



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 25 Stella Gill Industrial Estate, Pelton Fell, Chester-le-Street, Co. Durham, DH2 2RG
Regional Office: Unit 20 Business Development Centre, Eanam Wharf, Blackburn, BB1 5BL

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TRIAL PIT RECORD

Status:-

FINAL

Project: Prairie Site Ground Investigation Works			Exploratory Hole No.
Client: South Tees Development Corporation	Location: E:454479.190 N:520939.302		PRAIRIE_AUK_TP195
Method (Equipment): Machine Excavated (360 Tracked Excavator)	Ground Level (m): 12.556	Start Date: 28/04/2020	Sheet: 2 of 4

Figure PRAIRIE_AUK_TP195.1
PRAIRIE_AUK_TP195



Figure PRAIRIE_AUK_TP195.2
PRAIRIE_AUK_TP195





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Client: South Tees Development Corporation	Location: E:454479.190 N:520939.302		PRAIRIE_AUK_TP195
Method (Equipment): Machine Excavated (360 Tracked Excavator)	Ground Level (m): 12.556	Start Date: 28/04/2020	Sheet: 3 of 4

Figure PRAIRIE_AUK_TP195.3
PRAIRIE_AUK_TP195



Figure PRAIRIE_AUK_TP195.4
PRAIRIE_AUK_TP195 - Spoil





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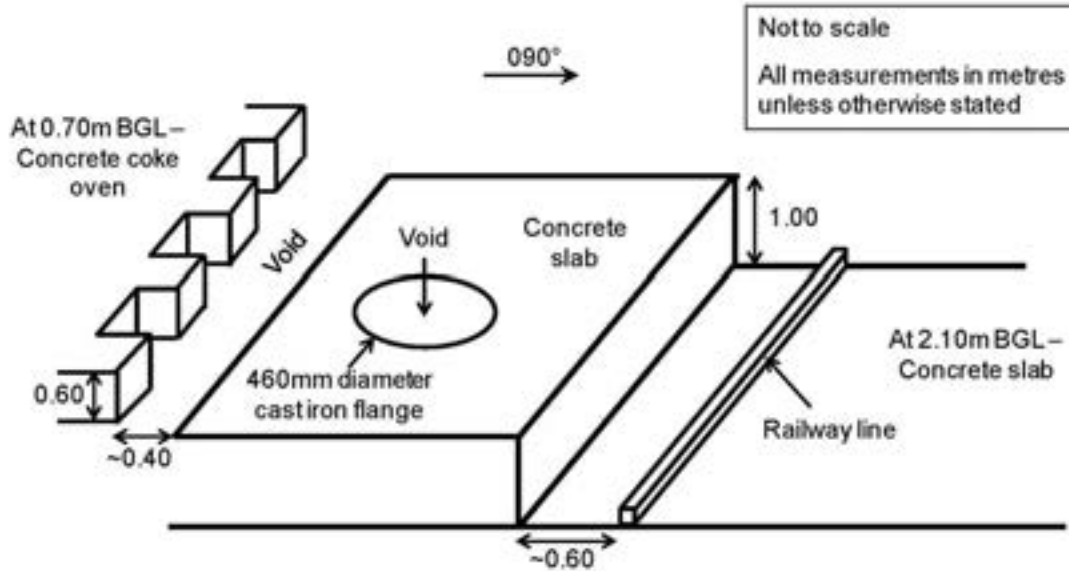
TRIAL PIT RECORD

Status:-

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Client: South Tees Development Corporation	Location: E:454479.190 N:520939.302		PRAIRIE_AUK_TP195
Method (Equipment): Machine Excavated (360 Tracked Excavator)	Ground Level (m): 12.556	Start Date: 28/04/2020	Sheet: 4 of 4

Figure PRAIRIE_AUK_TP195.5
PRAIRIE_AUK_TP195 Sketch





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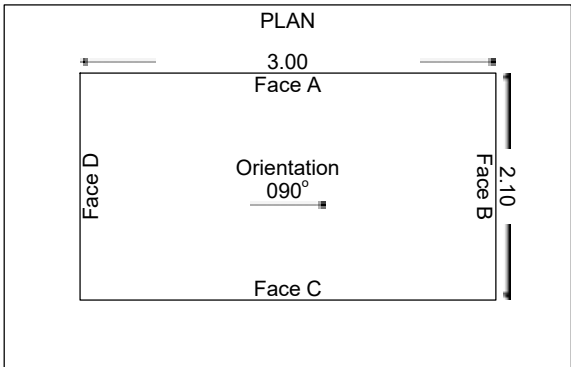
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TRIAL PIT RECORD

Status:-
FINAL

Project: Prairie Site Ground Investigation Works		Exploratory Hole No.	
Client: South Tees Development Corporation		Location: E:454436.008 N:520967.820	
Method (Equipment): Machine Excavated (360 Tracked Excavator)		Ground Level (m): 11.190	Start Date: 29/04/2020
		Sheet: 1 of 4	

SAMPLES & TESTS			STRATA			
Depth	Type No	Test Result	Water	Reduced Level	Legend	Description
1.40	ES1			9.79	(1.40)	MADE GROUND (Brown grey very sandy gravel with medium cobble content. Sand is fine to coarse and includes predominantly ash. Gravel is fine to coarse subangular and includes slag, sandstone, brick and concrete. Slag content is 25-50%. Cobbles are angular and include red brick, concrete and slag. Slag content 0-25%. Slag is vesicular grey). at c.0.50m BGL ... 300mm cast iron pipe running 000 degrees.
				9.59	1.60	
				9.19	(0.40)	MADE GROUND (Brown grey sandy gravel with medium cobble content. Sand is fine to coarse. Gravel is fine to coarse subangular and includes slag. Gravel slag content is 75-100%. Cobbles are angular and include slag. Cobble slag content is 75-100%. Slag is vesicular grey/grey green. Strong hydrocarbon/creosote odour and sheen noted). Firm brown grey mottled black CLAY. Hydrocarbon contamination from strata above. <i>Complete at 2.00m BGL.</i>
				2.00		



GROUNDWATER
Saturated strata at 1.80m BGL (Heavy inflow)

STABILITY
Pit sides and base moderately stable throughout excavation.

ADDITIONAL INFORMATION		
Sketch Diagram:	Sketch Taken	
Photographs:	Yes	See additional sheets.

GENERAL REMARKS
(1) Trial pit excavated on slope.

All dimensions in metres Scale 1:50	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>K.W</i>	Logged by: D. Portsmouth	Contract No. 4251
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TRIAL PIT RECORD

Status:-

FINAL

Project: Prairie Site Ground Investigation Works			Exploratory Hole No.
Client: South Tees Development Corporation	Location: E:454436.008 N:520967.820		PRAIRIE_AUK_TP196A
Method (Equipment): Machine Excavated (360 Tracked Excavator)	Ground Level (m): 11.190	Start Date: 29/04/2020	Sheet: 2 of 4

Figure PRAIRIE_AUK_TP196A.1
PRAIRIE_AUK_TP196A



Figure PRAIRIE_AUK_TP196A.2
PRAIRIE_AUK_TP196 (Section A towards Section B)





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Figure PRAIRIE_AUK_TP196A.3
PRAIRIE_AUK_TP196 (Section B towards Section A)



Figure PRAIRIE_AUK_TP196A.4
PRAIRIE_AUK_TP196 - Spoil





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TRIAL PIT RECORD

Status:-

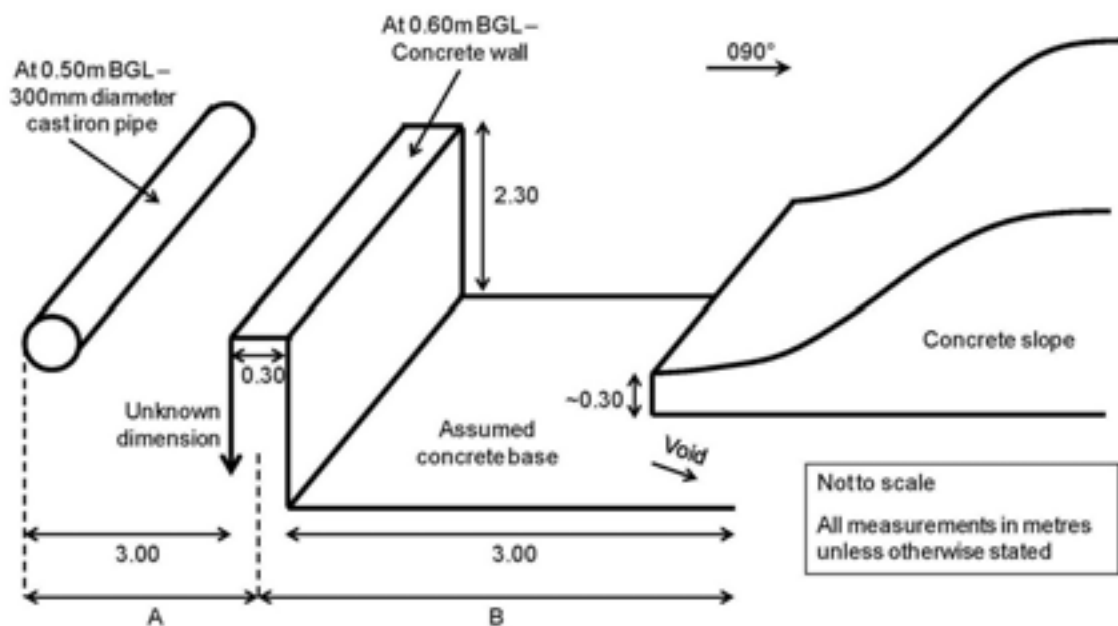
FINAL

Project: Prairie Site Ground Investigation Works			Exploratory Hole No.
Client: South Tees Development Corporation	Location: E:454436.008 N:520967.820		PRAIRIE_AUK_TP196A
Method (Equipment): Machine Excavated (360 Tracked Excavator)	Ground Level (m): 11.190	Start Date: 29/04/2020	Sheet: 4 of 4

Figure PRAIRIE_AUK_TP196A.5
PRAIRIE_AUK_TP196 - Spoil



Figure PRAIRIE_AUK_TP196A.6
PRAIRIE_AUK_TP196 Sketch





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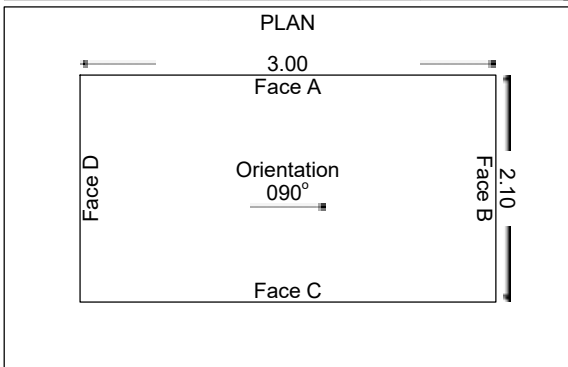
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Method (Equipment): Machine Excavated (360 Tracked Excavator)		Ground Level (m): 11.190	Start Date: 29/04/2020
		Sheet: 1 of 5	

SAMPLES & TESTS			STRATA			
Depth	Type No	Test Result	Water	Reduced Level	Legend	Description
				9.99		MADE GROUND (Grey sandy gravel and cobbles. Sand is fine to coarse. Gravel is fine to coarse subangular and includes slag. Gravel slag content 50-75%. Cobbles are angular and include slag. Cobble slag content is 75-100%. Slag is vesicular). (1.20)
				8.29		MADE GROUND (Grey gravel and cobbles with low to medium boulder content. Gravel is fine to coarse subangular and includes slag. Gravel slag content is 25-50%. Cobbles are subangular and include slag, concrete and metal. Cobble slag content is 50-75%. Boulders are subangular and include concrete, metal and wood. Slag is vesicular). (1.70)
						Terminated at 2.90m BGL - due to concrete obstruction.



GROUNDWATER
Saturated strata at 1.80m BGL (heavy inflow).

STABILITY
Pit sides and base moderately stable throughout excavation.

ADDITIONAL INFORMATION		
Sketch Diagram:	Sketch Taken	
Photographs:	Yes	See additional sheets.

GENERAL REMARKS
(1) Trial pit excavated on slope.

All dimensions in metres Scale 1:50	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>K.W</i>	Logged by: D. Portsmouth	Contract No. 4251
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TRIAL PIT RECORD

Status:-

FINAL

Project: Prairie Site Ground Investigation Works			Exploratory Hole No.
Client: South Tees Development Corporation	Location: E:454436.008 N:520967.820		PRAIRIE_AUK_TP196B
Method (Equipment): Machine Excavated (360 Tracked Excavator)	Ground Level (m): 11.190	Start Date: 29/04/2020	Sheet: 2 of 5

Figure PRAIRIE_AUK_TP196B.1
PRAIRIE_AUK_TP196B



Figure PRAIRIE_AUK_TP196B.2
PRAIRIE_AUK_TP196B





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TRIAL PIT RECORD

Status:-

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Project: Prairie Site Ground Investigation Works		Exploratory Hole No.	
Client: South Tees Development Corporation	Location: E:454436.008 N:520967.820		PRAIRIE_AUK_TP196B
Method (Equipment): Machine Excavated (360 Tracked Excavator)	Ground Level (m): 11.190	Start Date: 29/04/2020	Sheet: 3 of 5

Figure PRAIRIE_AUK_TP196B.3
PRAIRIE_AUK_TP196 (Section A towards Section B)



Figure PRAIRIE_AUK_TP196B.4
PRAIRIE_AUK_TP196 (Section B towards Section A)





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TRIAL PIT RECORD

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Method (Equipment): Machine Excavated (360 Tracked Excavator)	Ground Level (m): 11.190	Start Date: 29/04/2020	

Figure PRAIRIE_AUK_TP196B.5
PRAIRIE_AUK_TP196 - Spoil



Figure PRAIRIE_AUK_TP196B.6
PRAIRIE_AUK_TP196 - Spoil





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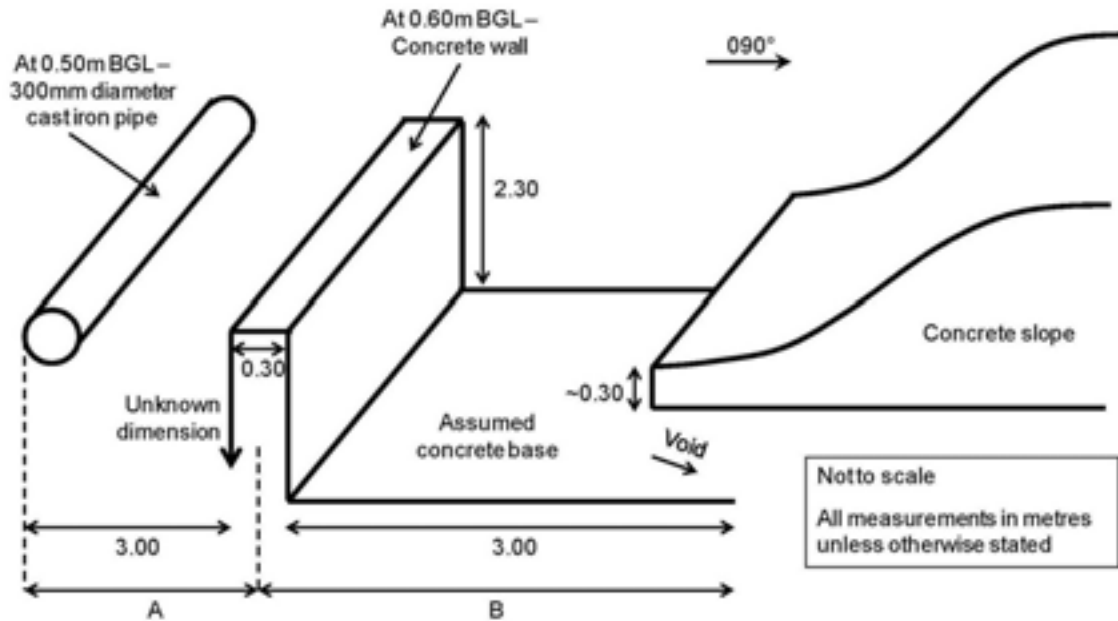
TRIAL PIT RECORD

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Client: South Tees Development Corporation	Location: E:454436.008 N:520967.820		PRAIRIE_AUK_TP196B
Method (Equipment): Machine Excavated (360 Tracked Excavator)	Ground Level (m): 11.190	Start Date: 29/04/2020	Sheet: 5 of 5

Figure PRAIRIE_AUK_TP196B.7
PRAIRIE_AUK_TP196 Sketch





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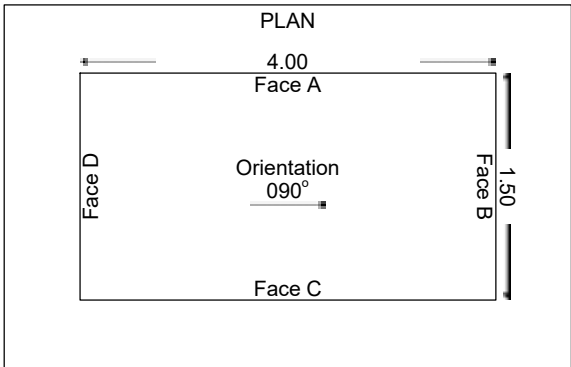
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TRIAL PIT RECORD

Status:-
FINAL

Project: Prairie Site Ground Investigation Works		Exploratory Hole No.	
Client: South Tees Development Corporation		Location: E:454449.745 N:520922.379	
Method (Equipment): Machine Excavated (360 Tracked Excavator)		Ground Level (m): 11.396	Start Date: 29/04/2020
		Sheet: 1 of 4	

SAMPLES & TESTS			STRATA				
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	Description
			~	9.60	[Cross-hatch pattern]	1.80	MADE GROUND (Brown grey very sandy gravel with medium cobble content. Sand is fine to coarse and includes ash. Gravel is fine to coarse subangular and include slag, sandstone, red brick and concrete. Gravel slag content is 25-50%. Cobbles are angular and include red brick, concrete and slag. Cobble slag content is 0-25%. Slag is vesicular grey).
			~	8.60	[Cross-hatch pattern]	2.80	MADE GROUND (Brown grey very gravel and cobbles with low boulder content and metal (girders). Sand is fine to coarse and includes ash. Gravel is fine to coarse subangular and includes slag, sandstone, red brick and concrete. Gravel slag content is 25-50%. Cobbles are angular and include red brick, concrete, slag, wood and metal. Cobble slag content is 0-25%. Boulders are angular and include concrete. Slag is vesicular grey).
							<i>Terminated at 2.80m BGL - due to concrete obstruction.</i>



GROUNDWATER
Saturated strata at 1.80m BGL (heavy inflow).

STABILITY
Pit sides and base moderately stable throughout excavation.

ADDITIONAL INFORMATION		
Sketch Diagram:	Sketch Taken	
Photographs:	Yes	See additional sheets.

GENERAL REMARKS

- (1) Trial pit excavated on slope.
- (2) No samples taken.
- (3) Trial pit excavated across slope exposing various subsurface structures - refer to following sketch.

All dimensions in metres Scale 1:50	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>K.W</i>	Logged by: D. Portsmouth	Contract No. 4251
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TRIAL PIT RECORD

Status:-

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Project: Prairie Site Ground Investigation Works		Exploratory Hole No.	
Client: South Tees Development Corporation	Location: E:454449.745 N:520922.379		PRAIRIE_AUK_TP197
Method (Equipment): Machine Excavated (360 Tracked Excavator)	Ground Level (m): 11.396	Start Date: 29/04/2020	Sheet: 2 of 4

Figure PRAIRIE_AUK_TP197.1
PRAIRIE_AUK_TP197



Figure PRAIRIE_AUK_TP197.2
PRAIRIE_AUK_TP197





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TRIAL PIT RECORD

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Client: South Tees Development Corporation	Location: E:454449.745 N:520922.379		PRAIRIE_AUK_TP197
Method (Equipment): Machine Excavated (360 Tracked Excavator)	Ground Level (m): 11.396	Start Date: 29/04/2020	Sheet: 3 of 4

Figure PRAIRIE_AUK_TP197.3
PRAIRIE_AUK_TP197



Figure PRAIRIE_AUK_TP197.4
PRAIRIE_AUK_TP197





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TRIAL PIT RECORD

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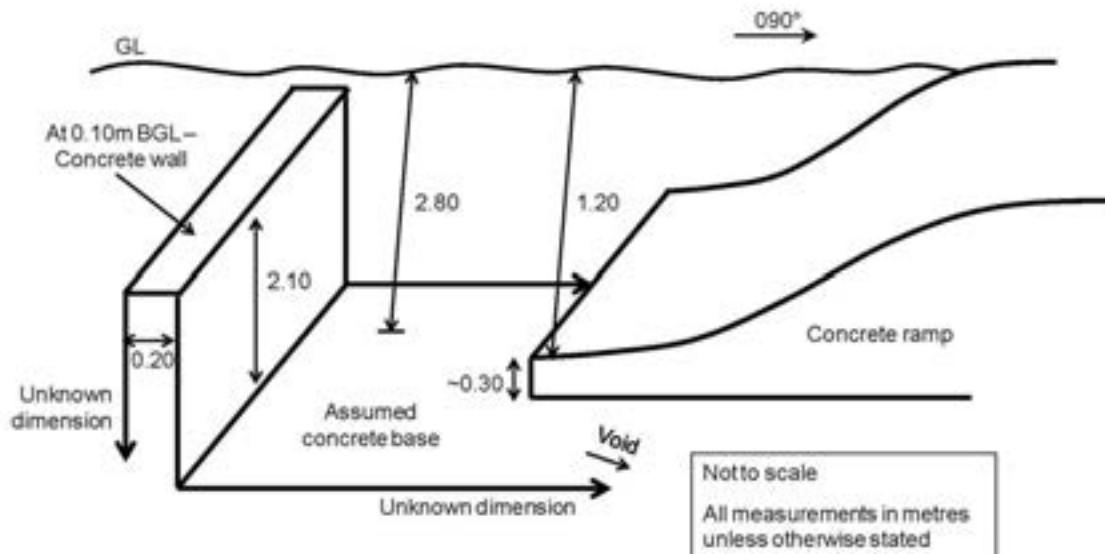
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Client: South Tees Development Corporation	Location: E:454449.745 N:520922.379		PRAIRIE_AUK_TP197
Method (Equipment): Machine Excavated (360 Tracked Excavator)	Ground Level (m): 11.396	Start Date: 29/04/2020	Sheet: 4 of 4

Figure PRAIRIE_AUK_TP197.5
PRAIRIE_AUK_TP197 - Spoil



Figure PRAIRIE_AUK_TP197.6
PRAIRIE_AUK_TP197 Sketch





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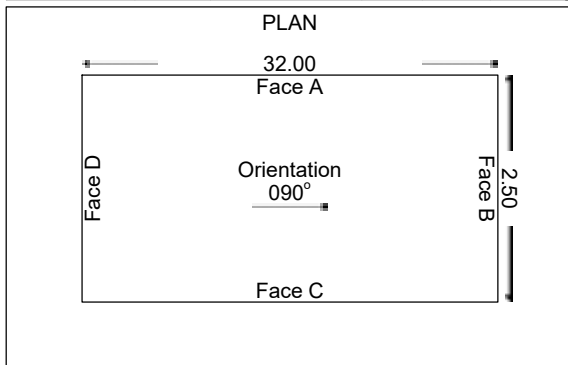
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TRIAL PIT RECORD

Status:-
FINAL

Project: Prairie Site Ground Investigation Works		Exploratory Hole No.	
Client: South Tees Development Corporation		Location: E:454458.796 N:520990.155	
Method (Equipment): Machine Excavated (360 Tracked Excavator)		Ground Level (m): 12.937	Start Date: 27/04/2020
		Sheet: 1 of 7	

SAMPLES & TESTS			STRATA					
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	Description	
				12.74		0.20	MADE GROUND (Brown grey very sandy gravel with many rootlets. Sand is fine to coarse. Gravel is fine to coarse subangular and includes slag, sandstone and concrete. Slag content is 25-50%. Slag is vesicular grey).	
						(1.00)	MADE GROUND (Red brown black sandy gravel with high cobble and low boulder content and metal and wood. Sand is fine to coarse. Gravel is fine to coarse angular and includes clinker, ash, concrete, red brick and slag. Slag content is 0-25%. Cobbles are angular and include red and yellow brick and concrete (rebar 10-20mm). Boulders are angular and include red and yellow brick sections and concrete (rebar 10-20mm). Slag is vesicular grey green).	
				11.74		1.20		
						(1.40)		
				10.34		2.60	MADE GROUND (Red brown black sandy gravel with high cobble content and fragments of wood. Sand is fine to coarse. Gravel is fine to coarse angular to subangular and includes clinker, ash, coal, concrete and red brick. Cobbles are angular and include red and yellow brick, metal, wood and concrete). at c.1.20m BGL ... concrete, extend pit east. at c.2.60m BGL ... concrete, extend pit east. <i>Terminated at 2.60m BGL - due to concrete obstruction.</i>	



GROUNDWATER
 No groundwater inflow observed.

STABILITY
 Pit sides and base moderately stable throughout excavation.

ADDITIONAL INFORMATION		
Sketch Diagram:	Sketch Taken	
Photographs:	Yes	See additional sheets.

GENERAL REMARKS
 (1) Trial pit excavated across slope exposing various subsurface structures - refer to following sketch.
 (2) At 2.60m BGL - pit extended north from western end. Same ground conditions encountered to 1.60m BGL.

All dimensions in metres Scale 1:50	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>K.W</i>	Logged by: D. Portsmouth	Contract No. 4251
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TRIAL PIT RECORD

Status:-

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Client: South Tees Development Corporation	Location: E:454458.796 N:520990.155		PRAIRIE_AUK_TP198
Method (Equipment): Machine Excavated (360 Tracked Excavator)	Ground Level (m): 12.937	Start Date: 27/04/2020	Sheet: 2 of 7

Figure PRAIRIE_AUK_TP198.1
PRAIRIE_AUK_TP198



Figure PRAIRIE_AUK_TP198.2
PRAIRIE_AUK_TP198





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Client: South Tees Development Corporation	Location: E:454458.796 N:520990.155		PRAIRIE_AUK_TP198
Method (Equipment): Machine Excavated (360 Tracked Excavator)	Ground Level (m): 12.937	Start Date: 27/04/2020	Sheet: 3 of 7

Figure PRAIRIE_AUK_TP198.3
PRAIRIE_AUK_TP198



Figure PRAIRIE_AUK_TP198.4
PRAIRIE_AUK_TP198





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Figure PRAIRIE_AUK_TP198.5
PRAIRIE_AUK_TP198



Figure PRAIRIE_AUK_TP198.6
PRAIRIE_AUK_TP198





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Figure PRAIRIE_AUK_TP198.7
PRAIRIE_AUK_TP198



Figure PRAIRIE_AUK_TP198.8
PRAIRIE_AUK_TP198





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TRIAL PIT RECORD

Status:-

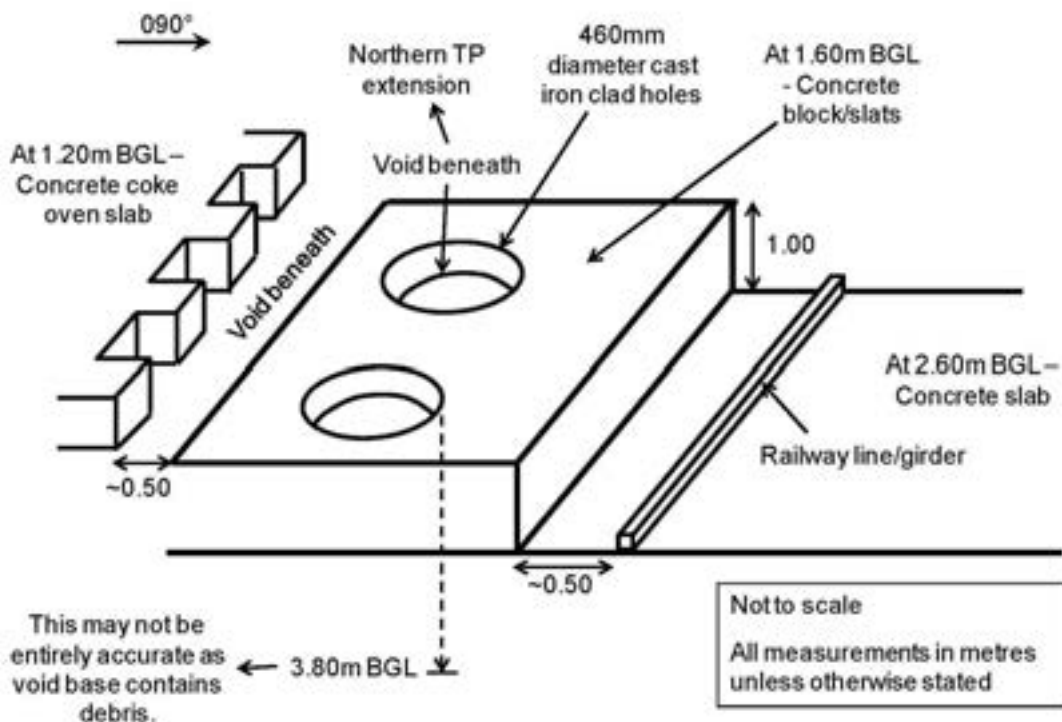
FINAL

Project: Prairie Site Ground Investigation Works			Exploratory Hole No.
Client: South Tees Development Corporation	Location: E:454458.796 N:520990.155		PRAIRIE_AUK_TP198
Method (Equipment): Machine Excavated (360 Tracked Excavator)	Ground Level (m): 12.937	Start Date: 27/04/2020	Sheet: 6 of 7

Figure PRAIRIE_AUK_TP198.9
PRAIRIE_AUK_TP198 - Spoil



Figure PRAIRIE_AUK_TP198.10
PRAIRIE_AUK_TP198 Sketch





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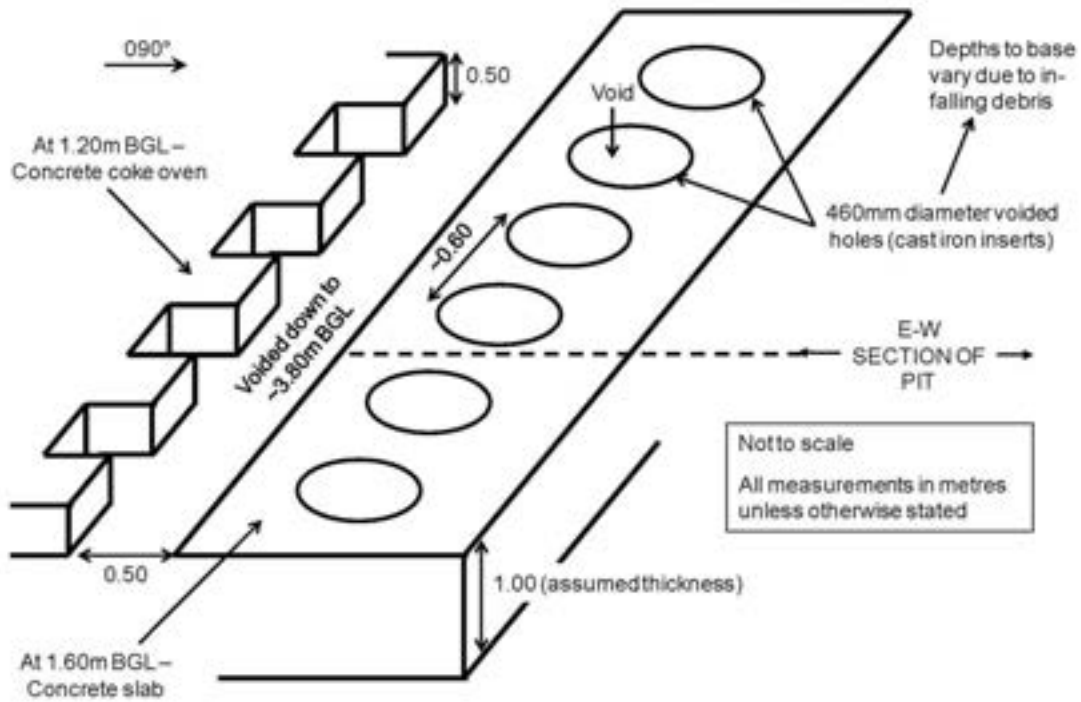
TRIAL PIT RECORD

Status:-

FINAL

Project: Prairie Site Ground Investigation Works			Exploratory Hole No.
Client: South Tees Development Corporation	Location: E:454458.796 N:520990.155		PRAIRIE_AUK_TP198
Method (Equipment): Machine Excavated (360 Tracked Excavator)	Ground Level (m): 12.937	Start Date: 27/04/2020	Sheet: 7 of 7

Figure PRAIRIE_AUK_TP198.11
PRAIRIE_AUK_TP198 Sketch





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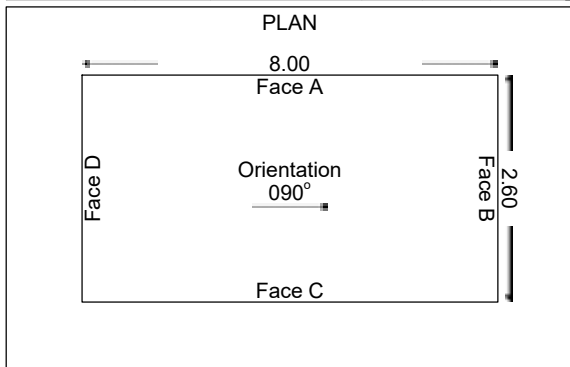
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TRIAL PIT RECORD

Status:-
FINAL

Project: Prairie Site Ground Investigation Works		Exploratory Hole No.	
Client: South Tees Development Corporation		Location: E:454465.130 N:521024.309	
Method (Equipment): Machine Excavated (360 Tracked Excavator)		Ground Level (m): 13.209	Start Date: 27/04/2020
		Sheet: 1 of 4	

SAMPLES & TESTS			STRATA			
Depth	Type No	Test Result	Water	Reduced Level	Legend	Description
				13.01		0.20 MADE GROUND (Brown grey very sandy gravel. Sand is fine to coarse. Gravel is fine to coarse subangular and includes slag, sandstone and concrete with many rootlets. Slag content is 25-50%. Slag is vesicular grey).
						(2.80) MADE GROUND (Red brown black sandy gravel with high cobble and low boulder content and fragments of wood and metal. Sand is fine to coarse. Gravel is fine to coarse angular to subangular and includes clinker, ash, coal, concrete, wood, red brick and slag. Slag content is 0-25%. Cobbles are angular and includes red and yellow brick and concrete (rebar 10-50mm). Boulders are angular and include red and yellow brick sections and concrete (rebar 10-30mm). Slag is vesicular grey green).
				10.21		3.00 MADE GROUND (Concrete and red brick floor).
				9.41		(0.80) 3.80 MADE GROUND (Red brown black sandy gravel with high cobble content and fragments/sections of metal and wood. Sand is fine to coarse. Gravel is fine to coarse angular to subangular and includes clinker, ash, coal, concrete and red brick. Cobbles are angular and include red and yellow brick and concrete).
				8.21		(1.20) 5.00
				8.01		5.20 Firm to stiff red brown grey slightly sandy CLAY. Sand is fine to medium. Complete at 5.20m BGL.



GROUNDWATER
 No groundwater inflow observed.

STABILITY
 Pit sides and base moderately stable throughout excavation.

ADDITIONAL INFORMATION		
Sketch Diagram:	Sketch Taken	
Photographs:	Yes	See additional sheets.

GENERAL REMARKS
 (1) Various subsurface structures exposed during excavation - refer to following sketch.
 (2) No samples taken.

All dimensions in metres Scale 1:50	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>K.W</i>	Logged by: D. Portsmouth	Contract No. 4251
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TRIAL PIT RECORD

Status:-

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Project: Prairie Site Ground Investigation Works		Exploratory Hole No.	
Client: South Tees Development Corporation	Location: E:454465.130 N:521024.309		PRAIRIE_AUK_TP199
Method (Equipment): Machine Excavated (360 Tracked Excavator)	Ground Level (m): 13.209	Start Date: 27/04/2020	Sheet: 2 of 4

Figure PRAIRIE_AUK_TP199.1
PRAIRIE_AUK_TP199



Figure PRAIRIE_AUK_TP199.2
PRAIRIE_AUK_TP199





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TRIAL PIT RECORD

Status:-

FINAL

Project: Prairie Site Ground Investigation Works			Exploratory Hole No.
Client: South Tees Development Corporation	Location: E:454465.130 N:521024.309		PRAIRIE_AUK_TP199
Method (Equipment): Machine Excavated (360 Tracked Excavator)	Ground Level (m): 13.209	Start Date: 27/04/2020	Sheet: 3 of 4

Figure PRAIRIE_AUK_TP199.3
PRAIRIE_AUK_TP199



Figure PRAIRIE_AUK_TP199.4
PRAIRIE_AUK_TP199 - Spoil





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TRIAL PIT RECORD

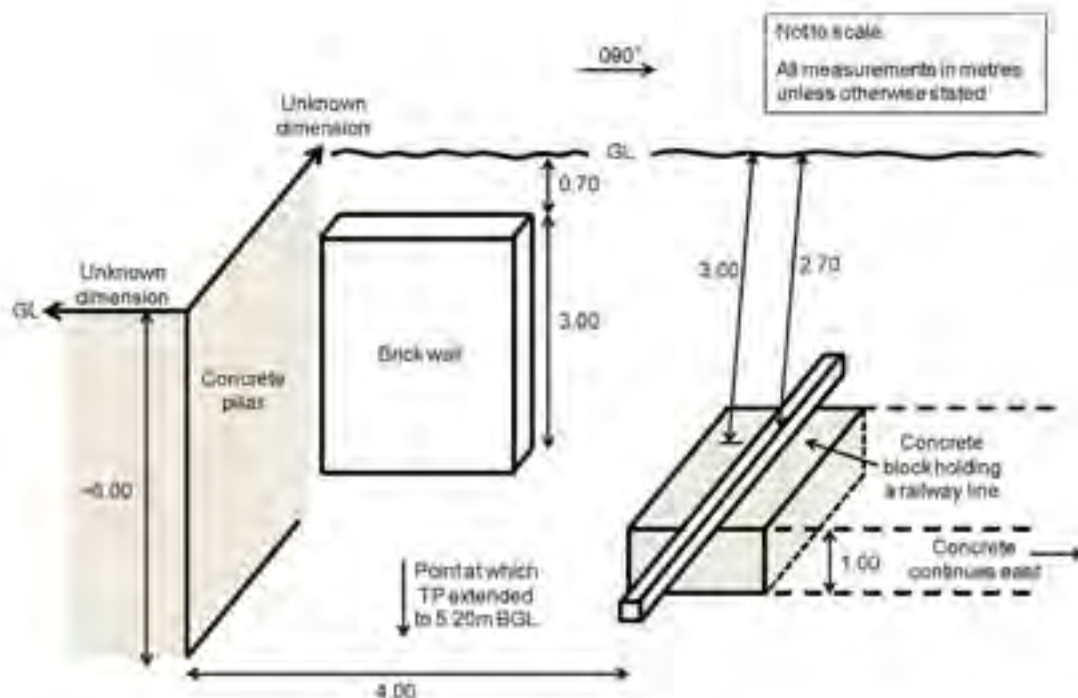
Status:-
FINAL

Project: Prairie Site Ground Investigation Works			Exploratory Hole No.
Client: South Tees Development Corporation	Location: E:454465.130 N:521024.309		PRAIRIE_AUK_TP199
Method (Equipment): Machine Excavated (360 Tracked Excavator)	Ground Level (m): 13.209	Start Date: 27/04/2020	Sheet: 4 of 4

Figure PRAIRIE_AUK_TP199.5
PRAIRIE_AUK_TP199 - Spoil



Figure PRAIRIE_AUK_TP199.6
PRAIRIE_AUK_TP199 Sketch





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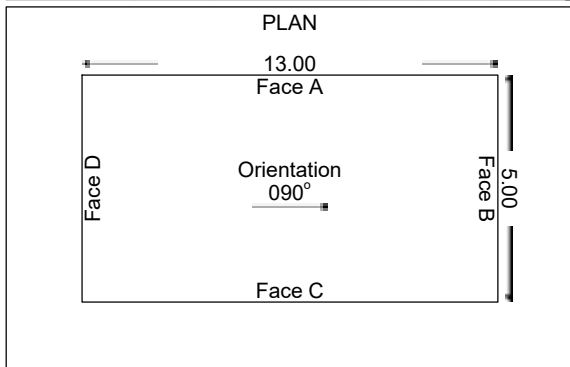
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TRIAL PIT RECORD

Status:-
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Project: Prairie Site Ground Investigation Works		Exploratory Hole No.
Client: South Tees Development Corporation	Location: E:454446.479 N:521086.026	PRAIRIE_AUK_TP200A
Method (Equipment): Machine Excavated (360 Tracked Excavator)	Ground Level (m): 10.527	Start Date: 28/04/2020
		Sheet: 1 of 6

SAMPLES & TESTS			STRATA				
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	Description
				10.33		0.20	MADE GROUND (Brown grey very sandy gravel with medium cobble content with many rootlets. Sand is fine to coarse and includes ash. Gravel is fine to coarse subangular and includes slag, sandstone and concrete. Slag content is 25-50%. Cobbles are angular and include red brick. Slag is vesicular grey).
						(0.80)	
				9.53		1.00	MADE GROUND (Brown grey very sandy gravel with medium cobble content. Sand is fine to coarse and includes ash. Gravel is fine to coarse subangular and includes slag, concrete and red and yellow brick. Slag content is 25-50%. Cobbles are angular and include red and yellow brick and concrete. Slag is vesicular grey). at c.0.20m BGL ... concrete encountered - extended pit west.
						(1.50)	
				8.03		2.50	MADE GROUND (Black grey sandy gravel. Sand is fine to coarse and includes ash. Gravel is fine to coarse subangular and includes ash, clinker, coke and red brick). at c.2.00m BGL ... concrete in western end of pit - pit extended.
						2.80	Firm brown grey yellow sandy CLAY. Sand is fine to medium.
				7.73			Complete at 2.80m BGL.



GROUNDWATER
No groundwater inflow observed.

STABILITY
Pit sides and base stable throughout excavation.

ADDITIONAL INFORMATION		
Sketch Diagram:	Sketch Taken	
Photographs:	Yes	See additional sheets.

GENERAL REMARKS

- (1) Trial pit extended west on slope.
- (2) Structures exposed when extending pit west which were backfilled with material the same as between 0.20-1.00m BGL but with medium boulder content (concrete). Structures bottomed out at 3.50m BGL.
- (3) Various structures exposed during excavation - refer to sketch following PRAIRIE_AUK_TP200B.
- (4) No samples taken.

All dimensions in metres Scale 1:50	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>K.W</i>	Logged by: D. Portsmouth	Contract No. 4251
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TRIAL PIT RECORD

Status:-

FINAL

Project: Prairie Site Ground Investigation Works			Exploratory Hole No.
Client: South Tees Development Corporation	Location: E:454446.479 N:521086.026		PRAIRIE_AUK_TP200A
Method (Equipment): Machine Excavated (360 Tracked Excavator)	Ground Level (m): 10.527	Start Date: 28/04/2020	Sheet: 2 of 6

Figure PRAIRIE_AUK_TP200A.1
PRAIRIE_AUK_TP200



Figure PRAIRIE_AUK_TP200A.2
PRAIRIE_AUK_TP200





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TRIAL PIT RECORD

Status:-

FINAL

Project: Prairie Site Ground Investigation Works		Exploratory Hole No.	
Client: South Tees Development Corporation	Location: E:454446.479 N:521086.026		PRAIRIE_AUK_TP200A
Method (Equipment): Machine Excavated (360 Tracked Excavator)	Ground Level (m): 10.527	Start Date: 28/04/2020	Sheet: 3 of 6

Figure PRAIRIE_AUK_TP200A.3
PRAIRIE_AUK_TP200



Figure PRAIRIE_AUK_TP200A.4
PRAIRIE_AUK_TP200





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TRIAL PIT RECORD

Status:-

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Project: Prairie Site Ground Investigation Works		Exploratory Hole No.	
Client: South Tees Development Corporation	Location: E:454446.479 N:521086.026		PRAIRIE_AUK_TP200A
Method (Equipment): Machine Excavated (360 Tracked Excavator)	Ground Level (m): 10.527	Start Date: 28/04/2020	Sheet: 4 of 6

Figure PRAIRIE_AUK_TP200A.5
PRAIRIE_AUK_TP200



Figure PRAIRIE_AUK_TP200A.6
PRAIRIE_AUK_TP200





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TRIAL PIT RECORD

Status:-

FINAL

Project: Prairie Site Ground Investigation Works			Exploratory Hole No.
Client: South Tees Development Corporation	Location: E:454446.479 N:521086.026		PRAIRIE_AUK_TP200A
Method (Equipment): Machine Excavated (360 Tracked Excavator)	Ground Level (m): 10.527	Start Date: 28/04/2020	Sheet: 5 of 6

Figure PRAIRIE_AUK_TP200A.7
PRAIRIE_AUK_TP200 - Spoil



Figure PRAIRIE_AUK_TP200A.8
PRAIRIE_AUK_TP200 - Spoil





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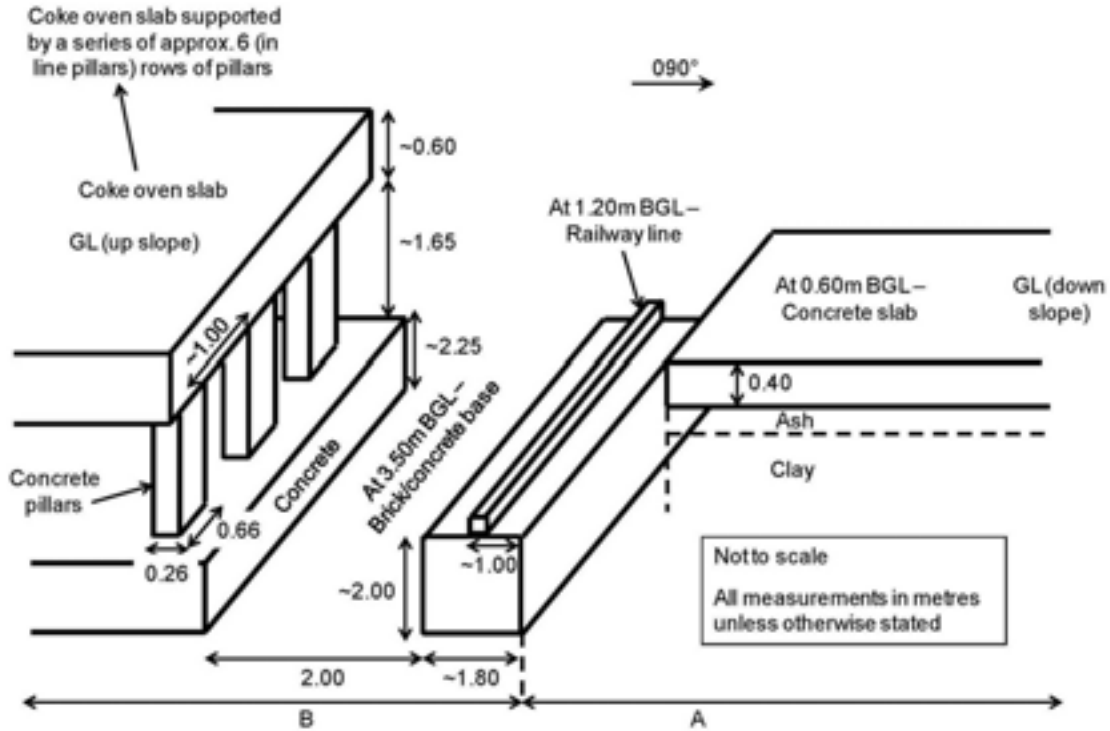
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TRIAL PIT RECORD

Status:-
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Project: Prairie Site Ground Investigation Works			Exploratory Hole No.
Client: South Tees Development Corporation	Location: E:454446.479 N:521086.026		PRAIRIE_AUK_TP200A
Method (Equipment): Machine Excavated (360 Tracked Excavator)	Ground Level (m): 10.527	Start Date: 28/04/2020	Sheet: 6 of 6

Figure PRAIRIE_AUK_TP200A.9
PRAIRIE_AUK_TP200 Sketch





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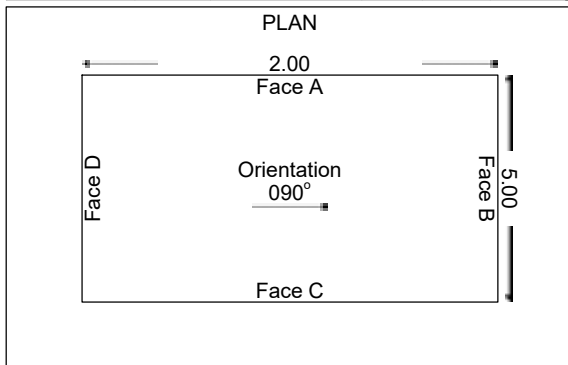
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TRIAL PIT RECORD

Status:-
FINAL

Project: Prairie Site Ground Investigation Works		Exploratory Hole No.	
Client: South Tees Development Corporation		Location: E:454446.479 N:521086.026	
Method (Equipment): Machine Excavated (360 Tracked Excavator)		Ground Level (m): 10.527	Start Date: 28/04/2020
		Sheet: 1 of 6	

SAMPLES & TESTS			STRATA			
Depth	Type No	Test Result	Water	Reduced Level	Legend	Description
				10.33		0.20 MADE GROUND (Brown grey very sandy gravel with medium cobble content with many rootlets. Sand is fine to coarse and includes ash. Gravel is fine to coarse subangular and includes slag, sandstone and concrete. Slag content is 25-50%. Cobbles are angular and include red brick. Slag is vesicular grey).
						(3.30) MADE GROUND (Brown grey very sandy gravel with medium cobble and boulder content. Sand is fine to coarse and includes ash. Gravel is fine to coarse subangular and includes slag, concrete and red and yellow brick. Slag content is 25-50%. Cobbles are angular and include red and yellow brick and concrete. Boulders are angular and include concrete. Slag is vesicular grey).
				7.03	3.50 Terminated at 3.50m BGL - due to concrete/brick base.	



GROUNDWATER
Water strike at 3.50m BGL (slight inflow).

STABILITY
Pit sides and base stable throughout excavation.

ADDITIONAL INFORMATION		
Sketch Diagram:	Sketch Taken	
Photographs:	Yes	See additional sheets.

GENERAL REMARKS

All dimensions in metres Scale 1:50	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>K.W</i>	Logged by: D. Portsmouth	Contract No. 4251
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TRIAL PIT RECORD

Status:-

FINAL

Project: Prairie Site Ground Investigation Works			Exploratory Hole No.
Client: South Tees Development Corporation	Location: E:454446.479 N:521086.026		PRAIRIE_AUK_TP200B
Method (Equipment): Machine Excavated (360 Tracked Excavator)	Ground Level (m): 10.527	Start Date: 28/04/2020	Sheet: 2 of 6

Figure PRAIRIE_AUK_TP200B.1
PRAIRIE_AUK_TP200



Figure PRAIRIE_AUK_TP200B.2
PRAIRIE_AUK_TP200





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TRIAL PIT RECORD

Status:-

FINAL

Project: Prairie Site Ground Investigation Works		Exploratory Hole No.	
Client: South Tees Development Corporation	Location: E:454446.479 N:521086.026		PRAIRIE_AUK_TP200B
Method (Equipment): Machine Excavated (360 Tracked Excavator)	Ground Level (m): 10.527	Start Date: 28/04/2020	Sheet: 3 of 6

Figure PRAIRIE_AUK_TP200B.3
PRAIRIE_AUK_TP200



Figure PRAIRIE_AUK_TP200B.4
PRAIRIE_AUK_TP200





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TRIAL PIT RECORD

Status:-

FINAL

Project: Prairie Site Ground Investigation Works		Exploratory Hole No.	
Client: South Tees Development Corporation	Location: E:454446.479 N:521086.026		PRAIRIE_AUK_TP200B
Method (Equipment): Machine Excavated (360 Tracked Excavator)	Ground Level (m): 10.527	Start Date: 28/04/2020	

Figure PRAIRIE_AUK_TP200B.5
PRAIRIE_AUK_TP200



Figure PRAIRIE_AUK_TP200B.6
PRAIRIE_AUK_TP200





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TRIAL PIT RECORD

Status:-

FINAL

Project: Prairie Site Ground Investigation Works			Exploratory Hole No.
Client: South Tees Development Corporation	Location: E:454446.479 N:521086.026		PRAIRIE_AUK_TP200B
Method (Equipment): Machine Excavated (360 Tracked Excavator)	Ground Level (m): 10.527	Start Date: 28/04/2020	Sheet: 5 of 6

Figure PRAIRIE_AUK_TP200B.7
PRAIRIE_AUK_TP200 - Spoil



Figure PRAIRIE_AUK_TP200B.8
PRAIRIE_AUK_TP200 - Spoil





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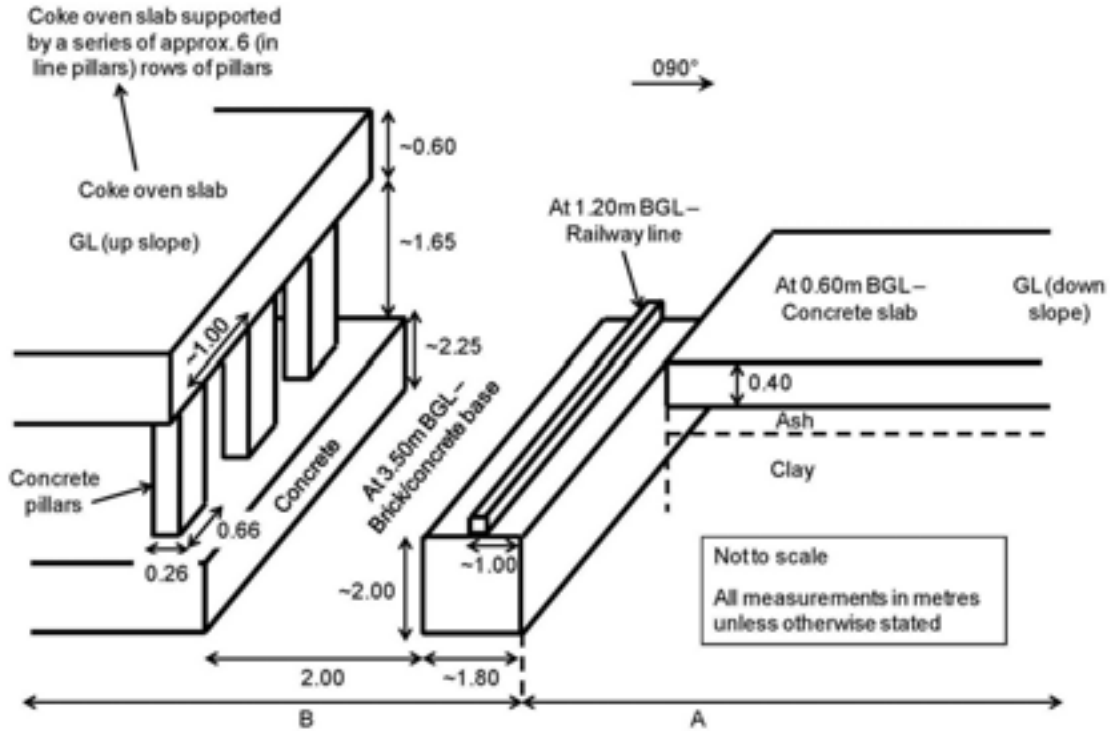
TRIAL PIT RECORD

Status:-

FINAL

Project: Prairie Site Ground Investigation Works		Exploratory Hole No.	
Client: South Tees Development Corporation	Location: E:454446.479 N:521086.026		PRAIRIE_AUK_TP200B
Method (Equipment): Machine Excavated (360 Tracked Excavator)	Ground Level (m): 10.527	Start Date: 28/04/2020	

Figure PRAIRIE_AUK_TP200B.9
PRAIRIE_AUK_TP200 Sketch





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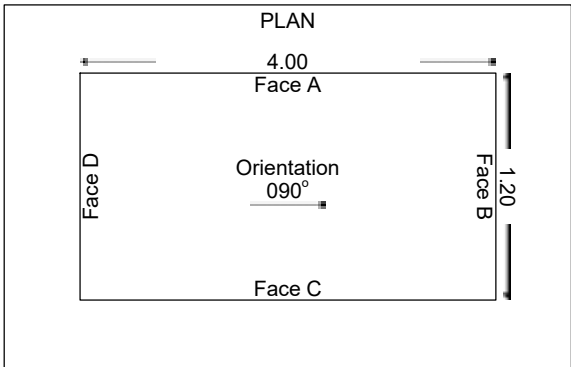
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TRIAL PIT RECORD

Status:-
FINAL

Project: Prairie Site Ground Investigation Works		Exploratory Hole No.	
Client: South Tees Development Corporation		Location: E:454512.591 N:520927.507	
Method (Equipment): Machine Excavated (360 Tracked Excavator)		Ground Level (m): 15.534	Start Date: 28/04/2020
		Sheet: 1 of 3	

SAMPLES & TESTS			STRATA				
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	Description
3.60	ES1		Water	15.33	[Cross-hatch pattern]	0.20	MADE GROUND (Brown grey very sandy gravel with many rootlets. Sand is fine to coarse and includes ash. Gravel is fine to coarse subangular slag, sandstone and concrete. Slag content is 25-50%. Slag is vesicular grey).
				(1.20)		1.20	MADE GROUND (Brown black grey compacted ash/clinker. Recovered as a sandy gravel. Sand is fine to coarse and predominantly ash. Gravel is fine to coarse subangular and includes ash and clinker).
				14.13	[Cross-hatch pattern]	1.40	MADE GROUND (Brown grey yellow very sandy gravel with high cobble content. Sand is fine to coarse and includes ash. Gravel is fine to coarse subangular and includes slag, concrete, sandstone and red and yellow brick. Slag content is 0-25%. Cobbles are angular and include red and yellow brick and concrete. Slag is vesicular grey).
				(1.60)		1.60	
				12.53	[Cross-hatch pattern]	3.00	MADE GROUND (Yellow grey very clayey sandy gravel with high cobble content. Sand is fine to coarse and is predominantly ash. Gravel is fine to coarse subangular and includes ash, clinker, coke, red brick and sandstone. Cobbles are angular and include sandstone and concrete. Engineer notes strata is mixed slightly (in-situ) with strata above due to gradient of slope).
				(1.40)		1.40	
				11.13		4.40	Complete at 4.40m BGL.



GROUNDWATER
No groundwater inflow observed.

STABILITY
Pit sides and base stable throughout excavation.

ADDITIONAL INFORMATION		
Sketch Diagram:	Sketch Taken	
Photographs:	Yes	See additional sheets.

GENERAL REMARKS
(1) Trial pit excavated into a raised earth bund. All measurements taken from top of slope.

All dimensions in metres Scale 1:50	For explanation of symbols and abbreviations see Key Sheets	Checked by: <i>K.W</i>	Logged by: D. Portsmouth	Contract No. 4251
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Tel: 01772 735 300 Fax: 01772 735 999

TRIAL PIT RECORD

Status:-

FINAL

Project: Prairie Site Ground Investigation Works			Exploratory Hole No.
Client: South Tees Development Corporation	Location: E:454512.591 N:520927.507		PRAIRIE_AUK_TP201
Method (Equipment): Machine Excavated (360 Tracked Excavator)	Ground Level (m): 15.534	Start Date: 28/04/2020	Sheet: 2 of 3

Figure PRAIRIE_AUK_TP201.1
PRAIRIE_AUK_TP201



Figure PRAIRIE_AUK_TP201.2
PRAIRIE_AUK_TP201





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Head Office: Unit 25 Stella Gill Industrial Estate, Pelton Fell, Chester-le-Street, Co. Durham, DH2 2RG
Regional Office: Unit 20 Business Development Centre, Eanam Wharf, Blackburn, BB1 5BL

Tel: 0191 387 4700 Fax: 0191 387 4710
Tel: 01772 735 300 Fax: 01772 735 999

TRIAL PIT RECORD

Status:-

FINAL

Project: Prairie Site Ground Investigation Works		Exploratory Hole No.	
Client: South Tees Development Corporation	Location: E:454512.591 N:520927.507		PRAIRIE_AUK_TP201
Method (Equipment): Machine Excavated (360 Tracked Excavator)	Ground Level (m): 15.534	Start Date: 28/04/2020	Sheet: 3 of 3

Figure PRAIRIE_AUK_TP201.3
PRAIRIE_AUK_TP201



Figure PRAIRIE_AUK_TP201.4
PRAIRIE_AUK_TP201 - Spoil



Groundwater Observations Made at the Time of Site Works



ALLIED EXPLORATION & GEOTECHNICS LIMITED

**GROUNDWATER OBSERVATIONS MADE AT THE TIME OF SITE WORKS
(WATER STRIKES)**

Head Office: 100-25 Riverside Way, Riverside, Milton Keynes, Bucks MK14 6LJ
 Regional Office: Unit 25, Business Development Centre, Liberty Way, Farnborough, BH14 3SL
 Tel: 01235 831111 Fax: 01235 831112 Email: info@allied-geotech.co.uk

Exploratory Hole No.	Date	Depth of Water (m)	Depth of Casing (m)	Depth Sealed (m)	Final Depth (m)	Total Time (mins)	Depth After 5 mins	Depth After 10 mins	Depth After 15 mins	Depth After 20 mins	Remarks
PRASIE_AUR_BH101	27/04/2020	3.00	2.60	4.00	2.55	20	2.88	2.64	2.60	2.58	Slow inflow
PRASIE_AUR_BH101	28/04/2020	14.60	14.45		12.35	20	14.05	13.72	13.11	12.35	Slow inflow
PRASIE_AUR_BH102	15/04/2020	3.00	2.85	4.00	2.85	20	2.95	2.93	2.90	2.88	Water strike (slow inflow)
PRASIE_AUR_BH102	16/04/2020	8.50	8.40		4.32	20	6.84	6.11	5.63	4.32	Water strike
PRASIE_AUR_BH110	21/04/2020	10.30	10.05	12.50	8.47	20	9.42	9.05	8.75	8.47	Water strike
PRASIE_AUR_BH107	06/04/2020	2.00									Water strike
PRASIE_AUR_BH108	06/04/2020	2.30									Water strike
PRASIE_AUR_BH112	22/04/2020	2.40									Water strike
PRASIE_AUR_BH111	05/04/2020	1.70									Water strike
PRASIE_AUR_BH115	08/04/2020	0.30									Water strike
PRASIE_AUR_BH119	22/04/2020	2.20									Water strike
PRASIE_AUR_BH118	20/04/2020	1.30									Water strike

Contract Title :-	Praine Side Ground Investigation Works	Client :-	South Tees Development Corporation
Date of Issue :-	05/11/2020	Page No. :-	1 of 3
Approved By :-	<i>[Signature]</i>	Checked By :-	<i>[Signature]</i>
AEG Contract No. :-	4251	Certificate No. :-	GWOWS/4251/1



ALLIED EXPLORATION & GEOTECHNICS LIMITED

**GROUNDWATER OBSERVATIONS MADE AT THE TIME OF SITE WORKS
(WATER STRIKES)**

Unit 25, South Tees Development Corridor, Princes Road, Middlesbrough, Cleveland, North Yorkshire, YO21 2JG, UK
 Tel: 01757 518 200 Fax: 01757 518 999
 Email: sales@allied-geotech.co.uk

Exploratory Hole No.	Date	Depth of Water (m)	Depth of Casing (m)	Depth Sealed (m)	Final Depth (m)	Total Time (mins)	Depth After 5 mins	Depth After 10 mins	Depth After 15 mins	Depth After 20 mins	Remarks
PRAIRIE_AUK_TP121	09/04/2020	0.90									Water strike
PRAIRIE_AUK_TP122	08/04/2020	0.30									Water strike (Heavy inflow)
PRAIRIE_AUK_TP123	08/04/2020	0.60									Water strike
PRAIRIE_AUK_TP127	23/04/2020	1.70									Water strike
PRAIRIE_AUK_TP132	02/04/2020	1.90									Water strike
PRAIRIE_AUK_TP133	15/04/2020	1.10									Water strike
PRAIRIE_AUK_TP136	15/04/2020	0.30									Water strike
PRAIRIE_AUK_TP137	15/04/2020	0.50									Water strike
PRAIRIE_AUK_TP139	16/04/2020	0.90									Water strike
PRAIRIE_AUK_TP141	23/04/2020	1.80			1.60						Water strike (Heavy inflow)
PRAIRIE_AUK_TP147	17/04/2020	1.60									Perched water
PRAIRIE_AUK_TP158	14/04/2020	0.60									Water strike

Contract Title :- Prairie Site Ground Investigation Works	Client :- South Tees Development Corporation	AEG Contract No :- 4251
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Checked By :- <i>LC</i>		Approved By :- <i>KLW</i>



ALLIED EXPLORATION & GEOTECHNICS LIMITED

**GROUNDWATER OBSERVATIONS MADE AT THE TIME OF SITE WORKS
(WATER STRIKES)**

Head Office: 1111 25 Street SW, Calgary, Alberta T2C 1P5, Canada. Tel: (403) 242-8888 Fax: (403) 242-8889
Regional Office: 1111 25 Street SW, Calgary, Alberta T2C 1P5, Canada. Tel: (403) 242-8888 Fax: (403) 242-8889

Exploratory Hole No.	Date	Depth of Water (m)	Depth of Casing (m)	Depth Sealed (m)	Final Depth (m)	Total Time (mins)	Depth After 5 mins	Depth After 10 mins	Depth After 15 mins	Depth After 20 mins	Remarks
PRAIRIE_AUG_TP1078	17/04/2020	1.00									Water strike
PRAIRIE_AUG_TP1156	17/04/2020	1.00									Water strike.
PRAIRIE_AUG_TP1190	16/04/2020	0.80									Water strike.
PRAIRIE_AUG_TP1654	16/04/2020	1.20									Water running from brick cable duct in Faces C and D.
PRAIRIE_AUG_TP2008	25/04/2020	3.50									Water strike (Slight inflow).



Contract Title :-	Prairie Site Ground Investigation Works	Client :-	South Tees Development Corporation
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Checked By :-	LC	Approved By :-	<i>[Signature]</i>
Contract No. :-	4251	Certificate No. :-	GWGWS/4251/3

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 25, River Oak Industrial Estate, Patten Way, Consett, Co. Durham, DA7 2NS. Tel: 0191 367 4333 Fax: 0191 367 4716
Regional Office: Unit 20, Business Development Centre, Easing Wood, Blaydon, SR1 3SE. Tel: 01172 726 303 Fax: 01172 726 289

GROUNDWATER OBSERVATIONS MADE AT THE TIME OF SITE WORKS (GROUNDWATER SEEPAGES)

Monitoring Point	Date	Depth (m)	Remarks
PRAIRIE_AIK_TP101	01/04/2020	2.00	Groundwater seepage.
PRAIRIE_AIK_TP114	07/04/2020	0.50	Groundwater seepage.
PRAIRIE_AIK_TP117	23/04/2020	2.50	Groundwater seepage.
PRAIRIE_AIK_TP118	23/04/2020	1.40	Groundwater seepage.
PRAIRIE_AIK_TP120	20/04/2020	1.50	Groundwater seepage.
PRAIRIE_AIK_TP128	17/04/2020	2.70	Slight groundwater seepage (water perched on concrete base).
PRAIRIE_AIK_TP128	17/04/2020	1.00	Saturated strata (slight inflow) at 1.00m BGL. Engineer notes contaminated water seeping from contaminated mudstone pocket into clay.
PRAIRIE_AIK_TP142	23/04/2020	1.20	Saturated strata between 1.00-1.20m BGL (Slight inflow). Water contains globules of oil/contaminants.
PRAIRIE_AIK_TP144	24/04/2020	1.10	Saturated strata (Slight inflow)
PRAIRIE_AIK_TP145	14/04/2020	1.70	Groundwater seepage.
PRAIRIE_AIK_TP148C	14/04/2020	1.20	Groundwater seepage.
PRAIRIE_AIK_TP148A	16/04/2020	1.70	Slight groundwater seepage.
PRAIRIE_AIK_TP150	21/04/2020	0.80	Saturated strata (Slight inflow).
PRAIRIE_AIK_TP150	16/04/2020	1.50	Saturated strata between 0.90-1.50m BGL.
PRAIRIE_AIK_TP152	14/04/2020	2.80	Saturated strata (Heavy inflow).
PRAIRIE_AIK_TP153	14/04/2020	1.10	Saturated strata (Slight inflow).
PRAIRIE_AIK_TP154	16/04/2020	2.40	Saturated strata between 1.20-2.40m BGL (Slow inflow).
PRAIRIE_AIK_TP114	08/04/2020	2.00	Slight groundwater seepage.
PRAIRIE_AIK_TP115	06/04/2020	0.90	Perched water (Slight inflow).
PRAIRIE_AIK_TP117	07/04/2020	1.40	Saturated strata (Heavy inflow)

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

Client :- **South Tees Development Corporation**

Certificate No. :- **GWOS/4251/1**

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Checked By :- *LC*

Approved By :- *KW*

AEG Contract No. :- **4251**



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office:
Regional Office:

Unit 25, West 1st Industrial Estate, Parker Hill, Chester-le-Street, Co. Durham, DA7 2BN
Unit 25, Enterprise Development Centre, Easing Street, Barnsley, S11 5SL

Tel: 0191 307 4200 Fax: 0191 307 4719
Tel: 01773 725 888 Fax: 01773 725 999

GROUNDWATER OBSERVATIONS MADE AT THE TIME OF SITE WORKS (GROUNDWATER SEEPAGES)

Monitoring Point	Date	Depth (m)	Remarks
PRARIÉ_AIK_TP178	09/04/2020	1.50	Perched water (Slight inflow)
PRARIÉ_AIK_TP179	09/04/2020	1.20	Saturated strata (Heavy inflow)
PRARIÉ_AIK_TP181	09/04/2020	1.70	Saturated strata (Slight inflow)
PRARIÉ_AIK_TP182	09/04/2020	1.10	Saturated strata (Slight inflow)
PRARIÉ_AIK_TP189	07/04/2020	1.00	Saturated strata (Moderate inflow). Possibly backfilled cellar/basement.
PRARIÉ_AIK_TP192	08/04/2020	1.70	Saturated strata (Heavy inflow)
PRARIÉ_AIK_TP189	07/04/2020	1.30	Perched water (Slight inflow)
PRARIÉ_AIK_TP192	01/05/2020	1.10	Saturated strata (Slight inflow)
PRARIÉ_AIK_TP193	30/04/2020	0.60	Saturated strata (Slow inflow)
PRARIÉ_AIK_TP194	29/04/2020	1.50	Saturated strata (Moderate inflow)
PRARIÉ_AIK_TP198	29/04/2020	1.80	Saturated strata (Heavy inflow)
PRARIÉ_AIK_TP199	29/04/2020	1.80	Saturated strata (Heavy inflow)
PRARIÉ_AIK_TP199	29/04/2020	1.80	Saturated strata (Heavy inflow)
PRARIÉ_AIK_TP199	29/04/2020	1.80	Saturated strata (Heavy inflow)

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

Client - **South Tees Development Corporation**



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Approved By - **[Signature]**

AEG Contract No - **4251**



Groundwater Monitoring Results



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 10 Seabank, Old Durham Road, Felling, Chester-le-Forge, Cheshire, Cheshire, UK. Durham, (D.C.19) Tel: 0191 387 4755 Fax: 0191 387 4770
 Regional Office: Unit 20 Seabank Development Centre, Tynemouth, North Shields, Tyne and Wear, NE27 9BB Tel: 01773 795 338 Fax: 01773 795 388

GROUNDWATER MONITORING RESULTS

Monitoring Point	Date and Time	Depth and Type of Well	Ground Level (mAOD)	Water Depth (mBGL)	Reduced Water Level (mAOD)	Remarks
PRAIRIE_AUK_BH101	05/05/2020 00:00	10.00m 19mm SPIE	8.64	2.00	6.64	
PRAIRIE_AUK_BH101	15/05/2020 12:05	10.00m 19mm SPIE	8.64	1.77	6.87	
PRAIRIE_AUK_BH101	30/05/2020 09:27	10.00m 19mm SPIE	8.64	1.69	6.95	
PRAIRIE_AUK_BH101	05/05/2020 00:00	16.50m 50mm SP	8.64	3.00	5.64	
PRAIRIE_AUK_BH101	15/05/2020 12:05	16.50m 50mm SP	8.64	1.76	6.88	
PRAIRIE_AUK_BH101	30/05/2020 09:23	16.50m 50mm SP	8.64	1.64	7.00	
PRAIRIE_AUK_BH102	05/05/2020 00:00	7.20m 50mm SP	8.21	1.10	7.11	
PRAIRIE_AUK_BH102	15/05/2020 14:16	7.20m 50mm SP	8.21	0.83	7.38	
PRAIRIE_AUK_BH102	30/05/2020 09:10	7.20m 50mm SP	8.21	0.90	7.31	
PRAIRIE_AUK_BH103	05/05/2020 00:00	8.50m 50mm SP	7.68	2.25	5.43	
PRAIRIE_AUK_BH103	15/05/2020 11:40	8.50m 50mm SP	7.68	1.71	5.97	
PRAIRIE_AUK_BH103	30/05/2020 08:49	8.50m 50mm SP	7.68	1.92	5.76	
PRAIRIE_AUK_BH104	05/05/2020 00:00	18.50m 50mm SP	6.70	6.40	2.30	
PRAIRIE_AUK_BH104	15/05/2020 14:35	18.50m 50mm SP	6.70	4.05	4.64	
PRAIRIE_AUK_BH104	30/05/2020 11:01	18.50m 50mm SP	6.70	6.21	2.49	
PRAIRIE_AUK_BH105	05/05/2020 00:00	11.00m 50mm SP	8.26	4.60	3.66	
PRAIRIE_AUK_BH105	15/05/2020 15:25	11.00m 50mm SP	8.26	4.40	3.77	
PRAIRIE_AUK_BH105	30/05/2020 12:09	11.00m 50mm SP	8.26	4.61	3.75	
PRAIRIE_AUK_BH106	05/05/2020 00:00	10.00m 50mm SP	8.71	5.94	4.77	
PRAIRIE_AUK_BH106	15/05/2020 14:52	10.00m 50mm SP	8.71	2.73	5.98	

SP = Sandpipe - SPIE = Standpipe/Plumbline

Contract Title :- Prairie Site Ground Investigation Works	Client :- South Tees Development Corporation
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	Checked By :- <i>LC</i>	Approved By :- <i>KW</i>	AEG Contract No. :- 4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 25, Strata 58, Industrial Estate, Potters Field, Traralgon, Victoria, Australia 3840. Tel: 03 5111 8111 Fax: 03 5111 8118
Regional Office: Unit 20 Business Development Centre, Eastern Street, Shepparton, VIC 3630. Tel: 03 5322 1200 Fax: 03 5322 1200

GROUNDWATER MONITORING RESULTS

Monitoring Point	Date and Time	Depth and Type of Well	Ground Level (mAOD)	Water Depth (mBGL)	Reduced Water Level (mAOD)	Remarks
PRAIRIE_AUK_BH100	30/06/2020 11:28	10.00m 50mm SP	8.71	3.28	5.43	
PRAIRIE_AUK_BH107	05/05/2020 00:00	8.00m 50mm SP	10.16	3.16	7.00	
PRAIRIE_AUK_BH107	15/06/2020 12:41	8.00m 50mm SP	10.16	3.21	6.95	
PRAIRIE_AUK_BH107	30/06/2020 13:05	8.00m 50mm SP	10.16	3.12	7.04	
PRAIRIE_AUK_BH108	06/05/2020 06:00	8.00m 19mm SPIE	8.86	2.20	6.66	
PRAIRIE_AUK_BH108	15/06/2020 15:17	8.00m 19mm SPIE	8.86	1.14	7.72	
PRAIRIE_AUK_BH108	30/06/2020 11:55	8.00m 19mm SPIE	8.86	0.55	8.31	
PRAIRIE_AUK_BH108	06/05/2020 06:00	14.00m 50mm SP	8.85	5.00	3.85	
PRAIRIE_AUK_BH108	15/06/2020 15:15	14.00m 50mm SP	8.85	4.91	3.95	
PRAIRIE_AUK_BH108	30/06/2020 11:51	14.00m 50mm SP	8.85	4.91	4.05	
PRAIRIE_AUK_BH109	06/05/2020 00:00	11.80m 50mm SP	12.00	5.44	6.56	
PRAIRIE_AUK_BH109	15/06/2020 13:04	11.80m 50mm SP	12.00	5.97	6.03	
PRAIRIE_AUK_BH109	30/06/2020 13:29	11.80m 50mm SP	12.00	5.72	6.28	
PRAIRIE_AUK_BH110	06/05/2020 00:00	20.80m 50mm SP	7.80	4.00	3.80	
PRAIRIE_AUK_BH110	15/06/2020 12:23	20.80m 50mm SP	7.80	3.84	3.96	
PRAIRIE_AUK_BH110	30/06/2020 09:46	20.80m 50mm SP	7.80	3.87	3.93	

SP = Standpipe - SPIE = Standpipe Pressure

Contract Title -> Prairie Site Ground Investigation Works	Client -> South Tees Development Corporation
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Gas Monitoring Results



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 20 Boscobeth Development Centre, (Barnsley), South Yorkshire, S61 2BE. Tel: 01773 751 300 Fax: 01773 751 999
 West Yorkshire: Unit 10 Boscobeth Development Centre, (Barnsley), South Yorkshire, S61 2BE. Tel: 01773 751 300 Fax: 01773 751 999
 Regional Offices: Unit 20 Boscobeth Development Centre, (Barnsley), South Yorkshire, S61 2BE. Tel: 01773 751 300 Fax: 01773 751 999

GAS MONITORING RESULTS

Monitoring Point	Date and Time	Weather Condition	Temperature °C	Depth and Type of Well	Drilled Level (m AOD)	Water Depth (m AOD)	Recharge Water Level (m AOD)	Flow Rate (m³)	O₂ Pressure (kPa)	ATM Pressure (kPa)	Methane % v/v		Methane % LEL		Carbon Dioxide % v/v		Oxygen % v/v	Hydrogen Sulphide (ppm)	Carbon Monoxide (ppm)	Comments
											(%)	(ppm)	(%)	(ppm)	(%)	(ppm)				
PM002_AUG_B010	08/05/2020 00:00	Fair	16	15.00m 50mm SP	8.64	2.93	8.64	-1.2	11.13	1028	0.4	0.4	8.0	0.1	<0.1	18.0	19.8	1.0	4.0	
PM002_AUG_B010	08/05/2020 00:00	Fair	14	10.50m 50mm SP	8.64	3.00	8.64	-0.4	1.53	1028	0.4	0.4	8.0	0.1	0.1	20.3	20.3	1.0	<0.1	
PM002_AUG_B010	08/05/2020 00:00	Fair	14	7.20m 50mm SP	8.21	1.10	7.11	-5.0	-2.43	1028	0.4	0.4	8.0	0.1	<0.1	20.5	20.5	1.0	<1.0	
PM002_AUG_B010	15/05/2020 14:18	Overcast	15	7.20m 50mm SP	8.21	0.83	7.38	-0.1	0.33	1016	0.1	0.1	2.0	0.1	0.1	20.4	20.4	<1.0	1.0	
PM002_AUG_B010	30/05/2020 06:10	Overcast	15	7.20m 50mm SP	8.21	0.60	7.31	0.1	-0.07	1001	<0.1	<0.1	<2.0	0.1	0.1	20.5	20.5	<1.0	3.0	
PM002_AUG_B010	08/05/2020 00:00	Fair	14	8.50m 50mm SP	7.88	2.25	8.43	-5.3	-3.36	1028	0.4	0.4	8.0	0.1	0.1	20.5	20.5	1.0	8.0	
PM002_AUG_B010	08/05/2020 00:00	Fair	14	18.50m 50mm SP	8.70	8.40	2.50	-3.7	-2.08	1028	0.4	0.4	8.0	0.1	0.1	20.4	20.4	1.0	2.0	
PM002_AUG_B010	15/05/2020 14:28	Overcast	15	18.50m 50mm SP	8.70	4.09	4.84	0.1	-0.09	1018	0.1	0.1	2.0	0.3	0.3	18.0	18.0	<1.0	8.0	
PM002_AUG_B010	30/05/2020 11:01	Overcast	15	18.50m 50mm SP	8.70	6.21	2.46	0.1	-0.21	1001	0.1	0.1	2.0	0.3	0.3	18.8	18.8	<1.0	2.0	
PM002_AUG_B010	08/05/2020 00:00	Fair	14	11.00m 50mm SP	8.28	4.80	3.88	0.8	-2.48	1037	0.4	0.4	8.0	0.1	0.1	20.4	20.4	1.0	<1.0	
PM002_AUG_B010	15/05/2020 15:28	Overcast	15	11.00m 50mm SP	8.28	4.49	3.71	0.1	0.02	1016	0.1	0.1	2.0	0.3	0.3	18.6	18.6	<1.0	5.0	

See attached Calibration Certificate for Model No. and any other details. SP = Standpipe - SPPE = Standpipe Piezometer. (P) = Peak - (S) = Steady - (D) = Decline.

Contract Title :-	Plaine Site Ground Investigation Works	Client :-	South Tees Development Corporation
Date of Issue :-	05/11/2020	Page No. :-	1 of 3
Contract No. :-	AEG Contract No. :- 4251		
Date of Issue :-	05/11/2020	Checked By :-	LC
Approved By :-	XW		
Certificate No. :-	MON/4251/1		



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Unit 23, South Gate Industrial Estate, South Gate, Chester, Cheshire, CH3 9JF
 Unit 25, Business Development Centre, Eastern Cheshire, Macclesfield, SK11 6BB
 Tel: 01753 834400 Fax: 01753 834401
 Tel: 01753 834400 Fax: 01753 776 686

GAS MONITORING RESULTS

Monitoring Point	Date Test	Weather Condition	Temperature °C	Depth Test (Type of Well)	Drilling Date (m/d/y)	Water Depth (m/d/c)	Reduced Water Level (m/d/c)	Flow Rate (l/m)	Dry Pressure (mbars)	ATM Pressure (mbars)	Methane % v/v		Methane % IEL		Oxygen % v/v		Hydrogen Sulfide (ppm)	Carbon Monoxide (ppm)	Remarks
											(P)	(S)	(P)	(S)	(P)	(S)			
PR001_AUG_2016	20/06/2016 12:00	Overcast	15	11.00m 50mm SP	8.26	4.51	3.75	0.1	1002	1002	<0.1	<0.1	0.2	0.2	18.8	19.8	<1.0	4.0	
PR002_AUG_2016	06/06/2016 09:00	Fair	14	10.00m 50mm SP	8.71	3.94	8.77	0.6	1027	1027	0.4	0.4	0.0	0.1	20.4	20.4	1.0	<1.0	
PR003_AUG_2016	15/06/2016 14:52	Overcast	15	10.00m 50mm SP	8.71	2.73	8.98	0.0	1018	1018	0.1	0.1	2.0	2.0	19.9	19.9	<1.0	2.0	
PR004_AUG_2016	20/06/2016 11:28	Overcast	16	10.00m 50mm SP	8.71	3.29	5.43	0.0	1002	1002	<0.1	<0.1	<0.1	<0.1	20.6	20.6	<1.0	2.0	
PR005_AUG_2017	06/06/2016 09:00	Fair	14	8.00m 50mm SP	10.15	3.16	7.00	1.1	1027	1027	0.4	0.4	0.0	0.7	19.8	19.9	1.0	2.0	
PR006_AUG_2017	15/06/2016 12:41	Overcast	15	8.00m 50mm SP	10.15	3.21	8.95	0.1	1018	1018	0.1	0.1	2.0	2.0	18.8	18.8	<1.0	2.0	
PR007_AUG_2017	20/06/2016 13:05	Overcast	15	8.00m 50mm SP	10.16	3.17	7.04	0.1	1002	1002	0.1	0.1	<0.1	<0.1	18.6	18.6	<1.0	3.0	
PR008_AUG_2018	06/06/2016 09:00	Fair	14	8.00m 16mm SP/SG	8.86	2.20	8.66	4.4	1007	1007	0.6	0.6	10.0	10.1	20.5	20.2	1.0	<1.0	
PR009_AUG_2018	15/06/2016 15:17	Overcast	15	8.00m 16mm SP/SG	8.86	1.14	7.72	0.2	1018	1018	0.1	0.1	2.0	2.0	18.8	19.4	<1.0	1.0	
PR010_AUG_2018	20/06/2016 11:55	Overcast	15	8.00m 16mm SP/SG	8.86	0.58	8.51	0.0	1000	1000	<0.1	<0.1	<0.1	<0.1	20.6	20.6	<1.0	<1.0	
PR011_AUG_2018	06/06/2016 09:00	Fair	14	14.00m 50mm SP	8.86	5.00	3.86	7.1	1027	1027	0.6	0.5	10.0	10.0	20.1	20.1	1.0	4.0	

See attached Calibration Certificate for Model No. and any other details. SP = Standpipe - SPG = Standpipe Piezometer, (P) = Peak - (S) = Steady - (O) = Decline.

Contract Title :-	Prairie Site Ground Investigation Works	Client :-	South Tees Development Corporation
Date of Issue :-	05/11/2020	Checked By :-	LC
Page No. :-	2 of 3	Approved By :-	KW
Contract No. :-	4251	Certificate No. :-	MON/4251/2



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: 10000 100th Ave, Edmonton, Alberta T5A 0A6
 Regional Office: 2425 Sunport Development Centre, Edmonton, Alberta T5B 3L2
 Tel: 780-443-2222 Fax: 780-443-2223
 Email: info@allied-geotech.com Website: www.allied-geotech.com

GAS MONITORING RESULTS

Monitoring Point	Date and Time	Weather Condition	Temperature °C	Depth and Type of Well	Ground Level (m AOD)	Water Depth (m AOD)	Reduced Water Level (m AOD)	Flow Rate (m³/d)	O₂ Pressure (mmHg)	ATM Pressure (mmHg)		Moisture % by Vol		Methane % by Vol		CO₂ (ppm)	Oxygen % by Vol	Hydrogen Sulfide (ppm)	Carbon Monoxide (ppm)	
										(P)	(S)	(P)	(S)	(P)	(S)					
msumc_aug_bem06	06/06/2020 03:00	Fair	14	11.80m 50mm SP	12.08	6.48	6.66	-1.2	-1027	0.4	0.4	0.0	0.0	0.0	0.0	0.0	16.0	10.0	1.2	1.0
msumc_aug_bem08	15/06/2020 13:04	Overcast	15	11.80m 50mm SP	12.08	6.57	6.12	0.1	1026	0.1	0.1	0.0	2.0	1.7	1.7	18.4	16.4	~1.0	1.0	
msumc_aug_bem10	20/06/2020 13:26	Overcast	15	11.80m 50mm SP	12.09	6.72	5.37	0.4	1022	0.5	0.5	10.0	10.0	4.0	4.0	15.4	16.4	~1.0	~10.0	
msumc_aug_bem16	06/06/2020 09:07	Fair	14	20.60m 50mm SP	7.60	4.00	3.80	-0.8	1029	0.5	0.5	10.0	10.0	0.1	0.1	20.4	20.4	1.0	3.0	
msumc_aug_bem10	15/06/2020 12:23	Overcast	15	20.60m 50mm SP	7.60	3.68	3.68	0.1	1016	0.1	0.1	2.0	2.0	0.2	0.2	11.9	11.9	~0.1	32.6	
msumc_aug_bem16	20/06/2020 09:46	Overcast	15	20.60m 50mm SP	7.60	3.97	3.03	0.1	1001	0.1	0.1	3.0	3.0	0.4	0.4	9.9	9.9	~1.0	13.9	

See attached Calibration Certificate for Model No. and any other details. SP = Standpipe - SPM = Standpipe Piezometer. (P) = Peak - (S) = Steady - (D) = Decline.

	Contract Title :- Prairie Site Ground Investigation Works	Client :- South Tees Development Corporation	AEG Contract No. :- 4251
	Date of Issue :- 05/11/2020	Page No :- 3 of 3	Checked By :- 
Approved By :- 		Certificate No. :- MON/4251/3	

CERTIFICATION OF CALIBRATION



Date Of Calibration: 09-Mar-2020
Issued by: QED Environmental Systems Ltd.

Certificate Number: G506066_2/25251

Customer: Allied Exploration & Geotechnics Ltd
25 Stella Gill Industrial Estate Pelton Fell Chester Le Street
County Durham DH2 2RG UNITED KINGDOM

Description: Gas Analyser

Model: GAS000

Serial Number: G506066

UKAS Accredited results:

Results after adjustment :

Methane (CH ₄)		
Certified Gas (%)	Instrument Reading (%)	Uncertainty (%)
5.0	4.9	0.41
15.0	15.0	0.64
50.0	49.6	0.94

Carbon Dioxide (CO ₂)		
Certified Gas (%)	Instrument Reading (%)	Uncertainty (%)
5.0	4.9	0.43
15.0	14.8	0.70
50.0	50.3	1.1

Oxygen (O ₂)		
Certified Gas (%)	Instrument Reading (%)	Uncertainty (%)
21.3	21.4	0.31

The inwards assessment was carried out 02-Mar-2020.
The maximum adjustment is larger than the inwards assessment uncertainty.
Inwards assessment data is available if requested.
All concentrations are molar.

CH₄, CO₂ readings recorded at : 32.5 °C ± 2.5 °C
O₂ readings recorded at : 24.0 °C ± 2.5 °C
Barometric Pressure : 1002 mbar ± 4 mbar

Method of Test : The analyser is calibrated in a temperature controlled chamber using a series of reference gases, in compliance with procedure LP004.

This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to the SI system of units and/or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

Calibration Instance: 108 IGC Instance: 108

Page 1 of 2 | LP015GIUKAS-2.4

www.qedenv.com +44 (0) 333 800 0088 sales@qedenv.co.uk

QED Environmental Systems Ltd, Cyan Park - Unit 3, Jimmy Hill Way, Coventry, CV2 4QF, UNITED KINGDOM

Registered in England and Wales 1898134

CERTIFICATION OF CALIBRATION



Date Of Calibration: 09-Mar-2020

Certificate Number: G506066_2/25251

Issued by: QED Environmental Systems Ltd.

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with UKAS requirements.

Calibrations marked 'Non-UKAS Accredited results' on this certificate have been included for completeness.

Non-UKAS accredited results after adjustment:

Barometer (mbar)	
Reference	Instrument Reading
1002	1002

Additional Gas Cells		
Gas	Certified Gas (ppm)	Instrument Reading (ppm)
CO	504	509
H ₂ S	262	262

Date of issue : 11-Mar-2020

Approved by Signatory

Laura McBride

Laboratory Inspection

This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to the SI system of units and/or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

Calibration Instance:108 IGC Instance:108

Page 2 of 2 | LPO15GIUKAS-2.4

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QED Environmental Systems Ltd, Cyan Park - Unit 3, Jimmy Hill Way, Coventry, CV2 4QP, UNITED KINGDOM

Registered in England and Wales 2898794

CERTIFICATION OF CALIBRATION



Date Of Calibration: 18-Jun-2020

Certificate Number: G506065_2/25880

Issued by: QED Environmental Systems Ltd.

Customer: Allied Exploration & Geotechnics Ltd
25 Stella Gill Industrial Estate Pelton Fell Chester Le Street
County Durham DH2 2RG UNITED KINGDOM

Description: Gas Analyser

Model: GA5000

Serial Number: G506065

UKAS Accredited results:

Results after adjustment :

Methane (CH ₄)		
Certified Gas (%)	Instrument Reading (%)	Uncertainty (%)
5.0	4.9	0.41
15.0	15.0	0.64
60.0	59.8	0.94

Carbon Dioxide (CO ₂)		
Certified Gas (%)	Instrument Reading (%)	Uncertainty (%)
5.0	4.9	0.43
15.0	14.8	0.70
39.9	40.0	1.1

Oxygen (O ₂)		
Certified Gas (%)	Instrument Reading (%)	Uncertainty (%)
21.1	21.2	0.31

The inwards assessment was carried out 14-May-2020.

The maximum adjustment is larger than the inwards assessment uncertainty.

Inwards assessment data is available if requested.

All concentrations are molar.

CH₄, CO₂ readings recorded at : 32.5 °C ± 2.5 °C

O₂ readings recorded at : 22.8 °C ± 2.5 °C

Barometric Pressure : 1000 mbar ± 4 mbar

Method of Test : The analyser is calibrated in a temperature controlled chamber using a series of reference gases, in compliance with procedure LP004.

This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to the SI system of units and/or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

Calibration Instance:109 IGC Instance:109

Page 1 of 2 | LP015G/UKAS-2.4

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QED Environmental Systems Ltd. Cyan Park - Unit 3, Jimmy Hill Way, Coventry, CV2 4QR, UNITED KINGDOM

Registered in England and Wales 3898734

CERTIFICATION OF CALIBRATION



Date Of Calibration: 18-Jun-2020

Certificate Number: G506065_2/25880

Issued by: QED Environmental Systems Ltd.

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with UKAS requirements.

Calibrations marked 'Non-UKAS Accredited results' on this certificate have been included for completeness.

Non-UKAS accredited results after adjustment:

Barometer (mbar)	
Reference	Instrument Reading
1000	1001

Internal Flow	
Applied (l/hr)	Instrument Reading (l/hr)
5.0	5.1
10.0	9.9

Date of Issue : 19-Jun-2020

Approved by Signatory

Laura McBride
Laboratory Inspection

This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to the SI system of units and/or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

Calibration Instance:109 IGC Instance:109

Page 2 of 2 | LP015GIUKAS-2.4

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QED Environmental Systems Ltd, Cyan Park - Unit 3, Jimmy Hill Way, Coventry, CV2 4QP, UNITED KINGDOM

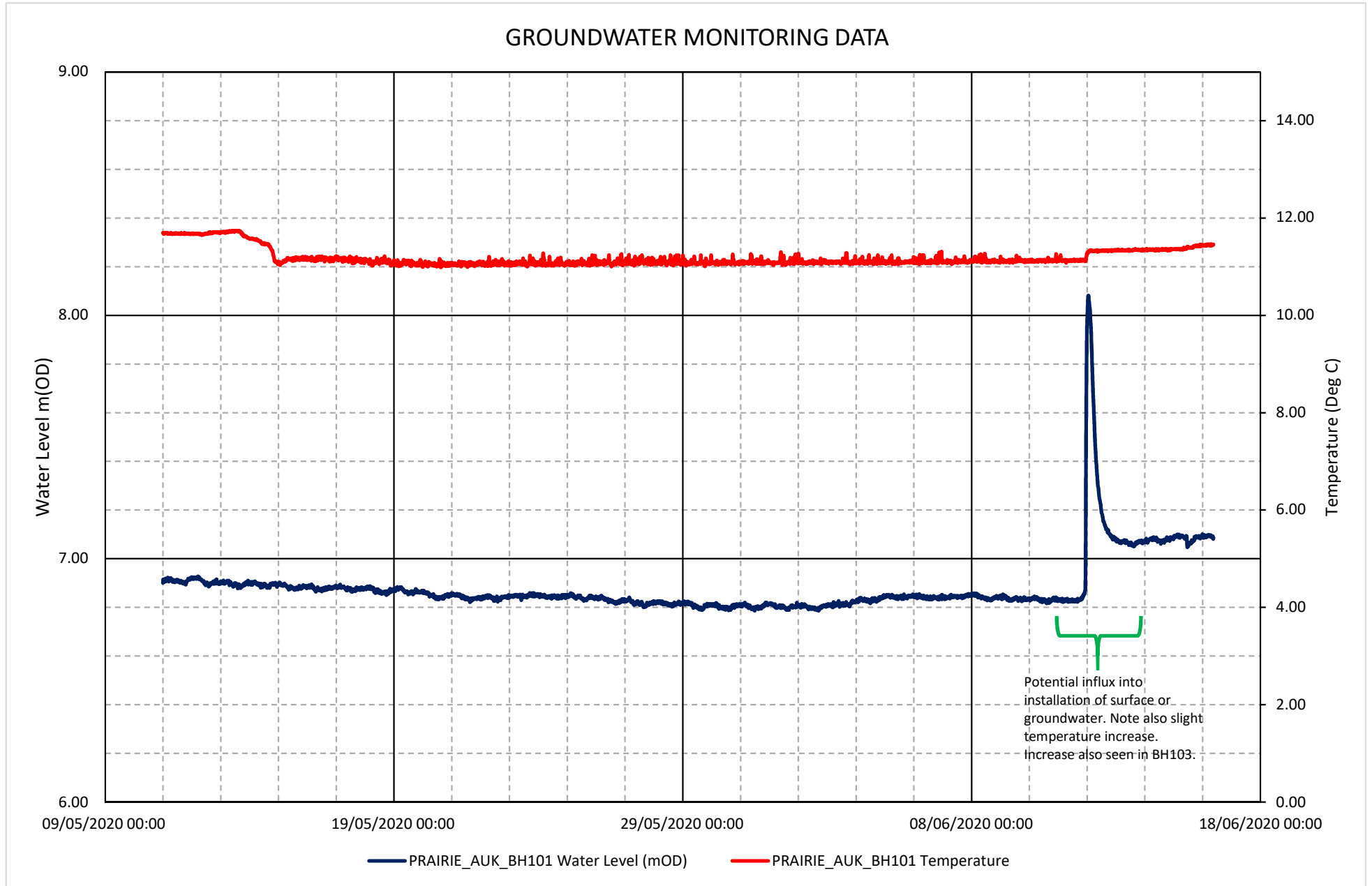
Registered in England and Wales 1894734

Continuous Groundwater/Tidal Monitoring Results



GROUNDWATER MONITORING DATA

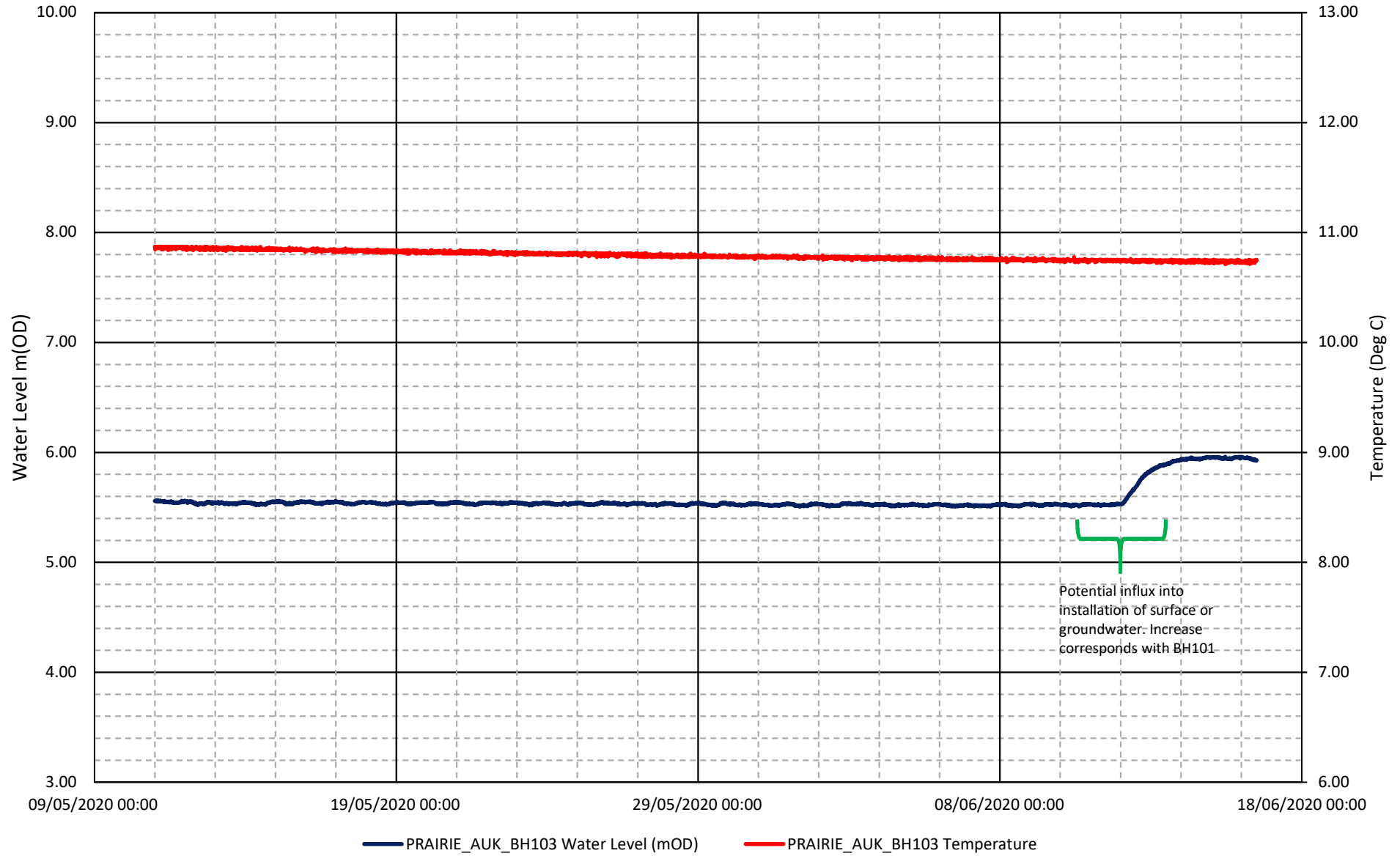
GROUNDWATER MONITORING DATA



Title: Prairie Site Ground Investigation Works
Contract No: 4251
Client: South Tees Development Corporation
Printed: 05/11/2020

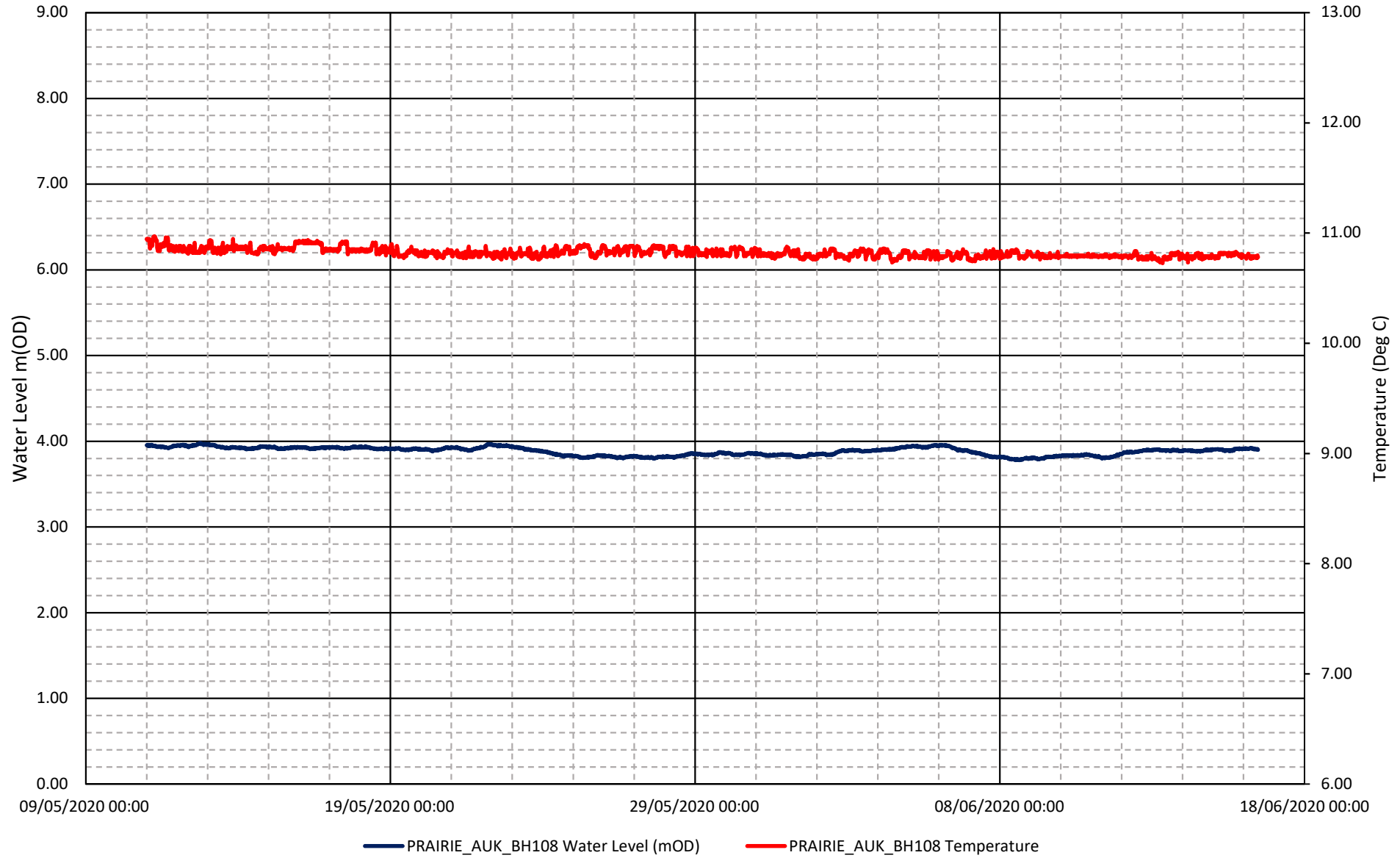
GROUNDWATER MONITORING DATA

GROUNDWATER MONITORING DATA



GROUNDWATER MONITORING DATA

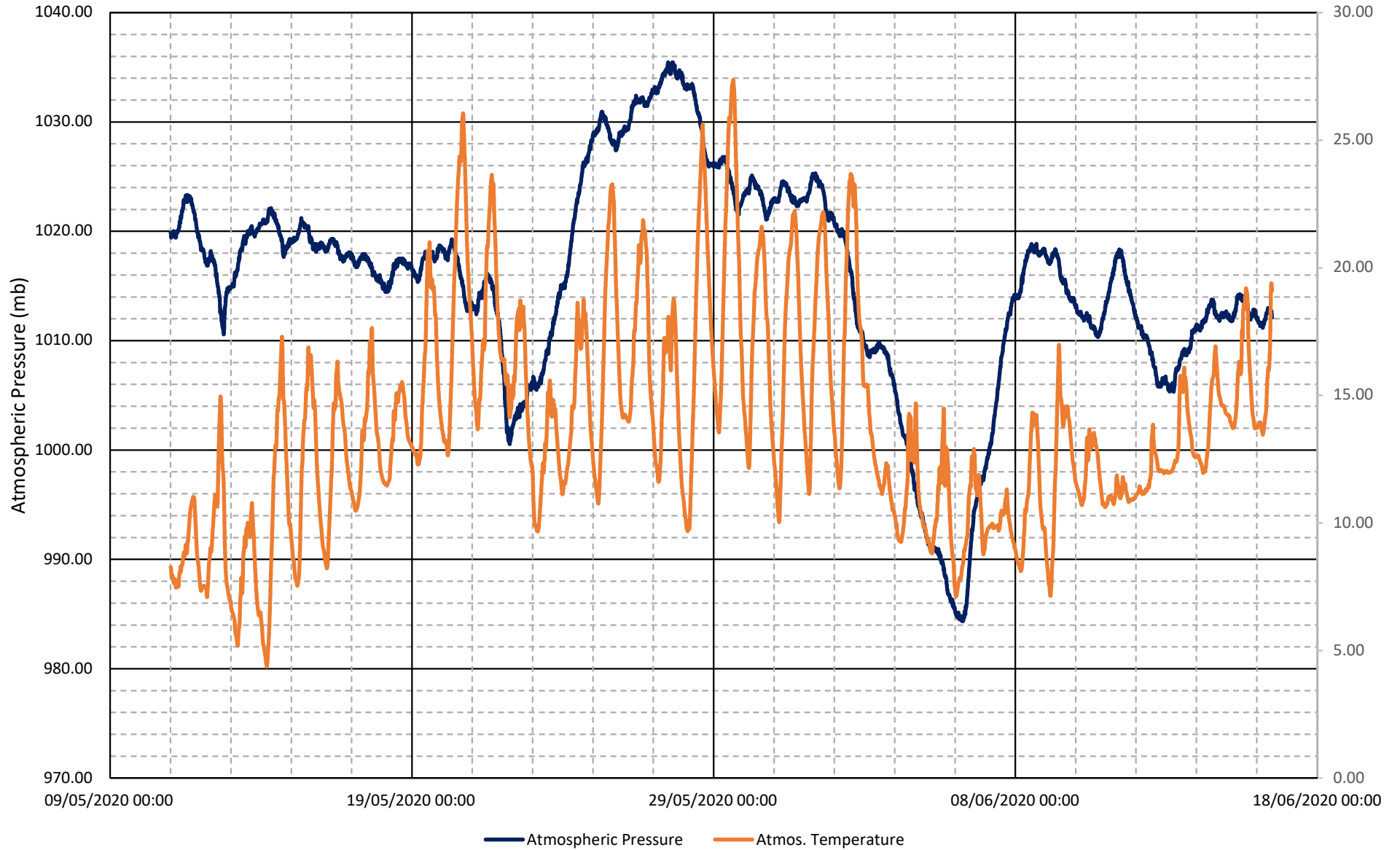
GROUNDWATER MONITORING DATA



Title: Prairie Site Ground Investigation Works
Contract No: 4251
Client: South Tees Development Corporation
Printed: 05/11/2020

GROUNDWATER MONITORING DATA

ATMOSPHERIC PRESSURE MONITORING DATA



Title: Prairie Site Ground Investigation Works
Contract No: 4251
Client: South Tees Development Corporation
Printed: 05/11/2020

In-situ Test Report Certificate



ALLIED EXPLORATION & GEOTECHNICS LIMITED

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Regional Office: Unit 20 Business Development Centre, Eppon Wharf, Blockley, BB1 5BC - Tel: 01254 503 200 Fax: 01254 602 190



IN-SITU TESTING REPORT CERTIFICATE



Contract Title: Prairie Site Ground Investigation Works

AEG Reference: 4251

Client Address: South Tees Development Corporation

I certify that *In-situ* testing was carried out on the above contract in accordance with techniques outlined in BS 1377: 1990: Part 9 or other appropriate standards as quoted, and the following results, given on the attached enclosures, were obtained.

The tests carried out are indicated in the attached table showing the enclosure number and the total number of pages.

For and on behalf of Allied Exploration & Geotechnics Limited

- Nick Vater (Managing Director)
 Kerry Wade (Technical Manager)

Signed

Date: 05 November 2020

Tests marked not UKAS accredited in this certificate are not included in the UKAS accreditation schedule for our laboratory. Any opinions and interpretations expressed herein are outside the scope of the laboratory's UKAS accreditation

IN-SITU TESTING REPORT CERTIFICATE

ENCLOSURES

Enclosure Number	Description	UKAS Accredited	Reference	No. of Pages
0	Test Report Certificate	N/A		2
1	Standard Penetration Test Results (SPT)	Yes	BS 1377 Part 9 1990	15
2	Hand Shear Vane Test Results	No		7
3	Photo-Ionisation Detector Test Results	No		7
4	<i>In-situ</i> Water Quality Parameter Test Results	No		9
5	Hydraulic Conductivity Slug Test Results	No		15
-	Density by Core Cutter Method	Yes	BS 1377 Part 9 1990	-
-	Determination of the Vane Shear Strength (Down the Hole)	Yes	BS 1377 Part 9 1990	-
-	Shallow Pad (skip) Load Test Results	No	BS 1377 Part 9 1990	-
-	Determination of the California Bearing Ratio	Yes	BS 1377 Part 9 1990	-
-	Plate Loading Test Results	No	BS 1377 Part 9 1990	-
-	Apparent Resistivity of Soil	No	BS 1377 Part 9 1990	-
-	Redox Potential of Soil	No	BS 1377 Part 9 1990	-
-	Determination of the Soil Infiltration Rate for Spokaway Design	No	BRE Digest 385 1991	-

Standard Penetration Test Results



ALLIED EXPLORATION & GEOTECHNICS LIMITED


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 Tel: 01524 371100 Fax: 01524 381 471
 Regional Office: Unit 25 Business Development Centre, Epsom (Woking) Surrey, GB, Epsom, Surrey, UK, Surrey, GU10 2JG, UK
 Tel: 01753 730300 Fax: 01753 730399

STANDARD PENETRATION TEST RESULTS

(BS EN ISO 22476-3: 2005)

Exploratory Hole No	Test Depth (Reduced Level)	Water Depth (Clear)	Rod Length	SPT Hammer Fall	Energy Ratio (%)	SEATING DRIVE										TEST DRIVE										Total Pen	Total Blows	Rod Length Cor _r	Energy Ratio Cor _r	Pen (mm)/Blow	SPTF Value	SPTF Value (Cor _r)	Remarks
						Blows		Pen (mm)		Blows		Pen (mm)		Blows		Pen (mm)		Blows		Pen (mm)													
						No	mm	No	mm	No	mm	No	mm	No	mm	No	mm	No	mm	No	mm												
PR0100_AUG_00010	0.50 (2.18)	Dry (0.30)	5.50	4500	51	75	3	75	4	150	1	75	5	75	5	75	5	75	5	75	5	75	6	300	21	0.85	0.85	14.29	21	15	5		
PR0100_AUG_00011	0.50 (0.82)	Dry (0.30)	8.50	4500	51	75	4	75	5	150	9	75	8	75	6	75	10	75	11	300	37	0.54	0.85	8.11	37	0.85	0.85	8.11	37	30	5		
PR0100_AUG_00012	11.50 (2.02)	Dry (13.30)	11.50	4500	51	75	0	75	17	150	23	75	28	75	16	75	18	75	20	300	80	1.00	0.85	3.75	96	0.85	0.85	3.75	96	98	5		
PR0100_AUG_00013	13.00 (4.32)	Dry (12.80)	13.00	4500	51	75	0	75	18	150	25	75	25	75	41	50	34			200	100	1.00	0.85	2.00	-	0.85	0.85	2.00	-	-	5		
PR0100_AUG_00014	13.50 (5.82)	Dry (13.30)	13.50	4700	51	75	22	75	38	150	48	75	47	55	53					130	100	1.00	0.85	1.30	-	0.85	0.85	1.30	-	-	5		
PR0100_AUG_00015	7.00 (1.70)	Dry (6.80)	7.00	4500	51	75	5	75	5	150	10	75	6	75	8	75	8	75	10	300	32	0.88	0.85	9.38	32	0.85	0.85	9.38	32	24	5		
PR0100_AUG_00016	10.00 (3.30)	Dry (9.80)	10.00	4500	51	75	0	75	7	150	13	75	9	75	9	75	9	75	10	300	36	1.00	0.85	8.33	36	1.00	0.85	8.33	36	21	5		
PR0100_AUG_00017	12.00 (3.30)	Dry (11.80)	12.00	4500	51	75	0	75	18	150	26	75	16	75	34	75	31	45	28	270	100	1.00	0.85	2.70	-	0.85	0.85	2.70	-	-	5		
PR0100_AUG_00018	13.00 (4.30)	Dry (12.80)	13.00	4500	51	75	10	75	20	150	30	75	23	75	34	75	42			225	100	1.00	0.85	2.25	-	0.85	0.85	2.25	-	-	5		
PR0100_AUG_00019	4.00 (4.20)	Dry (4.00)	4.00	4500	51	75	2	75	3	150	5	75	3	75	3	75	3	75	4	300	13	0.75	0.85	23.08	13	0.85	0.85	23.08	13	8	5		

NOTE: Please refer to calculation certificate for additional information and corresponding Exploratory Hole record for sampling details. Unconnected and corrected SPTF_r values are presented on the attached graphical plot (relative to each Exploratory Hole).

	Contract Title :- Praine Site Ground Investigation Works		Client :- South Tees Development Corporation		AEG Contract No :- 4251	
	Date of Issue :- 05/11/2020		Checked By :- LC		Certificate No. :- SPT/4251/2	
Page No. :- 2 of 5		Approved By :- ASW				




ALLIED EXPLORATION & GEOTECHNICS LIMITED

Unit 15 Princes Industrial Estate, Princes Park, Chester-le-Stroud, Derbyshire, S41 1JL
 Unit 25 Dunrobin Development Centre, Euxine Way, Scaurborn, S61 3EL
 Tel: 01773 754300 Fax: 01773 754399

STANDARD PENETRATION TEST RESULTS (BS EN ISO 22476-3: 2005)

Exploratory Hole No.	Test Depth (Referenced Level)	Water Content (Clayey)	Rod Length	SPT Hammer Eff.	SEATING DRIVE										Energy Rate E_v	TEST DRIVE										Energy Rate Cor.	Penetration	SPT Value	SPT Value (Cor.)	Block or Core	Remarks
					Blows		Pen		Blows		Pen		Blows			Pen		Blows		Pen		Blows		Pen							
					No.	mm	No.	mm	No.	mm	No.	mm	No.	mm		No.	mm	No.	mm	No.	mm	No.	mm	No.	mm						
PR1002_AUG_00000	0.50 (1.70)	Dry (6.30)	8.00	41000	51	75	3	75	4	150	7	75	4	75	4	75	4	75	4	75	4	75	6	300	19	14	5				
PR1003_AUG_00000	0.50 (1.24)	4.32 (9.30)	9.00	41000	51	75	12	75	23	150	35	75	28	75	38	26															
PR1004_AUG_00000	11.00 (2.74)	2.50 (10.00)	11.00	41000	51	90	60			90	60	75	100																		
PR1005_AUG_00000	11.20 (2.04)	7.89 (11.00)	11.20	41000	51	50	50			50	90	66	100																		
PR1006_AUG_00000	7.00 (1.71)	Dry (6.50)	7.00	41000	51	75	5	75	9	150	10	75	6	75	7	7	7	75	7	75	9	300	27								
PR1007_AUG_00000	10.00 (1.25)	Dry (9.60)	10.00	41000	51	75	5	75	10	150	15	75	12	75	12	12	12	75	12	75	12	300	52								
PR1008_AUG_00000	10.50 (1.70)	Dry (10.30)	10.50	41000	51	75	80			75	60	40	100																		
PR1009_AUG_00000	4.00 (0.16)	1.63 (2.40)	4.00	41000	51	75	2	75	3	150	5	75	3	75	4	4	4	75	4	75	5	300	17								
PR1010_AUG_00000	6.50 (2.66)	Dry (6.30)	6.60	41000	51	75	2	75	3	150	8	75	3	75	4	4	4	75	4	75	5	300	17								
PR1011_AUG_00000	9.00 (1.16)	Dry (7.60)	9.00	41000	51	75	25	75	25	110	50	40	100																		

NOTE: Please refer to calibration certificate for additional information and corresponding Exploratory Hole record to sampling details. Unconnected and corrected SPTN values are presented on the attached graph and relative to each Exploratory Hole.

	Contract Title :- Prairie Site Ground Investigation Works		Client :- South Tees Development Corporation		AEG Contract No :- 4251	
	Date of Issue :- 05/11/2020		Approved By :- <i>[Signature]</i>		Certificate No. :- SPT/4251/3	
Page No. :- 3 of 5		Checked By :- <i>[Signature]</i>				



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office:
Regional Office:

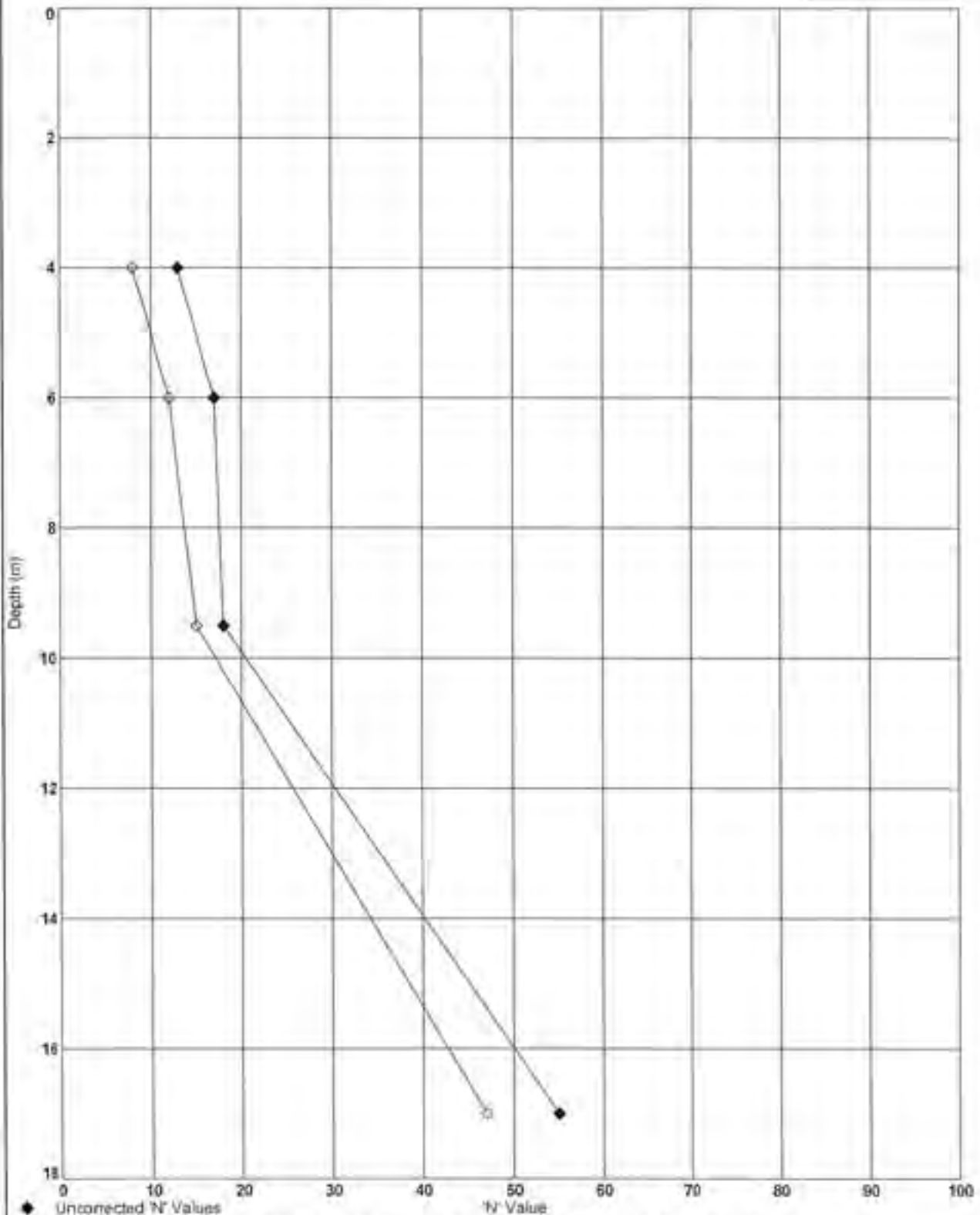
100th St, Suite 100, 704-888-8888, Mississauga, ON L4W 1M7
Unit 10, Kesteven, Leominster, Herefordshire, HR6 9PL

UK: 0191 261 4776 Fax: 0191 261 3113
US: 01772 252 800/804 01772 251 222

STANDARD PENETRATION TEST RESULTS (BS EN ISO 22476-3: 2005)

Exploratory Hole No:

PRAIRIE_AUK_BH101



Contract Title - Prairie Site Ground Investigation Works

Client - South Tees Development Corporation



Date of issue - 05/11/2020

Certificate No - SPT/4251/Graph/PRAIRIE_AUK_BH101

Operator - L. Sekirk

Checked By - LC

Approved By - ASW

AEG Contract No - 4251



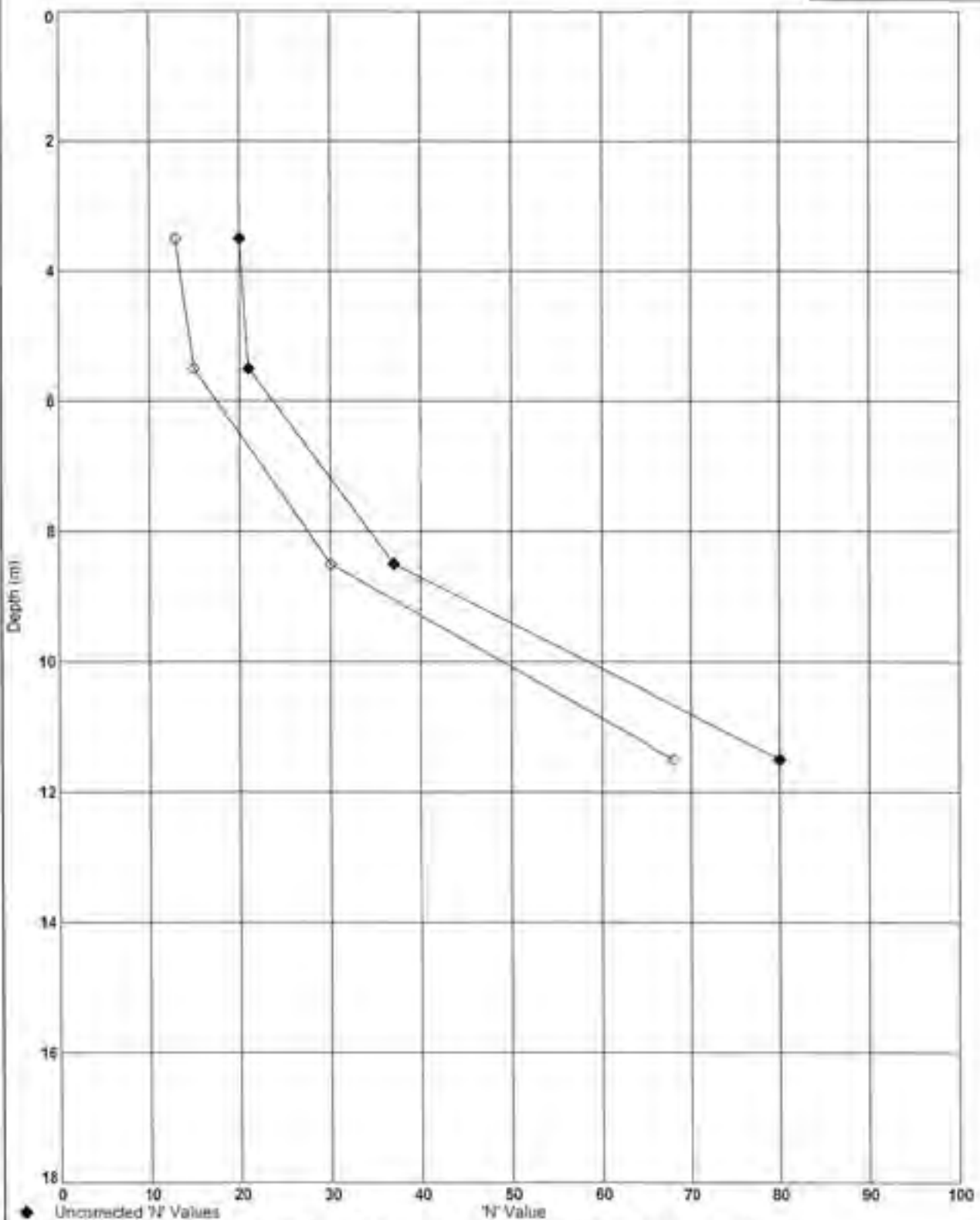
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ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 20, Kings Of Industry Drive, Park Hill, Chester-le-Street, Co. Durham, DH8 5PP Tel: 0191 287 4700 Fax: 0191 287 4710
 Regional Offices: Unit 20, Seaburn Development Centre, Seaburn, Newcastle, NE1 5PL Tel: 01753 335 800 Fax: 01753 735 399


STANDARD PENETRATION TEST RESULTS (BS EN ISO 22476-3: 2005)

Exploratory Hole No
PRAIRIE_AUK_BH103



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

Client - **South Tees Development Corporation**


 Date of issue - **05/11/2020**
 Checked By - *LC*

Certificate No - **SPT/4251/Graph/PRAIRIE_AUK_BH103**
 Approved By - *KW*

Operator - **L. Selkirk**
 AEG Contract No. - **4251**



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office:
Regional Office:

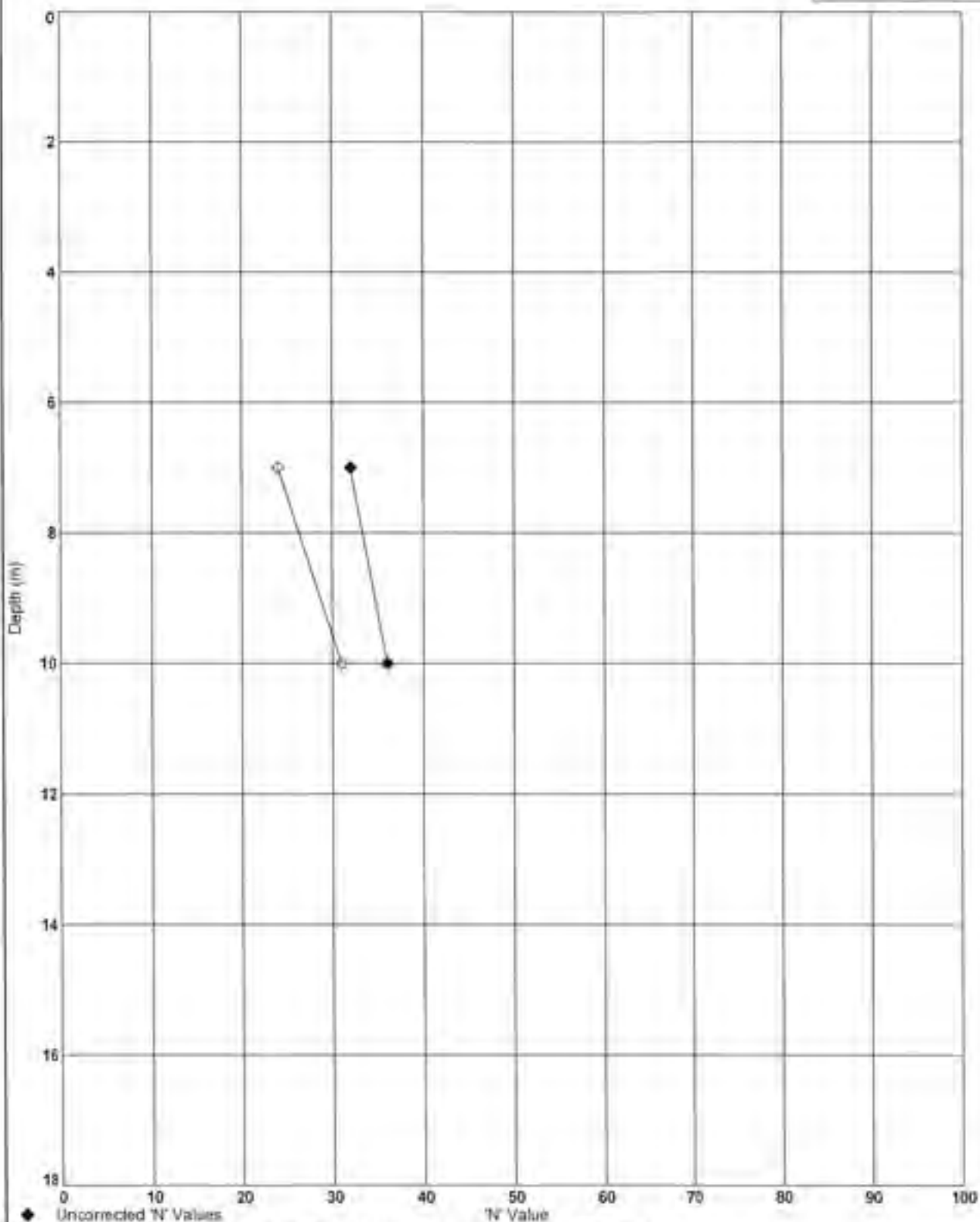
Unit 25, Green Hill Industrial Estate, Pease Road, Chatteris, Cambs, UK, Cambs, CB4 2DQ
Unit 20, Saxon's Development Centre, Europe Wharf, London, E91 3SE

Tel: 01455 861 400 Fax: 01455 287 474
Tel: 0203 255 300 Fax: 0203 255 300

STANDARD PENETRATION TEST RESULTS (BS EN ISO 22476-3: 2005)

Exploratory Hole No.

PRAIRIE_AUK_BH104



Contract Title :-
Frame Site Ground Investigation Works

Client :-
South Tees Development Corporation



Date of issue :-
05/11/2020

Certificate No :-
SPT/4251/Graph/PRAIRIE_AUK_BH104

Operator :-
L.S./L.H

Checked By :-
LC

Approved By :-
ALW

AEG Contract No :-
4251



1357

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office
Regional Office

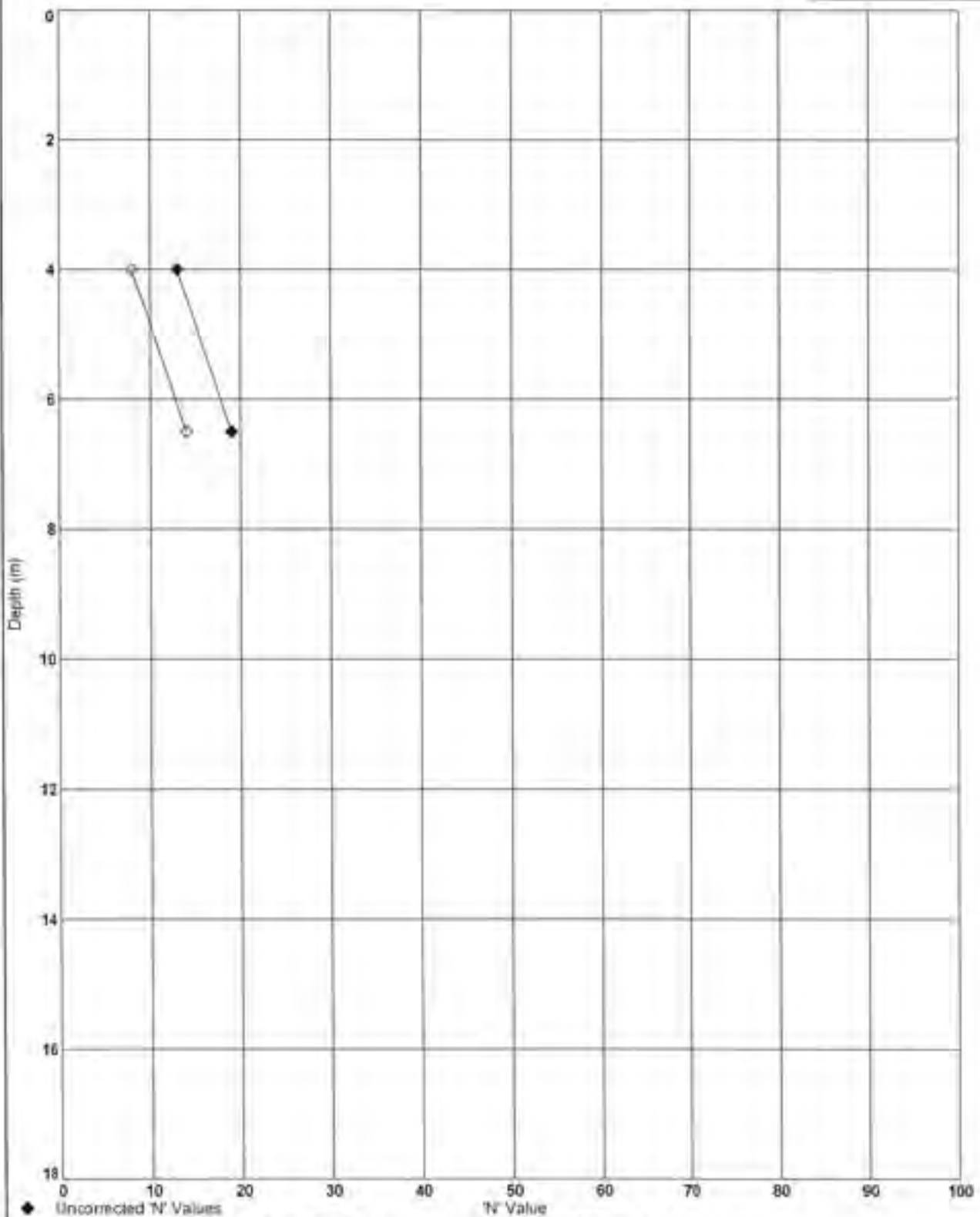
Unit 25, 26 & 27, Old Mill Lane, Churchfields, Churchfields, Colchester, CO1 2JQ
Unit 20, Science & Technology Centre, Eastern Water, Barking, E15 3BQ

Tel: 0201 861 4300 Fax: 0201 861 4310
Tel: 01772 726 301 Fax: 01772 726 302

STANDARD PENETRATION TEST RESULTS (BS EN ISO 22476-3: 2005)

Exploratory Hole No.

PRAIRIE_AUK_BH105



Contract Title :-

Praxe Site Ground Investigation Works

Client :-

South Tees Development Corporation



Date of Issue :-

05/11/2020

Certificate No. :-

SPT/4251/Graph/PRAIRIE_AUK_BH105

Operator :-

L. Selkirk

Checked By :-

LC

Approved By :-

ASW

AEG Contract No. :-

4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office:
Regional Office

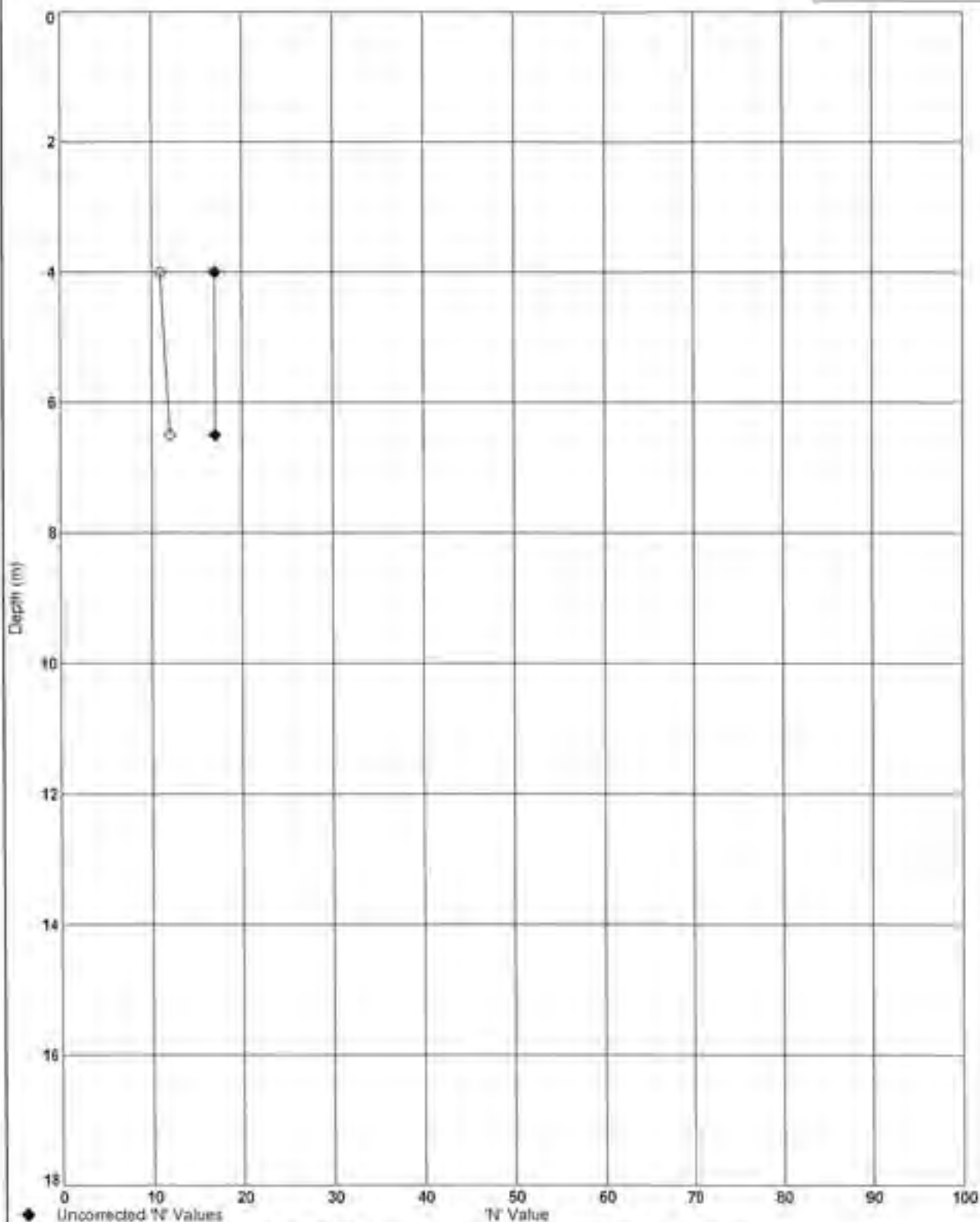
Unit 25, Green Oak Industrial Estate, Park Road, Chesham-Bell, Ox. Bucks, MK36 2HR
Unit 20, Eastman Development Centre, South Wood, Blotmore, BS1 5B

Tel: 01295 361 470 Fax: 01295 361 471
Tel: 01773 735 501 Fax: 01773 735 502

STANDARD PENETRATION TEST RESULTS (BS EN ISO 22476-3: 2005)

Exploratory Hole No

PRAIRIE_AUK_BH107



Contract Title :-

Prairie Site Ground Investigation Works

Client :-

South Trees Development Corporation



Date of Issue :-

05/11/2020

Certificate No :-

SPT/4251/Graph/PRAIRIE_AUK_BH107

Operator :-

L. Selkirk

Checked By :-

LC

Approved By :-

AKW

AEG Contract No :-

4251



1367

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office:
Regional Office:

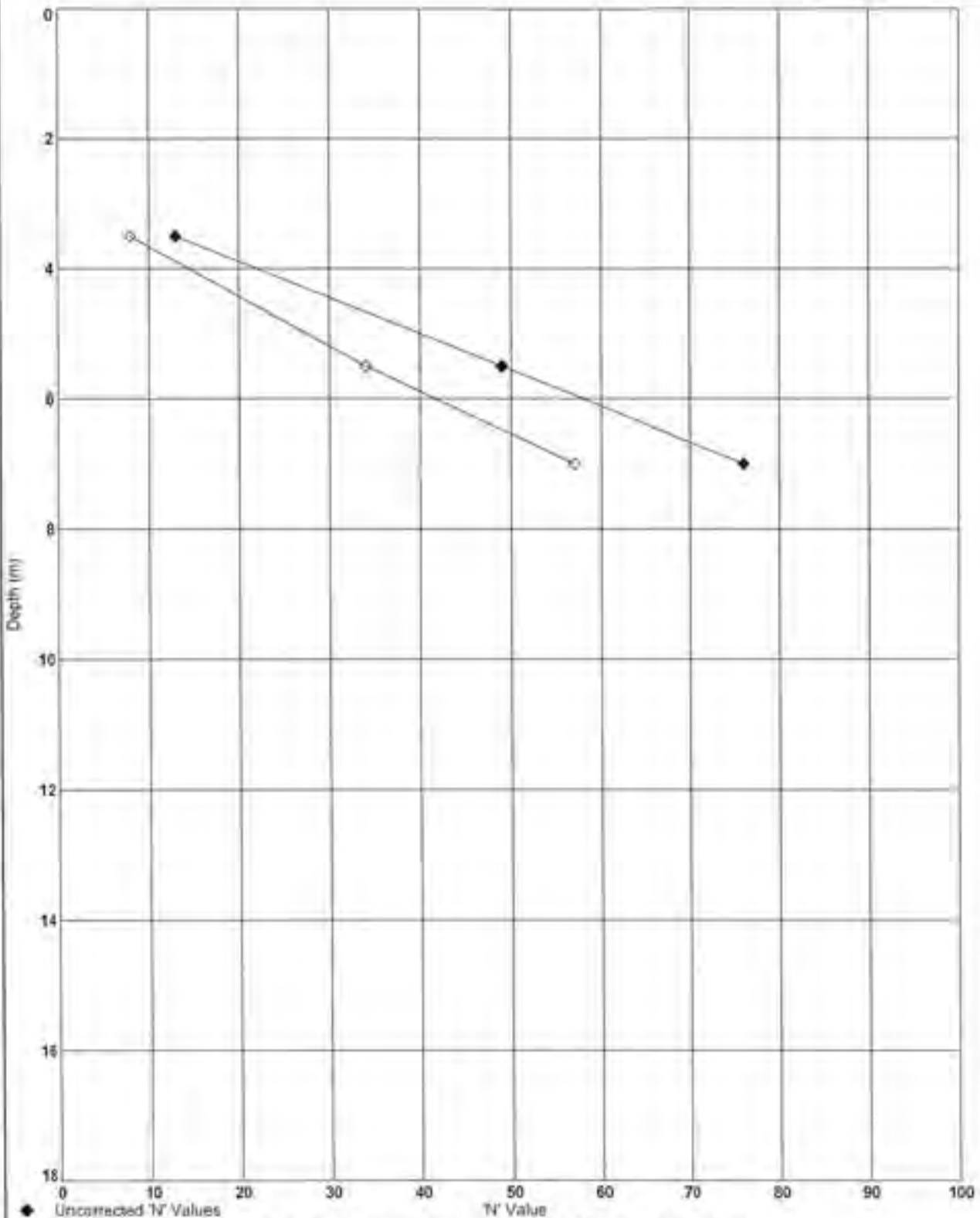
Unit 25, 26 & 27, Old Industrial Estate, Farnley Road, Churchfields, Doncaster, DN4 2PP
Unit 37, Enterprise Development Centre, South Wharf, Barnsley, S11 5SL

Tel: 0114 307 4700 Fax: 0114 302 4716
Tel: 01773 735 303 Fax: 01773 735 305

STANDARD PENETRATION TEST RESULTS (BS EN ISO 22476-3: 2005)

Exploratory Hole No.

PRAIRIE_AUK_BH108



Contract Title - Prairie Site Ground Investigation Works

Client - South Tees Development Corporation

Date of issue - 05/11/2020

Certificate No - SPT/4251/Graph/PRAIRIE_AUK_BH108

Operator - LS/LH

Checked By - LC

Approved By - [Signature]

AEG Contract No - 4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

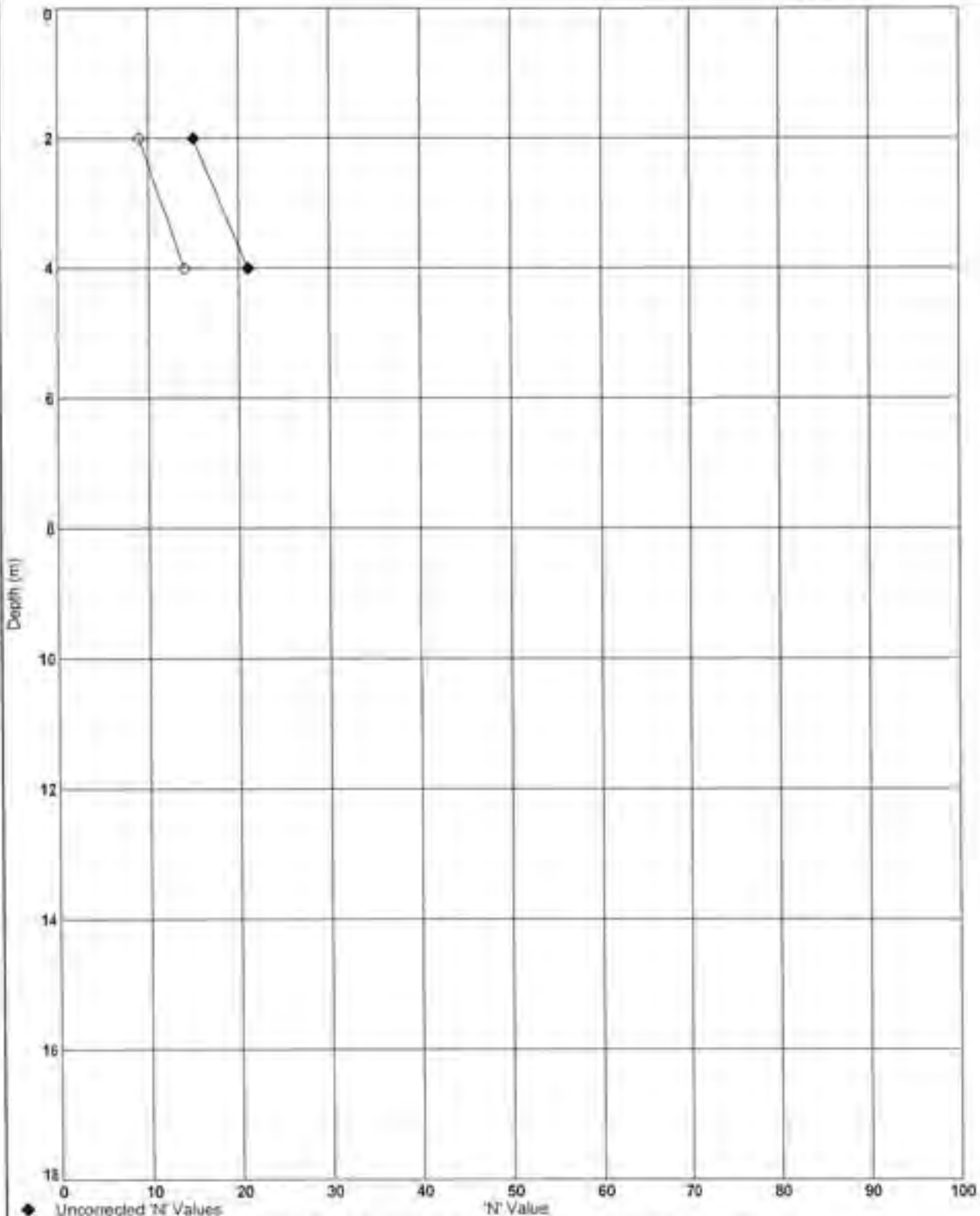
Head Office
Regional Office

Unit 27/28/29, The Gateway, 1st Floor, 100, The Gateway, Colchester, Essex, CO1 3JL
Unit 24, Riverside, Development Centre, 5, Albert Street, Huddersfield, West Yorkshire, HD1 3AB

Tel: 0151 907 4700 Fax: 0151 261 4710
Tel: 01474 790 500 Fax: 01474 770 990

STANDARD PENETRATION TEST RESULTS (BS EN ISO 22476-3: 2005)

Exploratory Hole No
PRAIRIE_AUK_BH109



◆ Uncorrected 'N' Values ○ Corrected 'N' Values Note: Graph does not display extrapolated SPT results (e.g. refusals).

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

	Date of issue :- 05/11/2020	Certificate No :- SPT/4251/Graph/PRAIRIE_AUK_BH109	Operator :- L.S./L.H.	
	Checked By :- <i>LC</i>	Approved By :- <i>ALW</i>	AEG Contract No. :- 4251	

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office:
Regional Office:

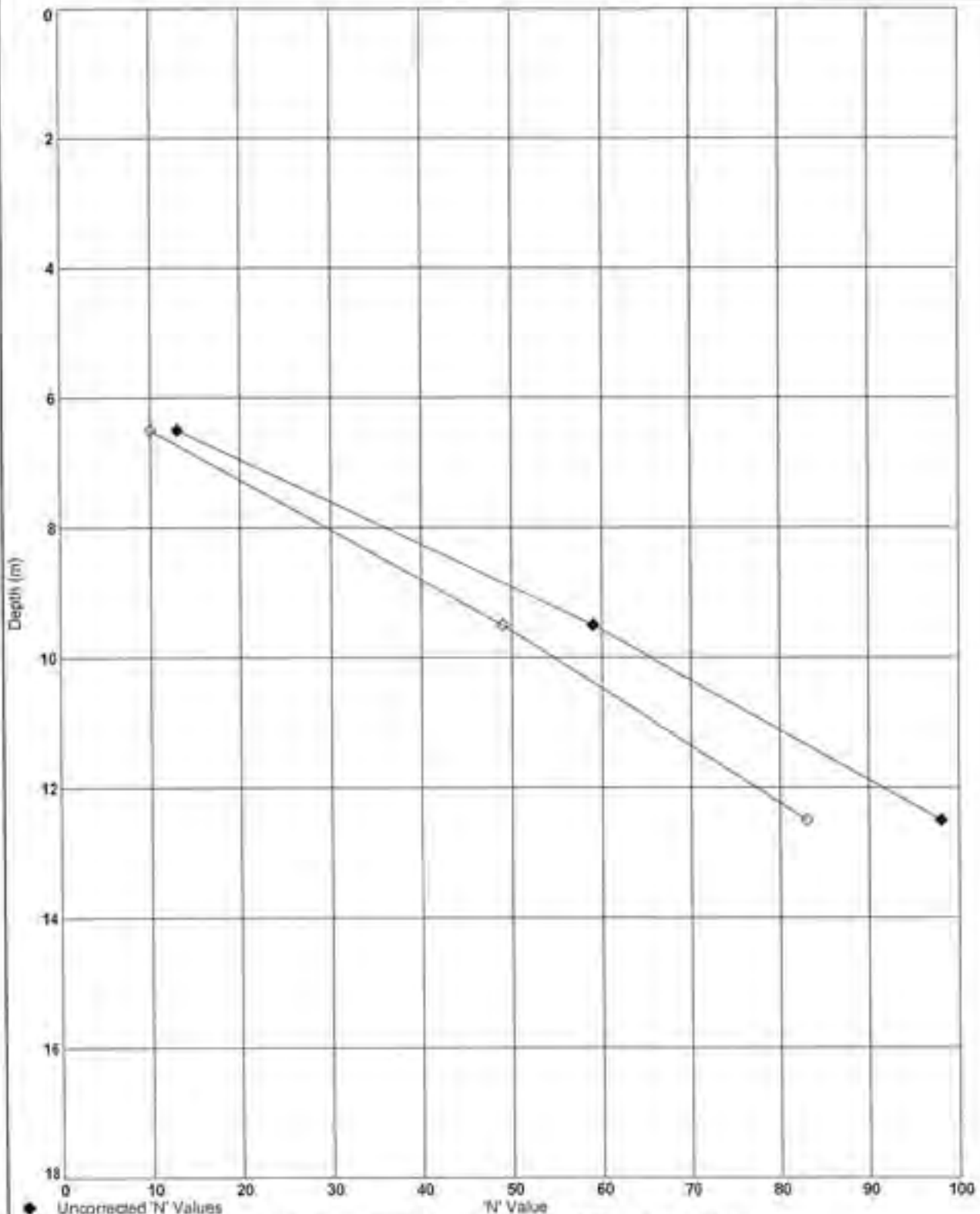
Unit 25-26, Oak Industrial Estate, Fyfe Park, Chester-le-Street, Co. Durham, DA1 2BC
Unit 20 Business Development Centre, Falcon Way, Baskerville, BA1 5BJ

Tel: 0191 361 4100 Fax: 0191 361 4716
Tel: 01172 226 228 Fax: 01172 726 489

STANDARD PENETRATION TEST RESULTS (BS EN ISO 22476-3: 2005)

Exploratory Hole No

PRAIRIE_AUK_BH110



Contract Title :- Prairie Site Ground Investigation Works

Client :- South Totes Development Corporation



Date of issue :- 05/11/2020

Certificate No :- SPT/4251/Graph/PRAIRIE_AUK_BH110

Operator :- LS/LH

Checked By :- LC

Approved By :- *LS*

AEG Contract No :- 4251



Unit 25 Stella Gill Industrial Estate
Pelton Fell
Chester-le-Street
DH2 2RG

SPT Hammer Energy Test Report

in accordance with BSEN ISO 22476-3:2005



SPT Hammer Ref: ATH09
Test Date: 23/05/2019
Report Date: 07/01/2020
File Name: ATH09.spt
Test Operator: BP

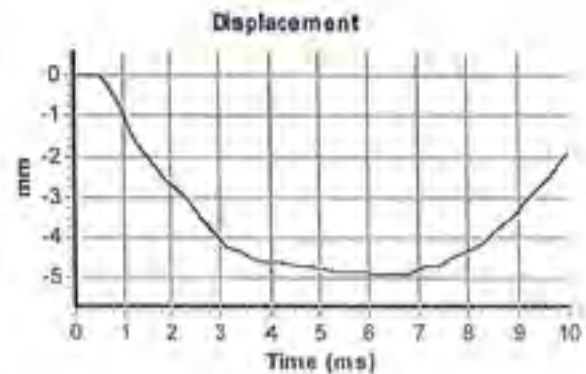
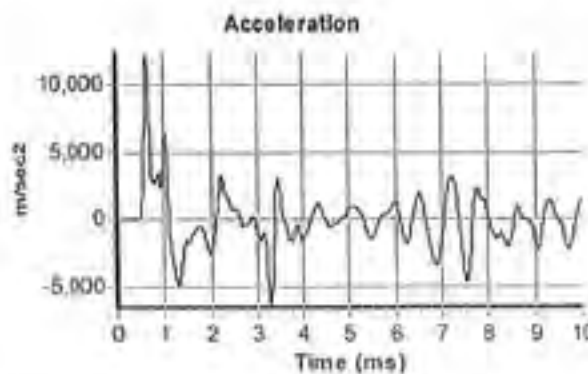
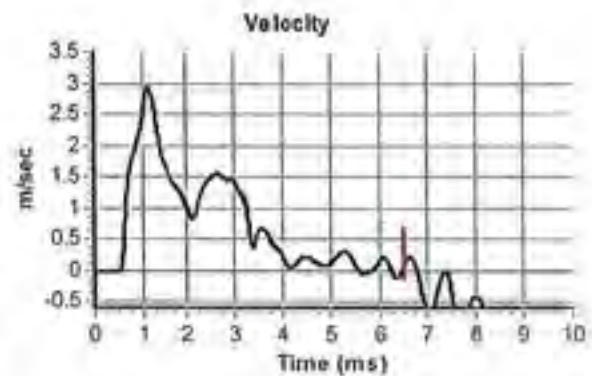
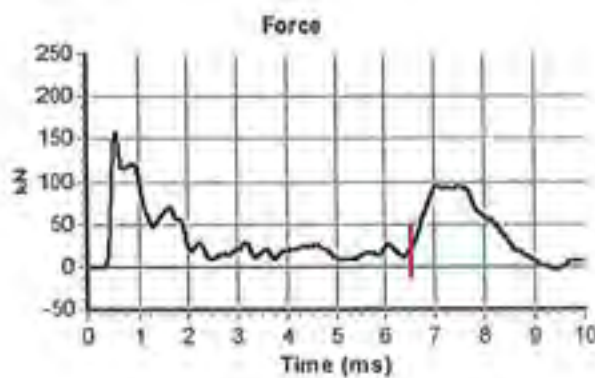
Instrumented Rod Data

Diameter d_r (mm): 54
Wall Thickness t_r (mm): 6.5
Assumed Modulus E_a (GPa): 208
Accelerometer No.1: 5991
Accelerometer No.2: 5990

SPT Hammer Information

Hammer Mass m (kg): 63.5
Falling Height h (mm): 760
SPT String Length L (m): 14.1

Comments / Location



Calculations

Area of Rod A (mm²): 970
Theoretical Energy E_{theor} (J): 473
Measured Energy E_{meas} (J): 241

Energy Ratio E_r (%): 51

Signed: Brian Proctor
Title: Technician

The recommended calibration interval is 12 months

Hand Shear Vane Test Results



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 23 Road 300 Industrial Estate, Newby Park, Northampton NN4 9EY, UK
 Regional Office: Unit 23 Riverside Development Centre, Emerald View, Brixworth, NN3 7BB, UK
 Tel: 01727 561 800 Fax: 01727 774 888

HAND SHEAR VANE TEST RESULTS

Exploratory Hole No.	Date	Depth (m)	1st Result (kPa)	2nd Result (kPa)	3rd Result (kPa)	4th Result (kPa)	Average (kPa)	Remarks
EMERALD_AUG_1710	01/04/2020	1.60	72 (32)	54	55	59	58 (32)	
EMERALD_AUG_1710	01/04/2020	2.80	50 (22)	54	65	42	53 (22)	
EMERALD_AUG_1710	01/04/2020	4.40	52 (18)	44	44	48	47 (18)	
EMERALD_AUG_1710	01/04/2020	3.00	90 (22)	82	85	88	87 (22)	
EMERALD_AUG_1710	01/04/2020	3.90	90 (32)	84	90	80	85 (32)	
EMERALD_AUG_1710	01/04/2020	2.00	60 (20)	60	60	60	60 (20)	
EMERALD_AUG_1710	01/04/2020	3.00	64 (24)	60	68	62	64 (24)	
EMERALD_AUG_1710	23/04/2020	2.00	72 (25)	72	55	68	70 (26)	
EMERALD_AUG_1710	23/04/2020	3.00	130	130	130	130	130	Results in excess of 130kPa - exceeds the device measuring range.
EMERALD_AUG_1710	05/04/2020	1.00	73 (34)	72	68	76	72 (34)	
EMERALD_AUG_1710	06/04/2020	2.60	64 (34)	62	68	72	67 (34)	
EMERALD_AUG_1710	21/04/2020	2.00	76 (40)	82	82	86	82 (40)	

Residual results given in brackets.

	Contract Title :- Prairie Site Ground Investigation Works		Client :- South Tees Development Corporation		AEG Contract No :- 4251
	Date of Issue :- 05/11/2020	Page No. :- 1 of 7	Checked By :- LC	Approved By :- [Signature]	Certificate No. :- HSV/4251/1

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: 124-130 South Star Avenue, Spring Hill, QLD 4001, Australia
 Registered Office: Unit 20 Gateway Development Centre, Eastern Creek, NSW 2138, Australia
 Tel: (61) 2 9517 6000 Fax: (61) 2 9517 7000

HAND SHEAR VANE TEST RESULTS

Exploratory Hole No.	Date	Depth m	1st Result kPa	2nd Result kPa	3rd Result kPa	4th Result kPa	Average kPa	Remarks
HSV4251/08	21/04/2020	3.00	100 (40)	110	90	110	103 (40)	
HSV4251/09	21/04/2020	3.00	60 (18)	58	56	60	59 (18)	
HSV4251/10	21/04/2020	4.00	50 (12)	44	52	50	49 (12)	
HSV4251/11	22/04/2020	2.50	60 (30)	64	80	74	70 (30)	
HSV4251/12	22/04/2020	3.00	100 (32)	92	112	100	101 (32)	
HSV4251/13	22/04/2020	2.50	68 (38)	78	88	68	76 (38)	
HSV4251/14	22/04/2020	3.10	54 (24)	52	58	58	56 (24)	
HSV4251/15	06/04/2020	3.50	50 (20)	50	60	56	54 (20)	
HSV4251/16	08/04/2020	2.00	30 (8)	20	30	20	25 (8)	
HSV4251/17	23/04/2020	2.00	100 (68)	90	98	110	100 (68)	
HSV4251/18	23/04/2020	3.00	130	130	130	130	130	Results in excess of 130kPa - exceeds the device measuring range.
HSV4251/19	23/04/2020	1.60	64 (42)	72	68	68	68 (42)	

Roundoff results given in brackets.

	Contract Title :-	Client :-	AEG Contract No. :-
	Prairie Site Ground Investigation Works	South Tees Development Corporation	4251
Date of Issue :-	Checked By :-	Approved By :-	Certificate No. :-
05/11/2020	LC	AKW	HSV4251/2
Page No. :-	2 of 7		

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Unit 10 Block 20, Commercial Estate, 4000 Highway 101, Cambridge, Ontario, Canada N3H 2Y6
 Unit 10 Business Development Centre, 1000 Highway 101, Cambridge, Ontario, Canada N3H 2Y6
 Tel: 519-845-4100 Fax: 519-845-4101
 No. 911275-300 Inc. (177) 743 986

HAND SHEAR VANE TEST RESULTS

Exploratory Hole No.	Date	Depth (m)	1st Result (kPa)	2nd Result (kPa)	3rd Result (kPa)	4th Result (kPa)	Average (kPa)	Remarks
PHASE_AUG_1P-04	23/04/2020	2.60	80 (40)	65	62	80	82 (40)	
PHASE_AUG_1P-05	22/04/2020	2.50	52 (20)	40	54	40	47 (20)	
PHASE_AUG_1P-18	22/04/2020	3.00	70 (22)	60	66	64	65 (22)	
PHASE_AUG_1P-06A	20/04/2020	1.50	50 (22)	62	66	60	62 (22)	
PHASE_AUG_1P-06B	20/04/2020	2.50	70 (18)	76	76	74	74 (18)	
PHASE_AUG_1P-04	08/04/2020	2.40	32 (20)	34	32	30	32 (20)	
PHASE_AUG_1P-17A	23/04/2020	2.50	70 (34)	68	72	68	70 (34)	
PHASE_AUG_1P-11	02/04/2020	2.60	46 (20)	62	50	22	45 (20)	
PHASE_AUG_1P-11	02/04/2020	3.60	66 (34)	60	60	58	59 (34)	
PHASE_AUG_1P-12	22/04/2020	1.00	42 (22)	30	44	46	41 (22)	
PHASE_AUG_1P-08	22/04/2020	1.50	76 (18)	80	64	64	71 (18)	
PHASE_AUG_1P-14	20/04/2020	1.50	76 (18)	64	66	68	69 (18)	

Residual results given in brackets.

	Contract Title :-	Client :-	AEG Contract No. :-
	Prairie Site Ground Investigation Works	South Tees Development Corporation	4251
Date of issue :-	Page No. :-	Checked By :-	Approved By :-
05/11/2020	3 of 7	LC	[Signature]
			Certificate No. :-
			HSV/4251/3

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 23 South Tees Development Centre, Liberty Road, Redcar, South Yorkshire, YO24 2PL
 Regional Office: Unit 23 South Tees Development Centre, Liberty Road, Redcar, South Yorkshire, YO24 2PL
 Tel: 01719 275 288 Fax: 01719 275 289

HAND SHEAR VANE TEST RESULTS

Exploratory Hole No.	Date	Depth (m)	1st Result (kPa)	2nd Result (kPa)	3rd Result (kPa)	4th Result (kPa)	Average (kPa)	Remarks
HSV4251/4	20/04/2020	2.50	84 (28)	85	84	82	84 (28)	
HSV4251/4	15/04/2020	1.60	66 (22)	72	66	72	70 (22)	
HSV4251/4	15/04/2020	2.80	70 (20)	62	72	74	70 (20)	
HSV4251/4	15/04/2020	1.50	38 (18)	40	40	42	40 (18)	
HSV4251/4	15/04/2020	2.50	66 (16)	66	70	64	67 (16)	
HSV4251/4	15/04/2020	2.00	56 (18)	42	48	46	46 (18)	
HSV4251/4	15/04/2020	2.50	44 (16)	50	46	46	47 (16)	
HSV4251/4	15/04/2020	3.50	60 (22)	70	80	76	77 (22)	
HSV4251/4	14/04/2020	2.00	62 (30)	72	76	76	77 (30)	
HSV4251/4	14/04/2020	3.00	62 (28)	62	64	68	64 (28)	
HSV4251/4	14/04/2020	1.50	98 (40)	100	94	96	97 (40)	
HSV4251/4	14/04/2020	2.50	92 (30)	105	92	96	97 (30)	

Residual results given in brackets.

Contract Title > Praline Site Ground Investigation Works	Client > South Tees Development Corporation	AEG Contract No > 4251	
Date of Issue > 05/11/2020	Page No > 4 of 7	Checked By > 	Approved By > 
		Certificate No > HSV4251/4	

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: 105 St. Michaels Drive, Invercargill, New Zealand
 Regional Office: 105 St. Michaels Drive, Invercargill, New Zealand
 Unit 25, Business Development Estate, Green Mount, Auckland, 06170, NZ
 Tel: 09 424 4100 Fax: 09 424 4111
 Email: info@allied.co.nz

HAND SHEAR VANE TEST RESULTS

Exploratory Hole No.	Date	Depth m	1st Result kPa	2nd Result kPa	3rd Result kPa	4th Result kPa	Average kPa	Remarks
HSV1401	09/04/2020	2.00	59 (34)	60	60	60	55 (34)	
HSV1402	09/04/2020	2.80	78 (20)	70	54	70	68 (20)	
HSV1403	14/04/2020	1.00	106 (40)	102	100	98	102 (40)	
HSV1404	14/04/2020	2.00	100 (38)	100	98	95	99 (38)	
HSV1405	17/04/2020	2.50	98 (41)	92	92	98	95 (41)	
HSV1406	18/04/2020	2.00						Not suitable for HSV testing - too friable
HSV1407	16/04/2020	2.50						Not suitable for HSV testing - too friable
HSV1408	14/04/2020	3.50						Not suitable for HSV testing - insufficiently cohesive
HSV1409	14/04/2020	2.00	58 (36)	42	62		54 (36)	
HSV1410	16/04/2020	2.50						Not suitable for HSV testing - too friable
HSV1411	16/04/2020	3.00						Not suitable for HSV testing - too friable
HSV1412	16/04/2020	3.50						Not suitable for HSV testing - too friable

(Result results given in brackets)

Contract Title >	Prairie Site Ground Investigation Works	Client >	South Tiers Development Corporation
Date of Issue >	05/11/2020	Page No. >	5 of 7
Contract No. >		Approved By >	
AEG Contract No. >	4251	Checked By >	
		Certificate No. >	HSV/4251/5



ALLIED EXPLORATION & GEOTECHNICS LIMITED

140 B, Bala Jai Industrial Estate, Khamra Col, Gurgaon, Haryana 122 002, India
 011-27333333 (10 Lines) / 011-27333334 (10 Lines) / 011-27333335 (10 Lines)
 011-27333336 (10 Lines) / 011-27333337 (10 Lines) / 011-27333338 (10 Lines)

HAND SHEAR VANE TEST RESULTS

Exploratory Hole No.	Date	Depth (m)	1st Result (kPa)	2nd Result (kPa)	3rd Result (kPa)	4th Result (kPa)	Average (kPa)	Remarks
ESW01_AEG_1616	09/04/2020	2.00	100 (42)	98	90		96 (42)	
ESW02_AEG_1617	09/04/2020	1.50						Not suitable for HSV testing - too friable
ESW03_AEG_1617	09/04/2020	2.50						Not suitable for HSV testing - too friable
ESW04_AEG_1616	06/04/2020	1.50	48 (20)	52	46		49 (20)	
ESW05_AEG_1616	06/04/2020	2.50						Not suitable for HSV testing - too friable
ESW06_AEG_1616	06/04/2020	3.50						Not suitable for HSV testing - too friable
ESW07_AEG_1616	07/04/2020	1.50	56 (36)	42	62		54 (36)	
ESW08_AEG_1616	06/04/2020	1.80	48 (26)	56	54		53 (26)	
ESW09_AEG_1616	06/04/2020	2.80	48 (26)	54	54		52 (26)	
ESW10_AEG_1616	06/04/2020	3.50						Not suitable for HSV testing - too friable
ESW11_AEG_1616	09/04/2020	2.00						Not suitable for HSV testing - too friable
ESW12_AEG_1616	09/04/2020	2.00	80 (42)	100	96		93 (42)	

Residual results given in brackets

Contract Title :-	Pranaj Site Ground Investigation Works	Client :-	South Tees Development Corporation
Date of Issue :-	05/11/2020	Page No. :-	5 of 7
Approved By :-	<i>LC</i>	Approved By :-	<i>ALW</i>
Certificate No. :-	HSV/4251/6	AEG Contract No. :-	4251



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Office: 100/11, South Hill Industrial Estate, Marlow, Bucks, HP8 4AT, UK. Tel: 01494 451111 Fax: 01494 451112
 Regional Office: 100/11, South Hill Industrial Estate, Marlow, Bucks, HP8 4AT, UK. Tel: 01494 451111 Fax: 01494 451112

HAND SHEAR VANE TEST RESULTS

Exploratory Hole No.	Date	Depth (m)	1st Result (kPa)	2nd Result (kPa)	3rd Result (kPa)	4th Result (kPa)	Average (kPa)	Remarks
HSV42517	09/04/2020	1.50						Not suitable for HSV testing - too friable.
HSV42517	09/04/2020	2.50						Not suitable for HSV testing - too friable.
HSV42517	07/04/2020	1.50	62 (42)	90	98		83 (47)	
HSV42517	07/04/2020	2.50	105 (46)	100	105		103 (46)	
HSV42517	15/04/2020	1.50	50 (20)	50	52	52	51 (20)	
HSV42517	15/04/2020	2.50	54 (18)	58	60	60	53 (18)	

Finalist results given in brackets.

	Contract Title :-	Priming Site Ground Investigation Works	Client :-	South Tees Development Corporation	AEG Contract No :-	4251	
	Date of Issue :-	05/11/2020	Page No. :-	7 of 7	Checked By :-	LC	
				Approved By :-	KW	Certificate No :-	HSV/42517

Photo-ionisation Detector Test Results



ALLIED EXPLORATION & GEOTECHNICS LIMITED

(Incorporated in Singapore) UIC No. 20001348 UIC No. 20001348 UIC No. 20001348 UIC No. 20001348 UIC No. 20001348
 Registered Office: Unit 10, Block 101, Prisco Road, #01-101, Prisco Industrial Estate, Singapore 119074 Tel: 65 6335 4100 Fax: 65 6335 4110
 Unit 10, Block 101, Prisco Road, #01-101, Prisco Industrial Estate, Singapore 119074 Tel: 65 6335 4100 Fax: 65 6335 4110

PHOTO-IONISATION DETECTOR

Exploratory Hole No.	Depth (m)	PID (ppm)	Date Tested	Remarks
PRAIRIE_AUK_BH101	3.00	0.2	27/04/2020	
PRAIRIE_AUK_BH103	2.50	See Remarks	09/04/2020	<0.1ppm
PRAIRIE_AUK_BH104	5.50	0.2	03/04/2020	
PRAIRIE_AUK_BH105	3.00	See Remarks	16/04/2020	<0.1ppm
PRAIRIE_AUK_BH106	5.50	See Remarks	16/04/2020	<0.1ppm
PRAIRIE_AUK_BH107	3.00	0.1	24/04/2020	
PRAIRIE_AUK_BH108	2.50	See Remarks	15/04/2020	<0.1ppm
PRAIRIE_AUK_BH109	0.50	2.9	23/04/2020	
PRAIRIE_AUK_BH109	1.00	12.8	23/04/2020	
PRAIRIE_AUK_BH109	1.70	27.6	23/04/2020	
PRAIRIE_AUK_BH109	2.50	10.8	23/04/2020	
PRAIRIE_AUK_BH109	3.50	26.1	23/04/2020	
PRAIRIE_AUK_BH110	3.00	See Remarks	20/04/2020	<0.1ppm
PRAIRIE_AUK_TP101	1.00	See Remarks	01/04/2020	<0.1ppm
PRAIRIE_AUK_TP101	2.20	See Remarks	01/04/2020	<0.1ppm
PRAIRIE_AUK_TP102	0.50	See Remarks	21/04/2020	<0.1ppm
PRAIRIE_AUK_TP102	1.00	See Remarks	21/04/2020	<0.1ppm
PRAIRIE_AUK_TP102	1.50	0.1	21/04/2020	
PRAIRIE_AUK_TP102	2.00	0.1	21/04/2020	
PRAIRIE_AUK_TP102	2.50	0.2	21/04/2020	
PRAIRIE_AUK_TP102	3.00	0.4	21/04/2020	
PRAIRIE_AUK_TP102	3.50	0.7	21/04/2020	
PRAIRIE_AUK_TP103	0.50	See Remarks	21/04/2020	<0.1ppm
PRAIRIE_AUK_TP103	1.00	See Remarks	21/04/2020	<0.1ppm
PRAIRIE_AUK_TP103	1.50	See Remarks	21/04/2020	<0.1ppm
PRAIRIE_AUK_TP104	1.50	See Remarks	01/04/2020	<0.1ppm
PRAIRIE_AUK_TP105	1.20	See Remarks	01/04/2020	<0.1ppm
PRAIRIE_AUK_TP105	2.50	See Remarks	01/04/2020	<0.1ppm
PRAIRIE_AUK_TP106	0.50	See Remarks	23/04/2020	<0.1ppm
PRAIRIE_AUK_TP106	1.00	See Remarks	23/04/2020	<0.1ppm
PRAIRIE_AUK_TP106	1.50	See Remarks	23/04/2020	<0.1ppm
PRAIRIE_AUK_TP106	2.50	See Remarks	23/04/2020	<0.1ppm
PRAIRIE_AUK_TP106	3.50	See Remarks	23/04/2020	<0.1ppm
PRAIRIE_AUK_TP107	0.80	See Remarks	06/04/2020	<0.1ppm
PRAIRIE_AUK_TP107	1.80	See Remarks	06/04/2020	<0.1ppm
PRAIRIE_AUK_TP107	2.80	See Remarks	06/04/2020	<0.1ppm
PRAIRIE_AUK_TP108	1.00	See Remarks	06/04/2020	<0.1ppm
PRAIRIE_AUK_TP108	2.00	1.7	06/04/2020	
PRAIRIE_AUK_TP108	3.00	0.6	06/04/2020	
PRAIRIE_AUK_TP109	0.50	See Remarks	21/04/2020	<0.1ppm

See attached Calibration Certificate for Model No. and any other details

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

Calibration Condition :- YES	Date of issue :- 05/11/2020	Page No :- 1 of 6	
Checked By :- <i>LC</i>	Approved By :- <i>[Signature]</i>	AEG Contract No :- 4251	

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: 191-211 West 59th Street, Suite 200, Toronto, Ontario M2W 6E1 Tel: (416) 291-2111 Fax: (416) 291-2112
Regional Office: 191-211 West 59th Street, Suite 200, Toronto, Ontario M2W 6E1 Tel: (416) 291-2111 Fax: (416) 291-2112

PHOTO-IONISATION DETECTOR

Exploratory Hole No.	Depth (m)	PID (ppm)	Date Tested	Remarks
PRAIRIE_AUK_TP109	1.00	0.1	21/04/2020	
PRAIRIE_AUK_TP109	1.50	0.1	21/04/2020	
PRAIRIE_AUK_TP109	2.00	See Remarks	21/04/2020	<0.1ppm
PRAIRIE_AUK_TP109	3.00	See Remarks	21/04/2020	<0.1ppm
PRAIRIE_AUK_TP110	0.50	See Remarks	21/04/2020	<0.1ppm
PRAIRIE_AUK_TP110	1.00	See Remarks	21/04/2020	<0.1ppm
PRAIRIE_AUK_TP110	1.50	See Remarks	21/04/2020	<0.1ppm
PRAIRIE_AUK_TP110	2.50	0.3	21/04/2020	
PRAIRIE_AUK_TP110	3.00	0.2	21/04/2020	
PRAIRIE_AUK_TP110	3.50	See Remarks	21/04/2020	<0.1ppm
PRAIRIE_AUK_TP110	4.00	See Remarks	21/04/2020	<0.1ppm
PRAIRIE_AUK_TP110	4.50	0.1	21/04/2020	
PRAIRIE_AUK_TP111	0.40	See Remarks	22/04/2020	<0.1ppm
PRAIRIE_AUK_TP111	1.00	0.1	22/04/2020	
PRAIRIE_AUK_TP111	1.50	0.2	22/04/2020	
PRAIRIE_AUK_TP111	2.00	See Remarks	22/04/2020	<0.1ppm
PRAIRIE_AUK_TP111	3.00	See Remarks	22/04/2020	<0.1ppm
PRAIRIE_AUK_TP112	0.50	See Remarks	22/04/2020	<0.1ppm
PRAIRIE_AUK_TP112	1.00	See Remarks	22/04/2020	<0.1ppm
PRAIRIE_AUK_TP112	1.50	See Remarks	22/04/2020	<0.1ppm
PRAIRIE_AUK_TP112	2.00	0.5	22/04/2020	
PRAIRIE_AUK_TP112	2.10	0.9	22/04/2020	
PRAIRIE_AUK_TP112	2.70	See Remarks	22/04/2020	<0.1ppm
PRAIRIE_AUK_TP112	3.00	See Remarks	22/04/2020	<0.1ppm
PRAIRIE_AUK_TP113	1.30	See Remarks	06/04/2020	<0.1ppm
PRAIRIE_AUK_TP114	0.50	7.2	07/04/2020	
PRAIRIE_AUK_TP114	0.90	130.0	07/04/2020	
PRAIRIE_AUK_TP115	1.90	See Remarks	08/04/2020	<0.1ppm
PRAIRIE_AUK_TP116	0.50	5.4	23/04/2020	
PRAIRIE_AUK_TP116	1.30	7.1	23/04/2020	
PRAIRIE_AUK_TP116	1.60	8.8	23/04/2020	
PRAIRIE_AUK_TP116	2.00	See Remarks	23/04/2020	<0.1ppm
PRAIRIE_AUK_TP116	3.00	See Remarks	23/04/2020	<0.1ppm
PRAIRIE_AUK_TP117	0.50	9.1	23/04/2020	
PRAIRIE_AUK_TP117	1.20	10.4	23/04/2020	
PRAIRIE_AUK_TP117	2.00	9.6	23/04/2020	
PRAIRIE_AUK_TP117	3.00	11.1	23/04/2020	
PRAIRIE_AUK_TP118	0.50	0.2	23/04/2020	
PRAIRIE_AUK_TP118	1.20	See Remarks	23/04/2020	<0.1ppm
PRAIRIE_AUK_TP118	1.60	See Remarks	23/04/2020	<0.1ppm

See attached Calibration Certificate for Model No. and any other details

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

	Calibration Compliant - YES	Date of Issue - 05/11/2020	Page No. - 2 of 6	
	Checked By - <i>LC</i>	Approved By - <i>AKW</i>	AEG Contract No. - 4251	

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office:
Regional Office:

200/21 South Hill Industrial Estate, Foster Park, Chesham-Bosley, CO. (01452) 340 200
Unit 27, Business Development Centre, South Street, Bournemouth, BH1 1BB



Tel: (011) 20 470 946 (24h) 47 47 14
Fax: (011) 75 220 944 (24h) 75 220 944

PHOTO-IONISATION DETECTOR

Exploratory Hole No.	Depth (m)	PiD (ppm)	Date Tested	Remarks
PRAIRIE_AUK_TP118	2.20	See Remarks	23/04/2020	<0.1ppm
PRAIRIE_AUK_TP119	0.50	See Remarks	22/04/2020	<0.1ppm
PRAIRIE_AUK_TP119	1.00	See Remarks	22/04/2020	<0.1ppm
PRAIRIE_AUK_TP119	1.50	See Remarks	22/04/2020	<0.1ppm
PRAIRIE_AUK_TP119	2.00	See Remarks	22/04/2020	<0.1ppm
PRAIRIE_AUK_TP119	2.50	See Remarks	22/04/2020	<0.1ppm
PRAIRIE_AUK_TP120	0.50	See Remarks	20/04/2020	<0.1ppm
PRAIRIE_AUK_TP120	1.00	See Remarks	20/04/2020	<0.1ppm
PRAIRIE_AUK_TP120	1.50	See Remarks	20/04/2020	<0.1ppm
PRAIRIE_AUK_TP120A	0.50	See Remarks	20/04/2020	<0.1ppm
PRAIRIE_AUK_TP120A	1.00	See Remarks	20/04/2020	<0.1ppm
PRAIRIE_AUK_TP120A	1.50	See Remarks	20/04/2020	<0.1ppm
PRAIRIE_AUK_TP120A	2.50	See Remarks	20/04/2020	<0.1ppm
PRAIRIE_AUK_TP121	1.50	See Remarks	08/04/2020	<0.1ppm
PRAIRIE_AUK_TP122	1.00	See Remarks	08/04/2020	<0.1ppm
PRAIRIE_AUK_TP123	0.60	See Remarks	08/04/2020	<0.1ppm
PRAIRIE_AUK_TP124	1.50	See Remarks	08/04/2020	<0.1ppm
PRAIRIE_AUK_TP124	2.50	See Remarks	08/04/2020	<0.1ppm
PRAIRIE_AUK_TP126	2.60	0.2	17/04/2020	
PRAIRIE_AUK_TP127	0.30	See Remarks	23/04/2020	<0.1ppm
PRAIRIE_AUK_TP127	1.40	See Remarks	23/04/2020	<0.1ppm
PRAIRIE_AUK_TP127A	2.80	See Remarks	23/04/2020	<0.1ppm
PRAIRIE_AUK_TP128	0.90	0.9	17/04/2020	
PRAIRIE_AUK_TP129	2.10	See Remarks	17/04/2020	<0.1ppm
PRAIRIE_AUK_TP130	1.00	1.0	17/04/2020	
PRAIRIE_AUK_TP131	1.80	See Remarks	02/04/2020	<0.1ppm
PRAIRIE_AUK_TP132	1.30	See Remarks	02/04/2020	<0.1ppm
PRAIRIE_AUK_TP133	0.20	See Remarks	22/04/2020	<0.1ppm
PRAIRIE_AUK_TP133	0.50	See Remarks	22/04/2020	<0.1ppm
PRAIRIE_AUK_TP133	0.60	See Remarks	22/04/2020	<0.1ppm
PRAIRIE_AUK_TP133	1.50	See Remarks	22/04/2020	<0.1ppm
PRAIRIE_AUK_TP134	0.50	See Remarks	20/04/2020	<0.1ppm
PRAIRIE_AUK_TP134	1.00	See Remarks	20/04/2020	<0.1ppm
PRAIRIE_AUK_TP134	1.50	See Remarks	20/04/2020	<0.1ppm
PRAIRIE_AUK_TP134	2.00	See Remarks	20/04/2020	<0.1ppm
PRAIRIE_AUK_TP134	2.50	See Remarks	20/04/2020	<0.1ppm
PRAIRIE_AUK_TP135	1.30	See Remarks	15/04/2020	<0.1ppm
PRAIRIE_AUK_TP136	0.80	See Remarks	15/04/2020	<0.1ppm
PRAIRIE_AUK_TP136	2.90	See Remarks	15/04/2020	<0.1ppm
PRAIRIE_AUK_TP137	1.30	See Remarks	15/04/2020	<0.1ppm

See attached Calibration Certificate for Model No. and any other details

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

	Calibration Compliant - YES	Date of Issue - 05/11/2020	Page No. - 3 of 5	
	Checked By - <i>LC</i>	Approved By - <i>[Signature]</i>	AEG Contract No. - 4251	

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office:
Regional Office:

125-125 South Hill (Opposite) Estate, Petros Hill, Corner of Road 52, Durban, 4013, 2011
Tel: 031 251 4100 Fax: 031 251 4110



125-125 South Hill (Opposite) Estate, Petros Hill, Corner of Road 52, Durban, 4013, 2011
Tel: 031 251 4100 Fax: 031 251 4110

PHOTO-IONISATION DETECTOR

Exploratory Hole No.	Depth (m)	PID (ppm)	Date Tested	Remarks
PRAIRIE_AUK_TP138	1.20	See Remarks	09/04/2020	<0.1ppm
PRAIRIE_AUK_TP139	1.10	See Remarks	16/04/2020	<0.1ppm
PRAIRIE_AUK_TP139B	0.30	See Remarks	16/04/2020	<0.1ppm
PRAIRIE_AUK_TP139B	3.30	See Remarks	16/04/2020	<0.1ppm
PRAIRIE_AUK_TP140	0.50	0.8	23/04/2020	
PRAIRIE_AUK_TP140	1.00	See Remarks	23/04/2020	<0.1ppm
PRAIRIE_AUK_TP140	1.50	See Remarks	23/04/2020	<0.1ppm
PRAIRIE_AUK_TP141	0.50	0.8	23/04/2020	
PRAIRIE_AUK_TP141	1.00	0.6	23/04/2020	
PRAIRIE_AUK_TP141	2.00	1.6	23/04/2020	
PRAIRIE_AUK_TP142	0.50	0.8	23/04/2020	
PRAIRIE_AUK_TP142	1.00	3.9	23/04/2020	
PRAIRIE_AUK_TP142	1.50	3.0	23/04/2020	
PRAIRIE_AUK_TP143	0.50	See Remarks	23/04/2020	<0.1ppm
PRAIRIE_AUK_TP143	1.00	See Remarks	23/04/2020	<0.1ppm
PRAIRIE_AUK_TP144	0.50	0.8	24/04/2020	
PRAIRIE_AUK_TP144	1.00	1.5	24/04/2020	
PRAIRIE_AUK_TP145	1.60	0.2	14/04/2020	
PRAIRIE_AUK_TP146C	1.30	0.2	14/04/2020	
PRAIRIE_AUK_TP146C	2.50	See Remarks	14/04/2020	<0.1ppm
PRAIRIE_AUK_TP147	1.50	See Remarks	17/04/2020	<0.1ppm
PRAIRIE_AUK_TP148A	1.40	See Remarks	16/04/2020	<0.1ppm
PRAIRIE_AUK_TP149	1.30	See Remarks	09/04/2020	<0.1ppm
PRAIRIE_AUK_TP150	0.70	See Remarks	16/04/2020	<0.1ppm
PRAIRIE_AUK_TP151	0.50	1.1	23/04/2020	
PRAIRIE_AUK_TP151	1.00	0.6	23/04/2020	
PRAIRIE_AUK_TP151	1.50	0.9	23/04/2020	
PRAIRIE_AUK_TP151	2.00	See Remarks	23/04/2020	<0.1ppm
PRAIRIE_AUK_TP151	2.50	See Remarks	23/04/2020	<0.1ppm
PRAIRIE_AUK_TP151	3.00	See Remarks	23/04/2020	<0.1ppm
PRAIRIE_AUK_TP152	0.50	0.3	22/04/2020	
PRAIRIE_AUK_TP152	1.00	1.6	22/04/2020	
PRAIRIE_AUK_TP152	1.50	0.8	22/04/2020	
PRAIRIE_AUK_TP153	0.50	1.8	22/04/2020	
PRAIRIE_AUK_TP153	1.00	0.5	22/04/2020	
PRAIRIE_AUK_TP153	1.50	See Remarks	22/04/2020	<0.1ppm
PRAIRIE_AUK_TP153	2.00	See Remarks	22/04/2020	<0.1ppm
PRAIRIE_AUK_TP154	0.50	1.1	21/04/2020	
PRAIRIE_AUK_TP154	1.00	0.2	21/04/2020	
PRAIRIE_AUK_TP154	1.50	See Remarks	21/04/2020	<0.1ppm

See attached Calibration Certificate for Model No. and any other details

Contract Title - Prairie 5km Ground Investigation Works	Client - South Tees Development Corporation
--	--

	Calibration Compliant - YES	Date of Issue - 05/11/2020	Page No - 4 of 6	
	Checked By - <i>LC</i>	Approved By - <i>KW</i>	AEG Contract No - 4251	

ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: 116/211-215/216 Industrial Estate, Plover Field, Chesham-on-Avon, Stroud District, Glos, UK. Tel: 01295 367490 Fax: 01295 367411
Regional Office: 105/211-215/216 Industrial Estate, Plover Field, Chesham-on-Avon, Stroud District, Glos, UK. Tel: 01295 367490 Fax: 01295 367411

PHOTO-IONISATION DETECTOR

Exploratory Hole No.	Depth (m)	PID (ppm)	Date Tested	Remarks
PRAIRIE_AUK_TP155	0.40	1.8	21/04/2020	
PRAIRIE_AUK_TP155	1.00	0.1	21/04/2020	
PRAIRIE_AUK_TP155	1.50	See Remarks	21/04/2020	<0.1ppm
PRAIRIE_AUK_TP155A	0.30	See Remarks	14/04/2020	<0.1ppm
PRAIRIE_AUK_TP157	0.80	See Remarks	17/04/2020	<0.1ppm
PRAIRIE_AUK_TP158	1.30	See Remarks	17/04/2020	<0.1ppm
PRAIRIE_AUK_TP159	0.60	See Remarks	16/04/2020	<0.1ppm
PRAIRIE_AUK_TP160	1.00	0.7	21/04/2020	
PRAIRIE_AUK_TP160	1.50	See Remarks	21/04/2020	<0.1ppm
PRAIRIE_AUK_TP161	0.80	0.8	20/04/2020	
PRAIRIE_AUK_TP161	2.00	See Remarks	20/04/2020	<0.1ppm
PRAIRIE_AUK_TP162	1.70	See Remarks	14/04/2020	<0.1ppm
PRAIRIE_AUK_TP163	1.20	4.5	14/04/2020	
PRAIRIE_AUK_TP163	1.90	2.1	14/04/2020	
PRAIRIE_AUK_TP164	0.70	See Remarks	16/04/2020	<0.1ppm
PRAIRIE_AUK_TP164	1.30	See Remarks	16/04/2020	<0.1ppm
PRAIRIE_AUK_TP165	1.00	See Remarks	15/04/2020	<0.1ppm
PRAIRIE_AUK_TP165	3.30	See Remarks	15/04/2020	<0.1ppm
PRAIRIE_AUK_TP166	0.50	0.2	20/04/2020	
PRAIRIE_AUK_TP166	1.00	See Remarks	20/04/2020	<0.1ppm
PRAIRIE_AUK_TP167	2.50	See Remarks	15/04/2020	<0.1ppm
PRAIRIE_AUK_TP168	0.05	See Remarks	09/04/2020	<0.1ppm
PRAIRIE_AUK_TP169	1.50	See Remarks	15/04/2020	<0.1ppm
PRAIRIE_AUK_TP170	0.50	See Remarks	21/04/2020	<0.1ppm
PRAIRIE_AUK_TP170	1.00	17.5	21/04/2020	
PRAIRIE_AUK_TP170	1.50	1.1	21/04/2020	
PRAIRIE_AUK_TP171	0.50	1.4	20/04/2020	
PRAIRIE_AUK_TP171	1.00	1.3	20/04/2020	
PRAIRIE_AUK_TP171	1.50	See Remarks	20/04/2020	<0.1ppm
PRAIRIE_AUK_TP172	0.80	See Remarks	06/04/2020	<0.1ppm
PRAIRIE_AUK_TP173	0.90	See Remarks	09/04/2020	<0.1ppm
PRAIRIE_AUK_TP174	0.90	See Remarks	08/04/2020	<0.1ppm
PRAIRIE_AUK_TP174	1.80	See Remarks	08/04/2020	<0.1ppm
PRAIRIE_AUK_TP175	0.80	101.1	06/04/2020	
PRAIRIE_AUK_TP175	1.80	5.3	06/04/2020	
PRAIRIE_AUK_TP176	0.90	1.1	07/04/2020	
PRAIRIE_AUK_TP177	0.60	1.1	07/04/2020	
PRAIRIE_AUK_TP177	1.90	See Remarks	07/04/2020	<0.1ppm
PRAIRIE_AUK_TP178	0.80	See Remarks	06/04/2020	<0.1ppm
PRAIRIE_AUK_TP179	1.40	3.8	09/04/2020	

See attached Calibration Certificate for Model No. and any other details

Contract Title :- Prairie Site Ground Investigation Works	Client :- South Tees Development Corporation
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Calibration Compliant - YES	Date of Issue - 05/11/2020	Page No - 5 of 6	
Checked By:- <i>LC</i>	Approved By:- <i>AW</i>	AEG Contract No - 4251	

ALLIED EXPLORATION & GEOTECHNICS LIMITED


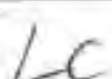

Head Office: 100-25 Albert Road, Industrial Estate, Filton, Bristol, Gloucestershire, UK. Dursley, G12 8JY. Tel: 01453 874199 Fax: 01453 881414
 Regional Office: 100-25 Albert Road, Industrial Estate, Filton, Bristol, Gloucestershire, UK. Dursley, G12 8JY. Tel: 01453 874199 Fax: 01453 881414

PHOTO-IONISATION DETECTOR

Exploratory Hole No.	Depth (m)	PID (ppm)	Date Tested	Remarks
PRAIRIE_AUK_TP179	2.00	2.1	09/04/2020	
PRAIRIE_AUK_TP180	0.30	See Remarks	14/04/2020	<0.1ppm
PRAIRIE_AUK_TP181	0.60	See Remarks	09/04/2020	<0.1ppm
PRAIRIE_AUK_TP181	2.50	See Remarks	09/04/2020	<0.1ppm
PRAIRIE_AUK_TP182	0.90	8.2	09/04/2020	
PRAIRIE_AUK_TP182	2.00	0.5	09/04/2020	
PRAIRIE_AUK_TP184	0.30	See Remarks	16/04/2020	<0.1ppm
PRAIRIE_AUK_TP185	4.30	See Remarks	08/04/2020	<0.1ppm
PRAIRIE_AUK_TP186	0.50	5.1	07/04/2020	
PRAIRIE_AUK_TP187	0.50	1.3	20/04/2020	
PRAIRIE_AUK_TP187	1.00	0.2	20/04/2020	
PRAIRIE_AUK_TP188	1.00	1.2	08/04/2020	
PRAIRIE_AUK_TP189	1.60	See Remarks	07/04/2020	<0.1ppm
PRAIRIE_AUK_TP189	3.00	See Remarks	07/04/2020	<0.1ppm
PRAIRIE_AUK_TP190A	1.10	See Remarks	16/04/2020	<0.1ppm

See attached Calibration Certificate for Model No. and any other details

Contract Title :- Prairie Site Ground Investigation Works	Client :- South Tees Development Corporation
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	Calibration Compliant :- YES	Date of Issue :- 05/11/2020	Page No. :- 6 of 6
	Checked By :- 	Approved By :- 	AEG Contract No. :- 4251





... everything gas detection

Certificate of Calibration

Customer: Allied Exploration & Geotechnics Ltd

Instrument: MiniRAE 2000

Job: Service, Test & Calibration

Serial number: 110-900192

Fleet Number: N/A

Certificate no: 900192 / 100519

Next calibration due date: 10 May 2020

Tested on: 10 May 2019

Calibrated for: Isobutylene

<u>Applied Gas Concentration:</u>	<u>Cylinder Reference:</u>	<u>Initial Sensor Reading</u>	<u>Final Sensor Reading</u>	<u>Accuracy Limits</u>
Isobutylene: 100 ppm	AGG2641-3-10	95.0 ppm	100.0 ppm	± 2%

The Instrument has been calibrated after Re-Zeroing & Introducing Span Calibration Gas, using gas that is traceable to national standards and has been prepared in accordance with BS EN ISO6145-6:2008

Calibration Engineer: P Lonsdale

Sign: _____



Quality Assessed by (Print): R.L. BAINBRIDGE Sign: _____

In-situ Water Quality Parameter Test Results






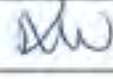
ALLIED EXPLORATION GEOTECHNICS LIMITED

Head Office: 100/101 Greta Drive, South Shields, Tyne and Wear, NE33 1JG, UK. Tel: 0191 477 4770 Fax: 0191 477 4771
Regional Office: 100/101 Greta Drive, South Shields, Tyne and Wear, NE33 1JG, UK. Tel: 01717 778 000 Fax: 01717 778 001

IN-SITU WATER QUALITY PARAMETER MONITORING RESULTS							
Date of Test: 05/05/2020		Operator: D. Portsmouth					
Weather Condition (inc temperature) :				Cool & Dry			
Monitoring Point	Time (hrs)	pH	Temp (°C)	Electrical Conductivity (Actual) (µs)	Redox Potential (mv)	Dissolved Oxygen (%)	Total Dissolved Solids (ppm)
PRAIRIE_AUK_BH104	15:30:00	8.10	15.10	811.29	309.30	49.79	0.65
	15:35:00	8.10	15.84	824.59	317.10	49.66	0.65
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
PRAIRIE_AUK_BH107	14:15:00	7.55	14.99	1989.10	294.80	77.94	1.60
	14:20:00	7.55	15.47	2039.40	282.30	77.48	1.62
	14:25:00	7.55	16.68	2096.30	283.70	78.03	1.62
	14:30:00	7.55	17.74	2143.70	284.70	78.44	1.62
PRAIRIE_AUK_BH103	12:00:00	8.78	14.49	548.17	189.80	27.56	0.44
	12:35:00	8.77	14.60	520.31	204.30	16.03	0.42
	12:40:00	8.77	14.23	540.24	108.20	19.16	0.44
	12:45:00	8.75	15.08	559.75	221.60	28.07	0.45
	12:50:00	8.73	15.45	562.00	231.60	30.30	0.45
	12:55:00	8.73	15.53	561.84	230.40	28.78	0.45
	13:00:00	8.72	15.66	559.15	226.70	22.54	0.44
Remarks :	BH104 & BH107 - unable to sample via pump due to lack of head. Agreed with Arcadis to sample using a bailer.						
Contract Title: Prairie Site Ground Investigation Works				Client: South Tees Development Corporation			
	Checked By: <i>LC</i>			Approved By: <i>RLW</i>			
	Date Issued: 01/07/2020		Page No.: 1 of 2	AEG Contract No.: 4251			

ALLIED EXPLORATION GEOTECHNICS LIMITED

Head Office: Unit 11, Park Drive, Broomfield, Essex, SSM1 2JF, United Kingdom. Tel: 01206 771111 Fax: 01206 771112
 Registered Office: Unit 10, Broomfield Development Court, Broomfield, Essex, SSM1 2JF, United Kingdom. Tel: 01206 771111 Fax: 01206 771112

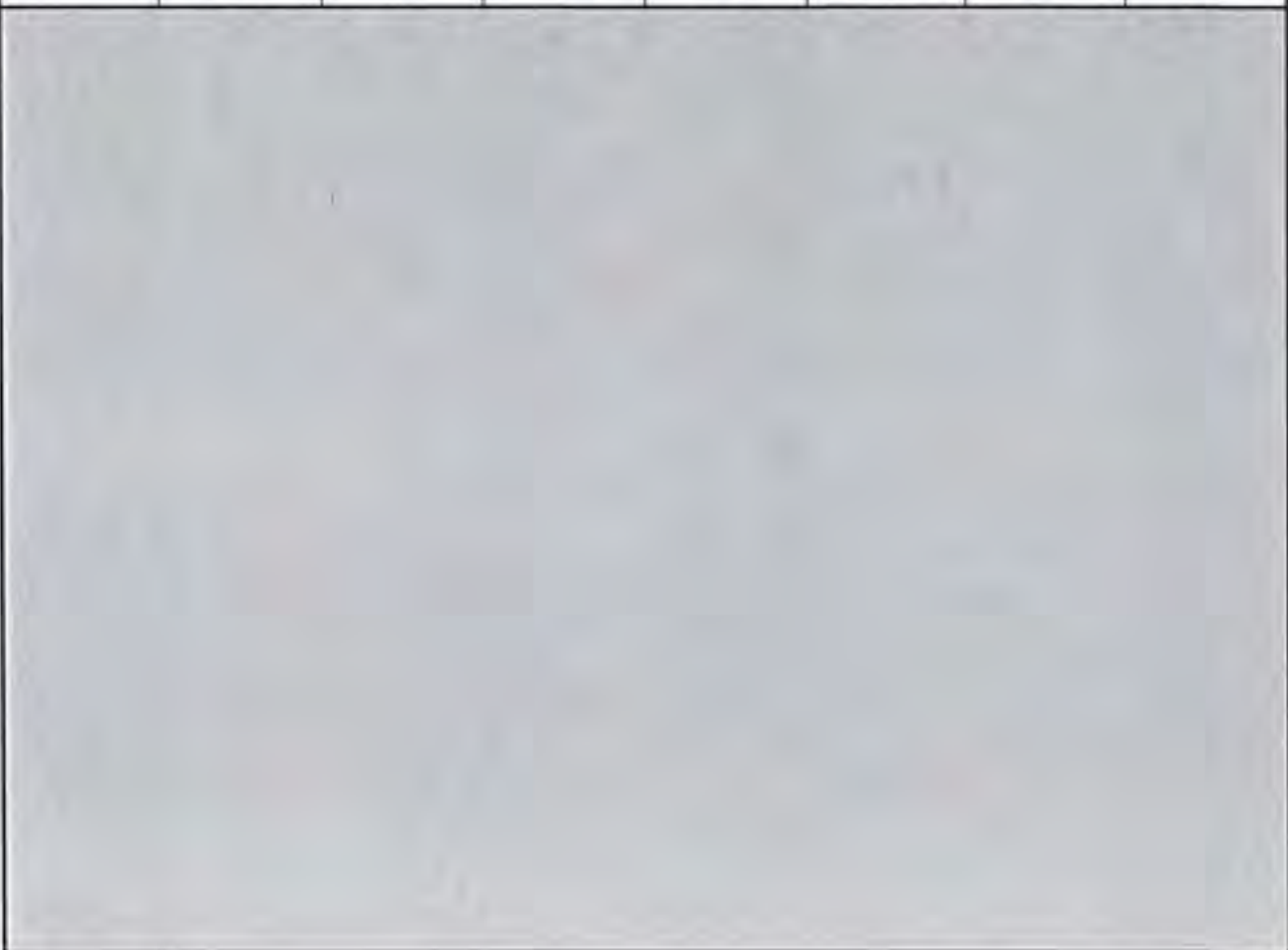
IN-SITU WATER QUALITY PARAMETER MONITORING RESULTS							
Date of Test:		06/05/2020		Operator:		D. Portsmouth	
Weather Condition (inc temperature) :				Cool/Warm & Dry			
Monitoring Point	Time (hrs)	pH	Temp (°C)	Electrical Conductivity (Actual) (µs)	Redox Potential (mv)	Dissolved Oxygen (%)	Total Dissolved Solids (ppm)
PRAIRIE_AUK_BH101 (Shallow)	10:10:00	8.52	11.50	1849.80	279.10	40.97	1.62
	10:15:00	8.52	11.62	1854.30	276.40	43.30	1.62
	10:20:00	8.52	11.50	1863.30	280.80	46.55	1.62
PRAIRIE_AUK_BH101 (Deep)	09:40:00	8.31	11.29	1790.40	238.40	47.43	1.57
	09:45:00	8.47	11.20	1795.10	227.30	46.79	1.58
	09:50:00	8.50	11.23	1799.70	233.70	46.34	1.59
	09:55:00	8.51	11.27	1802.10	242.40	46.59	1.59
PRAIRIE_AUK_BH106	08:35:00	9.54	11.22	641.13	124.20	32.09	0.56
	08:40:00	9.53	11.26	644.92	132.80	33.40	0.57
	08:45:00	9.52	11.47	648.52	139.40	34.61	0.57
	08:50:00	9.52	11.66	651.63	145.90	35.53	0.57
PRAIRIE_AUK_BH108 (Shallow)	13:05:00	7.53	11.51	1779.50	345.50	43.80	1.56
	13:10:00	7.56	11.46	1775.70	354.40	44.69	1.56
	13:15:00	7.57	11.46	1775.00	356.70	44.87	1.56
PRAIRIE_AUK_BH108 (Deep)	13:05:00	7.53	11.51	1789.60	345.50	43.80	1.56
	13:10:00	7.56	11.46	1787.70	354.40	44.69	1.56
	13:15:00	7.57	11.46	1785.50	356.70	44.87	1.56
PRAIRIE_AUK_BH110	11:10:00	8.08	11.61	2076.80	333.90	42.01	1.62
	11:15:00	8.12	11.47	2074.70	331.00	43.21	1.62
	11:20:00	8.13	11.43	2075.40	332.10	43.90	1.62
	11:25:00	8.14	11.40	2074.40	337.30	44.55	1.62
Remarks :	n/a						
Contract Title				Client			
Prairie Site Ground Investigation Works				South Tees Development Corporation			
	Checked By:			Approved By:			
	 Date Issued: 01/07/2020			 AEG Defined No: 4251			
Page No:			Page No:				
2 of 2			2 of 2				

ALLIED EXPLORATION GEOTECHNICS LIMITED

Head Office: 104 St. John's Church Lane, Police Post, Chesham, Bucks, UK. Tel: 0494 57478 Fax: 01494 57479
Regional Office: 104 St. John's Church Lane, Police Post, Chesham, Bucks, UK. Tel: 01753 73910 Fax: 01753 73911

IN-SITU WATER QUALITY PARAMETER MONITORING RESULTS





Date of Test: 16/06/2020		Operator: A. Masterman					
Weather Condition (inc temperature) :		Slightly overcast (15-18°C)					
Monitoring Point	Time (hrs)	pH	Temp (°C)	Electrical Conductivity (Actual) (µs)	Redox Potential (mv)	Dissolved Oxygen (%)	Total Dissolved Solids (ppm)
PRAIRIE_AUK_BH103	15:00:00	8.71	18.35	457.46	109.2	76.88	0.34
	15:03:00	9.12	14.46	428.58	118.7	32.15	0.34
	15:06:00	9.35	13.40	399.67	289.8	23.49	0.32
	15:09:00	9.67	13.60	333.61	115.0	21.43	0.28
	15:12:00	9.68	13.57	319.10	268.4	20.89	0.26
	15:15:00	9.69	13.28	314.98	295.5	19.20	0.26



Remarks :			
Contract Title:		Client:	
Prairie Site Ground Investigation Works		South Tees Development Corporation	
	Checked By:	Approved By:	
	Date Issued:	Page No.:	
05/11/2020	1 of 4	4251	



ALLIED EXPLORATION GEOTECHNICS LIMITED

10000 144th Street, Edmonton, Alberta, Canada T5A 0A6 (403) 443-1111 Fax: (403) 443-1112
 10000 144th Street, Edmonton, Alberta, Canada T5A 0A6 (403) 443-1111 Fax: (403) 443-1112

IN-SITU WATER QUALITY PARAMETER MONITORING RESULTS							
Date of Test:		17/06/2020		Operator:		A. Masterman	
Weather Condition (inc. temperature):				Overcast (15-18°C)			
Monitoring Point	Time (hrs)	pH	Temp (°C)	Electrical Conductivity (Actual) (µS)	Redox Potential (mv)	Dissolved Oxygen (%)	Total Dissolved Solids (ppm)
PRAIRIE_AUK_BH101 (Deep)	09:36:00	8.58	13.54	1563.90	145.4	34.98	1.30
	09:39:00	8.65	13.40	1573.00	-225.2	29.68	1.31
	09:42:00	8.69	13.50	1578.00	-240.7	27.94	1.31
	09:45:00	8.70	13.62	1582.00	-231.3	25.91	1.31
PRAIRIE_AUK_BH101 (Shallow)	10:33:00	8.48	13.13	1467.00	128.2	32.53	1.24
	10:41:00	8.84	12.92	1468.00	252.6	27.90	1.24
	10:44:00	8.84	12.88	1467.00	285.4	26.02	1.24
	10:47:00	8.85	12.90	1470.00	282.7	24.45	1.24
PRAIRIE_AUK_BH104	12:57:00	8.05	13.36	1222.80	276.0	16.84	1.02
	13:00:00	8.07	13.22	1223.30	316.3	14.79	1.03
	13:03:00	8.07	13.28	1233.60	317.5	14.21	1.03
	13:06:00	8.07	13.54	1238.60	305.7	14.34	1.03
PRAIRIE_AUK_BH105	11:14:00	8.24	13.58	1104.90	361.00	43.11	0.92
	11:17:00	8.27	13.86	1109.30	370.40	42.08	0.92
	11:20:00	8.29	14.06	1113.90	373.40	41.44	0.91
	11:23:00	8.29	14.22	1117.80	372.80	41.15	0.91
PRAIRIE_AUK_BH106	13:47:00	9.20	15.77	1035.40	303.6	30.24	0.82
	13:50:00	9.20	15.94	1040.20	331.2	22.53	0.82
	13:53:00	9.21	16.12	1044.60	341.5	20.67	0.82
PRAIRIE_AUK_BH108 (Deep)	10:00:00	7.42	14.38	2306.60	330.8	64.44	1.88
	10:03:00	7.55	14.54	2309.00	347.9	60.04	1.88
	10:06:00	7.59	14.67	2316.50	356.6	57.82	1.88
	10:09:00	7.61	14.76	2321.30	358.0	56.77	1.88
Remarks:							
Contract Title:				Client:			
Prairie Site Ground Investigation Works				South Tyes Development Corporation			
	Created By:			Approved By:			
							
Date Issued:		Page No.:		ASQ Control No.:			
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ALLIED EXPLORATION GEOTECHNICS LIMITED

Head Office: 108-25, 26th St Industrial Estate, Peter Park, Chester-le-Street, Co. Durham, DH2 2SD - Tel: 0191 357 4700 Fax: 0191 357 4710
Regional Office: 104-75, Business Development Centre, Easingwold, Bedfordshire, MK43 9SL - Tel: 01753 735 900 Fax: 01753 735 999

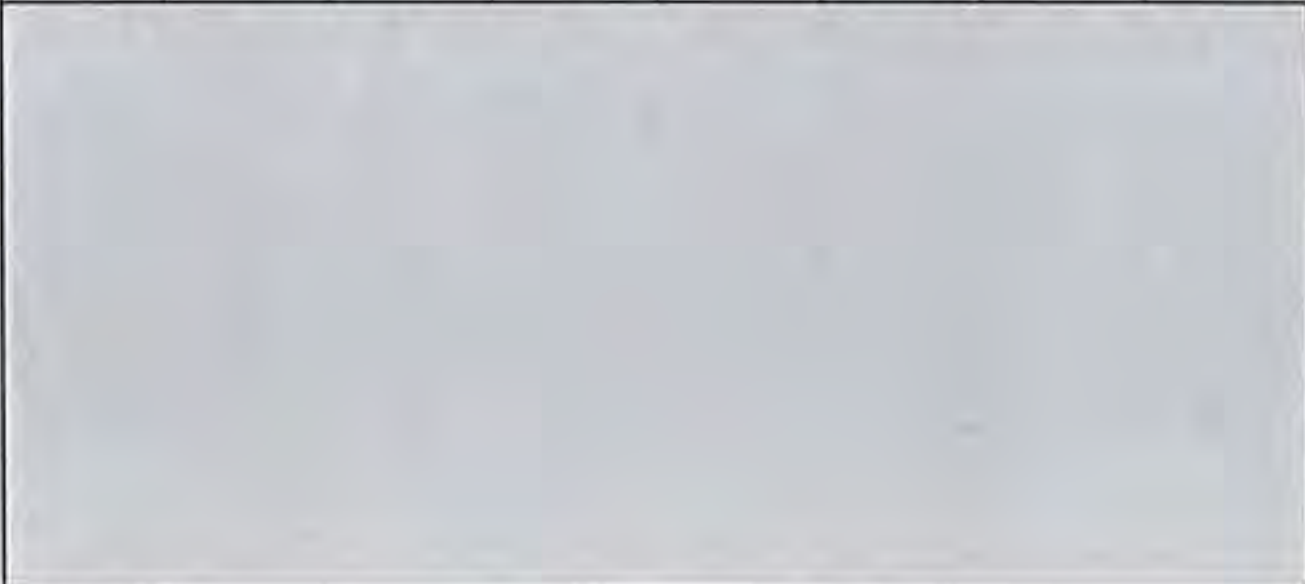
IN-SITU WATER QUALITY PARAMETER MONITORING RESULTS							
Date of Test: 18/06/2020			Operator: A. Masterman				
Weather Condition (inc temperature) :							
Monitoring Point	Time (hrs)	pH	Temp (°C)	Electrical Conductivity (Actual) (µs)	Redox Potential (mv)	Dissolved Oxygen (%)	Total Dissolved Solids (ppm)
PRAIRIE_AUK_BH108 (Shallow)	08:45:00	7.74	13.87	1704.00	278.00	38.43	1.41
	08:48:00	7.97	13.74	1710.00	314.20	35.71	1.42
	08:51:00	8.02	13.72	1711.90	307.70	33.61	1.42
	08:54:00	8.05	13.76	1713.70	306.30	34.54	1.42
PRAIRIE_AUK_BH110	11:21:00	8.12	14.22	2931.00	246.30	42.36	2.41
	11:24:00	8.11	13.23	2920.00	292.20	41.66	2.45
	11:27:00	8.11	12.99	2915.00	308.20	40.96	2.46
Remarks :							
Contract Title: Prairie Site Ground Investigation Works				Client: South Tees Development Corporation			
	Checked By: <i>LC</i>			Approved By: <i>AKW</i>			
	Date issued: 05/11/2020		Page No: 3 of 4	AEG Contract No: 4251			

ALLIED EXPLORATION GEOTECHNICS LIMITED

Head Office: Unit 25, South Devonport Road, Plymouth, Devon, PL6 8JG, UK. Tel: 01752 874700 Fax: 01752 874710
Regional Office: Unit 10, Riverside Court, Exeter, Devon, EX2 8LJ, UK. Tel: 01392 393300 Fax: 01392 393300

IN-SITU WATER QUALITY PARAMETER MONITORING RESULTS

Date of Test: 18/05/2020		Operator: A. Masternan					
Weather Condition (inc temperature) :		Cloudy (13-14°C)					
Monitoring Point	Time (hrs)	pH	Temp (°C)	Electrical Conductivity (Actual) (µs)	Redox Potential (mv)	Dissolved Oxygen (%)	Total Dissolved Solids (ppm)
PRAIRIE_AUK_BH102	12:36:00	12.89	12.49	4372.20	-103.90	37.05	3.74
	12:39:00	12.94	12.72	4391.40	-101.20	32.12	3.73
	12:42:00	12.98	12.99	4416.70	-100.00	30.57	3.72
	12:45:00	13.00	13.15	4431.30	-102.60	30.46	3.72
PRAIRIE_AUK_BH107	14:16:00	7.50	11.80	1703.90	280.20	7.95	1.48
	14:19:00	7.40	11.61	1681.40	322.10	7.71	1.47
	14:22:00	7.36	11.52	1667.10	349.10	7.40	1.46
	14:25:00	7.34	11.42	1664.20	360.20	7.36	1.46
PRAIRIE_AUK_BH109	15:33:00	7.17	11.50	3392.80	340.40	35.08	2.99
	15:38:00	7.33	11.89	3727.00	371.70	59.40	3.25
	15:39:00	7.41	11.75	4058.00	380.20	75.67	2.47
	15:42:00	7.78	12.32	3237.90	390.10	88.64	3.38
	15:45:00	7.90	12.72	3948.80	364.20	89.69	2.74





Remarks :

Contract Title: Prairie Site Ground Investigation Works		Client: South Tees Development Corporation	
	Checked By: <i>LC</i>	Approved By: <i>AW</i>	
Date Issued: 05/11/2020	Page No: 4 of 4	AEG Contract No: 4251	



ALLIED EXPLORATION GEOTECHNICS LIMITED

Head Office: Unit 25, North Street Industrial Estate, Pinner Rd, Chesham-Bosch, Ox. Oxford, OX2 2SD - Tel: 01295 387 478 Fax: 0191 287 4719
Regional Office: Unit 35, Business Development Centre, Empire Wharf, Reading, RG1 9BL - Tel: 01172 125 880 Fax: 01172 728 888

IN-SITU WATER QUALITY PARAMETER MONITORING RESULTS							
Date of Test:		30/06/2020		Operator:		A. Masterman	
Weather Condition (inc temperature) :				Overcast (17°C)			
Monitoring Point	Time (hrs)	pH	Temp (°C)	Electrical Conductivity (Actual) (µs)	Redox Potential (mv)	Dissolved Oxygen (%)	Total Dissolved Solids (ppm)
PRAIRIE_AUK_BH104	15:34:00	7.69	13.20	1229.00	50.10	7.74	1.01
	15:37:00	7.62	13.26	1120.00	52.60	7.46	0.93
	15:40:00	7.62	13.57	1124.00	53.90	9.52	0.95
	-	-	-	-	-	-	-
Remarks :	PRAIRIE_AUK_BH104 & PRAIRIE_AUK_BH107 - unable to sample using pump due to lack of head. Agreed with Arcadis to sample using a bailer.						
Contract Title:				Client:			
Prairie Site Ground Investigation Works				South Tees Development Corporation			
	Checked By:			Approved By:			
	Date Issued:			AEG Contract No.:			
05/11/2020			1 of 3			4251	



ALLIED EXPLORATION GEOTECHNICS LIMITED

11000 Highway 20, Box 20, Airdrie, Alberta, Canada T4B 1A1, Tel: (403) 461-1000, Fax: (403) 461-1001, Email: info@allied-geotech.com
 11000 Highway 20, Box 20, Airdrie, Alberta, Canada T4B 1A1, Tel: (403) 461-1000, Fax: (403) 461-1001, Email: info@allied-geotech.com

IN-SITU WATER QUALITY PARAMETER MONITORING RESULTS							
Date of Test:		01/07/2020		Operator:		A. Masterman	
Weather Condition (inc temperature):				Overcast (16°C)			
Monitoring Point	Time (hrs)	pH	Temp (°C)	Electrical Conductivity (Actual) (µS)	Redox Potential (mv)	Dissolved Oxygen (%)	Total Dissolved Solids (ppm)
PRAIRIE_AUK_BH101 (Deep)	09:21:00	8.85	13.30	2352.00	-305.90	7.85	1.94
	09:24:00	8.80	12.02	1372.00	-296.30	1.64	1.24
	09:27:00	8.66	11.85	1842.00	-294.00	1.24	1.60
	09:30:00	8.64	11.91	1834.00	-292.60	1.10	1.59
PRAIRIE_AUK_BH101 (Shallow)	09:35:00	9.60	12.32	1439.00	-306.00	2.24	1.27
	09:38:00	9.12	12.39	1583.00	-290.00	1.53	1.36
	09:41:00	9.04	12.19	1617.00	-286.00	1.53	1.39
	09:44:00	8.97	12.15	1647.00	-282.00	1.76	1.42
PRAIRIE_AUK_BH102	08:44:00	12.79	13.02	4476.00	-416.39	1.63	3.78
	08:47:00	12.66	12.88	4509.00	-423.30	1.30	3.84
	08:50:00	12.94	12.57	4622.00	-421.00	1.00	3.95
	-	-	-	-	-	-	-
PRAIRIE_AUK_BH103	11:39:00	9.38	12.05	935.30	-212.00	3.13	0.80
	11:42:00	9.39	12.09	840.63	-203.00	1.64	0.72
	11:45:00	9.40	12.14	830.17	-200.00	1.52	0.71
	11:48:00	9.39	12.10	813.60	-199.10	1.29	0.70
PRAIRIE_AUK_BH106	15:31:00	9.98	12.22	886.70	-164.50	2.73	0.75
	15:34:00	9.35	12.08	1274.00	-229.00	2.22	1.10
	15:37:00	9.41	12.00	1272.00	-242.90	1.69	1.10
	15:40:00	9.43	11.98	1272.60	-250.20	1.62	1.10
PRAIRIE_AUK_BH110	10:29:00	7.62	12.70	4057.00	86.80	11.19	3.45
	10:32:00	7.60	12.51	4045.00	129.50	9.43	3.45
	10:35:00	7.60	12.47	4045.00	169.00	8.48	3.45
	10:38:00	7.60	12.35	4026.00	160.60	7.72	3.46
	10:42:00	7.59	12.29	4022.00	266.20	7.31	3.46
Remarks:	N/A						
Contract Title				Client			
Prairie Site Ground Investigation Works				South Tees Development Corporation			
	Created by:			Approved by:			
	<i>LC</i>			<i>AKW</i>			
Date Issued		Page No.		AEG Contract No.			
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ALLIED EXPLORATION GEOTECHNICS LIMITED

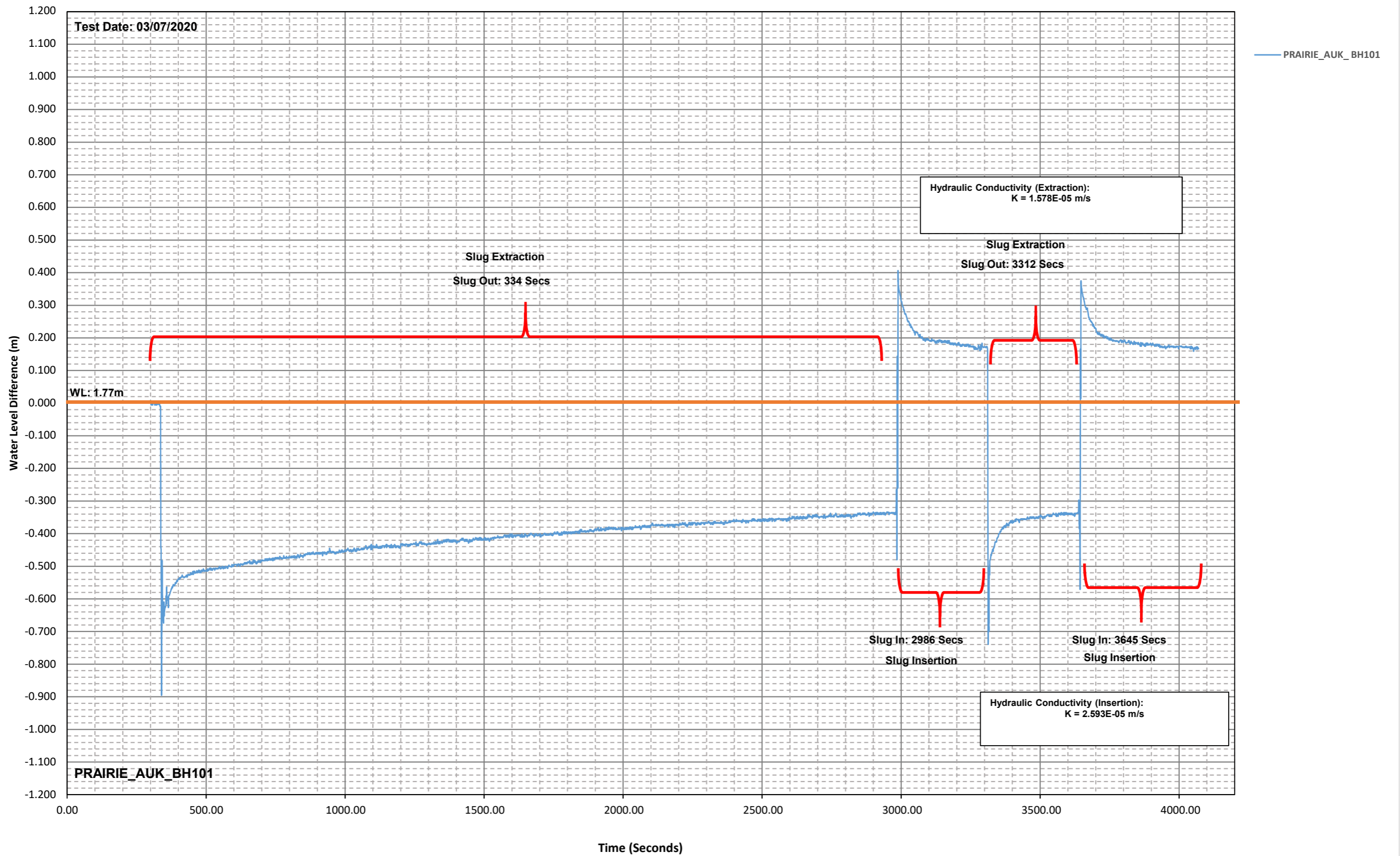
Head Office: 19427 26th Street, Suite 100, Edmonton, Alberta, Canada T5A 0K6 Tel: (781) 521-2200 Fax: (781) 521-2201
 19427 26th Street, Suite 100, Edmonton, Alberta, Canada T5A 0K6 Tel: (781) 521-2200 Fax: (781) 521-2201

IN-SITU WATER QUALITY PARAMETER MONITORING RESULTS							
Date of Test:		02/07/2020		Operator:		A. Masseran	
Weather Condition (inc temperature):				Overcast/Showers (11°C)			
Monitoring Point	Time (hrs)	pH	Temp (°C)	Electrical Conductivity (Actual) (µS)	Redox Potential (mv)	Dissolved Oxygen (%)	Total Dissolved Solids (ppm)
PRAIRIE_AUK_BH105	10:13:00	7.78	11.23	1394.10	-198.80	4.11	1.23
	10:16:00	7.71	11.21	1462.20	-197.00	2.53	1.29
	10:19:00	7.43	11.23	1598.80	-185.50	1.88	1.41
	10:22:00	7.37	11.27	1623.20	-179.50	1.80	1.43
PRAIRIE_AUK_BH107	11:44:00	6.93	12.00	2177.60	9.10	6.25	1.88
	11:47:00	6.94	12.02	2178.60	12.10	7.05	1.88
	11:50:00	6.94	12.17	2188.90	16.60	9.01	1.88
	11:53:00	6.93	12.07	2184.30	-1.50	5.44	1.89
	11:56:00	6.91	11.78	2168.00	-29.50	3.70	1.89
	11:59:00	6.91	11.75	2167.00	-40.30	2.96	1.89
	12:02:00	6.90	11.81	2172.30	-56.30	3.23	1.89
	12:05:00	6.89	11.83	2162.50	-71.50	2.24	1.89
	12:08:00	6.89	11.86	2166.20	-78.90	3.12	1.89
PRAIRIE_AUK_BH108 (Deep)	09:08:00	7.69	11.23	2649.00	-156.90	4.52	2.34
	09:11:00	7.17	11.26	2935.30	-141.70	3.36	2.59
	09:14:00	6.96	11.28	2971.80	-125.70	2.15	2.62
	09:17:00	6.92	11.29	2979.60	-110.20	2.11	2.62
	09:20:00	6.90	11.28	2984.50	-103.90	1.77	2.63
PRAIRIE_AUK_BH108 (Shallow)	09:33:00	7.40	11.84	2368.40	-174.90	20.18	2.06
	09:36:00	7.39	11.63	2400.00	-182.20	16.98	2.10
	09:39:00	7.38	11.84	2402.90	-181.80	17.97	2.10
PRAIRIE_AUK_BH109	13:22:00	6.53	12.15	5418.60	-103.40	6.04	4.69
	13:25:00	6.53	11.67	5378.40	-114.70	5.25	4.69
	13:28:00	6.53	11.52	5344.30	-113.00	4.76	4.68
	13:31:00	6.54	11.45	5312.60	-110.50	4.12	4.66
Remarks:	PRAIRIE_AUK_BH108 (Shallow) - Testing undertaken in container (not in-line)						
Contract File				Client			
Prairie Site Ground Investigation Works				South Tees Development Corporation			
	Drawn By:			Approved By:			
	<i>LC</i>			<i>KW</i>			
Date Issued:		Page No.		Allied Contract No.			
05/11/2020		3 of 3		4251			

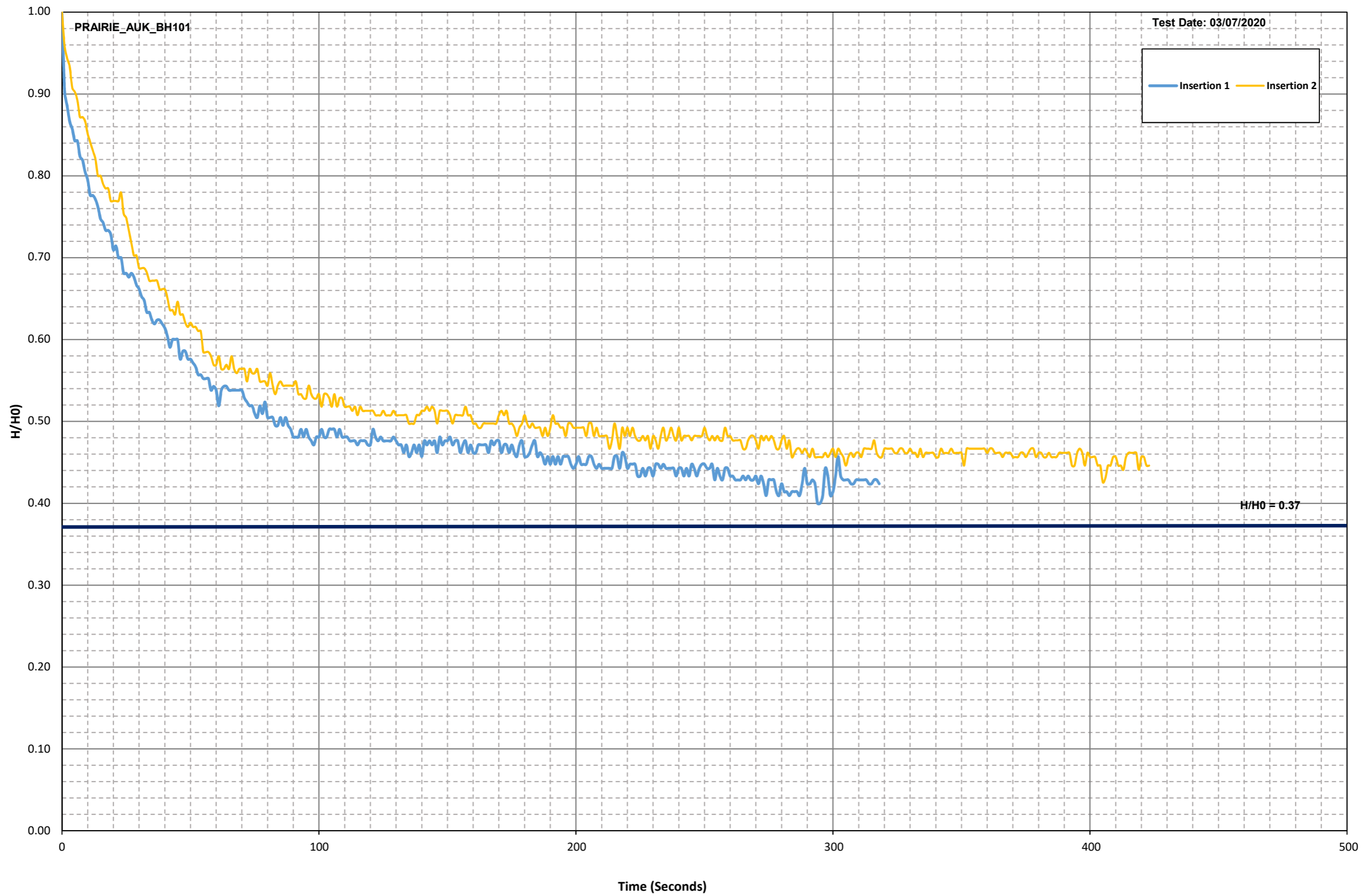
Hydraulic Conductivity: Slug Test Results



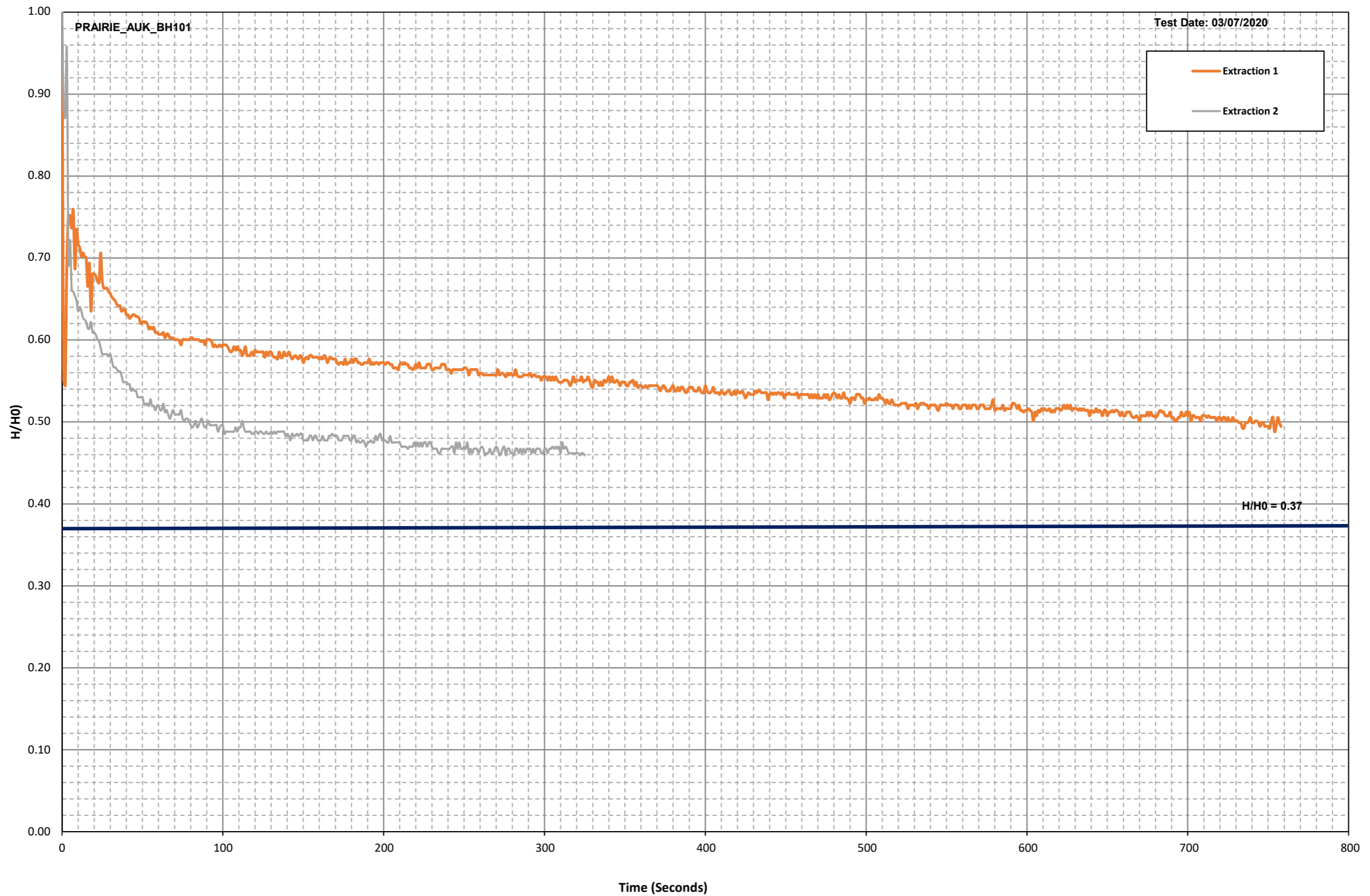
Hydraulic Conductivity: Slug Test



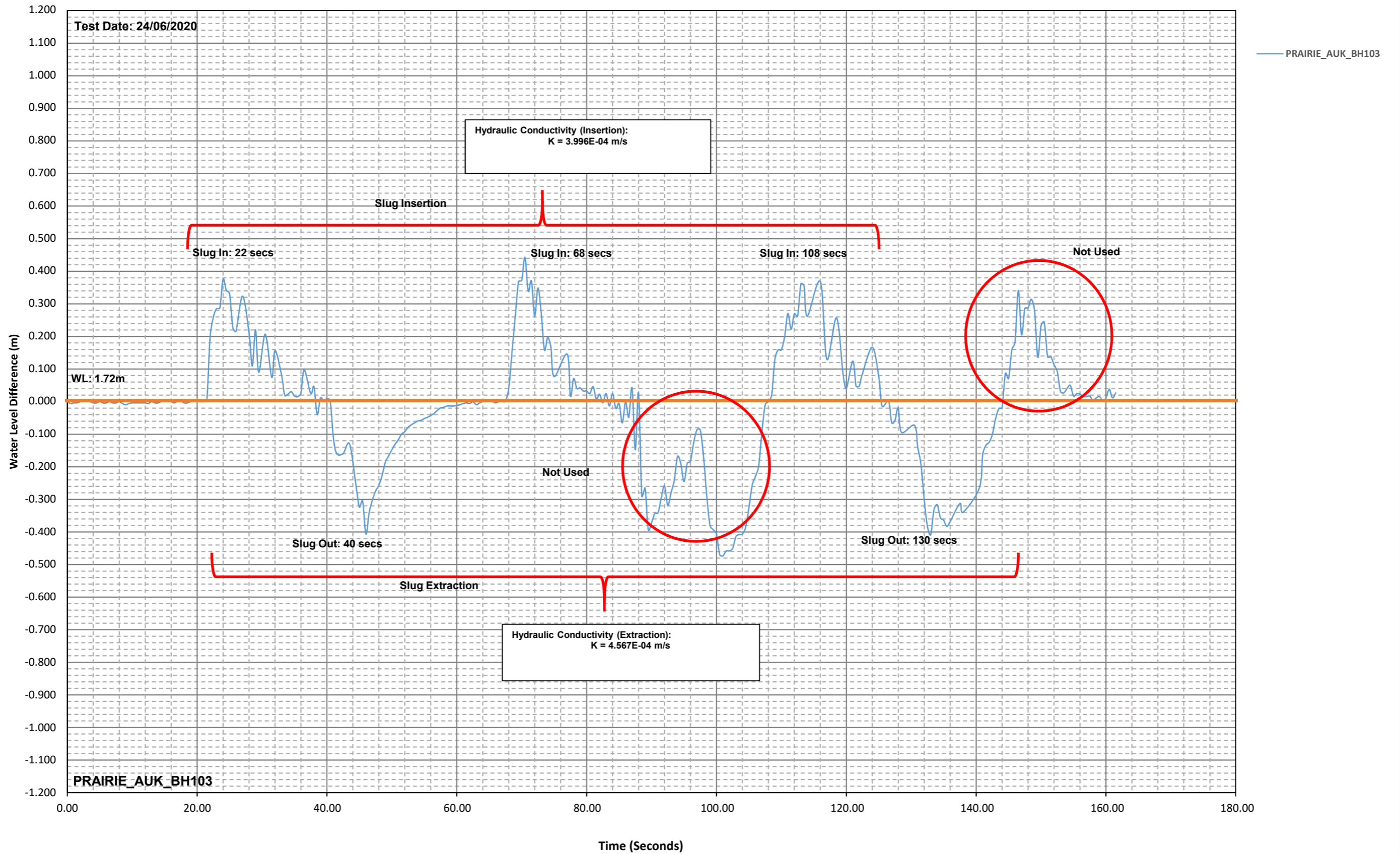
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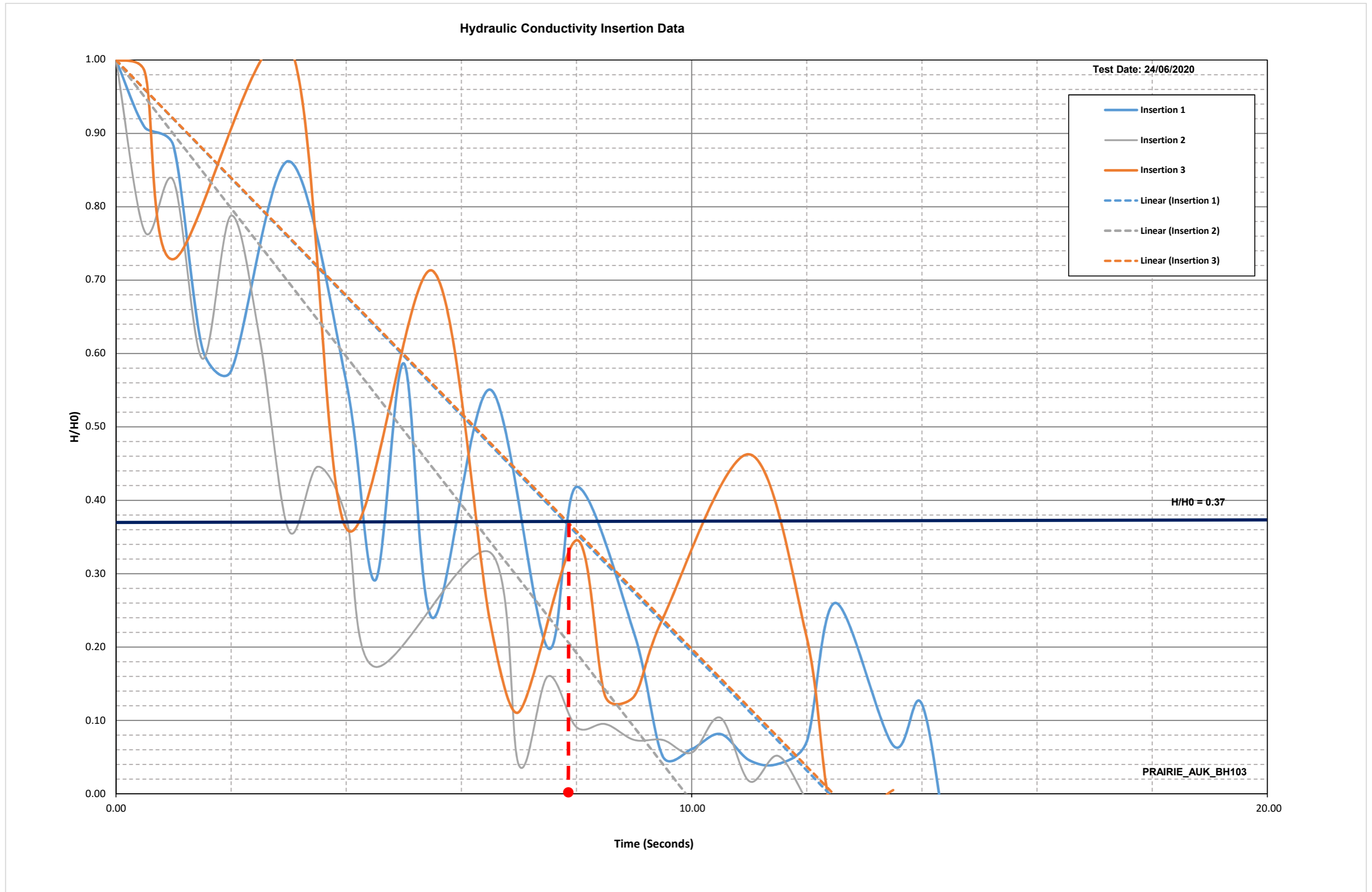


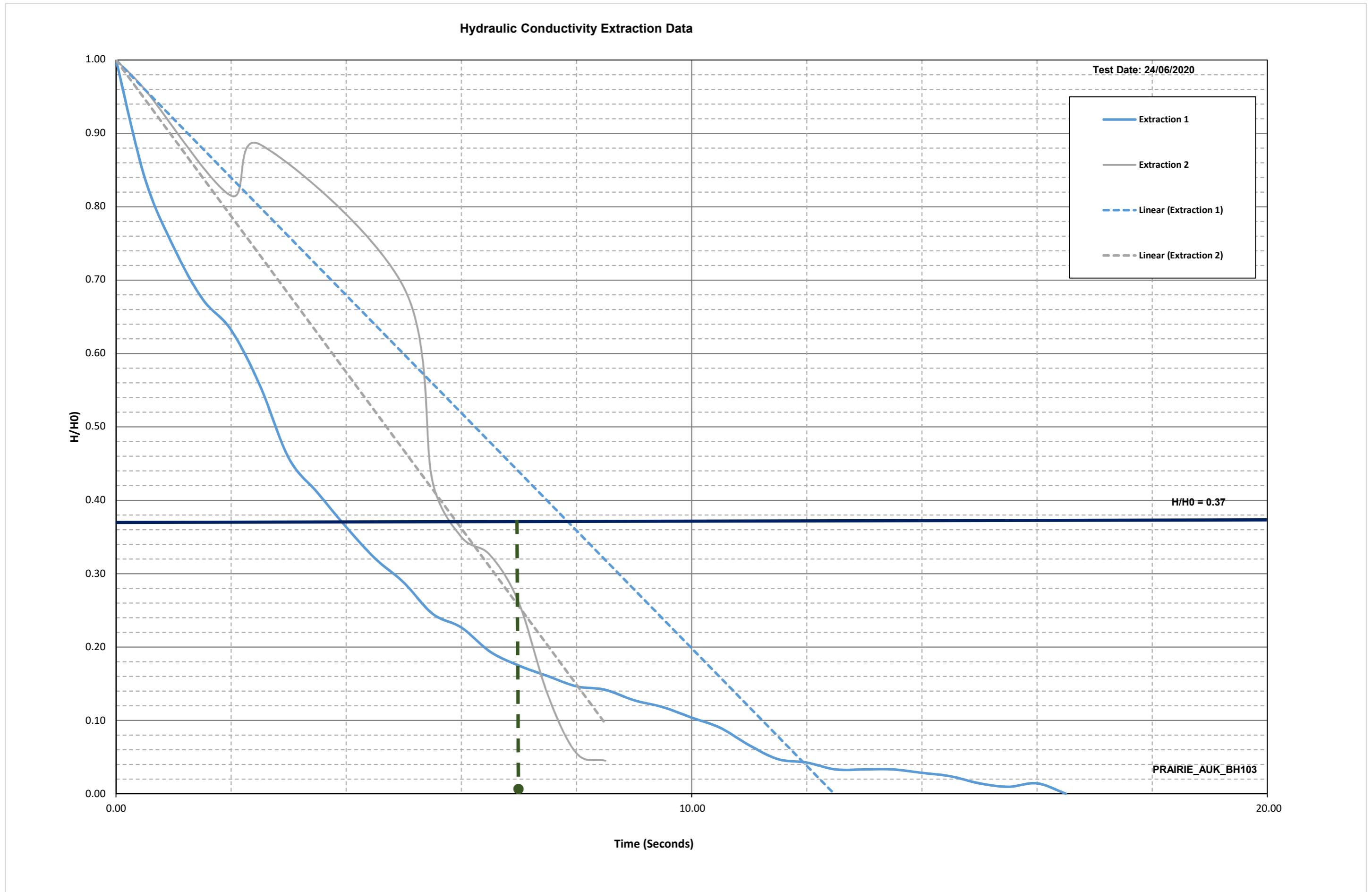
Hydraulic Conductivity Extraction Data



Hydraulic Conductivity: Slug Test

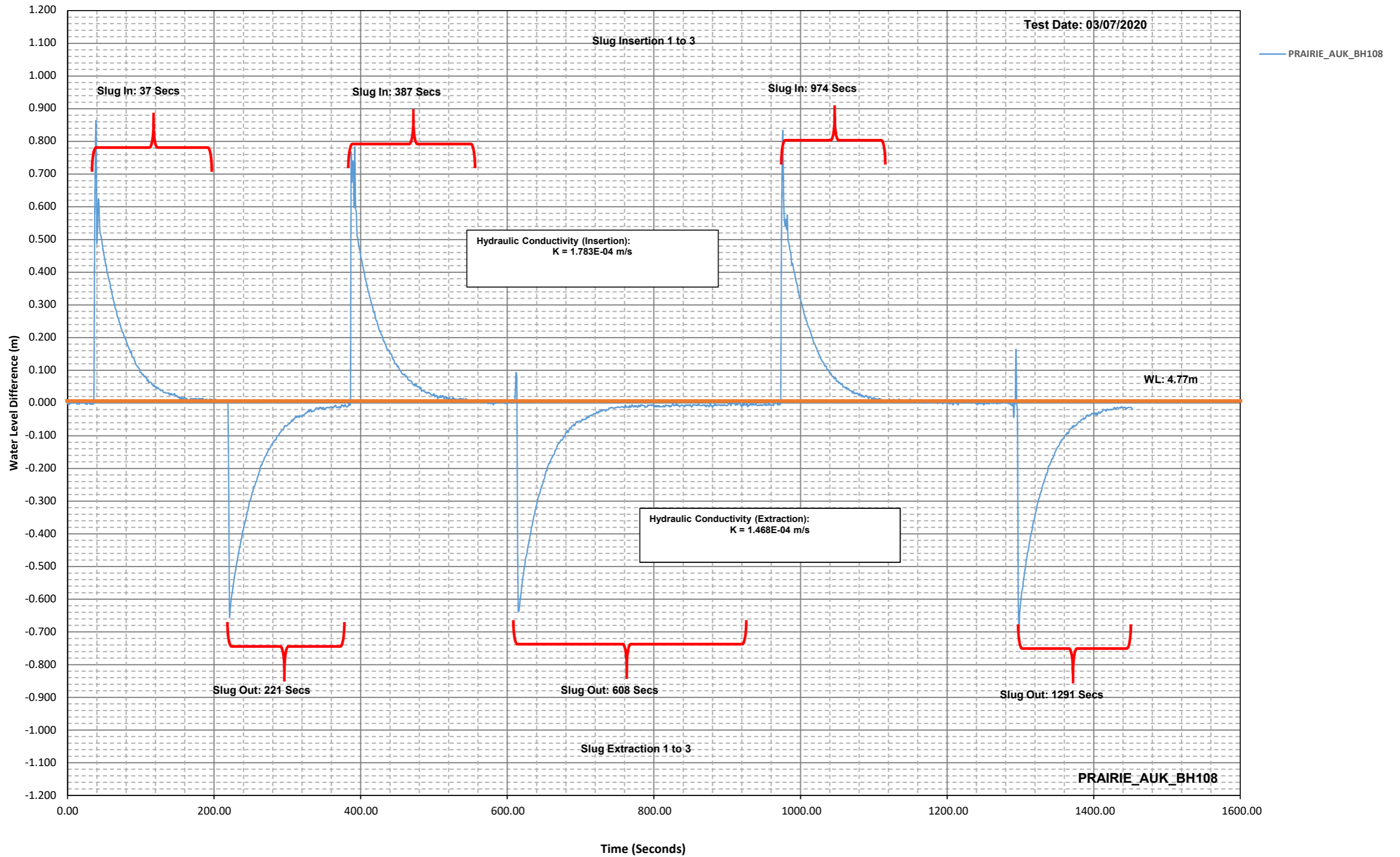




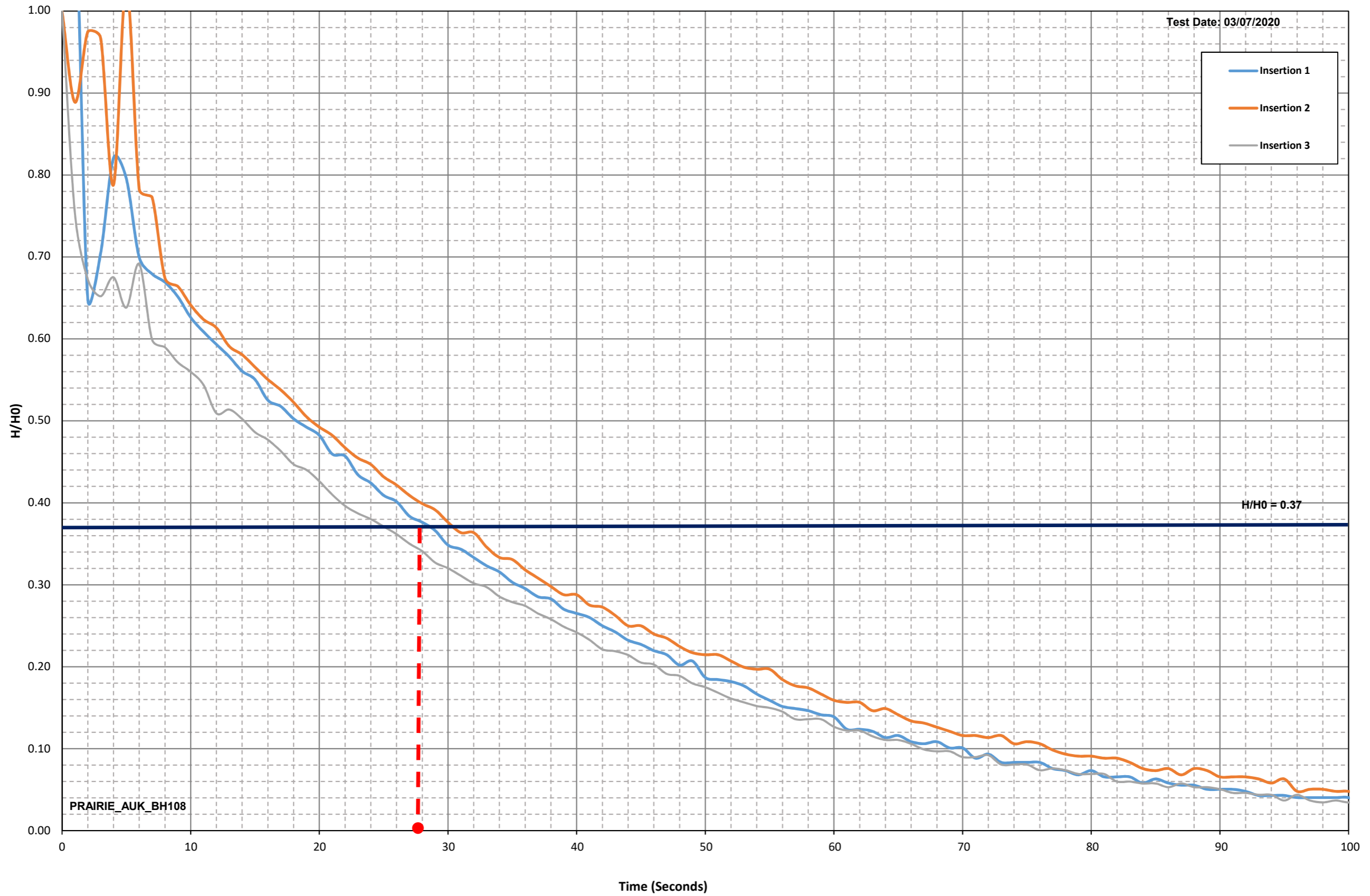


Hydraulic Conductivity: Slug Test

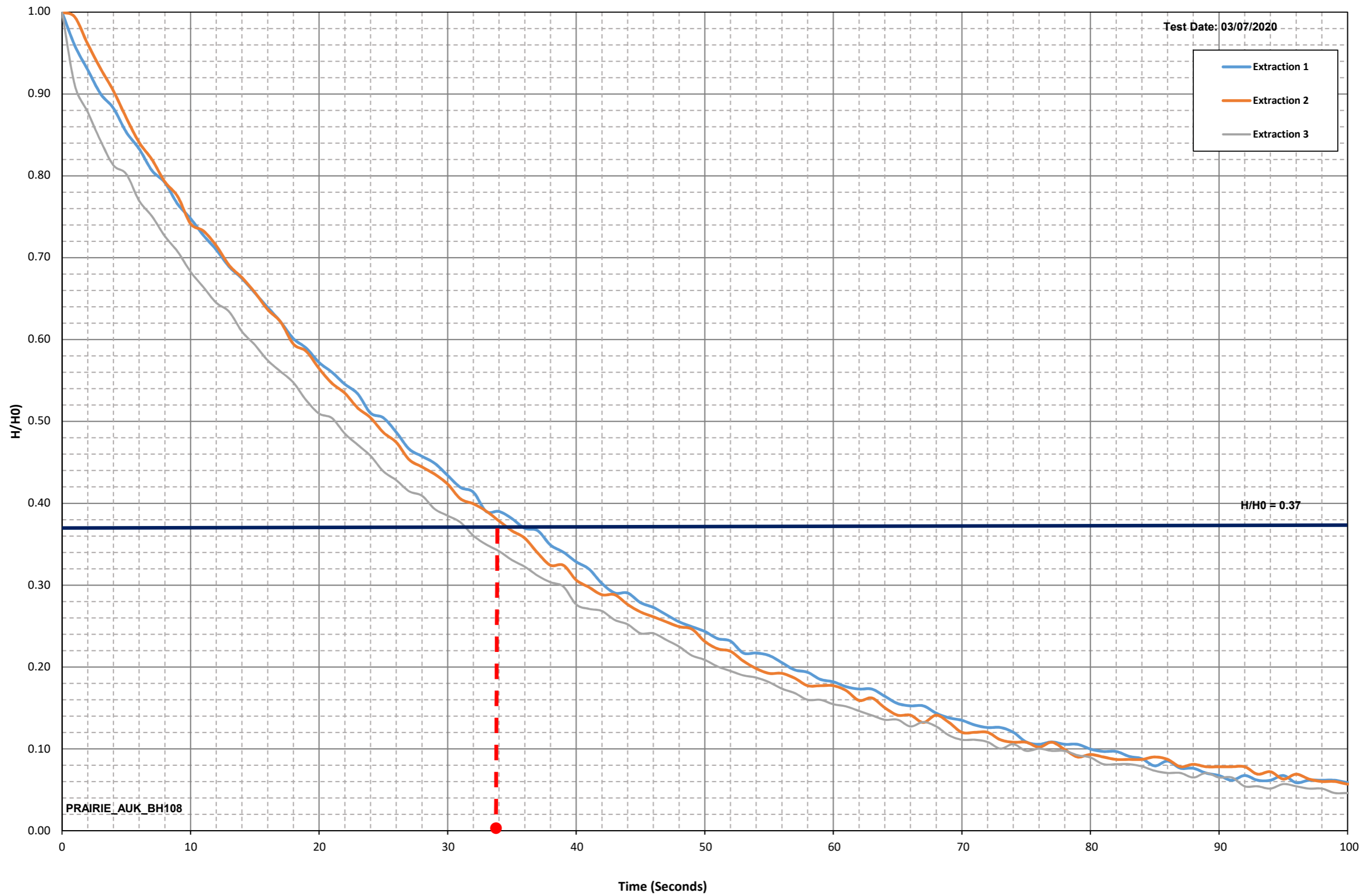
Test Date: 03/07/2020



Hydraulic Conductivity Insertion Data

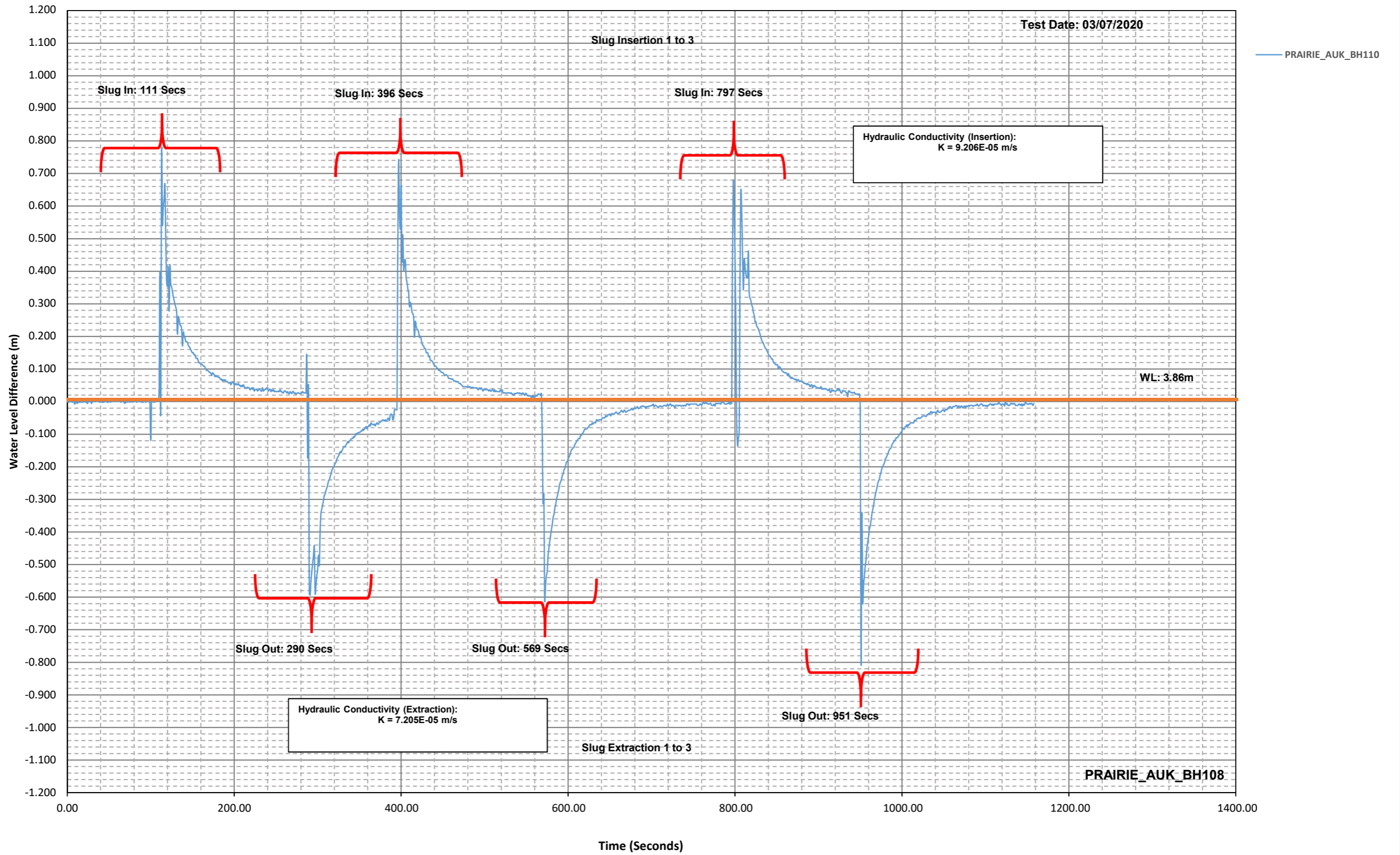


Hydraulic Conductivity Extraction Data

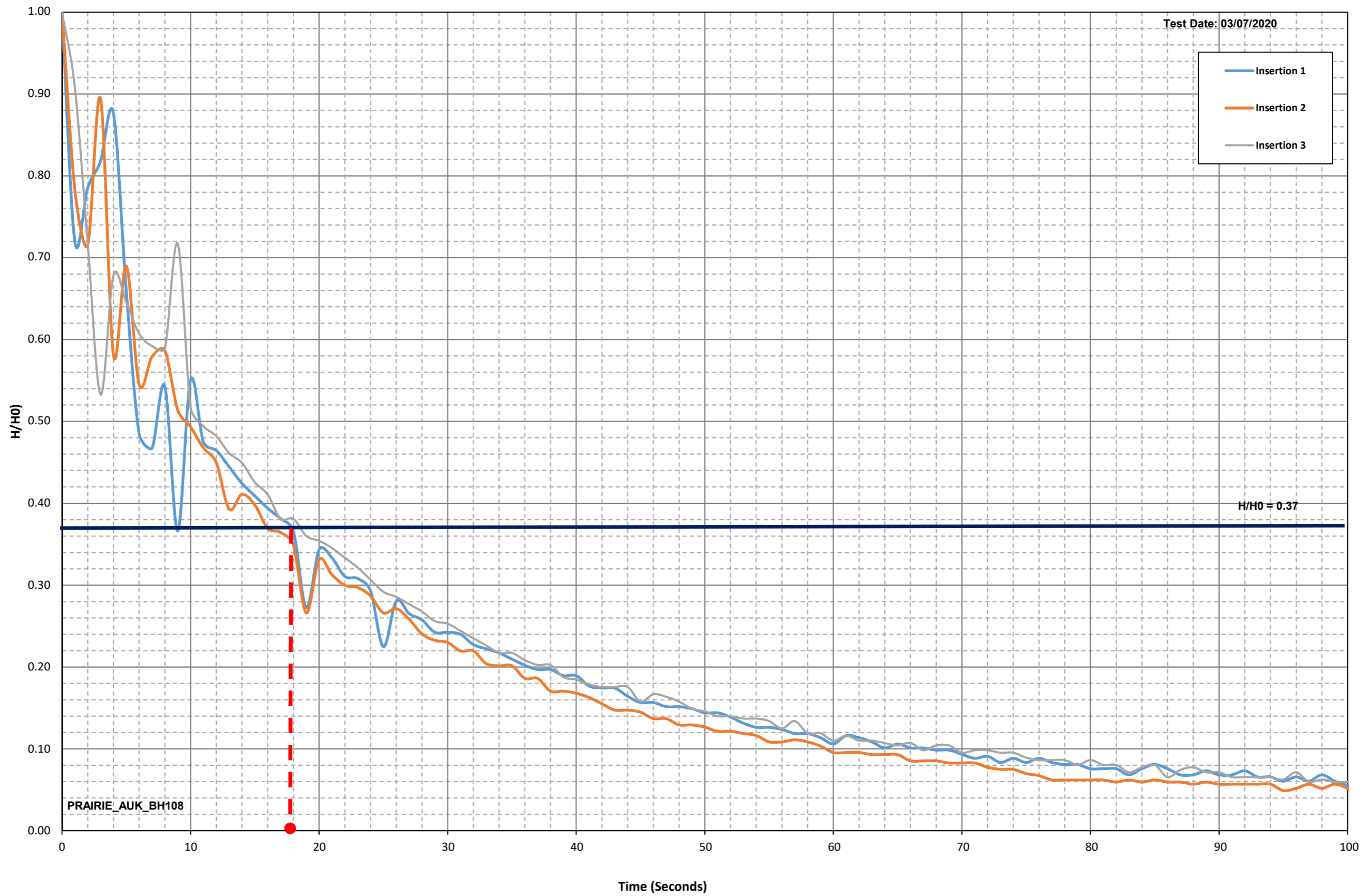


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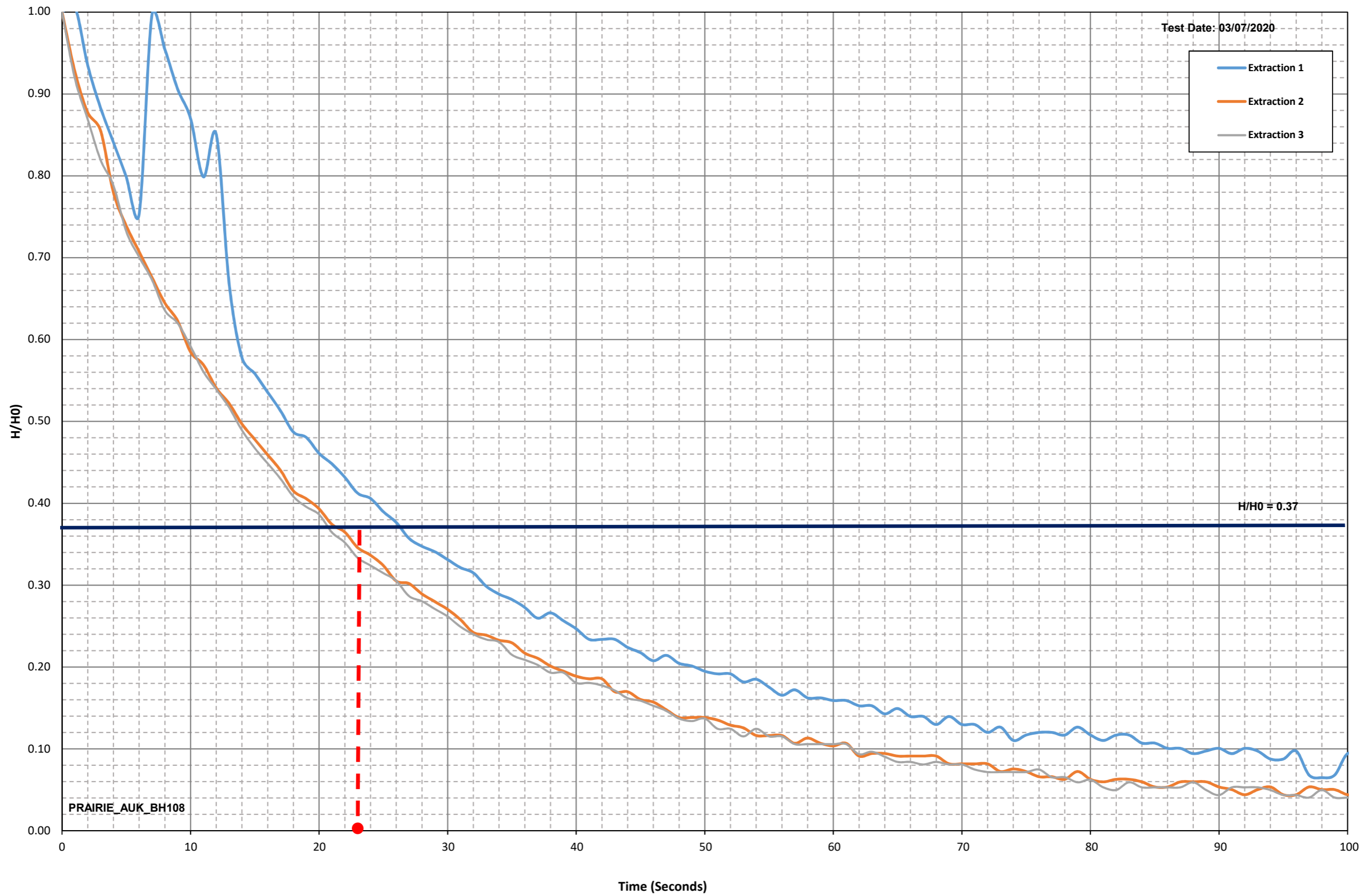
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Hydraulic Conductivity Insertion Data

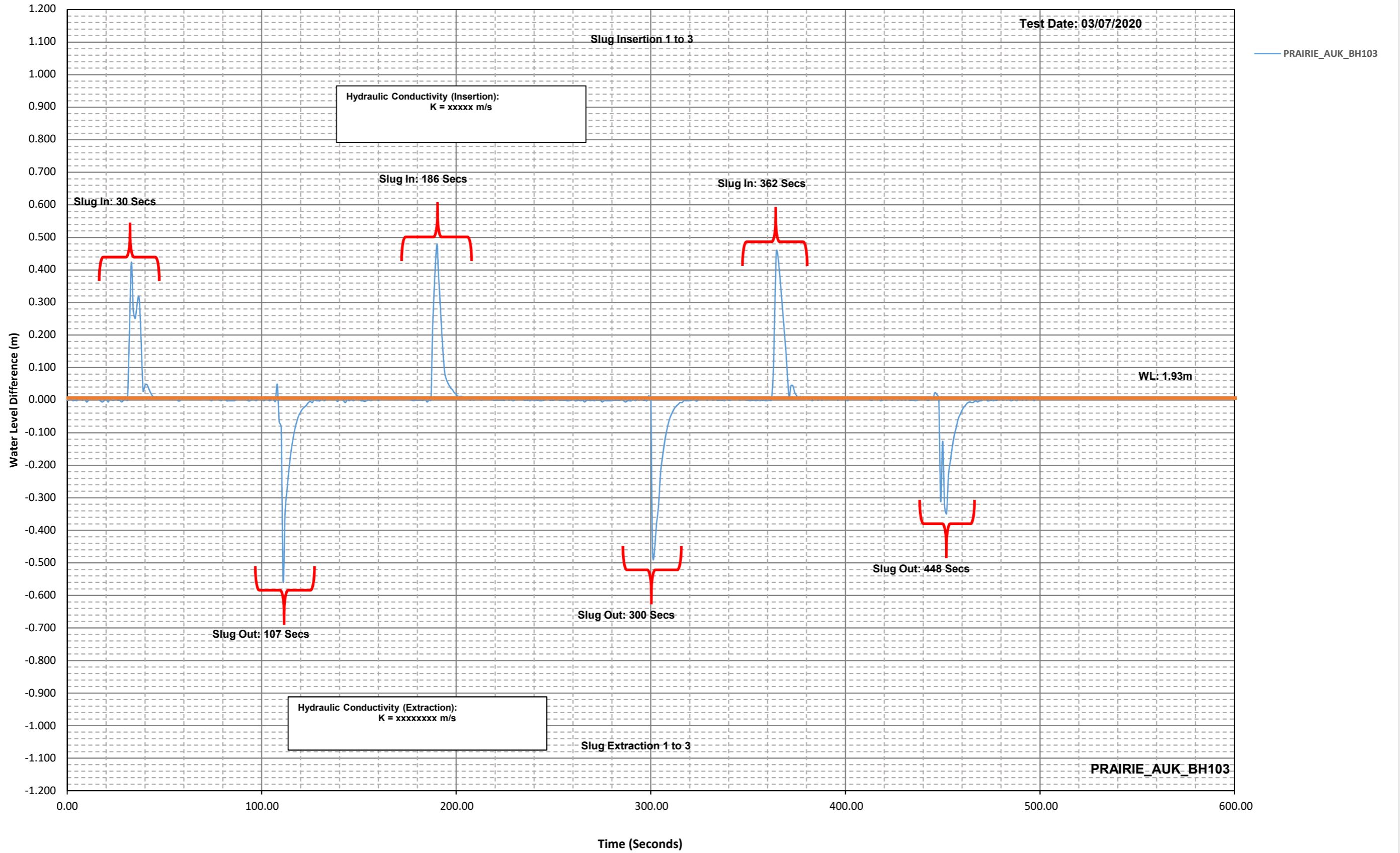


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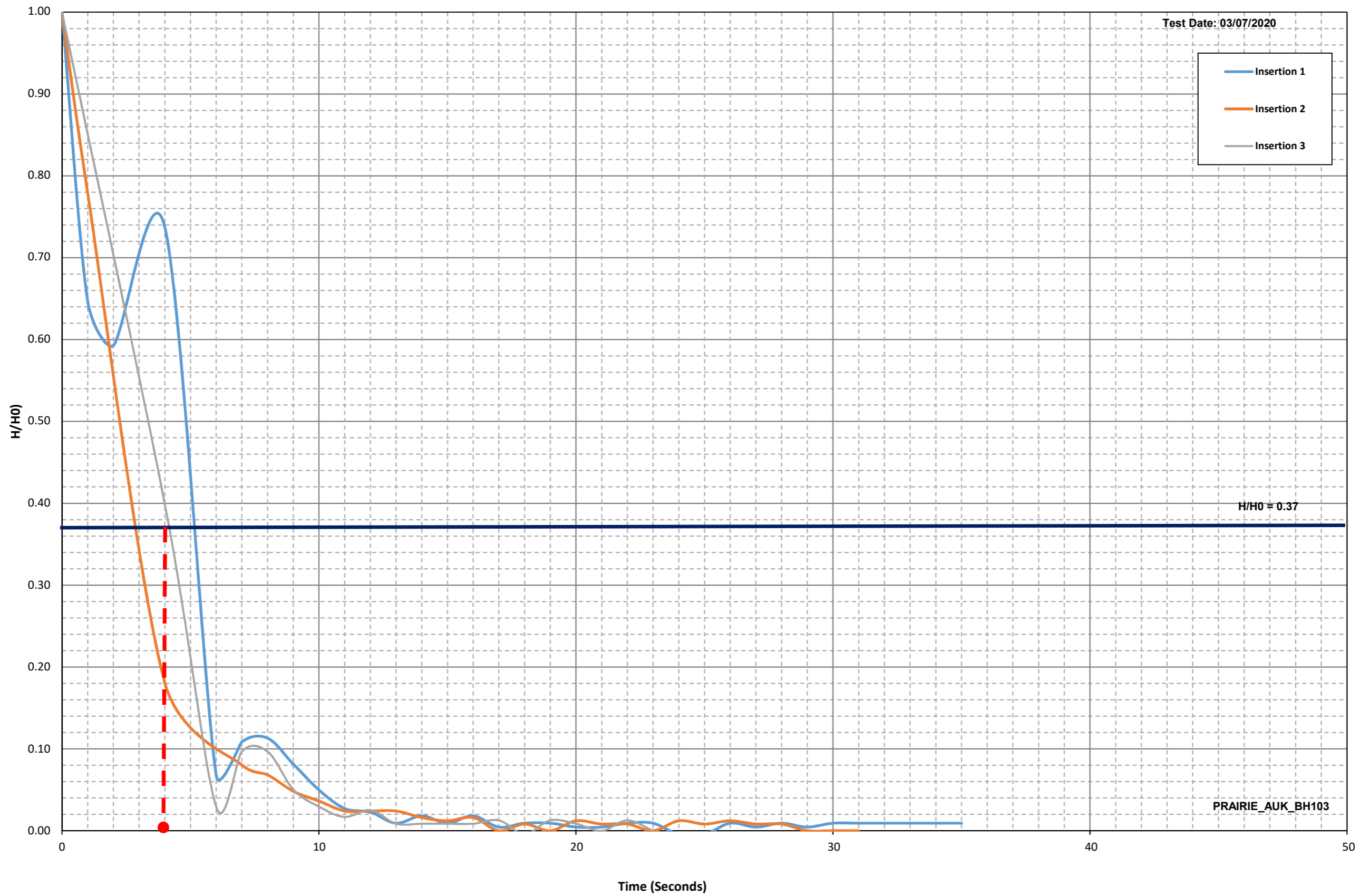


Hydraulic Conductivity: Slug Test

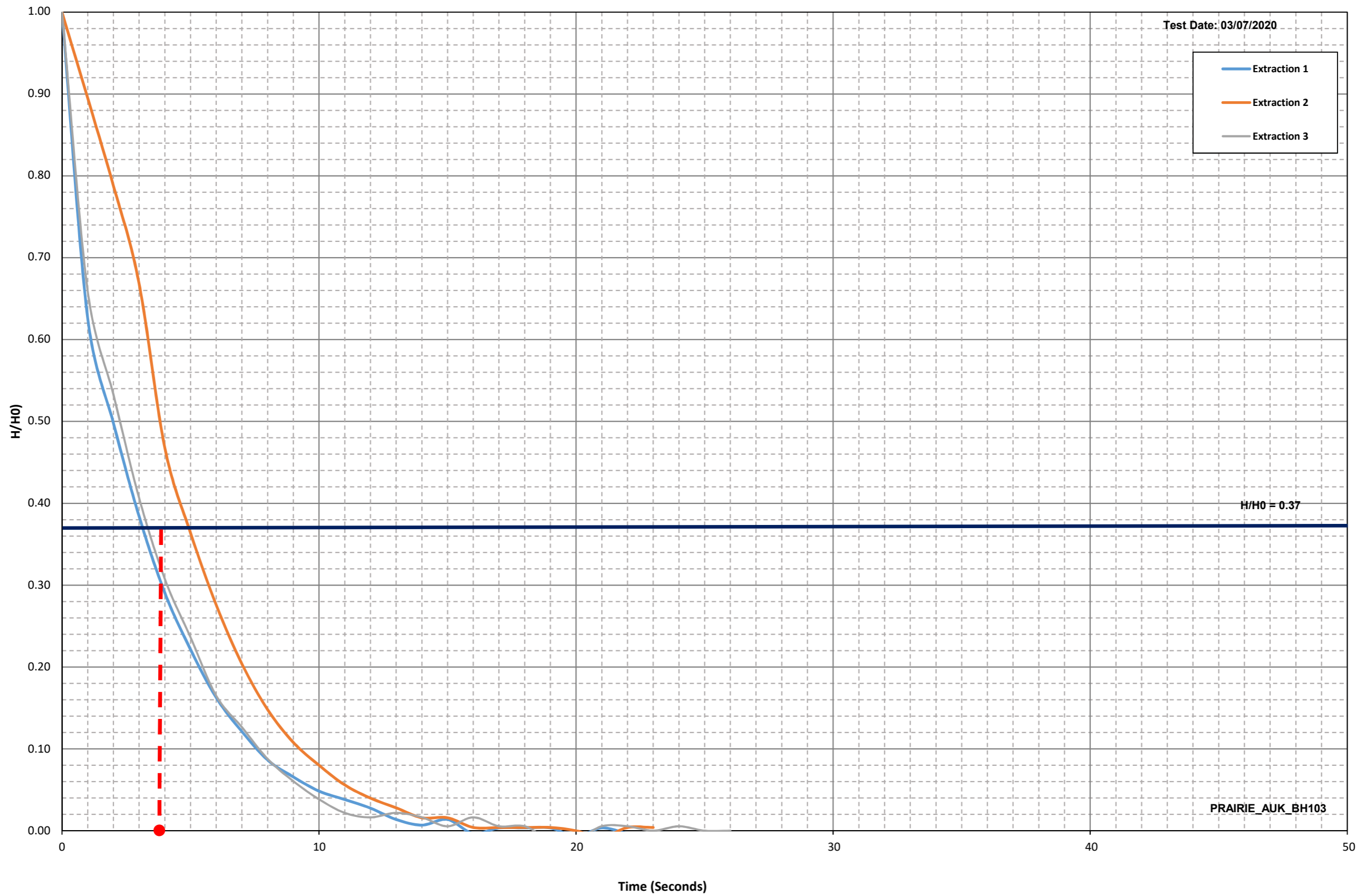
Test Date: 03/07/2020



Hydraulic Conductivity Insertion Data



Hydraulic Conductivity Insertion Extraction Data



Laboratory Report Certificate



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: Unit 25 Gales DA Industrial Estate, Parkin Way, Chesham-on-Sand, Co. Durham, DH2 2RD - Tel: 0161 3874700 Fax: 0191 3874710
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LABORATORY REPORT CERTIFICATE

Contract Title: Prairie Site Ground Investigation Works **AEG Reference:** 4251

Client: South Tees Development Corporation

We certify that Laboratory testing was carried out on samples from the above contract in accordance with techniques outlined in BS 1377: 1990, BS EN ISO 17892:2014 or other appropriate standards as quoted. The samples were received from April 2020 and the following results, given on the attached enclosures, were obtained.

The tests carried out are indicated in the attached table showing the enclosure number and the total number of pages.

For and on behalf of Allied Exploration & Geotechnics Limited

- Nick Vater (Managing Director)
- Kevin Warriner (HSE & Quality Director)
- Michelle Selkirk (Laboratory Manager)

Signed



Date: 06 November 2020

Tests marked not UKAS accredited in this certificate are not included in the UKAS accreditation schedule for our laboratory. Any opinions and interpretations expressed herein are outside the scope of the laboratory's UKAS accreditation.

Please note the material was derived from samples taken outside the control of the laboratory.

LABORATORY REPORT CERTIFICATE

ENCLOSURES

Enclosure Number	Description	UKAS Accredited	Reference	No. of Pages
0	Laboratory Report Certificate	N/A		3
1	Sample Description Sheets	N/A		11
2	Moisture Content	Yes	BS 1377 Part 2 1990 (BS EN ISO 17892-1:2014)	1
2	Plasticity Index and Moisture Content	Yes	BS 1377 Part 2 1990 (BS EN ISO 17892-1:2014)	8
3	Determination of Particle Density	Yes	BS 1377 Part 2 1990	1
4	Particle Size Distribution Sieving	Yes	BS 1377 Part 2 1990	76
4	Particle Size Distribution Sedimentation	No	BS 1377 Part 2 1990	25
5	Determination of Calorific Value, Organic Matter Content, Sulphate and pH (Tested externally)	No	See DETS certificates	19
6	Determination of Dry Density/Moisture Content Relationship	Yes	BS 1377 Part 4 1990	39
7	Determination of California Bearing Ratio	Yes	BS 1377 Part 4 1990	35
8	Determination of One Dimensional Consolidation Properties	Yes	BS 1377 Part 5 1990	4
9	Shear Strength by Hand Vane	No		1
10	Un drained Shear Strength in Triaxial Cell without Pore Water Pressure Measurement	Yes	BS 1377 Part 7 1990	2
11	Determination of Point Load Index	Yes	ISRM 1985	1
12	Determination of Unconfined Compressive Strength (Tested externally)		ISRM 1985	2
13	Slag Analysis (Tested externally)			20

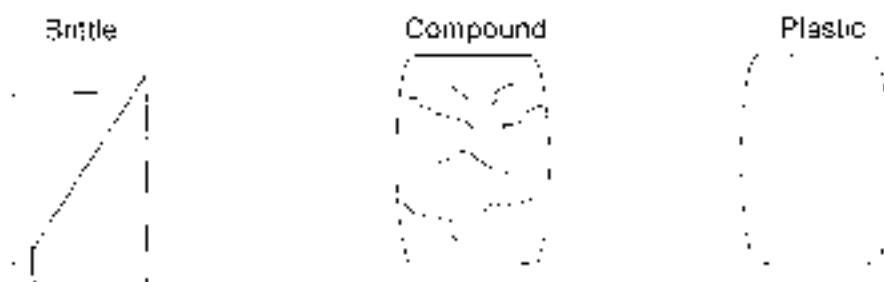
LABORATORY REPORT CERTIFICATE

ABBREVIATIONS

All the abbreviations used on the laboratory certificates are given below.

Br	Brittle	PSD	Particle Size Distribution by sieve analysis
C	Compound	SB	Shear Box
CBR	California Bearing Ratio	SED	Sedimentation Analysis
CDT	Consolidated Drained Triaxial	SO4	Sulphate (total, water extract, groundwater)
CL	Chloride content (water or soil)	CP2	Dry Density/Moisture Content 2.5kg rammer
US	Unsuitable sample for test	CP4	As above using 4.5kg rammer
UUT	Undrained Unconsolidated Triaxial	CPV	As above using vibrating hammer
HSV	Vane Test	CUT	Consolidated Undrained Triaxial
IS	Insufficient sample for test	R	Remoulded
LOI	Loss On Ignition	U	Undisturbed
M	Multi-stage testing	MC	Moisture Content
MCV	Moisture Content Value	PL	Point Load
NAT	Natural preparation method	NMC	Natural (or as received) moisture content
P	Plastic	PFH	Permeability Falling Head Method
OED	Oedometer	PTXL	Permeability in Triaxial Cell
OMC	Optimum Moisture Content	ORG	Organic content
B	Large disturbed (bulk) sample	PD	Particle Density (SS)
J	Small disturbed (jar) sample	PI	Liquid limit, plastic limit and plasticity index

Typical Mode of Failure for Triaxial Testing



Sample Description Sheets





ALLIED EXPLORATION & GEOTECHNICS LIMITED

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Regional Offices: Bristol, Manchester, Cardiff & Newport, Birmingham, B20 7JL. Tel: 01273 751000 Fax: 01273 751001

LABORATORY SAMPLE DESCRIPTION SHEET

Exploratory Hole No.	Sample Depth (m)	ID	Description	Laboratory Tests/Remarks
PRAIRIE_AUK_BH101	3.00	U2	Low strength laminated brown silty CLAY of intermediate plasticity with occasional silt lenses.	MC PI PD UUT
PRAIRIE_AUK_BH101	4.00	J4	Brown slightly sandy CLAY.	SO4
PRAIRIE_AUK_BH101	4.00	B5	Brown silty slightly sandy CLAY	PSD SED
PRAIRIE_AUK_BH101	5.00	U7	Low strength laminated brown silty slightly sandy CLAY of intermediate plasticity.	MC PI UUT
PRAIRIE_AUK_BH101	8.00	U12	Medium strength laminated brown silty slightly sandy CLAY.	UUT
PRAIRIE_AUK_BH101	9.00	J14	Brown slightly sandy CLAY	SO4
PRAIRIE_AUK_BH101	11.00	U18	High strength brown slightly sandy slightly gravelly CLAY of low plasticity.	MC PI PD UUT
PRAIRIE_AUK_BH101	12.50	J21	Brown slightly sandy gravelly CLAY.	MC PI (IS for LL)
PRAIRIE_AUK_BH101	12.50	B22	Brown slightly sandy slightly gravelly CLAY with a medium cobble content.	PSD SED
PRAIRIE_AUK_BH101	17.00	J30	Brown slightly sandy gravelly CLAY.	BRE
PRAIRIE_AUK_BH101	18.00	J33	White and brown slightly sandy GRAVEL.	MC BRE US for PI
PRAIRIE_AUK_BH103	2.50	U2	Medium strength brown slightly sandy CLAY	UUT OED
PRAIRIE_AUK_BH103	2.95	J3	Brown slightly sandy CLAY of high plasticity.	MC PI
PRAIRIE_AUK_BH103	4.50	U8	Medium strength brown slightly sandy CLAY	UUT
PRAIRIE_AUK_BH103	5.50	B12	Brown silty slightly sandy CLAY.	PSD SED
PRAIRIE_AUK_BH103	7.00	U14	Medium strength laminated brown CLAY with occasional silt pockets.	UUT
PRAIRIE_AUK_BH103	8.50	J18	Brown sandy slightly gravelly CLAY of low plasticity.	MC PI
PRAIRIE_AUK_BH103	8.50	B19	Brown slightly sandy slightly gravelly CLAY	PSD SED
PRAIRIE_AUK_BH103	10.00	U21	High strength brown slightly sandy slightly gravelly CLAY	UUT
PRAIRIE_AUK_BH103	13.00	J27	Brown sandy slightly gravelly CLAY of low plasticity	MC PI BRE
PRAIRIE_AUK_BH104	5.50	U2	High strength brown slightly sandy CLAY	UUT

Contract Title - Prairie Site Ground Investigation Works	Client - South Tees Development Corporation
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	Signed - <i>msene</i>	Name -	Page 1 of 11	
	Date of issue - 03/11/2020	Certificate No - SDM2011/1	AEG Contract No - 4251	