(Diametrial) POINT LOAD STRENGTH INDEX TEST DATA

Contract: Blanchardstown T.C.
Contract no. 23311
Date of test: 23/08/2021

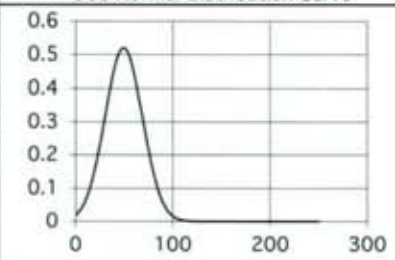
Sample Type: Core

RC No.	Depth m	D (Diameter) mm	P (failure load) kN	F	Is (index strength) Mpa	Is(50) (index strength) Mpa	*UCS MPa	Type	Orienation
RC11	3.8	78	14.0	1.222	2.30	2.81	56	d	//
	5.6	78	11.0	1.222	1.81	2.21	44	d	//
	7.3	78	9.0	1.222	1.48	1.81	36	d	//
	8.9	78	16.0	1.222	2.63	3.21	64	d	//
	9.9	78	17.0	1.222	2.79	3.41	68	d	//
RC12	4.1	78	11.0	1.222	1.81	2.21	44	d	//
	5.9	78	16.0	1.222	2.63	3.21	64	d	//
	8.6	78	15.0	1.222	2.47	3.01	60	d	//
	9.6	78	2.0	1.222	0.33	0.40	8	d	//
	9.8	78	13.0	1.222	2.14	2.61	52	d	//
RC13	3.1	78	19.0	1.222	3.12	3.81	76	d	//
	5.6	78	14.0	1.222	2.30	2.81	56	d	//
	6.7	78	8.0	1.222	1.31	1.61	32	d	//
	7.7	78	11.0	1.222	1.81	2.21	44	d	//
	8.9	78	2.0	1.222	0.33	0.40	8	d	//
RC14	4.1	78	11.0	1.222	1.81	2.21	44	d	//
	5.6	78	16.0	1.222	2.63	3.21	64	d	//
	7.5	78	22.0	1.222	3.62	4.42	88	d	//
	8.6	78	14.0	1.222	2.30	2.81	56	d	//
	9.9	78	7.0	1.222	1.15	1.41	28	d	//
RC15	4.6	78	15.0	1.222	2.47	3.01	60	d	//
	5.7	78	14.0	1.222	2.30	2.81	56	d	//
	7.2	78	6.0	1.222	0.99	1.20	24	d	//
	8.6	78	12.0	1.222	1.97	2.41	48	d	//
	9.8	78	14.0	1.222	2.30	2.81	56	d	//

Statistical Summary Data	Is(50)	UCS*
Number of Samples Tested	25	25
Minimum	0.40	8
Average	2.48	50
Maximum	4.42	88
Standard Dev.	0.96	19
Upper 95% Confidence Limit	4.36	87.23
Lower 95% Confidence Limit	0.60	12.03

Comments:
*UCS taken as k x Point Load Is(50): k= 20

*UCS Normal Distribution Curve



Abbreviations	
i	irregular
a	axial
b	block
d	diametral

approx. orientation to planes of weakness/bedding	
U	unknown
P	perpendicular
//	parallel

(Diametrial) POINT LOAD STRENGTH INDEX TEST DATA

Contract: Blanchardstown T.C.
Contract no. 23311
Date of test: 23/08/2021

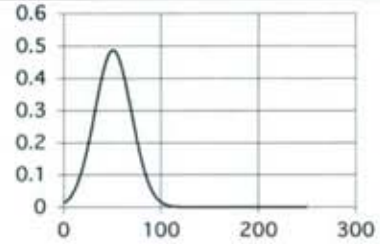
Sample Type: Core

RC No.	Depth m	D (Diameter) mm	P (failure load) kN	F	Is (index strength) Mpa	Is(50) (index strength) Mpa	*UCS MPa	Type	Orienation
RC16	4.3	78	9.0	1.222	1.48	1.81	36	d	//
	5.4	78	12.0	1.222	1.97	2.41	48	d	//
	7.3	78	18.0	1.222	2.96	3.61	72	d	//
	9.4	78	11.0	1.222	1.81	2.21	44	d	//
RC17	3.2	78	12.0	1.222	1.97	2.41	48	d	//
	5.4	78	4.0	1.222	0.66	0.80	16	d	//
	7.5	78	9.0	1.222	1.48	1.81	36	d	//
	9.3	78	18.0	1.222	2.96	3.61	72	d	//
	9.4	78	19.0	1.222	3.12	3.81	76	d	//
RC18	4.2	78	17.0	1.222	2.79	3.41	68	d	//
	5.0	78	5.0	1.222	0.82	1.00	20	d	//
	8.2	78	18.0	1.222	2.96	3.61	72	d	//
	9.4	78	17.0	1.222	2.79	3.41	68	d	//
RC19	4.6	78	11.0	1.222	1.81	2.21	44	d	//
	7.0	78	18.0	1.222	2.96	3.61	72	d	//
	8.0	78	15.0	1.222	2.47	3.01	60	d	//
	9.1	78	4.0	1.222	0.66	0.80	16	d	//
	9.9	78	17.0	1.222	2.79	3.41	68	d	//
RC20	4.1	78	15.0	1.222	2.47	3.01	60	d	//
	6.1	78	11.0	1.222	1.81	2.21	44	d	//
	7.1	78	10.0	1.222	1.64	2.01	40	d	//
	9.2	78	11.0	1.222	1.81	2.21	44	d	//
	9.7	78	10.0	1.222	1.64	2.01	40	d	//

Statistical Summary Data	Is(50)	UCS*
Number of Samples Tested	23	23
Minimum	0.80	16
Average	2.54	51
Maximum	3.81	76
Standard Dev.	0.94	19
Upper 95% Confidence Limit	4.38	87.69
Lower 95% Confidence Limit	0.70	13.92

Comments:
*UCS taken as k x Point Load Is(50): k= 20

*UCS Normal Distribution Curve



Abbreviations	
i	irregular
a	axial
b	block
d	diametral

approx. orientation to planes of weakness/bedding

U	unknown
P	perpendicular
//	parallel

(Diametrial) POINT LOAD STRENGTH INDEX TEST DATA

Contract: Blanchardstown T.C.
Contract no. 23311
Date of test: 23/08/2021

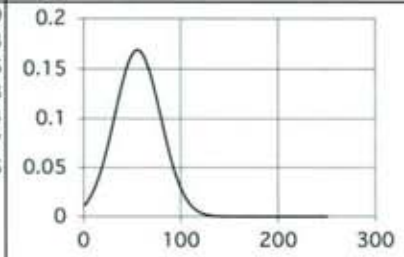
Sample Type: Core

RC No.	Depth m	D (Diameter) mm	P (failure load) kN	F	Is (index strength) Mpa	Is(50) (index strength) Mpa	*UCS MPa	Type	Orienation
RC21	4.3	78	14.0	1.222	2.30	2.81	56	d	//
	5.9	78	14.0	1.222	2.30	2.81	56	d	//
	6.6	78	16.0	1.222	2.63	3.21	64	d	//
	8.9	78	9.0	1.222	1.48	1.81	36	d	//
	9.9	78	12.0	1.222	1.97	2.41	48	d	//
RC22	3.8	78	2.0	1.222	0.33	0.40	8	d	//
	6.2	78	22.0	1.222	3.62	4.42	88	d	//
	6.8	78	20.0	1.222	3.29	4.02	80	d	//
	9.2	78	19.0	1.222	3.12	3.81	76	d	//
	9.9	78	11.0	1.222	1.81	2.21	44	d	//

Statistical Summary Data	Is(50)	UCS*
Number of Samples Tested	10	10
Minimum	0.40	8
Average	2.79	56
Maximum	4.42	88
Standard Dev.	1.18	24
Upper 95% Confidence Limit	5.10	102.07
Lower 95% Confidence Limit	0.48	9.56

Comments:
*UCS taken as k x Point Load Is(50): k= 20

*UCS Normal Distribution Curve



Abbreviations	
i	irregular
a	axial
b	block
d	diametral

approx. orientation to planes of weakness/bedding

U	unknown
P	perpendicular
//	parallel

Uniaxial Compression Test Report Sheet | *I.G.S.L.*

Sample Identification

Contract Name:	Blanchardstown T.C.
Job Number:	23311
Hole No:	RC01
Depth (m):	3.60m

Sample Description

Colour:	Dark grey
Grain size:	Fine-grained
Weathering Grade:	Fresh
Rock Type:	Muddy LIMESTONE

Weathering Grade Criteria

I. Fresh:	Unchanged from original state
II. Slightly weathered:	Slight discolouration, slight weakening
III. Moderately weathered:	Considerable weakening, penetrative discolouration
IV. Highly weathered:	Considerable weakening, penetrative discolouration, breaks in hand

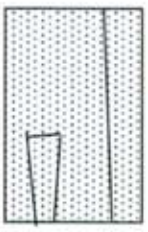
Sample Measurements

Length	201	
Diameter (Ø)	78.1	mm

Testing

Load Rate	4.3	kN/min
Load at Failure (P)	89	kN

Sketch of Failure Surfaces



Strength Calculations

Uniaxial Compressive Strength = $\frac{89000}{4788.19385}$

$= \frac{1000 \times P}{\Pi \times (Ø/2)^2}$

= 18.58 (Mpa)

Bulk Density = 2.73 (Mg/m^3)

Notes:

Uniaxial Compression Test Report Sheet | *I.G.S.L.*

Sample Identification

Contract Name:	Blanchardstown T.C.
Job Number:	23311
Hole No:	RC02
Depth (m):	6.70m

Sample Description

Colour:	Dark grey
Grain size:	Fine-grained
Weathering Grade:	Fresh
Rock Type:	Muddy LIMESTONE

Weathering Grade Criteria

I. Fresh:	Unchanged from original state
II. Slightly weathered:	Slight discolouration, slight weakening
III. Moderately weathered:	Considerable weakening, penetrative discolouration
IV. Highly weathered:	Considerable weakening, penetrative discolouration, breaks in hand

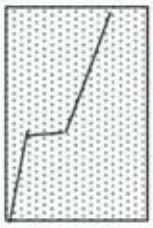
Sample Measurements

Length	200	
Diameter (Ø)	78	mm

Testing

Load Rate	4.3	kN/min
Load at Failure (P)	56	kN

Sketch of Failure Surfaces



Strength Calculations

Uniaxial Compressive Strength = $\frac{56000}{4775.94}$

$= \frac{1000 \times P}{\Pi \times (Ø/2)^2}$

= 11.72 (Mpa)

Bulk Density = 2.69 (Mg/m^3)

Notes:

Uniaxial Compression Test Report Sheet | *I.G.S.L.*

Sample Identification

Contract Name:	Blanchardstown T.C.
Job Number:	23311
Hole No:	RC03
Depth (m):	4.40m

Sample Description

Colour:	Dark grey
Grain size:	Fine-grained
Weathering Grade:	Fresh
Rock Type:	Muddy LIMESTONE

Weathering Grade Criteria

I. Fresh:	Unchanged from original state
II. Slightly weathered:	Slight discolouration, slight weakening
III. Moderately weathered:	Considerable weakening, penetrative discolouration
IV. Highly weathered:	Considerable weakening, penetrative discolouration, breaks in hand

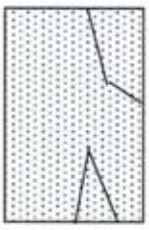
Sample Measurements

Length	201	
Diameter (Ø)	78	mm

Testing

Load Rate	4.3	kN/min
Load at Failure (P)	138	kN

Sketch of Failure Surfaces



Strength Calculations

Uniaxial Compressive Strength = $\frac{138000}{4775.94}$

$= \frac{1000 \times P}{\Pi \times (Ø/2)^2}$

= 28.88 (Mpa)

Bulk Density = 2.68 (Mg/m^3)

Notes:

Uniaxial Compression Test Report Sheet | I.G.S.L.

Sample Identification

Contract Name:	Blanchardstown T.C.
Job Number:	23311
Hole No:	RC04
Depth (m):	5.70m

Sample Description

Colour:	Dark grey
Grain size:	Fine-grained
Weathering Grade:	Fresh
Rock Type:	Muddy LIMESTONE

Weathering Grade Criteria

I. Fresh:	Unchanged from original state
II. Slightly weathered:	Slight discolouration, slight weakening
III. Moderately weathered:	Considerable weakening, penetrative discolouration
IV. Highly weathered:	Considerable weakening, penetrative discolouration, breaks in hand

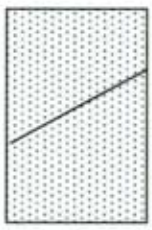
Sample Measurements

Length	199	
Diameter (Ø)	78	mm

Testing

Load Rate	4.3	kN/min
Load at Failure (P)	12	kN

Sketch of Failure Surfaces



Strength Calculations

Uniaxial Compressive Strength = $\frac{12000}{4775.94}$

$= \frac{1000 \times P}{\Pi \times (Ø/2)^2}$

= 2.51 (Mpa)

Bulk Density = 2.70 (Mg/m^3)

Notes:

Uniaxial Compression Test Report Sheet | *I.G.S.L.*

Sample Identification

Contract Name:	Blanchardstown T.C.
Job Number:	23311
Hole No:	RC05
Depth (m):	7.60m

Sample Description

Colour:	Dark grey
Grain size:	Fine-grained
Weathering Grade:	Fresh
Rock Type:	Muddy LIMESTONE

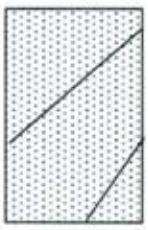
Weathering Grade Criteria

I. Fresh:	Unchanged from original state
II. Slightly weathered:	Slight discolouration, slight weakening
III. Moderately weathered:	Considerable weakening, penetrative discolouration
IV. Highly weathered:	Considerable weakening, penetrative discolouration, breaks in hand

Sample Measurements

Length	186	
Diameter (Ø)	78	mm

Sketch of Failure Surfaces



Testing

Load Rate	4.3	kN/min
Load at Failure (P)	145	kN

Strength Calculations

Uniaxial Compressive Strength = $\frac{145000}{4775.94}$

$= \frac{1000 \times P}{\Pi \times (Ø/2)^2}$

= 30.35 (Mpa)

Bulk Density = 2.71 (Mg/m^3)

Notes:

Uniaxial Compression Test Report Sheet | *I.G.S.L.*

Sample Identification

Contract Name:	Blanchardstown T.C.
Job Number:	23311
Hole No:	RC06
Depth (m):	9.40m

Sample Description

Colour:	Dark grey
Grain size:	Fine-grained
Weathering Grade:	Fresh
Rock Type:	Muddy LIMESTONE

Weathering Grade Criteria

I. Fresh:	Unchanged from original state
II. Slightly weathered:	Slight discolouration, slight weakening
III. Moderately weathered:	Considerable weakening, penetrative discolouration
IV. Highly weathered:	Considerable weakening, penetrative discolouration, breaks in hand

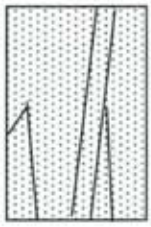
Sample Measurements

Length	202	
Diameter (Ø)	78	mm

Testing

Load Rate	4.3	kN/min
Load at Failure (P)	137	kN

Sketch of Failure Surfaces



Strength Calculations

Uniaxial Compressive Strength = $\frac{137000}{4775.94}$

$= \frac{1000 \times P}{\Pi \times (Ø/2)^2}$

= 28.67 (Mpa)

Bulk Density = 2.71 (Mg/m^3)

Notes:

Uniaxial Compression Test Report Sheet | *I.G.S.L.*

Sample Identification

Contract Name:	Blanchardstown T.C.
Job Number:	23311
Hole No:	RC07
Depth (m):	4.60m

Sample Description

Colour:	Dark grey
Grain size:	Fine-grained
Weathering Grade:	Fresh
Rock Type:	Muddy LIMESTONE

Weathering Grade Criteria

I. Fresh:	Unchanged from original state
II. Slightly weathered:	Slight discolouration, slight weakening
III. Moderately weathered:	Considerable weakening, penetrative discolouration
IV. Highly weathered:	Considerable weakening, penetrative discolouration, breaks in hand

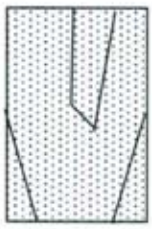
Sample Measurements

Length	202	
Diameter (Ø)	78	mm

Testing

Load Rate	4.3	kN/min
Load at Failure (P)	162	kN

Sketch of Failure Surfaces



Strength Calculations

Uniaxial Compressive Strength = $\frac{162000}{4775.94}$

$= \frac{1000 \times P}{\Pi \times (Ø/2)^2}$

= 33.90 (Mpa)

Bulk Density = 2.69 (Mg/m^3)

Notes:

Uniaxial Compression Test Report Sheet | *I.G.S.L.*

Sample Identification

Contract Name:	Blanchardstown T.C.
Job Number:	23311
Hole No:	RC08
Depth (m):	7.30m

Sample Description

Colour:	Dark grey
Grain size:	Fine-grained
Weathering Grade:	Fresh
Rock Type:	Muddy LIMESTONE

Weathering Grade Criteria

I. Fresh:	Unchanged from original state
II. Slightly weathered:	Slight discolouration, slight weakening
III. Moderately weathered:	Considerable weakening, penetrative discolouration
IV. Highly weathered:	Considerable weakening, penetrative discolouration, breaks in hand

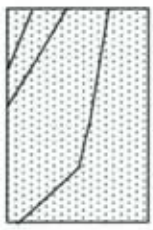
Sample Measurements

Length	199	
Diameter (Ø)	78.1	mm

Testing

Load Rate	4.3	kN/min
Load at Failure (P)	235	kN

Sketch of Failure Surfaces



Strength Calculations

Uniaxial Compressive Strength = $\frac{235000}{4788.19385}$

$= \frac{1000 \times P}{\Pi \times (Ø/2)^2}$

= 49.05 (Mpa)

Bulk Density = 2.68 (Mg/m^3)

Notes:

Uniaxial Compression Test Report Sheet | *I.G.S.L.*

Sample Identification

Contract Name:	Blanchardstown T.C.
Job Number:	23311
Hole No:	RC09
Depth (m):	9.30m

Sample Description

Colour:	Dark grey
Grain size:	Fine-grained
Weathering Grade:	Fresh
Rock Type:	Muddy LIMESTONE

Weathering Grade Criteria

I. Fresh:	Unchanged from original state
II. Slightly weathered:	Slight discolouration, slight weakening
III. Moderately weathered:	Considerable weakening, penetrative discolouration
IV. Highly weathered:	Considerable weakening, penetrative discolouration, breaks in hand

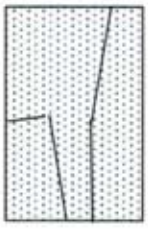
Sample Measurements

Length	200	
Diameter (Ø)	78	mm

Testing

Load Rate	4.3	kN/min
Load at Failure (P)	79	kN

Sketch of Failure Surfaces



Strength Calculations

Uniaxial Compressive Strength = $\frac{79000}{4775.94}$

$= \frac{1000 \times P}{\pi \times (Ø/2)^2}$

= 16.53 (Mpa)

Bulk Density = 2.68 (Mg/m^3)

Notes:

Uniaxial Compression Test Report Sheet | *I.G.S.L.*

Sample Identification

Contract Name:	Blanchardstown T.C.
Job Number:	23311
Hole No:	RC10
Depth (m):	5.80m

Sample Description

Colour:	Grey
Grain size:	Fine-grained
Weathering Grade:	Fresh
Rock Type:	Sandy LIMESTONE

Weathering Grade Criteria

I. Fresh:	Unchanged from original state
II. Slightly weathered:	Slight discolouration, slight weakening
III. Moderately weathered:	Considerable weakening, penetrative discolouration
IV. Highly weathered:	Considerable weakening, penetrative discolouration, breaks in hand

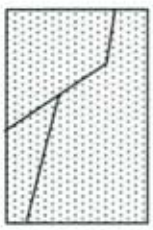
Sample Measurements

Length	202	
Diameter (Ø)	78	mm

Testing

Load Rate	4.3	kN/min
Load at Failure (P)	311	kN

Sketch of Failure Surfaces



Strength Calculations

Uniaxial Compressive Strength = $\frac{311000}{4775.94}$

$= \frac{1000 \times P}{\Pi \times (Ø/2)^2}$

= 65.09 (Mpa)

Bulk Density = 2.71 (Mg/m^3)

Notes:

Uniaxial Compression Test Report Sheet | *I.G.S.L.*

Sample Identification

Contract Name:	Blanchardstown T.C.
Job Number:	23311
Hole No:	RC11
Depth (m):	7.30m

Sample Description

Colour:	Dark grey
Grain size:	Fine-grained
Weathering Grade:	Fresh
Rock Type:	Sandy LIMESTONE

Weathering Grade Criteria

I. Fresh:	Unchanged from original state
II. Slightly weathered:	Slight discolouration, slight weakening
III. Moderately weathered:	Considerable weakening, penetrative discolouration
IV. Highly weathered:	Considerable weakening, penetrative discolouration, breaks in hand

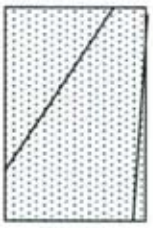
Sample Measurements

Length	199	
Diameter (Ø)	78	mm

Testing

Load Rate	4.3	kN/min
Load at Failure (P)	111	kN

Sketch of Failure Surfaces



Strength Calculations

Uniaxial Compressive Strength = $\frac{111000}{4775.94}$

$= \frac{1000 \times P}{\Pi \times (Ø/2)^2}$

= 23.23 (Mpa)

Bulk Density = 2.69 (Mg/m^3)

Notes:

Uniaxial Compression Test Report Sheet | I.G.S.L.

Sample Identification

Contract Name:	Blanchardstown T.C.
Job Number:	23311
Hole No:	RC12
Depth (m):	6.80m

Sample Description

Colour:	Dark grey
Grain size:	Fine-grained
Weathering Grade:	Fresh
Rock Type:	Sandy LIMESTONE

Weathering Grade Criteria

I. Fresh:	Unchanged from original state
II. Slightly weathered:	Slight discolouration, slight weakening
III. Moderately weathered:	Considerable weakening, penetrative discolouration
IV. Highly weathered:	Considerable weakening, penetrative discolouration, breaks in hand

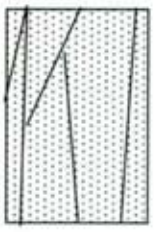
Sample Measurements

Length	202	
Diameter (Ø)	78.1	mm

Testing

Load Rate	4.3	kN/min
Load at Failure (P)	187	kN

Sketch of Failure Surfaces



Strength Calculations

Uniaxial Compressive Strength = $\frac{187000}{4788.19385}$

$= \frac{1000 \times P}{\Pi \times (Ø/2)^2}$

= 39.03 (Mpa)

Bulk Density = 2.68 (Mg/m^3)

Notes:

Uniaxial Compression Test Report Sheet | *I.G.S.L.*

Sample Identification

Contract Name:	Blanchardstown T.C.
Job Number:	23311
Hole No:	RC13
Depth (m):	8.80m

Sample Description

Colour:	Dark grey
Grain size:	Fine-grained
Weathering Grade:	Fresh
Rock Type:	Sandy LIMESTONE

Weathering Grade Criteria

I. Fresh:	Unchanged from original state
II. Slightly weathered:	Slight discolouration, slight weakening
III. Moderately weathered:	Considerable weakening, penetrative discolouration
IV. Highly weathered:	Considerable weakening, penetrative discolouration, breaks in hand

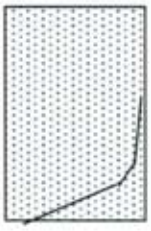
Sample Measurements

Length	201	
Diameter (Ø)	78	mm

Testing

Load Rate	4.3	kN/min
Load at Failure (P)	93	kN

Sketch of Failure Surfaces



Strength Calculations

Uniaxial Compressive Strength = $\frac{93000}{4775.94}$

$= \frac{1000 \times P}{\Pi \times (Ø/2)^2}$

= 19.46 (Mpa)

Bulk Density = 2.70 (Mg/m^3)

Notes:

Uniaxial Compression Test Report Sheet | I.G.S.L.

Sample Identification

Contract Name:	Blanchardstown T.C.
Job Number:	23311
Hole No:	RC14
Depth (m):	4.40m

Sample Description

Colour:	Dark grey
Grain size:	Fine-grained
Weathering Grade:	Fresh
Rock Type:	Sandy LIMESTONE

Weathering Grade Criteria

I. Fresh:	Unchanged from original state
II. Slightly weathered:	Slight discolouration, slight weakening
III. Moderately weathered:	Considerable weakening, penetrative discolouration
IV. Highly weathered:	Considerable weakening, penetrative discolouration, breaks in hand

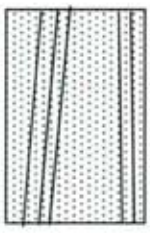
Sample Measurements

Length	199	
Diameter (Ø)	78	mm

Testing

Load Rate	4.3	kN/min
Load at Failure (P)	204	kN

Sketch of Failure Surfaces



Strength Calculations

Uniaxial Compressive Strength = $\frac{204000}{4775.94}$

$= \frac{1000 \times P}{\Pi \times (Ø/2)^2}$

= 42.69 (Mpa)

Bulk Density = 2.71 (Mg/m^3)

Notes:

Uniaxial Compression Test Report Sheet | *I.G.S.L.*

Sample Identification

Contract Name:	Blanchardstown T.C.
Job Number:	23311
Hole No:	RC15
Depth (m):	8.70m

Sample Description

Colour:	Dark grey
Grain size:	Fine-grained
Weathering Grade:	Fresh
Rock Type:	Sandy LIMESTONE

Weathering Grade Criteria

I. Fresh:	Unchanged from original state
II. Slightly weathered:	Slight discolouration, slight weakening
III. Moderately weathered:	Considerable weakening, penetrative discolouration
IV. Highly weathered:	Considerable weakening, penetrative discolouration, breaks in hand

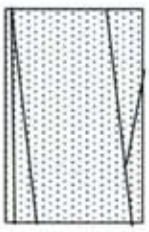
Sample Measurements

Length	200	
Diameter (Ø)	78	mm

Testing

Load Rate	4.3	kN/min
Load at Failure (P)	72	kN

Sketch of Failure Surfaces



Strength Calculations

Uniaxial Compressive Strength = $\frac{72000}{4775.94}$

$= \frac{1000 \times P}{\Pi \times (Ø/2)^2}$

= 15.07 (Mpa)

Bulk Density = 2.68 (Mg/m^3)

Notes:

Uniaxial Compression Test Report Sheet | I.G.S.L.

Sample Identification

Contract Name:	Blanchardstown T.C.
Job Number:	23311
Hole No:	RC16
Depth (m):	9.20m

Sample Description

Colour:	Dark grey
Grain size:	Fine-grained
Weathering Grade:	Fresh
Rock Type:	Sandy LIMESTONE

Weathering Grade Criteria

I. Fresh:	Unchanged from original state
II. Slightly weathered:	Slight discolouration, slight weakening
III. Moderately weathered:	Considerable weakening, penetrative discolouration
IV. Highly weathered:	Considerable weakening, penetrative discolouration, breaks in hand

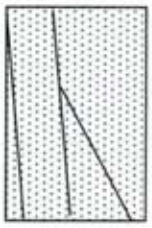
Sample Measurements

Length	202	
Diameter (Ø)	78	mm

Testing

Load Rate	4.3	kN/min
Load at Failure (P)	136	kN

Sketch of Failure Surfaces



Strength Calculations

Uniaxial Compressive Strength = $\frac{136000}{4775.94}$

$= \frac{1000 \times P}{\Pi \times (Ø/2)^2}$

= 28.46 (Mpa)

Bulk Density = 2.69 (Mg/m^3)

Notes:

Uniaxial Compression Test Report Sheet | *I.G.S.L.*

Sample Identification

Contract Name:	Blanchardstown T.C.
Job Number:	23311
Hole No:	RC17
Depth (m):	8.30m

Sample Description

Colour:	Dark grey
Grain size:	Fine-grained
Weathering Grade:	Fresh
Rock Type:	Sandy LIMESTONE

Weathering Grade Criteria

I. Fresh:	Unchanged from original state
II. Slightly weathered:	Slight discolouration, slight weakening
III. Moderately weathered:	Considerable weakening, penetrative discolouration
IV. Highly weathered:	Considerable weakening, penetrative discolouration, breaks in hand

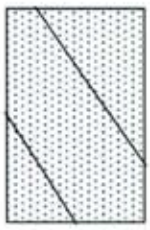
Sample Measurements

Length	200	
Diameter (Ø)	78	mm

Testing

Load Rate	4.3	kN/min
Load at Failure (P)	236	kN

Sketch of Failure Surfaces



Strength Calculations

Uniaxial Compressive Strength = $\frac{236000}{4775.94}$

$= \frac{1000 \times P}{\Pi \times (Ø/2)^2}$

= 49.39 (Mpa)

Bulk Density = 2.68 (Mg/m^3)

Notes:

Uniaxial Compression Test Report Sheet | *I.G.S.L.*

Sample Identification

Contract Name:	Blanchardstown T.C.
Job Number:	23311
Hole No:	RC18
Depth (m):	7.70m

Sample Description

Colour:	Dark grey
Grain size:	Fine-grained
Weathering Grade:	Fresh
Rock Type:	Sandy LIMESTONE

Weathering Grade Criteria

I. Fresh:	Unchanged from original state
II. Slightly weathered:	Slight discolouration, slight weakening
III. Moderately weathered:	Considerable weakening, penetrative discolouration
IV. Highly weathered:	Considerable weakening, penetrative discolouration, breaks in hand

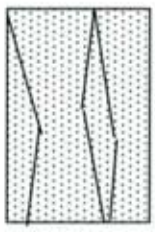
Sample Measurements

Length	184	
Diameter (Ø)	78	mm

Testing

Load Rate	4.3	kN/min
Load at Failure (P)	109	kN

Sketch of Failure Surfaces



Strength Calculations

Uniaxial Compressive Strength = $\frac{109000}{4775.94}$

$= \frac{1000 \times P}{\Pi \times (Ø/2)^2}$

= 22.81 (Mpa)

Bulk Density = 2.68 (Mg/m^3)

Notes:

Uniaxial Compression Test Report Sheet | *I.G.S.L.*

Sample Identification

Contract Name:	Blanchardstown T.C.
Job Number:	23311
Hole No:	RC19
Depth (m):	9.20m

Sample Description

Colour:	Dark grey
Grain size:	Fine-grained
Weathering Grade:	Fresh
Rock Type:	Sandy LIMESTONE

Weathering Grade Criteria

I. Fresh:	Unchanged from original state
II. Slightly weathered:	Slight discolouration, slight weakening
III. Moderately weathered:	Considerable weakening, penetrative discolouration
IV. Highly weathered:	Considerable weakening, penetrative discolouration, breaks in hand

Sample Measurements

Length	198	
Diameter (Ø)	78	mm

Testing

Load Rate	4.3	kN/min
Load at Failure (P)	272	kN

Sketch of Failure Surfaces

Strength Calculations

Uniaxial Compressive Strength = $\frac{272000}{4775.94}$

$= \frac{1000 \times P}{\Pi \times (Ø/2)^2}$

= 56.92 (Mpa)

Bulk Density = 2.70 (Mg/m^3)

Notes:

Uniaxial Compression Test Report Sheet | I.G.S.L.

Sample Identification

Contract Name:	Blanchardstown T.C.
Job Number:	23311
Hole No:	RC20
Depth (m):	8.80m

Sample Description

Colour:	Dark grey
Grain size:	Fine-grained
Weathering Grade:	Fresh
Rock Type:	Sandy LIMESTONE

Weathering Grade Criteria

I. Fresh:	Unchanged from original state
II. Slightly weathered:	Slight discolouration, slight weakening
III. Moderately weathered:	Considerable weakening, penetrative discolouration
IV. Highly weathered:	Considerable weakening, penetrative discolouration, breaks in hand

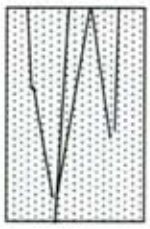
Sample Measurements

Length	204	
Diameter (Ø)	78.1	mm

Testing

Load Rate	4.3	kN/min
Load at Failure (P)	198	kN

Sketch of Failure Surfaces



Strength Calculations

Uniaxial Compressive Strength = $\frac{198000}{4788.19385}$

$= \frac{1000 \times P}{\Pi \times (Ø/2)^2}$

= 41.33 (Mpa)

Bulk Density = 2.71 (Mg/m^3)

Notes:

Uniaxial Compression Test Report Sheet

I.G.S.L.

Sample Identification

Contract Name:	Blanchardstown T.C.
Job Number:	23311
Hole No:	RC21
Depth (m):	6.30m

Sample Description

Colour:	Dark grey
Grain size:	Fine-grained
Weathering Grade:	Fresh
Rock Type:	Sandy LIMESTONE

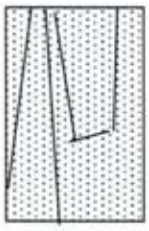
Weathering Grade Criteria

I. Fresh:	Unchanged from original state
II. Slightly weathered:	Slight discolouration, slight weakening
III. Moderately weathered:	Considerable weakening, penetrative discolouration
IV. Highly weathered:	Considerable weakening, penetrative discolouration, breaks in hand

Sample Measurements

Length	195	
Diameter (Ø)	78	mm

Sketch of Failure Surfaces



Testing

Load Rate	4.3	kN/min
Load at Failure (P)	184	kN

Strength Calculations

Uniaxial Compressive Strength = $\frac{184000}{4775.94}$

= $\frac{1000 \times P}{\Pi \times (Ø/2)^2}$

= 38.51 (Mpa)

Bulk Density = 2.70 (Mg/m^3)

Notes:

Uniaxial Compression Test Report Sheet | *I.G.S.L.*

Sample Identification

Contract Name:	Blanchardstown T.C.
Job Number:	23311
Hole No:	RC22
Depth (m):	5.20m

Sample Description

Colour:	Dark grey
Grain size:	Fine-grained
Weathering Grade:	Fresh
Rock Type:	Sandy LIMESTONE

Weathering Grade Criteria

I. Fresh:	Unchanged from original state
II. Slightly weathered:	Slight discolouration, slight weakening
III. Moderately weathered:	Considerable weakening, penetrative discolouration
IV. Highly weathered:	Considerable weakening, penetrative discolouration, breaks in hand

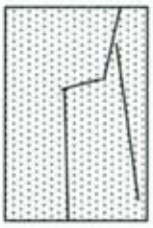
Sample Measurements

Length	200	
Diameter (Ø)	78.1	mm

Testing

Load Rate	4.3	kN/min
Load at Failure (P)	68	kN

Sketch of Failure Surfaces



Strength Calculations

Uniaxial Compressive Strength = $\frac{68000}{4788.19385}$

$= \frac{1000 \times P}{\Pi \times (Ø/2)^2}$

= 14.19 (Mpa)

Bulk Density = 2.68 (Mg/m^3)

Notes:

Appendix 6

Chemical and Environmental Laboratory Testing (Chemtest & Nicholls Colton Laboratories)

Nicholls Colton Group
7 - 11 Harding Street
Leicester
LE1 4DH

IGSL
Unit F
M7 Business Park
Naas

Analytical Test Report: L21/02984/IGS/21-20461

Your Project Reference:	**23311 - Blanchardstown TC**	Samples Received on:	20/08/2021
Your Order Number:	19429	Testing Instruction Received:	20/08/2021
Report Issue Number:	1	Sample Tested:	20/08 to 09/09/2021
Samples Analysed:	12 samples	Report issued:	09/09/2021

Signed

Peter Swanston
Environmental Laboratory Manager
Nicholls Colton Group

Notes:

General

Please refer to Methodologies tab for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Samples were supplied by customer, results apply to the samples as received.

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

Accreditation Key

UKAS = UKAS Accreditation, u = Unaccredited

Date of Issue 10/12/2020
Owned by Emily Blissett - Customer Services Supervisor
Authorised by James Gane - Commercial Manager
J:\Public\Projects\2021\L21\IGS - IGSL\L21-2984-IGS\L21-02984-IGS - 21-20461.XLSX]Cover Sheet

Nicholls Colton Group
7 - 11 Harding Street
Leicester
LE1 4DH

L21/02984/IGS/21-20461

Project Reference - 23311 - Blanchardstown TC

Analytical Test Results - Aggregate Testing

NC Reference			185365	185366	185367	185368
Client Sample Number			RC01	RC03	RC06	RC07
Material			Core	Core	Core	Core
Source/Client Reference			RC01 - 6.80m	RC03 - 3.60m	RC06 - 9.90m	RC07 - 6.20m
Sample Description			Dark grey rock core lumps	Grey rock core lumps	Dark grey rock core lumps	Dark grey rock core lumps
	Units	**Accreditation**				
EN 1744 Determinations						
Total Sulphur content (as S)	(%)	UKAS	0.40	0.12	0.23	0.20
Acid soluble sulphate content (as SO_3)	(%)	UKAS	0.04	0.05	0.05	0.03
Acid soluble sulphate content (as SO_4)	(%)	u	0.05	0.06	0.06	0.04
Water soluble sulphate content (as SO_3)	(%)	UKAS	< 0.01	0.07	< 0.01	0.06
Water soluble sulphate content (as SO_3)	(mg/l)	u	< 50	348	< 50	295
Water soluble sulphate content (as SO_4)	(%)	u	< 0.01	0.08	< 0.01	0.07
Water soluble sulphate content (as SO_4)	(mg/l)	u	< 60	418	< 60	353

Nicholls Colton Group
7 - 11 Harding Street
Leicester
LE1 4DH

L21/02984/IGS/21-20461

Project Reference - 23311 - Blanchardstown TC

Analytical Test Results - Aggregate Testing

NC Reference			185369	185370	185371	185372
Client Sample Number			RC08	RC09	RC11	RC13
Material			Core	Core	Core	Core
Source/Client Reference			RC08 - 3.50m	RC09 - 6.90m	RC11 - 3.20m	RC13 - 9.10m
Sample Description			Dark grey rock core lumps	Dark grey rock core lumps	Dark grey rock core lumps	Dark grey rock core lumps
	Units	**Accreditation**				
EN 1744 Determinations						
Total Sulphur content (as S)	(%)	UKAS	0.42	0.27	0.24	0.32
Acid soluble sulphate content (as SO_3)	(%)	UKAS	0.04	0.04	0.03	0.02
Acid soluble sulphate content (as SO_4)	(%)	u	0.04	0.04	0.04	0.02
Water soluble sulphate content (as SO_3)	(%)	UKAS	0.03	0.02	0.02	< 0.01
Water soluble sulphate content (as SO_3)	(mg/l)	u	173	85	97	< 50
Water soluble sulphate content (as SO_4)	(%)	u	0.04	0.02	0.02	< 0.01
Water soluble sulphate content (as SO_4)	(mg/l)	u	208	102	116	< 60

Nicholls Colton Group
7 - 11 Harding Street
Leicester
LE1 4DH

L21/02984/IGS/21-20461

Project Reference - 23311 - Blanchardstown TC

Analytical Test Results - Aggregate Testing

NC Reference			185373	185374	185375	185376
Client Sample Number			RC15	RC17	RC19	RC22
Material			Core	Core	Core	Core
Source/Client Reference			RC15 - 6.00m	RC17 - 8.00m	RC19 - 9.10m	RC22 - 3.50m
Sample Description			Dark grey rock core lumps	Dark grey rock core lumps	Dark grey rock core lumps	Dark gery rock core lumps
	Units	**Accreditation**				
EN 1744 Determinations						
Total Sulphur content (as S)	(%)	UKAS	0.27	0.30	0.32	0.30
Acid soluble sulphate content (as SO_3)	(%)	UKAS	0.05	0.03	0.02	0.03
Acid soluble sulphate content (as SO_4)	(%)	u	0.06	0.04	0.03	0.03
Water soluble sulphate content (as SO_3)	(%)	UKAS	0.02	0.03	0.01	< 0.01
Water soluble sulphate content (as SO_3)	(mg/l)	u	114	146	54	< 50
Water soluble sulphate content (as SO_4)	(%)	u	0.03	0.04	0.01	< 0.01
Water soluble sulphate content (as SO_4)	(mg/l)	u	136	175	65	< 60

Nicholls Colton Group
7 - 11 Harding Street
Leicester
LE1 4DH

L21/02984/IGS/21-20461

Project Reference - 23311 - Blanchardstown TC

Analysis Methodologies and Notes

Determinant	Test method and notes
EN 1744 Total Sulphur	Testing was in accordance with BS EN 1744-1:2009 + A1:2012 clause 11.
EN 1744 Acid Soluble Sulphate	Testing was in accordance with BS EN 1744-1:2009 + A1:2012 clause 12.
EN 1744 Water Soluble Sulphate	Testing was in accordance with BS EN 1744-1:2009 + A1:2012 clause 10.

eurofins | Chemtest
Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

UKAS TESTING 2183

Final Report

Report No.:	21-21171-1		
Initial Date of Issue:	01-Jul-2021		
Client	IGSL		
Client Address:	M7 Business Park Naas County Kildare Ireland		
Contact(s):	Darren Keogh		
Project	23311 Blanchardstown TC PRS Project (DBFL)		
Quotation No.:	Q20-19951	**Date Received:**	22-Jun-2021
Order No.:		**Date Instructed:**	22-Jun-2021
No. of Samples:	19		
Turnaround (Wkdays):	7	**Results Due:**	30-Jun-2021
Date Approved:	01-Jul-2021	**Subcon Results Due:**	30-Jun-2021

Approved By:

Details: Glynn Harvey, Technical Manager

Results - Leachate

Project: 23311 Blanchardstown TC PRS Project (DBFL)

Client: IGSL					Chemtest Job No.:	21-21171	21-21171	21-21171	21-21171	21-21171	21-21171	21-21171	21-21171	21-21171	21-21171	21-21171	21-21171
Quotation No.: Q20-19951					Chemtest Sample ID.:	1225637	1225638	1225639	1225640	1225641	1225642	1225643	1225644	1225645	1225646	1225647	1225648
Order No.:					Client Sample Ref.:	1-2	2-1	2-2	3-1	4-1	5-1	6-1	6-2	7-1	7-2	8-1	9-1
					Sample Location:	1	2	2	3	4	5	6	6	7	7	8	9
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00
					Bottom Depth (m):	2.00	1.00	2.00	1.00	1.00	1.00	1.00	2.00	1.00	2.00	1.00	1.00
Determinand	**Accred.**	**SOP**	**Type**	**Units**	**LOD**												
pH	U	1010	10:1		N/A	9.2	8.2	8.9	8.8	8.6	8.3	8.4	8.5	8.5	8.5	8.6	8.4
Ammonium	U	1220	10:1	mg/l	0.050	0.056	0.13	0.091	0.091	0.19	0.12	0.15	0.22	0.12	0.083	0.15	0.051
Ammonium	N	1220	10:1	mg/kg	0.10	1.0	1.4	1.3	1.2	2.3	1.3	1.7	2.6	1.4	0.97	1.8	0.58
Boron (Dissolved)	U	1455	10:1	mg/kg	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo[j]fluoranthene	N	1800	10:1	µg/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010

Results - Leachate

Project: 23311 Blanchardstown TC PRS Project (DBFL)

Client: IGSL					Chemtest Job No.:	21-21171	21-21171	21-21171	21-21171	21-21171	21-21171	21-21171
Quotation No.: Q20-19951					Chemtest Sample ID.:	1225649	1225650	1225651	1225652	1225653	1225654	1225655
Order No.:					Client Sample Ref.:	10-2	11-1	11-2	12-1	13-1	1-1	10-1
					Sample Location:	10	11	11	12	13	1	10
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	1.00	0.00	1.00	0.00	0.00	0.50	0.60
					Bottom Depth (m):	2.00	1.00	2.00	1.00	1.00	1.00	1.00
Determinand	**Accred.**	**SOP**	**Type**	**Units**	**LOD**							
pH	U	1010	10:1		N/A	8.5	8.7	8.8	8.7	8.6	8.6	8.6
Ammonium	U	1220	10:1	mg/l	0.050	0.092	0.18	0.18	0.11	0.11	0.089	0.091
Ammonium	N	1220	10:1	mg/kg	0.10	1.1	2.3	2.4	1.4	1.3	1.1	1.1
Boron (Dissolved)	U	1455	10:1	mg/kg	0.01	< 0.01	< 0.01	0.14	< 0.01	< 0.01	< 0.01	< 0.01
Benzo[j]fluoranthene	N	1800	10:1	µg/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010

Results - Soil

Project: 23311 Blanchardstown TC PRS Project (DBFL)

Client: IGSL				Chemtest Job No.:	21-21171	21-21171	21-21171	21-21171	21-21171	21-21171	21-21171	21-21171	21-21171
Quotation No.: Q20-19951				Chemtest Sample ID.:	1225637	1225638	1225639	1225640	1225641	1225642	1225643	1225644	1225645
Order No.:				Client Sample Ref.:	1-2	2-1	2-2	3-1	4-1	5-1	6-1	6-2	7-1
				Sample Location:	1	2	2	3	4	5	6	6	7
				Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00
				Bottom Depth (m):	2.00	1.00	2.00	1.00	1.00	1.00	1.00	2.00	1.00
				Asbestos Lab:	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A	-	-	-	-	-	-	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	7.1	7.4	6.8	9.4	17	13	8.4	9.3	9.9
Boron (Hot Water Soluble)	U	2120	mg/kg	0.40	[A] 0.56	[A] < 0.40	[A] < 0.40	[A] < 0.40	[A] < 0.40	[A] < 0.40	[A] < 0.40	[A] < 0.40	[A] < 0.40
Sulphur (Elemental)	U	2180	mg/kg	1.0	[A] 8.4	[A] 1.5	[A] 3.0	[A] < 1.0	[A] < 1.0	[A] 3.1	[A] 1.2	[A] < 1.0	[A] < 1.0
Cyanide (Total)	U	2300	mg/kg	0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50
Sulphide (Easily Liberatable)	N	2325	mg/kg	0.50	[A] 1.2	[A] 1.2	[A] 1.2	[A] 1.2	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50
Sulphate (Acid Soluble)	U	2430	%	0.010	[A] 0.034	[A] 0.037	[A] 0.098	[A] 0.052	[A] 0.028	[A] 0.20	[A] 0.073	[A] 0.037	[A] 0.051
Arsenic	U	2450	mg/kg	1.0	15	16	21	9.8	79	19	25	26	19
Barium	U	2450	mg/kg	10	43	33	120	25	40	110	71	17	37
Cadmium	U	2450	mg/kg	0.10	0.44	1.3	1.5	1.0	0.99	1.2	1.4	1.2	0.42
Chromium	U	2450	mg/kg	1.0	30	16	18	10	34	22	21	28	40
Molybdenum	U	2450	mg/kg	2.0	< 2.0	< 2.0	4.1	< 2.0	3.4	2.1	< 2.0	< 2.0	< 2.0
Antimony	N	2450	mg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0	2.4	2.0	< 2.0	< 2.0	< 2.0
Copper	U	2450	mg/kg	0.50	28	23	31	19	32	27	25	31	38
Mercury	U	2450	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.11	< 0.10	< 0.10	< 0.10
Nickel	U	2450	mg/kg	0.50	67	42	58	32	87	48	65	77	84
Lead	U	2450	mg/kg	0.50	37	18	18	11	50	44	24	29	28
Selenium	U	2450	mg/kg	0.20	0.62	0.65	2.1	0.32	0.56	0.40	0.40	1.4	0.27
Zinc	U	2450	mg/kg	0.50	95	56	85	48	150	98	160	350	98
Chromium (Trivalent)	N	2490	mg/kg	1.0	30	16	18	10	34	22	21	28	40
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Mineral Oil (TPH Calculation)	N	2670	mg/kg	10	< 10	< 10	< 10	< 10	440	< 10	< 10	< 10	< 10
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aliphatic TPH >C8-C10	U	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aliphatic TPH >C10-C12	U	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aliphatic TPH >C12-C16	U	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aliphatic TPH >C16-C21	U	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] 16	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aliphatic TPH >C21-C35	U	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] 410	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] 20	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0	[A] 440	[A] < 5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aromatic TPH >C8-C10	U	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aromatic TPH >C10-C12	U	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0

Results - Soil

Project: 23311 Blanchardstown TC PRS Project (DBFL)

Client: IGSL				Chemtest Job No.:	21-21171	21-21171	21-21171	21-21171	21-21171	21-21171	21-21171	21-21171	21-21171
Quotation No.: Q20-19951				Chemtest Sample ID.:	1225637	1225638	1225639	1225640	1225641	1225642	1225643	1225644	1225645
Order No.:				Client Sample Ref.:	1-2	2-1	2-2	3-1	4-1	5-1	6-1	6-2	7-1
				Sample Location:	1	2	2	3	4	5	6	6	7
				Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00
				Bottom Depth (m):	2.00	1.00	2.00	1.00	1.00	1.00	1.00	2.00	1.00
				Asbestos Lab:	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Aromatic TPH >C12-C16	U	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] 3.4	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aromatic TPH >C21-C35	U	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] 120	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0	[A] 130	[A] < 5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	[A] < 10	[A] < 10	[A] < 10	[A] < 10	[A] 570	[A] < 10	[A] < 10	[A] < 10	[A] < 10
Benzene	U	2760	µg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] 1.4
Toluene	U	2760	µg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] 9.4
Ethylbenzene	U	2760	µg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
m & p-Xylene	U	2760	µg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
o-Xylene	U	2760	µg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Methyl Tert-Butyl Ether	U	2760	µg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Naphthalene	N	2800	mg/kg	0.010	[A] 0.54	[A] 0.043	[A] 0.15	[A] 0.090	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Acenaphthylene	N	2800	mg/kg	0.010	[A] 0.086	[A] 0.016	[A] 0.014	[A] 0.020	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Acenaphthene	N	2800	mg/kg	0.010	[A] 0.75	[A] 0.030	[A] 0.038	[A] 0.10	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Fluorene	N	2800	mg/kg	0.010	[A] 0.73	[A] 0.051	[A] 0.069	[A] 0.14	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Phenanthrene	N	2800	mg/kg	0.010	[A] 5.6	[A] 0.29	[A] 0.34	[A] 0.40	[A] < 0.010	[A] 0.10	[A] < 0.010	[A] 0.040	[A] < 0.010
Anthracene	N	2800	mg/kg	0.010	[A] 1.4	[A] 0.11	[A] 0.047	[A] 0.19	[A] < 0.010	[A] 0.020	[A] < 0.010	[A] < 0.010	[A] < 0.010
Fluoranthene	N	2800	mg/kg	0.010	[A] 10	[A] 0.57	[A] 0.28	[A] 0.42	[A] < 0.010	[A] 0.090	[A] < 0.010	[A] 0.040	[A] < 0.010
Pyrene	N	2800	mg/kg	0.010	[A] 7.4	[A] 0.48	[A] 0.28	[A] 0.34	[A] < 0.010	[A] 0.080	[A] < 0.010	[A] 0.040	[A] < 0.010
Benzo[a]anthracene	N	2800	mg/kg	0.010	[A] 5.1	[A] 0.62	[A] 0.19	[A] 0.22	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Chrysene	N	2800	mg/kg	0.010	[A] 5.0	[A] 0.48	[A] 0.24	[A] 0.22	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Benzo[b]fluoranthene	N	2800	mg/kg	0.010	[A] 8.4	[A] 0.84	[A] 0.36	[A] 0.28	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Benzo[k]fluoranthene	N	2800	mg/kg	0.010	[A] 3.6	[A] 0.69	[A] 0.16	[A] 0.15	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Benzo[a]pyrene	N	2800	mg/kg	0.010	[A] 8.7	[A] 0.85	[A] 0.34	[A] 0.29	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Indeno(1,2,3-c,d)Pyrene	N	2800	mg/kg	0.010	[A] 7.5	[A] 1.1	[A] 0.34	[A] 0.35	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.010	[A] 0.98	[A] 0.49	[A] 0.082	[A] 0.30	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Benzo[g,h,i]perylene	N	2800	mg/kg	0.010	[A] 5.1	[A] 0.65	[A] 0.22	[A] 0.25	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Coronene	N	2800	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Total Of 17 PAH's	N	2800	mg/kg	0.20	[A] 71	[A] 7.3	[A] 3.2	[A] 3.8	[A] < 0.20	[A] 0.29	[A] < 0.20	[A] < 0.20	[A] < 0.20
PCB 28	N	2815	mg/kg	0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010
PCB 52	N	2815	mg/kg	0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010
PCB 90+101	N	2815	mg/kg	0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010
PCB 118	N	2815	mg/kg	0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010
PCB 153	N	2815	mg/kg	0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010
PCB 138	N	2815	mg/kg	0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010
PCB 180	N	2815	mg/kg	0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010

Results - Soil

Project: 23311 Blanchardstown TC PRS Project (DBFL)

Client: IGSL				**Chemtest Job No.:**	21-21171	21-21171	21-21171	21-21171	21-21171	21-21171	21-21171	21-21171	21-21171
Quotation No.: Q20-19951				**Chemtest Sample ID.:**	1225637	1225638	1225639	1225640	1225641	1225642	1225643	1225644	1225645
Order No.:				Client Sample Ref.:	1-2	2-1	2-2	3-1	4-1	5-1	6-1	6-2	7-1
				Sample Location:	1	2	2	3	4	5	6	6	7
				Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00
				Bottom Depth (m):	2.00	1.00	2.00	1.00	1.00	1.00	1.00	2.00	1.00
				Asbestos Lab:	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Total PCBs (7 congeners)	N	2815	mg/kg	0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010
Total Phenols	U	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: 23311 Blanchardstown TC PRS Project (DBFL)

Client: IGSL				Chemtest Job No.:	21-21171	21-21171	21-21171	21-21171	21-21171	21-21171	21-21171	21-21171	21-21171
Quotation No.: Q20-19951				Chemtest Sample ID.:	1225646	1225647	1225648	1225649	1225650	1225651	1225652	1225653	1225654
Order No.:				Client Sample Ref.:	7-2	8-1	9-1	10-2	11-1	11-2	12-1	13-1	1-1
				Sample Location:	7	8	9	10	11	11	12	13	1
				Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):	1.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	0.50
				Bottom Depth (m):	2.00	1.00	1.00	2.00	1.00	2.00	1.00	1.00	1.00
				Asbestos Lab:	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	IN-TRAN-D
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A	-	-	-	-	-	-	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	8.6	11	14	8.8	7.3	7.6	7.9	9.6	14
Boron (Hot Water Soluble)	U	2120	mg/kg	0.40	[A] < 0.40	[A] 0.41	[A] < 0.40	[A] < 0.40	[A] < 0.40	[A] < 0.40	[A] 2.7	[A] < 0.40	[A] 0.47
Sulphur (Elemental)	U	2180	mg/kg	1.0	[A] 1.3	[A] 1.5	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] 1.7	[A] 1.4	[A] < 1.0	[A] < 1.0
Cyanide (Total)	U	2300	mg/kg	0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50
Sulphide (Easily Liberatable)	N	2325	mg/kg	0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] 1.2	[A] 1.2	[A] 1.2	[A] 1.1
Sulphate (Acid Soluble)	U	2430	%	0.010	[A] 0.036	[A] 0.040	[A] 0.082	[A] 0.044	[A] 0.025	[A] 0.074	[A] 0.069	[A] 0.040	[A] 0.15
Arsenic	U	2450	mg/kg	1.0	16	12	17	16	19	15	14	16	27
Barium	U	2450	mg/kg	10	43	35	33	63	51	71	52	44	89
Cadmium	U	2450	mg/kg	0.10	0.33	0.19	0.65	1.5	1.5	0.79	1.1	1.5	2.3
Chromium	U	2450	mg/kg	1.0	37	31	32	20	17	13	22	15	21
Molybdenum	U	2450	mg/kg	2.0	< 2.0	< 2.0	< 2.0	3.0	3.0	2.9	2.3	2.5	4.4
Antimony	N	2450	mg/kg	2.0	< 2.0	< 2.0	< 2.0	4.6	2.8	< 2.0	< 2.0	< 2.0	< 2.0
Copper	U	2450	mg/kg	0.50	33	20	32	28	32	21	22	27	37
Mercury	U	2450	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	U	2450	mg/kg	0.50	79	65	70	55	56	47	46	46	61
Lead	U	2450	mg/kg	0.50	31	25	26	29	21	20	15	28	19
Selenium	U	2450	mg/kg	0.20	0.40	0.20	0.24	< 0.20	1.7	0.78	0.72	< 0.20	1.9
Zinc	U	2450	mg/kg	0.50	140	92	110	79	86	72	110	62	110
Chromium (Trivalent)	N	2490	mg/kg	1.0	37	31	32	20	17	13	22	15	21
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Mineral Oil (TPH Calculation)	N	2670	mg/kg	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aliphatic TPH >C8-C10	U	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aliphatic TPH >C10-C12	U	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aliphatic TPH >C12-C16	U	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aliphatic TPH >C16-C21	U	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aliphatic TPH >C21-C35	U	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aromatic TPH >C8-C10	U	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aromatic TPH >C10-C12	U	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0

Results - Soil

Project: 23311 Blanchardstown TC PRS Project (DBFL)

Client: IGSL				Chemtest Job No.:	21-21171	21-21171	21-21171	21-21171	21-21171	21-21171	21-21171	21-21171	21-21171
Quotation No.: Q20-19951				Chemtest Sample ID.:	1225646	1225647	1225648	1225649	1225650	1225651	1225652	1225653	1225654
Order No.:				Client Sample Ref.:	7-2	8-1	9-1	10-2	11-1	11-2	12-1	13-1	1-1
				Sample Location:	7	8	9	10	11	11	12	13	1
				Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):	1.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	0.50
				Bottom Depth (m):	2.00	1.00	1.00	2.00	1.00	2.00	1.00	1.00	1.00
				Asbestos Lab:	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	IN-TRAN-D
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Aromatic TPH >C12-C16	U	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aromatic TPH >C21-C35	U	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	[A] < 10	[A] < 10	[A] < 10	[A] < 10	[A] < 10	[A] < 10	[A] < 10	[A] < 10	[A] < 10
Benzene	U	2760	µg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Toluene	U	2760	µg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] 1.9
Ethylbenzene	U	2760	µg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
m & p-Xylene	U	2760	µg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
o-Xylene	U	2760	µg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Methyl Tert-Butyl Ether	U	2760	µg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Naphthalene	N	2800	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] 0.11	[A] < 0.010	[A] < 0.010
Acenaphthylene	N	2800	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] 0.030	[A] < 0.010	[A] < 0.010
Acenaphthene	N	2800	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] 0.090	[A] < 0.010	[A] < 0.010
Fluorene	N	2800	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] 0.13	[A] < 0.010	[A] < 0.010
Phenanthrene	N	2800	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] 0.42	[A] < 0.010	[A] < 0.010
Anthracene	N	2800	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] 0.13	[A] < 0.010	[A] < 0.010
Fluoranthene	N	2800	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] 0.13	[A] 0.31	[A] 0.13	[A] 0.15
Pyrene	N	2800	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] 0.12	[A] 0.25	[A] 0.13	[A] 0.23
Benzo[a]anthracene	N	2800	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] 0.070	[A] 0.14	[A] < 0.010	[A] < 0.010
Chrysene	N	2800	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] 0.080	[A] 0.12	[A] < 0.010	[A] < 0.010
Benzo[b]fluoranthene	N	2800	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] 0.12	[A] < 0.010	[A] < 0.010
Benzo[k]fluoranthene	N	2800	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] 0.090	[A] < 0.010	[A] < 0.010
Benzo[a]pyrene	N	2800	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] 0.16	[A] < 0.010	[A] < 0.010
Indeno(1,2,3-c,d)Pyrene	N	2800	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] 0.10	[A] < 0.010	[A] < 0.010
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Benzo[g,h,i]perylene	N	2800	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] 0.070	[A] < 0.010	[A] < 0.010
Coronene	N	2800	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Total Of 17 PAH's	N	2800	mg/kg	0.20	[A] < 0.20	[A] < 0.20	[A] < 0.20	[A] < 0.20	[A] < 0.20	[A] 0.40	[A] 2.3	[A] 0.26	[A] 0.38
PCB 28	N	2815	mg/kg	0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010
PCB 52	N	2815	mg/kg	0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010
PCB 90+101	N	2815	mg/kg	0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010
PCB 118	N	2815	mg/kg	0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010
PCB 153	N	2815	mg/kg	0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010
PCB 138	N	2815	mg/kg	0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010
PCB 180	N	2815	mg/kg	0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010

Results - Soil

Project: 23311 Blanchardstown TC PRS Project (DBFL)

Client: IGSL													
				Chemtest Job No.:	21-21171	21-21171	21-21171	21-21171	21-21171	21-21171	21-21171	21-21171	21-21171
Quotation No.: Q20-19951				Chemtest Sample ID.:	1225646	1225647	1225648	1225649	1225650	1225651	1225652	1225653	1225654
Order No.:				Client Sample Ref.:	7-2	8-1	9-1	10-2	11-1	11-2	12-1	13-1	1-1
				Sample Location:	7	8	9	10	11	11	12	13	1
				Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):	1.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	0.50
				Bottom Depth (m):	2.00	1.00	1.00	2.00	1.00	2.00	1.00	1.00	1.00
				Asbestos Lab:	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	IN-TRAN-D
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Total PCBs (7 congeners)	N	2815	mg/kg	0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010
Total Phenols	U	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: 23311 Blanchardstown TC PRS Project (DBFL)

Client: IGSL				Chemtest Job No.:	21-21171
Quotation No.: Q20-19951				Chemtest Sample ID.:	1225655
Order No.:				Client Sample Ref.:	10-1
				Sample Location:	10
				Sample Type:	SOIL
				Top Depth (m):	0.60
				Bottom Depth (m):	1.00
				Asbestos Lab:	IN-TRAN-D
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
ACM Type	U	2192		N/A	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected
Moisture	N	2030	%	0.020	10
Boron (Hot Water Soluble)	U	2120	mg/kg	0.40	[A] < 0.40
Sulphur (Elemental)	U	2180	mg/kg	1.0	[A] 2.0
Cyanide (Total)	U	2300	mg/kg	0.50	[A] < 0.50
Sulphide (Easily Liberatable)	N	2325	mg/kg	0.50	[A] 6.1
Sulphate (Acid Soluble)	U	2430	%	0.010	[A] 0.19
Arsenic	U	2450	mg/kg	1.0	13
Barium	U	2450	mg/kg	10	41
Cadmium	U	2450	mg/kg	0.10	1.2
Chromium	U	2450	mg/kg	1.0	10
Molybdenum	U	2450	mg/kg	2.0	2.2
Antimony	N	2450	mg/kg	2.0	< 2.0
Copper	U	2450	mg/kg	0.50	19
Mercury	U	2450	mg/kg	0.10	< 0.10
Nickel	U	2450	mg/kg	0.50	31
Lead	U	2450	mg/kg	0.50	8.8
Selenium	U	2450	mg/kg	0.20	1.1
Zinc	U	2450	mg/kg	0.50	57
Chromium (Trivalent)	N	2490	mg/kg	1.0	10
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50
Mineral Oil (TPH Calculation)	N	2670	mg/kg	10	< 10
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	[A] < 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	[A] < 1.0
Aliphatic TPH >C8-C10	U	2680	mg/kg	1.0	[A] < 1.0
Aliphatic TPH >C10-C12	U	2680	mg/kg	1.0	[A] < 1.0
Aliphatic TPH >C12-C16	U	2680	mg/kg	1.0	[A] < 1.0
Aliphatic TPH >C16-C21	U	2680	mg/kg	1.0	[A] < 1.0
Aliphatic TPH >C21-C35	U	2680	mg/kg	1.0	[A] < 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	[A] < 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	[A] < 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	[A] < 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	[A] < 1.0
Aromatic TPH >C8-C10	U	2680	mg/kg	1.0	[A] < 1.0
Aromatic TPH >C10-C12	U	2680	mg/kg	1.0	[A] < 1.0

Results - Soil

Project: 23311 Blanchardstown TC PRS Project (DBFL)

Client: IGSL					Chemtest Job No.:	21-21171
Quotation No.: Q20-19951					Chemtest Sample ID.:	1225655
Order No.:					Client Sample Ref.:	10-1
					Sample Location:	10
					Sample Type:	SOIL
					Top Depth (m):	0.60
					Bottom Depth (m):	1.00
					Asbestos Lab:	IN-TRAN-D
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
Aromatic TPH >C12-C16	U	2680	mg/kg	1.0	[A] < 1.0	
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	[A] < 1.0	
Aromatic TPH >C21-C35	U	2680	mg/kg	1.0	[A] < 1.0	
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	[A] < 1.0	
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	[A] < 5.0	
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	[A] < 10	
Benzene	U	2760	µg/kg	1.0	[A] < 1.0	
Toluene	U	2760	µg/kg	1.0	[A] < 1.0	
Ethylbenzene	U	2760	µg/kg	1.0	[A] < 1.0	
m & p-Xylene	U	2760	µg/kg	1.0	[A] < 1.0	
o-Xylene	U	2760	µg/kg	1.0	[A] < 1.0	
Methyl Tert-Butyl Ether	U	2760	µg/kg	1.0	[A] < 1.0	
Naphthalene	N	2800	mg/kg	0.010	[A] < 0.010	
Acenaphthylene	N	2800	mg/kg	0.010	[A] < 0.010	
Acenaphthene	N	2800	mg/kg	0.010	[A] < 0.010	
Fluorene	N	2800	mg/kg	0.010	[A] < 0.010	
Phenanthrene	N	2800	mg/kg	0.010	[A] < 0.010	
Anthracene	N	2800	mg/kg	0.010	[A] < 0.010	
Fluoranthene	N	2800	mg/kg	0.010	[A] < 0.010	
Pyrene	N	2800	mg/kg	0.010	[A] < 0.010	
Benzo[a]anthracene	N	2800	mg/kg	0.010	[A] < 0.010	
Chrysene	N	2800	mg/kg	0.010	[A] < 0.010	
Benzo[b]fluoranthene	N	2800	mg/kg	0.010	[A] < 0.010	
Benzo[k]fluoranthene	N	2800	mg/kg	0.010	[A] < 0.010	
Benzo[a]pyrene	N	2800	mg/kg	0.010	[A] < 0.010	
Indeno(1,2,3-c,d)Pyrene	N	2800	mg/kg	0.010	[A] < 0.010	
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.010	[A] < 0.010	
Benzo[g,h,i]perylene	N	2800	mg/kg	0.010	[A] < 0.010	
Coronene	N	2800	mg/kg	0.010	[A] < 0.010	
Total Of 17 PAH's	N	2800	mg/kg	0.20	[A] < 0.20	
PCB 28	N	2815	mg/kg	0.0010	[A] < 0.0010	
PCB 52	N	2815	mg/kg	0.0010	[A] < 0.0010	
PCB 90+101	N	2815	mg/kg	0.0010	[A] < 0.0010	
PCB 118	N	2815	mg/kg	0.0010	[A] < 0.0010	
PCB 153	N	2815	mg/kg	0.0010	[A] < 0.0010	
PCB 138	N	2815	mg/kg	0.0010	[A] < 0.0010	
PCB 180	N	2815	mg/kg	0.0010	[A] < 0.0010	

Results - Soil

Project: 23311 Blanchardstown TC PRS Project (DBFL)

Client: IGSL					**Chemtest Job No.:**	21-21171
Quotation No.: Q20-19951					**Chemtest Sample ID.:**	1225655
Order No.:					Client Sample Ref.:	10-1
					Sample Location:	10
					Sample Type:	SOIL
					Top Depth (m):	0.60
					Bottom Depth (m):	1.00
					Asbestos Lab:	IN-TRAN-D
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
Total PCBs (7 congeners)	N	2815	mg/kg	0.0010	[A] < 0.0010	
Total Phenols	U	2920	mg/kg	0.10	< 0.10	

Results - Single Stage WAC

Project: 23311 Blanchardstown TC PRS Project (DBFL)

					Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	21-21171						
Chemtest Sample ID:	1225637						
Sample Ref:	1-2						
Sample ID:							
Sample Location:	1						
Top Depth(m):	1.00						
Bottom Depth(m):	2.00						
Sampling Date:							
Determinand	**SOP**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	U	%	[A] 1.1	3	5	6
Loss On Ignition	2610	U	%	3.2	--	--	10
Total BTEX	2760	U	mg/kg	[A] < 0.010	6	--	--
Total PCBs (7 congeners)	2815	N	mg/kg	[A] < 0.0010	1	--	--
TPH Total WAC	2670	U	mg/kg	[A] < 10	500	--	--
Total Of 17 PAH's	2800	N	mg/kg	[A] 71	100	--	--
pH	2010	U		8.7	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg	0.029	--	To evaluate	To evaluate
Eluate Analysis			**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455	U	0.0003	0.0033	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.011	0.11	0.5	10	70
Copper	1455	U	0.0018	0.018	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0006	0.0060	0.5	10	30
Nickel	1455	U	0.0048	0.048	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.088	< 1.0	10	150	500
Sulphate	1220	U	1.3	13	1000	20000	50000
Total Dissolved Solids	1020	N	32	320	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	33	330	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	7.1

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: 23311 Blanchardstown TC PRS Project (DBFL)

					Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	21-21171						
Chemtest Sample ID:	1225638						
Sample Ref:	2-1						
Sample ID:							
Sample Location:	2						
Top Depth(m):	0.00						
Bottom Depth(m):	1.00						
Sampling Date:							
Determinand	**SOP**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	U	%	[A] 0.40	3	5	6
Loss On Ignition	2610	U	%	1.9	--	--	10
Total BTEX	2760	U	mg/kg	[A] < 0.010	6	--	--
Total PCBs (7 congeners)	2815	N	mg/kg	[A] < 0.0010	1	--	--
TPH Total WAC	2670	U	mg/kg	[A] < 10	500	--	--
Total Of 17 PAH's	2800	N	mg/kg	[A] 7.3	100	--	--
pH	2010	U		8.6	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg	0.034	--	To evaluate	To evaluate
Eluate Analysis			**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455	U	< 0.0002	< 0.0002	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.0095	0.095	0.5	10	70
Copper	1455	U	0.0024	0.024	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0004	0.0044	0.5	10	30
Nickel	1455	U	0.0042	0.042	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	1.1	11	800	15000	25000
Fluoride	1220	U	0.085	< 1.0	10	150	500
Sulphate	1220	U	4.6	46	1000	20000	50000
Total Dissolved Solids	1020	N	30	300	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	4.0	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	7.4

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: 23311 Blanchardstown TC PRS Project (DBFL)

					Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	21-21171						
Chemtest Sample ID:	1225639						
Sample Ref:	2-2						
Sample ID:							
Sample Location:	2						
Top Depth(m):	1.00						
Bottom Depth(m):	2.00						
Sampling Date:							
Determinand	**SOP**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	U	%	[A] 0.61	3	5	6
Loss On Ignition	2610	U	%	2.6	--	--	10
Total BTEX	2760	U	mg/kg	[A] < 0.010	6	--	--
Total PCBs (7 congeners)	2815	N	mg/kg	[A] < 0.0010	1	--	--
TPH Total WAC	2670	U	mg/kg	[A] < 10	500	--	--
Total Of 17 PAH's	2800	N	mg/kg	[A] 3.2	100	--	--
pH	2010	U		8.7	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg	0.050	--	To evaluate	To evaluate
Eluate Analysis			**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455	U	< 0.0002	< 0.0002	0.5	2	25
Barium	1455	U	0.021	0.21	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.0089	0.089	0.5	10	70
Copper	1455	U	0.0010	0.010	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0082	0.082	0.5	10	30
Nickel	1455	U	0.0040	0.040	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	0.0024	0.024	0.1	0.5	7
Zinc	1455	U	0.004	0.037	4	50	200
Chloride	1220	U	1.1	11	800	15000	25000
Fluoride	1220	U	0.26	2.6	10	150	500
Sulphate	1220	U	23	230	1000	20000	50000
Total Dissolved Solids	1020	N	72	720	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	4.5	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	6.8

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: 23311 Blanchardstown TC PRS Project (DBFL)

					Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	21-21171						
Chemtest Sample ID:	1225640						
Sample Ref:	3-1						
Sample ID:							
Sample Location:	3						
Top Depth(m):	0.00						
Bottom Depth(m):	1.00						
Sampling Date:							
Determinand	**SOP**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	U	%	[A] 0.30	3	5	6
Loss On Ignition	2610	U	%	2.7	--	--	10
Total BTEX	2760	U	mg/kg	[A] < 0.010	6	--	--
Total PCBs (7 congeners)	2815	N	mg/kg	[A] < 0.0010	1	--	--
TPH Total WAC	2670	U	mg/kg	[A] < 10	500	--	--
Total Of 17 PAH's	2800	N	mg/kg	[A] 3.8	100	--	--
pH	2010	U		8.6	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg	0.038	--	To evaluate	To evaluate
Eluate Analysis			**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455	U	< 0.0002	< 0.0002	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.0099	0.099	0.5	10	70
Copper	1455	U	0.0007	0.0075	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0044	0.044	0.5	10	30
Nickel	1455	U	0.0041	0.041	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	0.0007	0.0070	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	1.4	14	800	15000	25000
Fluoride	1220	U	0.35	3.5	10	150	500
Sulphate	1220	U	19	190	1000	20000	50000
Total Dissolved Solids	1020	N	78	780	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	4.5	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	9.4

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: 23311 Blanchardstown TC PRS Project (DBFL)

					Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	21-21171						
Chemtest Sample ID:	1225641						
Sample Ref:	4-1						
Sample ID:							
Sample Location:	4						
Top Depth(m):	0.00						
Bottom Depth(m):	1.00						
Sampling Date:							
Determinand	**SOP**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	U	%	[A] 0.46	3	5	6
Loss On Ignition	2610	U	%	3.7	--	--	10
Total BTEX	2760	U	mg/kg	[A] < 0.010	6	--	--
Total PCBs (7 congeners)	2815	N	mg/kg	[A] < 0.0010	1	--	--
TPH Total WAC	2670	U	mg/kg	[A] 570	500	--	--
Total Of 17 PAH's	2800	N	mg/kg	[A] < 0.20	100	--	--
pH	2010	U		8.2	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg	0.013	--	To evaluate	To evaluate
Eluate Analysis			**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455	U	0.0003	0.0026	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.010	0.10	0.5	10	70
Copper	1455	U	0.0010	0.0096	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0022	0.022	0.5	10	30
Nickel	1455	U	0.0045	0.045	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.55	5.5	10	150	500
Sulphate	1220	U	6.6	66	1000	20000	50000
Total Dissolved Solids	1020	N	72	710	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	4.0	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	17

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: 23311 Blanchardstown TC PRS Project (DBFL)

					Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	21-21171						
Chemtest Sample ID:	1225642						
Sample Ref:	5-1						
Sample ID:							
Sample Location:	5						
Top Depth(m):	0.00						
Bottom Depth(m):	1.00						
Sampling Date:							
Determinand	**SOP**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	U	%	[A] 1.4	3	5	6
Loss On Ignition	2610	U	%	4.9	--	--	10
Total BTEX	2760	U	mg/kg	[A] < 0.010	6	--	--
Total PCBs (7 congeners)	2815	N	mg/kg	[A] < 0.0010	1	--	--
TPH Total WAC	2670	U	mg/kg	[A] < 10	500	--	--
Total Of 17 PAH's	2800	N	mg/kg	[A] 0.29	100	--	--
pH	2010	U		8.5	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg	0.0070	--	To evaluate	To evaluate
Eluate Analysis			**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455	U	0.0008	0.0081	0.5	2	25
Barium	1455	U	0.009	0.095	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.010	0.10	0.5	10	70
Copper	1455	U	0.0016	0.016	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0019	0.019	0.5	10	30
Nickel	1455	U	0.0042	0.042	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	0.0006	0.0060	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	3.6	36	800	15000	25000
Fluoride	1220	U	0.31	3.1	10	150	500
Sulphate	1220	U	77	770	1000	20000	50000
Total Dissolved Solids	1020	N	180	1800	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	4.8	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	13

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: 23311 Blanchardstown TC PRS Project (DBFL)

					Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	21-21171						
Chemtest Sample ID:	1225643						
Sample Ref:	6-1						
Sample ID:							
Sample Location:	6						
Top Depth(m):	0.00						
Bottom Depth(m):	1.00						
Sampling Date:							
Determinand	**SOP**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	U	%	[A] 0.31	3	5	6
Loss On Ignition	2610	U	%	2.5	--	--	10
Total BTEX	2760	U	mg/kg	[A] < 0.010	6	--	--
Total PCBs (7 congeners)	2815	N	mg/kg	[A] < 0.0010	1	--	--
TPH Total WAC	2670	U	mg/kg	[A] < 10	500	--	--
Total Of 17 PAH's	2800	N	mg/kg	[A] < 0.20	100	--	--
pH	2010	U		8.7	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg	0.017	--	To evaluate	To evaluate
Eluate Analysis			**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455	U	< 0.0002	< 0.0002	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.011	0.11	0.5	10	70
Copper	1455	U	0.0008	0.0081	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0020	0.020	0.5	10	30
Nickel	1455	U	0.0044	0.044	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.37	3.7	10	150	500
Sulphate	1220	U	19	190	1000	20000	50000
Total Dissolved Solids	1020	N	91	910	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	4.8	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	8.4

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: 23311 Blanchardstown TC PRS Project (DBFL)

					Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	21-21171						
Chemtest Sample ID:	1225644						
Sample Ref:	6-2						
Sample ID:							
Sample Location:	6						
Top Depth(m):	1.00						
Bottom Depth(m):	2.00						
Sampling Date:							
Determinand	**SOP**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	U	%	[A] 0.33	3	5	6
Loss On Ignition	2610	U	%	3.3	--	--	10
Total BTEX	2760	U	mg/kg	[A] < 0.010	6	--	--
Total PCBs (7 congeners)	2815	N	mg/kg	[A] < 0.0010	1	--	--
TPH Total WAC	2670	U	mg/kg	[A] < 10	500	--	--
Total Of 17 PAH's	2800	N	mg/kg	[A] < 0.20	100	--	--
pH	2010	U		8.7	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg	0.026	--	To evaluate	To evaluate
Eluate Analysis			**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455	U	< 0.0002	< 0.0002	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.0098	0.098	0.5	10	70
Copper	1455	U	0.0007	0.0075	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0023	0.023	0.5	10	30
Nickel	1455	U	0.0040	0.040	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	0.0006	0.0065	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.37	3.7	10	150	500
Sulphate	1220	U	21	210	1000	20000	50000
Total Dissolved Solids	1020	N	85	840	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	4.0	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	9.3

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: 23311 Blanchardstown TC PRS Project (DBFL)

					Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	21-21171						
Chemtest Sample ID:	1225645						
Sample Ref:	7-1						
Sample ID:							
Sample Location:	7						
Top Depth(m):	0.00						
Bottom Depth(m):	1.00						
Sampling Date:							
Determinand	**SOP**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	U	%	[A] 0.55	3	5	6
Loss On Ignition	2610	U	%	3.3	--	--	10
Total BTEX	2760	U	mg/kg	[A] 0.011	6	--	--
Total PCBs (7 congeners)	2815	N	mg/kg	[A] < 0.0010	1	--	--
TPH Total WAC	2670	U	mg/kg	[A] < 10	500	--	--
Total Of 17 PAH's	2800	N	mg/kg	[A] < 0.20	100	--	--
pH	2010	U		8.6	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg	0.021	--	To evaluate	To evaluate
Eluate Analysis			**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455	U	< 0.0002	< 0.0002	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.011	0.11	0.5	10	70
Copper	1455	U	0.0008	0.0077	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0030	0.030	0.5	10	30
Nickel	1455	U	0.0043	0.043	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	0.0006	0.0056	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.34	3.4	10	150	500
Sulphate	1220	U	15	150	1000	20000	50000
Total Dissolved Solids	1020	N	72	710	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	4.0	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	9.9

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: 23311 Blanchardstown TC PRS Project (DBFL)

					Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	21-21171						
Chemtest Sample ID:	1225646						
Sample Ref:	7-2						
Sample ID:							
Sample Location:	7						
Top Depth(m):	1.00						
Bottom Depth(m):	2.00						
Sampling Date:							
Determinand	**SOP**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	U	%	[A] 0.61	3	5	6
Loss On Ignition	2610	U	%	3.6	--	--	10
Total BTEX	2760	U	mg/kg	[A] < 0.010	6	--	--
Total PCBs (7 congeners)	2815	N	mg/kg	[A] < 0.0010	1	--	--
TPH Total WAC	2670	U	mg/kg	[A] < 10	500	--	--
Total Of 17 PAH's	2800	N	mg/kg	[A] < 0.20	100	--	--
pH	2010	U		8.6	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg	0.016	--	To evaluate	To evaluate
Eluate Analysis			**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455	U	< 0.0002	< 0.0002	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.0097	0.097	0.5	10	70
Copper	1455	U	0.0011	0.011	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0019	0.019	0.5	10	30
Nickel	1455	U	0.0044	0.044	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7
Zinc	1455	U	0.003	0.035	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.30	3.0	10	150	500
Sulphate	1220	U	13	130	1000	20000	50000
Total Dissolved Solids	1020	N	72	710	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	3.9	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	8.6

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: 23311 Blanchardstown TC PRS Project (DBFL)

					Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	21-21171						
Chemtest Sample ID:	1225647						
Sample Ref:	8-1						
Sample ID:							
Sample Location:	8						
Top Depth(m):	0.00						
Bottom Depth(m):	1.00						
Sampling Date:							
Determinand	**SOP**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	U	%	[A] 0.62	3	5	6
Loss On Ignition	2610	U	%	3.2	--	--	10
Total BTEX	2760	U	mg/kg	[A] < 0.010	6	--	--
Total PCBs (7 congeners)	2815	N	mg/kg	[A] < 0.0010	1	--	--
TPH Total WAC	2670	U	mg/kg	[A] < 10	500	--	--
Total Of 17 PAH's	2800	N	mg/kg	[A] < 0.20	100	--	--
pH	2010	U		8.7	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg	0.013	--	To evaluate	To evaluate
Eluate Analysis			**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455	U	< 0.0002	< 0.0002	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.0097	0.097	0.5	10	70
Copper	1455	U	0.0007	0.0072	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0021	0.022	0.5	10	30
Nickel	1455	U	0.0042	0.042	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	1.9	19	800	15000	25000
Fluoride	1220	U	0.23	2.3	10	150	500
Sulphate	1220	U	32	320	1000	20000	50000
Total Dissolved Solids	1020	N	91	910	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	4.1	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	11

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: 23311 Blanchardstown TC PRS Project (DBFL)

					Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	21-21171						
Chemtest Sample ID:	1225648						
Sample Ref:	9-1						
Sample ID:							
Sample Location:	9						
Top Depth(m):	0.00						
Bottom Depth(m):	1.00						
Sampling Date:							
Determinand	**SOP**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	U	%	[A] 0.35	3	5	6
Loss On Ignition	2610	U	%	3.1	--	--	10
Total BTEX	2760	U	mg/kg	[A] < 0.010	6	--	--
Total PCBs (7 congeners)	2815	N	mg/kg	[A] < 0.0010	1	--	--
TPH Total WAC	2670	U	mg/kg	[A] < 10	500	--	--
Total Of 17 PAH's	2800	N	mg/kg	[A] < 0.20	100	--	--
pH	2010	U		8.7	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg	0.043	--	To evaluate	To evaluate
Eluate Analysis			**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455	U	0.0006	0.0060	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.0094	0.094	0.5	10	70
Copper	1455	U	0.0013	0.013	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0064	0.064	0.5	10	30
Nickel	1455	U	0.0040	0.040	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	0.0013	0.013	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	1.2	12	800	15000	25000
Fluoride	1220	U	0.32	3.2	10	150	500
Sulphate	1220	U	25	250	1000	20000	50000
Total Dissolved Solids	1020	N	72	710	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	8.4	84	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	14

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: 23311 Blanchardstown TC PRS Project (DBFL)

					Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	21-21171						
Chemtest Sample ID:	1225649						
Sample Ref:	10-2						
Sample ID:							
Sample Location:	10						
Top Depth(m):	1.00						
Bottom Depth(m):	2.00						
Sampling Date:							
Determinand	**SOP**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	U	%	[A] < 0.20	3	5	6
Loss On Ignition	2610	U	%	2.6	--	--	10
Total BTEX	2760	U	mg/kg	[A] < 0.010	6	--	--
Total PCBs (7 congeners)	2815	N	mg/kg	[A] < 0.0010	1	--	--
TPH Total WAC	2670	U	mg/kg	[A] < 10	500	--	--
Total Of 17 PAH's	2800	N	mg/kg	[A] < 0.20	100	--	--
pH	2010	U		8.5	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg	0.031	--	To evaluate	To evaluate
Eluate Analysis			**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455	U	< 0.0002	< 0.0002	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.0093	0.093	0.5	10	70
Copper	1455	U	0.0014	0.014	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0064	0.064	0.5	10	30
Nickel	1455	U	0.0044	0.044	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	0.0011	0.011	0.1	0.5	7
Zinc	1455	U	0.032	0.32	4	50	200
Chloride	1220	U	1.8	18	800	15000	25000
Fluoride	1220	U	0.32	3.2	10	150	500
Sulphate	1220	U	24	240	1000	20000	50000
Total Dissolved Solids	1020	N	85	840	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	11	110	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	8.8

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: 23311 Blanchardstown TC PRS Project (DBFL)

					Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	21-21171						
Chemtest Sample ID:	1225650						
Sample Ref:	11-1						
Sample ID:							
Sample Location:	11						
Top Depth(m):	0.00						
Bottom Depth(m):	1.00						
Sampling Date:							
Determinand	**SOP**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	U	%	[A] 0.63	3	5	6
Loss On Ignition	2610	U	%	2.8	--	--	10
Total BTEX	2760	U	mg/kg	[A] < 0.010	6	--	--
Total PCBs (7 congeners)	2815	N	mg/kg	[A] < 0.0010	1	--	--
TPH Total WAC	2670	U	mg/kg	[A] < 10	500	--	--
Total Of 17 PAH's	2800	N	mg/kg	[A] < 0.20	100	--	--
pH	2010	U		8.7	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg	0.035	--	To evaluate	To evaluate
Eluate Analysis			**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455	U	0.0003	0.0028	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.0094	0.094	0.5	10	70
Copper	1455	U	0.0007	0.0074	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0067	0.067	0.5	10	30
Nickel	1455	U	0.0042	0.042	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	0.0013	0.013	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.27	2.7	10	150	500
Sulphate	1220	U	16	160	1000	20000	50000
Total Dissolved Solids	1020	N	65	650	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	5.0	50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	7.3

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: 23311 Blanchardstown TC PRS Project (DBFL)

					Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	21-21171						
Chemtest Sample ID:	1225651						
Sample Ref:	11-2						
Sample ID:							
Sample Location:	11						
Top Depth(m):	1.00						
Bottom Depth(m):	2.00						
Sampling Date:							
Determinand	**SOP**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	U	%	[A] 0.45	3	5	6
Loss On Ignition	2610	U	%	2.5	--	--	10
Total BTEX	2760	U	mg/kg	[A] < 0.010	6	--	--
Total PCBs (7 congeners)	2815	N	mg/kg	[A] < 0.0010	1	--	--
TPH Total WAC	2670	U	mg/kg	[A] < 10	500	--	--
Total Of 17 PAH's	2800	N	mg/kg	[A] 0.40	100	--	--
pH	2010	U		8.5	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg	0.034	--	To evaluate	To evaluate
Eluate Analysis			**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455	U	0.0008	0.0076	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.011	0.11	0.5	10	70
Copper	1455	U	0.0009	0.0093	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.012	0.12	0.5	10	30
Nickel	1455	U	0.0052	0.052	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	0.0015	0.015	0.1	0.5	7
Zinc	1455	U	0.003	0.026	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.38	3.8	10	150	500
Sulphate	1220	U	27	270	1000	20000	50000
Total Dissolved Solids	1020	N	72	720	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	5.3	53	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	7.6

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: 23311 Blanchardstown TC PRS Project (DBFL)

					Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	21-21171						
Chemtest Sample ID:	1225652						
Sample Ref:	12-1						
Sample ID:							
Sample Location:	12						
Top Depth(m):	0.00						
Bottom Depth(m):	1.00						
Sampling Date:							
Determinand	**SOP**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	U	%	[A] 0.47	3	5	6
Loss On Ignition	2610	U	%	2.7	--	--	10
Total BTEX	2760	U	mg/kg	[A] < 0.010	6	--	--
Total PCBs (7 congeners)	2815	N	mg/kg	[A] < 0.0010	1	--	--
TPH Total WAC	2670	U	mg/kg	[A] < 10	500	--	--
Total Of 17 PAH's	2800	N	mg/kg	[A] 2.3	100	--	--
pH	2010	U		8.5	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg	0.029	--	To evaluate	To evaluate
Eluate Analysis			**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455	U	< 0.0002	< 0.0002	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.0097	0.097	0.5	10	70
Copper	1455	U	0.0008	0.0076	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0053	0.054	0.5	10	30
Nickel	1455	U	0.0043	0.043	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	1.8	18	800	15000	25000
Fluoride	1220	U	0.37	3.7	10	150	500
Sulphate	1220	U	22	220	1000	20000	50000
Total Dissolved Solids	1020	N	85	840	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	5.3	53	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	7.9

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: 23311 Blanchardstown TC PRS Project (DBFL)

					Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	21-21171						
Chemtest Sample ID:	1225653						
Sample Ref:	13-1						
Sample ID:							
Sample Location:	13						
Top Depth(m):	0.00						
Bottom Depth(m):	1.00						
Sampling Date:					Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill
Determinand	**SOP**	**Accred.**	**Units**				
Total Organic Carbon	2625	U	%	[A] 0.39	3	5	6
Loss On Ignition	2610	U	%	2.8	--	--	10
Total BTEX	2760	U	mg/kg	[A] < 0.010	6	--	--
Total PCBs (7 congeners)	2815	N	mg/kg	[A] < 0.0010	1	--	--
TPH Total WAC	2670	U	mg/kg	[A] < 10	500	--	--
Total Of 17 PAH's	2800	N	mg/kg	[A] 0.26	100	--	--
pH	2010	U		8.6	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg	0.034	--	To evaluate	To evaluate
Eluate Analysis			**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455	U	< 0.0002	< 0.0002	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.0095	0.095	0.5	10	70
Copper	1455	U	0.0007	0.0071	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0021	0.021	0.5	10	30
Nickel	1455	U	0.0041	0.041	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.38	3.8	10	150	500
Sulphate	1220	U	7.8	78	1000	20000	50000
Total Dissolved Solids	1020	N	72	710	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	4.7	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	9.6

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: 23311 Blanchardstown TC PRS Project (DBFL)

					Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	21-21171						
Chemtest Sample ID:	1225654						
Sample Ref:	1-1						
Sample ID:							
Sample Location:	1						
Top Depth(m):	0.50						
Bottom Depth(m):	1.00						
Sampling Date:							
Determinand	**SOP**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	U	%	[A] 0.21	3	5	6
Loss On Ignition	2610	U	%	2.7	--	--	10
Total BTEX	2760	U	mg/kg	[A] < 0.010	6	--	--
Total PCBs (7 congeners)	2815	N	mg/kg	[A] < 0.0010	1	--	--
TPH Total WAC	2670	U	mg/kg	[A] < 10	500	--	--
Total Of 17 PAH's	2800	N	mg/kg	[A] 0.38	100	--	--
pH	2010	U		8.6	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg	0.045	--	To evaluate	To evaluate
Eluate Analysis			**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455	U	< 0.0002	< 0.0002	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.0096	0.096	0.5	10	70
Copper	1455	U	0.0006	0.0063	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0029	0.030	0.5	10	30
Nickel	1455	U	0.0040	0.040	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	1.0	10	800	15000	25000
Fluoride	1220	U	0.28	2.8	10	150	500
Sulphate	1220	U	20	200	1000	20000	50000
Total Dissolved Solids	1020	N	78	780	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	4.4	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	14

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: 23311 Blanchardstown TC PRS Project (DBFL)

					Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	21-21171						
Chemtest Sample ID:	1225655						
Sample Ref:	10-1						
Sample ID:							
Sample Location:	10						
Top Depth(m):	0.60						
Bottom Depth(m):	1.00						
Sampling Date:							
Determinand	**SOP**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	U	%	[A] 0.69	3	5	6
Loss On Ignition	2610	U	%	2.6	--	--	10
Total BTEX	2760	U	mg/kg	[A] < 0.010	6	--	--
Total PCBs (7 congeners)	2815	N	mg/kg	[A] < 0.0010	1	--	--
TPH Total WAC	2670	U	mg/kg	[A] < 10	500	--	--
Total Of 17 PAH's	2800	N	mg/kg	[A] < 0.20	100	--	--
pH	2010	U		8.4	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg	0.0040	--	To evaluate	To evaluate
Eluate Analysis			**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455	U	0.0003	0.0025	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.010	0.10	0.5	10	70
Copper	1455	U	0.0008	0.0077	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0073	0.073	0.5	10	30
Nickel	1455	U	0.0044	0.044	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	0.0016	0.016	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.39	3.9	10	150	500
Sulphate	1220	U	31	310	1000	20000	50000
Total Dissolved Solids	1020	N	91	910	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	3.6	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	10

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request.The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1225637	1-2		1		A	Amber Glass 250ml
1225637	1-2		1		A	Plastic Tub 500g
1225638	2-1		2		A	Amber Glass 250ml
1225638	2-1		2		A	Plastic Tub 500g
1225639	2-2		2		A	Amber Glass 250ml
1225639	2-2		2		A	Plastic Tub 500g
1225640	3-1		3		A	Amber Glass 250ml
1225640	3-1		3		A	Plastic Tub 500g
1225641	4-1		4		A	Amber Glass 250ml
1225641	4-1		4		A	Plastic Tub 500g
1225642	5-1		5		A	Amber Glass 250ml
1225642	5-1		5		A	Plastic Tub 500g
1225643	6-1		6		A	Amber Glass 250ml
1225643	6-1		6		A	Plastic Tub 500g
1225644	6-2		6		A	Amber Glass 250ml
1225644	6-2		6		A	Plastic Tub 500g
1225645	7-1		7		A	Amber Glass 250ml
1225645	7-1		7		A	Plastic Tub 500g
1225646	7-2		7		A	Amber Glass 250ml
1225646	7-2		7		A	Plastic Tub 500g
1225647	8-1		8		A	Amber Glass 250ml
1225647	8-1		8		A	Plastic Tub 500g

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request.The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1225648	9-1		9		A	Amber Glass 250ml
1225648	9-1		9		A	Plastic Tub 500g
1225649	10-2		10		A	Amber Glass 250ml
1225649	10-2		10		A	Plastic Tub 500g
1225650	11-1		11		A	Amber Glass 250ml
1225650	11-1		11		A	Plastic Tub 500g
1225651	11-2		11		A	Amber Glass 250ml
1225651	11-2		11		A	Plastic Tub 500g
1225652	12-1		12		A	Amber Glass 250ml
1225652	12-1		12		A	Plastic Tub 500g
1225653	13-1		13		A	Amber Glass 250ml
1225653	13-1		13		A	Plastic Tub 500g
1225654	1-1		1		A	Amber Glass 250ml
1225654	1-1		1		A	Plastic Tub 500g
1225655	10-1		10		A	Amber Glass 250ml
1225655	10-1		10		A	Plastic Tub 500g

Test Methods

SOP	Title	Parameters included	Method summary
1010	pH Value of Waters	pH	pH Meter
1020	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Conductivity Meter
1220	Anions, Alkalinity & Ammonium in Waters	Fluoride; Chloride; Nitrite; Nitrate; Total; Oxidisable Nitrogen (TON); Sulfate; Phosphate; Alkalinity; Ammonium	Automated colorimetric analysis using 'Aquakem 600' Discrete Analyser.
1455	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).
1610	Total/Dissolved Organic Carbon in Waters	Organic Carbon	TOC Analyser using Catalytic Oxidation
1800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Waters by GC-MS	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	Pentane extraction / GCMS detection
1920	Phenols in Waters by HPLC	Phenolic compounds including: Phenol, Cresols, Xylenols, Trimethylphenols Note: Chlorophenols are excluded.	Determination by High Performance Liquid Chromatography (HPLC) using electrochemical detection.
2010	pH Value of Soils	pH	pH Meter
2015	Acid Neutralisation Capacity	Acid Reserve	Titration
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2180	Sulphur (Elemental) in Soils by HPLC	Sulphur	Dichloromethane extraction / HPLC with UV detection
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2325	Sulphide in Soils	Sulphide	Steam distillation with sulphuric acid / analysis by 'Aquakem 600' Discrete Analyser, using N,N--dimethyl-p-phenylenediamine.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
2610	Loss on Ignition	loss on ignition (LOI)	Determination of the proportion by mass that is lost from a soil by ignition at 550°C.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.

Test Methods

SOP	Title	Parameters included	Method summary
2670	Total Petroleum Hydrocarbons (TPH) in Soils by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO*TPH C8–C40	Dichloromethane extraction / GC-FID
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	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*	Dichloromethane extraction / GC-MS
2815	Polychlorinated Biphenyls (PCB) ICES7Congeners in Soils by GC-MS	ICES7 PCB congeners	Acetone/Hexane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.
640	Characterisation of Waste (Leaching C10)	Waste material including soil, sludges and granular waste	ComplianceTest for Leaching of Granular Waste Material and Sludge

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

eurofins | Chemtest
Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

UKAS TESTING 2183

Final Report

Report No.:	21-23459-1		
Initial Date of Issue:	16-Jul-2021		
Client	IGSL		
Client Address:	M7 Business Park Naas County Kildare Ireland		
Contact(s):	Darren Keogh		
Project	Blanchardstown		
Quotation No.:	Q20-19951	**Date Received:**	08-Jul-2021
Order No.:		**Date Instructed:**	08-Jul-2021
No. of Samples:	3		
Turnaround (Wkdays):	7	**Results Due:**	16-Jul-2021
Date Approved:	16-Jul-2021		

Approved By:

Details: Glynn Harvey, Technical Manager

Results - Leachate

Project: Blanchardstown

Client: IGSL					Chemtest Job No.:	21-23459	21-23459	21-23459
Quotation No.: Q20-19951					Chemtest Sample ID.:	1236760	1236761	1236762
					Sample Location:	WS14	WS15	WS18
					Sample Type:	SOIL	SOIL	SOIL
					Top Depth (m):	1.00	1.00	1.00
					Bottom Depth (m):	1.60	2.00	2.00
Determinand	**Accred.**	**SOP**	**Type**	**Units**	**LOD**			
pH	U	1010	10:1		N/A	8.7	8.9	8.7
Ammonium	U	1220	10:1	mg/l	0.050	0.13	0.29	0.13
Ammonium	N	1220	10:1	mg/kg	0.10	1.7	4.2	1.7
Boron (Dissolved)	U	1455	10:1	mg/kg	0.01	0.14	< 0.01	< 0.01
Benzo[j]fluoranthene	N	1800	10:1	µg/l	0.010	< 0.010	< 0.010	< 0.010

Results - Soil

Project: Blanchardstown

Client: IGSL				Chemtest Job No.:	21-23459	21-23459	21-23459
Quotation No.: Q20-19951				Chemtest Sample ID.:	1236760	1236761	1236762
				Sample Location:	WS14	WS15	WS18
				Sample Type:	SOIL	SOIL	SOIL
				Top Depth (m):	1.00	1.00	1.00
				Bottom Depth (m):	1.60	2.00	2.00
				Asbestos Lab:	COVENTRY	COVENTRY	COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**			
ACM Type	U	2192		N/A	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	9.9	11	15
Boron (Hot Water Soluble)	U	2120	mg/kg	0.40	[A] < 0.40	[A] < 0.40	[A] < 0.40
Sulphur (Elemental)	U	2180	mg/kg	1.0	[A] 1.1	[A] < 1.0	[A] 1.1
Cyanide (Total)	U	2300	mg/kg	0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50
Sulphide (Easily Liberatable)	N	2325	mg/kg	0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50
Sulphate (Acid Soluble)	U	2430	%	0.010	[A] 0.027	[A] < 0.010	[A] < 0.010
Arsenic	U	2450	mg/kg	1.0	15	13	12
Barium	U	2450	mg/kg	10	59	29	36
Cadmium	U	2450	mg/kg	0.10	0.29	1.7	1.5
Chromium	U	2450	mg/kg	1.0	26	17	9.9
Molybdenum	U	2450	mg/kg	2.0	< 2.0	2.1	3.0
Antimony	N	2450	mg/kg	2.0	2.4	< 2.0	< 2.0
Copper	U	2450	mg/kg	0.50	17	27	30
Mercury	U	2450	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Nickel	U	2450	mg/kg	0.50	47	39	35
Lead	U	2450	mg/kg	0.50	26	14	14
Selenium	U	2450	mg/kg	0.20	0.44	0.55	0.32
Zinc	U	2450	mg/kg	0.50	65	65	68
Chromium (Trivalent)	N	2490	mg/kg	1.0	26	17	9.9
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Mineral Oil (TPH Calculation)	N	2670	mg/kg	10	< 10	< 10	< 10
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aliphatic TPH >C8-C10	U	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aliphatic TPH >C10-C12	U	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aliphatic TPH >C12-C16	U	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aliphatic TPH >C16-C21	U	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aliphatic TPH >C21-C35	U	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aromatic TPH >C8-C10	U	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aromatic TPH >C10-C12	U	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aromatic TPH >C12-C16	U	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0

Results - Soil

Project: Blanchardstown

Client: IGSL				Chemtest Job No.:	21-23459	21-23459	21-23459
Quotation No.: Q20-19951				Chemtest Sample ID.:	1236760	1236761	1236762
				Sample Location:	WS14	WS15	WS18
				Sample Type:	SOIL	SOIL	SOIL
				Top Depth (m):	1.00	1.00	1.00
				Bottom Depth (m):	1.60	2.00	2.00
				Asbestos Lab:	COVENTRY	COVENTRY	COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**			
Aromatic TPH >C21-C35	U	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	[A] < 10	[A] < 10	[A] < 10
Benzene	U	2760	µg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Toluene	U	2760	µg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Ethylbenzene	U	2760	µg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
m & p-Xylene	U	2760	µg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
o-Xylene	U	2760	µg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Methyl Tert-Butyl Ether	U	2760	µg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Naphthalene	N	2800	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Acenaphthylene	N	2800	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Acenaphthene	N	2800	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Fluorene	N	2800	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Phenanthrene	N	2800	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Anthracene	N	2800	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Fluoranthene	N	2800	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Pyrene	N	2800	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Benzo[a]anthracene	N	2800	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Chrysene	N	2800	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Benzo[b]fluoranthene	N	2800	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Benzo[k]fluoranthene	N	2800	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Benzo[a]pyrene	N	2800	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Indeno(1,2,3-c,d)Pyrene	N	2800	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Benzo[g,h,i]perylene	N	2800	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Coronene	N	2800	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Total Of 17 PAH's	N	2800	mg/kg	0.20	[A] < 0.20	[A] < 0.20	[A] < 0.20
PCB 28	N	2815	mg/kg	0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010
PCB 52	N	2815	mg/kg	0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010
PCB 90+101	N	2815	mg/kg	0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010
PCB 118	N	2815	mg/kg	0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010
PCB 153	N	2815	mg/kg	0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010
PCB 138	N	2815	mg/kg	0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010
PCB 180	N	2815	mg/kg	0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010
Total PCBs (7 congeners)	N	2815	mg/kg	0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010
Total Phenols	U	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10

Results - Single Stage WAC

Project: Blanchardstown

					Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	21-23459						
Chemtest Sample ID:	1236760						
Sample Ref:							
Sample ID:							
Sample Location:	WS14						
Top Depth(m):	1.00						
Bottom Depth(m):	1.60						
Sampling Date:							
Determinand	**SOP**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	U	%	[A] 0.85	3	5	6
Loss On Ignition	2610	U	%	3.2	--	--	10
Total BTEX	2760	U	mg/kg	[A] < 0.010	6	--	--
Total PCBs (7 congeners)	2815	N	mg/kg	[A] < 0.0010	1	--	--
TPH Total WAC	2670	U	mg/kg	[A] < 10	500	--	--
Total Of 17 PAH's	2800	N	mg/kg	[A] < 0.20	100	--	--
pH	2010	U		9.1	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg	0.014	--	To evaluate	To evaluate
Eluate Analysis			**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455	U	< 0.0002	< 0.0002	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.0013	0.013	0.5	10	70
Copper	1455	U	0.0005	0.0050	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.013	0.13	0.5	10	30
Nickel	1455	U	< 0.0005	< 0.0005	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	0.0005	0.0054	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.80	8.0	10	150	500
Sulphate	1220	U	7.8	78	1000	20000	50000
Total Dissolved Solids	1020	N	72	710	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	3.0	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	9.9

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: Blanchardstown

					Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	21-23459						
Chemtest Sample ID:	1236761						
Sample Ref:							
Sample ID:							
Sample Location:	WS15						
Top Depth(m):	1.00						
Bottom Depth(m):	2.00						
Sampling Date:							
Determinand	**SOP**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	U	%	[A] 0.52	3	5	6
Loss On Ignition	2610	U	%	2.2	--	--	10
Total BTEX	2760	U	mg/kg	[A] < 0.010	6	--	--
Total PCBs (7 congeners)	2815	N	mg/kg	[A] < 0.0010	1	--	--
TPH Total WAC	2670	U	mg/kg	[A] < 10	500	--	--
Total Of 17 PAH's	2800	N	mg/kg	[A] < 0.20	100	--	--
pH	2010	U		9.2	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg	0.081	--	To evaluate	To evaluate
Eluate Analysis			**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455	U	0.0008	0.0080	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.0006	0.0056	0.5	10	70
Copper	1455	U	0.0030	0.030	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0094	0.094	0.5	10	30
Nickel	1455	U	0.0028	0.028	0.4	10	40
Lead	1455	U	0.0007	0.0072	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	0.0005	0.0051	0.1	0.5	7
Zinc	1455	U	0.014	0.14	4	50	200
Chloride	1220	U	1.7	17	800	15000	25000
Fluoride	1220	U	0.34	3.4	10	150	500
Sulphate	1220	U	3.9	39	1000	20000	50000
Total Dissolved Solids	1020	N	57	570	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	12	120	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	11

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: Blanchardstown

					Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	21-23459						
Chemtest Sample ID:	1236762						
Sample Ref:							
Sample ID:							
Sample Location:	WS18						
Top Depth(m):	1.00						
Bottom Depth(m):	2.00						
Sampling Date:							
Determinand	**SOP**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	U	%	[A] 0.44	3	5	6
Loss On Ignition	2610	U	%	3.1	--	--	10
Total BTEX	2760	U	mg/kg	[A] < 0.010	6	--	--
Total PCBs (7 congeners)	2815	N	mg/kg	[A] < 0.0010	1	--	--
TPH Total WAC	2670	U	mg/kg	[A] < 10	500	--	--
Total Of 17 PAH's	2800	N	mg/kg	[A] < 0.20	100	--	--
pH	2010	U		9.3	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg	0.022	--	To evaluate	To evaluate
Eluate Analysis			**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455	U	< 0.0002	< 0.0002	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	< 0.0005	< 0.0005	0.5	10	70
Copper	1455	U	0.0007	0.0070	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.010	0.10	0.5	10	30
Nickel	1455	U	< 0.0005	< 0.0005	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.50	5.0	10	150	500
Sulphate	1220	U	3.6	36	1000	20000	50000
Total Dissolved Solids	1020	N	72	710	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	3.2	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	15

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request.The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1236760			WS14		A	Amber Glass 250ml
1236760			WS14		A	Plastic Tub 1000g
1236761			WS15		A	Amber Glass 250ml
1236761			WS15		A	Plastic Tub 1000g
1236762			WS18		A	Amber Glass 250ml
1236762			WS18		A	Plastic Tub 1000g

Test Methods

SOP	Title	Parameters included	Method summary
1010	pH Value of Waters	pH	pH Meter
1020	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Conductivity Meter
1220	Anions, Alkalinity & Ammonium in Waters	Fluoride; Chloride; Nitrite; Nitrate; Total; Oxidisable Nitrogen (TON); Sulfate; Phosphate; Alkalinity; Ammonium	Automated colorimetric analysis using 'Aquakem 600' Discrete Analyser.
1455	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).
1610	Total/Dissolved Organic Carbon in Waters	Organic Carbon	TOC Analyser using Catalytic Oxidation
1800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Waters by GC-MS	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	Pentane extraction / GCMS detection
1920	Phenols in Waters by HPLC	Phenolic compounds including: Phenol, Cresols, Xylenols, Trimethylphenols Note: Chlorophenols are excluded.	Determination by High Performance Liquid Chromatography (HPLC) using electrochemical detection.
2010	pH Value of Soils	pH	pH Meter
2015	Acid Neutralisation Capacity	Acid Reserve	Titration
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2180	Sulphur (Elemental) in Soils by HPLC	Sulphur	Dichloromethane extraction / HPLC with UV detection
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Alkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2325	Sulphide in Soils	Sulphide	Steam distillation with sulphuric acid / analysis by 'Aquakem 600' Discrete Analyser, using N,N–dimethyl-p-phenylenediamine.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
2610	Loss on Ignition	loss on ignition (LOI)	Determination of the proportion by mass that is lost from a soil by ignition at 550°C.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.

Test Methods

SOP	Title	Parameters included	Method summary
2670	Total Petroleum Hydrocarbons (TPH) in Soils by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO*TPH C8–C40	Dichloromethane extraction / GC-FID
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	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*	Dichloromethane extraction / GC-MS
2815	Polychlorinated Biphenyls (PCB) ICES7Congeners in Soils by GC-MS	ICES7 PCB congeners	Acetone/Hexane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.
640	Characterisation of Waste (Leaching C10)	Waste material including soil, sludges and granular waste	ComplianceTest for Leaching of Granular Waste Material and Sludge

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

eurofins | Chemtest
Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

UKAS TESTING 2183

Amended Report

Report No.:	21-23475-2		
Initial Date of Issue:	19-Jul-2021	**Date of Re-Issue:**	06-Sep-2021
Client	IGSL		
Client Address:	M7 Business Park Naas County Kildare Ireland		
Contact(s):	Darren Keogh		
Project	Blanchardstown		
Quotation No.:	Q20-19951	**Date Received:**	08-Jul-2021
Order No.:		**Date Instructed:**	08-Jul-2021
No. of Samples:	5		
Turnaround (Wkdays):	42	**Results Due:**	06-Sep-2021
Date Approved:	06-Sep-2021		

Approved By:

Details: Glynn Harvey, Technical Manager

Results - Leachate

Project: Blanchardstown

Client: IGSL					Chemtest Job No.:	21-23475	21-23475	21-23475	21-23475	21-23475
Quotation No.: Q20-19951					Chemtest Sample ID.:	1236855	1236856	1236857	1236858	1236859
					Sample Location:	WS 16	WS 17	WS 19	WS 20	WS 21
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	1.00	0.70	1.00	1.00	1.00
					Bottom Depth (m):	1.50	1.40	2.00	1.60	1.60
Determinand	**Accred.**	**SOP**	**Type**	**Units**	**LOD**					
pH	U	1010	10:1		N/A	8.8	8.6	8.6	8.6	8.7
Ammonium	U	1220	10:1	mg/l	0.050	0.16	0.15	0.11	0.17	0.33
Ammonium	N	1220	10:1	mg/kg	0.10	2.1	1.9	1.4	2.1	4.1
Boron (Dissolved)	U	1455	10:1	mg/kg	0.01	< 0.01	0.12	< 0.01	0.17	0.13
Benzo[j]fluoranthene	N	1800	10:1	µg/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010

Results - Soil

Project: Blanchardstown

Client: IGSL				Chemtest Job No.:	21-23475	21-23475	21-23475	21-23475	21-23475
Quotation No.: Q20-19951				Chemtest Sample ID.:	1236855	1236856	1236857	1236858	1236859
				Sample Location:	WS 16	WS 17	WS 19	WS 20	WS 21
				Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):	1.00	0.70	1.00	1.00	1.00
				Bottom Depth (m):	1.50	1.40	2.00	1.60	1.60
				Asbestos Lab:	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**					
ACM Type	U	2192		N/A	-	-	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	2.3	4.9	11	6.0	9.6
Boron (Hot Water Soluble)	U	2120	mg/kg	0.40	[A] < 0.40	[A] < 0.40	[A] < 0.40	[A] < 0.40	[A] < 0.40
Sulphur (Elemental)	U	2180	mg/kg	1.0	[A] 3.8	[A] 7.0	[A] < 1.0	[A] 2.9	[A] < 1.0
Cyanide (Total)	U	2300	mg/kg	0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50
Sulphide (Easily Liberatable)	N	2325	mg/kg	0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50
Sulphate (Acid Soluble)	U	2430	%	0.010	[A] 0.044	[A] 0.052	[A] 0.010	[A] 0.046	[A] 0.016
Arsenic	U	2450	mg/kg	1.0	17	21	16	29	16
Barium	U	2450	mg/kg	10	73	61	48	71	35
Cadmium	U	2450	mg/kg	0.10	0.74	0.54	2.4	0.75	0.46
Chromium	U	2450	mg/kg	1.0	3.6	4.4	9.8	13	28
Molybdenum	U	2450	mg/kg	2.0	< 2.0	< 2.0	5.1	< 2.0	< 2.0
Antimony	N	2450	mg/kg	2.0	< 2.0	< 2.0	< 2.0	2.1	< 2.0
Copper	U	2450	mg/kg	0.50	9.9	9.9	31	19	34
Mercury	U	2450	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	U	2450	mg/kg	0.50	15	22	38	40	76
Lead	U	2450	mg/kg	0.50	49	20	16	36	23
Selenium	U	2450	mg/kg	0.20	< 0.20	< 0.20	0.71	< 0.20	0.91
Zinc	U	2450	mg/kg	0.50	33	45	61	79	150
Chromium (Trivalent)	N	2490	mg/kg	1.0	3.6	4.4	9.8	13	28
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Mineral Oil (TPH Calculation)	N	2670	mg/kg	10	< 10	5700	< 10	< 10	< 10
Diesel Present	N	2670		N/A		True			
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aliphatic TPH >C8-C10	U	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aliphatic TPH >C10-C12	U	2680	mg/kg	1.0	[A] < 1.0	[A] 240	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aliphatic TPH >C12-C16	U	2680	mg/kg	1.0	[A] < 1.0	[A] 1800	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aliphatic TPH >C16-C21	U	2680	mg/kg	1.0	[A] < 1.0	[A] 2200	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aliphatic TPH >C21-C35	U	2680	mg/kg	1.0	[A] < 1.0	[A] 1400	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	[A] < 1.0	[A] 58	[A] < 1.0	[A] < 1.0	[A] < 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	[A] < 5.0	[A] 5700	[A] < 5.0	[A] < 5.0	[A] < 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aromatic TPH >C8-C10	U	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aromatic TPH >C10-C12	U	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aromatic TPH >C12-C16	U	2680	mg/kg	1.0	[A] < 1.0	[A] 180	[A] < 1.0	[A] < 1.0	[A] < 1.0

Results - Soil

Project: Blanchardstown

Client: IGSL				Chemtest Job No.:	21-23475	21-23475	21-23475	21-23475	21-23475
Quotation No.: Q20-19951				Chemtest Sample ID.:	1236855	1236856	1236857	1236858	1236859
				Sample Location:	WS 16	WS 17	WS 19	WS 20	WS 21
				Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):	1.00	0.70	1.00	1.00	1.00
				Bottom Depth (m):	1.50	1.40	2.00	1.60	1.60
				Asbestos Lab:	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**					
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aromatic TPH >C21-C35	U	2680	mg/kg	1.0	[A] < 1.0	[A] 310	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	[A] < 5.0	[A] 490	[A] < 5.0	[A] < 5.0	[A] < 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	[A] < 10	[A] 6200	[A] < 10	[A] < 10	[A] < 10
Benzene	U	2760	µg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Toluene	U	2760	µg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Ethylbenzene	U	2760	µg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
m & p-Xylene	U	2760	µg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
o-Xylene	U	2760	µg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Methyl Tert-Butyl Ether	U	2760	µg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Naphthalene	N	2800	mg/kg	0.010	[A] 0.17	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Acenaphthylene	N	2800	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Acenaphthene	N	2800	mg/kg	0.010	[A] 0.042	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Fluorene	N	2800	mg/kg	0.010	[A] 0.045	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Phenanthrene	N	2800	mg/kg	0.010	[A] 0.10	[A] 0.041	[A] 0.034	[A] < 0.010	[A] 0.032
Anthracene	N	2800	mg/kg	0.010	[A] 0.033	[A] 0.024	[A] 0.013	[A] < 0.010	[A] 0.028
Fluoranthene	N	2800	mg/kg	0.010	[A] 0.088	[A] 0.089	[A] 0.021	[A] 0.030	[A] 0.044
Pyrene	N	2800	mg/kg	0.010	[A] 0.098	[A] 0.076	[A] 0.041	[A] 0.031	[A] 0.051
Benzo[a]anthracene	N	2800	mg/kg	0.010	[A] 0.046	[A] 0.043	[A] 0.023	[A] 0.029	[A] 0.041
Chrysene	N	2800	mg/kg	0.010	[A] 0.086	[A] 0.048	[A] 0.036	[A] 0.048	[A] 0.059
Benzo[b]fluoranthene	N	2800	mg/kg	0.010	[A] 0.063	[A] 0.060	[A] < 0.010	[A] < 0.010	[A] 0.028
Benzo[k]fluoranthene	N	2800	mg/kg	0.010	[A] 0.044	[A] 0.023	[A] < 0.010	[A] < 0.010	[A] 0.043
Benzo[a]pyrene	N	2800	mg/kg	0.010	[A] 0.054	[A] 0.038	[A] < 0.010	[A] < 0.010	[A] 0.037
Indeno(1,2,3-c,d)Pyrene	N	2800	mg/kg	0.010	[A] 0.071	[A] 0.052	[A] < 0.010	[A] < 0.010	[A] 0.046
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.010	[A] 0.067	[A] 0.030	[A] < 0.010	[A] < 0.010	[A] 0.040
Benzo[g,h,i]perylene	N	2800	mg/kg	0.010	[A] 0.082	[A] 0.032	[A] < 0.010	[A] < 0.010	[A] 0.040
Coronene	N	2800	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Total Of 17 PAH's	N	2800	mg/kg	0.20	[A] 1.1	[A] 0.56	[A] < 0.20	[A] < 0.20	[A] 0.49
PCB 28	N	2815	mg/kg	0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010
PCB 52	N	2815	mg/kg	0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010
PCB 90+101	N	2815	mg/kg	0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010
PCB 118	N	2815	mg/kg	0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010
PCB 153	N	2815	mg/kg	0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010
PCB 138	N	2815	mg/kg	0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010
PCB 180	N	2815	mg/kg	0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010
Total PCBs (7 congeners)	N	2815	mg/kg	0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010	[A] < 0.0010
Total Phenols	U	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Single Stage WAC

Project: Blanchardstown

					Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	21-23475						
Chemtest Sample ID:	1236855						
Sample Ref:							
Sample ID:							
Sample Location:	WS 16						
Top Depth(m):	1.00						
Bottom Depth(m):	1.50						
Sampling Date:							
Determinand	**SOP**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	U	%	[A] 0.72	3	5	6
Loss On Ignition	2610	U	%	2.4	--	--	10
Total BTEX	2760	U	mg/kg	[A] < 0.010	6	--	--
Total PCBs (7 congeners)	2815	N	mg/kg	[A] < 0.0010	1	--	--
TPH Total WAC	2670	U	mg/kg	[A] < 10	500	--	--
Total Of 17 PAH's	2800	N	mg/kg	[A] 1.1	100	--	--
pH	2010	U		9.6	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg	0.034	--	To evaluate	To evaluate
Eluate Analysis			**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455	U	0.0003	0.0027	0.5	2	25
Barium	1455	U	0.005	0.052	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.0009	0.0090	0.5	10	70
Copper	1455	U	0.0007	0.0072	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.021	0.21	0.5	10	30
Nickel	1455	U	< 0.0005	< 0.0005	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7
Zinc	1455	U	0.004	0.045	4	50	200
Chloride	1220	U	1.8	18	800	15000	25000
Fluoride	1220	U	0.63	6.3	10	150	500
Sulphate	1220	U	20	200	1000	20000	50000
Total Dissolved Solids	1020	N	72	720	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	4.0	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	2.3

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: Blanchardstown

					Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	21-23475						
Chemtest Sample ID:	1236856						
Sample Ref:							
Sample ID:							
Sample Location:	WS 17						
Top Depth(m):	0.70						
Bottom Depth(m):	1.40						
Sampling Date:							
Determinand	**SOP**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	U	%	[A] 0.57	3	5	6
Loss On Ignition	2610	U	%	1.8	--	--	10
Total BTEX	2760	U	mg/kg	[A] < 0.010	6	--	--
Total PCBs (7 congeners)	2815	N	mg/kg	[A] < 0.0010	1	--	--
TPH Total WAC	2670	U	mg/kg	[A] 6200	500	--	--
Total Of 17 PAH's	2800	N	mg/kg	[A] 0.56	100	--	--
pH	2010	U		8.8	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg	0.026	--	To evaluate	To evaluate
Eluate Analysis			**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455	U	0.0003	0.0027	0.5	2	25
Barium	1455	U	0.063	0.63	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	< 0.0005	< 0.0005	0.5	10	70
Copper	1455	U	0.0045	0.045	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.015	0.15	0.5	10	30
Nickel	1455	U	0.0044	0.044	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	0.0006	0.0058	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	1.6	16	800	15000	25000
Fluoride	1220	U	0.80	8.0	10	150	500
Sulphate	1220	U	23	230	1000	20000	50000
Total Dissolved Solids	1020	N	98	980	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	3.1	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	4.9

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: Blanchardstown

					Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	21-23475						
Chemtest Sample ID:	1236857						
Sample Ref:							
Sample ID:							
Sample Location:	WS 19						
Top Depth(m):	1.00						
Bottom Depth(m):	2.00						
Sampling Date:							
Determinand	**SOP**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	U	%	[A] 0.64	3	5	6
Loss On Ignition	2610	U	%	2.8	--	--	10
Total BTEX	2760	U	mg/kg	[A] < 0.010	6	--	--
Total PCBs (7 congeners)	2815	N	mg/kg	[A] < 0.0010	1	--	--
TPH Total WAC	2670	U	mg/kg	[A] < 10	500	--	--
Total Of 17 PAH's	2800	N	mg/kg	[A] < 0.20	100	--	--
pH	2010	U		8.8	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg	0.049	--	To evaluate	To evaluate
Eluate Analysis			**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455	U	< 0.0002	< 0.0002	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	< 0.0005	< 0.0005	0.5	10	70
Copper	1455	U	0.0008	0.0077	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.019	0.19	0.5	10	30
Nickel	1455	U	< 0.0005	< 0.0005	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.57	5.7	10	150	500
Sulphate	1220	U	9.7	97	1000	20000	50000
Total Dissolved Solids	1020	N	85	840	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	3.8	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	11

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: Blanchardstown

					Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	21-23475						
Chemtest Sample ID:	1236858						
Sample Ref:							
Sample ID:							
Sample Location:	WS 20						
Top Depth(m):	1.00						
Bottom Depth(m):	1.60						
Sampling Date:							
Determinand	**SOP**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	U	%	[A] 0.66	3	5	6
Loss On Ignition	2610	U	%	2.1	--	--	10
Total BTEX	2760	U	mg/kg	[A] < 0.010	6	--	--
Total PCBs (7 congeners)	2815	N	mg/kg	[A] < 0.0010	1	--	--
TPH Total WAC	2670	U	mg/kg	[A] < 10	500	--	--
Total Of 17 PAH's	2800	N	mg/kg	[A] < 0.20	100	--	--
pH	2010	U		8.7	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg	0.026	--	To evaluate	To evaluate
Eluate Analysis			**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455	U	0.0009	0.0085	0.5	2	25
Barium	1455	U	0.061	0.61	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.0007	0.0075	0.5	10	70
Copper	1455	U	0.0010	0.0099	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.014	0.14	0.5	10	30
Nickel	1455	U	< 0.0005	< 0.0005	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	0.0010	0.010	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	1.8	18	800	15000	25000
Fluoride	1220	U	0.51	5.1	10	150	500
Sulphate	1220	U	31	310	1000	20000	50000
Total Dissolved Solids	1020	N	100	1000	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	3.5	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	6.0

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: Blanchardstown

					Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	21-23475						
Chemtest Sample ID:	1236859						
Sample Ref:							
Sample ID:							
Sample Location:	WS 21						
Top Depth(m):	1.00						
Bottom Depth(m):	1.60						
Sampling Date:							
Determinand	**SOP**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	U	%	[A] 0.87	3	5	6
Loss On Ignition	2610	U	%	3.3	--	--	10
Total BTEX	2760	U	mg/kg	[A] < 0.010	6	--	--
Total PCBs (7 congeners)	2815	N	mg/kg	[A] < 0.0010	1	--	--
TPH Total WAC	2670	U	mg/kg	[A] < 10	500	--	--
Total Of 17 PAH's	2800	N	mg/kg	[A] 0.49	100	--	--
pH	2010	U		8.7	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg	0.022	--	To evaluate	To evaluate
Eluate Analysis			**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455	U	< 0.0002	< 0.0002	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	< 0.0005	< 0.0005	0.5	10	70
Copper	1455	U	0.0008	0.0078	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.011	0.11	0.5	10	30
Nickel	1455	U	0.0006	0.0061	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7
Zinc	1455	U	0.017	0.17	4	50	200
Chloride	1220	U	1.8	18	800	15000	25000
Fluoride	1220	U	0.45	4.5	10	150	500
Sulphate	1220	U	7.2	72	1000	20000	50000
Total Dissolved Solids	1020	N	78	780	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	3.7	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	9.6

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

TPH Interpretation

Job	Sample	Matrix	Location	Sample Ref	Sample ID	Sample Depth (m)	Gasoline / Diesel Present	TPH Interpretation
21-23475	1236856	S	WS 17			0.70	Yes	Diesel and Lube Oil

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request.The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1236855			WS 16		A	Amber Glass 250ml
1236855			WS 16		A	Plastic Tub 1000g
1236856			WS 17		A	Amber Glass 250ml
1236856			WS 17		A	Plastic Tub 1000g
1236857			WS 19		A	Amber Glass 250ml
1236857			WS 19		A	Plastic Tub 1000g
1236858			WS 20		A	Amber Glass 250ml
1236858			WS 20		A	Plastic Tub 1000g
1236859			WS 21		A	Amber Glass 250ml
1236859			WS 21		A	Plastic Tub 1000g

Test Methods

SOP	Title	Parameters included	Method summary
1010	pH Value of Waters	pH	pH Meter
1020	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Conductivity Meter
1220	Anions, Alkalinity & Ammonium in Waters	Fluoride; Chloride; Nitrite; Nitrate; Total; Oxidisable Nitrogen (TON); Sulfate; Phosphate; Alkalinity; Ammonium	Automated colorimetric analysis using 'Aquakem 600' Discrete Analyser.
1455	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).
1610	Total/Dissolved Organic Carbon in Waters	Organic Carbon	TOC Analyser using Catalytic Oxidation
1800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Waters by GC-MS	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	Pentane extraction / GCMS detection
1920	Phenols in Waters by HPLC	Phenolic compounds including: Phenol, Cresols, Xylenols, Trimethylphenols Note: Chlorophenols are excluded.	Determination by High Performance Liquid Chromatography (HPLC) using electrochemical detection.
2010	pH Value of Soils	pH	pH Meter
2015	Acid Neutralisation Capacity	Acid Reserve	Titration
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2180	Sulphur (Elemental) in Soils by HPLC	Sulphur	Dichloromethane extraction / HPLC with UV detection
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2325	Sulphide in Soils	Sulphide	Steam distillation with sulphuric acid / analysis by 'Aquakem 600' Discrete Analyser, using N,N–dimethyl-p-phenylenediamine.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
2610	Loss on Ignition	loss on ignition (LOI)	Determination of the proportion by mass that is lost from a soil by ignition at 550°C.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.

Test Methods

SOP	Title	Parameters included	Method summary
2670	Total Petroleum Hydrocarbons (TPH) in Soils by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO*TPH C8–C40	Dichloromethane extraction / GC-FID
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	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*	Dichloromethane extraction / GC-MS
2815	Polychlorinated Biphenyls (PCB) ICES7Congeners in Soils by GC-MS	ICES7 PCB congeners	Acetone/Hexane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.
640	Characterisation of Waste (Leaching C10)	Waste material including soil, sludges and granular waste	ComplianceTest for Leaching of Granular Waste Material and Sludge

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

eurofins | Chemtest
Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

UKAS TESTING 2183

Final Report

Report No.:	21-24738-1		
Initial Date of Issue:	26-Jul-2021		
Client	IGSL		
Client Address:	M7 Business Park Naas County Kildare Ireland		
Contact(s):	Darren Keogh		
Project	Blanchardstown		
Quotation No.:	Q20-21693	**Date Received:**	19-Jul-2021
Order No.:		**Date Instructed:**	19-Jul-2021
No. of Samples:	9		
Turnaround (Wkdays):	7	**Results Due:**	27-Jul-2021
Date Approved:	26-Jul-2021		
Approved By:			
Details:	Glynn Harvey, Technical Manager		

Results - Leachate

Project: Blanchardstown

Client: IGSL					Chemtest Job No.:	21-24738	21-24738	21-24738
Quotation No.: Q20-21693					Chemtest Sample ID.:	1242986	1242992	1242993
					Sample Location:	TP14	WS12	WS5
					Sample Type:	SOIL	SOIL	SOIL
					Top Depth (m):	0.5	1.4	1.8
					Bottom Depth (m):	1.0		
Determinand	**Accred.**	**SOP**	**Type**	**Units**	**LOD**			
pH	U	1010	10:1		N/A	7.6	7.9	8.0
Ammonium	U	1220	10:1	mg/l	0.050	< 0.050	0.073	0.095
Ammonium	N	1220	10:1	mg/kg	0.10	0.28	0.76	1.0
Boron (Dissolved)	U	1455	10:1	mg/kg	0.01	< 0.01	< 0.01	< 0.01
Benzo[j]fluoranthene	N	1800	10:1	µg/l	0.010	< 0.010	< 0.010	< 0.010

Results - Soil

Project: Blanchardstown

Client: IGSL					Chemtest Job No.:	21-24738	21-24738	21-24738	21-24738	21-24738	21-24738	21-24738	21-24738
Quotation No.: Q20-21693					Chemtest Sample ID.:	1242986	1242987	1242988	1242989	1242990	1242991	1242992	1242993	1242994
					Sample Location:	TP14	WS21	WS19	WS15	WS18	WS14	WS12	WS5	WS1
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.5	1.0	1.0	1.0	1.0	1.0	1.4	1.8	1.0
					Bottom Depth (m):	1.0	2.0	2.0	2.0	2.0	1.6			1.6
					Asbestos Lab:	COVENTRY						COVENTRY	COVENTRY	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**										
ACM Type	U	2192		N/A	-							-	-	
Asbestos Identification	U	2192		N/A	No Asbestos Detected							No Asbestos Detected	No Asbestos Detected	
Moisture	N	2030	%	0.020	19	6.8	12	6.8	12	13	8.0	11	10
pH (2.5:1)	N	2010		4.0		[A] 8.4	[A] 8.4	[A] 8.5	[A] 8.5	[A] 8.5			[A] 8.6
Boron (Hot Water Soluble)	U	2120	mg/kg	0.40	[A] < 0.40						[A] 0.48	[A] < 0.40	
Magnesium (Water Soluble)	N	2120	g/l	0.010		[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010			[A] < 0.010
Sulphate (2:1 Water Soluble) as SO4	U	2120	g/l	0.010		[A] 0.017	[A] 0.023	[A] 0.046	[A] < 0.010	[A] 0.035			[A] 0.033
Total Sulphur	U	2175	%	0.010		[A] 0.055	[A] 0.089	[A] 0.11	[A] 0.13	[A] 0.12			[A] 0.063
Sulphur (Elemental)	U	2180	mg/kg	1.0	[A] 2.9						[A] 1.7	[A] < 1.0	
Chloride (Water Soluble)	U	2220	g/l	0.010		[A] 0.012	[A] 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010			[A] < 0.010
Nitrate (Water Soluble)	N	2220	g/l	0.010		< 0.010	< 0.010	< 0.010	< 0.010	< 0.010			< 0.010
Cyanide (Total)	U	2300	mg/kg	0.50	[A] < 0.50						[A] < 0.50	[A] < 0.50	
Sulphide (Easily Liberatable)	N	2325	mg/kg	0.50	[A] 2.2						[A] 5.6	[A] 3.7	
Ammonium (Water Soluble)	U	2220	g/l	0.01		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01			< 0.01
Sulphate (Acid Soluble)	U	2430	%	0.010	[A] 0.044	[A] 0.024	[A] 0.037	[A] 0.030	[A] 0.030	[A] 0.061	[A] 0.11	[A] 0.090	[A] 0.048
Arsenic	U	2450	mg/kg	1.0	12						19	14	
Barium	U	2450	mg/kg	10	94						81	28	
Cadmium	U	2450	mg/kg	0.10	1.4						0.92	0.52	
Chromium	U	2450	mg/kg	1.0	27						21	26	
Molybdenum	U	2450	mg/kg	2.0	2.0						2.7	< 2.0	
Antimony	N	2450	mg/kg	2.0	2.9						2.2	< 2.0	
Copper	U	2450	mg/kg	0.50	110						97	140	
Mercury	U	2450	mg/kg	0.10	0.11						< 0.10	< 0.10	
Nickel	U	2450	mg/kg	0.50	50						58	61	
Lead	U	2450	mg/kg	0.50	32						26	36	
Selenium	U	2450	mg/kg	0.20	0.61						1.9	< 0.20	
Zinc	U	2450	mg/kg	0.50	110						83	48	
Chromium (Trivalent)	N	2490	mg/kg	1.0	27						21	26	
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50						< 0.50	< 0.50	
Mineral Oil (TPH Calculation)	N	2670	mg/kg	10	< 10						< 10	< 10	
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	[A] < 1.0						[A] < 1.0	[A] < 1.0	
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	[A] < 1.0						[A] < 1.0	[A] < 1.0	
Aliphatic TPH >C8-C10	U	2680	mg/kg	1.0	[A] < 1.0						[A] < 1.0	[A] < 1.0	
Aliphatic TPH >C10-C12	U	2680	mg/kg	1.0	[A] < 1.0						[A] < 1.0	[A] < 1.0	
Aliphatic TPH >C12-C16	U	2680	mg/kg	1.0	[A] < 1.0						[A] < 1.0	[A] < 1.0	
Aliphatic TPH >C16-C21	U	2680	mg/kg	1.0	[A] < 1.0						[A] < 1.0	[A] < 1.0	
Aliphatic TPH >C21-C35	U	2680	mg/kg	1.0	[A] < 1.0						[A] < 1.0	[A] < 1.0	
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	[A] < 1.0						[A] < 1.0	[A] < 1.0	

Results - Soil

Project: Blanchardstown

Client: IGSL													
				Chemtest Job No.:	21-24738	21-24738	21-24738	21-24738	21-24738	21-24738	21-24738	21-24738	21-24738
Quotation No.: Q20-21693				Chemtest Sample ID.:	1242986	1242987	1242988	1242989	1242990	1242991	1242992	1242993	1242994
				Sample Location:	TP14	WS21	WS19	WS15	WS18	WS14	WS12	WS5	WS1
				Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):	0.5	1.0	1.0	1.0	1.0	1.0	1.4	1.8	1.0
				Bottom Depth (m):	1.0	2.0	2.0	2.0	2.0	1.6			1.6
				Asbestos Lab:	COVENTRY						COVENTRY	COVENTRY	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	[A] < 5.0						[A] < 5.0	[A] < 5.0	
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	[A] < 1.0						[A] < 1.0	[A] < 1.0	
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	[A] < 1.0						[A] < 1.0	[A] < 1.0	
Aromatic TPH >C8-C10	U	2680	mg/kg	1.0	[A] < 1.0						[A] < 1.0	[A] < 1.0	
Aromatic TPH >C10-C12	U	2680	mg/kg	1.0	[A] < 1.0						[A] < 1.0	[A] < 1.0	
Aromatic TPH >C12-C16	U	2680	mg/kg	1.0	[A] < 1.0						[A] < 1.0	[A] < 1.0	
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	[A] < 1.0						[A] < 1.0	[A] < 1.0	
Aromatic TPH >C21-C35	U	2680	mg/kg	1.0	[A] < 1.0						[A] < 1.0	[A] < 1.0	
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	[A] < 1.0						[A] < 1.0	[A] < 1.0	
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	[A] < 5.0						[A] < 5.0	[A] < 5.0	
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	[A] < 10						[A] < 10	[A] < 10	
Benzene	U	2760	µg/kg	1.0	[A] < 1.0						[A] 1.8	[A] < 1.0	
Toluene	U	2760	µg/kg	1.0	[A] < 1.0						[A] 6.7	[A] < 1.0	
Ethylbenzene	U	2760	µg/kg	1.0	[A] < 1.0						[A] < 1.0	[A] < 1.0	
m & p-Xylene	U	2760	µg/kg	1.0	[A] < 1.0						[A] 5.2	[A] < 1.0	
o-Xylene	U	2760	µg/kg	1.0	[A] < 1.0						[A] 1.4	[A] < 1.0	
Methyl Tert-Butyl Ether	U	2760	µg/kg	1.0	[A] < 1.0						[A] < 1.0	[A] < 1.0	
Naphthalene	N	2800	mg/kg	0.010	[A] 0.44						[A] 0.30	[A] < 0.010	
Acenaphthylene	N	2800	mg/kg	0.010	[A] 0.038						[A] 0.13	[A] < 0.010	
Acenaphthene	N	2800	mg/kg	0.010	[A] 0.43						[A] 0.16	[A] < 0.010	
Fluorene	N	2800	mg/kg	0.010	[A] 0.43						[A] 0.17	[A] < 0.010	
Phenanthrene	N	2800	mg/kg	0.010	[A] 1.8						[A] 0.56	[A] < 0.010	
Anthracene	N	2800	mg/kg	0.010	[A] 0.45						[A] 0.21	[A] < 0.010	
Fluoranthene	N	2800	mg/kg	0.010	[A] 1.6						[A] 0.67	[A] 0.079	
Pyrene	N	2800	mg/kg	0.010	[A] 1.2						[A] 0.62	[A] 0.059	
Benzo[a]anthracene	N	2800	mg/kg	0.010	[A] 0.80						[A] 0.29	[A] < 0.010	
Chrysene	N	2800	mg/kg	0.010	[A] 0.67						[A] 0.27	[A] < 0.010	
Benzo[b]fluoranthene	N	2800	mg/kg	0.010	[A] 0.73						[A] 0.37	[A] < 0.010	
Benzo[k]fluoranthene	N	2800	mg/kg	0.010	[A] 0.23						[A] 0.18	[A] < 0.010	
Benzo[a]pyrene	N	2800	mg/kg	0.010	[A] 0.67						[A] 0.28	[A] < 0.010	
Indeno(1,2,3-c,d)Pyrene	N	2800	mg/kg	0.010	[A] 0.27						[A] 0.21	[A] < 0.010	
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.010	[A] 0.076						[A] 0.085	[A] < 0.010	
Benzo[g,h,i]perylene	N	2800	mg/kg	0.010	[A] 0.28						[A] 0.25	[A] < 0.010	
Coronene	N	2800	mg/kg	0.010	[A] < 0.010						[A] < 0.010	[A] < 0.010	
Total Of 17 PAH's	N	2800	mg/kg	0.20	[A] 10						[A] 4.8	[A] < 0.20	
PCB 28	N	2815	mg/kg	0.0010	[A] < 0.0010						[A] < 0.0010	[A] < 0.0010	
PCB 52	N	2815	mg/kg	0.0010	[A] < 0.0010						[A] < 0.0010	[A] < 0.0010	
PCB 90+101	N	2815	mg/kg	0.0010	[A] < 0.0010						[A] < 0.0010	[A] < 0.0010	
PCB 118	N	2815	mg/kg	0.0010	[A] < 0.0010						[A] < 0.0010	[A] < 0.0010	

Results - Soil

Project: Blanchardstown

Client: IGSL													
Quotation No.: Q20-21693				Chemtest Job No.:	21-24738	21-24738	21-24738	21-24738	21-24738	21-24738	21-24738	21-24738	21-24738
				Chemtest Sample ID.:	1242986	1242987	1242988	1242989	1242990	1242991	1242992	1242993	1242994
				Sample Location:	TP14	WS21	WS19	WS15	WS18	WS14	WS12	WS5	WS1
				Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):	0.5	1.0	1.0	1.0	1.0	1.0	1.4	1.8	1.0
				Bottom Depth (m):	1.0	2.0	2.0	2.0	2.0	1.6			1.6
				Asbestos Lab:	COVENTRY						COVENTRY	COVENTRY	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
PCB 153	N	2815	mg/kg	0.0010	[A] < 0.0010						[A] < 0.0010	[A] < 0.0010	
PCB 138	N	2815	mg/kg	0.0010	[A] < 0.0010						[A] < 0.0010	[A] < 0.0010	
PCB 180	N	2815	mg/kg	0.0010	[A] < 0.0010						[A] < 0.0010	[A] < 0.0010	
Total PCBs (7 congeners)	N	2815	mg/kg	0.0010	[A] < 0.0010						[A] < 0.0010	[A] < 0.0010	
Total Phenols	U	2920	mg/kg	0.10	< 0.10						2.2	< 0.10	

Results - Single Stage WAC

Project: Blanchardstown

					Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	21-24738						
Chemtest Sample ID:	1242986						
Sample Ref:							
Sample ID:							
Sample Location:	TP14						
Top Depth(m):	0.5						
Bottom Depth(m):	1.0						
Sampling Date:							
Determinand	**SOP**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	U	%	[A] 0.83	3	5	6
Loss On Ignition	2610	U	%	5.3	--	--	10
Total BTEX	2760	U	mg/kg	[A] < 0.010	6	--	--
Total PCBs (7 congeners)	2815	N	mg/kg	[A] < 0.0010	1	--	--
TPH Total WAC	2670	U	mg/kg	[A] < 10	500	--	--
Total Of 17 PAH's	2800	N	mg/kg	[A] 10	100	--	--
pH	2010	U		7.9	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg	0.27	--	To evaluate	To evaluate
Eluate Analysis			**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455	U	0.0009	0.0095	0.5	2	25
Barium	1455	U	0.098	0.98	20	100	300
Cadmium	1455	U	0.00082	0.0082	0.04	1	5
Chromium	1455	U	< 0.0005	< 0.0005	0.5	10	70
Copper	1455	U	0.013	0.13	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.074	0.74	0.5	10	30
Nickel	1455	U	0.0019	0.019	0.4	10	40
Lead	1455	U	0.0049	0.049	0.5	10	50
Antimony	1455	U	0.0009	0.0092	0.06	0.7	5
Selenium	1455	U	0.0060	0.060	0.1	0.5	7
Zinc	1455	U	0.14	1.4	4	50	200
Chloride	1220	U	2.3	23	800	15000	25000
Fluoride	1220	U	0.64	6.4	10	150	500
Sulphate	1220	U	6.6	66	1000	20000	50000
Total Dissolved Solids	1020	N	120	1200	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	37	370	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	19

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: Blanchardstown

					Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	21-24738						
Chemtest Sample ID:	1242992						
Sample Ref:							
Sample ID:							
Sample Location:	WS12						
Top Depth(m):	1.4						
Bottom Depth(m):							
Sampling Date:							
Determinand	**SOP**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	U	%	[A] 1.1	3	5	6
Loss On Ignition	2610	U	%	5.0	--	--	10
Total BTEX	2760	U	mg/kg	[A] 0.015	6	--	--
Total PCBs (7 congeners)	2815	N	mg/kg	[A] < 0.0010	1	--	--
TPH Total WAC	2670	U	mg/kg	[A] < 10	500	--	--
Total Of 17 PAH's	2800	N	mg/kg	[A] 4.8	100	--	--
pH	2010	U		8.4	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg	0.020	--	To evaluate	To evaluate
Eluate Analysis			**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455	U	0.0009	0.0087	0.5	2	25
Barium	1455	U	0.010	0.10	20	100	300
Cadmium	1455	U	0.00028	0.0028	0.04	1	5
Chromium	1455	U	< 0.0005	< 0.0005	0.5	10	70
Copper	1455	U	0.0017	0.017	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.075	0.75	0.5	10	30
Nickel	1455	U	< 0.0005	< 0.0005	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	0.0029	0.029	0.1	0.5	7
Zinc	1455	U	0.038	0.38	4	50	200
Chloride	1220	U	3.4	34	800	15000	25000
Fluoride	1220	U	0.30	3.0	10	150	500
Sulphate	1220	U	25	250	1000	20000	50000
Total Dissolved Solids	1020	N	98	970	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	13	130	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	8.0

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: Blanchardstown

					Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	21-24738						
Chemtest Sample ID:	1242993						
Sample Ref:							
Sample ID:							
Sample Location:	WS5						
Top Depth(m):	1.8						
Bottom Depth(m):							
Sampling Date:							
Determinand	**SOP**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	U	%	[A] 0.33	3	5	6
Loss On Ignition	2610	U	%	5.4	--	--	10
Total BTEX	2760	U	mg/kg	[A] < 0.010	6	--	--
Total PCBs (7 congeners)	2815	N	mg/kg	[A] < 0.0010	1	--	--
TPH Total WAC	2670	U	mg/kg	[A] < 10	500	--	--
Total Of 17 PAH's	2800	N	mg/kg	[A] < 0.20	100	--	--
pH	2010	U		8.3	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg	0.0090	--	To evaluate	To evaluate
Eluate Analysis			**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455	U	< 0.0002	< 0.0002	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.0005	0.0055	0.5	10	70
Copper	1455	U	0.0006	0.0061	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.063	0.63	0.5	10	30
Nickel	1455	U	< 0.0005	< 0.0005	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	0.0028	0.028	0.1	0.5	7
Zinc	1455	U	0.024	0.24	4	50	200
Chloride	1220	U	2.5	25	800	15000	25000
Fluoride	1220	U	0.28	2.8	10	150	500
Sulphate	1220	U	42	420	1000	20000	50000
Total Dissolved Solids	1020	N	120	1200	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	23	230	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	11

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request.The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1242986			TP14		A	Amber Glass 250ml
1242986			TP14		A	Plastic Tub 500g
1242987			WS21		A	Amber Glass 250ml
1242987			WS21		A	Plastic Tub 500g
1242988			WS19		A	Amber Glass 250ml
1242988			WS19		A	Plastic Tub 500g
1242989			WS15		A	Amber Glass 250ml
1242989			WS15		A	Plastic Tub 500g
1242990			WS18		A	Amber Glass 250ml
1242990			WS18		A	Plastic Tub 500g
1242991			WS14		A	Amber Glass 250ml
1242991			WS14		A	Plastic Tub 500g
1242992			WS12		A	Amber Glass 250ml
1242992			WS12		A	Plastic Tub 500g
1242993			WS5		A	Amber Glass 250ml
1242993			WS5		A	Plastic Tub 500g
1242994			WS1		A	Amber Glass 250ml
1242994			WS1		A	Plastic Tub 500g

Test Methods

SOP	Title	Parameters included	Method summary
1010	pH Value of Waters	pH	pH Meter
1020	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Conductivity Meter
1220	Anions, Alkalinity & Ammonium in Waters	Fluoride; Chloride; Nitrite; Nitrate; Total; Oxidisable Nitrogen (TON); Sulfate; Phosphate; Alkalinity; Ammonium	Automated colorimetric analysis using 'Aquakem 600' Discrete Analyser.
1455	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).
1610	Total/Dissolved Organic Carbon in Waters	Organic Carbon	TOC Analyser using Catalytic Oxidation
1800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Waters by GC-MS	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	Pentane extraction / GCMS detection
1920	Phenols in Waters by HPLC	Phenolic compounds including: Phenol, Cresols, Xylenols, Trimethylphenols Note: Chlorophenols are excluded.	Determination by High Performance Liquid Chromatography (HPLC) using electrochemical detection.
2010	pH Value of Soils	pH	pH Meter
2015	Acid Neutralisation Capacity	Acid Reserve	Titration
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2175	Total Sulphur in Soils	Total Sulphur	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2180	Sulphur (Elemental) in Soils by HPLC	Sulphur	Dichloromethane extraction / HPLC with UV detection
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2220	Water soluble Chloride in Soils	Chloride	Aqueous extraction and measuremernt by 'Aquakem 600' Discrete Analyser using ferric nitrate / mercuric thiocyanate.
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2325	Sulphide in Soils	Sulphide	Steam distillation with sulphuric acid / analysis by 'Aquakem 600' Discrete Analyser, using N,N–dimethyl-p-phenylenediamine.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.

Test Methods

SOP	Title	Parameters included	Method summary
2610	Loss on Ignition	loss on ignition (LOI)	Determination of the proportion by mass that is lost from a soil by ignition at 550°C.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2670	Total Petroleum Hydrocarbons (TPH) in Soils by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO*TPH C8–C40	Dichloromethane extraction / GC-FID
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	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*	Dichloromethane extraction / GC-MS
2815	Polychlorinated Biphenyls (PCB) ICES7Congeners in Soils by GC-MS	ICES7 PCB congeners	Acetone/Hexane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.
640	Characterisation of Waste (Leaching C10)	Waste material including soil, sludges and granular waste	ComplianceTest for Leaching of Granular Waste Material and Sludge

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

eurofins | Chemtest
Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

UKAS TESTING 2183

Amended Report

Report No.:	21-24743-2		
Initial Date of Issue:	26-Jul-2021	**Date of Re-Issue:**	06-Sep-2021
Client	IGSL		
Client Address:	M7 Business Park Naas County Kildare Ireland		
Contact(s):	Darren Keogh		
Project	Blanchardstown		
Quotation No.:	Q20-19951	**Date Received:**	19-Jul-2021
Order No.:		**Date Instructed:**	19-Jul-2021
No. of Samples:	10		
Turnaround (Wkdays):	35	**Results Due:**	06-Sep-2021
Date Approved:	06-Sep-2021		
Approved By:			
Details:	Glynn Harvey, Technical Manager		

Results - Leachate

Project: Blanchardstown

Client: IGSL					Chemtest Job No.:	21-24743	21-24743	21-24743	21-24743	21-24743	21-24743
Quotation No.: Q20-19951					Chemtest Sample ID.:	1243008	1243011	1243012	1243013	1243016	1243017
					Sample Location:	WS3	WS8	WS22	WS13	WS9	WS4
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	1.50	1.10	1.00	1.00	2.00	1.80
					Bottom Depth (m):			1.50	1.50		
Determinand	**Accred.**	**SOP**	**Type**	**Units**	**LOD**						
pH	U	1010	10:1		N/A	8.6	8.7	9.1	8.9	8.9	8.8
Ammonium	U	1220	10:1	mg/l	0.050	< 0.050	< 0.050	0.16	< 0.050	< 0.050	< 0.050
Ammonium	N	1220	10:1	mg/kg	0.10	0.60	0.52	2.9	0.47	0.57	0.62
Boron (Dissolved)	U	1455	10:1	mg/kg	0.01	1.1	0.42	0.33	0.23	0.21	0.20
Benzo[j]fluoranthene	N	1800	10:1	µg/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010

Results - Soil

Project: Blanchardstown

Client: IGSL				Chemtest Job No.:	21-24743	21-24743	21-24743	21-24743	21-24743	21-24743	21-24743	21-24743	21-24743
Quotation No.: Q20-19951				Chemtest Sample ID.:	1243008	1243009	1243010	1243011	1243012	1243013	1243014	1243015	1243016
				Sample Location:	WS3	WS3	WS7	WS8	WS22	WS13	WS9	WS11	WS9
				Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):	1.50	1.00	1.00	1.10	1.00	1.00	1.00	1.00	2.00
				Bottom Depth (m):		2.00	2.00		1.50	1.50	2.00	2.00	
				Asbestos Lab:	DURHAM			DURHAM	DURHAM	DURHAM			DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A	-			-	-	-			-
Asbestos Identification	U	2192		N/A	No Asbestos Detected			No Asbestos Detected	No Asbestos Detected	No Asbestos Detected			No Asbestos Detected
Moisture	N	2030	%	0.020	8.1	6.2	7.3	2.7	5.0	10	7.9	6.9	7.0
pH (2.5:1)	N	2010		4.0		[A] 8.5	[A] 8.8				[A] 8.7	[A] 8.7	
Boron (Hot Water Soluble)	U	2120	mg/kg	0.40	[A] 0.50			[A] 0.42	[A] 1.0	[A] < 0.40			[A] < 0.40
Magnesium (Water Soluble)	N	2120	g/l	0.010		[A] 0.026	[A] < 0.010				[A] < 0.010	[A] < 0.010	
Sulphate (2:1 Water Soluble) as SO4	U	2120	g/l	0.010		[A] 0.20	[A] 0.19				[A] 0.15	[A] 0.030	
Total Sulphur	U	2175	%	0.010		[A] 0.26	[A] 0.27				[A] 0.083	[A] < 0.010	
Sulphur (Elemental)	U	2180	mg/kg	1.0	[A] 2.9			[A] 3.1	[A] < 1.0	[A] < 1.0			[A] 12
Chloride (Water Soluble)	U	2220	g/l	0.010		[A] < 0.010	[A] 0.017				[A] < 0.010	[A] < 0.010	
Nitrate (Water Soluble)	N	2220	g/l	0.010		< 0.010	< 0.010				< 0.010	< 0.010	
Cyanide (Total)	U	2300	mg/kg	0.50	[A] < 0.50			[A] < 0.50	[A] < 0.50	[A] < 0.50			[A] < 0.50
Sulphide (Easily Liberatable)	N	2325	mg/kg	0.50	[A] 10			[A] 3.9	[A] 13	[A] 3.5			[A] 7.6
Ammonium (Water Soluble)	U	2220	g/l	0.01		< 0.01	< 0.01				< 0.01	< 0.01	
Sulphate (Acid Soluble)	U	2430	%	0.010	[A] 0.030	[A] 0.060	[A] 0.061	[A] 0.083	[A] 0.031	[A] 0.072	[A] 0.053	[A] 0.022	[A] 0.044
Arsenic	U	2450	mg/kg	1.0	16			11	18	19			16
Barium	U	2450	mg/kg	10	37			110	53	38			35
Cadmium	U	2450	mg/kg	0.10	0.26			1.3	1.5	0.57			0.32
Chromium	U	2450	mg/kg	1.0	34			17	17	30			31
Molybdenum	U	2450	mg/kg	2.0	< 2.0			2.1	2.3	< 2.0			< 2.0
Antimony	N	2450	mg/kg	2.0	< 2.0			< 2.0	< 2.0	< 2.0			< 2.0
Copper	U	2450	mg/kg	0.50	100			39	63	94			170
Mercury	U	2450	mg/kg	0.10	< 0.10			0.13	< 0.10	< 0.10			< 0.10
Nickel	U	2450	mg/kg	0.50	78			26	45	72			75
Lead	U	2450	mg/kg	0.50	38			35	19	21			39
Selenium	U	2450	mg/kg	0.20	0.65			0.77	0.57	0.25			0.32
Zinc	U	2450	mg/kg	0.50	130			77	77	60			110
Chromium (Trivalent)	N	2490	mg/kg	1.0	34			17	17	30			31
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50			< 0.50	< 0.50	< 0.50			< 0.50
Mineral Oil (TPH Calculation)	N	2670	mg/kg	10	< 10			< 10	3400	< 10			210
Diesel Present	N	2670		N/A					True				
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	[A] < 1.0			[A] < 1.0	[A] < 1.0	[A] < 1.0			[A] < 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	[A] < 1.0			[A] < 1.0	[A] < 1.0	[A] < 1.0			[A] < 1.0
Aliphatic TPH >C8-C10	U	2680	mg/kg	1.0	[A] < 1.0			[A] < 1.0	[A] < 1.0	[A] < 1.0			[A] < 1.0
Aliphatic TPH >C10-C12	U	2680	mg/kg	1.0	[A] < 1.0			[A] < 1.0	[A] < 1.0	[A] < 1.0			[A] < 1.0
Aliphatic TPH >C12-C16	U	2680	mg/kg	1.0	[A] < 1.0			[A] < 1.0	[A] 89	[A] < 1.0			[A] < 1.0
Aliphatic TPH >C16-C21	U	2680	mg/kg	1.0	[A] < 1.0			[A] < 1.0	[A] 750	[A] < 1.0			[A] < 1.0
Aliphatic TPH >C21-C35	U	2680	mg/kg	1.0	[A] < 1.0			[A] < 1.0	[A] 760	[A] < 1.0			[A] 26

Results - Soil

Project: Blanchardstown

Client: IGSL				Chemtest Job No.:	21-24743	21-24743	21-24743	21-24743	21-24743	21-24743	21-24743	21-24743	21-24743
Quotation No.: Q20-19951				Chemtest Sample ID.:	1243008	1243009	1243010	1243011	1243012	1243013	1243014	1243015	1243016
				Sample Location:	WS3	WS3	WS7	WS8	WS22	WS13	WS9	WS11	WS9
				Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):	1.50	1.00	1.00	1.10	1.00	1.00	1.00	1.00	2.00
				Bottom Depth (m):		2.00	2.00		1.50	1.50	2.00	2.00	
				Asbestos Lab:	DURHAM			DURHAM	DURHAM	DURHAM			DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	[A] < 1.0			[A] < 1.0	[A] 9.3	[A] < 1.0			[A] < 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	[A] < 5.0			[A] < 5.0	[A] 1600	[A] < 5.0			[A] 26
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	[A] < 1.0			[A] < 1.0	[A] < 1.0	[A] < 1.0			[A] < 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	[A] < 1.0			[A] < 1.0	[A] < 1.0	[A] < 1.0			[A] < 1.0
Aromatic TPH >C8-C10	U	2680	mg/kg	1.0	[A] < 1.0			[A] < 1.0	[A] < 1.0	[A] < 1.0			[A] < 1.0
Aromatic TPH >C10-C12	U	2680	mg/kg	1.0	[A] < 1.0			[A] < 1.0	[A] < 1.0	[A] < 1.0			[A] < 1.0
Aromatic TPH >C12-C16	U	2680	mg/kg	1.0	[A] < 1.0			[A] < 1.0	[A] 27	[A] < 1.0			[A] < 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	[A] < 1.0			[A] < 1.0	[A] < 1.0	[A] < 1.0			[A] < 1.0
Aromatic TPH >C21-C35	U	2680	mg/kg	1.0	[A] < 1.0			[A] < 1.0	[A] 850	[A] < 1.0			[A] 110
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	[A] < 1.0			[A] < 1.0	[A] < 1.0	[A] < 1.0			[A] < 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	[A] < 5.0			[A] < 5.0	[A] 880	[A] < 5.0			[A] 110
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	[A] < 10			[A] < 10	[A] 2500	[A] < 10			[A] 140
Benzene	U	2760	µg/kg	1.0	[A] < 1.0			[A] < 1.0	[A] < 1.0	[A] < 1.0			[A] < 1.0
Toluene	U	2760	µg/kg	1.0	[A] < 1.0			[A] < 1.0	[A] < 1.0	[A] < 1.0			[A] < 1.0
Ethylbenzene	U	2760	µg/kg	1.0	[A] < 1.0			[A] < 1.0	[A] < 1.0	[A] < 1.0			[A] < 1.0
m & p-Xylene	U	2760	µg/kg	1.0	[A] < 1.0			[A] < 1.0	[A] < 1.0	[A] < 1.0			[A] 1.2
o-Xylene	U	2760	µg/kg	1.0	[A] < 1.0			[A] < 1.0	[A] < 1.0	[A] < 1.0			[A] < 1.0
Methyl Tert-Butyl Ether	U	2760	µg/kg	1.0	[A] < 1.0			[A] < 1.0	[A] < 1.0	[A] < 1.0			[A] < 1.0
Naphthalene	N	2800	mg/kg	0.010	[A] < 0.010			[A] < 0.010	[A] 0.11	[A] < 0.010			[A] 0.25
Acenaphthylene	N	2800	mg/kg	0.010	[A] < 0.010			[A] < 0.010	[A] < 0.010	[A] < 0.010			[A] < 0.010
Acenaphthene	N	2800	mg/kg	0.010	[A] < 0.010			[A] < 0.010	[A] < 0.010	[A] < 0.010			[A] 0.41
Fluorene	N	2800	mg/kg	0.010	[A] < 0.010			[A] < 0.010	[A] < 0.010	[A] < 0.010			[A] 0.30
Phenanthrene	N	2800	mg/kg	0.010	[A] 0.11			[A] 0.63	[A] 0.12	[A] < 0.010			[A] 3.5
Anthracene	N	2800	mg/kg	0.010	[A] 0.085			[A] 0.10	[A] < 0.010	[A] < 0.010			[A] 1.1
Fluoranthene	N	2800	mg/kg	0.010	[A] 0.093			[A] 0.60	[A] 0.11	[A] < 0.010			[A] 8.5
Pyrene	N	2800	mg/kg	0.010	[A] 0.086			[A] 0.56	[A] 0.11	[A] < 0.010			[A] 6.7
Benzo[a]anthracene	N	2800	mg/kg	0.010	[A] < 0.010			[A] 0.29	[A] < 0.010	[A] < 0.010			[A] 4.8
Chrysene	N	2800	mg/kg	0.010	[A] < 0.010			[A] 0.36	[A] < 0.010	[A] < 0.010			[A] 4.6
Benzo[b]fluoranthene	N	2800	mg/kg	0.010	[A] < 0.010			[A] 0.37	[A] < 0.010	[A] < 0.010			[A] 7.6
Benzo[k]fluoranthene	N	2800	mg/kg	0.010	[A] < 0.010			[A] 0.13	[A] < 0.010	[A] < 0.010			[A] 2.0
Benzo[a]pyrene	N	2800	mg/kg	0.010	[A] < 0.010			[A] 0.29	[A] < 0.010	[A] < 0.010			[A] 6.5
Indeno(1,2,3-c,d)Pyrene	N	2800	mg/kg	0.010	[A] < 0.010			[A] 0.24	[A] < 0.010	[A] < 0.010			[A] 5.2
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.010	[A] < 0.010			[A] < 0.010	[A] < 0.010	[A] < 0.010			[A] 0.86
Benzo[g,h,i]perylene	N	2800	mg/kg	0.010	[A] < 0.010			[A] 0.21	[A] < 0.010	[A] < 0.010			[A] 4.2
Coronene	N	2800	mg/kg	0.010	[A] < 0.010			[A] < 0.010	[A] < 0.010	[A] < 0.010			[A] < 0.010
Total Of 17 PAH's	N	2800	mg/kg	0.20	[A] 0.37			[A] 3.8	[A] 0.45	[A] < 0.20			[A] 57
PCB 28	N	2815	mg/kg	0.0010	[A] < 0.0010			[A] < 0.0010	[A] < 0.0010	[A] < 0.0010			[A] < 0.0010
PCB 52	N	2815	mg/kg	0.0010	[A] < 0.0010			[A] < 0.0010	[A] < 0.0010	[A] < 0.0010			[A] < 0.0010
PCB 90+101	N	2815	mg/kg	0.0010	[A] < 0.0010			[A] < 0.0010	[A] < 0.0010	[A] < 0.0010			[A] < 0.0010

Results - Soil

Project: Blanchardstown

Client: IGSL				Chemtest Job No.:	21-24743	21-24743	21-24743	21-24743	21-24743	21-24743	21-24743	21-24743	21-24743
Quotation No.: Q20-19951				Chemtest Sample ID.:	1243008	1243009	1243010	1243011	1243012	1243013	1243014	1243015	1243016
				Sample Location:	WS3	WS3	WS7	WS8	WS22	WS13	WS9	WS11	WS9
				Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):	1.50	1.00	1.00	1.10	1.00	1.00	1.00	1.00	2.00
				Bottom Depth (m):		2.00	2.00		1.50	1.50	2.00	2.00	
				Asbestos Lab:	DURHAM			DURHAM	DURHAM	DURHAM			DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
PCB 118	N	2815	mg/kg	0.0010	[A] < 0.0010			[A] < 0.0010	[A] < 0.0010	[A] < 0.0010			[A] < 0.0010
PCB 153	N	2815	mg/kg	0.0010	[A] < 0.0010			[A] < 0.0010	[A] < 0.0010	[A] < 0.0010			[A] < 0.0010
PCB 138	N	2815	mg/kg	0.0010	[A] < 0.0010			[A] < 0.0010	[A] < 0.0010	[A] < 0.0010			[A] < 0.0010
PCB 180	N	2815	mg/kg	0.0010	[A] < 0.0010			[A] < 0.0010	[A] < 0.0010	[A] < 0.0010			[A] < 0.0010
Total PCBs (7 congeners)	N	2815	mg/kg	0.0010	[A] < 0.0010			[A] < 0.0010	[A] < 0.0010	[A] < 0.0010			[A] < 0.0010
Total Phenols	U	2920	mg/kg	0.10	< 0.10			< 0.10	< 0.10	< 0.10			< 0.10

Results - Soil

Project: Blanchardstown

Client: IGSL					Chemtest Job No.: 21-24743
Quotation No.: Q20-19951					Chemtest Sample ID.: 1243017
					Sample Location: WS4
					Sample Type: SOIL
					Top Depth (m): 1.80
					Bottom Depth (m):
					Asbestos Lab: DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
ACM Type	U	2192		N/A	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected
Moisture	N	2030	%	0.020	10
pH (2.5:1)	N	2010		4.0	
Boron (Hot Water Soluble)	U	2120	mg/kg	0.40	[A] < 0.40
Magnesium (Water Soluble)	N	2120	g/l	0.010	
Sulphate (2:1 Water Soluble) as SO4	U	2120	g/l	0.010	
Total Sulphur	U	2175	%	0.010	
Sulphur (Elemental)	U	2180	mg/kg	1.0	[A] < 1.0
Chloride (Water Soluble)	U	2220	g/l	0.010	
Nitrate (Water Soluble)	N	2220	g/l	0.010	
Cyanide (Total)	U	2300	mg/kg	0.50	[A] < 0.50
Sulphide (Easily Liberatable)	N	2325	mg/kg	0.50	[A] 3.9
Ammonium (Water Soluble)	U	2220	g/l	0.01	
Sulphate (Acid Soluble)	U	2430	%	0.010	[A] 0.069
Arsenic	U	2450	mg/kg	1.0	13
Barium	U	2450	mg/kg	10	12
Cadmium	U	2450	mg/kg	0.10	0.31
Chromium	U	2450	mg/kg	1.0	12
Molybdenum	U	2450	mg/kg	2.0	< 2.0
Antimony	N	2450	mg/kg	2.0	< 2.0
Copper	U	2450	mg/kg	0.50	41
Mercury	U	2450	mg/kg	0.10	< 0.10
Nickel	U	2450	mg/kg	0.50	26
Lead	U	2450	mg/kg	0.50	10
Selenium	U	2450	mg/kg	0.20	< 0.20
Zinc	U	2450	mg/kg	0.50	27
Chromium (Trivalent)	N	2490	mg/kg	1.0	12
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50
Mineral Oil (TPH Calculation)	N	2670	mg/kg	10	< 10
Diesel Present	N	2670		N/A	
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	[A] < 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	[A] < 1.0
Aliphatic TPH >C8-C10	U	2680	mg/kg	1.0	[A] < 1.0
Aliphatic TPH >C10-C12	U	2680	mg/kg	1.0	[A] < 1.0
Aliphatic TPH >C12-C16	U	2680	mg/kg	1.0	[A] < 1.0
Aliphatic TPH >C16-C21	U	2680	mg/kg	1.0	[A] < 1.0
Aliphatic TPH >C21-C35	U	2680	mg/kg	1.0	[A] 12

Results - Soil

Project: Blanchardstown

Client: IGSL					Chemtest Job No.:	21-24743
Quotation No.: Q20-19951					Chemtest Sample ID.:	1243017
					Sample Location:	WS4
					Sample Type:	SOIL
					Top Depth (m):	1.80
					Bottom Depth (m):	
					Asbestos Lab:	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	[A] < 1.0	
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	[A] 12	
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	[A] < 1.0	
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	[A] < 1.0	
Aromatic TPH >C8-C10	U	2680	mg/kg	1.0	[A] < 1.0	
Aromatic TPH >C10-C12	U	2680	mg/kg	1.0	[A] < 1.0	
Aromatic TPH >C12-C16	U	2680	mg/kg	1.0	[A] < 1.0	
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	[A] 25	
Aromatic TPH >C21-C35	U	2680	mg/kg	1.0	[A] 830	
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	[A] < 1.0	
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	[A] 850	
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	[A] 860	
Benzene	U	2760	µg/kg	1.0	[A] < 1.0	
Toluene	U	2760	µg/kg	1.0	[A] < 1.0	
Ethylbenzene	U	2760	µg/kg	1.0	[A] < 1.0	
m & p-Xylene	U	2760	µg/kg	1.0	[A] < 1.0	
o-Xylene	U	2760	µg/kg	1.0	[A] < 1.0	
Methyl Tert-Butyl Ether	U	2760	µg/kg	1.0	[A] < 1.0	
Naphthalene	N	2800	mg/kg	0.010	[A] 0.13	
Acenaphthylene	N	2800	mg/kg	0.010	[A] < 0.010	
Acenaphthene	N	2800	mg/kg	0.010	[A] < 0.010	
Fluorene	N	2800	mg/kg	0.010	[A] 0.10	
Phenanthrene	N	2800	mg/kg	0.010	[A] 0.35	
Anthracene	N	2800	mg/kg	0.010	[A] 0.19	
Fluoranthene	N	2800	mg/kg	0.010	[A] 0.72	
Pyrene	N	2800	mg/kg	0.010	[A] 0.61	
Benzo[a]anthracene	N	2800	mg/kg	0.010	[A] 0.50	
Chrysene	N	2800	mg/kg	0.010	[A] 0.50	
Benzo[b]fluoranthene	N	2800	mg/kg	0.010	[A] 0.79	
Benzo[k]fluoranthene	N	2800	mg/kg	0.010	[A] 0.25	
Benzo[a]pyrene	N	2800	mg/kg	0.010	[A] 0.73	
Indeno(1,2,3-c,d)Pyrene	N	2800	mg/kg	0.010	[A] 0.62	
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.010	[A] 0.23	
Benzo[g,h,i]perylene	N	2800	mg/kg	0.010	[A] 0.60	
Coronene	N	2800	mg/kg	0.010	[A] < 0.010	
Total Of 17 PAH's	N	2800	mg/kg	0.20	[A] 6.3	
PCB 28	N	2815	mg/kg	0.0010	[A] < 0.0010	
PCB 52	N	2815	mg/kg	0.0010	[A] < 0.0010	
PCB 90+101	N	2815	mg/kg	0.0010	[A] < 0.0010	

Results - Soil

Project: Blanchardstown

Client: IGSL				**Chemtest Job No.:**	21-24743
Quotation No.: Q20-19951				**Chemtest Sample ID.:**	1243017
				Sample Location:	WS4
				Sample Type:	SOIL
				Top Depth (m):	1.80
				Bottom Depth (m):	
				Asbestos Lab:	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
PCB 118	N	2815	mg/kg	0.0010	[A] < 0.0010
PCB 153	N	2815	mg/kg	0.0010	[A] < 0.0010
PCB 138	N	2815	mg/kg	0.0010	[A] < 0.0010
PCB 180	N	2815	mg/kg	0.0010	[A] < 0.0010
Total PCBs (7 congeners)	N	2815	mg/kg	0.0010	[A] < 0.0010
Total Phenols	U	2920	mg/kg	0.10	< 0.10

Results - Single Stage WAC

Project: Blanchardstown

					Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	21-24743						
Chemtest Sample ID:	1243008						
Sample Ref:							
Sample ID:							
Sample Location:	WS3						
Top Depth(m):	1.50						
Bottom Depth(m):							
Sampling Date:							
Determinand	**SOP**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	U	%	[A] 0.91	3	5	6
Loss On Ignition	2610	U	%	4.1	--	--	10
Total BTEX	2760	U	mg/kg	[A] < 0.010	6	--	--
Total PCBs (7 congeners)	2815	N	mg/kg	[A] < 0.0010	1	--	--
TPH Total WAC	2670	U	mg/kg	[A] < 10	500	--	--
Total Of 17 PAH's	2800	N	mg/kg	[A] 0.37	100	--	--
pH	2010	U		8.5	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg	0.0070	--	To evaluate	To evaluate
Eluate Analysis			**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455	U	< 0.0002	< 0.0002	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	< 0.0005	< 0.0005	0.5	10	70
Copper	1455	U	0.0005	0.0053	2	50	100
Mercury	1455	U	0.00005	0.00053	0.01	0.2	2
Molybdenum	1455	U	0.012	0.12	0.5	10	30
Nickel	1455	U	< 0.0005	< 0.0005	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	0.0008	0.0083	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.32	3.2	10	150	500
Sulphate	1220	U	25	250	1000	20000	50000
Total Dissolved Solids	1020	N	85	840	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	10	100	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	8.1

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: Blanchardstown

					Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	21-24743						
Chemtest Sample ID:	1243011						
Sample Ref:							
Sample ID:							
Sample Location:	WS8						
Top Depth(m):	1.10						
Bottom Depth(m):							
Sampling Date:							
Determinand	**SOP**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	U	%	[A] 1.8	3	5	6
Loss On Ignition	2610	U	%	7.3	--	--	10
Total BTEX	2760	U	mg/kg	[A] < 0.010	6	--	--
Total PCBs (7 congeners)	2815	N	mg/kg	[A] < 0.0010	1	--	--
TPH Total WAC	2670	U	mg/kg	[A] < 10	500	--	--
Total Of 17 PAH's	2800	N	mg/kg	[A] 3.8	100	--	--
pH	2010	U		8.6	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg	0.0050	--	To evaluate	To evaluate
Eluate Analysis			**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455	U	0.0006	0.0064	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	< 0.0005	< 0.0005	0.5	10	70
Copper	1455	U	< 0.0005	< 0.0005	2	50	100
Mercury	1455	U	0.00006	0.00056	0.01	0.2	2
Molybdenum	1455	U	0.0075	0.075	0.5	10	30
Nickel	1455	U	< 0.0005	< 0.0005	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	0.0008	0.0083	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.19	1.9	10	150	500
Sulphate	1220	U	21	210	1000	20000	50000
Total Dissolved Solids	1020	N	72	720	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	7.0	70	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	2.7

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: Blanchardstown

					Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	21-24743						
Chemtest Sample ID:	1243012						
Sample Ref:							
Sample ID:							
Sample Location:	WS22						
Top Depth(m):	1.00						
Bottom Depth(m):	1.50						
Sampling Date:							
Determinand	**SOP**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	U	%	[A] 0.60	3	5	6
Loss On Ignition	2610	U	%	2.5	--	--	10
Total BTEX	2760	U	mg/kg	[A] < 0.010	6	--	--
Total PCBs (7 congeners)	2815	N	mg/kg	[A] < 0.0010	1	--	--
TPH Total WAC	2670	U	mg/kg	[A] 2500	500	--	--
Total Of 17 PAH's	2800	N	mg/kg	[A] 0.45	100	--	--
pH	2010	U		8.5	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg	0.0020	--	To evaluate	To evaluate
Eluate Analysis			**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455	U	0.0022	0.022	0.5	2	25
Barium	1455	U	0.014	0.14	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	< 0.0005	< 0.0005	0.5	10	70
Copper	1455	U	< 0.0005	< 0.0005	2	50	100
Mercury	1455	U	0.00007	0.00074	0.01	0.2	2
Molybdenum	1455	U	0.011	0.11	0.5	10	30
Nickel	1455	U	< 0.0005	< 0.0005	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	0.0008	0.0082	0.06	0.7	5
Selenium	1455	U	0.0007	0.0070	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	1.3	13	800	15000	25000
Fluoride	1220	U	0.27	2.7	10	150	500
Sulphate	1220	U	21	210	1000	20000	50000
Total Dissolved Solids	1020	N	72	720	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	13	130	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	5.0

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: Blanchardstown

					Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	21-24743						
Chemtest Sample ID:	1243013						
Sample Ref:							
Sample ID:							
Sample Location:	WS13						
Top Depth(m):	1.00						
Bottom Depth(m):	1.50						
Sampling Date:							
Determinand	**SOP**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	U	%	[A] 0.44	3	5	6
Loss On Ignition	2610	U	%	4.1	--	--	10
Total BTEX	2760	U	mg/kg	[A] < 0.010	6	--	--
Total PCBs (7 congeners)	2815	N	mg/kg	[A] < 0.0010	1	--	--
TPH Total WAC	2670	U	mg/kg	[A] < 10	500	--	--
Total Of 17 PAH's	2800	N	mg/kg	[A] < 0.20	100	--	--
pH	2010	U		8.3	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg	0.014	--	To evaluate	To evaluate
Eluate Analysis			**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455	U	< 0.0002	< 0.0002	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	< 0.0005	< 0.0005	0.5	10	70
Copper	1455	U	0.0006	0.0063	2	50	100
Mercury	1455	U	0.00006	0.00055	0.01	0.2	2
Molybdenum	1455	U	0.0079	0.079	0.5	10	30
Nickel	1455	U	< 0.0005	< 0.0005	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	1.4	14	800	15000	25000
Fluoride	1220	U	0.24	2.4	10	150	500
Sulphate	1220	U	40	400	1000	20000	50000
Total Dissolved Solids	1020	N	120	1200	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	9.3	93	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	10

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: Blanchardstown

					Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	21-24743						
Chemtest Sample ID:	1243016						
Sample Ref:							
Sample ID:							
Sample Location:	WS9						
Top Depth(m):	2.00						
Bottom Depth(m):							
Sampling Date:							
Determinand	**SOP**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	U	%	[A] 1.0	3	5	6
Loss On Ignition	2610	U	%	4.3	--	--	10
Total BTEX	2760	U	mg/kg	[A] < 0.010	6	--	--
Total PCBs (7 congeners)	2815	N	mg/kg	[A] < 0.0010	1	--	--
TPH Total WAC	2670	U	mg/kg	[A] 140	500	--	--
Total Of 17 PAH's	2800	N	mg/kg	[A] 57	100	--	--
pH	2010	U		8.6	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg	0.010	--	To evaluate	To evaluate
Eluate Analysis			**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455	U	0.0002	0.0022	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.0011	0.011	0.5	10	70
Copper	1455	U	0.0006	0.0060	2	50	100
Mercury	1455	U	0.00006	0.00061	0.01	0.2	2
Molybdenum	1455	U	0.010	0.10	0.5	10	30
Nickel	1455	U	< 0.0005	< 0.0005	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	0.0010	0.010	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	< 1.0	< 10	800	15000	25000
Fluoride	1220	U	0.33	3.3	10	150	500
Sulphate	1220	U	5.2	52	1000	20000	50000
Total Dissolved Solids	1020	N	72	720	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	10	100	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	7.0

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: Blanchardstown

					Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	21-24743						
Chemtest Sample ID:	1243017						
Sample Ref:							
Sample ID:							
Sample Location:	WS4						
Top Depth(m):	1.80						
Bottom Depth(m):							
Sampling Date:							
Determinand	**SOP**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	U	%	[A] 0.40	3	5	6
Loss On Ignition	2610	U	%	3.5	--	--	10
Total BTEX	2760	U	mg/kg	[A] < 0.010	6	--	--
Total PCBs (7 congeners)	2815	N	mg/kg	[A] < 0.0010	1	--	--
TPH Total WAC	2670	U	mg/kg	[A] 860	500	--	--
Total Of 17 PAH's	2800	N	mg/kg	[A] 6.3	100	--	--
pH	2010	U		8.4	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg	0.17	--	To evaluate	To evaluate
Eluate Analysis			**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455	U	< 0.0002	< 0.0002	0.5	2	25
Barium	1455	U	< 0.005	< 0.0005	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	0.0006	0.0064	0.5	10	70
Copper	1455	U	0.0006	0.0064	2	50	100
Mercury	1455	U	0.00006	0.00058	0.01	0.2	2
Molybdenum	1455	U	0.0078	0.078	0.5	10	30
Nickel	1455	U	< 0.0005	< 0.0005	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0005	0.1	0.5	7
Zinc	1455	U	< 0.003	< 0.003	4	50	200
Chloride	1220	U	1.7	17	800	15000	25000
Fluoride	1220	U	0.27	2.7	10	150	500
Sulphate	1220	U	42	420	1000	20000	50000
Total Dissolved Solids	1020	N	120	1200	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	10	100	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	10

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

TPH Interpretation

Job	Sample	Matrix	Location	Sample Ref	Sample ID	Sample Depth (m)	Gasoline / Diesel Present	TPH Interpretation
21-24743	1243012	S	WS22			1.00	Yes	Diesel and Lube Oil

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request.The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1243008			WS3		A	Amber Glass 250ml
1243008			WS3		A	Plastic Tub 500g
1243009			WS3		A	Amber Glass 250ml
1243009			WS3		A	Plastic Tub 500g
1243010			WS7		A	Amber Glass 250ml
1243010			WS7		A	Plastic Tub 500g
1243011			WS8		A	Amber Glass 250ml
1243011			WS8		A	Plastic Tub 500g
1243012			WS22		A	Amber Glass 250ml
1243012			WS22		A	Plastic Tub 500g
1243013			WS13		A	Amber Glass 250ml
1243013			WS13		A	Plastic Tub 500g
1243014			WS9		A	Amber Glass 250ml
1243014			WS9		A	Plastic Tub 500g
1243015			WS11		A	Amber Glass 250ml
1243015			WS11		A	Plastic Tub 500g
1243016			WS9		A	Amber Glass 250ml
1243016			WS9		A	Plastic Tub 500g
1243017			WS4		A	Amber Glass 250ml
1243017			WS4		A	Plastic Tub 500g