agency has given its written consent to it. Following consent, the Licence Holder shall give the Agency prior written notification of the implementation date of the change, and from that date the changed section shall be deemed to be incorporated in the working plan in replacement of the previous version of that section.

Amendments to the working plan requiring prior notification to the Agency

- 1.7.5 Except where it is specified under condition 1.7.1 above that the amendment of specified sections of the working plan requires the prior consent of the Agency, the Licence Holder shall give the Agency not less than 7 days prior written notice of any change to the working plan and to any appendices, drawings and figures which are referenced from those sections.
- 1.7.6 The notice shall be accompanied by a copy of the specified changes.
- 1.7.7 The Licence Holder shall provide up to 6 additional copies of the proposed change to the Agency, when required by the Agency in writing.
- 1.7.8 Such changes to the working plan shall be deemed to be incorporated in the working plan and implemented on the date specified to the Agency in the amendment notification.

1.8 Notification of change of operator's or holder's details

- 1.8.1 The following information shall be notified in writing within 5 working days to the Agency:
- a [where the Licence Holder is an individual or named individuals:
 - i where the Licence Holder consists of more than one named individual, the death of any of those individuals;
 - ii any change in the Licence Holder's name(s) or address(es);
 - iii any steps taken with a view to the Licence Holder, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case them being in a partnership, dissolving the partnership;
 - iv the operator at the time of issue of the licence and of any change in the operator or in the operator's trading name, address, registered name or registered office address (if different from the Licence Holder)

1.9 Notification of preparatory works

- 1.9.1 No preparatory works shall be undertaken until at least 7 days prior notice in writing has been given to the Agency of the intention to do so. The notification shall include details of what work is being done and when.

1.10 Notification of commencement, cessation and recommencement of waste storage operations

Specified waste management operations

- 1.10.1 No specified waste management operation shall be carried out until at least 7 days prior notice in writing has been given to the Agency of the intention to commence carrying out the specified waste management operation.

Cessation and recommencement of specified waste management operations

- 1.10.2 In the event that the site ceases receiving wastes for longer than 21 days then within 7 days following the elapse of that time, the Licence Holder shall inform the Agency in writing of the date of cessation and of the planned date of recommencement. In the event that it is intended that the site shall recommence receiving wastes sooner than the notified date then the Licence Holder shall give the Agency not less than 7 days prior notice in writing.

1.11 **Notifications and submissions to Agency**

- 1.11.1 Except where otherwise specified, all notifications and submissions to the Agency under the requirements of these licence conditions:
- a shall be made in writing to the address specified by the Agency in writing at the time of issue of this licence, or as subsequently specified by written notification to the Licence Holder;
 - b shall quote the licence reference number and the name of the Licence Holder.

2 Site engineering for pollution prevention and control

2.1 Engineering site containment and drainage systems

Provision and maintenance of site containment and drainage systems

2.1.1 No waste shall be deposited, stored, treated or otherwise handled in any area of the site until the engineered site containment and drainage system for that area has been constructed and completed in accordance with this condition and condition 2.1.2.

2.1.2 The engineered site containment and drainage systems shall be designed, constructed, inspected, validated and maintained, and shall be fully documented and recorded, to be fit for purpose and meet the standards specified in Table 2.1 below.

Table 2.1 Site containment and drainage standards

Type of Site Surface and Drainage	Minimum Specified Standards of Design, Construction and Maintenance
a) Hardstanding	Areas of hardstanding shall be constructed of granular material (e.g. crushed stone, aggregate, road planings or other similar material) and maintained such that the working surface: i) shall remain even ii) shall not be subject to settlement or differential settlement iii) shall not be subject to rutting by vehicles even when wet iv) shall have sufficient durability to allow cleaning for example by scraping v) shall remain free of standing water.
b) Impermeable pavement, bunding and sills	Areas of impermeable pavement, bunding and sills shall be constructed and maintained so as to prevent fluids running off the pavement and the transmission of fluids through the pavement or joints.
c) Sealed drainage systems	Drainage to areas of impermeable pavement shall be provided by a sealed drainage system, that is comprised of a drainage system with impermeable components which does not leak and which will ensure that:- • no liquid will run off the pavement other than via the system; and • except where they may be lawfully discharged, all liquids entering the system are collected in a sealed sump. i) Sealed sumps shall be inspected no less frequently than daily and after rain, emptied when the collected liquids reach 80% of the capacity of the sump as measured using a dipstick or equivalent gauge, and constructed and maintained so as to collect and contain all liquids which run off the pavement; ii) Inspections and emptying of sealed sumps shall be recorded in the site diary. iii) Uncontaminated drainage from clean yard areas shall be kept separate and discharged to either surface water or sewer or watercourse or soakaway.
d) Covered buildings or roofed areas	Where wastes are stored in a building: i) the building shall be designed, constructed and maintained to prevent ingress of rain and surface water. ii) roof water shall be kept separate from contaminated water and other liquids and shall be discharged to either surface water or a sewer or a water course or a soakaway.
e) Fixed bays and other fixed containers	All fixed bays and other fixed containers used for the storage and treatment of wastes must be constructed and maintained to a standard, which is fit for purpose.
f) Storage areas for skips, drums and other mobile tanks and containers	All skips, drums and other mobile tanks and containers having individual capacities of greater than 10 litres which are used for the storage of wastes shall be constructed and maintained so that they do not leak any liquids contained in them.

Type of Site Surface and Drainage	Minimum Specified Standards of Design, Construction and Maintenance
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- | | |
|---|---|
| g) Inspection and maintenance of engineered containment | <p>All areas of hardstanding, impermeable pavement, sealed drainage systems, covered buildings, roofed areas, fixed bays and other containers, and storage areas for skips, drums and other mobile tanks and containers:</p> <ul style="list-style-type: none"> i) shall be inspected no less frequently than monthly, to ensure the continuing integrity and fitness for purpose of their construction, and the inspection and any necessary maintenance shall be recorded in the site diary; and ii) in the event of any damage occurring which breaches the integrity of the engineered containment so that it no longer meets the specified standards, the Licence Holder shall cease importing waste into or treating waste in the affected area, shall notify the Agency immediately, and shall not recommence importing waste into or treating waste in the affected area until it has been repaired to a standard at least as good as the original specification. |
|---|---|

Construction quality assurance of new site containment and drainage systems

2.1.3 No wastes shall be deposited, stored, treated or otherwise handled in any area for which an engineered site containment and drainage system is to be newly constructed to meet the requirements of this condition unless:

- a details of the identities, relevant experience and relevant qualifications of the personnel who will be providing Quality Assurance of the engineered site containment and drainage systems have been submitted in writing to the Agency and acknowledged in writing by the Agency;
- b the engineered site containment and drainage system has been constructed in accordance with the other requirements of condition 2.1;
- c the Validation Report on the construction of the engineered site containment and drainage system has been submitted in writing to the Agency, and the Agency has confirmed in writing that it has no objection to the placement of wastes on that containment area.

Construction quality assurance of existing site containment and drainage systems

2.1.4 No wastes shall be deposited, stored, treated or otherwise handled in any area for which a previously constructed and existing engineered site containment and drainage system is being used to meet the requirements of this condition unless:

- a details of the identities, relevant experience and relevant qualifications of the suitably qualified Engineer who will be providing inspection and validation of the existing engineered site containment and drainage systems have been submitted in writing to the Agency and acknowledged in writing by the Agency;
- b the engineered site containment and drainage system for that area has been inspected by the designated Engineer and has been maintained or improved, in accordance with their recorded advice, to be fit for purpose in that :

- i areas of impermeable pavement are laid to take weight of relevant vehicles, plant and equipment without cracking or breaking; and
- ii areas of impermeable pavement are free from cracks which could increase permeability; and
- iii areas of impermeable pavement are resistant to mechanical, physical and chemical stresses to which they may be subjected; and
- iv areas of impermeable pavement fall towards the drainage system to prevent ponding; and
- v no liquid will run off areas of impermeable pavement other than via the drainage system; and
- vi the drainage system is sealed so that it does not leak and is capable of collecting and containing liquids draining from the impermeable pavement ; and
- vii liquid from the drainage system is disposed of to an approved discharge.

2.1.5 The existing engineered site containment and drainage system shall be maintained in accordance with the recommendations of the designated Engineer and the requirements of Table 2.1.

3 Site infrastructure

3.1 Provision of site identification board

- 3.1.1 No wastes shall be received at the site until an identification board has been provided at or near the site entrance.
- 3.1.2 The identification board shall be inspected at least once per week. In the event of damage or defect, the board shall be repaired or replaced within 3 working days.
- 3.1.3 The board shall be easily readable from outside the site entrance in daylight hours, and shall display the following information:
 - a Site name and address;
 - b Licence Holder name (company name, not individual name unless justified as necessary);
 - c Operator name (company name, not individual name unless justified as necessary);
 - d Licence number;
 - e Emergency contact name and telephone number (for security reasons, personal names and home phone numbers should not be used except where no alternative is practicable);
 - f Statement that the site is licensed by the Environment Agency;
 - g Agency national numbers: General Enquiries 08708 506506 and Emergency Contact 0800 807060 (or any other number subsequently notified in writing by the Agency);
 - h Days and hours site is open to receive waste.

3.2 Site security

- 3.2.1 Site security systems shall be provided at all times during the subsistence of this licence, the objective of which shall be to prevent access by humans, and livestock, which is not authorised either by the Licence Holder or under legal powers of entry. These shall be installed, operated and maintained, and shall be fully documented and recorded, in accordance with the requirements specified in Table 3.2:

Table 3.2 Site security system standards

Site security system	Specified standards
Timetable of provision	Site security shall be provided prior to commencement of the specified operations.
Design standards	Unless otherwise agreed in writing by the Agency, this shall consist of a chainlink security fence at least 1.8 metres high around the perimeter of the site, which shall meet the standards specified in British Standard BS1722 or an agreed alternative, and shall have a lockable gate to at least the same height and standard at the site access.
Operational standards	The site shall be kept closed and secure at all times when unattended.
Maintenance standards	The site security shall be fully inspected at the commencement of each working day. Any defects or damage shall be made secure by temporary repair by the end of the working day, and shall be repaired within 7 working days of the damage being detected. All inspections, defects, damage and repairs shall be recorded in the site diary.

4 Site operations

4.1 Control of mud and debris and loose waste

Prevention of mud and debris on road

- 4.1.1 Whenever the site is receiving or despatching wastes, measures shall be provided, operated and maintained with the objective of preventing the deposit or tracking of mud or debris arising from the site onto public areas outside the site, which shall include public highways and areas of public access.
- 4.1.2 All vehicles leaving areas of the site which are operational or upon which engineering works are being carried out shall, before leaving the site, be cleaned as necessary and shall be checked to ensure that they are clear of loose waste and that any waste is secure.

Remediation of mud and debris on road

- 4.1.3 In the event that mud, debris or waste arising from the site is deposited onto public areas outside the site, the following remedial measures shall be implemented immediately:

-
- a) the affected public areas outside the site shall be cleaned
 - b) traffic shall be isolated from sources of mud and debris within the site to prevent further tracking of mud and debris, and measures shall be taken to clear any such sources as soon as practicable.

4.2 Leaks and spillages

Potentially polluting leaks and spillages from vehicles, plant and equipment

- 4.2.1 All vehicles used on the site by the operator, and all plant and all equipment used on the site in connection with specified waste management operations, shall be operated and maintained with the objective of preventing potentially polluting leaks and spillages of wastes [or other potentially polluting materials which are to be used in combination with those wastes in the specified waste management operations].

Potentially polluting leaks and spillages from skips, drums and other mobile containers

- 4.2.2 Each skip, drum or other mobile container used to hold wastes which consist of or contain potentially polluting liquids, sludges or powders, [or other potentially polluting materials which are to be used in combination with those wastes in the specified waste management operations] shall be:
- a loaded and unloaded in accordance with the handling procedures specified in Table 4.2;
 - b filled and emptied in accordance with the filling and emptying procedures specified in Table 4.2;
 - c clearly and unambiguously labelled regarding its contents, unless the contents are clearly identifiable by visual inspection;
 - d inspected and maintained according to the maintenance schedules and procedures specified in Table 4.2, which shall be fully documented and recorded;
 - e in the event of damage or deterioration to a container that is, or is likely to cause, a leak, that container shall be repaired or replaced immediately.

Control and remediation of leaks and spillages

- 4.2.3 In the event of any potentially polluting leak or spillage occurring on site, documented control and remediation procedures shall be implemented immediately and recorded, and shall meet the standards specified in Table 4.2 below.

Table 4.2 Standards for prevention and control of leaks and spillages

Action	Specified standards
a) Loading and unloading skips, drums and other mobile containers	i) Loading and unloading of containers shall be supervised at all times by a member of staff. ii) Lids/ caps/ bungs or other closures shall be in place during loading/ unloading. iii) Loading/ unloading shall be carried out in an area provided with engineered containment of the type required for that waste under condition 4.6, and of the standard of containment specified under condition 2.1.
b) Filling and emptying drums and other mobile containers	i) Filling and emptying of containers shall be supervised at all times by a member of staff. ii) Lids/ caps/ bungs or other closures shall be in place at the end of filling iii) Containers shall not be filled beyond their operational capacity. iv) Filling and emptying shall be carried out in a bunded area maintained in accordance with condition 2.1.2. v) Measurement of level/ void space shall be by physical dipping prior to loading.
c) Inspection, maintenance and repair of drums and other mobile containers	i) Containers shall be inspected daily for leaks. ii) Containers found to be leaking either shall be immediately transferred to a larger over-container or shall have their contents immediately transferred to an alternative container.
d) Control and remediation of leaks and spillages	i) Minor spillages shall be cleaned up immediately, using sand or proprietary absorbent to clean up liquids and placed in alternative containers. ii) Major spillages, which are causing or are likely to cause polluting emissions to the environment: • immediate action shall taken to contain the spillage and prevent liquid from entering surface water drains, water courses and unsurfaced ground; • the spillage shall be cleared immediately and placed in alternative containers; • the Agency shall be informed immediately.

4.3 **Fires on the site**

Prohibition of fires on site

4.3.1 No wastes shall be burned on the site.

Actions to be taken in the event of a fire

4.3.2 In the event of a fire on the site, notwithstanding the implementation of actions to suppress and extinguish the fire, the following actions shall be implemented immediately and recorded in the site diary:

- a** the Agency shall be informed immediately of the fire; and
- b** so far as practicable, contaminated site drainage shall be prevented from entering any surface water drain or water course or unsurfaced ground.

4.4 Waste acceptance and control procedures

Waste acceptance procedures

- 4.4.1 All wastes shall be received, inspected, accepted or rejected, and recorded in accordance with the standards specified in Table 4.4 below.

Waste control procedures

- 4.4.2 All wastes accepted at the site shall be handled, kept and recorded in accordance with the standards specified in Table 4.4 below.

Waste despatch procedures

- 4.4.3 All outgoing wastes shall be inspected, despatched and recorded in accordance with the standards specified in Table 4.4 below.

Table 4.4 Standards for waste acceptance and control procedures

Stage of Waste Handling	Specified standards
a) Waste inspection	All wastes received at the site: i) shall be inspected on receipt to confirm their description and composition against the relevant waste transfer note and other accompanying documentation. ii) shall be kept separate from and shall not be mixed with other wastes until they have been confirmed and recorded for acceptance at the site.
b) Waste control procedures: quarantine storage and rejection of wastes	i) Any items of non-permitted waste which are detected after acceptance at the site, shall be placed immediately in a designated quarantine container, and, where these are or appear to be special wastes, the Agency shall be informed immediately; ii) In the quarantine area, wastes shall be kept segregated from other wastes which are or are likely to be incompatible; iii) Quarantined wastes shall be removed from site within 7 days; iv) The maximum quantity of wastes kept in the quarantine storage area shall be 4.6m³ at any one time. v) A record shall be kept in the site diary of all rejected wastes and all wastes kept in quarantine storage.
c) Identification of wastes	Bays and containers shall be clearly defined and labelled to identify the wastes stored within them
d) Waste despatch procedures	All wastes despatched from the site shall be inspected prior to despatch to confirm their description and composition.
e) Incompatible wastes	Incompatible wastes that are likely, in combination with each other or with other material at the facility, to give rise to pollution of the environment or harm to human health outside the site, shall be clearly identified and kept physically separate in designated areas.

4.5 Waste quantity measurement systems

Means of measurement

4.5.1 All waste accepted at and despatched from the site shall be measured in accordance with the following requirements:

- a The weight of all wastes accepted at and despatched from the site shall be determined by means of a public weighbridge, or a weighbridge or scales located within the site. The weighbridge or scales used shall record quantities of wastes in tonnes to an accuracy of 0.01 tonnes; or

4.6 Storage of wastes with specified hazardous properties or forms

4.6.1 Notwithstanding the specification of permitted waste types under condition 1.2, wastes displaying any of the hazardous properties or forms specified in Table 4.6 shall only be handled and/or stored on the site in accordance with the standards specified in Table 4.6 below.

Table 4.6 Standards for handling and/or storage of wastes with specified characteristics

Storage requirement	Specified standards
a) Solid wastes which when handled or stored are likely to generate significant quantities of dusts, fibres or particulates	These wastes only permitted if they are handled and stored in: i) buildings or containers providing containment of aerial emissions of dusts and particulates; and ii) bays or roofed areas provided with a permanent water supply and water spraying or misting equipment, and with an impermeable pavement and a sealed drainage system; and the water spraying or misting equipment is used at all times when significant quantities of dusts, fibres or particulates are likely to be, or are being generated. iii) In the case of asbestos containing/contaminated materials they are only permitted if handled and stored in a manner which contains and segregates the materials from contaminating other wastes and in accordance with section 12 (1-6) of the working plan.
b) Odorous wastes, including wastes which are likely to be odour producing during storage	i) These wastes only permitted if: • stored in covered buildings providing containment of aerial emissions; or • stored in bays provided with an impermeable pavement and sealed drainage. ii) These wastes shall be subject to monitoring in accordance with condition 5.2 and shall in any case not be stored for longer than 48 hours, unless otherwise agreed in writing with the Agency.
c) Solid wastes which are likely to produce polluting or contaminating run-off.	• Inert wastes only permitted if stored in bays with • an impermeable pavement and sealed drainage. ii) Degradable Household, Commercial and Industrial wastes only permitted if stored in areas with impermeable pavement and sealed drainage and • stored in covered shelters or roofed areas; and • stored in bays.
d) Wastes which are in a form which is either sludge or liquid.	These wastes only permitted if: • received and stored in liquid-retaining, covered containers; and • stored in areas provided with impermeable pavement and sealed drainage.
e) Combustible wastes	These wastes only permitted if stored in bays provided with an impermeable pavement and sealed drainage, and with access to fire fighting equipment.
f) Wastes which are likely to attract pests	These wastes shall be subject to monitoring in accordance with condition 5.3, and shall in any case not be stored for longer than 48 hours, unless otherwise agreed in writing with the Agency.
g) Wastes which are likely to attract scavengers	i) These waste only permitted if: stored in covered buildings providing security against scavengers, ii) These wastes shall be subject to monitoring in accordance with condition 5.4.

h) Wastes which include light wastes or other wastes liable to give rise to litter	These wastes only permitted if: • stored in covered buildings providing containment of aerial emissions of litter;
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4.7 **Removal of residual wastes from site**

- 4.7.1 In the event that no wastes are received on the site for 3 months and the Agency has reasonable grounds to believe that the importation of wastes will not be resumed, then, notwithstanding any operational limits on storage times of wastes specified in the other conditions of this licence, the licence holder shall ensure that all wastes remaining on the site shall be removed by the date specified by the Agency in writing. This shall include, where required by the Agency, cleaning of plant, equipment and engineered containment used in the specified waste management operations, and emptying of any sealed sumps or interceptors.

5 **Amenity management and reporting**

5.1 **Control, monitoring and reporting of dusts, fibres and particulates**

- 5.1.1 Measures shall be implemented and maintained throughout the operational life of the site to control and monitor emissions of dusts, fibres and particulates from the site in accordance with the standards specified in Table 5.1 below

Table 5.1 Standards for monitoring and control of aerial emissions of dusts, fibres and particulates

a) Monitoring of aerial emissions	Site staff supervising individual waste handling operations shall, during the carrying out of those operations, undertake visual monitoring of aerial emissions.
b) Remedial action	i) On detection or notification of visible aerial emissions that are likely to be transported beyond the site boundary, immediate action shall be taken to stop the waste handling operations giving rise to the emission and to suppress the aerial emission from the waste. ii) The incident and the remedial action shall be recorded in the site diary.

- 5.1.2 All emissions to air from the specified waste management operations on the site shall be free from visible concentrations of dusts, fibres or particulates as are likely to cause pollution of the environment or harm to human health or serious detriment to the amenity of the locality outside the site boundary, as perceived by an authorised officer of the Agency.

5.2 Monitoring and control of odorous emissions

- 5.2.1** Measures shall be implemented and maintained throughout the operational life of the site to control and monitor emissions of odours from the site, in accordance with the standards specified in Table 5.2.
- 5.2.2** All emissions to air from the specified waste management operations on the site shall be free from odours at levels as are likely to cause pollution of the environment or harm to human health or serious detriment to the amenity of the locality outside the site boundary, as perceived by an authorised officer of the Agency.

Table 5.2 Standards for monitoring and control of emissions of odours

a) Monitoring of odorous emissions	Olfactory monitoring of aerial emissions from the site shall be carried out: • by the site manager or supervisor, at least twice a day, at the site boundary situated downwind of the waste operations, and shall be recorded in the site diary; and • by site staff supervising individual waste handling operations, during the carrying out of those operations.
b) Odorous emissions action plan	i) On detection or notification of aerial emissions of odour that are or are likely to be transported beyond the site boundary at such levels that they are likely to cause pollution of the environment or harm to human health or serious detriment to the amenity of the locality, immediate action shall be taken to stop the waste handling operations giving rise to the emission and to suppress the aerial emission from the waste. ii) The incident and the remedial action shall be recorded in the site diary.

5.3 Monitoring and control of pest infestations

- 5.3.1** Measures shall be implemented and maintained throughout the operational life of the site to control and monitor the presence of pests on the site, in accordance with the standards specified in Table 5.3. The objective of these measures shall be to prevent pest infestations that are likely to cause pollution of the environment or harm to human health or serious detriment to the amenity of the locality.

Table 5.3 Standards for monitoring and control of pest infestations

Specified standards	
a) Monitoring of pest infestations	An inspection of stored wastes for pest infestations shall be carried out at least at weekly intervals by the site supervisor, and shall be recorded in the site diary.
b) Pest infestations action plan	i) On detection or notification of pest infestations, immediate action shall be taken to secure the attendance of a professional pest control contractor, to eliminate the pest infestation. ii) The incident and the remedial action shall be recorded in the site diary.

5.4 Control of scavenging birds and other scavengers

- 5.4.1 Measures shall be implemented and maintained throughout the operational life of the site to control and monitor the presence of scavenging birds and other scavengers on the site, in accordance with the standards specified in Table 5.4. The objective of these measures shall be to prevent scavenging birds and other scavengers from gathering on operational areas or scavenging wastes in such numbers that are likely to cause harm to human health or serious detriment to the amenity of the locality.

Table 5.4 Standards for monitoring and control of scavenging birds and other scavengers

a) Monitoring of scavengers	Stored wastes which are likely to attract scavengers shall be routinely monitored for the presence of scavenging animals or flocks of scavenging birds, throughout the working day by the site supervisor.
b) Scavengers action plan	i) On detection or notification of scavenging animals or flocks of scavenging birds, immediate action shall be taken to: • remove or deter them from the site, and • isolate and secure the wastes attracting the scavengers against further scavenging. ii) The incident and the remedial action shall be recorded in the site diary.

5.5 Control of litter

- 5.5.1 Measures shall be implemented and maintained throughout the operational life of the site to prevent the escape of litter from the confines of the site.
- 5.5.2 In the event that litter does escape from the site, it shall be retrieved as soon as practicable and no later than 1 hour after the end of the working day.

6 Site records

6.1 Security and availability of records

Security of records

- 6.1.1 All records which are required to be made under the conditions of this licence shall be maintained and kept secure from loss, damage or deterioration, and shall be kept in accordance with the requirements specified in Table 6.1 below.

Availability of records

- 6.1.2 All records which are required to be made under the other conditions of this licence shall be made available for inspection at the place where they are kept immediately when required by an authorised officer of the Agency.

Table 6.1 Standards for keeping of site records

Site records	Specified standards
Wastes accepted at the site; Wastes rejected. Wastes despatched from the site; Site diaries.	1. All records shall be stored either: a) on paper in a secure cabinet or cupboard; or b) on computer disc with a back up copy. 2. Records shall be kept for a minimum of two years.

6.2 Records of waste movements

Recording of wastes accepted and removed

- 6.2.1 A record shall be kept of each load of waste accepted and each load of waste removed from the site. This record shall include the following details:
- a Loads in:- Nature (solid, sludge or liquid), waste type as specified under condition 1.2, quantity (tonnes), date received, date accepted.
 - b Loads out:- Nature (solid, liquid or sludge), waste type as specified under condition 1.2, quantity of waste removed(tonnes), date removed.

Summary records of wastes accepted and removed

- 6.2.2 A summary record of the waste types and quantities accepted and removed from the site shall be made for each quarter of the financial year and shall be submitted to the Agency within 1 month following the end of that quarter. The summary record shall be in the format detailed in Appendix B or otherwise subsequently agreed with the Agency in writing.

6.3**Site diary****6.3.1**

A site diary shall be kept secure and shall be available for inspection at the site when required by an authorised officer of the Agency. This shall include a record of the following events, in accordance with the other conditions of this licence:

- a** construction work
- b** start and finish of daily waste management activities on site
- c** maintenance
- d** breakdowns
- e** emergencies
- f** problems with waste received and action taken
- g** site inspections and consequent actions carried out by the operator
- h** technically competent management attendance on site: the date and the time onto site and the time left site
- i** despatch of records to the Agency
- j** severe weather conditions
- k** complaints about site operations and actions taken
- l** environmental problems and remedial actions

6.3.2

Each record shall be completed within 24 hours of the relevant event.

Interpretation

In these conditions and their interpretation, unless the context otherwise requires, the following terms have the specified meanings:

"accepted"

for waste being delivered to the site, shall mean accepted as waste input to the site for storage and/or processing and/or disposal under the specified waste management operations;

"authorised officer of the Agency"

means any person(s) authorised in writing by the Agency pursuant to section 108(1) of the 1995 Act to exercise any of the powers specified in subsection (4) of that section;

"consequences"

for **risk assessments** carried out within these conditions, means the adverse effects of harm as a result of realising a **hazard** which causes the quality of human health (other than health and safety of site staff or visitors to the site covered under the Health and Safety at Work Act 1974) or the environment to be impaired in the short or longer term.

"container"

means a container which does not permit either the ingress or egress of liquids, or the escape of dusts or wastes contained within it;

"engineered"

for works specified in these conditions, means carried out and completed using the relevant engineering process specified in these conditions;

"engineering"

for engineering works specified in these conditions, means the relevant process of design, construction or installation, quality assurance or validation or commissioning specified in these conditions;

"environmental targets or receptors"

for **risk assessments** carried out within these conditions, shall mean identified human and environmental populations or components, as specified in these conditions or otherwise agreed by the Agency within these conditions.

"groundwater"

means any water contained in underground strata;

"hazard"

means a property that in particular circumstances could lead to harm;

"immediately"

for carrying out of actions under the conditions, shall mean without delay and within a reasonable time, taking into account any more immediate direct action necessary to prevent or minimise risk to human health and the environment. For carrying out notifications to the Agency, shall also mean by the fastest effective means available (for example, telephone) and confirmed in writing within 1 working day (or such other time as may be agreed by the Agency within the conditions);

"inert waste"

means wastes which will not undergo any significant physical, chemical or biological transformations. Inert waste will not dissolve, burn or otherwise physically or chemically react, biodegrade or adversely affect other matter with which it comes into contact in a way likely to give rise to environmental pollution or harm to human health. The total leachability and pollutant content of the waste and the ecotoxicity of the leachate must be insignificant and in particular not endanger the quality of surface water and/or groundwater.

"maintenance"

for engineering maintenance specified in these conditions, means the process of inspection, testing, repair of the relevant engineering works specified in these conditions;

"probability"

means the quantified expression of chance, denoted either as:

- the ratio or percentage of the occurrence of a particular event as one among a number of possible events;
- or as the frequency of occurrence of a particular event in a given period of time;

"received"

for waste being delivered to the site, shall mean delivered to the site and undergoing the waste acceptance procedures, including storage of those wastes during those procedures prior to acceptance of the waste;

"release pathways"

for **risk assessments** carried out within these conditions, shall mean the routes by which defined **hazards** may potentially realise their **consequences**, defined in terms of releases or emissions from the site that go beyond the site containment or boundary via one or more of the following routes, either directly or indirectly: **Land; Groundwater, Surface water; Atmosphere;**

"relevant offences"

are offences within the meaning of regulation 3 of the Waste Management Licensing Regulations 1994 or any statutory provisions or regulations amending or replacing them;

"risk"

means a combination of the **probability** and **consequences** of occurrence of a defined hazard;

"risk assessment"

means the systematic identification, analysis, estimation and evaluation within a defined **scope** of the defined **risks** of a particular activity, operation, process or design, carried out and reported by suitably qualified or competent persons, using recognised quantified or semi-quantified methods and techniques.

Unless otherwise agreed by the Agency within these conditions, a risk assessment shall include and record the following:

- definition of the **hazards** associated with an activity, operation, process or design;
- assessment of the **probability** of those **hazards** occurring;
- determination of the potential **consequences** of those hazards for defined **environmental targets or receptors**, taking into account defined **release pathways** and defined protective measures;
- evaluation of the potential **magnitude** of those consequences and the **probability** of their occurrence;

"scope of risk assessment"

means the boundaries of the **risk assessment** and the **risks** to be assessed within those boundaries, as defined in the conditions or otherwise agreed by the Agency within the conditions;

"special waste"

has the meaning as defined by regulation 2 of the Special Waste Regulations 1996 or any statutory provisions or regulations amending or replacing them;

"specified waste management operations"

means the waste management operations authorised by condition 1.1 of this licence;

"surface water"

means any lake, pond, river or watercourse whether natural or artificial;

"the 1994 Regulations"

means the Waste Management Licensing Regulations 1994 and any statutory provisions or regulations amending or replacing them.

"the Agency"

means the Environment Agency;

"the Licence Holder"

means the Licence Holder specified in this licence or other person to whom the licence has been transferred in accordance with section 40 of the Environmental Protection Act 1990;

"the operator"

means a person who is in occupation of the site and has responsibility for carrying out day to day activities at the site;

"the site"

means the land, structures, plant and equipment to which this licence relates;

"time periods, e.g. annually, quarterly, monthly, per year, etc. "

Where periods are referred to in conditions, they shall be calculated in the following way:

- annually or per year: 1 April to 31 March;
- quarterly: 1 April to 30 June, 1 July to 30 September, 1 October to 31 December, 1 January to 31 March;
- monthly: calendar month;
- weekly: Monday to Sunday.

Where the issue of the licence does not coincide with the start of any of these periods, then any relevant limits for the first period shall apply pro rata;

"waste"

means controlled waste as defined in section 75(4) of the 1990 Act and the Controlled Waste Regulations 1992 or any statutory provisions or regulations amending or replacing them;

Appendices to conditions

Appendix A Permitted Wastes (Condition 1.2.1)

01 01 wastes from mineral excavation

01 01 01 wastes from mineral metalliferous excavation

01 01 02 wastes from mineral non-metalliferous excavation

02 01 wastes from agriculture, horticulture, aquaculture, forestry, hunting & fishing

02 01 03 plant-tissue waste

02 01 04 waste plastics (except packaging)

02 01 07 wastes from forestry

02 01 10 waste metal

02 06 wastes from the baking and confectionary industry

02 06 01 materials unsuitable for consumption or processing

02 07 wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa)

02 07 01 wastes from washing, cleaning and mechanical reduction of raw materials

02 07 04 materials unsuitable for consumption or processing

03 01 wastes from wood processing and the production of panels and furniture

03 01 01 waste bark and cork

03 01 05 sawdust, shavings, cuttings, wood, particle board and veneer other than those mentioned in 03 01 04

03 03 wastes from pulp, paper and cardboard production and processing

03 03 01 waste bark and wood

03 03 07 mechanically separated rejects from pulping waste paper and cardboard

03 03 08 waste from sorting of paper and cardboard destined for recycling

04 02 waste from the textile industry

04 02 09 waste from composite materials (impregnated textile, elastomer, plastomer)

04 02 10 organic matter from natural products

07 02 wastes from MFSU of plastics, synthetic rubber and man-made fibres

07 02 13 waste plastic

07 05 waste from MFSU of pharmaceuticals

07 05 14 solid wastes other than those mentioned in 07 05 13

10 02 wastes from the iron and steel industry

10 02 01 wastes from the processing of slag

10 02 02 unprocessed slag

10 02 08 solid wastes from gas treatment other than those mentioned in 10 02 07

10 03 wastes from aluminium thermal metallurgy

10 03 02 anode scraps

10 03 24 solid wastes from gas treatment other than those mentioned in 10 03 23

10 08 wastes from other non-ferrous thermal metallurgy

10 08 14 anode scrap

10 09 waste from casting of ferrous pieces

10 09 06 casting cores and moulds which have not undergone pouring other than those mentioned in 10 09 05

10 09 08 casting cores and moulds which have undergone pouring, other than those mentioned in 10 09 07

10 10 wastes from casting of non-ferrous pieces

10 10 06 casting cores and moulds which have not undergone pouring other than those mentioned in 10 10 05

10 10 08 casting cores and moulds which have undergone pouring, other than those mentioned in 10 10 07

10 11 waste from the manufacture of glass and glass products

10 11 03 waste glass-based fibrous materials

15 01 packaging (including separately collected municipal packaging waste)

15 01 01 paper and cardboard packaging

15 01 02 plastic packaging

15 01 03 wooden packaging

15 01 04 metallic packaging

15 01 05 composite packaging

15 01 06 mixed packaging

16 01 end-of-life vehicles from different means of transport

16 01 03 end-of-life tyres

17 01 concrete, bricks, tiles and ceramics

17 01 01 Concrete

17 01 02 Bricks

17 01 03 tiles and ceramics

17 01 07 mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06

17 02 wood, glass and plastic

17 02 01 Wood

17 02 02 Glass

17 02 03 Plastic

17 04 metals (including their alloys)

17 04 01 copper, bronze, brass

17 04 02 Aluminium

17 04 03 Lead

17 04 04 Zinc

17 04 05 iron and steel

17 04 06 Tin

17 04 07 mixed metals

17 04 11 cables other than those mentioned in 17 04 10

17 05 soil (including excavated soil from contaminated sites), stones and dredging spoil

17 05 04 soil and stones other than those mentioned in 17 05 03

17 05 06 dredging spoil other than those mentioned in 17 05 05

17 05 08 track ballast other than those mentioned in 17 05 07

17 06 insulation materials and asbestos-containing construction materials

17 06 04 insulation materials other than those mentioned in 17 06 01 and 17 06 03

17 06 05 construction materials containing asbestos (bonded asbestos only)

17 09 other construction and demolition wastes

17 09 04 mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03

20 01 separately collected fractions (except 15 01)

20 01 01 paper and cardboard

20 01 02 Glass

20 01 08 biodegradable kitchen and canteen waste

20 01 10 Clothes

20 01 11 Textiles

EWC

Code Description

20 01 36 discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35

20 01 38 wood other than that mentioned in 20 01 37

20 01 39 Plastics

20 01 40 Metals

20 01 41 wastes from chimney sweeping

20 01 99 other fractions not otherwise specified

20 02 garden and park wastes (including cemetery waste)

20 02 01 biodegradable waste

20 02 02 soil and stones

20 02 03 other non-biodegradable wastes

20 03 other municipal wastes

20 03 01 mixed municipal waste

20 03 02 waste from markets

20 03 03 street-cleaning residues

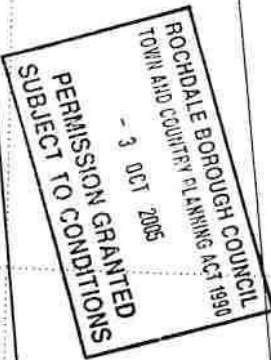
20 03 07 bulky waste

20 03 99 municipal wastes not otherwise specified

Appendix B Format for summary records of wastes accepted and removed (Condition 6.2.2)

Insert current Agency national format.

100

C+A

Certificate of Registration under the Waste (England and Wales) Regulations 2011

Regulation authority

Name



Address

National Customer Contact Centre
99 Parkway Avenue
Sheffield
S9 4WF

Telephone number

03708 506506

The Environment Agency certify that the following information is entered in the register which they maintain under regulation 28 of the Waste (England and Wales) Regulations 2011.

Carriers details

Name of registered carrier

WHEELDON BROTHERS WASTE LTD

Registered as

An upper tier waste carrier, broker and dealer

Registration number

CBDU95165

Address of place of business

BRIDGE HOUSE
BURY NEW RD
HEAP BRIDGE
BURY
BL9 7HT

Telephone number

01617648888

Date of registration

14 February 2022

Expiry date of

registration (unless
revoked)

25 March 2025

Making changes to your registration

Your registration will last 3 years and will need to be renewed after this period. If any of your details change, you must notify us within 28 days of the change.

The Hazardous Waste Regulations 2005: Consignment Note



Environment
Agency

PRODUCER'S/HOLDER'S/CONSIGNOR'S COPY (Delete as appropriate)

PART A Notification details

- 1 Consignment note code: **LKREME/00110**
- 2 The waste described below is to be removed from (name, address, postcode, telephone, e-mail, facsimile):
LK Remediate Site
Every Street, Bury, BL9 5BE
- 3 The waste will be taken to (name, address and postcode):
Wheelon Brothers
Unit 1-4 & 8-10 Yeorgate Industrial Estate, Hoop Bridge
Bury, BL9 7HT
- 4 The waste producer was (if different from 2) (name, address, postcode, telephone, e-mail, facsimile):
LK Remediate Ltd, Unit 29 Eton Hill Business Park, Eton Hill Road, Radcliffe, M26
22S Dave Andersen, 07843 410 124 d.anderson@thelkgroup.com

PART B Description of the waste

If continuation sheet used, tick here ☐

- 1 The process giving rise to the waste(s) was: 2 SIC (2007) for the process giving rise to the waste: **39 . 00 /**
- 3 WASTE DETAILS (where more than one waste type is collected all of the information given below must be completed for each EWC identified)

Description of waste	List of wastes (EWC code)(6 digits)	Quantity (kg)	The chemical/biological components in the waste and their concentrations are:		Physical form (gas, liquid, solid, powder, sludge or mixed)	Hazard code(s)	Container type, number and size
			Component	Concentration (% or mg/kg)			
Asbestos Cement	1 7 0 6 0 5	1000kg	Asbestos	<15%	SOLID	HP7	50L Bags

The information given below is to be completed for each EWC identified

EWC code	UN identification number(s)	Proper shipping name(s)	UN class(es)	Packing group(s)	Special handling requirements
1 7 0 6 0 5	2590	Chrysotile	9	II	Carry a Consignment Note

PART C Carrier's certificate

PART D Consignor's certificate

(If more than one carrier is used, please attach schedule for subsequent carriers. If schedule of carriers is attached tick here. ☐)

I certify that I today collected the consignment and that the details in A2, A3 and B3 are correct and I have been advised of any specific handling requirements.

Where this note comprises part of a multiple collection the round number and collection number are:

/

- 1 Carrier name: **DENE MARLINO**
On behalf of (name, address, postcode, telephone, e-mail, facsimile):

LK Remediate Site
Every Street, Bury, BL9 5BE

- 2 Carrier registration no./reason for exemption: **CBDU101884**

- 3 Vehicle registration no. (or mode of transport, if not road): **DY19 PCU**

Signature

Date **20 01 2023**

Time **1335**

I certify that the information in A, B and C has been completed and is correct, that the carrier is registered or exempt and was advised of the appropriate precautionary measures. All of the waste is packaged and labelled correctly and the carrier has been advised of any special handling requirements.

I confirm that I have fulfilled my duty to apply the waste hierarchy as required by Regulation 12 of the Waste (England and Wales) Regulations 2011.

- 1 Consignor name: **DENE MARLINO**
On behalf of (name, address, postcode, telephone, e-mail, facsimile):

LK Remediate Ltd, Unit 29 Eton Hill Business Park,
Eton Hill Road, Radcliffe, M26 2ZS
0161 783 7200
info@thelkgroup.com

Signature

Date **20 01 2023**

Time **1335**

PART E Consignee's certificate (where more than one waste type is collected all of the information given below must be completed for each EWC)

Individual EWC code(s) received	Quantity of each EWC code received (kg)	EWC code accepted/rejected	Waste management operation (R or D code)
170605	460 kg	✓	D15

- 1 I received this waste at the address given in A3 on: Date **20-1-23**

Time **1340**

- 2 Vehicle registration no. (or mode of transport if not road): **DY19PCU**

Name: **Terri Simpson**
On behalf of (name, address, postcode, telephone, e-mail, facsimile):

as at A3

I certify that waste permit/exempt waste operation number:

53823

authorises the management of the waste described in B at the address given in A3.

Where the consignment forms part of a multiple collection, as identified in Part C, I certify that the total number of consignments forming the collection are:

Signature

Date **20-1-23**

Time **1340**



191212
TF ST WASTE
170904
ROOF MA

CONDITIONS OF HIRE OVERLEAF

Provectus Remediation Ltd
Regent House
Bath Avenue
Wolverhampton
West Midlands
WV1 4EG

Our ref: EB3636AK/W0028

Date: 15/07/2022

Dear Mr Jon Owens

Environmental Permitting (England and Wales) Regulations 2016

Deployment ref: EB3636AK/W0028

Permit holder: Provectus Remediation Ltd

Location of the deployment: Maw Green Landfill, Maw Green Road, Maw Green, Crewe, CW1 5NG,

Following assessment of your deployment notification reference number EB3636AK/W0028 I can confirm that we have agreed your deployment form and you may now start to operate.

You have up to 12 months to notify us that your deployment activities are commencing. Once notified your deployment lasts for 52 weeks. If you wish to continue beyond this 52 week period you can request an extension up to a maximum of 12 months or submit a new deployment application for a further 12 month extension. Please see section 4.1 of the [Land and groundwater remediation deployment form guidance](#).

You must comply with your permit and carry out the activities in accordance with the requirements of the agreed deployment form and further information;

- Supporting Document: Environmental Monitoring Location Plan
from Jon Owens received on 15/07/2022 at 11:45

You must seek written permission from us if any of the details provided in the deployment form change.

This approval letter is associated with the mobile plant permitting regime only. As the operator, it is your responsibility to agree other authorisations, for example, planning permission, remedial strategy, abstraction or discharge consents with the relevant regulatory authority.

Please note that operating under your Mobile Plant Permit / Mobile Treatment Licence does not imply that the remediation processes used will be suitable for meeting any remediation objectives specified. These issues must be considered separately by the developer/consultant and our local area Groundwater and Contaminated Land team. These

must be defined in the site remedial strategy which sets out the remediation options to reduce or control the risks from pollution linkages associated with the site as a whole. You may need to carry out further remediation if an unacceptable risk to the environment remains at the site.

Please notify us at least seven days prior to starting the remediation activities, at psc@environment-agency.gov.uk & GMMCLandandWater@environment-agency.gov.uk

If you have any queries about this matter please contact us by telephone on 03708 506 506 or email us at enquiries@environment-agency.gov.uk quoting your deployment application reference EB3636AK/W0028.

Yours faithfully

Maria Gibbons,
Team Leader,
National Permitting Service

Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

3C Waste Limited
Maw Green Landfill Site
Maw Green Road
Coppenhall
Crewe
Cheshire
CW1 5NG

Variation application number

EPR/BS7722ID/V007

Permit number

EPR/BS7722ID

Maw Green Landfill Site

Permit number **EPR/BS7722ID**

Introductory note

This introductory note does not form a part of the notice

Under the Environmental Permitting (England & Wales) Regulations 2016 (schedule 5, part 1, paragraph 19) a variation may comprise a consolidated permit reflecting the variations and a notice specifying the variations included in that consolidated permit.

Schedule 1 of the notice specifies the conditions that have been varied and schedule 2 comprises a consolidated permit which reflects the variations being made.

The main features of this Permit variation are as follows:

The Operator will use an existing concrete pad formerly used as a composting facility (located in the central eastern area of site, near to the site boundary with the rail line) to install a Soil Treatment Facility. This Treatment Facility will accept various hazardous and non-hazardous waste codes, treated by biopile technology and moisture control, with the addition of nutrients and forced air extraction to encourage micro-organism growth to facilitate hydrocarbon compound breakdown into water vapour and Carbon Dioxide.

Biopiles will be placed on water and air extraction pipes connected to a blower, which draws air through the soils where it is then passed through a biofilter, prior to discharge to air. Excess waste draining through the soils will be collected within the process pipework, from where it will be pumped into the small treatment plant prior to discharge from site to sewer or redirected via pipeline to humidify the biofilter. There is also the option to irrigate the biopile if required in the event of sustained dry periods of weather which could prove detrimental to the treatment process.

The Soil Treatment Facility can accept up to 50,000 tonnes per annum of soils, made up of both hazardous and non-hazardous waste, with a maximum capacity at the facility of 38,000 tonnes at any one time. The maximum treatment time for soils is 6 months in general, with a majority having a treatment residency of between 8 and 16 weeks.

Following treatment, the waste soil will be sampled and tested to confirm whether it meets the end point criteria. The end-point criteria is determined as being below the acceptance thresholds for waste suitable for restoration set out in the restoration plan for the landfill.

All storage and treatment will take place on impermeable surfaced areas, and drain to a sealed drainage system. There are no changes to the existing landfill activity.

Information relating to the discharge of treated leachate from the landfill was added back into the Permit following an omission in the previous variation. Water collected from the Soil Treatment Facility sealed drainage system is either used in maintaining moisture levels in the treatment process or redirected to the leachate treatment containers prior to disposal to sewer. A new plan showing the sewer connection to the site has been provided as part of this variation notice.

The schedules specify the changes made to the permit.

The status log of a permit sets out the permitting history, including any changes to the permit reference number.

Status log of the permit		
Description	Date	Comments
Application EPR/BS7722ID/A001	09/10/2003	Received
Request for information	17/06/2004	Response received 19/07/2004
Request for information	23/06/2004	Response received 06/07/2004
Request for information	06/07/2004	Response received 20/07/2004
Request for information	25/08/2004	Response received 06/10/2004 and 11/10/2004
Request for information	30/12/2004	Response received 14/01/2005 and 27/01/2005
Permit determined EPR/BS7722ID	15/02/2005	
Variation notice UP3232LQ determined (EPR/BS7722ID/V002)	17/03/2005	
Application for Permit variation (EPR/BS7722ID/V003)	10/10/2007	Application received
Variation notice FP3931XK determined (EPR/BS7722ID/V003)	30/05/2008	
Environment Agency variation determined (EPR/BS7722ID/V005)	14/05/2013	Agency variation to implement changes introduced by IED
Environment Agency Landfill Sector Review Permit reviewed Variation notice determined EPR/BS7722ID/V006 (Billing ref: EP3538DW)	15/02/2017	Permit varied and consolidated permit issued in the modern format
Application EPR/BS7722ID/V007	Duly made 11/07/2019	Application to vary Permit to include soil treatment facility and associated Activities on site.
Request for information in Schedule 5 Notice	23/08/2019	Response received 23/10/2019
Request for information in Schedule 5 Notice	22/11/2019	Responses received 13/12/2019 and 10/01/2020
Request for information by email	20/01/2020	Response received 12/02/2020
Variation determined EPR/BS7722ID/V007 (Billing Ref: WP3934QP)	18/03/2020	Varied permit issued.

End of introductory note

Notice of variation and consolidation

The Environmental Permitting (England and Wales) Regulations 2016

The Environment Agency in exercise of its powers under regulation 20 of the Environmental Permitting (England and Wales) Regulations 2016 varies

Permit number

EPR/BS7722ID

Issued to

3C Waste Limited ("the operator")

whose registered office is

Ground Floor West

900 Pavilion Drive

Northampton Business Park

Northampton

NN4 7RG

company registration number 02632581

to operate a regulated facility at

Maw Green Landfill Site

Maw Green Road

Coppenhall

Crewe

Cheshire

CW1 5NG

to the extent set out in the schedules.

The notice shall take effect from 18/03/2020

Name	Date
Philip Lamb	18/03/2020

Authorised on behalf of the Environment Agency

Schedule 1

Only conditions (2.1.2, 2.3.3, 2.7.4, 2.7.10, 2.7.11, 2.7.12, 3.7, 4.1.1 (d) parts (vi), (vii) and (viii) and 4.2.3, 4.3.3 and 4.3.6, Tables S1.1, S1.2, S1.3 , S2.3a, S2.3b, S2.4, S3.2, S3.4 and S3.12) have been varied by the consolidated permit EPR/BS7722ID/V007.

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/BS7722ID

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/BS7722ID/V007 authorising,

3C Waste Limited ("the operator"),

whose registered office is

Ground Floor West

900 Pavilion Drive

Northampton Business Park

Northampton

NN4 7RG

company registration number 02632581

to operate an installation at

Maw Green Landfill Site

Maw Green Road

Coppenhall

Crewe

Cheshire

CW1 5NG

to the extent authorised by and subject to the conditions of this permit.

Name	Date
Philip Lamb	18/03/2020

Authorised on behalf of the Environment Agency

Conditions

1 Management

1.1 General management

- 1.1.1 The operator shall manage and operate the activities:
- (a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and
 - (b) using sufficient competent persons and resources.
- 1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.
- 1.1.3 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.
- 1.1.4 The operator shall comply with the requirements of an approved competence scheme.

1.2 Finance

- 1.2.1 The financial provision for meeting the obligations under this permit shall be as set out in the Deed of Performance dated 17 October 2007 between the Waste Recycling Group Limited (now known as FCC Environment (UK) Limited) and the Environment Agency as varied by a Deed of Variation dated 15 October 2010 (as varied by further Deeds of Variation from time to time). The operator shall accordingly ensure that the Permit is and remains throughout its subsistence a Permit to which the Deed relates and the operator shall produce evidence of such provision whenever required by the Environment Agency.
- 1.2.2 The operator shall ensure that the charges it makes for the disposal of waste in the landfill cover all of the following:
- (a) the costs of setting up and operating the landfill;
 - (b) the costs of the financial provision required by condition 1.2.1; and
 - (c) the estimated costs for the closure and aftercare of the landfill.

1.3 Energy efficiency

- 1.3.1 The operator shall:
- (a) take appropriate measures to ensure that energy is used efficiently in the activities;
 - (b) review and record at least every four years whether there are suitable opportunities to improve the energy efficiency of the activities; and
 - (c) implement any appropriate measures identified by a review.

1.4 Efficient use of raw materials

- 1.4.1 The operator shall:
- (a) take appropriate measures to ensure that raw materials and water are used efficiently in the activities;
 - (b) maintain records of raw materials and water used in the activities;

- (c) review and record at least every four years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material and water use; and
- (d) take any further appropriate measures identified by a review.

1.5 Avoidance, recovery and disposal of wastes produced by the activities

1.5.1 The operator shall:

- (a) take appropriate measures to ensure that waste produced by the activities is avoided or reduced, or where waste is produced it is recovered wherever practicable or otherwise disposed of in a manner which minimises its impact on the environment;
- (b) review and record at least every four years whether changes to those measures should be made; and
- (c) take any further appropriate measures identified by a review.

2 Operations

2.1 Permitted activities

- 2.1.1 The operator is only authorised to carry out the activities specified in schedule 1 table S1.1 (the “activities”).
- 2.1.2 For the following activities referenced in schedule 1, table S1.1 (AR3 to AR6) and AR15 waste authorised by this permit shall be clearly distinguished from any other waste on the site.

2.2 The site

- 2.2.1 The activities shall not extend beyond the site, being the land shown edged in blue on the site plan at schedule 7 to this permit.

2.3 Operating techniques

- 2.3.1 The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1, table S1.2, unless otherwise agreed in writing by the Environment Agency.
- 2.3.2 If notified by the Environment Agency that the activities are giving rise to pollution, the operator shall submit to the Environment Agency for approval within the period specified, a revision of any plan or other documentation (“plan”) specified in schedule 1, table S1.2 or otherwise required under this permit which identifies and minimises the risks of pollution relevant to that plan, and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by the Environment Agency.
- 2.3.3 Any raw materials or fuels listed in schedule 2 table S2.4 shall conform to the specifications set out in that table.

2.4 Improvement programme

- 2.4.1 The operator shall complete the improvements specified in schedule 1 table S1.3 by the date specified in that table unless otherwise agreed in writing by the Environment Agency.

- 2.4.2 Except in the case of an improvement which consists only of a submission to the Environment Agency, the operator shall notify the Environment Agency within 14 days of completion of each improvement.

2.5 Pre-operational conditions

- 2.5.1 The operations specified in schedule 1 table S1.4 shall not commence until the measures specified in that table have been completed.

2.6 Landfill Engineering

- 2.6.1 No construction of any new cell of the landfill shall commence until the operator has submitted construction proposals and the Environment Agency has confirmed that it is satisfied with the construction proposals.
- 2.6.2 Where the operator proposes to construct any new cell other than the first cell, but proposes no change from the design of the most recently approved cell which could have any impact on the performance of any element of the design, no construction of the new cell shall commence until the operator has submitted a cell layout drawing and the Environment Agency has confirmed that it is satisfied with the cell layout drawing.
- 2.6.3 The construction of a new cell shall take place only in accordance with the approved construction proposals unless:
- (a) any change to the approved construction proposals would have no impact on the performance of any element of the design; or
 - (b) a change has otherwise been agreed in writing by the Environment Agency.
- 2.6.4 No disposal of waste shall take place in a new cell until the operator has submitted a CQA Validation Report and the Environment Agency has confirmed that it is satisfied with the CQA Validation Report.
- 2.6.5 No construction of landfill infrastructure shall commence until the operator has submitted relevant construction proposals or a written request to use previous construction proposals and the Environment Agency has confirmed that it is satisfied with the construction proposals.
- 2.6.6 The construction of the landfill infrastructure shall take place only in accordance with the approved construction proposals unless:
- (a) any change to the approved construction proposals would have no impact on the performance of any element of the design; or
 - (b) a change has otherwise been agreed in writing by the Environment Agency.
- 2.6.7 The operator shall submit a CQA Validation Report within four weeks of the completion of the construction of the relevant landfill infrastructure or other time period agreed in writing with the Environment Agency.
- 2.6.8 Where pollution controls are immediately necessary to prevent an incident or accident, then conditions 2.6.5 and 2.6.6 do not apply and the relevant landfill infrastructure may be constructed, provided that the construction proposals are submitted to the Environment Agency as soon as practicable.
- 2.6.9 For the purposes of conditions 2.6.1, 2.6.2, 2.6.4 and 2.6.5, the Environment Agency shall be deemed to be satisfied where it has not, within the period of four weeks from the date of receipt of the relevant construction proposals or CQA Validation Report, either:
- (a) confirmed whether or not it is satisfied; or
 - (b) informed the operator that it requires further information.

2.6.10 Where the Environment Agency has required further information under condition 2.6.9(b), the Environment Agency shall be deemed to be satisfied where it has not, within the period of four weeks from the date of receipt of the further information, either:

- (a) confirmed whether or not it is satisfied; or
- (b) informed the operator that it requires further information.

2.7 Waste acceptance

2.7.1 For the following activities referenced in Schedule 1, Table S1.1 (AR1), wastes shall only be accepted for disposal if:

- (a) they are listed in schedule 2, Table S2.1, and
- (b) they are non-hazardous waste, and
- (c) they are not whole used tyres (other than bicycle tyres and tyres with an outside diameter of more than 1400 mm), and
- (d) they are not shredded used tyres, and
- (e) they are not liquid waste (including waste waters but excluding sludge), and
- (f) they are not chemical substances from research and development or teaching activities, for example laboratory residues, which are unidentified and/or which are new and whose effects on man and/or the environment are unknown, and
- (g) all the relevant waste acceptance procedures have been completed, and
- (h) they fulfil the relevant waste acceptance criteria, and
- (i) they have not been diluted or mixed solely to meet the relevant waste acceptance criteria, and
- (j) they are wastes which have been treated, except for: inert wastes for which treatment is not technically feasible; or it is waste other than inert waste and treatment would not reduce its quantity or the hazards which it poses to human health or the environment, and
- (k) they are wastes with a code beginning with 07 05 and 16 03, they shall exclude waste medicinal products and pharmaceutically active waste materials arising from their manufacture.

2.7.2 Wastes shall only be accepted for restoration where:

- (a) they are listed in schedule 2, table S2.2 and
- (b) they are accepted in accordance with a restoration plan approved in writing by the Environment Agency.

2.7.3 The operator shall:

- (a) visually inspect without unloading it, waste that is not in an enclosed container or enclosed vehicle on arrival at the landfill and waste at the point of deposit; and
- (b) be satisfied that the waste conforms to the requirements of condition 2.7.1.

2.7.4 For the following activities referenced in schedule 1, Table S1.1 (AR3, AR4, AR5 and AR6) waste shall only be accepted if:

- (a) it is of a type and quantity listed in schedule 2, Tables S2.3a and S2.3b; and
- (b) it conforms to the description in the documentation supplied by the producer and holder.

2.7.5 Where the operator has taken samples to establish that the waste is in conformity with the documentation submitted by the holder then the samples taken shall be retained for at least one month and results of any analysis for at least two years.

2.7.6 The operator on accepting each delivery of waste shall provide a receipt to the person delivering it.

- 2.7.7 The total quantity of waste that shall be deposited in the landfill shall be limited by the pre-settlement levels shown on drawing reference 1351-01-08 Final Restoration Plan-.
- 2.7.8 The quantity of waste that is deposited or recovered in the landfill in any year shall not exceed the limits in schedule 1 table S1.5.
- 2.7.9 The operator shall maintain and implement a system which ensures that a record is made of the quantity, characteristics, date of delivery and, where practicable, origin of any waste that is received for disposal or recovery and of the identity of the producer, or in the case of municipal waste and multiple collection vehicles, of the collector of such waste. Any information regarded by the operator as commercially confidential shall be clearly identified in the record.
- 2.7.10 Hazardous waste shall not be mixed, either with a different category of hazardous waste or with other waste, substances or materials, unless it is authorised by schedule 1 table S1.1 and appropriate measures are taken.
- 2.7.11 The operator shall ensure that where waste produced by the activities is sent to a relevant waste operation, that operation is provided with the following information, prior to the receipt of the waste:
- (a) the nature of the process producing the waste;
 - (b) the composition of the waste;
 - (c) the handling requirements of the waste;
 - (d) the hazardous property associated with the waste, if applicable; and
 - (e) the waste code of the waste.
- 2.7.12 The operator shall ensure that where waste produced by the activities is sent to a landfill site, it meets the waste acceptance criteria for that landfill.

2.8 Leachate levels

- 2.8.1 The limits for the level of leachate listed in schedule 3 table S3.1 shall not be exceeded.

2.9 Closure and aftercare

- 2.9.1 The operator shall maintain a closure and aftercare management plan.

2.10 Landfill gas management

- 2.10.1 The operator shall take appropriate measures, including, but not limited to, those specified in any approved landfill gas management plan, to:
- (a) collect landfill gas; and
 - (b) control the migration of landfill gas.
- 2.10.2 The operator shall use the collected landfill gas to produce energy. If the collected landfill gas cannot be used to produce energy, the operator shall use appropriate measures to flare or treat the gas in accordance with an approved landfill gas management plan.
- 2.10.3 The operator shall:
- (a) if notified by the Environment Agency, submit to the Environment Agency for approval within the period specified, a revised landfill gas management plan;
 - (b) implement the revised landfill gas management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3 Emissions and monitoring

3.1 Emissions to water, air or land

- 3.1.1 The limits in Schedule 3 shall not be exceeded.
- 3.1.2 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 tables S3.2, S3.3 and S3.4.
- 3.1.3 The limits given in Table S3.2 shall not be exceeded, save that compliance with an emission limit in that table shall include incorporation of the uncertainty allowance stated in Environment Agency guidance LFTGN 05 and LFTGN 08.
- 3.1.4 The operator shall prevent the input of any hazardous substances from the activities into groundwater.
- 3.1.5 The operator shall submit to the Environment Agency a review of the Hydrogeological Risk Assessment:
 - (a) between nine and six months prior to the sixth anniversary of the granting of the permit, and
 - (b) between nine and six months prior to every subsequent six years after the fourth anniversary of the granting of the permit.
- 3.1.6 For the following activities referenced in schedule 1, table S1.1 (AR2 to AR6) periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on systematic appraisal of the risk of contamination.

3.2 Emissions of substances not controlled by emission limits

- 3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.
- 3.2.2 The operator shall:
 - (a) if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;
 - (b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.
- 3.2.3 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

3.3 Odour

- 3.3.1 Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise the odour.
- 3.3.2 The operator shall:
 - (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Environment Agency for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;
 - (b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.4 Noise and vibration

- 3.4.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.
- 3.4.2 The operator shall:
- (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Environment Agency for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;
 - (b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.5 Monitoring

- 3.5.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring and any other actions specified in the following tables in schedule 3 to this permit:
- (a) Leachate specified in tables S3.1 and S3.11;
 - (b) Point source emissions specified in tables S3.2, S3.3 and S3.4;
 - (c) Groundwater specified in tables S3.5 and S3.9;
 - (d) Landfill gas specified in tables S3.6, S3.8 and S3.10;
 - (e) Surface water specified in table S3.12;
 - (f) Particulate matter specified in table S3.7.
- 3.5.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.
- 3.5.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.5.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by the Environment Agency.
- 3.5.4 A topographical survey of the site referenced to ordnance datum shall be carried out and shall be used to produce a plan of a scale adequate to show the surveyed features of the site:
- (a) annually, and
 - (b) prior to the disposal of waste in any new cell or new development area of the landfill, and
 - (c) following closure of the landfill or part of the landfill.

3.6 Pests

- 3.6.1 The activities shall not give rise to the presence of pests which are likely to cause pollution, hazard or annoyance outside the boundary of the site. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved pests management plan, have been taken to prevent or where that is not practicable, to minimise the presence of pests on the site.
- 3.6.2 The operator shall:

- (a) if notified by the Environment Agency, submit to the Environment Agency for approval within the period specified, a pests management plan which identifies and minimises risks of pollution hazard or annoyance from pests;
- (b) implement the pests management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.7 Fire prevention

- 3.7.1 The operator shall take all appropriate measures to prevent fires on site and minimise the risk of pollution from them including, but not limited to, those specified in any approved fire prevention plan.
- 3.7.2 The operator shall:
 - (a) if notified by the Environment Agency that the activities are giving rise to a risk of fire, submit to the Environment Agency for approval within the period specified, a fire prevention plan which prevents fires and minimises the risk of pollution from fires;
 - (b) implement the fire prevention plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

4 Information

4.1 Records

- 4.1.1 All records required to be made by this permit shall:
 - (a) be legible;
 - (b) be made as soon as reasonably practicable;
 - (c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and
 - (d) be retained, unless otherwise agreed in writing by the Environment Agency, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender:
 - (i) the results of groundwater monitoring;
 - (ii) sub-surface landfill gas monitoring;
 - (iii) leachate levels, quality and quantities;
 - (iv) landfill gas generation and collection;
 - (v) waste types and quantities;
 - (vi) the specification and as built drawings of the basal, sidewall and capping engineering systems.

for the following activities referenced in schedule 1, table S1.1 (AR3, AR4, AR5 and AR6):

 - (vii) off-site environmental effects; and
 - (viii) matters which affect the condition of the land and groundwater.
- 4.1.2 The operator shall keep on site all records, plans and the management system required to be maintained by this permit, unless otherwise agreed in writing by the Environment Agency.

4.2 Reporting

- 4.2.1 The operator shall send reports and notifications required by the permit to the Environment Agency using the contact details supplied in writing by the Environment Agency.

- 4.2.2 For the following activities referenced in schedule 1, Table S1.1 (AR1 and AR2), a report or reports on the performance of the activities over the previous year ('the annual report') shall be submitted to the Environment Agency by 31st January each year or such other date as may be agreed in writing by the Agency, with the exception of 4.2.2(c) that must be provided by the end of February each year. The report(s) shall include as a minimum:
- (a) a review of the results of the monitoring and assessment carried out in accordance with this permit against the relevant assumptions, parameters and results in the risk assessments submitted in relation to this installation and any agreed amendments thereto. The review will include written descriptions of the improvements made to operational performance during the year, action plans developed and planned improvements for the coming year;
 - (b) the energy consumed at the site, reported in the format set out in schedule 4 table S4.3;
 - (c) the annual production/treatment set out in schedule 4 table S4.2;
 - (d) the topographical surveys required by condition 3.5.3 other than those submitted as part of a CQA validation report;
 - (e) the volumetric difference (reported in cubic metres) between the most recent topographical survey and the previous annual topographical survey i.e. the additional volume of the landfill void that is occupied by waste;
 - (f) an assessment of the settlement behaviour of the landfill body based on the difference between the most recent topographical survey and previous annual topographical survey for the areas of the landfill which did not receive waste between the surveys;
 - (g) a calculation of the remaining capacity (reported in cubic metres) derived from the pre-settlement contours and the most recent topographical survey;
 - (h) a plan(s) ('the monitoring and extraction point plan – MEPP') showing the locations of existing and any new leachate and landfill gas extraction and all monitoring points.
- 4.2.3 For the following activities referenced in schedule 1, table S1.1 (AR3 to AR6) a report or reports on the performance of the activities over the previous year shall be submitted to the Environment Agency by 31st January (or other date agreed in writing by the Environment Agency) each year. The report(s) shall include as a minimum:
- (a) a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of that data;
 - (b) the annual production/treatment data set out in schedule 4 table S4.2; and
 - (c) the performance parameters set out in schedule 4 table S4.3 using the forms specified in table S4.4 of that schedule.
- 4.2.4 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Environment Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:
- (a) in respect of the parameters and emission points specified in schedule 4 table S4.1;
 - (b) using the forms specified in schedule 4 table S4.4 or other reporting format as agreed in writing with the Environment Agency; and
 - (c) giving the information from such results and assessments as may be required by the forms specified in those tables.
- 4.2.5 Within one month of the end of each quarter, the operator shall submit to the Environment Agency using the form made available for the purpose, the information specified on the form relating to the site and the waste accepted and removed from it during the previous quarter.
- 4.2.6 The operator shall, unless notice under this condition has been served within the preceding four years, submit to the Environment Agency, within six months of receipt of a written notice, a report

assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.

4.3 Notifications

- 4.3.1 (a) In the event that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately—
- (i) inform the Environment Agency,
 - (ii) take the measures necessary to limit the environmental consequences of such an incident or accident, and
 - (iii) take the measures necessary to prevent further possible incidents or accidents;
- (b) in the event of a breach of any permit condition the operator must immediately—
- (i) inform the Environment Agency, and
 - (ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;
- (c) in the event of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.
- 4.3.2 Any information provided under condition 4.3.1 (a)(i), or 4.3.1 (b)(i) where the information relates to the breach of a limit specified in the permit, shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.
- 4.3.3 For the following activities referenced in schedule 1, table S1.1 (AR3, AR4, AR5 and AR8) where the Environment Agency has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform the Environment Agency when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to the Environment Agency at least 14 days before the date the monitoring is to be undertaken.
- 4.3.4 The Environment Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:
- Where the operator is a registered company:
- (a) any change in the operator's trading name, registered name or registered office address; and
 - (b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.
- Where the operator is a corporate body other than a registered company:
- (a) any change in the operator's name or address; and
 - (b) any steps taken with a view to the dissolution of the operator.
- In any other case:
- (a) the death of any of the named operators (where the operator consists of more than one named individual);
 - (b) any change in the operator's name(s) or address(es); and
 - (c) any steps taken with a view to the operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case of them being in a partnership, dissolving the partnership.
- 4.3.5 Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:

- (a) the Environment Agency shall be notified at least 14 days before making the change; and
- (b) the notification shall contain a description of the proposed change in operation.

4.3.6 The Environment Agency shall be given at least 14 days notice before implementation of any part of the site closure plan.

4.4 Interpretation

4.4.1 In this permit the expressions listed in schedule 6 shall have the meaning given in that schedule.

4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made “immediately”, in which case it may be provided by telephone.

Schedule 1 – Operations

Table S1.1 activities				
Activity reference	WFD Annex I and II operations (where applicable)	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity
AR1	D5 –Specially engineered landfill; R5 - the recycling or reclamation of inorganic material and R10 – Land treatment resulting in benefit to agriculture or ecology	Section 5.2 Part A(1) (a), The disposal of waste in a landfill.	Landfill for non-hazardous waste and landfill restoration	Receipt, handling, storage and disposal of wastes, consisting of the types and quantities specified in conditions 2.7, as an integral part of landfilling.
AR2	D8 – Biological treatment of waste	Section 5.4, Part A(1)(a)(i), Biological treatment of non-hazardous waste	Treatment of leachate in a facility with a capacity of >50 tonnes/day	Leachate arising from the landfill.
AR3	D8 – Biological treatment of waste and R5 - the recycling or reclamation of inorganic material	Section 5.3 Part A(1)(a)(ii) Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day	Bioremediation process for hazardous waste	A maximum treatment capacity of 38,000 tonnes at any one time.
AR4	D8 – Biological treatment of waste and R5 - the recycling or reclamation of inorganic material	Section 5.4 Part A(1)(b)(i), Biological treatment of non-hazardous waste	Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day involving biological treatment	A maximum treatment capacity of 38,000 tonnes at any one time.

Table S1.1 activities				
Activity reference	WFD Annex I and II operations (where applicable)	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity
AR5	D8 – Biological treatment of waste and R5 - the recycling or reclamation of inorganic material	Section 5.3 Part A(1)(a)(ii) Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day	Screening to remove oversize material	A maximum treatment capacity of 38,000 tonnes at any one time
AR6	D8 – Biological treatment of waste and R5 - the recycling or reclamation of inorganic material	Section 5.6 Part A(1)(a) Temporary storage of hazardous waste with a total capacity exceeding 50 tonnes	Temporary storage of hazardous waste	A maximum of 2000 tonnes at any one time on site and an annual limit of 30,000 tonnes for wastes due to undergo treatment as per Activities A3, A4 or A5.
Directly Associated Activities				
AR7	R1 – use principally as a fuel to generate energy		Pre-treatment and utilisation of landfill gas for energy recovery in an appliance with a rated thermal input < 50MW	Treatment and utilisation of landfill gas arising from the landfill.
AR8	N/A		Temporary storage of waste (leachate)	Leachate arising from the landfill.
AR9	N/A		Flaring of landfill gas for disposal in an appliance.	Landfill gas arising from the landfill.
AR10	D6 – release to water body except seas/ oceans		Discharges of site drainage from the landfill.	From surface water management system to point of entry to controlled waters.
AR11	N/A		Fuel Storage	Storage of diesel for use in mobile plant at Soil Treatment Facility.
AR12	N/A		Water Storage	Collection and storage of process water.
AR13	N/A		Pipework between the leachate treatment plant and public sewerage system	From the point of discharge from the leachate treatment plant to the point where the pipework leaves the land under the control of the operator.

Table S1.1 activities				
Activity reference	WFD Annex I and II operations (where applicable)	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity
AR14	R13 – Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)		Storage of waste	Temporary storage of non-hazardous waste prior to treatment on site.
AR15	R5 - the recycling or reclamation of inorganic material	Section 5.4 Part A (1)(a)(ii) Physico-chemical treatment of non-hazardous waste with a capacity exceeding 50 tonnes per day	Screening of non-hazardous waste to remove oversized material for recovery	Non-hazardous waste prior to treatment on site by Activity AR4.

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application	The response to questions 1.2, 2.1, 2.2, 2.3, 2.4 and 2.5 in part B of the Application Form, excluding the following sections: 2.2.4 to 2.2.6, 2.3.32, 2.3.33, 2.3.34, 2.3.35, 2.3.39, 2.3.43, 2.3.50 to 2.3.54, 2.3.68, 2.3.69, 2.3.71, 2.3.72 and 2.3.78	09/10/2003
SLR letter and supporting documents regarding requests for information dated 17/06/2004.	All Parts	19/07/2004
SLR letter and supporting documents regarding requests for information dated 06/07/2004.	All Parts	20/07/2004
SLR letter and supporting documents regarding requests for information dated 25/08/2004.	All Parts	11/10/2004
SLR e-mail and supporting documents regarding revised waste list.	All Parts	14/01/2005

Table S1.2 Operating techniques		
Description	Parts	Date Received
SLR e-mail and supporting documents All parts 14/01/2005 and 27/01/2005 regarding requests for information dated 30/12/2004.	All Parts	28/02/2006
Correspondence dated 27/02/2006 re: 27/02/2006 re: Improvement condition 1.4.1.1	All Parts	28/02/2006
Correspondence dated 03/04/2006 re: Improvement condition 1.4.1.2	All Parts	03/04/2006
Correspondence dated 01/03/2006 re: Improvement condition 1.4.1.3	All Parts	06/03/2006
Correspondence dated 15/02/2006, (ref: 404-0197-00178) re: Improvement condition 1.4.1.5	All Parts	16/02/2006
Correspondence dated 02/2006 (ref 404-0197-00178), CQA plan for downstream monitoring wells)	All Parts	02/2006
Correspondence dated 06/04/2006 (ref: 402.0197.00423) re: Improvement condition 1.4.1.7	All Parts	12/04/2006
Correspondence dated 13/04/2006 (ref: 404.0197.00178) Re: improvement condition 1.4.1.9	All Parts	18/04/2006
Correspondence dated 15/03/2005 (ref: 4D-197-178) re improvement condition 1.4.1.12	All Parts	21/05/2005
Correspondence 'Maw Green Leachate Extraction Review' re improvement condition 1.4.1.13	All parts	06/2006
Revised monitoring location plan (drawing no. ESID 14, dated August 2007)	All parts	22/01/2008

Table S1.2 Operating techniques		
Description	Parts	Date Received
Monitoring reduction letter Ref ALM/MG/EAL53	All Parts	22/01/2014
FCC letter ref MG/LC2.2AR/ 20140829	All Parts	29/08/2014
FCC Document E mail from FCC 29 Jan 2016Attached updated tables for Doc ref: ALM/MG/EAL53	All Parts	29/01/2015
Landfill Restoration Plan (referenced report 10228-R07 and dated May 2017)	All Parts	15/05/2017
Application	Application Forms (All Parts) ESID Amendment Site Condition Report (referenced 3695-CAU-XX-XX-RP-V-0305.A0-C2 and dated March 2019) Soil Treatment Facility Amenity and Accident Plan (referenced 3695-CAU-XX-XX-RP-V-0302.A0-C2 and dated March 2019)	01/04/2019
Response to Schedule 5 Notice (1) dated 23/08/2019	Soil Treatment Facility Dust Management Plan (reference 3695-CAU-XX-XX-RP-V-0307-A0-C1 and dated October 2019) Soil Treatment Facility Operating Techniques (reference 3695-CAU-XX-XX-RP-V-0303 and dated October 2019) Response includes clarification on area drainage, clarification on waste codes and biofilter/air quality monitoring details.	02/10/2019
Response to Schedule 5 Notice (2) follow up request dated 22/11/2019 and 02/01/2020	STC Soil Characterisation Procedure (referenced WI-003) and dated 26/11/2019) Response includes further detail on waste code acceptance, biofilter and air quality monitoring.	13/12/2019

Table S1.2 Operating techniques		
Description	Parts	Date Received
	Soil Treatment Facility Odour Management Plan (reference 3695-CAU-XX-XX-RP-V-0308-A0-C3 OMP Combined and dated December 2019)	10/01/2020
Response to request for more information dated 20/01/2020	Drawings Leachate Pipeline Route (ref. 3695-CAU-XX-XX-DR-V-1802 P1) and Proposed Layout Plan (ref. 3695-CAU-XX-XX-DR-V-1801 P3) detailing sewer connections to site and proposed monitoring locations respectively.	12/02/2020

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
1	The operator shall submit a drawing showing the pre-settlement levels at the site (2.7.6).	Completed
2	The operator shall submit to the Environment Agency in writing for approval a restoration plan for the site which includes waste quantities, waste types, and waste acceptance criteria for wastes for restoration (2.7.2).	Completed
3	The operator shall provide Methane and Carbon Dioxide trigger levels for boreholes BH36, BH37, BH38.1, BH39.1, BH40.1, BH41-BH44 as detailed on drawing ESID14, dated August 2007. The trigger levels shall be derived in accordance with the methodology set out in the Agency's guidance on the Management of Landfill Gas (LFTGN03) unless otherwise agreed in writing by the Environment Agency.	Completed
4	The operator shall submit to the Environment Agency in writing for approval, a report detailing monthly chemical analysis monitoring results of collected waters from the Soil Treatment Facility (STF) at the point of discharge from the STF. The report should contain details of comparison of results from the chemical analysis to existing discharge consent limits and the Environment Agency's H1 Guidance.	Within four months of the commissioning of the Soil Treatment Facility

Table S1.4 Pre-operational measures for future development		
Reference	Operation	Pre-operational Measures
1	Deposit of wastes in any area of the Permitted installation where waste deposit commences after the issue of the permit	As part of any construction proposals required by condition 2.5.1 the operator shall include a design for leachate collection infrastructure, which includes details of the leachate collection layer, drainage pipework, collection systems and drilling targets.
2	Deposit of waste over previously completed areas of phase 1	A leachate drainage layer shall be incorporated into the design of the internal slope between phase 1 and future phases. The design specification of this layer shall be approved in accordance with condition 2.5.1.
3	Engineering of any new cell	As part of any construction proposals required by condition 2.5.1, the operator shall submit a report investigating the existence of sand horizons beneath the cell base. The report shall detail the thickness of any encountered sand horizon, the presence of groundwater including the piezometric head and shall also include an assessment into the possibility of basal heave and any necessary preventative action required for the cell, together with any required amendments to CQA procedures for engineering at the site. If in the preparation of the report, extra intrusive site investigation is undertaken, the report shall contain all relevant borehole logs and descriptions.

Table S1.5 Annual waste input limits	
Category	Limit Tonnes/ Year
Non-hazardous waste	450,000
Inert waste	450,000
Waste for restoration	75,000

Schedule 2 – List of permitted wastes

Table S2.1 Permitted waste types for disposal at a landfill for non-hazardous waste	
Waste code	Description
01	Wastes resulting from exploration, mining, quarrying, and physical and chemical treatment of minerals
01 01	wastes from mineral excavation
01 01 01	wastes from mineral metalliferous excavation
01 01 02	wastes from mineral non-metalliferous excavation
01 03	wastes from physical and chemical processing of metalliferous minerals
01 03 06	tailings other than those mentioned in 01 03 04 and 01 03 05
01 03 08	dusty and powdery wastes other than those mentioned in 01 03 07
01 03 09	red mud from alumina production other than the wastes mentioned in 01 03 10
01 04	wastes from physical and chemical processing of non-metalliferous minerals
01 04 08	waste gravel and crushed rocks other than those mentioned in 01 04 07
01 04 09	waste sand and clays
01 04 10	dusty and powdery wastes other than those mentioned in 01 04 07
01 04 11	wastes from potash and rock salt processing other than those mentioned in 01 04 07
01 04 12	tailings and other wastes from washing and cleaning of minerals other than those mentioned in 01 04 07 and 01 04 11
01 04 13	wastes from stone cutting and sawing other than those mentioned in 01 04 07
01 05	drilling muds and other drilling wastes
01 05 04	freshwater drilling muds and wastes
01 05 07	barite-containing drilling muds and wastes other than those mentioned in 01 05 05 and 01 05 06
01 05 08	chloride-containing drilling muds and wastes other than those mentioned in 01 05 05 and 01 05 06
02	Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing
02 01	wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing
02 01 01	sludges from washing and cleaning
02 01 02	animal-tissue waste
02 01 03	plant-tissue waste
02 01 04	waste plastics (except packaging)
02 01 06	animal faeces, urine and manure (including spoiled straw), effluent, collected separately and treated off-site
02 01 07	wastes from forestry
02 01 09	agrochemical waste other than those mentioned in 02 01 08
02 01 10	waste metal
02 02	wastes from the preparation and processing of meat, fish and other foods of animal origin

Table S2.1 Permitted waste types for disposal at a landfill for non-hazardous waste	
Waste code	Description
02 02 01	sludges from washing and cleaning
02 02 02	animal-tissue waste
02 02 03	materials unsuitable for consumption or processing
02 02 04	sludges from on-site effluent treatment
02 03	wastes from fruit, vegetables, cereals, edible oils, cocoa, coffee, tea and tobacco preparation and processing; conserve production; yeast and yeast extract production, molasses preparation and fermentation
02 03 01	sludges from washing, cleaning, peeling, centrifuging and separation
02 03 02	wastes from preserving agents
02 03 03	wastes from solvent extraction
02 03 04	materials unsuitable for consumption or processing
02 03 05	sludges from on-site effluent treatment
02 04	wastes from sugar processing
02 04 01	soil from cleaning and washing beet
02 04 02	off-specification calcium carbonate
02 04 03	sludges from on-site effluent treatment
02 05	wastes from the dairy products industry
02 05 01	materials unsuitable for consumption or processing
02 05 02	sludges from on-site effluent treatment
02 06	wastes from the baking and confectionery industry
02 06 01	materials unsuitable for consumption or processing
02 06 02	wastes from preserving agents
02 06 03	sludges from on-site effluent treatment
02 07	wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa)
02 07 01	wastes from washing, cleaning and mechanical reduction of raw materials
02 07 02	wastes from spirits distillation
02 07 03	wastes from chemical treatment
02 07 04	materials unsuitable for consumption or processing
02 07 05	sludges from on-site effluent treatment
03	Wastes from wood processing and the production of panels and furniture, pulp, paper and cardboard
03 01	wastes from wood processing and the production of panels and furniture
03 01 01	waste bark and cork
03 01 05	sawdust, shavings, cuttings, wood, particle board and veneer other than those mentioned in 03 01 04
03 03	wastes from pulp, paper and cardboard production and processing
03 03 01	waste bark and wood
03 03 02	green liquor sludge (from recovery of cooking liquor)
03 03 05	de-inking sludges from paper recycling

Table S2.1 Permitted waste types for disposal at a landfill for non-hazardous waste	
Waste code	Description
03 03 07	mechanically separated rejects from pulping of waste paper and cardboard
03 03 08	wastes from sorting of paper and cardboard destined for recycling
03 03 09	lime mud waste
03 03 10	fibre rejects, fibre-, filler- and coating-sludges from mechanical separation
03 03 11	sludges from on-site effluent treatment other than those mentioned in 03 03 10
04	Wastes from the leather, fur and textile industries
04 01	wastes from the leather and fur industry
04 01 01	fleshings and lime split wastes
04 01 02	liming waste
04 01 06	sludges, in particular from on-site effluent treatment containing chromium
04 01 07	sludges, in particular from on-site effluent treatment free of chromium
04 01 08	waste tanned leather (blue sheetings, shavings, cuttings, buffing dust) containing chromium
04 01 09	wastes from dressing and finishing
04 02	wastes from the textile industry
04 02 09	wastes from composite materials (impregnated textile, elastomer, plastomer)
04 02 10	organic matter from natural products (for example grease, wax)
04 02 15	wastes from finishing other than those mentioned in 04 02 14
04 02 17	dyestuffs and pigments other than those mentioned in 04 02 16
04 02 20	sludges from on-site effluent treatment other than those mentioned in 04 02 19
04 02 21	wastes from unprocessed textile fibres
04 02 22	wastes from processed textile fibres
05	Wastes from petroleum refining, natural gas purification and pyrolytic treatment of coal
05 01	wastes from petroleum refining
05 01 10	sludges from on-site effluent treatment other than those mentioned in 05 01 09
05 01 13	boiler feedwater sludges
05 01 14	wastes from cooling columns
05 01 16	sulphur-containing wastes from petroleum desulphurisation
05 01 17	bitumen
05 06	wastes from the pyrolytic treatment of coal
05 06 04	waste from cooling columns
05 07	wastes from natural gas purification and transportation
05 07 02	wastes containing sulphur
06	Wastes from inorganic chemical processes
06 03	wastes from the MFSU of salts and their solutions and metallic oxides
06 03 14	solid salts and solutions other than those mentioned in 06 03 11 and 06 03 13
06 03 16	metallic oxides other than those mentioned in 06 03 15
06 05	sludges from on-site effluent treatment

Table S2.1 Permitted waste types for disposal at a landfill for non-hazardous waste	
Waste code	Description
06 05 03	sludges from on-site effluent treatment other than those mentioned in 06 05 02
06 06	wastes from the MFSU of sulphur chemicals, sulphur chemical processes and desulphurisation processes
06 06 03	wastes containing sulphides other than those mentioned in 06 06 02
06 09	wastes from the MFSU of phosphorous chemicals and phosphorous chemical processes
06 09 02	phosphorous slag
06 09 04	calcium-based reaction wastes other than those mentioned in 06 09 03
06 11	wastes from the manufacture of inorganic pigments and opacifiers
06 11 01	calcium-based reaction wastes from titanium dioxide production
06 13	wastes from inorganic chemical processes not otherwise specified
06 13 03	carbon black
07	Wastes from organic chemical processes
07 01	wastes from the manufacture, formulation, supply and use (MFSU) of basic organic chemicals
07 01 12	sludges from on-site effluent treatment other than those mentioned in 07 01 11
07 02	wastes from the MFSU of plastics, synthetic rubber and man-made fibres
07 02 12	sludges from on-site effluent treatment other than those mentioned in 07 02 11
07 02 13	waste plastic
07 02 15	wastes from additives other than those mentioned in 07 02 14
07 02 17	waste containing silicones other than those mentioned in 07 02 16
07 03	wastes from the MFSU of organic dyes and pigments (except 06 11)
07 03 12	sludges from on-site effluent treatment other than those mentioned in 07 03 11
07 04	wastes from the MFSU of organic plant protection products (except 02 01 08 and 02 01 09), wood preserving agents (except 03 02) and other biocides
07 04 12	sludges from on-site effluent treatment other than those mentioned in 07 04 11
07 05	wastes from the MFSU of pharmaceuticals
07 05 12	sludges from on-site effluent treatment other than those mentioned in 07 05 11
07 05 14	solid wastes other than those mentioned in 07 05 13
07 06	wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics
07 06 12	sludges from on-site effluent treatment other than those mentioned in 07 06 11
07 07	wastes from the MFSU of fine chemicals and chemical products not otherwise specified
07 07 12	sludges from on-site effluent treatment other than those mentioned in 07 07 11
08	Wastes from the manufacture, formulation, supply and use (MFSU) of coatings (paints, varnishes and vitreous enamels), adhesives, sealants and printing inks
08 01	wastes from MFSU and removal of paint and varnish
08 01 12	waste paint and varnish other than those mentioned in 08 01 11
08 01 14	sludges from paint or varnish other than those mentioned in 08 01 13

Table S2.1 Permitted waste types for disposal at a landfill for non-hazardous waste	
Waste code	Description
08 01 16	aqueous sludges containing paint or varnish other than those mentioned in 08 01 15
08 01 18	wastes from paint or varnish removal other than those mentioned in 08 01 17
08 02	wastes from MFSU of other coatings (including ceramic materials)
08 02 01	waste coating powders
08 02 02	aqueous sludges containing ceramic materials
08 03	wastes from MFSU of printing inks
08 03 07	aqueous sludges containing ink
08 03 13	waste ink other than those mentioned in 08 03 12
08 03 15	ink sludges other than those mentioned in 08 03 14
08 03 18	waste printing toner other than those mentioned in 08 03 17
08 04	wastes from MFSU of adhesives and sealants (including water proofing products)
08 04 10	waste adhesives and sealants other than those mentioned in 08 04 09
08 04 12	adhesive and sealant sludges other than those mentioned in 08 04 11
08 04 14	aqueous sludges containing adhesives or sealants other than those mentioned in 08 04 13
09	Wastes from the photographic industry
09 01	wastes from the photographic industry
09 01 07	photographic film and paper containing silver or silver compounds
09 01 08	photographic film and paper free of silver or silver compounds
09 01 10	single-use cameras without batteries
09 01 12	single-use cameras containing batteries other than those mentioned in 09 01 11
10	Wastes from thermal processes
10 01	wastes from power stations and other combustion plants (except 19)
10 01 01	bottom ash, slag and boiler dust (excluding boiler dust mentioned in 10 01 04)
10 01 02	coal fly ash
10 01 03	fly ash from peat and untreated wood
10 01 05	calcium-based reaction wastes from flue-gas desulphurisation in solid form
10 01 07	calcium-based reaction wastes from flue-gas desulphurisation in sludge form
10 01 15	bottom ash, slag and boiler dust from co-incineration other than those mentioned in 10 01 14
10 01 17	fly ash from co-incineration other than those mentioned in 10 01 16
10 01 19	wastes from gas cleaning other than those mentioned in 10 01 05, 10 01 07 and 10 01 18
10 01 21	sludges from on-site effluent treatment other than those mentioned in 10 01 20
10 01 23	aqueous sludges from boiler cleansing other than those mentioned in 10 01 22
10 01 24	sands from fluidised beds
10 01 25	wastes from fuel storage and preparation of coal-fired power plants
10 01 26	wastes from cooling-water treatment

Table S2.1 Permitted waste types for disposal at a landfill for non-hazardous waste	
Waste code	Description
10 02	wastes from the iron and steel industry
10 02 01	wastes from the processing of slag
10 02 02	unprocessed slag
10 02 08	solid wastes from gas treatment other than those mentioned in 10 02 07
10 02 10	mill scales
10 02 12	wastes from cooling-water treatment other than those mentioned in 10 02 11
10 02 14	sludges and filter cakes from gas treatment other than those mentioned in 10 02 13
10 02 15	other sludges and filter cakes
10 03	wastes from aluminium thermal metallurgy
10 03 02	anode scraps
10 03 05	waste alumina
10 03 16	skimmings other than those mentioned in 10 03 15
10 03 18	carbon-containing wastes from anode manufacture other than those mentioned in 10 03 17
10 03 20	flue-gas dust other than those mentioned in 10 03 19
10 03 22	other particulates and dust (including ball-mill dust) other than those mentioned in 10 03 21
10 03 24	solid wastes from gas treatment other than those mentioned in 10 03 23
10 03 26	sludges and filter cakes from gas treatment other than those mentioned in 10 03 25
10 03 28	wastes from cooling-water treatment other than those mentioned in 10 03 27
10 03 30	wastes from treatment of salt slags and black drosses other than those mentioned in 10 03 29
10 04	wastes from lead thermal metallurgy
10 04 10	wastes from cooling-water treatment other than those mentioned in 10 04 09
10 05	wastes from zinc thermal metallurgy
10 05 01	slags from primary and secondary production
10 05 04	other particulates and dust
10 05 09	wastes from cooling-water treatment other than those mentioned in 10 05 08
10 05 11	dross and skimmings other than those mentioned in 10 05 10
10 06	wastes from copper thermal metallurgy
10 06 01	slags from primary and secondary production
10 06 02	dross and skimmings from primary and secondary production
10 06 04	other particulates and dust
10 06 10	wastes from cooling-water treatment other than those mentioned in 10 06 09
10 07	wastes from silver, gold and platinum thermal metallurgy
10 07 01	slags from primary and secondary production
10 07 02	dross and skimmings from primary and secondary production
10 07 03	solid wastes from gas treatment
10 07 04	other particulates and dust

Table S2.1 Permitted waste types for disposal at a landfill for non-hazardous waste	
Waste code	Description
10 07 05	sludges and filter cakes from gas treatment
10 07 08	wastes from cooling-water treatment other than those mentioned in 10 07 07
10 08	wastes from other non-ferrous thermal metallurgy
10 08 04	particulates and dust
10 08 09	other slags
10 08 11	dross and skimmings other than those mentioned in 10 08 10
10 08 13	carbon-containing wastes from anode manufacture other than those mentioned in 10 08 12
10 08 14	anode scrap
10 08 16	flue-gas dust other than those mentioned in 10 08 15
10 08 18	sludges and filter cakes from flue-gas treatment other than those mentioned in 10 08 17
10 08 20	wastes from cooling-water treatment other than those mentioned in 10 08 19
10 09	wastes from casting of ferrous pieces
10 09 03	furnace slag
10 09 06	casting cores and moulds which have not undergone pouring other than those mentioned in 10 09 05
10 09 08	casting cores and moulds which have undergone pouring other than those mentioned in 10 09 07
10 09 10	flue-gas dust other than those mentioned in 10 09 09
10 09 12	other particulates other than those mentioned in 10 09 11
10 09 14	waste binders other than those mentioned in 10 09 13
10 09 16	waste crack-indicating agent other than those mentioned in 10 09 15
10 10	wastes from casting of non-ferrous pieces
10 10 03	furnace slag
10 10 06	casting cores and moulds which have not undergone pouring, other than those mentioned in 10 10 05
10 10 08	casting cores and moulds which have undergone pouring, other than those mentioned in 10 10 07
10 10 10	flue-gas dust other than those mentioned in 10 10 09
10 10 12	other particulates other than those mentioned in 10 10 11
10 10 14	waste binders other than those mentioned in 10 10 13
10 10 16	waste crack-indicating agent other than those mentioned in 10 10 15
10 11	wastes from manufacture of glass and glass products
10 11 03	waste glass-based fibrous materials
10 11 05	particulates and dust
10 11 10	waste preparation mixture before thermal processing, other than those mentioned in 10 11 09
10 11 12	waste glass other than those mentioned in 10 11 11
10 11 14	glass-polishing and -grinding sludge other than those mentioned in 10 11 13

Table S2.1 Permitted waste types for disposal at a landfill for non-hazardous waste	
Waste code	Description
10 11 16	solid wastes from flue-gas treatment other than those mentioned in 10 11 15
10 11 18	sludges and filter cakes from flue-gas treatment other than those mentioned in 10 11 17
10 11 20	solid wastes from on-site effluent treatment other than those mentioned in 10 11 19
10 12	wastes from manufacture of ceramic goods, bricks, tiles and construction products
10 12 01	waste preparation mixture before thermal processing
10 12 03	particulates and dust
10 12 05	sludges and filter cakes from gas treatment
10 12 06	discarded moulds
10 12 08	waste ceramics, bricks, tiles and construction products (after thermal processing)
10 12 10	solid wastes from gas treatment other than those mentioned in 10 12 09
10 12 12	wastes from glazing other than those mentioned in 10 12 11
10 12 13	sludge from on-site effluent treatment
10 13	wastes from manufacture of cement, lime and plaster and articles and products made from them
10 13 01	waste preparation mixture before thermal processing
10 13 04	wastes from calcination and hydration of lime
10 13 06	particulates and dust (except 10 13 12 and 10 13 13)
10 13 07	sludges and filter cakes from gas treatment
10 13 10	wastes from asbestos-cement manufacture other than those mentioned in 10 13 09
10 13 11	wastes from cement-based composite materials other than those mentioned in 10 13 09 and 10 13 10
10 13 13	solid wastes from gas treatment other than those mentioned in 10 13 12
10 13 14	waste concrete and concrete sludge
11	Wastes from chemical surface treatment and coating of metals and other materials; non-ferrous hydro-metallurgy
11 01	wastes from chemical surface treatment and coating of metals and other materials (for example galvanic processes, zinc coating processes, pickling processes, etching, phosphating, alkaline degreasing, anodising)
11 01 10	sludges and filter cakes other than those mentioned in 11 01 09
11 01 14	degreasing wastes other than those mentioned in 11 01 13
11 02	wastes from non-ferrous hydrometallurgical processes
11 02 03	wastes from the production of anodes for aqueous electrolytical processes
11 02 06	wastes from copper hydrometallurgical processes other than those mentioned in 11 02 05
11 05	wastes from hot galvanising processes
11 05 01	hard zinc
11 05 02	zinc ash
12	Wastes from shaping and physical and mechanical surface treatment of metals and plastics

Table S2.1 Permitted waste types for disposal at a landfill for non-hazardous waste	
Waste code	Description
12 01	wastes from shaping and physical and mechanical surface treatment of metals and plastics
12 01 01	ferrous metal filings and turnings
12 01 02	ferrous metal dust and particles
12 01 03	non-ferrous metal filings and turnings
12 01 04	non-ferrous metal dust and particles
12 01 05	plastics shavings and turnings
12 01 13	welding wastes
12 01 15	machining sludges other than those mentioned in 12 01 14
12 01 17	waste blasting material other than those mentioned in 12 01 16
12 01 21	spent grinding bodies and grinding materials other than those mentioned in 12 01 20
15	Waste packaging, absorbents, wiping cloths, filter materials and protective clothing not otherwise specified
15 01	packaging (including separately collected municipal packaging waste)
15 01 01	paper and cardboard packaging
15 01 02	plastic packaging
15 01 03	wooden packaging
15 01 04	metallic packaging
15 01 05	composite packaging
15 01 06	mixed packaging
15 01 07	glass packaging
15 01 09	textile packaging
15 02	absorbents, filter materials, wiping cloths and protective clothing
15 02 03	absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02
16	Wastes not otherwise specified in the list
16 01	end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16 06 and 16 08)
16 01 03	end-of-life tyres
16 01 12	brake pads other than those mentioned in 16 01 11
16 01 17	ferrous metal
16 01 18	non-ferrous metal
16 01 19	plastic
16 01 20	glass
16 02	wastes from electrical and electronic equipment
16 02 14	discarded equipment other than those mentioned in 16 02 09 to 16 02 13
16 02 16	components removed from discarded equipment other than those mentioned in 16 02 15

Table S2.1 Permitted waste types for disposal at a landfill for non-hazardous waste	
Waste code	Description
16 03	off-specification batches and unused products
16 03 04	inorganic wastes other than those mentioned in 16 03 03
16 03 06	organic wastes other than those mentioned in 16 03 05
16 08	spent catalysts
16 08 01	spent catalysts containing gold, silver, rhenium, rhodium, palladium, iridium or platinum (except 16 08 07)
16 08 03	spent catalysts containing transition metals or transition metal compounds not otherwise specified
16 11	waste linings and refractories
16 11 02	carbon-based linings and refractories from metallurgical processes others than those mentioned in 16 11 01
16 11 04	other linings and refractories from metallurgical processes other than those mentioned in 16 11 03
16 11 06	linings and refractories from non-metallurgical processes others than those mentioned in 16 11 05
17	Construction and demolition wastes (including excavated soil from contaminated sites)
17 01	concrete, bricks, tiles and ceramics
17 01 01	concrete
17 01 02	bricks
17 01 03	tiles and ceramics
17 01 07	mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06
17 02	wood, glass and plastic
17 02 01	wood
17 02 02	glass
17 02 03	plastic
17 03	bituminous mixtures, coal tar and tarred products
17 03 02	bituminous mixtures other than those mentioned in 17 03 01
17 04	metals (including their alloys)
17 04 01	copper, bronze, brass
17 04 02	aluminium
17 04 03	lead
17 04 04	zinc
17 04 05	iron and steel
17 04 06	tin
17 04 07	mixed metals
17 04 11	cables other than those mentioned in 17 04 10
17 05	soil (including excavated soil from contaminated sites), stones and dredging spoil
17 05 04	soil and stones other than those mentioned in 17 05 03

Table S2.1 Permitted waste types for disposal at a landfill for non-hazardous waste	
Waste code	Description
17 05 06	dredging spoil other than those mentioned in 17 05 05
17 05 08	track ballast other than those mentioned in 17 05 07
17 06	insulation materials and asbestos-containing construction materials
17 06 04	insulation materials other than those mentioned in 17 06 01 and 17 06 03
17 09	other construction and demolition wastes
17 09 04	mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03
18	Wastes from human or animal health care and/or related research (except kitchen and restaurant wastes not arising from immediate health care)
18 01	wastes from natal care, diagnosis, treatment or prevention of disease in humans
18 01 04	wastes whose collection and disposal is not subject to special requirements in order to prevent infection (for example dressings, plaster casts, linen, disposable clothing, diapers)
18 02	wastes from research, diagnosis, treatment or prevention of disease involving animals
18 02 03	wastes whose collection and disposal is not subject to special requirements in order to prevent infection
18 02 06	chemicals other than those mentioned in 18 02 05
19	Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use
19 01	wastes from incineration or pyrolysis of waste
19 01 02	ferrous materials removed from bottom ash
19 01 12	bottom ash and slag other than those mentioned in 19 01 11
19 01 14	fly ash other than those mentioned in 19 01 13
19 01 16	boiler dust other than those mentioned in 19 01 15
19 01 18	pyrolysis wastes other than those mentioned in 19 01 17
19 01 19	sands from fluidised beds
19 02	wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)
19 02 03	premixed wastes composed only of non-hazardous wastes
19 02 06	sludges from physico/chemical treatment other than those mentioned in 19 02 05
19 02 10	combustible wastes other than those mentioned in 19 02 08 and 19 02 09
19 03	stabilised/solidified wastes
19 03 05	stabilised wastes other than those mentioned in 19 03 04
19 03 07	solidified wastes other than those mentioned in 19 03 06
19 04	vitrified waste and wastes from vitrification
19 04 01	vitrified waste
19 05	wastes from aerobic treatment of solid wastes
19 05 01	non-composted fraction of municipal and similar wastes
19 05 02	non-composted fraction of animal and vegetable waste

Table S2.1 Permitted waste types for disposal at a landfill for non-hazardous waste	
Waste code	Description
19 05 03	off-specification compost
19 06	wastes from anaerobic treatment of waste
19 06 04	digestate from anaerobic treatment of municipal waste
19 06 06	digestate from anaerobic treatment of animal and vegetable waste
19 08	wastes from waste water treatment plants not otherwise specified
19 08 01	screenings
19 08 02	waste from desanding
19 08 05	sludges from treatment of urban waste water
19 08 09	grease and oil mixture from oil/water separation containing only edible oil and fats
19 08 12	sludges from biological treatment of industrial waste water other than those mentioned in 19 08 11
19 08 14	sludges from other treatment of industrial waste water other than those mentioned in 19 08 13
19 09	wastes from the preparation of water intended for human consumption or water for industrial use
19 09 01	solid waste from primary filtration and screenings
19 09 02	sludges from water clarification
19 09 03	sludges from decarbonation
19 09 04	spent activated carbon
19 09 05	saturated or spent ion exchange resins
19 09 06	solutions and sludges from regeneration of ion exchangers
19 10	wastes from shredding of metal-containing wastes
19 10 01	iron and steel waste
19 10 02	non-ferrous waste
19 10 04	fluff-light fraction and dust other than those mentioned in 19 10 03
19 10 06	other fractions other than those mentioned in 19 10 05
19 11	wastes from oil regeneration
19 11 06	sludges from on-site effluent treatment other than those mentioned in 19 11 05
19 12	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 01	paper and cardboard
19 12 02	ferrous metal
19 12 03	non-ferrous metal
19 12 04	plastic and rubber
19 12 05	glass
19 12 07	wood other than that mentioned in 19 12 06
19 12 08	textiles
19 12 09	minerals (for example sand, stones)
19 12 10	combustible waste (refuse derived fuel)

Table S2.1 Permitted waste types for disposal at a landfill for non-hazardous waste	
Waste code	Description
19 12 12	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11
19 13	wastes from soil and groundwater remediation
19 13 02	solid wastes from soil remediation other than those mentioned in 19 13 01
19 13 04	sludges from soil remediation other than those mentioned in 19 13 03
19 13 06	sludges from groundwater remediation other than those mentioned in 19 13 05
20	Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions
20 01	separately collected fractions (except 15 01)
20 01 01	paper and cardboard
20 01 02	glass
20 01 08	biodegradable kitchen and canteen waste
20 01 10	clothes
20 01 11	textiles
20 01 25	edible oil and fat
20 01 28	paint, inks, adhesives and resins other than those mentioned in 20 01 27
20 01 30	detergents other than those mentioned in 20 01 29
20 01 36	discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35
20 01 38	wood other than that mentioned in 20 01 37
20 01 39	plastics
20 01 40	metals
20 01 41	wastes from chimney sweeping
20 02	garden and park wastes (including cemetery waste)
20 02 01	biodegradable waste
20 02 02	soil and stones
20 02 03	other non-biodegradable wastes
20 03	other municipal wastes
20 03 01	mixed municipal waste
20 03 02	waste from markets
20 03 03	street-cleaning residues
20 03 04	septic tank sludge
20 03 06	waste from sewage cleaning
20 03 07	bulky waste

Table S2.2 Permitted waste types for restoration	
Waste code	Description
01	Wastes resulting from exploration, mining, quarrying, and physical and chemical treatment of minerals
01 04	wastes from physical and chemical processing of non-metalliferous minerals
01 04 08	waste gravel and crushed rocks other than those mentioned in 01 04 07
01 04 09	waste sand and clays
02	Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing
02 04	wastes from sugar processing
02 04 01	soil from cleaning and washing beet
03	Wastes from wood processing and the production of panels and furniture, pulp, paper and cardboard
03 03	wastes from pulp, paper and cardboard production and processing
03 03 05	de-inking sludges from paper recycling
03 03 09	lime mud waste
17	Construction and demolition wastes (including excavated soil from contaminated sites)
17 05	soil (including excavated soil from contaminated sites), stones and dredging spoil
17 05 04	soil and stones other than those mentioned in 17 05 03
17 05 06	dredging spoil other than those mentioned in 17 05 05
19	Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use
19 05	wastes from aerobic treatment of solid wastes
19 05 03	off-specification compost
19 08	wastes from waste water treatment plants not otherwise specified
19 08 05	sludges from treatment of urban waste water
19 09	wastes from the preparation of water intended for human consumption or water for industrial use
19 09 02	sludges from water clarification
19 12	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 09	minerals (for example sand, stones)
19 13	wastes from soil and groundwater remediation
19 13 02	solid wastes from soil remediation other than those mentioned in 19 13 01
19 13 04	sludges from soil remediation other than those mentioned in 19 13 03
20	Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions
20 02	garden and park wastes (including cemetery waste)
20 02 02	soil and stones

Table S2.3a Permitted waste types for Physico-Chemical Treatment (Activity A5 in Table S1.1) at Soil Treatment Facility	
Maximum Quantity	Maximum storage capacity of hazardous waste codes is 1,000 tonnes at any one time. Maximum treatment capacity of the Treatment is 38,000 tonnes at any one time for non-hazardous and hazardous wastes. Treatment Activity tonnage limit is 50,000 tonnes per annum.
Waste code	Description
01	Wastes resulting from exploration, mining, quarrying, and physical and chemical treatment of minerals
01 04	wastes from physical and chemical processing of non-metalliferous minerals
01 04 09	Waste sand and clays
01 05	Drilling muds and other wastes
01 05 05*	Oil-containing drilling muds and wastes
01 05 06*	Drilling muds and other drilling wastes containing hazardous substances
05	Wastes from petroleum refining, natural gas purification and pyrolytic treatment of coal
05 01	wastes from petroleum refining
05 01 05*	Oil spills
13	Oil wastes and wastes of liquid fuels (except edible oils, and those in chapters 05, 12 and 19)
13 05	Oil/water separator contents
13 05 01*	Solids from grit chambers and oil/water separators
13 05 02*	Sludges from oil/water separators
13 05 03*	Interceptor sludges
13 05 08*	Mixtures of wastes from grit chambers and oil/water separators
17	Construction and demolitions wastes (including excavated soil from contaminated sites)
17 02	Wood, glass and plastic
17 02 01	Wood
17 05	Soil (including excavated soil from contaminated sites), stones and dredging spoil
17 05 03*	Soil and stones containing hazardous substances
17 05 04	Soil and stones other than those mentioned in 17 05 03
17 05 05*	Dredging spoil containing hazardous substances
17 05 06	Dredging spoil other than those mentioned in 17 05 05
17 05 07*	Track ballast containing hazardous substances
17 05 08	Track ballast other than those mentioned in 17 05 07
19	Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use
19 02	Wastes from physico/chemical treatment treatments of waste (including dechromatation, decyanidation, neutralisation)
19 02 05*	sludges from physico/chemical treatment containing hazardous substances – wastes suitable for biological treatment only

Table S2.3a Permitted waste types for Physico-Chemical Treatment (Activity A5 in Table S1.1) at Soil Treatment Facility	
Maximum Quantity	Maximum storage capacity of hazardous waste codes is 1,000 tonnes at any one time. Maximum treatment capacity of the Treatment is 38,000 tonnes at any one time for non-hazardous and hazardous wastes. Treatment Activity tonnage limit is 50,000 tonnes per annum.
Waste code	Description
19 02 06	sludges from physico/chemical treatment other than those mentioned in 19 02 05 – wastes suitable for biological treatment only
19 05	wastes from aerobic treatment of solid wastes
19 05 03	off-specification compost
19 08	wastes from waste water treatment plants not otherwise specified
19 08 02	Waste from desanding
19 08 13*	Sludges containing hazardous substances from other treatment of industrial waste water
19 08 14	Sludges from other treatment of industrial waste water other than those mentioned in 19 08 13
19 12	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 07	Wood other than those mentioned in 19 12 06
19 13	Wastes from soil and groundwater remediation
19 13 01*	Solid wastes from soil remediation containing hazardous substances
19 13 02	Solid wastes from soil remediation other than those mentioned in 19 13 01
19 13 03*	Sludges from soil remediation containing hazardous substances
19 13 04	Sludges from soil remediation other than those mentioned in 19 13 03
20	Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions
20 01	Separately collected fractions (except 15 01)
20 01 38	Wood other than that mentioned in 20 01 37
20 02	Garden and park wastes (including cemetery waste)
20 02 01	Biodegradable waste
20 02 02	Soil and stones
20 03	Other municipal wastes
20 03 03	Street cleaning residues

Table S2.3b Permitted waste types for Biological Treatment (Activity A3/A4 in Table S1.1) at Soil Treatment Facility	
Maximum Quantity	Maximum storage capacity of hazardous waste codes is 1,000 tonnes at any one time. Maximum treatment capacity of the Treatment is 38,000 tonnes at any one time for non-hazardous wastes and 30,000 tonnes for hazardous wastes. Treatment Activity tonnage limit is 50,000 tonnes per annum.
Waste code	Description
01	Wastes resulting from exploration, mining, quarrying, and physical and chemical treatment of minerals
01 04	wastes from physical and chemical processing of non-metalliferous minerals
01 04 09	Waste sand and clays
01 05	Drilling muds and other wastes
01 05 05*	Oil-containing drilling muds and wastes
01 05 06*	Drilling muds and other drilling wastes containing hazardous substances
05	Wastes from petroleum refining, natural gas purification and pyrolytic treatment of coal
05 01	wastes from petroleum refining
05 01 05*	Oil spills
13	Oil wastes and wastes of liquid fuels (except edible oils, and those in chapters 05, 12 and 19)
13 05	Oil/water separator contents
13 05 01*	Solids from grit chambers and oil/water separators
13 05 02*	Sludges from oil/water separators
13 05 03*	Interceptor sludges
13 05 08*	Mixtures of wastes from grit chambers and oil/water separators
17	Construction and demolitions wastes (including excavated soil from contaminated sites)
17 02	Wood, glass and plastic
17 02 01	Wood
17 05	Soil (including excavated soil from contaminated sites), stones and dredging spoil
17 05 03*	Soil and stones containing hazardous substances
17 05 04	Soil and stones other than those mentioned in 17 05 03
17 05 05*	Dredging spoil containing hazardous substances
17 05 06	Dredging spoil other than those mentioned in 17 05 05
17 05 07*	Track ballast containing hazardous substances
17 05 08	Track ballast other than those mentioned in 17 05 07
19	Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use
19 02	Wastes from physico/chemical treatment treatments of waste (including dechromatation, decyanidation, neutralisation)
19 02 05*	sludges from physico/chemical treatment containing hazardous substances – wastes suitable for biological treatment only

Table S2.3b Permitted waste types for Biological Treatment (Activity A3/A4 in Table S1.1) at Soil Treatment Facility	
Maximum Quantity	Maximum storage capacity of hazardous waste codes is 1,000 tonnes at any one time. Maximum treatment capacity of the Treatment is 38,000 tonnes at any one time for non-hazardous wastes and 30,000 tonnes for hazardous wastes. Treatment Activity tonnage limit is 50,000 tonnes per annum.
Waste code	Description
19 02 06	sludges from physico/chemical treatment other than those mentioned in 19 02 05 – wastes suitable for biological treatment only
19 05	wastes from aerobic treatment of solid wastes
19 05 03	off-specification compost
19 08	wastes from waste water treatment plants not otherwise specified
19 08 02	Waste from desanding
19 08 13*	Sludges containing hazardous substances from other treatment of industrial waste water
19 08 14	Sludges from other treatment of industrial waste water other than those mentioned in 19 08 13
19 12	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 07	Wood other than those mentioned in 19 12 06
19 12 11*	Other wastes (including mixtures of materials) from mechanical treatment of waste containing hazardous substances
19 13	Wastes from soil and groundwater remediation
19 13 01*	Solid wastes from soil remediation containing hazardous substances
19 13 02	Solid wastes from soil remediation other than those mentioned in 19 13 01
19 13 03*	Sludges from soil remediation containing hazardous substances
19 13 04	Sludges from soil remediation other than those mentioned in 19 13 03
20	Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions
20 01	Separately collected fractions (except 15 01)
20 01 38	Wood other than that mentioned in 20 01 37
20 02	Garden and park wastes (including cemetery waste)
20 02 01	Biodegradable waste
20 03	Other municipal wastes
20 03 03	Street cleaning residues

Table S2.4 Raw materials and fuels	
Raw materials and fuel description	Specification
NPK fertilizers	50 tonnes storage maximum at any one time

Schedule 3 – Emissions and monitoring

Table S3.1 Leachate level limits and monitoring requirements			
Monitoring point reference/Description	Limit	Monitoring frequency	Monitoring method
Phase 1: Two leachate monitoring points in addition to the collection sump for each hydraulically separate cell unless otherwise agreed in writing with the Agency.	3 m above cell base	Monthly	In accordance with Environment Agency document LFTGN02 (February 2003) 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water' or such other subsequent guidance as may be agreed in writing with the Environment Agency.
Phase 2: Two leachate monitoring points in addition to the collection sump for each hydraulically separate cell unless otherwise agreed in writing with the Agency.	6 m above cell base		

Table S3.2 Point source emissions to air – emission limits and monitoring requirements						
Emission point Ref. & Location	Parameter	Source	Limit (including unit)	Reference Period	Monitoring Frequency	Monitoring Standard or Method
Engines 1-5 Landfill gas engine on Plan ESID4	Oxides of Nitrogen	Gas utilisation plant	650 mg/m ³	Hourly mean	Annually	As per M2 or such other subsequent guidance as may be agreed in writing with the Environment Agency.
	CO		1500 mg/m ³			
	Total VOCs		1750 mg/m ³			
A1: Flare on plan 116-1-3026/A dated 27/02/2006	Oxides of Nitrogen	Landfill Gas Flares	150 mg/m ³	Hourly mean	Annually	As per M2 or such other subsequent guidance as may be agreed in writing with the Environment Agency. Monitoring is unnecessary where the flare is active for <10% of the year.
	CO		50 mg/m ³			
	Total VOCs		10 mg/m ³			
Biofilter Monitoring Point as shown on plan 3695-CAU-XX-XX-DR-V-1801	Ammonia	Biofilter at Soil Treatment Facility	20 mg/m ³	Hourly mean	Every six months	As agreed in writing with the Environment Agency.
	TVOCs		40 mg/m ³			
	Hydrogen Sulphide		No Limit			

Table S3.3 Point source emissions to water (other than sewer) – emission limits and monitoring requirements						
Emission point Ref. & Location	Parameter	Source	Limit (incl unit)	Reference Period	Monitoring Frequency	Monitoring Standard or Method
W1 On Plan ESID14 dated August 2007	Suspended Solids	Site drainage from the site surface water drainage system	75 mg/l	Spot Sample	Monthly	As specified in Environment Agency Guidance TGN02 'Monitoring of Landfill Leachate, Groundwater and Surface Water' (February 2003), <u>risk assessments for your environmental permit</u> (www.gov.uk) or such other subsequent guidance as may be agreed in writing with the Environment Agency
	Oil or grease		No visible discharge	Spot Sample	Monthly	
	pH		>6 and <9	Spot Sample	Monthly	
	Volume		750 m ³ /day	24 hours	Monthly	
	Flow rate		20 l/s	Instantaneous	Monthly	
	Conductivity		No limit set	Spot Sample	Monthly	
	Ammoniacal Nitrogen		No limit set	Spot Sample	Monthly	
	Chloride		No limit set	Spot Sample	Monthly	
	DO		No limit set	Spot Sample	Monthly	
	Sulphate		No limit set	Spot Sample	Quarterly	
	Alkalinity (as CaCO ₃)		No limit set	Spot Sample	Quarterly	
	COD		No limit set	Spot Sample	Quarterly	
	TON		No limit set	Spot Sample	Quarterly	
	Na		No limit set	Spot Sample	Quarterly	
	K		No limit set	Spot Sample	Quarterly	
	Ca		No limit set	Spot Sample	Quarterly	

Table S3.3 Point source emissions to water (other than sewer) – emission limits and monitoring requirements						
Emission point Ref. & Location	Parameter	Source	Limit (incl unit)	Reference Period	Monitoring Frequency	Monitoring Standard or Method
	Mg		No limit set	Spot Sample	Quarterly	
	Cr		No limit set	Spot Sample	Quarterly	
	Cd		No limit set	Spot Sample	Quarterly	
	Mn		No limit set	Spot Sample	Quarterly	
	Fe		No limit set	Spot Sample	Quarterly	
	Cu		No limit set	Spot Sample	Quarterly	
	Ni		No limit set	Spot Sample	Quarterly	
	Zn		No limit set	Spot Sample	Quarterly	
	Pb		No limit set	Spot Sample	Quarterly	
	Hg		No limit set	Spot Sample	Quarterly	
	List 1 substances identified in leachate, unless otherwise agreed in writing with the Environment Agency		No limit set	Spot Sample	Annually	

Table S3.4 Point source emissions to sewer, effluent treatment plant or by tankering or other transfer off-site – emission limits and monitoring requirements

Emission point Ref. & Location	Parameter	Source	Limit (including unit)	Reference Period	Monitoring Frequency	Monitoring Standard or Method
Treated Process Water Monitoring Point as shown on Plan 3695-CAU-XX-XX-DR-V-1801	Hazardous substances as defined by H1 assessment	Soil Treatment Facility	To be agreed in writing with the Environment Agency in accordance with Improvement Condition 4 in Table S1.3	Spot sample	Quarterly	As agreed in writing with the Environment Agency in accordance with Improvement Condition 4 in Table S1.3

Table S3.5 Groundwater – emission limits and monitoring requirements

Monitoring point reference	Parameter	Limit (including unit)	Reference Period	Monitoring frequency	Monitoring standard or method
GW5.01 as detailed on drawing number 124E232 dated February 2013	Ammoniacal Nitrogen	1.41 mg/l ¹	Spot Sample	Monthly	As specified in Environment Agency Guidance TGN02 'Monitoring of Landfill Leachate, Groundwater and Surface Water' (February 2003), <u>risk assessments for your environmental permit (www.gov.uk)</u> or such other subsequent guidance as may be agreed in writing with the Environment Agency
	Chloride	225 mg/l ¹		Monthly	
	Mecoprop	0.04 µg/l ¹		Quarterly	
	Xylene	3.0 µg/l ¹		Quarterly	
	Trichlorobenzene	0.01 µg/l ¹		Quarterly	
GW08 as detailed on drawing number 124E232 dated February 2013	Ammoniacal Nitrogen	1.80 mg/l		Monthly	
	Chloride	410 mg/l		Monthly	
	Mecoprop	0.04 µg/l		Quarterly	
	Xylene	3.0 µg/l		Quarterly	
	Trichlorobenzene	0.01 µg/l		Quarterly	
1. Unless otherwise agreed in writing by the Environment Agency					

Table S3.6 Landfill gas in external monitoring boreholes – limits and monitoring requirements				
Monitoring point Ref. /description	Parameter	Limit (including units)	Monitoring frequency	Monitoring standard or method
BH1, BH2, BH5- BH18, BH22-BH35 as detailed on drawing no. 124E232 dated February 2013	Methane	1% v/v	Monthly	As per LFTGN03 (Sept 2004) or such other subsequent guidance as may be agreed in writing with the Environment Agency. Record whether the ground is: waterlogged frozen snow covered
	Carbon Dioxide	1.5% v/v		
	Oxygen	No limit		
	Atmospheric pressure	No limit		
	Differential Pressure	No limit		
BH3, BH3.01, BH3.02, BH4.00, BH4.01 as detailed on drawing no. 124E232 dated February 2013	Methane	1% v/v		
	Carbon Dioxide	2% v/v		
	Oxygen	No limit		
	Atmospheric pressure	No limit		
	Differential Pressure	No limit		
BH4.02 as detailed on drawing no. 124E232 dated February 2013	Methane	1% v/v		
	Carbon Dioxide	11.5% v/v		
	Oxygen	No limit		
	Atmospheric pressure	No limit		
	Differential Pressure	No limit		
BH36, BH37, BH38.1, BH39.1, BH40.1, BH41-BH44 as detailed on drawing no. 124E232 dated February 2013	Methane	TBA ²		
	Carbon Dioxide	TBA ²		
	Oxygen	No limit		
	Atmospheric pressure	No limit		
	Differential Pressure	No limit		
1. The limit specified take account of the agree background concentrations as detailed in the application 2. To be agreed in accordance with improvement condition 3, table S1.3				

Table S3.7 Particulate matter in ambient air - monitoring requirements					
Monitoring Point Ref. /Description	Parameter	Limit	Reference Period	Monitoring Frequency	Monitoring Standard or Method
Dust monitoring points as detailed on drawing no.ESID14, dated August 2007	Deposited dust	200 mg/m ² /day	24 hours	Monthly	
	Suspended particulate PM10	None set	In accordance with correspondence ref: 402.0197.00423 dated 06/04/2006	In accordance with correspondence ref: 402.0197.00423 dated 06/04/2006	

Table S3.8 Landfill gas emissions from capped surfaces for cells that have accepted non-hazardous biodegradable waste – monitoring requirements			
Monitoring point Ref. /description	Parameter	Monitoring frequency	Monitoring Standard or method
Permanently capped zone	Methane concentration	Every 12 months	As per LFTGN 07 (v2 2010) or such other subsequent guidance as may be agreed in writing with the Environment Agency.
Temporarily capped zone	Methane concentration	Every 12 months	As per LFTGN 07 (v2 2010) or such other subsequent guidance as may be agreed in writing with the Environment Agency.
Whole site	Total methane emission	As agreed with the Environment Agency	As per LFTGN 07 (v2 2010) or such other subsequent guidance as may be agreed in writing with the Environment Agency.
Uncapped areas	Methane concentration	Every 12 months	As agreed with the Environment Agency based on the wording of revised LFTGN 07 or landfill sector guidance or such other subsequent guidance as may be agreed in writing with the Environment Agency.

Table S3.9 Groundwater – other monitoring requirements			
Monitoring Point Ref./Description	Parameter	Monitoring frequency	Monitoring standard or method
Up gradient MEPP	Water level, electrical conductivity, chloride, ammoniacal nitrogen, pH,	Quarterly	As specified in Environment Agency Guidance TGN02 'Monitoring of Landfill Leachate, Groundwater and Surface Water' (February 2003), <u>risk assessments for your environmental permit (www.gov.uk)</u> or such other subsequent guidance as may be agreed in writing with the Environment Agency
	total alkalinity, magnesium, potassium, total sulphates, calcium, sodium, chromium, copper, iron, lead, nickel, zinc, manganese	Annually	
	Hazardous substances	Annually for first six years of operation	
Down or cross gradient MEPP	Water level, electrical conductivity, chloride, ammoniacal nitrogen, pH,	Quarterly	As specified in Environment Agency Guidance TGN02 'Monitoring of Landfill Leachate, Groundwater and Surface Water' (February 2003), <u>risk assessments for your environmental permit (www.gov.uk)</u> or such other subsequent guidance as may be agreed in writing with the Environment Agency After the initial 6 year monitoring period for hazardous substances, if the results of quarterly or annual monitoring suggest an increase in contamination, the operator shall also undertake a full leachate hazardous substances screen.
	total alkalinity, magnesium, potassium, total sulphates, calcium, sodium, chromium, copper, iron, lead, nickel, zinc, manganese	Annually	
	Hazardous substances detected in leachate	Annually for first six years of operation then every two years	
MEPP	Base of monitoring point (mAoD)	Annually	

Table S3.10 Landfill gas – other monitoring requirements				
Monitoring Point Ref. /Description	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
In waste gas monitoring boreholes or sealed leachate wells or sacrificial gas extraction system	Methane Carbon Dioxide Oxygen Carbon Monoxide Differential pressure Atmospheric pressure	Monthly until gas extraction commences	Calibrated handheld monitoring instrument	For cells or phases which have no active gas extraction. Gas extraction system shall be installed and extraction commenced once monitoring shows onset of methane production in waste at a rate that can be sustainably extracted. Once gas extraction has commenced in a particular cell or phase, there is no longer a requirement to carry out this monitoring.
	Hydrogen sulphide	Quarterly	Calibrated handheld monitoring instrument or Tedlar Bag sample in accordance with LFTGN04 (V3, March 2010) or other such subsequent guidance as may be agreed in writing with the Environment Agency or a method agreed with the Environment Agency.	For cells or phases which have no active gas extraction. Once gas extraction has commenced in a particular cell or phase, there is no longer a requirement to carry out this monitoring. Concentrations of hydrogen sulphide shall be assessed in accordance with the gas and odour management plans

Table S3.10 Landfill gas – other monitoring requirements				
Monitoring Point Ref. /Description	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Gas collection system at well control valve, manifolds (if applicable) and strategic points on gas system	Methane Carbon Dioxide Oxygen Carbon Monoxide Atmospheric pressure Gas flow rate or suction % Balance Gas (calculated as the difference between the sum of measured gases and 100%)	Monthly or at such other frequency as may be agreed in writing with the Environment Agency.	Calibrated handheld monitoring instrument	Where the oxygen concentration exceeds 5% or the % balance gas is greater than 20% an assessment of air ingress into the system shall be undertaken. Where the concentration of carbon monoxide exceeds 100ppm then further investigation shall be undertaken Record the ambient air temperature and whether the ground is: waterlogged frozen snow covered
Gas collection system at well control valve	Hydrogen sulphide	Six monthly	Calibrated handheld monitoring instrument or Tedlar Bag sample in accordance with LFTGN04 (v3, March 2010) or other such subsequent guidance as may be agreed in writing with the Environment Agency or a method agreed with the Environment Agency.	Concentrations of hydrogen sulphide shall be assessed in accordance with the gas and odour management plans

Table S3.10 Landfill gas – other monitoring requirements				
Monitoring Point Ref. /Description	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Output to flare or LFG Utilisation Compound	Trace gas	Annually	Trace gas analysis in accordance with LFTGN04 (v3, March 2010) or such other subsequent guidance as may be agreed in writing with the Environment Agency [or a trace gas characterisation method agreed with the Environment Agency].	The concentration of trace gas components shall be assessed against the assumptions made in the Landfill gas risk assessment and dispersion modelling.
Output to flare or LFG Utilisation Compound	Methane Carbon Dioxide Oxygen Gas flow rate Suction % Balance Gas (calculated as the difference between the sum of measured gases and 100%)	Weekly		Where the oxygen concentration exceeds 5% or the % balance gas is greater than 20% an assessment of air ingress into the system shall be undertaken.