




ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: South Tees Development Corporation, South Tees Development Works, (off) Durham, CO1 2PQ. Tel: 0191 267 4100 Fax: 0191 267 4101
Regional Office: South Tees Development Corporation, South Tees Development Works, (off) Durham, CO1 2PQ. Tel: 0191 267 4100 Fax: 0191 267 4101

LABORATORY SAMPLE DESCRIPTION SHEET

| Exploratory Hole No. | Sample Depth (m) | ID | Description | Laboratory Tests/Remarks |
|----------------------|------------------|-----|--|--------------------------|
| PRAIRIE_AUK_BH104 | 5.95 | J3 | Brown with grey veining slightly sandy slightly gravelly CLAY of high plasticity. | MC PI BRE |
| PRAIRIE_AUK_BH104 | 6.50 | U8 | High strength brown slightly sandy CLAY. | HSV |
| PRAIRIE_AUK_BH104 | 11.00 | J13 | Brown sandy CLAY of low plasticity. | MC PI BRE |
| PRAIRIE_AUK_BH104 | 15.50 | C21 | Brown slightly sandy gravelly CLAY of low plasticity. | MC PI |
| PRAIRIE_AUK_BH104 | 17.50 | C23 | Brown slightly sandy gravelly CLAY of low plasticity. | MC PI |
| PRAIRIE_AUK_BH106 | 5.50 | U2 | Medium strength brown slightly sandy slightly gravelly CLAY. | UUT BRE QED |
| PRAIRIE_AUK_BH106 | 6.95 | J3 | Brown slightly sandy slightly gravelly CLAY of intermediate plasticity. | MC PI |
| PRAIRIE_AUK_BH106 | 7.00 | B6 | Brown slightly sandy slightly gravelly CLAY. | PSD SED |
| PRAIRIE_AUK_BH106 | 8.50 | U8 | Very high strength brown slightly sandy slightly gravelly CLAY. | UUT |
| PRAIRIE_AUK_BH106 | 9.50 | J10 | Grey sandy slightly gravelly CLAY of low plasticity. | MC PI BRE |
| PRAIRIE_AUK_BH107 | 3.00 | U2 | Low strength fissured brown/grey silty CLAY of intermediate plasticity. | MC PI Density UUT |
| PRAIRIE_AUK_BH107 | 3.45 | J3 | Brown CLAY with occasional sand pockets. | BRE |
| PRAIRIE_AUK_BH107 | 4.00 | B5 | Brown CLAY. | CP2 CBR |
| PRAIRIE_AUK_BH107 | 5.00 | U7 | Medium strength laminated brown silty CLAY. | UUT |
| PRAIRIE_AUK_BH107 | 7.50 | J12 | Red brown slightly sandy CLAY of low plasticity. | MC PI BRE |
| PRAIRIE_AUK_BH107 | 9.00 | J16 | Red brown CLAY with bands of white gypsum. | BRE |
| PRAIRIE_AUK_BH108 | 2.50 | U2 | High strength fissured brown CLAY of intermediate plasticity with occasional silt dustings. | MC PI HSV IS for UUT |
| PRAIRIE_AUK_BH108 | 2.95 | J3 | Brown CLAY of high plasticity. | MC PI |
| PRAIRIE_AUK_BH108 | 3.50 | B5 | Brown slightly sandy CLAY. | PSD SED PD |
| PRAIRIE_AUK_BH108 | 4.50 | U7 | Medium strength brown slightly sandy slightly gravelly CLAY becoming high strength with depth. | MC HSV |
| PRAIRIE_AUK_BH108 | 5.00 | J9 | Brown slightly sandy CLAY of low plasticity. | MC PI |

| | |
|---|--|
| Contract Title :- Prairie Site Ground Investigation Works | Client :- South Tees Development Corporation |
|---|--|

| | | | | |
|---|--|--------------------------------|-----------------------------|---|
|  | Signed :-  | Name :- | Page 2 of 11 |  |
| | Date of issue :- 02/11/2020 | Certificate No. :- SDW251/7 | AEG Contract No. :- 4251 | |



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 25, Brookside Industrial Estate, Kingsway, South Shields, Tyne and Wear, S16 5LJ. Tel: 0191 581 4700 Fax: 0191 581 4711
 Registered Office: 10000, Brookside Industrial Estate, South Shields, Tyne and Wear, S16 5LJ. Tel: 0191 581 4700 Fax: 0191 581 4711

LABORATORY SAMPLE DESCRIPTION SHEET

| Exploratory Hole No. | Sample Depth (m) ID | Description | Laboratory Tests/Remarks |
|----------------------|---------------------|--|--------------------------|
| PRAIRIE_AUK_BH108 | 6.50 J12 | Brown sandy gravelly CLAY of low plasticity. | MC PI |
| PRAIRIE_AUK_BH108 | 7.00 B14 | Brown slightly sandy slightly gravelly CLAY | PSD SED BRE |
| PRAIRIE_AUK_BH108 | 8.00 J15 | Brown sandy CLAY of low plasticity. | MC PI BRE |
| PRAIRIE_AUK_BH108 | 8.50 J16 | Red brown slightly gravelly SAND. Gravel includes gypsum. | MC PI(HP) |
| PRAIRIE_AUK_BH108 | 9.00 J18 | Red brown clayey SAND including gypsum. | BRE |
| PRAIRIE_AUK_BH109 | 0.50 B4 | Brown slightly sandy slightly gravelly CLAY of intermediate plasticity. (Sample has a hydrocarbon odour). | MC PI CBR |
| PRAIRIE_AUK_BH109 | 1.20 J16 | Medium strength brown silty slightly sandy CLAY becoming high strength with depth. (Sample has a hydrocarbon odour). | MC HSV |
| PRAIRIE_AUK_BH109 | 1.65 J7 | Brown slightly sandy CLAY of intermediate plasticity. (Sample has a strong hydrocarbon odour). | MC PI |
| PRAIRIE_AUK_BH109 | 2.00 B10 | Brown slightly sandy slightly gravelly CLAY. (Sample has a strong hydrocarbon odour). | PSD SED CP2 CBR |
| PRAIRIE_AUK_BH109 | 3.00 U13 | Medium strength brown slightly sandy CLAY. | UUT |
| PRAIRIE_AUK_BH109 | 3.45 J14 | Brown slightly sandy CLAY of intermediate plasticity. | MC PI US for Density |
| PRAIRIE_AUK_BH109 | 5.00 U19 | Medium strength brown CLAY becoming high strength with depth. | HSV |
| PRAIRIE_AUK_BH109 | 6.00 J22 | Blue black MUDSTONE. | MC PI(IS for LL) |
| PRAIRIE_AUK_BH110 | 3.00 U2 | Low strength laminated brown silty CLAY of intermediate plasticity with occasional sand pockets. | MC PI UUT |
| PRAIRIE_AUK_BH110 | 4.00 B5 | Brown slightly sandy slightly gravelly CLAY. | PSD SED |
| PRAIRIE_AUK_BH110 | 5.00 U6 | Medium strength brown silty CLAY of intermediate plasticity. | MC PI UUT |
| PRAIRIE_AUK_BH110 | 6.50 B10 | Brown slightly sandy slightly gravelly CLAY. | CP2 CBR |
| PRAIRIE_AUK_BH110 | 8.00 U12 | Medium strength brown CLAY of low plasticity. | MC PI UUT |
| PRAIRIE_AUK_BH110 | 9.50 J15 | Red brown slightly sandy CLAY of low plasticity. | MC PI |
| PRAIRIE_AUK_BH110 | 9.50 B16 | Brown slightly sandy slightly gravelly CLAY. | PSD SED |
| PRAIRIE_AUK_BH110 | 11.00 U18 | Extremely high strength brown slightly sandy slightly gravelly CLAY. | UUT |

| | |
|--|---|
| Contract Title - Prairie Site Ground Investigation Works | Client - South Tees Development Corporation |
|--|---|

| | | | | |
|---|-------------------------------|-------------------------------|---------------------------|---|
|  | Signed - <i>msene</i> | Name - | Page 3 of 11 |  |
| | Date of issue - 03/11/2020 | Certificate No - SDI4251/3 | AEG Contract No - 4251 | |



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: 107/108 Great Western Road, Reading, RG1 2AA, UK. Tel: 0118 977 770 Fax: 0118 977 771
Regional Office: Unit 10, Southdown Business Centre, Southdown Road, Basingstoke, Hants, RG24 0AA, UK. Tel: 01256 343 343 Fax: 01256 343 344

LABORATORY SAMPLE DESCRIPTION SHEET

| Exploratory Hole No. | Sample Depth (m) ID | Description | Laboratory Tests/Remarks |
|----------------------|---------------------|--|--------------------------|
| PRAIRIE_AUK_BH110 | 11.45 J19 | Orange brown sandy slightly gravelly CLAY | BRE |
| PRAIRIE_AUK_BH110 | 13.50 J23 | Brown slightly sandy slightly gravelly CLAY of low plasticity | MC PI |
| PRAIRIE_AUK_BH110 | 15.00 J27 | Red brown MUDSTONE with white crystalline inclusions (possible gypsum) | MC BRE US for PI |
| PRAIRIE_AUK_TP101 | 0.50 J3 | MADE GROUND (Brown slightly sandy gravel including brick fragments) | MC BRE Calorific Value |
| PRAIRIE_AUK_TP101 | 0.90 B4 | MADE GROUND (Dark brown/black clayey/silty very sandy gravel including slag and brick fragments) | PSD CP2 CBR |
| PRAIRIE_AUK_TP101 | 2.50 J10 | Grey mottled slightly sandy CLAY of high plasticity | MC PI |
| PRAIRIE_AUK_TP101 | 3.00 B11 | Brown slightly sandy slightly gravelly CLAY | CBR |
| PRAIRIE_AUK_TP101 | 4.40 J14 | Brown slightly organic slightly sandy slightly gravelly SILT of very high plasticity | MC PI BRE |
| PRAIRIE_AUK_TP102 | 1.50 J6 | Brown sandy CLAY of low plasticity | MC PI |
| PRAIRIE_AUK_TP102 | 3.00 B6 | Brown slightly sandy slightly gravelly CLAY | PSD SED CBR |
| PRAIRIE_AUK_TP103 | 0.80 B2 | MADE GROUND (Dark grey sandy gravel with a high cobble content. Gravel includes slag, ash, concrete and clinker) | PSD |
| PRAIRIE_AUK_TP104 | 2.00 J8 | Frable brown slightly sandy CLAY of intermediate plasticity | MC PI BRE |
| PRAIRIE_AUK_TP105 | 1.80 J4 | Fissured brown slightly sandy slightly gravelly CLAY of high plasticity | MC PI |
| PRAIRIE_AUK_TP105 | 2.00 B5 | Brown slightly sandy slightly gravelly CLAY | PSD SED CP2 CBR |
| PRAIRIE_AUK_TP106 | 1.00 B2 | MADE GROUND (Dark grey clayey sandy gravel including ash, slag, ceramic and brick fragments) | PSD |
| PRAIRIE_AUK_TP106 | 2.50 J6 | Brown slightly sandy CLAY of high plasticity | MC PI |
| PRAIRIE_AUK_TP106 | 3.50 J8 | Brown slightly sandy CLAY of intermediate plasticity | MC PI |
| PRAIRIE_AUK_TP107 | 0.50 J3 | Brown sandy slightly gravelly CLAY of intermediate plasticity with sand dustings | MC PI BRE |
| PRAIRIE_AUK_TP107 | 1.00 B4 | Brown slightly sandy slightly gravelly CLAY | PSD SED CP2 CBR |
| PRAIRIE_AUK_TP107 | 2.30 J6 | Brown slightly sandy CLAY of high plasticity | MC PI |
| PRAIRIE_AUK_TP108 | 0.80 B4 | MADE GROUND (Grey slightly clayey sandy gravel with a high cobble content. Gravel includes metal, concrete and slag fragments) | PSD US for CP2 |

| | |
|---|--|
| Contract Title :- Prairie Site Ground Investigation Works | Client :- South Tees Development Corporation |
|---|--|

| | | | | |
|---|--------------------------------|--------------------------------|----------------------------|---|
|  | Signed :- <i>mson</i> | Name :- | Page 4 of 11 |  |
| | Date of issue :- 03/11/2020 | Certificate No :- SD/4251/4 | AEG Contract No :- 4251 | |


ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: 1000-10000 of Industrial Estate, Panchsheel, Chandigarh, India. P.O. Box: 247110, 160 110 Chandigarh (India) Tel: 91-172-2611111 Fax: 91-172-2611112
Regional Office: 100000 of Industrial Estate, Panchsheel, Chandigarh, India. P.O. Box: 247110, 160 110 Chandigarh (India) Tel: 91-172-2611111 Fax: 91-172-2611112

LABORATORY SAMPLE DESCRIPTION SHEET

| Exploratory Hole No. | Sample Depth (m) | ID | Description | Laboratory Tests/Remarks |
|----------------------|------------------|-----|---|--------------------------|
| PRAIRIE_AUK_TP108 | 1.90 | B7 | MADE GROUND (Brown sandy gravel with a high cobble content. Gravel includes slag, ash, clinker and brick fragments) | PSD |
| PRAIRIE_AUK_TP110 | 1.60 | B2 | MADE GROUND (Brown clayey/silty very sandy gravel with a medium cobble content. Gravel includes slag and clinker) | PSD US for CP2 & CBR |
| PRAIRIE_AUK_TP110 | 2.50 | J6 | Brown slightly sandy CLAY of high plasticity | MC PI |
| PRAIRIE_AUK_TP110 | 3.00 | B8 | Brown slightly sandy slightly gravelly CLAY | PSD SED CP2 CBR |
| PRAIRIE_AUK_TP111 | 1.60 | B5 | MADE GROUND (Brown clayey sandy gravel with a medium cobble content. Gravel includes slag, metal and brick fragments) | PSD SED US for CP2 & CBR |
| PRAIRIE_AUK_TP111 | 2.00 | J6 | Brown CLAY of intermediate plasticity | MC PI |
| PRAIRIE_AUK_TP112 | 1.00 | J3 | MADE GROUND (Dark grey sandy gravel including slag and brick fragments) | BRE Calorific Value |
| PRAIRIE_AUK_TP112 | 1.70 | B5 | MADE GROUND (Dark grey clayey/silty very sandy gravel including plastic, slag and ceramic fragments) | PSD CP2 CBR |
| PRAIRIE_AUK_TP112 | 2.70 | J9 | Brown slightly sandy CLAY of high plasticity | MC PI |
| PRAIRIE_AUK_TP112 | 3.00 | J10 | Brown slightly sandy CLAY/SILT of intermediate plasticity | MC PI |
| PRAIRIE_AUK_TP112 | 3.20 | B11 | Brown silty slightly sandy CLAY | PSD SED CP2 |
| PRAIRIE_AUK_TP113 | 1.60 | B6 | White/grey sandy GRAVEL | PSD US for CP2 |
| PRAIRIE_AUK_TP113 | 2.50 | J7 | Brown slightly sandy CLAY of intermediate plasticity | MC PI |
| PRAIRIE_AUK_TP113 | 2.80 | B8 | Brown with grey mottling slightly sandy slightly gravelly CLAY | PSD SED CP2 |
| PRAIRIE_AUK_TP114 | 0.40 | B4 | MADE GROUND (Brown clayey very sandy gravel including plastic, brick and metal fragments) | PSD US for CP2 |
| PRAIRIE_AUK_TP115 | 1.40 | J4 | MADE GROUND (Grey slightly sandy gravel including slag fragments) | MC BRE Calorific Value |
| PRAIRIE_AUK_TP115 | 1.70 | B5 | MADE GROUND (Dark grey slightly clayey very sandy gravel) | PSD |
| PRAIRIE_AUK_TP115 | 1.60 | J5 | MADE GROUND (Brown slightly sandy slightly gravelly silt of intermediate plasticity. Gravel includes ceramic fragments) | MC PI BRE ORG |
| PRAIRIE_AUK_TP115 | 2.00 | J7 | Brown slightly sandy CLAY of high plasticity | MC PI |
| PRAIRIE_AUK_TP115 | 2.50 | B8 | Brown slightly sandy CLAY | CP2 CBR |
| PRAIRIE_AUK_TP116 | 3.00 | J9 | Reddish brown slightly sandy slightly gravelly CLAY of intermediate plasticity | MC PI |

| | |
|--|---|
| Contract Title :- Prairie Site Ground Investigation Works | Client :- South Tees Development Corporation |
|--|---|

| | | | |
|---|--------------------------------|-------------------------------|----------------------------|
|  | Signed :- <i>msene</i> | Name :- | Page 5 of 11 |
| | Date of issue :- 03/11/2020 | Certificate No :- SD4251/5 | AEG Contract No :- 4251 |

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 20, Millers Close, Millers Road, South Shields, Tyne and Wear, NE33 1AA. Tel: 0191 261 5555 Fax: 0191 261 27 81
 Registered Office: Unit 20, Millers Close, Millers Road, South Shields, Tyne and Wear, NE33 1AA. Tel: 0191 261 5555 Fax: 0191 261 27 81

LABORATORY SAMPLE DESCRIPTION SHEET

| Exploratory Hole No. | Sample Depth (m) | ID | Description | Laboratory Tests/Remarks |
|------------------------|------------------|-----|---|--------------------------|
| PRAIRIE_AUK_TP116 | 3.50 | B10 | Red brown slightly sandy slightly gravelly CLAY | CP2 CBR |
| PRAIRIE_AUK_TP117 | 1.50 | J4 | MADE GROUND (Grey slightly sandy gravel including slag fragments) | MC |
| PRAIRIE_AUK_TP117 | 2.00 | B5 | MADE GROUND (Brown slightly clayey sandy gravel with a high cobble content and occasional clay pockets. Gravel includes slag fragments) | PSD US for CP2 |
| PRAIRIE_AUK_TP117 | 3.20 | B9 | MADE GROUND (Brown clayey sandy gravel with a high cobble content. Gravel includes slag) | PSD |
| PRAIRIE_AUK_TP116 | 0.50 | J1 | MADE GROUND (Grey slightly sandy gravel including slag fragments) | MC |
| PRAIRIE_AUK_TP116 | 1.00 | B2 | MADE GROUND (Brown clayey/silty very sandy gravel including slag fragments) | PSD |
| PRAIRIE_AUK_TP118 | 1.50 | J4 | Brown slightly sandy CLAY/SILT of intermediate plasticity. | MC PI ORG |
| PRAIRIE_AUK_TP118 | 2.20 | J6 | Brown CLAY of high plasticity. | MC PI |
| PRAIRIE_AUK_TP118 | 2.50 | B7 | Brown slightly sandy CLAY | CP2 |
| PRAIRIE_AUK_TP119 | 0.50 | J1 | MADE GROUND (Brown sandy gravel including slag fragments) | MC |
| PRAIRIE_AUK_TP119 | 1.00 | B2 | MADE GROUND (Brown slightly clayey/silty sandy gravel including slag fragments) | PSD |
| PRAIRIE_AUK_TP119 | 2.00 | B5 | MADE GROUND (Brown slightly clayey/silty very sandy gravel including ash and clinker) | PSD CP2 CBR |
| PRAIRIE_AUK_TP119 | 2.50 | J6 | Brown slightly sandy CLAY of high plasticity. | MC PI |
| PRAIRIE_AUK_TP119 | 3.00 | B6 | Brown with orange mottling silty CLAY | CP2 CBR |
| PRAIRIE_AUK_TP120 | 0.50 | J1 | MADE GROUND (Brown gravelly sand. Gravel includes slag fragments) | Calorific Value |
| PRAIRIE_AUK_TP120A0.80 | 0.80 | B2 | MADE GROUND (Dark brown clayey very sandy gravel including glass and ash) | PSD |
| PRAIRIE_AUK_TP120A1.50 | 1.50 | J4 | Brown gravelly SAND | MC P(NP) |
| PRAIRIE_AUK_TP120A1.80 | 1.80 | B5 | Brown sandy CLAY | CP2 CBR |
| PRAIRIE_AUK_TP121 | 0.80 | B2 | MADE GROUND (Dark brown clayey very sandy gravel including slag and concrete fragments) | PSD CP2 CBR |
| PRAIRIE_AUK_TP123 | 0.50 | B2 | MADE GROUND (Grey brown cobbles of bricks) | PSD US for CBR |
| PRAIRIE_AUK_TP124 | 1.00 | J3 | MADE GROUND (Brown slightly sandy gravel with occasional clay pockets. Gravel includes brick fragments) | MC Calorific Value |

| | |
|---|--|
| Contract Title :- Prairie Site Ground Investigation Works | Client :- South Tees Development Corporation |
|---|--|

| | | | |
|---|--------------------------------|--------------------------------|----------------------------|
|  | Signed :- <i>msh</i> | Name :- | Page 5 of 11 |
| | Date of issue :- 03/11/2020 | Certificate No :- SD/4251/8 | AEG Contract No :- 4251 |

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: 107-111 Kings Hill Industrial Estate, Park Road, Thurston, S22 5DQ. Tel: 0114 897 4764 Fax: 0114 897 4751
 Registered Office: 107-111 Kings Hill Industrial Estate, Park Road, Thurston, S22 5DQ. Tel: 0114 897 4764 Fax: 0114 897 4751

LABORATORY SAMPLE DESCRIPTION SHEET

| Exploratory Hole No. | Sample Depth (m) | ID | Description | Laboratory Tests/Remarks |
|------------------------|------------------|-----|--|--------------------------|
| PRAIRIE_AUK_TP124 | 1.50 | B4 | MADE GROUND (Dark grey clayey very gravelly sand. Gravel includes ash, slag and brick fragments). | PSD CP2 |
| PRAIRIE_AUK_TP124 | 2.00 | J6 | Brown with grey mottling slightly sandy CLAY of high plasticity. | MC PI |
| PRAIRIE_AUK_TP126 | 1.80 | B4 | MADE GROUND (Grey cobbles of slag and brick) | PSD |
| PRAIRIE_AUK_TP131 | 1.00 | J3 | MADE GROUND (Brown slightly sandy gravel including brick fragments) | MC |
| PRAIRIE_AUK_TP131 | 2.60 | J7 | Brown slightly gravelly CLAY of high plasticity. | MC PI |
| PRAIRIE_AUK_TP131 | 3.60 | J9 | Fissured brown slightly silty CLAY of intermediate plasticity. | MC PI |
| PRAIRIE_AUK_TP131 | 3.80 | B10 | Brown slightly sandy CLAY. | CP2 CBR |
| PRAIRIE_AUK_TP132 | 0.60 | J2 | MADE GROUND (Brown slightly sandy gravel including slag and brick fragments) | Calorific Value |
| PRAIRIE_AUK_TP132 | 2.00 | B6 | MADE GROUND (Grey sandy gravel with a medium cobble content. Gravel includes concrete, slag and glass fragments) | PSD US for CP2 & CP4 |
| PRAIRIE_AUK_TP134 | 0.60 | B2 | MADE GROUND (Dark grey clayey very sandy gravel with a medium cobble content. Gravel includes slag, ash and brick fragments) | PSD |
| PRAIRIE_AUK_TP134 | 1.50 | J4 | Brown CLAY/SILT of intermediate plasticity with occasional silt pockets. | MC PI |
| PRAIRIE_AUK_TP135 | 1.00 | B3 | MADE GROUND (Grey slightly clayey very sandy gravel including slag, concrete and brick fragments) | PSD |
| PRAIRIE_AUK_TP135 | 2.00 | J7 | Brown CLAY of intermediate plasticity. | MC PI |
| PRAIRIE_AUK_TP135 | 2.70 | J9 | Brown slightly silty CLAY of high plasticity. | MC PI |
| PRAIRIE_AUK_TP136 | 1.00 | J4 | Red brown slightly sandy slightly gravelly SILT of intermediate plasticity. | MC PI |
| PRAIRIE_AUK_TP137 | 0.60 | J3 | MADE GROUND (Grey slightly sandy gravel including slag fragments) | MC |
| PRAIRIE_AUK_TP137 | 1.00 | B4 | MADE GROUND (Brown clayey sandy gravel including ash, clinker, slag and metal fragments) | PSD US for CP2 |
| PRAIRIE_AUK_TP137 | 2.00 | B7 | Brown sandy CLAY. | CP2 CBR |
| PRAIRIE_AUK_TP137 | 2.60 | J8 | Brown slightly sandy CLAY of intermediate plasticity. | MC PI |
| PRAIRIE_AUK_TP138 | 1.00 | B2 | MADE GROUND (Brown slightly clayey very sandy gravel with a high cobble content. Gravel includes ceramic, ash and brick fragments) | PSD |
| PRAIRIE_AUK_TP139B0.20 | | B2 | MADE GROUND (Dark grey clayey very sandy gravel including ash, slag and brick fragments) | PSD |

| | |
|--|---|
| Contract Title: Prairie Site Ground Investigation Works | Client: South Tees Development Corporation |
|--|---|

| | | | | |
|--|----------------------------------|----------------------------------|------------------------------|--|
| | Signed: <i>m.berne</i> | Name: _____ | Page 7 of 11 | |
| | Date of Issue: 03/11/2020 | Certificate No: SDI4251/7 | REG Contract No: 4251 | |


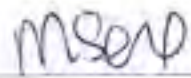
ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 20, Broomfield Lane, Farnborough, Hampshire, GU14 7JF, UK. Tel: 01253 873333 Fax: 01253 873334
Regional Offices: London, Gloucester, Manchester, County Down, West Yorkshire, Belfast, Dublin, Cork, Galway, Harrogate, Leeds, Luton, Milton Keynes, Reading, Southampton, York

LABORATORY SAMPLE DESCRIPTION SHEET

| Exploratory Hole No. | Sample Depth (m) | ID | Description | Laboratory Tests/Remarks |
|------------------------|------------------|----|--|------------------------------|
| PRAIRIE_AUK_TP139B3.00 | J4 | | Brown slightly sandy CLAY of intermediate plasticity | MC PI |
| PRAIRIE_AUK_TP145 1.00 | B3 | | MADE GROUND (Grey clayey very sandy gravel including ash, concrete and slag fragments) | PSD CP2 |
| PRAIRIE_AUK_TP145 1.90 | J5 | | Grey slightly sandy CLAY of high plasticity | MC PI |
| PRAIRIE_AUK_TP145 2.40 | B6 | | Brown slightly sandy slightly gravelly CLAY | CP2 CBR |
| PRAIRIE_AUK_TP145 2.90 | J7 | | Laminated brown CLAY of high plasticity with silt dustings on laminae | MC PI |
| PRAIRIE_AUK_TP145C1.00 | J4 | | MADE GROUND (Brown gravel) with occasional clay pockets. Gravel includes brick fragments | MC Calorific Value US for PI |
| PRAIRIE_AUK_TP146C1.30 | B6 | | MADE GROUND (Brown very sandy gravel with occasional clay pockets. Gravel includes brick fragments) | PSD CP2 CBR |
| PRAIRIE_AUK_TP146C1.70 | J7 | | Fissured brown CLAY of high plasticity | MC PI |
| PRAIRIE_AUK_TP146C2.30 | B8 | | Brown slightly sandy CLAY | CP2 CBR |
| PRAIRIE_AUK_TP149 1.00 | B2 | | MADE GROUND (Brown clayey very sandy gravel including slag fragments) | PSD |
| PRAIRIE_AUK_TP149 1.80 | J4 | | Brown slightly sandy CLAY of intermediate to high plasticity | MC PI BRE |
| PRAIRIE_AUK_TP149 2.70 | B5 | | Brown silty CLAY | PSD SED CP2 CBR |
| PRAIRIE_AUK_TP150 0.60 | B2 | | MADE GROUND (Dark grey clayey very sandy gravel with a medium cobble content. Gravel includes slag, ash, concrete, glass, metal and brick fragments) | PSD |
| PRAIRIE_AUK_TP154 0.60 | J1 | | Grey gravelly SAND | BRE Calorific Value |
| PRAIRIE_AUK_TP154 1.30 | J4 | | Brown slightly sandy CLAY of high plasticity | MC PI |
| PRAIRIE_AUK_TP154 1.60 | B5 | | Brown slightly sandy CLAY | CP2 |
| PRAIRIE_AUK_TP154 2.30 | J6 | | Brown slightly sandy CLAY of intermediate plasticity | MC PI |
| PRAIRIE_AUK_TP155 0.50 | B2 | | MADE GROUND (Dark grey slightly clayey sandy gravel with a medium cobble content. Gravel includes ash, slag and brick fragments) | PSD |
| PRAIRIE_AUK_TP155 1.20 | J4 | | Brown slightly sandy CLAY of intermediate plasticity | MC PI |
| PRAIRIE_AUK_TP155 1.60 | B5 | | Brown silty slightly sandy CLAY | PSD SED |
| PRAIRIE_AUK_TP155A0.70 | B4 | | MADE GROUND (Grey cobbles of concrete with much gravelly clay/silt) | PSD US for CP2 & CBR |

| | |
|---|--|
| Contract Title :- Prairie Site Ground Investigation Works | Client :- South Tees Development Corporation |
|---|--|

| | | | |
|---|---|------------------------------|----------------------------|
|  | Signed:  | Name: - | Page 8 of 11 |
| | Date of issue: - 02/11/2020 | Certificate No: SDI4251/3 | AEG Contract No. - 4251 |



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: 2nd Floor, 18 Southwell Road, Farnborough, Hampshire, UK. G11 1PL. Tel: 01329 513333 Fax: 01329 513334
Regional Office: Luton, Bedfordshire, MK1 1LW. Tel: 01525 851111 Fax: 01525 851112

LABORATORY SAMPLE DESCRIPTION SHEET

| Exploratory Hole No. | Sample Depth (m) | ID | Description | Laboratory Tests/Remarks |
|------------------------|------------------|----|--|--------------------------|
| PRAIRIE_AUK_TP156A1.10 | 1.10 | J5 | Brown sandy CLAY of low plasticity | MC PI |
| PRAIRIE_AUK_TP162 | 0.70 | J1 | MADE GROUND (Brown sandy gravel with occasional clay pockets) | BRE Calorific Value |
| PRAIRIE_AUK_TP162 | 0.90 | B2 | MADE GROUND (Brown clayey very sandy gravel including glass, slag and brick fragments) | PSD |
| PRAIRIE_AUK_TP162 | 2.50 | B6 | Brown slightly sandy CLAY of high plasticity | MC PI PSD SED CP2 CBR |
| PRAIRIE_AUK_TP162 | 3.10 | J7 | Fissured brown silty CLAY of high plasticity | MC PI BRE |
| PRAIRIE_AUK_TP163 | 0.50 | J1 | MADE GROUND (Dark brown slightly sandy gravel with occasional clay pockets. Gravel includes brick fragments) | MC US for PI |
| PRAIRIE_AUK_TP163 | 0.80 | B2 | MADE GROUND (Brown clayey very sandy gravel including ash and clinker) | PSD CP2 CBR |
| PRAIRIE_AUK_TP163 | 1.60 | J4 | Grey brown slightly sandy CLAY of intermediate plasticity | MC PI BRE |
| PRAIRIE_AUK_TP163 | 1.70 | B5 | Brown slightly sandy CLAY | CP2 CBR |
| PRAIRIE_AUK_TP165 | 1.50 | J4 | MADE GROUND (Brown slightly sandy gravel including brick fragments) | BRE |
| PRAIRIE_AUK_TP165 | 1.80 | B5 | MADE GROUND (Dark brown slightly clayey/silty sandy gravel and cobbles including brick, slag and concrete fragments) | PSD US for CP4 & CBR |
| PRAIRIE_AUK_TP165 | 2.50 | J6 | MADE GROUND (Brown slightly sandy gravel including brick fragments) | Calorific Value |
| PRAIRIE_AUK_TP165 | 2.80 | B7 | MADE GROUND (Dark grey brown sandy gravel with occasional clay pockets and a medium cobble content. Gravel includes ash, slag and brick fragments) | PSD |
| PRAIRIE_AUK_TP167 | 1.80 | B4 | MADE GROUND (Dark grey slightly clayey/silty sandy gravel with a medium cobble content. Gravel includes slag, brick and concrete fragments) | PSD |
| PRAIRIE_AUK_TP168 | 1.40 | J6 | Fissured brown slightly sandy CLAY | MC |
| PRAIRIE_AUK_TP168 | 1.60 | B7 | Brown slightly sandy CLAY | PSD SED CP2 CBR |
| PRAIRIE_AUK_TP169 | 0.80 | E2 | MADE GROUND (Brown clayey very sandy gravel including ash, slag and brick fragments) | PSD US for CP4 |
| PRAIRIE_AUK_TP172 | 0.60 | B2 | MADE GROUND (Dark grey brown cobbles of brick and slag fragments) | PSD US for CP2 & CBR |
| PRAIRIE_AUK_TP173 | 0.60 | J1 | MADE GROUND (Brown slightly sandy gravel including brick fragments) | MC BRE |
| PRAIRIE_AUK_TP173 | 0.80 | B2 | MADE GROUND (Brown very sandy gravel with clay pockets) | PSD SED CP2 CBR |
| PRAIRIE_AUK_TP174 | 1.20 | J4 | Brown slightly sandy CLAY of low to intermediate plasticity with occasional sand pockets | MC PI |

| | |
|---|--|
| Contract Title :- Prairie Site Ground Investigation Works | Client :- South Tees Development Corporation |
|---|--|

| | | | | |
|---|--------------------------------|--------------------------------|----------------------------|---|
|  | Signed :- <i>msone</i> | Name :- | Page 9 of 11 |  |
| | Date of Issue :- 02/11/2020 | Certificate No :- SDI4251/9 | AEG Contract No :- 4251 | |

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 21, Watly, 1st Industrial Estate, Rufford St., Cheshire Road, Ch. Duxton, Chx 2 9JH. Tel: 0181 574744 Fax: 0181 584714
Regional Office: Unit 10, Riverside Commercial Centre, Lacey Street, (Buckingham) MK1. Tel: 01727 731000 Fax: 01727 731000

LABORATORY SAMPLE DESCRIPTION SHEET

| Exploratory Hole No. | Sample Depth (m) | ID | Description | Laboratory Tests/Remarks |
|----------------------|------------------|----|---|--------------------------|
| PRAIRIE_AUK_TP175 | 0.60 | B2 | MADE GROUND (Grey brown clayey sandy cobbles of brick, slag and concrete fragments). | PSD US for CBR |
| PRAIRIE_AUK_TP175 | 1.40 | J4 | Grey slightly sandy CLAY of intermediate plasticity. | MC PI |
| PRAIRIE_AUK_TP176 | 0.50 | B2 | MADE GROUND (Brown clayey sandy gravel including ash and clinker fragments). | PSD |
| PRAIRIE_AUK_TP176 | 1.50 | J4 | Brown slightly organic slightly sandy CLAY. | MC BRE |
| PRAIRIE_AUK_TP176 | 2.00 | B5 | Brown slightly sandy CLAY. | PSD SED CP2 CBR |
| PRAIRIE_AUK_TP177 | 0.50 | J4 | MADE GROUND (Brown slightly sandy clay of high plasticity). | MC PI |
| PRAIRIE_AUK_TP177 | 1.80 | B7 | MADE GROUND (Brown cobbles with much gravel). | PSD US for CP2 & CBR |
| PRAIRIE_AUK_TP178 | 0.40 | J1 | MADE GROUND (Dark brown slightly sandy gravel including brick fragments). | MC BRE Calorific Value |
| PRAIRIE_AUK_TP178 | 0.60 | B2 | MADE GROUND (Brown clayey very sandy gravel including ash, clinker and slag fragments). | PSD CP2 CBR |
| PRAIRIE_AUK_TP178 | 1.60 | B5 | Brown with grey mottling slightly sandy slightly gravelly CLAY of very high plasticity. | MC PI BRE CP2 |
| PRAIRIE_AUK_TP179 | 0.20 | J1 | MADE GROUND (Dark brown sandy gravel including brick fragments). | BRE Calorific Value |
| PRAIRIE_AUK_TP179 | 0.40 | B2 | MADE GROUND (Dark grey clayey/silty very gravelly sand with a medium cobble content. Gravel includes ash, clinker, slag and brick fragments). | PSD CP2 |
| PRAIRIE_AUK_TP179 | 1.70 | J5 | Brown with grey veining slightly sandy CLAY of high plasticity. | MC PI |
| PRAIRIE_AUK_TP179 | 1.80 | B6 | Brown CLAY. | IS for CBR |
| PRAIRIE_AUK_TP181 | 0.50 | B2 | MADE GROUND (Brown very sandy gravel with occasional clay pockets. Gravel includes ash and clinker fragments). | PSD CBR US for CP2 |
| PRAIRIE_AUK_TP181 | 1.10 | B4 | MADE GROUND (Brown cobbles of brick and slag fragments). | PSD |
| PRAIRIE_AUK_TP181 | 1.80 | J5 | Grey slightly silty sandy CLAY of intermediate plasticity. | MC PI |
| PRAIRIE_AUK_TP181 | 2.00 | B6 | Brown with grey veining slightly sandy CLAY. | CBR |
| PRAIRIE_AUK_TP182 | 0.30 | J1 | MADE GROUND (Dark brown sandy gravel including brick fragments). | Calorific Value |
| PRAIRIE_AUK_TP182 | 0.60 | B2 | MADE GROUND (Dark grey clayey very sandy gravel including slag fragments). | PSD CP2 CBR |
| PRAIRIE_AUK_TP182 | 1.30 | J4 | Fissured brown slightly sandy slightly gravelly CLAY of intermediate plasticity. | MC PI |

Contract Title :-

Prairie Site Ground Investigation Works

Client :-

South Tees Development Corporation



Signed - *msoro*

Name - *[Signature]*

Page 10 of 11

Date of issue >
08/11/2020

Certificate No -
SQ4251/10

AEG Contract No -
4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: 202/203/204/205/206/207/208/209/210/211/212/213/214/215/216/217/218/219/220/221/222/223/224/225/226/227/228/229/230/231/232/233/234/235/236/237/238/239/240/241/242/243/244/245/246/247/248/249/250/251/252/253/254/255/256/257/258/259/260/261/262/263/264/265/266/267/268/269/270/271/272/273/274/275/276/277/278/279/280/281/282/283/284/285/286/287/288/289/290/291/292/293/294/295/296/297/298/299/300/301/302/303/304/305/306/307/308/309/310/311/312/313/314/315/316/317/318/319/320/321/322/323/324/325/326/327/328/329/330/331/332/333/334/335/336/337/338/339/340/341/342/343/344/345/346/347/348/349/350/351/352/353/354/355/356/357/358/359/360/361/362/363/364/365/366/367/368/369/370/371/372/373/374/375/376/377/378/379/380/381/382/383/384/385/386/387/388/389/390/391/392/393/394/395/396/397/398/399/400/401/402/403/404/405/406/407/408/409/410/411/412/413/414/415/416/417/418/419/420/421/422/423/424/425/426/427/428/429/430/431/432/433/434/435/436/437/438/439/440/441/442/443/444/445/446/447/448/449/450/451/452/453/454/455/456/457/458/459/460/461/462/463/464/465/466/467/468/469/470/471/472/473/474/475/476/477/478/479/480/481/482/483/484/485/486/487/488/489/490/491/492/493/494/495/496/497/498/499/500/501/502/503/504/505/506/507/508/509/510/511/512/513/514/515/516/517/518/519/520/521/522/523/524/525/526/527/528/529/530/531/532/533/534/535/536/537/538/539/540/541/542/543/544/545/546/547/548/549/550/551/552/553/554/555/556/557/558/559/560/561/562/563/564/565/566/567/568/569/570/571/572/573/574/575/576/577/578/579/580/581/582/583/584/585/586/587/588/589/590/591/592/593/594/595/596/597/598/599/600/601/602/603/604/605/606/607/608/609/610/611/612/613/614/615/616/617/618/619/620/621/622/623/624/625/626/627/628/629/630/631/632/633/634/635/636/637/638/639/640/641/642/643/644/645/646/647/648/649/650/651/652/653/654/655/656/657/658/659/660/661/662/663/664/665/666/667/668/669/670/671/672/673/674/675/676/677/678/679/680/681/682/683/684/685/686/687/688/689/690/691/692/693/694/695/696/697/698/699/700/701/702/703/704/705/706/707/708/709/710/711/712/713/714/715/716/717/718/719/720/721/722/723/724/725/726/727/728/729/730/731/732/733/734/735/736/737/738/739/740/741/742/743/744/745/746/747/748/749/750/751/752/753/754/755/756/757/758/759/760/761/762/763/764/765/766/767/768/769/770/771/772/773/774/775/776/777/778/779/780/781/782/783/784/785/786/787/788/789/790/791/792/793/794/795/796/797/798/799/800/801/802/803/804/805/806/807/808/809/810/811/812/813/814/815/816/817/818/819/820/821/822/823/824/825/826/827/828/829/830/831/832/833/834/835/836/837/838/839/840/841/842/843/844/845/846/847/848/849/850/851/852/853/854/855/856/857/858/859/860/861/862/863/864/865/866/867/868/869/870/871/872/873/874/875/876/877/878/879/880/881/882/883/884/885/886/887/888/889/890/891/892/893/894/895/896/897/898/899/900/901/902/903/904/905/906/907/908/909/910/911/912/913/914/915/916/917/918/919/920/921/922/923/924/925/926/927/928/929/930/931/932/933/934/935/936/937/938/939/940/941/942/943/944/945/946/947/948/949/950/951/952/953/954/955/956/957/958/959/960/961/962/963/964/965/966/967/968/969/970/971/972/973/974/975/976/977/978/979/980/981/982/983/984/985/986/987/988/989/990/991/992/993/994/995/996/997/998/999/1000

LABORATORY SAMPLE DESCRIPTION SHEET

| Exploratory Hole No. | Sample Depth (m) | ID | Description | Laboratory Tests/Remarks |
|----------------------|------------------|----|--|--------------------------|
| PRAIRIE_AUK_TP182 | 1.60 | B5 | Brown with grey veining slightly sandy CLAY (Sample has a strong hydro-carbon odour) | CBR |
| PRAIRIE_AUK_TP183 | 0.80 | B2 | MADE GROUND (Grey cobbles of concrete, slag and brick fragments) | PSD |
| PRAIRIE_AUK_TP185 | 3.50 | B2 | MADE GROUND (Brown slightly sandy slightly gravelly clay. Gravel includes brick and metal fragments) | PSD SED |
| PRAIRIE_AUK_TP186 | 0.40 | J1 | MADE GROUND (Dark brown sandy gravel including brick fragments) | MC BRE Calorific Value |
| PRAIRIE_AUK_TP188 | 0.60 | B2 | MADE GROUND (Dark brown clayey/silty sandy gravel including ash and clinker fragments) | PSD U5 for CP2 & CBR |
| PRAIRIE_AUK_TP189 | 0.30 | J1 | MADE GROUND (Brown slightly sandy gravel) | Calorific Value |
| PRAIRIE_AUK_TP189 | 0.50 | B2 | MADE GROUND (Dark brown clayey/silty very sandy gravel including slag and brick fragments) | PSD CBR |
| PRAIRIE_AUK_TP189 | 1.40 | J3 | Brown slightly sandy CLAY of high plasticity | MC FI BRE |
| PRAIRIE_AUK_TP189 | 1.50 | B4 | Grey brown mottled slightly sandy slightly gravelly CLAY | PSD SED CP2 |
| PRAIRIE_AUK_TP189 | 2.70 | J5 | Red brown slightly sandy CLAY of intermediate plasticity | MC FI |
| PRAIRIE_AUK_TP189 | 2.90 | B6 | Brown with grey veining slightly sandy slightly gravelly CLAY | PSD SED CP2 |

Contract Title: **Prairie Site Ground Investigation Works**

Client: **South Tees Development Corporation**



Signed: *MSone*

Name: _____

Page 11 of 11

Date of issue: **03/11/2020**

Certificate No: **SD/4251/11**

AEG Contract No: **4251**



Moisture Content/Plasticity Index and Moisture Content



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: 112 St. Marks Road, London, E16 1JL, United Kingdom. Tel: (020) 290 24 91/92 Fax: (020) 290 23 91
Regional Office: 1, Westgate, Southport, Merseyside, L35 5EF, UK. Tel: 01772 75 230 Fax: 01772 75 999

MOISTURE CONTENT CERTIFICATE

BS 1377 - Part 2 - Clause 3.2

| Exploratory Hole No. | Sample Depth (m) | Sample ID | Specific Depth (m) | Moisture Content (%) | Date Tested | Remarks |
|----------------------|------------------|-----------|--------------------|----------------------|-------------|---------|
| PRAIRIE_AUK_BH101 | 18.00 | J33 | 18.00 | 16.6 | 17/06/2020 | |
| PRAIRIE_AUK_BH108 | 4.50 | U7 | 4.50 | 23.7 | 10/07/2020 | |
| PRAIRIE_AUK_BH109 | 1.20 | U6 | 1.20 | 21.8 | 10/07/2020 | |
| PRAIRIE_AUK_BH110 | 15.00 | J27 | 15.00 | 25.1 | 10/07/2020 | |
| PRAIRIE_AUK_TP101 | 0.60 | J3 | 0.60 | 14.4 | 28/09/2020 | |
| PRAIRIE_AUK_TP115 | 1.40 | J4 | 1.40 | 8.3 | 06/10/2020 | |
| PRAIRIE_AUK_TP117 | 1.50 | J4 | 1.50 | 11.8 | 06/10/2020 | |
| PRAIRIE_AUK_TP118 | 0.50 | J1 | 0.50 | 14.3 | 12/10/2020 | |
| PRAIRIE_AUK_TP119 | 0.50 | J1 | 0.50 | 7 | 19/10/2020 | |
| PRAIRIE_AUK_TP124 | 1.00 | J3 | 1.00 | 15.9 | 28/09/2020 | |
| PRAIRIE_AUK_TP131 | 1.00 | J3 | 1.00 | 12.2 | 29/09/2020 | |
| PRAIRIE_AUK_TP137 | 0.60 | J3 | 0.60 | 18 | 12/10/2020 | |
| PRAIRIE_AUK_TP146C | 1.00 | J4 | 1.00 | 24.4 | 29/09/2020 | |
| PRAIRIE_AUK_TP161 | 0.50 | J1 | 0.50 | 14.6 | 30/09/2020 | |
| PRAIRIE_AUK_TP168 | 1.40 | J6 | 1.40 | 32.8 | 29/09/2020 | |
| PRAIRIE_AUK_TP171 | 0.60 | J1 | 0.60 | 20.9 | 29/09/2020 | |
| PRAIRIE_AUK_TP176 | 1.50 | J4 | 1.50 | 36.2 | 29/09/2020 | |
| PRAIRIE_AUK_TP179 | 0.40 | J1 | 0.40 | 27.7 | 29/09/2020 | |
| PRAIRIE_AUK_TP182 | 1.30 | J4 | 1.30 | 21.8 | 29/09/2020 | |
| PRAIRIE_AUK_TP189 | 0.40 | J1 | 0.40 | 16.1 | 29/09/2020 | |

For description of sample please refer to the Laboratory Sample Description Sheet

| | |
|---|--|
| Contract Title :- Prairie Site Ground Investigation Works | Client :- South Tees Development Corporation |
|---|--|

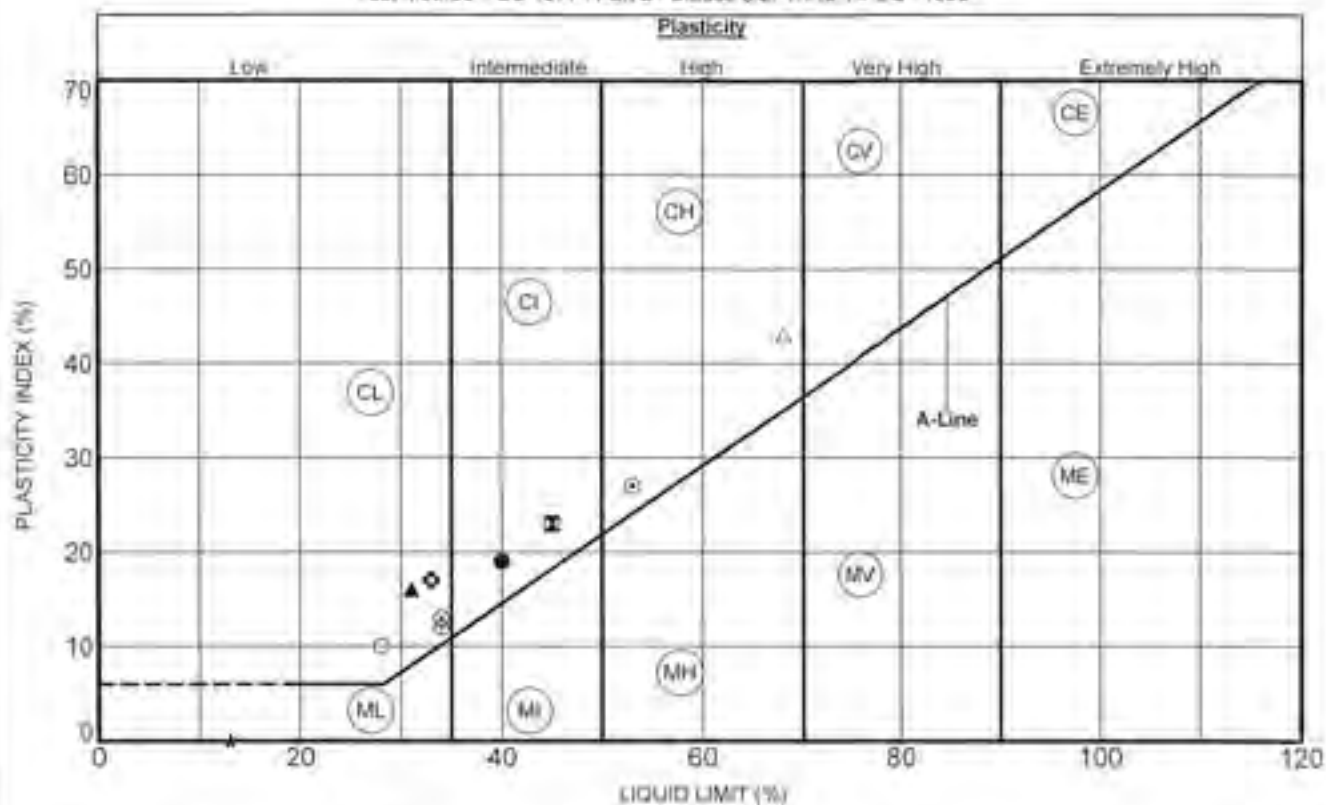
| | | | | |
|---|--------------------------------|--------------------------------|-----------------------------------|---|
|  | Signed :- <i>msore</i> | Name :- | Page 1 of 1 |  |
| | Date of Issue :- 02/11/2020 | Certificate No :- MC/4251/1 | REG Contract No :- 4251 | |

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: 10th Floor, 1st National Centre, Park Road, Huddersfield, West Yorkshire, HD1 1NY. Tel: 01484 574700 Fax: 01484 574701
Regional Office: 10th Floor, 1st National Centre, Southport, Merseyside, L35 5SL. Tel: 01757 779 89 Fax: 01757 779 90

ATTERBERG LIMITS & NATURAL MOISTURE CONTENT

Test Method - BS 1377, Part 2, Clause 3.2, 4.1 to 4.4 & 5, 1990



| Exploratory Hole No. | Depth (m) | Sample Type/Ref. | Specific Depth (m) | LL | PL | PI | I _p | Preparation Method | <0.425mm (%) | w/c (%) | Date Tested |
|--------------------------|-----------|------------------|--------------------|----|----|----|----------------|--------------------|--------------|---------|--------------|
| ● PRAIRIE_AUK_BH1013.00 | U2 | | 3.25 | 40 | 21 | 19 | 0.20 | Natural | | 24.8 | 17/06/2020 |
| ■ PRAIRIE_AUK_BH1015.00 | U7 | | 5.17 | 45 | 22 | 23 | 0.51 | Natural | | 33.7 | 17/06/2020 |
| ▲ PRAIRIE_AUK_BH10111.00 | U18 | | 11.25 | 31 | 15 | 16 | 0.04 | Natural | | 15.7 | 17/06/2020 |
| ▲ PRAIRIE_AUK_BH10112.50 | J21 | | 12.50 | | 13 | | | Natural | | 12.0 | 17/06/2020 |
| ○ PRAIRIE_AUK_BH1032.95 | J3 | | 2.95 | 53 | 26 | 27 | 0.01 | Natural | | 26.2 | 06/10/2020 |
| ◆ PRAIRIE_AUK_BH1038.50 | J18 | | 8.50 | 33 | 16 | 17 | 0.00 | Natural | | 16.0 | 08/10/2020 |
| ○ PRAIRIE_AUK_BH10313.00 | J27 | | 13.00 | 28 | 18 | 10 | 0.61 | Natural | | 24.1 | 06/10/2020 # |
| ○ PRAIRIE_AUK_BH1045.95 | J3 | | 5.95 | 68 | 25 | 43 | -0.03 | Natural | | 23.7 | 19/10/2020 |
| ○ PRAIRIE_AUK_BH10411.00 | J13 | | 11.00 | 34 | 21 | 13 | -0.26 | Natural | | 17.6 | 20/10/2020 |
| ○ PRAIRIE_AUK_BH10415.50 | C21 | | 16.50 | 34 | 22 | 12 | -1.09 | Air Dried | 49.0 | 8.9 | 12/10/2020 |

For description of sample please refer to the Laboratory Sample Description Sheet. # = Insufficient for 4 point PI
If sample is prepared in the natural state we are unable to determine % retained on the 0.425mm test sieve

Contract Title - **Prairie Site Ground Investigation Works**

Client - **South Tees Development Corporation**



Signed: *m.sore*

Name:-

Page 1 of 8

Date of Issue - 03/11/2020

Certificate No. - PA4251/1

AEG Contract No. - 4251

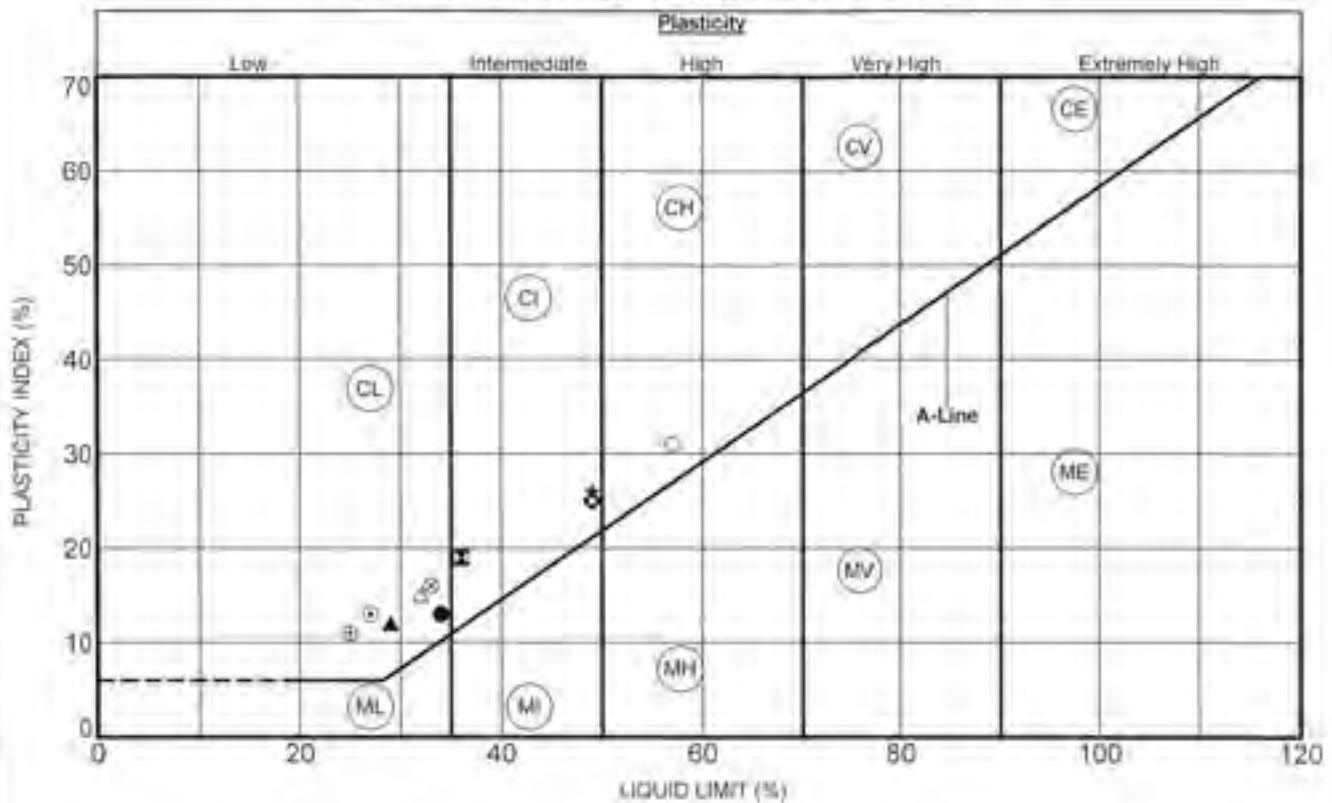


ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

ATTERBERG LIMITS & NATURAL MOISTURE CONTENT

Test Method :- BS 1377 : Part 2 : Clause 3.2.4.1 to 4.4 & 5 : 1990



| Exploratory Hole No. | Depth (m) | Sample Type/Ref. | Specific Depth (m) | LL | PL | PI | I | Preparation Method | <0.425mm (%) | m/c (%) | Date Tested |
|--------------------------|-----------|------------------|--------------------|----|----|----|-------|--------------------|--------------|---------|--------------|
| ● PRAIRIE_AUK_BH10417.50 | 5.00 | C23 | 18.00 | 34 | 21 | 13 | -1.07 | Air Dried | 36.0 | 7.1 | 12/10/2020 |
| ■ PRAIRIE_AUK_BH1065.95 | 3.35 | J3 | 5.95 | 36 | 17 | 19 | -0.08 | Natural | | 15.5 | 06/10/2020 |
| ▲ PRAIRIE_AUK_BH1069.50 | 5.00 | J10 | 9.50 | 29 | 17 | 12 | -0.10 | Natural | | 15.8 | 06/10/2020 |
| ◆ PRAIRIE_AUK_BH1073.00 | 7.50 | U2 | 3.35 | 49 | 23 | 26 | 0.55 | Natural | | 37.3 | 10/07/2020 |
| ○ PRAIRIE_AUK_BH1077.50 | 5.00 | J12 | 7.50 | 27 | 14 | 13 | 0.18 | Natural | | 16.3 | 10/07/2020 |
| ● PRAIRIE_AUK_BH1082.50 | 5.00 | U2 | 2.55 | 49 | 24 | 25 | 0.07 | Natural | | 25.8 | 10/07/2020 |
| ○ PRAIRIE_AUK_BH1082.95 | 5.00 | J2 | 2.95 | 57 | 26 | 31 | 0.13 | Natural | | 30.0 | 06/10/2020 |
| ○ PRAIRIE_AUK_BH1085.00 | 5.00 | J9 | 5.00 | 32 | 17 | 15 | -0.09 | Natural | | 15.6 | 10/07/2020 |
| ○ PRAIRIE_AUK_BH1085.50 | 5.00 | J12 | 6.50 | 33 | 17 | 16 | -0.39 | Air Dried | 35.0 | 10.7 | 10/07/2020 # |
| ○ PRAIRIE_AUK_BH1088.00 | 5.00 | J15 | 8.00 | 25 | 14 | 11 | -0.17 | Natural | | 12.1 | 06/10/2020 |

For description of sample please refer to the Laboratory Sample Description Sheet. # = insufficient for 4 point PI
If sample is prepared in the natural state we are unable to determine % retained on the 0.425mm test sieve

Contract Title :- **Prairie Site Ground Investigation Works**

Client :- **South Tees Development Corporation**



Signed :- *mzone*

Name :-

Page 2 of 8

Date of issue :- 03/11/2020

Certificate No :- PU4251/2

AEG Contract No :- 4251

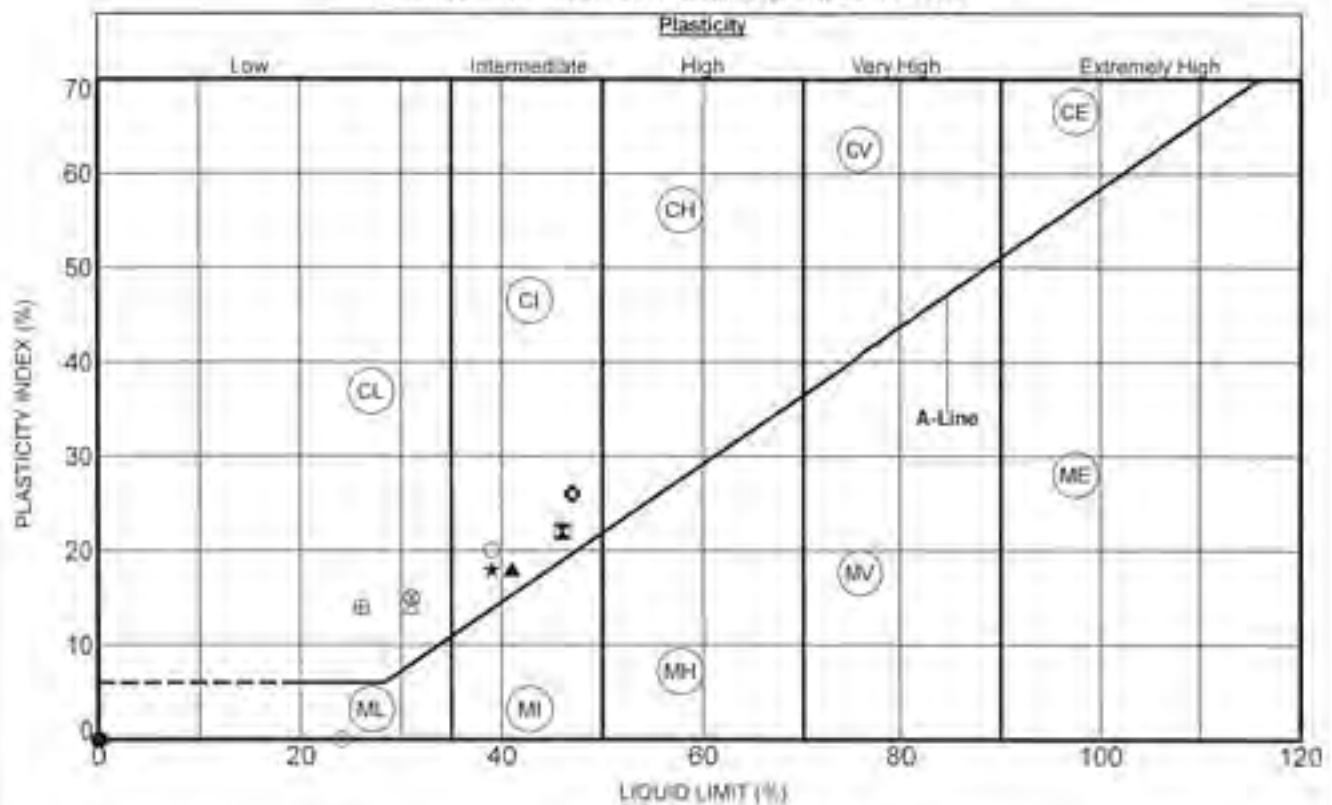


ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

ATTERBERG LIMITS & NATURAL MOISTURE CONTENT

Test Method - BS 1377 Part 2 Clause 3.2, 4.1 to 4.4 & 5 - 1990



| Exploratory Hole No. | Depth (m) | Sample Type/Ref. | Specific Depth (m) | LL | PL | PI | I_p | Preparation Method | <0.425mm (%) | w _c (%) | Date Tested |
|--------------------------|-----------|------------------|--------------------|----|----|----|-------|--------------------|--------------|--------------------|-------------|
| ● PRAIRIE_AUK_BH1088.50 | J16 | B4 | 0.50 | NP | NP | NP | | Natural | | 15.3 | 10/07/2020 |
| ⊗ PRAIRIE_AUK_BH1090.50 | J7 | B4 | 0.50 | 46 | 24 | 22 | 0.00 | Natural | | 23.9 | 13/07/2020 |
| ▲ PRAIRIE_AUK_BH1091.65 | J14 | B4 | 1.85 | 41 | 23 | 18 | 0.12 | Natural | | 25.1 | 10/07/2020 |
| ★ PRAIRIE_AUK_BH1093.45 | J14 | B4 | 3.45 | 39 | 21 | 18 | 0.11 | Natural | | 23.0 | 10/07/2020 |
| ⊙ PRAIRIE_AUK_BH1095.00 | J22 | B4 | 6.00 | NA | 24 | | | Air Dried | 39.0 | 10.8 | 10/07/2020 |
| ⊙ PRAIRIE_AUK_BH1103.00 | U2 | B4 | 3.00 | 47 | 21 | 26 | 0.31 | Natural | | 29.1 | 13/07/2020 |
| ⊙ PRAIRIE_AUK_BH1105.00 | U8 | B4 | 5.35 | 39 | 19 | 20 | 0.21 | Natural | | 23.2 | 10/07/2020 |
| ▲ PRAIRIE_AUK_BH1108.00 | U12 | B4 | 8.35 | 31 | 17 | 14 | 0.85 | Natural | | 28.9 | 10/07/2020 |
| ⊙ PRAIRIE_AUK_BH1109.50 | J15 | B4 | 9.50 | 31 | 16 | 15 | -0.23 | Natural | | 12.6 | 10/07/2020 |
| ⊙ PRAIRIE_AUK_BH11013.50 | J23 | B4 | 13.50 | 26 | 12 | 14 | 0.04 | Natural | | 12.6 | 10/07/2020 |

For description of sample please refer to the Laboratory Sample Description Sheet # = Insufficient for 4 point PI
 # sample is prepared in the natural state we are unable to determine % retained on the 0.425mm test sieve

Contract Title - **Prairie Site Ground Investigation Works**

Client - **South Tees Development Corporation**



Signed: *msore*

Name: _____

Page 3 of 8

Date of issue - 03/11/2020

Certificate No. - P/4251/3

AEG Contract No. - 4251



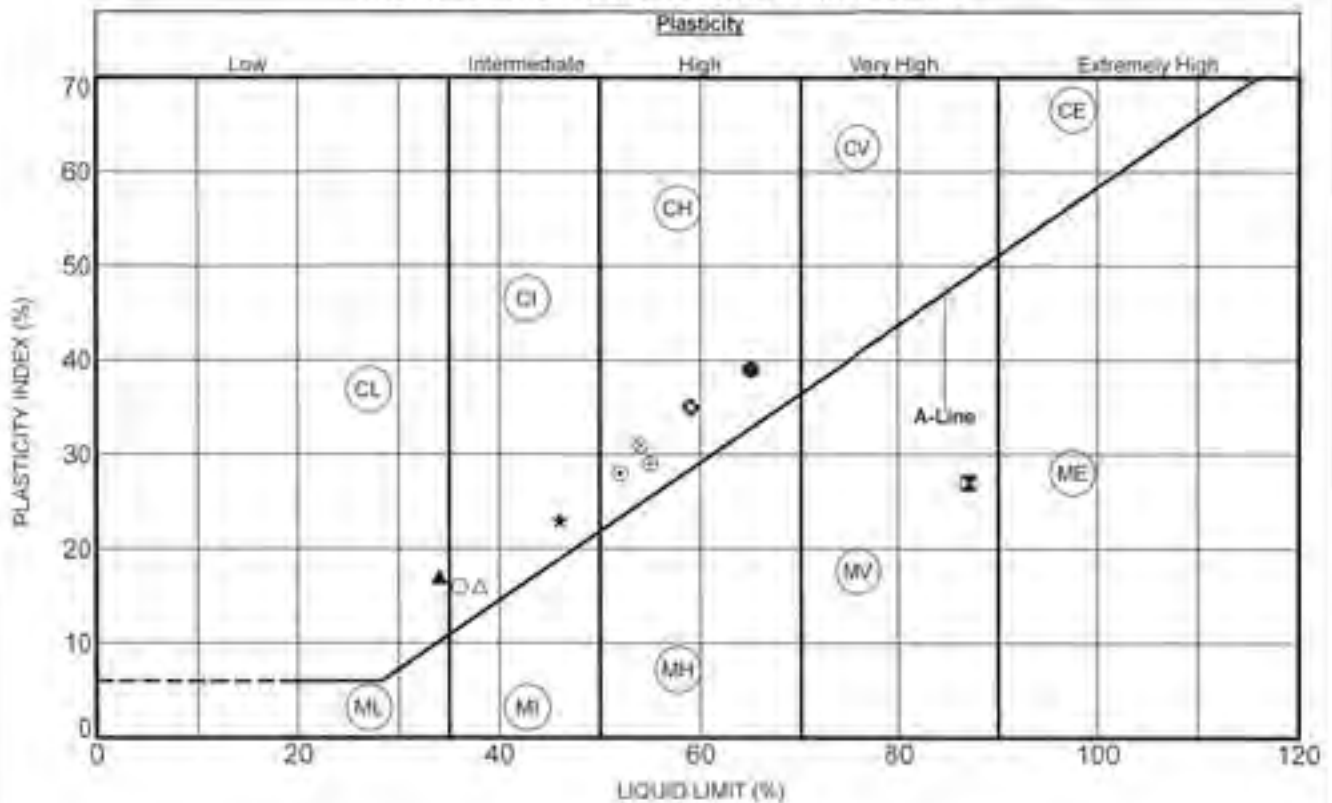
1367

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: 2nd Floor, International House, Fife Park, Westwoodside, St. Leonards, East Sussex, TN38 7JL, Tel: 01323 810000 Fax: 01323 810001
Regional Office: 15th Floor, Britannia Development Centre, 500, Broadwater, Bournemouth, Dorset, BH1 1BB, Tel: 01202 751000 Fax: 01202 751001

ATTERBERG LIMITS & NATURAL MOISTURE CONTENT

Test Method - BS 1377 : Part 2 : Clause 3.2.4.1 to 4.4 & 5 : 1990



| Exploratory Hole No. | Depth (m) | Sample Type/Ref. | Specific Depth (m) | LL | PL | PI | I _p | Preparation Method | <0.425mm (%) | w/c (%) | Date Tested |
|-------------------------|-----------|------------------|--------------------|----|----|-------|----------------|--------------------|--------------|--------------|-------------|
| ● PRAIRIE_AUK_TP1012.50 | J10 | 2.50 | 65 | 26 | 39 | -0.35 | Natural | | 12.2 | 28/09/2020 | |
| ■ PRAIRIE_AUK_TP1014.40 | J14 | 4.40 | 87 | 60 | 27 | 1.07 | Natural | | 89.0 | 28/09/2020 # | |
| ▲ PRAIRIE_AUK_TP1021.50 | J6 | 1.50 | 34 | 17 | 17 | 0.05 | Natural | | 17.8 | 06/10/2020 # | |
| ★ PRAIRIE_AUK_TP1042.00 | J8 | 2.00 | 46 | 23 | 23 | -0.08 | Natural | | 21.2 | 28/09/2020 # | |
| ⊙ PRAIRIE_AUK_TP1051.80 | J4 | 1.80 | 52 | 24 | 28 | 0.22 | Natural | | 30.1 | 28/09/2020 | |
| ◇ PRAIRIE_AUK_TP1062.50 | J6 | 2.50 | 59 | 24 | 35 | 0.06 | Natural | | 26.2 | 06/10/2020 # | |
| ⊖ PRAIRIE_AUK_TP1063.50 | J8 | 3.50 | 36 | 20 | 16 | -0.23 | Natural | | 16.3 | 06/10/2020 # | |
| △ PRAIRIE_AUK_TP1070.50 | J3 | 0.50 | 38 | 22 | 16 | -0.02 | Natural | | 21.7 | 29/09/2020 # | |
| ⊗ PRAIRIE_AUK_TP1072.30 | J8 | 2.30 | 54 | 23 | 31 | 0.13 | Natural | | 27.1 | 29/09/2020 | |
| ⊕ PRAIRIE_AUK_TP1102.50 | J8 | 2.50 | 55 | 26 | 29 | 0.24 | Natural | | 32.9 | 06/10/2020 # | |

For description of sample please refer to the Laboratory Sample Description Sheet # = Insufficient for 4 point Pi
If sample is prepared in the natural state we are unable to determine % retained on the 0.425mm test sieve

| | |
|---|--|
| Contract Title :- Prairie Site Ground Investigation Works | Client :- South Tees Development Corporation |
|---|--|

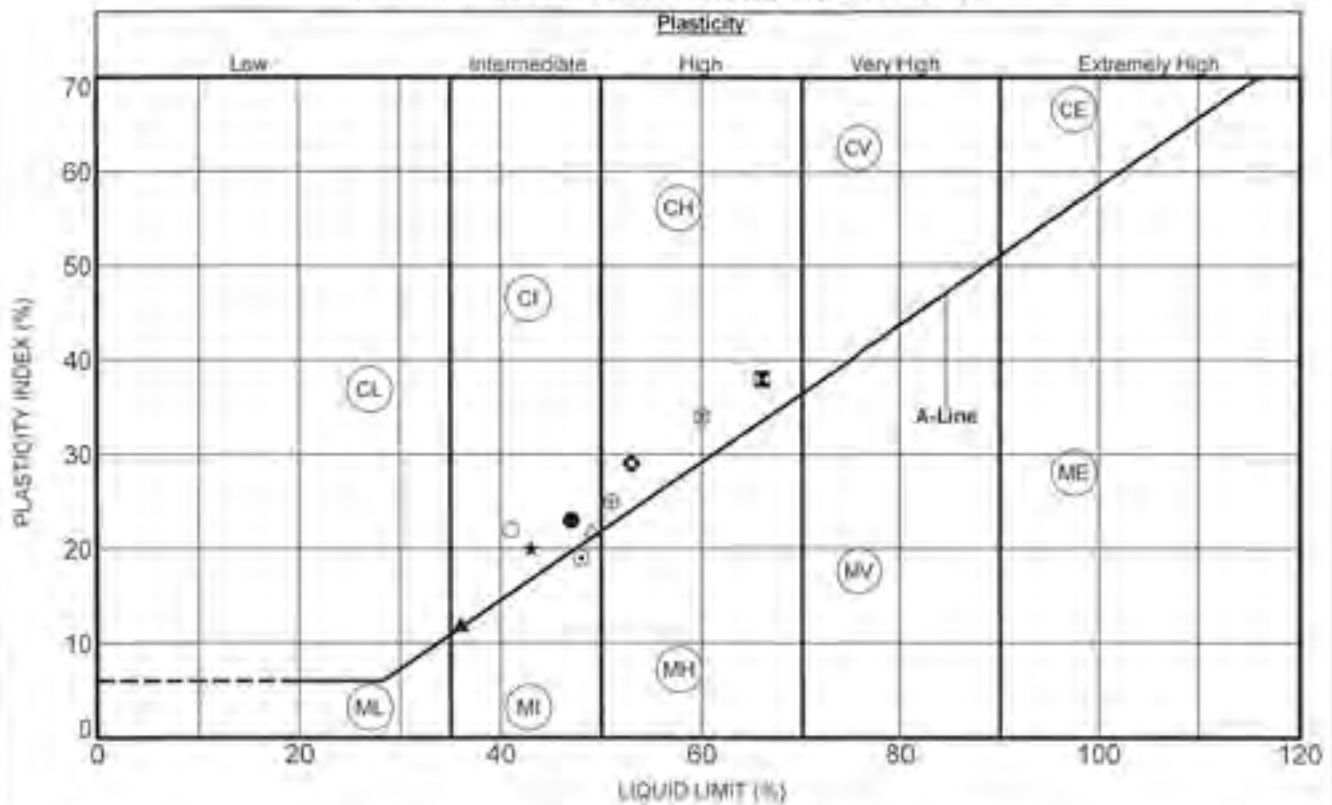
| | | | | |
|---|--------------------------------|-------------------------------|----------------------------|---|
|  | Signed:- <i>msene</i> | Name:- | Page 4 of 8 |  |
| | Date of Issue :- 09/11/2020 | Certificate No :- FV4253/4 | REG Contract No :- 4251 | |

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: South Tees Road, Middlesbrough, Cleveland, North Yorkshire, YO21 2JF. Tel: 01462 433300 Fax: 01462 433301
Regional Office: 100000, Boulevard, Middlesbrough, Cleveland, North Yorkshire, YO21 2JF. Tel: 01462 433300 Fax: 01462 433301

ATTERBERG LIMITS & NATURAL MOISTURE CONTENT

Test Method - BS 1377 - Part 2 - Clause 3.2, 4.1 to 4.4 & 5 - 1990



| Exploratory Hole No. | Depth (m) | Sample Type/Ref. | Specific Depth (m) | LL | PL | PI | I _p | Preparation Method | <0.425mm (%) | w/c (%) | Date Tested | |
|--------------------------|-----------|------------------|--------------------|----|----|-------|----------------|--------------------|--------------|------------|-------------|--|
| ● PRAIRIE_AUK_TP112.00 | J6 | 2.00 | 47 | 24 | 23 | -0.10 | Natural | | 21.8 | 06/10/2020 | # | |
| ⊠ PRAIRIE_AUK_TP112.70 | J9 | 2.70 | 66 | 26 | 38 | 0.07 | Natural | | 30.6 | 06/10/2020 | | |
| ▲ PRAIRIE_AUK_TP112.00 | J10 | 3.00 | 36 | 24 | 12 | 0.32 | Natural | | 27.8 | 06/10/2020 | | |
| ★ PRAIRIE_AUK_TP113.50 | J7 | 2.50 | 43 | 23 | 20 | 0.20 | Natural | | 26.9 | 28/09/2020 | | |
| ◇ PRAIRIE_AUK_TP116.60 | J5 | 1.60 | 48 | 29 | 19 | -0.12 | Natural | | 26.8 | 20/10/2020 | | |
| ◊ PRAIRIE_AUK_TP116.00 | J7 | 2.00 | 53 | 24 | 29 | 0.03 | Air Dried | 99.0 | 24.9 | 20/10/2020 | | |
| ○ PRAIRIE_AUK_TP116.00 | J9 | 3.00 | 41 | 19 | 22 | -0.07 | Natural | | 17.5 | 20/10/2020 | | |
| ▽ PRAIRIE_AUK_TP118.1.50 | J4 | 1.50 | 49 | 27 | 22 | 0.16 | Natural | | 30.6 | 12/10/2020 | # | |
| ◇ PRAIRIE_AUK_TP118.2.20 | J6 | 2.20 | 60 | 26 | 34 | 0.23 | Natural | | 33.8 | 12/10/2020 | # | |
| □ PRAIRIE_AUK_TP119.2.50 | J6 | 2.50 | 51 | 26 | 25 | 0.12 | Natural | | 29.1 | 06/10/2020 | # | |

For description of sample please refer to the Laboratory Sample Description Sheet. # = Insufficient for 4 point PI
If sample is prepared in the natural state we are unable to determine % retained on the 0.425mm test sieve

Contract Title -

Prairie Site Ground Investigation Works

Client -

South Tees Development Corporation



Signed - *msere*

Name -

Page 5 of 8

Date of issue
05/11/2020

Certificate No -
PI/4251/5

AEG Contract No -
4251



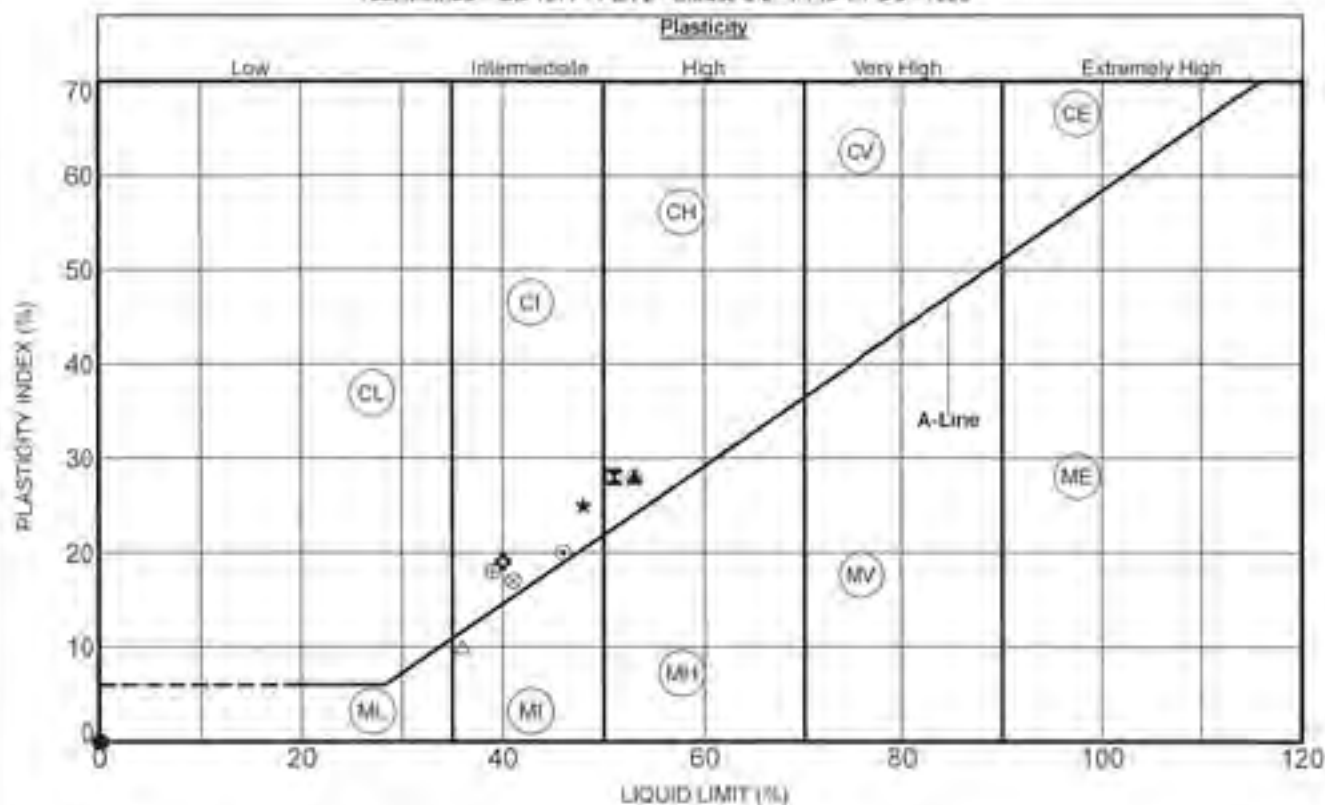
1367

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: 142-152 Westwood Road, Farnborough, Hampshire, UK. GPO Box 100, Farnborough, Hampshire, UK. Tel: 01329 877700 Fax: 01329 877711
 Registered Office: 142-152 Westwood Road, Farnborough, Hampshire, UK. GPO Box 100, Farnborough, Hampshire, UK. Tel: 01329 877700 Fax: 01329 877711

ATTERBERG LIMITS & NATURAL MOISTURE CONTENT

Test Method - BS 1377 - Part 2 - Clause 3.2.4.1 to 4.4 & 5 - 1990



| Exploratory Hole No. | Depth (m) | Sample Type/Ref | Specific Depth (m) | LL | PL | PI | I _p | Preparation Method | <0.425mm (%) | m/c (%) | Date Tested |
|----------------------|-----------|-----------------|--------------------|----|----|----|----------------|--------------------|--------------|---------|--------------|
| ● PRAIRIE_AUK_TP120A | 50 | J4 | 1.50 | NP | NP | NP | | Natural | | 16.8 | 06/10/2020 |
| ■ PRAIRIE_AUK_TP124 | 00 | J6 | 2.00 | 51 | 23 | 28 | 0.08 | Natural | | 25.1 | 28/09/2020 |
| ▲ PRAIRIE_AUK_TP131 | 2.60 | J7 | 2.60 | 53 | 25 | 28 | 0.19 | Natural | | 30.2 | 28/09/2020 |
| ★ PRAIRIE_AUK_TP131 | 3.60 | J9 | 3.60 | 48 | 23 | 25 | 0.21 | Natural | | 28.3 | 28/09/2020 |
| ○ PRAIRIE_AUK_TP134 | 1.50 | J4 | 1.50 | 46 | 26 | 20 | -0.09 | Natural | | 24.2 | 12/10/2020 # |
| ● PRAIRIE_AUK_TP135 | 2.00 | J7 | 2.00 | 40 | 21 | 19 | 0.15 | Natural | | 23.8 | 06/10/2020 # |
| ○ PRAIRIE_AUK_TP135 | 2.70 | J8 | 2.70 | 53 | 25 | 28 | -0.02 | Natural | | 24.5 | 08/10/2020 # |
| ○ PRAIRIE_AUK_TP136 | 1.00 | J4 | 1.00 | 36 | 26 | 10 | 0.53 | Natural | | 31.3 | 12/10/2020 # |
| ○ PRAIRIE_AUK_TP137 | 2.60 | J8 | 2.60 | 41 | 24 | 17 | 0.22 | Natural | | 27.8 | 06/10/2020 |
| ● PRAIRIE_AUK_TP138 | 3.00 | J4 | 3.00 | 39 | 21 | 18 | 0.54 | Natural | | 30.8 | 05/10/2020 |

For description of sample please refer to the Laboratory Sample Description Sheet. # = Insufficient for 4 point PI
 If sample is prepared in the natural state we are unable to determine % retained on the 0.425mm test sieve

| | |
|---|--|
| Contract Title :- Prairie Site Ground Investigation Works | Client :- South Tees Development Corporation |
|---|--|

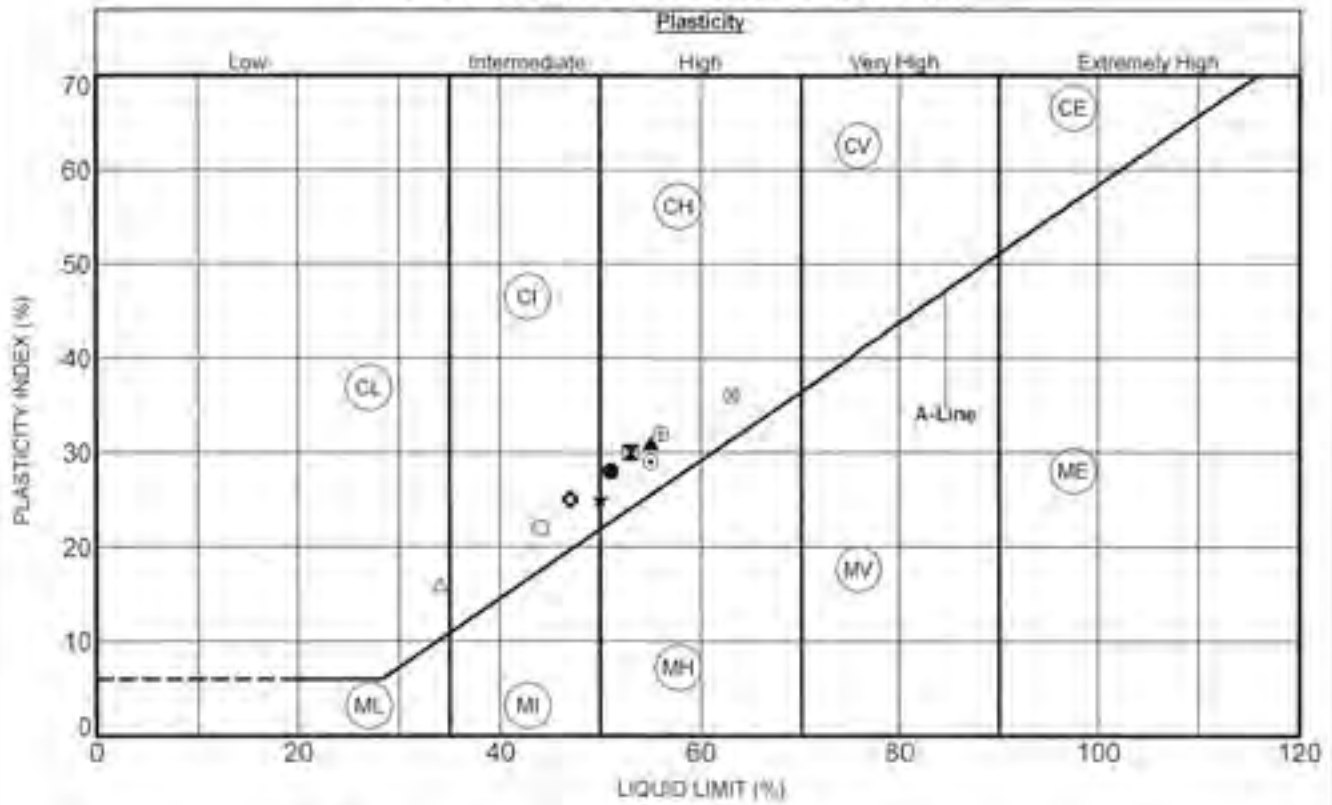
| | | | | |
|--|-------------------------------|------------------------------|---------------------------|--|
| | Signed:- <i>msone</i> | Name:- | Page 6 of 8 | |
| | Date of Issue:- 09/11/2020 | Certificate No:- PR4251/6 | REG Contract No:- 4251 | |

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

ATTERBERG LIMITS & NATURAL MOISTURE CONTENT

Test Method - BS 1377, Part 2, Clause 3.2, 4.1 to 4.4 & 5, 1990



| Exploratory Hole No. | Depth (m) | Sample Type/Ref. | Specific Depth (m) | LL | PL | PI | I _p | Preparation Method | <0.425mm (%) | w _c (%) | Date Tested |
|----------------------|-----------|------------------|--------------------|----|----|----|----------------|--------------------|--------------|--------------------|--------------|
| ● PRAIRIE_AUK_TP145 | 1.90 | J5 | 1.90 | 51 | 23 | 28 | 0.01 | Natural | | 23.4 | 29/09/2020 |
| ⊠ PRAIRIE_AUK_TP145 | 2.90 | J7 | 2.90 | 53 | 23 | 30 | 0.24 | Natural | | 30.2 | 29/09/2020 # |
| ▲ PRAIRIE_AUK_TP146 | 0.70 | J7 | 1.70 | 55 | 24 | 31 | 0.09 | Natural | | 28.8 | 29/09/2020 # |
| ★ PRAIRIE_AUK_TP146 | 1.80 | J4 | 1.80 | 50 | 25 | 25 | 0.20 | Natural | | 29.9 | 06/10/2020 # |
| ○ PRAIRIE_AUK_TP154 | 1.30 | J4 | 1.30 | 55 | 26 | 29 | 0.04 | Natural | | 27.2 | 06/10/2020 |
| ◇ PRAIRIE_AUK_TP154 | 2.30 | J6 | 2.30 | 47 | 22 | 25 | 0.03 | Natural | | 22.8 | 05/10/2020 |
| ∩ PRAIRIE_AUK_TP155 | 1.20 | J4 | 1.20 | 44 | 22 | 22 | -0.19 | Natural | | 17.8 | 12/10/2020 |
| △ PRAIRIE_AUK_TP156 | 1.10 | J5 | 1.10 | 34 | 18 | 16 | -0.01 | Natural | | 17.8 | 06/10/2020 # |
| ⊗ PRAIRIE_AUK_TP162 | 2.50 | B6 | 2.50 | 63 | 27 | 36 | 0.19 | Natural | 96.0 | 33.7 | 29/09/2020 |
| ⊙ PRAIRIE_AUK_TP162 | 3.10 | J7 | 3.10 | 56 | 24 | 32 | 0.28 | Natural | | 33.0 | 29/09/2020 |

For description of sample please refer to the Laboratory Sample Description Sheet # = Insufficient for 4 point PI
If sample is prepared in the natural state we are unable to determine % retained on the 0.425mm test sieve

Contract Title - **Prairie Site Ground Investigation Works**

Client - **South Tees Development Corporation**



Signed - *msone*

Name -

Page 7 of 8

Date of Issue - 03/11/2020

Certificate No. - FV4251/T

#EG Contract No 4251



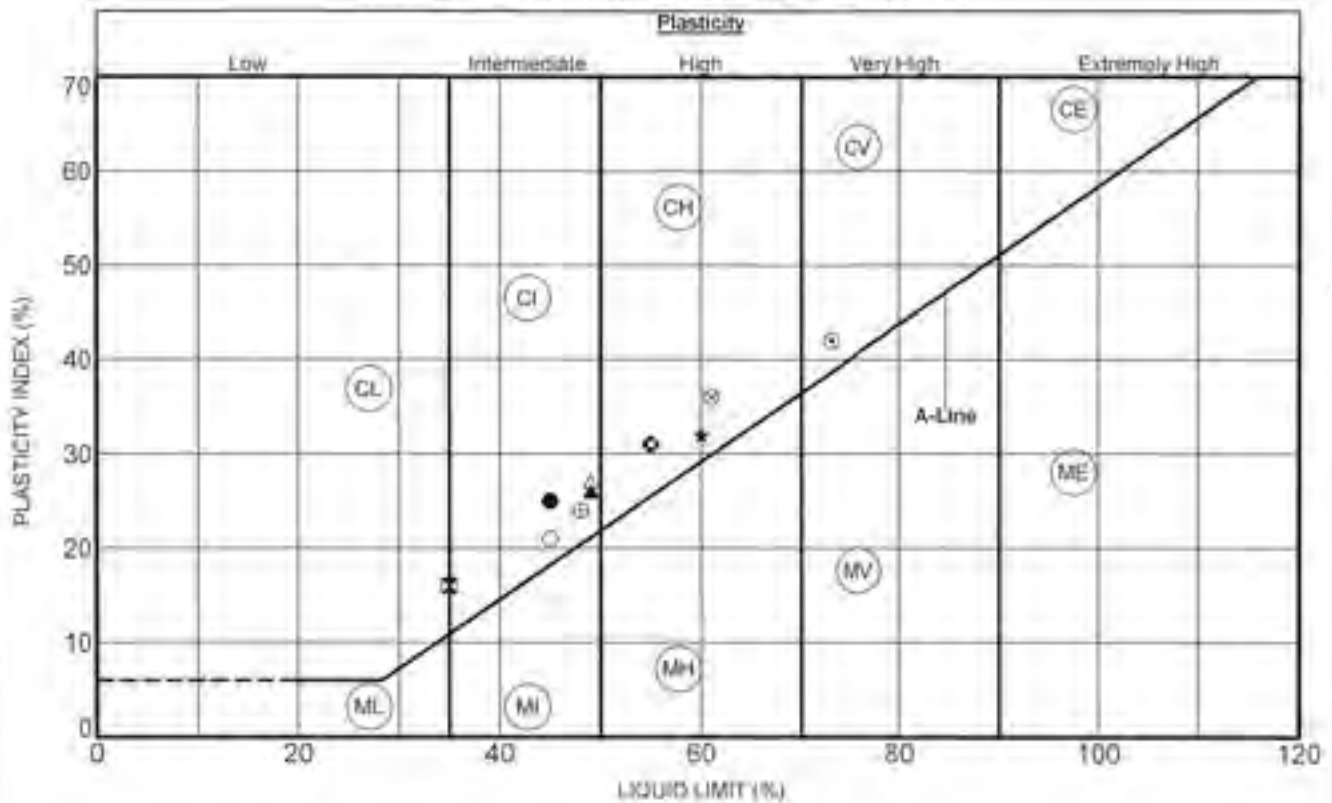
1367

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: 24-25 Bickley Road, South Shields, Tyne and Wear, NE33 1JG. Tel: 0191 477 4700 Fax: 0191 477 4710
Regional Office: 104-106, Commercial Road, South Shields, Tyne and Wear, NE33 1JL. Tel: 0191 757094 Fax: 0191 757095

ATTERBERG LIMITS & NATURAL MOISTURE CONTENT

Test Method: - BS 1377: Part 2: Clause 3.2.4.1 to 4.4 & 5: 1990



| Exploratory Hole No. | Depth (m) | Sample Type/Ref | Specific Depth (m) | LL | PL | PI | I _p | Preparation Method | <0.425mm (%) | m/c (%) | Date Tested |
|------------------------|-----------|-----------------|--------------------|----|----|----|----------------|--------------------|--------------|---------|-------------|
| ●PRAIRIE_AUK_TP1831.60 | J4 | J4 | 1.60 | 45 | 20 | 25 | 0.22 | Natural | | 25.6 | 29/09/2020 |
| ⊠PRAIRIE_AUK_TP1741.20 | J4 | J4 | 1.20 | 35 | 19 | 16 | 0.41 | Natural | | 25.6 | 28/09/2020 |
| ▲PRAIRIE_AUK_TP1751.40 | J4 | J4 | 1.40 | 49 | 23 | 26 | 0.08 | Natural | | 25.1 | 29/09/2020 |
| ★PRAIRIE_AUK_TP1770.90 | J4 | J4 | 0.90 | 60 | 28 | 32 | 0.20 | Natural | | 34.5 | 28/09/2020 |
| ⊙PRAIRIE_AUK_TP1781.60 | B5 | B5 | 1.60 | 73 | 31 | 42 | 0.43 | Natural | | 49.1 | 30/09/2020 |
| ◆PRAIRIE_AUK_TP1791.70 | J5 | J5 | 1.70 | 55 | 24 | 31 | 0.23 | Natural | | 31.1 | 29/09/2020 |
| ○PRAIRIE_AUK_TP1811.80 | J5 | J5 | 1.80 | 45 | 24 | 21 | -0.04 | Natural | | 23.1 | 29/09/2020 |
| ○PRAIRIE_AUK_TP1821.30 | J4 | J4 | 1.30 | 49 | 22 | 27 | -0.01 | Natural | | 21.8 | 29/09/2020 |
| ⊖PRAIRIE_AUK_TP1891.40 | J3 | J3 | 1.40 | 61 | 25 | 36 | 0.08 | Natural | | 27.9 | 29/09/2020 |
| ⊕PRAIRIE_AUK_TP1882.70 | J5 | J5 | 2.70 | 48 | 24 | 24 | 0.16 | Natural | | 27.9 | 29/09/2020 |

For description of sample please refer to the Laboratory Sample Description Sheet. # = insufficient for 4 point PI
If sample is prepared in the natural state we are unable to determine % retained on the 0.425mm test sieve

Contract Title: - **Prairie Site Ground Investigation Works**

Client: - **South Tees Development Corporation**



Signed: *[Signature]*

Name: -

Page 8 of 8

Date of Issue: -
03/11/2020

Certificate No: -
F4251/8

AEG Contract No: -
4251



1367

Determination of Particle Density

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 25, Colver Lane, Huddersfield, West Yorkshire, HD1 3JH. Tel: 01484 527 400 Fax: 01484 527 401
 Regional Office: Unit 26, Riverside, Chadderton, Greater Manchester, OL14 5SL. Tel: 01202 391 288 Fax: 01202 391 289


DETERMINATION OF PARTICLE DENSITY

BS1377 Part 2 : Clause 8.2 : 1990

| Exploratory Hole No. | Depth (m) | Sample Type & No. | Specific Depth (m) | Particle Density (Mg/m ³) | Date Tested |
|----------------------|-----------|-------------------|--------------------|---------------------------------------|-------------|
| PRAIRIE_AUK_BH101 | 3.00 | U2 | 3.00 | 2.61 | 18/06/2020 |
| PRAIRIE_AUK_BH101 | 11.00 | U18 | 11.00 | 2.69 | 18/06/2020 |
| PRAIRIE_AUK_BH108 | 3.50 | B5 | 3.50 | 2.61 | 27/07/2020 |

For description of sample please refer to the Laboratory Sample Description Sheet

| | |
|--|---|
| Contract Title :- Prairie Site Ground Investigation Works | Client :- South Tees Development Corporation |
|--|---|

| | | | | |
|---|--------------------------------|---------------------------------|-----------------------------|---|
|  | Signed:- <i>msene</i> | Name:- | Page 1 of 1 |  |
| | Date of Issue :- 03/11/2020 | Certificate No. :- PD/4251/1 | AEG Contract No. :- 4251 | |

Particle Size Distribution Sieving and Sedimentation



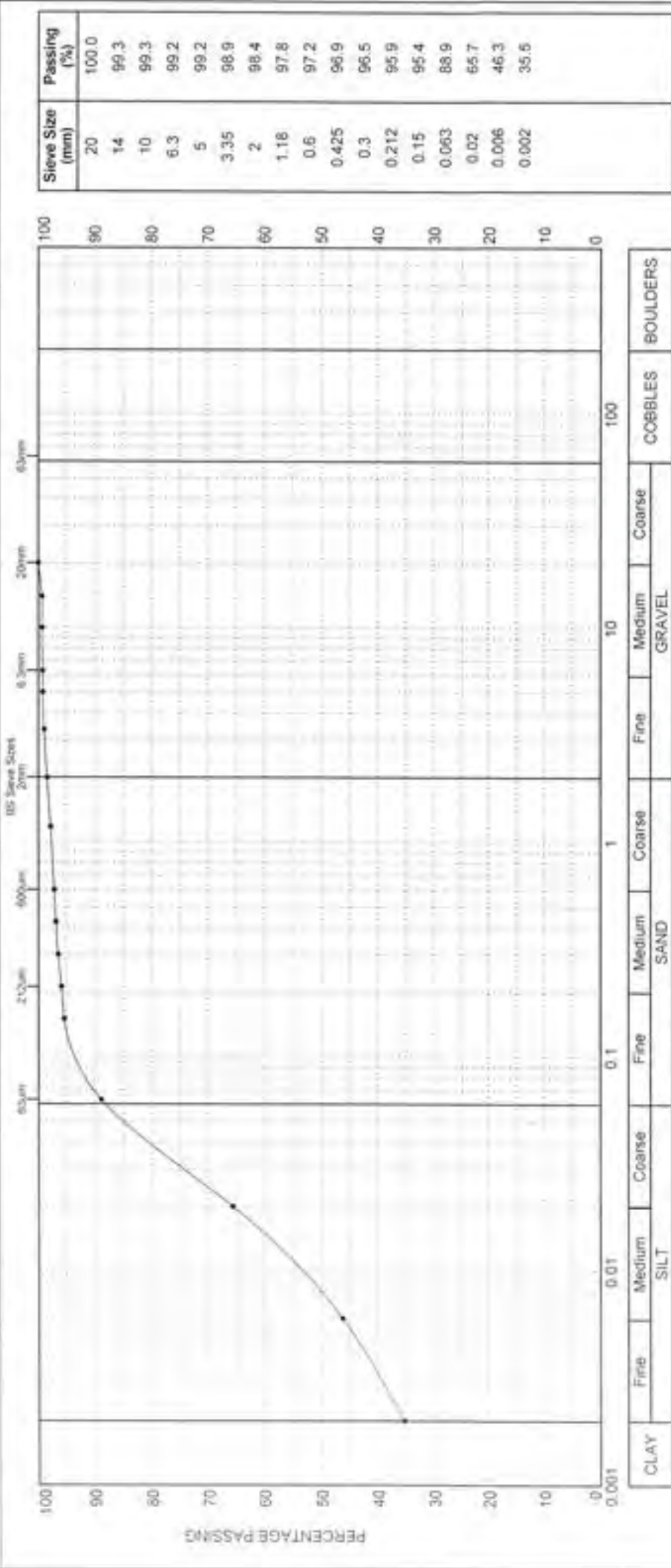
ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 20, Business Development Centre, Farnham Road, Farnham, Surrey, GU14 7AB. Tel: 01251 355 0200 Fax: 01251 352 4710
Regional Offices: Unit 20, Business Development Centre, Farnham Road, Farnham, Surrey, GU14 7AB. Tel: 01251 355 0200 Fax: 01251 352 4710

PARTICLE SIZE DISTRIBUTION

BS1377 : Part 2 : Clause 9.2 & 9.4 : 1990

Exploratory Hole No - PRAIRIE_AUK_BH101 Depth (m) - 4.00 Sample Type & No - B5 Specific Depth (m) - 4.00 Date Tested - 17/06/2020



For description of sample please refer to the Laboratory Sample Description Sheet

| | | | |
|---|--|-------------------------|------------------------|
| Date of issue - 29/06/2020 | Certificate No - PSD/4251/PRAIRIE_AUK_BH101/B5/4.00 | Signed - <i>M. Sore</i> | Name - |
| Client - South Tees Development Corporation | Contract Title - Prairie Site Ground Investigation Works | | Page 1 of 1 |
| | | | AEG Contract No - 4251 |

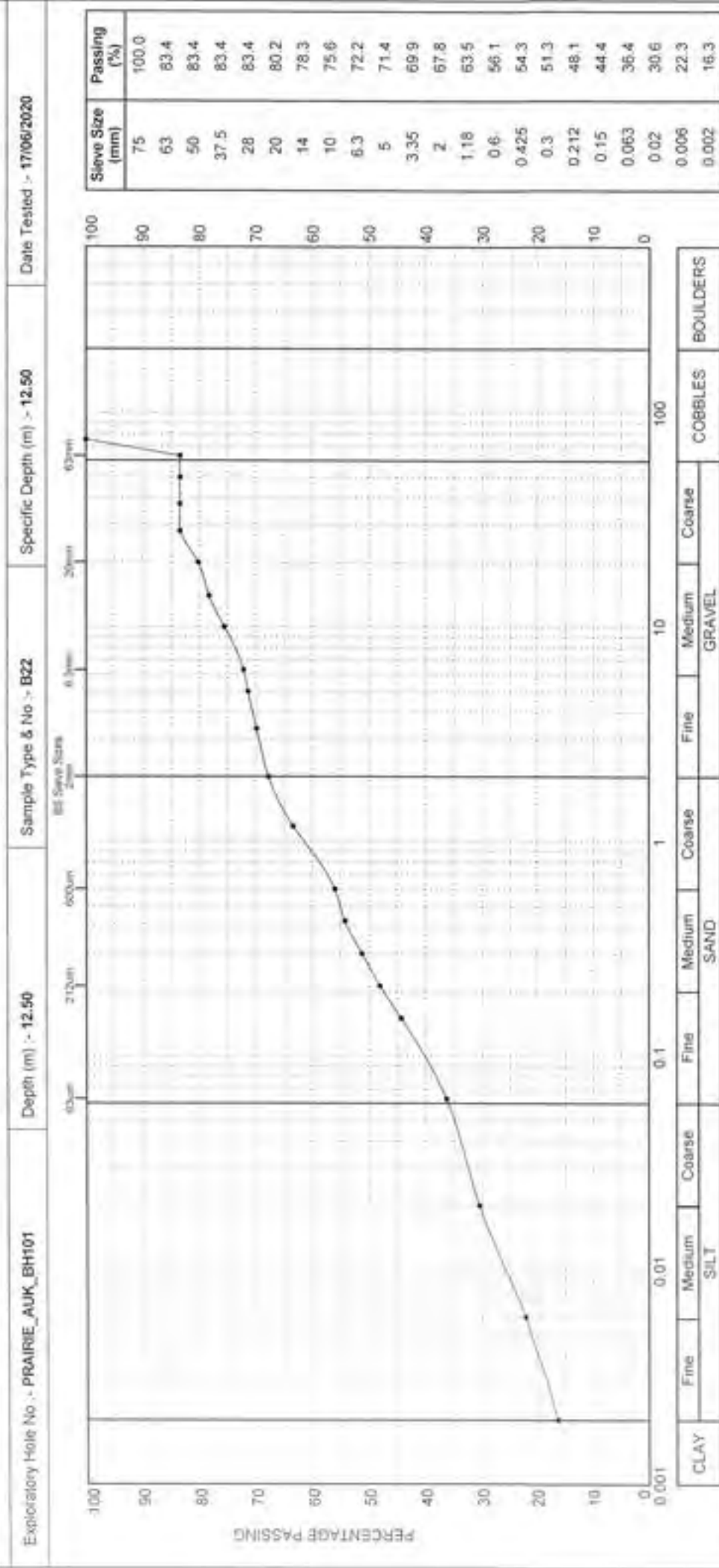


ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: 2-25 South Greenfield Lane, Prairies, Gateshead, Tyne and Wear, NE10 0JG, UK. Tel: 0191 261 4700 Fax: 0191 261 4710
Regional Office: 2nd Fl, Barnard Castle, South Shields, Tyne and Wear, NE15 7JG, UK. Tel: 0191 272 1231 Fax: 0191 272 1232

PARTICLE SIZE DISTRIBUTION

BS1377 : Part 2 : Clause 9.2 & 9.4 : 1990



For description of sample please refer to the Laboratory Sample Description Sheet

| | | | |
|---|---|---|---------|
| Date of issue :- 29/06/2020 | Certificate No :- PSD/4251/PRAIRIE_AUK_BH101/B22/12.50 | Signed :- <i>MSore</i> | Name :- |
| Client :- South Tees Development Corporation | Contract Title :- | Prairie Site Ground Investigation Works | |
| Page 1 of 1 | | AEG Contract No :- 4251 | |



1367

ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

BS1377 : Part 2 : Clause 9.2 & 9.4 : 1990

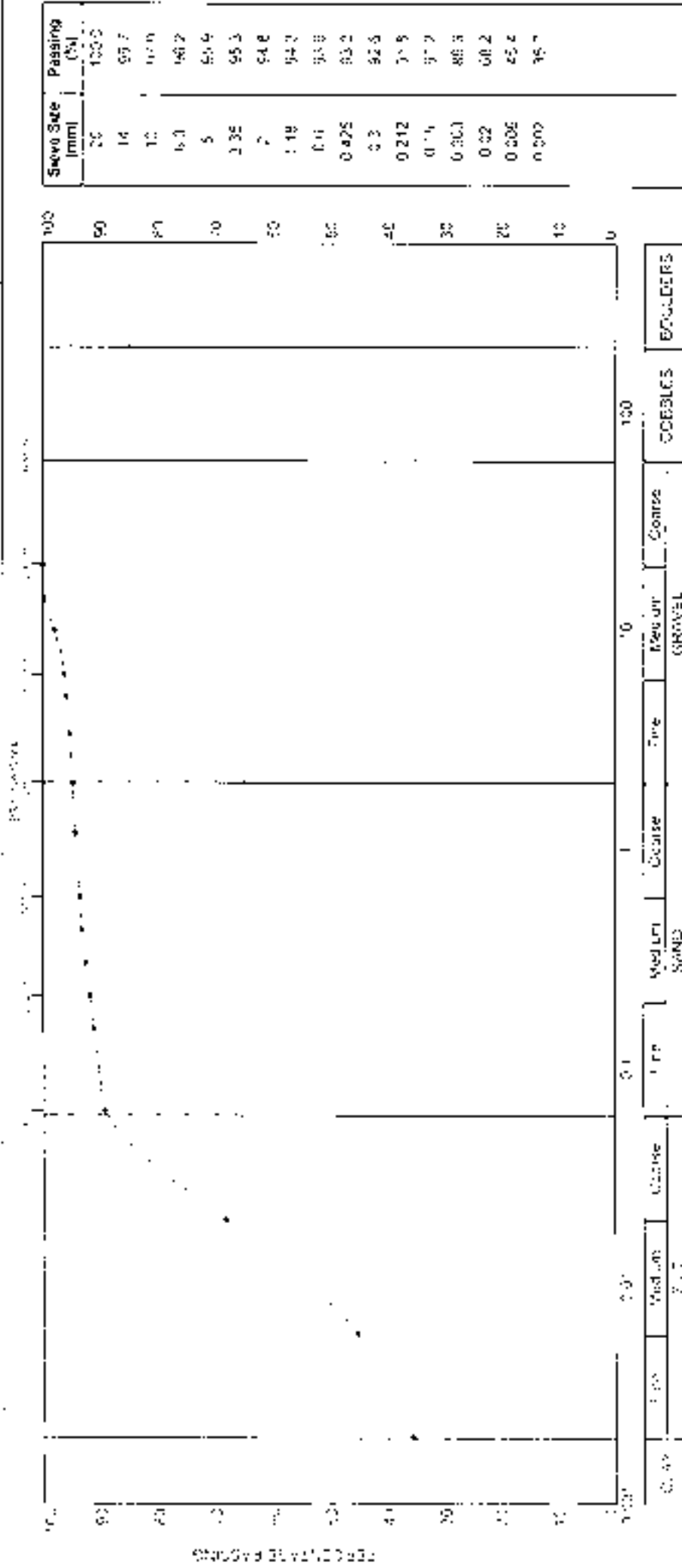
Exploration Project No : PHARMIE_AUK_BH103

Depth (m) : 5.50

Sample Type & No : B12

Specific Depth (m) : 5.50

Date Tested : 16/10/2020



Page 1 of 1
AEG Contract No : 4251

Client : **MSO**
Contract No : **MSO 4251**
Project Name : **PHARMIE_AUK_BH103**
Signed : *[Signature]*
Date : **21/10/2020**

Analyst : **MSO**
Contract No : **MSO 4251**
Project Name : **PHARMIE_AUK_BH103**
Signed : *[Signature]*
Date : **21/10/2020**



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: 1st Fl, 100, Gifford Street, Edinburgh, EC2 2LJ, Tel: 0131 462 4000 Fax: 0131 362 4714
Regional Office: 1st Fl, 20, Bannockburn Court, Leamington Spa, CV32 3JF, Tel: 01927 215 200 Fax: 01927 229 999

PARTICLE SIZE DISTRIBUTION

BS1377 : Part 2 : Clause 9.2 & 9.4 : 1990

| | | | | |
|---|------------------|------------------------|---------------------------|--------------------------|
| Exploratory Hole No - PRAIRIE_AUK_BH103 | Depth (m) - 8.50 | Sample Type & No - B19 | Specific Depth (m) - 8.50 | Date Tested - 15/10/2020 |
|---|------------------|------------------------|---------------------------|--------------------------|

PERCENTAGE PASSING

| Sieve Size (mm) | Passing (%) |
|-----------------|-------------|
| 20 | 100.0 |
| 14 | 99.7 |
| 10 | 99.5 |
| 6.3 | 98.5 |
| 5 | 98.0 |
| 3.35 | 97.0 |
| 2 | 95.6 |
| 1.18 | 94.0 |
| 0.6 | 91.7 |
| 0.425 | 90.3 |
| 0.3 | 88.0 |
| 0.212 | 84.6 |
| 0.15 | 80.0 |
| 0.063 | 69.6 |
| 0.02 | 56.9 |
| 0.006 | 39.9 |
| 0.002 | 29.7 |

| | | | |
|------|------|--------|--------|
| CLAY | Fine | Medium | Coarse |
|------|------|--------|--------|

| | | | |
|-----|------|--------|--------|
| 0.1 | Fine | Medium | Coarse |
|-----|------|--------|--------|

| | | | |
|------|------|--------|--------|
| SAND | Fine | Medium | Coarse |
|------|------|--------|--------|

| | | | |
|--------|--------|--------|----------|
| GRAVEL | Medium | Coarse | BOULDERS |
|--------|--------|--------|----------|

For description of sample please refer to the Laboratory Sample Description Sheet

Date of issue - 23/10/2020

Client - South Tees Development Corporation

Certificate No - PSD/4251/PRAIRIE_AUK_BH103/B19/8.50

Contract Title - Prairie Site Ground Investigation Works

Signed - *msore*

Name -

Contract No - 4251

Page 1 of 1

1367

ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

B51377 - Part 2 : Clause 9.2 & 9.4 : 1990

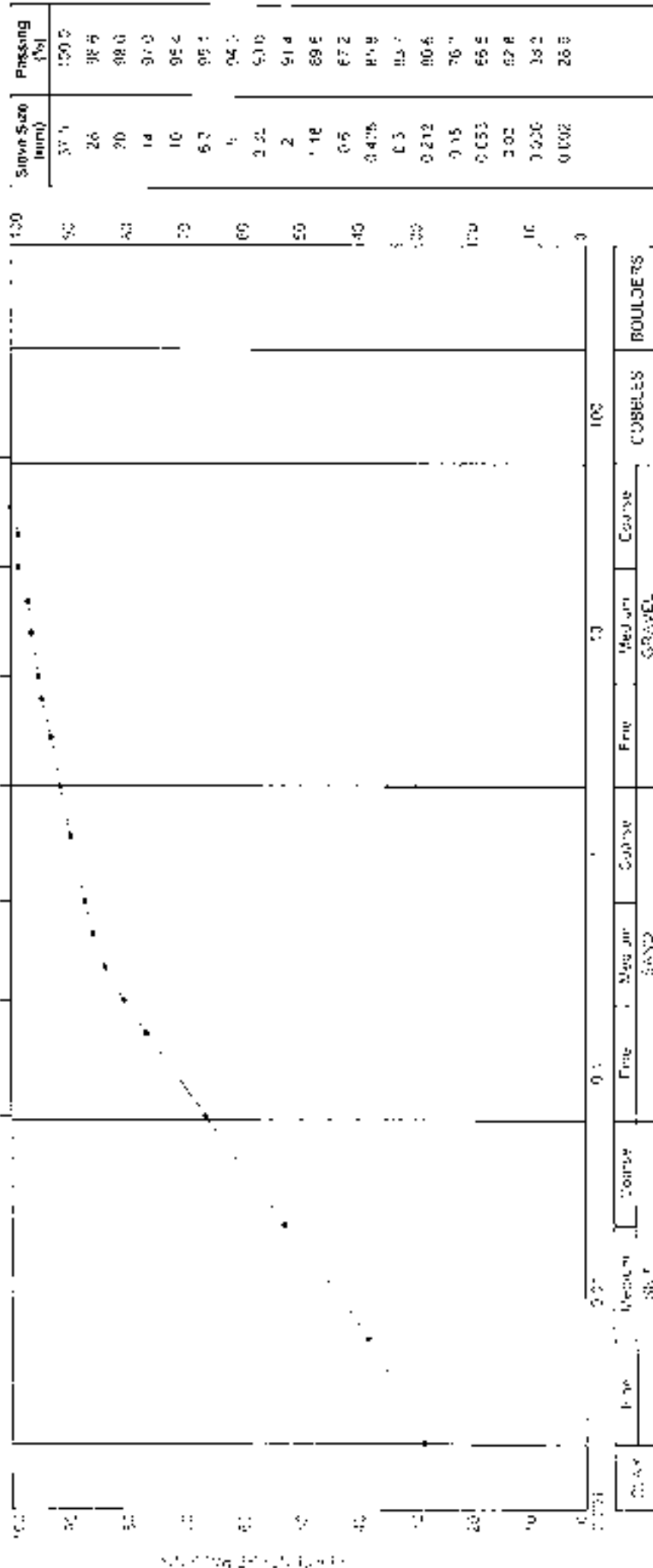
Project Name : PRAIRIE_AUK_UH106

Depth (m) : 7.00

Sample type & No : B6

Soil Description (m) : 7.00

Date Tested : 14/10/2020



| Course | Fine | Medium | Coarse | Course | Coarse | Course | COBBLES | BOULDERS |
|--------|------|--------|--------|--------|--------|--------|---------|----------|
| 0.075 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0.15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0.3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0.6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1.18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 60 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 75 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 150 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 300 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 600 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1200 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



Date of Issue : 20/10/2020
 Checked by : [Signature]
 Drawn by : [Signature]

Client Name : [Blank]
 Project Name : PRAIRIE_AUK_UH106
 Location : [Blank]
 Scale : [Blank]

Page 1 of 1
 ACC Contract No : 4251



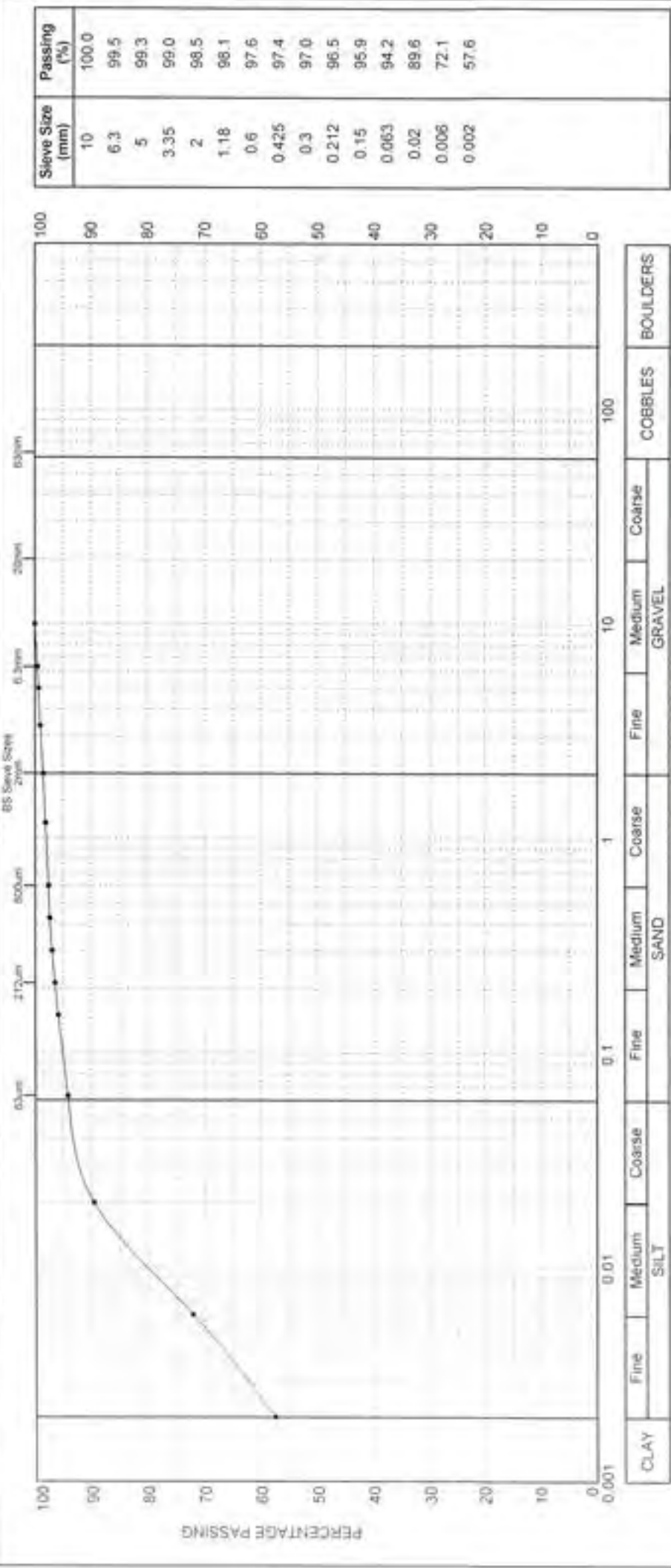
ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 21, Baxby, 2nd Industrial Estate, Park-Fit, Chester-le-Street, Co. Durham, DL3 5AG - Tel: 0191 267 4000 Fax: 0191 267 4174
Regional Office: Unit 21, Baxby, 2nd Industrial Estate, Park-Fit, Chester-le-Street, Co. Durham, DL3 5AG - Tel: 0191 267 4000 Fax: 0191 267 4174

PARTICLE SIZE DISTRIBUTION

BS1377 : Part 2 : Clause 9.2 & 9.4 ; 1990

Exploratory Hole No. :- PRAIRIE_AUK_BH108 Depth (m) :- 3.50 Sample Type & No :- B5 Specific Depth (m) :- 3.50 Date Tested :- 10/07/2020



For description of sample please refer to the Laboratory Sample Description Sheet

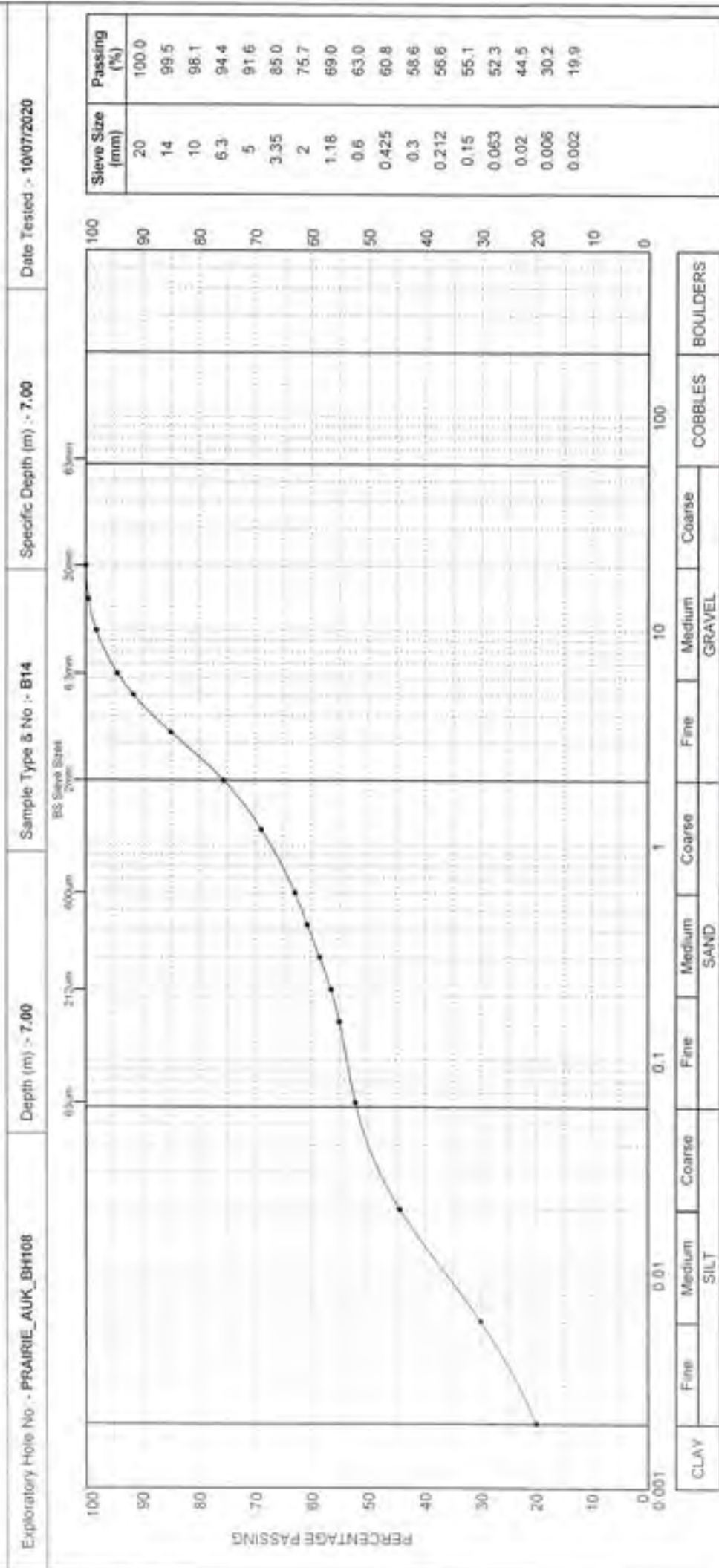
| | | | |
|---|--|----------------------------|------------------------|
| Date of Issue :- 30/07/2020 | Certificate No :- PSD4251/PRAIRIE_AUK_BH108/B5/3.50 | Signed :- <i>msore</i> | Name :- M. BELKINIK |
| Client :- South Tees Development Corporation | Contract Title :- Prairie Site Ground Investigation Works | AEG Contract No :- 4251 | |
| | | | |
| | | Page 1 of 1 | |

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Office: 1st Floor, The Old Rectory, 100, The Green, Buxton, Derbyshire, UK. Tel: 01335 531 100 Fax: 01335 531 110
 Registered Office: 1st Floor, The Old Rectory, 100, The Green, Buxton, Derbyshire, UK. Tel: 01335 531 100 Fax: 01335 531 110

PARTICLE SIZE DISTRIBUTION

BS1377 : Part 2 : Clause 9.2 & 9.4 : 1990



For description of sample please refer to the Laboratory Sample Description Sheet

| | | | |
|---|--|-------------------------|---------------------|
| Date of issue - 30/07/2020 | Certificate No. - PSD/4251/PRAIRIE_AUK_BH108/B14/7.00 | Signed - <i>M. Seno</i> | Name - <i>DELTA</i> |
| Client - South Tees Development Corporation | Contract Title - Prairie Site Ground Investigation Works | AEG Contract No. - 4251 | |

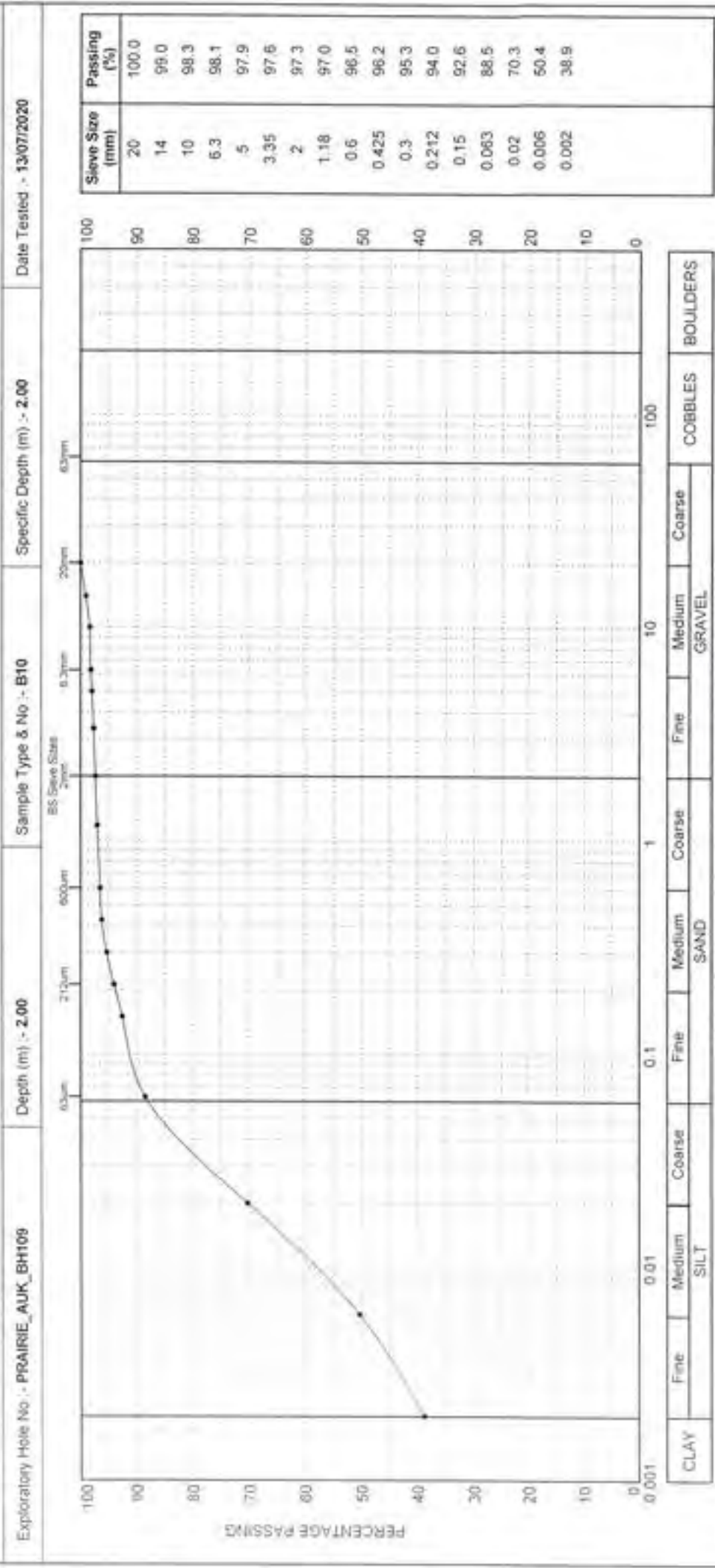
Page 1 of 1

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Regional Office: 104/25, Blenheim Development Centre, Crown Point, Repulse Bay, Hong Kong
 Head Office: 1st/25, Shek Oai Industrial Estate, Prince Fd., Cheung Sha Wan, District No. 18, Kowloon, Hong Kong
 Regional Office: 104/25, Blenheim Development Centre, Crown Point, Repulse Bay, Hong Kong

PARTICLE SIZE DISTRIBUTION

BS1377 : Part 2 : Clause 9.2 & 9.4 : 1990



For description of sample please refer to the Laboratory Sample Description Sheet

| | | | |
|--|---|---|--------------------------|
| Date of issue :- 30/07/2020 | Certificate No :- PSD/4251/PRAIRIE_AUK_BH109/B10/2.00 | Signed :- <i>msone</i> | Name :- <i>CLARK/FIN</i> |
| Client :- South Tees Development Corporation | Contract Title :- | Prairie Site Ground Investigation Works | |
| | | Page 1 of 1 | AEG Contract No :- 4251 |

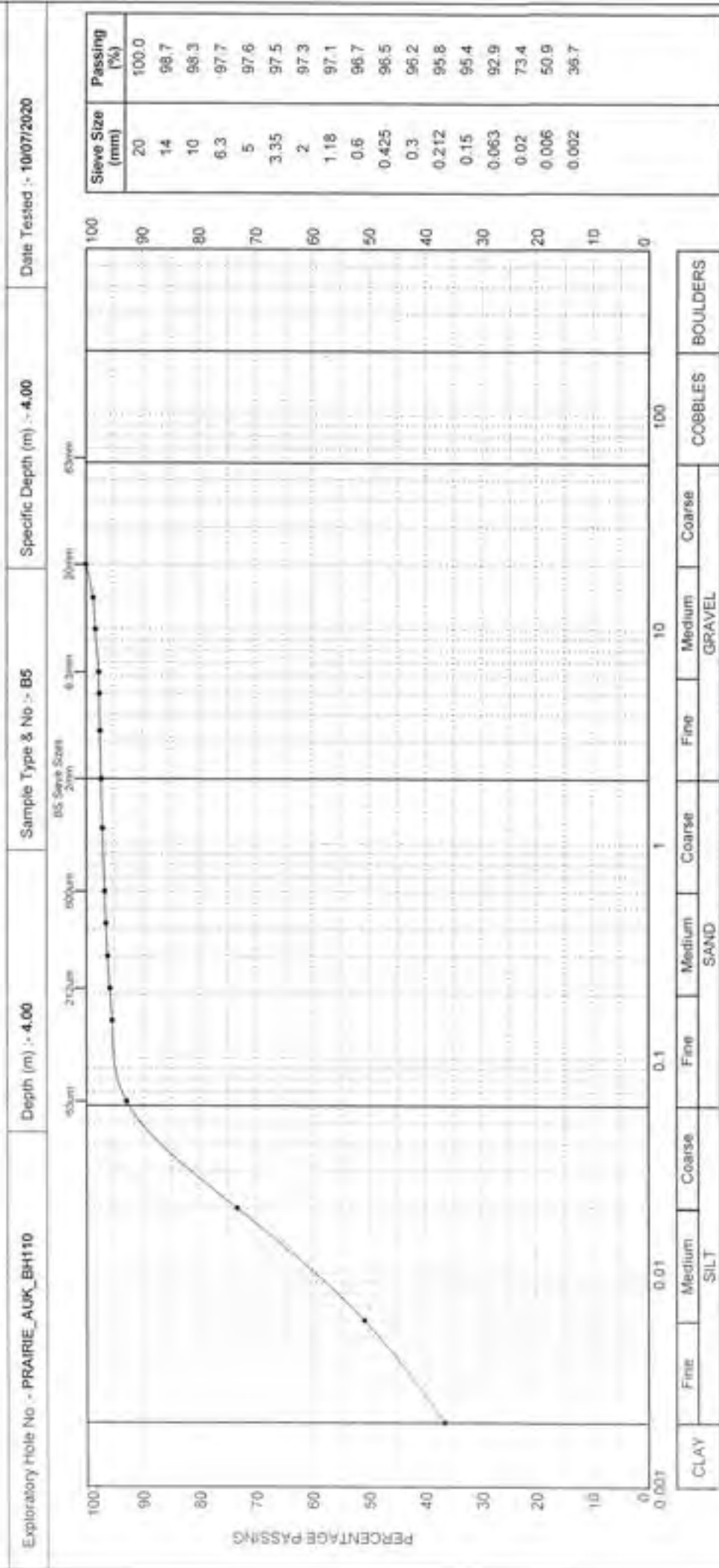


ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 11, 11000 Old Dominion Drive, Fairfax, VA 22030, Tel: 571-343-4200 Fax: 571-343-4710
Regional Office: Unit 21, Ebbw Vale Development Centre, Ebbw Vale, South Wales, NP23 5SE, Tel: 01773 230 300 Fax: 01773 230 599

PARTICLE SIZE DISTRIBUTION

BS1377 : Part 2 : Clause 9.2 & 9.4 : 1990



For description of sample please refer to the Laboratory Sample Description Sheet

| | | | | |
|--|-----------------------------|---|--|---|
| STC | Date of issue :- 30/07/2020 | Certificate No. :- PSD/4251/PRAIRIE_AUK_BH110/BS/4.00 | Signed :- <i>msone</i> | Page 1 of 1 AEG Contract No. :- 4251 |
| Client :- South Tees Development Corporation | Contract Title :- | | Name :- M SELKIRK Prairie Site Ground Investigation Works | |

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 25, The Mill, Mill Lane, Buntingford, Cambs, CB11 3AB. Tel: 01753 851100 Fax: 01753 851101
 Regional Office: Unit 25, The Mill, Mill Lane, Buntingford, Cambs, CB11 3AB. Tel: 01753 851100 Fax: 01753 851101

PARTICLE SIZE DISTRIBUTION

BS1377 : Part 2 : Clause 9.2 & 9.4 : 1990

| Exploratory Hole No :- PRAIRIE_AUK_BH110 | Depth (m) :- 9.50 | Sample Type & No :- B16 | Specific Depth (m) :- 9.50 | Date Tested :- 10/07/2020 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|------------------------------|----------------------------|---------------------------|-----------------|-------------|------|--------|--------|--------|------|----------|--------|--------|------|---------|--------|--------|------|----------|-----|------|-------|------|-----|------|-------|------|------|------|-------|------|------|------|-------|------|-------|------|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Sieve Size (mm)</th> <th>Passing (%)</th> </tr> </thead> <tbody> <tr><td>14</td><td>100.0</td></tr> <tr><td>10</td><td>99.6</td></tr> <tr><td>6.3</td><td>98.7</td></tr> <tr><td>5</td><td>97.6</td></tr> <tr><td>3.35</td><td>95.6</td></tr> <tr><td>2</td><td>93.2</td></tr> <tr><td>1.18</td><td>91.2</td></tr> <tr><td>0.6</td><td>88.8</td></tr> <tr><td>0.425</td><td>87.7</td></tr> <tr><td>0.3</td><td>85.8</td></tr> <tr><td>0.212</td><td>83.1</td></tr> <tr><td>0.15</td><td>79.5</td></tr> <tr><td>0.063</td><td>69.7</td></tr> <tr><td>0.02</td><td>58.9</td></tr> <tr><td>0.006</td><td>42.5</td></tr> <tr><td>0.002</td><td>31.1</td></tr> </tbody> </table> | | | | | Sieve Size (mm) | Passing (%) | 14 | 100.0 | 10 | 99.6 | 6.3 | 98.7 | 5 | 97.6 | 3.35 | 95.6 | 2 | 93.2 | 1.18 | 91.2 | 0.6 | 88.8 | 0.425 | 87.7 | 0.3 | 85.8 | 0.212 | 83.1 | 0.15 | 79.5 | 0.063 | 69.7 | 0.02 | 58.9 | 0.006 | 42.5 | 0.002 | 31.1 |
| Sieve Size (mm) | Passing (%) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | 100.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | 99.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6.3 | 98.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 97.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.35 | 95.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 93.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.18 | 91.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.6 | 88.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.425 | 87.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.3 | 85.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.212 | 83.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.15 | 79.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.063 | 69.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.02 | 58.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.006 | 42.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.002 | 31.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p style="font-size: small;">For description of sample please refer to the Laboratory Sample Description Sheet.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">CLAY</td> <td style="width: 25%;">SILT</td> <td style="width: 25%;">SAND</td> <td style="width: 25%;">GRAVEL</td> </tr> <tr> <td style="width: 25%;">COARSE</td> <td style="width: 25%;">MEDIUM</td> <td style="width: 25%;">FINE</td> <td style="width: 25%;">BOULDERS</td> </tr> <tr> <td style="width: 25%;">COARSE</td> <td style="width: 25%;">MEDIUM</td> <td style="width: 25%;">FINE</td> <td style="width: 25%;">COBBLES</td> </tr> <tr> <td style="width: 25%;">COARSE</td> <td style="width: 25%;">MEDIUM</td> <td style="width: 25%;">FINE</td> <td style="width: 25%;">BOULDERS</td> </tr> </table> | | | | | CLAY | SILT | SAND | GRAVEL | COARSE | MEDIUM | FINE | BOULDERS | COARSE | MEDIUM | FINE | COBBLES | COARSE | MEDIUM | FINE | BOULDERS | | | | | | | | | | | | | | | | | | |
| CLAY | SILT | SAND | GRAVEL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| COARSE | MEDIUM | FINE | BOULDERS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| COARSE | MEDIUM | FINE | COBBLES | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| COARSE | MEDIUM | FINE | BOULDERS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Date of Issue :- 30/07/2020 | Certificate No :- PSD:4251/PRAIRIE_AUK_BH110/B16/9.50 | Signed :- <i>M. Selaifir</i> | Name :- M. SELAIFIR | Page 1 of 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Client :- South Tees Development Corporation | Contract Title :- | Contract No :- 4251 | AEG Contract No :- 4251 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



1367

ALLIED EXPLORATION & GEOTECHNICS LIMITED

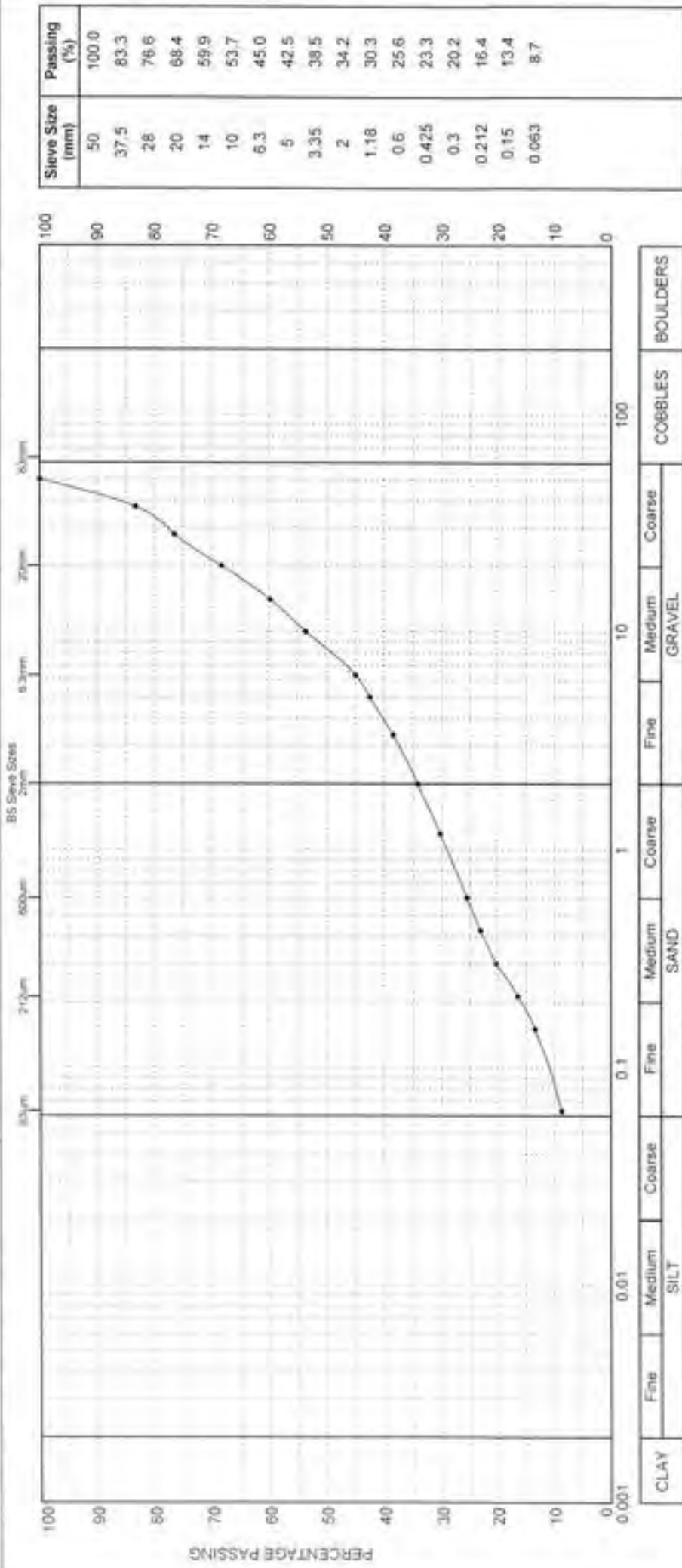
Head Office: Unit 25, Siskin Hill Industrial Estate, Ffos-y-Felin, Nant-y-Groesau, Gwent, NP23 5SD. Tel: 01753 351111 Fax: 01753 351112
Regional Office: Unit 23, Bannerman Development Centre, Ebbw Vale Parkway, Ebbw Vale, NP23 5SD. Tel: 01753 351111 Fax: 01753 351112

PARTICLE SIZE DISTRIBUTION

BS1377 : Part 2 : Clause 9.2 & 9.4 : 1990

(Test deviated from standard due to insufficient sample mass)

Exploratory Hole No :- PRAIRIE_AUK_TP101 Depth (m) :- 0.90 Sample Type & No :- B4 Specific Depth (m) :- 0.90 Date Tested :- 08/10/2020



For description of sample please refer to the Laboratory Sample Description Sheet

| | | | |
|---|--|--------------------------------|----------------------------|
| Date of issue :- 20/10/2020 | Certificate No :- PSD/4251/PRAIRIE_AUK_TP101/B4/0.90 | Signed :- <i>M. Selkirk</i> | Name :- M. SELKIRK |
| Client :- South Tees Development Corporation | Contract Title :- Prairie Site Ground Investigation Works | | AEG Contract No :- 4251 |

Page 1 of 1



ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

BS1377 - Part 2 - Clause 9.2 & 9.4 1990

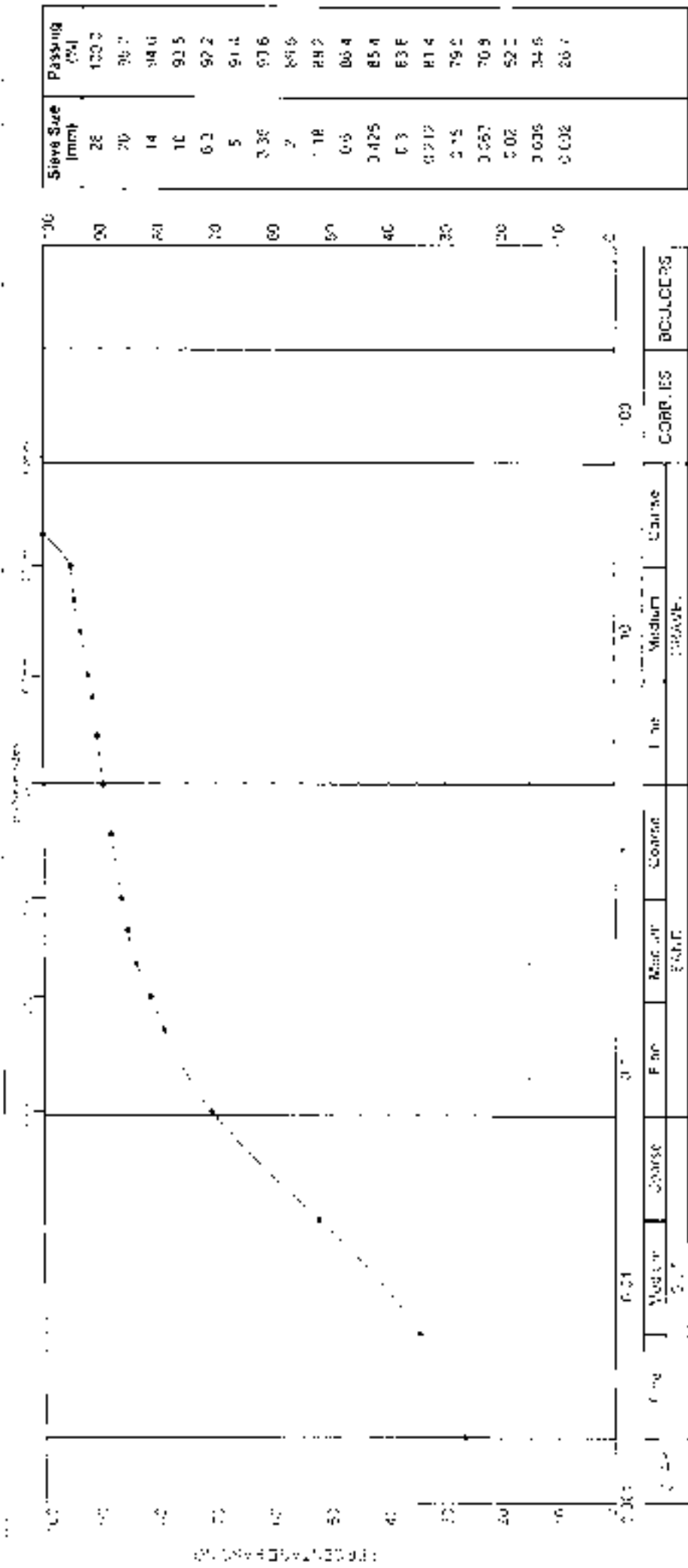
Project Name: PRAIRIE_AUK_TP102

Depth (m): 2.00

Sample Type: % - BS

Specific Depth (m): 2.00

Date Tested: 19/10/2020



Page 1 of 1
REG. Contract No: 4251

Name: *MSA*
Sample: PRAIRIE_AUK_TP102_B02_B05

Contract No: *MSA*
Please See Client Investigation Works

Client: *MSA*
Contract No: *MSA*

Contract No: *MSA*
Please See Client Investigation Works

Contract No: *MSA*
Please See Client Investigation Works

Contract No: *MSA*
Please See Client Investigation Works

Contract No: *MSA*
Please See Client Investigation Works

Contract No: *MSA*
Please See Client Investigation Works

ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

651377 - Part 2 : Clause 9.2 & 9.4 - 1996

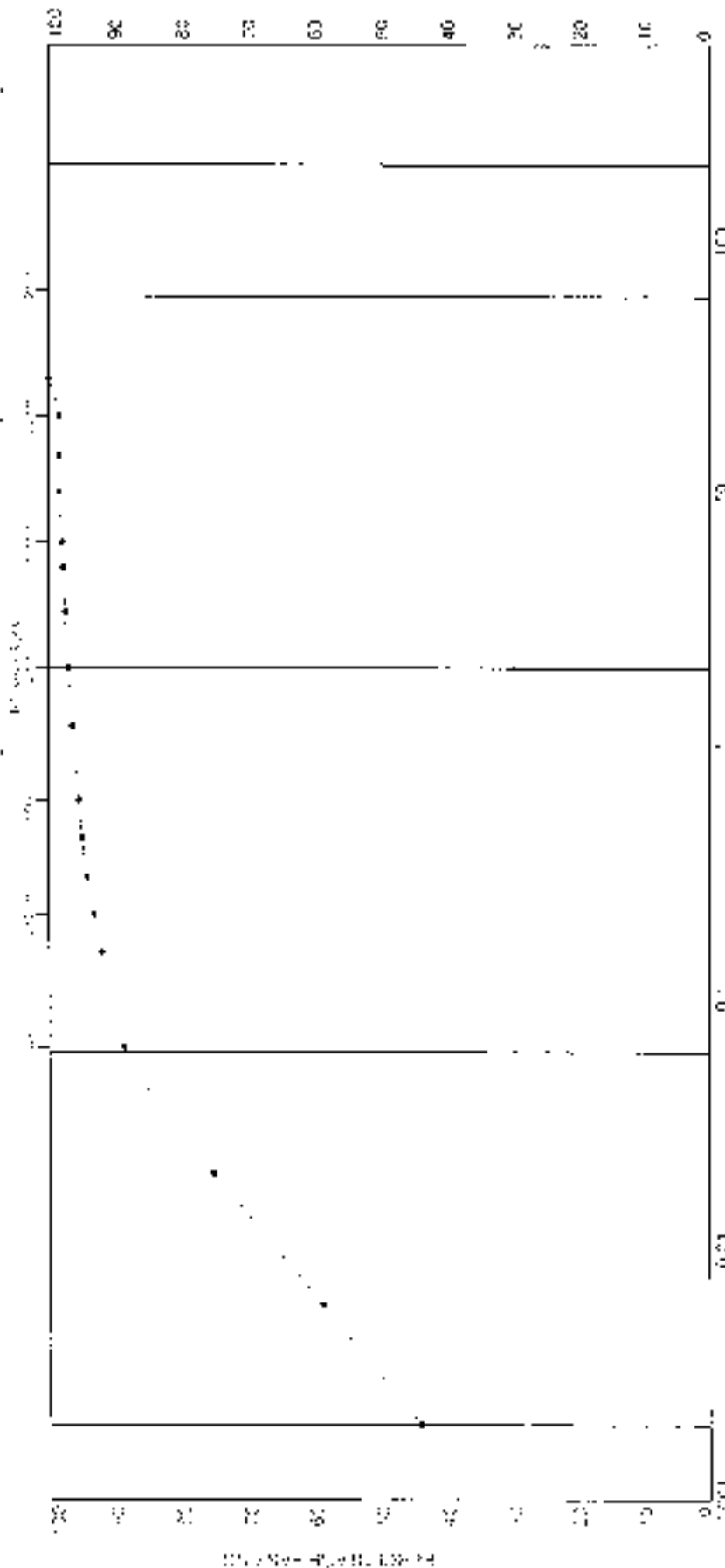
Exploration No: PRAIRIE_AUK_TPT05

Depth (m): 2.00

Sample Type & No: B5

Specimen Depth (m): 2.00


Date Tested: 30/05/2020



| Sieve Size (mm) | Passing (%) |
|-----------------|-------------|
| 25 | 100.0 |
| 20 | 98.4 |
| 15 | 96.4 |
| 10 | 94.4 |
| 6.3 | 94.0 |
| 5 | 93.6 |
| 3.35 | 93.5 |
| 2 | 93.1 |
| 1.18 | 90.4 |
| 0.6 | 85.0 |
| 0.425 | 85.0 |
| 0.3 | 84.2 |
| 0.212 | 83.0 |
| 0.15 | 82.1 |
| 0.075 | 80.8 |
| 0.03 | 75.5 |
| 0.025 | 69.0 |
| 0.02 | 44.2 |

| | | | | | | | |
|--------|--------|-------|--------|--------|--------|--------|----------|
| Coarse | Medium | Fine | Course | Course | Course | Course | BOULDERS |
| 0.075 | 0.425 | 0.075 | 0.075 | 0.075 | 0.075 | 0.075 | BOULDERS |
| 0.075 | 0.425 | 0.075 | 0.075 | 0.075 | 0.075 | 0.075 | BOULDERS |

The results of this test are provided as best estimate. Sample description: Sand



Date of Issue: 20/05/2020
 Issue No: PRAIRIE_AUK_TPT05
 Contract No: 42511
 Page 1 of 1



Client Name: PRAIRIE_AUK_TPT05
 Name: M. S. W.
 Signature: [Signature]
 Date: 30/05/2020
 Contract No: 42511
 Project: 378 Ground Investigation Works

ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

BS1377 - Part 2: Clause 9.2 & 9.4: 1990
 (Test deviated from standard due to insufficient sample mass)

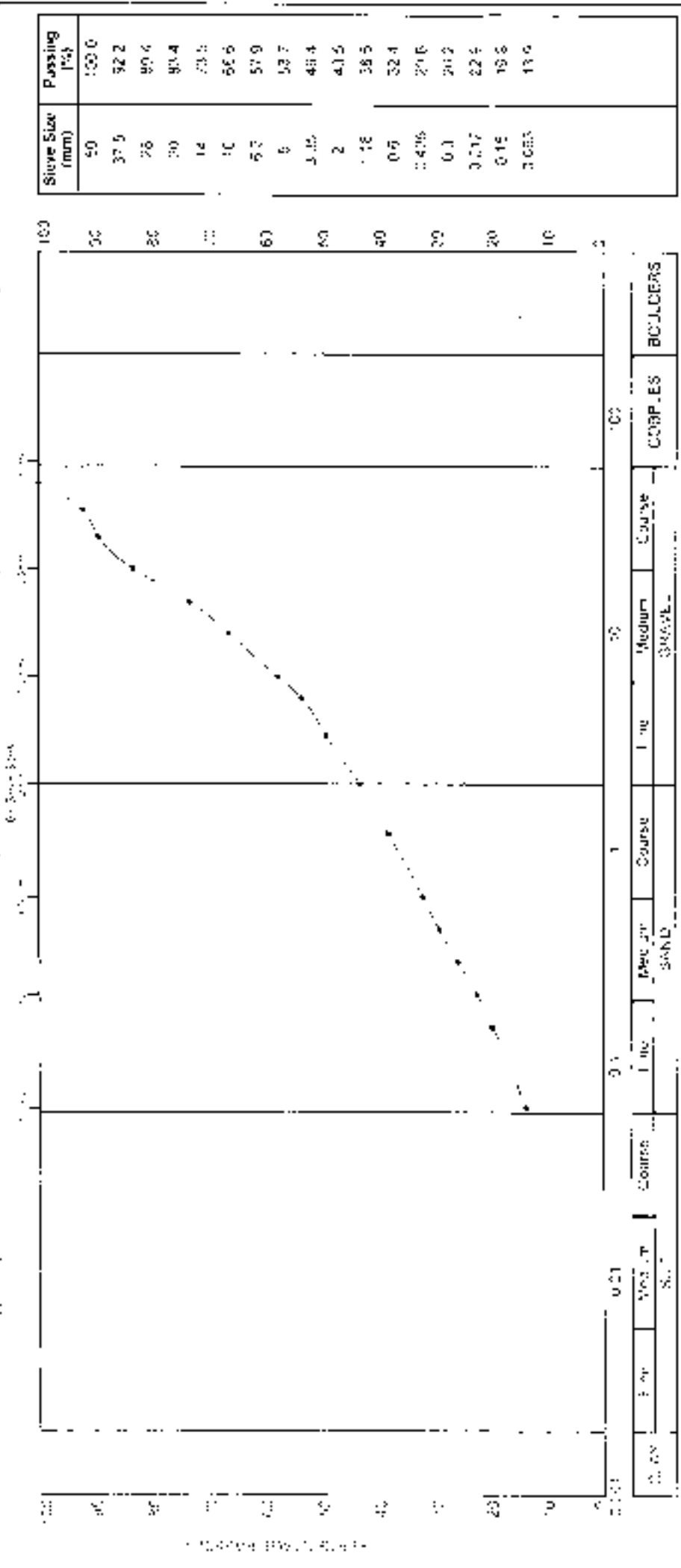
Project Name: PHAIRE_ACS_TPT06

Depth: 1.00

Sample Type & No: BZ

Specs: Leptom 1.00

Date Taken: 15/10/2020



AES

Site Name: PHAIRE_ACS_TPT06

Date: 22/10/2020

Depth: 1.00

Sample Type: BZ

Specs: Leptom 1.00

AS

Client Ref: 19514951

Client Name: PHAIRE_ACS_TPT06

Contract No: 4251

Performed by: *MSW*

Checked by: _____

Date: _____

Signature: _____

Name: _____

Contract Title: _____

Project: _____

Location: _____

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 22, The Industrial Estate, Mill Hill, Chesham, Bucks, UK. Tel: 01494 603333 Fax: 01494 362474
 Regional Offices: Unit 25, Barnwood Development Centre, Church Road, Gloucester, Gloucestershire, GL1 3SB. Tel: 01172 233333 Fax: 01172 755566

PARTICLE SIZE DISTRIBUTION

BS1377 : Part 2 : Clause 9.2 & 9.4 : 1990

| Exploratory Hole No :- PRAIRIE_AUK_TP107 | Depth (m) :- 1.00 | Sample Type & No :- B4 | Specific Depth (m) :- 1.00 | Date Tested :- 30/09/2020 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|--|----------------------------|---------------------------|-----------------|-------------|----|-------|------|------|----|------|----|------|----|------|----|------|-----|------|---|------|------|------|---|------|------|------|-----|------|-------|------|-----|------|-------|------|------|------|-------|------|------|------|-------|------|-------|------|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Sieve Size (mm)</th> <th>Passing (%)</th> </tr> </thead> <tbody> <tr><td>50</td><td>100.0</td></tr> <tr><td>37.5</td><td>96.3</td></tr> <tr><td>28</td><td>94.8</td></tr> <tr><td>20</td><td>94.8</td></tr> <tr><td>14</td><td>93.9</td></tr> <tr><td>10</td><td>91.9</td></tr> <tr><td>6.3</td><td>89.2</td></tr> <tr><td>5</td><td>87.8</td></tr> <tr><td>3.35</td><td>86.1</td></tr> <tr><td>2</td><td>84.4</td></tr> <tr><td>1.18</td><td>82.9</td></tr> <tr><td>0.6</td><td>81.2</td></tr> <tr><td>0.425</td><td>80.3</td></tr> <tr><td>0.3</td><td>78.9</td></tr> <tr><td>0.212</td><td>77.1</td></tr> <tr><td>0.15</td><td>75.0</td></tr> <tr><td>0.063</td><td>62.5</td></tr> <tr><td>0.02</td><td>51.6</td></tr> <tr><td>0.006</td><td>38.6</td></tr> <tr><td>0.002</td><td>28.3</td></tr> </tbody> </table> | | | | | Sieve Size (mm) | Passing (%) | 50 | 100.0 | 37.5 | 96.3 | 28 | 94.8 | 20 | 94.8 | 14 | 93.9 | 10 | 91.9 | 6.3 | 89.2 | 5 | 87.8 | 3.35 | 86.1 | 2 | 84.4 | 1.18 | 82.9 | 0.6 | 81.2 | 0.425 | 80.3 | 0.3 | 78.9 | 0.212 | 77.1 | 0.15 | 75.0 | 0.063 | 62.5 | 0.02 | 51.6 | 0.006 | 38.6 | 0.002 | 28.3 |
| Sieve Size (mm) | Passing (%) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 50 | 100.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 37.5 | 96.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 28 | 94.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | 94.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | 93.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | 91.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6.3 | 89.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 87.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.35 | 86.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 84.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.18 | 82.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.6 | 81.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.425 | 80.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.3 | 78.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.212 | 77.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.15 | 75.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.063 | 62.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.02 | 51.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.006 | 38.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.002 | 28.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| For description of sample please refer to the Laboratory Sample Description Sheet | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Date of issue :- 20/10/2020 | Certificate No :- PSD/4251/PRAIRIE_AUK_TP107/B4/1.00 | Signed :- <i>MSR</i> | Name :- <i>MSR</i> | Page 1 of 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Client :- South Tees Development Corporation | Contract Title :- | Praine Site Ground Investigation Works | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

RS1377 : Part 2 : Clause 9.2 & 9.4 : 1990
(Test deviating from standard due to insufficient sample mass)

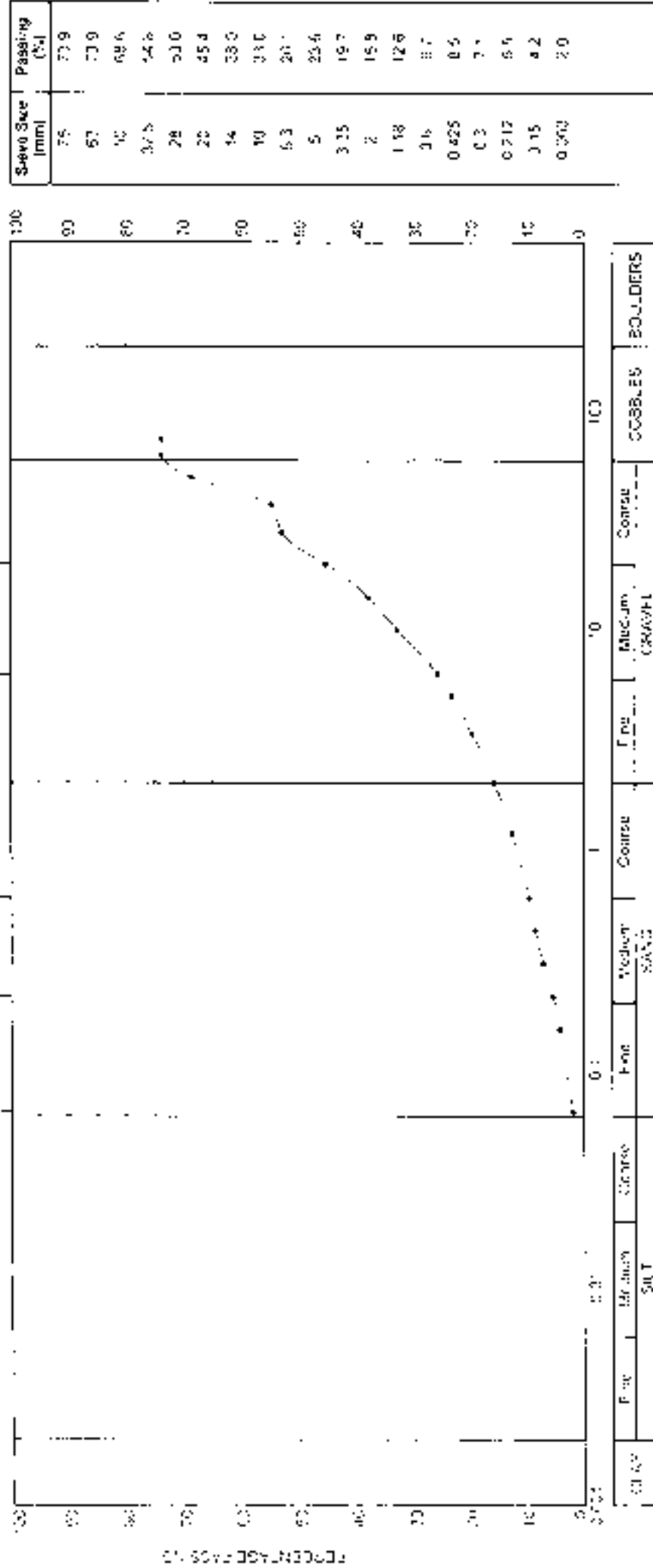
Test Identity File No: **FRAIR E_AUK_TP103**

Exp. No.: **0.90**

Sample Type & No.: **B4**

Specific Depth (m): **0.90**

Date Tested: **30/09/2020**



Page 1 of 1
AS Contract No: 4251

Project Name: **FRANKLIN RIVER**
Contract Title: **FRANKLIN RIVER DEVELOPMENT CONSULTING**

Client: **FRANKLIN RIVER DEVELOPMENT CONSULTING**
Contract Title: **FRANKLIN RIVER DEVELOPMENT CONSULTING**

Date of Issue: **30/09/2020**
Certificate No.: **95E-4251-FRAIR-21-AUK-TP-03-30-0-90**
Signed: **[Signature]**
Name: **[Name]**



ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

AS1377 - Part 2 - Clauses 9.2 & 9.4 - 1990

(Test deviated from standard due to insufficient sample mass)

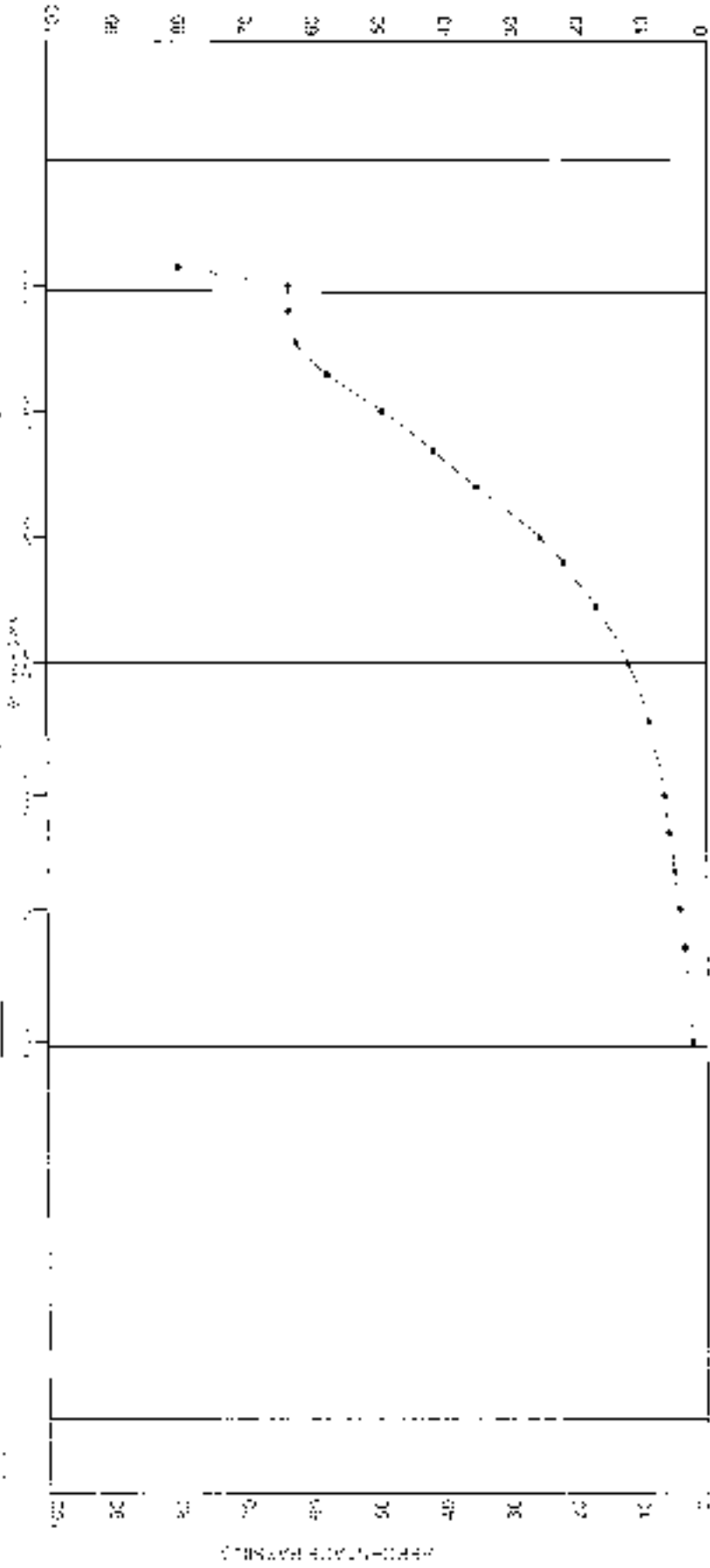
Exploratory Test No: PRAIRIE_AUK_TP108

Depth (m): 1.90

Sample Type & No: BT

Specific Depth (m): 1.90

Curve Tested: 8009/2020



| Coarse | Fine | Coarse | Fine | Medium | Coarse | Fine | Medium | Coarse | Fine | Coarse | Fine | Coarse | Fine | Coarse | Fine | Coarse | Fine | |
|--------|------|--------|------|--------|--------|------|--------|--------|------|--------|------|--------|------|--------|------|--------|------|--|
| | | | | | | | | | | | | | | | | | | |

For test results refer to the report or the test results sheet.



Date of Issue: 20/02/2020

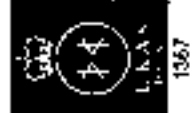
Tested by: PSE-425 - PRAIRIE_AUK_TP108 8/21/20

Checked by: [Signature]

Contract No: [Blank]

Project Name: [Blank]

Page 1 of 1



Contract Title: [Blank]

Project Name: Prairie Ground Investigation Works

ALG Contract No: 4251

ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

BS 1377 - Part 2: Clause 9.2 & 9.4: 1990

(Test deviated from standard due to insufficient sample mass)

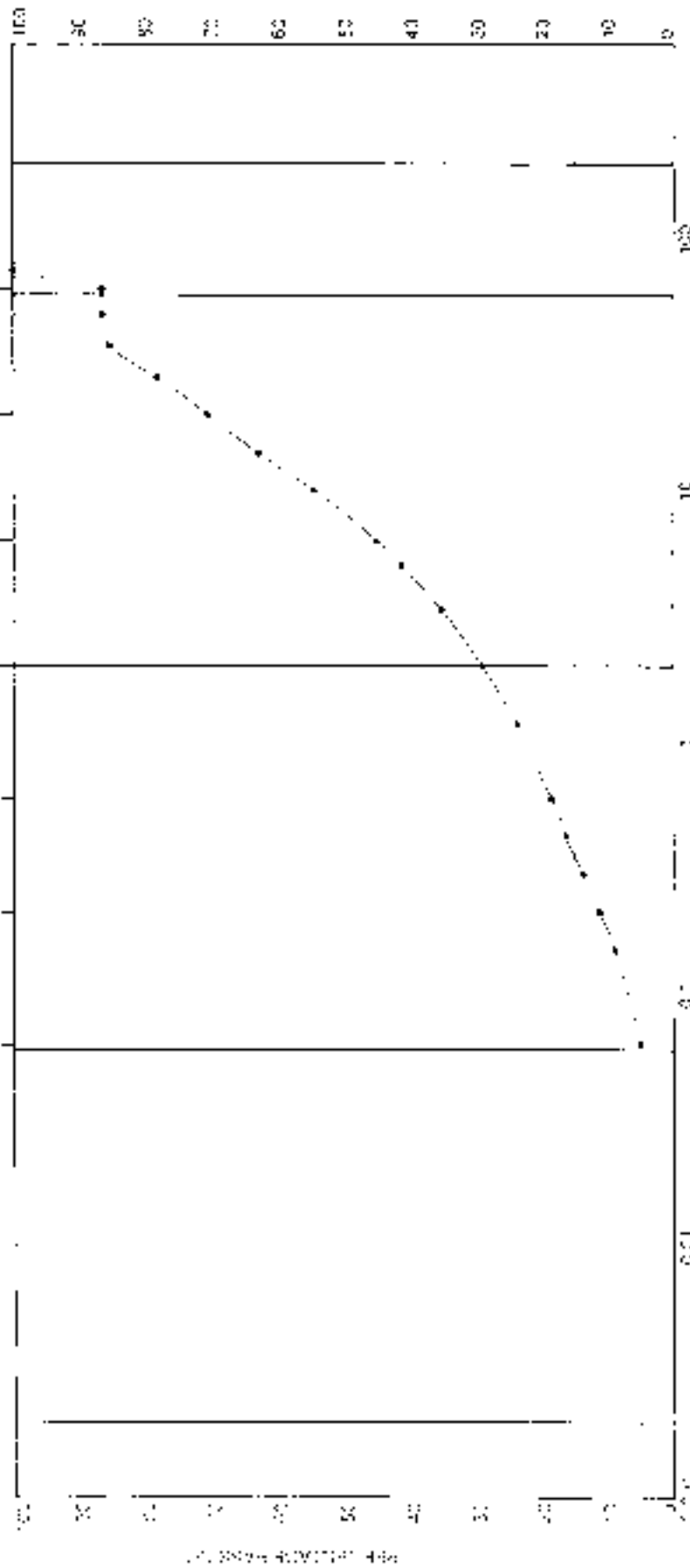
Project No: PRAIRIE_AUG_TP110

Depth: 1.00

Sample Type: B1 - B2

Seeds Depth: 1.00

Date Tested: 16/01/2020



| Coarse | Very Coarse | Coarse | Medium | Fine | Medium | Coarse | NO. OF TESTS |
|--------|-------------|--------|--------|------|--------|--------|--------------|
| | | | | | | | CC03_CS |

For test procedure, refer to BS 1377-2:1990 Part 2: Clause 9.2

Tested by: [Signature]

Date: 16/01/2020

Reference No: PRAIRIE_AUG_TP110_B2-00

Serial: 14310

Name: *Misaw*

Page 1 of 1



Client: [Signature]

Contact Title:

Project Site: Ground Investigation Works

Project No: 4251

ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

BS1377 : Part 2 : Clause 9.2.8.3.4 : 1990

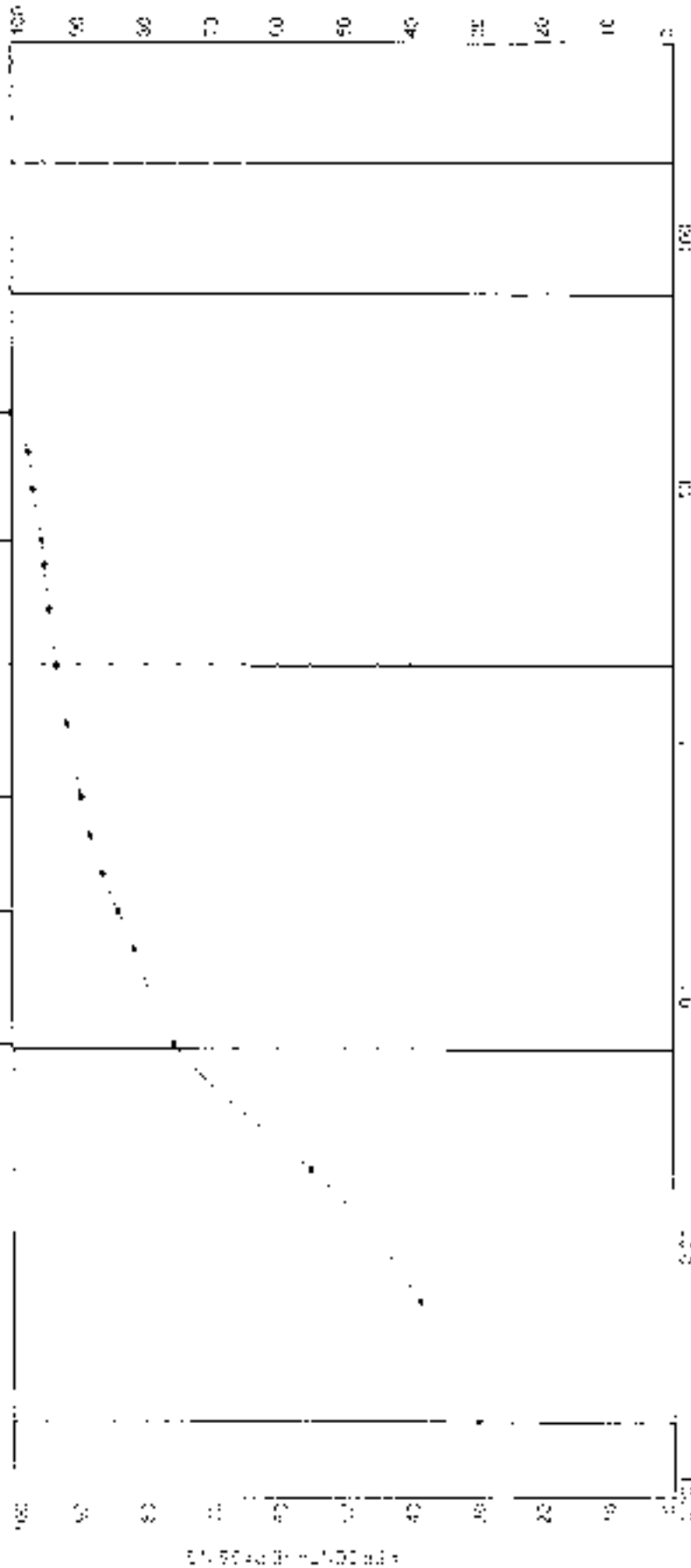
Location: PROAIRIE_AUK_TP110

Depth: 3.00

Sample Type & No: D8

Specific Depth: 3.00

Date Tested: 16/10/2020



| Course | Free | Medium | Coarse | COARSE | FINES |
|--------|------|--------|--------|--------|-------|
| 0.075 | 0 | 0 | 0 | 0 | 0 |
| 0.15 | 0 | 0 | 0 | 0 | 0 |
| 0.3 | 0 | 0 | 0 | 0 | 0 |
| 0.425 | 91.7 | 91.7 | 91.7 | 91.7 | 91.7 |
| 0.6 | 91.7 | 91.7 | 91.7 | 91.7 | 91.7 |
| 0.75 | 91.7 | 91.7 | 91.7 | 91.7 | 91.7 |
| 1.0 | 91.7 | 91.7 | 91.7 | 91.7 | 91.7 |
| 1.5 | 91.7 | 91.7 | 91.7 | 91.7 | 91.7 |
| 2.0 | 91.7 | 91.7 | 91.7 | 91.7 | 91.7 |
| 2.5 | 91.7 | 91.7 | 91.7 | 91.7 | 91.7 |
| 3.0 | 91.7 | 91.7 | 91.7 | 91.7 | 91.7 |
| 3.75 | 91.7 | 91.7 | 91.7 | 91.7 | 91.7 |
| 4.75 | 91.7 | 91.7 | 91.7 | 91.7 | 91.7 |
| 6.0 | 91.7 | 91.7 | 91.7 | 91.7 | 91.7 |
| 7.5 | 91.7 | 91.7 | 91.7 | 91.7 | 91.7 |
| 9.5 | 91.7 | 91.7 | 91.7 | 91.7 | 91.7 |
| 12.5 | 91.7 | 91.7 | 91.7 | 91.7 | 91.7 |
| 15.0 | 91.7 | 91.7 | 91.7 | 91.7 | 91.7 |
| 19.0 | 91.7 | 91.7 | 91.7 | 91.7 | 91.7 |
| 25.0 | 91.7 | 91.7 | 91.7 | 91.7 | 91.7 |
| 30.0 | 91.7 | 91.7 | 91.7 | 91.7 | 91.7 |
| 37.5 | 91.7 | 91.7 | 91.7 | 91.7 | 91.7 |
| 47.5 | 91.7 | 91.7 | 91.7 | 91.7 | 91.7 |
| 60.0 | 91.7 | 91.7 | 91.7 | 91.7 | 91.7 |
| 75.0 | 91.7 | 91.7 | 91.7 | 91.7 | 91.7 |

Method: 30 Medium GRAVEL

Date of test: 16/10/2020
 Certificate No: NSD 4791 TR2 R - 2020 - 11111111111111111111
 Signed: [Signature]
 Contract No: 4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

RS1377 Part 2 Clause 9.2 & 9.4 : 1990

(Test deviated from standard due to insufficient sample mass)

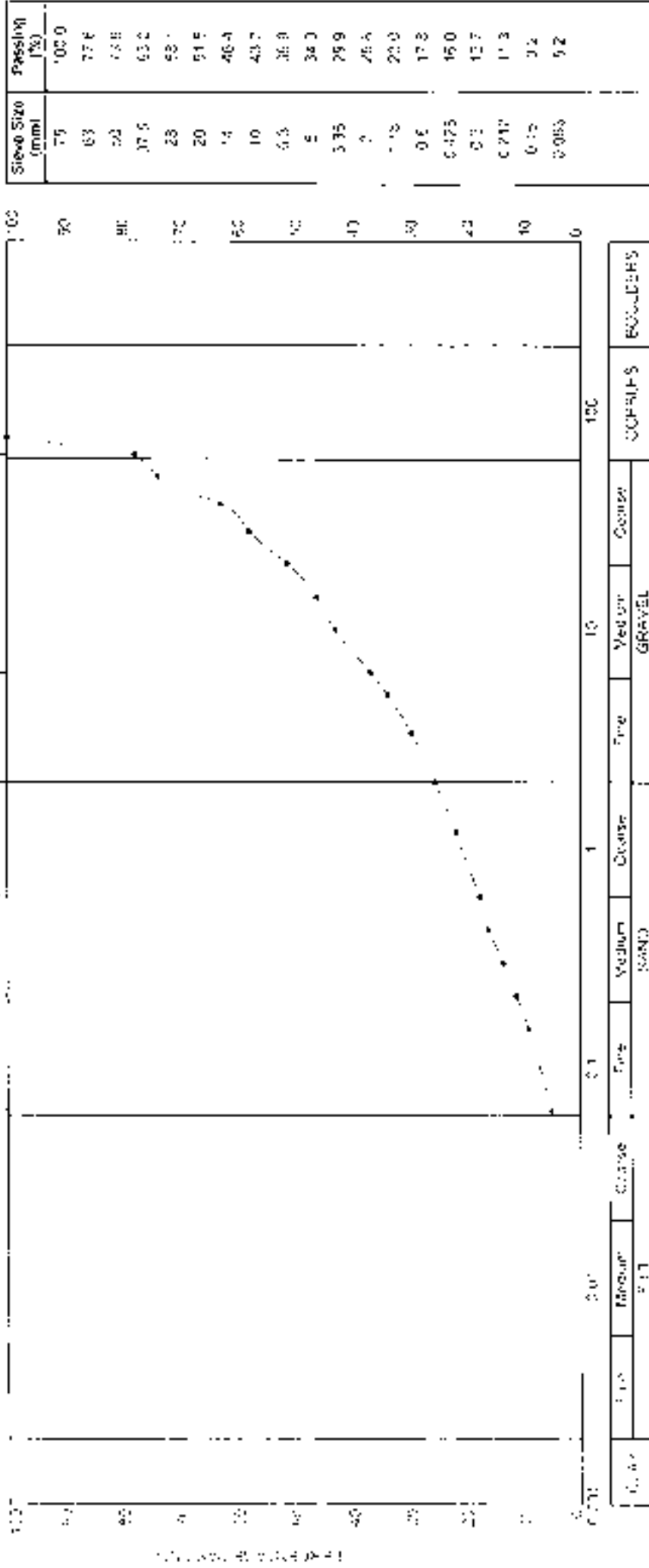
Job Reference No: PRAIRIE_AUK_TP111

Depth: 1.60

Sample Type & No: BS

Specific Depth: 1.00

Date Tested: 10/10/2020



| Class | Finer | Medium | Coarse | Very Coarse | Coarse | Very Coarse | Coarse | Very Coarse | Coarse |
|----------|-------|--------|--------|-------------|--------|-------------|--------|-------------|--------|
| Soils | 0.075 | 0.15 | 0.3 | 0.6 | 1.18 | 2.5 | 5 | 9.5 | 15 |
| Gravel | | | | | | | | | |
| Boulders | | | | | | | | | |



Client: South Tees Coastal Management Scheme
Date: 23/10/2020
Drawn by: M. J. W. M. / M. J. W. M.

Checked by: M. J. W. M. / M. J. W. M.
Signed: M. J. W. M. / M. J. W. M.
Name: M. J. W. M. / M. J. W. M.

Page 1 of 1
PES Contract No: 4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

BS1377, Part 2, Clauses 9.2 & 9.4 : 1990
(Test deviated from standard due to insufficient sample mass)

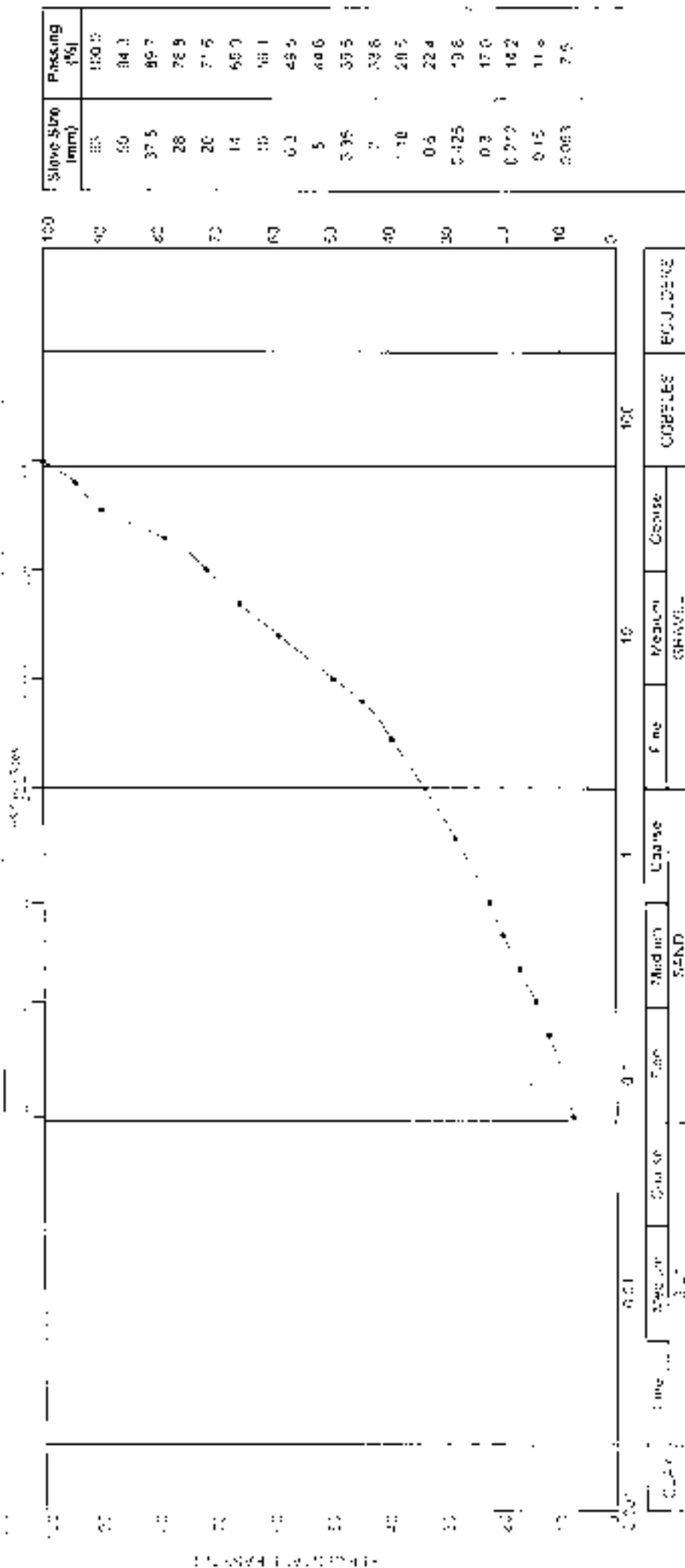
Sample No: **PIRANIE AUK_TP112**

Depth: **1.70**

Sample Type: **Sv - BS**

Specific Gravity: **1.70**

Date Tested: **19/10/2020**



| Coarse | Medium | Fine | Very Fine |
|-----------|-----------|----------|-------------|
| 75 - 47.5 | 47.5 - 25 | 25 - 7.5 | 7.5 - 0.075 |

By reference to the particle size distribution chart, the sample is classified as:

Soil Classification: **CL**
 Soil Description: **Clayey Silty Sand**

Soil Condition: **MS**



ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

BS1377: Part 2 - Clause 9.2.8.3.4 (1990)

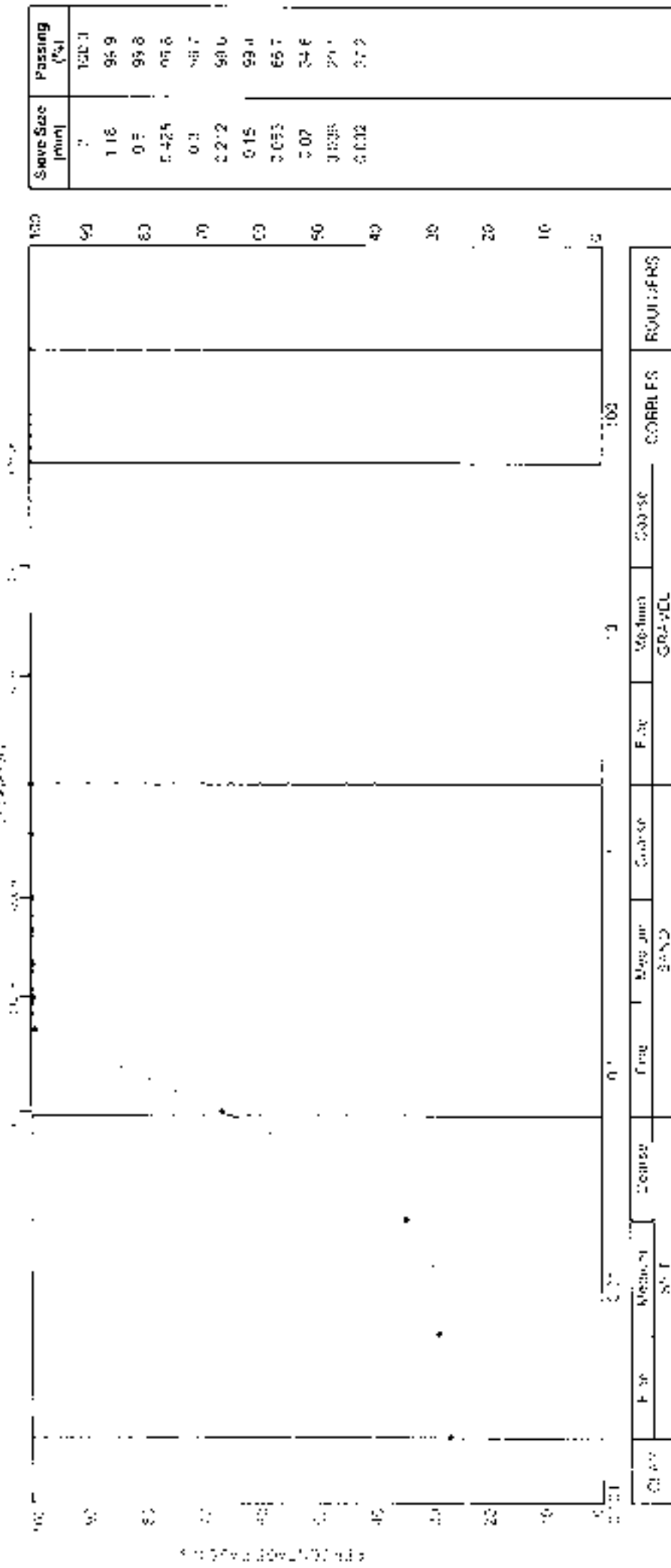
Client: Mr & Mrs - PRAIRIE_AUK_TP112

Depth: 0.0 - 3.20

Sample type & no: B11

Soil Depth: 0.0 - 3.20

Date Tested: 16/10/2020



| Course | Sub-course | Free | Medium | Coarse | Very coarse | Gravel | Coarse | Very coarse | Gravel | Coarse | Very coarse |
|---------------------------|------------|------|--------|--------|-------------|--------|--------|-------------|--------|--------|-------------|
| 0.075 | 0.15 | 0.3 | 0.425 | 0.6 | 0.75 | 1.0 | 1.5 | 2.0 | 2.5 | 3.0 | 3.75 |
| Soil Classification: SAND | | | | | | | | | | | |



Date of Issue: 20/10/2020
 Calculated by: [Signature]
 Checked by: [Signature]
 Drawn by: [Signature]
 Project No: PRAIRIE_AUK_TP112 - 0.0 - 3.20 - 0.0 - 3.20
 Name: [Signature]
 Page 1 of 1
 AEG Contract No: 4251
 Suite 17, 5, Esplanade, Christchurch
 Phone: 03 378 0000
 Fax: 03 378 0001
 Email: info@allied.co.nz
 Website: www.allied.co.nz

ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

US1377 : Part 2 : Clauses 9.2 & 9.4 : 1990
(Test deviated from standard due to insufficient sample mass)

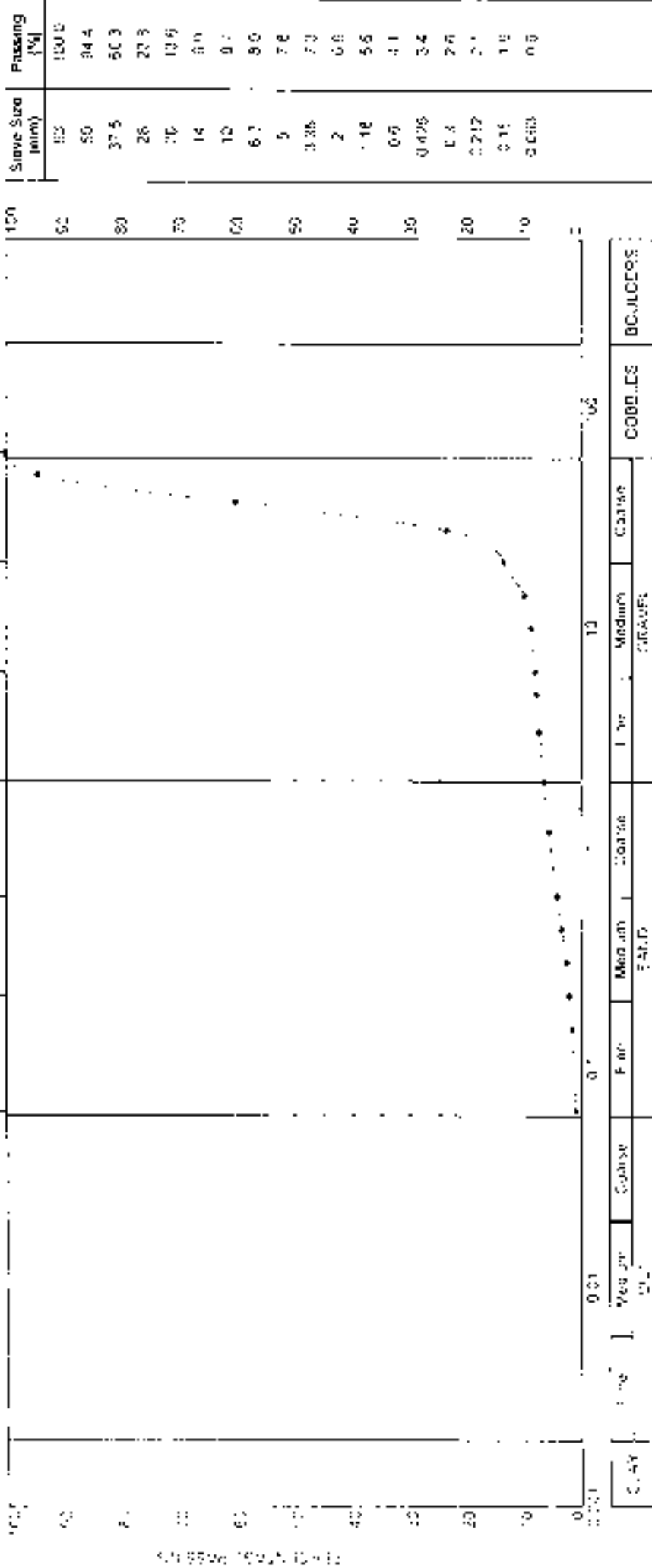
File number: 4050 - PEGARIE_AUK_TP113

Depth (m) : 1.80

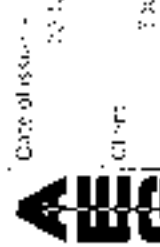
Sample type & No : B6

Specific Depth (m) : 1.80

Date Tested : 30/09/2020



| CLASS | Very fine | Coarse | Medium | Coarse | Very coarse | COBBLES | BOULDER |
|-------|-----------|-----------|-----------|-----------|-------------|-----------|-----------|
| CLASS | Yes or No | Yes or No | Yes or No | Yes or No | Yes or No | Yes or No | Yes or No |
| | | | | | | | |



Date of issue : 30/09/2020
 Client : TRANSDISOL
 Project : PEGARIE_AUK_TP113 B6
 Site : PEGARIE_AUK_TP113 B6
 Description : PEGARIE_AUK_TP113 B6
 Drawn by : [Signature]
 Checked by : [Signature]

Client's Name : TRANSDISOL
 Project Name : PEGARIE_AUK_TP113 B6
 Site Name : PEGARIE_AUK_TP113 B6
 Description : PEGARIE_AUK_TP113 B6
 Drawn by : [Signature]
 Checked by : [Signature]



Page 1 of 1
 REG Contract No : 4251
 1367

ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

651377 - Part 2 : Clause 9.2 & 9.4 : 1990

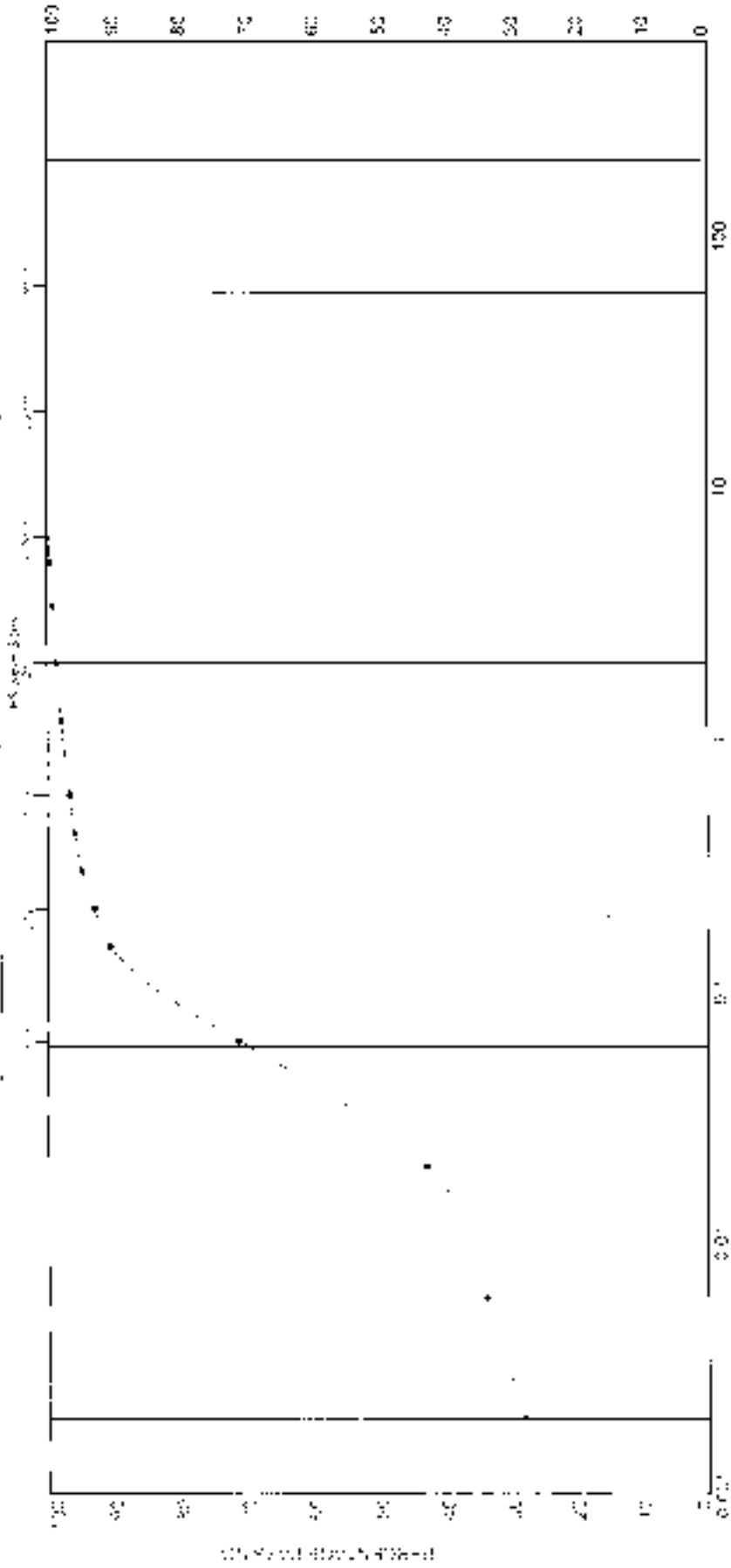
Client: Prairie_Auk TP113

Depth: 2.80

Sample Type: S - BB

Specific Depth: 2.80

Date Tested: 29/04/2020



| Course | Fine | Coarse | Medium | Coarse | Fine | Medium | Coarse | Course | COBBLES | FULL D.P.H.S |
|-------------|------|--------|--------|--------|------|--------|--------|--------|---------|--------------|
| CLAY | | | | | | | | | | |
| Med. Silt | | | | | | | | | | |
| Coarse Silt | | | | | | | | | | |
| Gravel | | | | | | | | | | |

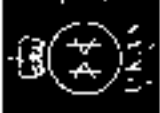
For distribution of sample to other laboratories, contact the person listed

Date of Issue: 03/10/2020

Test Name No: PASD 45-51.PRACTICE_AUK_TP113-2.80 - Stone 1

Name: *Mason*

Page: 1 of 1



Client: South East Development Corporation

Project Name: Ground Investigation Works

AEG Control No: 4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: 2nd Flr, 150-152, Victoria Road, South Shields, Tyne and Wear, NE33 1JG, UK. Tel: 0191 261 0200 Fax: 0191 261 4716
Regional Office: 107-109, Eldon Square, Newcastle, NE1 5BB, UK. Tel: 0191 272 2200 Fax: 0191 272 2209

PARTICLE SIZE DISTRIBUTION

BS1377 : Part 2 : Clause 9.2 & 9.4 : 1990

(Test deviated from standard due to insufficient sample mass)

| Exploratory Hole No - PRAIRIE_AUK_TP114 | Depth (m) - 0.40 | Sample Type & No - B4 | Specific Depth (m) - 0.40 | Date Tested - 29/09/2020 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|--------------------------|--------------------------------------|--------------------------|-----------------|-------------|------|--------|--------------------------|--------------------------|--------------------------|--------------------------------------|----|------|----|------|----|------|-----|------|---|------|------|------|---|------|------|------|-----|------|-------|------|-----|------|-------|------|------|------|-------|------|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Sieve Size (mm)</th> <th>Passing (%)</th> </tr> </thead> <tbody> <tr><td>50</td><td>100.0</td></tr> <tr><td>37.5</td><td>88.3</td></tr> <tr><td>28</td><td>85.6</td></tr> <tr><td>20</td><td>77.0</td></tr> <tr><td>14</td><td>67.9</td></tr> <tr><td>10</td><td>61.9</td></tr> <tr><td>6.3</td><td>54.9</td></tr> <tr><td>5</td><td>49.7</td></tr> <tr><td>3.35</td><td>43.8</td></tr> <tr><td>2</td><td>37.0</td></tr> <tr><td>1.18</td><td>30.8</td></tr> <tr><td>0.6</td><td>24.8</td></tr> <tr><td>0.425</td><td>22.6</td></tr> <tr><td>0.3</td><td>20.1</td></tr> <tr><td>0.212</td><td>17.5</td></tr> <tr><td>0.15</td><td>14.6</td></tr> <tr><td>0.063</td><td>10.9</td></tr> </tbody> </table> | | | | | Sieve Size (mm) | Passing (%) | 50 | 100.0 | 37.5 | 88.3 | 28 | 85.6 | 20 | 77.0 | 14 | 67.9 | 10 | 61.9 | 6.3 | 54.9 | 5 | 49.7 | 3.35 | 43.8 | 2 | 37.0 | 1.18 | 30.8 | 0.6 | 24.8 | 0.425 | 22.6 | 0.3 | 20.1 | 0.212 | 17.5 | 0.15 | 14.6 | 0.063 | 10.9 |
| Sieve Size (mm) | Passing (%) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 50 | 100.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 37.5 | 88.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 28 | 85.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | 77.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | 67.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | 61.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6.3 | 54.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 49.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.35 | 43.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 37.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.18 | 30.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.6 | 24.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.425 | 22.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.3 | 20.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.212 | 17.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.15 | 14.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.063 | 10.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">CLAY</td> <td style="width: 25%;">SILT</td> <td style="width: 25%;">SAND</td> <td style="width: 25%;">GRAVEL</td> </tr> <tr> <td style="text-align: center;">Fine Medium Coarse</td> <td style="text-align: center;">Fine Medium Coarse</td> <td style="text-align: center;">Fine Medium Coarse</td> <td style="text-align: center;">Fine Medium Coarse BOULDERS</td> </tr> </table> | | | | | CLAY | SILT | SAND | GRAVEL | Fine Medium Coarse | Fine Medium Coarse | Fine Medium Coarse | Fine Medium Coarse BOULDERS | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CLAY | SILT | SAND | GRAVEL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fine Medium Coarse | Fine Medium Coarse | Fine Medium Coarse | Fine Medium Coarse BOULDERS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| For description of sample please refer to the Laboratory Sample Description Sheet | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Date of issue - 20/10/2020 | Certificate No - PSD/4251/PRAIRIE_AUK_TP114/B4/0.40 | Signed - <i>msone</i> | Name - SELKIRK | Page 1 of 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Client - South Tees Development Corporation | Contract Title - | Contract No - | AEG Contract No - 4251 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: 110-111 Old Church Lane, South Park, Scarborough, North Yorkshire, YO15 1JG, UK. Tel: 01303 827400 Fax: 01303 827470
Regional Offices: 1st Floor, 25, Rotherham Road, Rotherham, South Yorkshire, S60 1JG, UK. Tel: 0114 272 300 Fax: 0114 272 309

PARTICLE SIZE DISTRIBUTION

BS1377 : Part 2 : Clause 9.2 & 9.4 : 1990

| Exploratory Hole No - PRAIRIE_AUK_TP115 | Depth (m) - 1.70 | Sample Type & No - B5 | Specific Depth (m) - 1.70 | Date Tested - 14/10/2020 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|---|---------------------------|--------------------------|-----------------|-------------|----|-------|----|------|------|------|----|------|----|------|----|------|----|------|-----|------|---|------|------|------|---|------|------|------|-----|------|-------|------|-----|------|-------|-----|------|-----|-------|-----|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Sieve Size (mm)</th> <th>Passing (%)</th> </tr> </thead> <tbody> <tr><td>63</td><td>100.0</td></tr> <tr><td>50</td><td>94.3</td></tr> <tr><td>37.5</td><td>94.3</td></tr> <tr><td>28</td><td>93.0</td></tr> <tr><td>20</td><td>87.4</td></tr> <tr><td>14</td><td>78.1</td></tr> <tr><td>10</td><td>59.5</td></tr> <tr><td>6.3</td><td>43.9</td></tr> <tr><td>5</td><td>38.6</td></tr> <tr><td>3.35</td><td>31.9</td></tr> <tr><td>2</td><td>26.0</td></tr> <tr><td>1.18</td><td>21.2</td></tr> <tr><td>0.6</td><td>15.9</td></tr> <tr><td>0.425</td><td>13.8</td></tr> <tr><td>0.3</td><td>11.4</td></tr> <tr><td>0.212</td><td>9.3</td></tr> <tr><td>0.15</td><td>7.6</td></tr> <tr><td>0.075</td><td>4.7</td></tr> </tbody> </table> | | | | | Sieve Size (mm) | Passing (%) | 63 | 100.0 | 50 | 94.3 | 37.5 | 94.3 | 28 | 93.0 | 20 | 87.4 | 14 | 78.1 | 10 | 59.5 | 6.3 | 43.9 | 5 | 38.6 | 3.35 | 31.9 | 2 | 26.0 | 1.18 | 21.2 | 0.6 | 15.9 | 0.425 | 13.8 | 0.3 | 11.4 | 0.212 | 9.3 | 0.15 | 7.6 | 0.075 | 4.7 |
| Sieve Size (mm) | Passing (%) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 63 | 100.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 50 | 94.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 37.5 | 94.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 28 | 93.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | 87.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | 78.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | 59.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6.3 | 43.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 38.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.35 | 31.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 26.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.18 | 21.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.6 | 15.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.425 | 13.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.3 | 11.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.212 | 9.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.15 | 7.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.075 | 4.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>For description of sample please refer to the Laboratory Sample Description Sheet</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Date of issue -> 23/10/2020 | Certificate No -> PSD/4251/PRAIRIE_AUK_TP115/B5/1.70 | Signed -> <i>msore</i> | Name -> <i>msore</i> | Page 1 of 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Client -> South Tees Development Corporation | | Contract Title -> Prairie Site Ground Investigation Works | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | AEG Contract No -> 4251 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

BS1377 Part 2 - Clause 9.2 & 9.3 - 1990

(Test deviated from standard due to insufficient sample mass)

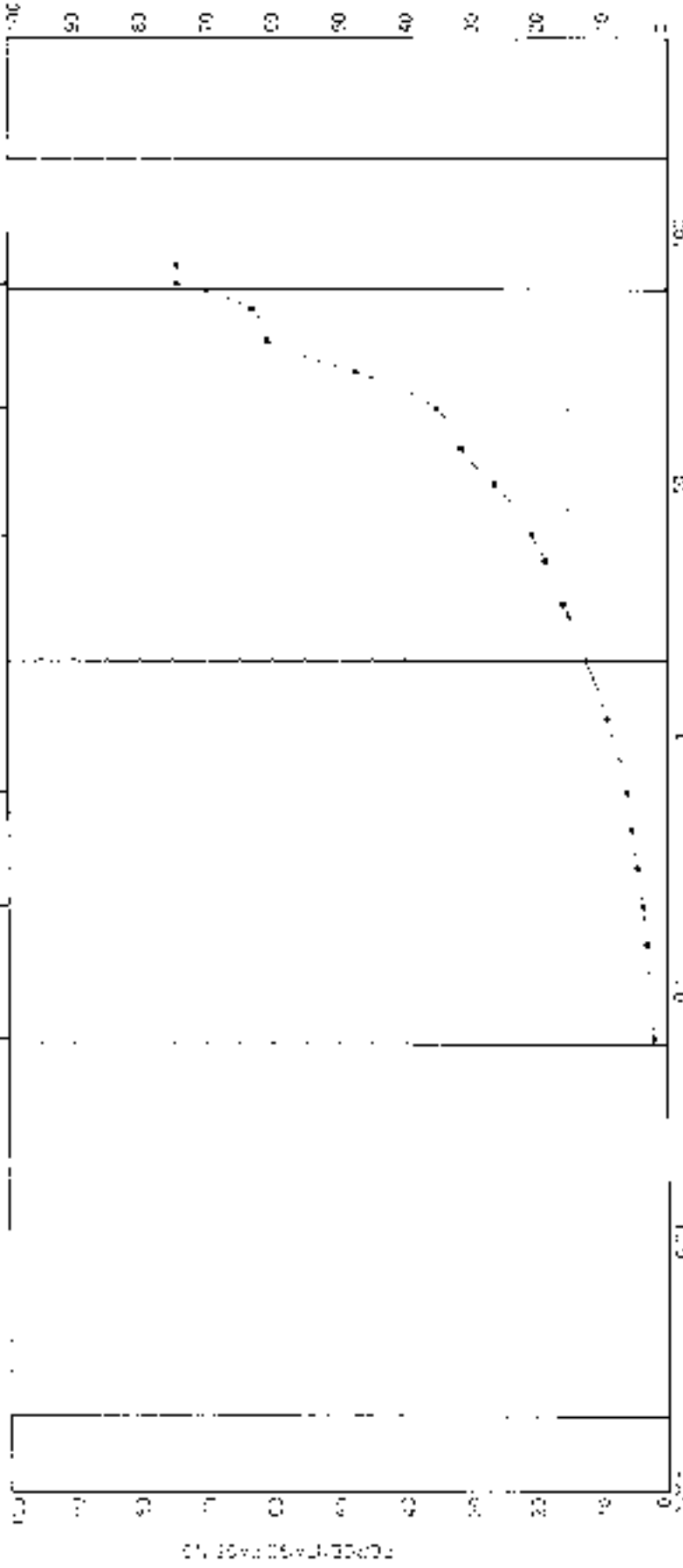
Laboratory File No: PIRRAIRIE AUK_IP1117

Depth (m): 2.00

Sample type & No: D5

Specific Depth (m): 2.00

Date Tested: 16/10/2020



| Zone | Max. Size | Min. Size | Material | Mass (%) |
|----------|-----------|-----------|----------|----------|
| COBBLES | 4.75 | 2.0 | GRAVEL | 0 |
| BOULDERS | >4.75 | >4.75 | BOULDERS | 0 |

Client Name: SOUTH TILES ENVIRONMENTAL CONSULTING

Project No: 22/10/2020

Date: 16/10/2020

Contract No: 4251

Clearance No: 1507497 (PERMITS_AUK_IP1117) Bb 2.00

Signer: *Mason* Name: MASON

Contract No: 4251

Test Location: PIRRAIRIE AUK_IP1117 Bb 2.00

Page 1 of 1

ASIS Contract No: 4251

1367

ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

OS1377 - Part 2 - Clause 9.2 & 9.4 : 1998
(Test deviated from standard due to insufficient sample mass)

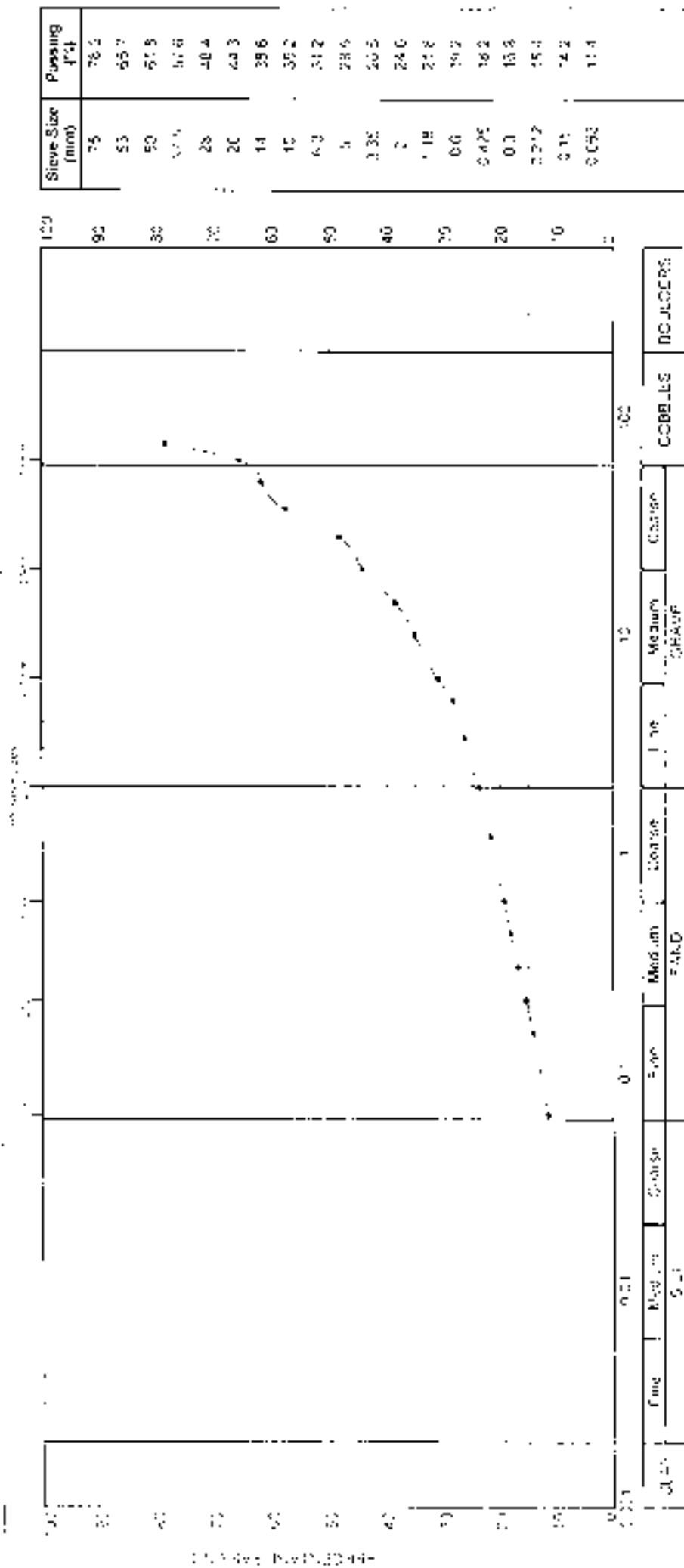
Estimator: MORTON - PRA RIE, AUK, TP117

Dry Weight: 0.20

Sample Type: S_u - B9

Specific Gravity: 2.70

Date Tested: 16/10/2020



| Class | Fine | Medium | Coarse | Very Coarse | Coarse | Very Coarse | Coarse | Very Coarse |
|-------|-------|--------|--------|-------------|--------|-------------|--------|-------------|
| 0.075 | 0.075 | 0.15 | 0.3 | 0.425 | 0.6 | 0.75 | 1.18 | 1.75 |
| 0.15 | 0.15 | 0.3 | 0.425 | 0.6 | 0.75 | 1.18 | 1.75 | 2.5 |
| 0.3 | 0.3 | 0.425 | 0.6 | 0.75 | 1.18 | 1.75 | 2.5 | 3.75 |
| 0.425 | 0.425 | 0.6 | 0.75 | 1.18 | 1.75 | 2.5 | 3.75 | 5.0 |
| 0.6 | 0.6 | 0.75 | 1.18 | 1.75 | 2.5 | 3.75 | 5.0 | 7.5 |
| 0.75 | 0.75 | 1.18 | 1.75 | 2.5 | 3.75 | 5.0 | 7.5 | 11.8 |
| 1.18 | 1.18 | 1.75 | 2.5 | 3.75 | 5.0 | 7.5 | 11.8 | 17.5 |
| 1.75 | 1.75 | 2.5 | 3.75 | 5.0 | 7.5 | 11.8 | 17.5 | 25 |
| 2.5 | 2.5 | 3.75 | 5.0 | 7.5 | 11.8 | 17.5 | 25 | 37.5 |
| 3.75 | 3.75 | 5.0 | 7.5 | 11.8 | 17.5 | 25 | 37.5 | 50 |
| 5.0 | 5.0 | 7.5 | 11.8 | 17.5 | 25 | 37.5 | 50 | 75 |
| 7.5 | 7.5 | 11.8 | 17.5 | 25 | 37.5 | 50 | 75 | 100 |
| 11.8 | 11.8 | 17.5 | 25 | 37.5 | 50 | 75 | 100 | 100 |
| 17.5 | 17.5 | 25 | 37.5 | 50 | 75 | 100 | 100 | 100 |
| 25 | 25 | 37.5 | 50 | 75 | 100 | 100 | 100 | 100 |
| 37.5 | 37.5 | 50 | 75 | 100 | 100 | 100 | 100 | 100 |
| 50 | 50 | 75 | 100 | 100 | 100 | 100 | 100 | 100 |
| 75 | 75 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

1. Test performed in accordance with AS/NZS 10117:2001

Client: 740
PSC 225 FORD RD, AUK, TP111 B9320
5/10/2020
Contract No: 4251



Name: *insore*

Page 1 of 1
At C: Harrison - 4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

GS1037 - Part 2 - Clauses 9.2 & 9.4 - 1996

(Test deviated from standard due to insufficient sample mass)

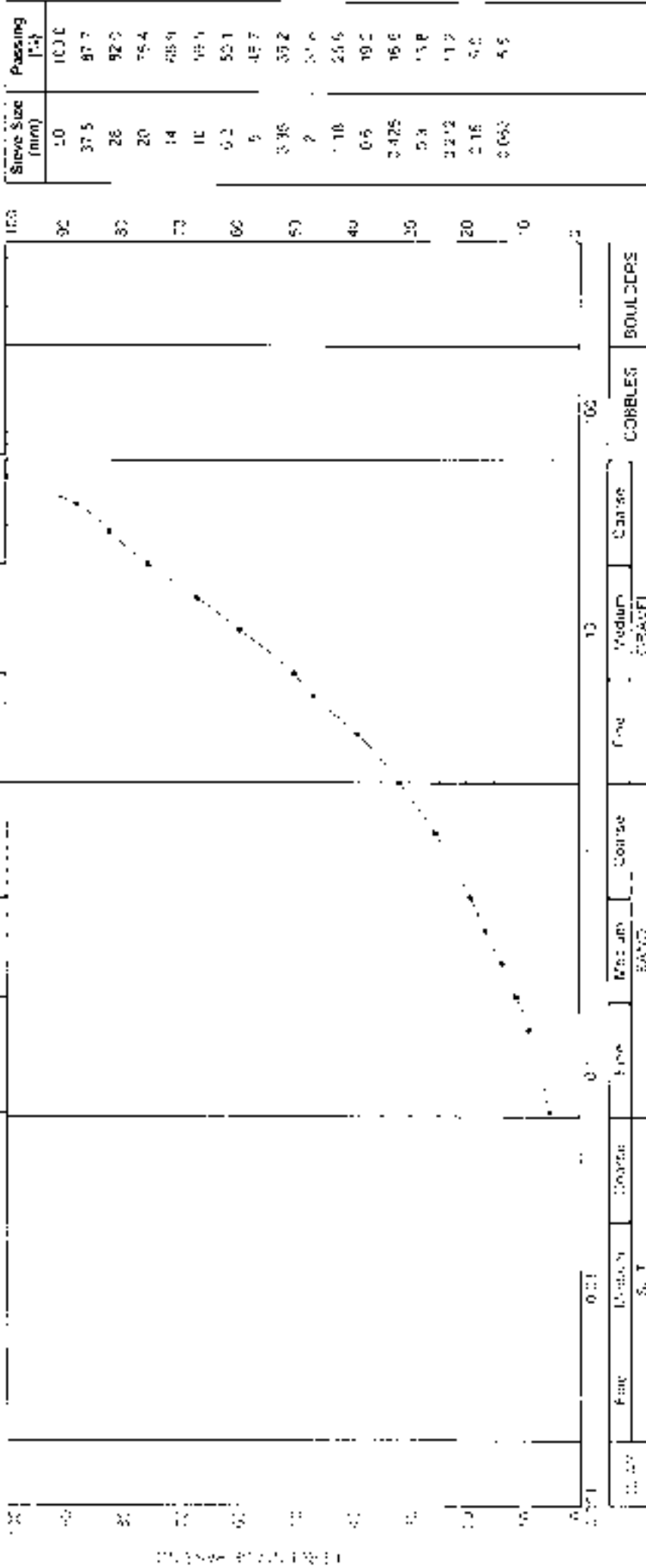
Project Name: PRAIRIE_AUR_TPH18

Depth: 1.00

Sample Type & No: S2

Soils & Deposition: 100

Date Tested: 19/10/2020



| Soil | Very Fine | Fine | Medium | Coarse | Very Coarse | Sand | Silt | Clay | Gravel | Coarse | COBBLES | BOULDERS |
|------|-----------|------|--------|--------|-------------|------|------|------|--------|--------|---------|----------|
| Soil | | | | | | | | | | | | |

Date of Issue: 21/10/2020

Dr. J. J. J. J.

PSD 495:184 R 2: 2007

Time 02:10

Series: MSA

Name: MSA

Page 1 of 1

REC Contract No: 4251

Project: Prairie Exploration Works

1367

ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

BS1377 Part 2 - Clause 9.2.3.3 - 1990

(Test deviated from standard due to insufficient sample mass)

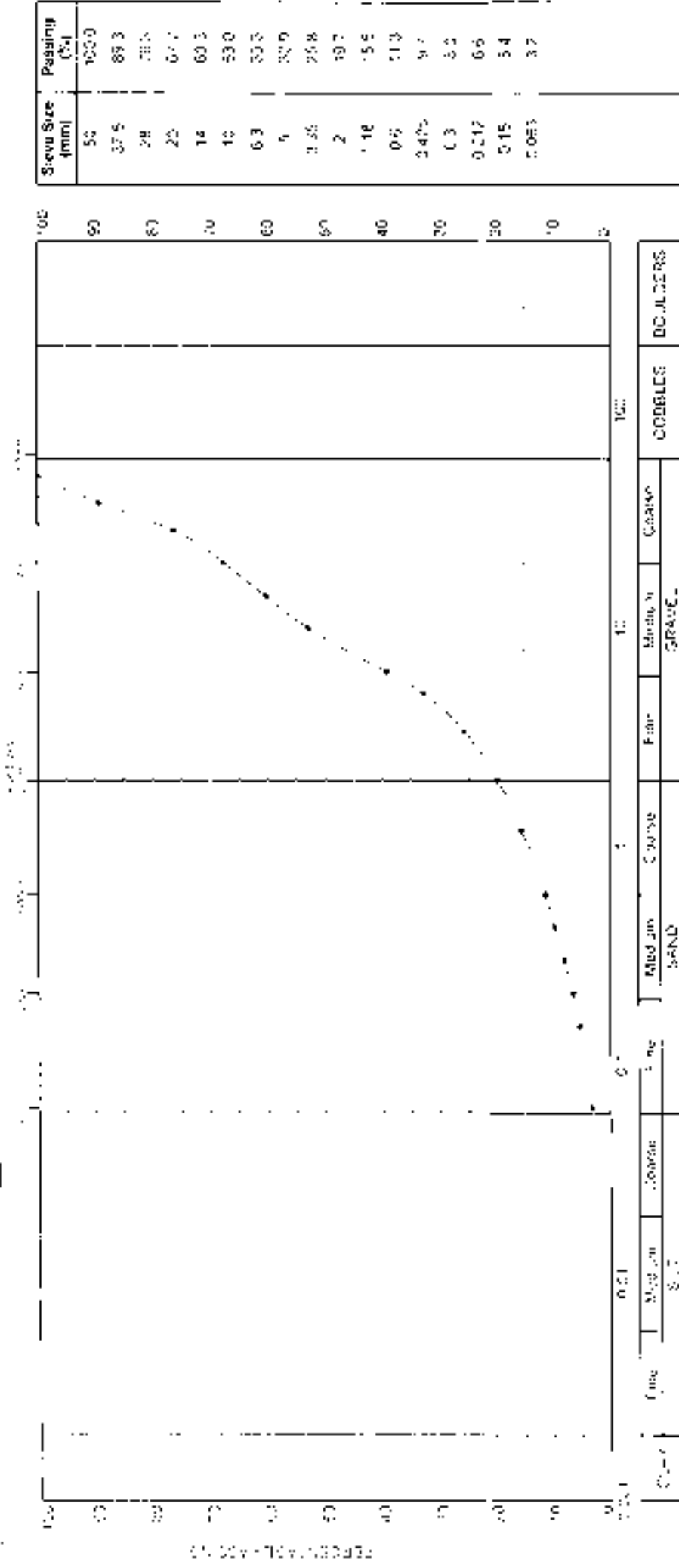
Report No: **PRAIRIE_AUK_TPI19**

Depth: **1.00**

Sample Type & No: **D2**

Specific Description: **1.00**

Date Tested: **19/10/2020**



| Coarse | Fine | Medium | Coarse | Medium | Fine | Medium | Coarse | COBBLES | BOULDERS |
|--------|------|--------|--------|--------|------|--------|--------|---------|----------|
| | | | | | | | | | |
| | | | | | | | | | |

Client: **01052076**
 Project: **PRairie_Auk_TPI19_03**
 Contact: **01052076**
 Client Name: **MS&E**
 Client Address: **Prarie Site Ground Investigation Works**

Page 1 of 1
 AES Contact No: **4251**

ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

ES1077 : Part 2 : Clause 9.2 & 9.4 : 1990
(Test deviated from standard due to insufficient sample mass)

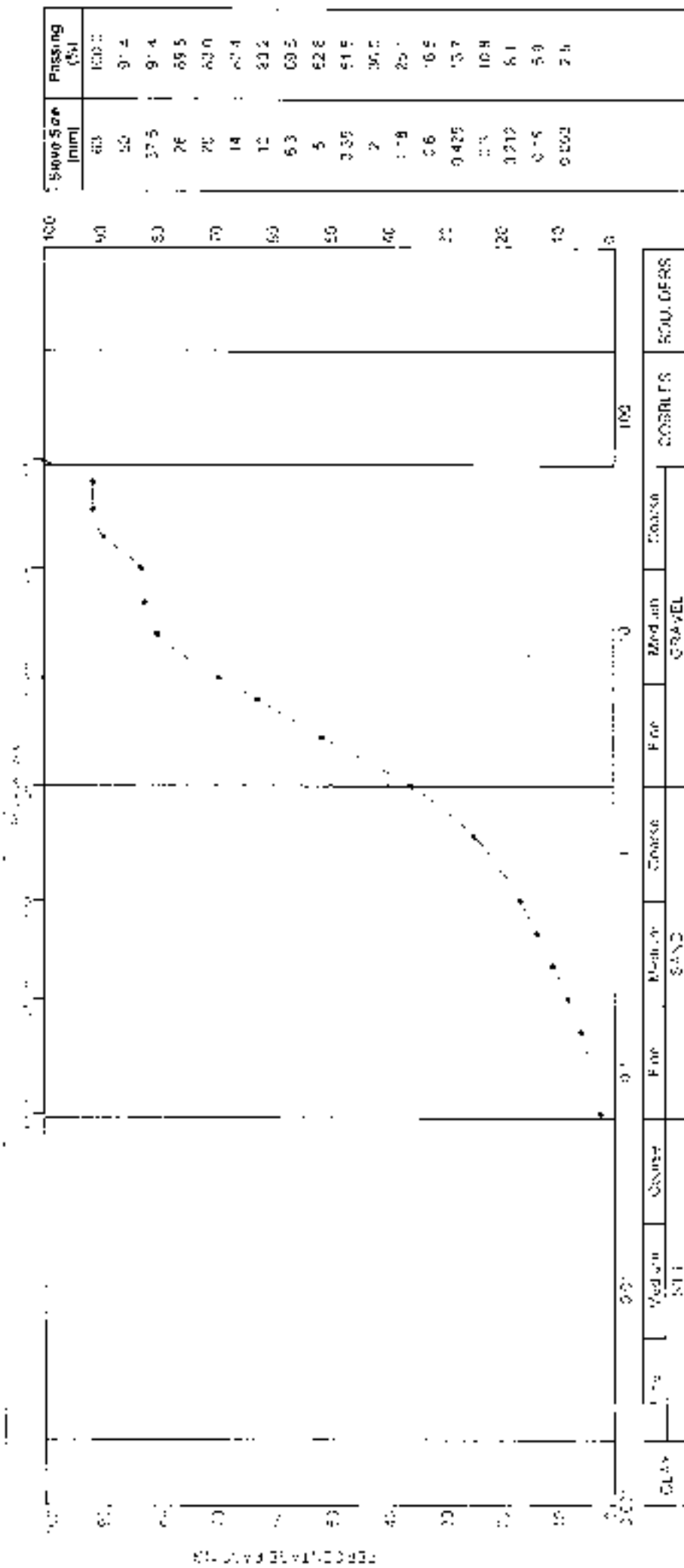
Sample No: **PRAIRIE AUK_TP110**

Depth (m) : **2.00**

Sample Type & No: **B5**

Spore's Depth (m) : **2.00**

Culc Tested : **19/10/2020**



| CLAY | Very | Med. fin | Coarse | Fin | Medium | Coarse | COBBLES | SCALDERS |
|------|------|----------|--------|------|--------|--------|---------|----------|
| | | SILT | SAND | FINE | GRAVEL | | | |

For detailed description of the test see the relevant laboratory test procedure sheet

Date of issue: 19/10/20

Credit ref No: ASD 4281

19/10/20

ASD 4281 PRAIRIE AUK_TP110 (952.00)

Signed: *Misono*

Name: *Misono*

Civil

Soils Test Development Department

Contract No:

Field Site Ground Investigation Name

AEG Contract No: 4251

Page 1 of 1



1367

ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

DS1977 - Part 2 - Clause 9.2 & 9.4 1990

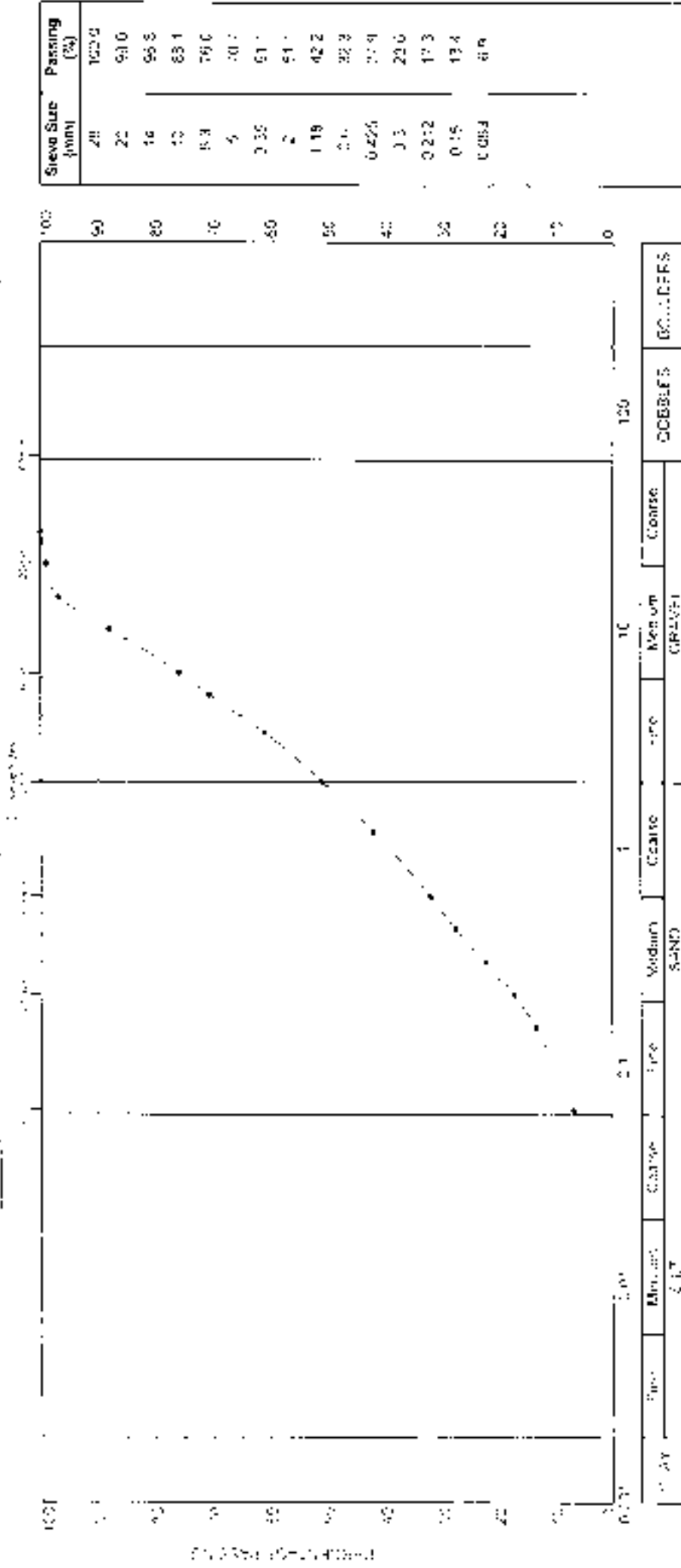
Project Name: PRAIRIE_AUK_TP120A

Location: 0.80

Sample Type & Size: B2

Specific Depth: 0.80

Date Tested: 15/12/2020



AEG
 25/12/2020
 600, 1000, 1500, 2000, 3000, 4000, 5000, 6000, 7000, 8000, 9000, 10000, 15000, 20000, 30000, 40000, 50000, 60000, 70000, 80000, 90000, 100000, 150000, 200000, 300000, 400000, 500000, 600000, 700000, 800000, 900000, 1000000

Client: *MS&O*
 Project: PRAIRIE_AUK_TP120A B2-0.80
 Location: 0.80
 Date: 15/12/2020
 Site: 475
 Contact: 475

ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

RS1377 Part 2 - Clause 9.2 & 9.4 - 1990

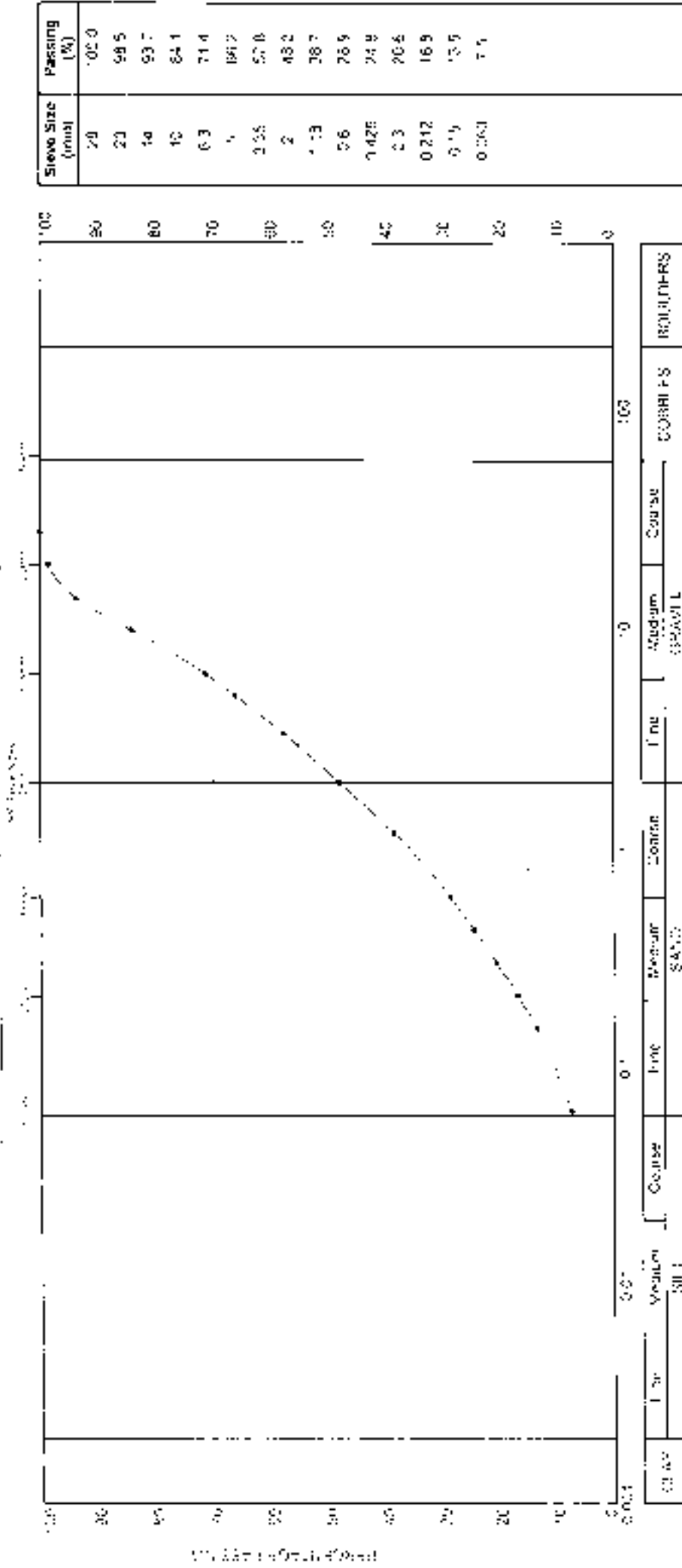
Exploratory File No. PHALRIE_AUK_TP124

Depth (m) 0.80

Sample Type & No. B2

Specific Depth (m) 0.80

Date tested - 01/10/2020



| | | | | |
|--------|--------|--------|-------------|------------------|
| Class | Medium | Coarse | Very Coarse | Very Very Coarse |
| Course | Medium | Coarse | Very Coarse | Very Very Coarse |
| Course | Medium | Coarse | Very Coarse | Very Very Coarse |
| Course | Medium | Coarse | Very Coarse | Very Very Coarse |

For details of the test procedure refer to the Laboratory Manual Test procedures

Date of issue: 23/10/2020

Certificate No: PH24/201 PR24/201/AUK_TP124/02/060

Name: MISO

Page 1 of 1



Contract Title: Earth Investigation Report Corporation

Contract No: 4751

REC Contract No: 4751

ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

BS1377 - Part 2 - Clause 9.2 & 9.4 - 1990

(Test deviated from standard due to insufficient sample mass)

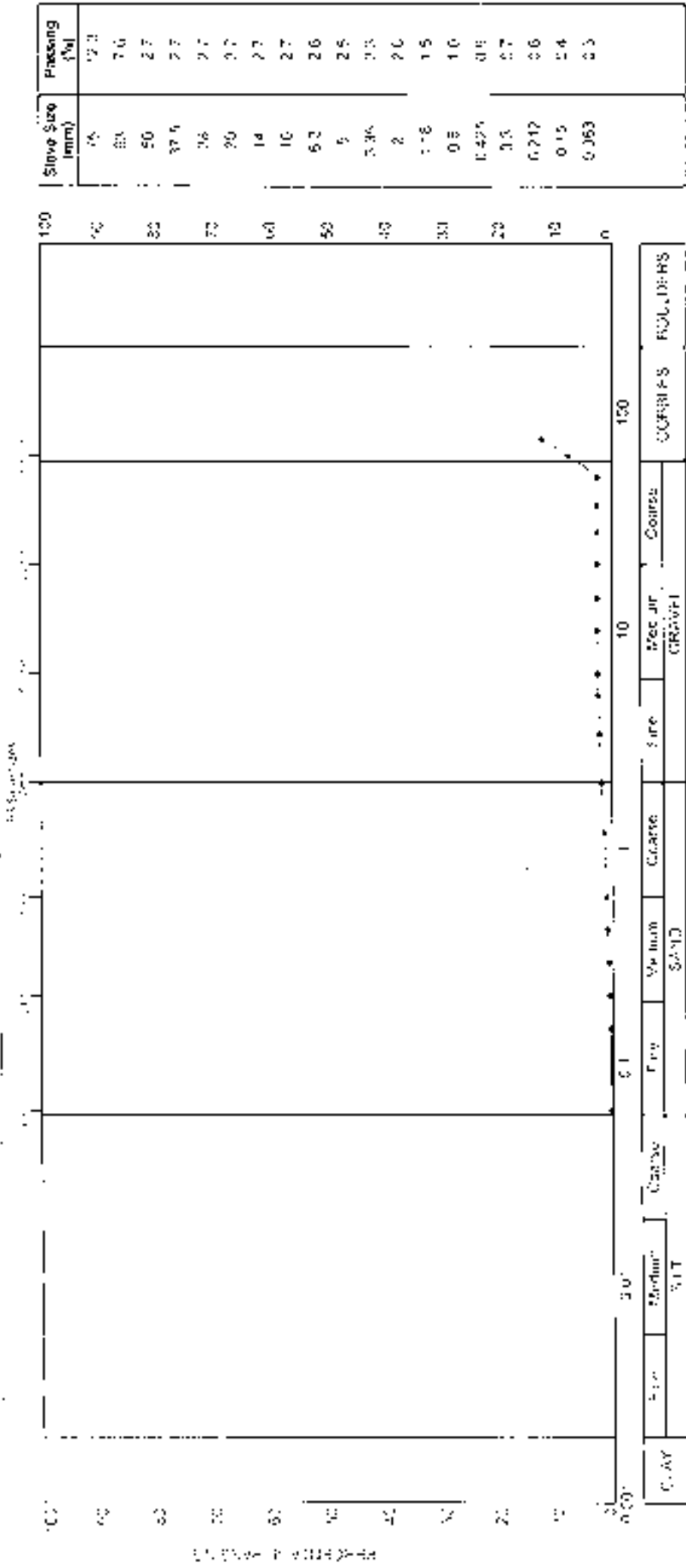
Client Ref: **PRAMIE_AUK_TP123**

Dryer No: **0.50**

Sample Type & No: **BZ**

Specific Gravity: **0.50**

Date Tested: **28/09/2020**



The results of this test deviate from the laboratory standard test method.

Scale of test:

1000g

Centrifuge No:

980 4941 PHALIE_AUK_TP123 0.50

Scale of test:

1000g

Scale of test:

1000g

Scale of test:

1000g

Scale of test:

1000g

Scale of test:

1000g

Scale of test:

1000g

Scale of test:

1000g



Page 1 of 1
AEG Contract No: 4251
Figure 2.14 Gravel Investigation Marks



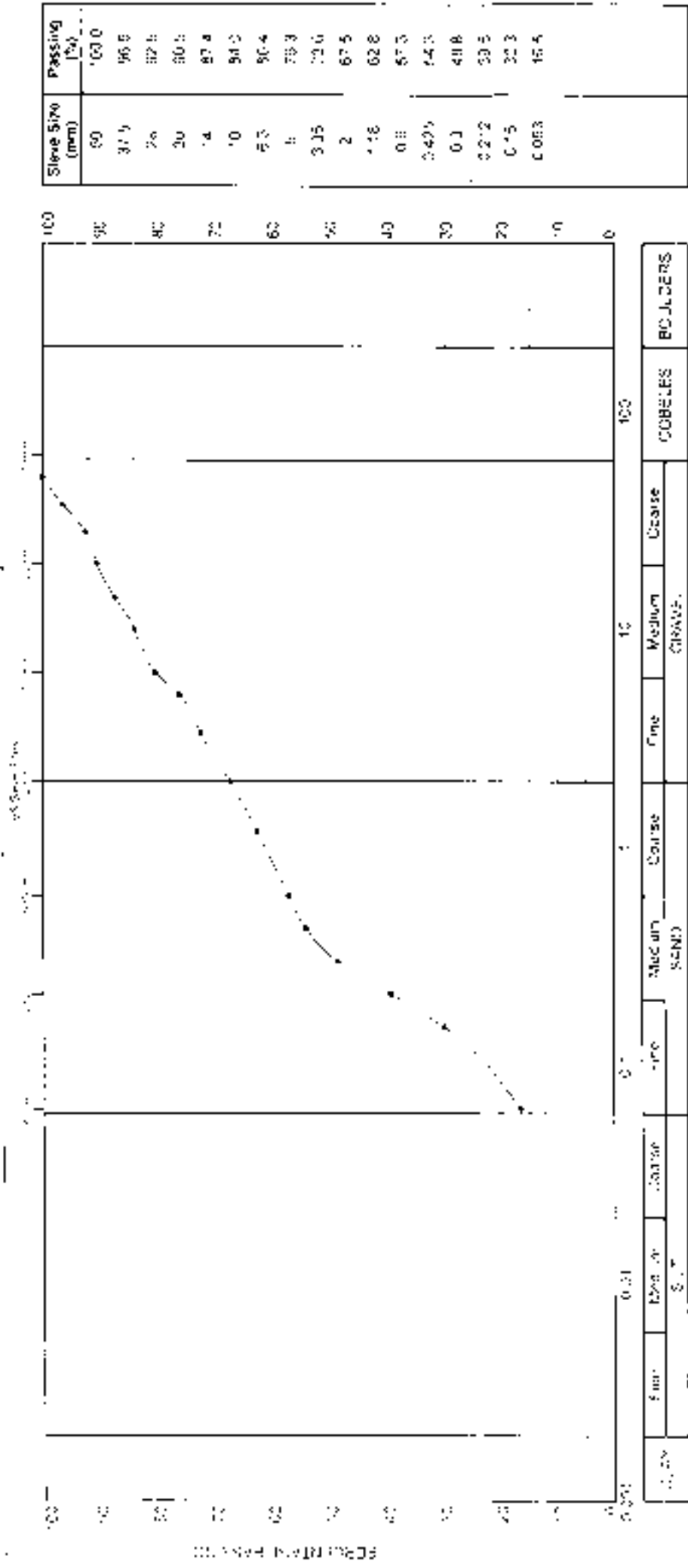
1367

ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

BS1377 : Part 2, Clause 9.2 & 9.4 : 1990

Sample No: **PRAIRIE_AUK_TP124** Depth: **1.50** Sample Type: **So - B4** Spec. Depth: **1.50** Date Tested: **28/09/2020**



| Coarse | Medium | Fine | Coarse | COBBLES | BOULDERS |
|-------------|--------|------|--------|---------|----------|
| 0.075 | 0.425 | 0.75 | 4.75 | | |
| MEDIUM SAND | | | GRAVEL | | |

Certificate No: **MSD-6251-PRAIRIE** Site: **TP124 B4 50** Name: **MSD**
 Client: **Prague Site Ground Investigation Works** Contact Title:

Page 1 of 1
 AEG Contact No: **4251**
 1367

ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

BS1377 : Part 2 : Clause 9.2 & 9.4 : 1990

(Test deviated from standard due to insufficient sample mass)

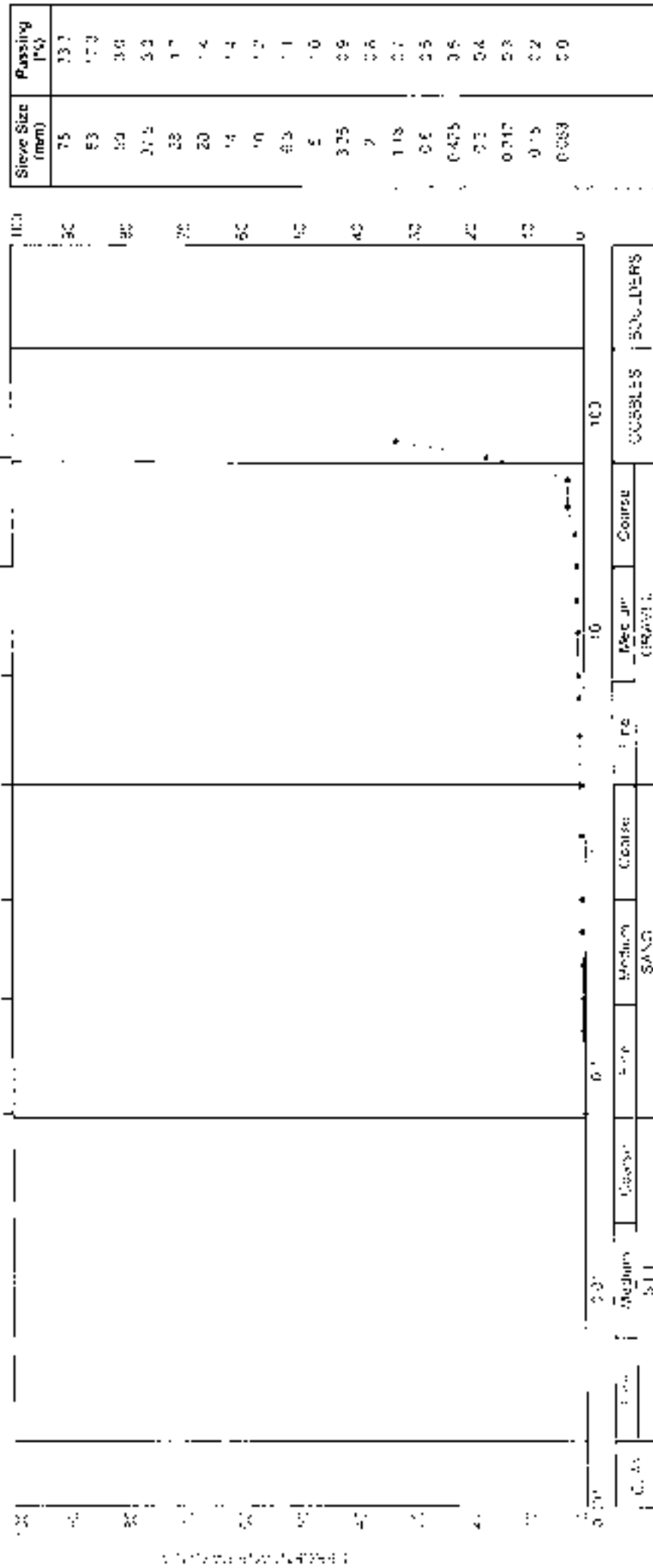
Location: PRAIRIE_AUK_FP120

Depth: 1.80

Sample Type & No: G4

Specific Description: 1.80

Date Tested: 16/01/2020



| Course | Medium | Coarse | Per cent Gravels | Course | Cobbles | SOULDERS |
|--------|--------|--------|------------------|--------|---------|----------|
| SANG | | | | | | |

For Test Results from the Geotechnical Laboratory, Contact Us on 01453 700000

Date of Issue: 22/01/20

Client Name: AUSTIN LAMARIE AUK_FP120 Bx1ED - Stone J

Scale: 100% (Visual Inspection)

Page 1 of 1

REG Contract No: 4261

M. Mason

Scale: 100% (Visual Inspection)

Contract No:

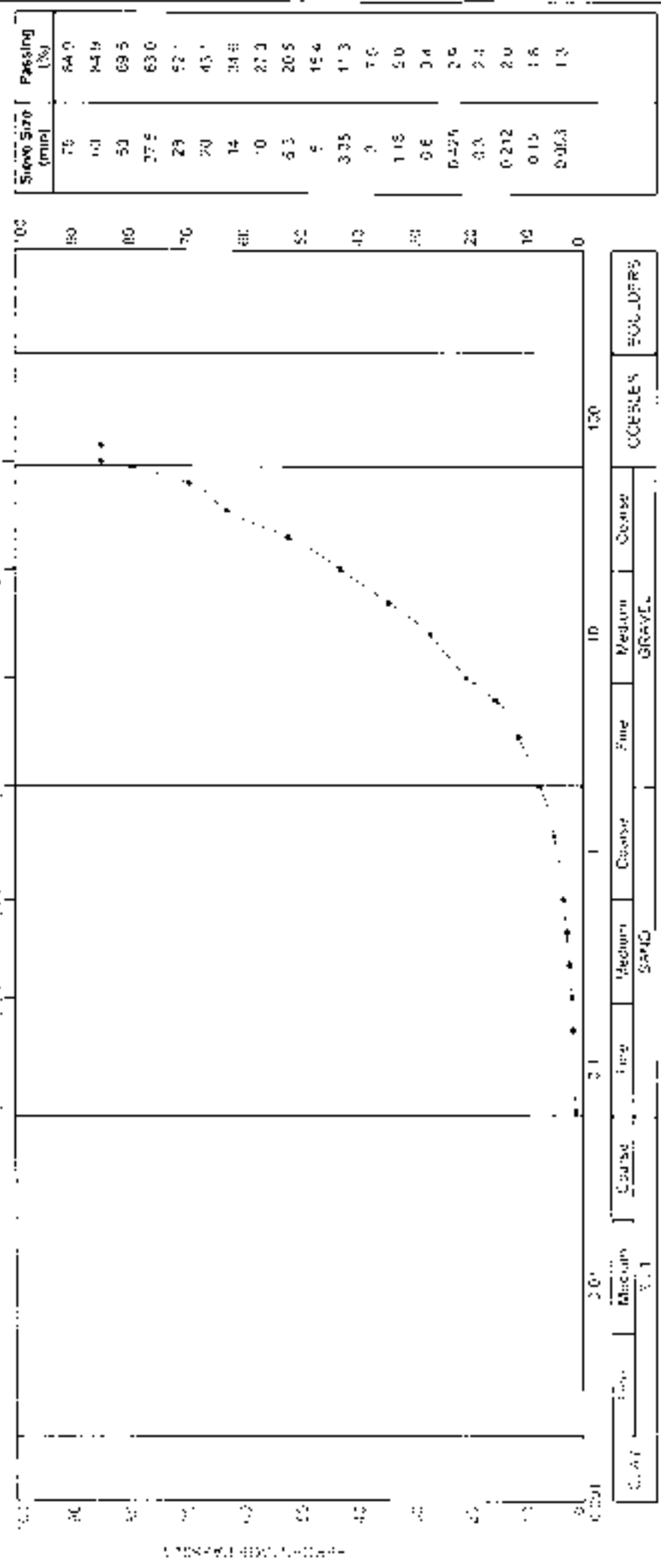
1367

ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION


DS4377 - Part 2 - Clause 8.2.8.9.4 : 1980
(Test deviated from standard due to insufficient sample mass)

Exp. No: PISAIRIE_AUX TP132 Depth: 2.00 Sample Type: D8 Specific Depth: 2.00 Date Tested: 30/09/2020




| Coarse | Medium | Coarse | Fine | Medium | Coarse | Coarse | FULLERS |
|--------|--------|--------|------|--------|--------|--------|---------|
| | | | | SAND | GRAVEL | | |

* Percentages may vary slightly from the published values due to the laboratory's own calibration level



Date of Issue: 30/09/2020
 Issued to: PISAIRIE_AUX_TP132.D8
 Scale: Test Results at General on

Contract Title:
msone
 Name:
 Prime Site Geologic Investigation Works



Page 1 of 1
 AEG Certified No. 4251
 1367

ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

BS4377 : Part 2 : Clause 9.2 & 9.4 : 1990

(Test deviation from standard due to insufficient sample mass)

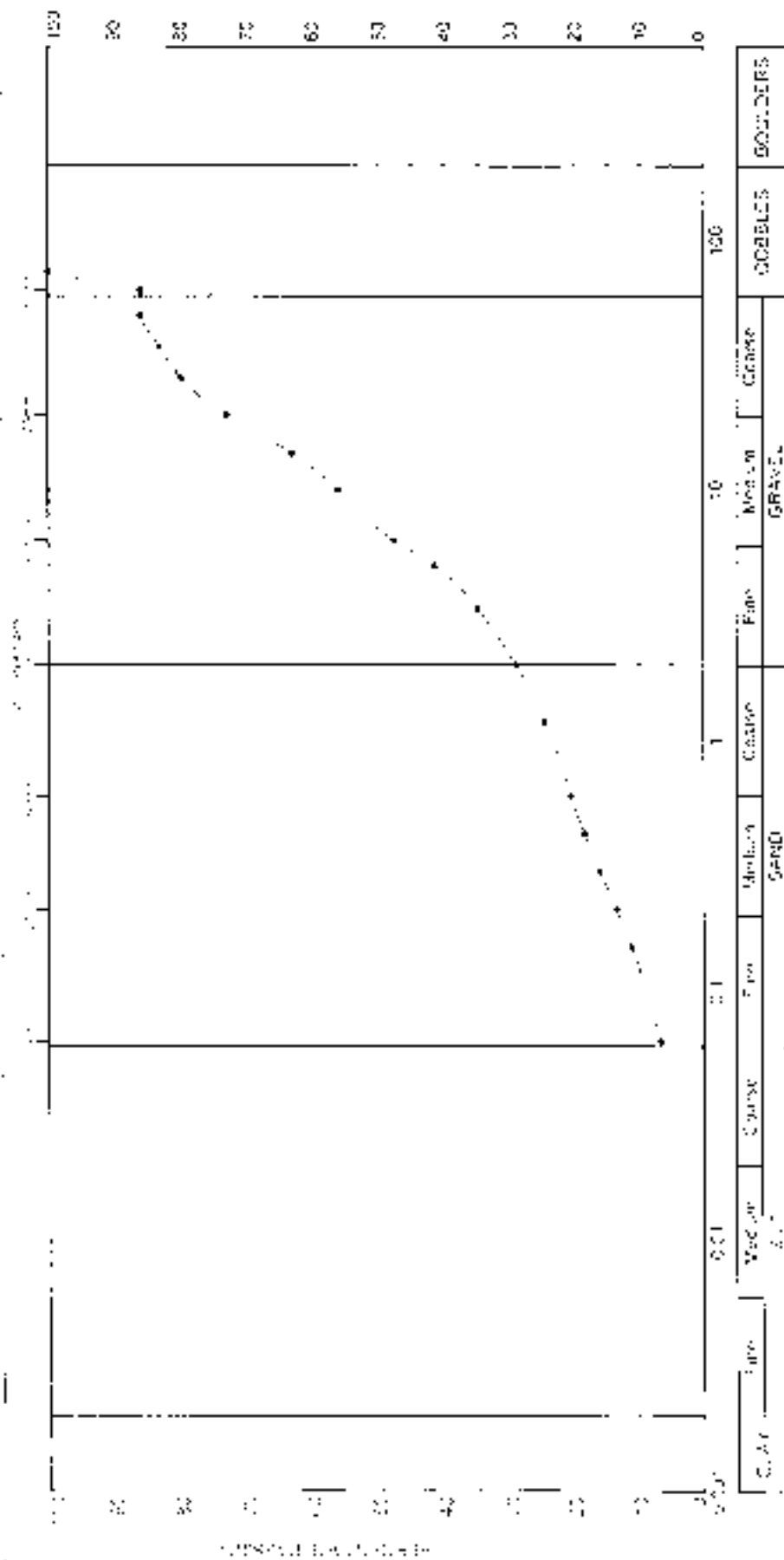
Sample No. : PRAIRIE_AUK_TP134

Depth : 0.80

Sample Type & No. : B2

Soils, Depth (m) : 0.80

Date Tested : 15/10/2020



| Soil Type | Coarse | Medium | Fine | Coarse | Fine | Medium | Coarse | COBBLES | BOULDERS |
|-----------|--------|--------|------|--------|------|--------|--------|---------|----------|
| | SAND | | | GRAVEL | | | | | |

Tested by: [Signature] Date: 15/10/2020



Contract No. : 4751
Project Name : Prairie Site Ground Investigation Works

Page 1 of 1
AEG Contract No. : 4751



ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 - Plaster B 2 & B 4 : 1990
(Test deviated from standard due to insufficient sample mass)

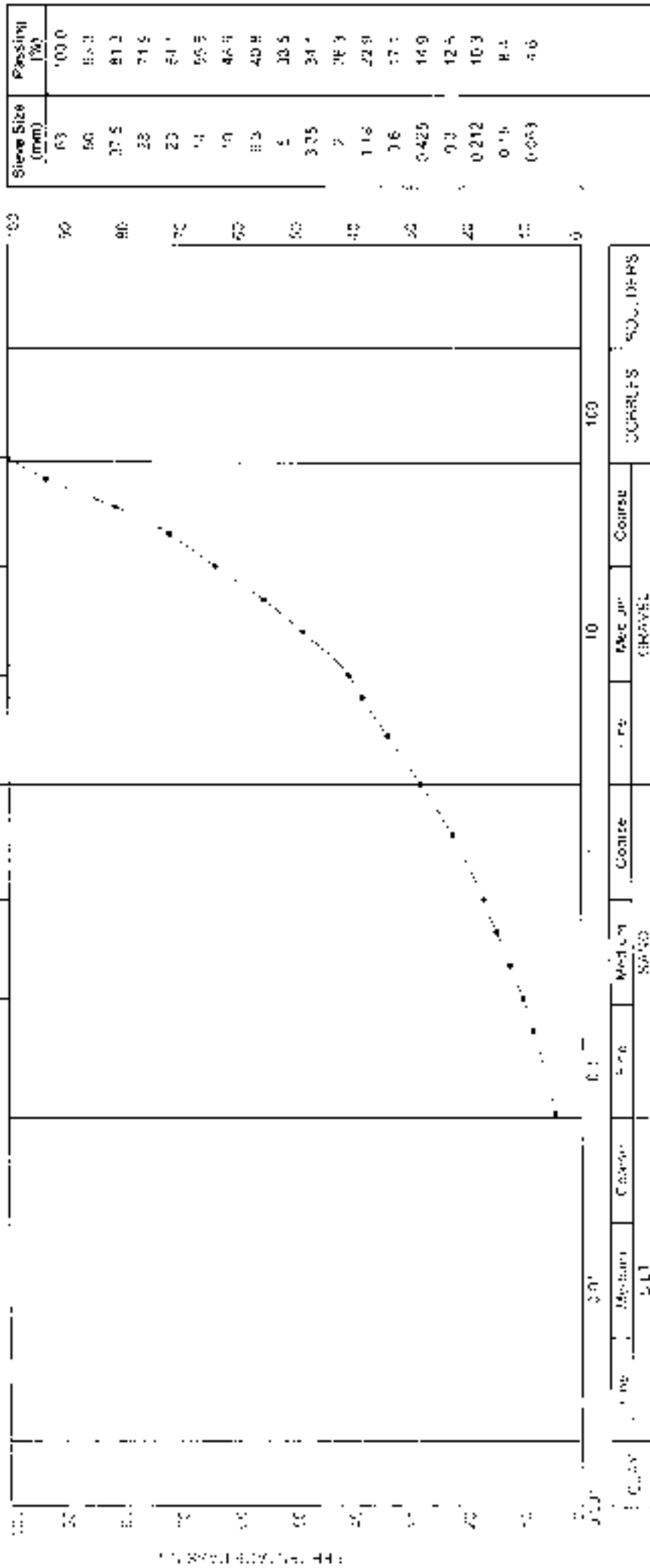
Project No: HIGHLIE_AUG_TP135

Scale: 100

Sample Type & Qty: B3

Specific Gravity: 1.00

Date Tested: 10/10/2020



| Zone | Coarse | Medium | Fine | Rec. Jm | Course | COARSE | MEDIUM | FINE |
|------|--------|--------|-------|---------|--------|--------|--------|------|
| mm | 4.75 | 4.75 | 0.075 | GRAVEL | | COARSE | MEDIUM | FINE |
| mm | 4.75 | 4.75 | 0.075 | GRAVEL | | COARSE | MEDIUM | FINE |

For more information on sample preparation and laboratory testing visit our website

Scale: 100

Scale: 100

Scale: 100

Scale: 100



Contract No:

Contract No:

Contract No:

Contract No:

Contract No:

Page 1 of 1

1367

4251

Investigation

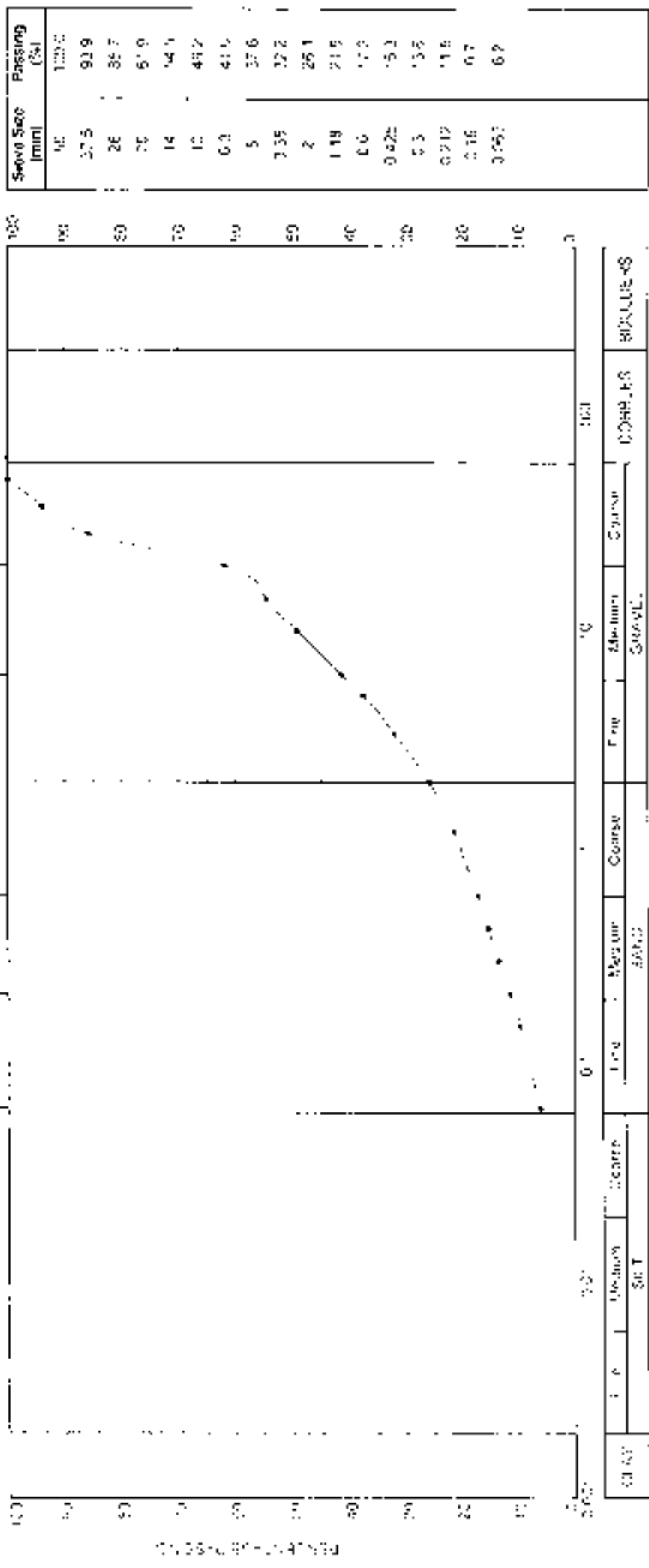
Starks

ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

BS1377 : Part 2 : Clause 9.2.9.4 : 1990
(Test deviated from standard due to insufficient sample mass)

Project No: PRAIRIE_AUR_1P137 Depth: 1.00 Sample Type & No: U4 Specific Gravity: 1.00 Date Tested: 19/10/2020



| CLASS | 1. P | 2. Medium | 3. Course | 4. Fine | 5. Medium | 6. Course | 7. CORP. FS | 8. SILLS & S |
|---------|------|-----------|-----------|---------|-----------|-----------|-------------|--------------|
| | SILT | | SAND | | GRAVEL | | | |
| Limit | | | | | | | | |
| Measure | | | | | | | | |
| Course | | | | | | | | |

* Values given are approximate values of the laboratory sample unless otherwise stated.

Date of Test: 20/10/2020

Geotechnical No: 191042020

Client: South West Energy Services Corporation

Location: 20/10/2020

Page 1 of 1

REC Computed by: 4251

For: Soil Ground Investigation Works

Drawn: *MSR*

Checked: *MSR*

Approved: *MSR*

ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

BS1377 - Part 2 - Clause 9.2 & 9.4, 1990
 (Test deviated from standard due to insufficient sample mass)

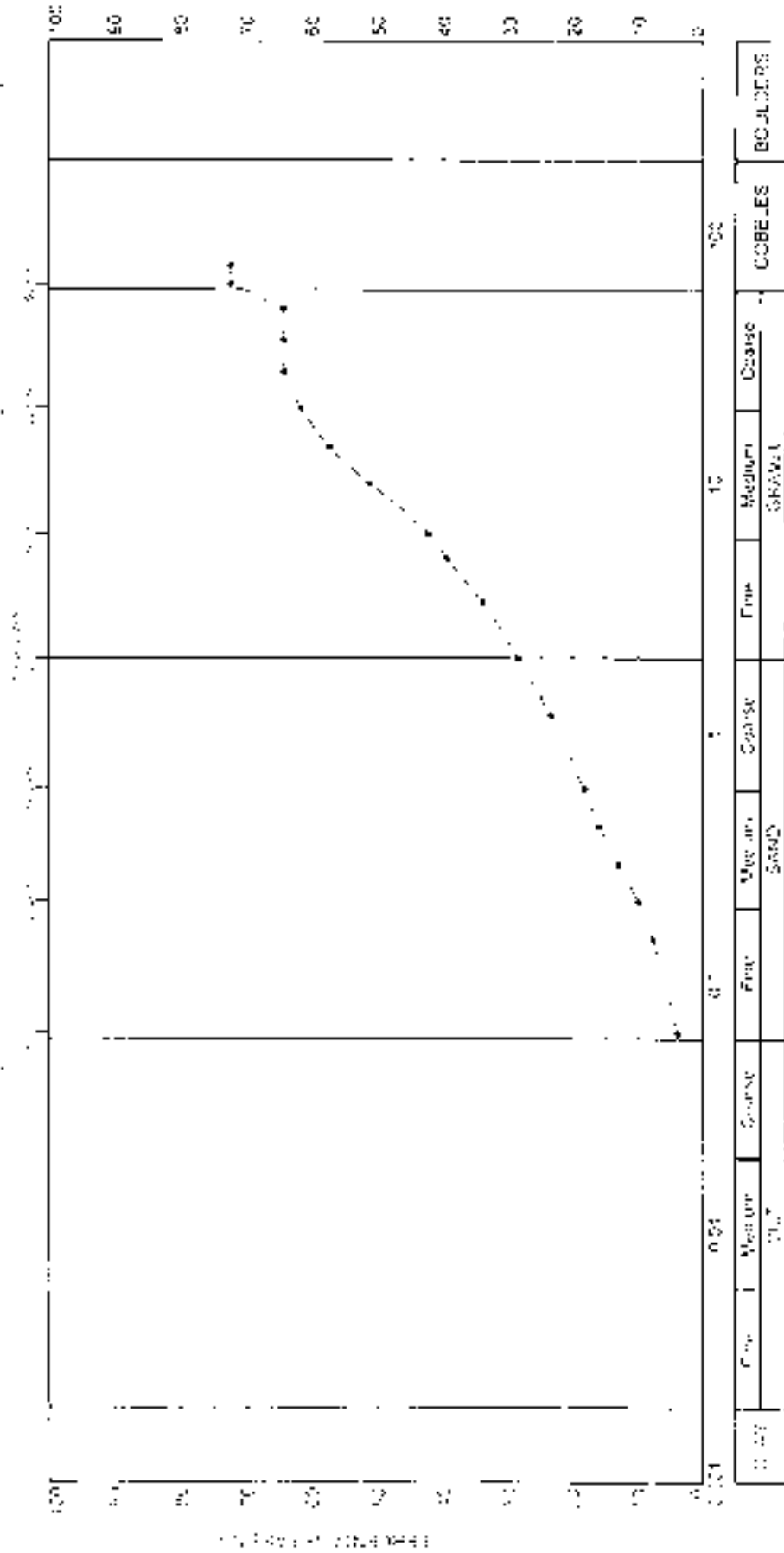
Project No: PFAIR F_AUK_TP138

Depth: 1.00

Sample Type & No.: BZ

Special Depth: 1.00

Date Tested: 15/10/2020



| Coarse | Medium | Coarse | Coarse | Coarse | Coarse | Coarse | Coarse | Coarse | |
|--------|--------|--------|--------|--------|--------|--------|---------|--------|----------|
| SAND | | | | GRAVEL | | | COBBLES | | BOULDERS |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

For details of test methods refer to BS1377-1:1990 and BS1377-2:1990

Drawn by: *MS*
 Checked by: *MS*
 Date: 15/10/2020
 Scale: 1:1

Client: *MS*
 Project: *MS*
 Site: *MS*
 Location: *MS*

Page 1 of 1
 of 1
 4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 25, Millfield Industrial Estate, Fenny Stratford, Bucks. MK12 5NF. Tel: 01494 45000 Fax: 01494 304471
 Regional Office: Unit 25, Millfield Industrial Estate, Fenny Stratford, Bucks. MK12 5NF. Tel: 01494 45000 Fax: 01494 304471

PARTICLE SIZE DISTRIBUTION

BS1377 : Part 2 : Clause 9.2 & 9.4 : 1990

(Test deviated from standard due to insufficient sample mass)

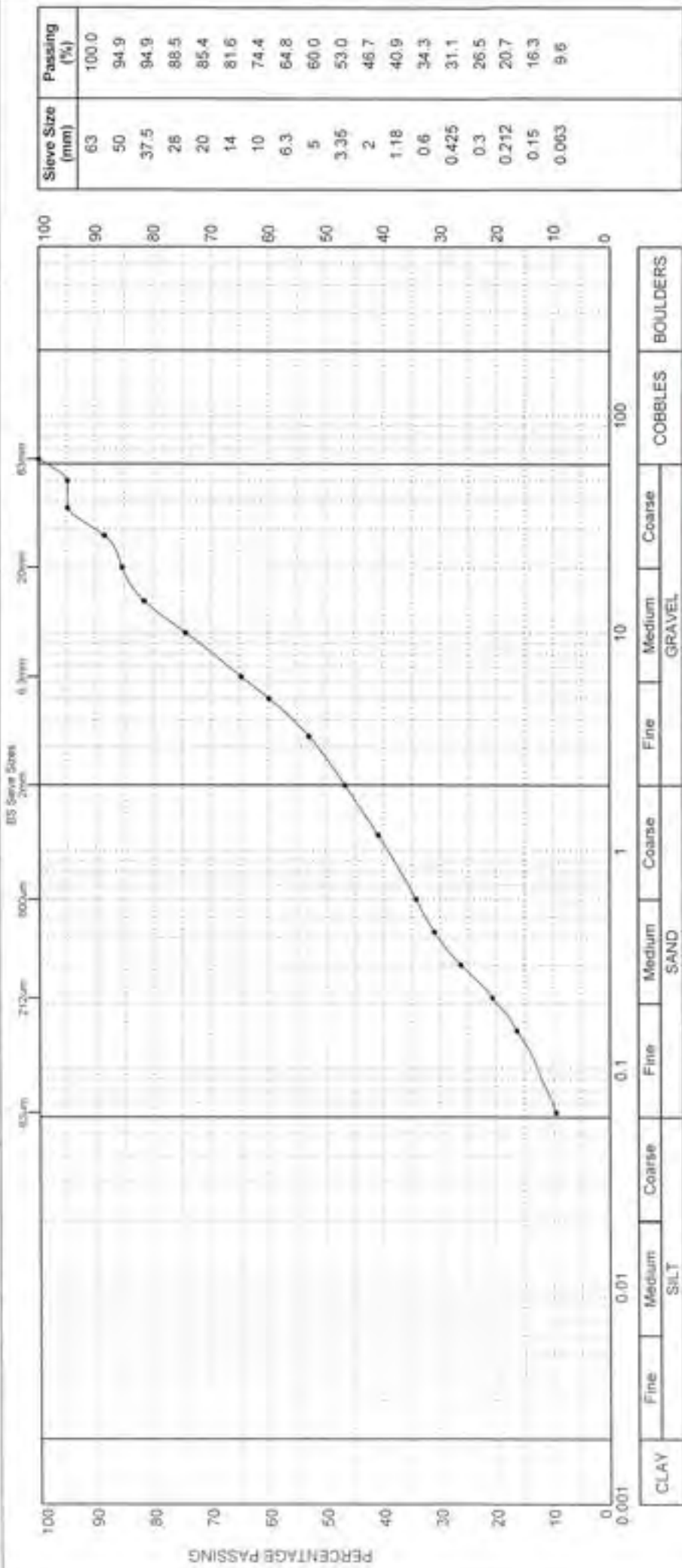
Exploratory Hole No :- PRAIRIE_AUK_TP139B

Depth (m) :- 0.20

Sample Type & No :- B2

Specific Depth (m) :- 0.20

Date Tested :- 14/10/2020



Page 1 of 1
 AEG Contract No :- 4251

Name :- M. SELKIRK

Signed :- mson

Contract Title :- Praine Site Ground Investigation Works

Client :- South Tees Development Corporation



Date of issue :- 23/10/2020

Certificate No :- PSD/4251/PRAIRIE_AUK_TP139B/IB2/0.20

For description of sample please refer to the Laboratory Sample Description Sheet

ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

BS1377 - Part 2 - Clause 9.2 & 9.4 : 1990

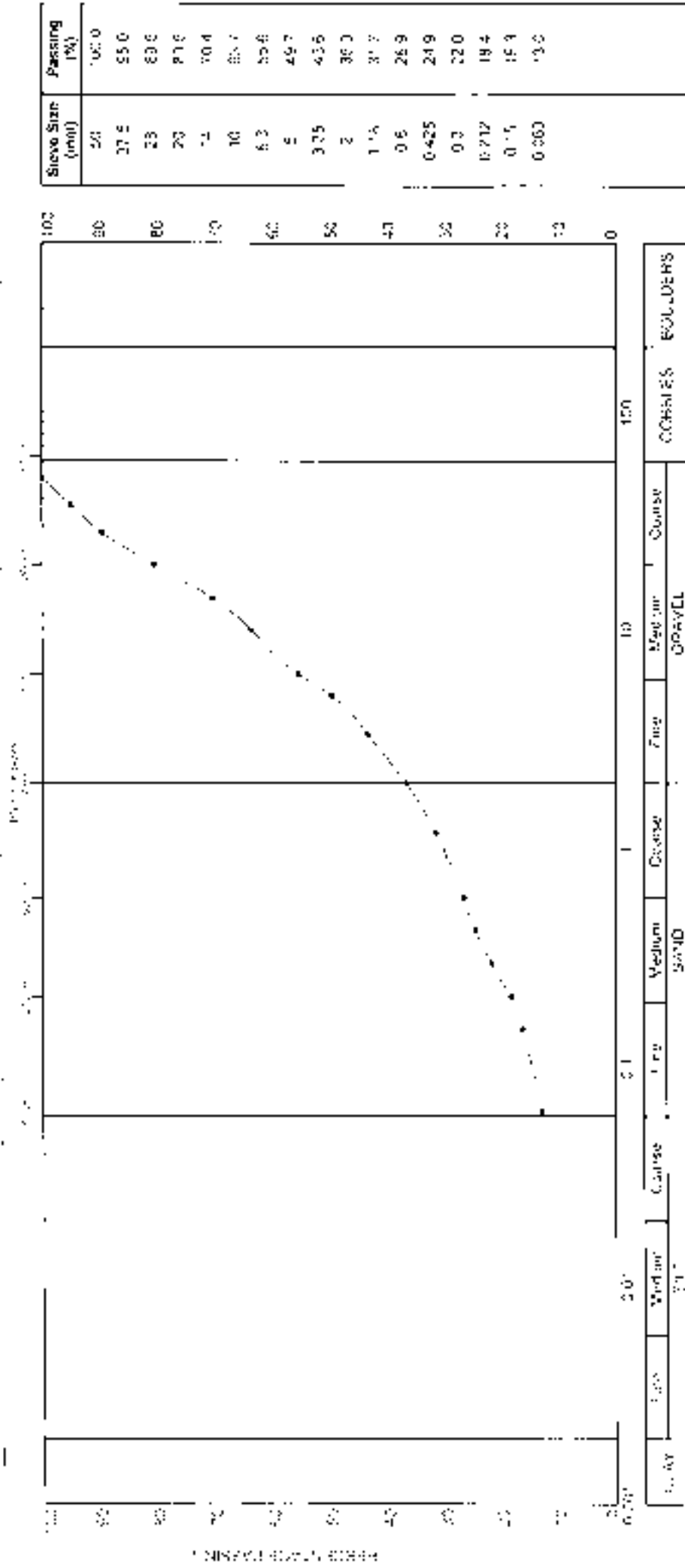
Job Name: PRAIRIE_AUR_TP146

Depth: 1.00

Sample Type & No: B3

Specific Requirement: 1.00

Date Tested: 28/08/2020



Job No: 20102020

Client: South Tiers Development Corporation

Date of Issue: 28/08/2020

Drawn by: PRAIRIE_AUR_TP146

Checked: [Signature]

Site Name: PRAIRIE_AUR_TP146

Depth: 1.00

Sample Type: B3

Specific Requirement: 1.00

Date Tested: 28/08/2020

Drawn by: [Signature]

Checked: [Signature]

Page 1 of 1

AEG Contract No: 4251

Prime Site Ground Investigation Works

ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

RS1377 Part 2 Clauses 9.2 & 9.4 : 1990

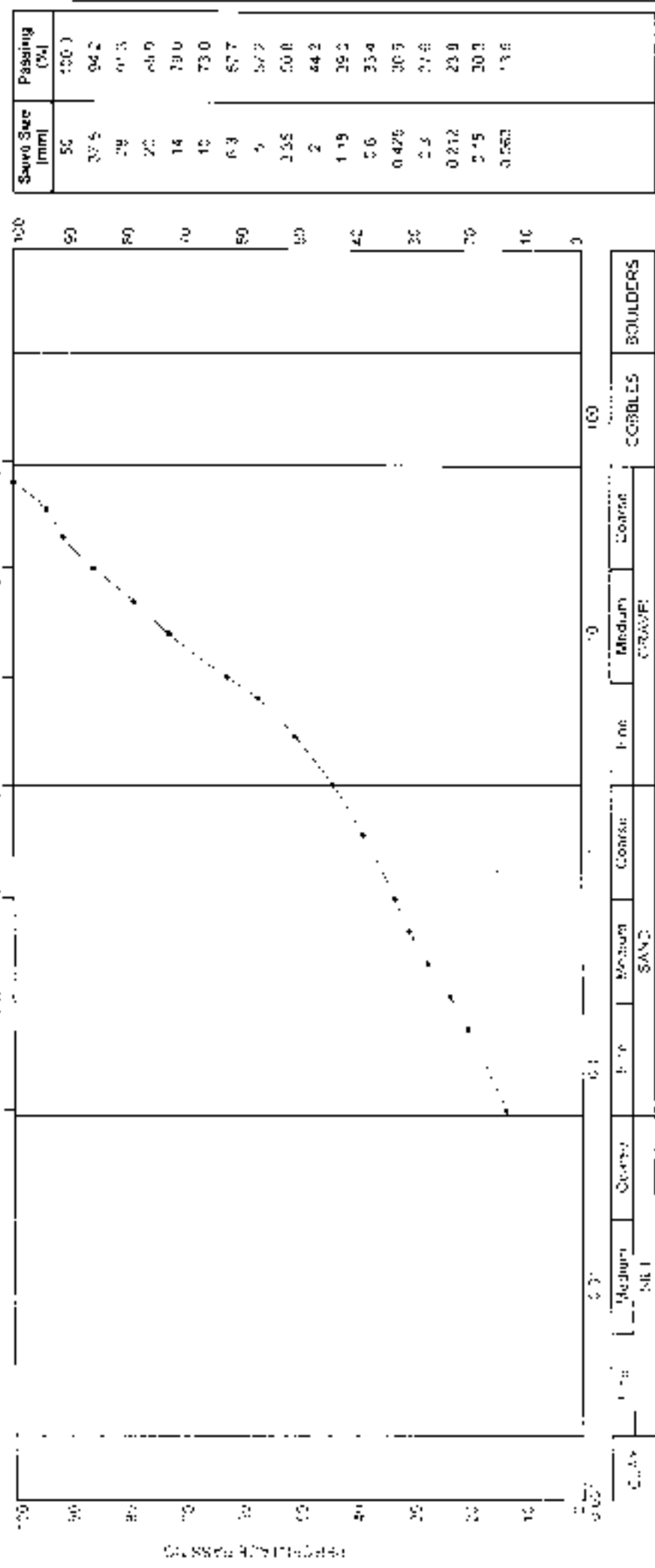
Project No: **INRAIRIE_AUK_TP148C**

Depth: **1.30**

Sample Type & No: **B6**

Specific Depth (m): **1.30**

Date Tested: **02/10/2020**



CLAY FINE SAND MEDIUM SAND COARSE SAND FINE GRAVEL MEDIUM GRAVEL COARSE GRAVEL COBBLES BOULDERS

* Distribution of fines is based on the dry mass, Sample Dewatered

Date of issue: **02/10/2020**

Client No: **RS1377 Part 2 Clauses 9.2 & 9.4 : 1990**

M. S. G. G. G.

Name: **M. S. G. G. G.**

Page 1 of 1



Client: **State of Queensland Government**

Contract Title: **...**

Fig. 9.2.9 Ground Investigation Works

APC Contract No: **4251**

1367

ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

DS 4127 - Part 2 - Clause B 2.8.9.4 : 1990
(Test deviated from standard due to insufficient sample mass)

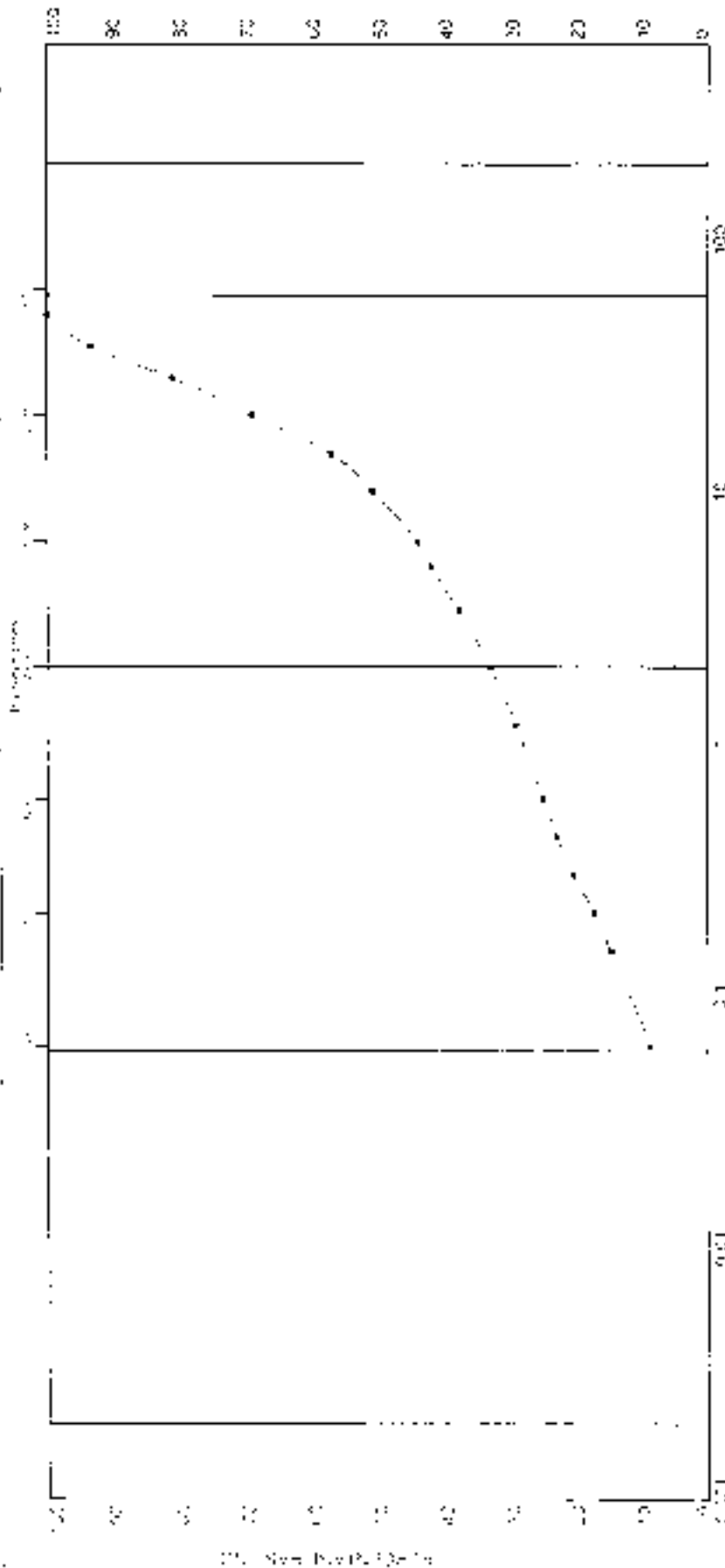
Laboratory No: PRA RIE_AUK_TP148

Drill No: 1.00

Sample Type: kg - B2

Soils Depth: 1.00

Date Tested: 19/10/2020



| | | | |
|-------------|-------------|-----------|--------------|
| Coarse Sand | Medium Sand | Fine Sand | Coarse Silts |
| 0.0 | 0.0 | 0.0 | 0.0 |

| | |
|-----------------|-------------|
| Sieve Size (mm) | Passing (%) |
| 50 | 100.0 |
| 37.5 | 93.5 |
| 25 | 91.1 |
| 20 | 80.2 |
| 15 | 67.3 |
| 10 | 57.1 |
| 6.3 | 44.3 |
| 5 | 42.1 |
| 3.75 | 38.0 |
| 3 | 33.5 |
| 2.5 | 29.5 |
| 2 | 25.4 |
| 1.5 | 23.2 |
| 1.25 | 20.5 |
| 1 | 17.4 |
| 0.75 | 14.7 |
| 0.6 | 9.6 |



Contract No: PSC 425-PR0110-AUG-TP148-B2-00
 Date: 20/10/2020
 Scale: Test Certificate Description

Client Code No: PSC 425-PR0110-AUG-TP148-B2-00
 Name: *msb*
 Project: Mine Site Ground Investigation Works

Page 1 of 1
 Test Certificate No: 425

ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

RS1377 Part 2 Clause 9.2 & 9.4, 1990

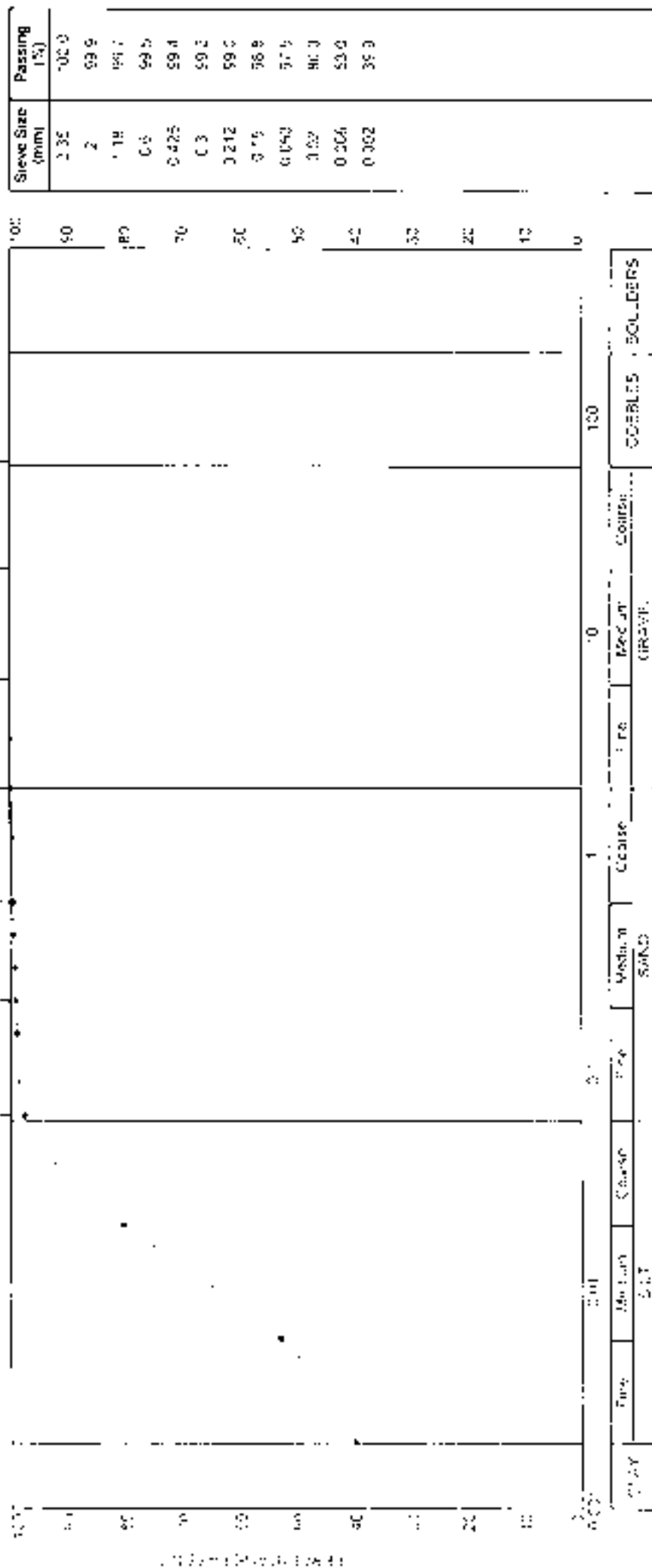
Project No: PRAIRIE_AUK_TP949

Location: 2.20

Sample Type & No.: BS

Specific Description: 2.20

Test Reference: 16/10/2020



Client No: 19-300

Cell No: 10

Field No: 10

Sample No: 10

Signature: *MSO*

Name: _____

Page: 1 of 1

Soil Test Development Group

Geotech Ltd

Home Site Ground Investigation Works

AEG Control No: 4291



ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

051377 - Part 2 - Clause 9.2 & 9.4 - 1990
 (Test deviated from standard due to insufficient sample mass)

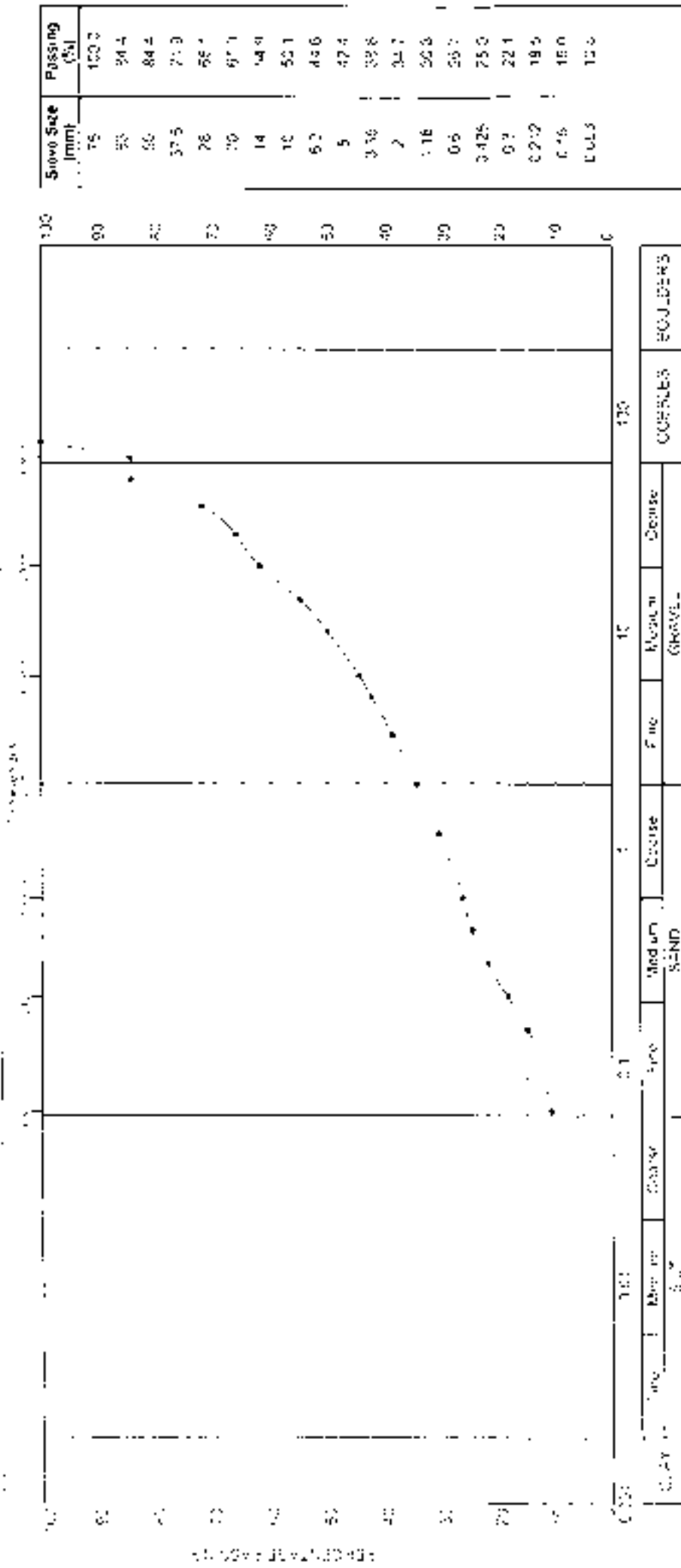
Client: PRINCE AUK TP160

Depth: 0.60

Sample Type & No.: B2

Soil Depth (m): 0.60

Date Tested: 15/10/2020



Page 1 of 1
 AEG Contract No. 4251

Contract Title: *None*
 Signed: *msone*
 Date: *None*

Soil Test Investigation Report
 15/10/2020
 Contract Title: *None*
 Signed: *msone*
 Date: *None*



ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

DS1377 Part 2 Clause 9.2 & 9.4: 1990

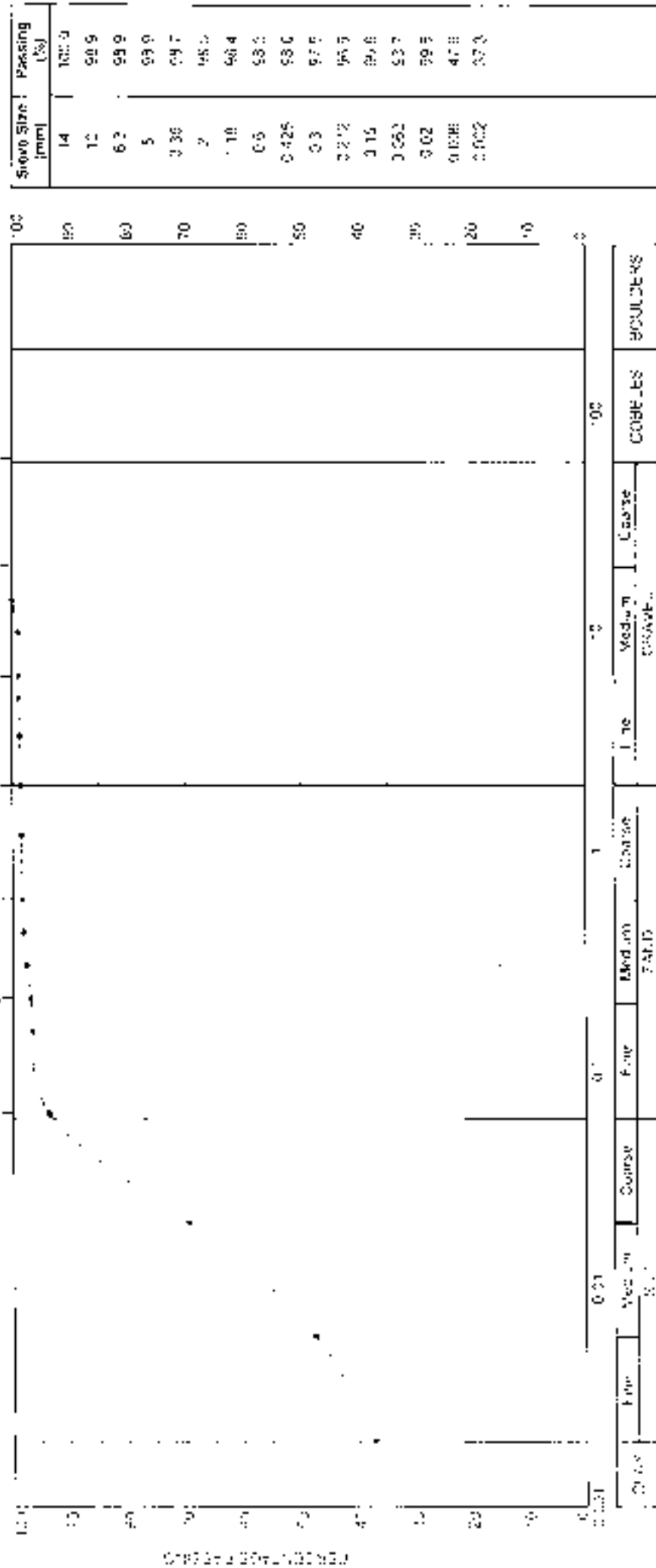
Project Name: PHOENIX AUK TP155

Depth: 1.60

Grain Type: BS

Specific Depth: 1.60

Date Test: 14/10/2020



Date of Issue: 23/10/2020

Client: Cairn Trust Development Corporation

Site: PHOENIX AUK TP155 BS

Serial No: *MS002*

Card Created: 23/10/2020

Client Name: PHOENIX AUK TP155 BS



Serial No: *MS002*

Site Name: Phoenix Auk Investigation Works

Page 1 of 1

Page 1 of 1

Page 1 of 1

ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

PS1377 Part 2 Chapter 9.2 & 9.4 : 1990

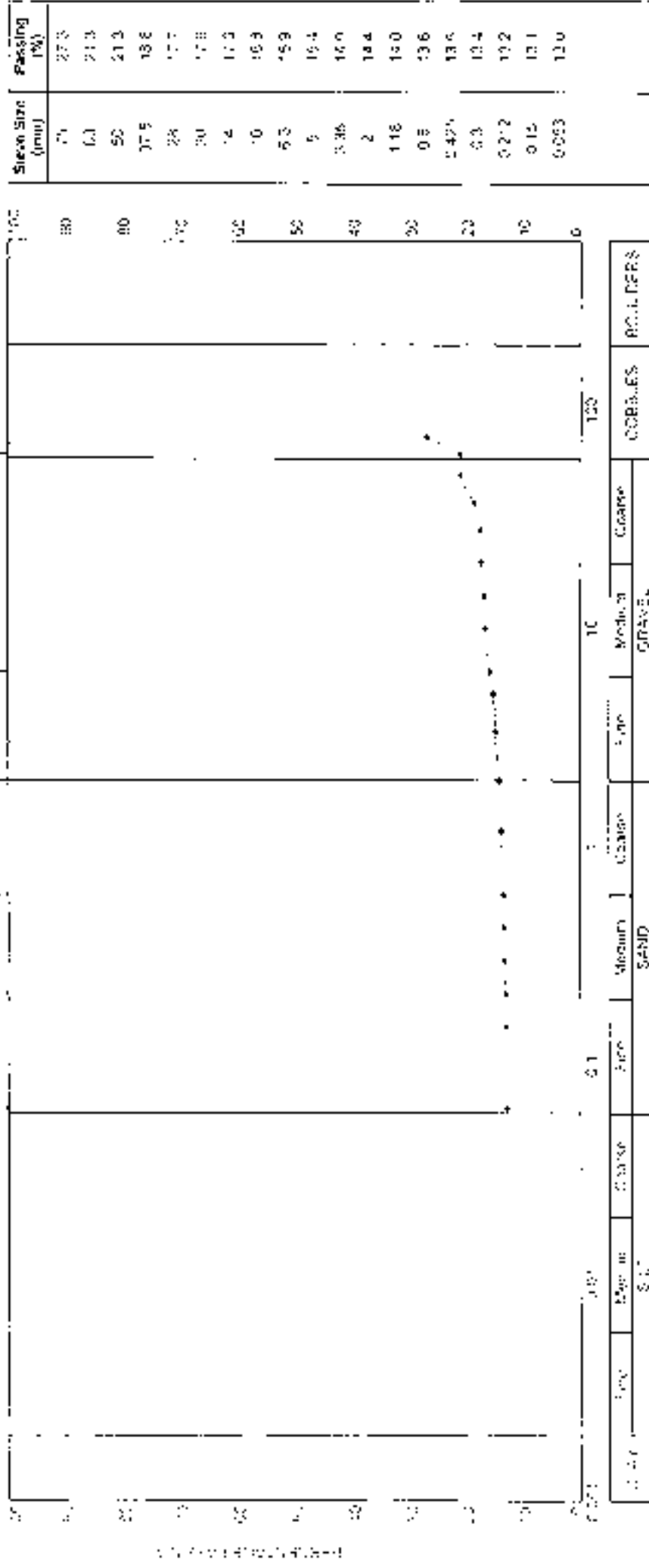
(Test deviated from standard due to insufficient sample mass)

Project Name : PHAHLIA_AUK_1P156A

Depth (mm) : 0.70

Sample Type & No. : B4

Date Tested : 15/10/2020



| Coarse | Medium | Coarse | Medium | Coarse | Coarse | Coarse | Coarse | Coarse |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | | | | | | | | |
| | | | | | | | | |

TESTED AT THE FOLLOWING LABORATORY: ALLIED EXPLORATION & GEOTECHNICS LIMITED



Test Code No : PSD 425
 PSD 425 - PHAHLIA_AUK_1P156A B4.10 - Superficial
 Date of Test : 15/10/2020

Name : *Mansour*
 Sample Site : Gahmrig - West of Jeddah

Contact No : +966 11 530 1000
 Fax : +966 11 530 1001



ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

BS1377, Part 2: Clause 9.2 & 9.4 (1990)
 (Test deviated from standard due to insufficient sample mass)

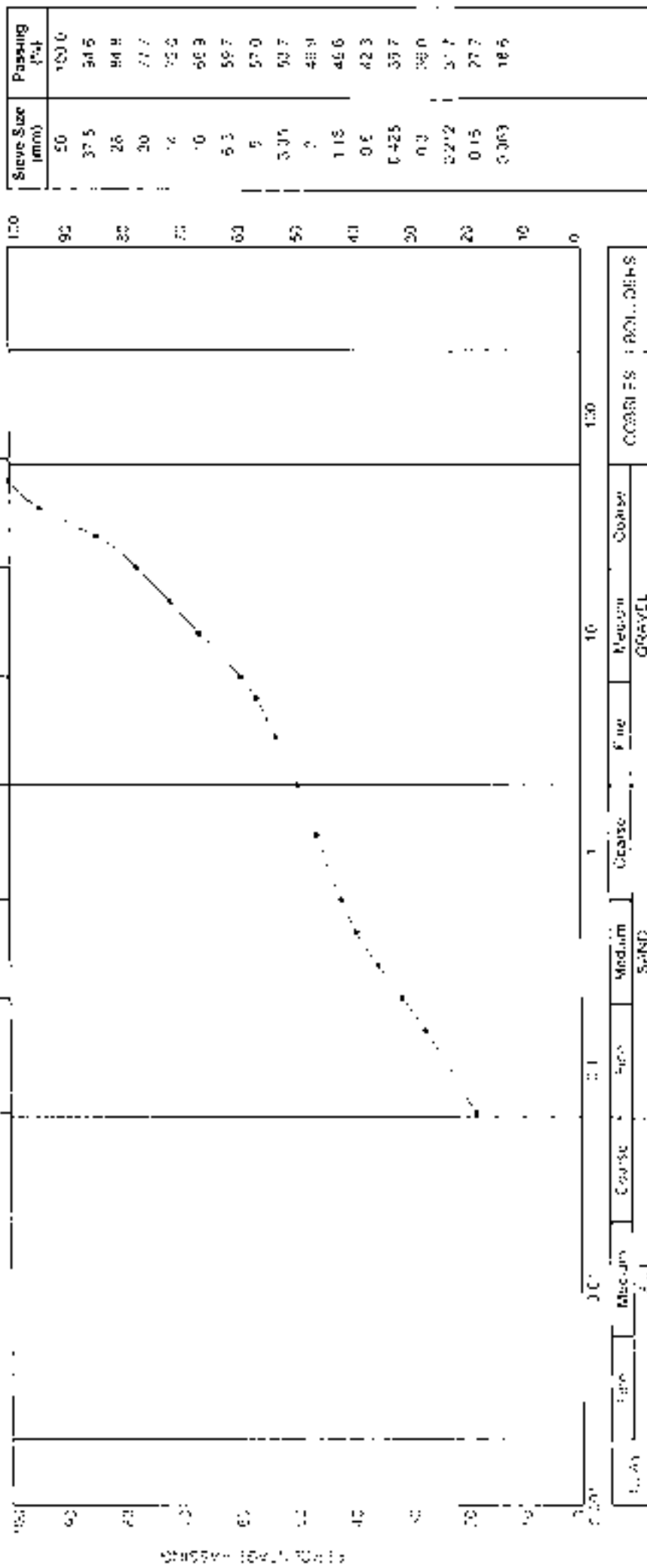
Lot Code: PRAIRIE_AUK_TP162

Sample No: 0.00

Sample Type & No: 02

Specific Depth (m): 0.90

Date Tested: 30/09/2020



AEG

South Tiers Queensland Geotechnical
 20/10/2020
 Geotechnical
 PRAIRIE_AUK_TP162-E2-0.00
 Signed: *MSore*
 name
 Control Title
 Prairie Site Ground Investigation Works

ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

BS1377 - Part 2 - Clause 9.2 & 9.4 : 1990

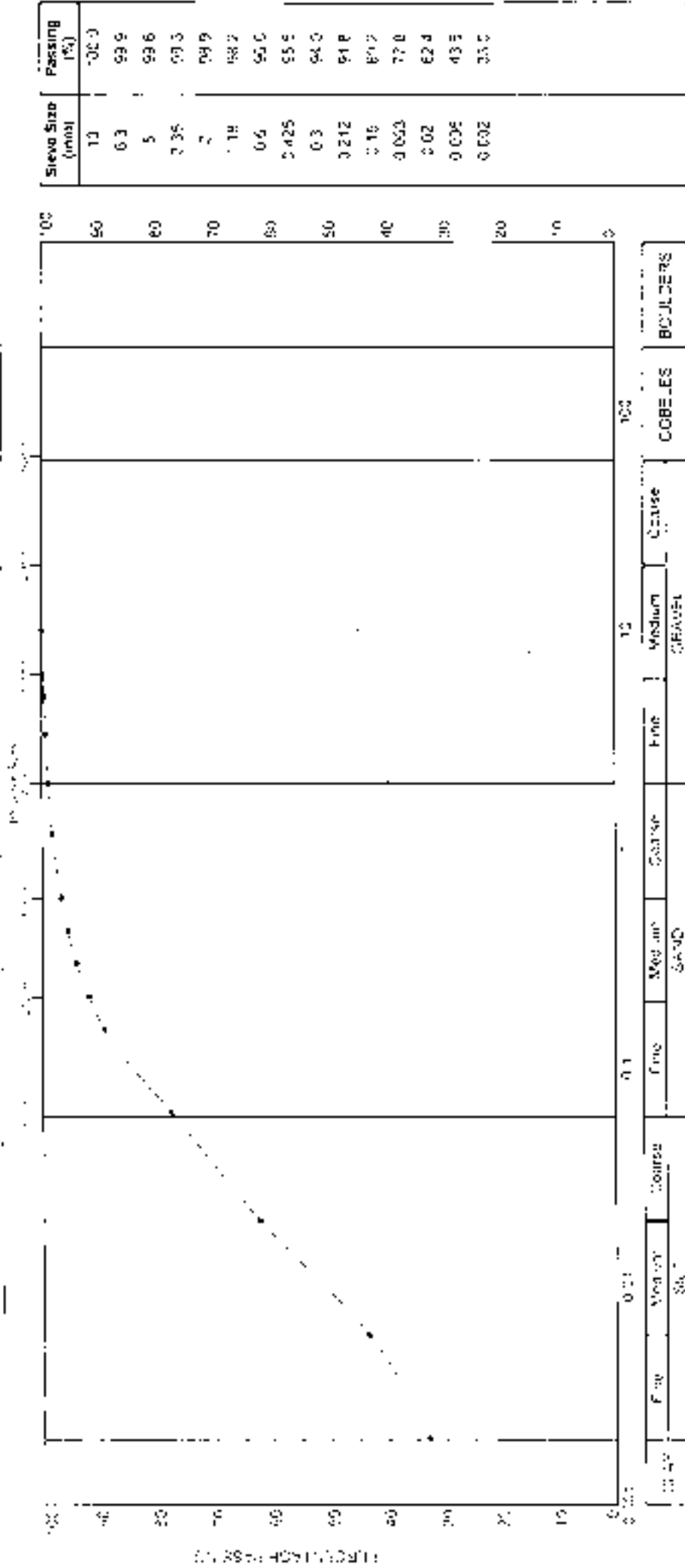
Location: No. 1 PRAIRIE, AUK, TP162

Depth: 2.50

Sample Type & No.: BS

Specific Depth (m): 2.50

Date tested: 20/09/2020



Comments: This percentage is preliminary. Some laboratory error is likely.



Date of Issue: 20/09/2020
 Project No: PSD-125-1-PR-16-AUK-TP162-BS-2-50
 Client: South West Earth Services Co. (Pty) Ltd

Drawn by: MSOR
 Checked by: [Signature]
 Project Site Group: Westpac-Work

Page 1 of 1
 AEG Contract No: 4201



ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

BS1377 Part 2 - Clause 9.2 B.9.4 1990

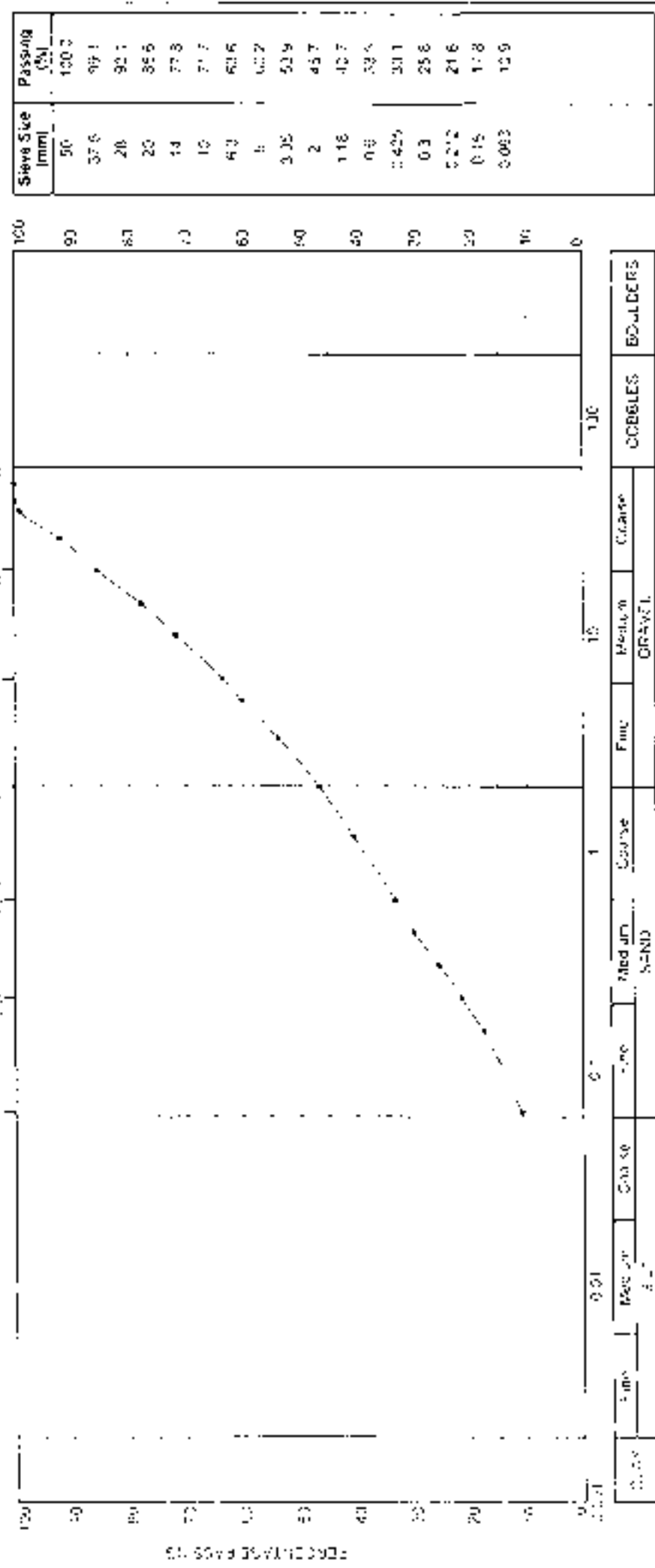
Project Name: PRAIRIE_AUK_IP103

Depth: 0.80

Sample Type & No: B2

Specific Depth (m): 0.80

Date Tested: 05/10/2020



| Grain Size | Coarse | Medium | Fine | Med. to Fine | Coarse to Fine | Coarse to Med. to Fine | Coarse to Fine to Med. to Fine | Coarse to Fine to Med. to Fine to Coarse | Coarse to Fine to Med. to Fine to Coarse to Fine | Coarse to Fine to Med. to Fine to Coarse to Fine to Coarse |
|----------------|--------|--------|------|--------------|----------------|------------------------|--------------------------------|--|--|--|
| Classification | | | | | | | | | | |

This report is valid only for the laboratory sample described.

Date of Issue: 20/10/2020

Client: Geocon Services Development

Conf No: PEG4551/PRAISE

Signature: [Signature]

Contract Title: [Blank]

Project Name: [Blank]

Page 1 of 1

PEG Contract No: 4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: 20, Meadowcroft Road, Easingwold, North Yorkshire, YO21 2JG, UK. Tel: 01753 853 4333 Fax: 01753 867 4716
Regional Offices: Unit 20, Balauness Drive, West Cambs, Easingwold, YO21 5BL, UK. Tel: 01753 256 320 Fax: 01753 738 908

PARTICLE SIZE DISTRIBUTION

BS1377 : Part 2 : Clause 9.2 & 9.4 : 1990

(Test deviated from standard due to insufficient sample mass)

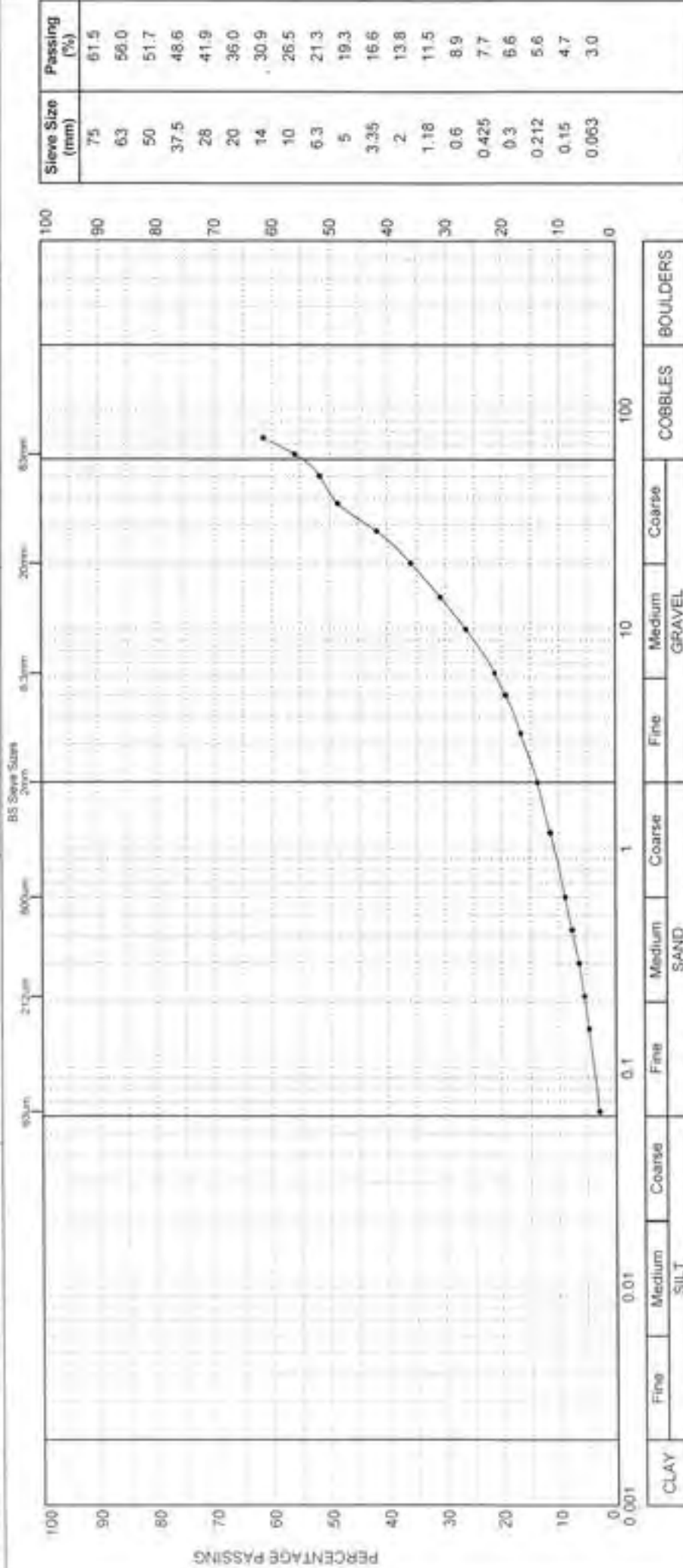
Exploratory Hole No - PRAIRIE_AUK_TP165

Depth (m) - 1.80


Sample Type & No - B5

Specific Depth (m) - 1.80

Date Tested - 01/10/2020



For description of sample please refer to the Laboratory Sample Description Sheet

| | | | | | |
|---|---|---|---|------------------------|-------------|
|  | Date of issue - 20/10/2020 | Certificate No - PSD/4251/PRAIRIE_AUK_TP165/B5/1.80 | Signed - <i>msone</i> | Name - SELKIRK | Page 1 of 1 |
| | Client - South Tees Development Corporation | Contract Title - | Prairie Site Ground Investigation Works | AEG Contract No - 4251 | |

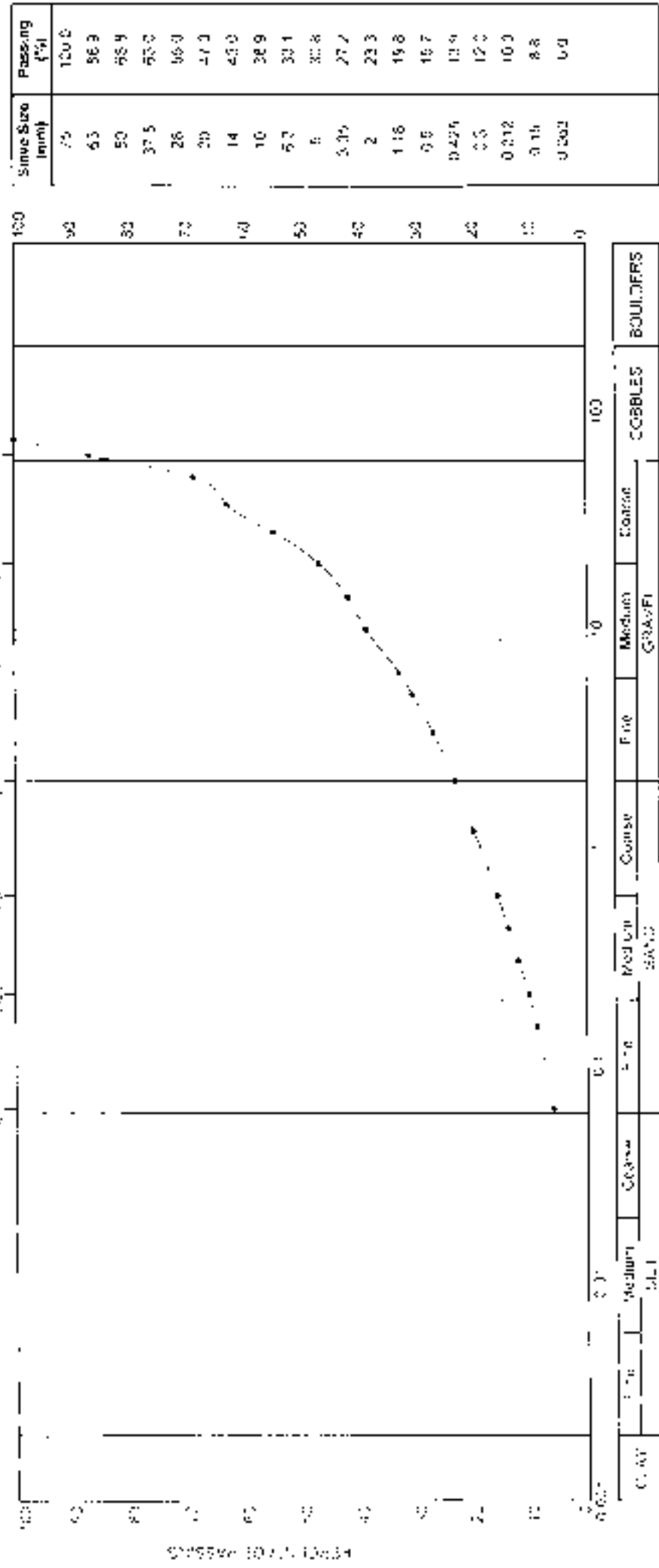


ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

BS1377 : Part 2 : Clause 9.2 & 9.4 : 1990
(Test deviated from standard due to insufficient sample mass)

Project No: **FRAIR E_AJK_1P165** Department: **2.80** Sample type & no: **B7** Date Tested: **30/08/2020**



Page 1 of 1
ACGS Contract No: 4251

Date of Issue: 30/08/2020
Certificate Ref: 9504251 P0423 E_AJK_1P165 (S.G. 18)

Client: South West's Environmental Consultants
Contract Title: *msone*

Name: _____
Project Site: Ground Investigation Works

Contract Title: _____

Signature: _____
Date: _____



ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

BS1377 - Part 2 - Clause 9.2 & 9.4 - 1990
(Test deviated from standard due to insufficient sample mass)

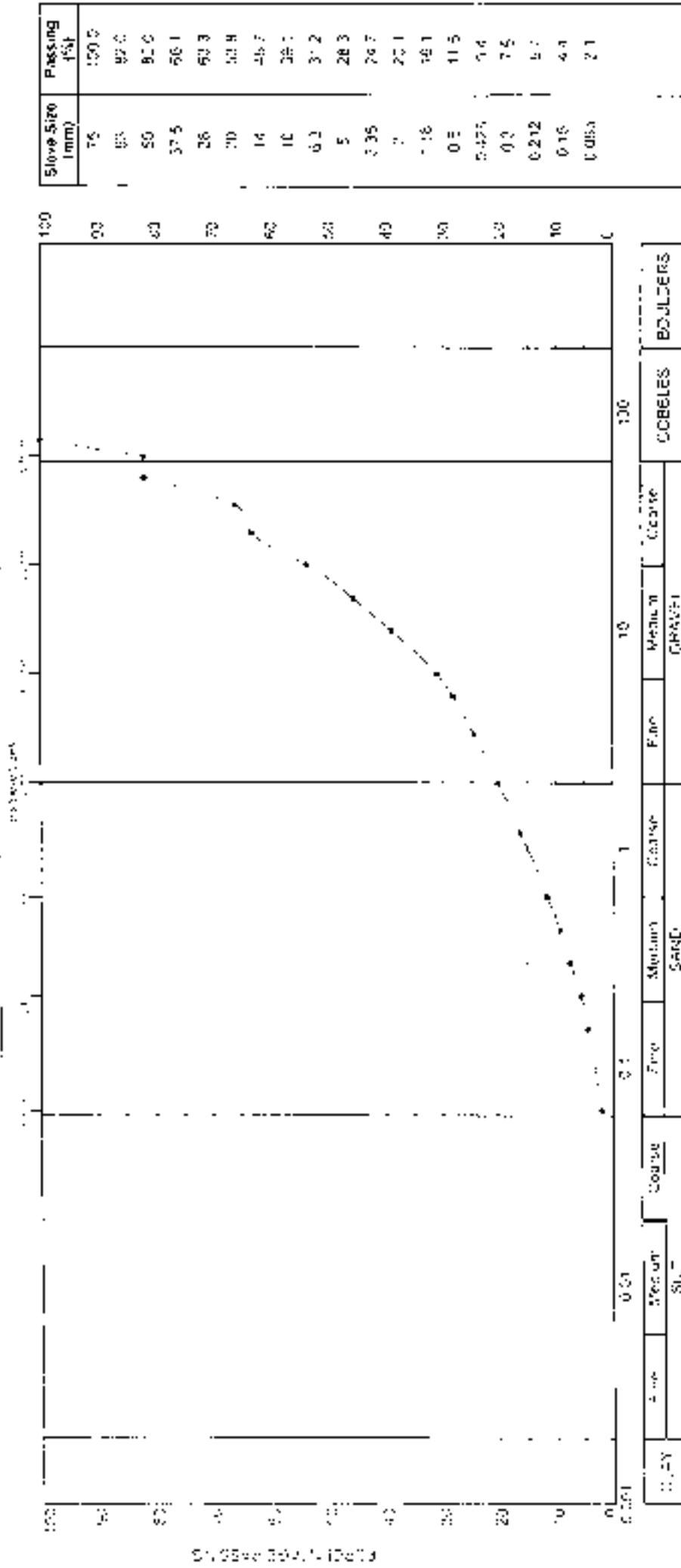
Logbook Number: **PRMIR E AUK TP167**

Depth (m): **1.80**

Sample Type & No.: **B4**

Specific Gravity: **1.80**

Date Tested: **30/08/2020**



Page 1 of 1
AEG Contract No: 4201

Contract Title: **Primo Site Geology Investigation Works**

Client Name: **MSOR**

Contract No: **4201**

Site No: **TP167**

Scale: **1:100**

Date of Issue: **20/10/2020**

Drawn by: **20/10/2020**

Checked by: **20/10/2020**



ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

BS1377 Part 2, Clauses 9.2 & 9.4 : 1990

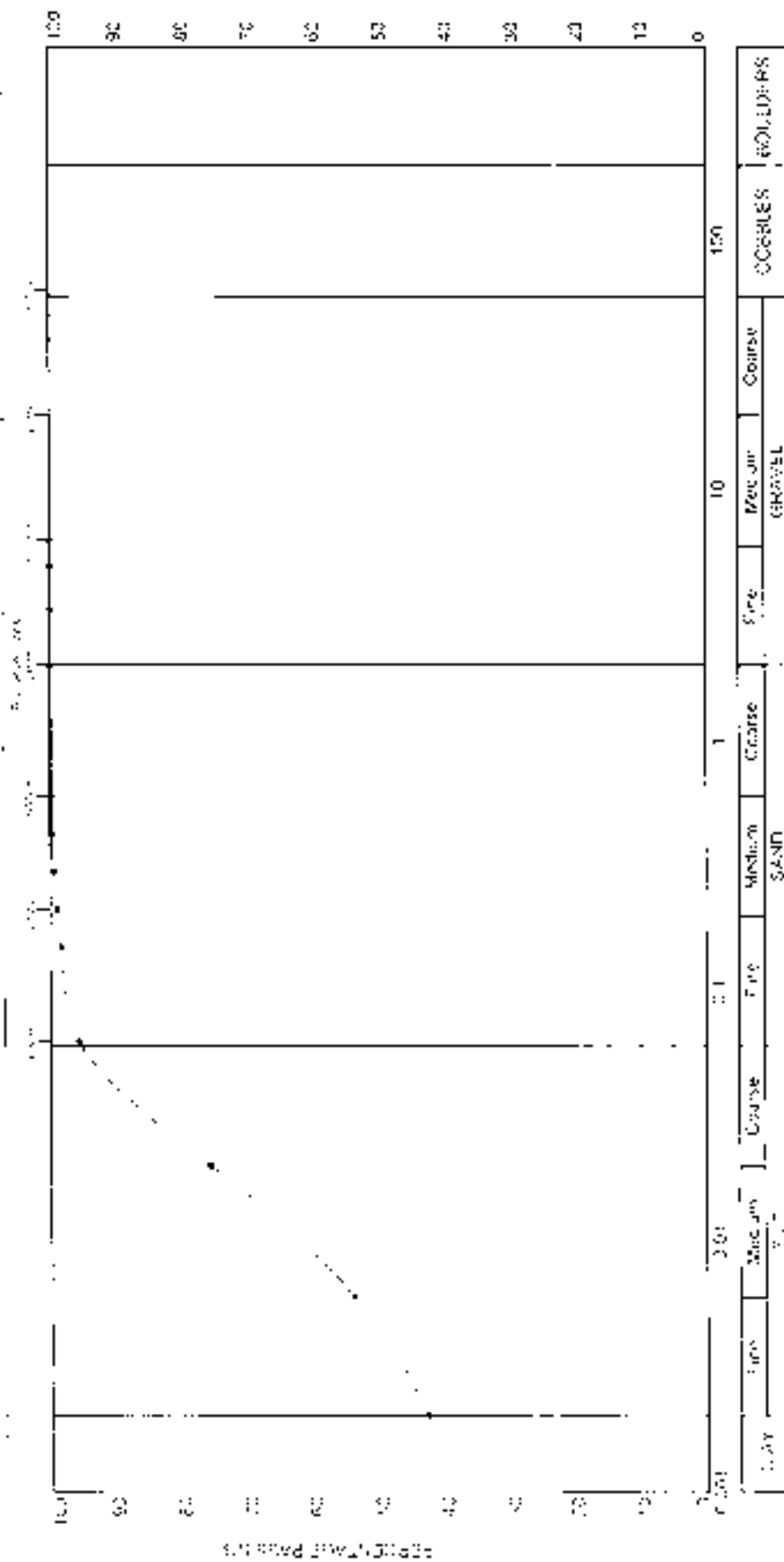
Lot Code / Sample No. : PRAIRIE AUK_TP168

Depth (m) : 1.80

Sample Type & No. : B7

Specific Gravity (m) : 1.60

Date Tested : 30/09/2020



| Layer | Top | Bottom | Course | Medium | Coarse | Fine | Material | Course | Notes |
|-------|-----|--------|--------|--------|--------|------|----------|--------|---------|
| | | | | SAND | | | GRAVEL | | COBBLES |

For description of symbols refer to the appropriate part of the description sheet



Order No. : 10-0020
 Client : South Tees Development Corporation

Contract No. :
 Signed : *M. Sano*
 Name :
 Control Title :

Page 1 of 1
 AEG Contract No. : 4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

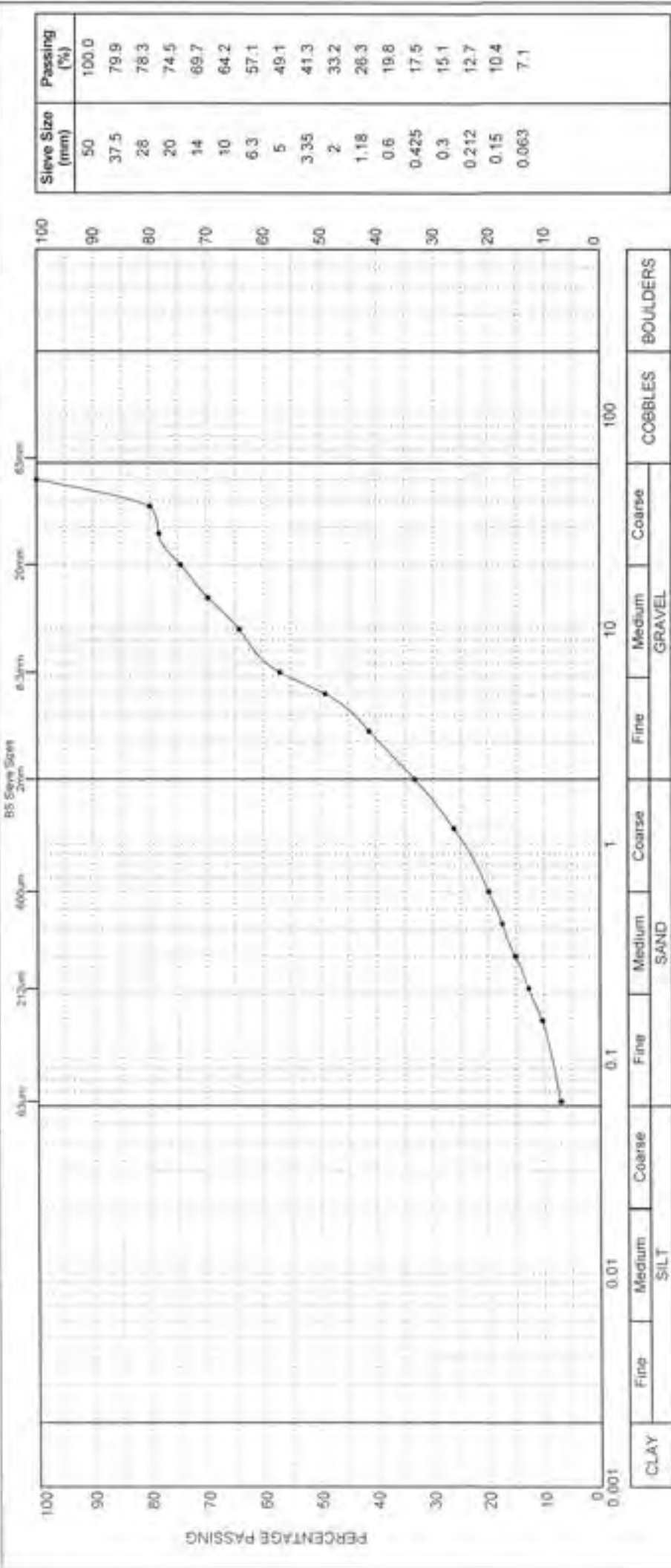
Head Office: 144-20, Salsburgh Drive, Eddlestone, Oxfordshire, OX20 2JG, UK. Tel: 0121 357 4300 Fax: 0121 361 8126
Regional Offices: 144-20, Salsburgh Drive, Eddlestone, Oxfordshire, OX20 2JG, UK. Tel: 0121 357 4300 Fax: 0121 361 8126

PARTICLE SIZE DISTRIBUTION

BS1377 : Part 2 : Clause 9.2 & 9.4 : 1990

(Test deviated from standard due to insufficient sample mass)

| | | | |
|--|------------------|------------------------|---------------------------|
| Exploratory Hole No. - PRAIRIE_AUK_TP169 | Depth (m) - 0.80 | Sample Type & No. - B2 | Specific Depth (m) - 0.80 |
| | | | Date Tested - 29/09/2020 |



For description of sample please refer to the Laboratory Sample Description Sheet.

| | | | | |
|---|--|-----------------------------|--------------------------|-------------|
| Date of issue - 20/10/2020 | Certificate No. - PSD/4251/PRAIRIE_AUK_TP169/B2/0.80 | Signed - <i>msone</i> | Name - SELKIRK | Page 1 of 1 |
| Client :- South Tees Development Corporation | Contract Title :- Prairie Site Ground Investigation Works | AEG Contract No. :- 4251 | | |

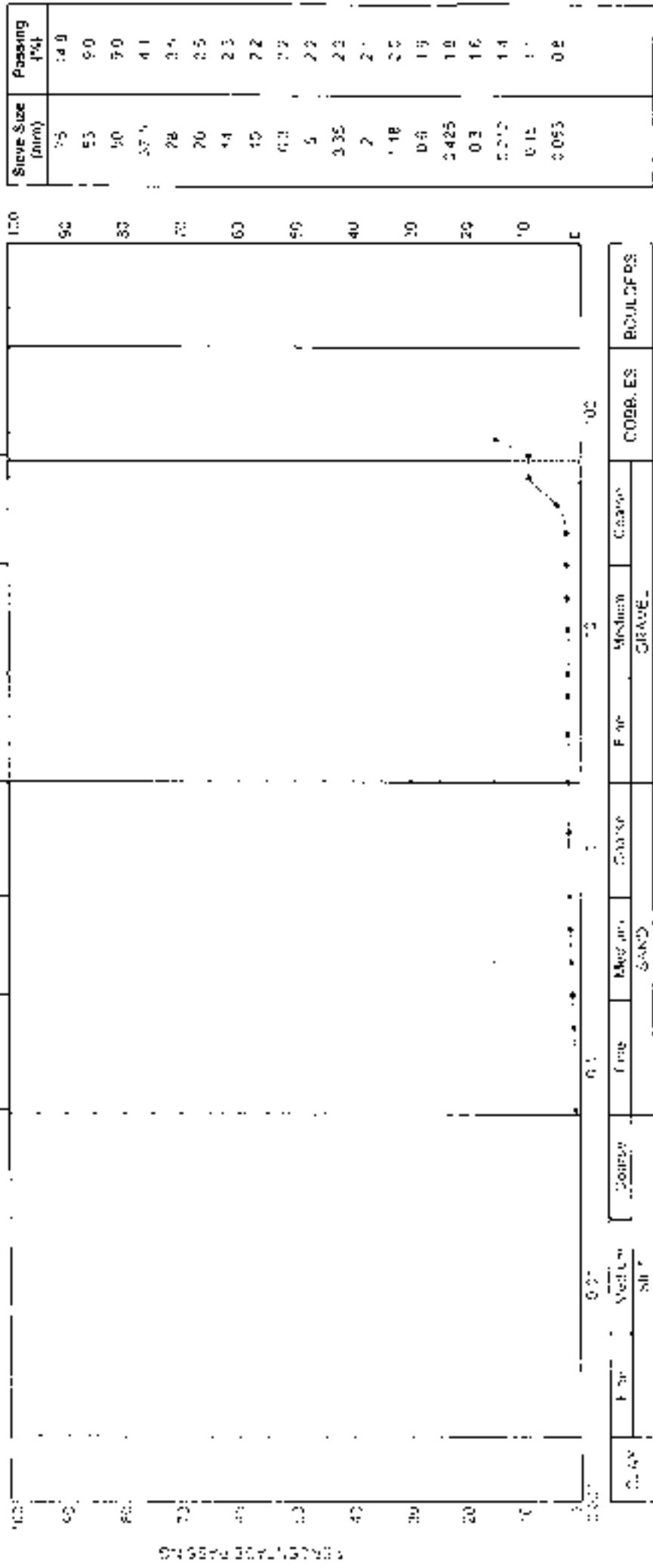


ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

BS1377 - Part 2 : Clauses 9.2 & 9.4 - 1990
 (Test deviated from standard due to insufficient sample mass)

Eng. Certificate No. **PREMIRE AUK TP172** Exp. No.: **060** Sample Type: **6710 - B2** Specific Depth: **0.60** Date Tested: **01/11/2020**



| Coarse | Fine | Medium | Coarse | Fine | Medium | Coarse | Coarse | ES | ROULDFOS |
|--------|------|--------|--------|-------|--------|--------|--------|----|----------|
| SAND | | SAND | | CLEAN | | CLEAN | | | |

(Indicate the material parameters in the table if they deviate from the standard)

Date of Issue: **20/10/2020**

Eng. Certificate No.: **PREMIRE AUK TP172**

Client: **Geotechnical Engineering Corporation**

Signature: *[Signature]*

Name: **MSAR**

Page 1 of 1

ASG Contact No: **425**

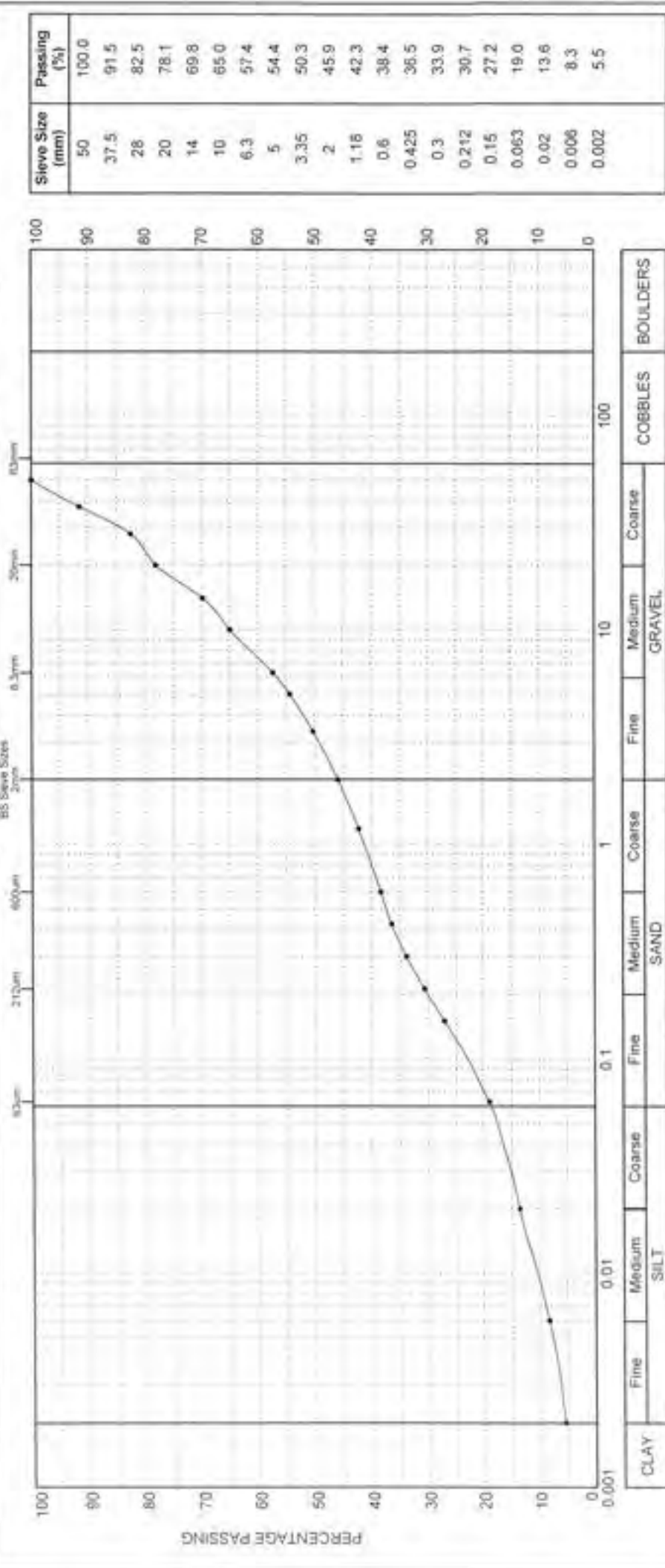
ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: 100/110 Greenfield Estate, Park Road, Chester-le-Street, Gateshead, Tyne and Wear, NE12 8JN. Tel: 0191 357 4700 Fax: 0191 367 4716
Regional Office: 107/105, Blenheim Commercial Centre, Blenheim Road, Middlesbrough, Cleveland, YO21 2JL. Tel: 01722 125 300 Fax: 01722 125 999

PARTICLE SIZE DISTRIBUTION

BS1377 : Part 2 : Clause 9.2 & 9.4 : 1990

| | | | | |
|--|-------------------|------------------------|----------------------------|---------------------------|
| Exploratory Hole No :- PRAIRIE_AUK_TP173 | Depth (m) :- 0.80 | Sample Type & No :- B2 | Specific Depth (m) :- 0.80 | Date Tested :- 30/09/2020 |
|--|-------------------|------------------------|----------------------------|---------------------------|



For description of sample please refer to the Laboratory Sample Description Sheet

| | | | | |
|-----------|--|--|--|-------------------------|
| EG | Date of Issue :- 20/10/2020 | Certificate No :- PSD/4251/PRAIRIE_AUK_TP173/B2/0.80 | Signed :- <i>msaw</i> | Name :- |
| | Client :- South Tees Development Corporation | Contract Title :- | Praise Site Ground Investigation Works | |
| | | | | AEG Contract No :- 4251 |
| | | | | Page 1 of 1 |



ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

ES1377 - Part 2 - Clause 9.2 & 9.4 - 1990
 (Test deviated from standard due to insufficient sample mass)

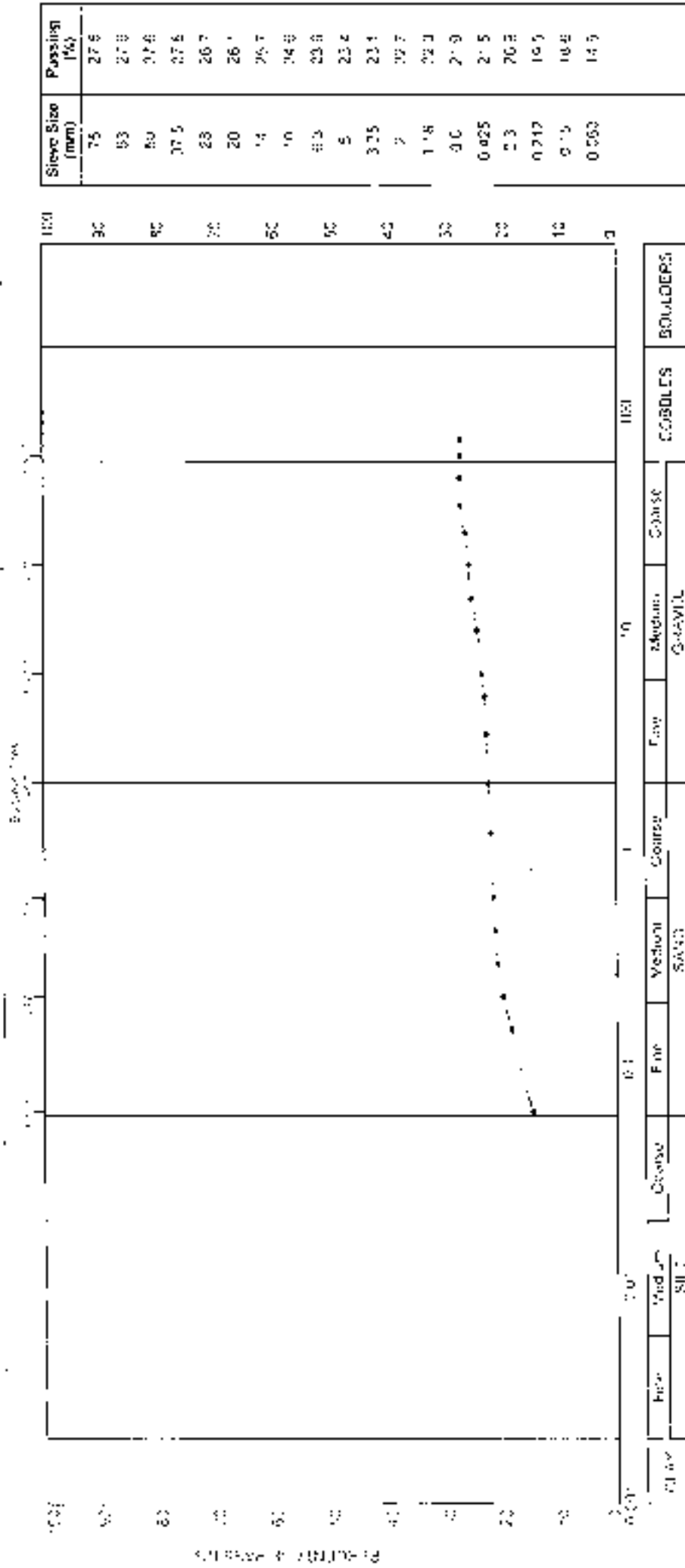
Lot/Job No.: PRAIRIL_AUK_IP175

Drain No.: 0.80

Sample Type & No.: BZ

Specific Depth (m): 0.60

Date: 01/10/2020



| Clay | Fine | Med | Coarse | Very | Coarse | Coarse | Coarse | BOULDERS |
|------|------|-----|--------|------|--------|--------|--------|----------|
| | | | | | | | | |
| | | | | | | | | |

Soils Test Pty Ltd Pty Ltd - State of Victoria - Laboratory Sample Description Form.



Date of test: 01/10/2020

Certificate No: PSD 4251-PR01-01-AUK_IP-75-92-0.60 - 5.0003

Name: Nimit

MSD

Page 1 of 1

Client: South West Earth Care and Conservation

Contact: 176

Project Site Ground Investigation Works

AUG Contract No: 4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

DS1377 - Part 2 - Clause 9.2 & 9.4 - 1990

(Test deviated from standard due to insufficient sample mass)

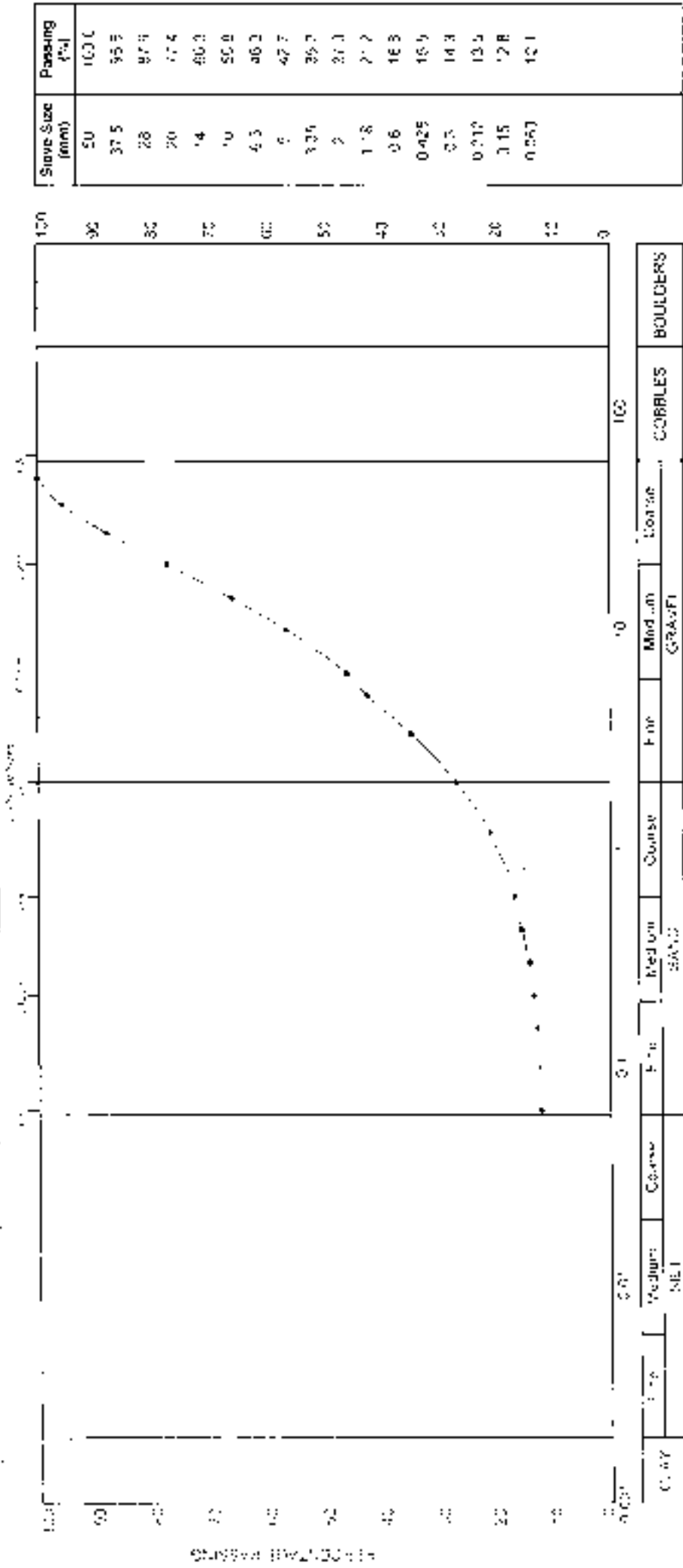
Project No: 10 - PRAIRIE_AUK_IP176

Depth (m) - 0.50

Sample Type & No. - BZ

Specie Depth (m) - 0.50

Date Tested - 28/09/2020



Page 1 of 1

AEG Contract No - 475

Name -

Project Site Ground Investigation Works

Contract No -

Client Name -

250 4251 PINE R E AVENUE, HILLSBORO

South Tyneside Council Corporation

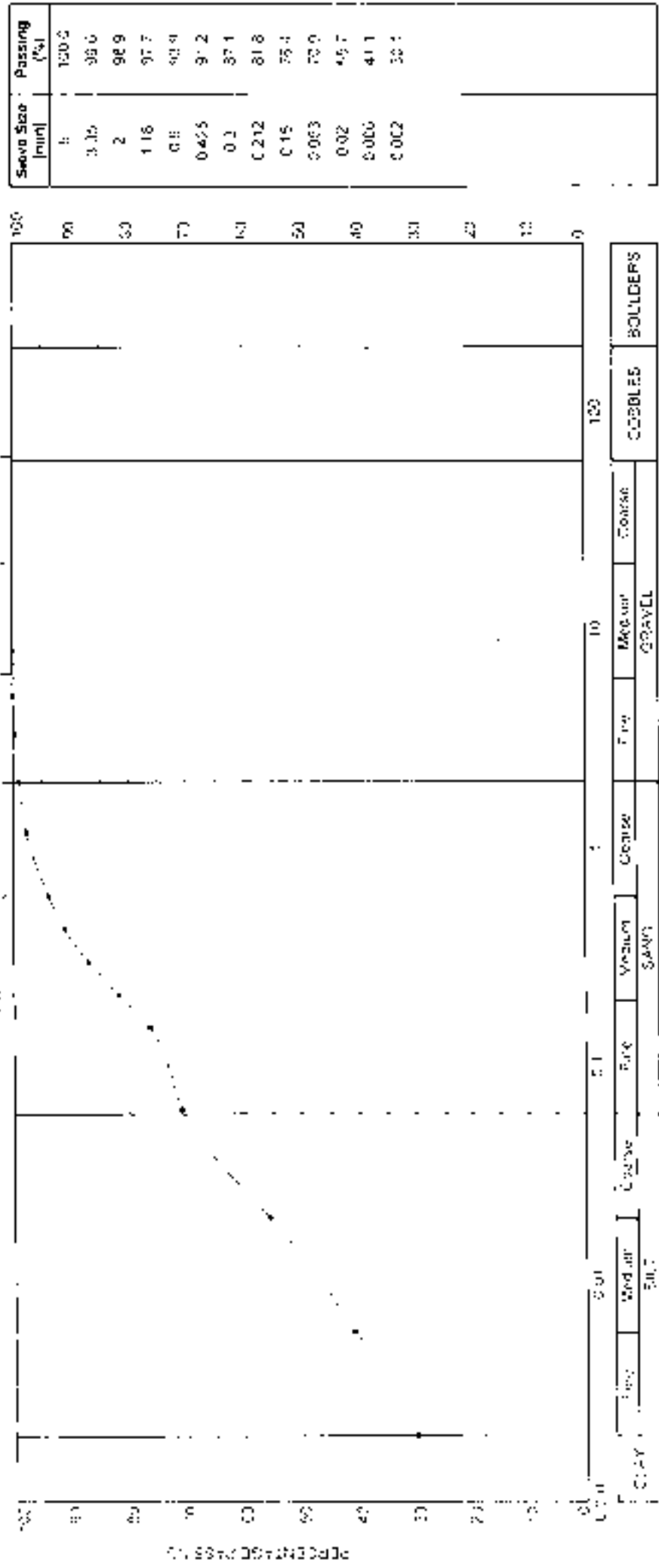


ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

BS1377 : Part 2 : Clause 9.2 & 9.4 : 1990

Location: PIAURIE_AUG TP176 Depth: 2.00 Sample Type & No: R5 Specific Depth: 2.00 Date Tested: 29/09/2020



| CLAY | FINE | MEDIUM | COARSE | GRAVEL | COBBLES | BOULDERS |
|------|------|--------|--------|--------|---------|----------|
| 50.7 | 5.1 | 1.0 | 12.0 | | | |
| 50.7 | | 5.1 | 1.0 | | | |

For description of soil see Test Method BS1377: Part 2: Clause 9.2.1

ALLS
 Soil Test Development Contractor
 2010 2020
 Certificate No: P50 4291114411E_00K_19/16/852/00

Page 1 of 1
 Name: MSR
 No. 376 Ground Investigation Works
 Contract No: 4251

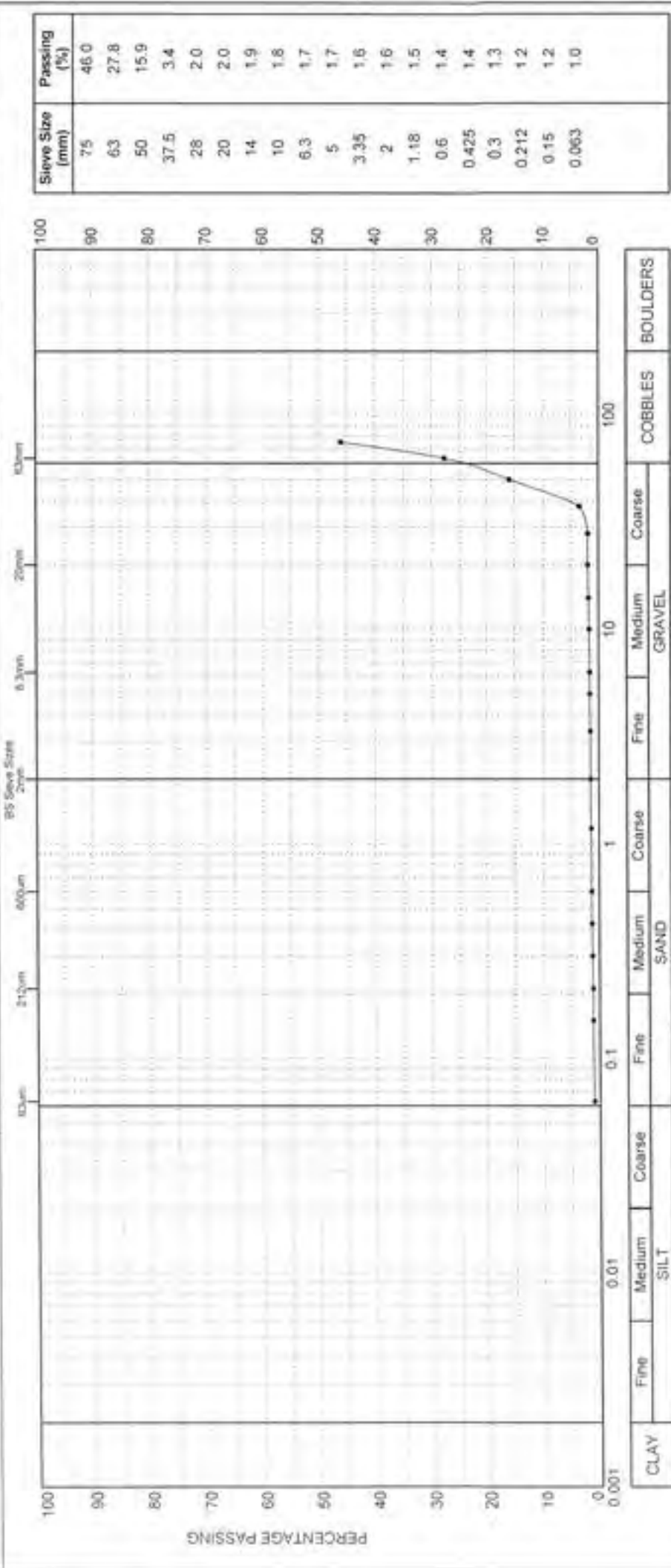
ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 25, Middle Green, Euxine, Popham, Chichester, West Sussex, PO19 1JG, UK. Tel: 01243 857 4700 Fax: 01243 857 4710
 Regional Office: Unit 25, Euxine, Development Centre, Canton Road, Bournemouth, BH1 1JG, UK. Tel: 01202 325 320 Fax: 01202 735 950

PARTICLE SIZE DISTRIBUTION

BS1377 : Part 2 : Clause 9.2 & 9.4 : 1990
 (Test deviated from standard due to insufficient sample mass)

| | | |
|---|------------------|---------------------------|
| Exploratory Hole No - PRAIRIE_AUK_TP177 | Depth (m) - 1.80 | Sample Type & No - B7 |
| Date Tested - 30/09/2020 | | Specific Depth (m) - 1.80 |



For description of sample please refer to the Laboratory Sample Description Sheet

| | | | |
|---|--|------------------------|-----------------------|
| Date of issue - 20/10/2020 | Certificate No - PSD/4251/PRAIRIE_AUK_TP177/B7/1.80 | Signed - <i>msaw</i> | Name - <i>SELKIRK</i> |
| Client - South Tees Development Corporation | Contract Title - Prairie Site Ground Investigation Works | AEG Contract No - 4251 | |

1367



ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

PS1377 Part 2 Cluded B.2 & 9.4: 1990

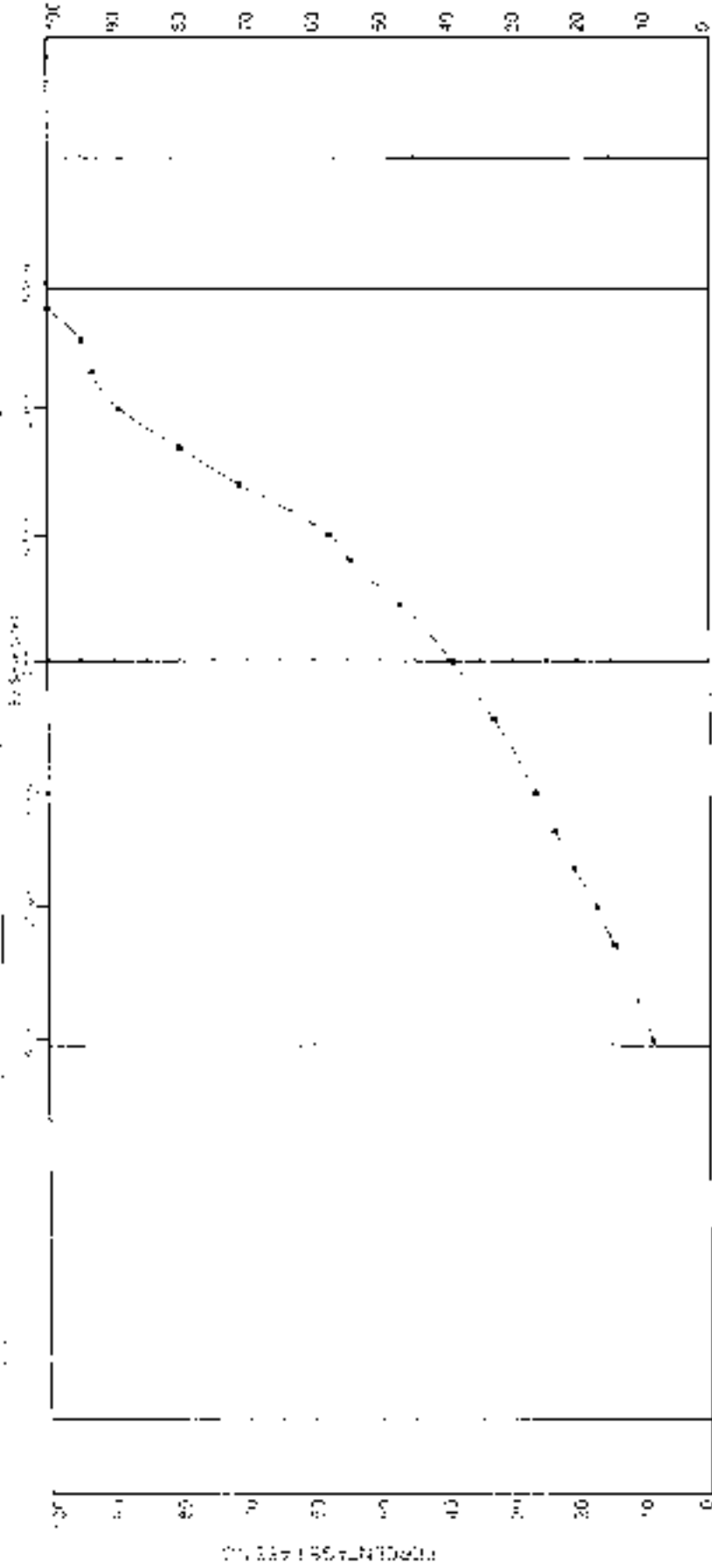
Location File No.: PHOENIX_AUK_TF178

Depth (m): 0.60

Sample Type & No.: BZ

Specific Depth (m): 0.60

Date Tested: 05/10/2020



| Grain Size | Coarse | Medium | Fine | Medium | Coarse | COBBLES | FOULDERS |
|------------|--------|--------|------|--------|--------|---------|----------|
| mm | 4.75 | 7.5 | 15 | 30 | 60 | | |
| Percentage | 14.5 | 27.1 | 49.2 | 80.2 | 94.9 | | |

For description of symbols please refer to the applicable sample description sheet.

Date of Issue:

26/10/2020

Conf Case No.:

PS1377-1-REVISION_1_AUK_TF178 B2 0.60

Signed:

M. S. O.

Name:

M. S. O.

Drawn:

Simon Toms Design at Integration

Contract Title:

Flow & Site Ground Investigation Works

Page 1 of 1

AEG Contract No.:

4251



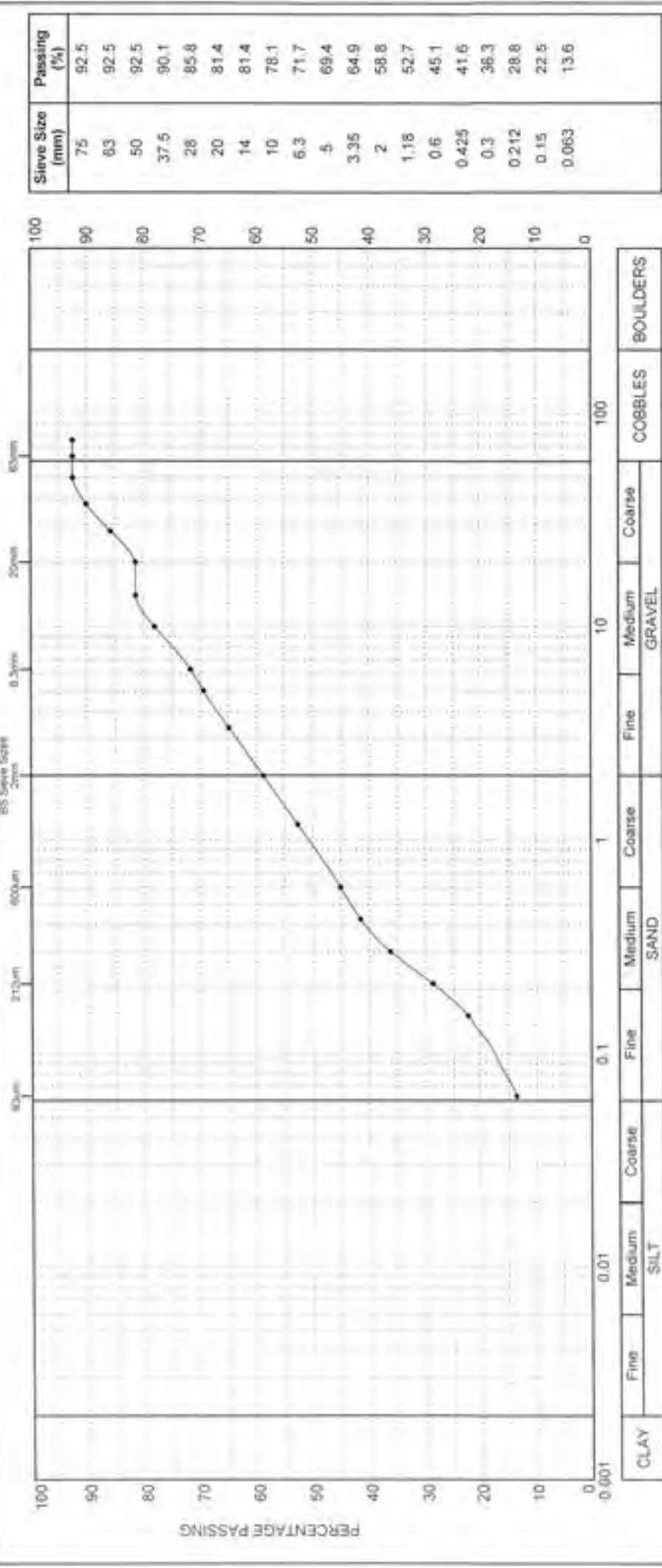
ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 25, Business Development Centre, Easton Road, Chester, CH3 9JG, UK. Tel: 01244 363 4000 Fax: 01244 363 4714
Regional Office: Unit 25, Business Development Centre, Easton Road, Stockton, SS15 5BQ, UK. Tel: 01773 735 300 Fax: 01773 735 300

PARTICLE SIZE DISTRIBUTION

BS1377 : Part 2 : Clause 9.2 & 9.4 : 1990

| | | | | |
|--|-------------------|------------------------|----------------------------|---------------------------|
| Exploratory Hole No :- PRAIRIE_AUK_TP179 | Depth (m) :- 0.40 | Sample Type & No :- B2 | Specific Depth (m) :- 0.40 | Date Tested :- 30/09/2020 |
|--|-------------------|------------------------|----------------------------|---------------------------|



| | | | | | |
|--|---|--|-------------------------|------------------------|-------------|
| AIM | Date of Issue :- 20/10/2020 | Certificate No :- PSD/4251/PRAIRIE_AUK_TP179/B2/0.40 | Signed :- <i>msore</i> | Name :- SELKIRK | Page 1 of 1 |
| Client :- South Tees Development Corporation | Contract Title :- Prairie Site Ground Investigation Works | | AEG Contract No :- 4251 | | |



ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

NS1377 Part 2 - Clause 9.2 & 9.4: 1990

(Test deviated from standard due to insufficient sample mass)

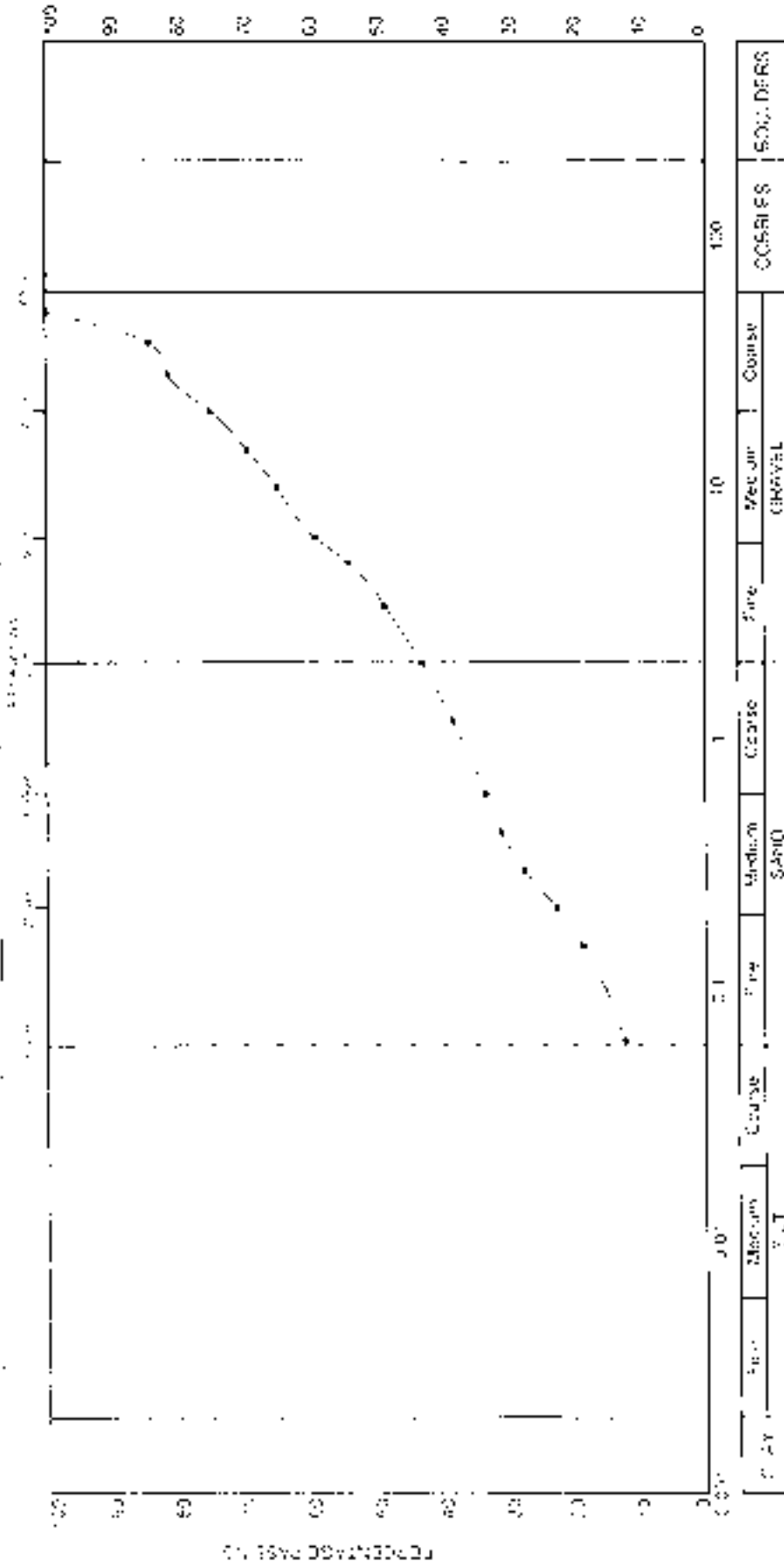
Exploration No: 16 - PRAIRIE_AUK_TM101

Depth (m) 0.50

Sample Type & No.: UZ

Specific Depth (m) 0.50

Date Tested: 02/10/2020



| Grain Size | Coarse | Fine | Medium | Coarse | Fine | Secure | Course | COARSE | FINE |
|------------|--------|------|--------|--------|------|--------|--------|--------|------|
| 0.075 | | | | | | | | | |
| 0.15 | | | | | | | | | |
| 0.3 | | | | | | | | | |
| 0.6 | | | | | | | | | |
| 1.2 | | | | | | | | | |
| 2.5 | | | | | | | | | |
| 5.0 | | | | | | | | | |
| 10 | | | | | | | | | |
| 20 | | | | | | | | | |
| 40 | | | | | | | | | |
| 80 | | | | | | | | | |
| 150 | | | | | | | | | |

For detailed analysis procedures refer to the laboratory's test description sheet




Client: South West Development Corporation

Date of Issue: 02/10/2020

Prepared by: PRAIRIE_AUK_TM101

Signed: *MSD*

Contract: 1657



Page: 1 of 1

4EG Contract No: 42/51

ALLIED EXPLORATION & GEOTECHNICS LIMITED

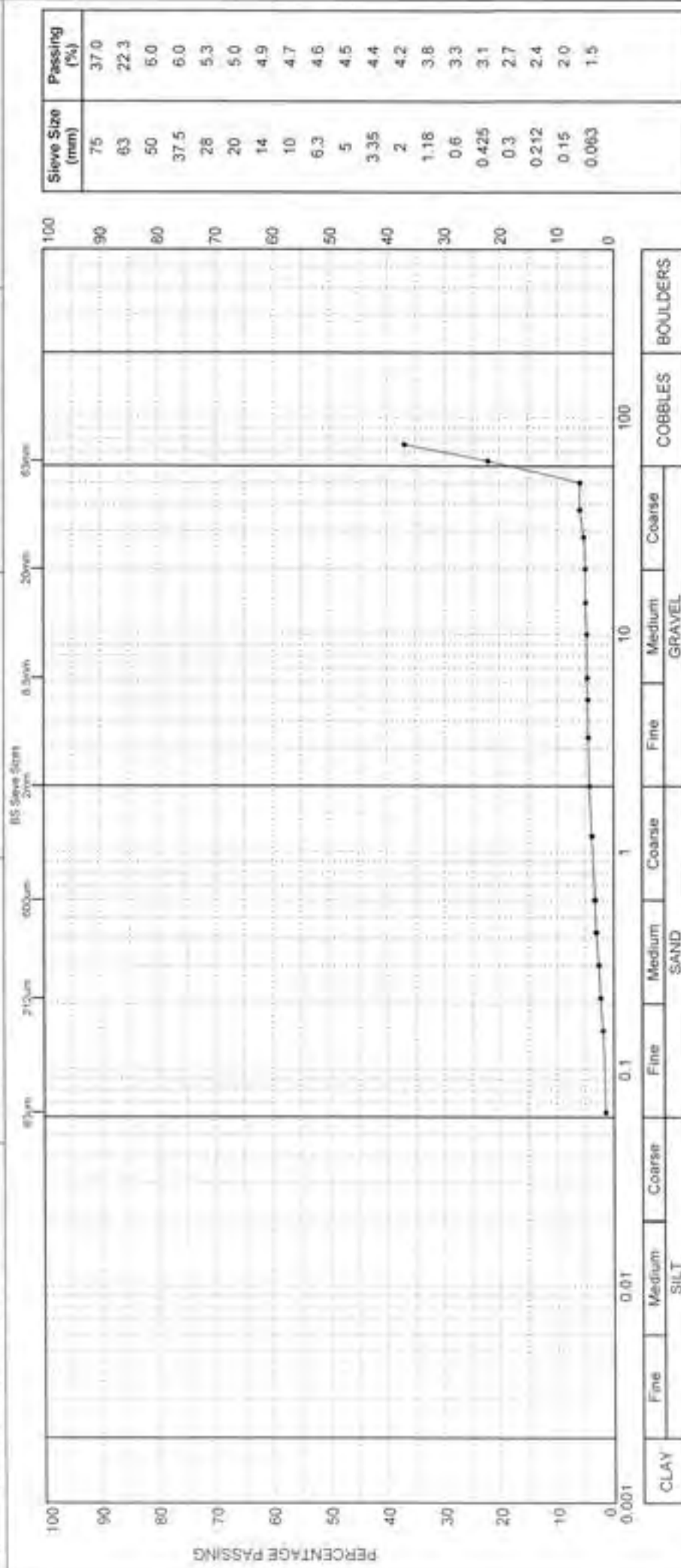
Head Office: Unit 25, Middleport Industrial Estate, Park Road, Chester-le-Street, Co. Durham, DA2 2SD. Tel: 0191 857 4100 Fax: 0191 857 4716
Regional Office: Unit 20, Alnport Development Centre, Easton Wharfedale, Throckmorton, Wetherby, Wetherby, LS23 7JQ. Tel: 01937 535 300 Fax: 01937 535 300

PARTICLE SIZE DISTRIBUTION


BS1377 : Part 2 : Clause 9.2 & 9.4 : 1990

(Test deviated from standard due to insufficient sample mass)

Exploratory Hole No. : PRAIRIE_AUK_TP181 Depth (m) :- 1.10 Sample Type & No. :- B4 Specific Depth (m) :- 1.10 Date Tested :- 30/09/2020



For description of sample please refer to the Laboratory Sample Description Sheet

| | | | | |
|---|---|--|----------------------|----------------------------|
|  | Date of Issue :- 20/10/2020 | Certificate No :- PSD/4251/PRAIRIE_AUK_TP181/B4/1.10 | Name :- M. DELKIN | Page 1 of 1 |
| | Client :- South Tees Development Corporation | Contract Title :- Prairie Site Ground Investigation Works | Signed :- msae | AEG Contract No :- 4251 |



ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

RS1377 Part 2 Clause B.2 & 9.4 - 1990

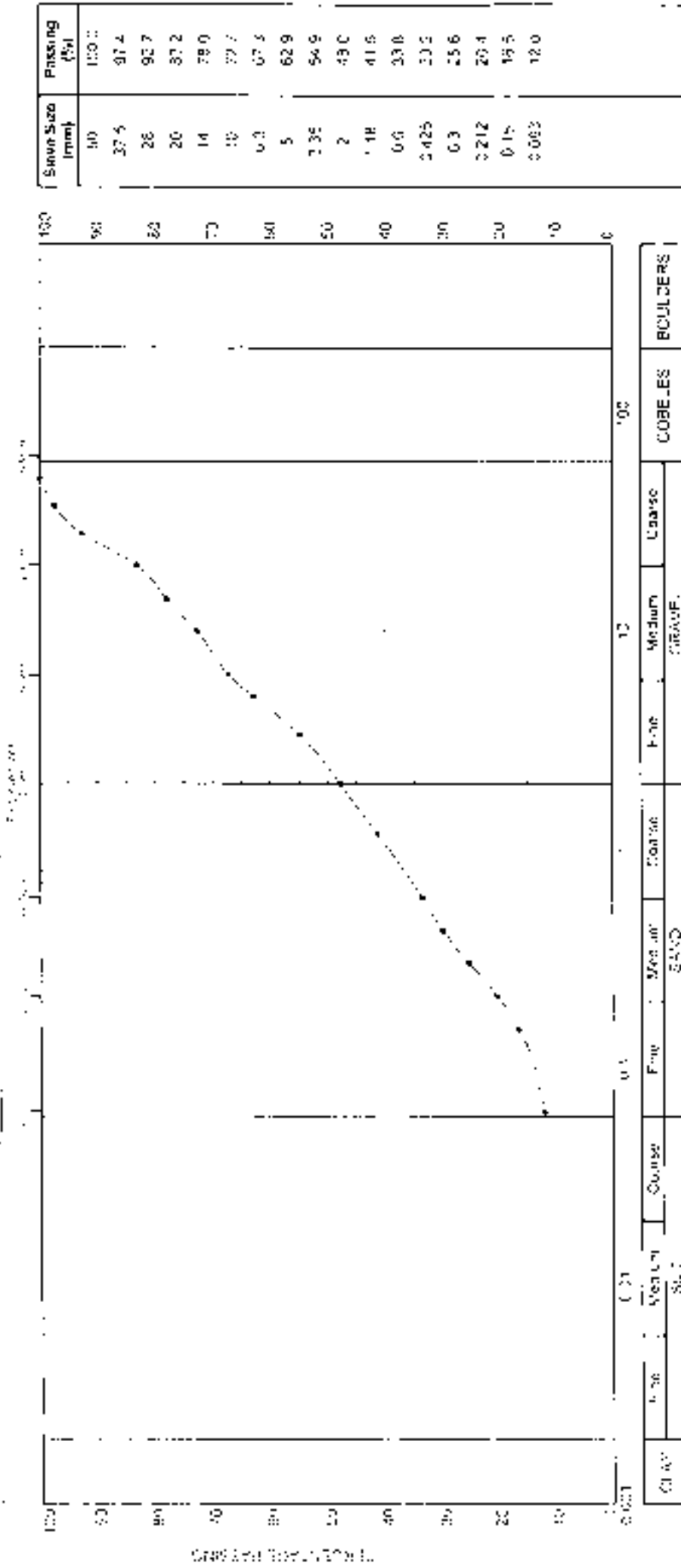
System of Tests: **PRAIRIE_AUK_TPR2**

Moisture: **0.60**

Sample Type & No.: **U2**

Specific Depth (m): **0.60**

Date Tested: **28/09/2020**



Indicate the soil type according to the Laboratory Codes Test Report Sheet

| Class | Very Coarse | Coarse | Fine | Medium | Coarse | Fine | Medium | Coarse | COBBLES | BOULDERS |
|--------|-------------|--------|------|--------|--------|------|--------|--------|---------|----------|
| Symbol | SC1 | SC2 | SC3 | SC4 | SC5 | SC6 | SC7 | SC8 | | |

Date of Issue:

40.10.2020

Control No.:

MSD 4251 PR21412_AUK_TPR2_03 Signed

Name:

MSD

Page 1 of 1

AEG Contract No. 4251

Client: South Texas Drive Alignment Construction

Contract File:

Project Site Group: Westgate Works



1357

ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

BS1377 - Part 2 : Clause 9.2 & 9.4 : 1990
(Test deviated from standard due to insufficient sample mass)

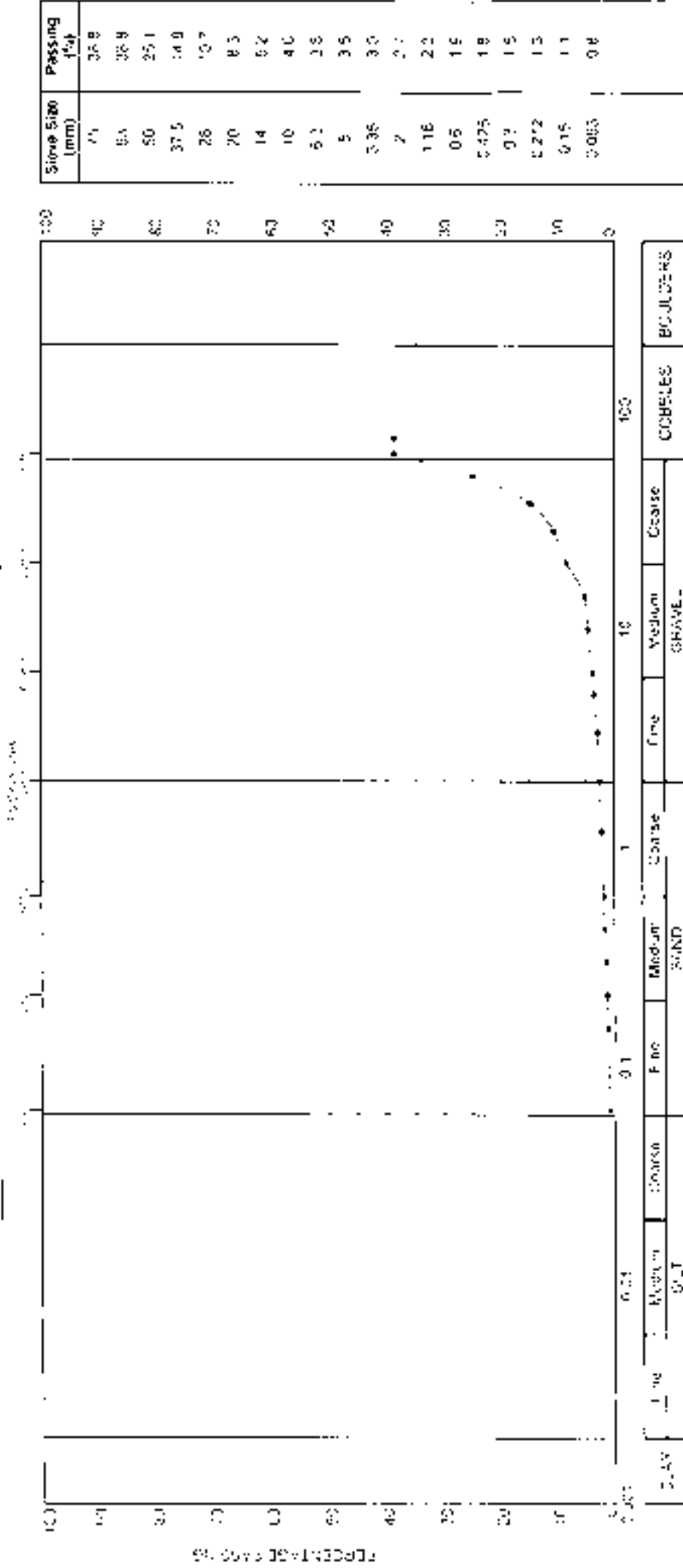
File Path: PRAIRIE_AUK_TP183

Depth: 0.00

Sample Type: BZ

Specific Depth: 0.00

Date Tested: 30/09/2020



| CLASS | Fine | Medium | Coarse | COBBLES | BC JUDGERS |
|-------|--------|--------|--------|---------|------------|
| | SAND | | | | |
| | GRAVEL | | | | |

* The classification of this sample is based on the test results and is for information only.

Date of Issue:

20/10/2020

Certificate No:

PGC 4251-F 24 R E_AUK_TP183 B2 080

Name:

M.S. Rao

Page 1 of 1

Client:

Sunni Tools Development Corporation

Contract No:

Project Site Ground Investigation Works

AFS Contract No:

4251



1067



ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

OS1077 - Part 2 - Clause 9.2 & 9.4 - 1990

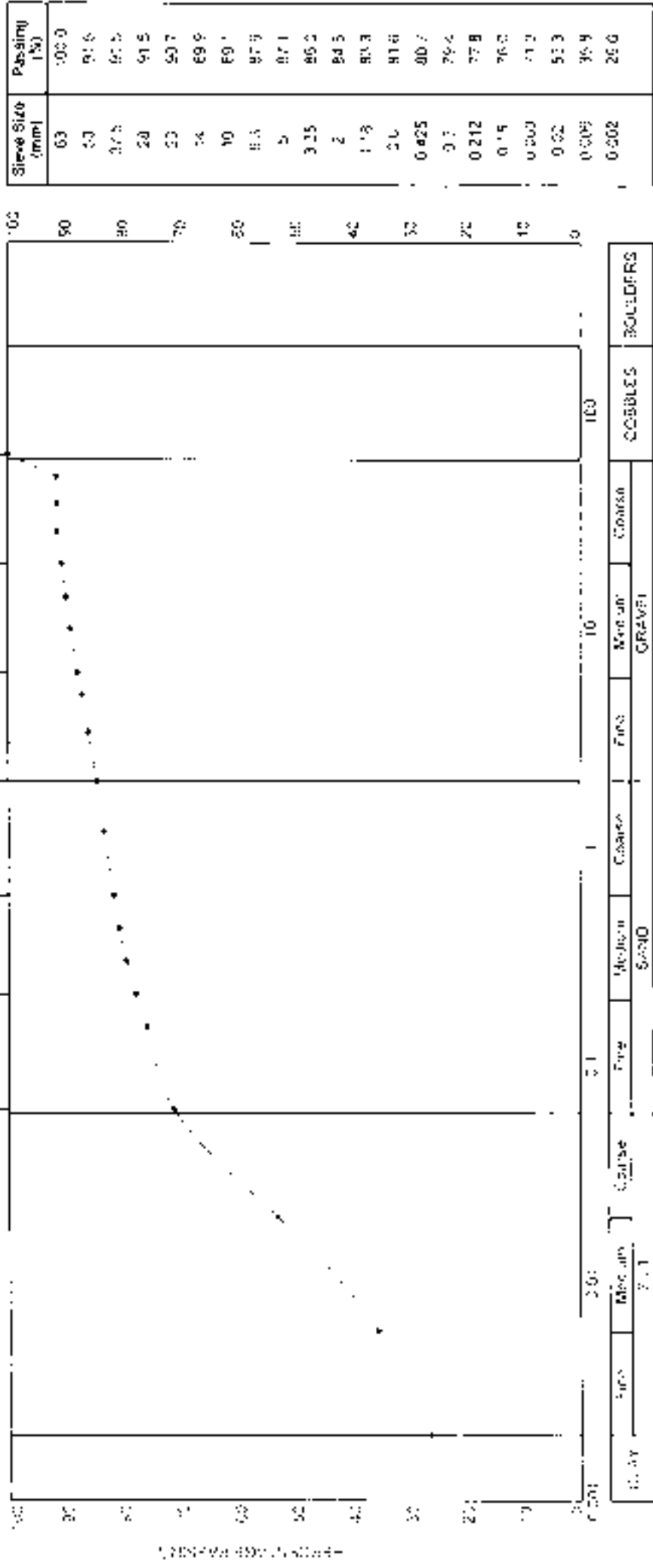
Exp. No. / Job No: **PIB-RIE AUK_IP185**

Depth (m): **3.50**

Sample Type & No: **BZ**

Specific Depth (m): **3.50**

Date Tested: **28/09/2020**



| Coarse | Medium | Coarse | Fine | Medium | Coarse | Fine | Medium | Coarse | COBBLES | BOULDERS |
|--------|--------|--------|------|--------|--------|--------|--------|--------|---------|----------|
| SAND | | SILT | | CLAY | | GRAVEL | | | | |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Figure 9.2.1.1 - Particle size distribution for the test specimen



Date of issue: **28/10/2020**

Contract No.: **P201421 - RESURF_AUK_IP185-BZ 3.50**

Site No: **3**

Name: **MSWD**



Page: **3/1**

Drawn: **South Tiers Design/Project Coordinator**

Contract Title:

Figure Site Ground Investigation Notes

ALL Contract No.: **4251**

1367

ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

RS1377 Part 2 - Clause 9.2 & 9.4 - 1990
(Test deviated from standard due to insufficient sample mass)

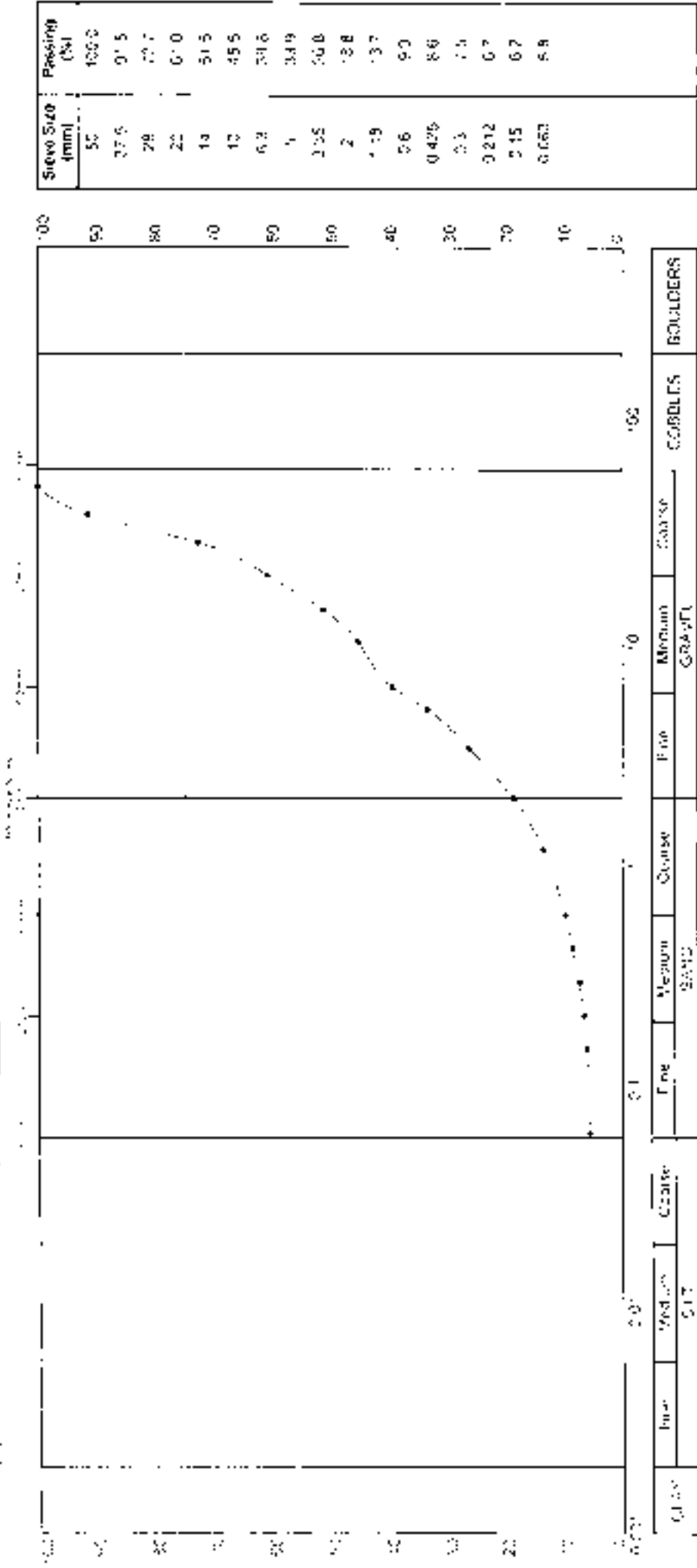
Sample No. - PRAIRIE_AUK TP188

Depth (m) - 0.60

Sample Type & No. - B2

Specific Dmppt (m) - 0.60

Date Tested - 28/09/2020



Client: South Tees Development Corporation
Project: PRAIRIE_AUK TP188
Contract No.: 42/51

Geotechnical Engineer: [Signature]
Name: [Signature]

Contract No.: 42/51
Page 1 of 1

ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

BS1377 Part 2, Clause 9.2 & 9.4 : 1990

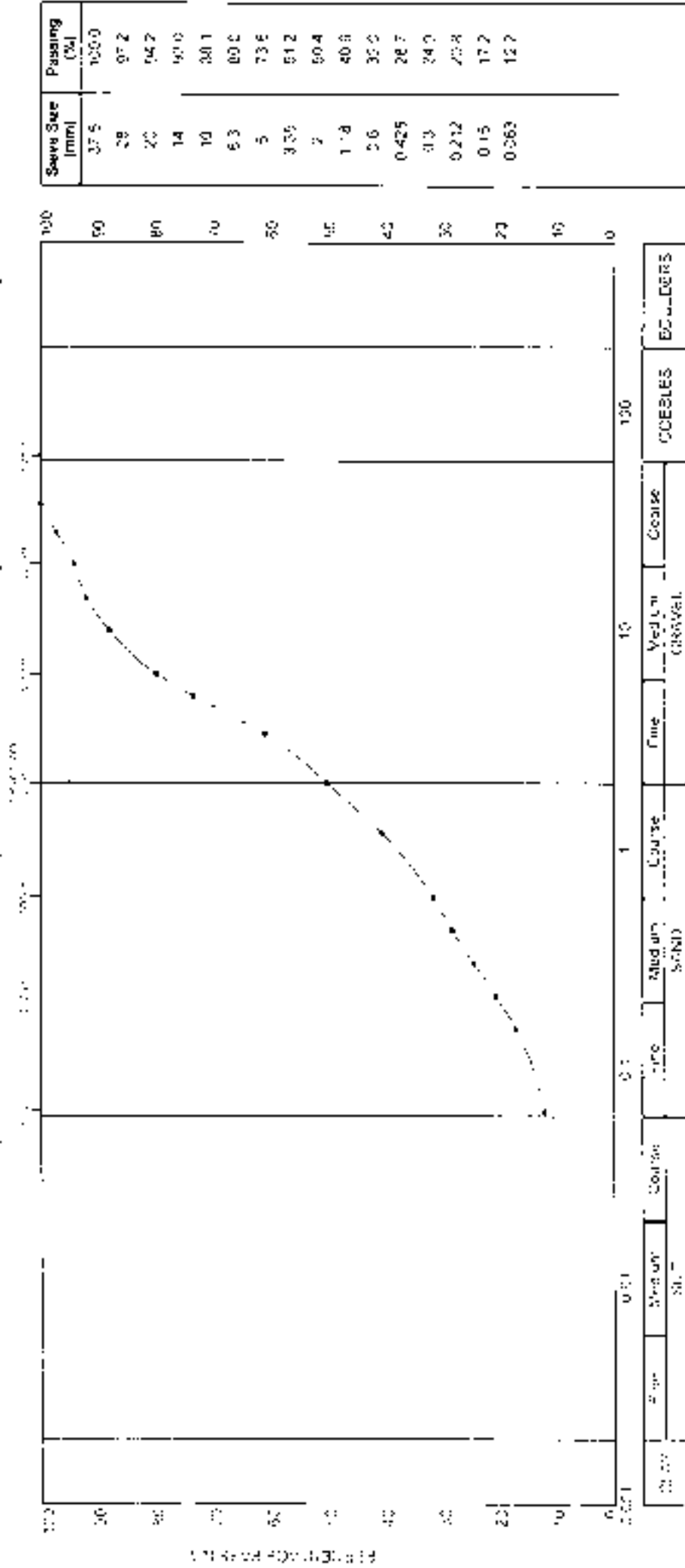
Location: **PROBIE, AUK YP189**

Depth: **0.50**

Soil type: **CL**

Specific Depth: **0.50**

Date tested: **01/10/2020**



Client Name: **20102020**

Client Ref: **1804251 PROBIE AUK YP189**

Client Address: **20102020**

Contract No: **4251**

Project Name: **PROBIE AUK YP189**

Site Name: **PROBIE AUK YP189**

Drawn by: **MSB**

Checked by: **MSB**

Signed: **MSB**

Page 1 of 1

ASCI Contact No: **4251**

ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

DS1377 Part 2 Clause B.2 & B.4, 1990

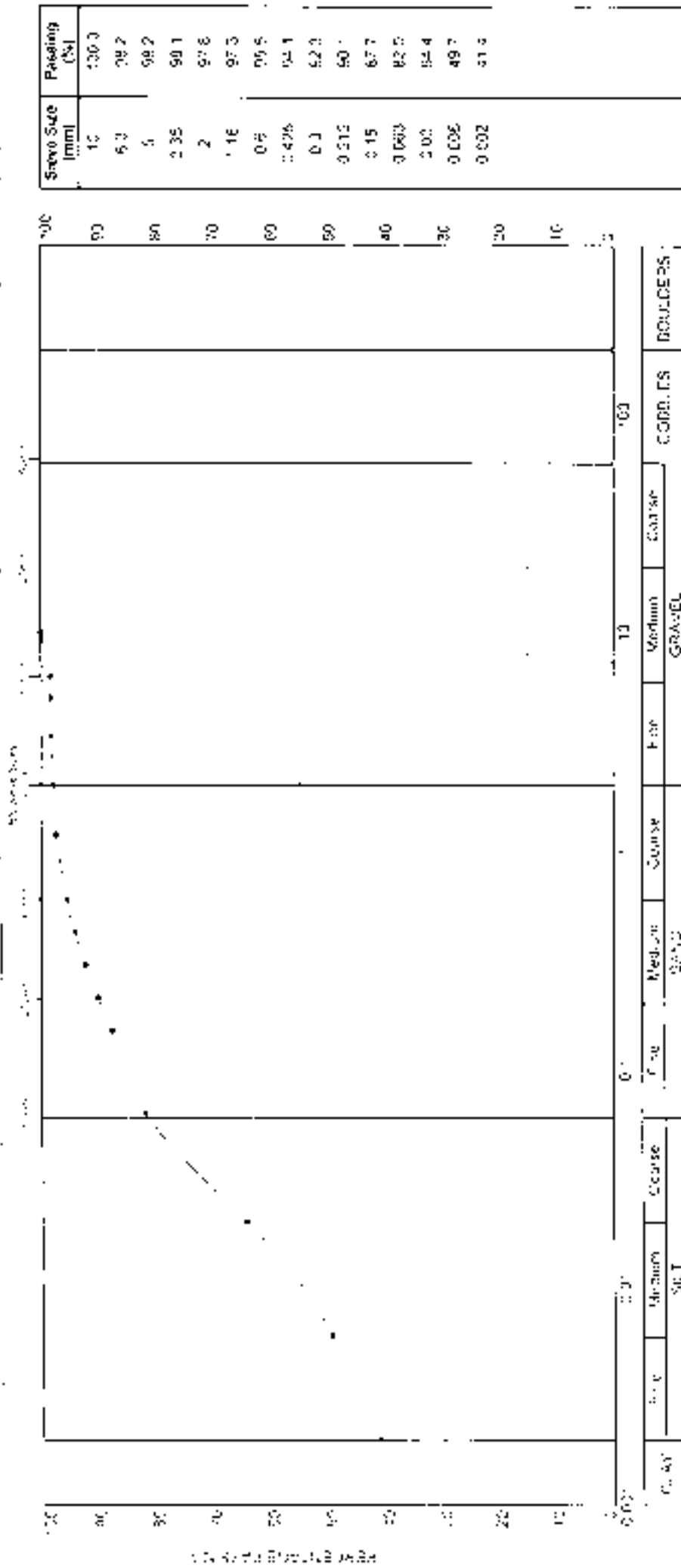
Exploratory Hole No. PHAIRIE_AUK_TM189

Depth (m) - 1.50

Sample Type & No. B4

Specific Depth (m) - 1.50

Date Tested 29/09/2020



| Coarse | Medium | Coarse | Fine | Medium | Coarse | Fine | Medium | Coarse | COBBLES | BOULDERS |
|--------|--------|--------|------|--------|--------|------|--------|--------|---------|----------|
| | | | | | | | | GRAVEL | | |

The distribution of sample coarse with 5.0% is similar to Sample Description Sheet



AEG
 1367
 South Coast Development Consultant
 1000 of Street
 PO BOX 2000
 Christchurch
 Certificate No. PSN-4251 (RE-CLASSIFIED) Signed: *MSB* Name: *MSB*
 Date: 10/10/2020
 Page 1 of 1
 AEG Certificate No. 4251

ALLIED EXPLORATION & GEOTECHNICS LIMITED

PARTICLE SIZE DISTRIBUTION

GS1377 - Part 2 - Clause 9.2 & 9.4 - 1998

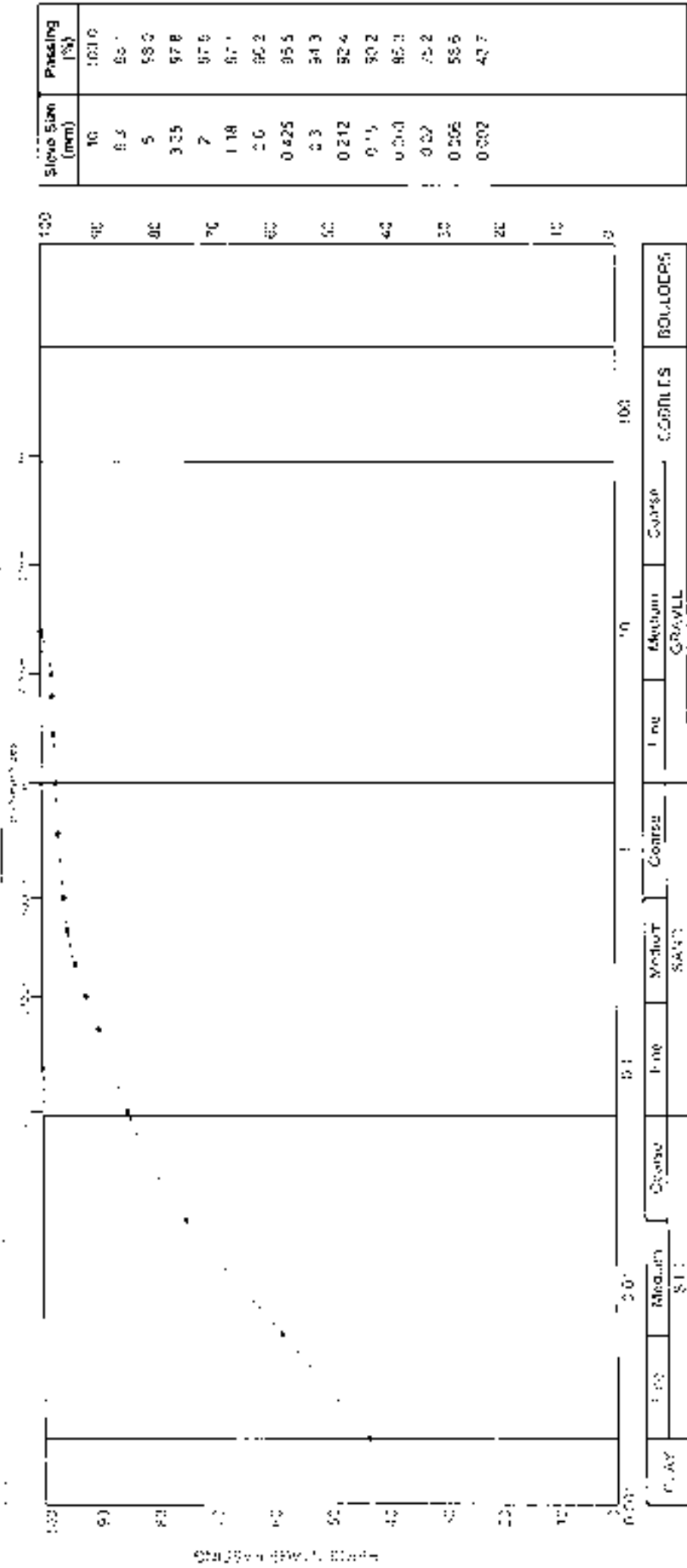
Soil Category Code No: **PRAIR_F_AMK_1P189**

Depth (m): **2.90**

Sample Type & No: **B6**

Specific Depth (m): **2.90**

Date Tested: **30/08/2020**





CLAY
 MEDIUM SILT
 COARSE SILT
 FINE SAND
 MEDIUM SAND
 COARSE SAND
 FINE GRAVELL
 MEDIUM GRAVELL
 COARSE GRAVELL
 BOULDER

Soil description: **Medium clay with some Laboratory Sample Description: *Clay***

Date of Issue: **30/08/2020**
 Certificate No: **950 6241 PRAIRIE_AUK TP 35 BF 2.90**
 Report No: **MS08**
 Page 1 of 1

Client: **South Pines Development Corporation**
 Contact: **Tracy**
 Address: **14/05 Ground Investigation Works**
 A.G.S. Contract No: **4251**

**Determination of Calorific Value,
Organic Matter Content, Sulphate and pH
(Tested Externally)**





DETS

Certificate of Analysis

Certificate Number 20-21273

28-Oct-20

Client Allied Exploration & Geotechnics Limited
Unit 25
Stella Gill Industrial Estate
Pelton Fell
DH2 2RG

Our Reference 20-21273

Client Reference 4251

Order No LA 2399

Contract Title Prairie Site Ground Investigation Works

Description 13 Soil samples.

Date Received 22-Oct-20

Date Started 22-Oct-20

Date Completed 28-Oct-20

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By



Adam Fenwick
Contracts Manager





Summary of Chemical Analysis Soil Samples

Our Ref: 20-21273

Client Ref: 4251

Contract Title: Prairie Site Ground Investigation Works

| Lab No | 1749354 | 1749355 | 1749356 | 1749357 | 1749358 | 1749359 | 1749360 |
|---------------|------------|------------|------------|------------|------------|------------|------------|
| Sample ID | PR103 | PR104 | PR104 | PR106 | PR106 | PR108 | PR112 |
| Depth | 13.00 | 5.95 | 11.00 | 5.50 | 9.50 | 8.00 | 1.00 |
| Other ID | 27 | 3 | 13 | 2 | 10 | 15 | 3 |
| Sample Type | 3 | 3 | 1 | 3 | 1 | 1 | 1 |
| Sampling Date | 09/04/2020 | 03/04/2020 | 03/04/2020 | 06/04/2020 | 06/04/2020 | 15/04/2020 | 22/04/2020 |
| Sampling Time | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

| Test | Method | LOD | Units |
|---------------------------------|-------------|-----|-------|
| Inorganics | | | |
| pH | DETSC 2008# | 8.2 | pH |
| Colorific Value | DETSC 5098 | 1 | MU/kg |
| Organic matter | DETSC 2002# | 0.1 | % |
| Sulphate-Aqueous Extract as SO4 | DETSC 2076# | 10 | mg/l |
| | | 220 | 140 |
| | | 120 | 610 |
| | | 50 | 110 |
| | | 8.6 | 8.2 |
| | | 8.3 | 7.9 |
| | | 8.0 | 8.2 |
| | | 8.2 | 11.7 |
| | | | 2.2 |
| | | | 92 |



Summary of Chemical Analysis Soil Samples

Our Ref 20-21273

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Lab No | 1749361 | 1749362 | 1749363 | 1749364 | 1749365 | 1749366 |
|---------------|------------|------------|------------|------------|------------|------------|
| PRAIRIE_AUK | TP115 | TP116 | TP118 | TP120 | TP149 | TP154 |
| FRAIRIE_AUK | | | | | | |
| Sample ID | 1.40 | 1.60 | 1.50 | 0.50 | 1.80 | 0.60 |
| Depth | 4 | 5 | 4 | 1 | 4 | 1 |
| Other ID | 1 | 1 | 1 | 1 | 1 | 1 |
| Sample Type | | | | | | |
| Sampling Date | 08/04/2020 | 23/04/2020 | 23/04/2020 | 20/04/2020 | 09/04/2020 | 21/04/2020 |
| Sampling Time | N/A | N/A | N/A | N/A | N/A | N/A |

| Test | Method | LOD | Units |
|---------------------------------|-------------|-------|-------|
| Inorganics | | | |
| pH | DETSC 2008# | | pH |
| | | 10.3 | 6.8 |
| Calorific Value | DETSC S008 | | MJ/kg |
| | | < 1.0 | < 1.0 |
| Organic matter | DETSC 2002# | | % |
| | | 480 | 4.0 |
| Sulphate-Aqueous Extract as SO4 | DETSC 2076# | | mg/l |
| | | 480 | 1200 |
| | | < 1.0 | < 1.0 |
| | | 3.7 | 3.7 |
| | | 7.9 | 7.9 |
| | | 330 | 330 |
| | | 210 | 210 |

Information in Support of the Analytical Results

Our Ref: 20-21273

Client Ref: 4251

Contract: Prairie Site Ground Investigation Works

Containers Received & Deviating Samples

| Lab No | Sample ID | Date Sampled | Containers Received | Holding time exceeded for tests | Inappropriate container for tests |
|---------|---------------------------------|--------------|---------------------|---|-----------------------------------|
| 1749354 | PRAIRIE_AUK_BH103 13.00 SOIL | 03/04/20 | PT 1L | Anions 2:1 (30 days), pH + Conductivity (7 days) | |
| 1749355 | PRAIRIE_AUK_BH104 5.95 SOIL | 03/04/20 | PT 1L | Anions 2:1 (30 days), pH + Conductivity (7 days) | |
| 1749356 | PRAIRIE_AUK_BH104 11.00 SOIL | 03/04/20 | PT 1L | Anions 2:1 (30 days), pH + Conductivity (7 days) | |
| 1749357 | PRAIRIE_AUK_BH106 5.50 SOIL | 06/04/20 | PT 1L | Anions 2:1 (30 days), pH + Conductivity (7 days) | |
| 1749358 | PRAIRIE_AUK_BH106 9.50 SOIL | 06/04/20 | PT 1L | Anions 2:1 (30 days), pH + Conductivity (7 days) | |
| 1749359 | PRAIRIE_AUK_BH108 8.00 SOIL | 15/04/20 | PT 1L | Anions 2:1 (30 days), pH + Conductivity (7 days) | |
| 1749360 | PRAIRIE_AUK_TP112 1.00 SOIL | 22/04/20 | PT 1L | Anions 2:1 (30 days), pH + Conductivity (7 days) | |
| 1749361 | PRAIRIE_AUK_TP115 2.40 SOIL | 08/04/20 | PT 1L | Anions 2:1 (30 days), pH + Conductivity (7 days) | |
| 1749362 | PRAIRIE_AUK_TP116 1.50 SOIL | 23/04/20 | PT 1L | Anions 2:1 (30 days), Organic Matter (Manual) (28 days), pH + Conductivity (7 days) | |
| 1749363 | PRAIRIE_AUK_TP118 1.50 SOIL | 23/04/20 | PT 1L | Organic Matter (Manual) (28 days) | |
| 1749364 | PRAIRIE_AUK_TP120 0.50 SOIL | 20/04/20 | PT 1L | | |
| 1749365 | PRAIRIE_AUK_TP140 1.80 SOIL | 09/04/20 | PT 1L | Anions 2:1 (30 days), pH + Conductivity (7 days) | |
| 1749366 | PRAIRIE_AUK_TP154 0.60 SOIL | 11/04/20 | PT 1L | Anions 2:1 (30 days), pH + Conductivity (7 days) | |

Key: P=Plastic T=Tab

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS3377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C ±/3°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal:

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report



Certificate of Analysis

Certificate Number 20-10974

25-Jun-20

Client Allied Exploration & Geotechnics Limited
Unit 25
Stella Gill Industrial Estate
Pelton Fell
DH2 2RG

Our Reference 20-10974

Client Reference 4251

Order No LA 2358

Contract Title Prairie Site Ground Investigation Works

Description 4 Soil samples.

Date Received 22-Jun-20

Date Started 22-Jun-20

Date Completed 25-Jun-20

Test Procedures Identified by prefix DETSn (details on request)

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Adam Fenwick
Contracts Manager



Summary of Chemical Analysis Soil Samples

Our Ref 20-10974

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Lab No | 1687327 | 1687328 | 1687329 | 1687330 |
|---------------|------------|------------|------------|------------|
| | PRAIRIE | PRAIRIE | PRAIRIE | PRAIRIE |
| | AUK_BH1 | AUK_BH1 | AUK_BH1 | AUK_BH1 |
| Sample ID | 01 | 01 | 01 | 01 |
| Depth | 4.00 | 9.00 | 17.00 | 18.00 |
| Other ID | 4 | 14 | 30 | 33 |
| Sample Type | J | J | I | J |
| Sampling Date | 27/04/2020 | 27/04/2020 | 28/04/2020 | 29/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | |
|---------------------------------|-------------|-----|-------|------|-----|------|------|
| Inorganics | | | | | | | |
| pH | DETSC 2008# | | pH | | | 7.8 | 8.2 |
| Sulphate Aqueous Extract as SO4 | DETSC 2076# | 10 | mg/l | 1100 | 270 | 2400 | 3000 |

Information in Support of the Analytical Results

Our Ref: 20-10974

Client Ref: 4251

Contract: Prairie Site Ground Investigation Works

Containers Received & Deviating Samples

| Lab No | Sample ID | Date | | Containers Received | Holding time exceeded for tests | Inappropriate container for tests |
|---------|---------------------------------|----------|--|---------------------|--|-----------------------------------|
| | | Sampled | | | | |
| 1687327 | PRAIRIE_AUK_BH101 4.00 SOIL | 27/04/20 | | PT 1L | Anions 2:1 (30 days) | |
| 1687328 | PRAIRIE_AUK_BH101 5.00 SOIL | 27/04/20 | | PT 1L | Anions 2:1 (30 days) | |
| 1687329 | PRAIRIE_AUK_BH101 17.00 SOIL | 28/04/20 | | PT 1L | Anions 2:1 (30 days), pH + Conductivity (7 days) | |
| 1687330 | PRAIRIE_AUK_BH101 18.00 SOIL | 29/04/20 | | PT 1L | Anions 2:1 (30 days), pH + Conductivity (7 days) | |

Key: P-Plastic T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and Laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers, etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C ± 2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal:

Soils - 1 month, Liquids - 3 weeks, Asbestos (test portion) - 6 months



DETS

Certificate of Analysis

Certificate Number 20-12672-1

20-Jul-20

Client Allied Exploration & Geotechnics Limited
Unit 25
Stella Gill Industrial Estate
Pelton Fell
DH2 2RG

Our Reference 20-12672-1

Client Reference 4251

Order No LA 2358

Contract Title Prairie Site Ground Investigations Works

Description 7 Soil samples.

Date Received 15-Jul-20

Date Started 15-Jul-20

Date Completed 20-Jul-20

Test Procedures Identified by prefix DETSn (details on request).

Notes **This report supersedes 20-12672, amendments.**

Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By



Adam Fenwick
Contracts Manager

Summary of Chemical Analysis Soil Samples

Our Ref 20-12672-1

Client Ref 4251

Contract Title Prairie Site Ground Investigations Works

| | | |
|---------------|-------------------|-------------------|
| Lab No | 1697828 | 1697829 |
| Sample ID | PRAIRIE_AUK_BH107 | PRAIRIE_AUK_BH107 |
| Depth | 3.45 | 7.50 |
| Other ID | 3 | 12 |
| Sample Type | J | J |
| Sampling Date | 24/04/2020 | 24/04/2020 |
| Sampling Time | n/a | n/a |

| Test | Method | LOD | Units | | |
|---------------------------------|-------------|-----|-------|-----|-----|
| Inorganics | | | | | |
| pH | DETSC 2008# | | pH | 8.0 | 7.9 |
| Sulphate Aqueous Extract as SO4 | DETSC 2076# | 10 | mg/l | 110 | 250 |

Summary of Chemical Analysis

Soil Samples

Our Ref 20-12672-1

Client Ref 4251

Contract Title Prairie Site Ground Investigations Works

| | | |
|---------------|-------------------|-------------------|
| Lab No | 1697830 | 1697831 |
| Sample ID | PRAIRIE_AUK_BH107 | PRAIRIE_AUK_BH108 |
| Depth | 9.00 | 7.00 |
| Other ID | 1E | 14 |
| Sample Type | J | B |
| Sampling Date | 24/04/2020 | 15/04/2020 |
| Sampling Time | n/c | n/c |

| Test | Method | LOD | Units | | |
|---------------------------------|-------------|-----|-------|------|-----|
| Inorganics | | | | | |
| pH | DETSC 2008# | | pH | 7.9 | 8.1 |
| Sulphate Aqueous Extract as SO4 | DETSC 2076# | 10 | mg/l | 1700 | 640 |

Summary of Chemical Analysis Soil Samples

Our Ref 20-12672-1

Client Ref 4251

Contract Title Prairie Site Ground Investigations Works

| Lab No | 1697832 | 1697833 |
|---------------|-------------------|-------------------|
| Sample ID | PRAIRIE_AUK_BH108 | PRAIRIE_AUK_BH110 |
| Depth | 9.00 | 11.45 |
| Other ID | 18 | 19 |
| Sample Type | J | J |
| Sampling Date | 15/04/2020 | 21/04/2020 |
| Sampling Time | n/a | n/a |

| Test | Method | LOD | Units | | |
|---|-------------|-----|-------|------|-----|
| Inorganics | | | | | |
| pH | DETSC 2008# | | pH | 7.8 | 8.0 |
| Sulphate Aqueous Extract as SO ₄ | DETSC 2076# | 10 | mg/l | 1700 | 480 |

Summary of Chemical Analysis

Soil Samples

Our Ref 20-12672-1

Client Ref 4251

Contract Title Prairie Site Ground Investigations Works

| | |
|---------------|-------------------|
| Lab No | 1697834 |
| Sample ID | PRAIRIE_AUK_BH110 |
| Depth | 15.00 |
| Other ID | 27 |
| Sample Type | 1 |
| Sampling Date | 22/04/2020 |
| Sampling Time | n/a |

| Test | Method | LOD | Units | |
|---|-------------|-----|-------|------|
| Inorganics | | | | |
| pH | DETSC 2008# | | pH | 8.3 |
| Sulphate Aqueous Extract as SO ₄ | DETSC 2076# | 10 | mg/l | 2200 |

Information in Support of the Analytical Results

Our Ref: 20-12672-1
 Client Ref: 4251
 Contract: Prairie Site Ground Investigations Works

Containers Received & Deviating Samples

| Lab No | Sample ID | Date Sampled | Containers Received | Holding time exceeded for tests | Inappropriate container for tests | Headspace in container for tests |
|---------|----------------------------------|--------------|---------------------|--|-----------------------------------|----------------------------------|
| 1697828 | PRAIRIE_AUK_BH10 7 3.45 SOIL | 24/04/20 | PT 900ml | Anions 2-1 (30 days), pH + Conductivity (7 days) | | |
| 1697829 | PRAIRIE_AUK_BH10 7 7.50 SOIL | 24/04/20 | PT 100ml | Anions 2-1 (30 days), pH + Conductivity (7 days) | | |
| 1697830 | PRAIRIE_AUK_BH10 7 9.00 SOIL | 24/04/20 | PT 900ml | Anions 2-1 (30 days), pH + Conductivity (7 days) | | |
| 1697831 | PRAIRIE_AUK_BH10 8 7.00 SOIL | 15/04/20 | PT 500ml | Anions 2-1 (30 days), pH + Conductivity (7 days) | | |
| 1697832 | PRAIRIE_AUK_BH10 8 9.00 SOIL | 15/04/20 | PT 900ml | Anions 2-1 (30 days), pH + Conductivity (7 days) | | |
| 1697833 | PRAIRIE_AUK_BH11 0 11.45 SOIL | 21/04/20 | PT 900ml | Anions 2-1 (30 days), pH + Conductivity (7 days) | | |
| 1697834 | PRAIRIE_AUK_BH11 0 13.00 SOIL | 22/04/20 | PT 600ml | Anions 2-1 (30 days), pH + Conductivity (7 days) | | |

Key: P=Plastic T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory criteria in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date/time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, retained to pass a 425um sieve, in accordance with BS1277.

Organic soil analysis was carried out on an 'as received' sample. Organic results are corrected for moisture and expressed as a dry weight basis.

The Loss on Drying, used to express organic analysis on an air dried basis, is carried out at a temperature of 20°C ± 2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal:

Soils - 1 month, Liquids - 2 weeks, Asbestos (fast potting) - 6 months.



Certificate of Analysis

Certificate Number 20-19447

13-Oct-20

Client Allied Exploration & Geotechnics Limited
Unit 25
Stella Gill Industrial Estate
Pelton Fell
DH2 2RG

Our Reference 20-19447

Client Reference 4251

Order No LA 2399

Contract Title Prairie Site Ground Investigation Works

Description 21 Soil samples.

Date Received 05-Oct-20

Date Started 05-Oct-20

Date Completed 13-Oct-20

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

A handwritten signature in black ink, appearing to read "Adam Fenwick".

Adam Fenwick
Contracts Manager





Summary of Chemical Analysis Soil Samples

Our Ref: 20-19447

Client Ref: 4251

Contract Title: Prairie Site Ground Investigation Works

| Lab No | 1738055 | 1738056 | 1738057 | 1738058 | 1738059 | 1738060 | 1738061 | 1738062 | 1738063 | 1738064 |
|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| PRAIRIE_AUK | PRAIRIE_AUK | PRAIRIE_AUK | PRAIRIE_AUK | PRAIRIE_AUK | PRAIRIE_AUK | PRAIRIE_AUK | PRAIRIE_AUK | PRAIRIE_AUK | PRAIRIE_AUK | PRAIRIE_AUK |
| TP101 | TP101 | TP104 | TP107 | TP124 | TP132 | TP146C | TP162 | TP162 | TP162 | TP163 |
| 0.60 | 4.40 | 2.00 | 0.50 | 1.00 | 0.50 | 1.00 | 0.70 | 0.70 | 3.10 | 1.60 |
| 1 | 14 | 8 | 3 | 3 | 2 | 4 | 1 | 1 | 7 | 4 |
| | | | | | | | | | | |
| Sample Type | | | | | | | | | | |
| Sampling Date | 01/04/2020 | 01/04/2020 | 06/04/2020 | 08/04/2020 | 02/04/2020 | 14/04/2020 | 14/04/2020 | 14/04/2020 | 14/04/2020 | 14/04/2020 |
| Sampling Time | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| LOD | | | | | | | | | | |
| Units | | | | | | | | | | |

Test

| Test | Method | LOD | Units |
|---------------------------------|-------------|-----|-------|
| Inorganics | | | |
| pH | DETSC 2008# | | pH |
| | | | 9.8 |
| Calorific Value | DETSC 5008 | 1 | MJ/kg |
| | | | 4.8 |
| Organic matter | DETSC 2002# | 0.1 | % |
| | | | 3.2 |
| Sulphate-Aqueous-Extract-as-SO4 | DETSC 2076# | 10 | mg/l |
| | | | 890 |
| | | | 10.5 |
| | | | 4.6 |
| | | | < 1.0 |
| | | | 3.5 |
| | | | 9.7 |
| | | | 3.6 |
| | | | 230 |
| | | | 250 |
| | | | 7.4 |



Summary of Chemical Analysis Soil Samples

Our Ref 20-19447

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Lab No | 1738065 | 1738066 | 1738067 | 1738068 | 1738069 | 1738070 | 1738071 | 1738072 | 1738073 | 1738074 |
|---------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Sample ID | TP165 | TP165 | TP173 | TP176 | TP178 | TP178 | TP179 | TP182 | TP188 | TP189 |
| Depth | 1.50 | 2.50 | 0.60 | 1.50 | 0.40 | 1.60 | 0.20 | 0.30 | 0.40 | 0.30 |
| Other ID | 4 | 6 | 1 | 4 | 1 | 5 | 1 | 1 | 3 | 1 |
| Sample Type | / | / | / | / | / | / | / | / | / | / |
| Sampling Date | 15/04/2020 | 15/04/2020 | 09/04/2020 | 07/04/2020 | 06/04/2020 | 06/04/2020 | 09/04/2020 | 09/04/2020 | 09/04/2020 | 07/04/2020 |
| Sampling Time | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

Test Method LOD Units

| Test | Method | LOD | Units |
|---------------------------------|-------------|------|-------|
| Inorganics | | | |
| pH | DETSC 2008# | 8.0 | pH |
| Calorific Value | DETSC 5008 | 5.6 | MJ/kg |
| Organic matter | DETSC 2002# | 8.3 | % |
| Sulphate Aqueous Extract as SO4 | DETSC 2076# | 2400 | mg/l |
| | | 5.8 | |
| | | 8.2 | |
| | | 23.3 | |
| | | 24.2 | |
| | | 22.5 | |
| | | 7.6 | |
| | | 32 | |
| | | 160 | |
| | | 220 | |

Summary of Chemical Analysis Soil Samples

Our Ref: 20-19447

Client Ref: 4251

Contract Title: Prairie Site Ground Investigation Works

| | |
|---------------|---------------------|
| Lab No | 1736075 |
| Sample ID | PRAME_AJLK TP189 |
| Depth | 1.40 |
| Other ID | 3 |
| Sample Type | 1 |
| Sampling Date | 07/04/2020 |
| Sampling Time | n/a |

| Test | Method | LOD | Units |
|---------------------------------|-------------|-----|-------|
| Inorganics | | | |
| pH | DETSC 2008B | | pH |
| Calorific Value | DETSC S008 | 1 | MJ/kg |
| Organic matter | DETSC 2002B | 0.1 | % |
| Sulphate Aqueous Extract as SO4 | DETSC 2075B | 10 | mg/l |
| | | | 570 |

Information in Support of the Analytical Results

Our Ref 20-19447

Client Ref 4251

Contract Prairie Site Ground Investigation Works

Containers Received & Deviating Samples

| Lab No | Sample ID | Date Sampled | Containers Received | Holding time exceeded for tests | inappropriate container for tests |
|---------|---------------------------------|--------------|---------------------|---|-----------------------------------|
| 1738055 | PRAIRIE_AUK_TP101 0.40 SOIL | 01/04/20 | PT 500ml | Anions 2:1 (30 days), pH + Conductivity (7 days) | |
| 1738056 | PRAIRIE_AUK_TP101 4.40 SOIL | 01/04/20 | PT 500ml | Organic Matter (Manual) (28 days) | |
| 1738057 | PRAIRIE_AUK_TP104 2.00 SOIL | 01/04/20 | PT 500ml | Organic Matter (Manual) (28 days) | |
| 1738058 | PRAIRIE_AUK_TP107 0.50 SOIL | 06/04/20 | PT 500ml | Anions 2:1 (30 days), pH + Conductivity (7 days) | |
| 1738059 | PRAIRIE_AUK_TP124 1.00 SOIL | 08/04/20 | PT 500ml | | |
| 1738060 | PRAIRIE_AUK_TP132 0.50 SOIL | 02/04/20 | PT 500ml | | |
| 1738061 | PRAIRIE_AUK_TP146C 1.00 SOIL | 14/04/20 | PT 500ml | | |
| 1738062 | PRAIRIE_AUK_TP162 0.70 SOIL | 14/04/20 | PT 500ml | Anions 2:1 (30 days), pH + Conductivity (7 days) | |
| 1738063 | PRAIRIE_AUK_TP162 1.10 SOIL | 14/04/20 | PT 500ml | Anions 2:1 (30 days), pH + Conductivity (7 days) | |
| 1738064 | PRAIRIE_AUK_TP163 1.60 SOIL | 14/04/20 | PT 500ml | Organic Matter (Manual) (28 days) | |
| 1738065 | PRAIRIE_AUK_TP165 1.50 SOIL | 15/04/20 | PT 500ml | Anions 2:1 (30 days), pH + Conductivity (7 days) | |
| 1738066 | PRAIRIE_AUK_TP165 2.50 SOIL | 15/04/20 | PT 500ml | | |
| 1738067 | PRAIRIE_AUK_TP173 0.60 SOIL | 09/04/20 | PT 500ml | Anions 2:1 (30 days), Organic Matter (Manual) (28 days), pH + Conductivity (7 days) | |
| 1738068 | PRAIRIE_AUK_TP176 1.50 SOIL | 07/04/20 | PT 500ml | Anions 2:1 (30 days), Organic Matter (Manual) (28 days), pH + Conductivity (7 days) | |
| 1738069 | PRAIRIE_AUK_TP178 0.40 SOIL | 06/04/20 | PT 500ml | Anions 2:1 (30 days), pH + Conductivity (7 days) | |
| 1738070 | PRAIRIE_AUK_TP178 1.60 SOIL | 06/04/20 | PT 500ml | Organic Matter (Manual) (28 days) | |
| 1738071 | PRAIRIE_AUK_TP179 0.20 SOIL | 09/04/20 | PT 500ml | Anions 2:1 (30 days), pH + Conductivity (7 days) | |
| 1738072 | PRAIRIE_AUK_TP182 0.30 SOIL | 09/04/20 | PT 500ml | | |
| 1738073 | PRAIRIE_AUK_TP183 0.40 SOIL | 08/04/20 | PT 500ml | Anions 2:1 (30 days), pH + Conductivity (7 days) | |
| 1738074 | PRAIRIE_AUK_TP189 0.30 SOIL | 07/04/20 | PT 500ml | | |
| 1738075 | PRAIRIE_AUK_TP189 1.40 SOIL | 07/04/20 | PT 500ml | Anions 2:1 (30 days), Organic Matter (Manual) (28 days), pH + Conductivity (7 days) | |

Key: P-Plastic 1-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate container etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviation. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Information in Support of the Analytical Results

Our Ref 20-19447

Client Ref 4251

Contract Prairie Site Ground Investigation Works

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425 μ m sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C \pm 2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal:

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Determination of Dry Density/Moisture Content Relationship



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 27, Moor Lane Industrial Estate, Princes Road, Chester-le-Street, Co. Durham, (UK) (NE1) Tel: 0191 287 4720 Fax: 0191 287 4751
Regional Office: Unit 20, Riverside Development Centre, Eastern Green, Sedgefield, (UK) (SR) Tel: 01753 353366 Fax: 01753 376188

MOISTURE CONTENT/DRY DENSITY RELATIONSHIP

BS 1377 Part 4: 1990

Specimen Identification

Exploratory Hole No - PRAIRIE_AUK_BH107 Depth (m) - 4.00

Sample Type & No - B5

Test Method 2.5kg Compaction

Single Sample

Test Results

Optimum Moisture Content (%) = 17.0

Particle Density (Assumed) = 2.70

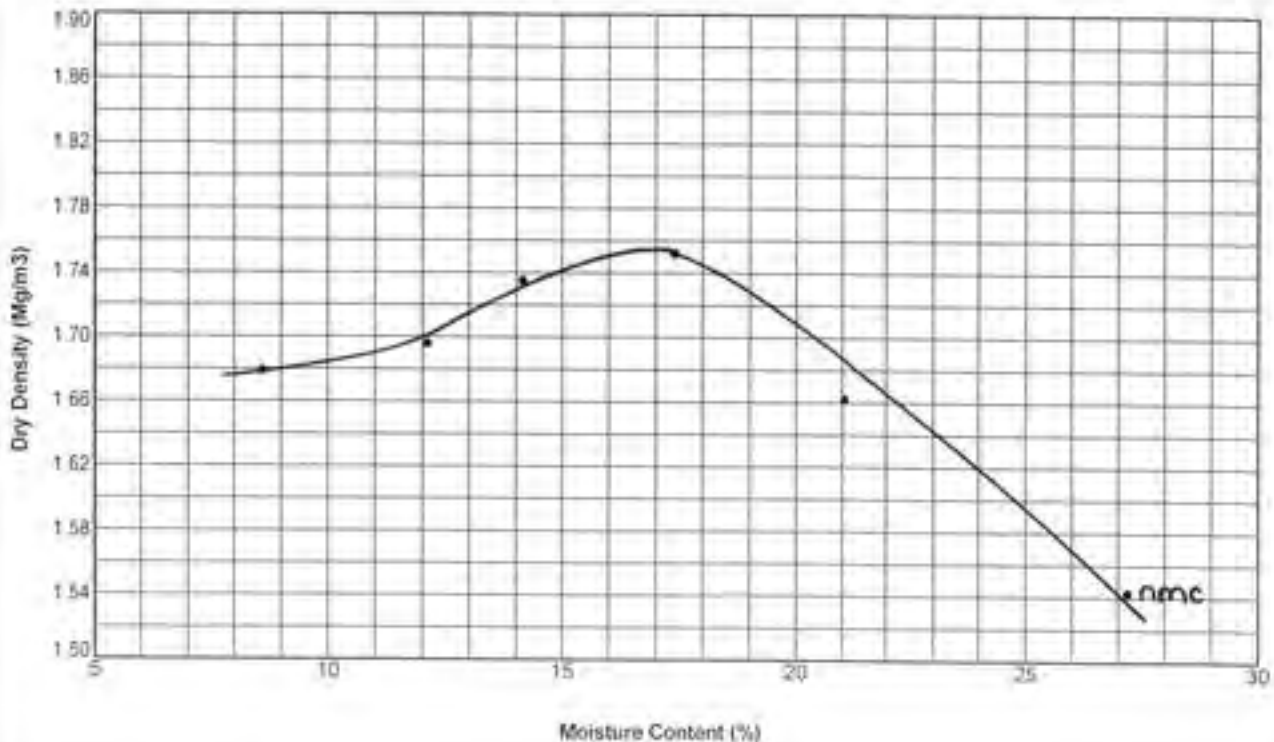
Maximum Dry Density (Mg/m³) = 1.75

Retained on 20mm Sieve (%) = 0.0

Date Tested = 14/07/2020

Retained on 37.5mm Sieve (%) = 0.0

Remarks :



For description of sample please refer to the Laboratory Sample Description Sheet

Contact Title - Prairie Site Ground Investigation Works

Client - South Tees Development Corporation



Signature - *mscho*

Name - *M. Schofield*

Page 1 of 1

Date of issue - 14/07/2020

Certificate No. - COMP42511

AEIG Contact No. - 4251



1367

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 21, Gower Park Industrial Estate, Potters Park, St Albans, Herts, SG8 5NG. Tel: 01763 207400 Fax: 01763 201421
Regional Office: Unit 20, Business Development Centre, Kilmarnock, Ayrshire, SA11 5SL. Tel: 01772 705300 Fax: 01772 735988

MOISTURE CONTENT/DRY DENSITY RELATIONSHIP BS 1377 : Part 4 : 1990

Specimen Identification

Exploratory Hole No :- PRAIRIE_AUK_BH109 Depth (m) - 2.00

Sample Type & No :- B10

Test Method 2.5kg Compaction

Single Sample

Test Results

Optimum Moisture Content (%) = 18.0

Particle Density (Assumed) = 2.70

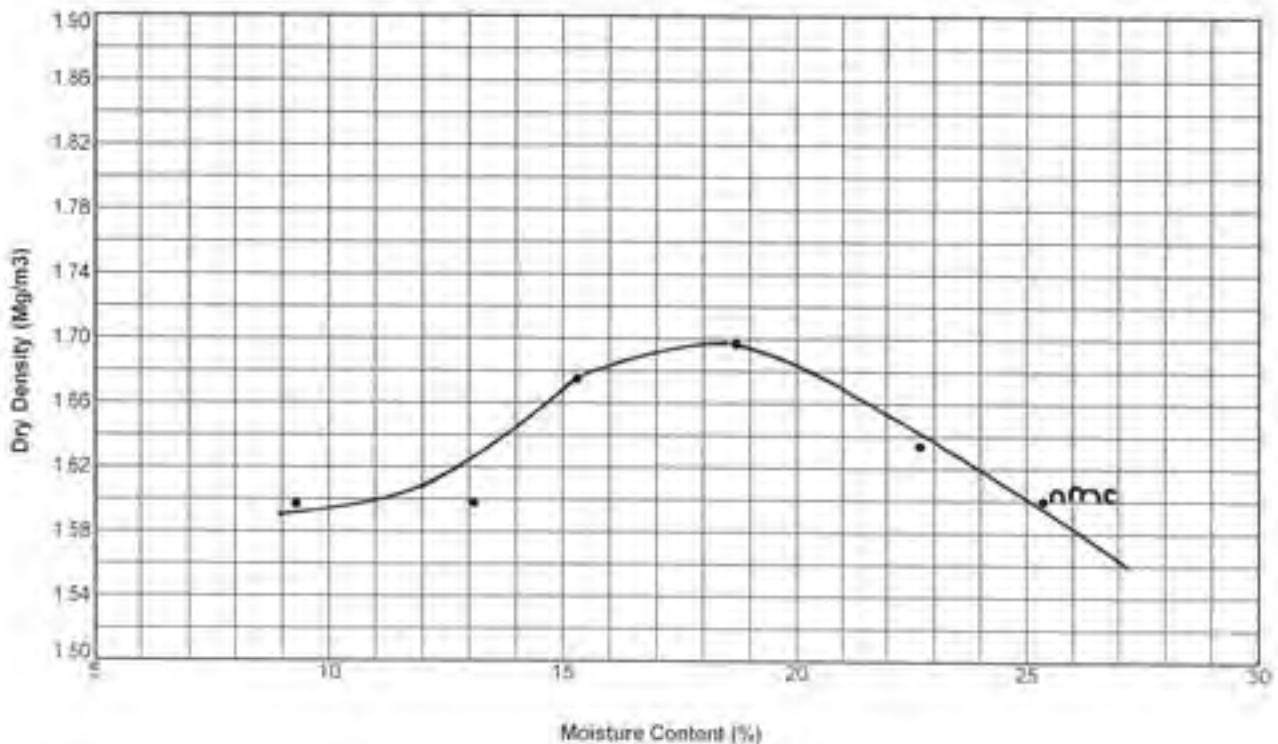
Maximum Dry Density (Mg/m³) = 1.70

Retained on 20mm Sieve (%) = 0.0

Date Tested = 14/07/2020

Retained on 37.5mm Sieve (%) = 0.0

Remarks :



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :- Prairie Site Ground Investigation Works

Client :- South Tees Development Corporation



Signed - *msene*

Name - JCLN

Page 1 of 1

Date of issue - 14/07/2020

Certificate No - GDMR/4251/1

AEG Contract No - 4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 25 100fta Off Industrial Estate, Potters Field, Clonville, Ayrshire, Co. Durham, DA1 2NS, Tel: 0191 207 4700 Fax: 0191 207 4710
Regional Office: Unit 20, Business Centre, Colindale Avenue, London NW9 1QB, Tel: 01772 735 100 Fax: 01772 735 105

MOISTURE CONTENT/DRY DENSITY RELATIONSHIP BS 1377 : Part 4 : 1990

Specimen Identification

Exploratory Hole No :- PRAIRIE_AUK_BH110 Depth (m) :- 6.50

Sample Type & No :- B10

Test Method 2.5kg Compaction

Single Sample

Test Results

Optimum Moisture Content (%) = 15.0

Particle Density (Assumed) = 2.70

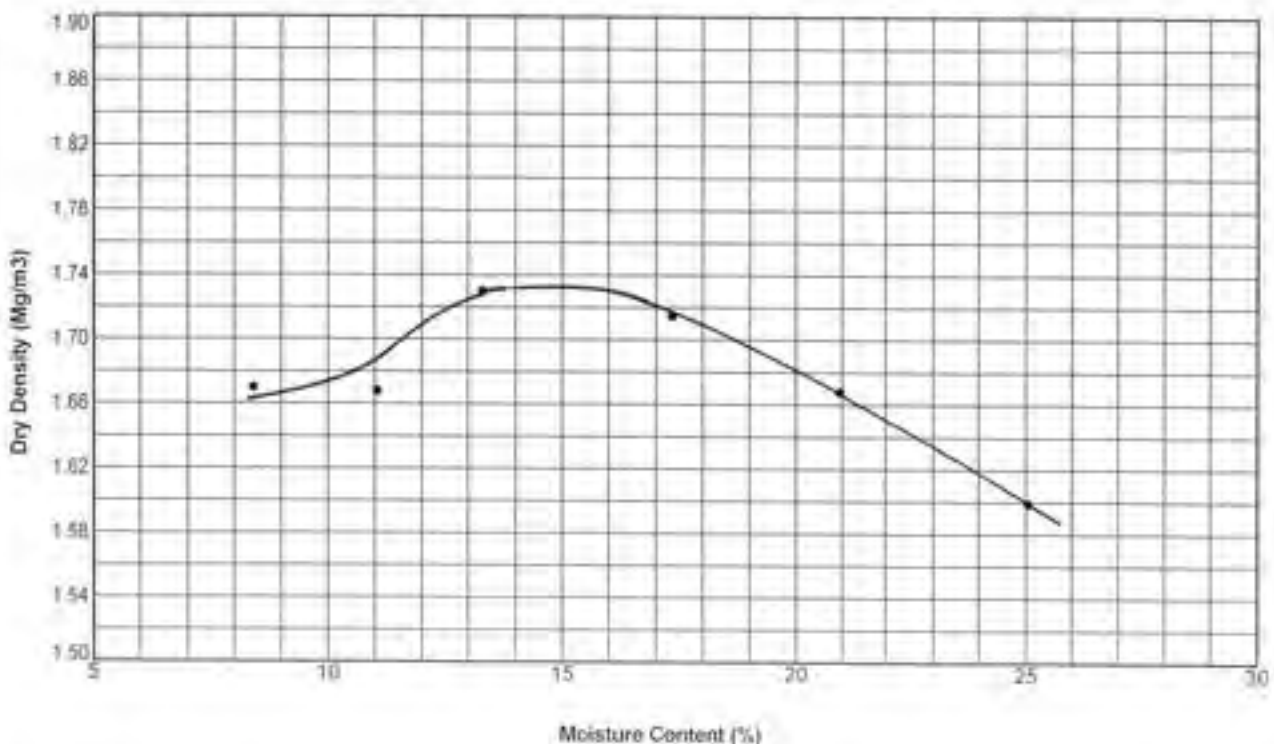
Maximum Dry Density (Mg/m³) = 1.73

Retained on 20mm Sieve (%) = 0.0

Date Tested = 14/07/2020

Retained on 37.5mm Sieve (%) = 0.0

Remarks :



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :- Prairie Site Ground Investigation Works

Client :- South Tees Development Corporation



Signed :- *msone*

Name :- *SEAN*

Page 1 of 1

Date of issue :- 11/07/2020

Certificate No :- COMB4251/1

REG Contract No :- 4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 25, Westgate Industrial Estate, Patten Way, Chester-le-Street, Co. Durham, UK, SR9 7LQ. Tel: 0191 261 4100 Fax: 0191 261 4101
Regional Office: Unit 20, Blenheim Development Centre, Euston Wharf, Sunderland, SR1 1BB. Tel: 01712 221368 Fax: 01712 221369

MOISTURE CONTENT/DRY DENSITY RELATIONSHIP

BS 1377 - Part 4 - 1990

Specimen Identification

Exploratory Hole No - PRAIRIE_AUK_TP101 Depth (m) - 0.90

Sample Type & No - B4

Test Method 2.5kg Compaction

Single Sample

Test Results

Optimum Moisture Content (%) = 16.5

Particle Density (Assumed) = 2.55

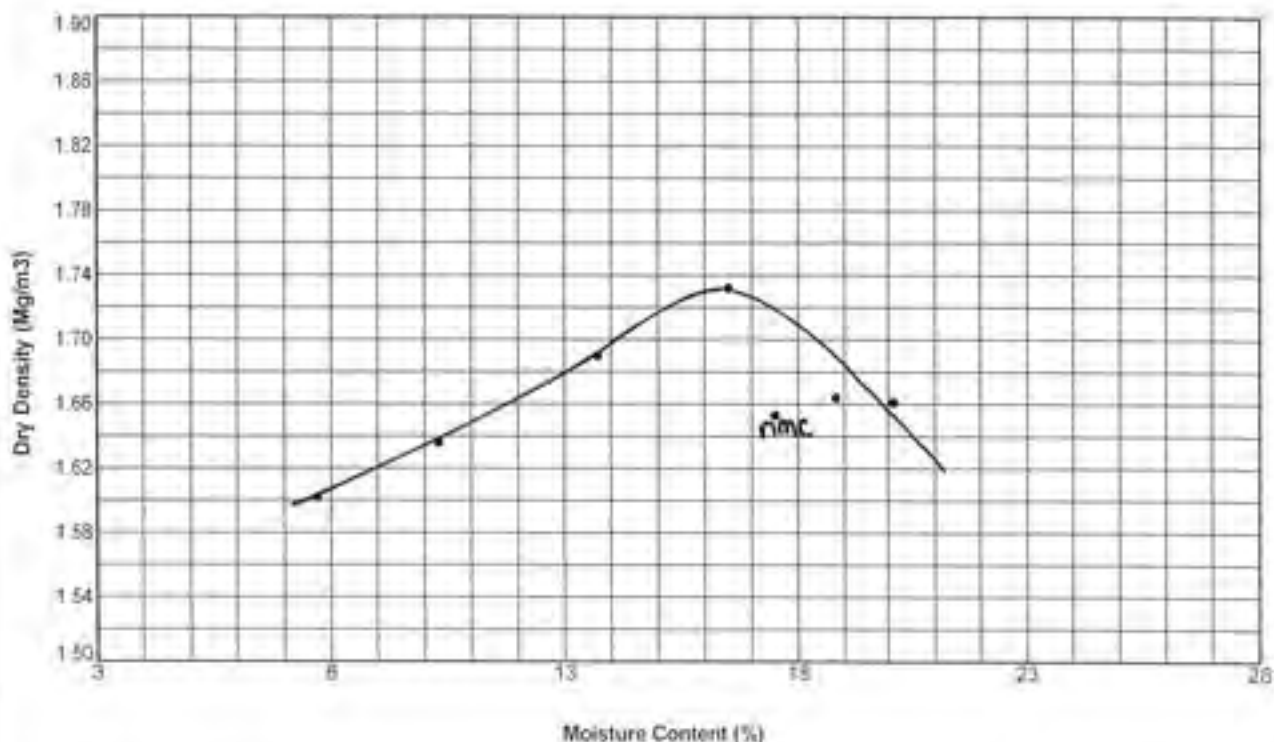
Maximum Dry Density (Mg/m³) = 1.73

Retained on 20mm Sieve (%) = 32.0

Date Tested = 01/10/2020

Retained on 37.5mm Sieve (%) = 17.0

Remarks :



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title - Prairie Site Ground Investigation Works

Client - South Tees Development Corporation



Signed: *[Signature]*

Name: *[Signature]*

Page 1 of 1

Date of issue - 02/11/2020

Certificate No - COMRA251/1

AEG Contract No - 4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: 100-25 Area 041 Industrial Estate, Pickett Park, Chester-le-Street, Co. Durham, DA2 2BQ, UK. 0191 267 4700 Fax: 0191 267 4710
Regional Office: Unit 21, Business Development Centre, Thorncliffe Park, Rotherham, S64 5SL, UK. Tel: 0114 231 7000 Fax: 0114 231 7001

MOISTURE CONTENT/DRY DENSITY RELATIONSHIP BS 1377 - Part 4, 1990

Specimen Identification

Exploratory Hole No :- PRAIRIE_AUK_TP105 Depth (m) :- 2.00

Sample Type & No :- B5

Test Method 2.5kg Compaction

Single Sample

Test Results

Optimum Moisture Content (%) = 17.0

Particle Density (Assumed) = 2.65

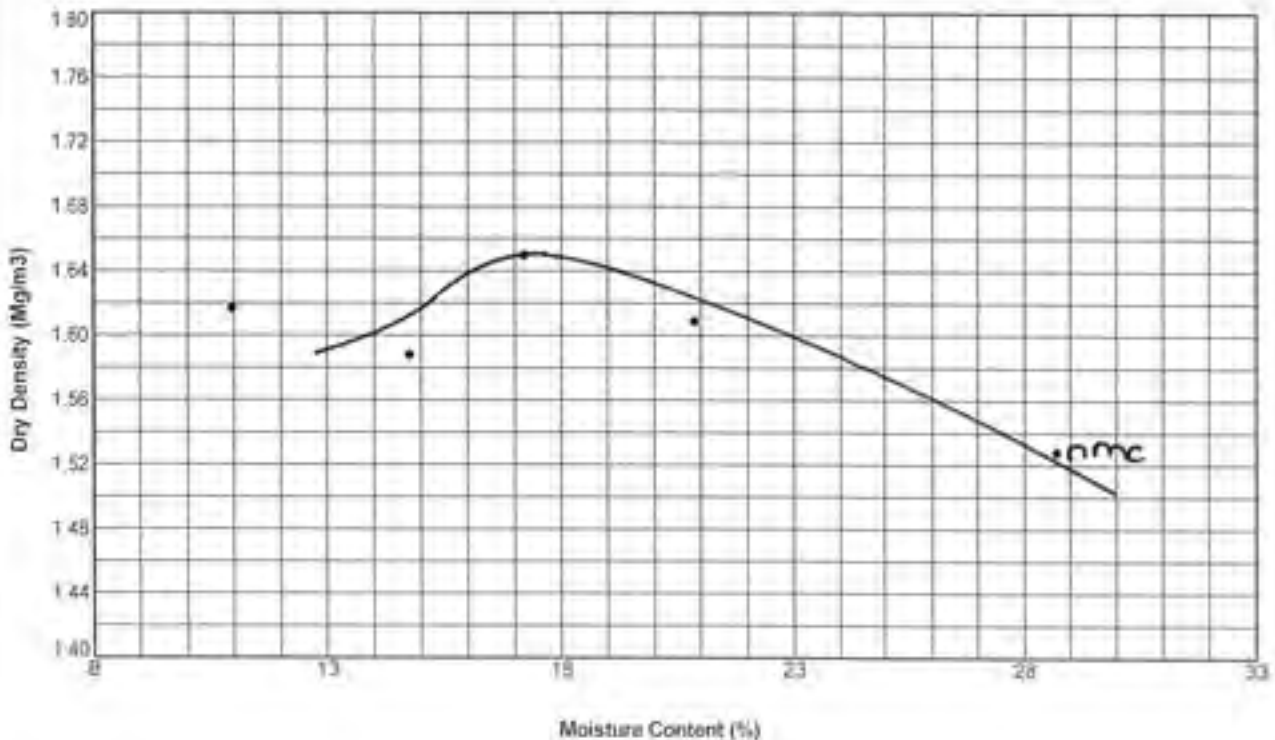
Maximum Dry Density (Mg/m³) = 1.65

Retained on 20mm Sieve (%) = 2.0

Date Tested = 30/09/2020

Retained on 37.5mm Sieve (%) = 0.0

Remarks :



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :- Prairie Site Ground Investigation Works

Client :- South Tates Development Corporation



Signed :- *msene*

Name :-

Page 1 of 1

Date of issue
02/11/2020

Certificate No >
COMB/4251/1

AEG Contract No. >
4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 25, Widdow's Gar Industrial Estate, Widdow's Park, Chester-le-Street, Co. Durham, DA2 2JG. Tel: 0191 287 8796 Fax: 0191 687 1160
Regional Office: Unit 20, Seabank Development Centre, Easingborough, East Yorkshire, YO1 1NL. Tel: 01753 701 386 Fax: 01753 710 366

MOISTURE CONTENT/DRY DENSITY RELATIONSHIP BS 1377 - Part 4 : 1990

Specimen Identification

Exploratory Hole No - PRAIRIE_AUK_TP107 Depth (m) - 1.00

Sample Type & No - B4

Test Method 2.5kg Compaction

Single Sample

Test Results

Optimum Moisture Content (%) = 17.5

Particle Density (Assumed) = 2.70

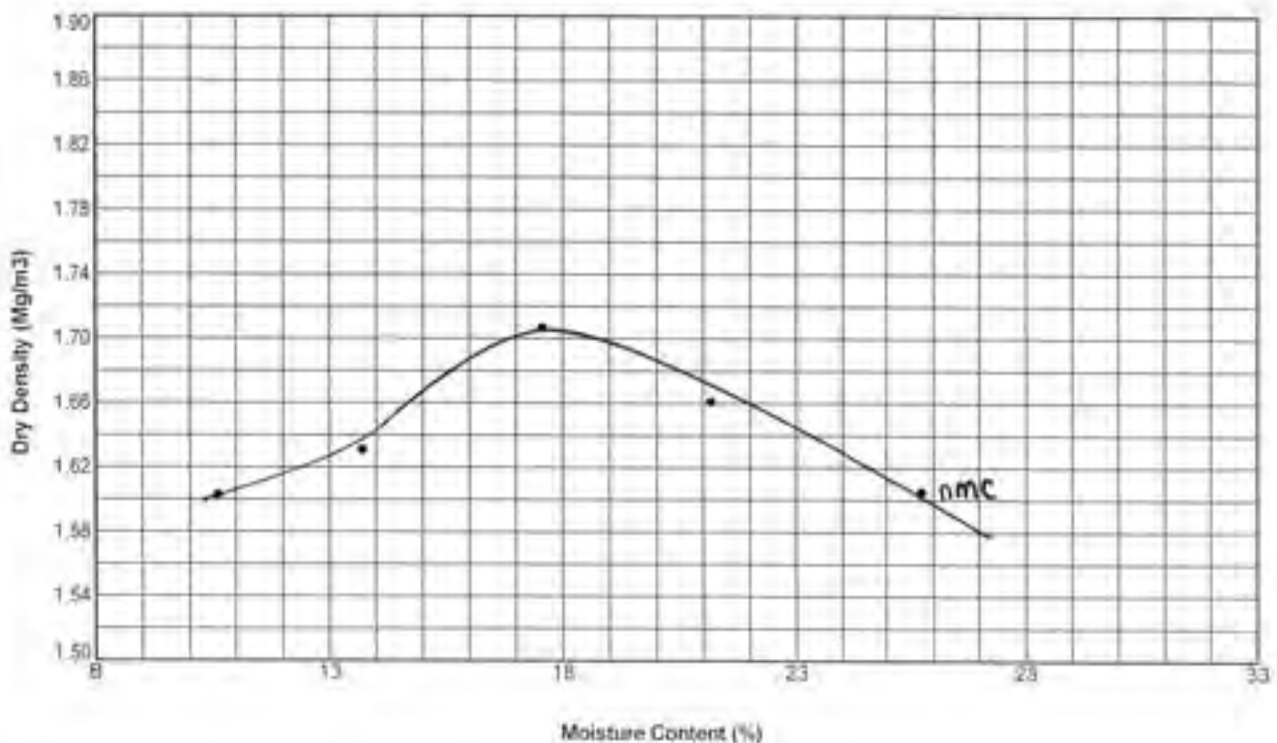
Maximum Dry Density (Mg/m³) = 1.71

Retained on 20mm Sieve (%) = 5.0

Date Tested = 30/09/2020

Retained on 37.5mm Sieve (%) = 4.0

Remarks :



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title:-

Prairie Site Ground Investigation Works

Client:-

South Tees Development Corporation



Signed: *mserp*

Name: *M. SERP*

Page 1 of 1

Date of issue
02/11/2020

Certificate No:-
COMPN4251/1

AEG Contract No:-
4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 21, Bally, 28, Buntingford Road, Tipton Park, Chorley, Greater Manchester, Co. Lancashire, M40 2PQ - Tel: 01257 347410 Fax: 01257 347411
Regional Offices: Unit 20, Business Development Centre, Eagle View, Baccara, Birtley, Co. Durham, NE21 1BA - Tel: 01772 725000 Fax: 01772 725001

MOISTURE CONTENT/DRY DENSITY RELATIONSHIP

BS 1377 Part 4: 1990

Specimen Identification

Exploratory Hole No :- PRAIRIE_AUK_TP110 Depth (m) :- 3.00

Sample Type & No :- B8

Test Method

2.5kg Compaction

Single Sample

Test Results

Optimum Moisture Content (%) = 21.0

Particle Density (Assumed) = 2.65

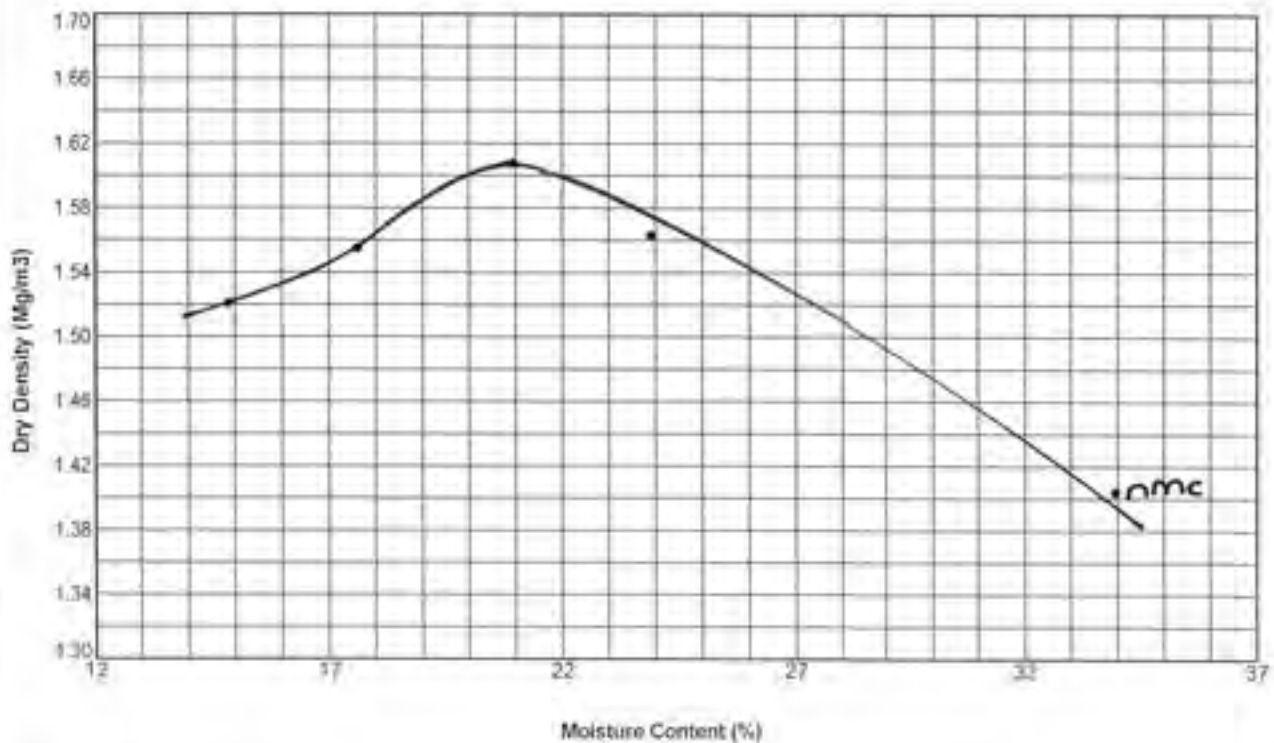
Maximum Dry Density (Mg/m³) = 1.60

Retained on 20mm Sieve (%) = 0.0

Date Tested = 16/10/2020

Retained on 37.5mm Sieve (%) = 0.0

Remarks :



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :-

Prairie Site Ground Investigation Works

Client :-

South Tees Development Corporation



Signed :- msene

Name :- M. SENE

Page 1 of 1

Date of Issue :- 02/11/2020

Certificate No. :- GOMR/4251/1

AEG Contract No. :- 4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 25, 2000 International Business Park, Park Road, Chesham, Bucks, UK, Bucks, HP8 4TJ. Tel: 01494 381470 Fax: 01494 381471
Regional Office: Unit 25, Enterprise Development Centre, Station Wharf, Banbury, Oxon, OX1 5BL. Tel: 01235 725 505 Fax: 01235 725 999

MOISTURE CONTENT/DRY DENSITY RELATIONSHIP BS 1377 - Part 4 : 1990

Specimen Identification

Exploratory Hole No :- PRAIRIE_AUK_TP112 Depth (m) :- 1.70

Sample Type & No :- B5

Test Method

2.5kg Compaction

Single Sample

Test Results

Optimum Moisture Content (%) = 20.5

Particle Density (Assumed) = 2.35

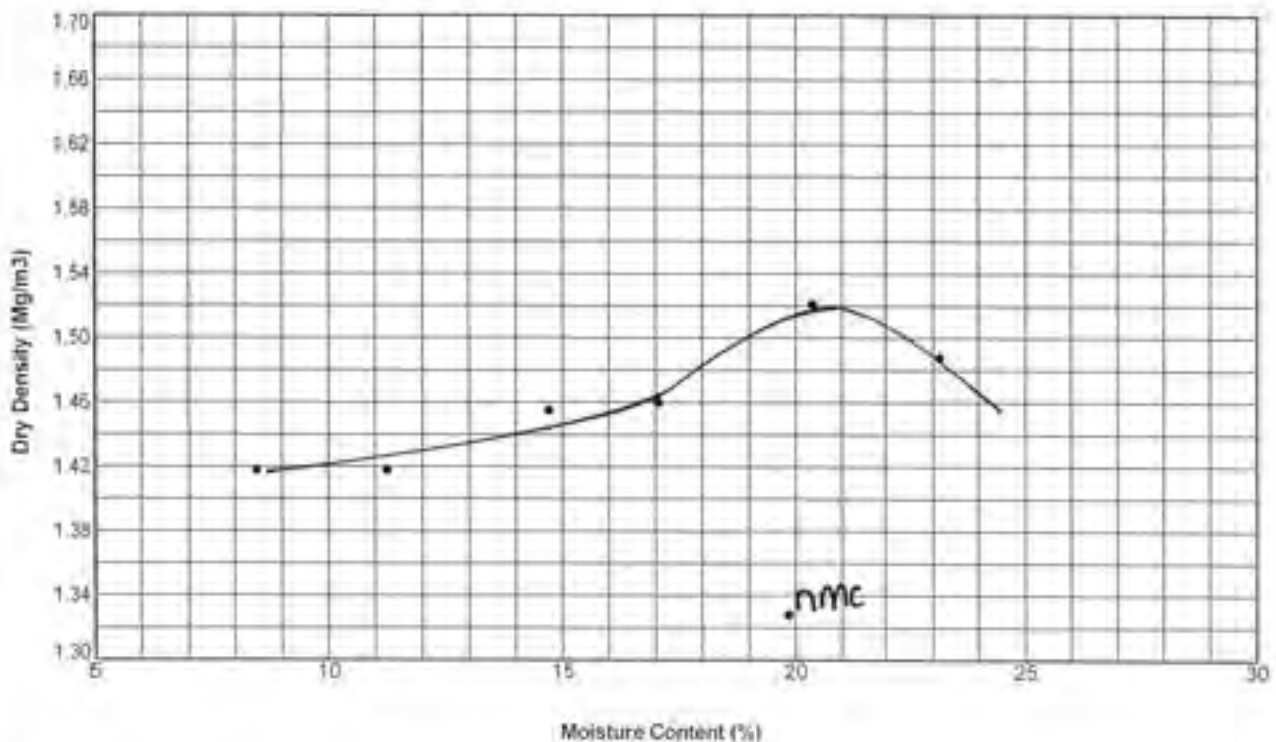
Maximum Dry Density (Mg/m³) = 1.52

Retained on 20mm Sieve (%) = 28.0

Date Tested = 19/10/2020

Retained on 37.5mm Sieve (%) = 10.0

Remarks :



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :-

Prairie Site Ground Investigation Works

Client :-

South Tees Development Corporation



Signed :- *msene*

Name :-

Page 1 of 1

Date of issue :-
02/11/2020

Certificate No :-
COMP4251/1

AEG Contract No :-
4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 21, Broomfield Industrial Estate, Filton, Filton, Bristol, Gloucestershire, UK. Phone: 01273 814288 Fax: 01273 814715
Regional Office: Unit 21, Broomfield Industrial Estate, Filton, Filton, Bristol, Gloucestershire, UK. Phone: 01273 725 335 Fax: 01273 725 336

MOISTURE CONTENT/DRY DENSITY RELATIONSHIP

BS 1377 - Part 4 - 1990

Specimen Identification

Exploratory Hole No :- PRAIRIE_AUK_TP112 Depth (m) :- 3.20

Sample Type & No :- B11

Test Method

2.5kg Compaction

Separate Samples

Test Results

Optimum Moisture Content (%) = 16.5

Particle Density (Assumed) = 2.65

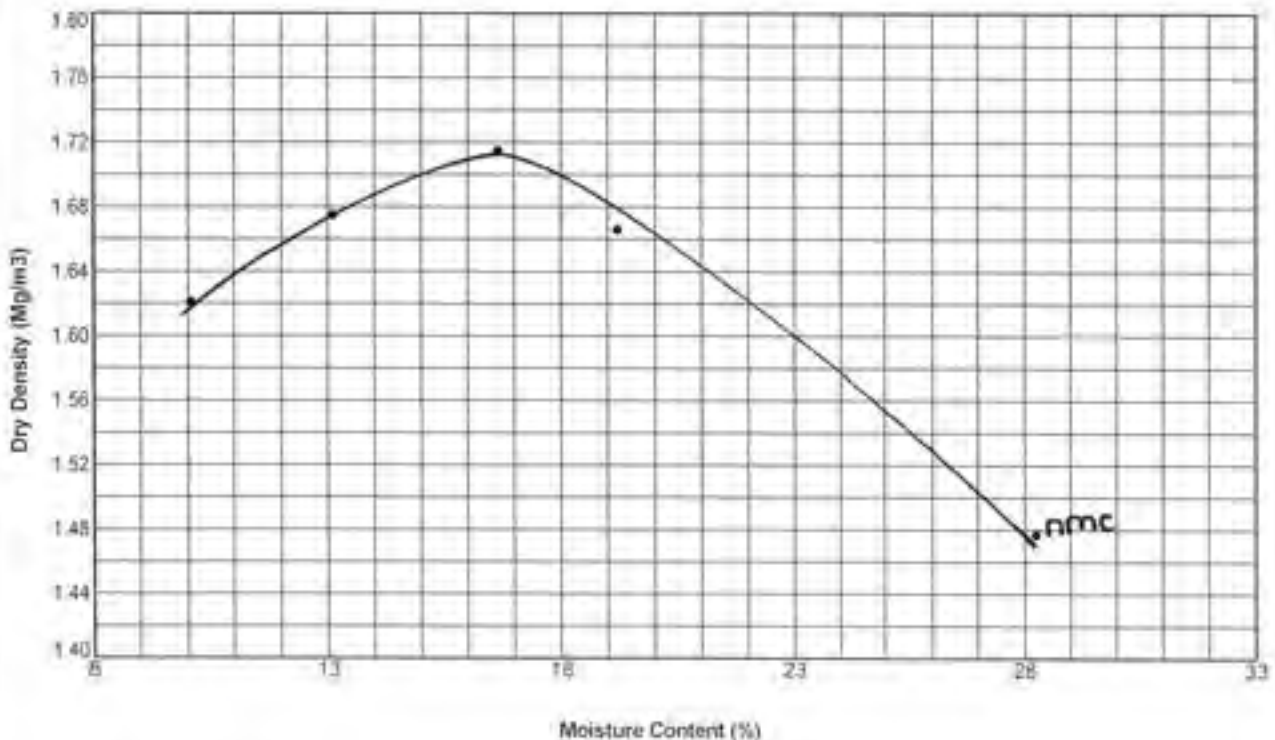
Maximum Dry Density (Mg/m³) = 1.70

Retained on 20mm Sieve (%) = 0.0

Date Tested = 16/10/2020

Retained on 37.5mm Sieve (%) = 0.0

Remarks :



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :-

Prairie Site Ground Investigation Works

Client :-

South Tees Development Corporation



Signed - *mshoe*

Name :-

Page 1 of 1

Date of issue :-
02/11/2020

Certificate No :-
COMP/4251/1

AEG Contract No :-
4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 21, Mills Hill, Millers Dale, Felling, Warrington, Cheshire, WA1 4JG. Tel: 01925 367400 Fax: 01925 307410
Regional Office: Unit 20, Riverside Development Centre, Sandbach, Cheshire, WA1 1SA. Tel: 01829 541100 Fax: 01829 541101

MOISTURE CONTENT/DRY DENSITY RELATIONSHIP

BS 1377 - Part 4 : 1990

Specimen Identification

Exploratory Hole No :- PRAIRIE_AUK_TP113 Depth (m) - 2.80

Sample Type & No :- B8

Test Method

2.5kg Compaction

Single Sample

Test Results

Optimum Moisture Content (%) = 19.5

Particle Density (Assumed) = 2.75

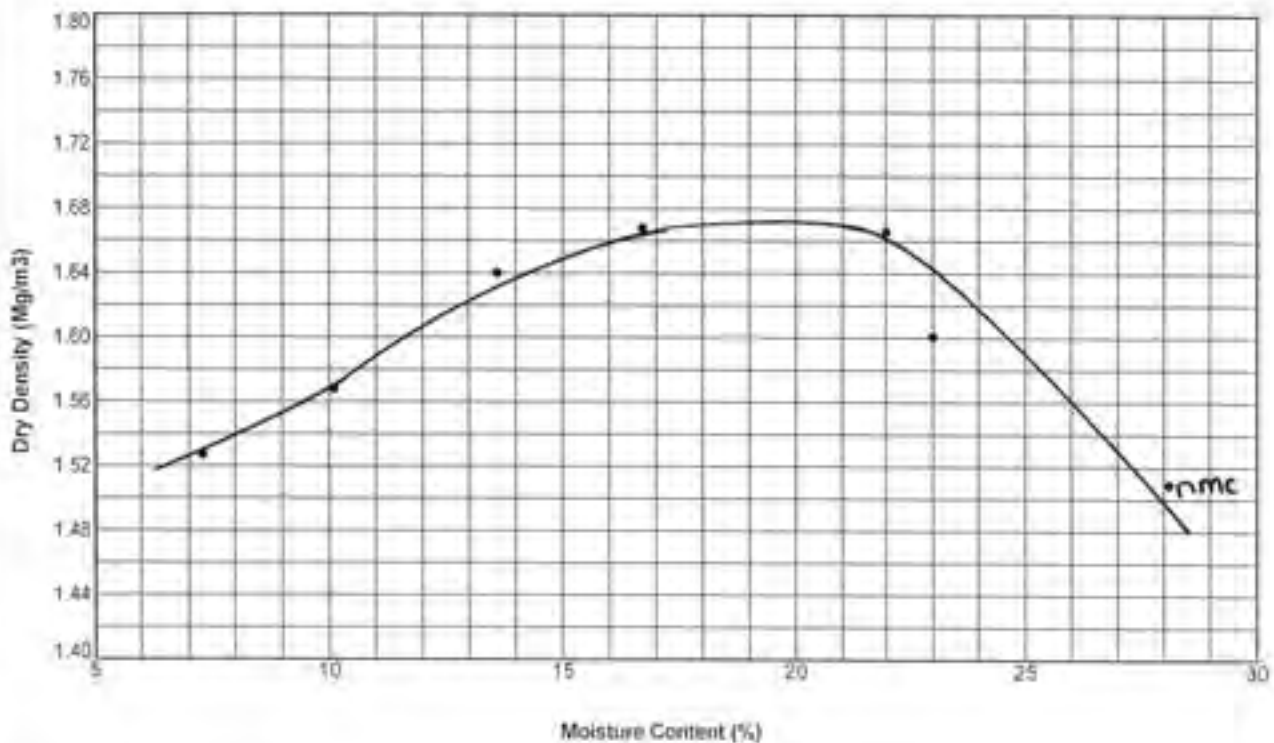
Maximum Dry Density (Mg/m³) = 1.67

Retained on 20mm Sieve (%) = 0.0

Date Tested = 30/09/2020

Retained on 37.5mm Sieve (%) = 0.0

Remarks :



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :-

Prairie Site Ground Investigation Works

Client :-

South Tees Development Corporation



Signed :- *msene*

Name :-

Page 1 of 1

Date of issue :-
02/11/2020

Certificate No :-
COMR/4251/1

AEG Contract No :-
4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: LONDON, 2nd Floor, 25 Abchurch Lane, London, EC4N 3DF, UK. Tel: 020 7417 4700 Fax: 020 7417 4750
Regional Office: 27, Seacombe Road, Seacombe, Wirral, Merseyside, CH62 3EL, UK. Tel: 0151 326 4444 Fax: 0151 326 4444

MOISTURE CONTENT/DRY DENSITY RELATIONSHIP

BS 1377 - Part 4: 1990

Specimen Identification

Exploratory Hole No :- PRAIRIE_AUK_TP116 Depth (m) :- 2.50

Sample Type & No :- B8

Test Method

2.5kg Compaction

Single Sample

Test Results

Optimum Moisture Content (%) = 20.0

Particle Density (Assumed) = 2.65

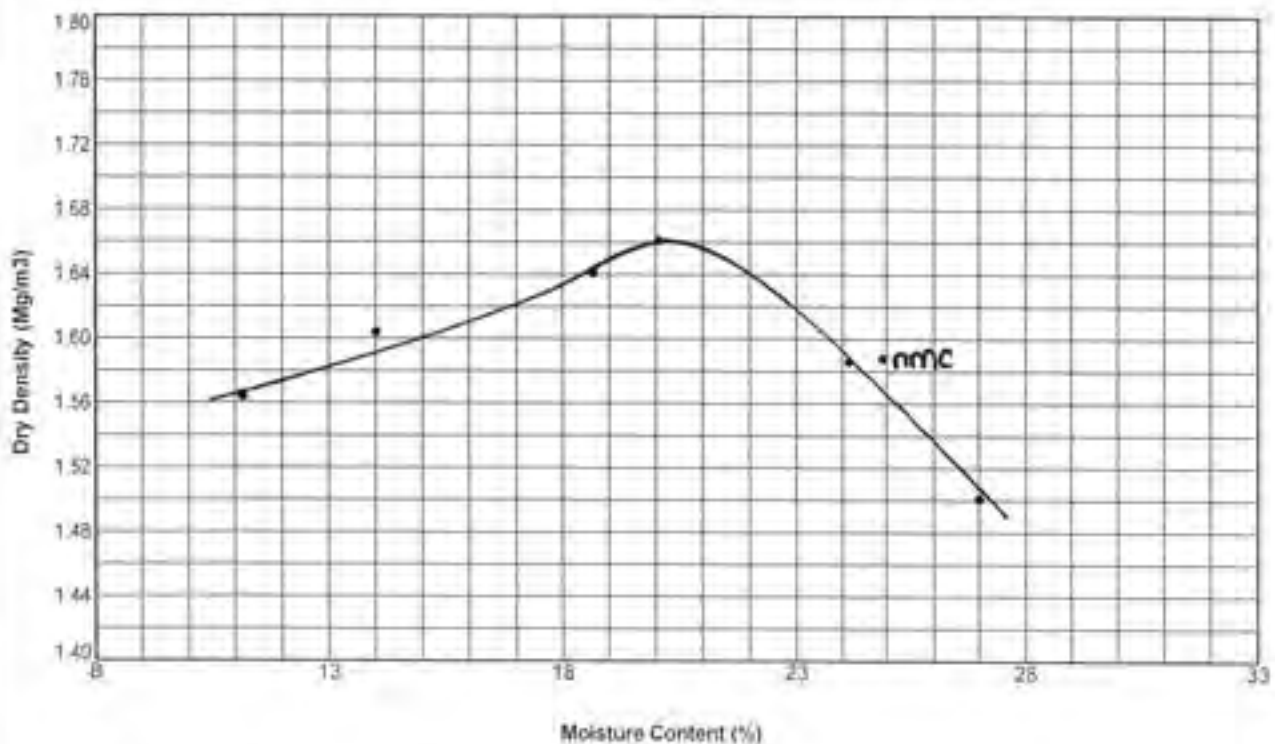
Maximum Dry Density (Mg/m³) = 1.65

Retained on 20mm Sieve (%) = 0.0

Date Tested = 16/10/2020

Retained on 37.5mm Sieve (%) = 0.0

Remarks :



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :- **Prairie Site Ground Investigation Works**

Client :- **South Tees Development Corporation**



Signed :- *[Signature]*

Name :- *[Signature]*

Page 1 of 1

Date of Issue :- 02/11/2020

Certificate No :- COMP/4251/1

AEG Contract No :- 4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 21, Mill Lane, Huddersfield, West Yorkshire, HD1 2JG. Tel: 01484 595100 Fax: 01484 595110
Regional Office: Unit 20, Sowerby Development Centre, Sowerby Wharfedale, Huddersfield, HD1 3JG. Tel: 01484 595110 Fax: 01484 595110

MOISTURE CONTENT/DRY DENSITY RELATIONSHIP

BS 1377 - Part 4 : 1990

Specimen Identification

Exploratory Hole No - PRAIRIE_AUK_TP116 Depth (m) - 3.50

Sample Type & No - B10

Test Method

2.5kg Compaction

Separate Samples

Test Results

Optimum Moisture Content (%) = 14.0

Particle Density (Assumed) = 2.65

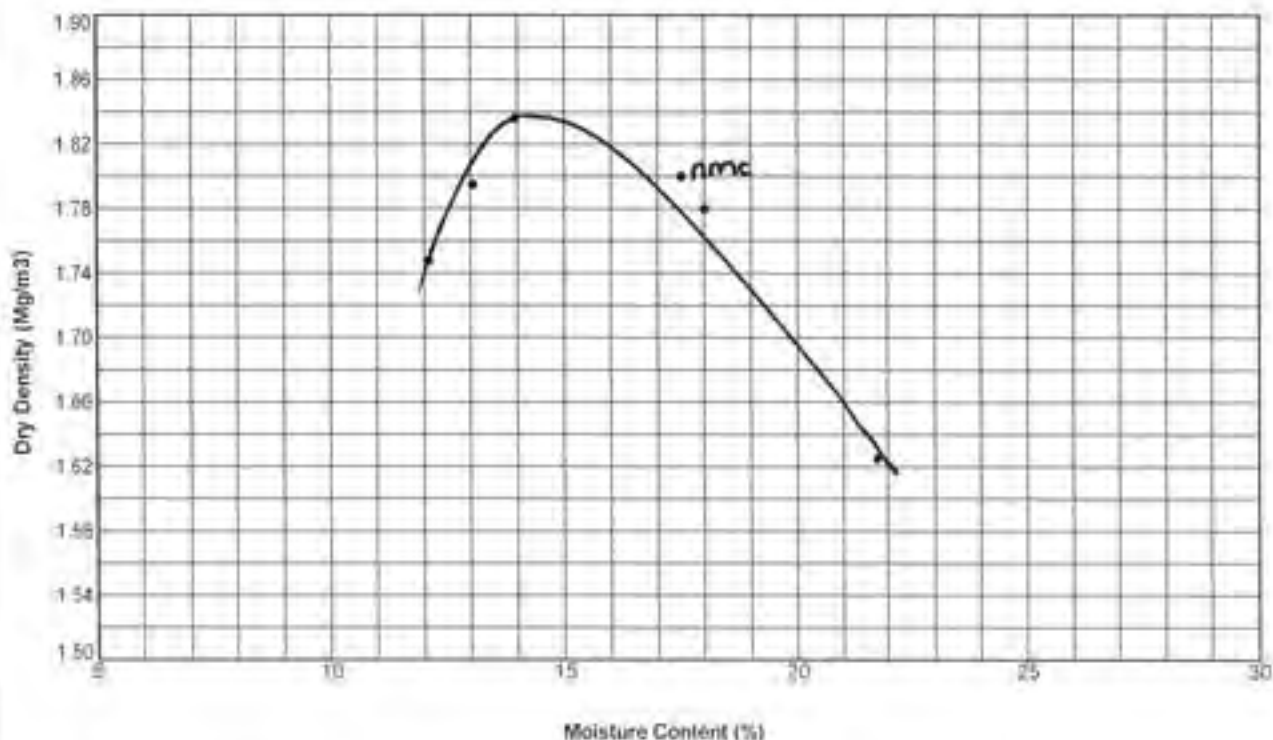
Maximum Dry Density (Mg/m³) = 1.85

Retained on 20mm Sieve (%) = 3.2

Date Tested = 19/10/2020

Retained on 37.5mm Sieve (%) = 1.8

Remarks :



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :-

Prairie Site Ground Investigation Works

Client :-

South Tees Development Corporation



Signed :-

msene

Name :-

CLARKE

Page 1 of 1

Date of Issue :-

02/11/2020

Certificate No :-

COMR/4251/1

WEG Contract No :-

4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 25, Spring Hill Industrial Estate, Evesham Park, Chesham, Bucks, UK. Tel: 01494 380 470 Fax: 01494 380 471
Regional Office: Unit 20, Business Development Centre, Evesham Park, Chesham, Bucks, UK. Tel: 01494 380 470 Fax: 01494 380 471

MOISTURE CONTENT/DRY DENSITY RELATIONSHIP

BS 1377 : Part 4 : 1990

Specimen Identification

Exploratory Hole No - PRAIRIE_AUK_TP118 Depth (m) :- 2.50

Sample Type & No :- B7

Test Method 2.5kg Compaction

Single Sample

Test Results

Optimum Moisture Content (%) = 23.5

Particle Density (Assumed) = 2.65

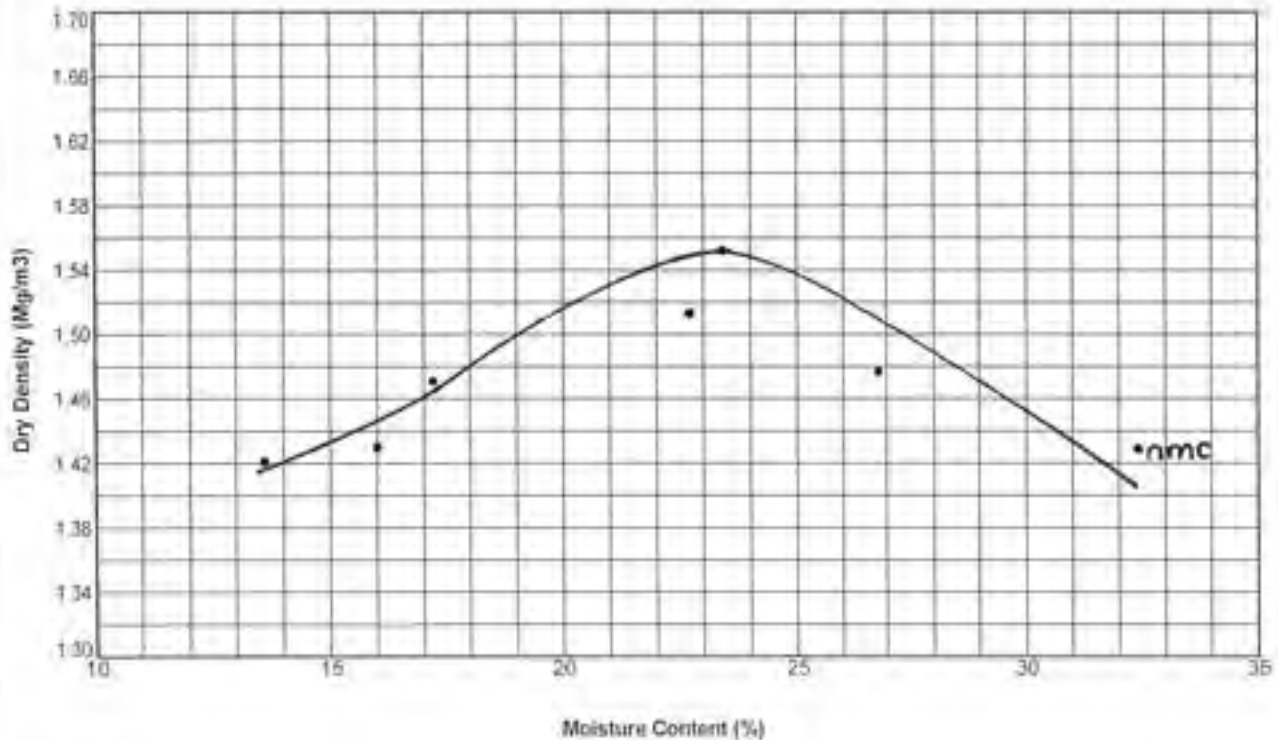
Maximum Dry Density (Mg/m³) = 1.55

Retained on 20mm Sieve (%) = 0.0

Date Tested = 19/10/2020

Retained on 37.5mm Sieve (%) = 0.0

Remarks :



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :- Prairie Site Ground Investigation Works

Client :- South Tees Development Corporation



Signed *msene*

Name - *SELKIRK*

Page 1 of 1

Date of issue :- 02/11/2020

Certificate No. :- COMR/4251/1

AEG Contract No. :- 4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office Unit 25 (1995) Judd Road, Filton, Bristol, Gloucestershire, UK. Company No: 020283 - Tel: 0117 937 4755 Fax: 0117 937 4711
Regional Office Unit 12 Business Centre, Garsington Road, Oxford, OX4 1BB - Tel: 01235 236 997 Fax: 01235 236 999

MOISTURE CONTENT/DRY DENSITY RELATIONSHIP

BS 1377 : Part 4 : 1990

Specimen Identification

Exploratory Hole No :- PRAIRIE_AUK_TP119 Depth (m) :- 2.00

Sample Type & No :- B5

Test Method

2.5kg Compaction

Single Sample

Test Results

Optimum Moisture Content (%) = 18.5

Particle Density (Assumed) = 2.85

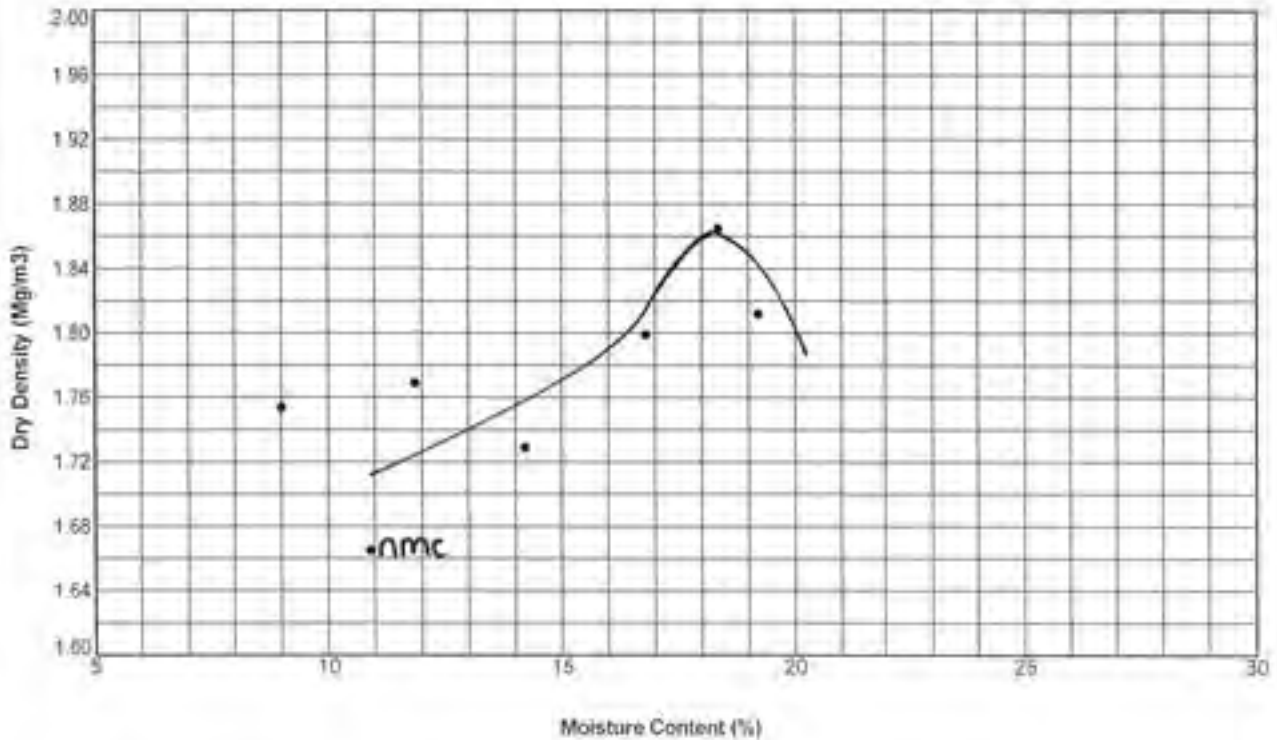
Maximum Dry Density (Mg/m³) = 1.87

Retained on 20mm Sieve (%) = 17.0

Date Tested = 19/10/2020

Retained on 37.5mm Sieve (%) = 9.0

Remarks :



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :-

Prairie Site Ground Investigation Works

Client :-

South Tees Development Corporation



Signed :- *msene*

Name :- *[Signature]*

Page 1 of 1

Date of issue :-
02/11/2020

Certificate No :-
COMR/4251/1

AEG Contract No :-
4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 25 Males Oil Industrial Estate, Farnborough, Hampshire, GU14 0JG. Tel: 0114 267 4200 Fax: 0114 267 4215
Regional Office: Unit 20, Business Development Centre, Southampton, Hampshire, SO11 5BQ. Tel: 01703 225 282 Fax: 01703 225 289

MOISTURE CONTENT/DRY DENSITY RELATIONSHIP

BS 1377 - Part 4: 1990

Specimen Identification

Exploratory Hole No :- PRAIRIE_AUK_TP119 Depth (m) :- 3.00

Sample Type & No :- B8

Test Method 2.5kg Compaction

Single Sample

Test Results

Optimum Moisture Content (%) = 23.5

Particle Density (Assumed) = 2.70

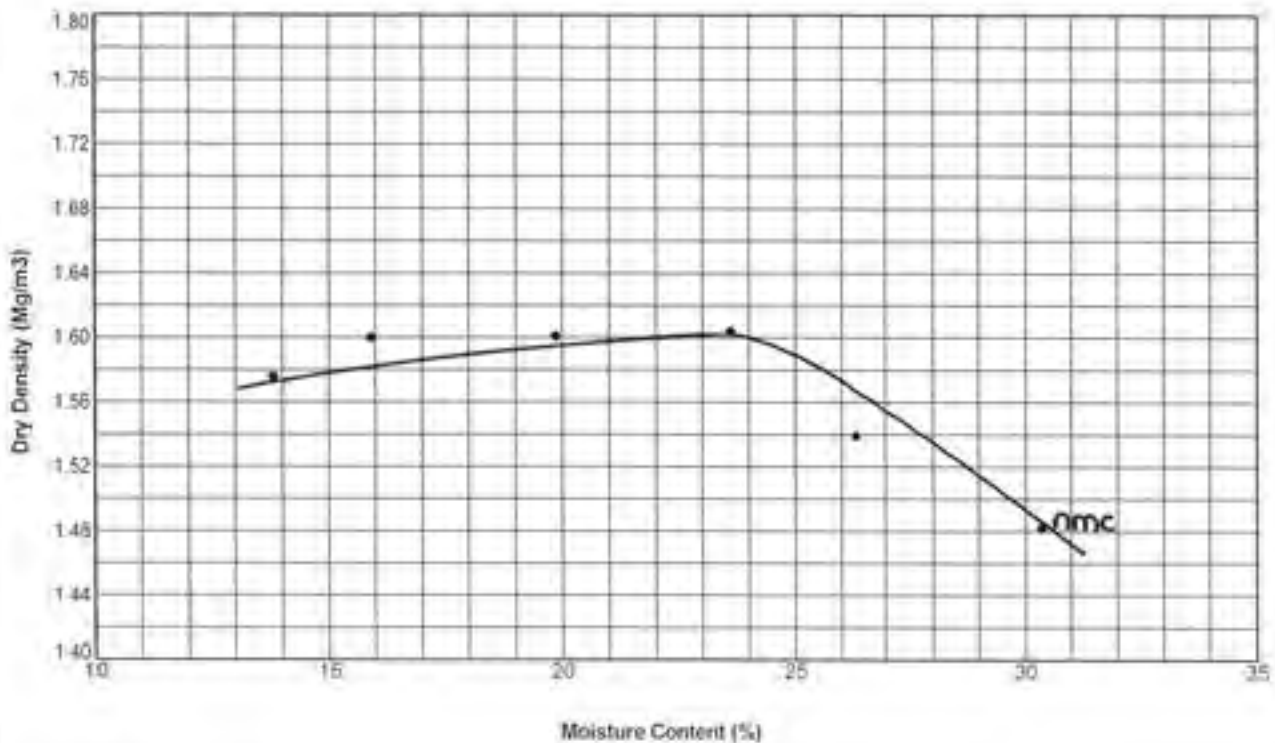
Maximum Dry Density (Mg/m³) = 1.60

Retained on 20mm Sieve (%) = 0.0

Date Tested = 16/10/2020

Retained on 37.5mm Sieve (%) = 0.0

Remarks :



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :- **Prairie Site Ground Investigation Works**

Client :- **South Tees Development Corporation**



Signed - *mson*
Date of issue - 02/11/2020

Name -
Certificate No - GDMR/4251/1

Page 1 of 1
AEG Contract No - 4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 25 Astra 58 Industrial Estate, Park Road, Cross-in-Woods, Co. Durham, DA2 2DZ. Tel: 0191 387 4700 Fax: 0191 387 4710
Regional Office: Unit 25, Solihull Development Centre, "Eaton Square" Boulevard, B37 5BL. Tel: 0121 703 2000 Fax: 0121 703 3000

MOISTURE CONTENT/DRY DENSITY RELATIONSHIP BS 1377 - Part 4 : 1990

Specimen Identification

Exploratory Hole No :- **PRAIRIE_AUK_TP120** Depth (m) :- **1.80**

Sample Type & No :- **B5**

Test Method

2.5kg Compaction

Single Sample

Test Results

Optimum Moisture Content (%) = **20.0**

Particle Density (Assumed) = **2.65**

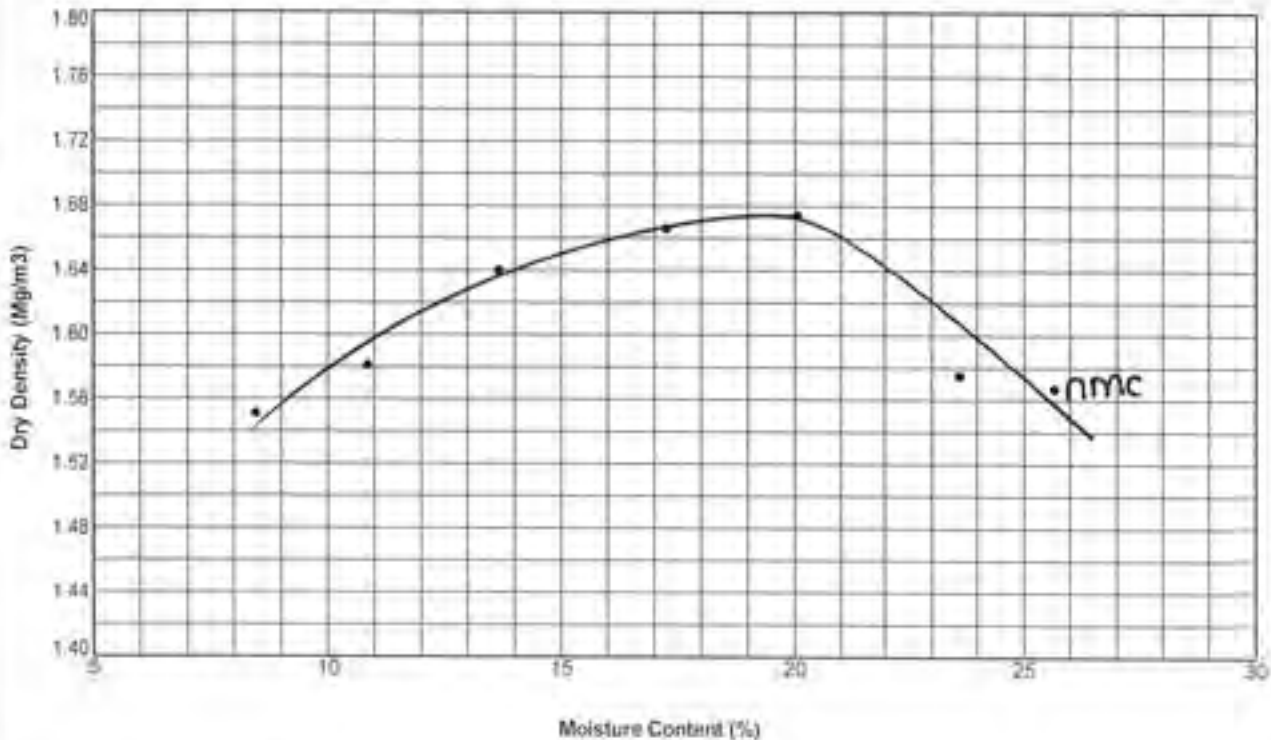
Maximum Dry Density (Mg/m³) = **1.67**

Retained on 20mm Sieve (%) = **0.0**

Date Tested = **15/10/2020**

Retained on 37.5mm Sieve (%) = **0.0**

Remarks :



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :-

Prairie Site Ground Investigation Works

Client :-

South Tees Development Corporation



Signed :-

msone

Name :-

MSONE

Page 1 of 1

Date of issue :-

02/11/2020

Certificate No :-

COM/4251/1

AEG Contract No :-

4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: 1st Flr, 27, Roke Rd, Industrial Estate, Thess Valley, Cleveland, Co. Durham, DL22 9JG, UK. Tel: 0191 287 4700 Fax: 0191 287 4710
Regional Offices: 1st Flr, 27, Roke Rd, Industrial Estate, Thess Valley, Cleveland, Co. Durham, DL22 9JG, UK. Tel: 01773 751 288 Fax: 01773 751 284

MOISTURE CONTENT/DRY DENSITY RELATIONSHIP

BS 1377 - Part 4: 1990

Specimen Identification

Exploratory Hole No :- PRAIRIE_AUK_TP121 Depth (m) :- 0.80

Sample Type & No :- B2

Test Method

2.5kg Compaction

Single Sample

Test Results

Optimum Moisture Content (%) = 14.0

Particle Density (Assumed) = 2.75

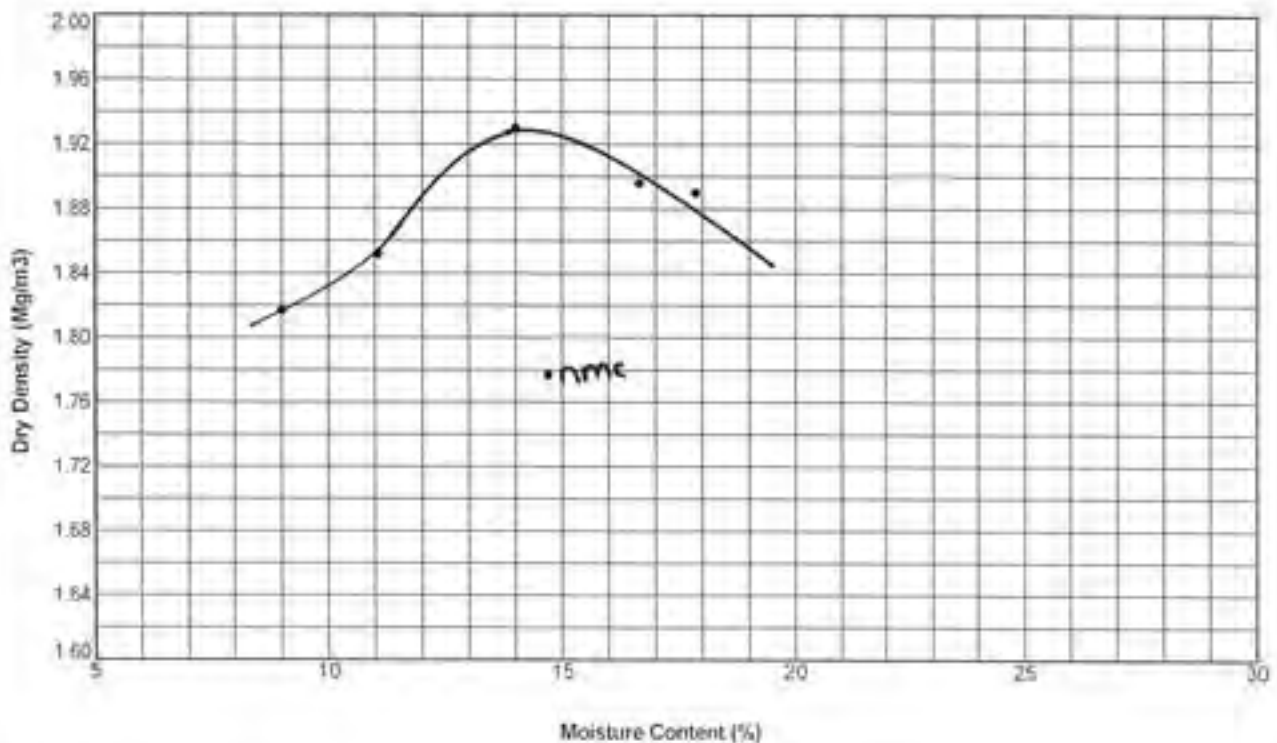
Maximum Dry Density (Mg/m³) = 1.93

Retained on 20mm Sieve (%) = 1.0

Date Tested = 01/10/2020

Retained on 37.5mm Sieve (%) = 0.0

Remarks :



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :-

Prairie Site Ground Investigation Works

Client :-

South Tees Development Corporation



Signed :-

msone

Name :-

MSONE

Page 1 of 1

Date of issue :-

02/11/2020

Certificate No :-

COMP4251/1

AEG Contract No :-

4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 21, The Old Industrial Estate, North Hill, Chatteris, Cambs, Cambs, CB5 9PS - Tel: 01353 762410 Fax: 01353 681471
Regional Office: Unit 21, The Old Industrial Estate, North Hill, Chatteris, Cambs, Cambs, CB5 9PS - Tel: 01353 762410 Fax: 01353 681471

MOISTURE CONTENT/DRY DENSITY RELATIONSHIP

BS 1377 Part 4: 1990

Specimen Identification

Exploratory Hole No :- **PRAIRIE_AUK_TP124** Depth (m) :- **1.50**

Sample Type & No :- **B4**

Test Method

2.5kg Compaction

Single Sample

Test Results

Optimum Moisture Content (%) = **16.0**

Particle Density (Assumed) = **2.55**

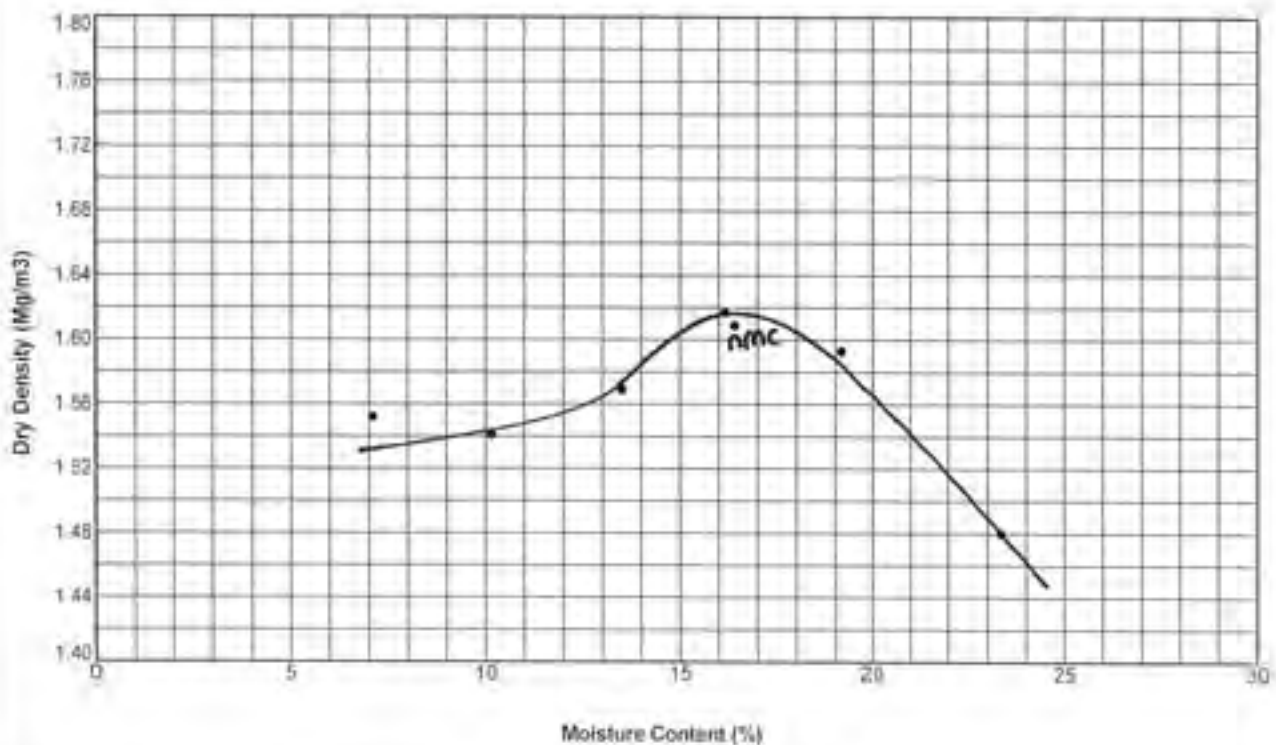
Maximum Dry Density (Mg/m³) = **1.62**

Retained on 20mm Sieve (%) = **9.0**

Date Tested = **29/09/2020**

Retained on 37.5mm Sieve (%) = **3.0**

Remarks :



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :- **Prairie Site Ground Investigation Works**

Client :- **South Tees Development Corporation**



Signed :- *m.sone*

Name :- *M. Sone*

Page 1 of 1

Date of issue :- **02/11/2020**

Certificate No :- **GDMP/4251/1**

AEG Contract No :- **4251**



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 20, Balfour Industrial Estate, Wigan Road, Chorley, Lancashire, UK. DUNSMUIR, Unit 10, 11th Floor, 100, Market Street, Manchester, M1 1PU. Tel: 01252 755 337 Fax: 01252 755 367
Regional Office: Unit 10, Balfour Industrial Estate, Wigan Road, Chorley, Lancashire, UK. DUNSMUIR, Unit 10, 11th Floor, 100, Market Street, Manchester, M1 1PU. Tel: 01252 755 337 Fax: 01252 755 367

MOISTURE CONTENT/DRY DENSITY RELATIONSHIP

BS 1377 / Part 4 : 1990

Specimen Identification

Exploratory Hole No - PRAIRIE_AUK_TP131 Depth (m) :- 3.80

Sample Type & No :- B10

Test Method

2.5kg Compaction

Separate Samples

Test Results

Optimum Moisture Content (%) = 21.0

Particle Density (Assumed) = 2.75

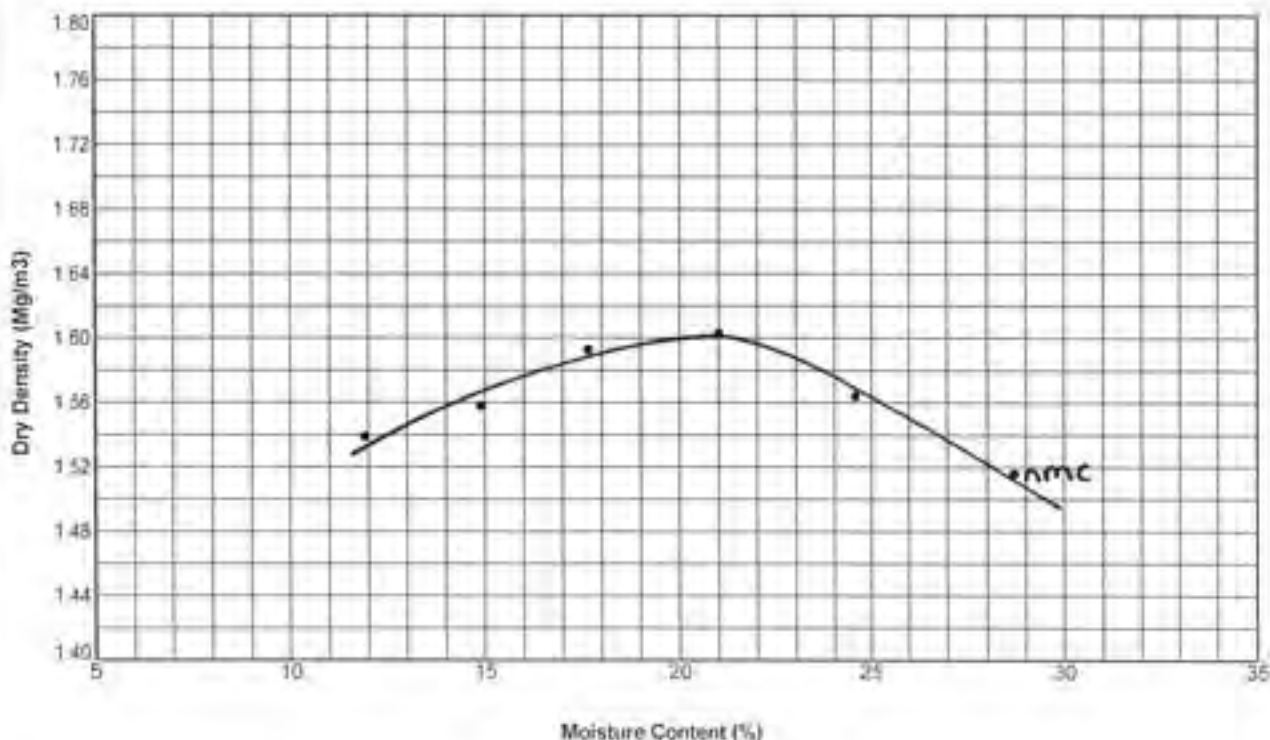
Maximum Dry Density (Mg/m³) = 1.60

Retained on 20mm Sieve (%) = 0.0

Date Tested = 01/10/2020

Retained on 37.5mm Sieve (%) = 0.0

Remarks :



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :-

Prairie Site Ground Investigation Works

Client :-

South Tees Development Corporation



Signed -

msene

Name :-

Page 1 of 1

Date of Issue

02/11/2020

Certificate No:-

COMPA4251/1

AEG Contract No. :-

4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 75, Brook 124 Industrial Estate, Polesworth, Coventry, CV3 2PL. Tel: 01203 267472 Fax: 01203 267471
Regional Office: Unit 22, Business Development Centre, Gosport Wharf, Southampton, SO2 1BQ. Tel: 01703 731 88 Fax: 01703 731 88

MOISTURE CONTENT/DRY DENSITY RELATIONSHIP

BS 1377 : Part 4 : 1990

Specimen Identification

Exploratory Hole No :- PRAIRIE_AUK_TP137 Depth (m) :- 2.00

Sample Type & No :- B7

Test Method 2.5kg Compaction

Separate Samples

Test Results

Optimum Moisture Content (%) = 17.0

Particle Density (Assumed) = 2.65

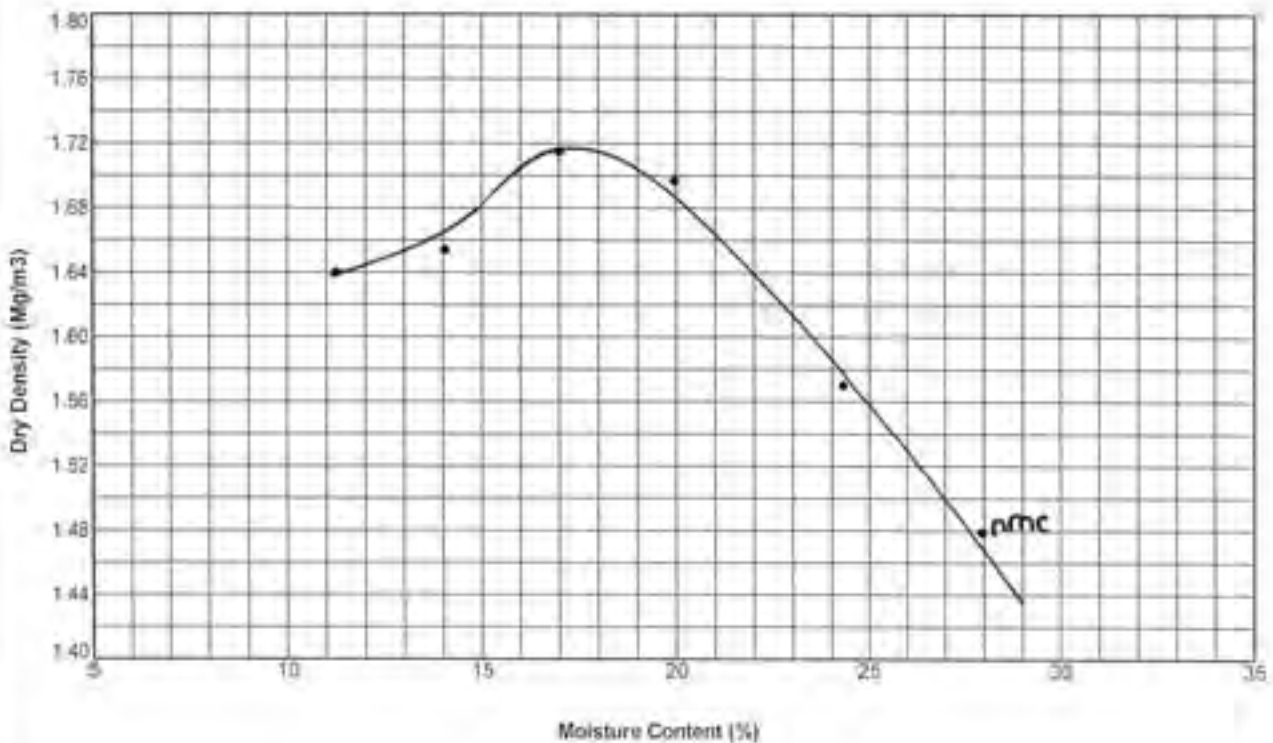
Maximum Dry Density (Mg/m³) = 1.70

Retained on 20mm Sieve (%) = 0.0

Date Tested = 15/10/2020

Retained on 37.5mm Sieve (%) = 0.0

Remarks :



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :- Prairie Site Ground Investigation Works

Client :- South Tees Development Corporation



Signed :- *mson*

Name :-

Page 1 of 1

Date of issue :- 02/11/2020

Certificate No :- COMPI/4251/1

AEG Contract No :- 4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 25, 26/27, Old Industrial Estate, Green Park, Chesham-Bosham, Ch. District, GU20 2BQ - Tel: 01296 387470/8 Fax: 01296 387473
Regional Office: Unit 21, Salsford, Development Centre, Salsford Road, Boreham, Essex, SS11 5BA - Tel: 01773 435 388 Fax: 01773 515 061

MOISTURE CONTENT/DRY DENSITY RELATIONSHIP BS 1377 : Part 4 : 1990

Specimen Identification

Exploratory Hole No :- PRAIRIE_AUK_TP145 Depth (m) :- 1.00

Sample Type & No :- B3

Test Method

2.5kg Compaction

Single Sample

Test Results

Optimum Moisture Content (%) = 17.5

Particle Density (Assumed) = 2.55

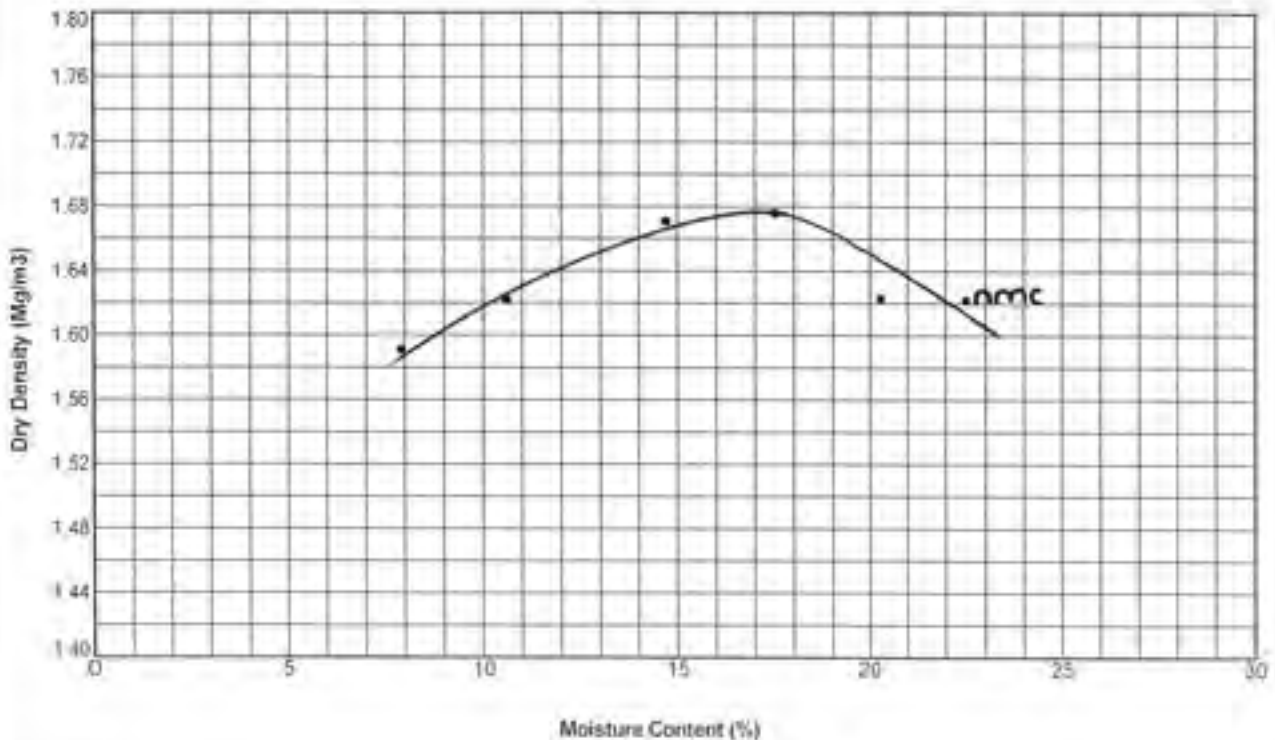
Maximum Dry Density (Mg/m³) = 1.68

Retained on 20mm Sieve (%) = 19.0

Date Tested = 29/09/2020

Retained on 37.5mm Sieve (%) = 5.0

Remarks :



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :-

Prairie Site Ground Investigation Works

Client :-

South Tees Development Corporation



Signed -

msone

Name :-

msone

Page 1 of 1

Date of issue :-

02/11/2020

Certificate No :-

COMB/425111

AEG Contract No :-

4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: 1st & 2nd Floors, 146, Victoria Square, Preston Park, Chichester, Sussex, UK, PO19 1SE. Tel: 01243 785 473 Fax: 01243 787 474
Regional Office: Unit 25, Business Development Centre, Crown Way, Basingstoke, Hampshire, UK, RG24 0BA. Tel: 01256 333 788 Fax: 01256 337722

MOISTURE CONTENT/DRY DENSITY RELATIONSHIP

BS 1377 - Part 4 - 1990

Specimen Identification

Exploratory Hole No :- PRAIRIE_AUK_TP145 Depth (m) :- 2.40

Sample Type & No :- B6

Test Method

2.5kg Compaction

Single Sample

Test Results

Optimum Moisture Content (%) = 21.0

Particle Density (Assumed) = 2.70

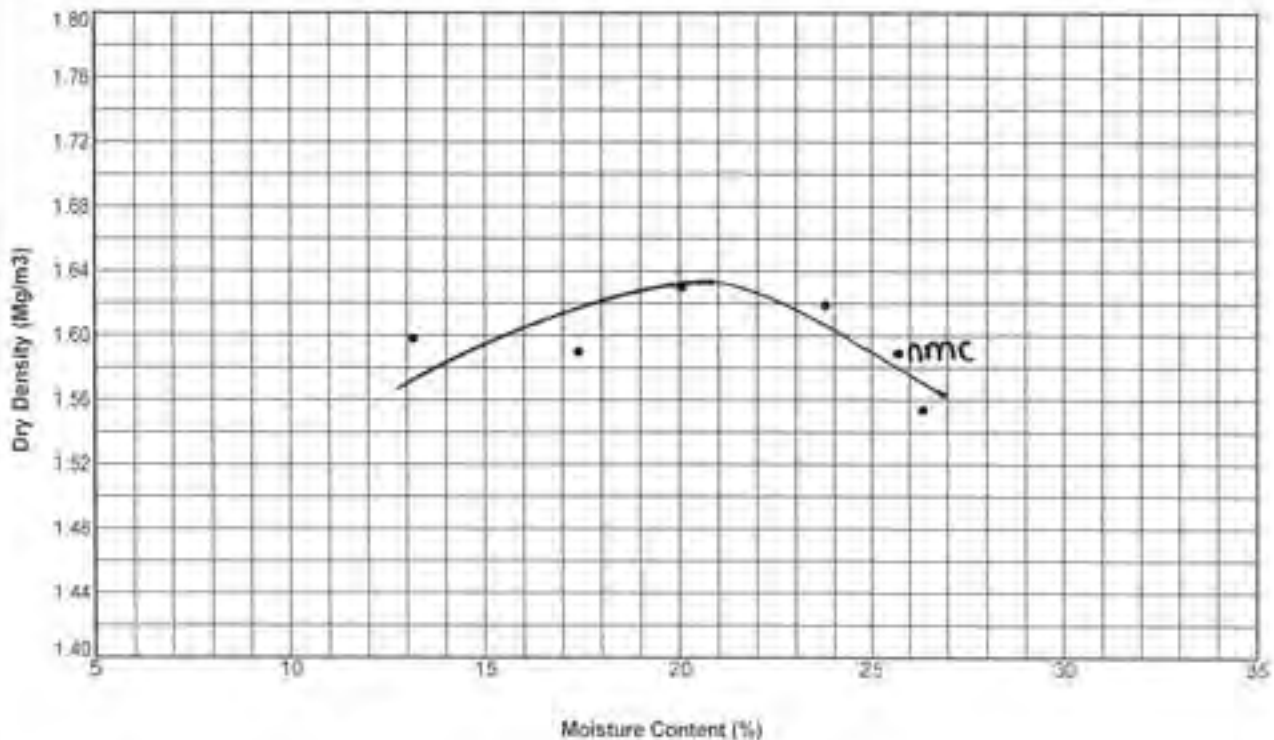
Maximum Dry Density (Mg/m³) = 1.63

Retained on 20mm Sieve (%) = 0.0

Date Tested = 30/09/2020

Retained on 37.5mm Sieve (%) = 0.0

Remarks :



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :-

Prairie Site Ground Investigation Works

Client :-

South Tees Development Corporation



Signed :-

msene

Name :-

Page 1 of 1

Date of issue :-

02/11/2020

Certificate No :-

COMP/4251/T

AEG Contract No :-

4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 25, Broomfield Industrial Estate, Poles Road, Chatteris, Cambs, Cambridgeshire, UK. Tel: 01455 507414 Fax: 01455 511474
Regional Office: Unit 25, Broomfield Industrial Estate, Poles Road, Chatteris, Cambridgeshire, UK. Tel: 01455 507414 Fax: 01455 511474

MOISTURE CONTENT/DRY DENSITY RELATIONSHIP

BS 1377 : Part 4 : 1990

Specimen Identification

Exploratory Hole No :- PRAIRIE_AUK_TP146 Depth (m) :- 1.30

Sample Type & No :- B6

Test Method

2.5kg Compaction

Single Sample

Test Results

Optimum Moisture Content (%) = 17.5

Particle Density (Assumed) = 2.65

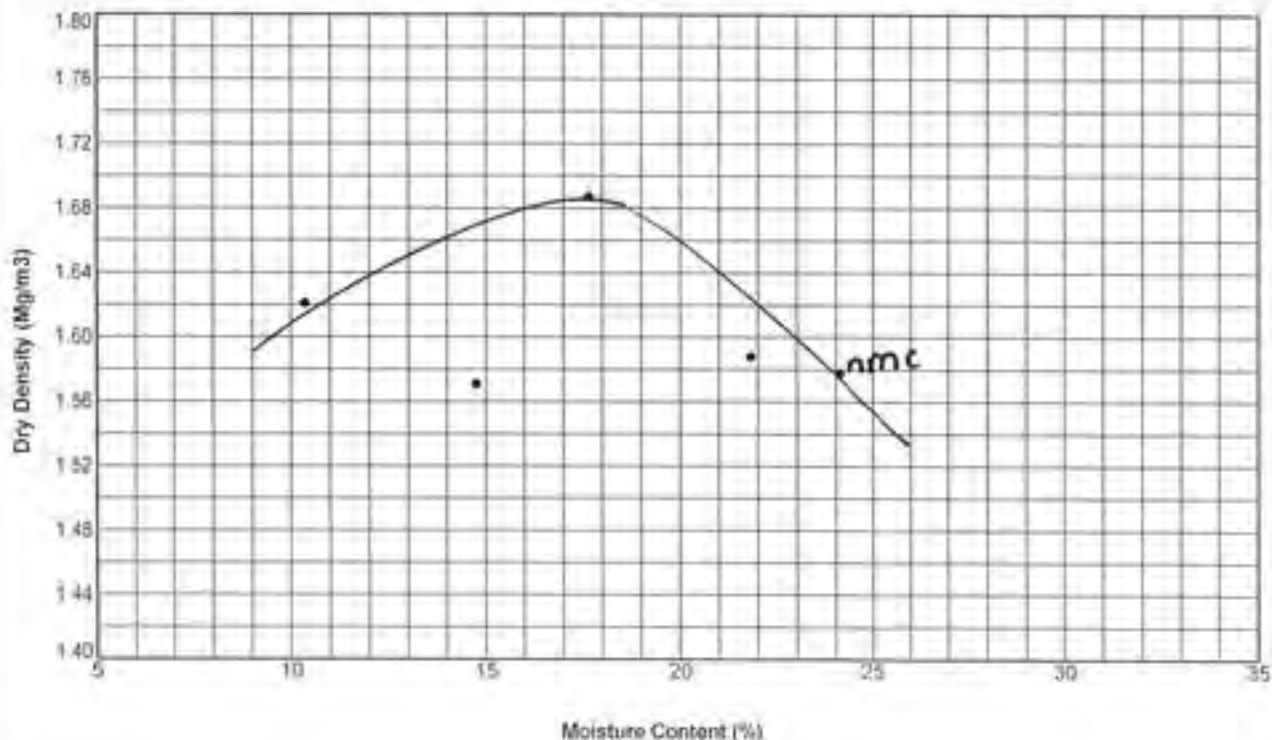
Maximum Dry Density (Mg/m³) = 1.69

Retained on 20mm Sieve (%) = 14.0

Date Tested = 02/10/2020

Retained on 37.5mm Sieve (%) = 6.0

Remarks :



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :-

Prairie Site Ground Investigation Works

Client :-

South Tees Development Corporation



Signed :- *mson*

Name :-

Page 1 of 1

Date of issue :-

02/11/2020

Certificate No :-

COMP/4251/1

AEG Contract No :-

4251



1367

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 25, Kings Gate Industrial Estate, Forest Park, Chesham Street, Col. Dunton, DA2 2WJ. Tel: 01773 284219 Fax: 01773 284218
Regional Office: Unit 26, Seaboard Development Centre, Capenhurst, Sandiacre, Derby DE11 4BB. Tel: 01773 284219 Fax: 01773 284218

MOISTURE CONTENT/DRY DENSITY RELATIONSHIP

BS 1377 - Part 4 : 1990

Specimen Identification

Exploratory Hole No :- PRAIRIE_AUK_TP146 Depth (m) :- 2.30

Sample Type & No :- B8

Test Method

2.5kg Compaction

Single Sample

Test Results

Optimum Moisture Content (%) = 18.5

Particle Density (Assumed) = 2.70

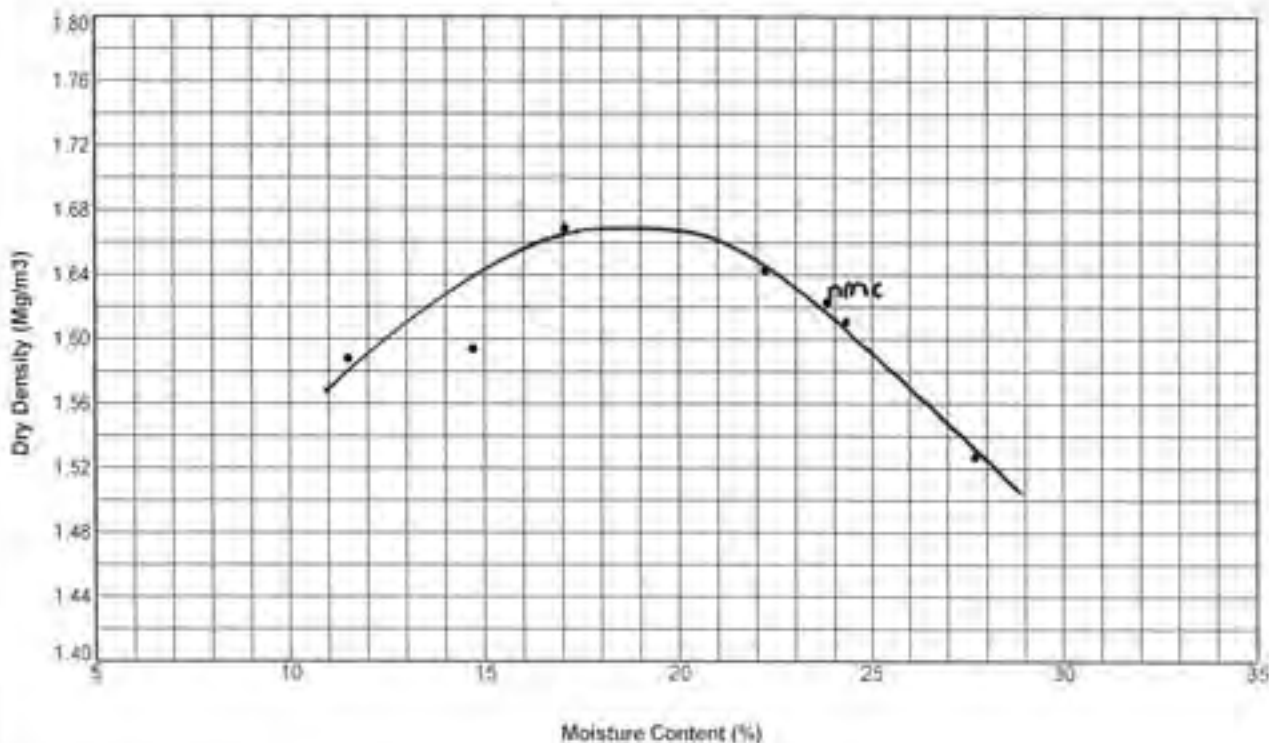
Maximum Dry Density (Mg/m³) = 1.67

Retained on 20mm Sieve (%) = 0.0

Date Tested = 01/10/2020

Retained on 37.5mm Sieve (%) = 0.0

Remarks :



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :-

Prairie Site Ground Investigation Works

Client :-

South Tees Development Corporation



Signed: *msone*

Name :-



Page 1 of 1

Date of issue :-
02/11/2020

Certificate No :-
COMPI425111

REG Contract No :-
4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 25, Rye, East Sussex, TN31 7YU. Tel: 01323 810444 Fax: 01323 811419
Regional Office: Unit 20, Business Development Centre, London Road, Buntingford, Cambs, SG4 9LE. Tel: 01753 752346 Fax: 01753 752355

MOISTURE CONTENT/DRY DENSITY RELATIONSHIP

BS 1377 : Part 4 : 1990

Specimen Identification

Exploratory Hole No :- PRAIRIE_AUK_TP149 Depth (m) :- 2.20

Sample Type & No :- B5

Test Method

2.5kg Compaction

Single Sample

Test Results

Optimum Moisture Content (%) = 22.5

Particle Density (Assumed) = 2.70

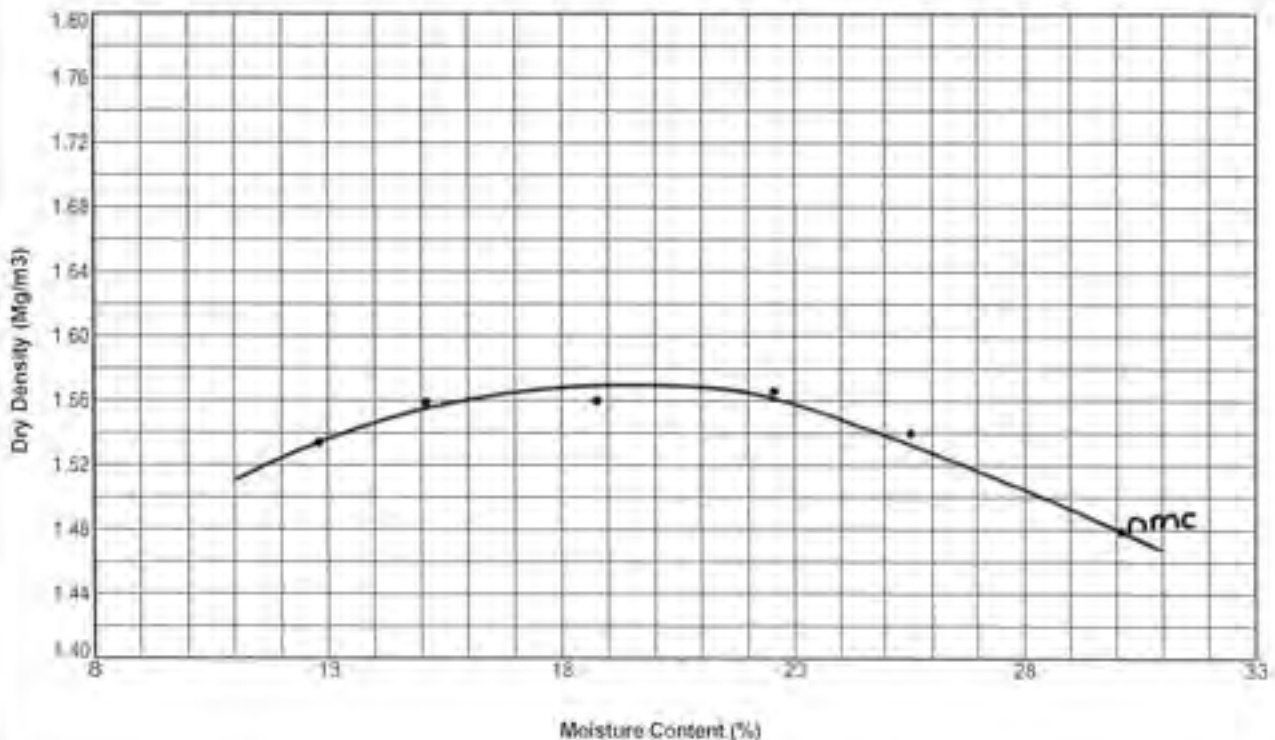
Maximum Dry Density (Mg/m³) = 1.57

Retained on 20mm Sieve (%) = 0.0

Date Tested = 16/10/2020

Retained on 37.5mm Sieve (%) = 0.0

Remarks :



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :-

Prairie Site Ground Investigation Works

Client :-

South Tees Development Corporation



Signed :- *msene*

Name :-

Page 1 of 1

Date of Issue :-
02/11/2020

Certificate No :-
COMP/4251/1

AEG Contract No. :-
4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 25 Millis (on industrial Estate), Fulford Park, Goswick Road, Ormskirk, Ormskirk, Lancs. L25 0DQ. Tel: 01705 561476 Fax: 01705 561475
Regional Office Unit 25 Business Centre, 100000 Centre, Goswick Road, Ormskirk, Lancs. L25 0DQ. Tel: 01705 561476 Fax: 01705 561475

MOISTURE CONTENT/DRY DENSITY RELATIONSHIP

BS 1377, Part 4 : 1990

Specimen Identification

Exploratory Hole No :- PRAIRIE_AUK_TP154 Depth (m) :- 1.60

Sample Type & No :- B5

Test Method

2.5kg Compaction

Single Sample

Test Results

Optimum Moisture Content (%) = 24.0

Particle Density (Assumed) = 2.70

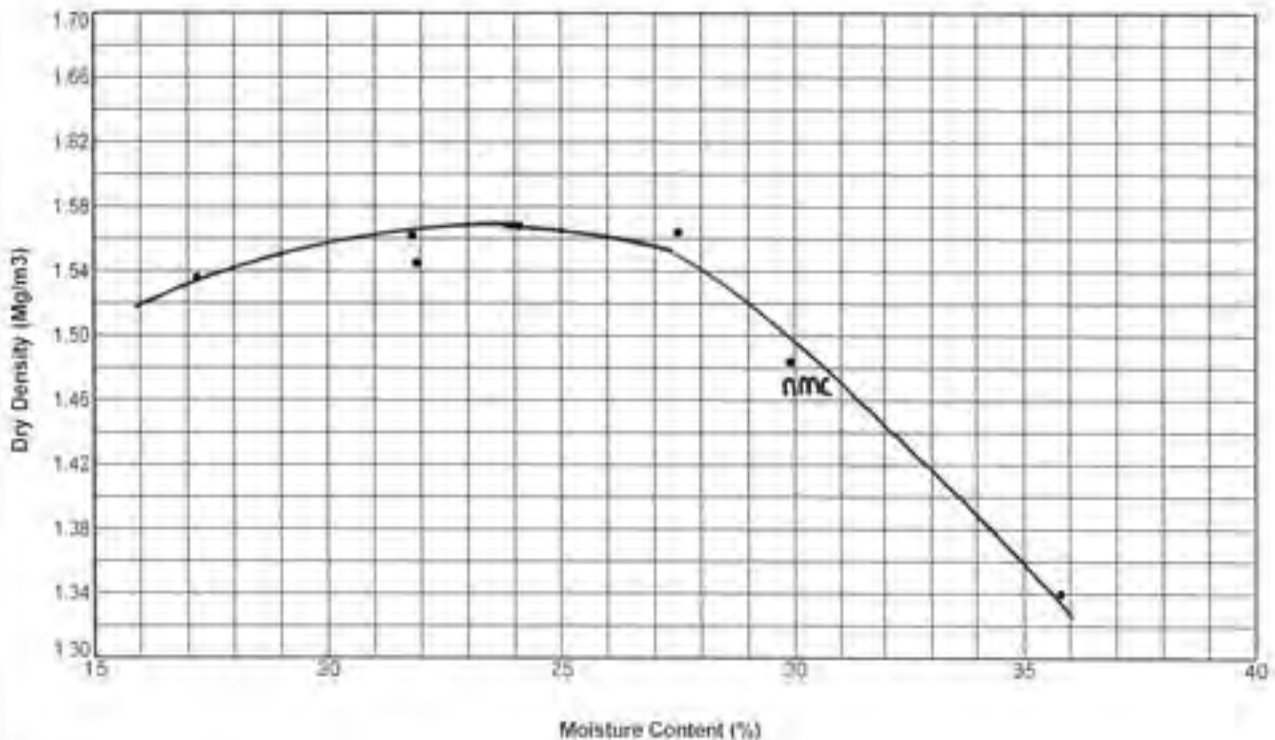
Maximum Dry Density (Mg/m³) = 1.57

Retained on 20mm Sieve (%) = 0.0

Date Tested = 20/10/2020

Retained on 37.5mm Sieve (%) = 0.0

Remarks :-



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :-

Prairie Site Ground Investigation Works

Client :-

South Tees Development Corporation



Signed :- *msc*

Name :- *[Signature]*

Page 1 of 1

Date of issue :- 02/11/2020

Certificate No :- COMR/4251/T

AEG Contract No :- 4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 25, Brierley Industrial Estate, Fyfe Road, Consett, Co. Durham, DL23 1ND. Tel: 0191 387 4279 Fax: 0191 387 4713
Regional Office: LINCOS Business Development Centre, Exploration, Broomby, B'n'G, Tel: 01752 751465 Fax: 01752 751368

MOISTURE CONTENT/DRY DENSITY RELATIONSHIP

BS 1377: Part 4: 1990

Specimen Identification

Exploratory Hole No :- PRAIRIE_AUK_TP163 Depth (m) :- 0.80

Sample Type & No :- B2

Test Method

2.5kg Compaction

Single Sample

Test Results

Optimum Moisture Content (%) = 18.0

Particle Density (Assumed) = 1.70

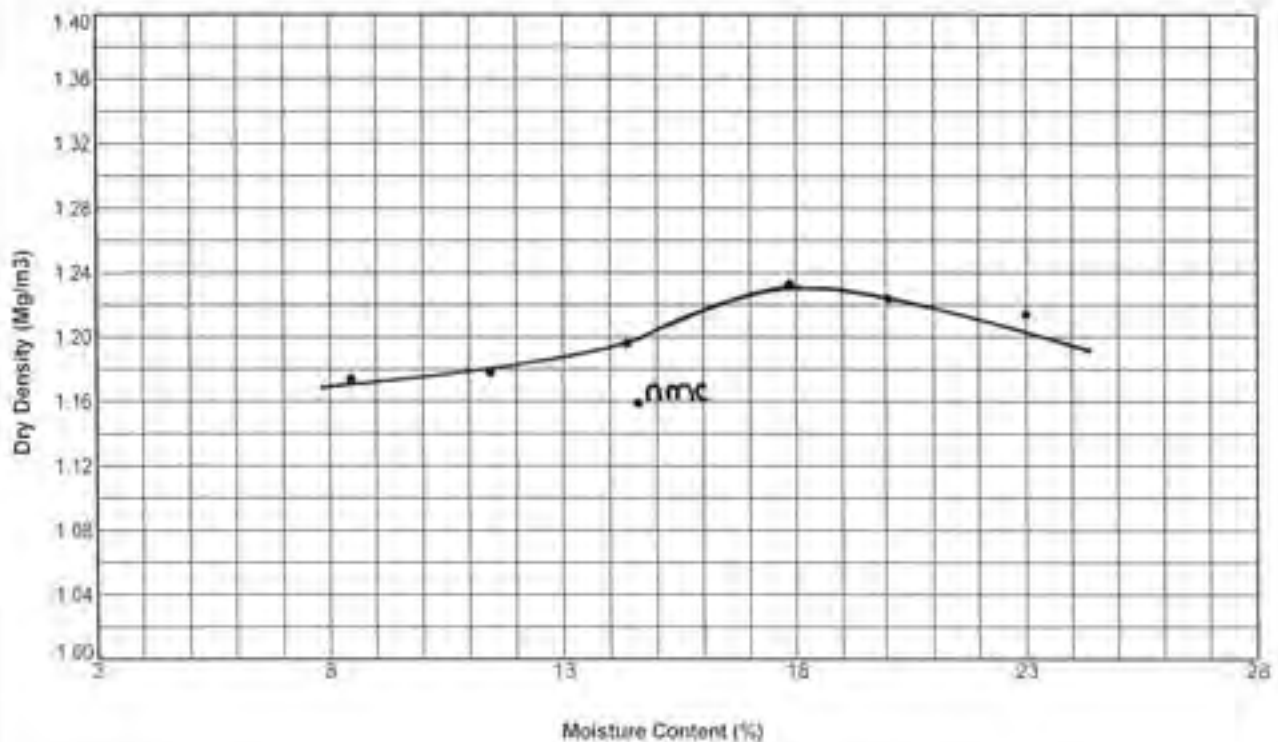
Maximum Dry Density (Mg/m³) = 1.23

Retained on 20mm Sieve (%) = 14.0

Date Tested = 05/10/2020

Retained on 37.5mm Sieve (%) = 1.0

Remarks :



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :-

Prairie Site Ground Investigation Works

Client :-

South Tees Development Corporation



Signed - *msene*

Name :-

Page 1 of 1

Date of issue :-
02/11/2020

Certificate No :-
COMR/4251/1

AEG Contract No :-
4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office Unit 25 Greys (24 Industrial Estate), Palace Road, Haverhill Street, Colchester, Chelmsford, Essex, UK, CO1 1JG. Tel: 0206 807 4700 Fax: 0206 807 4711
Regional Office Unit 23, Business Development Centre, Church Wharf, Sturminster Newton, Dorset, UK. Tel: 01707 755 200 Fax: 01707 130 904

MOISTURE CONTENT/DRY DENSITY RELATIONSHIP BS 1377 : Part 4 : 1990

Specimen Identification

Exploratory Hole No - PRAIRIE_AUK_TP163 Depth (m) - 1.70

Sample Type & No - B5

Test Method

2.5kg Compaction

Separate Samples

Test Results

Optimum Moisture Content (%) = 18.3

Particle Density (Assumed) = 2.75

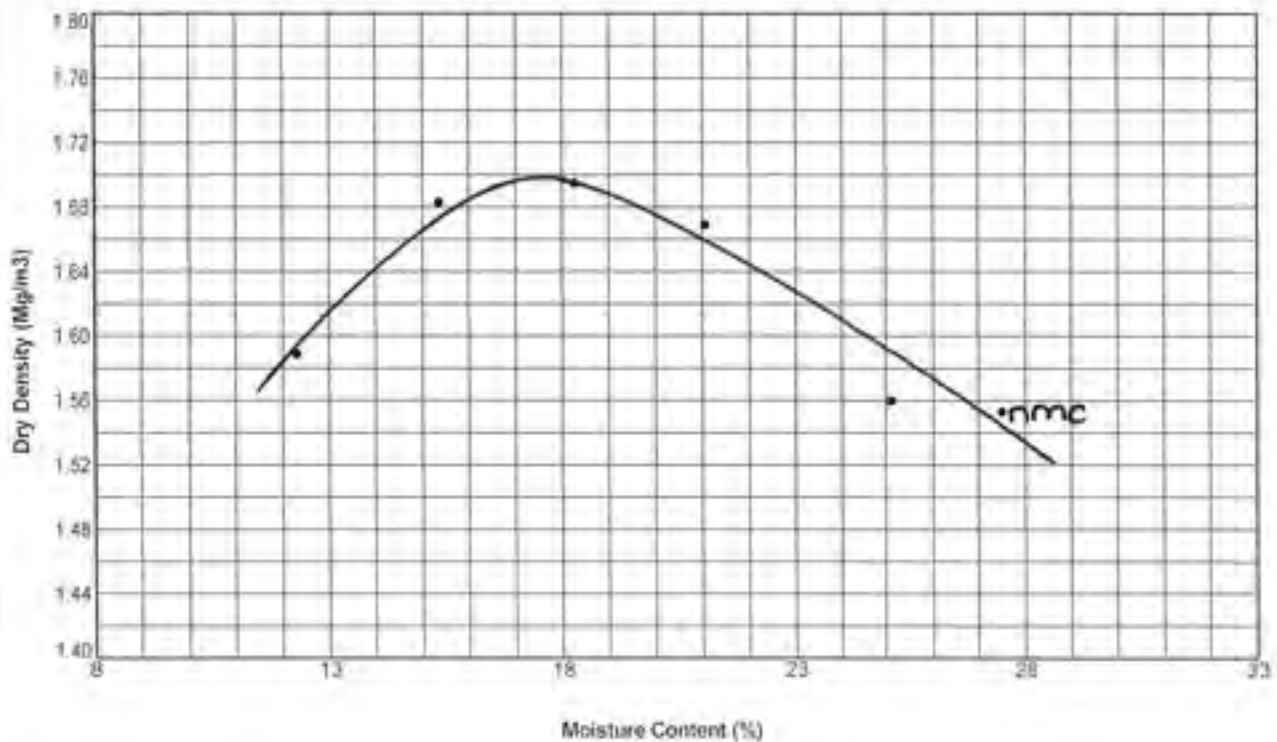
Maximum Dry Density (Mg/m³) = 1.70

Retained on 20mm Sieve (%) = 0.0

Date Tested = 01/10/2020

Retained on 37.5mm Sieve (%) = 0.0

Remarks :



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :-

Prairie Site Ground Investigation Works

Client :-

South Tees Development Corporation



Signed - *msene*

Name -

Page 1 of 1

Date of issue -
02/11/2020

Certificate No -
COMR(251/)

AEG Contract No -
4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 22, South 2nd Industrial Estate, Millers Hill, Cheshire, M20 9JL, UK. Tel: 01256 351470 Fax: 01256 351471
 Regional Office: Unit 15, Staines Development Centre, Kings Road, Staines, Middlesex, TW20 9BB, UK. Tel: 01753 579 270 Fax: 01753 579 460

MOISTURE CONTENT/DRY DENSITY RELATIONSHIP

BS 1377 - Part 4 : 1990

Specimen Identification

Exploratory Hole No :- PRAIRIE_AUK_TP168 Depth (m) :- 1.60

Sample Type & No :- B7

Test Method

2.5kg Compaction

Single Sample

Test Results

Optimum Moisture Content (%) = 24.0

Particle Density (Assumed) = 2.70

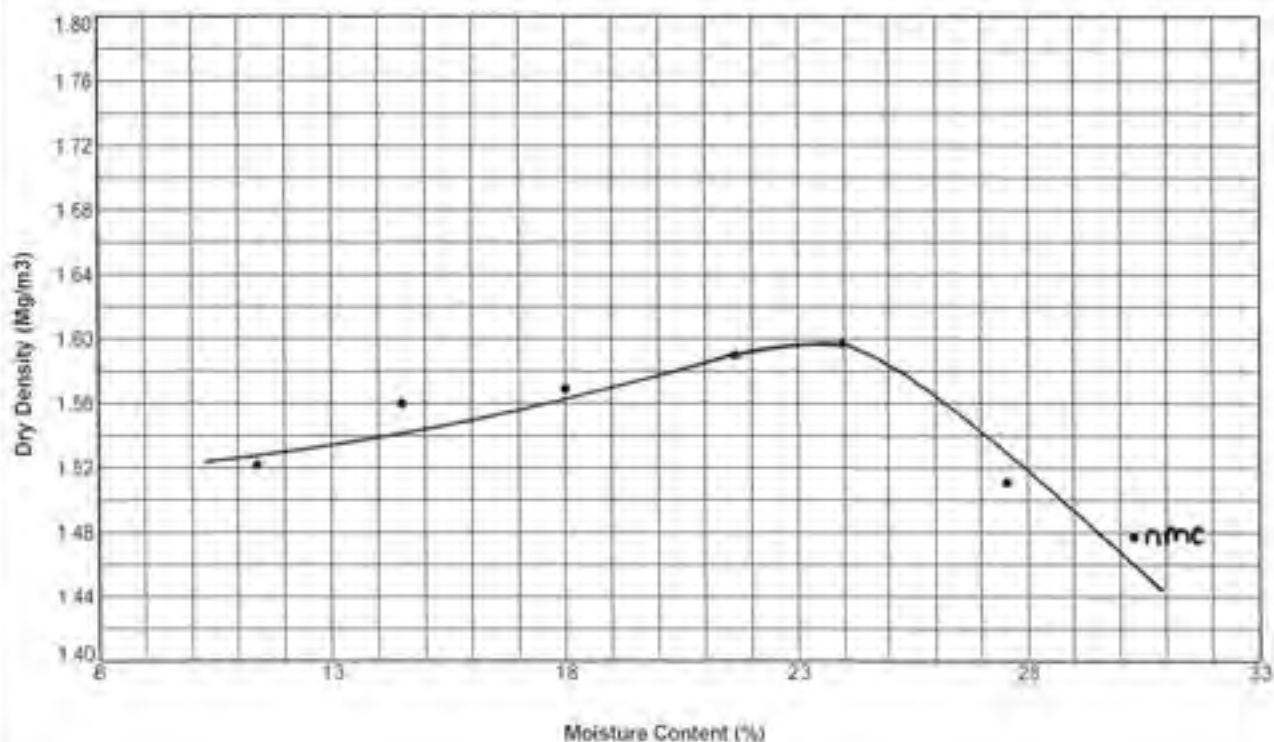
Maximum Dry Density (Mg/m³) = 1.60

Retained on 20mm Sieve (%) = 0.0

Date Tested = 01/10/2020

Retained on 37.5mm Sieve (%) = 0.0

Remarks :



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :-

Prairie Site Ground Investigation Works

Client :-

South Tees Development Corporation



Signed - *msone*

Name :-

Page 1 of 1

Date of issue - 02/11/2020

Certificate No. - DCOMP4251/1

AEG Contract No. - 4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 25, Belfry Industrial Estate, Wetherby, West Yorkshire LS23 7BQ - Tel: 01937 541479 Fax: 01937 541411
 Regional Office: Unit 21, Riverside Development Centre, Easingwold, East Yorkshire YO21 3BS - Tel: 01753 775 200 Fax: 01753 775 129

MOISTURE CONTENT/DRY DENSITY RELATIONSHIP

BS 1377 : Part 4 : 1990

Specimen Identification

Exploratory Hole No - PRAIRIE_AUK_TP173 Depth (m) - 0.80

Sample Type & No - B2

Test Method

2.5kg Compaction

Single Sample

Test Results

Optimum Moisture Content (%) = 18.0

Particle Density (Assumed) = 2.55

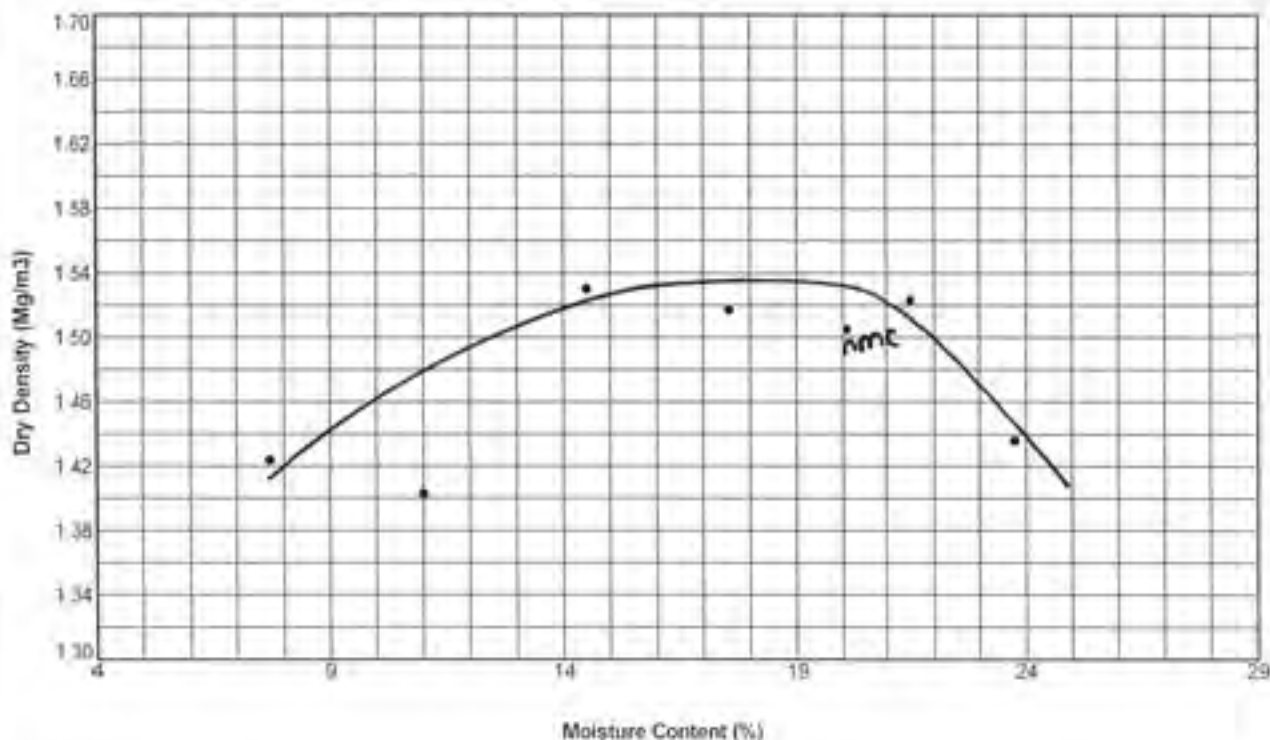
Maximum Dry Density (Mg/m³) = 1.53

Retained on 20mm Sieve (%) = 22.0

Date Tested = 30/09/2020

Retained on 37.5mm Sieve (%) = 8.0

Remarks :



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title -

Prairie Site Ground Investigation Works

Client -

South Tees Development Corporation



Signed - *msene*

Name -

Page 1 of 1

Date of issue -
02/11/2020

Certificate No -
COMP4251/1

AEG Contract No -
4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 21 Waterhill Industrial Estate, Park Road, Chesterfield, Derbyshire, S40 2NS. Tel: 01293 562478 Fax: 01293 562479
Regional Office: Unit 25, Business Development Centre, "Kingsmead" Southway, Barnsley, S70 2BQ. Tel: 01225 725 576 Fax: 01225 725588

MOISTURE CONTENT/DRY DENSITY RELATIONSHIP

BS 1377 : Part 4 : 1990

Specimen Identification

Exploratory Hole No :- PRAIRIE_AUK_TP176 Depth (m) :- 2.00

Sample Type & No :- B5

Test Method

2.5kg Compaction

Single Sample

Test Results

Optimum Moisture Content (%) = 18.0

Particle Density (Assumed) = 2.70

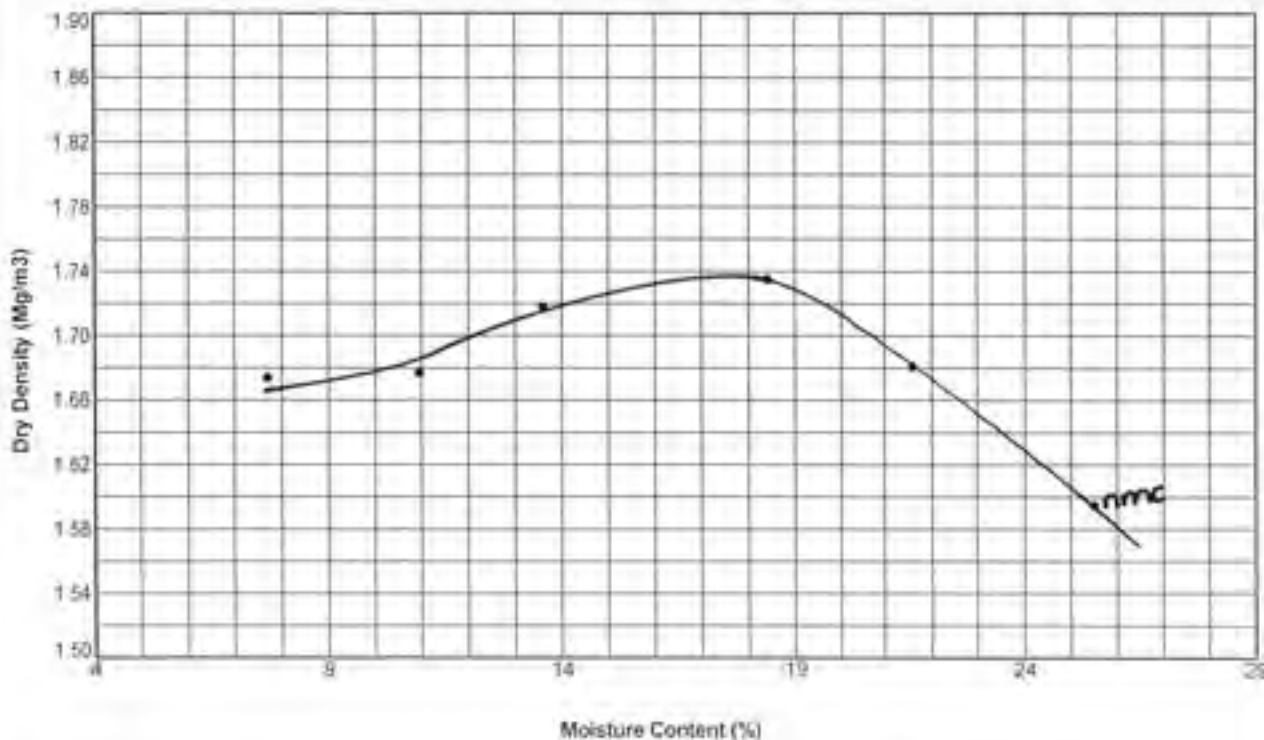
Maximum Dry Density (Mg/m³) = 1.74

Retained on 20mm Sieve (%) = 0.0

Date Tested = 29/09/2020

Retained on 37.5mm Sieve (%) = 0.0

Remarks :



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :-

Prairie Site Ground Investigation Works

Client :-

South Tees Development Corporation



Signed :-

msene

Name :-

Date of issue :-

02/11/2020

Certificate No :-

COMP4251/1

AEG Contract No :-

4251

Page 1 of 1



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office Unit 25 Brindley Industrial Estate, Park Road, Chester, Cheshire, CH1 4JG, UK Tel: 01244 837478 Fax: 01244 837479
Regional Office Unit 25 Business Centre, Church Lane, Warrington, Cheshire, WA1 1AA, UK Tel: 01925 761500 Fax: 01925 751289

MOISTURE CONTENT/DRY DENSITY RELATIONSHIP

BS 1377 : Part 4 : 1990

Specimen Identification

Exploratory Hole No :- PRAIRIE_AUK_TP178 Depth (m) :- 0.60

Sample Type & No :- B2

Test Method

2.5kg Compaction

Single Sample

Test Results

Optimum Moisture Content (%) = 21.7

Particle Density (Assumed) = 2.00

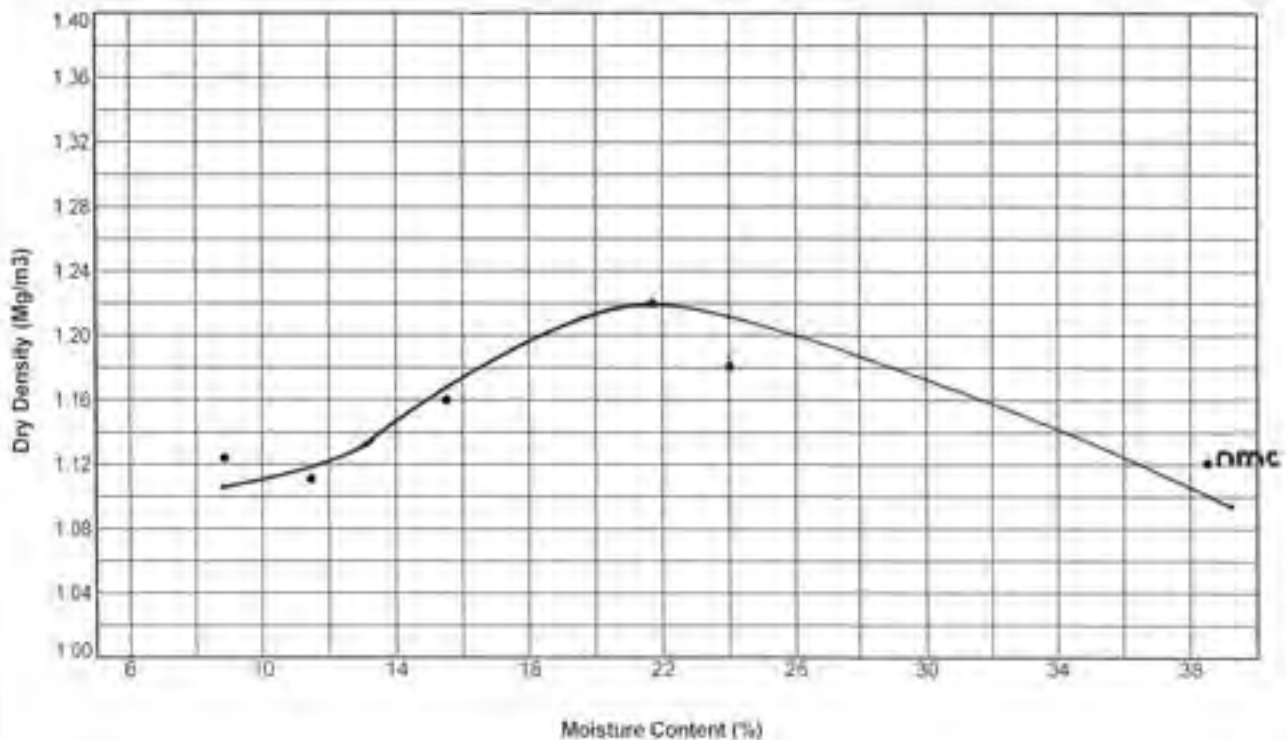
Maximum Dry Density (Mg/m³) = 1.22

Retained on 20mm Sieve (%) = 11.0

Date Tested = 05/10/2020

Retained on 37.5mm Sieve (%) = 5.0

Remarks :



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :-

Prairie Site Ground Investigation Works

Client :-

South Tees Development Corporation



Signed :-

msene

Name :-

[Signature]

Page 1 of 1

Date of issue :-

02/11/2020

Certificate No :-

COMB4251/1

AEG Contract No :-

4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 21, West of Industrial Estate, Furness Road, Cockerham, Preston, Lancashire, PR1 0SD. Tel: 01773 600 610 Fax: 01773 601 411
Regional Office: 1, Moorfields Business Development Centre, "Kilnsey Wharf", Southtown, Barnsley, S70 2RT. Tel: 01225 721330 Fax: 01225 721331

MOISTURE CONTENT/DRY DENSITY RELATIONSHIP

BS 1377 : Part 4 : 1990

Specimen Identification

Exploratory Hole No :- PRAIRIE_AUK_TP178 Depth (m) :- 1.60

Sample Type & No :- B5

Test Method

2.5kg Compaction

Single Sample

Test Results

Optimum Moisture Content (%) = 24.0

Particle Density (Assumed) = 2.40

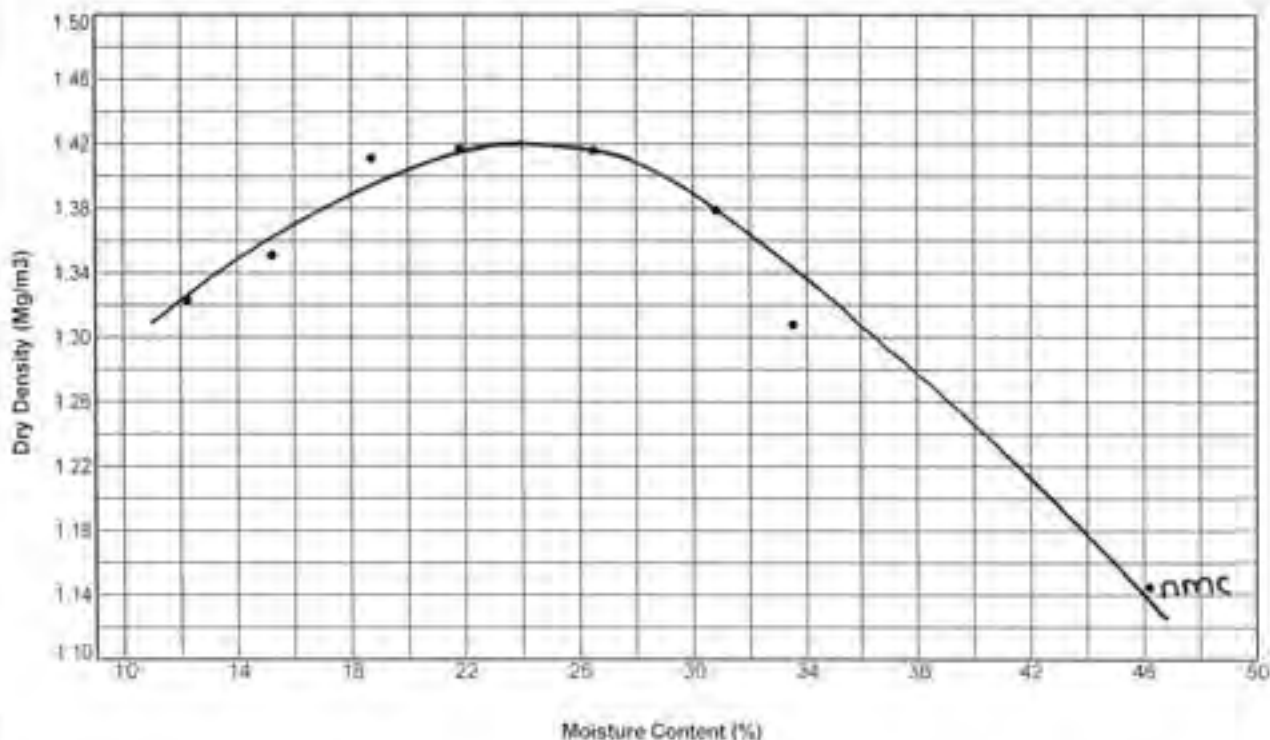
Maximum Dry Density (Mg/m³) = 1.42

Retained on 20mm Sieve (%) = 0.0

Date Tested = 30/09/2020

Retained on 37.5mm Sieve (%) = 0.0

Remarks :



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :-

Prairie Site Ground Investigation Works

Client :-

South Tees Development Corporation



Signed :-

msene

Name :-

[Signature]

Page 1 of 1

Date of issue :-

02/11/2020

Certificate No :-

COMP4251/1

AEG Contract No :-

4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 23 (over Garages) York Road, South Shields, Co. Durham, DH1 2RS. Tel: 0191 357 4210 Fax: 0191 357 4710
Regional Office: Unit 23, (over Garages) Twelve Darnley Road, Sunderland, SR1 1SR. Tel: 01753 751300 Fax: 01753 751301

MOISTURE CONTENT/DRY DENSITY RELATIONSHIP

BS 1377 Part 4: 1990

Specimen Identification

Exploratory Hole No :- PRAIRIE_AUK_TP179 Depth (m) :- 0.40

Sample Type & No :- B2

Test Method

2.5kg Compaction

Single Sample

Test Results

Optimum Moisture Content (%) = 16.0

Particle Density (Assumed) = 2.05

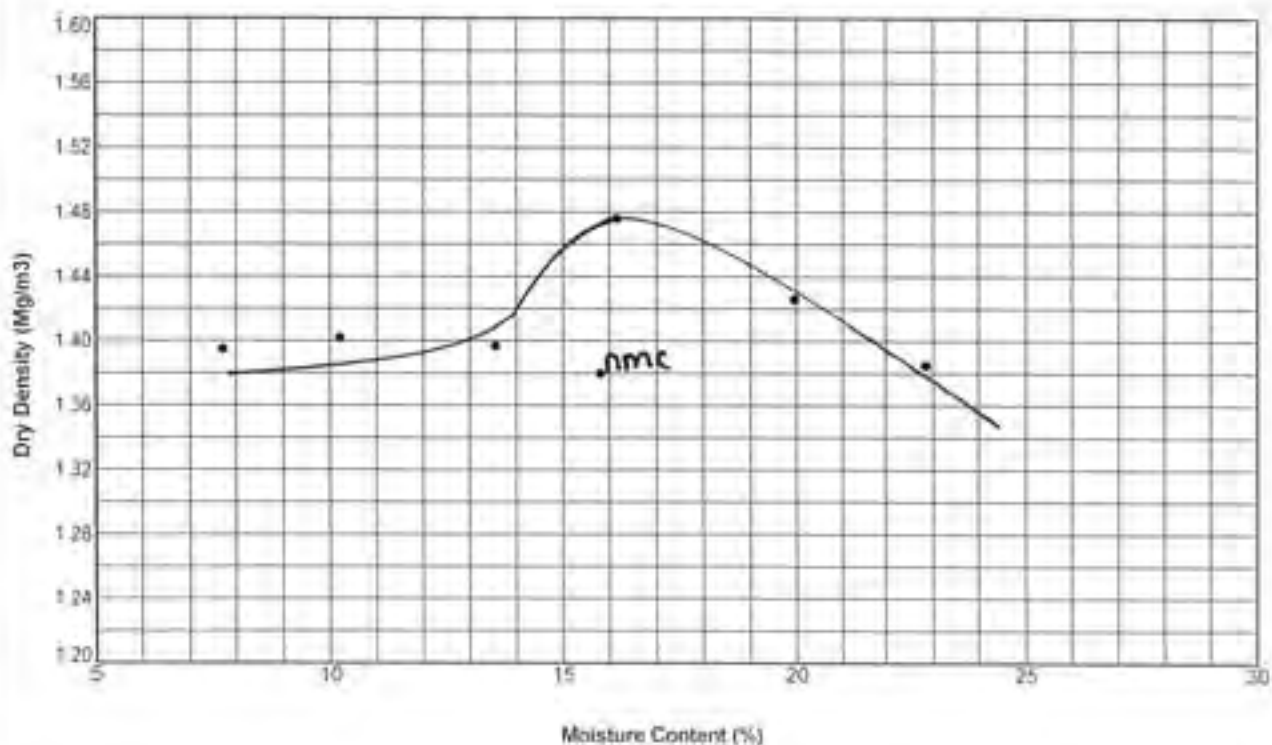
Maximum Dry Density (Mg/m³) = 1.48

Retained on 20mm Sieve (%) = 19.0

Date Tested = 30/09/2020

Retained on 37.5mm Sieve (%) = 10.0

Remarks ::



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :-

Prairie Site Ground Investigation Works

Client :-

South Tees Development Corporation



Signed :- *msene*

Name :-

MSENE

Page 1 of 1

Date of issue :-
02/11/2020

Certificate No :-
COMP4251/1

AEG Contract No :-
4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 25, Wield (a) Industrial Estate, Forest Farm, Chatteris, Huntingdon, Cambs, Cambridgeshire, UK. Tel: 01455 510000 Fax: 01455 510001
 Regional Office: Unit 21, Business Gateway, Chatteris, Huntingdon, Cambridgeshire, UK. Tel: 01455 510000 Fax: 01455 510001

MOISTURE CONTENT/DRY DENSITY RELATIONSHIP BS 1377 Part 4: 1990

Specimen Identification

Exploratory Hole No - PRAIRIE_AUK_TP182 Depth (m) - 0.60

Sample Type & No - B2

Test Method

2.5kg Compaction

Single Sample

Test Results

Optimum Moisture Content (%) = 17.5

Particle Density (Assumed) = 1.95

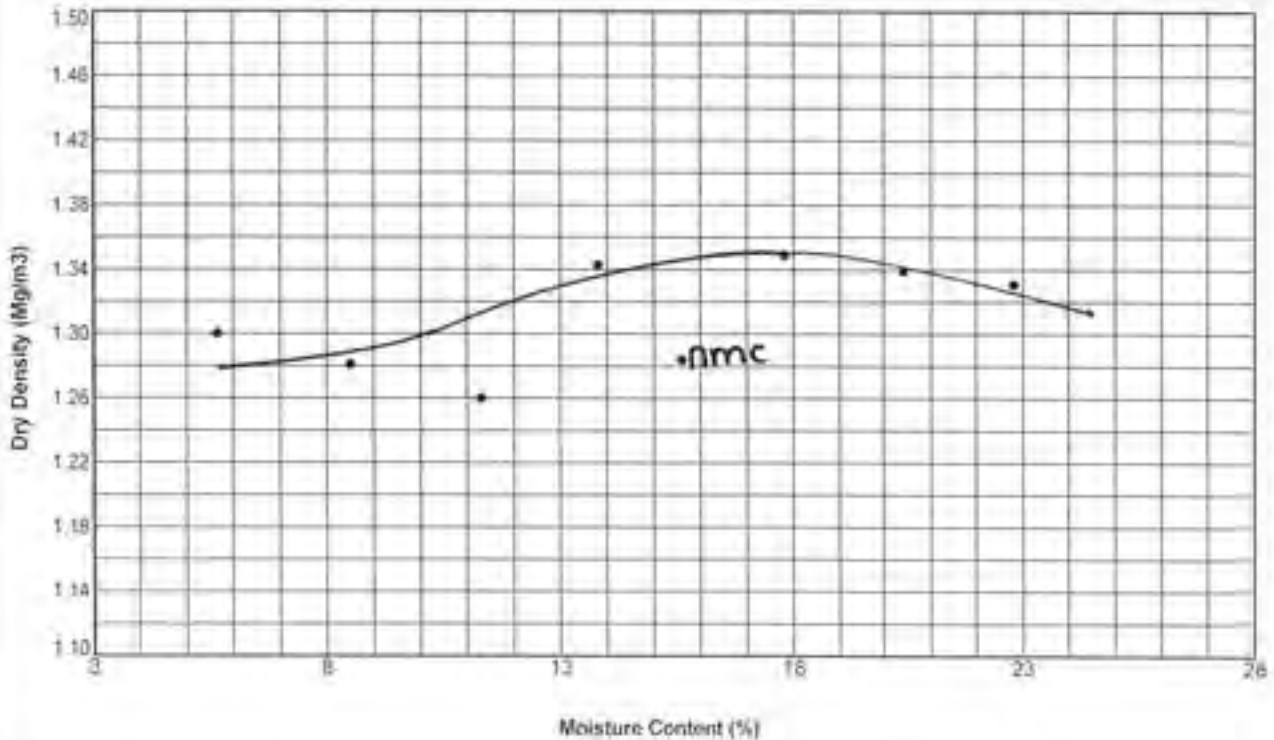
Maximum Dry Density (Mg/m³) = 1.35

Retained on 20mm Sieve (%) = 17.0

Date Tested = 28/09/2020

Retained on 37.5mm Sieve (%) = 3.0

Remarks :



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :-

Prairie Site Ground Investigation Works

Client :-

South Tees Development Corporation



Signed :-

msone

Name :-

Page 1 of 1

Date of issue :-

02/11/2020

Certificate No :-

COMP/4251/1

AEG Contract No :-

4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 25, Brookside Enterprise Centre, North Street, Darlington, Co. Durham, DL1 1BS. Tel: 01779 367498 Fax: 01779 367410
Regional Office: Unit 25, Stannard Development Centre, "Kings Wood", Heslerton, BN 1 5B. Tel: 01753 771341 Fax: 01753 771342

MOISTURE CONTENT/DRY DENSITY RELATIONSHIP

BS 1377 - Part 4 : 1990

Specimen Identification

Exploratory Hole No - PRAIRIE_AUK_TP189 Depth (m) - 1.50

Sample Type & No - B4

Test Method

2.5kg Compaction

Single Sample

Test Results

Optimum Moisture Content (%) = 21.0

Particle Density (Assumed) = 2.65

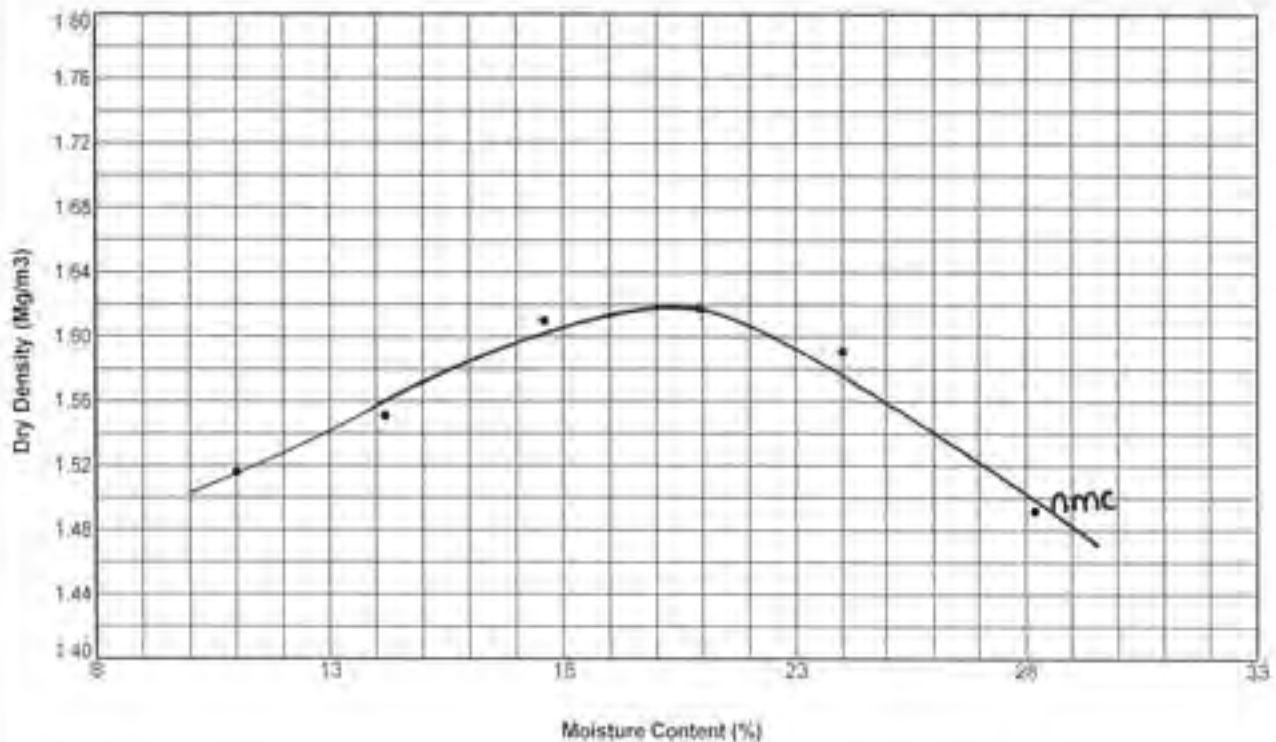
Maximum Dry Density (Mg/m³) = 1.62

Retained on 20mm Sieve (%) = 0.0

Date Tested = 30/09/2020

Retained on 37.5mm Sieve (%) = 0.0

Remarks :



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title -

Prairie Site Ground Investigation Works

Client -

South Tees Development Corporation



Signed -

mserle

Name -

M. Serle

Page 1 of 1

Date of issue -

02/11/2020

Certificate No -

COMP/4251/1

AEG Contract No -

4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 21, The Old School House, High Road, Chesham, Bucks, UK. Dunstable: (01462) 420000. Tel: 0117 327 4700 Fax: 0117 327 4710
 Regional Offices: Unit 21, The Old School House, High Road, Chesham, Bucks, UK. Tel: 0117 327 4700 Fax: 0117 327 4710

MOISTURE CONTENT/DRY DENSITY RELATIONSHIP

BS 1377 Part 4: 1990

Specimen Identification

Exploratory Hole No :- PRAIRIE_AUK_TP189 Depth (m) :- 2.90

Sample Type & No :- B6

Test Method 2.5kg Compaction

Single Sample

Test Results

Optimum Moisture Content (%) = 21.5

Particle Density (Assumed) = 2.70

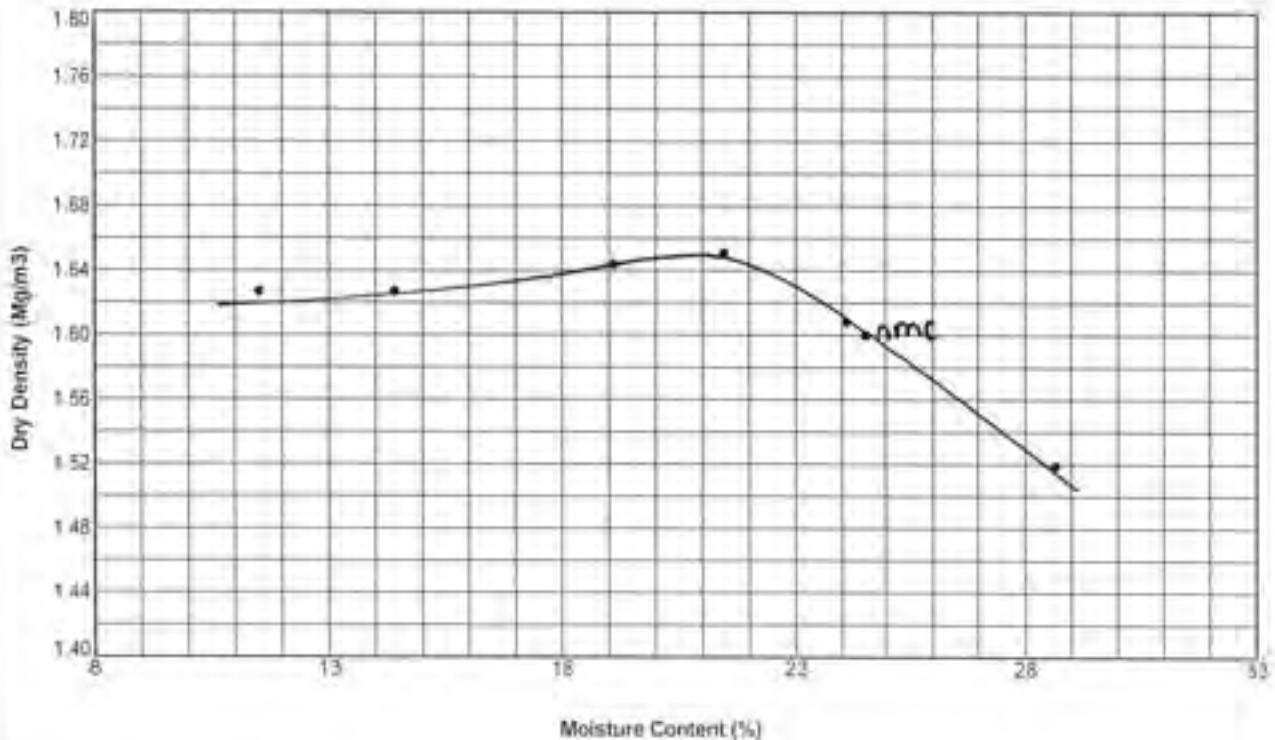
Maximum Dry Density (Mg/m³) = 1.65

Retained on 20mm Sieve (%) = 0.0

Date Tested = 30/09/2020

Retained on 37.5mm Sieve (%) = 0.0

Remarks :



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :- Prairie Site Ground Investigation Works

Client :- South Tees Development Corporation



Signed: *msene*

Name :-

Page 1 of 1

Date of Issue :- 02/11/2020

Certificate No: COMP/251/1

AEG Contract No :- 4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office Unit 25, Southport Business Park, Ferry Road, Southport, Merseyside, L35 9EF
Regional Office Unit 25, Business Development Centre, Kingswood, Braintree, Essex, CO1 1JL

ATTEMPTED AND ABORTED TESTING

| Exploratory Hole No. | Sample Depth (m) | Sample ID | Test Type | Retained on 20mm (%) | Retained on 37.5mm (%) | Remarks |
|----------------------|------------------|-----------|------------------|----------------------|------------------------|---|
| PRAIRIE_AJK_TP109 | 0.90 | B4 | 2.5kg Compaction | 55.0 | 45.0 | Test Unsuitable due to excessive coarse material. |
| PRAIRIE_AJK_TP110 | 1.00 | B2 | 2.5kg Compaction | 29.0 | 15.0 | Test Unsuitable due to excessive coarse material. |
| PRAIRIE_AJK_TP111 | 1.00 | B5 | 2.5kg Compaction | 48.0 | 37.0 | Test Unsuitable due to excessive coarse material. |
| PRAIRIE_AJK_TP113 | 1.80 | B6 | 2.5kg Compaction | 86.0 | 40.0 | Test Unsuitable due to excessive coarse material. |
| PRAIRIE_AJK_TP114 | 0.40 | B4 | 2.5kg Compaction | 23.0 | 12.0 | Test Unsuitable due to excessive coarse material. |
| PRAIRIE_AJK_TP117 | 2.00 | B5 | 2.5kg Compaction | 65.0 | 39.0 | Test Unsuitable due to excessive coarse material. |
| PRAIRIE_AJK_TP132 | 2.00 | B6 | 2.5kg Compaction | 57.0 | 37.0 | Test Unsuitable due to excessive coarse material. |
| PRAIRIE_AJK_TP137 | 1.00 | B4 | 2.5kg Compaction | 38.0 | 6.0 | Test Unsuitable due to excessive coarse material. |
| PRAIRIE_AJK_TP155A | 0.70 | B4 | 2.5kg Compaction | 82.0 | 81.0 | Test Unsuitable due to excessive coarse material. |
| PRAIRIE_AJK_TP164 | 1.80 | B5 | 4.5kg Compaction | 64.0 | 51.0 | Test Unsuitable due to excessive coarse material. |
| PRAIRIE_AJK_TP169 | 0.80 | B2 | 4.5kg Compaction | 25.0 | 20.0 | Test Unsuitable due to excessive coarse material. |
| PRAIRIE_AJK_TP172 | 0.60 | B2 | 2.5kg Compaction | 97.0 | 96.0 | Test Unsuitable due to excessive coarse material. |
| PRAIRIE_AJK_TP177 | 1.80 | B7 | 2.5kg Compaction | 88.0 | 97.0 | Test Unsuitable due to excessive coarse material. |
| PRAIRIE_AJK_TP181 | 0.50 | B2 | 2.5kg Compaction | 25.0 | 16.0 | Test Unsuitable due to excessive coarse material. |
| PRAIRIE_AJK_TP188 | 0.60 | B2 | 2.5kg Compaction | 39.0 | 8.0 | Test Unsuitable due to excessive coarse material. |

For description of sample please refer to the Laboratory Sample Description Sheet

| | |
|---|--|
| Contract Title :- Prairie Site Ground Investigation Works | Client :- South Tees Development Corporation |
|---|--|

| | | | |
|---|--------------------------------|----------------------------------|-----------------------------------|
|  | Signed :- <i>[Signature]</i> | | Page 1 of 1 |
| | Date of Issue :- 03/11/2020 | Certificate No :- USCR/M251/F | AEIG Control No :- 4251 |

Determination of California Bearing Ratio



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 21 South Gate Industrial Estate, Priory Way, Chorleywood, Essex, Dunmow, CO9 2SD. Tel: 01992 387 438 Fax: 01992 387 439
Regional Office: Unit 21, Business Development Centre, Eastern Street, Buntingford, Cambs, CB11 1SA. Tel: 01753 735 260 Fax: 01753 735 261

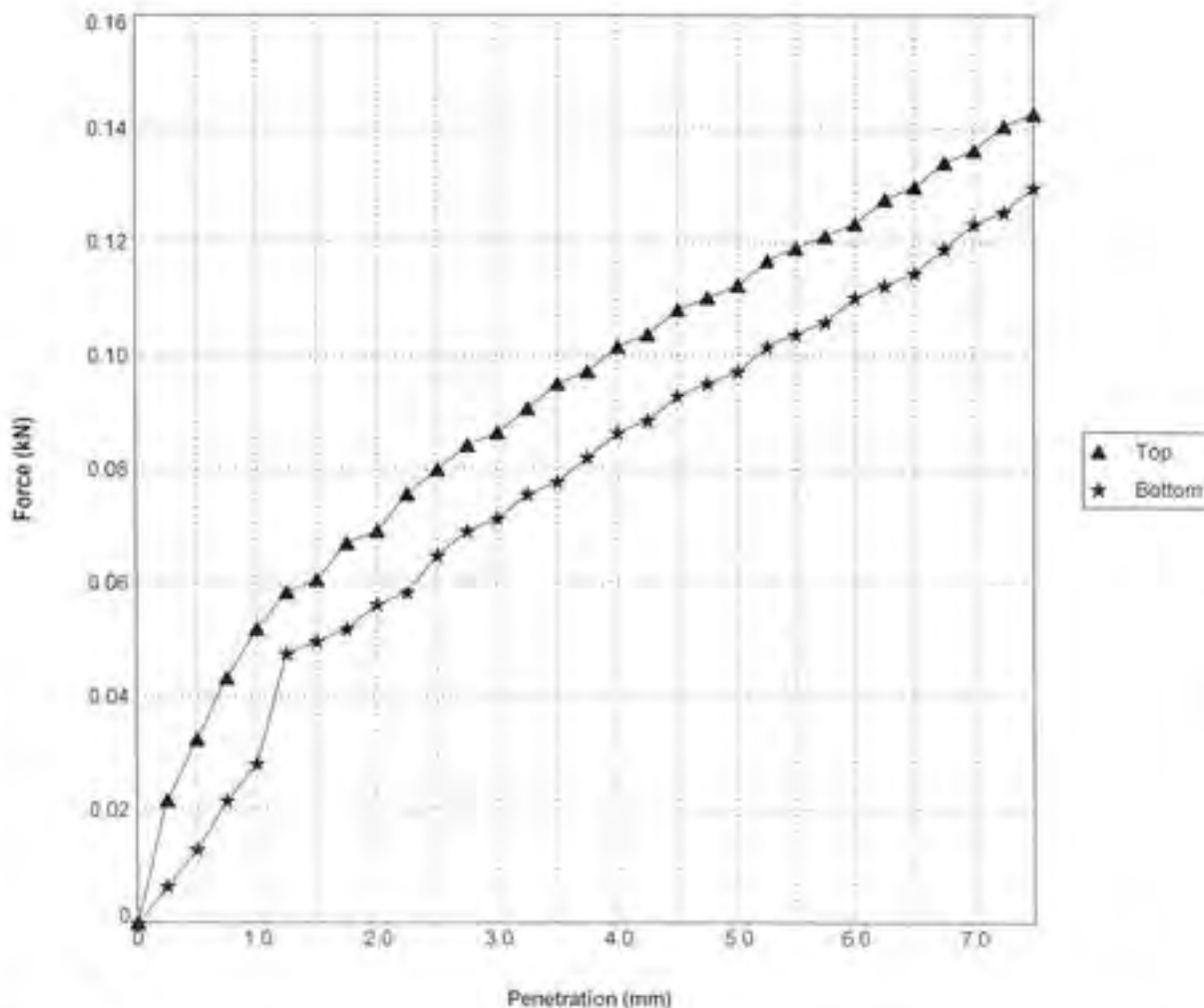
DETERMINATION OF THE CALIFORNIA BEARING RATIO

BS 1377 - Part 4 : 1990 and Part 2 : Clause 3.2 : 1990

Exploratory Hole No.- **PRAIRIE_AUK_BH107** Sample No.- **B5**

Depth (m)- **4.00**

| | | | |
|--------------------------------------|------------------|-------------------------------------|------------------------|
| "As Received" Moisture Content (%) : | 27.4 | Surcharge (Kg) : | 6 |
| Retained on 20mm (%) : | 0.0 | Seating Load (N) : | Top 10 / Bottom 10 |
| Correction Needed : | No | Test Moisture Content (%) : | Top 27.1 / Bottom 27.7 |
| Soaking Time (Days) : | N/A | Bulk Density (Mg/m ³) : | 1.96 |
| Swelling (mm) : | N/A | Dry Density (Mg/m ³) : | 1.54 |
| Date Tested : | 14/07/2020 | CBR Value (%) : | Top 0.6 / Bottom 0.5 |
| Preparation Method : | 2.5kg Compaction | | |
| Remarks : | | | |



For description of sample please refer to the Laboratory Sample Description Sheet

| | |
|--|---|
| Contract Title :- Prairie Site Ground Investigation Works | Client :- South Tees Development Corporation |
|--|---|

| | | | | |
|---|--------------------------------|---|-----------------------------|---|
|  | Signed :- <i>msone</i> | Name :- <i>M. BELKIRK</i> | Page 1 of 1 |  |
| | Date of issue :- 31.07.2020 | Certificate No. :- CBR/4251/PRAIRIE_AUK_BH107/B5/4 001 | AEG Contract No. :- 4251 | |

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 21, Walsley Industrial Estate, Park Road, Walsley, Rotherham, S64 5DG. Tel: 0114 951 4700 Fax: 0114 251 4710
Regional Office: Unit 20, Business Development Centre, Eastern Wharf, Barnsley, S81 1SA. Tel: 01223 735 385 Fax: 01223 735 980

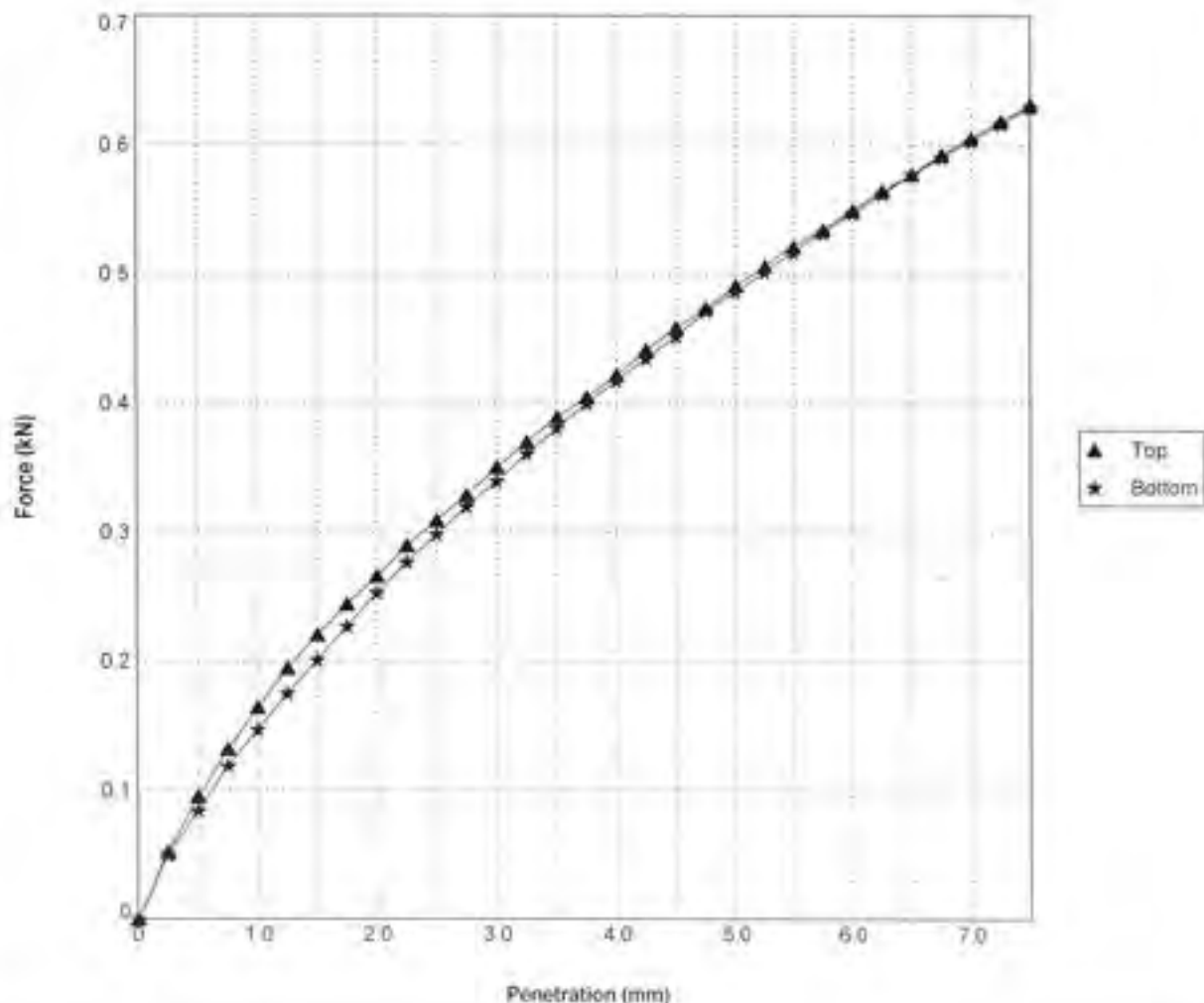
DETERMINATION OF THE CALIFORNIA BEARING RATIO

BS 1377 - Part 4 - 1990 and Part 2 - Clause 3.2 - 1990

Exploratory Hole No. - PRAIRIE_AUK_BH109 Sample No. - B4

Depth (m) - 0.50

| | | | |
|--------------------------------------|------------------|-------------------------------------|------------------------|
| "As Received" Moisture Content (%) : | 23.8 | Surcharge (Kg) : | 6 |
| Retained on 20mm (%) : | 1.0 | Seating Load (N) : | Top 10 / Bottom 10 |
| Correction Needed : | No | Test Moisture Content (%) : | Top 23.3 / Bottom 24.2 |
| Soaking Time (Days) : | N/A | Bulk Density (Mg/m ³) : | 2.00 |
| Swelling (mm) : | N/A | Dry Density (Mg/m ³) : | 1.61 |
| Date Tested : | 14/07/2020 | CBR Value (%) : | Top 2.5 / Bottom 2.4 |
| Preparation Method : | 2.5kg Compaction | | |
| Remarks : | | | |



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :- Prairie Site Ground Investigation Works

Client :- South Tees Development Corporation



Signed :- *msone*

Name :- M. SCLAR

Page 1 of 1

Date of issue :- 31/07/2020

Certificate No. :- CBR/4351/PRAIRIE_AUK_BH109/B4/0.50/1

AEG Contract No. :- 4251



1367

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 21, Boreas (28 Industrial Estate), Porth Park, Clevedon Road, Cox Durham, DN2 2BG. Tel: 0191 351 4700 Fax: 0191 351 4755
Regional Office: Unit 21, Business Development Centre, Eastern Wharf, Gosport, H01 5BL. Tel: 01703 735 300 Fax: 01703 735 260

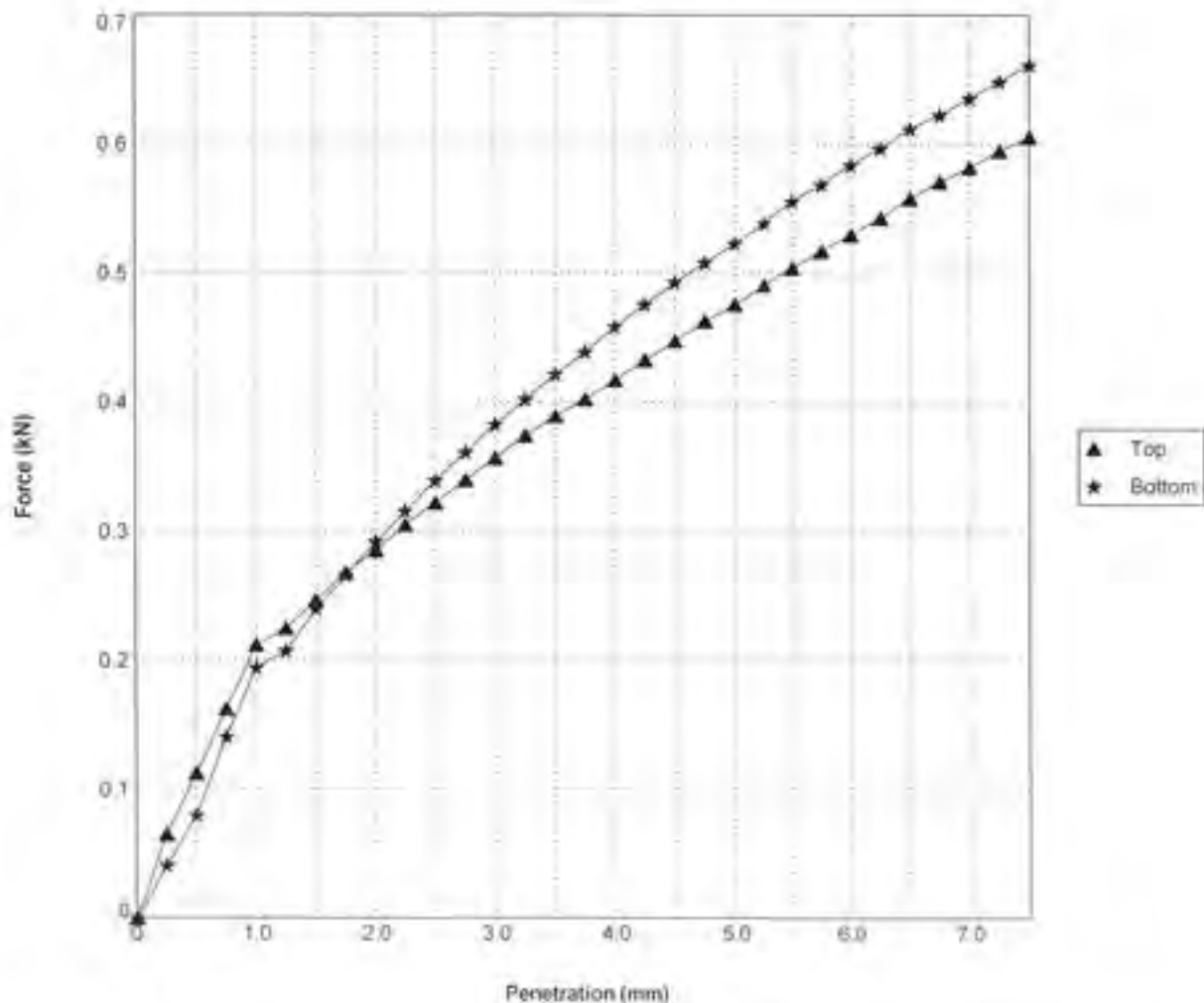
DETERMINATION OF THE CALIFORNIA BEARING RATIO

BS 1377 : Part 4 : 1990 and Part 2 : Clause 3.2 : 1990

Exploratory Hole No - **PRAIRIE_AUK_BH109** Sample No - **B10**

Depth (m) - **2.00**

| | | | |
|--------------------------------------|------------------|-------------------------------------|------------------------|
| "As Received" Moisture Content (%) : | 24.5 | Surcharge (Kg) : | 6 |
| Retained on 20mm (%) : | 0.0 | Seating Load (N) : | Top 10 / Bottom 10 |
| Correction Needed : | No | Test Moisture Content (%) : | Top 24.9 / Bottom 24.0 |
| Soaking Time (Days) : | N/A | Bulk Density (Mg/m ³) : | 2.00 |
| Swelling (mm) : | N/A | Dry Density (Mg/m ³) : | 1.60 |
| Date Tested : | 14/07/2020 | CBR Value (%) : | Top 2.4 / Bottom 2.6 |
| Preparation Method : | 2.5kg Compaction | | |
| Remarks : | | | |



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title - **Prairie Site Ground Investigation Works**

Client - **South Tees Development Corporation**



Signed - *msene*

Name - *M. SENE*

Page 1 of 1

Date of issue - **31/07/2020**

Certificate No - **CBR/4251/PRAIRIE_AUK_BH109/B10/2.00/1**

AEG Contract No - **4251**



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 25, Widdow's Industrial Estate, Preston Park, Chichester, West Sussex, PO19 1PL, UK. Tel: 01243 831436 Fax: 01243 831478
Regional Office: Unit 20, Business Development Centre, Station Street, Buxton, Derbyshire, SK15 1BS, UK. Tel: 01752 755300 Fax: 01752 755300

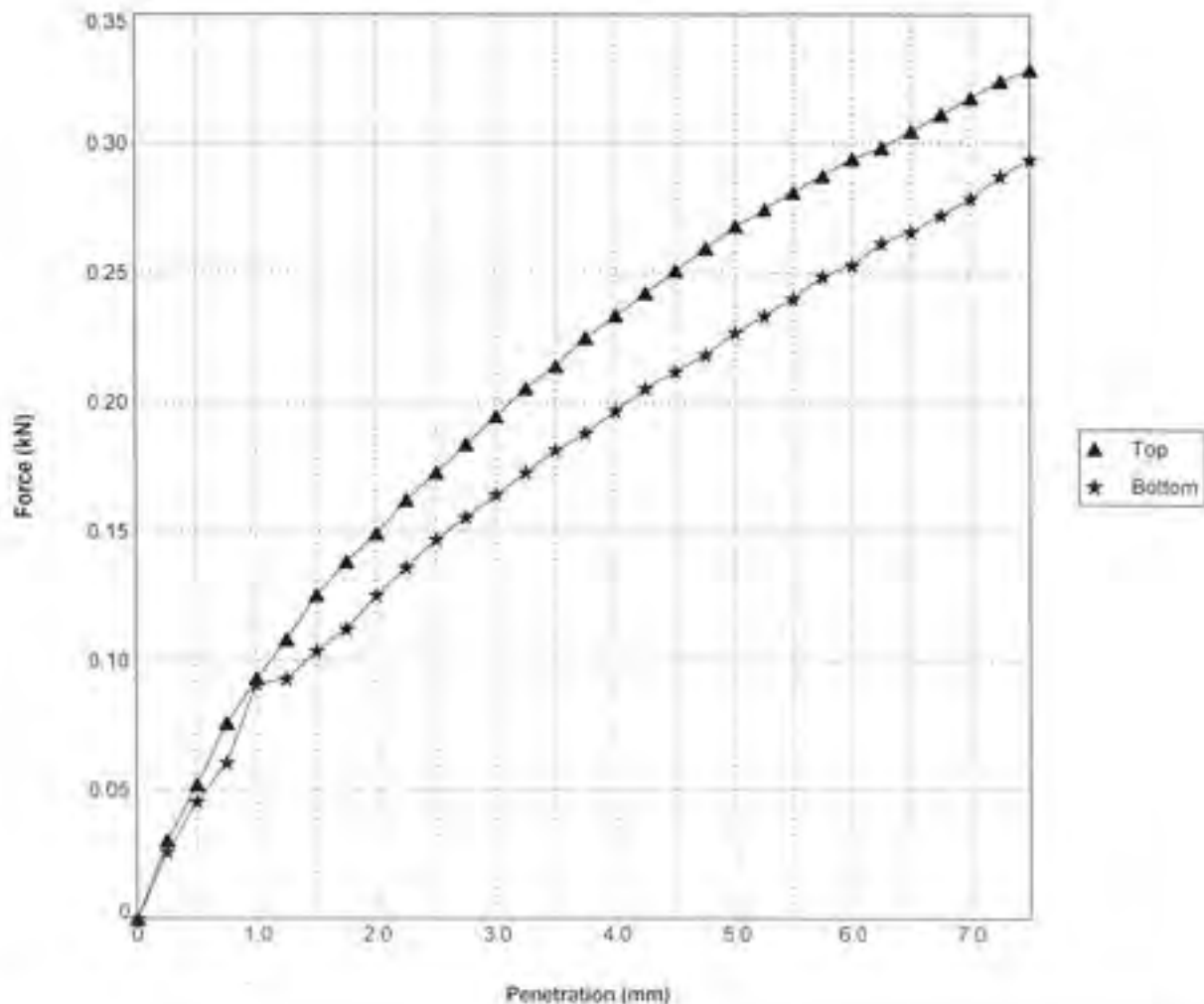
DETERMINATION OF THE CALIFORNIA BEARING RATIO

BS 1377 - Part 4 : 1990 and Part 2 : Clause 3.2 : 1990

Exploratory Hole No.- **PRAIRIE_AUK_BH110** Sample No.- **B10**

Depth (m)- **6.50**

| | | | |
|--------------------------------------|------------------|-------------------------------------|------------------------|
| "As Received" Moisture Content (%) : | 25.9 | Surcharge (Kg) : | 5 |
| Retained on 20mm (%) : | 0.0 | Seating Load (N) : | Top 10 / Bottom 10 |
| Correction Needed : | No | Test Moisture Content (%) : | Top 25.6 / Bottom 26.2 |
| Soaking Time (Days) : | N/A | Bulk Density (Mg/m ³) : | 1.97 |
| Swelling (mm) : | N/A | Dry Density (Mg/m ³) : | 1.57 |
| Date Tested : | 14/07/2020 | CBR Value (%) : | Top 1.3 / Bottom 1.1 |
| Preparation Method : | 2.5kg Compaction | | |
| Remarks : | | | |



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title - **Prairie Site Ground Investigation Works**

Client - **South Tees Development Corporation**



Signed - *msene*

Name - *M SOLARI*

Page 1 of 1

Date of issue - **31/07/2020**

Certificate No - **CBR4251/PRAIRIE_AUK_BH110/B10-5.50/1**

AEG Contract No. - **4251**



1367

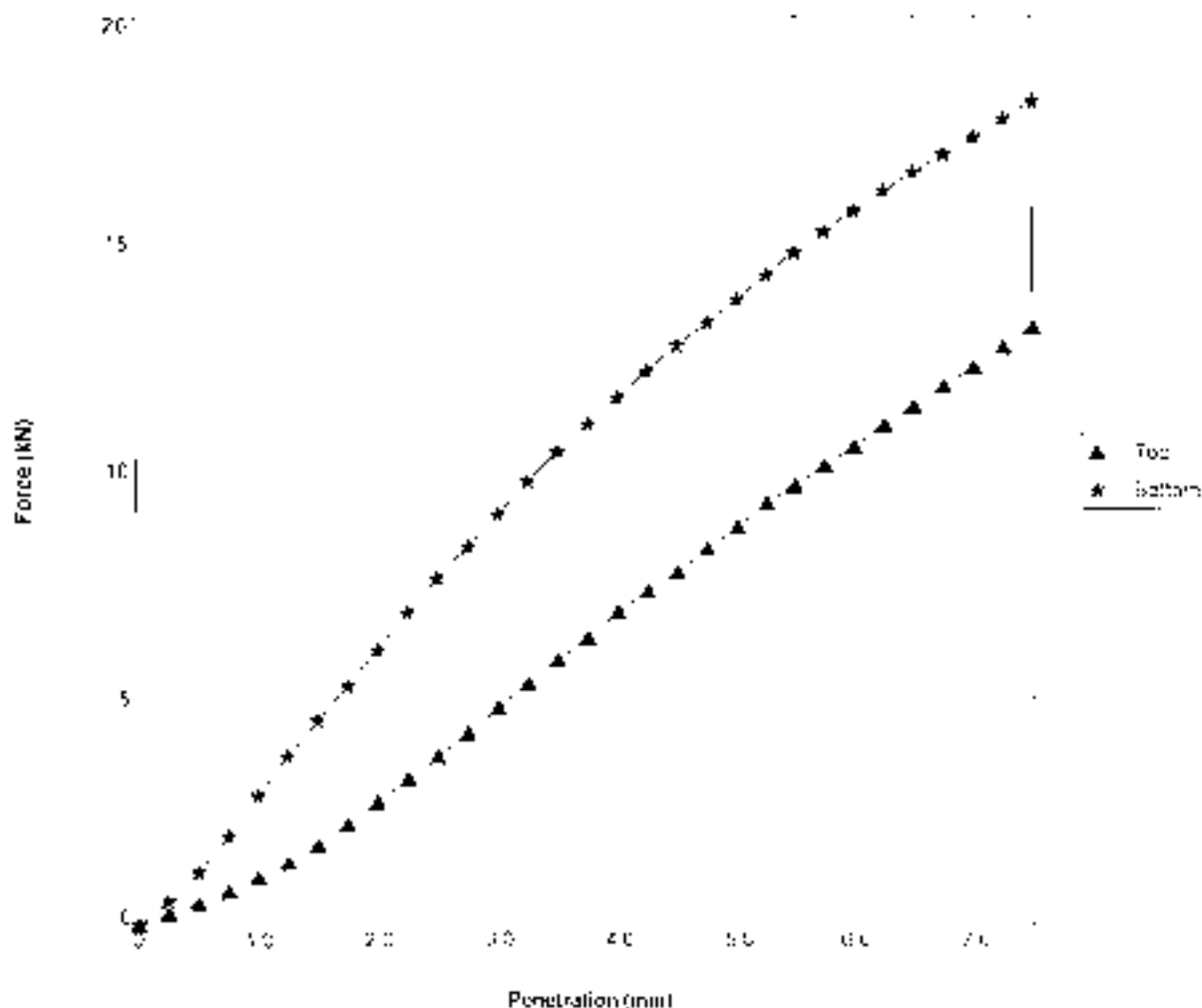
DETERMINATION OF THE CALIFORNIA BEARING RATIO

BS 1377 Part 4: 1990 and Part 2: Clause 3.2: 1990

Exploratory Hole No - **PRAIRIE_AUK_TP101** Sample No - **B4**

Depth (m) - **0.90**

| | | | |
|------------------------------------|------------------|-----------------------------------|----------------------|
| "As Received" Moisture Content (%) | | Surcharge (Kg) | 6 |
| Retained on 20mm (%) | 32.0 | Seating Load (N) | Top 250 / Bottom 250 |
| Corrector Needed | No | Test Moisture Content (%) | Top 17 / Bottom 16 |
| Soaking Time (Days) | N/A | Bulk Density (Mg/m ³) | 1.94 |
| Swelling (mm) | N/A | Dry Density (Mg/m ³) | 1.67 |
| Date Tested | 01/10/2020 | CBR Value (%) | Top 44 / Bottom 69 |
| Preparation Method | 2.5kg Compaction | | |
| Remarks | | | |



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Ref: _____

Prairie Site Ground Investigation Works

Client:

South Tees Development Corporation



Signature: *msone*
Date Issued: 01/10/2020

Name: _____
Job Number: 2019/2020 PRAIRIE_AUK_TP101/B4/B1

Page 1 of 1
Allied Com No: 4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

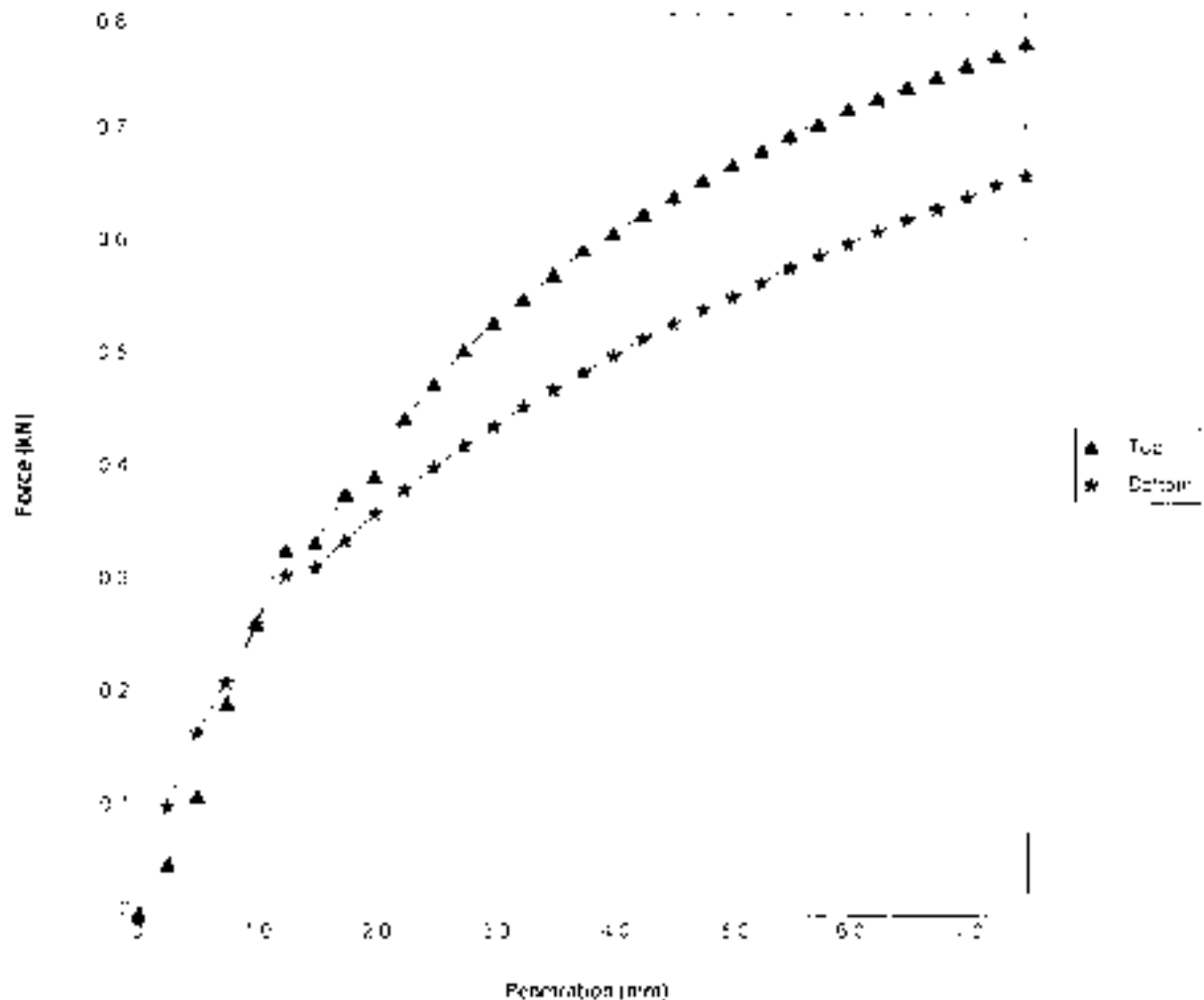
Registered in England No. 02032926, Registered Office: 100, Victoria Road, South Shields, Tyne and Wear, NE33 1JG, United Kingdom

DETERMINATION OF THE CALIFORNIA BEARING RATIO

BS 1377 Part 4: 1990 and Part 2: Clause 3.3: 1990

Exploratory Hole No - **PRAIRIE_AUK_TP101** Sample No - **B11** Depth (m) - **3.00**

| | | | |
|------------------------------------|------------------|-----------------------------------|----------------------|
| "As Received" Moisture Content (%) | | Surcharge (kg) | 8 |
| Retained on 20mm (%) | 0.2 | Seating Load (N) | Top 10 / Bottom 10 |
| Correction Needed | No | Test Moisture Content (%) | Top 28 / Bottom 28 |
| Soaking Time (Days) | N/A | Bulk Density (Mg/m ³) | 1.95 |
| Swelling (mm) | N/A | Dry Density (Mg/m ³) | 1.52 |
| Date Tested | 30/09/2020 | CBR Value (%) | Top 3.6 / Bottom 3.0 |
| Preparation Method | 2.5kg Compaction | | |
| Remarks | | | |



For details of all samples please refer to the Laboratory Sample Description Sheet

Contract Title

Prairie Site Ground Investigation Works

South Tees Development Corporation



Signature: *[Handwritten Signature]*
Date of Issue: 22/10/2020

Name: _____
Certificate No: _____
CBR 4251 PRAIRIE_AUK_TP101 B11 3.00

Job No: _____
AEG Certificate No: **4251**



1367

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 25, Station Industrial Estate, Pinner Park, Chesham, Bucks, UK, Bucks, Unit 25, Tel: 01494 367476 Fax: 01494 367476
Regional Office: Unit 20, Business Development Centre, Epsom Street, Stratford, Beds, UK, Tel: 01773 336300 Fax: 01773 796388

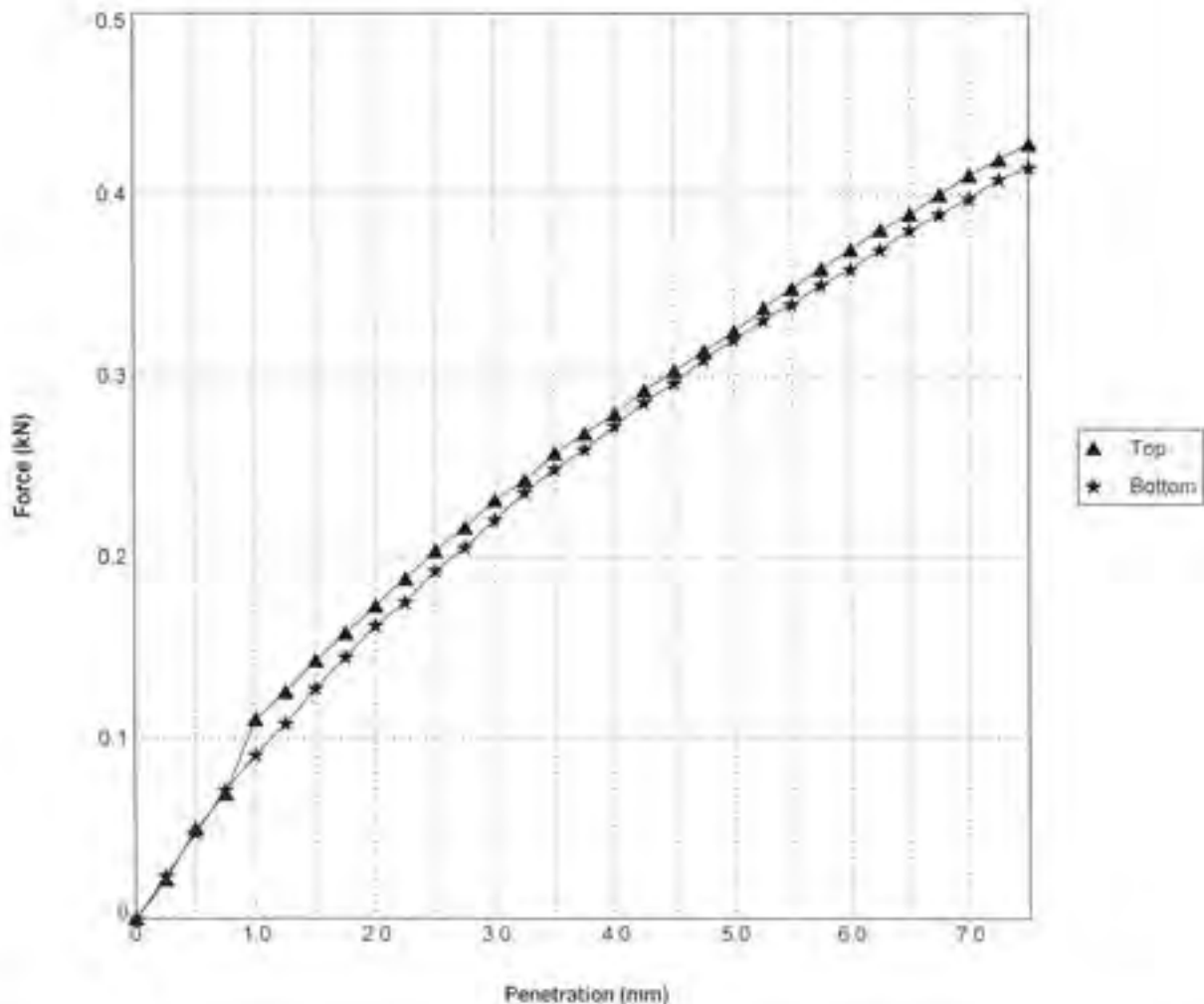
DETERMINATION OF THE CALIFORNIA BEARING RATIO

BS 1377: Part 4: 1990 and Part 2: Clause 3.2: 1990

Exploratory Hole No. - **PRAIRIE_AUK_TP102** Sample No. - **B8**

Depth (m) - **2.00**

| | | | |
|--------------------------------------|------------------|-------------------------------------|----------------------|
| "As Received" Moisture Content (%) : | | Surcharge (Kg) : | 6 |
| Retained on 20mm (%) : | 5.0 | Seating Load (N) : | Top 10 / Bottom 10 |
| Correction Needed : | No | Test Moisture Content (%) : | Top 22 / Bottom 23 |
| Soaking Time (Days) : | N/A | Bulk Density (Mg/m ³) : | 2.02 |
| Swelling (mm) : | N/A | Dry Density (Mg/m ³) : | 1.65 |
| Date Tested : | 19/10/2020 | CBR Value (%) : | Top 1.6 / Bottom 1.6 |
| Preparation Method : | 2.5kg Compaction | | |
| Remarks : | | | |



For description of sample please refer to the Laboratory Sample Description Sheet

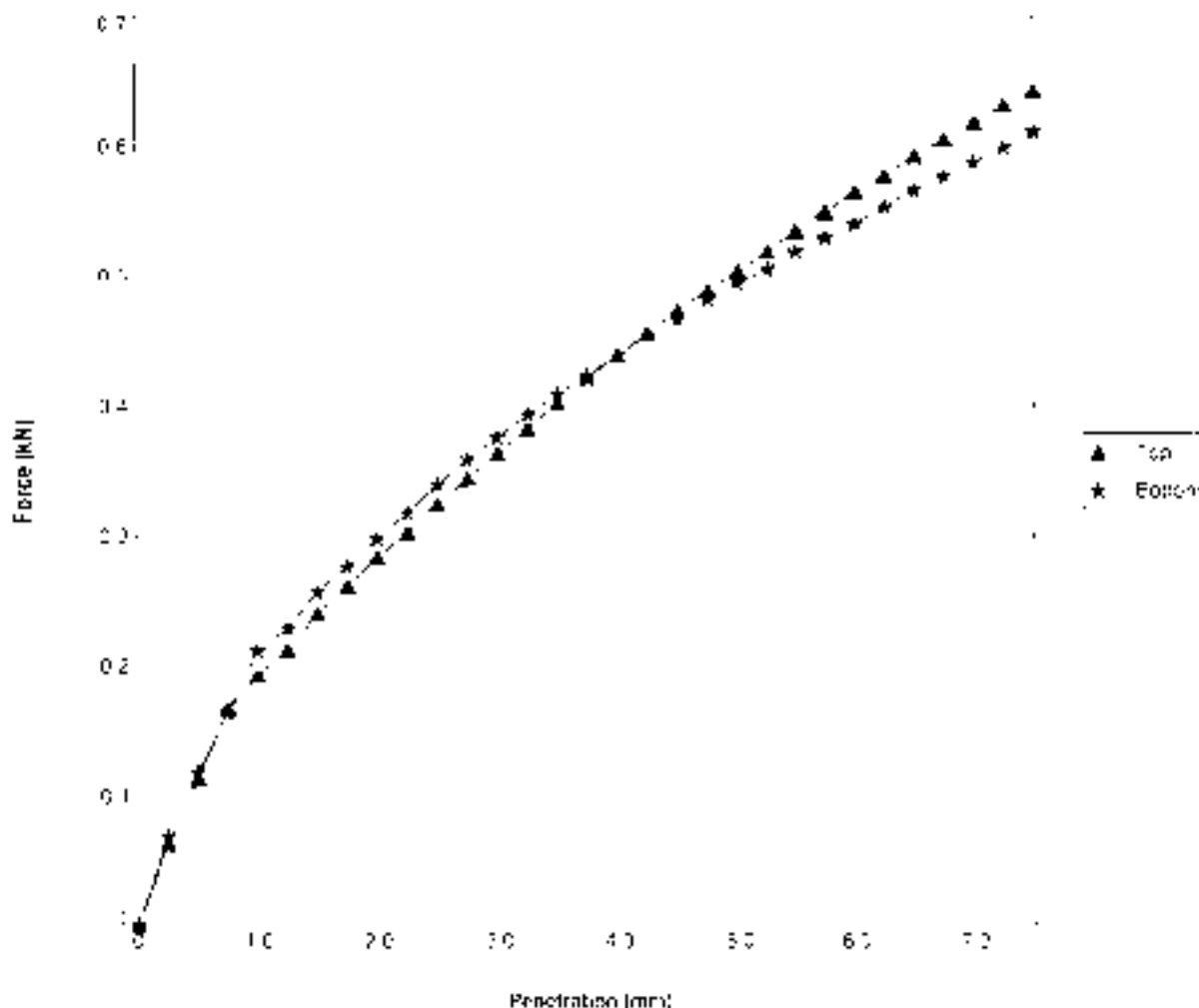
| | |
|---|--|
| Contract Title :- Prairie Site Ground Investigation Works | Client :- South Tees Development Corporation |
|---|--|

| | | | | |
|---|--------------------------------|--|-----------------------------------|---|
|  | Signed :- <i>mserp</i> | Name :- <i>MSERP</i> | Page 1 of 1 |  |
| | Date of issue :- 30/10/2020 | Certificate No :- CBR/4251/PRAIRIE_AUK_TP102/B8/2 001 | AEG Contract No :- 4251 | |

DETERMINATION OF THE CALIFORNIA BEARING RATIO

BS 1377 Part 4: 1990 and Part 7: Clause 3.2: 1990

| | | |
|--|-----------------------------------|-------------------------|
| Exploratory Hole No - PRAIRIE_AUK_TP105 | Sample No - B5 | Depth (m) - 2.00 |
| As Received Moisture Content (%) | Surcharge (Kg) | 5 |
| Retained on 20mm (%) | Seating Load (N) | Top 10 / Bottom 10 |
| Correction Needed | Test Moisture Content (%) | Top 27 / Bottom 27 |
| Soaking Time (Days) | Bulk Density (Mg/m ³) | 1.95 |
| Swelling (mm) | Dry Density (Mg/m ³) | 1.53 |
| Date Tested | CBR Value (%) | Top 2.5 / Bottom 2.6 |
| Preparation Method | 2.5kg Compaction | |
| Remarks | | |



For coverage of sample please refer to the Laboratory Sample Description Sheet

Contract Title

Prairie Site Ground Investigation Works

Client

South Tees Development Corporation



Site No: **msaw**
 Date of Issue: **20/09/2020**

Name

Page 1 of 1

Client Reference

ASD Drawing No

CBR 4 INCL PRAIRIE_AUK_TP105 B5 2.00

4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

100, Garsington Road, Oxford, OX4 2DQ, UK. Tel: 01865 206000 Fax: 01865 206001
 Registered in England No. 2720957. Registered Office: 100, Garsington Road, Oxford, OX4 2DQ, UK.

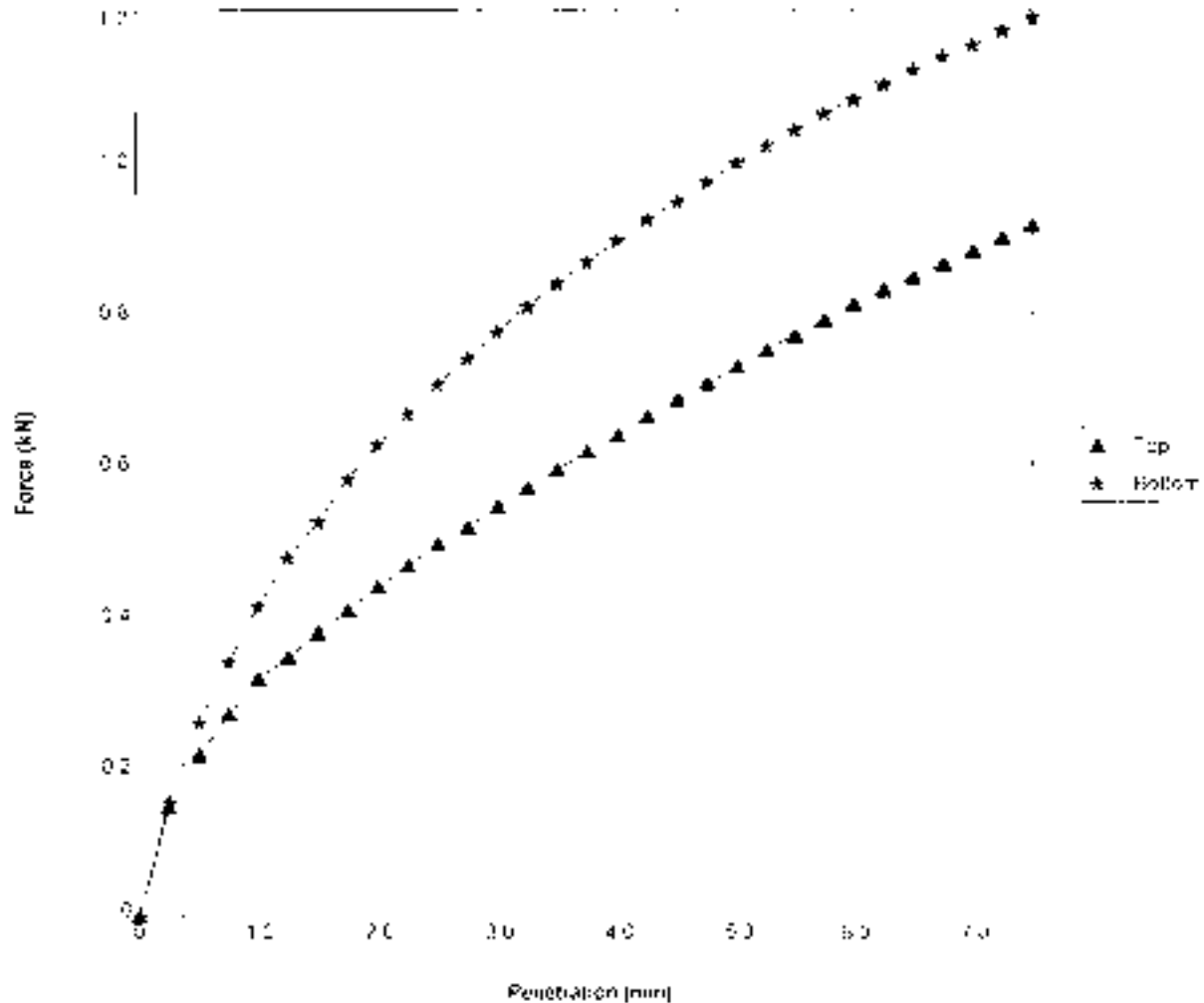
DETERMINATION OF THE CALIFORNIA BEARING RATIO

BS 1377 Part 4: 1990 and Part 2: Clause 3.2: 1990

Exploratory Hole No - PRAIRIE_AUK_TP107 Sample No - B4

Depth (m) - 1.00

| | | | |
|----------------------------------|------------------|-----------------------------------|----------------------|
| As Received Moisture Content (%) | | Surcharge (Kg) | 6 |
| Retained on 20mm (%) | 5.0 | Seating Load (N) | Top 10 / Bottom 10 |
| Correction Needed | No | Test Moisture Content (%) | Top 25 / Bottom 24 |
| Soaking Time (Days) | N/A | Bulk Density (Mg/m ³) | 2.00 |
| Swelling (mm) | N/A | Dry Density (Mg/m ³) | 1.51 |
| Date Tested | 30/09/2020 | CBR Value (%) | Top 3.7 / Bottom 5.3 |
| Preparation Method | 2.5kg Compaction | | |
| Remarks | | | |



For detailed procedure please refer to the Laboratory Sample Description Sheet

Contract Ref:

Prairie Site Ground Investigation Works

Client:

South Tees Development Corporation



Signed:

Date of Issue:

[Handwritten Signature]

30/09/2020

Name:

Certificate No:

CEP-001 PRAIRIE_AUK_TP107 B4 (01)

Page 1 of 1

APN Contract No.:

4251



1367

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Lot 21 Duffa (44) Industrial Estate, Peckham Park, Chesham, Bucks, UK. Domicile: GHD 2902. Tel: 0191 267 4700 Fax: 0191 267 4710
Regional Office: Unit 10, Resource Development Centre, Easton Wharf, Rotherham, S64 1SL. Tel: 01773 755 300 Fax: 01773 755 309

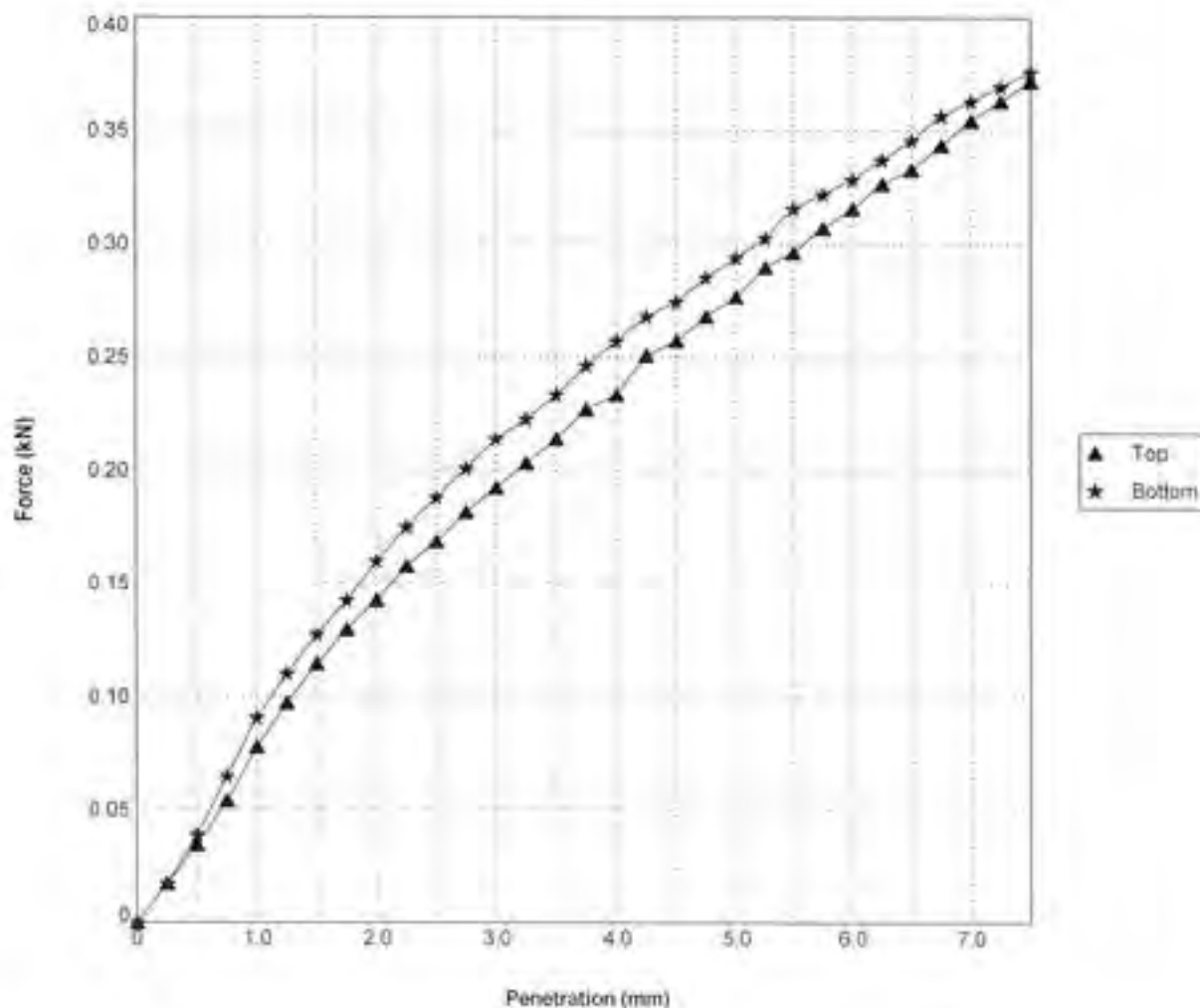
DETERMINATION OF THE CALIFORNIA BEARING RATIO

BS 1377 : Part 4 : 1990 and Part 2 : Clause 3.2 : 1990

Exploratory Hole No - **PRAIRIE_AUK_TP110** Sample No - **B8**

Depth (m) - **3.00**

| | | | |
|--------------------------------------|------------------|-------------------------------------|----------------------|
| "As Received" Moisture Content (%) : | | Surcharge (Kg) : | 6 |
| Retained on 20mm (%) : | 0.0 | Seating Load (N) : | Top 10 / Bottom 10 |
| Correction Needed : | No | Test Moisture Content (%) : | Top 31 / Bottom 31 |
| Soaking Time (Days) : | N/A | Bulk Density (Mg/m ³) : | 2.27 |
| Swelling (mm) : | N/A | Dry Density (Mg/m ³) : | 1.73 |
| Date Tested : | 16/10/2020 | CBR Value (%) : | Top 1.4 / Bottom 1.5 |
| Preparation Method : | 2.5kg Compaction | | |
| Remarks : | | | |



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :- **Prairie Site Ground Investigation Works**

Client :- **South Tees Development Corporation**



Signed - *msore*

Name - *msore*

Page 1 of 1

Date of issue - **30/10/2020**

Certificate No - **CBR/4251/PRAIRIE_AUK_TP110/B8/3 00/1**

AEG Contract No - **4251**



1367

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 25, South Lakes Industrial Estate, Preston, Lancashire, PR1 6YU. Tel: 01773 507470 Fax: 01773 507474
Regional Office: Unit 20, Riverside Development Centre, Ebbw Vale, South Wales, NP23 5BB. Tel: 01772 795190 Fax: 01773 795192

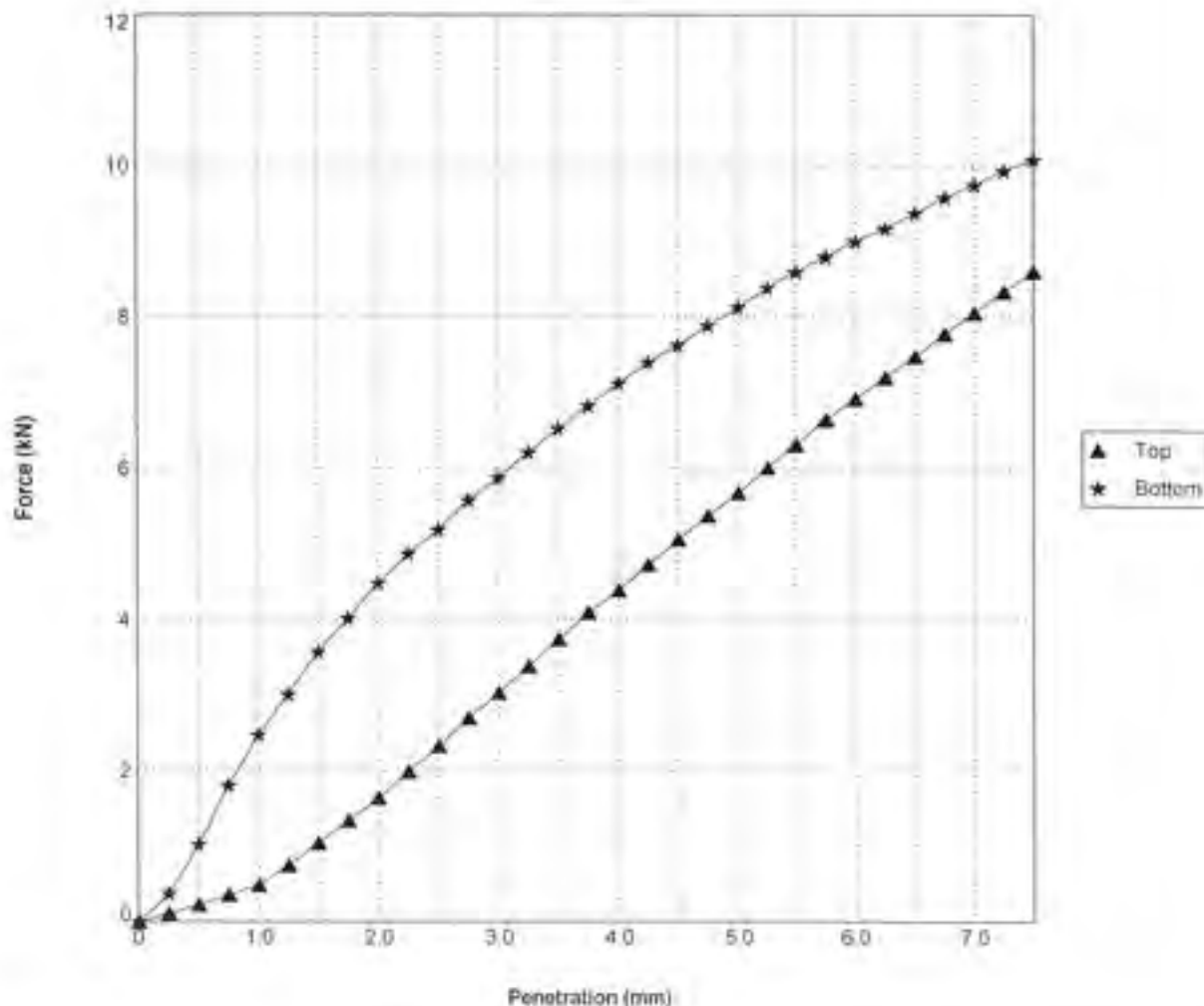
DETERMINATION OF THE CALIFORNIA BEARING RATIO

BS 1377 : Part 4 : 1990 and Part 2 : Clause 3.2 : 1990

Exploratory Hole No. - PRAIRIE_AUK_TP112 Sample No. - B5

Depth (m) - 1.70

| | | | |
|--------------------------------------|------------------|-------------------------------------|----------------------|
| "As Received" Moisture Content (%) : | | Surcharge (Kg) : | 6 |
| Retained on 20mm (%) : | 28.0 | Seating Load (N) : | Top 250 / Bottom 250 |
| Correction Needed : | No | Test Moisture Content (%) : | Top 20 / Bottom 18 |
| Soaking Time (Days) : | N/A | Bulk Density (Mg/m ³) : | 1.65 |
| Swelling (mm) : | N/A | Dry Density (Mg/m ³) : | 1.39 |
| Date Tested : | 19/10/2020 | CBR Value (%) : | Top 28 / Bottom 41 |
| Preparation Method : | 2.5kg Compaction | | |
| Remarks : | | | |



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :- Prairie Site Ground Investigation Works

Client :- South Tees Development Corporation



Signed :- *msore*

Name :-

Page 1 of 1

Date of issue :- 30/10/2020

Certificate No :- CBR/4251/PRAIRIE_AUK_TP112/B5/1.70/1

AEG Contract No :- 4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 20, Seabra Old Industrial Estate, Station Park, Croxall-within, Ux. Durham, D.H. 2 9JG. Tel: 0191 387 4700 Fax: 0191 387 4701
Regional Office: Unit 20, Business Development Centre, Station Square, Stockton, SS17 5SL. Tel: 01752 195 280 Fax: 01752 426 989

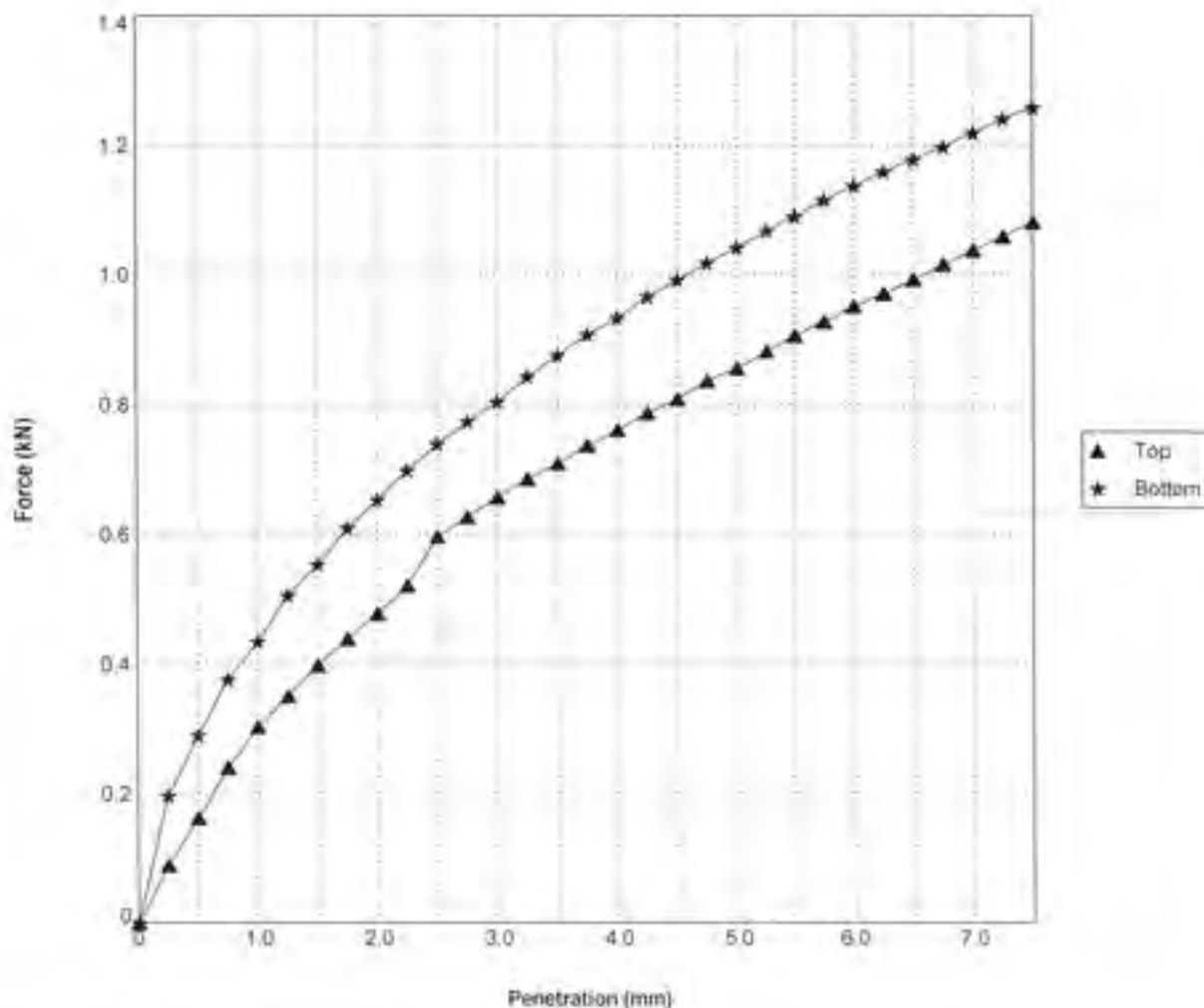
DETERMINATION OF THE CALIFORNIA BEARING RATIO

BS 1377 : Part 4 : 1990 and Part 2 : Clause 3.2 : 1990

Exploratory Hole No. - PRAIRIE_AUK_TP116 Sample No. - B8

Depth (m) - 2.50

| | | | |
|--------------------------------------|------------------|-------------------------------------|----------------------|
| "As Received" Moisture Content (%) : | | Surcharge (Kg) : | 6 |
| Retained on 20mm (%) : | 0.0 | Seating Load (N) : | Top 50 / Bottom 50 |
| Correction Needed : | No | Test Moisture Content (%) : | Top 24 / Bottom 24 |
| Soaking Time (Days) : | N/A | Bulk Density (Mg/m ³) : | 1.98 |
| Swelling (mm) : | N/A | Dry Density (Mg/m ³) : | 1.60 |
| Date Tested : | 16/10/2020 | CBR Value (%) : | Top 4.5 / Bottom 5.6 |
| Preparation Method : | 2.5kg Compaction | | |
| Remarks : | | | |



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :-

Prairie Site Ground Investigation Works

Client :-

South Tees Development Corporation



Signed - *msone*

Name :-

Page 1 of 1

Date of issue - 30/10/2020

Certificate No - CBR/4251/PRAIRIE_AUK_TP116/B5/2 50/1

AEG Contract No - 4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 25, Salford Industrial Estate, Pinfold Way, Clarendon Street, Co. Down, DRU 26KJ - Tel: 0118 387 4700 Fax: 0118 387 4716
Regional Office: Unit 20, Business Development Centre, Eastern Wharf, Stockport, SK1 5BL - Tel: 01773 735 300 Fax: 01773 733 940

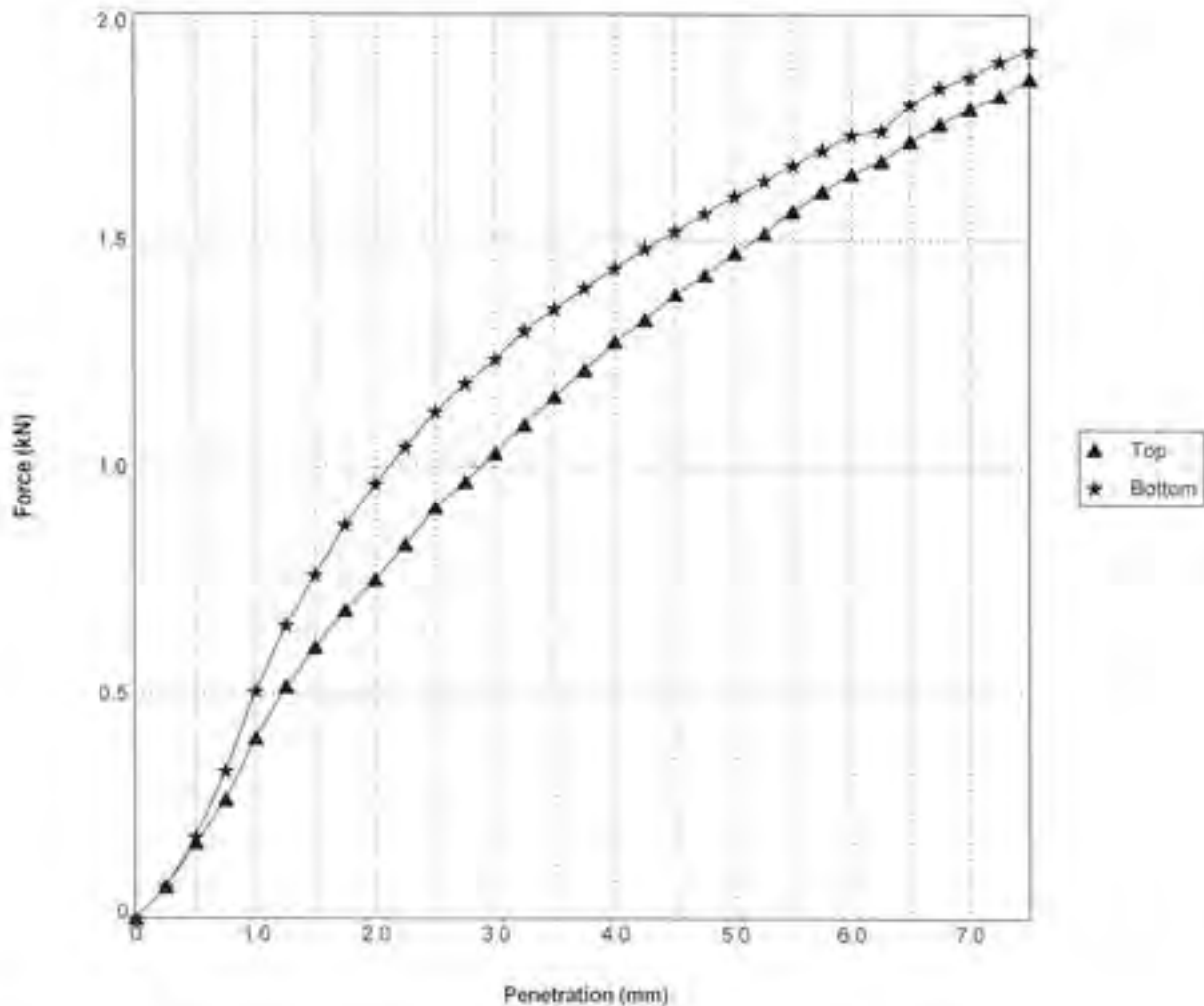
DETERMINATION OF THE CALIFORNIA BEARING RATIO

BS 1377 Part 4: 1990 and Part 2: Clause 3.2: 1990

Exploratory Hole No.- **PRAIRIE_AUK_TP116** Sample No.- **B10**

Depth (m)- **3.50**

| | | | |
|--------------------------------------|------------------|-------------------------------------|----------------------|
| "As Received" Moisture Content (%) : | | Surcharge (Kg) : | 6 |
| Retained on 20mm (%) : | 3.2 | Seating Load (N) : | Top 50 / Bottom 50 |
| Correction Needed : | No | Test Moisture Content (%) : | Top 17 / Bottom 17 |
| Soaking Time (Days) : | N/A | Bulk Density (Mg/m ³) : | 2.12 |
| Swelling (mm) : | N/A | Dry Density (Mg/m ³) : | 1.81 |
| Date Tested : | 19/10/2020 | CBR Value (%) : | Top 7.4 / Bottom 8.5 |
| Preparation Method : | 2.5kg Compaction | | |
| Remarks : | | | |



For description of sample please refer to the Laboratory Sample Description Sheet

| | |
|---|--|
| Contract Title :- Prairie Site Ground Investigation Works | Client :- South Tees Development Corporation |
|---|--|

| | | | | |
|---|--------------------------------|---|-----------------------------------|---|
|  | Signed :- <i>msero</i> | Name :- | Page 1 of 1 |  |
| | Date of issue :- 09/10/2020 | Certificate No :- CBR/4251/PRAIRIE_AUK_TP116/B10/3/501 | AEG Contract No :- 4251 | |

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 25 Stevia Oil Industrial Estate, Fusion Park, Cleasdale Street, Co. Durham, DN4 2PL - Tel: 0191 340 4700 Fax: 0191 340 4710
Regional Office: Unit 20, Business Development Centre, Salford Wharf, Salford, Greater Manchester, M6 6PU - Tel: 01753 525 300 Fax: 01753 525 305

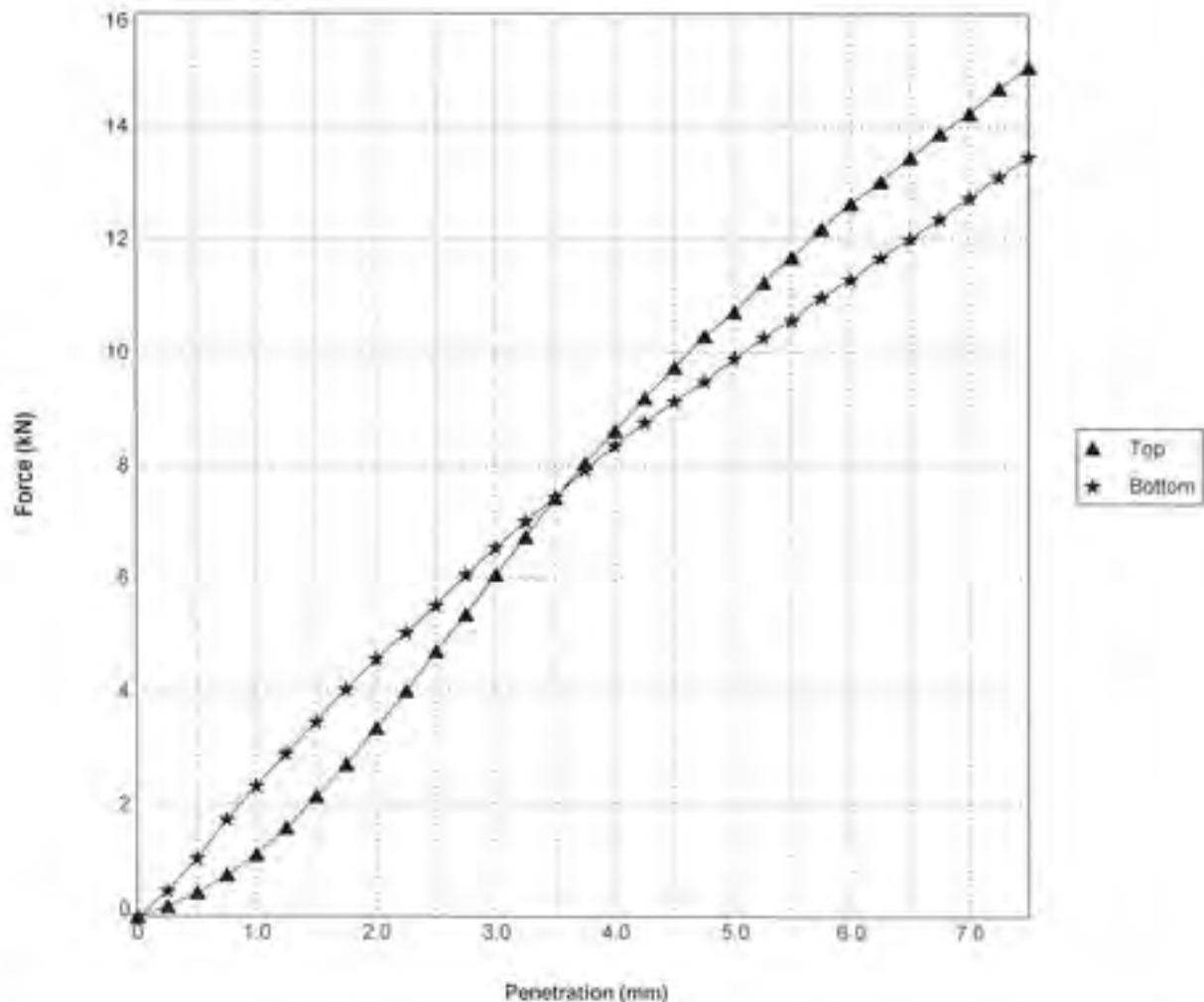
DETERMINATION OF THE CALIFORNIA BEARING RATIO

BS 1377 - Part 4 : 1990 and Part 2 : Clause 3.2 : 1990

Exploratory Hole No. - PRAIRIE_AUK_TP119 Sample No. - B5

Depth (m) - 2.00

| | | | |
|--------------------------------------|------------------|-------------------------------------|----------------------|
| "As Received" Moisture Content (%) : | | Surcharge (Kg) : | 6 |
| Retained on 20mm (%) : | 17.0 | Seating Load (N) : | Top 250 / Bottom 250 |
| Correction Needed : | No | Test Moisture Content (%) : | Top 11 / Bottom 12 |
| Soaking Time (Days) : | N/A | Bulk Density (Mg/m ³) : | 1.90 |
| Swelling (mm) : | N/A | Dry Density (Mg/m ³) : | 1.71 |
| Date Tested : | 19/10/2020 | CBR Value (%) : | Top 54 / Bottom 50 |
| Preparation Method : | 2.5kg Compaction | | |
| Remarks : | | | |



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :- Prairie Site Ground Investigation Works

Client :- South Tees Development Corporation



Signed :- *msene*

Name :-

Page 1 of 1

Date of issue :- 30/10/2020

Certificate No. :- CBR/4251/PRAIRIE_AUK_TP119/BS/2 00/1

AEG Contract No. :- 4251



1367

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 20, Jorvale Industrial Estate, Park Road, Chester-le-Street, Co. Durham, DL2 2BG - Tel: 0191 357 4100 Fax: 0191 357 4101
Regional Office: Unit 20, Business Development Centre, Eamon Wharf, Blackburn, BB1 5BB - Tel: 01752 725 280 Fax: 01752 735 999

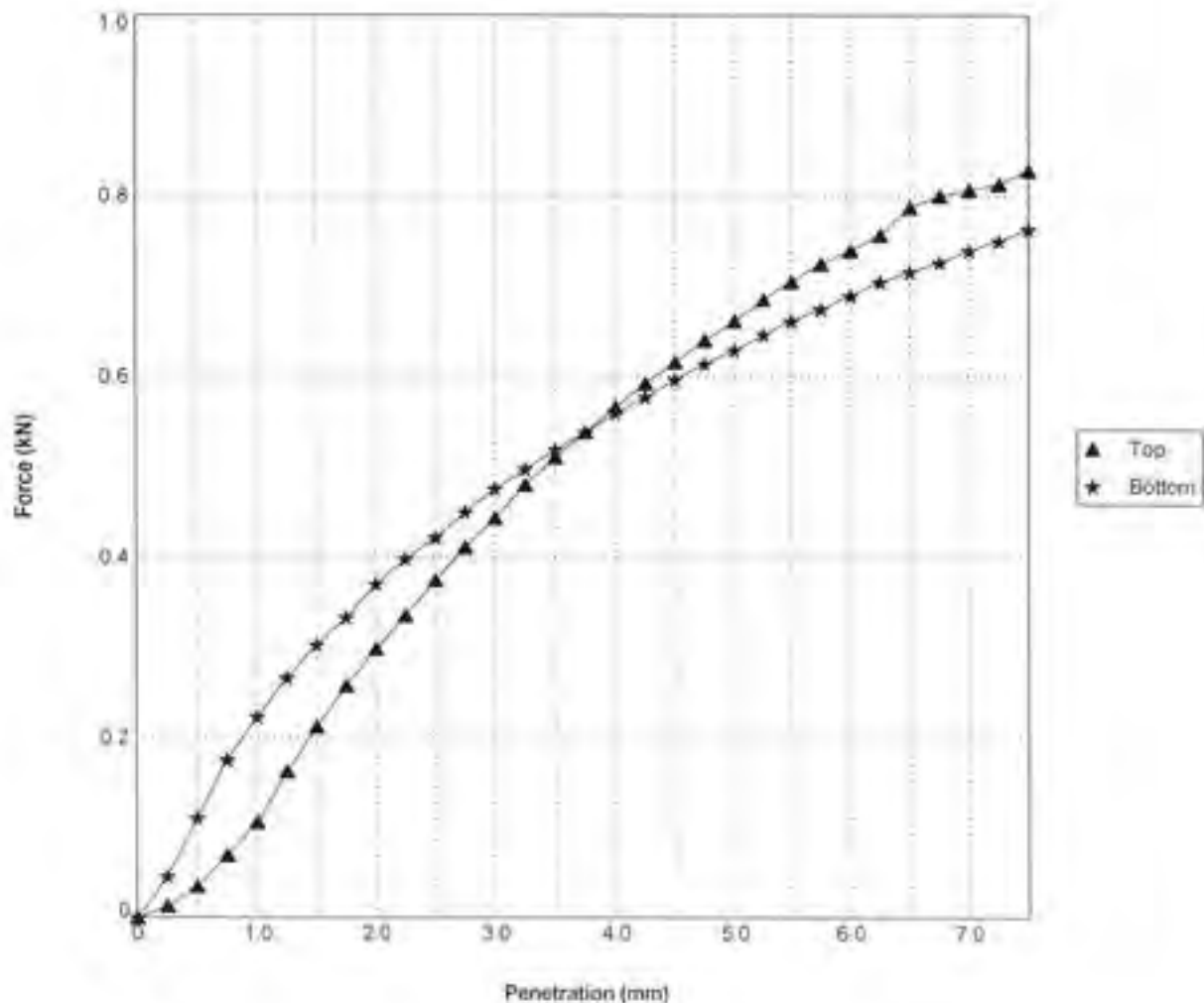
DETERMINATION OF THE CALIFORNIA BEARING RATIO

BS 1377 : Part 4 : 1990 and Part 2 : Clause 3.2 : 1990

Exploratory Hole No.- **PRAIRIE_AUK_TP119** Sample No. - **B8**

Depth (m)- **3.00**

| | | | |
|--------------------------------------|------------------|-------------------------------------|----------------------|
| "As Received" Moisture Content (%) : | | Surcharge (Kg) : | 6 |
| Retained on 20mm (%) : | 0.0 | Seating Load (N) : | Top 10 / Bottom 10 |
| Correction Needed : | Yes | Test Moisture Content (%) : | Top 28 / Bottom 29 |
| Soaking Time (Days) : | N/A | Bulk Density (Mg/m ³) : | 1.93 |
| Swelling (mm) : | N/A | Dry Density (Mg/m ³) : | 1.50 |
| Date Tested : | 16/10/2020 | CBR Value (%) : | Top 3.5 / Bottom 3.2 |
| Preparation Method : | 2.5kg Compaction | | |
| Remarks : | | | |



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :- **Prairie Site Ground Investigation Works**

Client :- **South Tees Development Corporation**



Signed :- *msero*

Name :-

Page 1 of 1

Date of issue :- **30/10/2020**

Certificate No :- **CBR/4251/PRAIRIE_AUK_TP119/B8/3 00/1**

AEG Contract No. :- **4251**



ALLIED EXPLORATION & GEOTECHNICS LIMITED

(Incorporated in the State of New South Wales, Australia) (Company No. 11702299) (19/02/20)

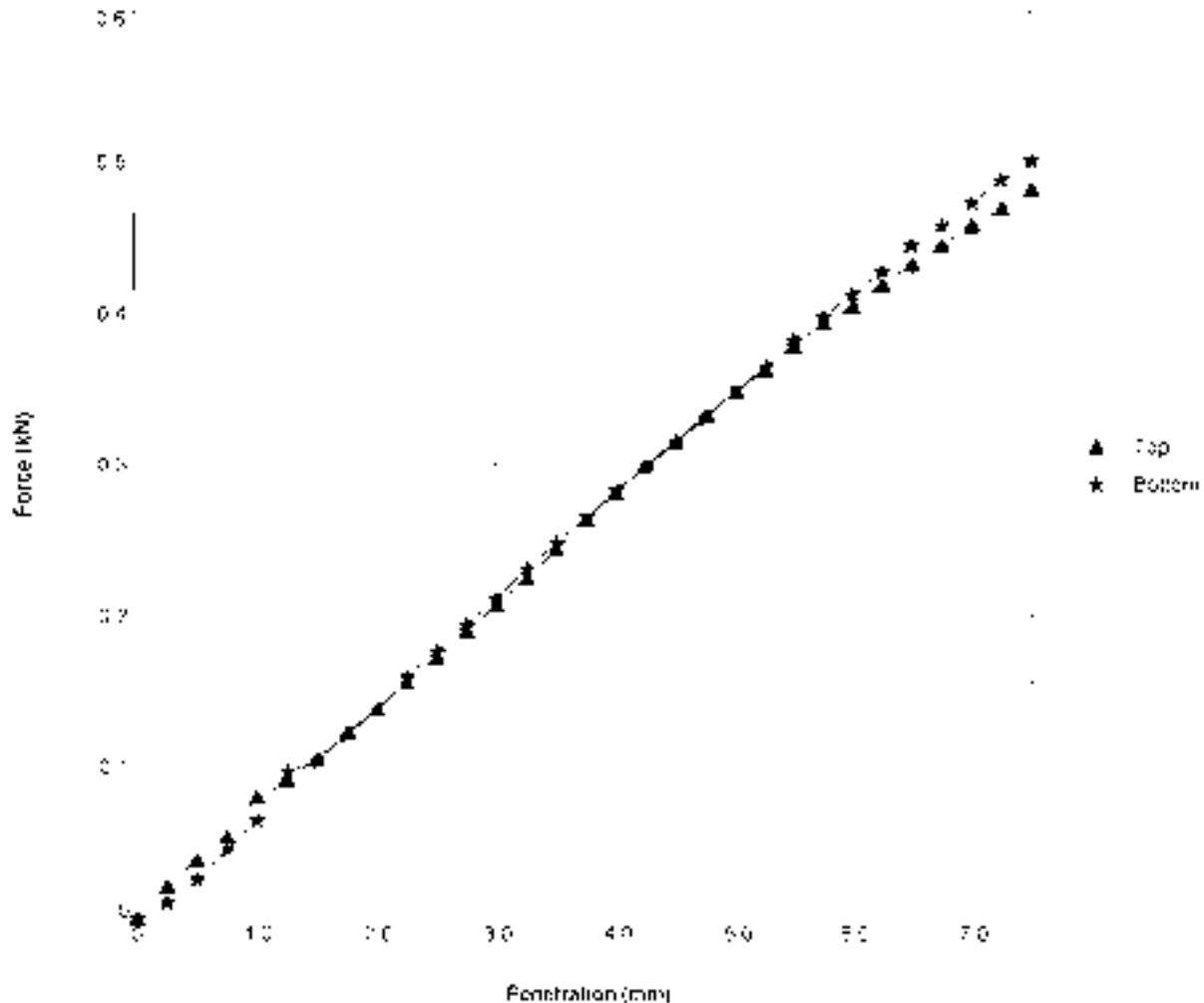
DETERMINATION OF THE CALIFORNIA BEARING RATIO

BS 1377 Part 4: 1990 and Part 2: Clause 3.2: 1992

Exploratory Hole No - PRAIRIE_AUK_TP120A Sample No - 65

Depth (m) - 1.60

| | | | |
|------------------------------------|------------------|-----------------------------------|----------------------|
| "As Received" Moisture Content (%) | | Surcharge (Kg) | 6 |
| Retained on 20mm (%) | 0.0 | Seating Load (N) | Top 10 / Bottom 10 |
| Correction Needed | No | Test Moisture Content (%) | Top 26 / Bottom 25 |
| Soaking Time (Days) | N/A | Bulk Density (Mg/m ³) | 1.96 |
| Swelling (mm) | N/A | Dry Density (Mg/m ³) | 1.57 |
| Date Tested | 15/10/2020 | CBR Value (%) | Top 1.7 / Bottom 1.5 |
| Preparation Method | 2.5kg Compaction | | |
| Remarks | | | |



For use only in the sample log, use hole log, the Laboratory Log and/or Description Sheet

Contract Title -

Prairie Site Ground Investigation Works

Client -

South Trees Development Corporation



Signature

[Handwritten Signature]

Name

Page 1 of 1

Date of Issue -

15/10/2020

Method of Issue -

CBR 4251 PRAIRIE_AUK_TP120A B11 15/10

APR Code of Ref -

4251



1367

ALLIED EXPLORATION & GEOTECHNICS LIMITED

1000 Lakeside, South Coast Highway, PO Box 420, Southport, Queensland, Australia 4211

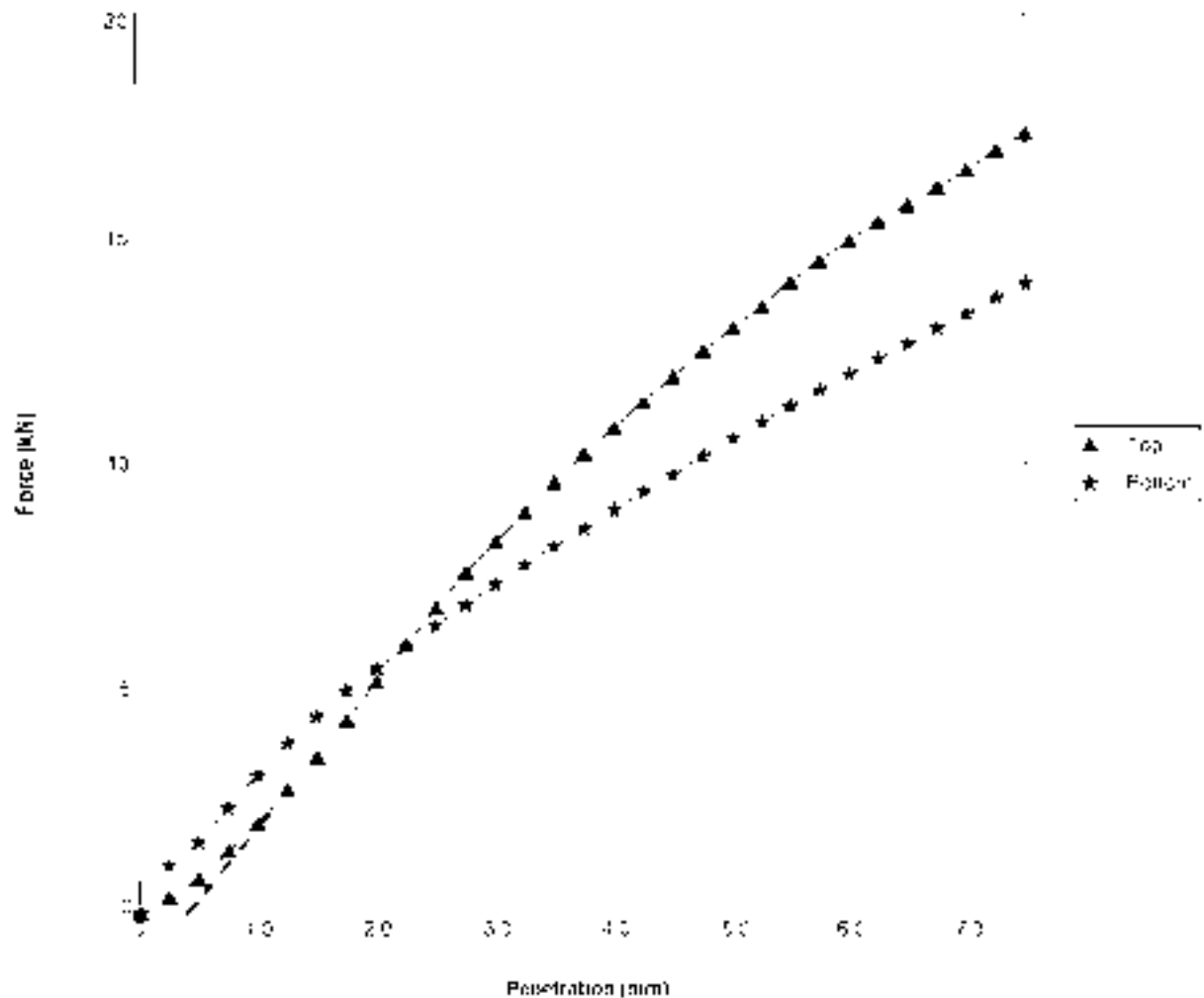
DETERMINATION OF THE CALIFORNIA BEARING RATIO

BS 1377 Part 4: 1990 and Part 2: Clause 3.2: 1990

Exploratory Hole No - **PRAIRIE_AUK_TP121** Sample No - **B2**

Depth (m) - **0.80**

| | | | |
|------------------------------------|------------------|-----------------------------------|----------------------|
| "As Received" Moisture Content (%) | | Surcharge (Kg) | 5 |
| Retained on 20mm: (%) | 1.0 | Seating Load (N) | Top 250 / Bottom 250 |
| Correction Needed | Yes | Test Moisture Content (%) | Top 14 / Bottom 15 |
| Soaking Time (Days) | N/A | Bulk Density (Mg/m ³) | 2.04 |
| Swelling (mm) | N/A | Dry Density (Mg/m ³) | 1.78 |
| Date Tested | 01/10/2020 | CBR Value (%) | Top 70 / Bottom 53 |
| Preparation Method | 2.5kg Compaction | | |
| Remarks | | | |



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title -

Prairie Site Ground Investigation Works

South Tees Development Corporation



Signature: *msae*
Date of Issue: 23/10/2020

Form: 4251
Contract No: 4251
Ref: 4251/1944/01/01/01/01/01/01/01

Project No: 4251
Allied Contract No: 4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

(Incorporated in the United Kingdom) (Registered Office: 100, Victoria Road, Walsby, Lincolnshire, LN11 9JF)

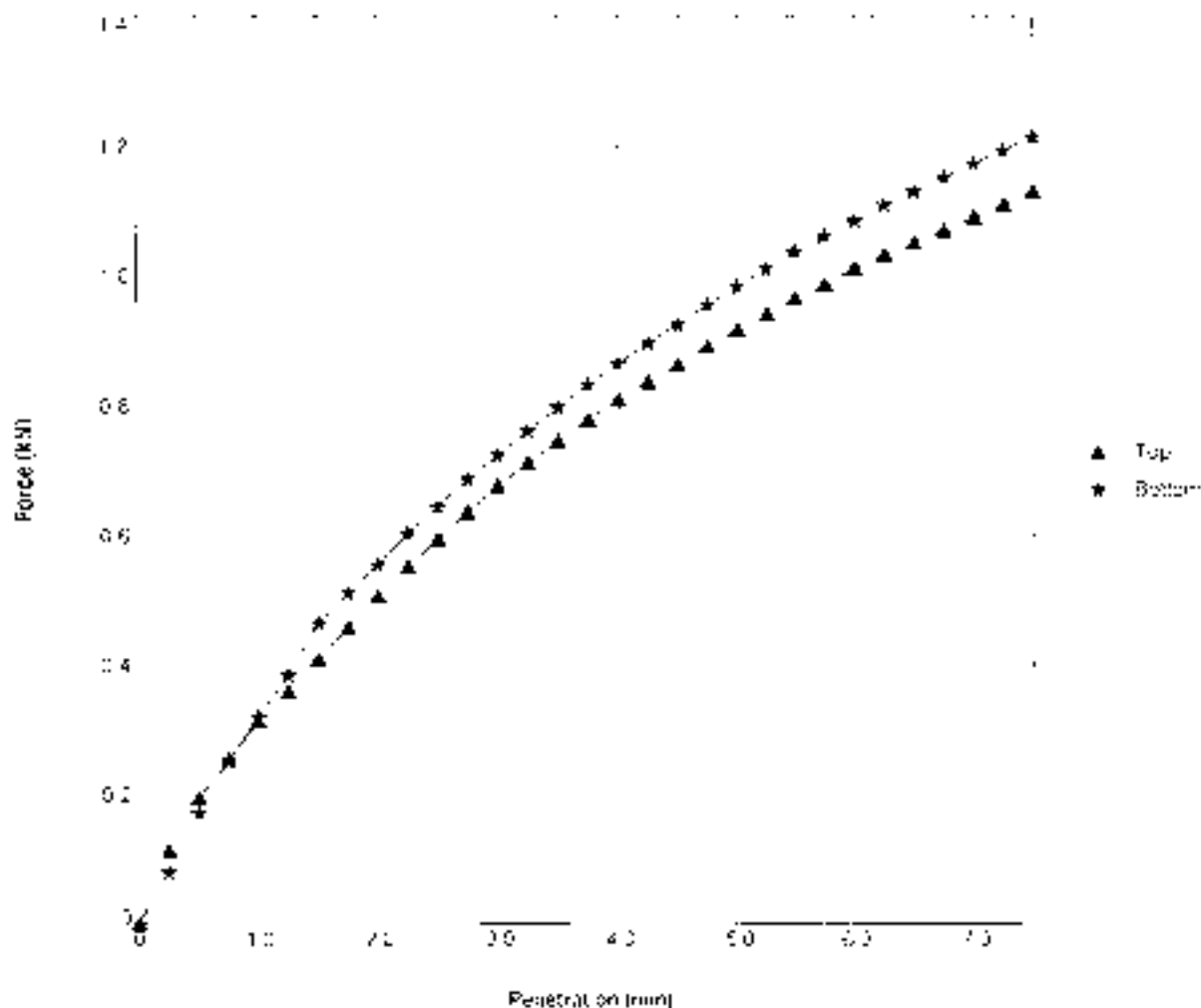
DETERMINATION OF THE CALIFORNIA BEARING RATIO

BS 1377 Part 4: 1990 and Part 2: Clause 3.7: 1990

Exploratory Hole No - PRAIRIE_AUK_TP131 Sample No - B10

Depth Int - 3.60

| | | | |
|------------------------------------|------------------|-----------------------------------|----------------------|
| "As Received" Moisture Content (%) | | Surcharge (Kg) | 9 |
| Retained on 20mm (%) | 0.0 | Sealing Load (N) | Top 10 / Bottom 10 |
| Correction Needed | No | Test Moisture Content (%) | Top 28 / Bottom 27 |
| Soaking Time (Days) | N/A | Bulk Density (Mg/m ³) | 1.93 |
| Swelling (mm) | N/A | Dry Density (Mg/m ³) | 1.52 |
| Date Tested | 01/10/2020 | CBR Value (%) | Top 4.6 / Bottom 4.9 |
| Preparation Method | 2.5kg Compaction | | |
| Remarks | | | |



For description of test, please refer to the Laboratory Sample Order form Sheet

Customer File

Prairie Site Ground Investigation Works

South Tees Development Corporation



Serial

meane

Name

File Ref

Date of Issue

01/10/2020

Customer Ref

CBR4013141E_AUK_TP131_B10_3.60

ACR Control No

4251



1367

ALLIED EXPLORATION & GEOTECHNICS LIMITED

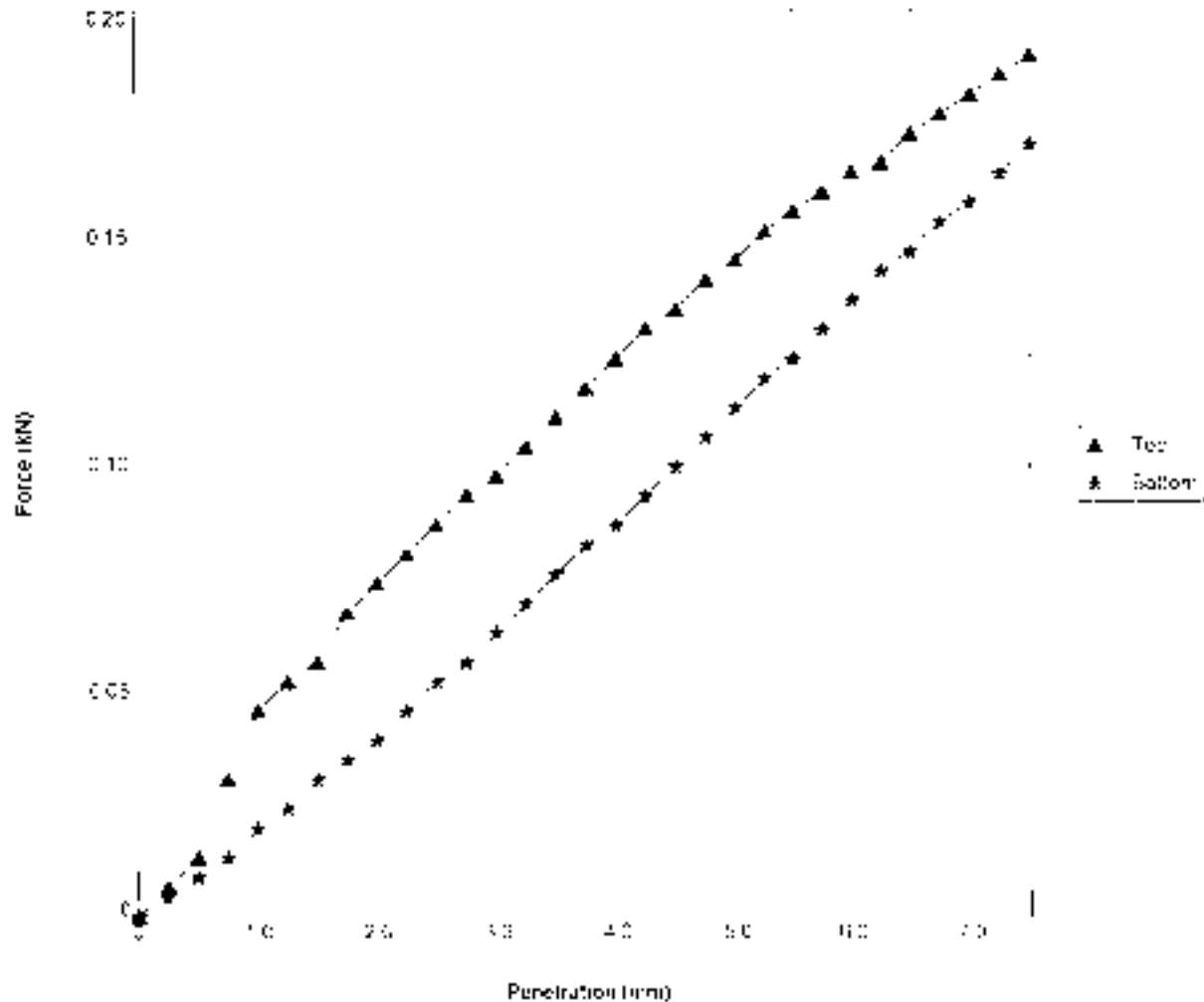
DETERMINATION OF THE CALIFORNIA BEARING RATIO

BS 1377 Part 4: 1990 and Part 2: Clause 3.2: 1990

Exploratory Hole No - PRAIRIE_AUK_TP137 Sample No - B7

Depth (m) - 2.00

| | | | |
|------------------------------------|------------------|-----------------------------------|------------------------|
| "As Received" Moisture Content (%) | | Surcharge (Kg) | 6 |
| Retained on 20mm (%) | 0.0 | Seating Load (N) | Top 10 / Bottom 10 |
| Correction Needed | No | Test Moisture Content (%) | Top 28 / Bottom 27 |
| Soaking Time (Days) | N/A | Bulk Density (Mg/m ³) | 1.92 |
| Swelling (mm) | N/A | Dry Density (Mg/m ³) | 1.51 |
| Date Tested | 15/10/2020 | CBR Value (%) | Top 0.72 / Bottom 0.58 |
| Preparation Method | 2.5kg Compaction | | |
| Remarks | | | |



For full details of sample, please refer to the Laboratory Sample Description sheet

Company Name

Prairie Site Ground Investigation Works

Client

South Tees Development Corporation



Project

Date of Issue

21/10/2020

msw

Name

Identification No.

2019-0119-0000 - AUK TP137 - B7 - 2020

Page 1 of 1

As per Contract No.

4251



1367

ALLIED EXPLORATION & GEOTECHNICS LIMITED

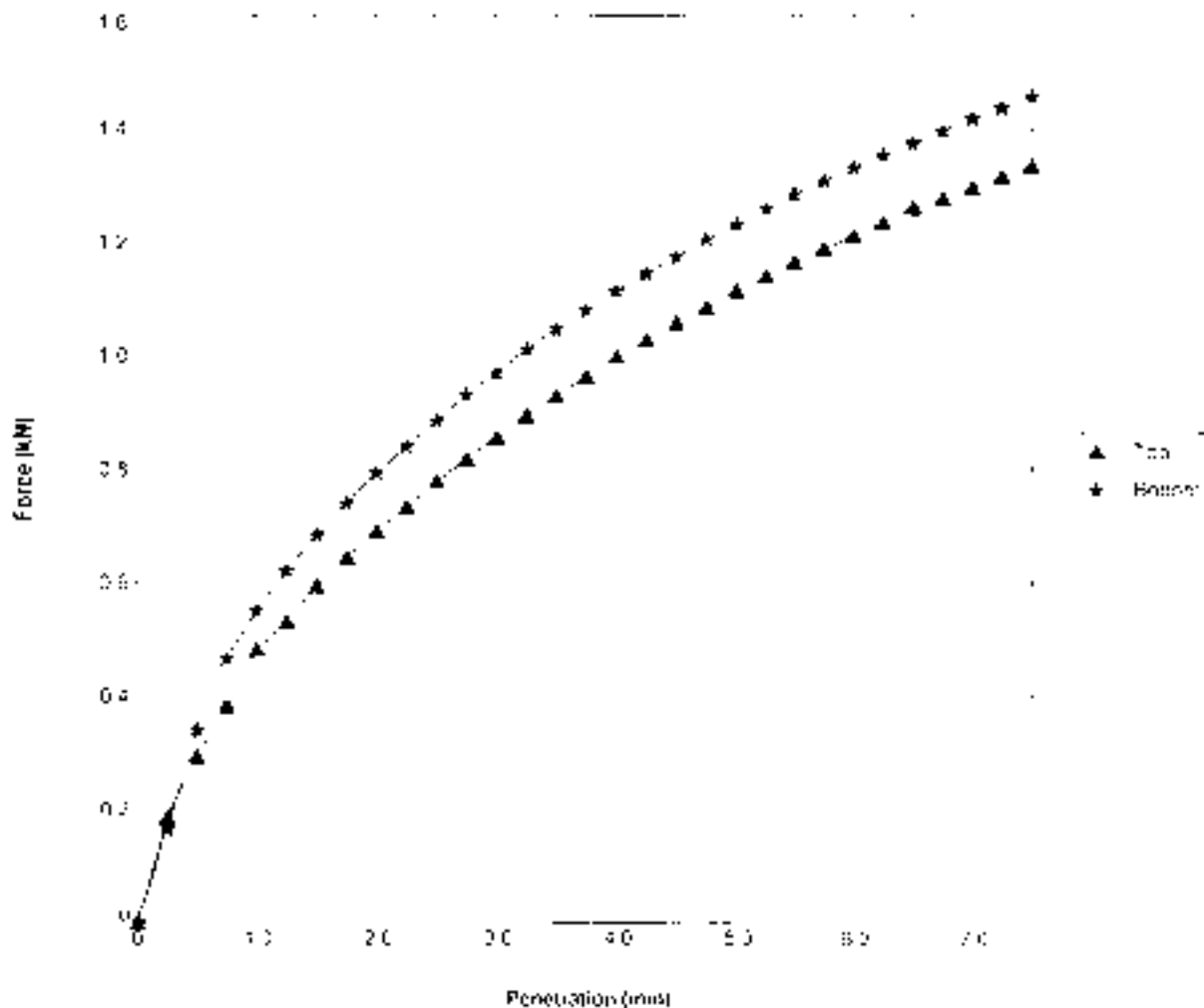
(INCORPORATED IN CANADA) (INCORPORATED IN ONTARIO) (INCORPORATED IN BRITISH COLUMBIA) (INCORPORATED IN ALBERTA) (INCORPORATED IN SASKATCHEWAN) (INCORPORATED IN MANITOBA) (INCORPORATED IN QUEBEC)

DETERMINATION OF THE CALIFORNIA BEARING RATIO

BS 1377 Part 4: 1990 and Part 2: Clause A2: 1990

Exploratory Hole No. **PRAIRIE_AUK TP145** Sample No. - **B6** Depth (m) - **2.40**

| | | | |
|------------------------------------|------------------|-----------------------------------|----------------------|
| "As Received" Moisture Content (%) | | Surcharge (Kg) | 6 |
| Retained on 20mm (%) | 0.0 | Sealing Load (N) | Top 10 / Bottom 10 |
| Correction Needed | No | Test Moisture Content (%) | Top 24 / Bottom 25 |
| Soaking Time (Days) | N/A | Bulk Density (Mg/m ³) | 2.09 |
| Swelling (mm) | N/A | Dry Density (Mg/m ³) | 1.08 |
| Date Tested | 30/09/2020 | CBR Value (%) | Top 5.9 / Bottom 6.7 |
| Preparation Method | 2.5kg Compaction | | |
| Remarks | | | |



For determination of sample please refer to the Laboratory Sample Description Sheet

Contract Title:

Prairie Site Ground Investigation Works

Client:

South Tees Development Corporation



Agreed:

M. Sore

Page 1 of 1

Date of Issue:

28/10/2020

Call Centre No:

1-800-425-4774 (Toll Free) / 416-291-1400

Accession No:

4251



1367

ALLIED EXPLORATION & GEOTECHNICS LIMITED

REGISTERED OFFICE: 117, CANTONMENT ROAD, SOUTH AFRICA, 7701, PORT ELIZABETH
REGISTRATION NO: 2015/0128672/07

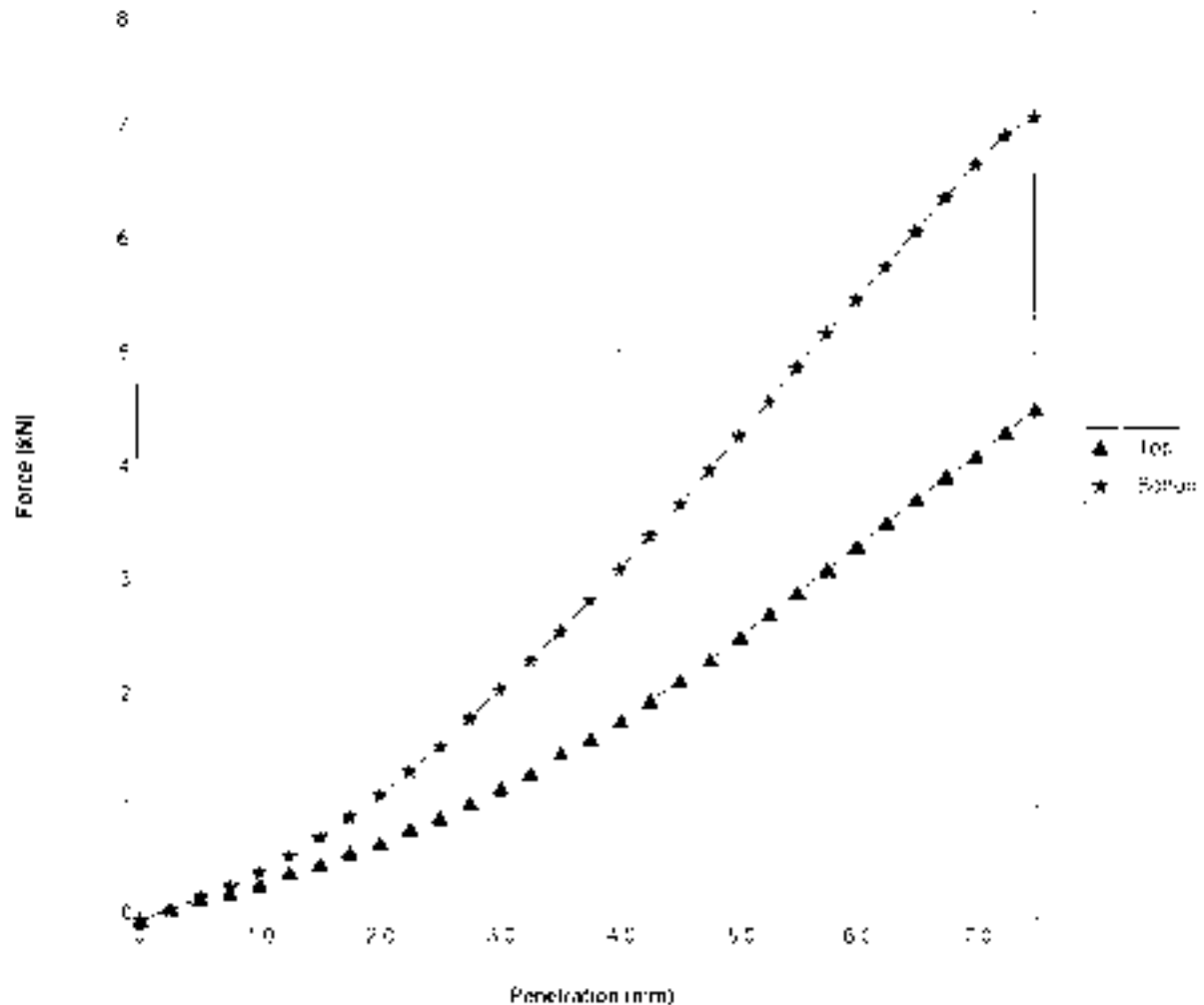
DETERMINATION OF THE CALIFORNIA BEARING RATIO

BS 1377 Part 4: 1990 and Part 2: Clause 5.2: 1990

Exploratory Hole No - PRAIRIE_AUK_TP146CSample No B6

Depth (m): 1.30

| | | | |
|------------------------------------|------------------|-----------------------------------|----------------------|
| "As Received" Moisture Content (%) | | Surcharge (Kg) | 5 |
| Retained on 20mm (%) | 14.0 | Seating Load (N) | Top 250 / Bottom 250 |
| Correction Needed | No | Test Moisture Content (%) | Top 24 / Bottom 24 |
| Soaking Time (Days) | N/A | Bulk Density (Mg/m ³) | 1.98 |
| Swelling (mm) | N/A | Dry Density (Mg/m ³) | 1.60 |
| Date Tested | 02/10/2020 | CBR Value (%) | Top 13 / Bottom 21 |
| Preparation Method | 2.5kg Compaction | | |
| Remarks | | | |



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title

Prairie Site Ground Investigation Works

Sixth Trees Development Corporation



Signed

[Handwritten Signature]

Name

Page 1 of 1

Date of Issue

02/10/2020

Drawn by

CBR 401 PRAIRIE_AUK_TP146C_B6_1

Tested by

4251



1367

ALLIED EXPLORATION & GEOTECHNICS LIMITED

AN ISO 9001:2015 CERTIFIED COMPANY
 Registered in England and Wales No. 02042887
 Registered Office: 100, South Street, South Tyneside, Tyne and Wear, NE11 1JG

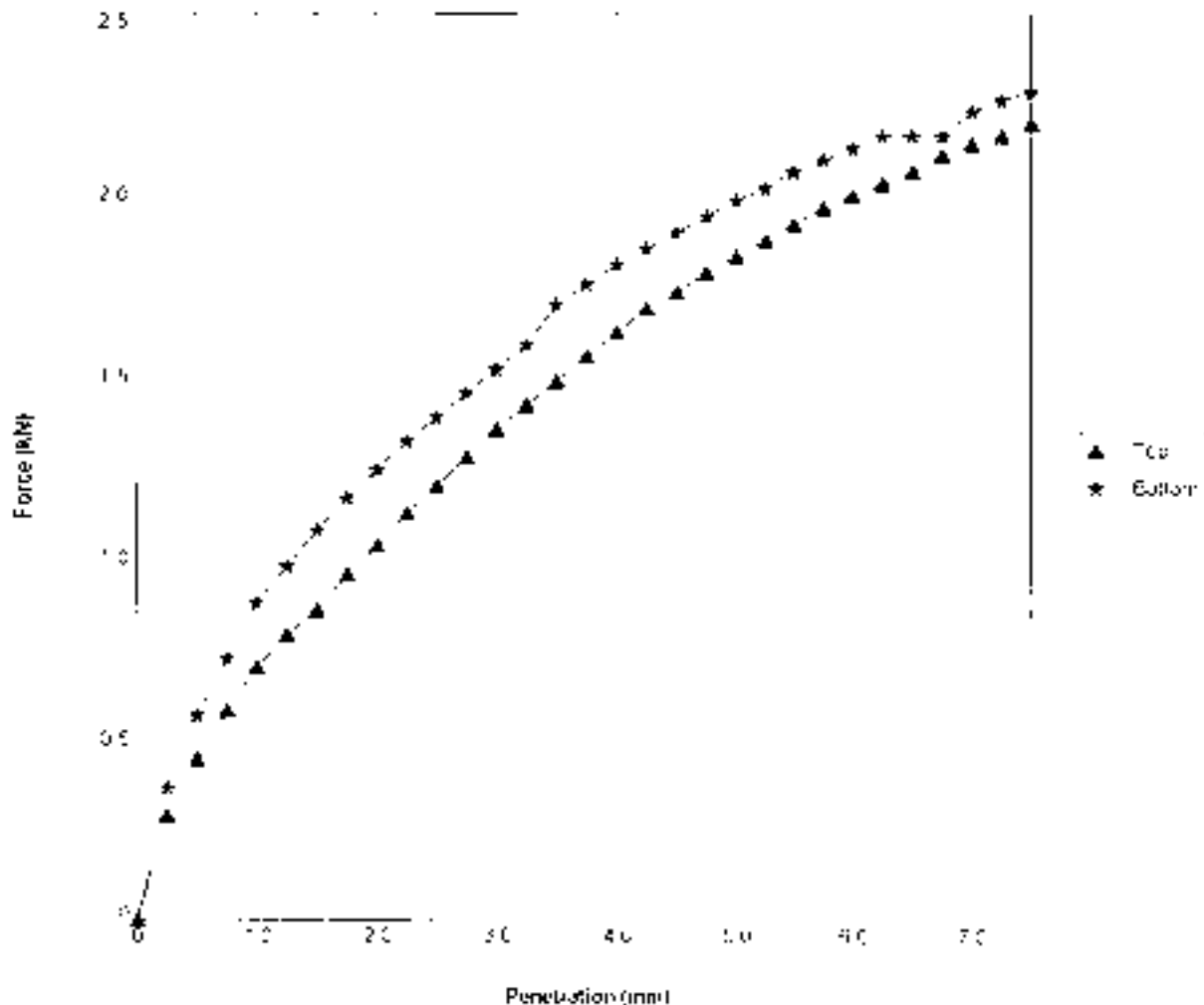
DETERMINATION OF THE CALIFORNIA BEARING RATIO

BS 1377 Part 4: 1990 and Part 2: Clause 3.2: 1990

Exploratory Hole No. **PRAIRIE AUK TP146C** Sample No. - **B8**

Depth (m): **2.30**

| | | | |
|------------------------------------|------------------|-----------------------------------|---------------------|
| "As Received" Moisture Content (%) | | Surcharge (Kg) | 6 |
| Retained on 20mm (%) | 0.0 | Seating Load (Ni) | Top 50 / Bottom 50 |
| Correction Needed | No | Test Moisture Content (%) | Top 23 / Bottom 23 |
| Soaking Time (Days) | N/A | Bulk Density (Mg/m ³) | 2.30 |
| Swelling (mm) | N/A | Dry Density (Mg/m ³) | 1.63 |
| Date Tested | 01/10/2020 | CBR Value (%) | Top 5.2 / Bottom 10 |
| Preparation Method | 2.5kg Compaction | | |
| Remarks | | | |



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title

Prairie Site Ground Investigation Works

South Tynes Development Corporation



Report No.

Date of Issue

msore

03/10/2020

Name

Contract No.

00740-146A-TP146C-SUB-B8

Page 1 of 1

Reference No.

4251



1367

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 25 Brinkley Industrial Estate, Farnley Park, Chester-le-Street, Co. Durham, DH4 2PL. Tel: 0191 261 4770 Fax: 0191 261 4743
Regional Office: Unit 21, Blundell Development Centre, Easing Wharf, Ewellham, SO1 5BL. Tel: 01702 735 300 Fax: 01702 735 288

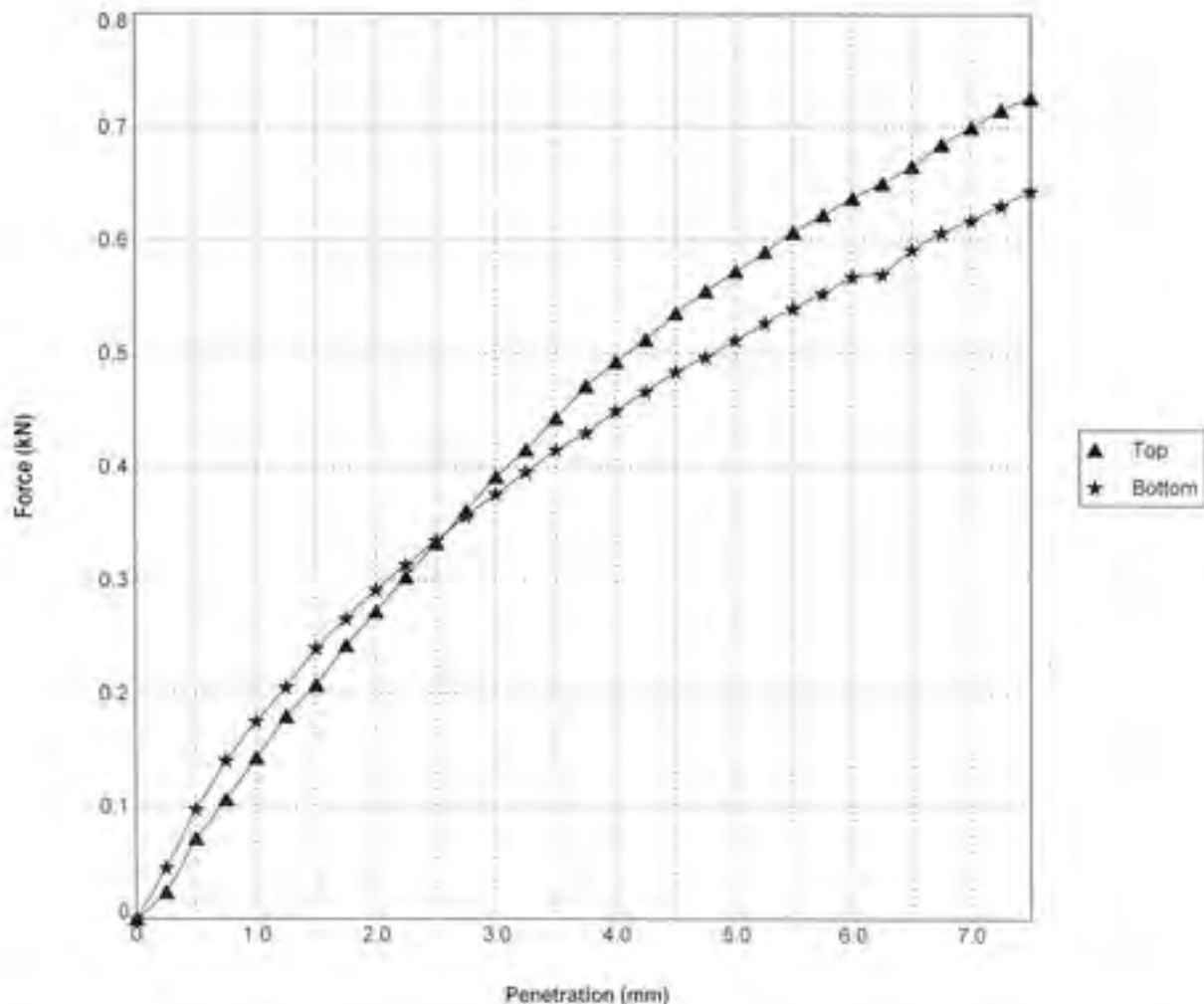
DETERMINATION OF THE CALIFORNIA BEARING RATIO

BS 1377 : Part 4 : 1990 and Part 2 : Clause 3.2 : 1990

Exploratory Hole No. - PRAIRIE_AUK_TP149 Sample No. - B5

Depth (m) - 2.20

| | | | |
|--------------------------------------|------------------|-------------------------------------|----------------------|
| "As Received" Moisture Content (%) : | | Surcharge (Kg) : | 6 |
| Retained on 20mm (%) : | 0.0 | Seating Load (N) : | Top 10 / Bottom 10 |
| Correction Needed : | No | Test Moisture Content (%) : | Top 29 / Bottom 30 |
| Soaking Time (Days) : | N/A | Bulk Density (Mg/m ³) : | 1.92 |
| Swelling (mm) : | N/A | Dry Density (Mg/m ³) : | 1.49 |
| Date Tested : | 16/10/2020 | CBR Value (%) : | Top 2.9 / Bottom 2.6 |
| Preparation Method : | 2.5kg Compaction | | |
| Remarks : | | | |



For description of sample please refer to the Laboratory Sample Description Sheet

| | |
|--|---|
| Contract Title :- Prairie Site Ground Investigation Works | Client :- South Tees Development Corporation |
|--|---|

| | | | | |
|---|--------------------------------|--|-------------|---|
|  | Signed :- <i>msere</i> | Name :- | Page 1 of 1 |  |
| | Date of issue :- 30/10/2020 | Certificate No. :- CBR/4251/PRAIRIE_AUK_TP149/B5/2.20/1 | | |

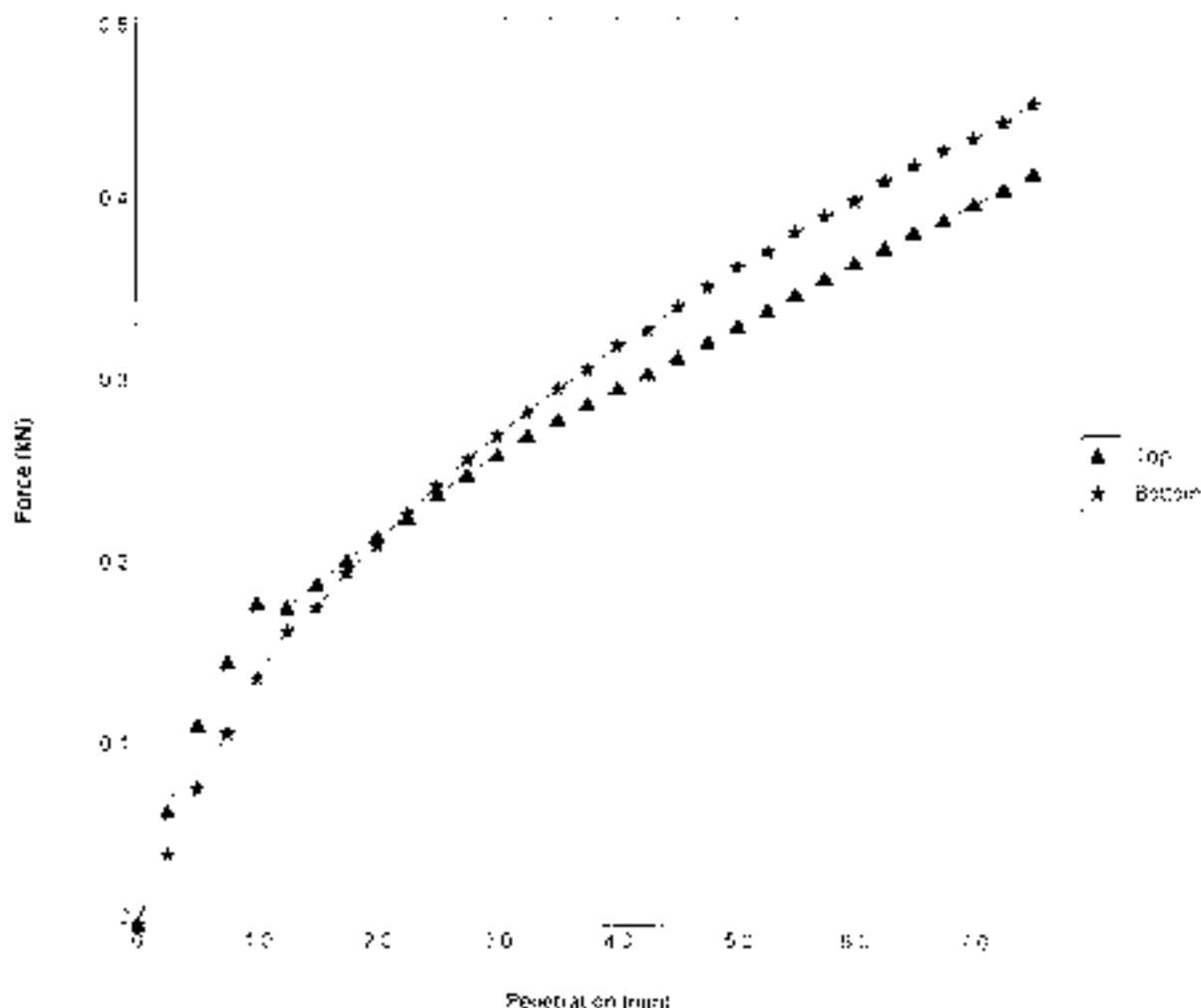
ALLIED EXPLORATION & GEOTECHNICS LIMITED

DETERMINATION OF THE CALIFORNIA BEARING RATIO

BS 1377 Part 4: 1990 and Part 2: Clause 12: 1990

Exploratory Hole No - PRAIRIE_ADK_TP152 Sample No - B6 Depth (m) - 2.50

| | | | |
|------------------------------------|------------------|-----------------------------------|----------------------|
| "As Received" Moisture Content (%) | | Surcharge (Kg) | 5 |
| Retained on 20mm (%) | 0.0 | Sealing Load (N) | Top 10 / Bottom 10 |
| Correction Needed | No | Test Moisture Content (%) | Top 31 / Bottom 30 |
| Soaking Time (Days) | N/A | Bulk Density (Mg/m ³) | 1.90 |
| Swelling (mm) | N/A | Dry Density (Mg/m ³) | 1.45 |
| Date Tested | 29/09/2020 | CBR Value (%) | Top 1.8 / Bottom 1.8 |
| Preparation Method | 2.5kg Compaction | | |
| Remarks | | | |



For description of symbols and procedure refer to the Laboratory Sample Description Sheet

Contract Title -

Prairie Site Ground Investigation Works

Client -

Southern Cross Development Corporation



Supervisor: *msone*
 Date of Issue: 09/10/2020

Job No: JBR 4251 PRAIRIE_ADK_TP152
 Certificate No: 4251

Page 7 of 7



1367

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Registered Office: 100, Victoria Road, South Shields, Tyne and Wear, NE33 1JF, U.K.

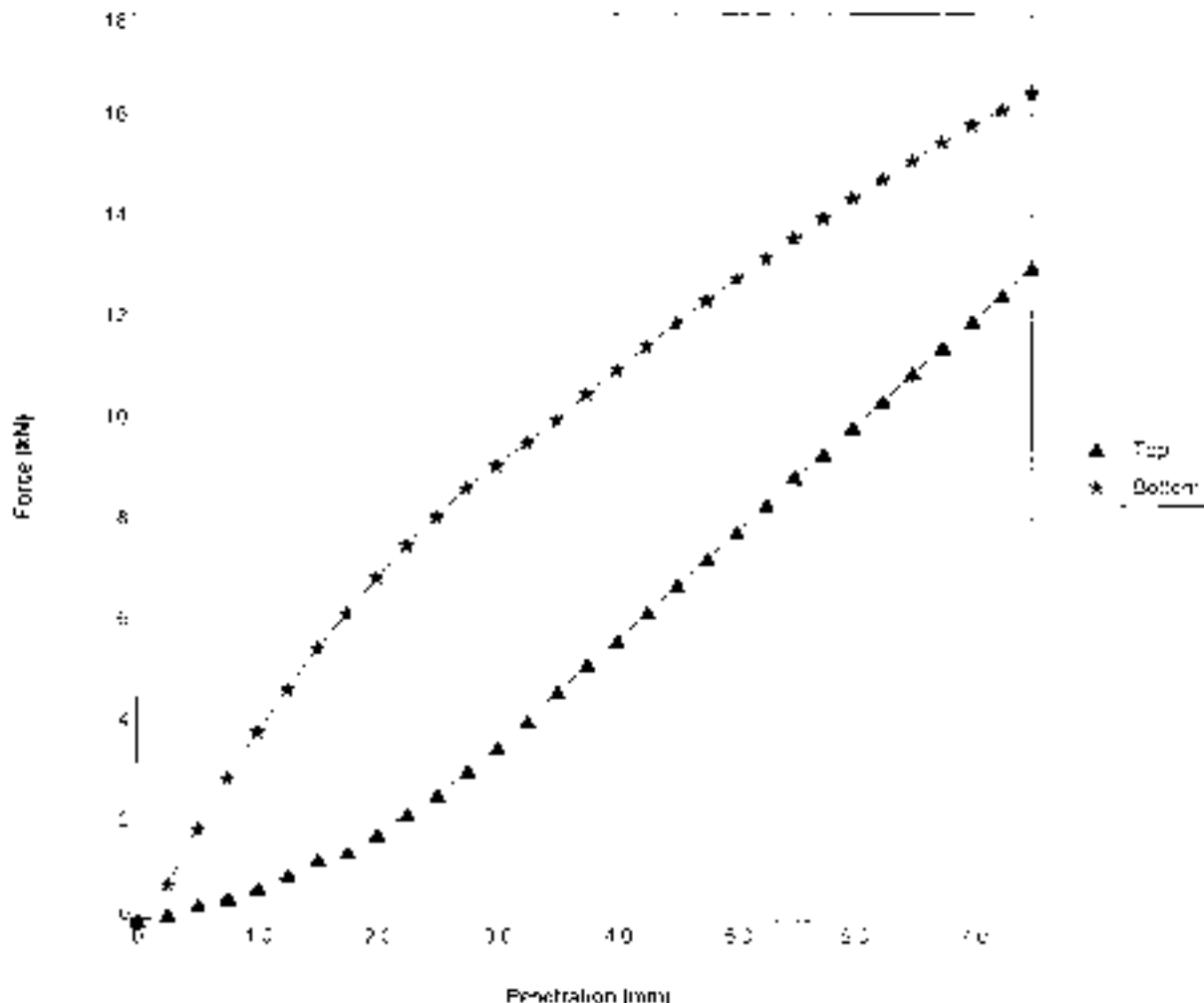
DETERMINATION OF THE CALIFORNIA BEARING RATIO

BS 1377 Part 4: 1990 and Part 2: Clause 3.2: 1990

Exploratory Hole No - PRAIRIE_AUK_TP163 Sample No - B2

Depth (m) - 0.80

| | | | |
|------------------------------------|------------------|-----------------------------------|--------------------|
| "As Received" Moisture Content (%) | | Surcharge (Kg) | 5 |
| Retained on 20mm (%) | 14.0 | Sealing Load (N) | Top 50 / Bottom 50 |
| Correction Needed | No | Test Moisture Content (%) | Top 14 / Bottom 14 |
| Soaking Time (Days) | N/A | Bulk Density (Mg/m ³) | 1.37 |
| Swelling (mm) | N/A | Dry Density (Mg/m ³) | 1.20 |
| Date Tested | 05/10/2020 | CBR Value (%) | Top 39 / Bottom 64 |
| Preparation Method | 2.5kg Compaction | | |
| Remarks | | | |



For full description of sample please refer to the Laboratory Sample Description sheet.

Contract Title:

Prairie Site Ground Investigation Works

Client:

South Tees Development Corporation



Agent:

msaw

Name:

Page 1 of 1

Date Issued:

04/10/2020

Certificate No.:

CBR4201/PRAIRIE_AUK_TP163/B2/0201

AEG Certificate No.

4251



1057

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Registered in England and Wales, No. 02062074, Limited by Guarantee, Registered Office: 100, Victoria Road, South Shields, Tyne and Wear, NE33 1JG, United Kingdom

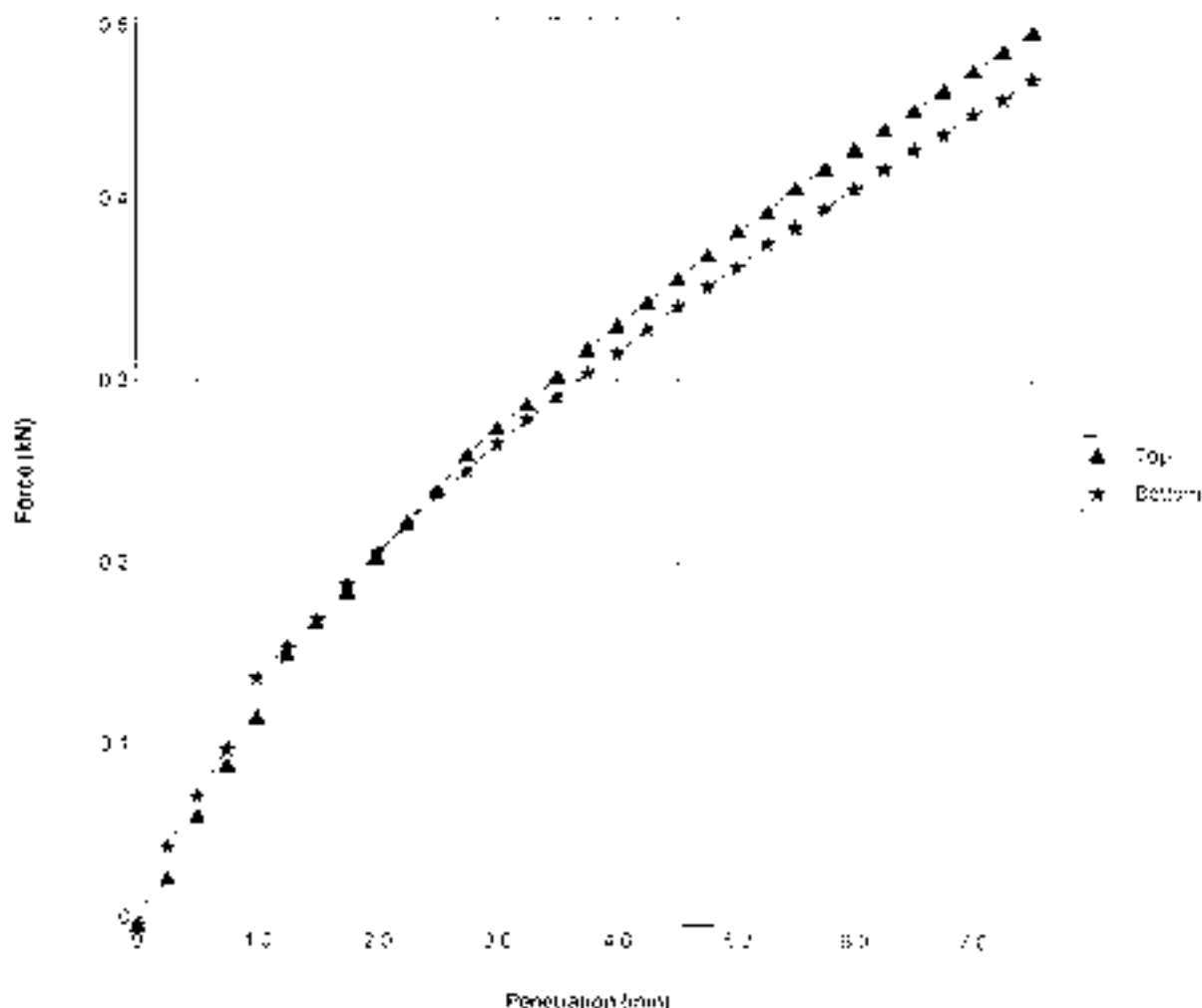
DETERMINATION OF THE CALIFORNIA BEARING RATIO

BS 1377 Part 4: 1990 and Part 2: Clause 3.2: 1990

Exploratory Hole No - PRAIRIE_AUK_TP163 Sample No - B5

Depth (m)- 1.70

| | | | |
|----------------------------------|------------------|-----------------------------------|----------------------|
| As Received Moisture Content (%) | | Surcharge (Kg) | 5 |
| Retained on 20mm (%) | 0.0 | Sealing Load (N) | Top 10 / Bottom 10 |
| Correction Needed | No | Test Moisture Content (%) | Top 27 / Bottom 27 |
| Soaking Time (Days) | N/A | Bulk Density (Mg/m ³) | 1.99 |
| Swelling (mm) | N/A | Dry Density (Mg/m ³) | 1.57 |
| Date Tested | 01/10/2020 | CBR Value (%) | Top 1.9 / Bottom 1.8 |
| Preparation Method | 2.5kg Compaction | | |
| Remarks | | | |



For determination of sample please refer to the Laboratory Sample Description Sheet

Manufacturer:

Frame Site Ground Investigation Works

Client:

South Tees Development Corporation



Signed:

msero

Date Issued:

01/10/2020

Name:

Geotechnical

CPN 4251 PRAIRIE_AUK_TP163 B5 1.70

Report No.:

AEG Report No.:

4251



1367

ALLIED EXPLORATION & GEOTECHNICS LIMITED

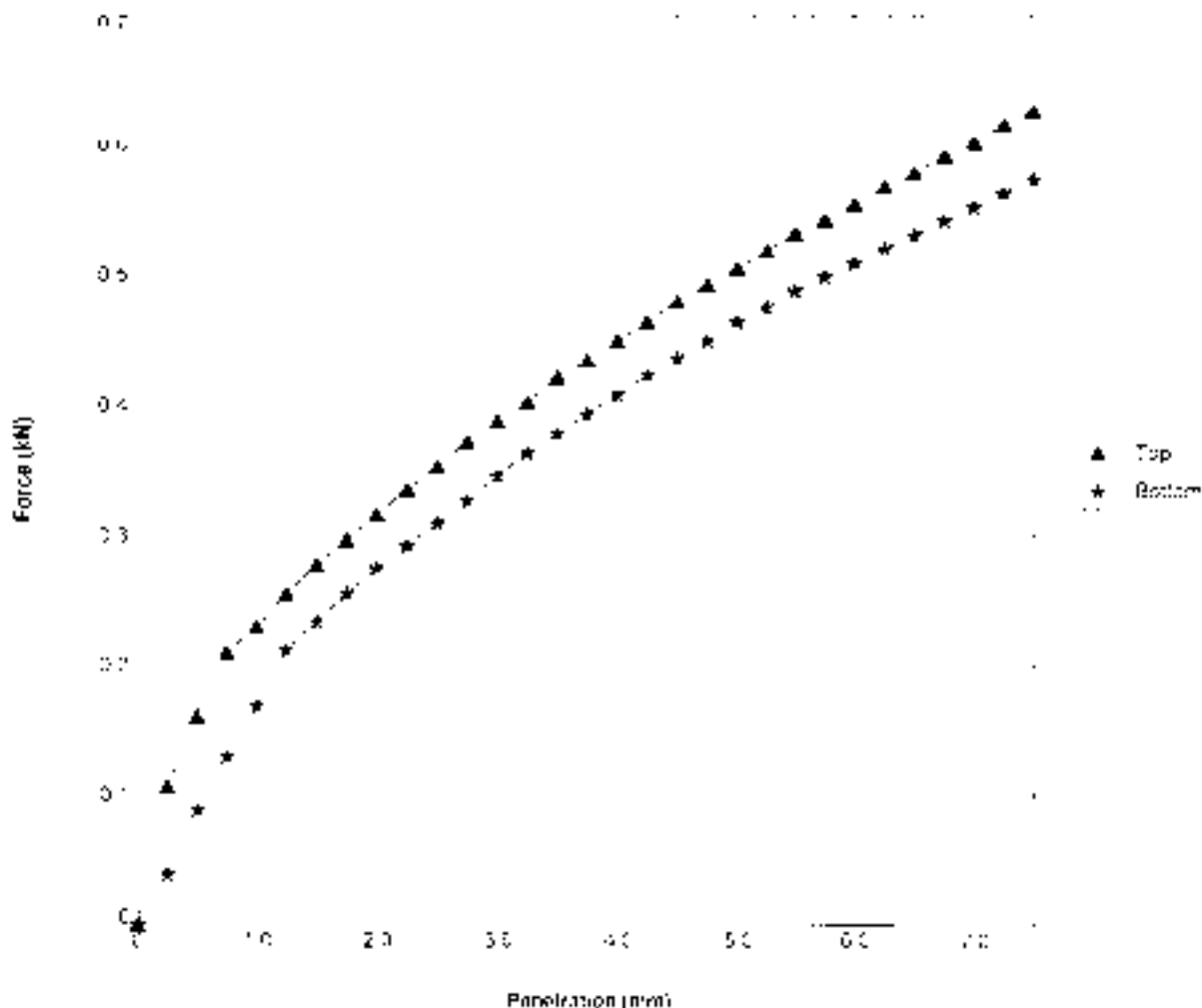
(Incorporated in the Republic of South Africa) (Pretoria) (P.O. Box 10246) (Sandton) (2146)

DETERMINATION OF THE CALIFORNIA BEARING RATIO

BS 1377 Part 4: 1990 and Part 2: Clause 3.9: 1990

Exploratory Hole No - PRAIRIE_AUK_TP168 Sample No - B7 Depth (m) - 1.60

| | | | |
|----------------------------------|------------------|-----------------------------------|----------------------|
| As Received Moisture Content (%) | | Surcharge (Kg) | 8 |
| Retained on 20mm (%) | 0.0 | Sealing Load (N) | Top 10 / Bottom 10 |
| Correction Needed | No | Test Moisture Content (%) | Top 29 / Bottom 33 |
| Soaking Time (Days) | N/A | Bulk Density (Mg/m ³) | 1.92 |
| Swelling (mm) | N/A | Dry Density (Mg/m ³) | 1.48 |
| Date Tested | 30/09/2020 | CBR Value (%) | Top 2.7 / Bottom 2.3 |
| Preparation Method | 2.5kg Compaction | | |
| Remarks | | | |



For description of sample please refer to the Laboratory Sample Description sheet

Contract No -

Prairie Site Ground Investigation Works

Client

South Tees Development Corporation



Signed

msone

Name

Reviewed

Date of Issue

19/10/2020

Contract No -

PR168 AUK PRAIRIE_AUK_TP168 B7 1/20

ACQ Control No

4251



1367

ALLIED EXPLORATION & GEOTECHNICS LIMITED

(Incorporated in England and Wales, No. 02062974, Limited Liability Company)

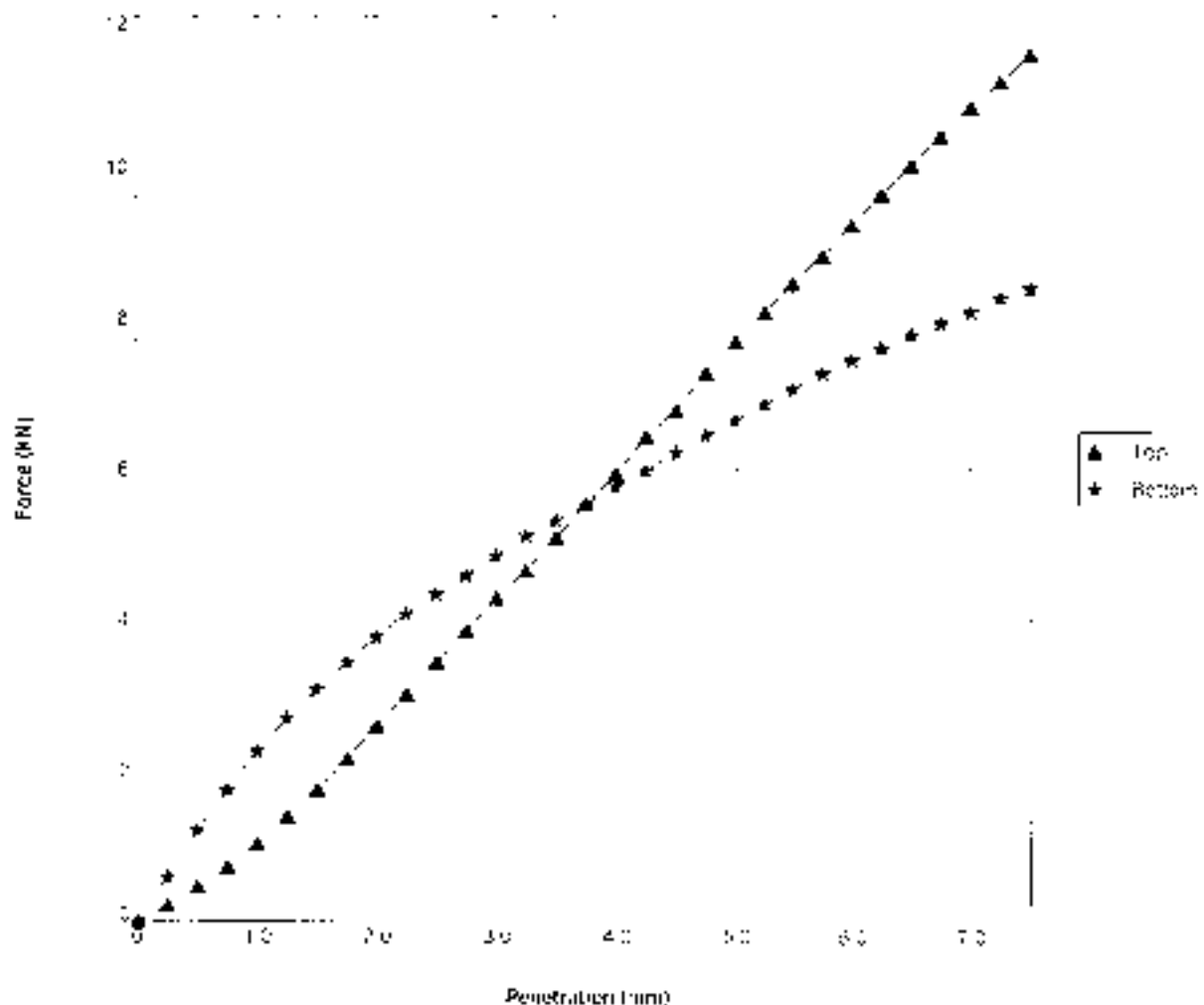
DETERMINATION OF THE CALIFORNIA BEARING RATIO

BS 1377 Part 4: 1990 and Part 2: Clause 3.7: 1990

Exploratory Hole No - PRAIRIE AUX TP173 Sample No - B2

Depth (m) - 0.80

| | | | |
|------------------------------------|------------------|-----------------------------------|----------------------|
| "As Received" Moisture Content (%) | | Surcharge (Kg) | 6 |
| Retained on 20mm (%) | 22.0 | Sealing Load (N) | Top 250 / Bottom 250 |
| Correction Needed | No | Test Moisture Content (%) | Top 20 / Bottom 20 |
| Soaking Time (Days) | N/A | Bulk Density (Mg/m ³) | 1.77 |
| Swelling (mm) | N/A | Dry Density (Mg/m ³) | 1.48 |
| Date Tested : | 30/09/2020 | CBR Value (%) | Top 39 / Bottom 33 |
| Preparation Method | 2.5kg Compaction | | |
| Remarks | | | |



For verification of sample phase refer to the Laboratory Sample Description Sheet

Contract File:

Prairie Site Ground Investigation Works

Location:

South Tees Development Corporation



Signature: *[Handwritten Signature]*
 Date of Issue: 30/10/2020

Name: *[Handwritten Name]*
 Job Title: CDR
 CDR 404/PRAIRIE AUX TP173/SUBJECT

Page 1 of 1

LAB ID/Draw No: 4251



1357

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Method: BS 1377 Part 4: 1990 and Part 2: Clause 3.2: 1990

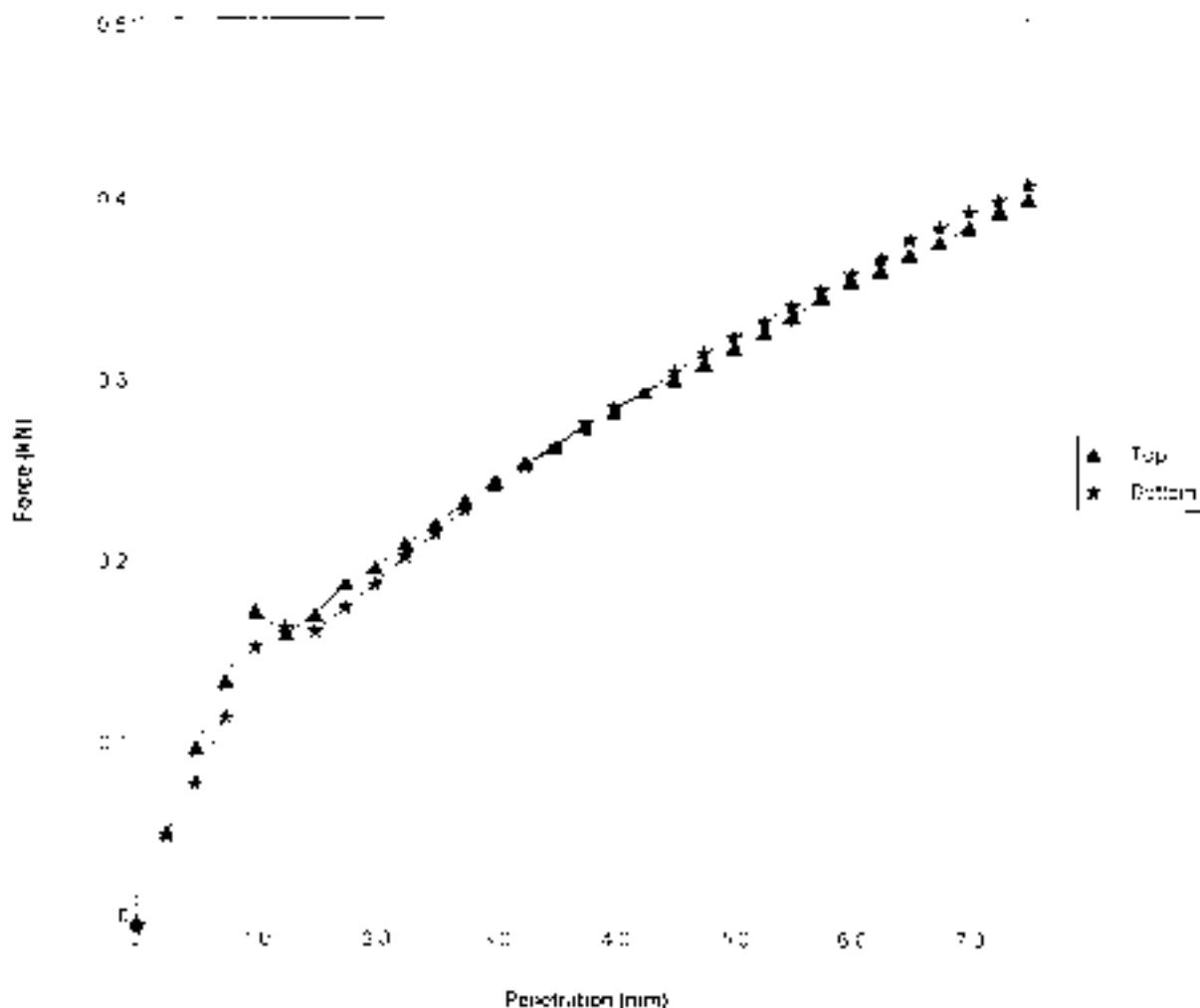
DETERMINATION OF THE CALIFORNIA BEARING RATIO

BS 1377 Part 4: 1990 and Part 2: Clause 3.2: 1990

Exploratory Hole No - PRAIRIE_AUK_TP176 Sample No - B5

Depth (m) - 2.00

| | | | |
|------------------------------------|------------------|-----------------------------------|----------------------|
| "As Received" Moisture Content (%) | | Surcharge (Kg) | 8 |
| Retained on 20mm (%) | 0.0 | Sealing Load (N) | Top 10 / Bottom 10 |
| Correction Needed | No | Test Moisture Content (%) | Top 26 / Bottom 25 |
| Soaking Time (Days) | N/A | Bulk Density (Mg/m ³) | 1.97 |
| Swelling (mm) | N/A | Dry Density (Mg/m ³) | 1.55 |
| Date Tested | 29/09/2020 | CBR Value (%) | Top 1.7 / Bottom 1.6 |
| Preparation Method | 2.5kg Compaction | | |
| Remarks | | | |



For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title

Prairie Site Ground Investigation Works

Client

South Tynes Development Corporation



Signature

msene

Name

Date Issued

Date of Issue

29/09/2020

Client and No.

Contract Ref: PRAIRIE_AUK_TP176/B5

Reference No.

4251



1357

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Registered Office: 100, The Quadrant, Southport, Merseyside, L35 9DF, UK

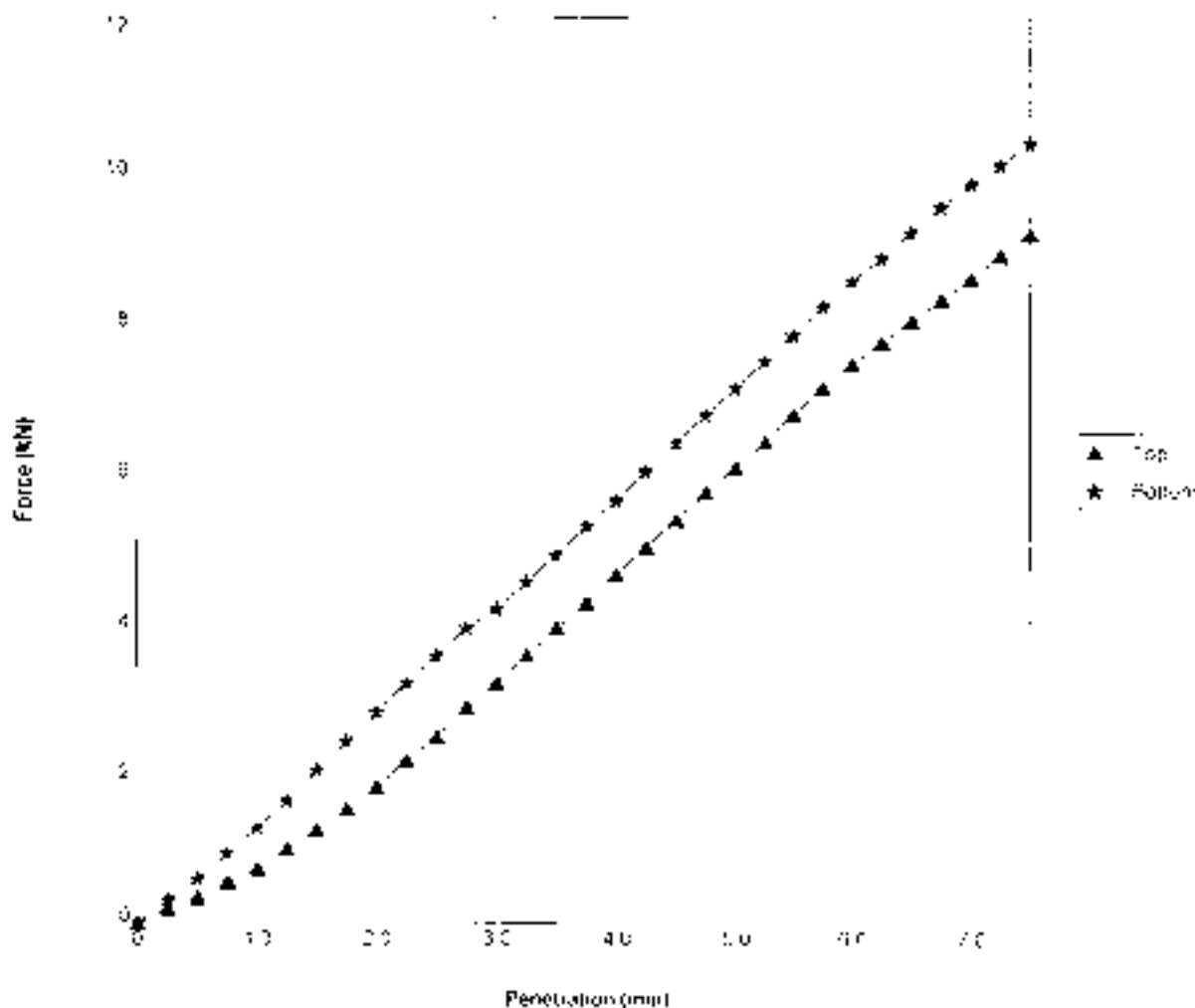
DÉTERMINATION OF THE CALIFORNIA BEARING RATIO

BS 1377 Part 4: 1990 and Part 2: Clause 3.7: 1990

Exploratory Hole No - **PRAIRIE_AUK_TP178** Sample No - **82**

Depth (m) - **0.60**

| | | | |
|------------------------------------|------------------|-----------------------------------|----------------------|
| "As Received" Moisture Content (%) | | Surcharge (Kg) | 6 |
| Retained on 20mm (%) | 11.0 | Seating Load (N) | Top 250 / Bottom 250 |
| Correction Needed | No | Test Moisture Content (%) | Top 33 / Bottom 34 |
| Soaking Time (Days) | N/A | Bulk Density (Mg/m ³) | 1.57 |
| Swelling (mm) | N/A | Dry Density (Mg/m ³) | 1.22 |
| Date Tested | 05/10/2020 | CBR Value (%) | Top 30 / Bottom 35 |
| Preparation Method | 2.5kg Compaction | | |
| Remarks | | | |



For description of sample please refer to the Laboratory Sample Description Sheet.

Contract Title:

Prairie Site Ground Investigation Works

South Lakes Development Corporation



Signed:

msere

Date:

Supplied:

Contract No.:

05/10/2020

Certificate No.:

0054001004-PRAIRIE_AUK_TP178-002020

Accreditation No.:

4251



1367

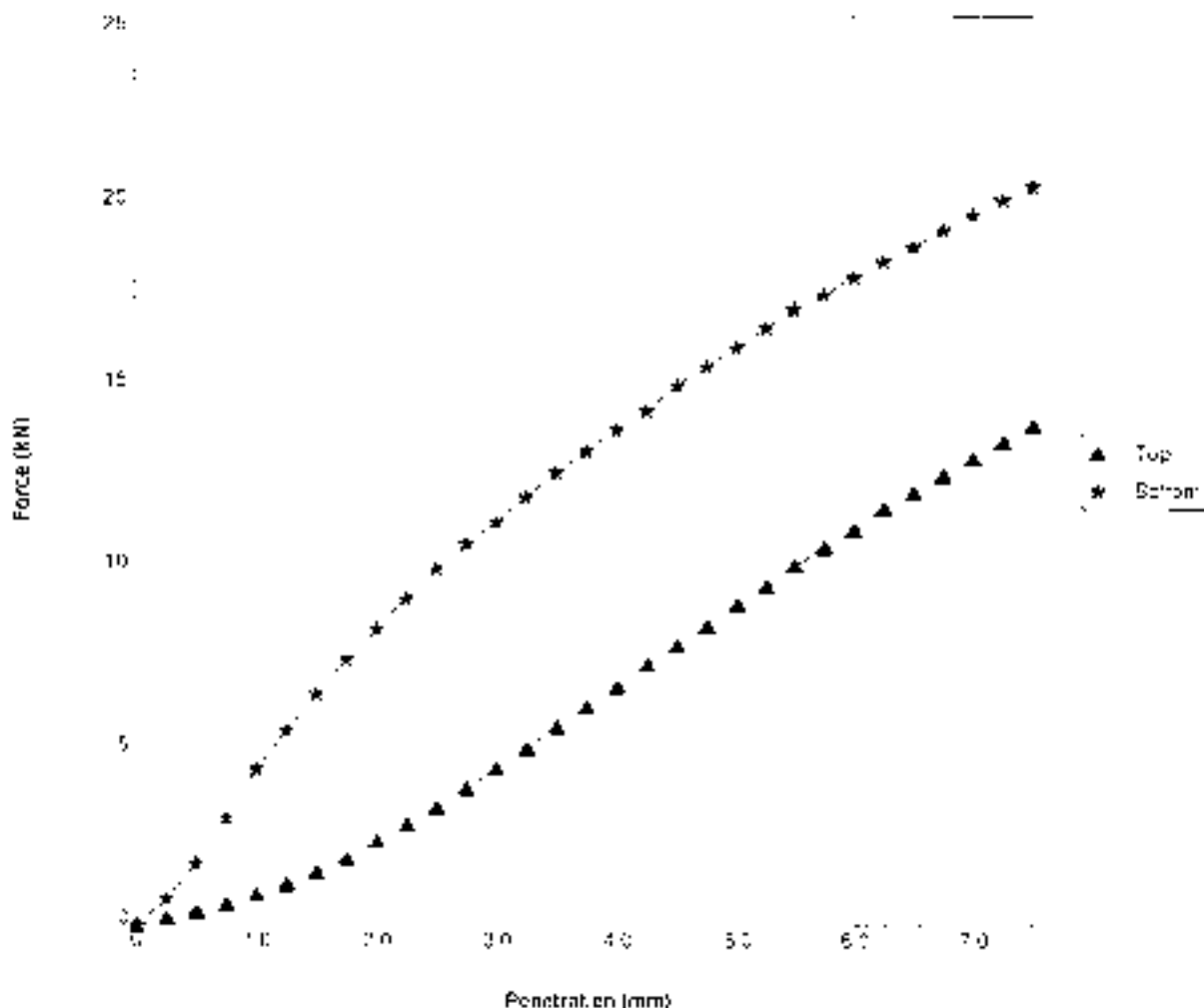
ALLIED EXPLORATION & GEOTECHNICS LIMITED

Method: BS 1377 Part 4: 1990 and Part 2: Clause 3.7: 1990

DETERMINATION OF THE CALIFORNIA BEARING RATIO

BS 1377 Part 4: 1990 and Part 2: Clause 3.7: 1990

| | | | |
|---|------------------|-----------------------------------|----------------------|
| Exploratory Hole No - PRAIRIE_AUK_TP181 | | Sample No - B2 | Depth (m) - 0.50 |
| "As Received" Moisture Content (%) | | Surcharge (Kg) | 6 |
| Retained on 20mm (%) | 25.0 | Seating Load (N) | Top 250 / Bottom 250 |
| Correction Needed | No | Test Moisture Content (%) | Top 15 / Bottom 15 |
| Soaking Time (Days) | N/A | Bulk Density (Mg/m ³) | 1.75 |
| Swelling (mm) | N/A | Dry Density (Mg/m ³) | 1.52 |
| Date Tested | 02/10/2020 | CBR Value (%) | Top 44 / Bottom 80 |
| Preparation Method | 2.5kg Compaction | | |
| Remarks | | | |



For identification of samples please refer to the Laboratory Sample Description Sheet

Contract Ref:

Prairie Site Ground Investigation Works

Client:

South Tees Development Corporation



Series

ms020

Name

Date Issued

Date of Issue

05/10/2020

Location No

000401/PRAIRIE_AUK_TP181/01/50

Project No

4251



1167

ALLIED EXPLORATION & GEOTECHNICS LIMITED

100, 201st Street, Scarborough, Ontario M1B 2Y7, Canada

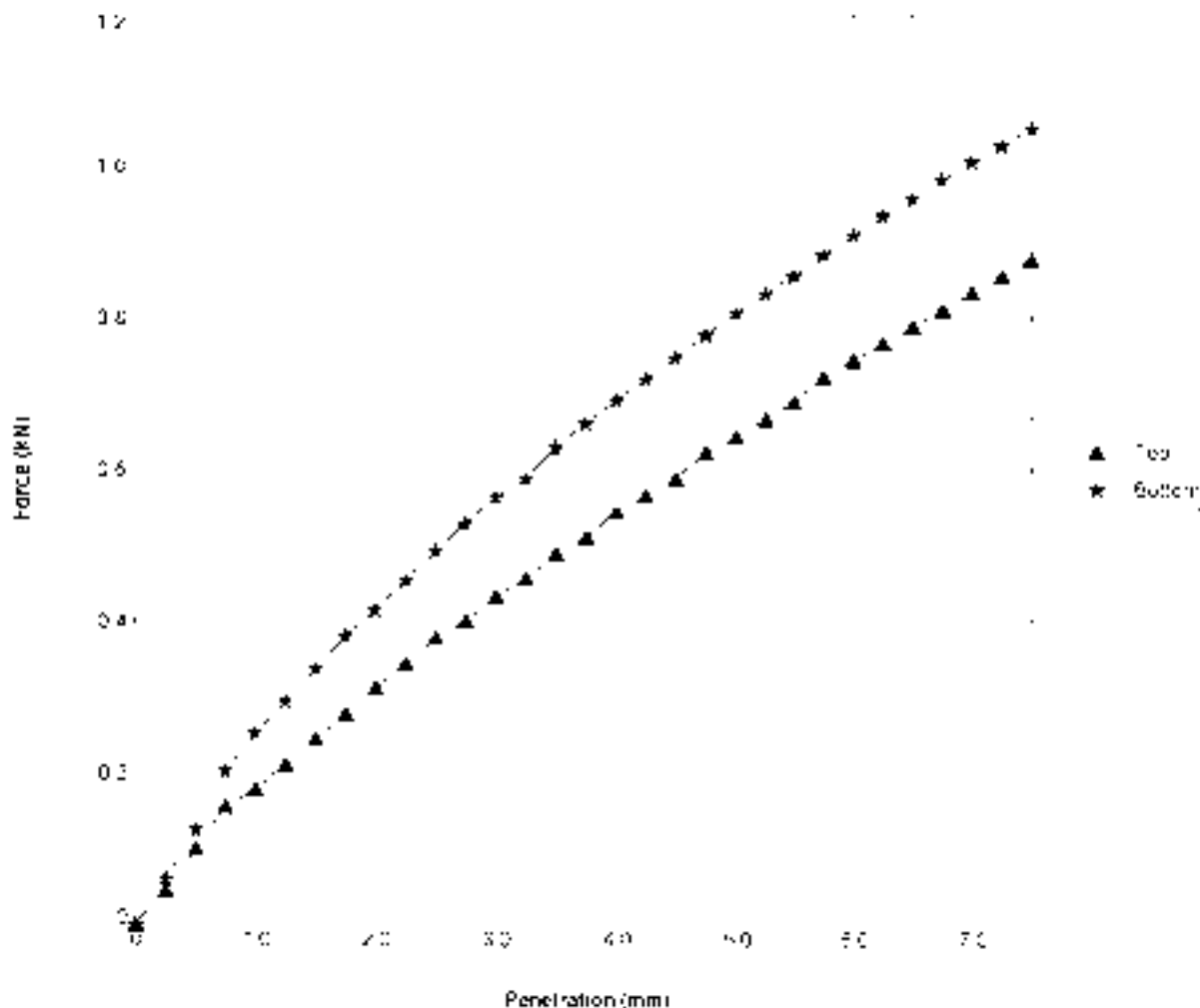
DETERMINATION OF THE CALIFORNIA BEARING RATIO

BS 1377 Part 4: 1990 and Part 7: Clause 3.2: 1990

Exploratory Hole No - PRAIRIE_AUK_TP181 Sample No - B6

Depth (m) - 2.00

| | | | |
|------------------------------------|------------------|-----------------------------------|----------------------|
| "As Received" Moisture Content (%) | | Surcharge (Kg) | 3 |
| Retained on 20mm (%) | 0.0 | Sealing Load (kN) | Top 50 / Bottom 50 |
| Correction Needed | No | Test Moisture Content (%) | Top 23 / Bottom 23 |
| Soaking Time (Days) | N/A | Bulk Density (Mg/m ³) | 2.04 |
| Swelling (mm) | N/A | Dry Density (Mg/m ³) | 1.65 |
| Date Tested | 02/10/2020 | GBR Value (%) | Top 3.2 / Bottom 4.0 |
| Preparation Method | 2.5kg Compaction | | |
| Remarks | | | |



Each sample of soil used here refers to the Laboratory Sample Description Sheet

Contract No:

Prairie Site Ground Investigation Works

Client:

South Tees Development Corporation



By:

District Engineer

02/10/2020

For:

Contract No:

GBR 4251 PRAIRIE_AUK_TP181 B6 (0.1)

By:

4251

4251



1367

ALLIED EXPLORATION & GEOTECHNICS LIMITED

REGISTERED OFFICE: ALLIED EXPLORATION & GEOTECHNICS LIMITED, 100, BRISTOL ROAD, SOUTH TEES, SOUTH TEES DEVELOPMENT CORPORATION, SOUTH TEES, MIDDLESBROUGH, NORTH YORKSHIRE, TS20 1JH

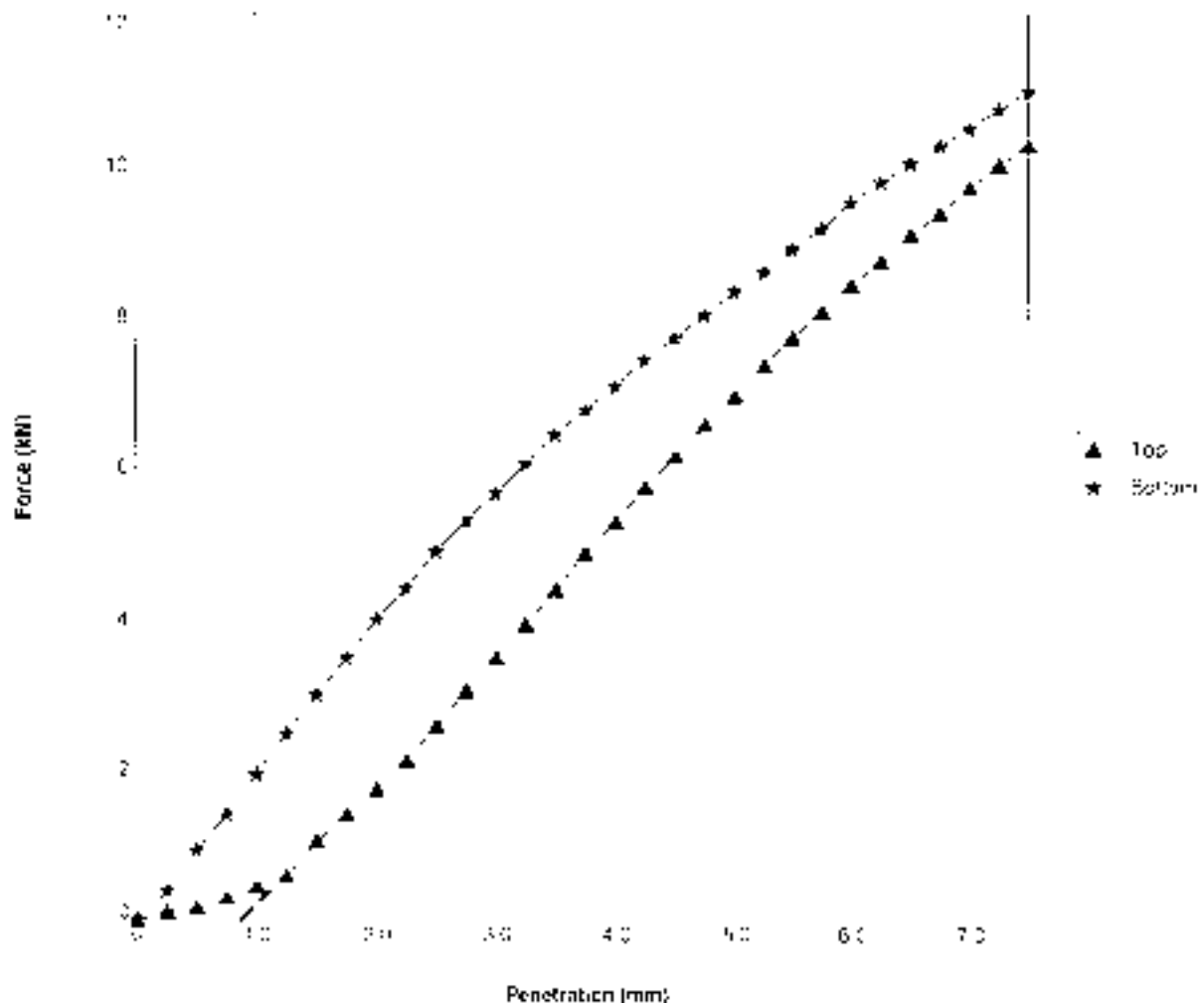
DETERMINATION OF THE CALIFORNIA BEARING RATIO

BS 1377 Part 4: 1990 and Part 2: Clause 3.2: 1990

Exploratory Hole No - PRAIRIE_AUK_TP182 Sample No - B2

Depth (m) - 0.60

| | | | |
|------------------------------------|------------------|-----------------------------------|----------------------|
| "As Received" Moisture Content (%) | | Surcharge (Kg) | 10 |
| Retained on 20mm (%) | 17.0 | Seating Load (N) | Top 250 / Bottom 250 |
| Correction Needed | Yes | Test Moisture Content (%) | Top 16 / Bottom 16 |
| Soaking Time (Days) | N/A | Bulk Density (Mg/m ³) | 1.48 |
| Swelling (mm) | N/A | Dry Density (Mg/m ³) | 1.28 |
| Date Tested | 25/09/2020 | CBR Value (%) | Top 40 / Bottom 42 |
| Preparation Method | 2.5kg Compaction | | |
| Remarks | | | |



For identification of sample, please refer to the Laboratory Sample Description Sheet

Contract File No.

Prairie Site Ground Investigation Works

Client No.

South Tees Development Corporation



Signature

Date of Issue

25/09/2020

Name

Contract No.

058/2020/PRAIRIE_AUK_TP182/B2/B2

Page 1 of 1

APG Certificate No.

4251



1367

ALLIED EXPLORATION & GEOTECHNICS LIMITED

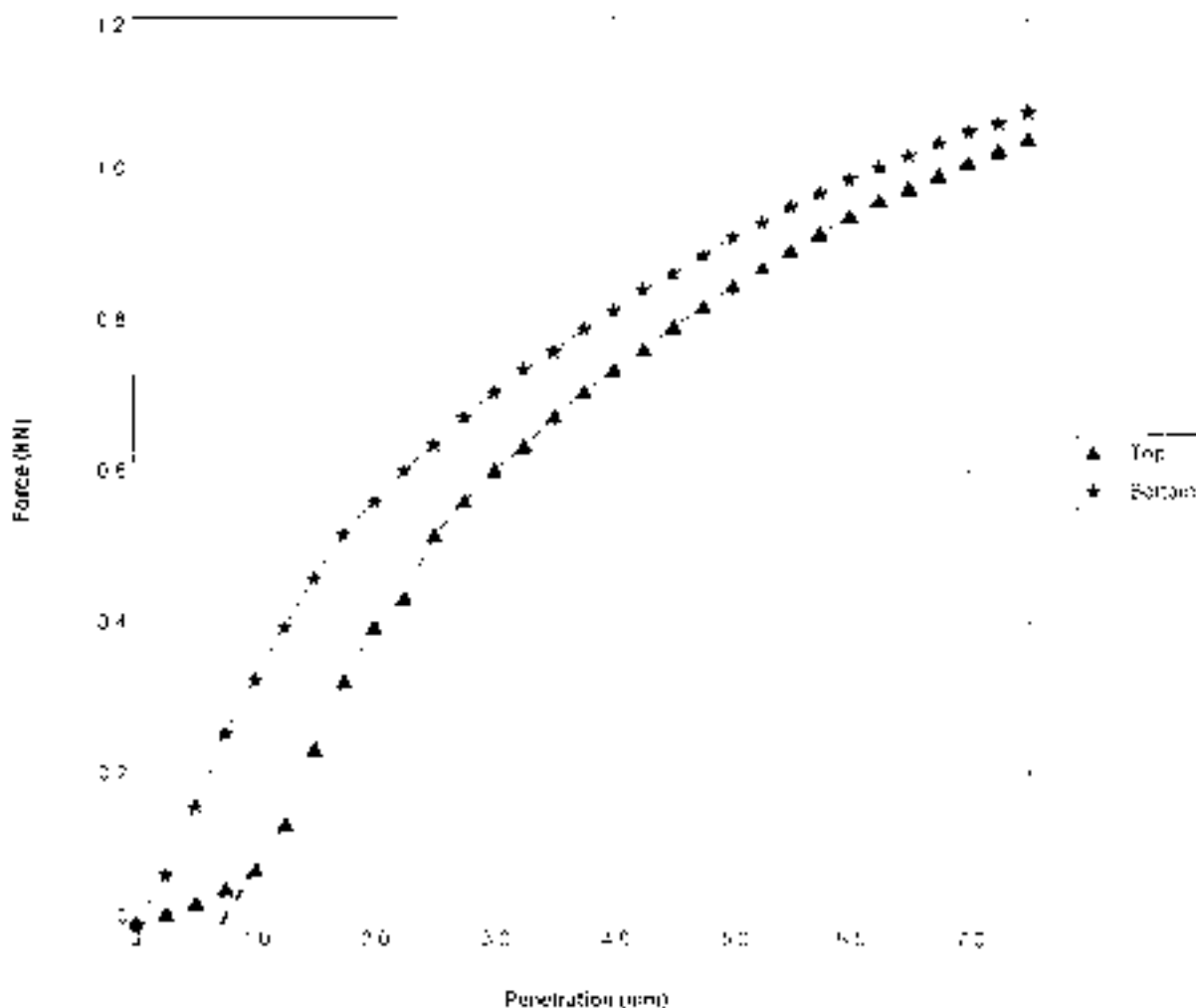
100/100A/100B/100C/100D/100E/100F/100G/100H/100I/100J/100K/100L/100M/100N/100O/100P/100Q/100R/100S/100T/100U/100V/100W/100X/100Y/100Z

DETERMINATION OF THE CALIFORNIA BEARING RATIO

BS 1377 Part 4: 1990 and Part 2: Clause 3.2: 1990

Exploratory Hole No - PRAIRIE_AUK_TP182 Sample No - B5 Depth (m) - 1.60

| | | | |
|------------------------------------|------------------|-----------------------------------|----------------------|
| "As Received" Moisture Content (%) | | Surcharge (Kg) | 6 |
| Retained on 20mm (%) | 0.0 | Sealing Load (N) | Top 10 / Bottom 50 |
| Correction Needed | Yes | Test Moisture Content (%) | Top 28 / Bottom 27 |
| Soaking Time (Days) | N/A | Bulk Density (Mg/m ³) | 1.94 |
| Swelling (mm) | N/A | Dry Density (Mg/m ³) | 1.52 |
| Date Tested | 16/10/2020 | CBR Value (%) | Top 4.6 / Bottom 4.8 |
| Preparation Method | 2.5kg Compaction | | |
| Remarks | | | |



For next business day please refer to the Laboratory of 100/100A/100B/100C/100D/100E/100F/100G/100H/100I/100J/100K/100L/100M/100N/100O/100P/100Q/100R/100S/100T/100U/100V/100W/100X/100Y/100Z

Contract Title

Prairie Site Ground Investigation Works

Client

South Trees Development Corporation



Prepared by: *msoar*
 Date of Issue: 16/10/2020

Checked by: _____
 Date of Issue: 16/10/2020

Project Ref: _____
 All Quantities: 4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: 120, Victoria Road, South Shields, Tyne and Wear, NE33 1JG, UK
 Telephone: 0191 276 6000 Fax: 0191 276 6001 E-mail: sales@allied-geotech.co.uk

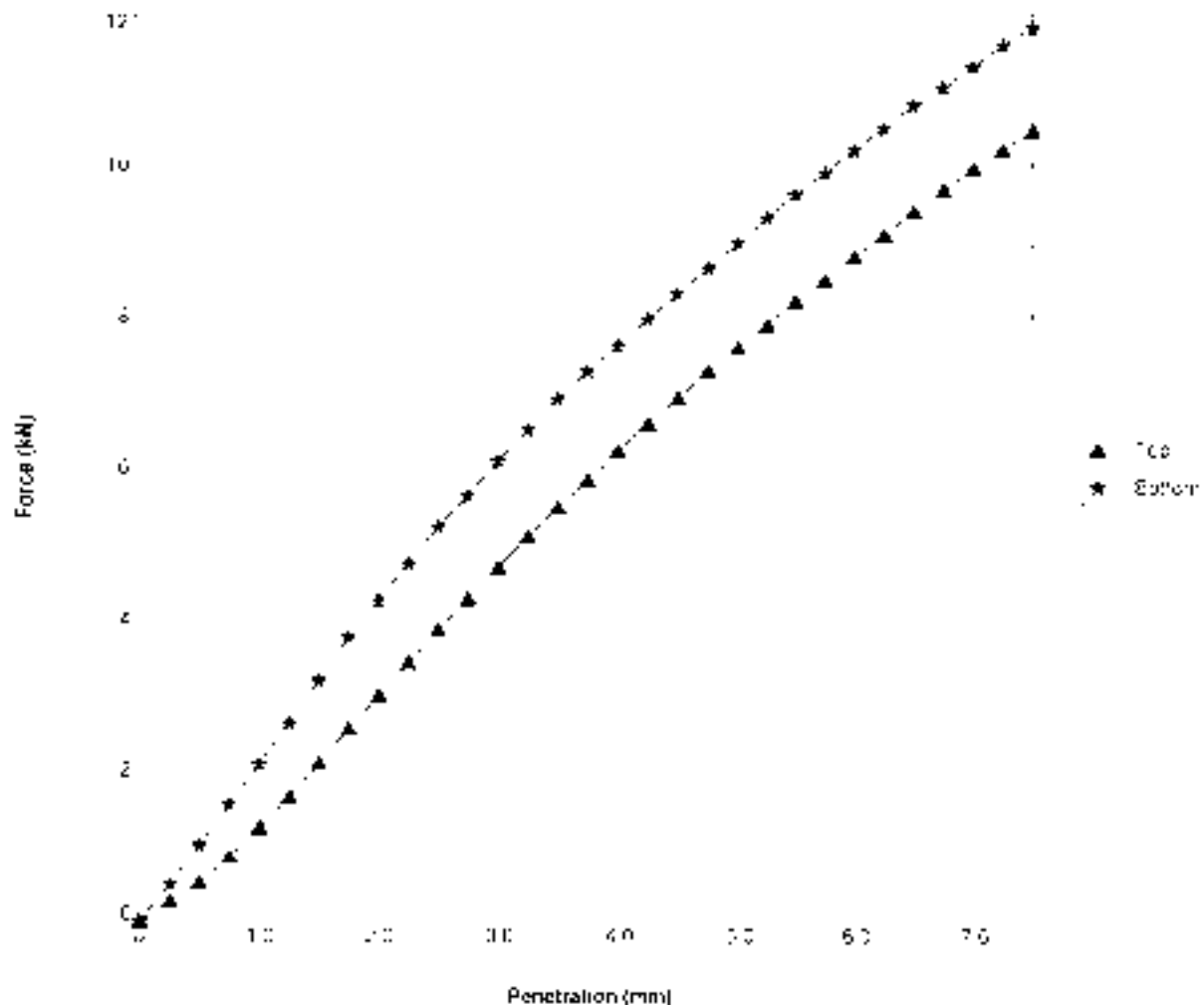
DETERMINATION OF THE CALIFORNIA BEARING RATIO

BS 1377 Part 4: 1990 and Part 2: Clause 3.2: 1990

Exploratory Hole No - PRAIRIE_AUK_TP189 Sample No - 82

Depth (m) 0.50

| | | | |
|------------------------------------|------------------|-----------------------------------|----------------------|
| "As Received" Moisture Content (%) | | Surcharge (Kg) | 0 |
| Retained on 20mm (%) | 6.0 | Sealing Load (N) | Top 250 / Bottom 250 |
| Correction Needed | No | Test Moisture Content (%) | Top 17 / Bottom 17 |
| Soaking Time (Days) | N/A | Bulk Density (Mg/m ³) | 2.55 |
| Swelling (mm) | N/A | Dry Density (Mg/m ³) | 2.18 |
| Date Tested | 01/10/2020 | CBR Value (%) | Top 38 / Bottom 45 |
| Preparation Method | 2.5kg Compaction | | |
| Remarks | | | |



Please refer to the Laboratory Sample Description Sheet for a full description of sample(s) used in this test.

Contract Ref:

Prairie Site Ground Investigation Works

Client:

South Tees Development Corporation



Signed: *msore*
 Job: 4251
 28/10/2020

Name: _____
 Designation: _____
 CBR401 PRAIRIE_AUK_TP189_4251_82

Page: 1 of 1
 All Rights Reserved
 4251



Determination of One Dimensional Consolidation Properties



ALLIED EXPLORATION & GEOTECHNICS LIMITED

(INCORPORATED IN GREAT BRITAIN) (REGD NO. 2721272)



ONE DIMENSIONAL CONSOLIDATION PROPERTIES

BS 1377 : PART 5 : 1990 : CLAUSE 3

| | | | | | |
|---------------------|-------------------|-------------|-------------------|-----------------------------|------------|
| Exploratory Hole No | PRAIRIE_AUK_BH103 | Sample | U2 | Depth (m) | 2.50m |
| Specimen Type | Undisturbed | Orientation | Vertical | Specific Depth (m) | 2.55m |
| | INITIAL | FINAL | | | |
| Height: | 18.7 | 16.4 | mm | Particle Density (Assumed): | 2.70 |
| Diameter: | 74.74 | 74.74 | mm | Degree of Saturation (%) | 98.2 |
| Moisture Content | 30.0 | 25.6 | % | Test Duration (Days) | 6 |
| Wet Density | 1.92 | 2.07 | Mg/m ³ | Date Tested | 07/10/2020 |
| Dry Density | 1.43 | 1.65 | Mg/m ³ | | |

| Square Root of Time Fitting Method | | | | |
|-------------------------------------|--------------------------------------|--------------------------------------|-----------|-------------|
| Pressure Range kN/m ² | M _v m ² /MN | C _v m ² /yr | Temp C | Voids Ratio |
| Initial | | | | 0.825 |
| 0 - 50 | 0.828 | . | 21 | 0.749 |
| 50 - 100 | 0.438 | 2.25 | 21 | 0.711 |
| 100 - 50 | 0.056 | Swelling | 20 | 0.716 |
| 50 - 100 | 0.056 | 3.34 | 20 | 0.710 |
| 100 - 200 | 0.289 | 2.13 | 20 | 0.661 |
| 200 - 400 | 0.191 | 1.67 | 20 | 0.592 |

For sample description please refer to the Laboratory Sample Description Sheet

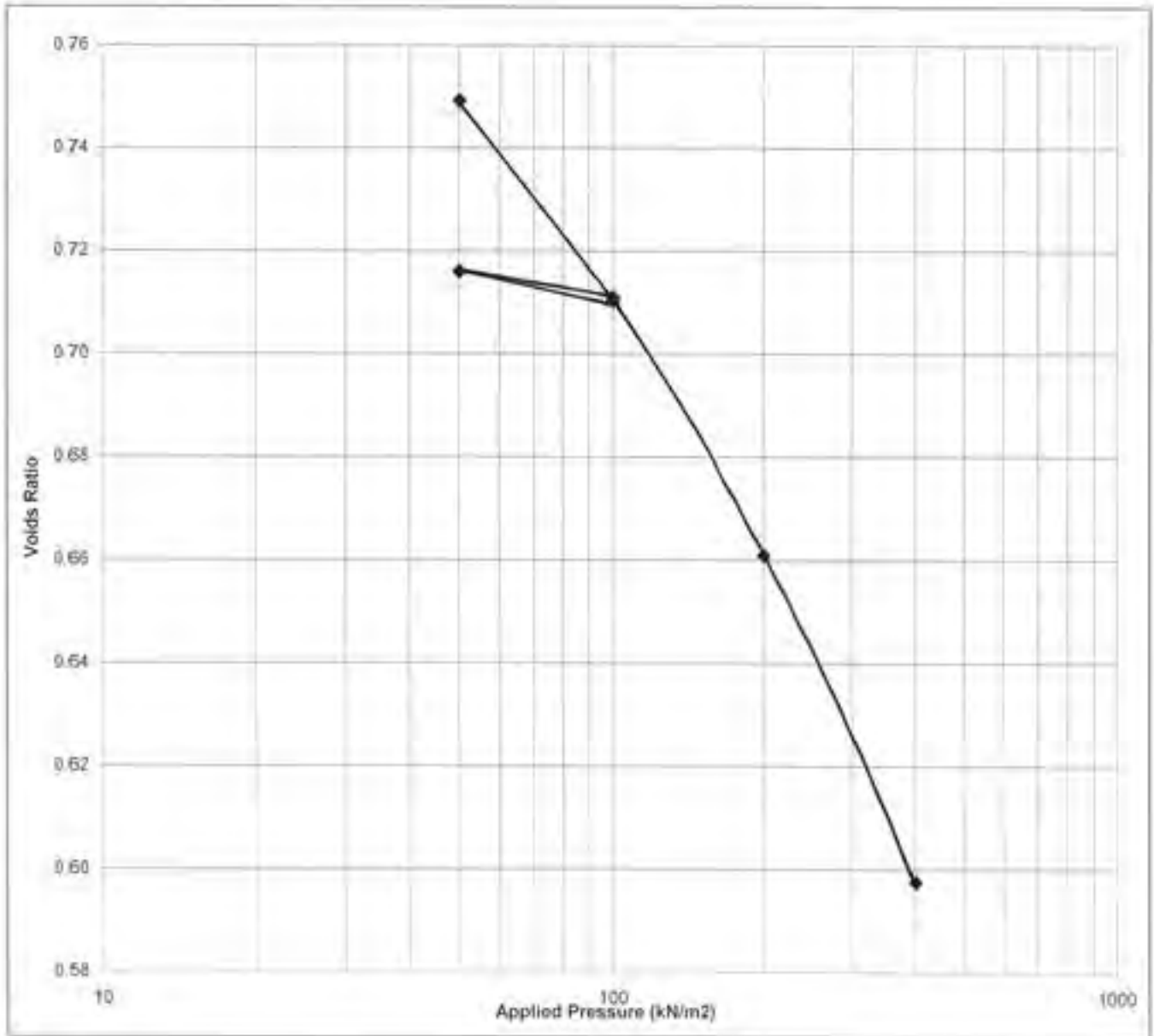
| | | | |
|---|-----------------------------|---|---|
| Contract Title Prairie Site Ground Investigation Works | | Client South Tees Development Corporation | |
|  | Signed <i>msene</i> | Name M. SELKIRK | Page 1 of 2 |
| | Date of Issue 18/11/2020 | Contract No. 4251:A | REG. Contract No. 4251 |
| | | |  1367 |

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Allied Geotech Ltd 25 South Shields Road, South Shields, Tyne and Wear, NE33 1JG, UK
 Registered in England No. 02062888. VAT No. 251 217 9228. Tel: 0191 262 2222. Fax: 0191 262 2223

ONE DIMENSIONAL CONSOLIDATION PROPERTIES BS 1377 : PART 5 : 1990 : CLAUSE 3

| | | | | | |
|---------------------|-------------------|-------------|----------|--------------------|-------|
| Exploratory Hole No | PRAIRIE_AUK_BH103 | Sample | U2 | Depth (m) | 2.50m |
| Specimen Type | Undisturbed | Orientation | Vertical | Specific Depth (m) | 2.55m |



| | |
|--|---|
| Contract Title Prairie Site Ground Investigation Works | Client South Tees Development Corporation |
|--|---|

| | | | | |
|--|------------------------------|----------------------------|--------------------------|--|
| | Signed: <i>M. Selkirk</i> | Name: M. SELKIRK | Page 2 of 2 | |
| | Date of Issue: 18/10/2020 | Certificate No: 4251/A | AEG Contract No: 4251 | |

ALLIED EXPLORATION & GEOTECHNICS LIMITED

100, 101 & 102, The Quadrant, South Shields, Tyne and Wear, NE33 1JG



ONE DIMENSIONAL CONSOLIDATION PROPERTIES

BS 1377 : PART 5 : 1990 : CLAUSE 3

| | | | | | |
|---------------------|-------------------|-------------|-------------------|----------------------------|------------|
| Exploratory Hole No | PRAIRIE_AUK_BH106 | Sample | U2 | Depth (m) | 5.50m |
| Specimen Type | Undisturbed | Orientation | Vertical | Specific Depth (m) | 5.50m |
| | INITIAL | FINAL | | | |
| Height: | 18.6 | 16.7 | mm | Particle Density (Assumed) | 2.70 |
| Diameter: | 74.91 | 74.91 | mm | Degree of Saturation (%) | 99.5 |
| Moisture Content | 22.4 | 18.5 | % | Test Duration (Days) | 6 |
| Wet Density | 2.06 | 2.24 | Mg/m ³ | Date Tested | 07/10/2020 |
| Dry Density | 1.68 | 1.89 | Mg/m ³ | | |

| Square Root of Time Fitting Method | | | | |
|-------------------------------------|--------------------------------------|--------------------------------------|-----------|-------------|
| Pressure Range kN/m ² | M _v m ² /MN | C _v m ² /yr | Temp C | Voids Ratio |
| Initial | | | | 0.603 |
| 0 - 100 | 0.374 | . | 21 | 0.548 |
| 100 - 200 | 0.120 | 7.80 | 21 | 0.520 |
| 200 - 100 | 0.012 | Swelling | 20 | 0.522 |
| 100 - 200 | 0.018 | 13.47 | 20 | 0.519 |
| 200 - 400 | 0.119 | 6.40 | 20 | 0.483 |
| 400 - 800 | 0.070 | 8.83 | 20 | 0.441 |

For sample description please refer to the Laboratory Sample Description Sheet

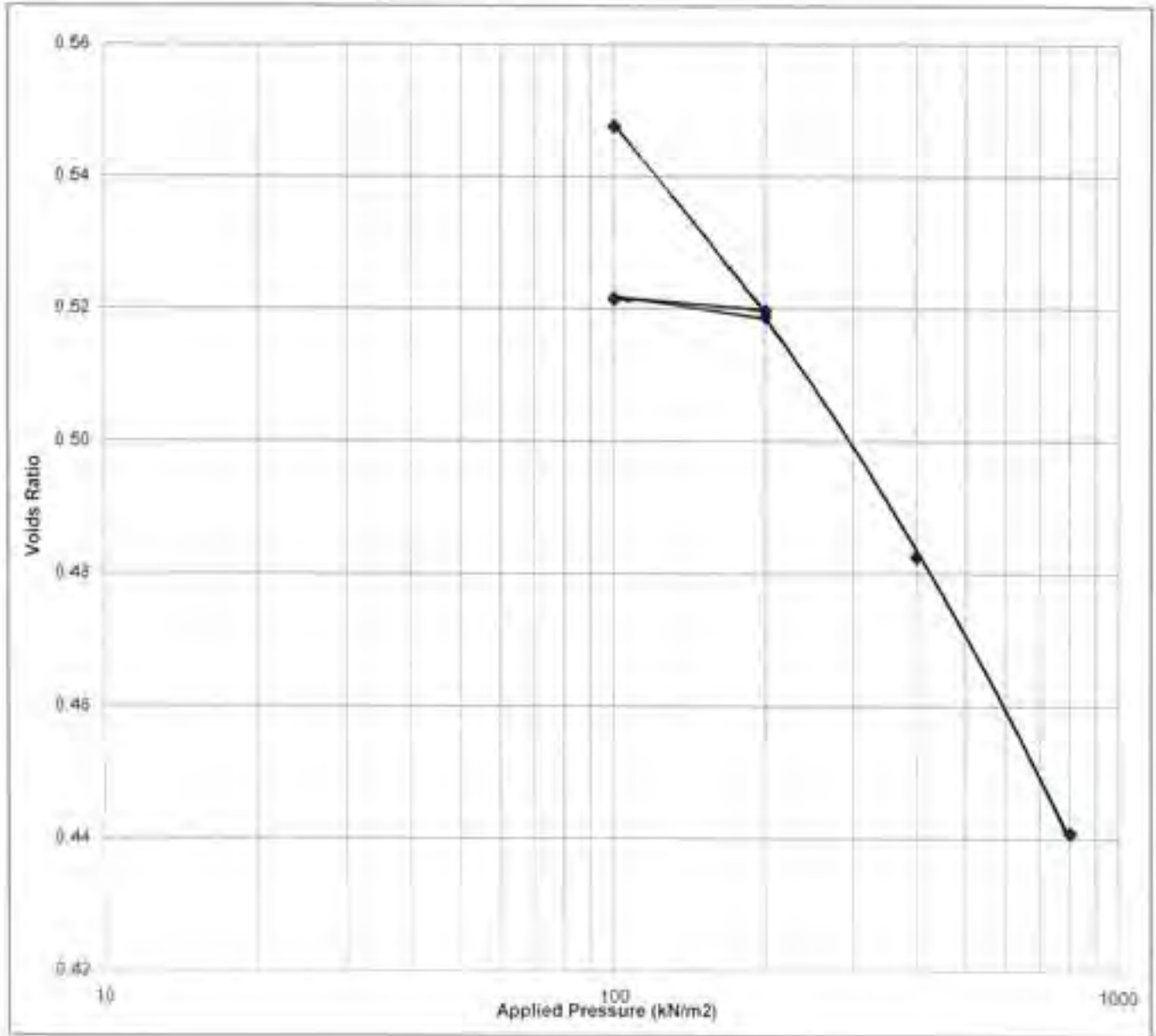
| | | | |
|---|-------------------|---|---|
| Contract Title | | Client | |
| Prairie Site Ground Investigation Works | | South Tees Development Corporation | |
|  | Signed | Name | Page 1 of 2 |
| | <i>M. Selkirk</i> | M. SELKIRK | |
| Date of Issue | Contract No. | AGS Contract No. | |
| 10/10/2020 | 4251-B | 4251 |  1367 |

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 25, 26 & 27, The Parkway, South Shields, Tyne and Wear, North East, England, NE3 3LJ. Tel: 0191 261 4700 Fax: 0191 261 4701
Regional Offices: 100, 101 & 102, The Gateway, South Shields, Tyne and Wear, North East, England, NE3 3LJ. Tel: 0191 261 4700 Fax: 0191 261 4701

ONE DIMENSIONAL CONSOLIDATION PROPERTIES BS 1377 : PART 5 : 1990 : CLAUSE 3

| | | | | | |
|---------------------|-------------------|-------------|----------|--------------------|-------|
| Exploratory Hole No | PRAIRIE_AUK_BH106 | Sample | U2 | Depth (m) | 5.50m |
| Specimen Type | Undisturbed | Orientation | Vertical | Specific Depth (m) | 5.50m |



| | |
|---|--|
| Contract Title: Prairie Site Ground Investigation Works | Client: South Tees Development Corporation |
|---|--|

| | | | | |
|--|------------------------------|----------------------------|--------------------------|--|
| | Signed: <i>M. Selkirk</i> | Name: M. SELKIRK | Page 2 of 2 | |
| | Date of Issue: 18/10/2020 | Certificate No: 4251/B | AEG Contract No: 4251 | |

Shear Strength by Hand Vane



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 15, South of Bourne Drive, Bourne Park, Ipswich, Suffolk, IP1 1 1ST. (01473) 711100 Fax: (01473) 711101
 Regional Office: Unit 20, Gannon Development Centre, Lower Wood, Braintree, Essex, SA6 2YF. Tel: (01773) 711100 Fax: (01773) 711101

DETERMINATION OF SHEAR STRENGTH BY HAND VANE

| Exploratory Hole No. | Sample Depth (m) | Sample ID | Specific Depth (m) | Vane Shear Strength (kPa) | Remarks |
|----------------------|------------------|-----------|--------------------|---------------------------|-----------------------------------|
| PRAIRIE_AJK_BH104 | 8.50 | U8 | 8.50 | >130 | Reading exceeded apparatus limits |
| PRAIRIE_AJK_BH104 | 8.50 | U8 | 8.95 | >130 | Reading exceeded apparatus limits |
| PRAIRIE_AJK_BH103 | 2.50 | U2 | 2.50 | 109 | |
| PRAIRIE_AJK_BH103 | 2.50 | U2 | 2.95 | 94 | |
| PRAIRIE_AJK_BH103 | 4.50 | U7 | 4.50 | 65 | |
| PRAIRIE_AJK_BH103 | 4.50 | U7 | 4.95 | 87 | |
| PRAIRIE_AJK_BH103 | 1.20 | U6 | 1.20 | 41 | |
| PRAIRIE_AJK_BH103 | 1.20 | U6 | 1.65 | >130 | Reading exceeded apparatus limits |
| PRAIRIE_AJK_BH103 | 5.00 | U19 | 5.00 | 42 | |
| PRAIRIE_AJK_BH103 | 5.00 | U19 | 5.45 | 62 | |

For description of sample please refer to the Laboratory Sample Description Sheet

| | |
|---|--|
| Contract Title :- <b style="text-align: center;">Prairie Site Ground Investigation Works | Client :- <b style="text-align: center;">South Tees Development Corporation |
|---|--|

| | | | | |
|---|--------------------------------|---------------------------------|---|---|
|  | Signed :- <i>msene</i> | Name :- | Page 1 of 1 |  |
| | Date of issue :- 03/11/2020 | Certificate No :- HSV/4251/1 | AEG Contract No :- <b style="text-align: center;">4251 | |

**Undrained Shear Strength in Triaxial Cell
without Pore Water Pressure Measurement**



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: 04333 Bury Gate, Middlesbrough, Teesside, Cleveland, North Yorkshire, YO21 2JY, Tel: 01709 361400 Fax: 01709 361415
Regional Offices: 100-125, Industrial Development Centre, Enderby, Leicestershire, LE19 4EJ, Tel: 01753 751979 Fax: 01753 751989

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION WITHOUT MEASUREMENT OF PORE PRESSURE

BS 1377 - Part 7, Clauses 8 & 9 : 1990 Part 2 Clause 3.2

| Exploratory Hole | Sample ID Depth (m) | Sample Type | Specific Depth (m) | Diameter (mm) | Length (mm) | Prep Method | Stage No. | Initial Moisture Content (%) | Bulk Density (Mg/m ³) | Dry Density (Mg/m ³) | Membrane Thickness (mm) | Membrane Correction (kPa) | Cell Pressure (kPa) | Corrected Deviator Stress (kPa) | Failure Strain (%) | Mode of Failure | Cu (kPa) | Date Tested |
|-------------------|------------------------|-------------|--------------------|---------------|-------------|-------------|-----------|------------------------------|-----------------------------------|----------------------------------|-------------------------|---------------------------|---------------------|---------------------------------|--------------------|-----------------|----------|-------------|
| PRAIRIE_AUK_BH101 | 3.00 | U2 | 3.02 | 103.6 | 209.5 | UNDISTURBED | 1 | 32.7 | 1.95 | 1.47 | 0.3 | 1.10 | 60 | 52 | 20.0 | F | 26 | 17/06/2020 |
| PRAIRIE_AUK_BH101 | 5.00 | U1 | 5.18 | 104.0 | 211.0 | UNDISTURBED | 1 | 32.9 | 1.93 | 1.46 | 0.3 | 0.79 | 80 | 83 | 13.0 | F | 32 | 17/06/2020 |
| PRAIRIE_AUK_BH101 | 8.00 | U12 | 8.01 | 103.0 | 210.0 | UNDISTURBED | 1 | 27.3 | 1.98 | 1.55 | 0.4 | 0.94 | 110 | 97 | 11.0 | BR | 43 | 17/06/2020 |
| PRAIRIE_AUK_BH101 | 11.00 | U16 | 11.01 | 104.7 | 210.7 | UNDISTURBED | 1 | 16.1 | 2.19 | 1.89 | 0.9 | 0.85 | 140 | 251 | 14.5 | F | 125 | 17/06/2020 |
| PRAIRIE_AUK_BH103 | 3.50 | U2 | 2.80 | 103.5 | 210.4 | UNDISTURBED | 1 | 31.1 | 1.94 | 1.48 | 0.3 | 1.10 | 50 | 94 | 20.0 | P | 42 | 06/10/2020 |
| PRAIRIE_AUK_BH103 | 4.50 | U5 | 4.56 | 103.7 | 211.0 | UNDISTURBED | 1 | 25.4 | 1.97 | 1.56 | 0.4 | 0.88 | 100 | 147 | 10.0 | C | 74 | 06/10/2020 |
| PRAIRIE_AUK_BH100 | 7.00 | U14 | 7.02 | 102.9 | 210.8 | UNDISTURBED | 1 | 27.4 | 1.97 | 1.55 | 0.3 | 0.43 | 150 | 106 | 8.0 | BR | 53 | 06/10/2020 |
| PRAIRIE_AUK_BH103 | 18.00 | U21 | 10.25 | 103.5 | 211.7 | UNDISTURBED | 1 | 17.2 | 2.07 | 1.77 | 0.3 | 0.92 | 200 | 185 | 16.0 | C | 93 | 06/10/2020 |
| PRAIRIE_AUK_BH104 | 5.60 | U2 | 5.53 | 101.8 | 211.5 | UNDISTURBED | 1 | 25.8 | 1.92 | 1.53 | 0.4 | 0.58 | 110 | 230 | 8.0 | BR | 115 | 06/10/2020 |
| PRAIRIE_AUK_BH100 | 5.50 | U2 | 5.57 | 103.3 | 210.1 | UNDISTURBED | 1 | 23.0 | 2.06 | 1.68 | 0.3 | 1.08 | 110 | 136 | 19.5 | C | 68 | 06/10/2020 |
| PRAIRIE_AUK_BH100 | 6.50 | U6 | 8.60 | 104.6 | 211.2 | UNDISTURBED | 1 | 14.3 | 2.25 | 1.97 | 0.4 | 1.24 | 175 | 502 | 16.5 | C | 251 | 06/10/2020 |
| PRAIRIE_AUK_BH101 | 3.30 | U2 | 3.00 | 102.6 | 212.7 | UNDISTURBED | 1 | 29.9 | 1.95 | 1.50 | 0.4 | 1.36 | 60 | 51 | 18.0 | P | 25 | 10/07/2020 |
| PRAIRIE_AUK_BH107 | 5.00 | U7 | 5.06 | 103.4 | 211.1 | UNDISTURBED | 1 | 23.6 | 2.05 | 1.66 | 0.3 | 1.01 | 100 | 134 | 18.0 | BR | 67 | 13/07/2020 |
| PRAIRIE_AUK_BH109 | 3.80 | U13 | 5.05 | 103.2 | 211.2 | UNDISTURBED | 1 | 23.6 | 2.04 | 1.65 | 0.3 | 0.82 | 60 | 142 | 13.5 | BR | 71 | 13/07/2020 |
| PRAIRIE_AUK_BH110 | 4.80 | U2 | 3.03 | 103.1 | 211.1 | UNDISTURBED | 1 | 30.4 | 1.91 | 1.47 | 0.3 | 0.85 | 60 | 71 | 10.0 | BR | 36 | 13/07/2020 |

For description of sample please refer to the Laboratory Sample Description Sheet. Please note the rate of strain was 2% per minute and the orientation of the test specimen was vertical. Latex membrane used.



Date of Issue : 23/10/2020

Certificate No : TXL/4251/1

Signed : *MSOR*

Name : *MSOR*



Page 1 of 2
AEG Contract No : 4251

Client : South Tees Development Corporation

Contract Title : Prairie Site Ground Investigation Works

ALLIED EXPLORATION & GEOTECHNICS LIMITED

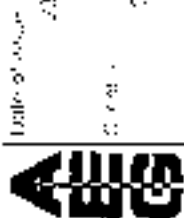
Registered Office: 100, Victoria Road, Weybridge, Surrey, Middlesex, TW20 0EX, UK
 Registered Office: 100, Victoria Road, Weybridge, Surrey, Middlesex, TW20 0EX, UK

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION WITHOUT MEASUREMENT OF PORE PRESSURE

BS 1377 Part 2: Clauses 8.8, 1989 Part 2 Clause 3.2

| Experiment No. | Sample ID | Specimen Depth (mm) | Diameter (mm) | Length (mm) | Prep Method | Slope (%) | Initial Moisture Content (%) | Soil Density (kg/m ³) | Bulk Density (kg/m ³) | Dr. Density (kg/m ³) | Membrane Thickness (mm) | Membrane Correction (%) | Cell Pressure (kPa) | Corrected Deviator Stress (kPa) | Failure Strain (%) | Mode of Failure | Failure Angle (°) | Date Tested |
|----------------|-----------|---------------------|---------------|-------------|-------------|-----------|------------------------------|-----------------------------------|-----------------------------------|----------------------------------|-------------------------|-------------------------|---------------------|---------------------------------|--------------------|-----------------|-------------------|-------------|
| 1 | 1001 | 840 | 100.7 | 210.6 | Hand | 1 | 94.2 | 2.06 | 1.54 | 0.3 | 0.60 | 100 | 105 | 12.5 | C | 52 | | 10/07/2020 |
| 2 | 1002 | 805 | 100.6 | 212.2 | Hand | 1 | 93.1 | 2.15 | 1.79 | 0.2 | 1.09 | 160 | 144 | 19.5 | C | 72 | | 10/07/2020 |
| 3 | 1003 | 1120 | 100.9 | 211.0 | Hand | 1 | 10.4 | 2.33 | 2.29 | 0.7 | 2.54 | 220 | 782 | 23.0 | C | 39 | | 10/07/2020 |

Note: For purpose of sample preparation refer to the Laboratory Sample Description Sheet. Please note the rate of strain was 2% per minute and the orientation of the test specimen was vertical. Later than the time and



10/07/2020

Site Code No.

AL 42612

Signed

Mason

Name

Page 2 of 2



Contract No.

Contract Title

Praxis Site Ground Investigation Works

AEG Contract No.

4261

1367

Determination of Point Load Index

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 21, West of Alton Road, Alton, Hampshire, GU34 5LJ. Tel: 01703 497400 Fax: 01703 497401
 Registered Office: Unit 25, Blandford Road, Blandford, Dorset, BH10 9BB. Tel: 01753 551000 Fax: 01753 551005

POINT LOAD STRENGTH INDEX

ISRM : 1985

| Exploratory Hole No | Depth (m) | Type/Orientation | Width (mm) | Platen Separation (mm)+ | Failure Load (kN)* | De ² (mm ²) | Point Load (IS) (MPa) | Size Factor | Point Load Index (IS50) (MPa) | Type | Date Tested |
|---------------------|-----------|------------------|------------|-------------------------|--------------------|------------------------------------|-----------------------|-------------|-------------------------------|-----------|-------------|
| WPA01E_A(BC_04110) | 7.70 | Vertical | 65.5 | 58.4 | 0.4 | 8365.0 | 0.06 | 1.23 | 0.078 | Sandstone | 17/05/2020 |

NOTES: - *Tested specimen measured using calibrated vernier calipers - #-Invalid Failure (Did not pass through both points) !:-Top soft to register a reading

Date of issue :-

25/05/2020

Certificate No :-

PL425111

Signed :-

msae

Name :-

msae

Client :-

South Tees Development Corporation

Contract Title :-

Praine Site Ground Investigation Works

Page 1 of 1

AEG Contract No :-

4251



**Determination of Unconfined Compressive Strength
(Tested Externally)**



LABORATORY TEST CERTIFICATE

10 Queenslie Point
Queenslie Industrial Estate
120 Stepps Road
Glasgow
G33 3NQ

Certificate No : 20/504 - 01
To : Michelle Selkirk
Client : **Allied Exploration & Geotechnics Ltd.**
Unit 25 Stella Gill Industrial Estate
Pelton Fell
Chester-le-Street
County Durham
DH2 2RG

Tel: 0141 774 4032

email: info@mattest.org
Website: www.mattest.org

Dear Sirs,

LABORATORY TESTING OF ROCK

Introduction

We refer to samples taken from Prairie Site Ground Investigation Works and delivered to our laboratory on 18th June 2020.

Material & Source

Sample Reference : See Report Plate
Sampled By : Client
Sampling Certificate : Not Supplied
Location : See Report Plate
Description : Rock Cores
Date Sampled : Not Supplied
Date Tested : 18th June 2020 Onwards
Source : 4251 - Prairie Site Ground Investigation Works

Test Results;


As Detailed On Page 2

Comments;

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation
This report should not be reproduced except in full without the written approval of the laboratory
All remaining samples for this project will be disposed of 28 days after issue of this test certificate

Remarks;

Approved for Issue

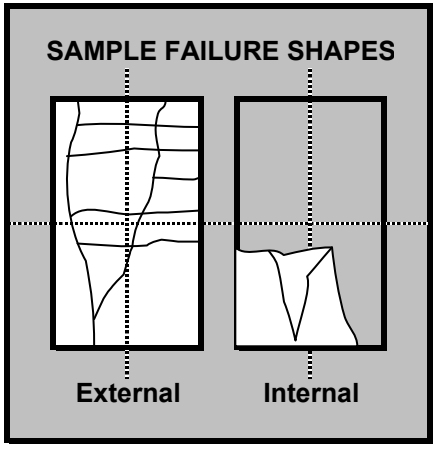


T McLelland (Director)

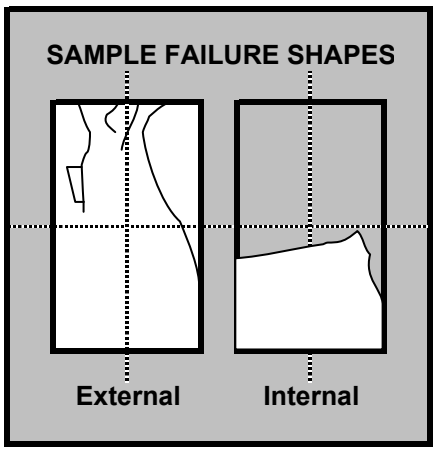
Date 10/11/2020



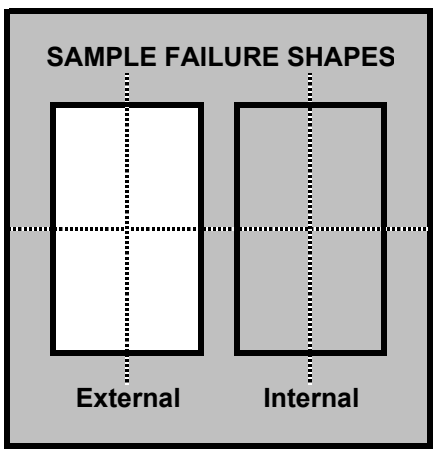
| | | |
|--|-------------------|--------|
| BOREHOLE | PRAIRIE_AUK_BH109 | |
| SAMPLE | C | |
| DEPTH | m | 9.00 |
| SAMPLE DIAMETER | mm | 81.64 |
| SAMPLE HEIGHT | mm | 169.33 |
| TEST CONDITION | As Received | |
| RATE OF LOADING | kN/s | 0.4 |
| TEST DURATION | min.sec | 4.37 |
| DATE OF TESTING | 22/06/2020 | |
| LOAD FRAME USED | 2000kN | |
| LOAD DIRECTION WITH RESPECT TO LITHOLOGY | Unknown | |
| FAILURE LOAD | kN | 105.9 |
| UNCONFINED COMPRESSIVE STRENGTH | MPa | 20.2 |
| WATER CONTENT (ISRM Suggested Methods) | % | 3.5 |
| BULK DENSITY (ISRM Suggested Methods) | Mg/m ³ | 2.60 |
| DRY DENSITY (ISRM Suggested Methods) | Mg/m ³ | 2.51 |



| | | |
|--|-------------------|--------|
| BOREHOLE | PRAIRIE_AUK_BH109 | |
| SAMPLE | C | |
| DEPTH | m | 11.30 |
| SAMPLE DIAMETER | mm | 83.10 |
| SAMPLE HEIGHT | mm | 186.89 |
| TEST CONDITION | As Received | |
| RATE OF LOADING | kN/s | 0.7 |
| TEST DURATION | min.sec | 3.28 |
| DATE OF TESTING | 22/06/2020 | |
| LOAD FRAME USED | 2000kN | |
| LOAD DIRECTION WITH RESPECT TO LITHOLOGY | Unknown | |
| FAILURE LOAD | kN | 132.2 |
| UNCONFINED COMPRESSIVE STRENGTH | MPa | 24.4 |
| WATER CONTENT (ISRM Suggested Methods) | % | 1.7 |
| BULK DENSITY (ISRM Suggested Methods) | Mg/m ³ | 2.58 |
| DRY DENSITY (ISRM Suggested Methods) | Mg/m ³ | 2.54 |



| | | |
|--|-------------------|--|
| BOREHOLE | | |
| SAMPLE | | |
| DEPTH | m | |
| SAMPLE DIAMETER | mm | |
| SAMPLE HEIGHT | mm | |
| TEST CONDITION | | |
| RATE OF LOADING | kN/s | |
| TEST DURATION | min.sec | |
| DATE OF TESTING | | |
| LOAD FRAME USED | | |
| LOAD DIRECTION WITH RESPECT TO LITHOLOGY | | |
| FAILURE LOAD | kN | |
| UNCONFINED COMPRESSIVE STRENGTH | MPa | |
| WATER CONTENT (ISRM Suggested Methods) | % | |
| BULK DENSITY (ISRM Suggested Methods) | Mg/m ³ | |
| DRY DENSITY (ISRM Suggested Methods) | Mg/m ³ | |



Tested in accordance with ASTM D7012 - 14

SUMMARY OF UNCONFINED COMPRESSIVE STRENGTH

Slag Analysis
(Tested Externally)



TRS REPORT

Report Ref: BG0E-F/AEG/PSR/TRS/07/20/RP2
Date Issued: 31 July 2020
TRS Sample Refs: BG0E01-04/BG0F01-02
Order No: LA2343

**EXAMINATION OF SIX SAMPLES
FROM
4251 PRAIRIE SITE GROUND INVESTIGATION
WORKS, REDCAR
FOR
ALLIED EXPLORATION & GEOTECHNICS LTD**



Thomas Research Services Ltd.

Tel: +44 (0) 1469 532 929

www.slagtest.co.uk

Unit 7, Tittershall Castle Court, Morgan Way, New Holland,

North Lincolnshire, DN19 7PZ, United Kingdom

A Limited Company registered in England. Company Registration No: 2518421

**EXAMINATION OF SIX SAMPLES
FROM
4251 PRAIRIE SITE GROUND INVESTIGATION
WORKS, REDCAR
FOR
ALLIED EXPLORATION & GEOTECHNICS LTD**

1. BACKGROUND

Four bulk samples were received from the above site on 11th May 2020, with a further two samples arriving on 16th June 2020. Each sample was weighed and allocated a unique TRS reference number, the details of which are recorded below:-

| TRS Ref | Site Ref | Depth/m | Mass/kg |
|----------------|-----------------|----------------|----------------|
| BG0E01 | TP109 B2 | 1.0 | 11.8 |
| BG0E02 | TP116 B2 | 1.0 | 12.3 |
| BG0E03 | TP117 B2 | 1.0 | 16.3 |
| BG0E04 | TP121 B5 | 1.8 | 12.1 |
| BG0F01 | TP131 B4 | 1.5 | 10.0 |
| BG0F02 | TP132 B3 | 1.0 | 9.8 |

There was a delay in processing these samples due to the Coronavirus lockdown.

The purpose of the exercise was to identify the range and relative concentrations of any iron and steelmaking slags present in the samples, and whether there was any potential for volumetric instability from the materials.

2. SAMPLE PREPARATION & PROGRAMME OF ANALYSIS

The samples were primary crushed to reduce particle size down to <50mm, portions then being selected and dried at low temperature to constant weight. The dried material was subjected to a regime of stage crushing and quartering to further reduce particle size down to <5mm. Portions of this <5mm material were made up into resin bound blocks, one face of which was ground flat and polished using diamond pastes. Further portions of the <5mm material were milled to a fine powder. Fractions of material were extracted throughout the preparation procedure to provide the materials necessary for the further tests and analyses required in the programme.

A petrological examination was made of the polished blocks using reflected light microscopy, the complete findings of which are recorded in appendix A. The results of this examination were discussed in our report of 10th July 2020. On the basis of that report, the following tests and analyses were carried out on the samples:-

Samples BG0E01-02 were subjected to the following tests & analyses to assess the potential for expansion of the blast furnace slag.

- Water soluble sulphate (table 1)
- Acid soluble sulphate (table 1)
- Total sulphur (table 1)
- Thermal analysis (table 3)
- TRS accelerated expansion test (table 4)

Samples BG0E04 & BG0F01-02 were subjected to the following tests & analyses to assess the potential for expansion of the basic steel slag.

- Free CaO (table 2)
- Free MgO (table 2)
- Thermal analysis (table 3)
- TRS accelerated expansion test (table 4)

Sample BG0E03 were subjected to the following tests & analyses to assess the potential for expansion of the mixed slag.

- Water soluble sulphate (table 1)
- Acid soluble sulphate (table 1)
- Total sulphur (table 1)
- Free CaO (table 2)
- Free MgO (table 2)
- Thermal analysis (table 3)
- TRS accelerated expansion test (table 4)

3. DISCUSSION OF RESULTS

3.1 Petrology

A petrological examination was made of the six samples using reflected light microscopy. The complete findings of this examination are recorded in appendices A and B.

Blast furnace slag was present in all six samples, with substantial quantities present in samples BG0E01-03 and small amounts in samples BG0E04 & BG0F01-02. The blast furnace slag was predominantly crystalline with only minor amounts of glassy material seen. Secondary alteration due to weathering was moderate, consisting mainly of pore infill and surface rinds. Products of alteration included calcite, with other products being difficult to identify specifically under the microscope. Old weathered blast furnace slag may occasionally contain pockets of potentially expansive material (see appendix C). This potential can only be assessed by direct expansion testing (see sections 3.2-3.5). The unaltered slag consisted predominantly of melilite, along with more minor amounts of larnite, bredigite, spinel, metallic iron and sulphides.

Basic steel slag was present in all six samples. Samples BG0E01-02 contained minor amounts (small/very small), sample BG0E03 contained a medium amount, but samples BG0E04 & BG0F01-02 comprised predominantly of basic steel slag. The slag was extensively altered due to weathering, the secondary phases being difficult to identify specifically under the microscope. The unaltered basic steel slag consisted largely of dicalcium silicate, along with more minor amounts of FeO

& R₂O₃ phase, CaF phase, tricalcium silicate, lime phase and periclase. The mineralogy of the basic steel slag would suggest that it may have significant potential for expansion (see appendix C). This potential can only be assessed by direct expansion testing (see sections 3.2-3.5).

Minor amounts (small / very small) of basic refractory material were seen in four of the samples. This material, even in minor amounts, can have significant potential for expansion (see appendix C).

Other constituents seen in the samples in minor concentrations included alumina-silicate brick, quartz, limestone, iron ore, iron ore sinter, cinder, metal, coal, coke and fume. A cementitious material often bound the smaller particles together. This material appeared similar to the slag alteration products.

3.2 Sulphur Species

The following range of analyses were performed on samples BG0E01-03 (These samples contained significant amounts of blast furnace slag). The results are recorded in table 1:-

- Water soluble sulphate
- Acid soluble sulphate
- Total sulphur

Total sulphur values were in the range 0.62 to 1.07 percent. Acid soluble sulphates were in the range 0.30 to 0.87 percent, with corresponding water soluble sulphates of 0.17 to 0.35 g/l. These sulphate and sulphur values were fairly typical for blast furnace slag. However, care should be taken when specifying concrete that may come into contact with the slag. Calculations show that between 19 and 33 percent of the available sulphur is present as sulphate.

3.3 Thermal Analysis

Simultaneous differential thermal analysis (DTA) and thermo-gravimetric analysis (TGA) were performed on all six samples. The results are recorded in table three.

Ettringite was seen in three of the samples examined, at trace levels only. Gypsum was seen in all but one of the samples, at between trace and 3.7 percent. On comparing the gypsum values with the acid soluble sulphates, some of the gypsum values were overstated. This is common in old weathered blast furnace slag, and is usually an indicator of the presence of thaumasite. The presence of ettringite and possibly thaumasite would suggest some past expansion has occurred in the blast furnace slag.

Calcium hydroxide was recorded in four of the samples, at between 0.5 and 2.5 percent. Magnesium hydroxide was measured in three of the samples, at between 0.5 and 1.0 percent. These values were used to correct the free CaO and free MgO analyses recorded in Table 2.

Calcite was present in all of the samples examined at between 2.4 and 5.6 percent. This product is an indicator as to the weathered state of the slag.

3.4 Free CaO & Free MgO

Free CaO & free MgO analyses were carried out on samples BG0E03-04 & BG0F01-02 (These samples contained medium or more mounts of basic steel slag). The results are recorded in table 2. Both original and corrected values are recorded. The original values include both the oxide (CaO and MgO) and the hydroxide ((Ca(OH)₂ and Mg(OH)₂)) contents. The corrected values report only the oxide content (CaO and MgO) after correction using the hydroxide values

from the thermal analyses. These corrected values are the more significant, as it is only the oxides that are still free to hydrate, i.e. expand.

Free lime was recorded in the samples at between 1.5 and 5.2 percent. Free magnesia was recorded at between 0.3 and 3.3 percent. These corrected free lime and free magnesia levels record oxides that are potentially still free to hydrate (i.e. expand).

3.5 TRS Accelerated Expansion Test

The TRS accelerated expansion test was performed on all six samples. The results are recorded in table four. Note that the test measures potential for future expansion, and is not a measure of expansion that may have taken place in the past.

Samples consisting predominantly of blast furnace slag, with only minor amounts of basic steel slag recorded expansion results of between 0.22 and 0.25 percent. The sample containing mixed blast furnace slag and basic steel slag recorded an expansion result of between 0.50 percent. Samples consisting predominantly of basic steel slag recorded expansion results of between 2.56 and 3.11 percent.

4. CONCLUSIONS & RECOMMENDATIONS

The following conclusions can be drawn:-

- Blast furnace slag was a dominant constituent in three of the samples (BG0E01-03) and a minor constituent in the remaining three. The slag was mainly crystalline although minor amounts of glassy material were seen. The slag showed some alteration due to weathering. Old weathered blast furnace slag may occasionally contain pockets of potentially expansive material. Potential for expansion can only be assessed with direct expansion testing.
- Further testing of samples consisting predominantly of blast furnace slag (with up to medium amounts of basic steel slag) recorded expansion results of between 0.22 and 0.50 percent. Thermal analysis indicated some evidence of past expansion of the blast furnace slag (presence of ettringite and possibly thaumasite). The sulphate values should be taken into consideration when specifying concrete that may come into contact with the slag.
- Basic steel slag was the dominant constituent in samples BG0E04 and BG0F01-02. It was also present in more minor amounts (vs to m) in the remaining three samples. This material is likely to present a significant risk of expansion. Potential for expansion can only be assessed with direct expansion testing.
- Expansion testing of the samples consisting mainly of basic steel slag (BG0E04 & BG0F01-02) recorded expansion results of between 2.56 and 3.11 percent.
- Minor amounts of basic refractory material were seen in four of the six samples examined. This product can be a significant source of expansion, even when present in relatively small amounts.

- Other products were seen in the samples in minor amounts including alumino-silicate brick, quartz, limestone, iron ore, iron ore sinter, cinder, metal, coal, coke and fume.

Note

These conclusions apply only to the samples tested and may not represent the bulk of the material on the site from which they were taken.

Ian D. Thomas

Ian D Thomas BSc(Hons)

31 July 2020

TABLE 1 **SULPHUR SPECIES ANALYSES**

| TRS Ref | Site Ref | Water Sol. SO ₄ (g/l) | Acid Sol. SO ₄ (%) | Total S (%) |
|---------|----------|-------------------------------------|----------------------------------|----------------|
| BG0E01 | TP109 | 0.14 | 0.87 | 1.07 |
| BG0E02 | TP116 | 0.17 | 0.70 | 0.96 |
| BG0E03 | TP117 | 0.35 | 0.7 | 0.62 |
| BG0E04 | TP121 | - | - | - |
| BG0F01 | TP131 | - | - | - |
| BG0F02 | TP131 | - | - | - |

TABLE 2 **ANALYSIS FOR FREE CaO AND FREE MgO**

| TRS Ref | Site Ref | Free CaO Original (%) | Free CaO Corrected (%) | Free MgO Original (%) | Free MgO Corrected (%) |
|---------|----------|-----------------------------|------------------------------|-----------------------------|------------------------------|
| BG0E01 | TP109 | - | - | - | - |
| BG0E02 | TP116 | - | - | - | - |
| BG0E03 | TP117 | 2 | 1.5 | 1.7 | 1.7 |
| BG0E04 | TP121 | 7.1 | 5.7 | 1.1 | 0.2 |
| BG0F01 | TP131 | 4.9 | 3.3 | 1.7 | 0.3 |
| BG0F02 | TP131 | 5.5 | 4.6 | 1.0 | 0.3 |

TABLE 3 **RESULTS FROM THERMAL ANALYSIS**

| TRS Ref | Site Ref | Mass % by Thermal Analysis | | | | | | |
|---------|----------|----------------------------|------------|--------|---------|---------------------|---------------------|---------|
| | | L.O.I. | Ettringite | Gypsum | Calcite | Ca(OH) ₂ | Mg(OH) ₂ | Others |
| BG0E01 | TP109 | 0.39 | 0.44 | 1.7 | 2.4 | 0.0 | 0.0 | - |
| BG0E02 | TP116 | 5.35 | 0.00 | 1.2 | 4.4 | 0.0 | 0.0 | Clay? |
| BG0E03 | TP117 | 5.60 | 0.0 | 0.00 | 5.4 | 0.5 | 0.0 | Calcite |
| BG0E04 | TP121 | 7.05 | 0.00 | 0.00 | 2.4 | 2.5 | 0.5 | - |
| BG0F01 | TP131 | 6.85 | 0.0 | 0.00 | 5.0 | 0.8 | 0.5 | Calcite |
| BG0F02 | TP131 | 3.07 | 0.0 | 0.5 | 4.4 | 1.3 | 1.0 | - |

TABLE 4 **TRS ACCELERATED EXPANSION TEST**

| TRS Ref | Site Ref | 7 day (%) | 14 day (%) | 21 day (%) | 28 day (%) |
|---------|----------|--------------|---------------|---------------|---------------|
| BG0E01 | TP109 | 0.15 | 0.27 | - | - |
| BG0E02 | TP116 | 1.75 | 0.25 | - | - |
| BG0E03 | TP117 | 0.36 | 0.45 | 0.48 | 0.52 |
| BG0E04 | TP121 | 0.31 | 1.50 | 2.11 | 2.56 |
| BG0F01 | TP131 | 1.51 | 2.75 | 3.05 | 4.11 |
| BG0F02 | TP131 | 1.25 | 1.91 | 2.60 | 2.83 |

APPENDIX A

PETROLOGICAL REPORT ON SAMPLES BG0E 01-04

A petrological examination has been carried out of four samples BG0E 01 to 04.

Polished blocks were prepared using particulate material crushed to a nominal size of $\sim 5\text{mm}$. Representative material was made up into resin-bonded blocks. One face of each of these was ground flat and polished using diamond pastes. In addition, the surfaces were selectively etched with water and 0.1%N HCl in order to help with the phase identification.

The detailed results are given in the accompanying Table.

Samples 01, 02 and 03 consist largely of blast furnace slag and its alteration products.

Sample 04 is mainly basic steel slag whilst samples 01, 02 and 03 have very small, small and medium amounts respectively. Very little basic refractory material was seen.

Blast furnace slag

The unaltered blast furnace slag consists mainly of melilite (Ca,Mg,Al silicate). It is crystalline with crystals varying up to about 1mm in size. The matrix, the space between the melilite crystals, is partly occupied by silicate glass and partly with other silicates such as larnite ($\beta\text{-Ca}_2\text{SiO}_4$) and bredigite (Ca_2SiO_4 with some Mg in solid solution). Also, some spinel (MgAl_2O_4) occurs as a primary phase. The slag contains minor amounts of iron metal occurring as tiny globules and prills and, also, dendritic crystals of Ca,Mn sulphide. Secondary alteration is moderate. It is mainly restricted to pore infill and the formation of thin rinds and to the replacement of the matrix phases, especially the larnite. The secondary products are mostly finely granular and are difficult to identify specifically under the microscope. Some calcite (CaCO_3) is present but no well-crystallised gypsum ($\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$) was seen.

Basic steel slag

The unaltered basic steel slag consists mainly of dicalcium silicate, tricalcium silicate, PO and R_2O_3 phases (FeO and Fe_2O_3 with some Al, Mn, Mg and Ca in solid solution) and CaF phases (complex Ca aluminoferrites). Individual particles vary considerably in composition. Lime phase (CaO with some Fe, Mn and Mg in solid solution) is present in substantial amounts. It occurs mainly as granular particles up to about 0.1 mm in size that are often packed together as macro-inclusions. Periclase (MgO with some Fe in solid solution) is uncommon. Some

metal is present as prills. The slag is extensively altered to secondary products that are difficult to identify specifically and are, probably, mainly hydrated silicates but also include some calcite (CaCO_3) and, probably, portlandite (Ca(OH)_2).

Other constituents

These include rare acid (silicic) slag, quartz, limestone, iron ore, iron ore sinter, metal and associated red (goethitic) rust, coke and fume. The particles are bonded together by cementitious material that is similar to the slag alteration products but probably also includes some clay. It consists mostly of complex hydrates difficult to identify under the optical microscope.

TRIS SAMPLES BGQE 01-04

| | 1 | 2 | 3 | 4 |
|----------------------------------|----|----|----|----|
| BLAST FURNACE SLAG | | | | |
| Amount | L | L | L | S |
| Phases present:- | | | | |
| Metallic | L | L | L | L |
| Lime & periclase | vs | vs | vs | |
| Matrix & other silicates | S | S | S | - |
| Ca & Fe sulphides | vs | vs | vs | - |
| Meta-iron | vs | vs | S | - |
| Spinel | S | S | S | - |
| Glassy slag | - | vs | S | - |
| Alteration products | m | m | L | m |
| Calcite | S | S | - | - |
| BASIC STEEL SLAG | | | | |
| Amount | vs | S | m | L |
| Phases present:- | | | | |
| Dicalcium silicate | - | m | m | m |
| Tricalcium silicate | - | - | S | - |
| R0 phase | vs | m | m | m |
| CaF phase | - | S | S | S |
| R3O4 phase | - | S | S | S |
| Metal & rust | - | S | S | vs |
| Lime phase | - | S | S | m |
| Periclase | vs | S | S | S |
| Alteration products | L | L | | L |
| BASIC REFRACTORIES | | | | |
| Amount | vs | vs | - | - |
| OTHER CONSTITUENTS | | | | |
| Quartz, etc | S | vs | S | S |
| Acid (silicic) slag | vs | - | - | - |
| Metal, rust, scale, etc | S | S | S | S |
| Limestone & dolomite | - | vs | S | - |
| Iron ore, nonstone, etc | vs | vs | - | - |
| Coke | vs | vs | vs | vs |
| Cementitious alteration products | S | S | S | S |

L = very large, l = large, m = medium, s = small and vs = very small amounts

GENERAL EXPLANATION

L = very large, l = large, m = medium, s = small and vs = very small amounts.

Blast furnace slag. When present this consists mainly of melite (Ca,Mg,Al silicate ranging in composition between $\text{Ca}_2\text{Al}_2\text{SiO}_7$ and $\text{Ca}_2\text{Mg}_2\text{SiO}_7$). Other common phases are merwinite ($\text{Ca}_2\text{MgSi}_2\text{O}_7$). The matrix often consists of some of the above phases, especially melite, but may also contain other phases such as wollastonite (CaSiO_3), anorthite ($\text{CaAl}_2\text{Si}_2\text{O}_7$) and pyroxene (CaMgSiO_3). Spinel ($\text{Mg,Fe}_3\text{O}_4$) may be present. Sulphides and metal usually occur and are mostly finely dispersed, but the metal sometimes occurs as pits and may contain some graphite and Ti carbide (TiC). Material reported as ceramic in appearance is very finely crystalline. The alteration products often include talc and gypsum but are mostly silicate and/or sulphate hydrates that are difficult to identify specifically under the microscope.

Basic steel slag. When present this consists mainly of dicalcium silicate, mostly the β -form (larnite) but sometimes the α form. Phosphoric slags may contain nepselchewicite (Ca_2SiO_4 with $\text{Ca}_3\text{P}_2\text{O}_7$ in solid solution). Other silicate often present in small amounts, melted by H_2O , is probably melite. RO, R_2O_3 and R_2F phases are typically present and are mainly FeO and Fe_2O_3 with some Mg, Mn, Cu, etc. in solid solution and complex Ca aluminoferrites. There may also be some Fe_2O_3 and spinel ($\text{Mg,Fe}_3\text{Al}_2\text{O}_4$). The slag typically carries minor amounts of periclase (MgO with some Fe in solid solution) and lime phase (CaO with some Fe, Mn & Mg in solid solution). Other possible minor constituents include fluore (CaF_2) and apatite (Ca fluoro-phosphate), the last present in phosphoric slags. The alteration products are, again, difficult to identify specifically but are probably, mainly, hydrated silicates. Portlandite ($\text{Ca}(\text{OH})_2$) may be present.

Basic refractory material. When present, this is mainly magnesian and consists of granular periclase (MgO) with interstitial silicates. Sometimes samples contain chromite-magnesia material with chromite present in addition to the other phases. Hot face material (from close to the furnace) may also occur. The periclase and interstitial silicates show secondary alteration similar to that of the basic steel slag. Brucite ($\text{Mg}(\text{OH})_2$) is likely.

Acid steel slag. When present this consists mainly of fayalite ($\text{Fe,Mn}_2\text{SiO}_4$), Fe,Mn oxides and cristobalite (high temperature SiO_2).

Other slags. The 'intermediate slag' (probably primary flush slags from steel furnaces) has a variable phase assemblage, being mainly formed of silicates, particularly dicalcium silicate, melite, merwinite and a complex olivine phase together with corundum and wustite (FeO). Sometimes it contains significant amounts of periclase, well embedded in the slag. The 'ferrous slag' (probably from ladling operations) has similar silicates but much more substantial content of iron oxides, usually wustite. It is often associated with scale (iron oxides formed on the surface of steel during reheating/cooling). When present, the 'ferrous slag' consists of various silicates and silicate glass with Fe oxides, brucite ($\text{Fe}(\text{OH})_2$) and, sometimes, corundum (Al_2O_3). It is usually derived from heating furnaces and is often associated with burnt shale. When present, the 'silicious driver' is similar but devoid of iron oxides.

Other constituents The aluminosilicate brick includes a range of refractory firebrick, common brick and diamond-refractories. The quartz, sandstone, etc. may include used silica refractory material consisting of quartz and high temperature forms. Sometimes there is a distinct granular texture and this is derived from silicate, a kind of chert. Occasionally material may contain finer particles together. It is similar to the other alteration products consisting mainly of amorphous hydrates difficult to identify under the microscope. Sometimes some is used Portland cement recognised by the solid texture of the binder and the embedded quartz sand.

APPENDIX B

PETROLOGICAL REPORT ON SAMPLES BG0F 01 & 02

A petrological examination has been carried out of two samples BG0F 01 and 02.

Polished blocks were prepared using particulate material crushed to a nominal size of $\sim 5\text{mm}$. Representative material was made up into resin-bonded blocks. One face of each of these was ground flat and polished using diamond pastes. In addition, the surfaces were selectively etched with water and 0.1%N HCl in order to help with the phase identification.

The detailed results are given in the accompanying Table.

Both samples consist mainly of basic steel slag with small but significant amounts of basic refractory material.

There are small amounts of blast furnace slag and its alteration products.

Blast furnace slag

The unaltered blast furnace slag consists mainly of melilite (Ca,Mg,Al silicate). It is crystalline with crystals varying up to about 1mm in size. The matrix, the space between the melilite crystals, is partly occupied by silicate glass and partly with other silicates. Also, some spinel (MgAl_2O_4) occurs as a primary phase. The slag contains minor amounts of iron metal. Secondary alteration is moderate. It is mainly restricted to pore infill and the formation of thin rinds. The secondary products are mostly finely granular and are difficult to identify specifically under the microscope. Some calcite (CaCO_3) is present but no well-crystallised gypsum ($\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$) was seen.

Basic steel slag

Although the individual particles vary considerably in composition the two samples are broadly similar to one another.

The unaltered basic steel slag consists mainly of dicalcium silicate, tricalcium silicate, RO, R_2O_3 and R₂O phases (FeO , Fe_2O_3 and Fe_3O_4 with some Al, Mn, Mg and Ca in solid solution), and CaF phases (complex Ca aluminoferrites). Lime phase (CaO with some Fe, Mn and Mg in solid solution) is present in substantial amounts and is widespread. It occurs mainly as granular particles up to about 0.1 mm in size that tends to be packed together as macro-inclusions. Periclase (MgO with some Fe in solid solution) is present in small amounts and like lime phase is widespread. It tends to be present in the grain cores protected by marginal RO phase that is more iron rich. Some metal is present as small prills partly rusted. The slag is extensively altered to secondary products that are

difficult to identify specifically and are, probably, mainly hydrated silicates but also include some calcite (CaCO_3).

Basic refractory material

This is mainly magnesian and consists of two types: (a) coarsely crystalline granular periclase (MgO) with bonding by magnesian silicates and (b) finely crystalline material probably seawater magnesia.

Other constituents

These include quartz, aluminosilicate brick, cinder, metal with associated red (goethitic) rust, coke, coal and fume. The particles are bonded together by cementitious material that is similar to the slag alteration products but probably also includes some clay. It consists mostly of complex hydrates difficult to identify under the optical microscope.

TRS SAMPLES BG0F 01 & 02

| | 1 | 2 |
|--------------------------------|----|----|
| BLAST FURNACE SLAG | | |
| Amount | s | s |
| Phases present:- | | |
| Me life | l | l |
| Matrix & other silicates | s | m |
| Metallic iron | - | vs |
| Spinel | - | s |
| Glassy slag | s | s |
| Alteration products | m | m |
| Caste | - | s |
| BASIC STEEL SLAG | | |
| Amount | l | l |
| Phases present:- | | |
| Dicalcium silicate | l | m |
| Tricalcium silicate | - | s |
| Unclashed silicate | - | s |
| RO phase | m | m |
| CaF phase | s | s |
| R3O4 & R2O3 phases | s | s |
| Metal & rust | s | s |
| Lime phase | s | s |
| Pericase | s | s |
| Alteration products | m | m |
| BASIC REFRACTORIES | | |
| Amount | s | s |
| OTHER CONSTITUENTS | | |
| Aluminosilicate brick | s | vs |
| Quartz etc | s | s |
| Cindery slag | vs | - |
| Fume | vs | vs |
| Metal rust scale etc | s | s |
| Coke | s | vs |
| Coal & char | s | - |
| Continuous alteration products | s | s |

L = very large, l = large, m = medium, s = small and vs = very small amounts

GENERAL EXPLANATION

L = very large, l = large, m = medium, s = small and vs = very small amounts.

Blast furnace slag. When present this consists mainly of melilite (Ca/Mg,Al silicate ranging in composition between $\text{Ca}_2\text{Al}_2\text{SiO}_7$ and $\text{Ca}_2\text{MgSi}_2\text{O}_7$). Other common phases are merwinite ($\text{Ca}_2\text{Mg}_2\text{Si}_2\text{O}_7$). The matrix often consists of some of the above phases, especially melilite, but may also contain other phases such as wollastonite (CaSiO_3), anorthite ($\text{CaAl}_2\text{Si}_2\text{O}_7$) and pyroxene ($(\text{Ca/Mg})\text{SiO}_3$). Spinel (MgAl_2O_4) may be present. Sulphides and metal usually occur and are mostly finely dispersed, but the metal sometimes occurs as prills and may contain some graphite and Fe-carbo-nitride (Fe_3CN). Material reported as ceramic in appearance is very finely crystalline. The alteration products often include talite and gypsum but are mostly silicate and/or sulpho-aluminate hydrates that are difficult to identify specifically under the microscope.

Basic steel slag. When present this consists mainly of dicalcium silicate, mostly the β -form (ferriite) but sometimes the α form. Phosphoric slags may contain nagelschmidite (Ca_2SiO_4 with $\text{Ca}_3\text{P}_2\text{O}_8$ in solid solution). Other silicates often present in small amounts, unetched by dilute HCl, is probably melilite, RO, R₂O, and RF phases and typically present and are mainly FeO and Fe₂O₃ with some Mg, Mn, Ca, etc. in solid solution and complex Ca aluminoferrites. There may also be some Fe₂O₃ and spinel ($(\text{Mg,Fe})\text{Al}_2\text{O}_4$). The slag typically carries minor amounts of pentase (MgO with some Fe in solid solution) and lime phase (CaO with some Fe, Mn & Mg in solid solution). Other possible minor constituents include fluoroite (CaF_2) and apatite (Ca fluorophosphate), the last present in phosphoric slags. The alteration products are, again, difficult to identify specifically but are probably, mainly, hydrated silicates. Portlandite ($\text{Ca}(\text{OH})_2$) may be present.

Basic refractory material. When present, this is mainly merwinite and consists of granular pentase (MgO) with interstitial silicates. Sometimes samples contain chromite-magnesia material with chromite present in addition to the other phases. Hot face material (from down to the hearth) may also occur. The pentase and interstitial silicates show secondary alteration similar to that of the basic steel slag. Brucite ($\text{Mg}(\text{OH})_2$) is likely.

Acid steel slag. When present this consists mainly of fayalite ($(\text{Fe,Mn})_2\text{SiO}_4$), Fe,Mn oxides and cristobalite (high temperature SiO_2).

Other slags. The 'intermediate slag' (probably primary flush slags from steel furnaces) has a variable phase assemblage, being mainly formed of silicates, particularly dicalcium silicate, melilite, merwinite and a complex olivine phase together with spinel and wustite (FeO). Sometimes it contains significant amounts of perthite, with embedded in the slag. The 'ferrous slag' (probably from foundry operations) has similar silicates but much more substantial content of iron oxides, usually wustite. It is often associated with scale (iron oxides formed on the surface of steel during reheating/cooking). When present, the 'foundry slag' consists of various silicates and silicate glass with Fe oxides, ferrocyanite ($\text{Fe}_3\text{Al}_2\text{O}_7$) and, sometimes, corundum (Al_2O_3). It is usually derived from heating furnaces and is often associated with burnt shale. When present, the 'siliceous comb' is similar but devoid of iron oxides.

Other constituents The starting silicate brick includes a range of refractory linings, commonly brick and some acid refractories. The quartz, sandstone, etc. may include used silica refractory material consisting of quartz and its high temperature forms. Sometimes there is a distinct quartz linings and it is derived from siliceous sand of chert. Cementitious material may bind the brick particles together. This similar to the other alteration products consisting mostly of complex hydrates difficult to identify under the microscope but may include Portland cement, recognised by the typical features of the clinker and the embedded quartz sand.

APPENDIX C

MECHANISMS OF VOLUMETRIC INSTABILITY IN IRON AND STEEL INDUSTRY SLAGS

Volumetric change with time can occur in some types of iron and steel industry slags. These mechanisms are briefly described in this section.

Blast Furnace Slags

Fresh-make air-cooled, i.e. crystalline, blast furnace slags are almost always volumetrically stable after cooling. The two mechanisms for volumetric instability listed in BS1047:1983 – "Air Cooled Blast furnace Slag for use in Construction" are:-

- a) Beta to gamma inversion of dicalcium silicate.**
- b) Iron unsoundness.**

a) Research by G. H. Thomas on this phase transformation has shown the transformation to be athermal rather than isothermal. In practical terms this means that inversion, and the expansion associated with it, can only occur during the cooling cycle. In fully cooled material there would appear to be no further risk of instability from this mechanism.

b) Iron unsoundness is a very rare form of instability frequently associated with operating problems in the blast furnace. TRS know of only one instance in over 40 years. The mechanism, which is a hydrolysis reaction, is immediately triggered off by the presence of water. Once water has initiated the reaction, the mechanism proceeds to completion. It is impossible to arrest the process once started; at least by methods operating in normal ambient conditions.

It follows that the risk of late expansion from either of these mechanisms in blast furnace slag is remote.

c) Sulphoaluminate Type Activity

Some years ago G. H. Thomas discovered a third mechanism that may give rise to volumetric instability. The process is possible only in some old blast furnace slag altered by weathering. When the sulphide sulphur in the blast furnace slag is oxidised during

weathering to sulphate, under some circumstances reactions can take place within the slag to produce an 'ettringite' type product. The process is somewhat analogous to sulphatic attack on concrete and has a similar result - expansion of the mass and associated disruption.

For the mechanism to have any significance, the slag needs to have residual potential for this reaction. Evidence of past activity does not necessarily indicate further reaction is possible.

The TRS accelerated expansion test is, we believe, uniquely capable of identifying such slags, as well as instability attributable to free CaO and free MgO in steel slag & etc.

Basic Steel Slags

Basic steel slags commonly contain significant quantities of free CaO and free MgO. These free oxides are well known for the massive expansion associated with their hydration. In practical terms, it is impossible to forecast when hydration will take place, but it can be up to decades after the material was cooled - or placed. The reasons are complex, but include the varying density of the oxides, due to the variation in temperatures at which the products have been held in the furnace. Other factors influencing rate of hydration include:-

- the protection of slags by a reaction product at the oxide interface with the slag,
- the presence of the oxides as lime or magnesia rich solid solutions instead of the pure oxide.

The result is potential future volumetric instability but at an unforeseeable date. Periclase, i.e. free MgO, is relatively much slower than free CaO to hydrate.

Scrap High Magnesia Refractories

These are particularly undesirable components in fill as they commonly result in high concentrations of free MgO. The problems associated with these concentrations are similar to those where periclase is found in basic steel slag.

**Specialist Chemical Testing
(Tested Externally)**



DETS

Certificate of Analysis

Certificate Number Combined 4251 Prairie

10-Nov-20

Client Allied Exploration & Geotechnics Limited
Unit 25
Stella Gill Industrial Estate
Pelton Fell
DH2 2RG

Our Reference Combined 4251 Prairie

Client Reference 4251

Order No (not supplied)

Contract Title Prairie Site Ground Investigation Works

Description 120 Soil samples, 24 Leachate samples, 42 Water samples.

Date Received 06-Apr-20

Date Started 06-Apr-20

Date Completed 10-Nov-20

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By



Adam Fenwick
Contracts Manager





Summary of Chemical Analysis

Matrix Descriptions

Our Ref Combined 4251 Prairie

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Sample ID | Other ID | Depth | Lab No | Completed | Matrix Description |
|-----------------------|----------|-------|---------|------------|---|
| PRAIRIE_AUK_TP13 2 | 4 | 1.3 | 1663605 | 05/08/2020 | Dark brown gravelly SAND |
| PRAIRIE_AUK_TP13 1 | 5 | 1.8 | 1663606 | 05/08/2020 | Dark brown gravelly SAND |
| PRAIRIE_AUK_TP10 1 | 5 | 1 | 1663734 | 05/08/2020 | Dark brown gravelly SAND (Possible made ground - brick) |
| PRAIRIE_AUK_TP10 1 | 9 | 2.2 | 1663735 | 05/08/2020 | Dark brown sandy, clayey GRAVEL (sample matrix outside MCERTS scope of accreditation) |
| PRAIRIE_AUK_TP10 4 | 5 | 1.5 | 1663736 | 05/08/2020 | Dark brown gravelly SAND |
| PRAIRIE_AUK_TP10 5 | 11 | 2.5 | 1663737 | 05/08/2020 | Dark brown sandy CLAY |
| PRAIRIE_AUK_BH10 4 | 1 | 5.5 | 1663978 | 05/08/2020 | Dark brown gravelly, sandy CLAY |
| PRAIRIE_AUK_TP17 2 | 3 | 0.8 | 1665133 | 05/08/2020 | Dark brown gravelly SAND |
| PRAIRIE_AUK_TP17 5 | 3 | 0.8 | 1665134 | 05/08/2020 | Dark brown sandy GRAVEL (sample matrix outside MCERTS scope of accreditation) |
| PRAIRIE_AUK_TP17 5 | 6 | 1.8 | 1665135 | 05/08/2020 | Dark brown sandy CLAY |
| PRAIRIE_AUK_TP17 8 | 3 | 0.8 | 1665136 | 05/08/2020 | Dark brown sandy GRAVEL (sample matrix outside MCERTS scope of accreditation) |
| PRAIRIE_AUK_BH10 6 | 1 | 5.5 | 1665137 | 05/08/2020 | Dark brown gravelly SAND |
| PRAIRIE_AUK_TP10 7 | 6 | 1.8 | 1665138 | 05/08/2020 | Dark brown gravelly SAND |
| PRAIRIE_AUK_TP10 7 | 11 | 0.8 | 1665139 | 05/08/2020 | Dark brown sandy CLAY |
| PRAIRIE_AUK_TP10 8 | 5 | 1 | 1665140 | 05/08/2020 | Dark brown gravelly SAND |
| PRAIRIE_AUK_TP10 8 | 8 | 2 | 1665141 | 05/08/2020 | Dark brown gravelly SAND |
| PRAIRIE_AUK_TP11 3 | 5 | 1.3 | 1665142 | 05/08/2020 | Dark brown gravelly SAND |
| PRAIRIE_AUK_BH10 3 | 1 | 2.5 | 1665286 | 05/08/2020 | Dark brown sandy CLAY |
| PRAIRIE_AUK_TP11 5 | 6 | 1.9 | 1665288 | 05/08/2020 | Dark grey sandy GRAVEL (sample matrix outside MCERTS scope of accreditation) |
| PRAIRIE_AUK_TP12 2 | 3 | 1 | 1665290 | 05/08/2020 | Dark brown gravelly SAND |
| PRAIRIE_AUK_TP12 3 | 3 | 0.6 | 1665291 | 05/08/2020 | Dark brown gravelly, clayey SAND |
| PRAIRIE_AUK_TP18 5 | 5 | 4.3 | 1665292 | 05/08/2020 | Dark brown sandy CLAY |
| PRAIRIE_AUK_TP18 6 | 3 | 0.5 | 1665293 | 05/08/2020 | Dark brown gravelly, sandy CLAY (Possible made ground - brick) |
| PRAIRIE_AUK_TP18 8 | 3 | 1 | 1665295 | 05/08/2020 | Dark brown gravelly SAND |
| PRAIRIE_AUK_TP12 1 | 4 | 1.5 | 1665450 | 05/08/2020 | Dark brown sandy, clayey GRAVEL (sample matrix outside MCERTS scope of accreditation) |
| PRAIRIE_AUK_TP13 8 | 3 | 1.2 | 1665451 | 05/08/2020 | Dark brown gravelly SAND (Possible made ground - brick) |
| PRAIRIE_AUK_TP14 9 | 3 | 1.3 | 1665452 | 05/08/2020 | Dark brown gravelly, clayey SAND |
| PRAIRIE_AUK_TP16 8 | 1 | 0.05 | 1665453 | 05/08/2020 | Dark brown gravelly, clayey SAND |

Summary of Chemical Analysis

Matrix Descriptions

Our Ref Combined 4251 Prairie

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Sample ID | Other ID | Depth | Lab No | Completed | Matrix Description |
|--------------------------|----------|-------|---------|------------|---|
| PRAIRIE_AUK_TP17 3 | 3 | 0.9 | 1665454 | 05/08/2020 | Dark brown gravelly, clayey SAND |
| PRAIRIE_AUK_SURF ACE1 | 1 | 0 | 1665455 | 05/08/2020 | Cream, gravelly, sandy and CLAY |
| PRAIRIE_AUK_TP11 4 | 6 | 0.9 | 1665588 | 05/08/2020 | U/S (sample matrix outside MCERTS scope of accreditation) |
| PRAIRIE_AUK_TP12 4 | 5 | 1.5 | 1665589 | 05/08/2020 | Dark brown gravelly, very sandy CLAY |
| PRAIRIE_AUK_TP17 4 | 3 | 0.8 | 1665590 | 05/08/2020 | Dark brown gravelly, very sandy CLAY |
| PRAIRIE_AUK_TP17 4 | 6 | 1.6 | 1665591 | 05/08/2020 | Dark brown sandy CLAY |
| PRAIRIE_AUK_TP17 6 | 3 | 0.9 | 1665592 | 05/08/2020 | Dark brown gravelly, very sandy CLAY |
| PRAIRIE_AUK_TP17 7 | 2 | 0.6 | 1665593 | 05/08/2020 | Dark brown gravelly, very sandy CLAY |
| PRAIRIE_AUK_TP18 9 | 7 | 3 | 1665594 | 05/08/2020 | Dark brown sandy CLAY |
| PRAIRIE_AUK_TP17 9 | 4 | 1.4 | 1665610 | 05/08/2020 | U/S (sample matrix outside MCERTS scope of accreditation) |
| PRAIRIE_AUK_TP17 9 | 7 | 2 | 1665611 | 05/08/2020 | Dark brown sandy CLAY |
| PRAIRIE_AUK_TP18 1 | 3 | 0.6 | 1665612 | 05/08/2020 | Dark brown gravelly, very, sandy CLAY |
| PRAIRIE_AUK_TP18 2 | 3 | 0.9 | 1665613 | 05/08/2020 | U/S (sample matrix outside MCERTS scope of accreditation) |
| PRAIRIE_AUK_TP14 5 | 4 | 1.6 | 1665990 | 05/08/2020 | Dark brown gravelly, sandy CLAY |
| PRAIRIE_AUK_TP14 6C | 5 | 1.3 | 1665991 | 05/08/2020 | Dark brown gravelly, sandy CLAY |
| PRAIRIE_AUK_TP15 6A | 2 | 0.3 | 1665992 | 05/08/2020 | Dark brown gravelly, very sandy CLAY |
| PRAIRIE_AUK_TP16 2 | 3A | 1.7 | 1665993 | 05/08/2020 | Dark brown gravelly, very sandy CLAY including some rootlets |
| PRAIRIE_AUK_TP18 0 | 3 | 0.3 | 1665994 | 05/08/2020 | Dark brown gravelly, very sandy CLAY including some rootlets |
| PRAIRIE_AUK_TP16 3 | 3 | 1.2 | 1665995 | 05/08/2020 | U/S (sample matrix outside MCERTS scope of accreditation) |
| PRAIRIE_AUK_TP13 5 | 5 | 1.3 | 1666343 | 05/08/2020 | Dark brown clayey, sandy GRAVEL (sample matrix outside MCERTS scope of accreditation) |
| PRAIRIE_AUK_TP13 6 | 3 | 0.8 | 1666344 | 05/08/2020 | Dark brown sandy, clayey GRAVEL (sample matrix outside MCERTS scope of accreditation) |
| PRAIRIE_AUK_TP13 6 | 10 | 2.9 | 1666345 | 05/08/2020 | Dark brown sandy CLAY |
| PRAIRIE_AUK_TP16 5 | 3 | 1 | 1666346 | 05/08/2020 | Dark brown gravelly, clayey SAND |
| PRAIRIE_AUK_TP16 7 | 6 | 2.5 | 1666347 | 05/08/2020 | Dark brown gravelly, clayey SAND |
| PRAIRIE_AUK_TP16 9 | 3 | 1.5 | 1666348 | 05/08/2020 | Dark brown gravelly, clayey SAND |
| PRAIRIE_AUK_BH10 8 | 1 | 2.5 | 1666610 | 05/08/2020 | Dark brown sandy CLAY |
| PRAIRIE_AUK_TP13 9B | 3 | 0.3 | 1666611 | 05/08/2020 | Dark brown very sandy GRAVEL (Possible made ground - brick) (sample matrix outside MCERTS scope of accreditation) |
| PRAIRIE_AUK_TP13 9B | 6 | 3.3 | 1666612 | 05/08/2020 | Dark brown sandy CLAY |



Summary of Chemical Analysis

Matrix Descriptions

Our Ref Combined 4251 Prairie

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Sample ID | Other ID | Depth | Lab No | Completed | Matrix Description |
|--------------------|----------|-------|---------|------------|---|
| PRAIRIE_AUK_TP148A | 5 | 1.4 | 1666613 | 05/08/2020 | Dark brown very sandy GRAVEL (Possible made ground - brick) (sample matrix outside MCERTS scope of accreditation) |
| PRAIRIE_AUK_TP150 | 3 | 1.5 | 1666614 | 05/08/2020 | Dark brown very sandy GRAVEL (Possible made ground - brick) (sample matrix outside MCERTS scope of accreditation) |
| PRAIRIE_AUK_TP159 | 3 | 0.6 | 1666615 | 05/08/2020 | Dark brown very sandy GRAVEL (sample matrix outside MCERTS scope of accreditation) |
| PRAIRIE_AUK_TP190A | 3 | 1.1 | 1666616 | 05/08/2020 | Dark brown gravelly, clayey SAND |
| PRAIRIE_AUK_BH105 | 1 | 3 | 1667231 | 05/08/2020 | Dark brown sandy CLAY |
| PRAIRIE_AUK_TP126 | 5 | 2.6 | 1667232 | 05/08/2020 | Dark brown gravelly, sandy CLAY |
| PRAIRIE_AUK_TP128 | 3 | 0.9 | 1667233 | 05/08/2020 | U/S (sample matrix outside MCERTS scope of accreditation) |
| PRAIRIE_AUK_TP129 | 4A | 2.1 | 1667234 | 05/08/2020 | Dark brown sandy CLAY |
| PRAIRIE_AUK_TP130 | 4A | 1 | 1667235 | 05/08/2020 | Dark brown gravelly, clayey SAND |
| PRAIRIE_AUK_TP147 | 4 | 1.5 | 1667236 | 05/08/2020 | Dark brown gravelly, sandy CLAY |
| PRAIRIE_AUK_TP158 | 3 | 1.3 | 1667237 | 05/08/2020 | Dark brown gravelly, clayey SAND |
| PRAIRIE_AUK_TP157 | 2 | 0.8 | 1667238 | 05/08/2020 | Dark brown gravelly, clayey SAND |
| PRAIRIE_AUK_TP120A | 3 | 1 | 1667501 | 05/08/2020 | Dark brown gravelly SAND |
| PRAIRIE_AUK_TP134 | 3 | 1 | 1667502 | 05/08/2020 | Dark brown gravelly SAND |
| PRAIRIE_AUK_TP134 | 6 | 2 | 1667503 | 05/08/2020 | Dark brown sandy CLAY |
| PRAIRIE_AUK_TP161 | 3 | 1 | 1667504 | 05/08/2020 | Dark brown gravelly SAND |
| PRAIRIE_AUK_TP166 | 3 | 0.45 | 1667505 | 05/08/2020 | Dark brown gravelly SAND |
| PRAIRIE_AUK_TP166 | 8 | 1.2 | 1667506 | 05/08/2020 | Dark brown sandy CLAY |
| PRAIRIE_AUK_TP171 | 3 | 0.75 | 1667507 | 05/08/2020 | Dark brown sandy CLAY |
| PRAIRIE_AUK_TP187 | 3 | 0.7 | 1667508 | 05/08/2020 | Dark brown sandy CLAY |
| PRAIRIE_AUK_BH110 | 1 | 3 | 1668118 | 05/08/2020 | Dark brown sandy CLAY |
| PRAIRIE_AUK_TP102 | 4 | 1 | 1668119 | 05/08/2020 | Dark brown gravelly SAND |
| PRAIRIE_AUK_TP102 | 11 | 3 | 1668120 | 05/08/2020 | Dark brown gravelly, sandy CLAY |
| PRAIRIE_AUK_TP103 | 3 | 1 | 1668121 | 05/08/2020 | Dark brown gravelly SAND |
| PRAIRIE_AUK_TP109 | 3 | 1 | 1668122 | 05/08/2020 | Dark brown gravelly SAND |
| PRAIRIE_AUK_TP110 | 3 | 1 | 1668123 | 05/08/2020 | Dark brown gravelly SAND |
| PRAIRIE_AUK_TP110 | 7 | 2 | 1668124 | 05/08/2020 | Dark brown gravelly, sandy CLAY |
| PRAIRIE_AUK_TP111 | 4 | 1.5 | 1668125 | 05/08/2020 | Dark brown gravelly SAND |



Summary of Chemical Analysis

Matrix Descriptions

Our Ref Combined 4251 Prairie

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Sample ID | Other ID | Depth | Lab No | Completed | Matrix Description |
|------------------------|----------|-------|---------|------------|--|
| PRAIRIE_AUK_TP11 2 | 4 | 1.5 | 1668126 | 05/08/2020 | Dark brown gravelly SAND (Possible made ground - brick) |
| PRAIRIE_AUK_TP11 9 | 3 | 1.5 | 1668127 | 05/08/2020 | Dark brown gravelly SAND |
| PRAIRIE_AUK_TP11 9 | 7 | 2.5 | 1668128 | 05/08/2020 | Dark brown sandy CLAY |
| PRAIRIE_AUK_TP13 3 | 2 | 0.5 | 1668129 | 05/08/2020 | Dark brown, gravelly SAND |
| PRAIRIE_AUK_TP15 2 | 6 | 2 | 1668130 | 05/08/2020 | Dark brown gravelly, very sandy CLAY |
| PRAIRIE_AUK_TP15 3 | 4 | 1.1 | 1668131 | 05/08/2020 | Dark brown gravelly SAND |
| PRAIRIE_AUK_TP15 4 | 3 | 0.85 | 1668132 | 05/08/2020 | Dark brown very gravelly SAND |
| PRAIRIE_AUK_TP15 5 | 3 | 0.7 | 1668133 | 05/08/2020 | Dark brown gravelly SAND |
| PRAIRIE_AUK_TP16 0 | 4 | 0.75 | 1668134 | 05/08/2020 | Dark brown gravelly SAND (Possible made ground - brick) |
| PRAIRIE_AUK_TP17 0 | 4 | 1 | 1668135 | 05/08/2020 | Dark brown sandy CLAY |
| PRAIRIE_AUK_TP16 4 | 3 | 0.7 | 1668557 | 05/08/2020 | Dark brown gravelly SAND |
| PRAIRIE_AUK_TP16 4 | 5 | 1.3 | 1668558 | 05/08/2020 | Dark brown gravelly, slightly clayey SAND |
| PRAIRIE_AUK_TP18 4 | 2 | 0.3 | 1668559 | 05/08/2020 | Dark brown sandy GRAVEL including odd rootlets (sample matrix outside MCERTS scope of accreditation) |
| PRAIRIE_AUK_TP10 6 | 3 | 1 | 1668560 | 05/08/2020 | Dark brown gravelly, sandy CLAY |
| PRAIRIE_AUK_TP11 6 | 3 | 1.3 | 1668561 | 05/08/2020 | Dark brown gravelly, clayey SAND |
| PRAIRIE_AUK_TP11 7 | 8 | 3 | 1668562 | 05/08/2020 | Dark brown sandy, clayey GRAVEL (sample matrix outside MCERTS scope of accreditation) |
| PRAIRIE_AUK_TP11 8 | 3 | 1.2 | 1668563 | 05/08/2020 | Dark brown gravelly SAND |
| PRAIRIE_AUK_TP12 7 | 3 | 0.3 | 1668564 | 05/08/2020 | Dark brown gravelly SAND (Possible made ground - brick) |
| PRAIRIE_AUK_TP12 7A | 3 | 2.8 | 1668565 | 05/08/2020 | Brown sandy CLAY |
| PRAIRIE_AUK_TP14 0 | 3 | 1 | 1668566 | 05/08/2020 | Dark brown gravelly, clayey SAND |
| PRAIRIE_AUK_TP14 1 | 4 | 2 | 1668567 | 05/08/2020 | U/S (sample matrix outside MCERTS scope of accreditation) |
| PRAIRIE_AUK_TP14 2 | 3 | 0.9 | 1668568 | 05/08/2020 | U/S (sample matrix outside MCERTS scope of accreditation) |
| PRAIRIE_AUK_TP14 2 | 4 | 1.5 | 1668569 | 05/08/2020 | U/S (sample matrix outside MCERTS scope of accreditation) |
| PRAIRIE_AUK_TP14 3 | 3 | 0.8 | 1668570 | 05/08/2020 | Dark brown gravelly, clayey SAND |
| PRAIRIE_AUK_TP14 3 | 6 | 1.6 | 1668571 | 05/08/2020 | Dark brown gravelly, sandy CLAY |
| PRAIRIE_AUK_TP15 1 | 5 | 1.2 | 1668572 | 05/08/2020 | Dark brown gravelly, clayey SAND |
| PRAIRIE_AUK_TP13 9 | 4 | 1.1 | 1668657 | 05/08/2020 | Dark brown very gravelly, sandy CLAY |
| PRAIRIE_AUK_TP14 4 | 3 | 0.8 | 1668869 | 05/08/2020 | Dark brown very sandy, clayey GRAVEL (sample matrix outside MCERTS scope of accreditation) |



Summary of Chemical Analysis

Matrix Descriptions

Our Ref Combined 4251 Prairie

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Sample ID | Other ID | Depth | Lab No | Completed | Matrix Description |
|------------------------|----------|-------|---------|------------|---|
| PRAIRIE_AUK_TP11 2 | 7 | 2.1 | 1669251 | 05/08/2020 | Dark brown sandy GRAVEL (sample matrix outside MCERTS scope of accreditation) |
| PRAIRIE_AUK_TP19 4A | 1 | 1.4 | 1670142 | 05/08/2020 | U/S (sample matrix outside MCERTS scope of accreditation) |
| PRAIRIE_AUK_TP19 6A | 1 | 1.4 | 1670143 | 05/08/2020 | U/S (sample matrix outside MCERTS scope of accreditation) |
| PRAIRIE_AUK_TP20 1 | 1 | 3.6 | 1670144 | 05/08/2020 | Dark brown gravelly, clayey SAND |
| PRAIRIE_AUK_TP19 3 | 1 | 0.8 | 1670502 | 05/08/2020 | U/S (sample matrix outside MCERTS scope of accreditation) |
| PRAIRIE_AUK_BH10 1 | 1 | 3 | 1675450 | 05/08/2020 | Dark brown sandy CLAY |
| PRAIRIE_AUK_BH10 7 | 1 | 3 | 1675451 | 05/08/2020 | Dark brown sandy CLAY |
| PRAIRIE_AUK_SW4 | 1 | 0 | 1700277 | 05/08/2020 | Dark grey very gravelly SAND |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Lab No | 1663605 | 1663606 | 1663734 | 1663735 | 1663736 |
|---------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Sample ID | PRAIRIE_AUK_TP132 | PRAIRIE_AUK_TP131 | PRAIRIE_AUK_TP101 | PRAIRIE_AUK_TP101 | PRAIRIE_AUK_TP104 |
| Depth | 1.30 | 1.80 | 1.00 | 2.20 | 1.50 |
| Other ID | 4 | 5 | 5 | 9 | 5 |
| Sample Type | ES | ES | ES | ES | ES |
| Sampling Date | 02/04/2020 | 02/04/2020 | 01/04/2020 | 01/04/2020 | 01/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | | |
|---------------------------------|-------------|-------|-------|--------|-------|-------|--------|-------|
| Asbestos Quantification | DETSC 1102 | 0.001 | % | | | 0.001 | | |
| Metals | | | | | | | | |
| Aluminium | DETSC 2301* | 1 | mg/kg | 12000 | 15000 | 36000 | 32000 | 31000 |
| Antimony | DETSC 2301* | 1 | mg/kg | 7.7 | 9.1 | 1.4 | 1.5 | 3.4 |
| Arsenic | DETSC 2301# | 0.2 | mg/kg | 5.2 | 13 | 13 | 18 | 23 |
| Barium | DETSC 2301# | 1.5 | mg/kg | 220 | 1300 | 390 | 280 | 390 |
| Beryllium | DETSC 2301# | 0.2 | mg/kg | 0.7 | 1.4 | 4.4 | 4.0 | 3.5 |
| Boron, Water Soluble | DETSC 2311# | 0.2 | mg/kg | 5.4 | 1.3 | 3.1 | 4.3 | 3.4 |
| Cadmium | DETSC 2301# | 0.1 | mg/kg | 0.4 | 0.3 | 0.4 | 0.5 | 0.5 |
| Chromium | DETSC 2301# | 0.15 | mg/kg | 410 | 620 | 30 | 39 | 120 |
| Chromium, Hexavalent | DETSC 2204* | 1 | mg/kg | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Copper | DETSC 2301# | 0.2 | mg/kg | 36 | 100 | 55 | 54 | 61 |
| Iron | DETSC 2301 | 25 | mg/kg | 140000 | 99000 | 18000 | 31000 | 56000 |
| Lead | DETSC 2301# | 0.3 | mg/kg | 88 | 46 | 330 | 89 | 110 |
| Magnesium | DETSC 2301* | 1 | mg/kg | 41000 | 33000 | 23000 | 14000 | 25000 |
| Manganese | DETSC 2301# | 20 | mg/kg | 18000 | 17000 | 2900 | 1500 | 7700 |
| Mercury | DETSC 2325# | 0.05 | mg/kg | < 0.05 | 0.07 | 0.25 | 0.24 | 0.34 |
| Molybdenum | DETSC 2301# | 0.4 | mg/kg | 3.9 | 1.5 | 1.0 | 1.6 | 1.4 |
| Nickel | DETSC 2301# | 1 | mg/kg | 17 | 12 | 9.7 | 23 | 21 |
| Silicon | DETSC 2301* | 10 | mg/kg | 42000 | 46000 | 67000 | 120000 | 64000 |
| Vanadium | DETSC 2301# | 0.8 | mg/kg | 430 | 3300 | 74 | 91 | 290 |
| Zinc | DETSC 2301# | 1 | mg/kg | 130 | 56 | 170 | 200 | 180 |
| Inorganics | | | | | | | | |
| Loss on Ignition at 440oC | DETSC 2003# | 0.01 | % | | | | | |
| pH | DETSC 2008# | | pH | 12.2 | 12.1 | 10.0 | 10.1 | 10.9 |
| Calorific Value | DETSC 5008 | 1 | MJ/kg | | | | | |
| Cyanide, Total | DETSC 2130# | 0.1 | mg/kg | 0.7 | 0.4 | 0.6 | 0.2 | 0.3 |
| Cyanide, Free | DETSC 2130# | 0.1 | mg/kg | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Thiocyanate | DETSC 2130# | 0.6 | mg/kg | < 0.6 | < 0.6 | 2.4 | 0.7 | < 0.6 |
| Organic matter | DETSC 2002# | 0.1 | % | 1.0 | 1.6 | 4.5 | 2.8 | 2.4 |
| Sulphate Aqueous Extract as SO4 | DETSC 2076# | 10 | mg/l | 17 | 24 | 850 | 590 | 490 |
| Sulphur (free) | DETSC 3049# | 0.75 | mg/kg | < 0.75 | 1.9 | 120 | 16 | 5.0 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie
 Client Ref 4251
 Contract Title Prairie Site Ground Investigation Works

| Lab No | 1663605 | 1663606 | 1663734 | 1663735 | 1663736 |
|---------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Sample ID | PRAIRIE_AUK_ TP132 | PRAIRIE_AUK_ TP131 | PRAIRIE_AUK_ TP101 | PRAIRIE_AUK_ TP101 | PRAIRIE_AUK_ TP104 |
| Depth | 1.30 | 1.80 | 1.00 | 2.20 | 1.50 |
| Other ID | 4 | 5 | 5 | 9 | 5 |
| Sample Type | ES | ES | ES | ES | ES |
| Sampling Date | 02/04/2020 | 02/04/2020 | 01/04/2020 | 01/04/2020 | 01/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | 1663605 | 1663606 | 1663734 | 1663735 | 1663736 |
|-------------------------------|-------------|------|-------|---------|---------|---------|---------|---------|
| Petroleum Hydrocarbons | | | | | | | | |
| Aliphatic C5-C6 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C6-C8 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C8-C10 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C10-C12 | DETSC 3072# | 1.5 | mg/kg | < 1.5 | < 1.5 | < 1.5 | < 1.5 | < 1.5 |
| Aliphatic C12-C16 | DETSC 3072# | 1.2 | mg/kg | < 1.2 | < 1.2 | < 1.2 | 2.7 | < 1.2 |
| Aliphatic C16-C21 | DETSC 3072# | 1.5 | mg/kg | 4.9 | < 1.5 | < 1.5 | 3.6 | < 1.5 |
| Aliphatic C21-C35 | DETSC 3072# | 3.4 | mg/kg | 43 | 11 | < 3.4 | 20 | < 3.4 |
| Aliphatic C5-C35 | DETSC 3072* | 10 | mg/kg | 48 | 12 | < 10 | 27 | < 10 |
| Aromatic C5-C7 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C7-C8 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C8-C10 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C10-C12 | DETSC 3072# | 0.9 | mg/kg | 1.1 | < 0.9 | < 0.9 | < 0.9 | < 0.9 |
| Aromatic C12-C16 | DETSC 3072# | 0.5 | mg/kg | 1.1 | < 0.5 | 0.5 | < 0.5 | < 0.5 |
| Aromatic C16-C21 | DETSC 3072# | 0.6 | mg/kg | 1.9 | < 0.6 | 19 | 1.5 | < 0.6 |
| Aromatic C21-C35 | DETSC 3072# | 1.4 | mg/kg | 7.7 | < 1.4 | 38 | 16 | < 1.4 |
| Aromatic C5-C35 | DETSC 3072* | 10 | mg/kg | 12 | < 10 | 58 | 18 | < 10 |
| TPH Ali/Aro Total C5-C35 | DETSC 3072* | 10 | mg/kg | 60 | 12 | 58 | 45 | < 10 |
| EPH (C10-C40) | DETSC 3311# | 10 | mg/kg | 290 | 68 | 1100 | 110 | 120 |
| PAHs | | | | | | | | |
| Naphthalene | DETSC 3303# | 0.03 | mg/kg | 0.08 | < 0.03 | 0.09 | 0.08 | < 0.03 |
| Acenaphthylene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | < 0.03 | 0.05 | < 0.03 | < 0.03 |
| Acenaphthene | DETSC 3303# | 0.03 | mg/kg | 0.09 | < 0.03 | 1.4 | 0.15 | 0.05 |
| Fluorene | DETSC 3303 | 0.03 | mg/kg | < 0.03 | < 0.03 | 1.4 | 0.11 | 0.06 |
| Phenanthrene | DETSC 3303# | 0.03 | mg/kg | 1.6 | 0.42 | 22 | 1.1 | 1.1 |
| Anthracene | DETSC 3303 | 0.03 | mg/kg | 0.08 | 0.08 | 2.7 | 0.21 | 0.14 |
| Fluoranthene | DETSC 3303# | 0.03 | mg/kg | 1.4 | 0.97 | 37 | 1.4 | 1.9 |
| Pyrene | DETSC 3303# | 0.03 | mg/kg | 0.91 | 0.74 | 31 | 1.0 | 1.6 |
| Benzo(a)anthracene | DETSC 3303# | 0.03 | mg/kg | 0.24 | 0.33 | 7.8 | 0.39 | 0.66 |
| Chrysene | DETSC 3303 | 0.03 | mg/kg | 0.44 | 0.40 | 7.1 | 0.49 | 0.79 |
| Benzo(b)fluoranthene | DETSC 3303# | 0.03 | mg/kg | 0.44 | 0.45 | 6.7 | 0.36 | 0.75 |
| Benzo(k)fluoranthene | DETSC 3303# | 0.03 | mg/kg | 0.18 | 0.18 | 2.6 | 0.15 | 0.31 |
| Benzo(a)pyrene | DETSC 3303# | 0.03 | mg/kg | 0.14 | 0.22 | 3.7 | 0.23 | 0.43 |
| Indeno(1,2,3-c,d)pyrene | DETSC 3303# | 0.03 | mg/kg | 0.14 | 0.13 | 2.0 | 0.10 | 0.20 |
| Dibenzo(a,h)anthracene | DETSC 3303# | 0.03 | mg/kg | 0.04 | 0.04 | 0.55 | 0.03 | 0.06 |
| Benzo(g,h,i)perylene | DETSC 3303# | 0.03 | mg/kg | 0.19 | 0.16 | 2.3 | 0.11 | 0.27 |
| PAH - USEPA 16, Total | DETSC 3303 | 0.1 | mg/kg | 6.0 | 4.1 | 130 | 5.9 | 8.3 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie
 Client Ref 4251
 Contract Title Prairie Site Ground Investigation Works

| Lab No | 1663605 | 1663606 | 1663734 | 1663735 | 1663736 |
|---------------|--------------|--------------|--------------|--------------|--------------|
| PRAIRIE_AUK_ | PRAIRIE_AUK_ | PRAIRIE_AUK_ | PRAIRIE_AUK_ | PRAIRIE_AUK_ | PRAIRIE_AUK_ |
| Sample ID | TP132 | TP131 | TP101 | TP101 | TP104 |
| Depth | 1.30 | 1.80 | 1.00 | 2.20 | 1.50 |
| Other ID | 4 | 5 | 5 | 9 | 5 |
| Sample Type | ES | ES | ES | ES | ES |
| Sampling Date | 02/04/2020 | 02/04/2020 | 01/04/2020 | 01/04/2020 | 01/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | | | |
|---------------------|-------------|------|-------|-----|-----|-----|-------|-------|--|
| PCBs | | | | | | | | | |
| PCB 28 + PCB 31 | DETSC 3401# | 0.01 | mg/kg | | | | | | |
| PCB 52 | DETSC 3401# | 0.01 | mg/kg | | | | | | |
| PCB 101 | DETSC 3401# | 0.01 | mg/kg | | | | | | |
| PCB 118 | DETSC 3401# | 0.01 | mg/kg | | | | | | |
| PCB 153 | DETSC 3401# | 0.01 | mg/kg | | | | | | |
| PCB 138 | DETSC 3401# | 0.01 | mg/kg | | | | | | |
| PCB 180 | DETSC 3401# | 0.01 | mg/kg | | | | | | |
| PCB 7 Total | DETSC 3401# | 0.01 | mg/kg | | | | | | |
| Phenols | | | | | | | | | |
| Phenol - Monohydric | DETSC 2130# | 0.3 | mg/kg | 0.4 | 0.3 | 0.4 | < 0.3 | < 0.3 | |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Lab No | 1663737 | 1663978 | 1665133 | 1665134 |
|---------------|-------------------|-------------------|-------------------|-------------------|
| Sample ID | PRAIRIE_AUK_TP105 | PRAIRIE_AUK_BH104 | PRAIRIE_AUK_TP172 | PRAIRIE_AUK_TP175 |
| Depth | 2.50 | 5.50 | 0.80 | 0.80 |
| Other ID | 11 | 1 | 3 | 3 |
| Sample Type | ES | ES | ES | ES |
| Sampling Date | 01/04/2020 | 03/04/2020 | 06/04/2020 | 06/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | |
|---------------------------------|-------------|-------|-------|--------|--------|-------|-------|
| Asbestos Quantification | DETSC 1102 | 0.001 | % | | | 0.001 | |
| Metals | | | | | | | |
| Aluminium | DETSC 2301* | 1 | mg/kg | 16000 | 9700 | 12000 | 18000 |
| Antimony | DETSC 2301* | 1 | mg/kg | 2.0 | < 1.0 | 1.9 | 3.7 |
| Arsenic | DETSC 2301# | 0.2 | mg/kg | 14 | 5.9 | 20 | 13 |
| Barium | DETSC 2301# | 1.5 | mg/kg | 400 | 120 | 650 | 350 |
| Beryllium | DETSC 2301# | 0.2 | mg/kg | 1.7 | 0.7 | 1.5 | 2.8 |
| Boron, Water Soluble | DETSC 2311# | 0.2 | mg/kg | 2.2 | 1.1 | 7.7 | 3.3 |
| Cadmium | DETSC 2301# | 0.1 | mg/kg | 0.4 | 0.1 | 1.4 | 0.6 |
| Chromium | DETSC 2301# | 0.15 | mg/kg | 38 | 20 | 19 | 130 |
| Chromium, Hexavalent | DETSC 2204* | 1 | mg/kg | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Copper | DETSC 2301# | 0.2 | mg/kg | 44 | 19 | 95 | 54 |
| Iron | DETSC 2301 | 25 | mg/kg | 46000 | 24000 | 34000 | 57000 |
| Lead | DETSC 2301# | 0.3 | mg/kg | 45 | 11 | 120 | 1500 |
| Magnesium | DETSC 2301* | 1 | mg/kg | 7900 | 11000 | 8800 | 12000 |
| Manganese | DETSC 2301# | 20 | mg/kg | 1100 | 450 | 38000 | 8400 |
| Mercury | DETSC 2325# | 0.05 | mg/kg | 0.09 | < 0.05 | 4.1 | 0.37 |
| Molybdenum | DETSC 2301# | 0.4 | mg/kg | 1.1 | 0.8 | 2.7 | 1.8 |
| Nickel | DETSC 2301# | 1 | mg/kg | 38 | 23 | 25 | 18 |
| Silicon | DETSC 2301* | 10 | mg/kg | 180000 | 120000 | 80000 | 79000 |
| Vanadium | DETSC 2301# | 0.8 | mg/kg | 48 | 28 | 39 | 280 |
| Zinc | DETSC 2301# | 1 | mg/kg | 160 | 48 | 280 | 170 |
| Inorganics | | | | | | | |
| Loss on Ignition at 440oC | DETSC 2003# | 0.01 | % | | | | |
| pH | DETSC 2008# | | pH | 9.1 | 8.1 | 10.0 | 10.4 |
| Calorific Value | DETSC 5008 | 1 | MJ/kg | | | | |
| Cyanide, Total | DETSC 2130# | 0.1 | mg/kg | < 0.1 | < 0.1 | 52 | 6.7 |
| Cyanide, Free | DETSC 2130# | 0.1 | mg/kg | < 0.1 | < 0.1 | 0.5 | < 0.1 |
| Thiocyanate | DETSC 2130# | 0.6 | mg/kg | 0.6 | < 0.6 | 3.6 | 0.9 |
| Organic matter | DETSC 2002# | 0.1 | % | 1.4 | 1.0 | 4.4 | 3.1 |
| Sulphate Aqueous Extract as SO4 | DETSC 2076# | 10 | mg/l | 770 | 100 | 450 | 390 |
| Sulphur (free) | DETSC 3049# | 0.75 | mg/kg | 8.0 | < 0.75 | 15 | 1000 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Lab No | 1663737 | 1663978 | 1665133 | 1665134 |
|---------------|-------------------|-------------------|-------------------|-------------------|
| Sample ID | PRAIRIE_AUK_TP105 | PRAIRIE_AUK_BH104 | PRAIRIE_AUK_TP172 | PRAIRIE_AUK_TP175 |
| Depth | 2.50 | 5.50 | 0.80 | 0.80 |
| Other ID | 11 | 1 | 3 | 3 |
| Sample Type | ES | ES | ES | ES |
| Sampling Date | 01/04/2020 | 03/04/2020 | 06/04/2020 | 06/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | |
|-------------------------------|-------------|------|-------|--------|--------|--------|--------|
| Petroleum Hydrocarbons | | | | | | | |
| Aliphatic C5-C6 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C6-C8 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C8-C10 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | 0.13 |
| Aliphatic C10-C12 | DETSC 3072# | 1.5 | mg/kg | < 1.5 | < 1.5 | < 1.5 | 2.1 |
| Aliphatic C12-C16 | DETSC 3072# | 1.2 | mg/kg | < 1.2 | < 1.2 | < 1.2 | 93 |
| Aliphatic C16-C21 | DETSC 3072# | 1.5 | mg/kg | < 1.5 | < 1.5 | < 1.5 | 350 |
| Aliphatic C21-C35 | DETSC 3072# | 3.4 | mg/kg | < 3.4 | < 3.4 | < 3.4 | 67 |
| Aliphatic C5-C35 | DETSC 3072* | 10 | mg/kg | < 10 | < 10 | < 10 | 510 |
| Aromatic C5-C7 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | 0.15 |
| Aromatic C7-C8 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | 0.22 |
| Aromatic C8-C10 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | 1.3 |
| Aromatic C10-C12 | DETSC 3072# | 0.9 | mg/kg | 2.1 | < 0.9 | < 0.9 | 250 |
| Aromatic C12-C16 | DETSC 3072# | 0.5 | mg/kg | 3.1 | < 0.5 | 2.3 | 2100 |
| Aromatic C16-C21 | DETSC 3072# | 0.6 | mg/kg | 7.6 | < 0.6 | 21 | 830 |
| Aromatic C21-C35 | DETSC 3072# | 1.4 | mg/kg | 9.7 | < 1.4 | 33 | 210 |
| Aromatic C5-C35 | DETSC 3072* | 10 | mg/kg | 23 | < 10 | 57 | 3400 |
| TPH Ali/Aro Total C5-C35 | DETSC 3072* | 10 | mg/kg | 23 | < 10 | 57 | 3900 |
| EPH (C10-C40) | DETSC 3311# | 10 | mg/kg | 78 | < 10 | 360 | 10000 |
| PAHs | | | | | | | |
| Naphthalene | DETSC 3303# | 0.03 | mg/kg | 0.06 | < 0.03 | 0.35 | 24 |
| Acenaphthylene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | < 0.03 | 0.92 | 19 |
| Acenaphthene | DETSC 3303# | 0.03 | mg/kg | 0.62 | < 0.03 | 0.99 | 98 |
| Fluorene | DETSC 3303 | 0.03 | mg/kg | 0.57 | < 0.03 | 1.6 | 74 |
| Phenanthrene | DETSC 3303# | 0.03 | mg/kg | 3.1 | < 0.03 | 8.0 | 98 |
| Anthracene | DETSC 3303 | 0.03 | mg/kg | 0.53 | < 0.03 | 8.0 | 30 |
| Fluoranthene | DETSC 3303# | 0.03 | mg/kg | 3.0 | < 0.03 | 12 | 41 |
| Pyrene | DETSC 3303# | 0.03 | mg/kg | 2.3 | < 0.03 | 11 | 30 |
| Benzo(a)anthracene | DETSC 3303# | 0.03 | mg/kg | 0.74 | < 0.03 | 6.5 | 13 |
| Chrysene | DETSC 3303 | 0.03 | mg/kg | 0.85 | < 0.03 | 4.8 | 12 |
| Benzo(b)fluoranthene | DETSC 3303# | 0.03 | mg/kg | 0.92 | < 0.03 | 5.6 | 12 |
| Benzo(k)fluoranthene | DETSC 3303# | 0.03 | mg/kg | 0.30 | < 0.03 | 2.8 | 59 |
| Benzo(a)pyrene | DETSC 3303# | 0.03 | mg/kg | 0.55 | < 0.03 | 3.9 | 120 |
| Indeno(1,2,3-c,d)pyrene | DETSC 3303# | 0.03 | mg/kg | 0.28 | < 0.03 | 2.4 | 53 |
| Dibenzo(a,h)anthracene | DETSC 3303# | 0.03 | mg/kg | 0.08 | < 0.03 | 0.61 | 15 |
| Benzo(g,h,i)perylene | DETSC 3303# | 0.03 | mg/kg | 0.35 | < 0.03 | 2.9 | 64 |
| PAH - USEPA 16, Total | DETSC 3303 | 0.1 | mg/kg | 14 | < 0.10 | 72 | 760 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie
 Client Ref 4251
 Contract Title Prairie Site Ground Investigation Works

| Lab No | 1663737 | 1663978 | 1665133 | 1665134 |
|---------------|-------------------|-------------------|-------------------|-------------------|
| Sample ID | PRAIRIE_AUK_TP105 | PRAIRIE_AUK_BH104 | PRAIRIE_AUK_TP172 | PRAIRIE_AUK_TP175 |
| Depth | 2.50 | 5.50 | 0.80 | 0.80 |
| Other ID | 11 | 1 | 3 | 3 |
| Sample Type | ES | ES | ES | ES |
| Sampling Date | 01/04/2020 | 03/04/2020 | 06/04/2020 | 06/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | |
|---------------------|-------------|------|-------|-------|-----|-------|-----|
| PCBs | | | | | | | |
| PCB 28 + PCB 31 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 52 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 101 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 118 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 153 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 138 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 180 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 7 Total | DETSC 3401# | 0.01 | mg/kg | | | | |
| Phenols | | | | | | | |
| Phenol - Monohydric | DETSC 2130# | 0.3 | mg/kg | < 0.3 | 1.4 | < 0.3 | 5.3 |

Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Lab No | 1665135 | 1665136 | 1665137 | 1665138 |
|---------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Sample ID | PRAIRIE_AUK_ TP175 | PRAIRIE_AUK_ TP178 | PRAIRIE_AUK_ BH106 | PRAIRIE_AUK_ TP107 |
| Depth | 1.80 | 0.80 | 5.50 | 1.80 |
| Other ID | 6 | 3 | 1 | 6 |
| Sample Type | ES | ES | ES | ES |
| Sampling Date | 06/04/2020 | 06/04/2020 | 06/04/2020 | 06/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | |
|---------------------------------|-------------|-------|-------|--------|--------|--------|--------|
| Asbestos Quantification | DETSC 1102 | 0.001 | % | | | | |
| Metals | | | | | | | |
| Aluminium | DETSC 2301* | 1 | mg/kg | 14000 | 16000 | 15000 | 12000 |
| Antimony | DETSC 2301* | 1 | mg/kg | 1.2 | 2.4 | 1.5 | 4.8 |
| Arsenic | DETSC 2301# | 0.2 | mg/kg | 8.4 | 18 | 6.4 | 33 |
| Barium | DETSC 2301# | 1.5 | mg/kg | 340 | 250 | 160 | 270 |
| Beryllium | DETSC 2301# | 0.2 | mg/kg | 1.2 | 2.2 | 1.2 | 2.6 |
| Boron, Water Soluble | DETSC 2311# | 0.2 | mg/kg | 0.8 | 1.5 | 1.1 | 2.3 |
| Cadmium | DETSC 2301# | 0.1 | mg/kg | 0.2 | 0.4 | 0.2 | 1.4 |
| Chromium | DETSC 2301# | 0.15 | mg/kg | 28 | 18 | 52 | 90 |
| Chromium, Hexavalent | DETSC 2204* | 1 | mg/kg | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Copper | DETSC 2301# | 0.2 | mg/kg | 31 | 91 | 32 | 120 |
| Iron | DETSC 2301 | 25 | mg/kg | 35000 | 70000 | 32000 | 87000 |
| Lead | DETSC 2301# | 0.3 | mg/kg | 30 | 70 | 20 | 120 |
| Magnesium | DETSC 2301* | 1 | mg/kg | 6000 | 5900 | 14000 | 7400 |
| Manganese | DETSC 2301# | 20 | mg/kg | 900 | 670 | 1200 | 3200 |
| Mercury | DETSC 2325# | 0.05 | mg/kg | 0.19 | 0.13 | 0.78 | 0.07 |
| Molybdenum | DETSC 2301# | 0.4 | mg/kg | < 0.4 | 3.6 | 0.6 | 4.0 |
| Nickel | DETSC 2301# | 1 | mg/kg | 34 | 41 | 25 | 58 |
| Silicon | DETSC 2301* | 10 | mg/kg | 180000 | 66000 | 140000 | 50000 |
| Vanadium | DETSC 2301# | 0.8 | mg/kg | 33 | 96 | 150 | 280 |
| Zinc | DETSC 2301# | 1 | mg/kg | 83 | 160 | 69 | 350 |
| Inorganics | | | | | | | |
| Loss on Ignition at 440oC | DETSC 2003# | 0.01 | % | | 26 | | |
| pH | DETSC 2008# | | pH | 8.4 | 8.0 | 11.1 | 9.7 |
| Calorific Value | DETSC 5008 | 1 | MJ/kg | | 13.5 | | |
| Cyanide, Total | DETSC 2130# | 0.1 | mg/kg | 2.0 | 2.5 | 0.2 | 1.6 |
| Cyanide, Free | DETSC 2130# | 0.1 | mg/kg | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Thiocyanate | DETSC 2130# | 0.6 | mg/kg | < 0.6 | < 0.6 | < 0.6 | < 0.6 |
| Organic matter | DETSC 2002# | 0.1 | % | 3.2 | 12 | 1.9 | 13 |
| Sulphate Aqueous Extract as SO4 | DETSC 2076# | 10 | mg/l | 35 | 61 | 310 | 200 |
| Sulphur (free) | DETSC 3049# | 0.75 | mg/kg | < 0.75 | < 0.75 | 0.92 | < 0.75 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Lab No | 1665135 | 1665136 | 1665137 | 1665138 |
|---------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Sample ID | PRAIRIE_AUK_ TP175 | PRAIRIE_AUK_ TP178 | PRAIRIE_AUK_ BH106 | PRAIRIE_AUK_ TP107 |
| Depth | 1.80 | 0.80 | 5.50 | 1.80 |
| Other ID | 6 | 3 | 1 | 6 |
| Sample Type | ES | ES | ES | ES |
| Sampling Date | 06/04/2020 | 06/04/2020 | 06/04/2020 | 06/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | |
|-------------------------------|-------------|------|-------|--------|--------|--------|--------|
| Petroleum Hydrocarbons | | | | | | | |
| Aliphatic C5-C6 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C6-C8 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C8-C10 | DETSC 3321* | 0.01 | mg/kg | 0.37 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C10-C12 | DETSC 3072# | 1.5 | mg/kg | < 1.5 | < 1.5 | < 1.5 | < 1.5 |
| Aliphatic C12-C16 | DETSC 3072# | 1.2 | mg/kg | 7.2 | < 1.2 | < 1.2 | < 1.2 |
| Aliphatic C16-C21 | DETSC 3072# | 1.5 | mg/kg | 31 | < 1.5 | < 1.5 | < 1.5 |
| Aliphatic C21-C35 | DETSC 3072# | 3.4 | mg/kg | < 3.4 | < 3.4 | < 3.4 | < 3.4 |
| Aliphatic C5-C35 | DETSC 3072* | 10 | mg/kg | 39 | < 10 | < 10 | < 10 |
| Aromatic C5-C7 | DETSC 3321* | 0.01 | mg/kg | 0.48 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C7-C8 | DETSC 3321* | 0.01 | mg/kg | 0.24 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C8-C10 | DETSC 3321* | 0.01 | mg/kg | 0.64 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C10-C12 | DETSC 3072# | 0.9 | mg/kg | 85 | < 0.9 | < 0.9 | < 0.9 |
| Aromatic C12-C16 | DETSC 3072# | 0.5 | mg/kg | 310 | < 0.5 | < 0.5 | < 0.5 |
| Aromatic C16-C21 | DETSC 3072# | 0.6 | mg/kg | 160 | < 0.6 | < 0.6 | < 0.6 |
| Aromatic C21-C35 | DETSC 3072# | 1.4 | mg/kg | 96 | < 1.4 | < 1.4 | < 1.4 |
| Aromatic C5-C35 | DETSC 3072* | 10 | mg/kg | 650 | < 10 | < 10 | < 10 |
| TPH Ali/Aro Total C5-C35 | DETSC 3072* | 10 | mg/kg | 690 | < 10 | < 10 | < 10 |
| EPH (C10-C40) | DETSC 3311# | 10 | mg/kg | 1200 | < 10 | < 10 | < 10 |
| PAHs | | | | | | | |
| Naphthalene | DETSC 3303# | 0.03 | mg/kg | 440 | 0.06 | 0.11 | 0.06 |
| Acenaphthylene | DETSC 3303# | 0.03 | mg/kg | 31 | 0.03 | < 0.03 | 0.04 |
| Acenaphthene | DETSC 3303# | 0.03 | mg/kg | 340 | 0.09 | 0.13 | 0.07 |
| Fluorene | DETSC 3303 | 0.03 | mg/kg | 220 | 0.09 | 0.12 | 0.06 |
| Phenanthrene | DETSC 3303# | 0.03 | mg/kg | 290 | 0.12 | 0.22 | 0.42 |
| Anthracene | DETSC 3303 | 0.03 | mg/kg | 53 | < 0.03 | 0.03 | 0.08 |
| Fluoranthene | DETSC 3303# | 0.03 | mg/kg | 87 | 0.11 | 0.13 | 1.2 |
| Pyrene | DETSC 3303# | 0.03 | mg/kg | 62 | 0.08 | 0.10 | 1.1 |
| Benzo(a)anthracene | DETSC 3303# | 0.03 | mg/kg | 27 | 0.07 | 0.05 | 0.71 |
| Chrysene | DETSC 3303 | 0.03 | mg/kg | 23 | 0.06 | 0.05 | 0.66 |
| Benzo(b)fluoranthene | DETSC 3303# | 0.03 | mg/kg | 23 | 0.06 | 0.05 | 1.0 |
| Benzo(k)fluoranthene | DETSC 3303# | 0.03 | mg/kg | 10 | < 0.03 | < 0.03 | 0.41 |
| Benzo(a)pyrene | DETSC 3303# | 0.03 | mg/kg | 20 | 0.04 | 0.03 | 0.54 |
| Indeno(1,2,3-c,d)pyrene | DETSC 3303# | 0.03 | mg/kg | 8.6 | < 0.03 | < 0.03 | 0.31 |
| Dibenzo(a,h)anthracene | DETSC 3303# | 0.03 | mg/kg | 2.5 | < 0.03 | < 0.03 | 0.10 |
| Benzo(g,h,i)perylene | DETSC 3303# | 0.03 | mg/kg | 10 | < 0.03 | < 0.03 | 0.35 |
| PAH - USEPA 16, Total | DETSC 3303 | 0.1 | mg/kg | 1700 | 0.76 | 0.97 | 7.1 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie
 Client Ref 4251
 Contract Title Prairie Site Ground Investigation Works

| Lab No | 1665135 | 1665136 | 1665137 | 1665138 |
|---------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Sample ID | PRAIRIE_AUK_ TP175 | PRAIRIE_AUK_ TP178 | PRAIRIE_AUK_ BH106 | PRAIRIE_AUK_ TP107 |
| Depth | 1.80 | 0.80 | 5.50 | 1.80 |
| Other ID | 6 | 3 | 1 | 6 |
| Sample Type | ES | ES | ES | ES |
| Sampling Date | 06/04/2020 | 06/04/2020 | 06/04/2020 | 06/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | |
|---------------------|-------------|------|-------|-----|-----|-------|-------|
| PCBs | | | | | | | |
| PCB 28 + PCB 31 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 52 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 101 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 118 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 153 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 138 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 180 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 7 Total | DETSC 3401# | 0.01 | mg/kg | | | | |
| Phenols | | | | | | | |
| Phenol - Monohydric | DETSC 2130# | 0.3 | mg/kg | 3.9 | 0.5 | < 0.3 | < 0.3 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Lab No | 1665139 | 1665140 | 1665141 | 1665142 |
|---------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Sample ID | PRAIRIE_AUK_ TP107 | PRAIRIE_AUK_ TP108 | PRAIRIE_AUK_ TP108 | PRAIRIE_AUK_ TP113 |
| Depth | 0.80 | 1.00 | 2.00 | 1.30 |
| Other ID | 11 | 5 | 8 | 5 |
| Sample Type | ES | ES | ES | ES |
| Sampling Date | 06/04/2020 | 06/04/2020 | 06/04/2020 | 06/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | |
|---------------------------------|-------------|-------|-------|--------|-------|--------|-------|
| Asbestos Quantification | DETSC 1102 | 0.001 | % | | 0.001 | 0.002 | 0.006 |
| Metals | | | | | | | |
| Aluminium | DETSC 2301* | 1 | mg/kg | 12000 | 23000 | 10000 | 21000 |
| Antimony | DETSC 2301* | 1 | mg/kg | < 1.0 | 5.3 | 11 | 4.5 |
| Arsenic | DETSC 2301# | 0.2 | mg/kg | 9.2 | 11 | 31 | 18 |
| Barium | DETSC 2301# | 1.5 | mg/kg | 290 | 650 | 830 | 320 |
| Beryllium | DETSC 2301# | 0.2 | mg/kg | 1.2 | 2.3 | 1.0 | 2.7 |
| Boron, Water Soluble | DETSC 2311# | 0.2 | mg/kg | 2.6 | 1.5 | 1.9 | 4.3 |
| Cadmium | DETSC 2301# | 0.1 | mg/kg | 0.2 | 1.5 | 5.8 | 1.3 |
| Chromium | DETSC 2301# | 0.15 | mg/kg | 25 | 340 | 620 | 150 |
| Chromium, Hexavalent | DETSC 2204* | 1 | mg/kg | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Copper | DETSC 2301# | 0.2 | mg/kg | 23 | 40 | 89 | 72 |
| Iron | DETSC 2301 | 25 | mg/kg | 33000 | 57000 | 100000 | 75000 |
| Lead | DETSC 2301# | 0.3 | mg/kg | 36 | 120 | 320 | 140 |
| Magnesium | DETSC 2301* | 1 | mg/kg | 3800 | 21000 | 23000 | 18000 |
| Manganese | DETSC 2301# | 20 | mg/kg | 440 | 14000 | 16000 | 7800 |
| Mercury | DETSC 2325# | 0.05 | mg/kg | < 0.05 | 0.06 | 0.06 | 0.08 |
| Molybdenum | DETSC 2301# | 0.4 | mg/kg | 0.7 | 3.5 | 6.7 | 2.3 |
| Nickel | DETSC 2301# | 1 | mg/kg | 30 | 16 | 40 | 24 |
| Silicon | DETSC 2301* | 10 | mg/kg | 190000 | 54000 | 49000 | 63000 |
| Vanadium | DETSC 2301# | 0.8 | mg/kg | 40 | 950 | 1600 | 280 |
| Zinc | DETSC 2301# | 1 | mg/kg | 98 | 230 | 520 | 280 |
| Inorganics | | | | | | | |
| Loss on Ignition at 440oC | DETSC 2003# | 0.01 | % | | 8.1 | 4.8 | |
| pH | DETSC 2008# | | pH | 8.6 | 11.7 | 11.9 | 11.3 |
| Calorific Value | DETSC 5008 | 1 | MJ/kg | | < 1.0 | < 1.0 | |
| Cyanide, Total | DETSC 2130# | 0.1 | mg/kg | 22 | 0.5 | 0.7 | 5.9 |
| Cyanide, Free | DETSC 2130# | 0.1 | mg/kg | 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Thiocyanate | DETSC 2130# | 0.6 | mg/kg | < 0.6 | < 0.6 | < 0.6 | < 0.6 |
| Organic matter | DETSC 2002# | 0.1 | % | 1.2 | 1.4 | 1.9 | 4.0 |
| Sulphate Aqueous Extract as SO4 | DETSC 2076# | 10 | mg/l | 270 | 330 | 160 | 320 |
| Sulphur (free) | DETSC 3049# | 0.75 | mg/kg | < 0.75 | 5.3 | 3.5 | 2.3 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie
 Client Ref 4251
 Contract Title Prairie Site Ground Investigation Works

| Lab No | 1665139 | 1665140 | 1665141 | 1665142 |
|---------------|--------------------|--------------------|--------------------|--------------------|
| Sample ID | PRAIRIE_AUK_ TP107 | PRAIRIE_AUK_ TP108 | PRAIRIE_AUK_ TP108 | PRAIRIE_AUK_ TP113 |
| Depth | 0.80 | 1.00 | 2.00 | 1.30 |
| Other ID | 11 | 5 | 8 | 5 |
| Sample Type | ES | ES | ES | ES |
| Sampling Date | 06/04/2020 | 06/04/2020 | 06/04/2020 | 06/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | |
|-------------------------------|-------------|------|-------|--------|--------|--------|--------|
| Petroleum Hydrocarbons | | | | | | | |
| Aliphatic C5-C6 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C6-C8 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C8-C10 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C10-C12 | DETSC 3072# | 1.5 | mg/kg | < 1.5 | < 1.5 | < 1.5 | < 1.5 |
| Aliphatic C12-C16 | DETSC 3072# | 1.2 | mg/kg | < 1.2 | < 1.2 | < 1.2 | < 1.2 |
| Aliphatic C16-C21 | DETSC 3072# | 1.5 | mg/kg | < 1.5 | < 1.5 | < 1.5 | < 1.5 |
| Aliphatic C21-C35 | DETSC 3072# | 3.4 | mg/kg | < 3.4 | 31 | 13 | 46 |
| Aliphatic C5-C35 | DETSC 3072* | 10 | mg/kg | < 10 | 32 | 14 | 46 |
| Aromatic C5-C7 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C7-C8 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C8-C10 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C10-C12 | DETSC 3072# | 0.9 | mg/kg | < 0.9 | < 0.9 | < 0.9 | < 0.9 |
| Aromatic C12-C16 | DETSC 3072# | 0.5 | mg/kg | < 0.5 | < 0.5 | 1.6 | 0.8 |
| Aromatic C16-C21 | DETSC 3072# | 0.6 | mg/kg | < 0.6 | 5.1 | 7.9 | 7.1 |
| Aromatic C21-C35 | DETSC 3072# | 1.4 | mg/kg | < 1.4 | 67 | 36 | 76 |
| Aromatic C5-C35 | DETSC 3072* | 10 | mg/kg | < 10 | 72 | 46 | 84 |
| TPH Ali/Aro Total C5-C35 | DETSC 3072* | 10 | mg/kg | < 10 | 100 | 60 | 130 |
| EPH (C10-C40) | DETSC 3311# | 10 | mg/kg | < 10 | 420 | 180 | 230 |
| PAHs | | | | | | | |
| Naphthalene | DETSC 3303# | 0.03 | mg/kg | 0.23 | 0.06 | 0.20 | 0.21 |
| Acenaphthylene | DETSC 3303# | 0.03 | mg/kg | 0.06 | 0.03 | 0.56 | 0.15 |
| Acenaphthene | DETSC 3303# | 0.03 | mg/kg | 0.14 | 0.15 | 0.48 | 0.13 |
| Fluorene | DETSC 3303 | 0.03 | mg/kg | 0.17 | 0.13 | 0.94 | 0.23 |
| Phenanthrene | DETSC 3303# | 0.03 | mg/kg | 0.44 | 1.3 | 4.2 | 1.8 |
| Anthracene | DETSC 3303 | 0.03 | mg/kg | 0.07 | 0.30 | 1.9 | 0.52 |
| Fluoranthene | DETSC 3303# | 0.03 | mg/kg | 0.57 | 4.1 | 9.7 | 5.0 |
| Pyrene | DETSC 3303# | 0.03 | mg/kg | 0.46 | 4.2 | 8.6 | 6.0 |
| Benzo(a)anthracene | DETSC 3303# | 0.03 | mg/kg | 0.26 | 3.3 | 7.8 | 3.0 |
| Chrysene | DETSC 3303 | 0.03 | mg/kg | 0.28 | 2.1 | 4.8 | 2.3 |
| Benzo(b)fluoranthene | DETSC 3303# | 0.03 | mg/kg | 0.32 | 4.0 | 12 | 3.1 |
| Benzo(k)fluoranthene | DETSC 3303# | 0.03 | mg/kg | 0.13 | 1.8 | 6.2 | 1.2 |
| Benzo(a)pyrene | DETSC 3303# | 0.03 | mg/kg | 0.21 | 2.4 | 8.4 | 2.3 |
| Indeno(1,2,3-c,d)pyrene | DETSC 3303# | 0.03 | mg/kg | 0.10 | 1.1 | 3.1 | 0.79 |
| Dibenzo(a,h)anthracene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | 0.28 | 0.72 | 0.23 |
| Benzo(g,h,i)perylene | DETSC 3303# | 0.03 | mg/kg | 0.11 | 1.3 | 2.9 | 1.0 |
| PAH - USEPA 16, Total | DETSC 3303 | 0.1 | mg/kg | 3.5 | 26 | 73 | 28 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Lab No | 1665139 | 1665140 | 1665141 | 1665142 |
|---------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Sample ID | PRAIRIE_AUK_ TP107 | PRAIRIE_AUK_ TP108 | PRAIRIE_AUK_ TP108 | PRAIRIE_AUK_ TP113 |
| Depth | 0.80 | 1.00 | 2.00 | 1.30 |
| Other ID | 11 | 5 | 8 | 5 |
| Sample Type | ES | ES | ES | ES |
| Sampling Date | 06/04/2020 | 06/04/2020 | 06/04/2020 | 06/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | |
|---------------------|-------------|------|-------|-------|-------|-------|-------|
| PCBs | | | | | | | |
| PCB 28 + PCB 31 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 52 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 101 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 118 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 153 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 138 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 180 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 7 Total | DETSC 3401# | 0.01 | mg/kg | | | | |
| Phenols | | | | | | | |
| Phenol - Monohydric | DETSC 2130# | 0.3 | mg/kg | < 0.3 | < 0.3 | < 0.3 | < 0.3 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Lab No | 1665286 | 1665288 | 1665290 | 1665291 |
|---------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Sample ID | PRAIRIE_AUK_ BH103 | PRAIRIE_AUK_ TP115 | PRAIRIE_AUK_ TP122 | PRAIRIE_AUK_ TP123 |
| Depth | 2.50 | 1.90 | 1.00 | 0.60 |
| Other ID | 1 | 6 | 3 | 3 |
| Sample Type | ES | ES | ES | ES |
| Sampling Date | 08/04/2020 | 08/04/2020 | 08/04/2020 | 08/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | |
|---------------------------------|-------------|-------|-------|--------|--------|--------|-------|
| Asbestos Quantification | DETSC 1102 | 0.001 | % | | | 0.002 | |
| Metals | | | | | | | |
| Aluminium | DETSC 2301* | 1 | mg/kg | 14000 | 35000 | 10000 | 16000 |
| Antimony | DETSC 2301* | 1 | mg/kg | 1.5 | 1.4 | 6.6 | 5.0 |
| Arsenic | DETSC 2301# | 0.2 | mg/kg | 11 | 4.2 | 10 | 14 |
| Barium | DETSC 2301# | 1.5 | mg/kg | 270 | 370 | 160 | 240 |
| Beryllium | DETSC 2301# | 0.2 | mg/kg | 1.4 | 3.9 | 1.2 | 1.2 |
| Boron, Water Soluble | DETSC 2311# | 0.2 | mg/kg | 1.7 | 4.4 | 2.0 | 3.7 |
| Cadmium | DETSC 2301# | 0.1 | mg/kg | 0.3 | < 0.1 | 2.6 | 0.5 |
| Chromium | DETSC 2301# | 0.15 | mg/kg | 30 | 66 | 85 | 190 |
| Chromium, Hexavalent | DETSC 2204* | 1 | mg/kg | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Copper | DETSC 2301# | 0.2 | mg/kg | 39 | 10 | 170 | 68 |
| Iron | DETSC 2301 | 25 | mg/kg | 42000 | 14000 | 180000 | 86000 |
| Lead | DETSC 2301# | 0.3 | mg/kg | 50 | 4.6 | 91 | 56 |
| Magnesium | DETSC 2301* | 1 | mg/kg | 9500 | 33000 | 6000 | 16000 |
| Manganese | DETSC 2301# | 20 | mg/kg | 1200 | 4100 | 2400 | 9400 |
| Mercury | DETSC 2325# | 0.05 | mg/kg | < 0.05 | < 0.05 | < 0.05 | 0.29 |
| Molybdenum | DETSC 2301# | 0.4 | mg/kg | 0.8 | 0.4 | 12 | 3.2 |
| Nickel | DETSC 2301# | 1 | mg/kg | 34 | 2.9 | 65 | 19 |
| Silicon | DETSC 2301* | 10 | mg/kg | 160000 | 77000 | 39000 | 95000 |
| Vanadium | DETSC 2301# | 0.8 | mg/kg | 47 | 230 | 71 | 360 |
| Zinc | DETSC 2301# | 1 | mg/kg | 130 | 33 | 3000 | 200 |
| Inorganics | | | | | | | |
| Loss on Ignition at 440oC | DETSC 2003# | 0.01 | % | | | 2.1 | |
| pH | DETSC 2008# | | pH | 9.7 | 11.4 | 11.2 | 11.9 |
| Calorific Value | DETSC 5008 | 1 | MJ/kg | | | < 1.0 | |
| Cyanide, Total | DETSC 2130# | 0.1 | mg/kg | 0.5 | 1.6 | 9.5 | 29 |
| Cyanide, Free | DETSC 2130# | 0.1 | mg/kg | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Thiocyanate | DETSC 2130# | 0.6 | mg/kg | < 0.6 | 0.8 | < 0.6 | 6.3 |
| Organic matter | DETSC 2002# | 0.1 | % | 3.7 | 0.8 | 1.5 | 2.1 |
| Sulphate Aqueous Extract as SO4 | DETSC 2076# | 10 | mg/l | 470 | 400 | 230 | 170 |
| Sulphur (free) | DETSC 3049# | 0.75 | mg/kg | 3.4 | 4.5 | < 0.75 | 7.9 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie
 Client Ref 4251
 Contract Title Prairie Site Ground Investigation Works

| Lab No | 1665286 | 1665288 | 1665290 | 1665291 |
|---------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Sample ID | PRAIRIE_AUK_ BH103 | PRAIRIE_AUK_ TP115 | PRAIRIE_AUK_ TP122 | PRAIRIE_AUK_ TP123 |
| Depth | 2.50 | 1.90 | 1.00 | 0.60 |
| Other ID | 1 | 6 | 3 | 3 |
| Sample Type | ES | ES | ES | ES |
| Sampling Date | 08/04/2020 | 08/04/2020 | 08/04/2020 | 08/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | |
|-------------------------------|-------------|------|-------|--------|--------|--------|--------|
| Petroleum Hydrocarbons | | | | | | | |
| Aliphatic C5-C6 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C6-C8 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C8-C10 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C10-C12 | DETSC 3072# | 1.5 | mg/kg | < 1.5 | < 1.5 | < 1.5 | < 1.5 |
| Aliphatic C12-C16 | DETSC 3072# | 1.2 | mg/kg | < 1.2 | < 1.2 | < 1.2 | 40 |
| Aliphatic C16-C21 | DETSC 3072# | 1.5 | mg/kg | < 1.5 | < 1.5 | < 1.5 | 290 |
| Aliphatic C21-C35 | DETSC 3072# | 3.4 | mg/kg | < 3.4 | < 3.4 | 24 | 190 |
| Aliphatic C5-C35 | DETSC 3072* | 10 | mg/kg | < 10 | < 10 | 24 | 520 |
| Aromatic C5-C7 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C7-C8 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C8-C10 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C10-C12 | DETSC 3072# | 0.9 | mg/kg | < 0.9 | < 0.9 | < 0.9 | < 0.9 |
| Aromatic C12-C16 | DETSC 3072# | 0.5 | mg/kg | < 0.5 | < 0.5 | < 0.5 | 16 |
| Aromatic C16-C21 | DETSC 3072# | 0.6 | mg/kg | < 0.6 | < 0.6 | < 0.6 | 99 |
| Aromatic C21-C35 | DETSC 3072# | 1.4 | mg/kg | < 1.4 | < 1.4 | < 1.4 | 100 |
| Aromatic C5-C35 | DETSC 3072* | 10 | mg/kg | < 10 | < 10 | < 10 | 220 |
| TPH Ali/Aro Total C5-C35 | DETSC 3072* | 10 | mg/kg | < 10 | < 10 | 24 | 730 |
| EPH (C10-C40) | DETSC 3311# | 10 | mg/kg | < 10 | < 10 | 120 | 1500 |
| PAHs | | | | | | | |
| Naphthalene | DETSC 3303# | 0.03 | mg/kg | 0.29 | < 0.03 | < 0.03 | < 0.30 |
| Acenaphthylene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | < 0.03 | < 0.03 | < 0.30 |
| Acenaphthene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | < 0.03 | < 0.03 | < 0.30 |
| Fluorene | DETSC 3303 | 0.03 | mg/kg | 0.04 | < 0.03 | < 0.03 | < 0.30 |
| Phenanthrene | DETSC 3303# | 0.03 | mg/kg | 0.12 | 0.05 | 0.08 | 0.48 |
| Anthracene | DETSC 3303 | 0.03 | mg/kg | < 0.03 | < 0.03 | < 0.03 | < 0.30 |
| Fluoranthene | DETSC 3303# | 0.03 | mg/kg | 0.10 | 0.11 | 0.11 | 0.92 |
| Pyrene | DETSC 3303# | 0.03 | mg/kg | 0.07 | 0.09 | 0.09 | 0.72 |
| Benzo(a)anthracene | DETSC 3303# | 0.03 | mg/kg | 0.03 | 0.05 | 0.04 | 0.56 |
| Chrysene | DETSC 3303 | 0.03 | mg/kg | 0.04 | 0.05 | 0.06 | 0.50 |
| Benzo(b)fluoranthene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | 0.05 | 0.06 | 0.53 |
| Benzo(k)fluoranthene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | < 0.03 | 0.03 | < 0.30 |
| Benzo(a)pyrene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | < 0.03 | < 0.03 | < 0.30 |
| Indeno(1,2,3-c,d)pyrene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | < 0.03 | 0.03 | 0.36 |
| Dibenzo(a,h)anthracene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | < 0.03 | < 0.03 | < 0.30 |
| Benzo(g,h,i)perylene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | < 0.03 | < 0.03 | < 0.30 |
| PAH - USEPA 16, Total | DETSC 3303 | 0.1 | mg/kg | 0.62 | 0.39 | 0.44 | < 3.37 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie
 Client Ref 4251
 Contract Title Prairie Site Ground Investigation Works

| Lab No | 1665286 | 1665288 | 1665290 | 1665291 |
|---------------|--------------------|--------------------|--------------------|--------------------|
| Sample ID | PRAIRIE_AUK_ BH103 | PRAIRIE_AUK_ TP115 | PRAIRIE_AUK_ TP122 | PRAIRIE_AUK_ TP123 |
| Depth | 2.50 | 1.90 | 1.00 | 0.60 |
| Other ID | 1 | 6 | 3 | 3 |
| Sample Type | ES | ES | ES | ES |
| Sampling Date | 08/04/2020 | 08/04/2020 | 08/04/2020 | 08/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | |
|---------------------|-------------|------|-------|-----|--------|-------|-------|
| PCBs | | | | | | | |
| PCB 28 + PCB 31 | DETSC 3401# | 0.01 | mg/kg | | < 0.01 | | |
| PCB 52 | DETSC 3401# | 0.01 | mg/kg | | < 0.01 | | |
| PCB 101 | DETSC 3401# | 0.01 | mg/kg | | < 0.01 | | |
| PCB 118 | DETSC 3401# | 0.01 | mg/kg | | < 0.01 | | |
| PCB 153 | DETSC 3401# | 0.01 | mg/kg | | < 0.01 | | |
| PCB 138 | DETSC 3401# | 0.01 | mg/kg | | < 0.01 | | |
| PCB 180 | DETSC 3401# | 0.01 | mg/kg | | < 0.01 | | |
| PCB 7 Total | DETSC 3401# | 0.01 | mg/kg | | < 0.01 | | |
| Phenols | | | | | | | |
| Phenol - Monohydric | DETSC 2130# | 0.3 | mg/kg | 0.4 | < 0.3 | < 0.3 | < 0.3 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Lab No | 1665292 | 1665293 | 1665295 | 1665450 |
|---------------|-------------------|-------------------|-------------------|-------------------|
| Sample ID | PRAIRIE_AUK_TP185 | PRAIRIE_AUK_TP186 | PRAIRIE_AUK_TP188 | PRAIRIE_AUK_TP121 |
| Depth | 4.30 | 0.50 | 1.00 | 1.50 |
| Other ID | 5 | 3 | 3 | 4 |
| Sample Type | ES | ES | ES | ES |
| Sampling Date | 08/04/2020 | 07/04/2020 | 08/04/2020 | 09/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | |
|---------------------------------|-------------|-------|-------|--------|-------|-------|--------|
| Asbestos Quantification | DETSC 1102 | 0.001 | % | | | | |
| Metals | | | | | | | |
| Aluminium | DETSC 2301* | 1 | mg/kg | 11000 | 15000 | 11000 | 8100 |
| Antimony | DETSC 2301* | 1 | mg/kg | 1.3 | 4.7 | 3.9 | 11 |
| Arsenic | DETSC 2301# | 0.2 | mg/kg | 8.1 | 150 | 28 | 1.6 |
| Barium | DETSC 2301# | 1.5 | mg/kg | 220 | 340 | 270 | 210 |
| Beryllium | DETSC 2301# | 0.2 | mg/kg | 0.9 | 1.4 | 1.1 | 0.4 |
| Boron, Water Soluble | DETSC 2311# | 0.2 | mg/kg | 0.6 | 1.0 | 2.4 | 3.6 |
| Cadmium | DETSC 2301# | 0.1 | mg/kg | 0.3 | 3.7 | 0.2 | 0.2 |
| Chromium | DETSC 2301# | 0.15 | mg/kg | 23 | 55 | 69 | 750 |
| Chromium, Hexavalent | DETSC 2204* | 1 | mg/kg | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Copper | DETSC 2301# | 0.2 | mg/kg | 32 | 100 | 53 | 21 |
| Iron | DETSC 2301 | 25 | mg/kg | 42000 | 78000 | 60000 | 180000 |
| Lead | DETSC 2301# | 0.3 | mg/kg | 23 | 68 | 26 | 14 |
| Magnesium | DETSC 2301* | 1 | mg/kg | 7500 | 8400 | 7100 | 32000 |
| Manganese | DETSC 2301# | 20 | mg/kg | 490 | 75000 | 21000 | 37000 |
| Mercury | DETSC 2325# | 0.05 | mg/kg | < 0.05 | 0.60 | 0.11 | < 0.05 |
| Molybdenum | DETSC 2301# | 0.4 | mg/kg | 0.8 | 38 | 2.5 | 3.6 |
| Nickel | DETSC 2301# | 1 | mg/kg | 31 | 46 | 27 | 3.6 |
| Silicon | DETSC 2301* | 10 | mg/kg | 170000 | 14000 | 48000 | 38000 |
| Vanadium | DETSC 2301# | 0.8 | mg/kg | 28 | 240 | 150 | 1700 |
| Zinc | DETSC 2301# | 1 | mg/kg | 160 | 150 | 81 | 56 |
| Inorganics | | | | | | | |
| Loss on Ignition at 440oC | DETSC 2003# | 0.01 | % | 4.4 | | 13 | |
| pH | DETSC 2008# | | pH | 8.4 | 10.7 | 10.6 | 12.1 |
| Calorific Value | DETSC 5008 | 1 | MJ/kg | < 1.0 | | 12.0 | |
| Cyanide, Total | DETSC 2130# | 0.1 | mg/kg | 0.5 | 19 | 2.6 | 23 |
| Cyanide, Free | DETSC 2130# | 0.1 | mg/kg | < 0.1 | 0.5 | < 0.1 | < 0.1 |
| Thiocyanate | DETSC 2130# | 0.6 | mg/kg | < 0.6 | < 0.6 | < 0.6 | 1.2 |
| Organic matter | DETSC 2002# | 0.1 | % | 1.9 | 3.0 | 5.0 | 1.5 |
| Sulphate Aqueous Extract as SO4 | DETSC 2076# | 10 | mg/l | 120 | 270 | 220 | 32 |
| Sulphur (free) | DETSC 3049# | 0.75 | mg/kg | < 0.75 | 2.7 | 2.1 | < 0.75 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Lab No | 1665292 | 1665293 | 1665295 | 1665450 |
|---------------|-------------------|-------------------|-------------------|-------------------|
| Sample ID | PRAIRIE_AUK_TP185 | PRAIRIE_AUK_TP186 | PRAIRIE_AUK_TP188 | PRAIRIE_AUK_TP121 |
| Depth | 4.30 | 0.50 | 1.00 | 1.50 |
| Other ID | 5 | 3 | 3 | 4 |
| Sample Type | ES | ES | ES | ES |
| Sampling Date | 08/04/2020 | 07/04/2020 | 08/04/2020 | 09/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | |
|-------------------------------|-------------|------|-------|--------|--------|--------|--------|
| Petroleum Hydrocarbons | | | | | | | |
| Aliphatic C5-C6 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C6-C8 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C8-C10 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C10-C12 | DETSC 3072# | 1.5 | mg/kg | < 1.5 | < 1.5 | < 1.5 | < 1.5 |
| Aliphatic C12-C16 | DETSC 3072# | 1.2 | mg/kg | < 1.2 | < 1.2 | < 1.2 | < 1.2 |
| Aliphatic C16-C21 | DETSC 3072# | 1.5 | mg/kg | < 1.5 | < 1.5 | < 1.5 | < 1.5 |
| Aliphatic C21-C35 | DETSC 3072# | 3.4 | mg/kg | < 3.4 | < 3.4 | < 3.4 | < 3.4 |
| Aliphatic C5-C35 | DETSC 3072* | 10 | mg/kg | < 10 | < 10 | < 10 | < 10 |
| Aromatic C5-C7 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C7-C8 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C8-C10 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C10-C12 | DETSC 3072# | 0.9 | mg/kg | < 0.9 | < 0.9 | < 0.9 | < 0.9 |
| Aromatic C12-C16 | DETSC 3072# | 0.5 | mg/kg | < 0.5 | 1.6 | < 0.5 | < 0.5 |
| Aromatic C16-C21 | DETSC 3072# | 0.6 | mg/kg | < 0.6 | 5.2 | < 0.6 | < 0.6 |
| Aromatic C21-C35 | DETSC 3072# | 1.4 | mg/kg | < 1.4 | 8.4 | < 1.4 | < 1.4 |
| Aromatic C5-C35 | DETSC 3072* | 10 | mg/kg | < 10 | 16 | < 10 | < 10 |
| TPH Ali/Aro Total C5-C35 | DETSC 3072* | 10 | mg/kg | < 10 | 16 | < 10 | < 10 |
| EPH (C10-C40) | DETSC 3311# | 10 | mg/kg | < 10 | 130 | 140 | < 10 |
| PAHs | | | | | | | |
| Naphthalene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | 0.61 | 0.31 | < 0.03 |
| Acenaphthylene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | 0.59 | 0.17 | < 0.03 |
| Acenaphthene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | 0.40 | 0.13 | < 0.03 |
| Fluorene | DETSC 3303 | 0.03 | mg/kg | < 0.03 | 0.42 | 0.20 | < 0.03 |
| Phenanthrene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | 2.5 | 2.6 | 0.10 |
| Anthracene | DETSC 3303 | 0.03 | mg/kg | < 0.03 | 1.3 | 0.67 | < 0.03 |
| Fluoranthene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | 6.5 | 4.2 | 0.39 |
| Pyrene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | 5.7 | 3.2 | 0.49 |
| Benzo(a)anthracene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | 2.7 | 1.4 | 0.18 |
| Chrysene | DETSC 3303 | 0.03 | mg/kg | < 0.03 | 2.2 | 1.2 | 0.26 |
| Benzo(b)fluoranthene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | 3.0 | 1.3 | 0.27 |
| Benzo(k)fluoranthene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | 1.3 | 0.57 | 0.10 |
| Benzo(a)pyrene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | 2.1 | 0.79 | 0.12 |
| Indeno(1,2,3-c,d)pyrene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | 0.93 | 0.27 | 0.09 |
| Dibenzo(a,h)anthracene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | 0.25 | 0.10 | < 0.03 |
| Benzo(g,h,i)perylene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | 1.1 | 0.33 | 0.09 |
| PAH - USEPA 16, Total | DETSC 3303 | 0.1 | mg/kg | < 0.10 | 31 | 17 | 2.1 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie
 Client Ref 4251
 Contract Title Prairie Site Ground Investigation Works

| Lab No | 1665292 | 1665293 | 1665295 | 1665450 |
|---------------|-------------------|-------------------|-------------------|-------------------|
| Sample ID | PRAIRIE_AUK_TP185 | PRAIRIE_AUK_TP186 | PRAIRIE_AUK_TP188 | PRAIRIE_AUK_TP121 |
| Depth | 4.30 | 0.50 | 1.00 | 1.50 |
| Other ID | 5 | 3 | 3 | 4 |
| Sample Type | ES | ES | ES | ES |
| Sampling Date | 08/04/2020 | 07/04/2020 | 08/04/2020 | 09/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | |
|---------------------|-------------|------|-------|-------|-------|-------|-------|
| PCBs | | | | | | | |
| PCB 28 + PCB 31 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 52 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 101 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 118 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 153 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 138 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 180 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 7 Total | DETSC 3401# | 0.01 | mg/kg | | | | |
| Phenols | | | | | | | |
| Phenol - Monohydric | DETSC 2130# | 0.3 | mg/kg | < 0.3 | < 0.3 | < 0.3 | < 0.3 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Lab No | 1665451 | 1665452 | 1665453 | 1665454 |
|---------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Sample ID | PRAIRIE_AUK_ TP138 | PRAIRIE_AUK_ TP149 | PRAIRIE_AUK_ TP168 | PRAIRIE_AUK_ TP173 |
| Depth | 1.20 | 1.30 | 0.05 | 0.90 |
| Other ID | 3 | 3 | 1 | 3 |
| Sample Type | ES | ES | ES | ES |
| Sampling Date | 09/04/2020 | 09/04/2020 | 09/04/2020 | 09/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | |
|---------------------------------|-------------|-------|-------|-------|---------|---------|---------|
| Asbestos Quantification | DETSC 1102 | 0.001 | % | 0.020 | < 0.001 | < 0.001 | < 0.001 |
| Metals | | | | | | | |
| Aluminium | DETSC 2301* | 1 | mg/kg | 12000 | 8600 | 19000 | 21000 |
| Antimony | DETSC 2301* | 1 | mg/kg | 3.2 | 2.5 | 3.9 | 6.1 |
| Arsenic | DETSC 2301# | 0.2 | mg/kg | 15 | 37 | 44 | 78 |
| Barium | DETSC 2301# | 1.5 | mg/kg | 200 | 1100 | 210 | 210 |
| Beryllium | DETSC 2301# | 0.2 | mg/kg | 0.8 | 1.1 | 2.1 | 2.5 |
| Boron, Water Soluble | DETSC 2311# | 0.2 | mg/kg | 2.1 | 2.5 | 1.5 | 3.1 |
| Cadmium | DETSC 2301# | 0.1 | mg/kg | 0.5 | 0.7 | 0.6 | 0.5 |
| Chromium | DETSC 2301# | 0.15 | mg/kg | 150 | 33 | 61 | 93 |
| Chromium, Hexavalent | DETSC 2204* | 1 | mg/kg | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Copper | DETSC 2301# | 0.2 | mg/kg | 26 | 110 | 78 | 320 |
| Iron | DETSC 2301 | 25 | mg/kg | 47000 | 48000 | 91000 | 150000 |
| Lead | DETSC 2301# | 0.3 | mg/kg | 53 | 180 | 93 | 70 |
| Magnesium | DETSC 2301* | 1 | mg/kg | 12000 | 8000 | 10000 | 7700 |
| Manganese | DETSC 2301# | 20 | mg/kg | 5100 | 2000 | 2100 | 4100 |
| Mercury | DETSC 2325# | 0.05 | mg/kg | 2.1 | 1.4 | 0.15 | 0.09 |
| Molybdenum | DETSC 2301# | 0.4 | mg/kg | 2.0 | 2.6 | 2.1 | 5.6 |
| Nickel | DETSC 2301# | 1 | mg/kg | 13 | 27 | 38 | 86 |
| Silicon | DETSC 2301* | 10 | mg/kg | 88000 | 46000 | 62000 | 48000 |
| Vanadium | DETSC 2301# | 0.8 | mg/kg | 140 | 90 | 200 | 230 |
| Zinc | DETSC 2301# | 1 | mg/kg | 160 | 350 | 330 | 380 |
| Inorganics | | | | | | | |
| Loss on Ignition at 440oC | DETSC 2003# | 0.01 | % | | | | |
| pH | DETSC 2008# | | pH | 11.5 | 10.3 | 9.0 | 8.7 |
| Calorific Value | DETSC 5008 | 1 | MJ/kg | | | | |
| Cyanide, Total | DETSC 2130# | 0.1 | mg/kg | 9.9 | 11 | 0.6 | 120 |
| Cyanide, Free | DETSC 2130# | 0.1 | mg/kg | 0.3 | < 0.1 | < 0.1 | 0.2 |
| Thiocyanate | DETSC 2130# | 0.6 | mg/kg | 0.7 | < 0.6 | < 0.6 | 1.8 |
| Organic matter | DETSC 2002# | 0.1 | % | 1.3 | 2.8 | 12 | 8.6 |
| Sulphate Aqueous Extract as SO4 | DETSC 2076# | 10 | mg/l | 150 | 290 | 77 | 540 |
| Sulphur (free) | DETSC 3049# | 0.75 | mg/kg | 2.4 | 1.5 | < 0.75 | 2.4 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Lab No | 1665451 | 1665452 | 1665453 | 1665454 |
|---------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Sample ID | PRAIRIE_AUK_ TP138 | PRAIRIE_AUK_ TP149 | PRAIRIE_AUK_ TP168 | PRAIRIE_AUK_ TP173 |
| Depth | 1.20 | 1.30 | 0.05 | 0.90 |
| Other ID | 3 | 3 | 1 | 3 |
| Sample Type | ES | ES | ES | ES |
| Sampling Date | 09/04/2020 | 09/04/2020 | 09/04/2020 | 09/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | |
|-------------------------------|-------------|------|-------|--------|--------|--------|--------|
| Petroleum Hydrocarbons | | | | | | | |
| Aliphatic C5-C6 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C6-C8 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C8-C10 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C10-C12 | DETSC 3072# | 1.5 | mg/kg | < 1.5 | < 1.5 | < 1.5 | < 1.5 |
| Aliphatic C12-C16 | DETSC 3072# | 1.2 | mg/kg | < 1.2 | < 1.2 | < 1.2 | < 1.2 |
| Aliphatic C16-C21 | DETSC 3072# | 1.5 | mg/kg | < 1.5 | < 1.5 | < 1.5 | < 1.5 |
| Aliphatic C21-C35 | DETSC 3072# | 3.4 | mg/kg | 11 | 12 | 7.4 | < 3.4 |
| Aliphatic C5-C35 | DETSC 3072* | 10 | mg/kg | 13 | 13 | < 10 | < 10 |
| Aromatic C5-C7 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C7-C8 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C8-C10 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C10-C12 | DETSC 3072# | 0.9 | mg/kg | < 0.9 | < 0.9 | < 0.9 | < 0.9 |
| Aromatic C12-C16 | DETSC 3072# | 0.5 | mg/kg | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| Aromatic C16-C21 | DETSC 3072# | 0.6 | mg/kg | 7.9 | < 0.6 | < 0.6 | < 0.6 |
| Aromatic C21-C35 | DETSC 3072# | 1.4 | mg/kg | 30 | < 1.4 | < 1.4 | < 1.4 |
| Aromatic C5-C35 | DETSC 3072* | 10 | mg/kg | 38 | < 10 | < 10 | < 10 |
| TPH Ali/Aro Total C5-C35 | DETSC 3072* | 10 | mg/kg | 51 | 13 | < 10 | < 10 |
| EPH (C10-C40) | DETSC 3311# | 10 | mg/kg | 280 | 96 | < 10 | < 10 |
| PAHs | | | | | | | |
| Naphthalene | DETSC 3303# | 0.03 | mg/kg | 0.04 | < 0.03 | 0.06 | 2.0 |
| Acenaphthylene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | < 0.03 | < 0.03 | 0.09 |
| Acenaphthene | DETSC 3303# | 0.03 | mg/kg | 0.05 | < 0.03 | 0.05 | 0.57 |
| Fluorene | DETSC 3303 | 0.03 | mg/kg | 0.04 | 0.03 | 0.03 | 0.20 |
| Phenanthrene | DETSC 3303# | 0.03 | mg/kg | 0.44 | 0.35 | 0.28 | 0.37 |
| Anthracene | DETSC 3303 | 0.03 | mg/kg | 0.08 | 0.06 | 0.04 | 0.05 |
| Fluoranthene | DETSC 3303# | 0.03 | mg/kg | 2.1 | 0.87 | 0.43 | 0.30 |
| Pyrene | DETSC 3303# | 0.03 | mg/kg | 2.1 | 0.70 | 0.37 | 0.23 |
| Benzo(a)anthracene | DETSC 3303# | 0.03 | mg/kg | 1.4 | 0.36 | 0.18 | 0.09 |
| Chrysene | DETSC 3303 | 0.03 | mg/kg | 1.2 | 0.35 | 0.25 | 0.14 |
| Benzo(b)fluoranthene | DETSC 3303# | 0.03 | mg/kg | 1.8 | 0.32 | 0.24 | 0.11 |
| Benzo(k)fluoranthene | DETSC 3303# | 0.03 | mg/kg | 0.78 | 0.14 | 0.10 | 0.05 |
| Benzo(a)pyrene | DETSC 3303# | 0.03 | mg/kg | 1.2 | 0.18 | 0.12 | 0.05 |
| Indeno(1,2,3-c,d)pyrene | DETSC 3303# | 0.03 | mg/kg | 0.58 | 0.09 | 0.08 | 0.04 |
| Dibenzo(a,h)anthracene | DETSC 3303# | 0.03 | mg/kg | 0.20 | 0.03 | < 0.03 | < 0.03 |
| Benzo(g,h,i)perylene | DETSC 3303# | 0.03 | mg/kg | 1.0 | 0.09 | 0.09 | 0.04 |
| PAH - USEPA 16, Total | DETSC 3303 | 0.1 | mg/kg | 13 | 3.5 | 2.3 | 4.3 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie
 Client Ref 4251
 Contract Title Prairie Site Ground Investigation Works

| Lab No | 1665451 | 1665452 | 1665453 | 1665454 |
|---------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Sample ID | PRAIRIE_AUK_ TP138 | PRAIRIE_AUK_ TP149 | PRAIRIE_AUK_ TP168 | PRAIRIE_AUK_ TP173 |
| Depth | 1.20 | 1.30 | 0.05 | 0.90 |
| Other ID | 3 | 3 | 1 | 3 |
| Sample Type | ES | ES | ES | ES |
| Sampling Date | 09/04/2020 | 09/04/2020 | 09/04/2020 | 09/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | |
|---------------------|-------------|------|-------|--------|-------|-----|-------|
| PCBs | | | | | | | |
| PCB 28 + PCB 31 | DETSC 3401# | 0.01 | mg/kg | < 0.01 | | | |
| PCB 52 | DETSC 3401# | 0.01 | mg/kg | 0.26 | | | |
| PCB 101 | DETSC 3401# | 0.01 | mg/kg | 0.44 | | | |
| PCB 118 | DETSC 3401# | 0.01 | mg/kg | 0.40 | | | |
| PCB 153 | DETSC 3401# | 0.01 | mg/kg | 0.24 | | | |
| PCB 138 | DETSC 3401# | 0.01 | mg/kg | 0.40 | | | |
| PCB 180 | DETSC 3401# | 0.01 | mg/kg | 0.05 | | | |
| PCB 7 Total | DETSC 3401# | 0.01 | mg/kg | 1.8 | | | |
| Phenols | | | | | | | |
| Phenol - Monohydric | DETSC 2130# | 0.3 | mg/kg | < 0.3 | < 0.3 | 0.3 | < 0.3 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Lab No | 1665455 | 1665588 | 1665589 | 1665590 |
|---------------|--------------------------|-----------------------|-----------------------|-----------------------|
| Sample ID | PRAIRIE_AUK_SU RFACE1 | PRAIRIE_AUK_ TP114 | PRAIRIE_AUK_ TP124 | PRAIRIE_AUK_ TP174 |
| Depth | 0.00 | 0.90 | 1.50 | 0.80 |
| Other ID | 1 | 6 | 5 | 3 |
| Sample Type | ES | ES | ES | ES |
| Sampling Date | 09/04/2020 | 07/04/2020 | 08/04/2020 | 08/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | |
|---------------------------------|-------------|-------|-------|--------|-------|--------|--------|
| Asbestos Quantification | DETSC 1102 | 0.001 | % | | | 0.002 | |
| Metals | | | | | | | |
| Aluminium | DETSC 2301* | 1 | mg/kg | 4800 | 12000 | 8300 | 9200 |
| Antimony | DETSC 2301* | 1 | mg/kg | < 1.0 | 4.6 | 3.8 | 5.6 |
| Arsenic | DETSC 2301# | 0.2 | mg/kg | 1.8 | 51 | 40 | 58 |
| Barium | DETSC 2301# | 1.5 | mg/kg | 130 | 140 | 350 | 250 |
| Beryllium | DETSC 2301# | 0.2 | mg/kg | 0.5 | 1.3 | 0.8 | 0.9 |
| Boron, Water Soluble | DETSC 2311# | 0.2 | mg/kg | 1.9 | 0.8 | 7.2 | 1.4 |
| Cadmium | DETSC 2301# | 0.1 | mg/kg | 0.1 | 3.9 | 3.1 | 0.3 |
| Chromium | DETSC 2301# | 0.15 | mg/kg | 1.7 | 66 | 48 | 81 |
| Chromium, Hexavalent | DETSC 2204* | 1 | mg/kg | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Copper | DETSC 2301# | 0.2 | mg/kg | 5.9 | 110 | 69 | 120 |
| Iron | DETSC 2301 | 25 | mg/kg | 2700 | 69000 | 51000 | 120000 |
| Lead | DETSC 2301# | 0.3 | mg/kg | 10 | 330 | 90 | 110 |
| Magnesium | DETSC 2301* | 1 | mg/kg | 4700 | 3900 | 9900 | 8600 |
| Manganese | DETSC 2301# | 20 | mg/kg | 1500 | 2000 | 23000 | 99000 |
| Mercury | DETSC 2325# | 0.05 | mg/kg | 0.22 | 0.35 | 0.26 | 0.33 |
| Molybdenum | DETSC 2301# | 0.4 | mg/kg | < 0.4 | 2.5 | 4.0 | 18 |
| Nickel | DETSC 2301# | 1 | mg/kg | 1.6 | 47 | 32 | 78 |
| Silicon | DETSC 2301* | 10 | mg/kg | 9500 | U/S | 100000 | 36000 |
| Vanadium | DETSC 2301# | 0.8 | mg/kg | 7.9 | 110 | 100 | 67 |
| Zinc | DETSC 2301# | 1 | mg/kg | 47 | 4200 | 340 | 160 |
| Inorganics | | | | | | | |
| Loss on Ignition at 440oC | DETSC 2003# | 0.01 | % | | | | 6.5 |
| pH | DETSC 2008# | | pH | 10.8 | 8.3 | 9.7 | 8.4 |
| Calorific Value | DETSC 5008 | 1 | MJ/kg | | | | 2.5 |
| Cyanide, Total | DETSC 2130# | 0.1 | mg/kg | 21 | 0.6 | 41 | 5.5 |
| Cyanide, Free | DETSC 2130# | 0.1 | mg/kg | 0.5 | < 0.1 | 0.2 | 0.1 |
| Thiocyanate | DETSC 2130# | 0.6 | mg/kg | 6.6 | 2.2 | 1.7 | 1.3 |
| Organic matter | DETSC 2002# | 0.1 | % | 1.3 | 2.5 | 1.6 | 2.4 |
| Sulphate Aqueous Extract as SO4 | DETSC 2076# | 10 | mg/l | 670 | 44 | 130 | 110 |
| Sulphur (free) | DETSC 3049# | 0.75 | mg/kg | < 0.75 | 13 | < 0.75 | < 0.75 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Lab No | 1665455 | 1665588 | 1665589 | 1665590 |
|---------------|--------------------------|-----------------------|-----------------------|-----------------------|
| Sample ID | PRAIRIE_AUK_SU RFACE1 | PRAIRIE_AUK_ TP114 | PRAIRIE_AUK_ TP124 | PRAIRIE_AUK_ TP174 |
| Depth | 0.00 | 0.90 | 1.50 | 0.80 |
| Other ID | 1 | 6 | 5 | 3 |
| Sample Type | ES | ES | ES | ES |
| Sampling Date | 09/04/2020 | 07/04/2020 | 08/04/2020 | 08/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | |
|-------------------------------|-------------|------|-------|--------|---------|--------|--------|
| Petroleum Hydrocarbons | | | | | | | |
| Aliphatic C5-C6 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 1.00 | < 0.01 | < 0.01 |
| Aliphatic C6-C8 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 1.00 | < 0.01 | < 0.01 |
| Aliphatic C8-C10 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | 1.5 | < 0.01 | < 0.01 |
| Aliphatic C10-C12 | DETSC 3072# | 1.5 | mg/kg | < 1.5 | < 1.5 | < 1.5 | < 1.5 |
| Aliphatic C12-C16 | DETSC 3072# | 1.2 | mg/kg | < 1.2 | < 1.2 | < 1.2 | < 1.2 |
| Aliphatic C16-C21 | DETSC 3072# | 1.5 | mg/kg | < 1.5 | < 1.5 | < 1.5 | < 1.5 |
| Aliphatic C21-C35 | DETSC 3072# | 3.4 | mg/kg | < 3.4 | < 3.4 | < 3.4 | < 3.4 |
| Aliphatic C5-C35 | DETSC 3072* | 10 | mg/kg | < 10 | < 763.0 | < 10 | < 10 |
| Aromatic C5-C7 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | 6.0 | < 0.01 | < 0.01 |
| Aromatic C7-C8 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | 5.6 | < 0.01 | < 0.01 |
| Aromatic C8-C10 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | 15 | < 0.01 | < 0.01 |
| Aromatic C10-C12 | DETSC 3072# | 0.9 | mg/kg | < 0.9 | 130 | < 0.9 | < 0.9 |
| Aromatic C12-C16 | DETSC 3072# | 0.5 | mg/kg | < 0.5 | 97 | < 0.5 | < 0.5 |
| Aromatic C16-C21 | DETSC 3072# | 0.6 | mg/kg | < 0.6 | 150 | < 0.6 | < 0.6 |
| Aromatic C21-C35 | DETSC 3072# | 1.4 | mg/kg | < 1.4 | 83 | < 1.4 | < 1.4 |
| Aromatic C5-C35 | DETSC 3072* | 10 | mg/kg | < 10 | 490 | < 10 | < 10 |
| TPH Ali/Aro Total C5-C35 | DETSC 3072* | 10 | mg/kg | < 10 | 1300 | < 10 | < 10 |
| EPH (C10-C40) | DETSC 3311# | 10 | mg/kg | < 10 | | | |
| PAHs | | | | | | | |
| Naphthalene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | 37000 | 0.05 | 0.11 |
| Acenaphthylene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | 5600 | 0.07 | 0.27 |
| Acenaphthene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | 41 | < 0.03 | 0.17 |
| Fluorene | DETSC 3303 | 0.03 | mg/kg | < 0.03 | 6200 | < 0.03 | 0.23 |
| Phenanthrene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | 22000 | 1.2 | 1.7 |
| Anthracene | DETSC 3303 | 0.03 | mg/kg | < 0.03 | 5700 | 0.22 | 0.43 |
| Fluoranthene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | 11000 | 4.4 | 3.2 |
| Pyrene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | 9700 | 3.8 | 2.6 |
| Benzo(a)anthracene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | 4600 | 1.6 | 0.96 |
| Chrysene | DETSC 3303 | 0.03 | mg/kg | < 0.03 | 3600 | 1.8 | 0.93 |
| Benzo(b)fluoranthene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | 91 | 1.7 | 0.92 |
| Benzo(k)fluoranthene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | 49 | 0.86 | 0.39 |
| Benzo(a)pyrene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | 92 | 0.66 | 0.60 |
| Indeno(1,2,3-c,d)pyrene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | 31 | 0.62 | 0.30 |
| Dibenzo(a,h)anthracene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | 8.4 | 0.21 | 0.09 |
| Benzo(g,h,i)perylene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | 29 | 0.72 | 0.35 |
| PAH - USEPA 16, Total | DETSC 3303 | 0.1 | mg/kg | < 0.10 | 110000 | 18 | 13 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie
 Client Ref 4251
 Contract Title Prairie Site Ground Investigation Works

| Lab No | 1665455 | 1665588 | 1665589 | 1665590 |
|---------------|--------------------------|-----------------------|-----------------------|-----------------------|
| Sample ID | PRAIRIE_AUK_SU RFACE1 | PRAIRIE_AUK_ TP114 | PRAIRIE_AUK_ TP124 | PRAIRIE_AUK_ TP174 |
| Depth | 0.00 | 0.90 | 1.50 | 0.80 |
| Other ID | 1 | 6 | 5 | 3 |
| Sample Type | ES | ES | ES | ES |
| Sampling Date | 09/04/2020 | 07/04/2020 | 08/04/2020 | 08/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | |
|---------------------|-------------|------|-------|-------|--------|-------|-------|
| PCBs | | | | | | | |
| PCB 28 + PCB 31 | DETSC 3401# | 0.01 | mg/kg | | < 0.05 | | |
| PCB 52 | DETSC 3401# | 0.01 | mg/kg | | < 0.05 | | |
| PCB 101 | DETSC 3401# | 0.01 | mg/kg | | < 0.05 | | |
| PCB 118 | DETSC 3401# | 0.01 | mg/kg | | < 0.05 | | |
| PCB 153 | DETSC 3401# | 0.01 | mg/kg | | < 0.05 | | |
| PCB 138 | DETSC 3401# | 0.01 | mg/kg | | < 0.05 | | |
| PCB 180 | DETSC 3401# | 0.01 | mg/kg | | < 0.05 | | |
| PCB 7 Total | DETSC 3401# | 0.01 | mg/kg | | < 0.01 | | |
| Phenols | | | | | | | |
| Phenol - Monohydric | DETSC 2130# | 0.3 | mg/kg | < 0.3 | 210 | < 0.3 | < 0.3 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Lab No | 1665591 | 1665592 | 1665593 | 1665594 |
|---------------|-------------------|-------------------|-------------------|-------------------|
| Sample ID | PRAIRIE_AUK_TP174 | PRAIRIE_AUK_TP176 | PRAIRIE_AUK_TP177 | PRAIRIE_AUK_TP189 |
| Depth | 1.60 | 0.90 | 0.60 | 3.00 |
| Other ID | 6 | 3 | 2 | 7 |
| Sample Type | ES | ES | ES | ES |
| Sampling Date | 08/04/2020 | 07/04/2020 | 07/04/2020 | 07/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | |
|---------------------------------|-------------|-------|-------|--------|--------|--------|--------|
| Asbestos Quantification | DETSC 1102 | 0.001 | % | | | | |
| Metals | | | | | | | |
| Aluminium | DETSC 2301* | 1 | mg/kg | 12000 | 30000 | 31000 | 19000 |
| Antimony | DETSC 2301* | 1 | mg/kg | < 1.0 | 3.0 | 2.8 | 1.3 |
| Arsenic | DETSC 2301# | 0.2 | mg/kg | 6.2 | 83 | 37 | 9.9 |
| Barium | DETSC 2301# | 1.5 | mg/kg | 84 | 260 | 120 | 260 |
| Beryllium | DETSC 2301# | 0.2 | mg/kg | 0.6 | 3.7 | 4.0 | 1.5 |
| Boron, Water Soluble | DETSC 2311# | 0.2 | mg/kg | 1.2 | 4.2 | 2.9 | 1.0 |
| Cadmium | DETSC 2301# | 0.1 | mg/kg | < 0.1 | 0.4 | 0.2 | 0.2 |
| Chromium | DETSC 2301# | 0.15 | mg/kg | 20 | 58 | 110 | 33 |
| Chromium, Hexavalent | DETSC 2204* | 1 | mg/kg | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Copper | DETSC 2301# | 0.2 | mg/kg | 17 | 80 | 26 | 30 |
| Iron | DETSC 2301 | 25 | mg/kg | 32000 | 100000 | 80000 | 46000 |
| Lead | DETSC 2301# | 0.3 | mg/kg | 23 | 61 | 29 | 27 |
| Magnesium | DETSC 2301* | 1 | mg/kg | 2300 | 13000 | 11000 | 13000 |
| Manganese | DETSC 2301# | 20 | mg/kg | 370 | 1600 | 1600 | 830 |
| Mercury | DETSC 2325# | 0.05 | mg/kg | 0.06 | 0.08 | < 0.05 | 0.08 |
| Molybdenum | DETSC 2301# | 0.4 | mg/kg | 0.6 | 3.2 | 1.2 | 0.6 |
| Nickel | DETSC 2301# | 1 | mg/kg | 11 | 65 | 32 | 42 |
| Silicon | DETSC 2301* | 10 | mg/kg | 190000 | 71000 | 61000 | 140000 |
| Vanadium | DETSC 2301# | 0.8 | mg/kg | 27 | 190 | 450 | 42 |
| Zinc | DETSC 2301# | 1 | mg/kg | 58 | 360 | 260 | 94 |
| Inorganics | | | | | | | |
| Loss on Ignition at 440oC | DETSC 2003# | 0.01 | % | | 12 | | |
| pH | DETSC 2008# | | pH | 7.2 | 8.4 | 8.7 | 7.9 |
| Calorific Value | DETSC 5008 | 1 | MJ/kg | | 5.0 | | |
| Cyanide, Total | DETSC 2130# | 0.1 | mg/kg | 1.0 | 0.2 | 0.4 | < 0.1 |
| Cyanide, Free | DETSC 2130# | 0.1 | mg/kg | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Thiocyanate | DETSC 2130# | 0.6 | mg/kg | 1.2 | 0.8 | 0.8 | < 0.6 |
| Organic matter | DETSC 2002# | 0.1 | % | 0.7 | 3.2 | 2.9 | 0.8 |
| Sulphate Aqueous Extract as SO4 | DETSC 2076# | 10 | mg/l | 190 | 170 | 83 | 350 |
| Sulphur (free) | DETSC 3049# | 0.75 | mg/kg | 6.8 | < 0.75 | < 0.75 | < 0.75 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Lab No | 1665591 | 1665592 | 1665593 | 1665594 |
|---------------|-------------------|-------------------|-------------------|-------------------|
| Sample ID | PRAIRIE_AUK_TP174 | PRAIRIE_AUK_TP176 | PRAIRIE_AUK_TP177 | PRAIRIE_AUK_TP189 |
| Depth | 1.60 | 0.90 | 0.60 | 3.00 |
| Other ID | 6 | 3 | 2 | 7 |
| Sample Type | ES | ES | ES | ES |
| Sampling Date | 08/04/2020 | 07/04/2020 | 07/04/2020 | 07/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | |
|-------------------------------|-------------|------|-------|--------|--------|--------|--------|
| Petroleum Hydrocarbons | | | | | | | |
| Aliphatic C5-C6 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C6-C8 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C8-C10 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C10-C12 | DETSC 3072# | 1.5 | mg/kg | < 1.5 | 7.3 | < 1.5 | < 1.5 |
| Aliphatic C12-C16 | DETSC 3072# | 1.2 | mg/kg | < 1.2 | < 1.2 | < 1.2 | < 1.2 |
| Aliphatic C16-C21 | DETSC 3072# | 1.5 | mg/kg | < 1.5 | < 1.5 | < 1.5 | < 1.5 |
| Aliphatic C21-C35 | DETSC 3072# | 3.4 | mg/kg | < 3.4 | < 3.4 | < 3.4 | < 3.4 |
| Aliphatic C5-C35 | DETSC 3072* | 10 | mg/kg | < 10 | < 10 | < 10 | < 10 |
| Aromatic C5-C7 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C7-C8 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C8-C10 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C10-C12 | DETSC 3072# | 0.9 | mg/kg | < 0.9 | < 0.9 | < 0.9 | < 0.9 |
| Aromatic C12-C16 | DETSC 3072# | 0.5 | mg/kg | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| Aromatic C16-C21 | DETSC 3072# | 0.6 | mg/kg | < 0.6 | < 0.6 | < 0.6 | < 0.6 |
| Aromatic C21-C35 | DETSC 3072# | 1.4 | mg/kg | < 1.4 | < 1.4 | < 1.4 | < 1.4 |
| Aromatic C5-C35 | DETSC 3072* | 10 | mg/kg | < 10 | < 10 | < 10 | < 10 |
| TPH Ali/Aro Total C5-C35 | DETSC 3072* | 10 | mg/kg | < 10 | < 10 | < 10 | < 10 |
| EPH (C10-C40) | DETSC 3311# | 10 | mg/kg | | | | |
| PAHs | | | | | | | |
| Naphthalene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | 0.04 | < 0.03 | < 0.03 |
| Acenaphthylene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | < 0.03 | < 0.03 | < 0.03 |
| Acenaphthene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | 0.05 | < 0.03 | < 0.03 |
| Fluorene | DETSC 3303 | 0.03 | mg/kg | < 0.03 | 0.04 | < 0.03 | < 0.03 |
| Phenanthrene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | 0.17 | 0.06 | < 0.03 |
| Anthracene | DETSC 3303 | 0.03 | mg/kg | < 0.03 | 0.06 | < 0.03 | < 0.03 |
| Fluoranthene | DETSC 3303# | 0.03 | mg/kg | 0.05 | 0.67 | 0.14 | < 0.03 |
| Pyrene | DETSC 3303# | 0.03 | mg/kg | 0.04 | 0.62 | 0.16 | < 0.03 |
| Benzo(a)anthracene | DETSC 3303# | 0.03 | mg/kg | 0.03 | 0.10 | 0.05 | < 0.03 |
| Chrysene | DETSC 3303 | 0.03 | mg/kg | < 0.03 | 0.15 | 0.08 | < 0.03 |
| Benzo(b)fluoranthene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | 0.06 | 0.05 | < 0.03 |
| Benzo(k)fluoranthene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | < 0.03 | < 0.03 | < 0.03 |
| Benzo(a)pyrene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | 0.03 | < 0.03 | < 0.03 |
| Indeno(1,2,3-c,d)pyrene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | < 0.03 | < 0.03 | < 0.03 |
| Dibenzo(a,h)anthracene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | < 0.03 | < 0.03 | < 0.03 |
| Benzo(g,h,i)perylene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | < 0.03 | < 0.03 | < 0.03 |
| PAH - USEPA 16, Total | DETSC 3303 | 0.1 | mg/kg | < 0.10 | 2.0 | 0.53 | < 0.10 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie
 Client Ref 4251
 Contract Title Prairie Site Ground Investigation Works

| Lab No | 1665591 | 1665592 | 1665593 | 1665594 |
|---------------|--------------------|--------------------|--------------------|--------------------|
| Sample ID | PRAIRIE_AUK_ TP174 | PRAIRIE_AUK_ TP176 | PRAIRIE_AUK_ TP177 | PRAIRIE_AUK_ TP189 |
| Depth | 1.60 | 0.90 | 0.60 | 3.00 |
| Other ID | 6 | 3 | 2 | 7 |
| Sample Type | ES | ES | ES | ES |
| Sampling Date | 08/04/2020 | 07/04/2020 | 07/04/2020 | 07/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | |
|---------------------|-------------|------|-------|-------|-----|-----|-------|
| PCBs | | | | | | | |
| PCB 28 + PCB 31 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 52 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 101 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 118 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 153 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 138 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 180 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 7 Total | DETSC 3401# | 0.01 | mg/kg | | | | |
| Phenols | | | | | | | |
| Phenol - Monohydric | DETSC 2130# | 0.3 | mg/kg | < 0.3 | 0.8 | 0.9 | < 0.3 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Lab No | 1665610 | 1665611 | 1665612 | 1665613 |
|---------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Sample ID | PRAIRIE_AUK_ TP179 | PRAIRIE_AUK_ TP179 | PRAIRIE_AUK_ TP181 | PRAIRIE_AUK_ TP182 |
| Depth | 1.40 | 2.00 | 0.60 | 0.90 |
| Other ID | 4 | 7 | 3 | 3 |
| Sample Type | ES | ES | ES | ES |
| Sampling Date | 09/04/2020 | 09/04/2020 | 09/04/2020 | 09/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | |
|---------------------------------|-------------|-------|-------|--------|--------|-------|-------|
| Asbestos Quantification | DETSC 1102 | 0.001 | % | | | | |
| Metals | | | | | | | |
| Aluminium | DETSC 2301* | 1 | mg/kg | 39000 | 15000 | 18000 | 21000 |
| Antimony | DETSC 2301* | 1 | mg/kg | 4.6 | 1.3 | 4.7 | 2.5 |
| Arsenic | DETSC 2301# | 0.2 | mg/kg | 88 | 9.3 | 45 | 33 |
| Barium | DETSC 2301# | 1.5 | mg/kg | 79 | 190 | 280 | 82 |
| Beryllium | DETSC 2301# | 0.2 | mg/kg | 4.0 | 1.7 | 2.5 | 3.0 |
| Boron, Water Soluble | DETSC 2311# | 0.2 | mg/kg | 2.3 | 1.5 | 1.5 | 2.4 |
| Cadmium | DETSC 2301# | 0.1 | mg/kg | 0.2 | 0.1 | 0.5 | 0.2 |
| Chromium | DETSC 2301# | 0.15 | mg/kg | 120 | 29 | 23 | 51 |
| Chromium, Hexavalent | DETSC 2204* | 1 | mg/kg | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Copper | DETSC 2301# | 0.2 | mg/kg | 32 | 29 | 130 | 23 |
| Iron | DETSC 2301 | 25 | mg/kg | 160000 | 39000 | 41000 | 87000 |
| Lead | DETSC 2301# | 0.3 | mg/kg | 27 | 34 | 380 | 23 |
| Magnesium | DETSC 2301* | 1 | mg/kg | 11000 | 4000 | 6400 | 7000 |
| Manganese | DETSC 2301# | 20 | mg/kg | 1200 | 320 | 12000 | 1000 |
| Mercury | DETSC 2325# | 0.05 | mg/kg | 0.32 | 0.05 | 0.10 | 0.75 |
| Molybdenum | DETSC 2301# | 0.4 | mg/kg | 2.1 | 0.5 | 2.6 | 0.8 |
| Nickel | DETSC 2301# | 1 | mg/kg | 98 | 30 | 23 | 28 |
| Silicon | DETSC 2301* | 10 | mg/kg | 100000 | 190000 | 56000 | 73000 |
| Vanadium | DETSC 2301# | 0.8 | mg/kg | 360 | 33 | 83 | 150 |
| Zinc | DETSC 2301# | 1 | mg/kg | 200 | 99 | 210 | 130 |
| Inorganics | | | | | | | |
| Loss on Ignition at 440oC | DETSC 2003# | 0.01 | % | | | | |
| pH | DETSC 2008# | | pH | 7.5 | 7.6 | 8.6 | 8.0 |
| Calorific Value | DETSC 5008 | 1 | MJ/kg | | | | |
| Cyanide, Total | DETSC 2130# | 0.1 | mg/kg | 120 | 4.8 | 20 | 3300 |
| Cyanide, Free | DETSC 2130# | 0.1 | mg/kg | 0.3 | < 0.1 | < 0.1 | 4.5 |
| Thiocyanate | DETSC 2130# | 0.6 | mg/kg | 2.1 | < 0.6 | 0.9 | 69 |
| Organic matter | DETSC 2002# | 0.1 | % | 4.4 | 1.8 | 6.1 | 7.0 |
| Sulphate Aqueous Extract as SO4 | DETSC 2076# | 10 | mg/l | 900 | 490 | 220 | 650 |
| Sulphur (free) | DETSC 3049# | 0.75 | mg/kg | < 0.75 | < 0.75 | 60 | 26 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie
 Client Ref 4251
 Contract Title Prairie Site Ground Investigation Works

| Lab No | 1665610 | 1665611 | 1665612 | 1665613 |
|---------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Sample ID | PRAIRIE_AUK_ TP179 | PRAIRIE_AUK_ TP179 | PRAIRIE_AUK_ TP181 | PRAIRIE_AUK_ TP182 |
| Depth | 1.40 | 2.00 | 0.60 | 0.90 |
| Other ID | 4 | 7 | 3 | 3 |
| Sample Type | ES | ES | ES | ES |
| Sampling Date | 09/04/2020 | 09/04/2020 | 09/04/2020 | 09/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | |
|-------------------------------|-------------|------|-------|--------|--------|--------|--------|
| Petroleum Hydrocarbons | | | | | | | |
| Aliphatic C5-C6 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C6-C8 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | 0.01 |
| Aliphatic C8-C10 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | 0.25 |
| Aliphatic C10-C12 | DETSC 3072# | 1.5 | mg/kg | < 1.5 | < 1.5 | < 1.5 | 6.3 |
| Aliphatic C12-C16 | DETSC 3072# | 1.2 | mg/kg | < 1.2 | < 1.2 | < 1.2 | 42 |
| Aliphatic C16-C21 | DETSC 3072# | 1.5 | mg/kg | < 1.5 | < 1.5 | < 1.5 | 49 |
| Aliphatic C21-C35 | DETSC 3072# | 3.4 | mg/kg | < 3.4 | < 3.4 | < 3.4 | 3.6 |
| Aliphatic C5-C35 | DETSC 3072* | 10 | mg/kg | < 10 | < 10 | < 10 | 100 |
| Aromatic C5-C7 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | 0.04 |
| Aromatic C7-C8 | DETSC 3321* | 0.01 | mg/kg | 0.03 | < 0.01 | < 0.01 | 0.31 |
| Aromatic C8-C10 | DETSC 3321* | 0.01 | mg/kg | 0.71 | < 0.01 | < 0.01 | 13 |
| Aromatic C10-C12 | DETSC 3072# | 0.9 | mg/kg | 27 | < 0.9 | < 0.9 | 1700 |
| Aromatic C12-C16 | DETSC 3072# | 0.5 | mg/kg | 150 | < 0.5 | < 0.5 | 2500 |
| Aromatic C16-C21 | DETSC 3072# | 0.6 | mg/kg | 31 | < 0.6 | < 0.6 | 370 |
| Aromatic C21-C35 | DETSC 3072# | 1.4 | mg/kg | 9.7 | < 1.4 | < 1.4 | 82 |
| Aromatic C5-C35 | DETSC 3072* | 10 | mg/kg | 220 | < 10 | < 10 | 4600 |
| TPH Ali/Aro Total C5-C35 | DETSC 3072* | 10 | mg/kg | 220 | < 10 | < 10 | 4700 |
| EPH (C10-C40) | DETSC 3311# | 10 | mg/kg | | | | |
| PAHs | | | | | | | |
| Naphthalene | DETSC 3303# | 0.03 | mg/kg | 190 | 2.5 | 0.27 | 3500 |
| Acenaphthylene | DETSC 3303# | 0.03 | mg/kg | 13 | 0.07 | 0.23 | 1300 |
| Acenaphthene | DETSC 3303# | 0.03 | mg/kg | 200 | 1.0 | 1.5 | 1300 |
| Fluorene | DETSC 3303 | 0.03 | mg/kg | 100 | 0.47 | 1.1 | 730 |
| Phenanthrene | DETSC 3303# | 0.03 | mg/kg | 65 | 0.33 | 1.2 | 500 |
| Anthracene | DETSC 3303 | 0.03 | mg/kg | 18 | 0.09 | 0.31 | 130 |
| Fluoranthene | DETSC 3303# | 0.03 | mg/kg | 12 | 0.08 | 0.56 | 120 |
| Pyrene | DETSC 3303# | 0.03 | mg/kg | 8.2 | 0.05 | 0.42 | 80 |
| Benzo(a)anthracene | DETSC 3303# | 0.03 | mg/kg | 1.7 | < 0.03 | 0.12 | 6.9 |
| Chrysene | DETSC 3303 | 0.03 | mg/kg | 1.5 | < 0.03 | 0.16 | 5.2 |
| Benzo(b)fluoranthene | DETSC 3303# | 0.03 | mg/kg | 0.74 | < 0.03 | 0.13 | 3.1 |
| Benzo(k)fluoranthene | DETSC 3303# | 0.03 | mg/kg | 0.31 | < 0.03 | 0.06 | 1.6 |
| Benzo(a)pyrene | DETSC 3303# | 0.03 | mg/kg | 0.59 | < 0.03 | 0.07 | 2.1 |
| Indeno(1,2,3-c,d)pyrene | DETSC 3303# | 0.03 | mg/kg | 0.17 | < 0.03 | 0.06 | 0.66 |
| Dibenzo(a,h)anthracene | DETSC 3303# | 0.03 | mg/kg | 0.05 | < 0.03 | < 0.03 | 0.20 |
| Benzo(g,h,i)perylene | DETSC 3303# | 0.03 | mg/kg | 0.19 | < 0.03 | 0.06 | 0.71 |
| PAH - USEPA 16, Total | DETSC 3303 | 0.1 | mg/kg | 610 | 4.6 | 6.2 | 7700 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie
 Client Ref 4251
 Contract Title Prairie Site Ground Investigation Works

| Lab No | 1665610 | 1665611 | 1665612 | 1665613 |
|---------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Sample ID | PRAIRIE_AUK_ TP179 | PRAIRIE_AUK_ TP179 | PRAIRIE_AUK_ TP181 | PRAIRIE_AUK_ TP182 |
| Depth | 1.40 | 2.00 | 0.60 | 0.90 |
| Other ID | 4 | 7 | 3 | 3 |
| Sample Type | ES | ES | ES | ES |
| Sampling Date | 09/04/2020 | 09/04/2020 | 09/04/2020 | 09/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | |
|---------------------|-------------|------|-------|-----|-----|-----|-----|
| PCBs | | | | | | | |
| PCB 28 + PCB 31 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 52 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 101 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 118 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 153 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 138 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 180 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 7 Total | DETSC 3401# | 0.01 | mg/kg | | | | |
| Phenols | | | | | | | |
| Phenol - Monohydric | DETSC 2130# | 0.3 | mg/kg | 1.6 | 0.6 | 1.0 | 9.0 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Lab No | 1665990 | 1665991 | 1665992 | 1665993 | 1665994 |
|---------------|-------------------|--------------------|--------------------|-------------------|-------------------|
| Sample ID | PRAIRIE_AUK_TP145 | PRAIRIE_AUK_TP146C | PRAIRIE_AUK_TP156A | PRAIRIE_AUK_TP162 | PRAIRIE_AUK_TP180 |
| Depth | 1.60 | 1.30 | 0.30 | 1.70 | 0.30 |
| Other ID | 4 | 5 | 2 | 3A | 3 |
| Sample Type | ES | ES | ES | ES | ES |
| Sampling Date | 14/04/2020 | 14/04/2020 | 14/04/2020 | 14/04/2020 | 14/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | | |
|---------------------------------|-------------|-------|-------|--------|-------|--------|--------|-------|
| Asbestos Quantification | DETSC 1102 | 0.001 | % | | | 0.001 | | |
| Metals | | | | | | | | |
| Aluminium | DETSC 2301* | 1 | mg/kg | 11000 | 16000 | 26000 | 16000 | 15000 |
| Antimony | DETSC 2301* | 1 | mg/kg | 69 | 9.5 | 6.5 | 18 | 5.6 |
| Arsenic | DETSC 2301# | 0.2 | mg/kg | 64 | 14 | 31 | 2100 | 12 |
| Barium | DETSC 2301# | 1.5 | mg/kg | 560 | 250 | 540 | 320 | 270 |
| Beryllium | DETSC 2301# | 0.2 | mg/kg | 1.9 | 1.9 | 2.6 | 2.3 | 1.5 |
| Boron, Water Soluble | DETSC 2311# | 0.2 | mg/kg | 2.5 | 3.2 | 2.5 | 2.2 | 2.4 |
| Cadmium | DETSC 2301# | 0.1 | mg/kg | 0.8 | 1.0 | 0.7 | 1.7 | 0.7 |
| Chromium | DETSC 2301# | 0.15 | mg/kg | 120 | 19 | 170 | 100 | 310 |
| Chromium, Hexavalent | DETSC 2204* | 1 | mg/kg | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Copper | DETSC 2301# | 0.2 | mg/kg | 20000 | 420 | 110 | 190 | 31 |
| Iron | DETSC 2301 | 25 | mg/kg | 45000 | 35000 | 140000 | 360000 | 99000 |
| Lead | DETSC 2301# | 0.3 | mg/kg | 1200 | 210 | 110 | 870 | 94 |
| Magnesium | DETSC 2301* | 1 | mg/kg | 11000 | 9000 | 17000 | 3500 | 23000 |
| Manganese | DETSC 2301# | 20 | mg/kg | 4900 | 1700 | 6100 | 2800 | 28000 |
| Mercury | DETSC 2325# | 0.05 | mg/kg | 0.19 | 0.17 | 0.69 | 0.73 | 0.47 |
| Molybdenum | DETSC 2301# | 0.4 | mg/kg | 2.9 | 1.0 | 2.2 | 73 | 2.8 |
| Nickel | DETSC 2301# | 1 | mg/kg | 41 | 17 | 40 | 160 | 16 |
| Silicon | DETSC 2301* | 10 | mg/kg | 23000 | 69000 | 43000 | 53000 | 67000 |
| Vanadium | DETSC 2301# | 0.8 | mg/kg | 240 | 57 | 700 | 310 | 1200 |
| Zinc | DETSC 2301# | 1 | mg/kg | 1500 | 350 | 310 | 630 | 270 |
| Inorganics | | | | | | | | |
| Loss on Ignition at 440oC | DETSC 2003# | 0.01 | % | | | | | |
| pH | DETSC 2008# | | pH | 11.2 | 9.6 | 10.6 | 8.2 | 11.5 |
| Calorific Value | DETSC 5008 | 1 | MJ/kg | | | | | |
| Cyanide, Total | DETSC 2130# | 0.1 | mg/kg | 1.3 | 13 | 12 | 3.6 | 2.3 |
| Cyanide, Free | DETSC 2130# | 0.1 | mg/kg | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Thiocyanate | DETSC 2130# | 0.6 | mg/kg | < 0.6 | 0.7 | < 0.6 | < 0.6 | < 0.6 |
| Organic matter | DETSC 2002# | 0.1 | % | 2.8 | 5.8 | 3.2 | 3.4 | 3.3 |
| Sulphate Aqueous Extract as SO4 | DETSC 2076# | 10 | mg/l | 200 | 590 | 280 | 110 | 110 |
| Sulphur (free) | DETSC 3049# | 0.75 | mg/kg | < 0.75 | 5.2 | 1.2 | < 0.75 | 1.4 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Lab No | 1665990 | 1665991 | 1665992 | 1665993 | 1665994 |
|---------------|-------------------|--------------------|--------------------|-------------------|-------------------|
| Sample ID | PRAIRIE_AUK_TP145 | PRAIRIE_AUK_TP146C | PRAIRIE_AUK_TP156A | PRAIRIE_AUK_TP162 | PRAIRIE_AUK_TP180 |
| Depth | 1.60 | 1.30 | 0.30 | 1.70 | 0.30 |
| Other ID | 4 | 5 | 2 | 3A | 3 |
| Sample Type | ES | ES | ES | ES | ES |
| Sampling Date | 14/04/2020 | 14/04/2020 | 14/04/2020 | 14/04/2020 | 14/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | | |
|-------------------------------|-------------|------|-------|--------|--------|--------|--------|--------|
| Petroleum Hydrocarbons | | | | | | | | |
| Aliphatic C5-C6 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C6-C8 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C8-C10 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C10-C12 | DETSC 3072# | 1.5 | mg/kg | < 1.5 | 6.5 | < 1.5 | < 1.5 | < 1.5 |
| Aliphatic C12-C16 | DETSC 3072# | 1.2 | mg/kg | < 1.2 | 16 | < 1.2 | < 1.2 | < 1.2 |
| Aliphatic C16-C21 | DETSC 3072# | 1.5 | mg/kg | < 1.5 | 45 | < 1.5 | < 1.5 | < 1.5 |
| Aliphatic C21-C35 | DETSC 3072# | 3.4 | mg/kg | < 3.4 | 99 | < 3.4 | < 3.4 | < 3.4 |
| Aliphatic C5-C35 | DETSC 3072* | 10 | mg/kg | < 10 | 170 | < 10 | < 10 | < 10 |
| Aromatic C5-C7 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C7-C8 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C8-C10 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C10-C12 | DETSC 3072# | 0.9 | mg/kg | < 0.9 | 1.3 | < 0.9 | 4.2 | < 0.9 |
| Aromatic C12-C16 | DETSC 3072# | 0.5 | mg/kg | < 0.5 | 1.6 | < 0.5 | 5.1 | < 0.5 |
| Aromatic C16-C21 | DETSC 3072# | 0.6 | mg/kg | < 0.6 | 13 | < 0.6 | 0.7 | < 0.6 |
| Aromatic C21-C35 | DETSC 3072# | 1.4 | mg/kg | < 1.4 | 55 | < 1.4 | < 1.4 | < 1.4 |
| Aromatic C5-C35 | DETSC 3072* | 10 | mg/kg | < 10 | 71 | < 10 | 10 | < 10 |
| TPH Ali/Aro Total C5-C35 | DETSC 3072* | 10 | mg/kg | < 10 | 240 | < 10 | 10 | < 10 |
| EPH (C10-C40) | DETSC 3311# | 10 | mg/kg | | | | | |
| PAHs | | | | | | | | |
| Naphthalene | DETSC 3303# | 0.03 | mg/kg | 0.06 | 0.03 | 0.05 | < 0.03 | 0.24 |
| Acenaphthylene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | < 0.03 | 0.03 | < 0.03 | 0.06 |
| Acenaphthene | DETSC 3303# | 0.03 | mg/kg | 0.04 | < 0.03 | < 0.03 | < 0.03 | 0.11 |
| Fluorene | DETSC 3303 | 0.03 | mg/kg | 0.03 | < 0.03 | 0.03 | < 0.03 | 0.09 |
| Phenanthrene | DETSC 3303# | 0.03 | mg/kg | 0.37 | 0.32 | 0.63 | < 0.03 | 1.8 |
| Anthracene | DETSC 3303 | 0.03 | mg/kg | 0.09 | 0.07 | 0.17 | < 0.03 | 0.79 |
| Fluoranthene | DETSC 3303# | 0.03 | mg/kg | 1.5 | 1.0 | 3.0 | 0.03 | 2.2 |
| Pyrene | DETSC 3303# | 0.03 | mg/kg | 1.4 | 0.91 | 3.0 | 0.03 | 2.0 |
| Benzo(a)anthracene | DETSC 3303# | 0.03 | mg/kg | 0.61 | 0.43 | 1.6 | 0.03 | 0.82 |
| Chrysene | DETSC 3303 | 0.03 | mg/kg | 0.61 | 0.40 | 1.3 | < 0.03 | 0.90 |
| Benzo(b)fluoranthene | DETSC 3303# | 0.03 | mg/kg | 0.92 | 0.44 | 2.0 | < 0.03 | 0.86 |
| Benzo(k)fluoranthene | DETSC 3303# | 0.03 | mg/kg | 0.30 | 0.19 | 0.79 | < 0.03 | 0.37 |
| Benzo(a)pyrene | DETSC 3303# | 0.03 | mg/kg | 0.47 | 0.30 | 1.2 | < 0.03 | 0.43 |
| Indeno(1,2,3-c,d)pyrene | DETSC 3303# | 0.03 | mg/kg | 0.21 | 0.12 | 0.58 | < 0.03 | 0.19 |
| Dibenzo(a,h)anthracene | DETSC 3303# | 0.03 | mg/kg | 0.06 | 0.03 | 0.15 | < 0.03 | 0.06 |
| Benzo(g,h,i)perylene | DETSC 3303# | 0.03 | mg/kg | 0.30 | 0.16 | 0.77 | < 0.03 | 0.27 |
| PAH - USEPA 16, Total | DETSC 3303 | 0.1 | mg/kg | 7.0 | 4.3 | 15 | < 0.10 | 11 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie
 Client Ref 4251
 Contract Title Prairie Site Ground Investigation Works

| Lab No | 1665990 | 1665991 | 1665992 | 1665993 | 1665994 |
|---------------|-----------------------|------------------------|------------------------|-----------------------|-----------------------|
| Sample ID | PRAIRIE_AUK_ TP145 | PRAIRIE_AUK_ TP146C | PRAIRIE_AUK_ TP156A | PRAIRIE_AUK_ TP162 | PRAIRIE_AUK_ TP180 |
| Depth | 1.60 | 1.30 | 0.30 | 1.70 | 0.30 |
| Other ID | 4 | 5 | 2 | 3A | 3 |
| Sample Type | ES | ES | ES | ES | ES |
| Sampling Date | 14/04/2020 | 14/04/2020 | 14/04/2020 | 14/04/2020 | 14/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | | |
|---------------------|-------------|------|-------|-------|--------|-------|-------|-------|
| PCBs | | | | | | | | |
| PCB 28 + PCB 31 | DETSC 3401# | 0.01 | mg/kg | | < 0.01 | | | |
| PCB 52 | DETSC 3401# | 0.01 | mg/kg | | < 0.01 | | | |
| PCB 101 | DETSC 3401# | 0.01 | mg/kg | | < 0.01 | | | |
| PCB 118 | DETSC 3401# | 0.01 | mg/kg | | < 0.01 | | | |
| PCB 153 | DETSC 3401# | 0.01 | mg/kg | | < 0.01 | | | |
| PCB 138 | DETSC 3401# | 0.01 | mg/kg | | < 0.01 | | | |
| PCB 180 | DETSC 3401# | 0.01 | mg/kg | | < 0.01 | | | |
| PCB 7 Total | DETSC 3401# | 0.01 | mg/kg | | < 0.01 | | | |
| Phenols | | | | | | | | |
| Phenol - Monohydric | DETSC 2130# | 0.3 | mg/kg | < 0.3 | < 0.3 | < 0.3 | < 0.3 | < 0.3 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Lab No | 1665995 | 1666343 | 1666344 | 1666345 | 1666346 |
|---------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Sample ID | PRAIRIE_AUK_TP163 | PRAIRIE_AUK_TP135 | PRAIRIE_AUK_TP136 | PRAIRIE_AUK_TP136 | PRAIRIE_AUK_TP165 |
| Depth | 1.20 | 1.30 | 0.80 | 2.90 | 1.00 |
| Other ID | 3 | 5 | 3 | 10 | 3 |
| Sample Type | ES | ES | ES | ES | ES |
| Sampling Date | 14/04/2020 | 15/04/2020 | 15/04/2020 | 15/04/2020 | 15/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | | |
|---------------------------------|-------------|-------|-------|---------|---------|--------|--------|-------|
| Asbestos Quantification | DETSC 1102 | 0.001 | % | < 0.001 | < 0.001 | | | |
| Metals | | | | | | | | |
| Aluminium | DETSC 2301* | 1 | mg/kg | 53000 | 25000 | 38000 | 15000 | 5900 |
| Antimony | DETSC 2301* | 1 | mg/kg | < 1.0 | 4.5 | < 1.0 | 1.2 | 2.5 |
| Arsenic | DETSC 2301# | 0.2 | mg/kg | 12 | 61 | 7.0 | 9.3 | 23 |
| Barium | DETSC 2301# | 1.5 | mg/kg | 170 | 500 | 160 | 310 | 150 |
| Beryllium | DETSC 2301# | 0.2 | mg/kg | 7.0 | 3.3 | 5.3 | 1.3 | 0.4 |
| Boron, Water Soluble | DETSC 2311# | 0.2 | mg/kg | 1.5 | 2.6 | 1.4 | 0.9 | 1.4 |
| Cadmium | DETSC 2301# | 0.1 | mg/kg | 0.1 | 0.8 | 0.2 | 0.2 | 0.4 |
| Chromium | DETSC 2301# | 0.15 | mg/kg | 12 | 52 | 9.1 | 26 | 120 |
| Chromium, Hexavalent | DETSC 2204* | 1 | mg/kg | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Copper | DETSC 2301# | 0.2 | mg/kg | 40 | 100 | 15 | 29 | 28 |
| Iron | DETSC 2301 | 25 | mg/kg | 6800 | 3200 | 8900 | 40000 | 41000 |
| Lead | DETSC 2301# | 0.3 | mg/kg | 15 | 220 | 5.0 | 35 | 43 |
| Magnesium | DETSC 2301* | 1 | mg/kg | 16000 | 15000 | 17000 | 6200 | 10000 |
| Manganese | DETSC 2301# | 20 | mg/kg | 1200 | 5300 | 870 | 700 | 18000 |
| Mercury | DETSC 2325# | 0.05 | mg/kg | 0.07 | 0.37 | < 0.05 | < 0.05 | 0.11 |
| Molybdenum | DETSC 2301# | 0.4 | mg/kg | 0.5 | 5.4 | 0.5 | 0.4 | 1.6 |
| Nickel | DETSC 2301# | 1 | mg/kg | 2.5 | 33 | 5.9 | 37 | 15 |
| Silicon | DETSC 2301* | 10 | mg/kg | 63000 | 64000 | 64000 | 170000 | 53000 |
| Vanadium | DETSC 2301# | 0.8 | mg/kg | 41 | 120 | 31 | 31 | 470 |
| Zinc | DETSC 2301# | 1 | mg/kg | 39 | 270 | 54 | 100 | 120 |
| Inorganics | | | | | | | | |
| Loss on Ignition at 440oC | DETSC 2003# | 0.01 | % | | | | | |
| pH | DETSC 2008# | | pH | 10.4 | 10.3 | 11.4 | 8.6 | 11.4 |
| Calorific Value | DETSC 5008 | 1 | MJ/kg | | | | | |
| Cyanide, Total | DETSC 2130# | 0.1 | mg/kg | 1300 | 0.4 | 0.6 | 0.3 | 1.0 |
| Cyanide, Free | DETSC 2130# | 0.1 | mg/kg | 0.4 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Thiocyanate | DETSC 2130# | 0.6 | mg/kg | 8.9 | 0.6 | < 0.6 | < 0.6 | 0.6 |
| Organic matter | DETSC 2002# | 0.1 | % | 1.1 | 3.3 | 0.5 | 2.6 | 13 |
| Sulphate Aqueous Extract as SO4 | DETSC 2076# | 10 | mg/l | 480 | 400 | 840 | 120 | 170 |
| Sulphur (free) | DETSC 3049# | 0.75 | mg/kg | < 0.75 | 0.83 | 2.2 | < 0.75 | 1.4 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Lab No | 1665995 | 1666343 | 1666344 | 1666345 | 1666346 |
|---------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Sample ID | PRAIRIE_AUK_TP163 | PRAIRIE_AUK_TP135 | PRAIRIE_AUK_TP136 | PRAIRIE_AUK_TP136 | PRAIRIE_AUK_TP165 |
| Depth | 1.20 | 1.30 | 0.80 | 2.90 | 1.00 |
| Other ID | 3 | 5 | 3 | 10 | 3 |
| Sample Type | ES | ES | ES | ES | ES |
| Sampling Date | 14/04/2020 | 15/04/2020 | 15/04/2020 | 15/04/2020 | 15/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | | |
|-------------------------------|-------------|------|-------|--------|--------|--------|--------|--------|
| Petroleum Hydrocarbons | | | | | | | | |
| Aliphatic C5-C6 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C6-C8 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C8-C10 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C10-C12 | DETSC 3072# | 1.5 | mg/kg | < 1.5 | < 1.5 | < 1.5 | < 1.5 | < 1.5 |
| Aliphatic C12-C16 | DETSC 3072# | 1.2 | mg/kg | < 1.2 | < 1.2 | < 1.2 | < 1.2 | < 1.2 |
| Aliphatic C16-C21 | DETSC 3072# | 1.5 | mg/kg | < 1.5 | < 1.5 | < 1.5 | < 1.5 | < 1.5 |
| Aliphatic C21-C35 | DETSC 3072# | 3.4 | mg/kg | < 3.4 | < 3.4 | < 3.4 | < 3.4 | < 3.4 |
| Aliphatic C5-C35 | DETSC 3072* | 10 | mg/kg | < 10 | < 10 | < 10 | < 10 | < 10 |
| Aromatic C5-C7 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C7-C8 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C8-C10 | DETSC 3321* | 0.01 | mg/kg | 0.35 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C10-C12 | DETSC 3072# | 0.9 | mg/kg | 1.7 | < 0.9 | < 0.9 | < 0.9 | < 0.9 |
| Aromatic C12-C16 | DETSC 3072# | 0.5 | mg/kg | 96 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| Aromatic C16-C21 | DETSC 3072# | 0.6 | mg/kg | 40 | < 0.6 | < 0.6 | < 0.6 | < 0.6 |
| Aromatic C21-C35 | DETSC 3072# | 1.4 | mg/kg | 7.1 | < 1.4 | < 1.4 | < 1.4 | < 1.4 |
| Aromatic C5-C35 | DETSC 3072* | 10 | mg/kg | 150 | < 10 | < 10 | < 10 | < 10 |
| TPH Ali/Aro Total C5-C35 | DETSC 3072* | 10 | mg/kg | 150 | < 10 | < 10 | < 10 | < 10 |
| EPH (C10-C40) | DETSC 3311# | 10 | mg/kg | | | | | |
| PAHs | | | | | | | | |
| Naphthalene | DETSC 3303# | 0.03 | mg/kg | 0.85 | 0.03 | < 0.03 | < 0.03 | 0.42 |
| Acenaphthylene | DETSC 3303# | 0.03 | mg/kg | 4.1 | < 0.03 | < 0.03 | < 0.03 | 0.06 |
| Acenaphthene | DETSC 3303# | 0.03 | mg/kg | 20 | 0.05 | < 0.03 | < 0.03 | 0.05 |
| Fluorene | DETSC 3303 | 0.03 | mg/kg | 11 | 0.03 | < 0.03 | < 0.03 | 0.07 |
| Phenanthrene | DETSC 3303# | 0.03 | mg/kg | 7.8 | 0.57 | < 0.03 | < 0.03 | 0.91 |
| Anthracene | DETSC 3303 | 0.03 | mg/kg | 11 | 0.18 | < 0.03 | < 0.03 | 0.26 |
| Fluoranthene | DETSC 3303# | 0.03 | mg/kg | 11 | 2.3 | < 0.03 | < 0.03 | 1.0 |
| Pyrene | DETSC 3303# | 0.03 | mg/kg | 7.5 | 3.4 | < 0.03 | < 0.03 | 0.83 |
| Benzo(a)anthracene | DETSC 3303# | 0.03 | mg/kg | 1.6 | 1.1 | < 0.03 | < 0.03 | 0.40 |
| Chrysene | DETSC 3303 | 0.03 | mg/kg | 1.4 | 1.2 | < 0.03 | < 0.03 | 0.51 |
| Benzo(b)fluoranthene | DETSC 3303# | 0.03 | mg/kg | 0.70 | 1.3 | < 0.03 | < 0.03 | 0.49 |
| Benzo(k)fluoranthene | DETSC 3303# | 0.03 | mg/kg | 0.30 | 0.53 | < 0.03 | < 0.03 | 0.18 |
| Benzo(a)pyrene | DETSC 3303# | 0.03 | mg/kg | 0.53 | 0.87 | < 0.03 | < 0.03 | 0.26 |
| Indeno(1,2,3-c,d)pyrene | DETSC 3303# | 0.03 | mg/kg | 0.13 | 0.37 | < 0.03 | < 0.03 | 0.15 |
| Dibenzo(a,h)anthracene | DETSC 3303# | 0.03 | mg/kg | 0.04 | 0.10 | < 0.03 | < 0.03 | 0.05 |
| Benzo(g,h,i)perylene | DETSC 3303# | 0.03 | mg/kg | 0.14 | 0.47 | < 0.03 | < 0.03 | 0.19 |
| PAH - USEPA 16, Total | DETSC 3303 | 0.1 | mg/kg | 78 | 12 | < 0.10 | < 0.10 | 5.8 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie
 Client Ref 4251
 Contract Title Prairie Site Ground Investigation Works

| Lab No | 1665995 | 1666343 | 1666344 | 1666345 | 1666346 |
|---------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Sample ID | PRAIRIE_AUK_ TP163 | PRAIRIE_AUK_ TP135 | PRAIRIE_AUK_ TP136 | PRAIRIE_AUK_ TP136 | PRAIRIE_AUK_ TP165 |
| Depth | 1.20 | 1.30 | 0.80 | 2.90 | 1.00 |
| Other ID | 3 | 5 | 3 | 10 | 3 |
| Sample Type | ES | ES | ES | ES | ES |
| Sampling Date | 14/04/2020 | 15/04/2020 | 15/04/2020 | 15/04/2020 | 15/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | | |
|---------------------|-------------|------|-------|-----|-------|-------|-------|-------|
| PCBs | | | | | | | | |
| PCB 28 + PCB 31 | DETSC 3401# | 0.01 | mg/kg | | | | | |
| PCB 52 | DETSC 3401# | 0.01 | mg/kg | | | | | |
| PCB 101 | DETSC 3401# | 0.01 | mg/kg | | | | | |
| PCB 118 | DETSC 3401# | 0.01 | mg/kg | | | | | |
| PCB 153 | DETSC 3401# | 0.01 | mg/kg | | | | | |
| PCB 138 | DETSC 3401# | 0.01 | mg/kg | | | | | |
| PCB 180 | DETSC 3401# | 0.01 | mg/kg | | | | | |
| PCB 7 Total | DETSC 3401# | 0.01 | mg/kg | | | | | |
| Phenols | | | | | | | | |
| Phenol - Monohydric | DETSC 2130# | 0.3 | mg/kg | 1.1 | < 0.3 | < 0.3 | < 0.3 | < 0.3 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Lab No | 1666347 | 1666348 | 1666610 | 1666611 | 1666612 |
|---------------|-------------------|-------------------|-------------------|--------------------|--------------------|
| Sample ID | PRAIRIE_AUK_TP167 | PRAIRIE_AUK_TP169 | PRAIRIE_AUK_BH108 | PRAIRIE_AUK_TP139B | PRAIRIE_AUK_TP139B |
| Depth | 2.50 | 1.50 | 2.50 | 0.30 | 3.30 |
| Other ID | 6 | 3 | 1 | 3 | 6 |
| Sample Type | ES | ES | ES | ES | ES |
| Sampling Date | 15/04/2020 | 15/04/2020 | 15/04/2020 | 16/04/2020 | 16/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | | |
|---------------------------------|-------------|-------|-------|-------|---------|--------|---------|--------|
| Asbestos Quantification | DETSC 1102 | 0.001 | % | | < 0.001 | | < 0.001 | |
| Metals | | | | | | | | |
| Aluminium | DETSC 2301* | 1 | mg/kg | 11000 | 8600 | 17000 | 26000 | 14000 |
| Antimony | DETSC 2301* | 1 | mg/kg | 2.5 | 1.7 | 2.0 | 5.4 | 1.4 |
| Arsenic | DETSC 2301# | 0.2 | mg/kg | 5.8 | 7.3 | 10 | 43 | 7.8 |
| Barium | DETSC 2301# | 1.5 | mg/kg | 220 | 120 | 240 | 810 | 330 |
| Beryllium | DETSC 2301# | 0.2 | mg/kg | 0.9 | 0.5 | 1.6 | 3.1 | 1.0 |
| Boron, Water Soluble | DETSC 2311# | 0.2 | mg/kg | 2.7 | 1.2 | 1.4 | 6.6 | 0.5 |
| Cadmium | DETSC 2301# | 0.1 | mg/kg | 0.2 | 0.7 | 0.3 | 1.9 | 0.2 |
| Chromium | DETSC 2301# | 0.15 | mg/kg | 120 | 46 | 76 | 77 | 24 |
| Chromium, Hexavalent | DETSC 2204* | 1 | mg/kg | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Copper | DETSC 2301# | 0.2 | mg/kg | 17 | 39 | 46 | 94 | 29 |
| Iron | DETSC 2301 | 25 | mg/kg | 42000 | 27000 | 46000 | 84000 | 40000 |
| Lead | DETSC 2301# | 0.3 | mg/kg | 31 | 68 | 38 | 410 | 28 |
| Magnesium | DETSC 2301* | 1 | mg/kg | 17000 | 6300 | 12000 | 21000 | 8700 |
| Manganese | DETSC 2301# | 20 | mg/kg | 8400 | 2000 | 1800 | 16000 | 700 |
| Mercury | DETSC 2325# | 0.05 | mg/kg | 0.13 | 0.10 | 0.27 | 3.6 | 0.06 |
| Molybdenum | DETSC 2301# | 0.4 | mg/kg | 1.0 | 1.7 | 1.0 | 3.5 | 0.4 |
| Nickel | DETSC 2301# | 1 | mg/kg | 12 | 24 | 37 | 31 | 33 |
| Silicon | DETSC 2301* | 10 | mg/kg | 64000 | 110000 | 160000 | 47000 | 160000 |
| Vanadium | DETSC 2301# | 0.8 | mg/kg | 410 | 75 | 200 | 140 | 30 |
| Zinc | DETSC 2301# | 1 | mg/kg | 78 | 150 | 140 | 1200 | 99 |
| Inorganics | | | | | | | | |
| Loss on Ignition at 440oC | DETSC 2003# | 0.01 | % | | | | | |
| pH | DETSC 2008# | | pH | 11.3 | 9.8 | 10.0 | 11.0 | 8.1 |
| Calorific Value | DETSC 5008 | 1 | MJ/kg | | | | | |
| Cyanide, Total | DETSC 2130# | 0.1 | mg/kg | 2.2 | 0.6 | 2.0 | 220 | 2.0 |
| Cyanide, Free | DETSC 2130# | 0.1 | mg/kg | < 0.1 | < 0.1 | < 0.1 | 0.4 | < 0.1 |
| Thiocyanate | DETSC 2130# | 0.6 | mg/kg | 0.7 | 0.8 | < 0.6 | 3.1 | < 0.6 |
| Organic matter | DETSC 2002# | 0.1 | % | 1.6 | 13 | 2.6 | 2.1 | 3.4 |
| Sulphate Aqueous Extract as SO4 | DETSC 2076# | 10 | mg/l | 220 | 110 | 180 | 740 | 320 |
| Sulphur (free) | DETSC 3049# | 0.75 | mg/kg | 1.9 | 1.1 | < 0.75 | 2.4 | < 0.75 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Lab No | 1666347 | 1666348 | 1666610 | 1666611 | 1666612 |
|---------------|-------------------|-------------------|-------------------|--------------------|--------------------|
| Sample ID | PRAIRIE_AUK_TP167 | PRAIRIE_AUK_TP169 | PRAIRIE_AUK_BH108 | PRAIRIE_AUK_TP139B | PRAIRIE_AUK_TP139B |
| Depth | 2.50 | 1.50 | 2.50 | 0.30 | 3.30 |
| Other ID | 6 | 3 | 1 | 3 | 6 |
| Sample Type | ES | ES | ES | ES | ES |
| Sampling Date | 15/04/2020 | 15/04/2020 | 15/04/2020 | 16/04/2020 | 16/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | | |
|-------------------------------|-------------|------|-------|--------|--------|--------|--------|--------|
| Petroleum Hydrocarbons | | | | | | | | |
| Aliphatic C5-C6 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C6-C8 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C8-C10 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C10-C12 | DETSC 3072# | 1.5 | mg/kg | < 1.5 | < 1.5 | < 1.5 | < 1.5 | < 1.5 |
| Aliphatic C12-C16 | DETSC 3072# | 1.2 | mg/kg | < 1.2 | < 1.2 | < 1.2 | < 1.2 | < 1.2 |
| Aliphatic C16-C21 | DETSC 3072# | 1.5 | mg/kg | < 1.5 | < 1.5 | < 1.5 | < 1.5 | < 1.5 |
| Aliphatic C21-C35 | DETSC 3072# | 3.4 | mg/kg | < 3.4 | < 3.4 | < 3.4 | < 3.4 | < 3.4 |
| Aliphatic C5-C35 | DETSC 3072* | 10 | mg/kg | < 10 | < 10 | < 10 | < 10 | < 10 |
| Aromatic C5-C7 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C7-C8 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C8-C10 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C10-C12 | DETSC 3072# | 0.9 | mg/kg | < 0.9 | < 0.9 | < 0.9 | < 0.9 | < 0.9 |
| Aromatic C12-C16 | DETSC 3072# | 0.5 | mg/kg | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| Aromatic C16-C21 | DETSC 3072# | 0.6 | mg/kg | < 0.6 | < 0.6 | < 0.6 | < 0.6 | < 0.6 |
| Aromatic C21-C35 | DETSC 3072# | 1.4 | mg/kg | < 1.4 | < 1.4 | < 1.4 | < 1.4 | < 1.4 |
| Aromatic C5-C35 | DETSC 3072* | 10 | mg/kg | < 10 | < 10 | < 10 | < 10 | < 10 |
| TPH Ali/Aro Total C5-C35 | DETSC 3072* | 10 | mg/kg | < 10 | < 10 | < 10 | < 10 | < 10 |
| EPH (C10-C40) | DETSC 3311# | 10 | mg/kg | | | | | |
| PAHs | | | | | | | | |
| Naphthalene | DETSC 3303# | 0.03 | mg/kg | 0.20 | 0.38 | < 0.03 | 0.45 | 0.31 |
| Acenaphthylene | DETSC 3303# | 0.03 | mg/kg | 0.06 | 0.09 | < 0.03 | 0.10 | 0.05 |
| Acenaphthene | DETSC 3303# | 0.03 | mg/kg | 0.09 | < 0.03 | < 0.03 | 0.60 | 0.36 |
| Fluorene | DETSC 3303 | 0.03 | mg/kg | 0.12 | 0.13 | < 0.03 | 0.55 | 0.27 |
| Phenanthrene | DETSC 3303# | 0.03 | mg/kg | 1.5 | 1.9 | 0.04 | 1.5 | 0.33 |
| Anthracene | DETSC 3303 | 0.03 | mg/kg | 0.37 | 0.50 | < 0.03 | 0.34 | 0.06 |
| Fluoranthene | DETSC 3303# | 0.03 | mg/kg | 1.8 | 2.1 | 0.08 | 1.6 | 0.11 |
| Pyrene | DETSC 3303# | 0.03 | mg/kg | 1.4 | 1.7 | 0.07 | 1.3 | 0.08 |
| Benzo(a)anthracene | DETSC 3303# | 0.03 | mg/kg | 0.55 | 0.65 | < 0.03 | 0.30 | 0.04 |
| Chrysene | DETSC 3303 | 0.03 | mg/kg | 0.69 | 0.67 | < 0.03 | 0.52 | 0.03 |
| Benzo(b)fluoranthene | DETSC 3303# | 0.03 | mg/kg | 0.69 | 0.56 | 0.04 | 0.43 | 0.03 |
| Benzo(k)fluoranthene | DETSC 3303# | 0.03 | mg/kg | 0.26 | 0.22 | < 0.03 | 0.17 | < 0.03 |
| Benzo(a)pyrene | DETSC 3303# | 0.03 | mg/kg | 0.32 | 0.31 | < 0.03 | 0.20 | < 0.03 |
| Indeno(1,2,3-c,d)pyrene | DETSC 3303# | 0.03 | mg/kg | 0.20 | 0.13 | < 0.03 | 0.12 | < 0.03 |
| Dibenzo(a,h)anthracene | DETSC 3303# | 0.03 | mg/kg | 0.06 | 0.04 | < 0.03 | 0.04 | < 0.03 |
| Benzo(g,h,i)perylene | DETSC 3303# | 0.03 | mg/kg | 0.24 | 0.16 | < 0.03 | 0.16 | < 0.03 |
| PAH - USEPA 16, Total | DETSC 3303 | 0.1 | mg/kg | 8.6 | 9.5 | 0.23 | 8.3 | 1.6 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie
 Client Ref 4251
 Contract Title Prairie Site Ground Investigation Works

| Lab No | 1666347 | 1666348 | 1666610 | 1666611 | 1666612 |
|---------------|-------------------|-------------------|-------------------|--------------------|--------------------|
| Sample ID | PRAIRIE_AUK_TP167 | PRAIRIE_AUK_TP169 | PRAIRIE_AUK_BH108 | PRAIRIE_AUK_TP139B | PRAIRIE_AUK_TP139B |
| Depth | 2.50 | 1.50 | 2.50 | 0.30 | 3.30 |
| Other ID | 6 | 3 | 1 | 3 | 6 |
| Sample Type | ES | ES | ES | ES | ES |
| Sampling Date | 15/04/2020 | 15/04/2020 | 15/04/2020 | 16/04/2020 | 16/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | | |
|---------------------|-------------|------|-------|-------|-------|-----|-------|-------|
| PCBs | | | | | | | | |
| PCB 28 + PCB 31 | DETSC 3401# | 0.01 | mg/kg | | | | | |
| PCB 52 | DETSC 3401# | 0.01 | mg/kg | | | | | |
| PCB 101 | DETSC 3401# | 0.01 | mg/kg | | | | | |
| PCB 118 | DETSC 3401# | 0.01 | mg/kg | | | | | |
| PCB 153 | DETSC 3401# | 0.01 | mg/kg | | | | | |
| PCB 138 | DETSC 3401# | 0.01 | mg/kg | | | | | |
| PCB 180 | DETSC 3401# | 0.01 | mg/kg | | | | | |
| PCB 7 Total | DETSC 3401# | 0.01 | mg/kg | | | | | |
| Phenols | | | | | | | | |
| Phenol - Monohydric | DETSC 2130# | 0.3 | mg/kg | < 0.3 | < 0.3 | 0.5 | < 0.3 | < 0.3 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Lab No | 1666613 | 1666614 | 1666615 | 1666616 | 1667231 |
|---------------|--------------------|-------------------|-------------------|--------------------|-------------------|
| Sample ID | PRAIRIE_AUK_TP148A | PRAIRIE_AUK_TP150 | PRAIRIE_AUK_TP159 | PRAIRIE_AUK_TP190A | PRAIRIE_AUK_BH105 |
| Depth | 1.40 | 1.50 | 0.60 | 1.10 | 3.00 |
| Other ID | 5 | 3 | 3 | 3 | 1 |
| Sample Type | ES | ES | ES | ES | ES |
| Sampling Date | 16/04/2020 | 16/04/2020 | 16/04/2020 | 16/04/2020 | 16/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | | |
|---------------------------------|-------------|-------|-------|-------|--------|-------|-------|--------|
| Asbestos Quantification | DETSC 1102 | 0.001 | % | | 0.009 | 0.002 | 0.003 | |
| Metals | | | | | | | | |
| Aluminium | DETSC 2301* | 1 | mg/kg | 20000 | 7700 | 15000 | 15000 | 13000 |
| Antimony | DETSC 2301* | 1 | mg/kg | 2.7 | 7.6 | < 1.0 | 1.6 | 2.0 |
| Arsenic | DETSC 2301# | 0.2 | mg/kg | 24 | 30 | 6.1 | 21 | 8.7 |
| Barium | DETSC 2301# | 1.5 | mg/kg | 330 | 400 | 340 | 560 | 170 |
| Beryllium | DETSC 2301# | 0.2 | mg/kg | 2.3 | 0.8 | 3.2 | 1.3 | 1.1 |
| Boron, Water Soluble | DETSC 2311# | 0.2 | mg/kg | 3.7 | 1.9 | 2.0 | 6.6 | 1.2 |
| Cadmium | DETSC 2301# | 0.1 | mg/kg | 1.0 | 1.3 | 0.1 | 1.5 | 0.2 |
| Chromium | DETSC 2301# | 0.15 | mg/kg | 69 | 75 | 53 | 24 | 34 |
| Chromium, Hexavalent | DETSC 2204* | 1 | mg/kg | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Copper | DETSC 2301# | 0.2 | mg/kg | 39 | 130 | 14 | 54 | 40 |
| Iron | DETSC 2301 | 25 | mg/kg | 53000 | 180000 | 18000 | 34000 | 41000 |
| Lead | DETSC 2301# | 0.3 | mg/kg | 65 | 420 | 13 | 160 | 40 |
| Magnesium | DETSC 2301* | 1 | mg/kg | 14000 | 8200 | 12000 | 8900 | 10000 |
| Manganese | DETSC 2301# | 20 | mg/kg | 16000 | 2400 | 4600 | 24000 | 730 |
| Mercury | DETSC 2325# | 0.05 | mg/kg | 1.3 | 2.6 | 0.13 | 1.8 | 0.07 |
| Molybdenum | DETSC 2301# | 0.4 | mg/kg | 2.9 | 5.8 | 0.7 | 3.6 | 1.0 |
| Nickel | DETSC 2301# | 1 | mg/kg | 23 | 54 | 5.8 | 24 | 37 |
| Silicon | DETSC 2301* | 10 | mg/kg | 51000 | 53000 | 59000 | 62000 | 160000 |
| Vanadium | DETSC 2301# | 0.8 | mg/kg | 110 | 110 | 160 | 49 | 41 |
| Zinc | DETSC 2301# | 1 | mg/kg | 200 | 830 | 65 | 630 | 140 |
| Inorganics | | | | | | | | |
| Loss on Ignition at 440oC | DETSC 2003# | 0.01 | % | | | | | |
| pH | DETSC 2008# | | pH | 11.3 | 10.1 | 10.7 | 10.8 | 8.5 |
| Calorific Value | DETSC 5008 | 1 | MJ/kg | | | | | |
| Cyanide, Total | DETSC 2130# | 0.1 | mg/kg | 22 | 8.2 | 0.9 | 240 | < 0.1 |
| Cyanide, Free | DETSC 2130# | 0.1 | mg/kg | 0.1 | 0.1 | < 0.1 | 0.6 | < 0.1 |
| Thiocyanate | DETSC 2130# | 0.6 | mg/kg | 1.2 | < 0.6 | 1.5 | 4.7 | < 0.6 |
| Organic matter | DETSC 2002# | 0.1 | % | 2.7 | 2.1 | 2.0 | 2.6 | 2.1 |
| Sulphate Aqueous Extract as SO4 | DETSC 2076# | 10 | mg/l | 630 | 350 | 550 | 530 | 220 |
| Sulphur (free) | DETSC 3049# | 0.75 | mg/kg | 63 | 3.5 | 12 | 1.1 | < 0.75 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Lab No | 1666613 | 1666614 | 1666615 | 1666616 | 1667231 |
|---------------|--------------------|-------------------|-------------------|--------------------|-------------------|
| Sample ID | PRAIRIE_AUK_TP148A | PRAIRIE_AUK_TP150 | PRAIRIE_AUK_TP159 | PRAIRIE_AUK_TP190A | PRAIRIE_AUK_BH105 |
| Depth | 1.40 | 1.50 | 0.60 | 1.10 | 3.00 |
| Other ID | 5 | 3 | 3 | 3 | 1 |
| Sample Type | ES | ES | ES | ES | ES |
| Sampling Date | 16/04/2020 | 16/04/2020 | 16/04/2020 | 16/04/2020 | 16/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | | |
|-------------------------------|-------------|------|-------|--------|--------|--------|--------|--------|
| Petroleum Hydrocarbons | | | | | | | | |
| Aliphatic C5-C6 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C6-C8 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C8-C10 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C10-C12 | DETSC 3072# | 1.5 | mg/kg | < 1.5 | < 1.5 | < 1.5 | < 1.5 | < 1.5 |
| Aliphatic C12-C16 | DETSC 3072# | 1.2 | mg/kg | < 1.2 | < 1.2 | < 1.2 | < 1.2 | < 1.2 |
| Aliphatic C16-C21 | DETSC 3072# | 1.5 | mg/kg | < 1.5 | < 1.5 | < 1.5 | < 1.5 | < 1.5 |
| Aliphatic C21-C35 | DETSC 3072# | 3.4 | mg/kg | < 3.4 | < 3.4 | < 3.4 | < 3.4 | < 3.4 |
| Aliphatic C5-C35 | DETSC 3072* | 10 | mg/kg | < 10 | < 10 | < 10 | < 10 | < 10 |
| Aromatic C5-C7 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C7-C8 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C8-C10 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C10-C12 | DETSC 3072# | 0.9 | mg/kg | < 0.9 | < 0.9 | < 0.9 | < 0.9 | < 0.9 |
| Aromatic C12-C16 | DETSC 3072# | 0.5 | mg/kg | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| Aromatic C16-C21 | DETSC 3072# | 0.6 | mg/kg | < 0.6 | < 0.6 | < 0.6 | < 0.6 | < 0.6 |
| Aromatic C21-C35 | DETSC 3072# | 1.4 | mg/kg | < 1.4 | < 1.4 | 18 | < 1.4 | < 1.4 |
| Aromatic C5-C35 | DETSC 3072* | 10 | mg/kg | < 10 | < 10 | 18 | < 10 | < 10 |
| TPH Ali/Aro Total C5-C35 | DETSC 3072* | 10 | mg/kg | < 10 | < 10 | 18 | < 10 | < 10 |
| EPH (C10-C40) | DETSC 3311# | 10 | mg/kg | | | | | |
| PAHs | | | | | | | | |
| Naphthalene | DETSC 3303# | 0.03 | mg/kg | 0.23 | 0.53 | 0.20 | 0.07 | < 0.03 |
| Acenaphthylene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | 0.07 | 0.08 | < 0.03 | < 0.03 |
| Acenaphthene | DETSC 3303# | 0.03 | mg/kg | 0.27 | 0.67 | 0.23 | 0.16 | < 0.03 |
| Fluorene | DETSC 3303 | 0.03 | mg/kg | 0.21 | 0.49 | 0.16 | 0.09 | < 0.03 |
| Phenanthrene | DETSC 3303# | 0.03 | mg/kg | 1.5 | 1.6 | 0.27 | 1.4 | < 0.03 |
| Anthracene | DETSC 3303 | 0.03 | mg/kg | 0.18 | 0.34 | 0.10 | 0.14 | < 0.03 |
| Fluoranthene | DETSC 3303# | 0.03 | mg/kg | 2.2 | 2.1 | 1.1 | 3.0 | 0.04 |
| Pyrene | DETSC 3303# | 0.03 | mg/kg | 1.8 | 1.7 | 1.6 | 2.8 | < 0.03 |
| Benzo(a)anthracene | DETSC 3303# | 0.03 | mg/kg | 0.50 | 0.50 | 0.39 | 0.96 | < 0.03 |
| Chrysene | DETSC 3303 | 0.03 | mg/kg | 0.77 | 0.68 | 0.73 | 1.1 | < 0.03 |
| Benzo(b)fluoranthene | DETSC 3303# | 0.03 | mg/kg | 0.66 | 0.67 | 1.5 | 1.2 | < 0.03 |
| Benzo(k)fluoranthene | DETSC 3303# | 0.03 | mg/kg | 0.29 | 0.28 | 0.70 | 0.51 | < 0.03 |
| Benzo(a)pyrene | DETSC 3303# | 0.03 | mg/kg | 0.44 | 0.36 | 0.77 | 0.80 | < 0.03 |
| Indeno(1,2,3-c,d)pyrene | DETSC 3303# | 0.03 | mg/kg | 0.20 | 0.20 | 0.49 | 0.31 | < 0.03 |
| Dibenzo(a,h)anthracene | DETSC 3303# | 0.03 | mg/kg | 0.06 | 0.06 | 0.14 | 0.09 | < 0.03 |
| Benzo(g,h,i)perylene | DETSC 3303# | 0.03 | mg/kg | 0.24 | 0.24 | 0.59 | 0.38 | < 0.03 |
| PAH - USEPA 16, Total | DETSC 3303 | 0.1 | mg/kg | 9.4 | 10 | 9.0 | 13 | < 0.10 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie
 Client Ref 4251
 Contract Title Prairie Site Ground Investigation Works

| Lab No | 1666613 | 1666614 | 1666615 | 1666616 | 1667231 |
|---------------|--------------------|-------------------|-------------------|--------------------|-------------------|
| Sample ID | PRAIRIE_AUK_TP148A | PRAIRIE_AUK_TP150 | PRAIRIE_AUK_TP159 | PRAIRIE_AUK_TP190A | PRAIRIE_AUK_BH105 |
| Depth | 1.40 | 1.50 | 0.60 | 1.10 | 3.00 |
| Other ID | 5 | 3 | 3 | 3 | 1 |
| Sample Type | ES | ES | ES | ES | ES |
| Sampling Date | 16/04/2020 | 16/04/2020 | 16/04/2020 | 16/04/2020 | 16/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | | |
|---------------------|-------------|------|-------|-----|-------|-------|-------|-------|
| PCBs | | | | | | | | |
| PCB 28 + PCB 31 | DETSC 3401# | 0.01 | mg/kg | | | | | |
| PCB 52 | DETSC 3401# | 0.01 | mg/kg | | | | | |
| PCB 101 | DETSC 3401# | 0.01 | mg/kg | | | | | |
| PCB 118 | DETSC 3401# | 0.01 | mg/kg | | | | | |
| PCB 153 | DETSC 3401# | 0.01 | mg/kg | | | | | |
| PCB 138 | DETSC 3401# | 0.01 | mg/kg | | | | | |
| PCB 180 | DETSC 3401# | 0.01 | mg/kg | | | | | |
| PCB 7 Total | DETSC 3401# | 0.01 | mg/kg | | | | | |
| Phenols | | | | | | | | |
| Phenol - Monohydric | DETSC 2130# | 0.3 | mg/kg | 0.3 | < 0.3 | < 0.3 | < 0.3 | < 0.3 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Lab No | 1667232 | 1667233 | 1667234 | 1667235 | 1667236 |
|---------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Sample ID | PRAIRIE_AUK_TP126 | PRAIRIE_AUK_TP128 | PRAIRIE_AUK_TP129 | PRAIRIE_AUK_TP130 | PRAIRIE_AUK_TP147 |
| Depth | 2.60 | 0.90 | 2.10 | 1.00 | 1.50 |
| Other ID | 5 | 3 | 4A | 4A | 4 |
| Sample Type | ES | ES | ES | ES | ES |
| Sampling Date | 17/04/2020 | 17/04/2020 | 17/04/2020 | 17/04/2020 | 17/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | | |
|---------------------------------|-------------|-------|-------|--------|---------|--------|--------|---------|
| Asbestos Quantification | DETSC 1102 | 0.001 | % | | < 0.001 | | | < 0.001 |
| Metals | | | | | | | | |
| Aluminium | DETSC 2301* | 1 | mg/kg | 9800 | 3300 | 11000 | 9200 | 19000 |
| Antimony | DETSC 2301* | 1 | mg/kg | 4.1 | < 1.0 | 1.4 | 2.9 | 3.6 |
| Arsenic | DETSC 2301# | 0.2 | mg/kg | 13 | 5.4 | 8.2 | 34 | 14 |
| Barium | DETSC 2301# | 1.5 | mg/kg | 160 | 89 | 430 | 130 | 390 |
| Beryllium | DETSC 2301# | 0.2 | mg/kg | 1.1 | 0.8 | 1.0 | 1.6 | 1.9 |
| Boron, Water Soluble | DETSC 2311# | 0.2 | mg/kg | 5.2 | 1.3 | 1.8 | 1.6 | 3.2 |
| Cadmium | DETSC 2301# | 0.1 | mg/kg | 0.5 | < 0.1 | 0.4 | 0.4 | 0.8 |
| Chromium | DETSC 2301# | 0.15 | mg/kg | 50 | 8.8 | 25 | 69 | 99 |
| Chromium, Hexavalent | DETSC 2204* | 1 | mg/kg | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Copper | DETSC 2301# | 0.2 | mg/kg | 86 | 35 | 29 | 56 | 58 |
| Iron | DETSC 2301 | 25 | mg/kg | 110000 | 4800 | 35000 | 60000 | 56000 |
| Lead | DETSC 2301# | 0.3 | mg/kg | 82 | 27 | 40 | 100 | 220 |
| Magnesium | DETSC 2301* | 1 | mg/kg | 7500 | 1500 | 4100 | 4400 | 14000 |
| Manganese | DETSC 2301# | 20 | mg/kg | 2200 | 61 | 1300 | 2200 | 4100 |
| Mercury | DETSC 2325# | 0.05 | mg/kg | 0.22 | < 0.05 | < 0.05 | 0.18 | 0.83 |
| Molybdenum | DETSC 2301# | 0.4 | mg/kg | 2.2 | < 0.4 | 0.6 | 1.7 | 1.8 |
| Nickel | DETSC 2301# | 1 | mg/kg | 28 | 12 | 39 | 38 | 20 |
| Silicon | DETSC 2301* | 10 | mg/kg | 23000 | 140000 | 180000 | 93000 | 87000 |
| Vanadium | DETSC 2301# | 0.8 | mg/kg | 160 | 10 | 33 | 170 | 190 |
| Zinc | DETSC 2301# | 1 | mg/kg | 440 | 39 | 140 | 280 | 340 |
| Inorganics | | | | | | | | |
| Loss on Ignition at 440oC | DETSC 2003# | 0.01 | % | | | | | |
| pH | DETSC 2008# | | pH | 10.3 | 8.6 | 8.8 | 9.3 | 10.9 |
| Calorific Value | DETSC 5008 | 1 | MJ/kg | | | | | |
| Cyanide, Total | DETSC 2130# | 0.1 | mg/kg | 7.9 | 0.6 | 0.5 | 3.0 | 29 |
| Cyanide, Free | DETSC 2130# | 0.1 | mg/kg | < 0.1 | < 0.1 | < 0.1 | < 0.1 | 0.5 |
| Thiocyanate | DETSC 2130# | 0.6 | mg/kg | 1.2 | < 0.6 | < 0.6 | < 0.6 | 2.5 |
| Organic matter | DETSC 2002# | 0.1 | % | 12 | 3.6 | 2.1 | 5.3 | 2.4 |
| Sulphate Aqueous Extract as SO4 | DETSC 2076# | 10 | mg/l | 1200 | 25 | 270 | 100 | 480 |
| Sulphur (free) | DETSC 3049# | 0.75 | mg/kg | 24 | < 0.75 | < 0.75 | < 0.75 | < 0.75 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Lab No | 1667232 | 1667233 | 1667234 | 1667235 | 1667236 |
|---------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Sample ID | PRAIRIE_AUK_TP126 | PRAIRIE_AUK_TP128 | PRAIRIE_AUK_TP129 | PRAIRIE_AUK_TP130 | PRAIRIE_AUK_TP147 |
| Depth | 2.60 | 0.90 | 2.10 | 1.00 | 1.50 |
| Other ID | 5 | 3 | 4A | 4A | 4 |
| Sample Type | ES | ES | ES | ES | ES |
| Sampling Date | 17/04/2020 | 17/04/2020 | 17/04/2020 | 17/04/2020 | 17/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | | |
|-------------------------------|-------------|------|-------|--------|--------|--------|--------|--------|
| Petroleum Hydrocarbons | | | | | | | | |
| Aliphatic C5-C6 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C6-C8 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C8-C10 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | 0.20 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C10-C12 | DETSC 3072# | 1.5 | mg/kg | < 1.5 | < 1.5 | < 1.5 | < 1.5 | < 1.5 |
| Aliphatic C12-C16 | DETSC 3072# | 1.2 | mg/kg | < 1.2 | 25 | < 1.2 | < 1.2 | < 1.2 |
| Aliphatic C16-C21 | DETSC 3072# | 1.5 | mg/kg | < 1.5 | 2.1 | < 1.5 | < 1.5 | < 1.5 |
| Aliphatic C21-C35 | DETSC 3072# | 3.4 | mg/kg | < 3.4 | < 3.4 | < 3.4 | < 3.4 | < 3.4 |
| Aliphatic C5-C35 | DETSC 3072* | 10 | mg/kg | < 10 | 28 | < 10 | < 10 | < 10 |
| Aromatic C5-C7 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C7-C8 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C8-C10 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | 2.2 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C10-C12 | DETSC 3072# | 0.9 | mg/kg | < 0.9 | 320 | < 0.9 | < 0.9 | < 0.9 |
| Aromatic C12-C16 | DETSC 3072# | 0.5 | mg/kg | < 0.5 | 1400 | < 0.5 | < 0.5 | 1.3 |
| Aromatic C16-C21 | DETSC 3072# | 0.6 | mg/kg | < 0.6 | 6.4 | < 0.6 | < 0.6 | 4.8 |
| Aromatic C21-C35 | DETSC 3072# | 1.4 | mg/kg | < 1.4 | < 1.4 | < 1.4 | < 1.4 | 23 |
| Aromatic C5-C35 | DETSC 3072* | 10 | mg/kg | < 10 | 1700 | < 10 | < 10 | 29 |
| TPH Ali/Aro Total C5-C35 | DETSC 3072* | 10 | mg/kg | < 10 | 1700 | < 10 | < 10 | 29 |
| EPH (C10-C40) | DETSC 3311# | 10 | mg/kg | | | | | |
| PAHs | | | | | | | | |
| Naphthalene | DETSC 3303# | 0.03 | mg/kg | 0.14 | 520 | 3.2 | 0.05 | 0.07 |
| Acenaphthylene | DETSC 3303# | 0.03 | mg/kg | 0.05 | 5.5 | < 0.03 | < 0.03 | < 0.03 |
| Acenaphthene | DETSC 3303# | 0.03 | mg/kg | 0.30 | 520 | 3.6 | 0.16 | 0.09 |
| Fluorene | DETSC 3303 | 0.03 | mg/kg | 0.29 | 100 | 0.66 | 0.04 | 0.05 |
| Phenanthrene | DETSC 3303# | 0.03 | mg/kg | 0.73 | 5.1 | 0.09 | 0.18 | 0.73 |
| Anthracene | DETSC 3303 | 0.03 | mg/kg | 0.77 | 1.1 | 0.09 | 0.04 | 0.77 |
| Fluoranthene | DETSC 3303# | 0.03 | mg/kg | 0.56 | 0.34 | < 0.03 | 0.24 | 2.0 |
| Pyrene | DETSC 3303# | 0.03 | mg/kg | 0.45 | 0.24 | < 0.03 | 0.20 | 2.0 |
| Benzo(a)anthracene | DETSC 3303# | 0.03 | mg/kg | 0.19 | 0.15 | < 0.03 | 0.11 | 1.1 |
| Chrysene | DETSC 3303 | 0.03 | mg/kg | 0.19 | 0.16 | < 0.03 | 0.13 | 1.1 |
| Benzo(b)fluoranthene | DETSC 3303# | 0.03 | mg/kg | 0.20 | 0.17 | < 0.03 | 0.11 | 1.4 |
| Benzo(k)fluoranthene | DETSC 3303# | 0.03 | mg/kg | 0.09 | 0.08 | < 0.03 | 0.06 | 0.61 |
| Benzo(a)pyrene | DETSC 3303# | 0.03 | mg/kg | 0.12 | 0.10 | < 0.03 | 0.05 | 0.88 |
| Indeno(1,2,3-c,d)pyrene | DETSC 3303# | 0.03 | mg/kg | 0.07 | 0.09 | < 0.03 | 0.05 | 0.55 |
| Dibenzo(a,h)anthracene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | < 0.03 | < 0.03 | < 0.03 | 0.17 |
| Benzo(g,h,i)perylene | DETSC 3303# | 0.03 | mg/kg | 0.07 | 0.08 | < 0.03 | 0.04 | 0.65 |
| PAH - USEPA 16, Total | DETSC 3303 | 0.1 | mg/kg | 4.2 | 1200 | 7.7 | 1.4 | 12 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie
 Client Ref 4251
 Contract Title Prairie Site Ground Investigation Works

| Lab No | 1667232 | 1667233 | 1667234 | 1667235 | 1667236 |
|---------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Sample ID | PRAIRIE_AUK_TP126 | PRAIRIE_AUK_TP128 | PRAIRIE_AUK_TP129 | PRAIRIE_AUK_TP130 | PRAIRIE_AUK_TP147 |
| Depth | 2.60 | 0.90 | 2.10 | 1.00 | 1.50 |
| Other ID | 5 | 3 | 4A | 4A | 4 |
| Sample Type | ES | ES | ES | ES | ES |
| Sampling Date | 17/04/2020 | 17/04/2020 | 17/04/2020 | 17/04/2020 | 17/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | | |
|---------------------|-------------|------|-------|-------|-------|-------|-------|-------|
| PCBs | | | | | | | | |
| PCB 28 + PCB 31 | DETSC 3401# | 0.01 | mg/kg | | | | | |
| PCB 52 | DETSC 3401# | 0.01 | mg/kg | | | | | |
| PCB 101 | DETSC 3401# | 0.01 | mg/kg | | | | | |
| PCB 118 | DETSC 3401# | 0.01 | mg/kg | | | | | |
| PCB 153 | DETSC 3401# | 0.01 | mg/kg | | | | | |
| PCB 138 | DETSC 3401# | 0.01 | mg/kg | | | | | |
| PCB 180 | DETSC 3401# | 0.01 | mg/kg | | | | | |
| PCB 7 Total | DETSC 3401# | 0.01 | mg/kg | | | | | |
| Phenols | | | | | | | | |
| Phenol - Monohydric | DETSC 2130# | 0.3 | mg/kg | < 0.3 | < 0.3 | < 0.3 | < 0.3 | < 0.3 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Lab No | 1667237 | 1667238 | 1667501 | 1667502 | 1667503 |
|---------------|-------------------|-------------------|--------------------|-------------------|-------------------|
| Sample ID | PRAIRIE_AUK_TP158 | PRAIRIE_AUK_TP157 | PRAIRIE_AUK_TP120A | PRAIRIE_AUK_TP134 | PRAIRIE_AUK_TP134 |
| Depth | 1.30 | 0.80 | 1.00 | 1.00 | 2.00 |
| Other ID | 3 | 2 | 3 | 3 | 6 |
| Sample Type | ES | ES | ES | ES | ES |
| Sampling Date | 17/04/2020 | 17/04/2020 | 20/04/2020 | 20/04/2020 | 20/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | | |
|---------------------------------|-------------|-------|-------|-------|---------|-------|--------|--------|
| Asbestos Quantification | DETSC 1102 | 0.001 | % | | < 0.001 | 0.001 | | |
| Metals | | | | | | | | |
| Aluminium | DETSC 2301* | 1 | mg/kg | 10000 | 9600 | 21000 | 8700 | 13000 |
| Antimony | DETSC 2301* | 1 | mg/kg | 1.8 | 4.3 | 4.0 | 18 | 1.5 |
| Arsenic | DETSC 2301# | 0.2 | mg/kg | 9.1 | 10 | 12 | 61 | 9.0 |
| Barium | DETSC 2301# | 1.5 | mg/kg | 390 | 200 | 330 | 200 | 300 |
| Beryllium | DETSC 2301# | 0.2 | mg/kg | 1.7 | 1.0 | 3.1 | 0.9 | 1.2 |
| Boron, Water Soluble | DETSC 2311# | 0.2 | mg/kg | 7.4 | 3.5 | 4.9 | 2.6 | 0.8 |
| Cadmium | DETSC 2301# | 0.1 | mg/kg | 0.6 | 0.8 | 0.8 | 0.6 | 0.3 |
| Chromium | DETSC 2301# | 0.15 | mg/kg | 24 | 200 | 190 | 240 | 29 |
| Chromium, Hexavalent | DETSC 2204* | 1 | mg/kg | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Copper | DETSC 2301# | 0.2 | mg/kg | 94 | 40 | 56 | 100 | 29 |
| Iron | DETSC 2301 | 25 | mg/kg | 32000 | 61000 | 58000 | 140000 | 43000 |
| Lead | DETSC 2301# | 0.3 | mg/kg | 130 | 140 | 89 | 160 | 30 |
| Magnesium | DETSC 2301* | 1 | mg/kg | 7700 | 14000 | 18000 | 15000 | 7300 |
| Manganese | DETSC 2301# | 20 | mg/kg | 1000 | 12000 | 8200 | 26000 | 850 |
| Mercury | DETSC 2325# | 0.05 | mg/kg | 0.56 | 2.2 | 0.19 | 0.09 | < 0.05 |
| Molybdenum | DETSC 2301# | 0.4 | mg/kg | 1.2 | 2.6 | 5.8 | 4.6 | 0.5 |
| Nickel | DETSC 2301# | 1 | mg/kg | 13 | 11 | 19 | 29 | 38 |
| Silicon | DETSC 2301* | 10 | mg/kg | 95000 | 70000 | 72000 | 59000 | 170000 |
| Vanadium | DETSC 2301# | 0.8 | mg/kg | 37 | 410 | 360 | 680 | 36 |
| Zinc | DETSC 2301# | 1 | mg/kg | 710 | 470 | 190 | 180 | 99 |
| Inorganics | | | | | | | | |
| Loss on Ignition at 440oC | DETSC 2003# | 0.01 | % | | | | | |
| pH | DETSC 2008# | | pH | 9.9 | 12.0 | 11.3 | 11.3 | 8.7 |
| Calorific Value | DETSC 5008 | 1 | MJ/kg | | | | | |
| Cyanide, Total | DETSC 2130# | 0.1 | mg/kg | 57 | 25 | 2.2 | 1.4 | 0.1 |
| Cyanide, Free | DETSC 2130# | 0.1 | mg/kg | 0.2 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Thiocyanate | DETSC 2130# | 0.6 | mg/kg | 3.3 | 1.5 | 0.7 | < 0.6 | < 0.6 |
| Organic matter | DETSC 2002# | 0.1 | % | 2.7 | 2.4 | 2.9 | 2.5 | 2.3 |
| Sulphate Aqueous Extract as SO4 | DETSC 2076# | 10 | mg/l | 620 | 65 | 250 | 130 | 78 |
| Sulphur (free) | DETSC 3049# | 0.75 | mg/kg | 14 | 1.9 | 33 | 6.0 | < 0.75 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie
 Client Ref 4251
 Contract Title Prairie Site Ground Investigation Works

| Lab No | 1667237 | 1667238 | 1667501 | 1667502 | 1667503 |
|---------------|-------------------|-------------------|--------------------|-------------------|-------------------|
| Sample ID | PRAIRIE_AUK_TP158 | PRAIRIE_AUK_TP157 | PRAIRIE_AUK_TP120A | PRAIRIE_AUK_TP134 | PRAIRIE_AUK_TP134 |
| Depth | 1.30 | 0.80 | 1.00 | 1.00 | 2.00 |
| Other ID | 3 | 2 | 3 | 3 | 6 |
| Sample Type | ES | ES | ES | ES | ES |
| Sampling Date | 17/04/2020 | 17/04/2020 | 20/04/2020 | 20/04/2020 | 20/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | | |
|-------------------------------|-------------|------|-------|--------|--------|--------|--------|--------|
| Petroleum Hydrocarbons | | | | | | | | |
| Aliphatic C5-C6 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C6-C8 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C8-C10 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C10-C12 | DETSC 3072# | 1.5 | mg/kg | < 1.5 | < 1.5 | < 1.5 | < 1.5 | < 1.5 |
| Aliphatic C12-C16 | DETSC 3072# | 1.2 | mg/kg | < 1.2 | < 1.2 | 3.4 | < 1.2 | < 1.2 |
| Aliphatic C16-C21 | DETSC 3072# | 1.5 | mg/kg | < 1.5 | < 1.5 | 27 | < 1.5 | < 1.5 |
| Aliphatic C21-C35 | DETSC 3072# | 3.4 | mg/kg | < 3.4 | < 3.4 | 270 | < 3.4 | < 3.4 |
| Aliphatic C5-C35 | DETSC 3072* | 10 | mg/kg | < 10 | < 10 | 300 | < 10 | < 10 |
| Aromatic C5-C7 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C7-C8 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C8-C10 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C10-C12 | DETSC 3072# | 0.9 | mg/kg | < 0.9 | < 0.9 | < 0.9 | < 0.9 | < 0.9 |
| Aromatic C12-C16 | DETSC 3072# | 0.5 | mg/kg | < 0.5 | 0.6 | 6.8 | 1.5 | < 0.5 |
| Aromatic C16-C21 | DETSC 3072# | 0.6 | mg/kg | 1.3 | 6.3 | 100 | 15 | < 0.6 |
| Aromatic C21-C35 | DETSC 3072# | 1.4 | mg/kg | 7.2 | 22 | 510 | 69 | < 1.4 |
| Aromatic C5-C35 | DETSC 3072* | 10 | mg/kg | < 10 | 29 | 610 | 86 | < 10 |
| TPH Ali/Aro Total C5-C35 | DETSC 3072* | 10 | mg/kg | < 10 | 29 | 910 | 86 | < 10 |
| EPH (C10-C40) | DETSC 3311# | 10 | mg/kg | | | | | |
| PAHs | | | | | | | | |
| Naphthalene | DETSC 3303# | 0.03 | mg/kg | 0.47 | 0.16 | 0.04 | < 0.03 | < 0.03 |
| Acenaphthylene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | < 0.03 | 0.03 | < 0.03 | < 0.03 |
| Acenaphthene | DETSC 3303# | 0.03 | mg/kg | 0.55 | 0.27 | 0.13 | 0.09 | < 0.03 |
| Fluorene | DETSC 3303 | 0.03 | mg/kg | 0.11 | 0.05 | 0.05 | 0.12 | < 0.03 |
| Phenanthrene | DETSC 3303# | 0.03 | mg/kg | 0.44 | 0.49 | 1.4 | 0.93 | < 0.03 |
| Anthracene | DETSC 3303 | 0.03 | mg/kg | 0.08 | 0.04 | 0.39 | 0.48 | < 0.03 |
| Fluoranthene | DETSC 3303# | 0.03 | mg/kg | 1.2 | 0.72 | 8.2 | 1.5 | < 0.03 |
| Pyrene | DETSC 3303# | 0.03 | mg/kg | 1.1 | 0.63 | 12 | 1.2 | < 0.03 |
| Benzo(a)anthracene | DETSC 3303# | 0.03 | mg/kg | 0.55 | 0.54 | 6.6 | 0.62 | < 0.03 |
| Chrysene | DETSC 3303 | 0.03 | mg/kg | 0.57 | 0.72 | 4.8 | 0.47 | < 0.03 |
| Benzo(b)fluoranthene | DETSC 3303# | 0.03 | mg/kg | 0.66 | 0.64 | 7.3 | 0.66 | < 0.03 |
| Benzo(k)fluoranthene | DETSC 3303# | 0.03 | mg/kg | 0.31 | 0.26 | 2.9 | 0.29 | < 0.03 |
| Benzo(a)pyrene | DETSC 3303# | 0.03 | mg/kg | 0.39 | 0.29 | 5.8 | 0.52 | < 0.03 |
| Indeno(1,2,3-c,d)pyrene | DETSC 3303# | 0.03 | mg/kg | 0.28 | 0.14 | 1.9 | 0.21 | < 0.03 |
| Dibenzo(a,h)anthracene | DETSC 3303# | 0.03 | mg/kg | 0.05 | 0.03 | 0.53 | 0.06 | < 0.03 |
| Benzo(g,h,i)perylene | DETSC 3303# | 0.03 | mg/kg | 0.34 | 0.15 | 2.4 | 0.25 | < 0.03 |
| PAH - USEPA 16, Total | DETSC 3303 | 0.1 | mg/kg | 7.1 | 5.1 | 54 | 7.4 | < 0.10 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie
 Client Ref 4251
 Contract Title Prairie Site Ground Investigation Works

| Lab No | 1667237 | 1667238 | 1667501 | 1667502 | 1667503 |
|---------------|-----------------------|-----------------------|------------------------|-----------------------|-----------------------|
| Sample ID | PRAIRIE_AUK_ TP158 | PRAIRIE_AUK_ TP157 | PRAIRIE_AUK_ TP120A | PRAIRIE_AUK_ TP134 | PRAIRIE_AUK_ TP134 |
| Depth | 1.30 | 0.80 | 1.00 | 1.00 | 2.00 |
| Other ID | 3 | 2 | 3 | 3 | 6 |
| Sample Type | ES | ES | ES | ES | ES |
| Sampling Date | 17/04/2020 | 17/04/2020 | 20/04/2020 | 20/04/2020 | 20/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | | |
|---------------------|-------------|------|-------|-------|--------|-------|-------|-------|
| PCBs | | | | | | | | |
| PCB 28 + PCB 31 | DETSC 3401# | 0.01 | mg/kg | | < 0.01 | | | |
| PCB 52 | DETSC 3401# | 0.01 | mg/kg | | < 0.01 | | | |
| PCB 101 | DETSC 3401# | 0.01 | mg/kg | | < 0.01 | | | |
| PCB 118 | DETSC 3401# | 0.01 | mg/kg | | < 0.01 | | | |
| PCB 153 | DETSC 3401# | 0.01 | mg/kg | | < 0.01 | | | |
| PCB 138 | DETSC 3401# | 0.01 | mg/kg | | < 0.01 | | | |
| PCB 180 | DETSC 3401# | 0.01 | mg/kg | | < 0.01 | | | |
| PCB 7 Total | DETSC 3401# | 0.01 | mg/kg | | < 0.01 | | | |
| Phenols | | | | | | | | |
| Phenol - Monohydric | DETSC 2130# | 0.3 | mg/kg | < 0.3 | < 0.3 | < 0.3 | < 0.3 | < 0.3 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Lab No | 1667504 | 1667505 | 1667506 | 1667507 |
|---------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Sample ID | PRAIRIE_AUK_ TP161 | PRAIRIE_AUK_ TP166 | PRAIRIE_AUK_ TP166 | PRAIRIE_AUK_ TP171 |
| Depth | 1.00 | 0.45 | 1.20 | 0.75 |
| Other ID | 3 | 3 | 8 | 3 |
| Sample Type | ES | ES | ES | ES |
| Sampling Date | 20/04/2020 | 20/04/2020 | 20/04/2020 | 20/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | |
|---------------------------------|-------------|-------|-------|--------|-------|--------|--------|
| Asbestos Quantification | DETSC 1102 | 0.001 | % | | 0.001 | | |
| Metals | | | | | | | |
| Aluminium | DETSC 2301* | 1 | mg/kg | 12000 | 28000 | 10000 | 18000 |
| Antimony | DETSC 2301* | 1 | mg/kg | 5.5 | 5.1 | 1.2 | 3.4 |
| Arsenic | DETSC 2301# | 0.2 | mg/kg | 8.1 | 22 | 7.6 | 30 |
| Barium | DETSC 2301# | 1.5 | mg/kg | 260 | 700 | 200 | 610 |
| Beryllium | DETSC 2301# | 0.2 | mg/kg | 1.9 | 3.4 | 1.0 | 3.2 |
| Boron, Water Soluble | DETSC 2311# | 0.2 | mg/kg | 1.8 | 2.2 | 0.5 | 1.9 |
| Cadmium | DETSC 2301# | 0.1 | mg/kg | 0.2 | 0.9 | 0.2 | 3.6 |
| Chromium | DETSC 2301# | 0.15 | mg/kg | 150 | 140 | 23 | 27 |
| Chromium, Hexavalent | DETSC 2204* | 1 | mg/kg | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Copper | DETSC 2301# | 0.2 | mg/kg | 150 | 160 | 26 | 110 |
| Iron | DETSC 2301 | 25 | mg/kg | 53000 | 91000 | 33000 | 63000 |
| Lead | DETSC 2301# | 0.3 | mg/kg | 59 | 190 | 23 | 310 |
| Magnesium | DETSC 2301* | 1 | mg/kg | 11000 | 21000 | 3500 | 5700 |
| Manganese | DETSC 2301# | 20 | mg/kg | 3400 | 6600 | 840 | 1600 |
| Mercury | DETSC 2325# | 0.05 | mg/kg | 0.08 | 0.28 | < 0.05 | 0.06 |
| Molybdenum | DETSC 2301# | 0.4 | mg/kg | 1.8 | 5.7 | < 0.4 | 4.2 |
| Nickel | DETSC 2301# | 1 | mg/kg | 15 | 53 | 40 | 46 |
| Silicon | DETSC 2301* | 10 | mg/kg | 80000 | 59000 | 180000 | 90000 |
| Vanadium | DETSC 2301# | 0.8 | mg/kg | 160 | 340 | 28 | 120 |
| Zinc | DETSC 2301# | 1 | mg/kg | 110 | 210 | 66 | 1500 |
| Inorganics | | | | | | | |
| Loss on Ignition at 440oC | DETSC 2003# | 0.01 | % | | | | |
| pH | DETSC 2008# | | pH | 11.4 | 10.0 | 7.9 | 8.5 |
| Calorific Value | DETSC 5008 | 1 | MJ/kg | | | | |
| Cyanide, Total | DETSC 2130# | 0.1 | mg/kg | 0.5 | 0.5 | < 0.1 | 0.5 |
| Cyanide, Free | DETSC 2130# | 0.1 | mg/kg | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Thiocyanate | DETSC 2130# | 0.6 | mg/kg | < 0.6 | < 0.6 | < 0.6 | < 0.6 |
| Organic matter | DETSC 2002# | 0.1 | % | 1.6 | 2.5 | 1.8 | 5.8 |
| Sulphate Aqueous Extract as SO4 | DETSC 2076# | 10 | mg/l | 100 | 260 | 84 | 120 |
| Sulphur (free) | DETSC 3049# | 0.75 | mg/kg | < 0.75 | 3.9 | < 0.75 | < 0.75 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Lab No | 1667504 | 1667505 | 1667506 | 1667507 |
|---------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Sample ID | PRAIRIE_AUK_ TP161 | PRAIRIE_AUK_ TP166 | PRAIRIE_AUK_ TP166 | PRAIRIE_AUK_ TP171 |
| Depth | 1.00 | 0.45 | 1.20 | 0.75 |
| Other ID | 3 | 3 | 8 | 3 |
| Sample Type | ES | ES | ES | ES |
| Sampling Date | 20/04/2020 | 20/04/2020 | 20/04/2020 | 20/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | |
|-------------------------------|-------------|------|-------|--------|--------|--------|--------|
| Petroleum Hydrocarbons | | | | | | | |
| Aliphatic C5-C6 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C6-C8 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C8-C10 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C10-C12 | DETSC 3072# | 1.5 | mg/kg | < 1.5 | < 1.5 | < 1.5 | < 1.5 |
| Aliphatic C12-C16 | DETSC 3072# | 1.2 | mg/kg | < 1.2 | < 1.2 | < 1.2 | < 1.2 |
| Aliphatic C16-C21 | DETSC 3072# | 1.5 | mg/kg | < 1.5 | < 1.5 | < 1.5 | < 1.5 |
| Aliphatic C21-C35 | DETSC 3072# | 3.4 | mg/kg | 30 | 9.9 | < 3.4 | < 3.4 |
| Aliphatic C5-C35 | DETSC 3072* | 10 | mg/kg | 31 | 11 | < 10 | < 10 |
| Aromatic C5-C7 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C7-C8 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C8-C10 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C10-C12 | DETSC 3072# | 0.9 | mg/kg | < 0.9 | < 0.9 | < 0.9 | < 0.9 |
| Aromatic C12-C16 | DETSC 3072# | 0.5 | mg/kg | < 0.5 | 0.7 | < 0.5 | < 0.5 |
| Aromatic C16-C21 | DETSC 3072# | 0.6 | mg/kg | 4.4 | 19 | < 0.6 | < 0.6 |
| Aromatic C21-C35 | DETSC 3072# | 1.4 | mg/kg | 29 | 65 | < 1.4 | < 1.4 |
| Aromatic C5-C35 | DETSC 3072* | 10 | mg/kg | 33 | 84 | < 10 | < 10 |
| TPH Ali/Aro Total C5-C35 | DETSC 3072* | 10 | mg/kg | 64 | 95 | < 10 | < 10 |
| EPH (C10-C40) | DETSC 3311# | 10 | mg/kg | | | | |
| PAHs | | | | | | | |
| Naphthalene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | < 0.03 | < 0.03 | < 0.03 |
| Acenaphthylene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | < 0.03 | < 0.03 | < 0.03 |
| Acenaphthene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | < 0.03 | < 0.03 | < 0.03 |
| Fluorene | DETSC 3303 | 0.03 | mg/kg | < 0.03 | < 0.03 | < 0.03 | < 0.03 |
| Phenanthrene | DETSC 3303# | 0.03 | mg/kg | 0.15 | 0.25 | < 0.03 | 0.09 |
| Anthracene | DETSC 3303 | 0.03 | mg/kg | < 0.03 | 0.08 | < 0.03 | < 0.03 |
| Fluoranthene | DETSC 3303# | 0.03 | mg/kg | 0.32 | 1.2 | < 0.03 | 0.20 |
| Pyrene | DETSC 3303# | 0.03 | mg/kg | 0.33 | 1.1 | < 0.03 | 0.17 |
| Benzo(a)anthracene | DETSC 3303# | 0.03 | mg/kg | 0.19 | 0.67 | < 0.03 | 0.11 |
| Chrysene | DETSC 3303 | 0.03 | mg/kg | 0.19 | 0.60 | < 0.03 | 0.12 |
| Benzo(b)fluoranthene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | 0.89 | < 0.03 | 0.17 |
| Benzo(k)fluoranthene | DETSC 3303# | 0.03 | mg/kg | 0.11 | 0.37 | < 0.03 | 0.08 |
| Benzo(a)pyrene | DETSC 3303# | 0.03 | mg/kg | 0.13 | 0.71 | < 0.03 | 0.12 |
| Indeno(1,2,3-c,d)pyrene | DETSC 3303# | 0.03 | mg/kg | 0.09 | 0.29 | < 0.03 | 0.06 |
| Dibenzo(a,h)anthracene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | 0.08 | < 0.03 | < 0.03 |
| Benzo(g,h,i)perylene | DETSC 3303# | 0.03 | mg/kg | 0.11 | 0.38 | < 0.03 | 0.07 |
| PAH - USEPA 16, Total | DETSC 3303 | 0.1 | mg/kg | 1.6 | 6.6 | < 0.10 | 1.2 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie
 Client Ref 4251
 Contract Title Prairie Site Ground Investigation Works

| Lab No | 1667504 | 1667505 | 1667506 | 1667507 |
|---------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Sample ID | PRAIRIE_AUK_ TP161 | PRAIRIE_AUK_ TP166 | PRAIRIE_AUK_ TP166 | PRAIRIE_AUK_ TP171 |
| Depth | 1.00 | 0.45 | 1.20 | 0.75 |
| Other ID | 3 | 3 | 8 | 3 |
| Sample Type | ES | ES | ES | ES |
| Sampling Date | 20/04/2020 | 20/04/2020 | 20/04/2020 | 20/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | |
|---------------------|-------------|------|-------|-------|-------|-------|-------|
| PCBs | | | | | | | |
| PCB 28 + PCB 31 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 52 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 101 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 118 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 153 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 138 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 180 | DETSC 3401# | 0.01 | mg/kg | | | | |
| PCB 7 Total | DETSC 3401# | 0.01 | mg/kg | | | | |
| Phenols | | | | | | | |
| Phenol - Monohydric | DETSC 2130# | 0.3 | mg/kg | < 0.3 | < 0.3 | < 0.3 | < 0.3 |

Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Lab No | 1667508 | 1668118 | 1668119 | 1668120 | 1668121 |
|---------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Sample ID | PRAIRIE_AUK_TP187 | PRAIRIE_AUK_BH110 | PRAIRIE_AUK_TP102 | PRAIRIE_AUK_TP102 | PRAIRIE_AUK_TP103 |
| Depth | 0.70 | 3.00 | 1.00 | 3.00 | 1.00 |
| Other ID | 3 | 1 | 4 | 11 | 3 |
| Sample Type | ES | ES | ES | ES | ES |
| Sampling Date | 20/04/2020 | 20/04/2020 | 21/04/2020 | 21/04/2020 | 21/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | | |
|---------------------------------|-------------|-------|-------|--------|--------|--------|---------|--------|
| Asbestos Quantification | DETSC 1102 | 0.001 | % | | | | < 0.001 | |
| Metals | | | | | | | | |
| Aluminium | DETSC 2301* | 1 | mg/kg | 14000 | 12000 | 49000 | 19000 | 45000 |
| Antimony | DETSC 2301* | 1 | mg/kg | 22 | 1.4 | 1.3 | 1.8 | 1.5 |
| Arsenic | DETSC 2301# | 0.2 | mg/kg | 46 | 7.5 | 11 | 21 | 8.1 |
| Barium | DETSC 2301# | 1.5 | mg/kg | 340 | 210 | 460 | 630 | 440 |
| Beryllium | DETSC 2301# | 0.2 | mg/kg | 3.2 | 1.1 | 8.9 | 2.0 | 5.7 |
| Boron, Water Soluble | DETSC 2311# | 0.2 | mg/kg | 1.1 | 0.6 | 1.8 | 2.4 | 2.4 |
| Cadmium | DETSC 2301# | 0.1 | mg/kg | 24 | 0.1 | 0.1 | 0.5 | < 0.1 |
| Chromium | DETSC 2301# | 0.15 | mg/kg | 19 | 28 | 30 | 29 | 82 |
| Chromium, Hexavalent | DETSC 2204* | 1 | mg/kg | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Copper | DETSC 2301# | 0.2 | mg/kg | 530 | 27 | 22 | 36 | 17 |
| Iron | DETSC 2301 | 25 | mg/kg | 110000 | 31000 | 19000 | 36000 | 26000 |
| Lead | DETSC 2301# | 0.3 | mg/kg | 1800 | 24 | 20 | 98 | 14 |
| Magnesium | DETSC 2301* | 1 | mg/kg | 5200 | 9400 | 28000 | 7400 | 25000 |
| Manganese | DETSC 2301# | 20 | mg/kg | 4200 | 570 | 6700 | 1100 | 6200 |
| Mercury | DETSC 2325# | 0.05 | mg/kg | 0.13 | < 0.05 | 0.06 | 0.08 | < 0.05 |
| Molybdenum | DETSC 2301# | 0.4 | mg/kg | 6.4 | 0.7 | 0.6 | 0.7 | 0.6 |
| Nickel | DETSC 2301# | 1 | mg/kg | 55 | 37 | 7.2 | 25 | 11 |
| Silicon | DETSC 2301* | 10 | mg/kg | 96000 | 170000 | 72000 | 160000 | 68000 |
| Vanadium | DETSC 2301# | 0.8 | mg/kg | 81 | 31 | 100 | 65 | 110 |
| Zinc | DETSC 2301# | 1 | mg/kg | 3800 | 91 | 84 | 300 | 43 |
| Inorganics | | | | | | | | |
| Loss on Ignition at 440oC | DETSC 2003# | 0.01 | % | | | | | |
| pH | DETSC 2008# | | pH | 8.8 | 7.7 | 10.1 | 8.5 | 9.2 |
| Calorific Value | DETSC 5008 | 1 | MJ/kg | | | | | |
| Cyanide, Total | DETSC 2130# | 0.1 | mg/kg | 11 | < 0.1 | 0.2 | 0.2 | 0.2 |
| Cyanide, Free | DETSC 2130# | 0.1 | mg/kg | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Thiocyanate | DETSC 2130# | 0.6 | mg/kg | < 0.6 | < 0.6 | < 0.6 | 0.7 | < 0.6 |
| Organic matter | DETSC 2002# | 0.1 | % | 14 | 3.3 | 1.4 | 3.3 | 3.1 |
| Sulphate Aqueous Extract as SO4 | DETSC 2076# | 10 | mg/l | 74 | 350 | 580 | 220 | 680 |
| Sulphur (free) | DETSC 3049# | 0.75 | mg/kg | < 0.75 | < 0.75 | < 0.75 | 2.2 | 110 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Lab No | 1667508 | 1668118 | 1668119 | 1668120 | 1668121 |
|---------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Sample ID | PRAIRIE_AUK_ TP187 | PRAIRIE_AUK_ BH110 | PRAIRIE_AUK_ TP102 | PRAIRIE_AUK_ TP102 | PRAIRIE_AUK_ TP103 |
| Depth | 0.70 | 3.00 | 1.00 | 3.00 | 1.00 |
| Other ID | 3 | 1 | 4 | 11 | 3 |
| Sample Type | ES | ES | ES | ES | ES |
| Sampling Date | 20/04/2020 | 20/04/2020 | 21/04/2020 | 21/04/2020 | 21/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | 1667508 | 1668118 | 1668119 | 1668120 | 1668121 |
|-------------------------------|-------------|------|-------|---------|---------|---------|---------|---------|
| Petroleum Hydrocarbons | | | | | | | | |
| Aliphatic C5-C6 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C6-C8 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C8-C10 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C10-C12 | DETSC 3072# | 1.5 | mg/kg | < 1.5 | < 1.5 | < 1.5 | 11 | 3.1 |
| Aliphatic C12-C16 | DETSC 3072# | 1.2 | mg/kg | < 1.2 | < 1.2 | < 1.2 | 29 | 13 |
| Aliphatic C16-C21 | DETSC 3072# | 1.5 | mg/kg | < 1.5 | < 1.5 | < 1.5 | 33 | 14 |
| Aliphatic C21-C35 | DETSC 3072# | 3.4 | mg/kg | < 3.4 | < 3.4 | < 3.4 | 29 | 17 |
| Aliphatic C5-C35 | DETSC 3072* | 10 | mg/kg | < 10 | < 10 | < 10 | 100 | 47 |
| Aromatic C5-C7 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C7-C8 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C8-C10 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C10-C12 | DETSC 3072# | 0.9 | mg/kg | < 0.9 | < 0.9 | < 0.9 | 1.8 | 0.9 |
| Aromatic C12-C16 | DETSC 3072# | 0.5 | mg/kg | < 0.5 | < 0.5 | < 0.5 | 13 | 8.2 |
| Aromatic C16-C21 | DETSC 3072# | 0.6 | mg/kg | < 0.6 | < 0.6 | < 0.6 | 16 | 30 |
| Aromatic C21-C35 | DETSC 3072# | 1.4 | mg/kg | < 1.4 | < 1.4 | < 1.4 | 5.9 | 97 |
| Aromatic C5-C35 | DETSC 3072* | 10 | mg/kg | < 10 | < 10 | < 10 | 36 | 140 |
| TPH Ali/Aro Total C5-C35 | DETSC 3072* | 10 | mg/kg | < 10 | < 10 | < 10 | 140 | 180 |
| EPH (C10-C40) | DETSC 3311# | 10 | mg/kg | | | | | |
| PAHs | | | | | | | | |
| Naphthalene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 |
| Acenaphthylene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | < 0.03 | < 0.03 | < 0.03 | 0.10 |
| Acenaphthene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | < 0.03 | < 0.03 | < 0.03 | 0.12 |
| Fluorene | DETSC 3303 | 0.03 | mg/kg | < 0.03 | < 0.03 | < 0.03 | < 0.03 | 0.13 |
| Phenanthrene | DETSC 3303# | 0.03 | mg/kg | 0.06 | < 0.03 | < 0.03 | 0.11 | 2.6 |
| Anthracene | DETSC 3303 | 0.03 | mg/kg | < 0.03 | 0.05 | < 0.03 | < 0.03 | 0.81 |
| Fluoranthene | DETSC 3303# | 0.03 | mg/kg | 0.29 | < 0.03 | 0.06 | 0.16 | 36 |
| Pyrene | DETSC 3303# | 0.03 | mg/kg | 0.28 | < 0.03 | 0.06 | 0.13 | 29 |
| Benzo(a)anthracene | DETSC 3303# | 0.03 | mg/kg | 0.15 | 0.06 | 0.04 | 0.05 | 15 |
| Chrysene | DETSC 3303 | 0.03 | mg/kg | 0.16 | < 0.03 | 0.05 | 0.05 | 11 |
| Benzo(b)fluoranthene | DETSC 3303# | 0.03 | mg/kg | 0.24 | < 0.03 | 0.07 | < 0.03 | 14 |
| Benzo(k)fluoranthene | DETSC 3303# | 0.03 | mg/kg | 0.10 | < 0.03 | < 0.03 | < 0.03 | 7.1 |
| Benzo(a)pyrene | DETSC 3303# | 0.03 | mg/kg | 0.18 | < 0.03 | < 0.03 | < 0.03 | 11 |
| Indeno(1,2,3-c,d)pyrene | DETSC 3303# | 0.03 | mg/kg | 0.09 | < 0.03 | 0.04 | < 0.03 | 4.1 |
| Dibenzo(a,h)anthracene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | < 0.03 | < 0.03 | < 0.03 | 1.2 |
| Benzo(g,h,i)perylene | DETSC 3303# | 0.03 | mg/kg | 0.11 | < 0.03 | 0.04 | < 0.03 | 5.0 |
| PAH - USEPA 16, Total | DETSC 3303 | 0.1 | mg/kg | 1.7 | 0.11 | 0.36 | 0.49 | 140 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie
 Client Ref 4251
 Contract Title Prairie Site Ground Investigation Works

| Lab No | 1667508 | 1668118 | 1668119 | 1668120 | 1668121 |
|---------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Sample ID | PRAIRIE_AUK_ TP187 | PRAIRIE_AUK_ BH110 | PRAIRIE_AUK_ TP102 | PRAIRIE_AUK_ TP102 | PRAIRIE_AUK_ TP103 |
| Depth | 0.70 | 3.00 | 1.00 | 3.00 | 1.00 |
| Other ID | 3 | 1 | 4 | 11 | 3 |
| Sample Type | ES | ES | ES | ES | ES |
| Sampling Date | 20/04/2020 | 20/04/2020 | 21/04/2020 | 21/04/2020 | 21/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | | |
|---------------------|-------------|------|-------|-------|-------|--------|-------|-----|
| PCBs | | | | | | | | |
| PCB 28 + PCB 31 | DETSC 3401# | 0.01 | mg/kg | | | < 0.01 | | |
| PCB 52 | DETSC 3401# | 0.01 | mg/kg | | | < 0.01 | | |
| PCB 101 | DETSC 3401# | 0.01 | mg/kg | | | < 0.01 | | |
| PCB 118 | DETSC 3401# | 0.01 | mg/kg | | | < 0.01 | | |
| PCB 153 | DETSC 3401# | 0.01 | mg/kg | | | < 0.01 | | |
| PCB 138 | DETSC 3401# | 0.01 | mg/kg | | | < 0.01 | | |
| PCB 180 | DETSC 3401# | 0.01 | mg/kg | | | < 0.01 | | |
| PCB 7 Total | DETSC 3401# | 0.01 | mg/kg | | | < 0.01 | | |
| Phenols | | | | | | | | |
| Phenol - Monohydric | DETSC 2130# | 0.3 | mg/kg | < 0.3 | < 0.3 | 0.3 | < 0.3 | 0.5 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Lab No | 1668122 | 1668123 | 1668124 | 1668125 | 1668126 |
|---------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Sample ID | PRAIRIE_AUK_TP109 | PRAIRIE_AUK_TP110 | PRAIRIE_AUK_TP110 | PRAIRIE_AUK_TP111 | PRAIRIE_AUK_TP112 |
| Depth | 1.00 | 1.00 | 2.00 | 1.50 | 1.50 |
| Other ID | 3 | 3 | 7 | 4 | 4 |
| Sample Type | ES | ES | ES | ES | ES |
| Sampling Date | 21/04/2020 | 21/04/2020 | 21/04/2020 | 22/04/2020 | 22/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | | |
|---------------------------------|-------------|-------|-------|--------|-------|--------|--------|--------|
| Asbestos Quantification | DETSC 1102 | 0.001 | % | | | | 0.002 | |
| Metals | | | | | | | | |
| Aluminium | DETSC 2301* | 1 | mg/kg | 33000 | 31000 | 18000 | 18000 | 14000 |
| Antimony | DETSC 2301* | 1 | mg/kg | 2.1 | 1.8 | 2.9 | 8.9 | 4.5 |
| Arsenic | DETSC 2301# | 0.2 | mg/kg | 11 | 6.8 | 21 | 48 | 19 |
| Barium | DETSC 2301# | 1.5 | mg/kg | 350 | 490 | 380 | 600 | 540 |
| Beryllium | DETSC 2301# | 0.2 | mg/kg | 4.4 | 3.6 | 1.8 | 1.8 | 1.8 |
| Boron, Water Soluble | DETSC 2311# | 0.2 | mg/kg | 6.7 | 3.3 | 1.6 | 1.4 | 1.0 |
| Cadmium | DETSC 2301# | 0.1 | mg/kg | 0.2 | 0.2 | 0.4 | 0.9 | 0.9 |
| Chromium | DETSC 2301# | 0.15 | mg/kg | 110 | 72 | 78 | 390 | 210 |
| Chromium, Hexavalent | DETSC 2204* | 1 | mg/kg | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Copper | DETSC 2301# | 0.2 | mg/kg | 71 | 110 | 60 | 76 | 68 |
| Iron | DETSC 2301 | 25 | mg/kg | 35000 | 31000 | 60000 | 99000 | 65000 |
| Lead | DETSC 2301# | 0.3 | mg/kg | 33 | 31 | 94 | 120 | 60 |
| Magnesium | DETSC 2301* | 1 | mg/kg | 21000 | 24000 | 9500 | 29000 | 12000 |
| Manganese | DETSC 2301# | 20 | mg/kg | 8200 | 5100 | 1900 | 9100 | 4900 |
| Mercury | DETSC 2325# | 0.05 | mg/kg | < 0.05 | 0.06 | 0.23 | 0.36 | < 0.05 |
| Molybdenum | DETSC 2301# | 0.4 | mg/kg | 0.7 | 1.2 | 1.8 | 3.1 | 5.4 |
| Nickel | DETSC 2301# | 1 | mg/kg | 9.3 | 9.8 | 40 | 32 | 31 |
| Silicon | DETSC 2301* | 10 | mg/kg | 72000 | 68000 | 16000 | 67000 | 79000 |
| Vanadium | DETSC 2301# | 0.8 | mg/kg | 300 | 180 | 210 | 1100 | 690 |
| Zinc | DETSC 2301# | 1 | mg/kg | 68 | 140 | 260 | 290 | 580 |
| Inorganics | | | | | | | | |
| Loss on Ignition at 440oC | DETSC 2003# | 0.01 | % | | | | | |
| pH | DETSC 2008# | | pH | 10.2 | 11.2 | 10.4 | 11.6 | 11.3 |
| Calorific Value | DETSC 5008 | 1 | MJ/kg | | | | | |
| Cyanide, Total | DETSC 2130# | 0.1 | mg/kg | 0.2 | 0.1 | < 0.1 | 0.5 | < 0.1 |
| Cyanide, Free | DETSC 2130# | 0.1 | mg/kg | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Thiocyanate | DETSC 2130# | 0.6 | mg/kg | < 0.6 | < 0.6 | < 0.6 | < 0.6 | < 0.6 |
| Organic matter | DETSC 2002# | 0.1 | % | 1.1 | 2.3 | 2.7 | 2.7 | 2.0 |
| Sulphate Aqueous Extract as SO4 | DETSC 2076# | 10 | mg/l | 400 | 260 | 230 | 87 | 140 |
| Sulphur (free) | DETSC 3049# | 0.75 | mg/kg | < 0.75 | 57 | < 0.75 | < 0.75 | < 0.75 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Lab No | 1668122 | 1668123 | 1668124 | 1668125 | 1668126 |
|---------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Sample ID | PRAIRIE_AUK_TP109 | PRAIRIE_AUK_TP110 | PRAIRIE_AUK_TP110 | PRAIRIE_AUK_TP111 | PRAIRIE_AUK_TP112 |
| Depth | 1.00 | 1.00 | 2.00 | 1.50 | 1.50 |
| Other ID | 3 | 3 | 7 | 4 | 4 |
| Sample Type | ES | ES | ES | ES | ES |
| Sampling Date | 21/04/2020 | 21/04/2020 | 21/04/2020 | 22/04/2020 | 22/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | | |
|-------------------------------|-------------|------|-------|--------|--------|--------|--------|--------|
| Petroleum Hydrocarbons | | | | | | | | |
| Aliphatic C5-C6 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C6-C8 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C8-C10 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C10-C12 | DETSC 3072# | 1.5 | mg/kg | < 1.5 | < 1.5 | < 1.5 | < 1.5 | < 1.5 |
| Aliphatic C12-C16 | DETSC 3072# | 1.2 | mg/kg | < 1.2 | 2.2 | < 1.2 | < 1.2 | < 1.2 |
| Aliphatic C16-C21 | DETSC 3072# | 1.5 | mg/kg | < 1.5 | 4.4 | < 1.5 | < 1.5 | < 1.5 |
| Aliphatic C21-C35 | DETSC 3072# | 3.4 | mg/kg | < 3.4 | 35 | < 3.4 | < 3.4 | < 3.4 |
| Aliphatic C5-C35 | DETSC 3072* | 10 | mg/kg | < 10 | 43 | < 10 | < 10 | < 10 |
| Aromatic C5-C7 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C7-C8 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C8-C10 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C10-C12 | DETSC 3072# | 0.9 | mg/kg | < 0.9 | < 0.9 | < 0.9 | < 0.9 | < 0.9 |
| Aromatic C12-C16 | DETSC 3072# | 0.5 | mg/kg | < 0.5 | 1.5 | < 0.5 | 0.8 | 0.6 |
| Aromatic C16-C21 | DETSC 3072# | 0.6 | mg/kg | < 0.6 | 8.8 | < 0.6 | 5.2 | 4.6 |
| Aromatic C21-C35 | DETSC 3072# | 1.4 | mg/kg | < 1.4 | 73 | < 1.4 | 18 | 11 |
| Aromatic C5-C35 | DETSC 3072* | 10 | mg/kg | < 10 | 84 | < 10 | 24 | 16 |
| TPH Ali/Aro Total C5-C35 | DETSC 3072* | 10 | mg/kg | < 10 | 130 | < 10 | 24 | 16 |
| EPH (C10-C40) | DETSC 3311# | 10 | mg/kg | | | | | |
| PAHs | | | | | | | | |
| Naphthalene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | 0.07 | < 0.03 | 0.15 | 0.07 |
| Acenaphthylene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | 0.06 | < 0.03 | 0.31 | 0.10 |
| Acenaphthene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | 1.4 | < 0.03 | 0.13 | < 0.03 |
| Fluorene | DETSC 3303 | 0.03 | mg/kg | < 0.03 | 0.78 | < 0.03 | 0.49 | 0.09 |
| Phenanthrene | DETSC 3303# | 0.03 | mg/kg | 0.14 | 3.2 | 0.12 | 3.9 | 1.7 |
| Anthracene | DETSC 3303 | 0.03 | mg/kg | < 0.03 | 3.1 | < 0.03 | 1.3 | 0.35 |
| Fluoranthene | DETSC 3303# | 0.03 | mg/kg | 0.29 | 36 | 0.52 | 8.6 | 3.5 |
| Pyrene | DETSC 3303# | 0.03 | mg/kg | 0.25 | 37 | 0.41 | 6.9 | 2.6 |
| Benzo(a)anthracene | DETSC 3303# | 0.03 | mg/kg | 0.17 | 20 | 0.22 | 4.2 | 1.3 |
| Chrysene | DETSC 3303 | 0.03 | mg/kg | 0.15 | 12 | 0.15 | 2.6 | 0.99 |
| Benzo(b)fluoranthene | DETSC 3303# | 0.03 | mg/kg | 0.23 | 18 | 0.17 | 3.6 | 1.4 |
| Benzo(k)fluoranthene | DETSC 3303# | 0.03 | mg/kg | 0.08 | 5.6 | 0.09 | 1.7 | 0.61 |
| Benzo(a)pyrene | DETSC 3303# | 0.03 | mg/kg | 0.11 | 9.4 | 0.12 | 2.7 | 0.86 |
| Indeno(1,2,3-c,d)pyrene | DETSC 3303# | 0.03 | mg/kg | 0.08 | 3.1 | 0.06 | 1.2 | 0.43 |
| Dibenzo(a,h)anthracene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | 1.1 | < 0.03 | 0.25 | 0.11 |
| Benzo(g,h,i)perylene | DETSC 3303# | 0.03 | mg/kg | 0.10 | 3.2 | 0.06 | 1.2 | 0.51 |
| PAH - USEPA 16, Total | DETSC 3303 | 0.1 | mg/kg | 1.6 | 150 | 1.9 | 39 | 14 |



Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie
 Client Ref 4251
 Contract Title Prairie Site Ground Investigation Works

| Lab No | 1668122 | 1668123 | 1668124 | 1668125 | 1668126 |
|---------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Sample ID | PRAIRIE_AUK_TP109 | PRAIRIE_AUK_TP110 | PRAIRIE_AUK_TP110 | PRAIRIE_AUK_TP111 | PRAIRIE_AUK_TP112 |
| Depth | 1.00 | 1.00 | 2.00 | 1.50 | 1.50 |
| Other ID | 3 | 3 | 7 | 4 | 4 |
| Sample Type | ES | ES | ES | ES | ES |
| Sampling Date | 21/04/2020 | 21/04/2020 | 21/04/2020 | 22/04/2020 | 22/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | | |
|---------------------|-------------|------|-------|-----|-----|-----|-----|--------|
| PCBs | | | | | | | | |
| PCB 28 + PCB 31 | DETSC 3401# | 0.01 | mg/kg | | | | | < 0.01 |
| PCB 52 | DETSC 3401# | 0.01 | mg/kg | | | | | < 0.01 |
| PCB 101 | DETSC 3401# | 0.01 | mg/kg | | | | | 0.01 |
| PCB 118 | DETSC 3401# | 0.01 | mg/kg | | | | | < 0.01 |
| PCB 153 | DETSC 3401# | 0.01 | mg/kg | | | | | < 0.01 |
| PCB 138 | DETSC 3401# | 0.01 | mg/kg | | | | | 0.01 |
| PCB 180 | DETSC 3401# | 0.01 | mg/kg | | | | | < 0.01 |
| PCB 7 Total | DETSC 3401# | 0.01 | mg/kg | | | | | 0.03 |
| Phenols | | | | | | | | |
| Phenol - Monohydric | DETSC 2130# | 0.3 | mg/kg | 0.5 | 0.6 | 0.4 | 0.4 | < 0.3 |

Summary of Chemical Analysis

Soil Samples

Our Ref Combined 4251 Prairie

Client Ref 4251

Contract Title Prairie Site Ground Investigation Works

| Lab No | 1668127 | 1668128 | 1668129 | 1668130 |
|---------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Sample ID | PRAIRIE_AUK_ TP119 | PRAIRIE_AUK_ TP119 | PRAIRIE_AUK_ TP133 | PRAIRIE_AUK_ TP152 |
| Depth | 1.50 | 2.50 | 0.50 | 2.00 |
| Other ID | 3 | 7 | 2 | 6 |
| Sample Type | ES | ES | ES | ES |
| Sampling Date | 22/04/2020 | 22/04/2020 | 22/04/2020 | 22/04/2020 |
| Sampling Time | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | |
|---------------------------------|-------------|-------|-------|--------|--------|--------|--------|
| Asbestos Quantification | DETSC 1102 | 0.001 | % | | | | 0.002 |
| Metals | | | | | | | |
| Aluminium | DETSC 2301* | 1 | mg/kg | 37000 | 14000 | 21000 | 15000 |
| Antimony | DETSC 2301* | 1 | mg/kg | 2.5 | 1.5 | 6.5 | 5.0 |
| Arsenic | DETSC 2301# | 0.2 | mg/kg | 11 | 8.5 | 35 | 19 |
| Barium | DETSC 2301# | 1.5 | mg/kg | 380 | 180 | 390 | 230 |
| Beryllium | DETSC 2301# | 0.2 | mg/kg | 4.0 | 1.1 | 2.4 | 1.3 |
| Boron, Water Soluble | DETSC 2311# | 0.2 | mg/kg | 1.8 | 0.5 | 1.2 | 1.8 |
| Cadmium | DETSC 2301# | 0.1 | mg/kg | 0.3 | 0.2 | 0.8 | 1.7 |
| Chromium | DETSC 2301# | 0.15 | mg/kg | 140 | 33 | 150 | 160 |
| Chromium, Hexavalent | DETSC 2204* | 1 | mg/kg | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Copper | DETSC 2301# | 0.2 | mg/kg | 35 | 31 | 330 | 64 |
| Iron | DETSC 2301 | 25 | mg/kg | 38000 | 38000 | 120000 | 67000 |
| Lead | DETSC 2301# | 0.3 | mg/kg | 29 | 28 | 110 | 200 |
| Magnesium | DETSC 2301* | 1 | mg/kg | 26000 | 7300 | 15000 | 18000 |
| Manganese | DETSC 2301# | 20 | mg/kg | 6400 | 660 | 4800 | 3300 |
| Mercury | DETSC 2325# | 0.05 | mg/kg | 0.08 | < 0.05 | 0.12 | 0.30 |
| Molybdenum | DETSC 2301# | 0.4 | mg/kg | 0.8 | 0.4 | 3.2 | 1.9 |
| Nickel | DETSC 2301# | 1 | mg/kg | 11 | 39 | 56 | 34 |
| Silicon | DETSC 2301* | 10 | mg/kg | 58000 | 160000 | 94000 | 120000 |
| Vanadium | DETSC 2301# | 0.8 | mg/kg | 430 | 40 | 350 | 320 |
| Zinc | DETSC 2301# | 1 | mg/kg | 82 | 96 | 380 | 360 |
| Inorganics | | | | | | | |
| Loss on Ignition at 440oC | DETSC 2003# | 0.01 | % | | | | |
| pH | DETSC 2008# | | pH | 11.1 | 8.9 | 11.3 | 11.0 |
| Calorific Value | DETSC 5008 | 1 | MJ/kg | | | | |
| Cyanide, Total | DETSC 2130# | 0.1 | mg/kg | 0.1 | < 0.1 | 0.4 | 0.5 |
| Cyanide, Free | DETSC 2130# | 0.1 | mg/kg | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Thiocyanate | DETSC 2130# | 0.6 | mg/kg | < 0.6 | < 0.6 | < 0.6 | < 0.6 |
| Organic matter | DETSC 2002# | 0.1 | % | 4.4 | 2.1 | 2.2 | 1.9 |
| Sulphate Aqueous Extract as SO4 | DETSC 2076# | 10 | mg/l | 1100 | 72 | 170 | 1700 |
| Sulphur (free) | DETSC 3049# | 0.75 | mg/kg | < 0.75 | < 0.75 | 8.9 | < 0.75 |