

Environmental Chemistry

Certificate of Analysis

- Client: Alpha Construction
- Project: 22092199
- Quote: BEC220926855 V1.2
- Project Ref: Alpha Construction
 - Site: Denby SCJ
 - Contact: Hassan Habib
 - Address: Alpha House Hilton Derbyshire DE65 5GE
 - E-Mail: Hassan.Habib-ext@alphaconstruction.co.uk
 - Phone: 44 (0)1283 733688
- No. Samples Received: 2
 - Date Received: 30/09/2022
 - Analysis Date: 12/10/2022
 - Date Issued: 12/10/2022
 - **Report Type:** Final Version 01
 - This report supersedes any versions previously issued by the laboratory

Reported by



Samples Analysed

| <u>Text ID</u> | Sample Reference | Sampling Date | Sample Type | Sample Description |
|----------------|------------------|---------------------|-------------|--------------------|
| 22092199-001 | 01 | 28/09/2022 11:00:00 | SOLID | Soil Sample |
| 22092199-002 | 02 Sump | 09/09/2022 10:00:00 | SOLID | Soil Sample |





| | | | s | Sample ID | C | 001 | 0 | 02 |
|------------------------|-----------------------|--------|--------|-----------|------------|------------|------------|------------|
| | | | Cus | stomer ID | | 01 | 02 5 | Sump |
| | | | San | nple Type | LPL | SOLID | LPL | SOLID |
| | | | Samp | ling Date | 28/09/2022 | 28/09/2022 | 09/09/2022 | 09/09/2022 |
| Analysis | Method Code | MDL | Units | Accred. | | | | |
| Antimony as Sb | ICPMSW (Dissolved) | 0.01 | mg/kg^ | N | <0.01 | | <0.01 | |
| Arsenic as As | ICPMSW (Dissolved) | 0.01 | mg/kg^ | N | <0.01 | | 0.03 | |
| Barium as Ba | ICPWATVAR (Dissolved) | 0.1 | mg/kg^ | N | <0.1 | | 0.2 | |
| Cadmium as Cd | ICPMSW (Dissolved) | 0.0002 | mg/kg^ | N | <0.0002 | | 0.0002 | |
| Chloride as Cl | KONENS | 10 | mg/kg^ | N | <10 | | <10 | |
| Total Chromium as Cr | ICPMSW (Dissolved) | 0.01 | mg/kg^ | N | <0.01 | | 0.02 | |
| Copper as Cu | ICPMSW (Dissolved) | 0.01 | mg/kg^ | N | <0.01 | | 0.02 | |
| Lead as Pb | ICPMSW (Dissolved) | 0.01 | mg/kg^ | N | <0.01 | | <0.01 | |
| Mercury as Hg | ICPMSW (Dissolved) | 0.0003 | mg/kg^ | N | <0.0003 | | 0.0004 | |
| Molybdenum as Mo | ICPMSW (Dissolved) | 0.01 | mg/kg^ | N | 0.02 | | <0.01 | |
| Nickel as Ni | ICPMSW (Dissolved) | 0.01 | mg/kg^ | N | <0.01 | | <0.01 | |
| Phenol Index | SFAPI | 0.5 | mg/kg^ | N | 1.1 | | <0.5 | |
| Selenium as Se | ICPMSW (Dissolved) | 0.01 | mg/kg^ | N | <0.01 | | <0.01 | |
| Total Sulphur as SO4 | ICPWATVAR (Dissolved) | 30 | mg/kg^ | N | <30 | | <30 | |
| TDS as mg/kg | PHCONDW | 700 | mg/kg^ | N | <700 | | <700 | |
| Leached Organic Carbon | WSLM13 | 2 | mg/kg^ | N | 19.1 | | 20.9 | |
| Fluoride as F | ISEF | 1 | mg/kg^ | N | 11 | | <1 | |
| Zinc as Zn | ICPMSW (Dissolved) | 0.02 | mg/kg^ | N | 0.03 | | 0.12 | |
| Conductivity at 25°C | PHCONDW | 100 | µS/cm | U | 101 | | <100 | |





| | | | S | ample ID | 0 | 01 | 0 | 02 |
|------------------------|--------------------|---------|----------|----------|------------|------------|------------|------------|
| | | | Cus | tomer ID | (| 01 | | Sump |
| | | | Sam | ple Type | LPL | SOLID | LPL | SOLID |
| | | | Sampl | ing Date | 28/09/2022 | 28/09/2022 | 09/09/2022 | 09/09/2022 |
| Analysis | Method Code | MDL | Units | Accred. | | | | |
| рН | PHCONDW | 1 | pH units | U | 8.0 | | 8.0 | |
| TDS as mg/l | PHCONDW | 70 | mg/l | N | <70 | | <70 | |
| ANC | ANC | 0.04 | mol/kg^ | N | | 4.72 | | 3.60 |
| pH (2.5:1 extraction) | PHSOIL | 1 | pH units | UM | | 8.7 | | 9.0 |
| Chloride as Cl | KONENS | 1 | mg/l | U | <1 | | <1 | |
| Phenol Index | SFAPI | 0.05 | mg/l | U | 0.11 | | <0.05 | |
| Fluoride as F | ISEF | 0.1 | mg/l | U | 1.1 | | <0.1 | |
| Total Organic Carbon | WSLM59 | 0.02 | % m/m^ | U | | 1.36 | | 0.32 |
| LOI @ 450°C | LOI(%MM) | 0.2 | % m/m^ | N | | 3.7 | | 1.1 |
| Leached Organic Carbon | TOCW | 0.4 | mg/l | U | 1.92 | | 2.09 | |
| Antimony as Sb | ICPMSW (Dissolved) | 0.001 | mg/l | U | <0.001 | | <0.001 | |
| Arsenic as As | ICPMSW (Dissolved) | 0.001 | mg/l | U | <0.001 | | 0.003 | |
| Cadmium as Cd | ICPMSW (Dissolved) | 0.00002 | mg/l | U | <0.00002 | | 0.00002 | |
| Total Chromium as Cr | ICPMSW (Dissolved) | 0.001 | mg/l | U | <0.001 | | 0.002 | |
| Copper as Cu | ICPMSW (Dissolved) | 0.001 | mg/l | U | 0.001 | | 0.002 | |
| Lead as Pb | ICPMSW (Dissolved) | 0.001 | mg/l | U | <0.001 | | <0.001 | |
| Mercury as Hg | ICPMSW (Dissolved) | 0.00003 | mg/l | U | <0.00003 | | 0.00004 | |
| Molybdenum as Mo | ICPMSW (Dissolved) | 0.001 | mg/l | U | 0.002 | | <0.001 | |
| Nickel as Ni | ICPMSW (Dissolved) | 0.001 | mg/l | U | <0.001 | | <0.001 | |





| | | | s | ample ID | C | 01 | 0 | 02 |
|--------------------------|-----------------------|-------|--------|-----------|------------|------------|------------|------------|
| | | | Cus | tomer ID | | 01 | 02 5 | Sump |
| | | | Sam | ple Type | LPL SOLID | | LPL | SOLID |
| | | | Samp | ling Date | 28/09/2022 | 28/09/2022 | 09/09/2022 | 09/09/2022 |
| Analysis | Method Code | MDL | Units | Accred. | | | | |
| Selenium as Se | ICPMSW (Dissolved) | 0.001 | mg/l | U | <0.001 | | <0.001 | |
| Zinc as Zn | ICPMSW (Dissolved) | 0.002 | mg/l | U | 0.003 | | 0.012 | |
| Barium as Ba | ICPWATVAR (Dissolved) | 0.01 | mg/l | U | <0.01 | | 0.02 | |
| Total Sulphur as SO4 | ICPWATVAR (Dissolved) | 3 | mg/l | U | 3 | | <3 | |
| Benzene HS_1D_AR | BTEXHSA | 0.01 | mg/kg^ | UM | | <0.012* в | | <0.010* в |
| Ethylbenzene HS_1D_AR | BTEXHSA | 0.01 | mg/kg^ | UM | | <0.012 | | <0.010 |
| m/p-Xylene HS_1D_AR | BTEXHSA | 0.02 | mg/kg^ | UM | | <0.023 | | <0.021 |
| o-Xylene HS_1D_AR | BTEXHSA | 0.01 | mg/kg^ | UM | | <0.012 | | <0.010 |
| Toluene HS_1D_AR | BTEXHSA | 0.01 | mg/kg^ | UM | | <0.012 | | <0.010 |
| Total BTEX HS_1D_AR | BTEXHSA | 0.06 | mg/kg^ | UM | | <0.069 | | <0.062 |
| Acenaphthene | PAHMSUS | 0.08 | mg/kg^ | UM | | <0.09 | | <0.08 |
| Acenaphthylene | PAHMSUS | 0.08 | mg/kg^ | U | | <0.09 | | <0.08 |
| Anthracene | PAHMSUS | 0.08 | mg/kg^ | U | | <0.09 | | <0.08 |
| Benzo[a]anthracene | PAHMSUS | 0.08 | mg/kg^ | UM | | 0.16 | | <0.08 |
| Benzo[a]pyrene | PAHMSUS | 0.08 | mg/kg^ | UM | | 0.19 | | 0.09 |
| Benzo[b]fluoranthene | PAHMSUS | 0.08 | mg/kg^ | UM | | 0.18 | | 0.09 |
| Benzo[g,h,i]perylene | PAHMSUS | 0.08 | mg/kg^ | UM | | 0.10 | | <0.08 |
| Benzo[k]fluoranthene | PAHMSUS | 0.08 | mg/kg^ | UM | | 0.11 | | <0.08 |
| Chrysene | PAHMSUS | 0.08 | mg/kg^ | UM | | 0.19 | | <0.08 |





| | | | s | ample ID | C | 001 | 0 | 02 |
|-------------------------------------|----------------------|-------|--------|-----------|------------|------------|------------|------------|
| | | | Cus | tomer ID | | 01 | 02 \$ | Sump |
| | | | Sam | ple Type | LPL | SOLID | LPL | SOLID |
| | | | Samp | ling Date | 28/09/2022 | 28/09/2022 | 09/09/2022 | 09/09/2022 |
| Analysis | Method Code | MDL | Units | Accred. | | | | |
| Coronene | PAHMSUS | 0.08 | mg/kg^ | N | | <0.09 | | <0.08 |
| Dibenzo[a,h]anthracene | PAHMSUS | 0.08 | mg/kg^ | UM | | <0.09 | | <0.08 |
| Fluoranthene | PAHMSUS | 0.08 | mg/kg^ | UM | | 0.14 | | <0.08 |
| Fluorene | PAHMSUS | 0.08 | mg/kg^ | UM | | <0.09 | | <0.08 |
| Indeno[1,2,3-cd]pyrene | PAHMSUS | 0.08 | mg/kg^ | UM | | 0.11 | | <0.08 |
| Naphthalene | PAHMSUS | 0.08 | mg/kg^ | UM | | <0.09 | | <0.08 |
| Phenanthrene | PAHMSUS | 0.08 | mg/kg^ | UM | | 0.11 | | <0.08 |
| Pyrene | PAHMSUS | 0.08 | mg/kg^ | UM | | 0.13 | | <0.08 |
| Total PAH 16 | PAHMSUS | 1.28 | mg/kg^ | U | | 1.97 | | 1.34 |
| Total PAH 17 | PAHMSUS | 1.36 | mg/kg^ | N | | 2.06 | | 1.42 |
| PCB 101 | PCBECD | 0.005 | mg/kg^ | UM | | <0.006 | | <0.005 |
| PCB 118 | PCBECD | 0.005 | mg/kg^ | UM | | <0.006 | | <0.005 |
| PCB 138 | PCBECD | 0.005 | mg/kg^ | UM | | <0.006 | | <0.005 |
| PCB 153 | PCBECD | 0.005 | mg/kg^ | UM | | <0.006 | | <0.005 |
| PCB 180 | PCBECD | 0.005 | mg/kg^ | UM | | <0.006 | | <0.005 |
| PCB 28 | PCBECD | 0.005 | mg/kg^ | UM | | <0.006 | | <0.005 |
| PCB 52 | PCBECD | 0.005 | mg/kg^ | UM | | <0.006 | | <0.005 |
| Total PCB 7 Congeners | PCBECD | 0.035 | mg/kg^ | UM | | <0.040 | | <0.036 |
| >C10-C40 (Aliphatic) EH_CU_ID_AL | TPHFIDUS (Aliphatic) | 20 | mg/kg^ | U | | 27.0 | | 107 |





| | | | Sa | ample ID | C | 001 | 0 | 02 |
|--|------------------------|-----|--------|----------|------------|--------------|------------|--------------|
| | | | Cust | tomer ID | | 01 | 02 S | Sump |
| | | | Sam | ple Type | LPL | SOLID | LPL | SOLID |
| | | | Sampl | ing Date | 28/09/2022 | 28/09/2022 | 09/09/2022 | 09/09/2022 |
| Analysis | Method Code | MDL | Units | Accred. | | | | |
| Total TPH >C8-C40 (Aliphatic) EH_CU_1D_AL | TPHFIDUS (Aliphatic) | 20 | mg/kg^ | UM | | 27.8 | | 108 |
| Total Moisture at 35°C | CLANDPREP | 0.1 | % | N | | 12.9 | | 3.5 |
| Description of Solid Material | CLANDPREP | | - | N | | CLAY | | SAND |
| Equivalent Weight of Dry Material (kg) | Leachate Prep CEN 10:1 | | kg | N | | 0.090 | | 0.090 |
| Fraction above 4mm (%) | Leachate Prep CEN 10:1 | | % | N | | 0 | | 0 |
| Fraction of non-crushable material (%) | Leachate Prep CEN 10:1 | | % | N | | 0 | | 0 |
| Volume of Water for 10:1 Leach (ltr) | Leachate Prep CEN 10:1 | | 1 | N | | 0.880 | | 0.896 |
| Weight of Sample Leached (kg) | Leachate Prep CEN 10:1 | | kg | N | | 0.110 | | 0.094 |
| WAC Report | WAC | | - | N | | See Attached | | See Attached |

WASTE ACCEPTANCE CRITERIA TESTING BSEN 12457/2

| Client | Alpha Construction | |
|--------------|--------------------|------------|
| Site | Denby SCJ | |
| Project | 22092199 | |
| Sample No | Sample Description | Issue Date |
| 22092199-001 | 01 | 12/10/2022 |

Note: The >4mm fraction is crushed using a disc mill

| Leaching Data | |
|---|-------|
| Weight of Sample (kg) | 0.110 |
| Moisture content @ 105°C (% Wet Weight) | 18.1 |
| Equivalent weight based on drying @ 105°C (kg) | 0.090 |
| Volume of Water required for 10:1 stage (Itres) | 0.880 |
| Fraction of sample above 4mm % | 0 |
| Fraction of non-crushable material % | 0 |
| | |
| | |

| _ | 0 | | | Landfill Wa | aste Acceptance Criter | ia Limit Values |
|---------------|-------------|---------------------------------------|---|-------------------------|--|-----------------------------|
| Accreditation | Method Code | Solid Waste Analysis (Dry Basis) | Concentration in Solid (Dry Weight Basis) | Inert Waste Landfill | Stable Non-Reactive Hazardous Waste in Non-Hazardous Landfill | Hazardous Waste Landfill |
| U | WSLM59 | Total Organic Carbon (% M/M) | 1.36 | 3 | 5 | 6 |
| N | LOI450 | Loss on Ignition (%) | 3.7 | | | 10 |
| UM | BTEXHSA | Sum of BTEX (mg/kg) | <0.069 | 6 | | |
| UM | PCBUSECD | Sum of 7 Congener PCBs (mg/kg) | <0.040 | 1 | | |
| U | TPHFIDUS | >C10-C40 Aliphatic (mg/kg) EH_1D_AL | 27.0 | 500 | | |
| Ν | PAHMSUS | Sum of 17 PAHs (mg/kg) | 2.06 | 100 | | |
| UM | PHSOIL | pH (pH Units) | 8.7 | | >6 | |
| N | ANC | Acid Neutralisation Capacity (mol/kg) | 4.72 | | To be evaluated | To be evaluated |

| _ | ⁰ | | 10:1 Single Stage | Cumulative Amount | Landfill W | aste Acceptance Criteri | ia Limit Values |
|-------------|--------------|--------------------------|-------------------|-------------------|-------------------------|--|-----------------------------|
| creditation | thod Code | Leachate Analysis | Leachate | Leached at 10:1 | Inert Waste Landfill | Stable Non-Reactive Hazardous Waste in Non-Hazardous | Hazardous Waste Landfill |
| Ac | Mei | | mg/l except ** | mg/kg (dry wt) | | Landfill | |
| U | WSLM3** | pH (pH Units) | 8.0 | | | | |
| U | WSLM2** | Conductivity (µS/cm) | 101 | | | | |
| U | ICPMSW | Arsenic | <0.001 | <0.01 | 0.5 | 2 | 25 |
| U | ICPWATVAR | Barium | <0.01 | <0.1 | 20 | 100 | 300 |
| U | ICPMSW | Cadmium | <0.00002 | <0.0002 | 0.04 | 1 | 5 |
| U | ICPMSW | Chromium | <0.001 | <0.01 | 0.5 | 10 | 70 |
| U | ICPMSW | Copper | 0.001 | <0.01 | 2 | 50 | 100 |
| U | ICPMSW | Mercury | <0.00003 | <0.0003 | 0.01 | 0.2 | 2 |
| U | ICPMSW | Molybdenum | 0.002 | 0.02 | 0.5 | 10 | 30 |
| U | ICPMSW | Nickel | <0.001 | <0.01 | 0.4 | 10 | 40 |
| U | ICPMSW | Lead | <0.001 | <0.01 | 0.5 | 10 | 50 |
| U | ICPMSW | Antimony | <0.001 | <0.01 | 0.06 | 0.7 | 5 |
| U | ICPMSW | Selenium | <0.001 | <0.01 | 0.1 | 0.5 | 7 |
| U | ICPMSW | Zinc | 0.003 | 0.03 | 4 | 50 | 200 |
| U | KONENS | Chloride | <1 | <10 | 800 | 15000 | 25000 |
| U | ISEF | Fluoride | 1.1 | 11 | 10 | 150 | 500 |
| U | ICPWATVAR | Sulphate as SO4 | 3 | <30 | 1000 | 20000 | 50000 |
| Ν | WSLM27 | Total Dissolved Solids | <70 | <700 | 4000 | 60000 | 100000 |
| U | SFAPI | Phenol Index | 0.11 | 1.1 | 1 | | |
| U | WSLM13 | Dissolved Organic Carbon | 1.92 | 19.1 | 500 | 800 | 1000 |

Tests where the accreditation is set to U are UKAS accredited, those where the accreditation is set to N are not UKAS accredited. Calculated data is not UKAS accredited

Landfill Waste Acceptance Criteria limit values correct as of 11th March 2009.

Date Printed: 12-Oct-2022

WASTE ACCEPTANCE CRITERIA TESTING BSEN 12457/2

| Client | Alpha Construction | | | | | |
|--------------|--------------------|------------|--|--|--|--|
| Site | Denby SCJ | | | | | |
| Project | 22092199 | | | | | |
| Sample No | Sample Description | Issue Date | | | | |
| 22092199-002 | 02 Sump | 12/10/2022 | | | | |

Note: The >4mm fraction is crushed using a disc mill

| Leaching Data | |
|---|-------|
| Weight of Sample (kg) | 0.094 |
| Moisture content @ 105°C (% Wet Weight) | 4.6 |
| Equivalent weight based on drying @ 105°C (kg) | 0.090 |
| Volume of Water required for 10:1 stage (Itres) | 0.896 |
| Fraction of sample above 4mm % | 0 |
| Fraction of non-crushable material % | 0 |
| | |
| | |

| _ | Method Code | | | Landfill Waste Acceptance Criteria Limit Values | | | | |
|---------------|-------------|---------------------------------------|---|---|--|-----------------------------|--|--|
| Accreditation | | Solid Waste Analysis (Dry Basis) | Concentration in Solid (Dry Weight Basis) | Inert Waste Landfill | Stable Non-Reactive Hazardous Waste in Non-Hazardous Landfill | Hazardous Waste Landfill | | |
| U | WSLM59 | Total Organic Carbon (% M/M) | 0.32 | 3 | 5 | 6 | | |
| N | LOI450 | Loss on Ignition (%) | 1.1 | | | 10 | | |
| UM | BTEXHSA | Sum of BTEX (mg/kg) | <0.062 | 6 | | | | |
| UM | PCBUSECD | Sum of 7 Congener PCBs (mg/kg) | <0.036 | 1 | | | | |
| U | TPHFIDUS | >C10-C40 Aliphatic (mg/kg) EH_1D_AL | 107 | 500 | | | | |
| Ν | PAHMSUS | Sum of 17 PAHs (mg/kg) | 1.42 | 100 | | | | |
| UM | PHSOIL | pH (pH Units) | 9.0 | | >6 | | | |
| N | ANC | Acid Neutralisation Capacity (mol/kg) | 3.60 | | To be evaluated | To be evaluated | | |

| ۔ د | hod Code | Leachate Analysis | 10:1 Single Stage | Cumulative Amount | Landfill Waste Acceptance Criteria Limit Values | | | |
|-------------|-----------|--------------------------|-------------------|-------------------|---|--|-----------------------------|--|
| creditation | | | Leachate | Leached at 10:1 | Inert Waste Landfill | Stable Non-Reactive Hazardous Waste in Non-Hazardous | Hazardous Waste Landfill | |
| Ac | Me | | mg/l except ** | mg/kg (dry wt) | | Landfill | | |
| U | WSLM3** | pH (pH Units) | 8.0 | | | | | |
| U | WSLM2** | Conductivity (µS/cm) | <100 | | | | | |
| U | ICPMSW | Arsenic | 0.003 | 0.03 | 0.5 | 2 | 25 | |
| U | ICPWATVAR | Barium | 0.02 | 0.2 | 20 | 100 | 300 | |
| U | ICPMSW | Cadmium | 0.00002 | 0.0002 | 0.04 | 1 | 5 | |
| U | ICPMSW | Chromium | 0.002 | 0.02 | 0.5 | 10 | 70 | |
| U | ICPMSW | Copper | 0.002 | 0.02 | 2 | 50 | 100 | |
| U | ICPMSW | Mercury | 0.00004 | 0.0004 | 0.01 | 0.2 | 2 | |
| U | ICPMSW | Molybdenum | <0.001 | <0.01 | 0.5 | 10 | 30 | |
| U | ICPMSW | Nickel | <0.001 | <0.01 | 0.4 | 10 | 40 | |
| U | ICPMSW | Lead | <0.001 | <0.01 | 0.5 | 10 | 50 | |
| U | ICPMSW | Antimony | <0.001 | <0.01 | 0.06 | 0.7 | 5 | |
| U | ICPMSW | Selenium | <0.001 | <0.01 | 0.1 | 0.5 | 7 | |
| U | ICPMSW | Zinc | 0.012 | 0.12 | 4 | 50 | 200 | |
| U | KONENS | Chloride | <1 | <10 | 800 | 15000 | 25000 | |
| U | ISEF | Fluoride | <0.1 | <1 | 10 | 150 | 500 | |
| U | ICPWATVAR | Sulphate as SO4 | <3 | <30 | 1000 | 20000 | 50000 | |
| Ν | WSLM27 | Total Dissolved Solids | <70 | <700 | 4000 | 60000 | 100000 | |
| U | SFAPI | Phenol Index | <0.05 | <0.5 | 1 | | | |
| U | WSLM13 | Dissolved Organic Carbon | 2.09 | 20.9 | 500 | 800 | 1000 | |

Tests where the accreditation is set to U are UKAS accredited, those where the accreditation is set to N are not UKAS accredited. Calculated data is not UKAS accredited

Landfill Waste Acceptance Criteria limit values correct as of 11th March 2009.

 Landini waste Acceptance Ontena limit values correct as of 11th March 2009.

 Date Printed:
 12-Oct-2022



Deviating Sample Report

| Sample Reference | <u>Text ID</u> | Method Code | Incorrect Container | Incorrect Label | Headspace | Incorrect/No Preservative | No Sampling Date | Holding Time |
|------------------|----------------|----------------------|---------------------|-----------------|-----------|---------------------------|------------------|--------------|
| 02 Sump | 22092199-002 | BTEXHSA | | | | | | ✓ |
| 02 Sump | 22092199-002 | PAHMSUS | | | | | | ✓ |
| 02 Sump | 22092199-002 | PHSOIL | | | | | | ~ |
| 02 Sump | 22092199-002 | TPHFIDUS (Aliphatic) | | | | | | ~ |
| 02 Sump | 22092199-002 | WSLM59 | | | | | | ✓ |



Analysis Method

Method Code ANC **BTEXHSA** CLANDPREP **CLANDPREP** ICPMSW (Dissolved) ICPWATVAR (Dissolved) ICPWATVAR (Dissolved) ICPWATVAR (Dissolved) ICPWATVAR (Dissolved) ISEF ISEF KONENS KONENS Leachate Prep CEN 10:1 LOI(%MM) PAHMSUS PCBECD PHCONDW PHCONDW PHCONDW PHCONDW PHSOIL SFAPI SFAPI TOCW **TPHFIDUS** (Aliphatic) WAC WSLM13 WSLM59

Client: Alpha Construction Project Name: Alpha Construction-Denby SCJ Project No: 22092199 Date Issued: 12/10/2022

> Method Description Analysis Method ANC: Acid Neutralisation Capacity (mol/kg) Air Dried & Ground BTEX for WAC by GCFID As Received **Basic Solid Description** As Received DW35 - CLand Prep and Dry Weight Correction to 35°C As Received Antimony (Diss.) in Lab Leachate by ICPMS Filtered Antimony in Solids (BSEN 12457-2) Filtered Arsenic (Diss.) in Lab Leachate by ICPMS Filtered Arsenic in Solids (BSEN 12457-2) Filtered Cadmium (Diss.) in Lab Leachate by ICPMS Filtered Cadmium in Solids (BSEN 12457-2) Filtered Chromium (Diss.) in Lab Leachate by ICPMS Filtered Chromium in Solids (BSEN 12457-2) Filtered Copper (Diss.) in Lab Leachate by ICPMS Filtered Copper in Solids (BSEN 12457-2) Filtered Lead (Diss.) in Lab Leachate by ICPMS Filtered Lead in Solids (BSEN 12457-2) Filtered Mercury (Diss.) in Lab Leachate by ICPMS Filtered Mercury in Solids (BSEN 12457-2) Filtered Molybdenum (Diss.) in Lab Leachate by ICPMS Filtered Molybdenum in Solids (BSEN 12457-2) Filtered Nickel (Diss.) in Lab Leachate by ICPMS Filtered Nickel in Solids (BSEN 12457-2) Filtered Selenium (Diss.) in Lab Leachate by ICPMS Filtered Selenium in Solids (BSEN 12457-2) Filtered Zinc (Diss.) in Lab Leachate by ICPMS Filtered Zinc in Solids (BSEN 12457-2) Filtered Barium (Diss.) in Lab Leachate by ICPOES Filtered Barium in Solids (BSEN 12457-2) Filtered Total Sulphur as SO4 (Diss.) in Lab Leachate Filtered Total Sulphur as SO4 in Solids (BSEN 12457-2) Filtered Fluoride by ISE Filtered Fluoride in Solids (BSEN 12457-2) Filtered Chloride by Colorimetry Filtered Chloride in Solids (BSEN 12457-2) Filtered WAC Leachate Prep, 1-Stage 10:1 (BSEN 12457-2) As Received LOI: Loss on Ignition @ 450°C Air Dried & Ground 17 PAHs (inc. Coronene) for WAC by GCMS As Received PCBs, ICES 7 Congeners inc. Total Calculation As Received Electrical Conductivity @ 25°C Filtered рΗ Filtered TDS: Total Dissolved Solids (Calc) Filtered Total Dissolved Solids in Solids (BSEN 12457-2) Filtered pH (2.5:1) As Received Phenol Index (Total) by SFA Filtered Phenol Index in Solids (BSEN 12457-2) Filtered LOC: Leached Organic Carbon Filtered TPH (>C8-C40) Aliphatic and Carbon Band (>C10-C40) As Received WAC Report Leached Organic Carbon in Solids (BSEN 12457-2) Filtered TOC: Total Organic Carbon Air Dried & Ground



Result Report Notes

Letters alongside results signify that the result has associated report notes. The report notes are as follows:

Letter Note

- A Due to the matrix of the sample the laboratory has had to deviate from our standard protocols to be able to process the sample and provide a result. Where applicable the accreditation has been removed and this should be taken into consideration when utilising the data.
- B The QC associated with this result has not wholly met the QMS requirements, the accreditation has therefore been removed. However, the Laboratory has confidence in the performance of the method as a whole and that the integrity of the data has not been significantly compromised.
- C Due to matrix interference, the internal standard and/or surrogate has not met the QMS requirements. This should be taken into consideration when utilising the data.
- D A non-standard volume or mass has been used for this test which has resulted in a raised detection limit.
- E Due to the parameter value being beyond our calibration range (and following the maximum size of dilution allowed, where applicable), the result cannot be quantified and as such the result will appear as a greater than symbol (>) with the accreditation removed. This data should be used for indicative purposes only.
- F Based on the sample history, appearance and smell a dilution was applied prior to testing. Unfortunately, the result is either above (>) or below (<) our calibration range. Results above our calibration range have accreditation removed. The data should be used for indicative purposes only.
- G The day 5 oxygen reading was below the capability of the instrument to detect, and therefore the calculated BOD has been reported unaccredited for guidance purposes only.

HWOL Acronym Key

| Acronym | Description |
|---------|---|
| HS | Headspace Analysis |
| EH | Extractable Hydrocarbons - i.e everything extracted by the solvent(s) |
| CU | Clean up - e.g. by florisil, silica gel |
| 1D | GC - Single coil gas chromatography |
| Total | Aliphatics & Aromatics |
| AL | Aliphatics only |
| AR | Aromatics only |
| + | Operator to indicate cumulative e.g. EH_CU+HS_1D_Total |



Additional Information

This report refers to samples as received. SOCOTEC UK Ltd takes no responsibility for accuracy or competence of sampling by others.

Results within this report relate only to the samples tested.

The accreditation codes are as follows:

U = UKAS accredited analysis

M = MCERT accredited analysis

N = Unaccredited analysis

Any units marked with ^ signify results are reported on a dry weight basis of 35 ° c.

All Air Dried and Ground Samples (ADG) are oven dried at less than 35° c.

This report shall not be reproduced except in full, without written approval of the laboratory.

Opinions and interpretations given are outside the scope of our UKAS accreditation.

Any samples marked with * are not covered by our scope of UKAS accreditation. If applicable, further report notes have been added.

Any solid samples where the Major Constituents are not one of the following (Sand, Silt, Clay, Made Ground) are not one of our accredited matrix types.

Any samples marked with ‡ have had MCERTS accreditation removed for this result

Any samples marked with a tick in the deviant table is deviant for the specific reason.

Any samples reported as IS, NA, ND mean the following:

IS = Insufficient Sample to complete analysis

- NA = Sample is not amenable for the required analysis
- ND = Results cannot be determined

Items listed with a 'SUB' method code prefix have been carried out by an external subcontracted laboratory.

Our deviating sample report does not include deviancy information for Subcontracted analysis. Please see the report from the subcontracted lab for information regarding any deviancies for this analysis.

Summaries of analysis methods are available upon request.

End of Certificate of Analysis