TRIAL PIT RECORD **FINAL** Exploratory Hole No. Prairie Site Ground Investigation Works Client: Location: PRAIRIE\_AUK\_TP197 South Tees Development Corporation E:454449.745 N:520922.379 Method (Equipment):
Machine Excavated (360 Tracked Excavator) Start Date: 29/04/2020 3 of 4





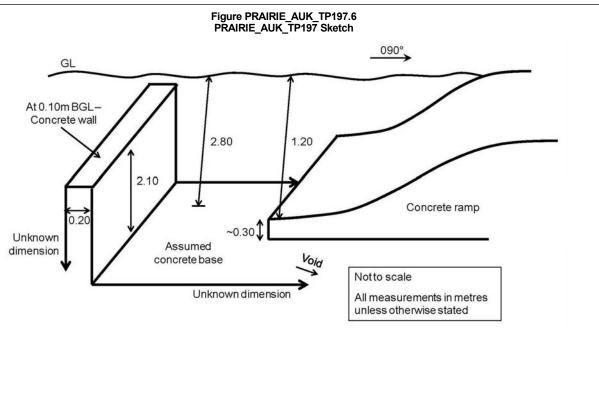
Head Office: Unit 25 Stella Gill Industrial Estate, Pelton Fell, Chester-le-Street, Co. Durham, DH2 2RG Regional Office: Unit 20 Business Development Centre, Eanam Wharf, Blackburn, BB1 5BL Tel: 01772 735 300 Fax: 01772 735 999



Client:

# Status:-TRIAL PIT RECORD **FINAL** Prairie Site Ground Investigation Works Exploratory Hole No. Location: PRAIRIE\_AUK\_TP197 South Tees Development Corporation E:454449.745 N:520922.379 Start Date: 29/04/2020 Method (Equipment): Machine Excavated (360 Tracked Excavator) Ground Level (m): 11.396 Sheet: 4 of 4



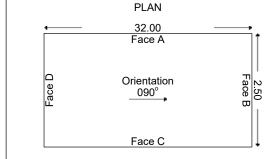


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Status:-TRIAL PIT RECORD **FINAL** 

Project:		Prairie Site Ground Investigation Works									No.
Client:	South Tee	es Development	levelopment Corporation   Location:   E:454458,796 N:520990.155							PRAIRIE_AUK_T	P198
Method (Equ	ethod (Equipment): Machine Excavated (360 Tracked Excavator)					•		Ground Level (m): 12.937	Start Date: 27/04/2020	Sheet: 1 of 7	
S	SAMPLES &	TESTS						STRATA			

SAM	PLES &	TESTS					STRATA
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	Description
				11.74		(1.40)	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).  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 to subangular 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).  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.  Terminated at 2.60m BGL - due to concrete obstruction.
1		DI ANI				11	NDMATED



**GROUNDWATER** 

No groundwater inflow observed.

STABILITY

Pit sides and base moderately stable throughout excavation.

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

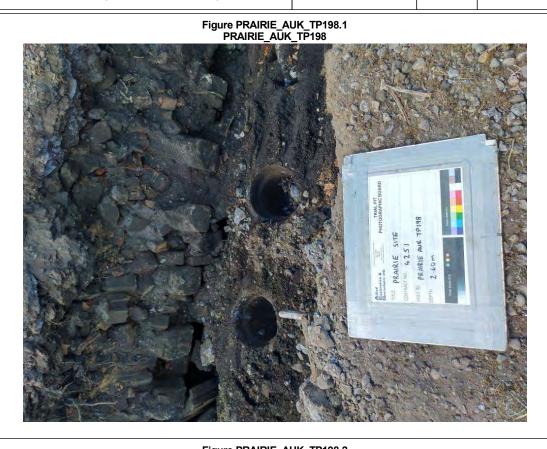
GENERAL REMARKS

- (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.

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

# ALLIED EXPLORATION & GEOTECHNICS LIMITED Head Office: Regional Office: Re

# TRIAL PIT RECORD **FINAL** Exploratory Hole No. Prairie Site Ground Investigation Works Client: Location: PRAIRIE\_AUK\_TP198 South Tees Development Corporation E:454458.796 N:520990.155 Method (Equipment): Machine Excavated (360 Tracked Excavator) Start Date: 27/04/2020 2 of 7



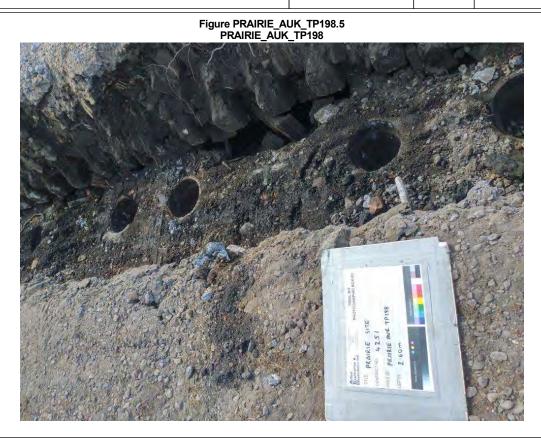


TRIAL PIT RECORD **FINAL** Exploratory Hole No. Prairie Site Ground Investigation Works Client: Location: PRAIRIE\_AUK\_TP198 South Tees Development Corporation E:454458.796 N:520990.155 Method (Equipment):
Machine Excavated (360 Tracked Excavator) Start Date: 27/04/2020 3 of 7





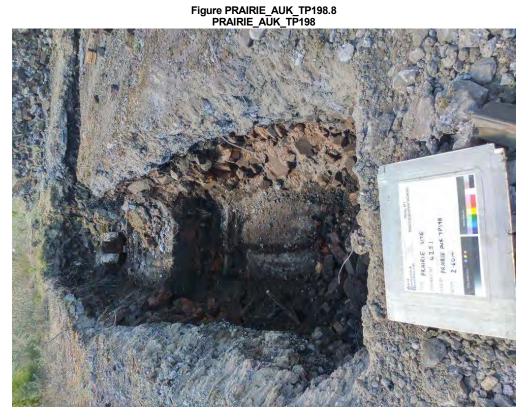
TRIAL PIT RECORD **FINAL** Exploratory Hole No. Prairie Site Ground Investigation Works Client: Location: PRAIRIE\_AUK\_TP198 South Tees Development Corporation E:454458.796 N:520990.155 Method (Equipment):
Machine Excavated (360 Tracked Excavator) Start Date: 27/04/2020 4 of 7





TRIAL PIT RECORD **FINAL** Project: Exploratory Hole No. Prairie Site Ground Investigation Works Client: Location: PRAIRIE\_AUK\_TP198 South Tees Development Corporation E:454458.796 N:520990.155 Start Date: 27/04/2020 Method (Equipment):
Machine Excavated (360 Tracked Excavator) 5 of 7

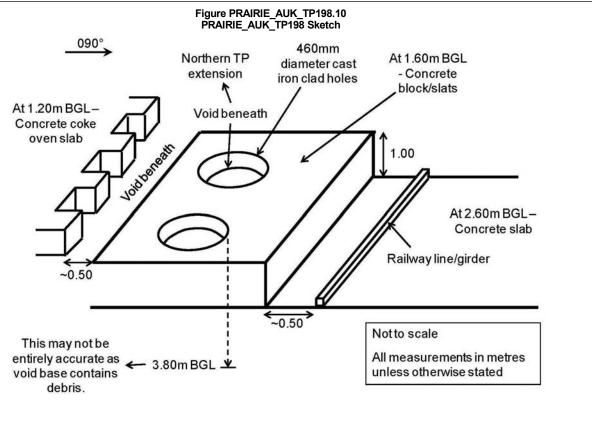




Head Office: Unit 25 Stella Gill Industrial Estate, Pelton Fell, Chester-le-Street, Co. Durham, DH2 2RG Regional Office: Unit 20 Business Development Centre, Eanam Wharf, Blackburn, BB1 5BL Tel: 0191 387 4700 Fax: 0191 387 4710 Fax: 01972 735 399

# TRIAL PIT RECORD **FINAL** Exploratory Hole No. Prairie Site Ground Investigation Works Client: Location: PRAIRIE\_AUK\_TP198 South Tees Development Corporation E:454458.796 N:520990.155 Ground Level (m): 12.937 Start Date: 27/04/2020 Method (Equipment): Machine Excavated (360 Tracked Excavator) 6 of 7

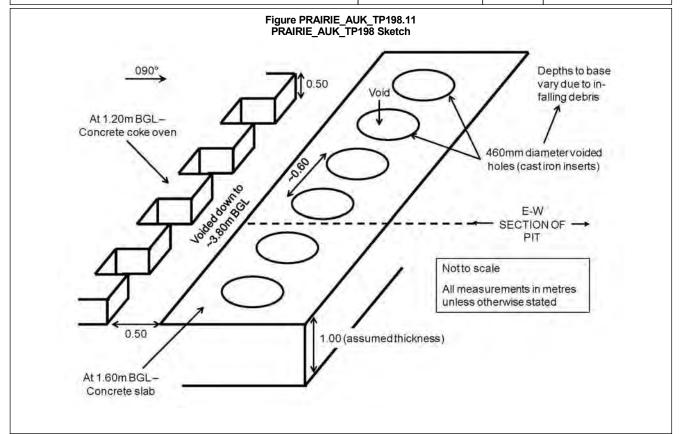




Unit 25 Stella Gill Industrial Estate, Pelton Fell, Chester-le-Street, Co. Durham, DH2 2RG Unit 20 Business Development Centre, Eanam Wharf, Blackburn, BB1 5BL Tel: 0191 387 4700 Fax: 0191 387 4700 Fax: 0197 375 999



## Status:-TRIAL PIT RECORD **FINAL** Project: Prairie Site Ground Investigation Works Exploratory Hole No. Client: Location: PRAIRIE\_AUK\_TP198 South Tees Development Corporation E:454458.796 N:520990.155 Start Date: 27/04/2020 Method (Equipment): Machine Excavated (360 Tracked Excavator) Ground Level (m): 12.937 Sheet: 7 of 7



Status:-

	Head Office: Regional Office:	Unit 25 Stella Gill Industrial Estate, Pelton Fell, Chester-le-Street, Co. Durham, DH2 2RG Unit 20 Business Development Centre, Eanam Wharf, Blackburn, BB1 5BL	Tel: 0191 387 4700 Fax: 0191 Tel: 01772 735 300 Fax: 0177
		TRIAL PIT RECORD	
Project:		Prairie Site Ground Investigation Works	

South Tees Development Corporation

Client:

**FINAL** Exploratory Hole No. Location: PRAIRIE\_AUK\_TP199 E:454465.130 N:521024.309 Start Date: 27/04/2020 Method (Equipment):
Machine Excavated (360 Tracked Excavator) Ground Level (m): 13.209 1 of 4

SAMPLES 8	& TESTS		STRATA						
Depth Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	Description			
			13.01		(2.80)	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).  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).			
			9.41		3.80	MADE GROUND (Concrete and red brick floor).  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			
			8.21 8.01		(1.20) - - - - - - - - - - - - - - - - - - -	clinker, ash, coal, concrete and red brick. Cobbles are angular and include red and yellow brick and concrete).  Firm to stiff red brown grey slightly sandy CLAY. Sand is fine to medium.			
					- - - - -	Complete at 5.20m BGL.			
PLAN  8.00 Face A  Orientation 090° B  PLAN  8.00 Face B						NDWATER undwater inflow observed.			
					STABILITY Pit sides and base moderately stable throughout excavation.				

ADD	ITIONAL INFOR	MATION	GENERAL REMARKS				
			(1) Various subsurfac sketch. (2) No samples taken	e structures exposed .	during excavation - ι	refer to following	
Photographs:	Yes	See additional sheets.					
All dimensions in metres For explanation of Scale 1:50 abbreviations see			of symbols and ee Key Sheets	Checked by: <i>K,W</i>	Logged by: D. Portsmouth	Contract No. <b>4251</b>	

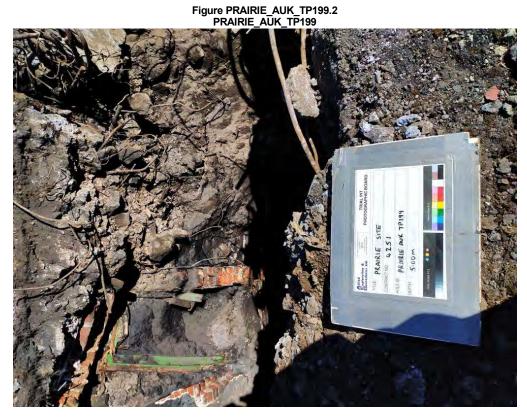
Face C

# ALLIED EXPLORATION & GEOTECHNICS LIMITED Head Office: Regional Office: Unit 25 Stella Gill Industrial Estate, Pelton Fell, Chester-le-Street, Co. Durham, DH2 2RG Tel: 0191 387 4700 Fax: 0191 387 4710 Tel: 01772 735 300 Fax: 01772 735 999

Status:-

Œ	TRI	FINAL			
Project:	Prairie Site Ground Inve	Exploratory Hole No.			
Client:	South Tees Development Corporation	PRAIRIE_AUK_TP199			
Method (Ed	quipment): Machine Excavated (360 Tracked Excavator)		Ground Level (m): 13.209	Start Date: 27/04/2020	Sheet: 2 of 4





TRIAL PIT RECORD **FINAL** Exploratory Hole No. Prairie Site Ground Investigation Works Client: Location: PRAIRIE\_AUK\_TP199 South Tees Development Corporation E:454465.130 N:521024.309 Start Date: 27/04/2020 Method (Equipment):

Machine Excavated (360 Tracked Excavator) 3 of 4





Figure PRAIRIE\_AUK\_TP199.4 PRAIRIE\_AUK\_TP199 - Spoil

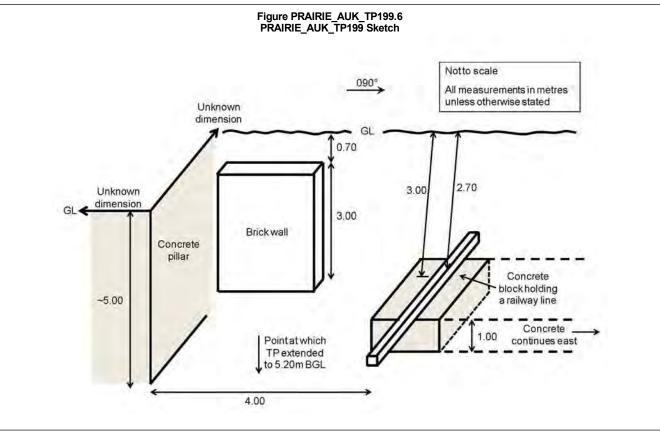


Unit 25 Stella Gill Industrial Estate, Pelton Fell, Chester-le-Street, Co. Durham, DH2 2RG
Unit 20 Business Development Centre, Eanam Wharf, Blackburn, BB1 5BL
Tel: 0191 387 4700 Fax: 0191 387 4710
Tel: 0197 387 4700 Fax: 0197 387 4910
Tel: 01772 735 300 Fax: 01772 735 399

Status:-

# TRIAL PIT RECORD **FINAL** Exploratory Hole No. Prairie Site Ground Investigation Works Client: Location: PRAIRIE\_AUK\_TP199 South Tees Development Corporation E:454465.130 N:521024.309 Start Date: 27/04/2020 Method (Equipment): Machine Excavated (360 Tracked Excavator) Ground Level (m): 13.209 Sheet: 4 of 4





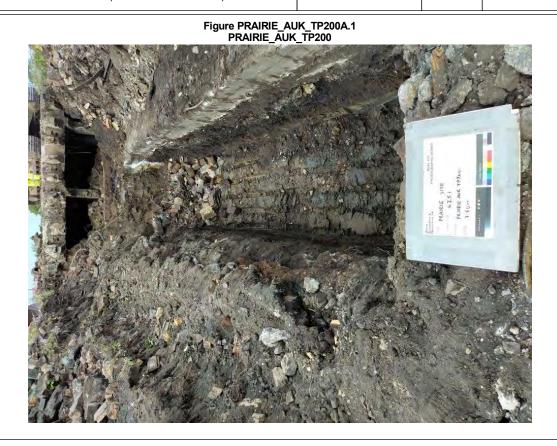
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# Status:-

C)					TR	IAL PI	T RECOR	RD			FINAL
Project:			Prairie	Site Gr	ound Inv	estigatio	n Works			Expl	oratory Hole No.
Client: South Tees Development Corporation Location:											RIE_AUK_TP200A
E:454446.479 N:521086.026									Sheet:	1 of 6	
SAI	MPLES &	TESTS						STRATA			
Depth	Type Test 9 Reduced Denth						escription				
				9.53 9.53 8.03 7.73		(0.80)	MADE GROUND (Brown grey very sandy gravel with medium of content with many rootlets. Sand is fine to coarse and includes Gravel is fine to coarse subangular and includes slag, sandsto concrete. Slag content is 25-50%. Cobbles are angular and includes of content. Slag is vesicular grey).  MADE GROUND (Brown grey very sandy gravel with medium of coarse subangular and includes slag, concrete and red and yellow brick. Slag content is 25-50%. Cobbles are angular and include and yellow brick and concrete. Slag is vesicular grey).  at c.0.20m BGL concrete encountered - extended pit west.  MADE GROUND (Black grey sandy gravel. Sand is fine to coal 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.  Firm brown grey yellow sandy CLAY. Sand is fine to medium.				nd includes ash. ag, sandstone and ular and include th medium cobble ravel is fine to red and yellow and include red y). d pit west. if fine to coarse ar and includes bit extended.
Face D		PLAN 13.00 Face A  Orientation 090°		T ac CC		No gro		observed.	vation.		
		Face C			<u></u>						
Sketch Dia		TIONAL INFORM	MATIO			(1) Tria (2) Stru the sar Structu (3) Var	ne as between ires bottomed o ious structures	vest on slope. d when extending pit 0.20-1.00m BGL but out at 3.50m BGL. exposed during exca	with medium	boulder	content (concrete).
Photogra	phs:	Yes		See add shee			IE_AUK_TP200 samples taken.				
	ensions in Scale 1:50				lanation			Checked by:	Logged D. Portsn		Contract No. 4251

Client:

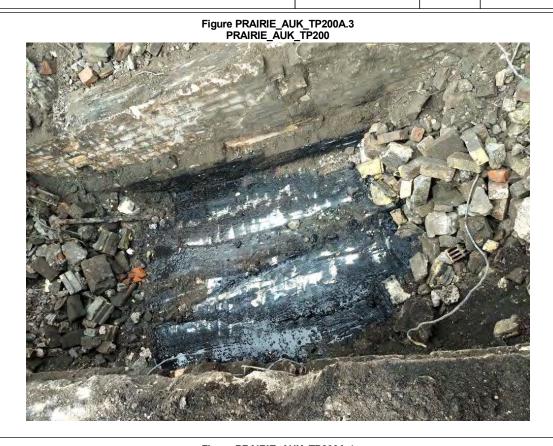
# TRIAL PIT RECORD **FINAL** Exploratory Hole No. Prairie Site Ground Investigation Works Location: PRAIRIE\_AUK\_TP200A South Tees Development Corporation E:454446.479 N:521086.026 Start Date: 28/04/2020 Method (Equipment): Machine Excavated (360 Tracked Excavator) 2 of 6

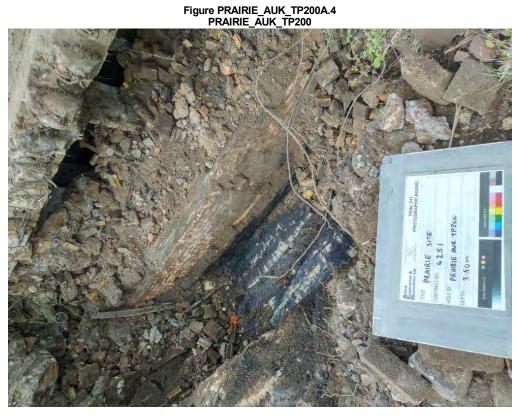




Client:

# TRIAL PIT RECORD **FINAL** Exploratory Hole No. Prairie Site Ground Investigation Works Location: PRAIRIE\_AUK\_TP200A South Tees Development Corporation E:454446.479 N:521086.026 Method (Equipment): Machine Excavated (360 Tracked Excavator) Start Date: 28/04/2020 Ground Level (m): 10.527 3 of 6





# ALLIED EXPLORATION & GEOTECHNICS LIMITED Head Office: Regional Office: Unit 25 Stella Gill Industrial Estate, Pelton Fell, Chester-le-Street, Co. Durham, DH2 2RG Tel: 0191 387 4700 Fax: 0191 387 4710 Tel: 01772 735 999

Project:

Client:

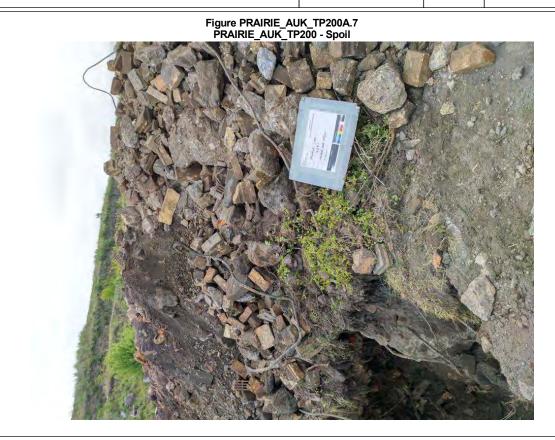
# TRIAL PIT RECORD **FINAL** Exploratory Hole No. Prairie Site Ground Investigation Works Location: PRAIRIE\_AUK\_TP200A South Tees Development Corporation E:454446.479 N:521086.026 Start Date: 28/04/2020 Method (Equipment): Machine Excavated (360 Tracked Excavator) Ground Level (m): 10.527 4 of 6

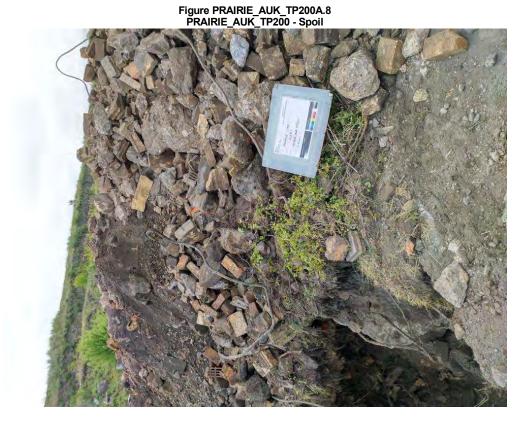
# Figure PRAIRIE\_AUK\_TP200A.5 PRAIRIE\_AUK\_TP200



Status:-

G	TRIA	FINAL			
Project:	Prairie Site Ground Inve	Exploratory Hole No.			
Client:	South Tees Development Corporation	PRAIRIE_AUK_TP200A			
Method (E	Equipment): Machine Excavated (360 Tracked Excavator)		Ground Level (m): 10.527	Start Date: 28/04/2020	Sheet: 5 of 6



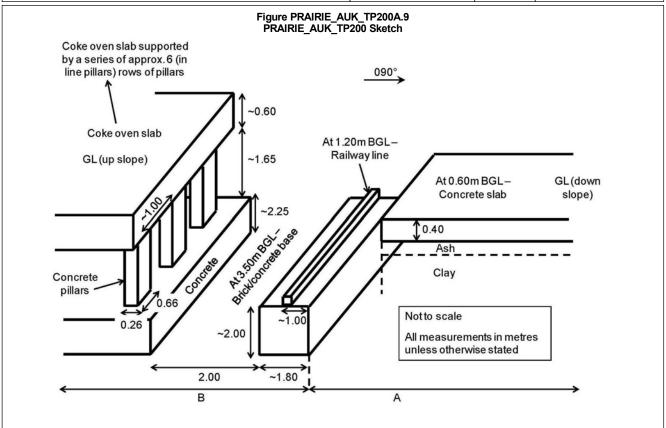


Head Office: Regional Office Unit 25 Stella Gill Industrial Estate, Pelton Fell, Chester-le-Street, Co. Durham, DH2 2RG Unit 20 Business Development Centre, Eanam Wharf, Blackburn, BB1 5BL

Tel: 0191 387 4700 Fax: 0191 387 4710



# TRIAL PIT RECORD Project: Prairie Site Ground Investigation Works Exploratory Hole No. Client: South Tees Development Corporation E:454446.479 N:521086.026 Method (Equipment): Ground Level (m): Start Date: 28/04/2020 6 of 6

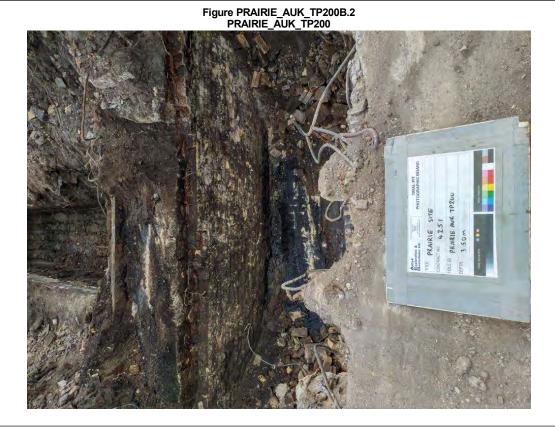


A	A	Head Office:	Unit 25 Ste	lla Gill Indust	trial Estate, Po		ter-le-Stre		CS LIM	4710	
	TRIAL PIT RECORD										
Project:	: Prairie Site Ground Investigation Works									Exploratory Hole No.	
Client:	t: South Tees Development Corporation E:454446.479 N:521086.026								PRAIRIE_AUK_TP200B		
Method (Equipr		Excavated (36	60 Trac	ked Exc	cavator)			Ground Level (m): 10.527	Start Date: 28/04/2020	Sheet: 1 of 6	
SAI	MPLES &	TESTS						STRATA			
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)			Description		
				10.33		0.20	ravel with medium cobble coarse and includes ash. ludes slag, sandstone and are angular and include ravel with medium cobble and includes ash. Gravel				

SAMI	SAMPLES & TESTS				STRATA							
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)			escription			
			<b>♣</b>	7.03		(3.30)	content with Gravel is fin concrete. Slaved brick. Slaved MADE GRO and boulder is fine to coa yellow brick. include red a include conc	UND (Brown grey v many rootlets. San e to coarse subang ag content is 25-50' ag is vesicular grey UND (Brown grey v content. Sand is fir irse subangular and Slag content is 25- and yellow brick and crete. Slag is vesicu	d is fine to coarse a ular and includes sl %. Cobbles are and b.  ery sandy gravel with the to coarse and includes slag, con 50%. Cobbles are a d concrete. Boulder lar grey).	and includes ash. ag, sandstone and gular and include ith medium cobble cludes ash. Gravel crete and red and angular and s are angular and		
						- - - - - - - - - - - - - - - - - - -						
		PLAN	•	•	•		INDWATER strike at 3.50m	IDWATER rike at 3.50m BGL (slight inflow).				
		2.00 Face A			1							
Face D		Orientation 090°		ace b	5.00	STABILITY Pit sides and base stable throughout excavation.						
	Face C											
ADDITIONAL INFORMATION					GENERAL REMARKS							
Sketch Diagr	am:	Sk	etch Tak	en								
Photograph	ıs:	Yes		See add shee								
All dimen	sions in ale 1:50			For expl	anation iations s	of symbo	of symbols and Checked by: Logged by: Contract No. e Key Sheets D. Portsmouth 4251					

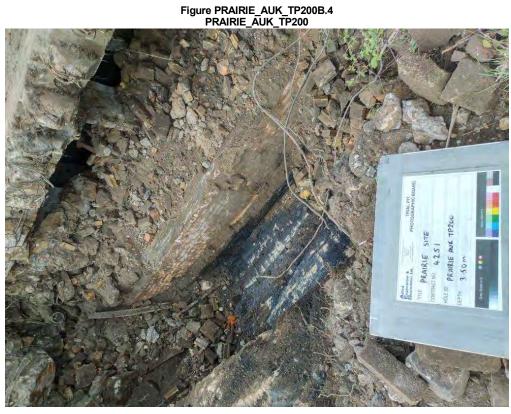
TRIAL PIT RECORD **FINAL** Exploratory Hole No. Prairie Site Ground Investigation Works Client: Location: PRAIRIE\_AUK\_TP200B South Tees Development Corporation E:454446.479 N:521086.026 Start Date: 28/04/2020 Method (Equipment):
Machine Excavated (360 Tracked Excavator) 2 of 6





# TRIAL PIT RECORD **FINAL** Exploratory Hole No. Prairie Site Ground Investigation Works Client: Location: PRAIRIE\_AUK\_TP200B South Tees Development Corporation E:454446.479 N:521086.026 Method (Equipment): Machine Excavated (360 Tracked Excavator) Start Date: 28/04/2020 3 of 6





# ALLIED EXPLORATION & GEOTECHNICS LIMITED Head Office: Regional Office: Unit 25 Stella Gill Industrial Estate, Pelton Fell, Chester-le-Street, Co. Durham, DH2 2RG Tel: 0191 387 4700 Fax: 0191 387 4710 Tel: 01772 735 999

TRIAL PIT RECORD

Status:-

# **FINAL** Project: Exploratory Hole No. Prairie Site Ground Investigation Works Client: Location: PRAIRIE\_AUK\_TP200B South Tees Development Corporation E:454446.479 N:521086.026 Start Date: 28/04/2020 Method (Equipment): Machine Excavated (360 Tracked Excavator) Ground Level (m): 10.527 4 of 6

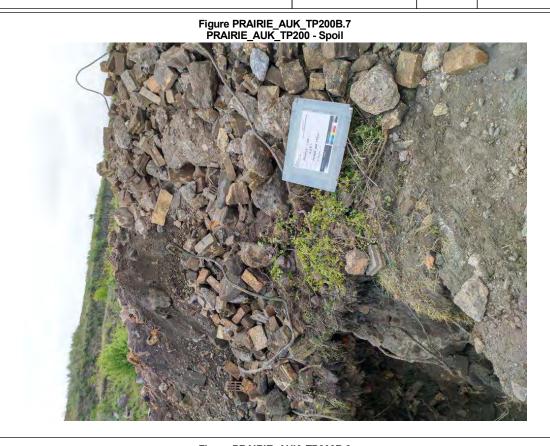


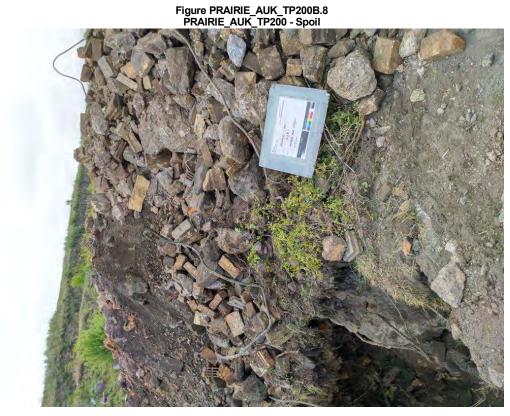




# ALLIED EXPLORATION & GEOTECHNICS LIMITED Head Office: Regional Office: Re

TRIAL PIT RECORD **FINAL** Exploratory Hole No. Prairie Site Ground Investigation Works Client: Location: PRAIRIE\_AUK\_TP200B South Tees Development Corporation E:454446.479 N:521086.026 Method (Equipment):
Machine Excavated (360 Tracked Excavator) Start Date: 28/04/2020 Ground Level (m): 10.527 5 of 6





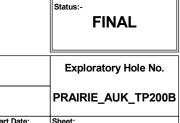
South Tees Development Corporation

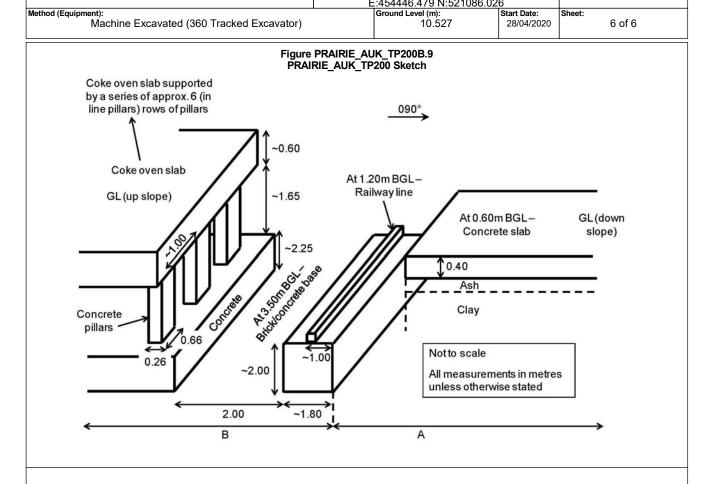
Client:

Location:

E:454446.479 N:521086.026







Status:-

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Τ.	-

# TRIAL PIT RECORD **FINAL** Project: Prairie Site Ground Investigation Works Exploratory Hole No. Client: Location: PRAIRIE\_AUK\_TP201 South Tees Development Corporation E-454512 501 NI-520027 507

		<u>'</u>					E	:454512.591 N:52092			
Method (Equipn		e Excavated (360	Tracl	ked Exc	cavator)			Ground Level (m): 15.534	Start Date: 28/04/2020	Sheet:	1 of 3
SAM	MPLES &	TESTS						STRATA	١	<u>'</u>	
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)			Description		
				15.33		- 0.20	San suba Slag MAI Rec prec ash	DE GROUND (Brown g d is fine to coarse and angular slag, sandston g is vesicular grey). DE GROUND (Brown b overed as a sandy gradominantly ash. Gravel and clinker).	includes ash. Gi e and concrete. plack grey compa vel. Sand is fine	ravel is fil Slag con acted ash to coarse	ne to coarse tent is 25-50%. //clinker. e and
				42.52		(1.60)	cobl fine and	DE GROUND (Brown g ble content. Sand is fin to coarse subangular a red and yellow brick. S include red and yellow /).	e to coarse and and includes slag Slag content is 0-	includes g, concre ·25%. Co	ash. Gravel is te, sandstone bbles are angular
3.60	ES1			12.53		3.00	cobl Grav red and	DE GROUND (Yellow g ble content. Sand is fin vel is fine to coarse sul brick and sandstone. C concrete. Engineer no ta above due to gradier	e to coarse and bangular and inc Cobbles are angu tes strata is mixe	is predor ludes as ılar and i	ninantly ash. h, clinker, coke, nclude sandstone
							Con	nplete at 4.40m BGL.			
•		PLAN 4.00 Face A			<u> </u>	GROU No gro		ATER ater inflow observed.			
Face D		Orientation 090° Face C		acc D		STABI Pit side		base stable throughout	excavation.		
	ADDI <sup>-</sup>	TIONAL INFORMA	OITA	N				REMARKS			
Sketch Dia	gram:	Sketc	h Tak	en		(1) Tria	al pit e	xcavated into a raised ea	arth bund. All mea	surement	s taken from top of
Photogra	phs:	Yes		See add							

For explanation of symbols and abbreviations see Key Sheets

Checked by:

Logged by: D. Portsmouth

Contract No.

4251

Print Date and Time: 06/11/2020 14:40:33

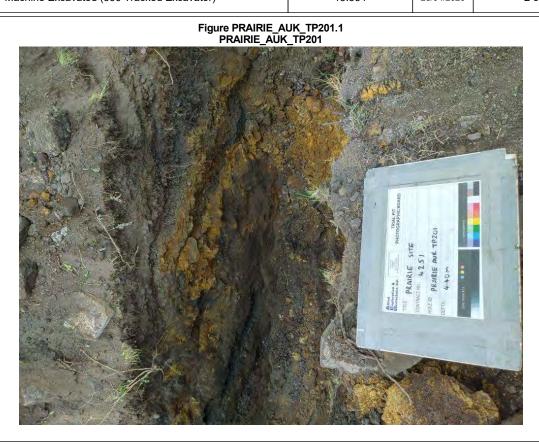
All dimensions in metres

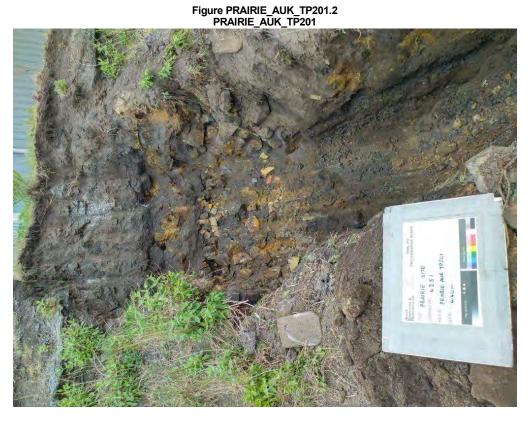
Scale 1:50

# ALLIED EXPLORATION & GEOTECHNICS LIMITED Head Office: Regional Office: Unit 25 Stella Gill Industrial Estate, Pelton Fell, Chester-le-Street, Co. Durham, DH2 2RG Tel: 0191 387 4700 Fax: 0191 387 4710 Tel: 01772 735 999

Client:

# TRIAL PIT RECORD **FINAL** Exploratory Hole No. Prairie Site Ground Investigation Works Location: PRAIRIE\_AUK\_TP201 South Tees Development Corporation E:454512.591 N:520927.507 Method (Equipment): Machine Excavated (360 Tracked Excavator) Start Date: 28/04/2020 2 of 3





TRIAL PIT RECORD **FINAL** Exploratory Hole No. Prairie Site Ground Investigation Works Client: Location: PRAIRIE\_AUK\_TP201 South Tees Development Corporation E:454512.591 N:520927.507 Method (Equipment):
Machine Excavated (360 Tracked Excavator) Start Date: 28/04/2020 3 of 3





**Groundwater Observations Made at the Time of Site Works** 



# Head Office: Unit 25 Stells Gill Industrial Enale, Pelion Faul, Chester-te-Street, Co Durham, DH2 2RG. Tel: 0197 387 4700 Fax: 0191 387 4710 Regional Office: Unit 20 Business Development Centre, Eanam Wharf, Blackburn, BB1 58L. GROUNDWATER OBSERVATIONS MADE AT THE TIME OF SITE WORKS (WATER STRIKES)

Remarks	Slow inflow.	Slow inflow.	Water strike (slow inflow).	Water strike.	Water strike.	Water strike.	South Tees Development Corporation 4251	ed By:- / Certificate No.:-						
Depth After 20 mins	2.58	12.36	2.88	4.32	8.47								South Tees	Approved By :-
Depth After 15 mins	2.60	13.11	2.90	5.63	8.78								Olient :-	
Depth After 10 mins	2.64	13.72	2.93	6.11	9.06								0	
Depth After 5 mins	2.88	14.06	2.96	6.84	9.42									Checked By :-
Total Time (mins)	20	20	20	20	20									Ö
Final Depth (m)	2.58	12.36	2.88	4,32	8.47					i			ation Works	
Depth Sealed (m)	4.00		4.00		12.50								und Investig	7.0
Depth of Casing (m)	2.80	14.46	2.88	8.40	10.06								Prairie Site Ground Investigation Works	Page No.
Depth of Water (m)	3.00	14.80	3.00	8.60	10,30	2.00	2.30	2.40	1.70	0.30	2.20	1.30	Pra	
Date	27/04/2020	28/04/2020	16/04/2020	16/04/2020	21/04/2020	06/04/2020	06/04/2020	22/04/2020	06/04/2020	08/04/2020	22/04/2020	20/04/2020	i.	.:. <u>e</u>
Exploratory Hole No.	PRAIRIE_AUK_BH101 27	PRAIRIE_AUK_BH101 28	PRAIRIE_AUK_BH105 16	PRAIRIE_AUK_BH105 16	PRAIRIE_AUK_BH110 2:	PRAIRIE_AUK_TP107 06	PRAIRIE_AUK_TP108 06	PRAIRIE_AUK_TP112 23	PRAIRIE_AUK_TP113 06	PRAIRIE_AUK_TP115 08	PRAIRIE AUK TP119 2	PRAIRIE AUK TP120A 20	Contract Title	Date of Issue :-

# Head Office: Unit 25 Stells Gail Industrial Eastle, Pelitor Fau, Chesteries Caro Durham, DRIZ 2RG Tel: 01712 735 300 Fax; 0181 357 4710 Regional Office: Unit 20 Business Development Centre, Earlam What, Blackburn, BB1 581. GROUNDWATER OBSERVATIONS MADE AT THE TIME OF SITE WORKS (WATER STRIKES)

Remarks													AEG Contract No :- 4251	Certificate No. :- GWOWS/4251/2
	Water strike.	Water strike (Heavy inflow).	Water strike.	Water strike.	Water strike.	Water strike.	Water strike.	Water strike.	Water strike.	Water strike (Heavy inflow).	Perched water.	Water strike.	South Tees Development Corporation	Approved By:-
Depth After 20 mins													South Tees	Approve
Depth After 15 mins	Ī												Client :-	
Depth After 10 mins													0	7
Depth After 5 mins														Checked By :-
Total Time (mins)														O
Final Depth (m)										1,60			lation Works	2 of 3
Depth Sealed (m)													und Investig	
Depth of Casing (m)													Prairie Site Ground Investigation Works	Page No
Depth of Water (m)	06.0	0.30	09.0	1.70	1.90	1.10	0.30	0.50	0.90	1.80	1.60	09:0	Pra	0
Date	09/04/2020	08/04/2020	08/04/2020	23/04/2020	02/04/2020	15/04/2020	15/04/2020	15/04/2020	16/04/2020	23/04/2020	17/04/2020	14/04/2020	itle:-	sue >- 05/11/2020
Exploratory Hole No.	PRAIRIE_AUK_TP121 0	PRAIRIE_AUK_TP122 0	PRAIRIE_AUK_TP123 C	PRAIRIE_AUK_TP127	PRAIRIE_AUK_TP132 C	PRAIRIE_AUK_TP135	PRAIRIE_AUK_TP136	PRAIRIE_AUK_TP137	PRAIRIE_AUK_TP139B	PRAIRIE_AUK_TP143	PRAIRIE_AUK_TP147	PRAIRIE_AUK_TP156	Contract Title :-	Date of Issue :-

# Head office: Unit 25 Stellin Gall Industrial Eastle, Pelino Fail, Chesterle-Street, Co Durham, Drid 2RG. Regional Office: Unit 20 Business Development Centre, Eanam Whart, Blackburn, 881 98L. GROUNDWATER OBSERVATIONS MADE AT THE TIME OF SITE WORKS (WATER STRIKES)

		==/					
Remarks				duct in Faces C and D.		AEG Contract No :-	Certificate No. :- GWOWS/4251/3
	Water strike.	Water strike.	Water strike.	Water running from brick cable duct in Faces C and D.	Water strike (Slight inflow).	South Tees Development Corporation	d By:
After 20 mins						South Tees	Approved By :-
Depth After 15 mins						Olent ∵	
Depth After 10 mins						Ö	1
Depth After 5 mins							Checked By :-
Total Time (mins)							5
Final Depth (m)						ation Works	3 of 3
Depth Sealed (m)						and Investiga	
Depth of Casing (m)						Prairie Site Ground Investigation Works	Page No. :-
Depth of Water (m)	1.00	1.00	0.80	1.20	3.50	Prai	0
Date	17/04/2020	17/04/2020	16/04/2020	16/04/2020	28/04/2020	ıtle :-	sue :- 05/11/2020
Exploratory Hole No.	PRAIRIE_AUK_TP157B	PRAIRIE_AUK_TP158	PRAIRIE_AUK_TP190	PRAIRIE_AUK_TP190A	PRAIRIE_AUK_TP200B	Contract Title :-	Date of Issue :-

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

Monitoring Point	Date	Depth (m)	Remarks
PRAIRIE_AUK_TP101	01/04/2020	2.00	Groundwater seepage.
PRAIRIE_AUK_TP114	07/04/2020	0.50	Groundwater seepage.
PRAIRIE_AUK_TP117	23/04/2020	2.60	Groundwater seepage.
PRAIRIE_AUK_TP118	23/04/2020	1.40	Groundwater seepage.
PRAIRIE_AUK_TP120	20/04/2020	1.50	Groundwater seepage.
PRAIRIE_AUK_TP126	17/04/2020	2.70	Slight groundwater seepage (water perched on concrete base).
PRAIRIE_AUK_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_AUK_TP142	23/04/2020	1.20	Saturated strata between 1.00-1.20m BGL (Slight inflow). Water contains globules of oil/contaminants.
PRAIRIE_AUK_TP144	24/04/2020	1.10	Saturated strata (Slight inflow).
PRAIRIE_AUK_TP145	14/04/2020	1.70	Groundwater seepage.
PRAIRIE_AUK_TP146C	14/04/2020	1.20	Groundwater seepage.
PRAIRIE_AUK_TP148A	16/04/2020	1.70	Slight groundwater seepage.
PRAIRIE_AUK_TP155	21/04/2020	0.80	Saturated strata (Slight inflow).
PRAIRIE_AUK_TP159	16/04/2020	1.50	Saturated strata between 0.90-1.50m BGL.
PRAIRIE_AUK_TP162	14/04/2020	2.80	Saturated strata (Heavy inflow).
PRAIRIE_AUK_TP163	14/04/2020	1.10	Saturated strata (Slight inflow).
PRAIRIE_AUK_TP164	16/04/2020	2.40	Saturated strata between 1.20-2.40m BGL (Slow inflow).
PRAIRIE_AUK_TP174	08/04/2020	2.00	Slight groundwater seepage.
PRAIRIE_AUK_TP175	06/04/2020	0.90	Perched water (Slight inflow).
PRAIRIE_AUK_TP177	07/04/2020	1.40	Saturated strata (Heavy inflow).

Contract Title :-

Prairie Site Ground Investigation Works

Client :-

South Tees Development Corporation



Certificate No. :-Date of Issue :-Page No.:-05/11/2020 GWOS/4251/1 Checked By :-

1 of 2

AEG Contract No.:-4251



Approved By :-



# ALLIED EXPLORATION & GEOTECHNICS LIMITED Head Office: Regional Office: Unit 25 Stella Gill Industrial Estate, Pelton Felt, Chester-le-Street, Co. Durham, DH2 2RG Unit 20 Business Development Centre, Earnam Wharf, Blackburn. BB1 5BL Tel: 01772 735 300 Fax: 01772 735 999

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

Monitoring Point	Date	Depth (m)	Remarks
PRAIRIE_AUK_TP178	09/04/2020	1.50	Perched water (Slight inflow).
PRAIRIE_AUK_TP179.	09/04/2020	1.20	Saturated strata (Heavy inflow).
PRAIRIE_AUK_TP181	09/04/2020	1.70	Saturated strata (Slight inflow).
PRAIRIE_AUK_TP182	09/04/2020	1.10	Saturated strata (Slight inflow).
PRAIRIE_AUK_TP186	07/04/2020	1.00	Saturated strata (Moderate inflow). Possibly backfilled cellar/basement.
PRAIRIE_AUK_TP188	AIRIE_AUK_TP188 08/04/2020		Saturated strata (Heavy inflow).
PRAIRIE_AUK_TP189	07/04/2020	1.30	Perched water (Slight inflow).
PRAIRIE_AUK_TP192	01/05/2020	1.10	Saturated strata (Slight inflow).
PRAIRIE_AUK_TP193	30/04/2020	0.80	Saturated strata (Slow inflow)
PRAIRIE_AUK_TP194A	29/04/2020	1.50	Saturated strata (Moderate inflow)
PRAIRIE_AUK_TP1948	29/04/2020	1.80	Saturated strata (Heavy inflow).
PRAIRIE_AUK_TP196A	29/04/2020	1.80	Saturated strata (Heavy inflow).
PRAIRIE_AUK_TP196B	29/04/2020	1.80	Saturated strata (Heavy inflow).
PRAIRIE_AUK_TP197	29/04/2020	1.80	Saturated strata (Heavy inflow).

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

Certificate No.:-	Date of Issue :-	Page No. :-
GWOS/4251/2	05/11/2020	2 of 2
Checked By :-	Approved By :-	AEG Contract No.:-
/_C	a w	4251

**Groundwater Monitoring Results** 



Head Office:

Unit 25 Stella Gill Industrial Estate, Pellon Fell, Chester-le-Street, Co. Durham, DH2 2RC

Tel: 0191 387 4700 Fax: 0191 387 4710

# **GROUNDWATER MONITORING RESULTS**

Monitoring Point	Date and Time	Depth and Type of Well	Ground Level (mAOD)	Water Depth (mBGL)	Reduced Water Level (mAOD)	Remarks
RAIRIE_AUK_BH101	06/05/2020 00:00	10.00m 19mm SPIE	8.64	2.00	6.64	
RAIRIE_AUK_BH101	15/06/2020 12:05	10.00m 19mm SPIE	8.64	1.77	6.87	
RAIRIE_AUK_BH101	30/06/2020 09:27	10.00m 19mm SPIE	8.64	1.69	6.95	
RAIRIE_AUK_BH101	06/05/2020 00:00	16.50m 50mm SP	8.64	3.00	5,64	
RAIRIE_AUK_BH101	15/06/2020 12:05	16.50m 50mm SP	8.64	1.78	6.86	
RAIRIE_AUK_BH101	30/06/2020 09:23	16.50m 50mm SP	8.64	1,64	7.00	
RAIRIE_AUK_6H102	06/05/2020 00:00	7.20m 50mm SP	8.21	1,10	7.11	
PRAIRIE_AUK_BH102	15/06/2020 14:16	7.20m 50mm SP	8.21	0.83	7.38	
PRAIRIE_AUK_BH102	30/06/2020 09:10	7.20m 50mm SP	8.21	0.90	7.31	
PRAIRIE_AUK_BH103	06/05/2020 00:00	8.50m 50mm SP	7.68	2,25	5.43	
PRAIRIE_AUK_BH103	15/06/2020 11:40	8.50m 50mm SP	7.68	1.71	5.97	
PRAIRIE_AUK_BH103	30/06/2020 08:49	8.50m 50mm SP	7.68	1.92	5.76	
PRAIRIE_AUK_BH104	06/05/2020 00:00	18.50m 50mm SP	8,70	6,40	2.30	
PRAIRIE_AUK_BH104	15/06/2020 14:35	18.50m 50mm SP	8.70	4.06	4.64	
PRAIRIE_AUK_BH104	30/06/2020 11:01	18.50m 50mm SP	8.70	6.21	2.49	
PRAIRIE_AUK_BH105	06/05/2020 00:00	11.00m 50mm SP	8.26	4.60	3.66	
PRAIRIE_AUK_BH105	15/06/2020 15:29	11.00m 50mm SP	8.26	4.49	3.77	
PRAIRIE_AUK_BH105	30/06/2020 12:09	11,00m 50mm SP	8.26	4.51	3.75	
PRAIRIE_AUK_BH106	06/05/2020 00:00	10.00m 50mm SP	8.71	3,94	4.77	
PRAIRIE_AUK_BH106	15/06/2020 14:52	10.00m 50mm SP	8.71	2.73	5.98	

Contract Title :-

Prairie Site Ground Investigation Works

Client :-

South Tees Development Corporation



Certificate No. :- Date of Issue :- 05/11/2020

Page No.:-

1 of 2

Checked By:-

Approved By :-

AEG Contract No.:-

4251



### **ALLIED EXPLORATION & GEOTECHNICS LIMITED**

Head Office: Regional Office Unit 25 Stella Gill Industrial Estate, Pelton Fell, Chester-le-Street, Co. Durham, DH2 2RG

Tel: 0191 387 4700 Fax: 0191 387 4710

### **GROUNDWATER MONITORING RESULTS**

Monitoring Point	Date and Time	Depth and Type of Well	Ground Level (mAOD)	Water Depth (mBGL)	Reduced Water Level (mAOD)	Remarks
RAIRIE_AUK_BH106	30/06/2020 11:28	10.00m 50mm SP	8.71	3.28	5.43	
PRAIRIE_AUK_BH107	06/05/2020 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 00:00	6.00m 19mm SPIE	8.86	2.20	6.66	
PRAIRIE_AUK_BH108	15/06/2020 15:17	6.00m 19mm SPIE	8.86	1,14	7.72	
PRAIRIE_AUK_BH108	30/06/2020 11:55	6.00m 19mm SPIE	8.86	0.35	8.51	
PRAIRIE_AUK_BH108	06/05/2020 00:00	14.00m 50mm SP	8,86	5,00	3,86	
PRAIRIE_AUK_BH108	15/06/2020 15:15	14.00m 50mm SP	8,86	4.91	3.95	
PRAIRIE_AUK_BH108	30/06/2020 11:51	14.00m 50mm SP	8.86	4.81	4.05	
PRAIRIE_AUK_BH109	06/05/2020 00:00	11.80m 50mm SP	12.09	5.44	6.65	
PRAIRIE_AUK_BH109	15/06/2020 13:04	11.80m 50mm SP	12.09	5,97	6.12	
PRAIRIE_AUK_BH109	30/06/2020 13:29	11.80m 50mm SP	12.09	6.72	5.37	
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 = SI	andpipe Piezometer		
Contract Title :- Pra	irie Site Ground Inves	stigation Works	Client :- So	uth Tees Development Corporat	ion
Certificate No	1-	Date of Issue :-		Page No. :-	
4	MMD/4251/2	05/1	1/2020	2 of 2	



Checked By :-

Approved By :-

XW

AEG Contract No. :-4251



**Gas Monitoring Results** 



# ALLIED EXPLORATION & GEOTECHNICS LIMITED Head office: Unit 20 Business Development Centre, Earlan Winst, Backburn, BB1 SBL GAS MONITORING RESULTS GAS MONITORING RESULTS

Remarks														AEG Contract No :- 4251	Certificate No. :- MON/4251/1
Carbon Monoxide (ppm)	v	0,4	1.0>	0.1.0	1.0	3.0	0.0	2.0	0.9	3.0	0,0	9.0	- (D) = Decline.	<u> </u>	O
(ppm) (ppm)		1,0	1.0	1.0	0.0	0,10	0.1	1.0	0,10	4.0	1.0	4.0	= Steady - (D)	South Tees Development Corporation	
	(S)	19.0	20.3	20.5	20.4	20.5	20.5	20.4	18.6	9.9	20.4	19.6	- (S) = St	nent Co	3
Oxygen V/v %	(g)	19.0	20.3	20.5	20.4	20.5	20.5	20.4	18.6	18.9	20.4	19.6	Standpipe Piezometer. (P) = Peak - (S)	avelopn	A
N/A %	(S)	0.1	0.1	6	0.1	0.1	0.1	0.1	0.2	0.3	0.1	0.3	ometer. (	ees De	Approved By :-
Carbon Dioxide v/v %	(P)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.1	0.3	pipe Piez	South T	Appri
131 %	(S)	8.0	8.0	8.0	2.0	<2.0	8.0	8.0	2.0	2.0	8.0	2.0	= Stand		
Methane	(P)	8,0	8.0	8.0	5.0	<2.0	8,0	8.0	2.0	2.0	8.0	2.0	pe - SPIE	Client ⊹	
۸/۸ %	(S)	4.0	4.0	0.4	0.1	40.1	4.0	0.4	0.1	1.0	0.4	1.0	= Standpipe - SPIE =		
enedleM	(P)	0.4	4.0	0.4	0.1	0.1	0.4	0.4	0.1	0.1	0.4	1.0	ails. SP =		4
M Pressure	ITA ISA	1028	1028	1028	1016	1001	1028	1028	1016	1001	1027	1016	other det		Checked By
Pressure (mbar)	Diff	11.13	1,53	-2.43	0.33	-0.07	-3.36	2.08	60'0-	-0.31	-2.46	0.02	and any		Chec
Senge (I/hr)	ын	-12	-0.4	-5.0	1.0	0.1	5.3	-2.7	0.1	1.0	9'0-	1,0	r Model No		
uced Water (GOAm) le	Keq	6.64	5.64	7.11	7,38	7.31	5.43	2.30	4.64	2.49	3.66	3.77	rtificate fo	n Works	
iter Depth (mBGL)	5W )	2.00	3.00	1.10	0.83	0.90	2.25	6.40	4.06	6.21	4.60	4,49	bration Ce	estigatio	1 of 3
lavaJ brue (QOAm		8.64	8.64	8.21	8.21	8.21	7.68	8.70	8.70	8.70	8.26	8,26	See attached Calibration Certificate for Model No. and any other details. SP	vul bund	 ON
epth and	IĄT	10.00m 19mm SPIE	16.50m 50mm SP	7.20m 50mm SP	7.20m 50mm SP	7.20m 50mm SP	8.50m 50mm SP	18.50m 50mm SP	18.50m 50mm SP	18.50m 50mm SP	11,00m 50mm SP	11.00m 50mm SP	See att	Prairie Site Ground Investigation Works	Page No.
°C nperature	neT	4	14	4	15	5	4.	4	ŧ	5	4	15		Pre	
Veather		Fair	Fall	Fair	Overcast	Overcast	Fair	Fair	Overcast	Overcast	Fair	Overcast			05/11/2020
ate and amiT	a	06/05/2020	06/05/2020	06/05/2020	15/06/2020	30/06/2020	06/05/2020	06/05/2020	15/08/2020 14:35	30/06/2020	06/05/2020	15/06/2020		Contract Title :-	
Point	DM.	PRAIRIE AUK BH101	PRAIRIE_AUK_BH101	PRAIRIE_AUK_BH102	PRAIRIE_AUK_BH102	PRAIRIE AUK BH102	PRAIRIE_AUK_BH103	PRAIRIE AUK BH104	PRAIRIE_AUK_BH104	PRAIRIE AUK BH104	PRAIRIE_AUK_BH105	PRAIRIE AUK BH105		41	Date of Issue

# ALLIED EXPLORATION & GEOTECHNICS LIMITED FRANCE THE CHNICS LIMITED REGIONAL CITY OF THE CHNICS LIMITED FRANCE FRAN

Remarks														AEG Contract No :- 4251	Certificate No.:- MON/4251/2
Carbon Monoxide (ppm)	v	0.4	0,7	2.0	2.0	2.0	2.0	3.0	<1.0	1.0	<1.0	0.4	= Decline.	E .	
(bbw) Alogen Aydrogen	4	0.10	1.0	4.0	41.0	1,0	0,12	0.15	1.0	0,1>	41.0	1.0	= Standpipe - SPIE = Standpipe Piezometer. (P) = Peak - (S) = Steady - (D)	South Tees Development Corporation	
	(S)	19.8	20.4	19.9	20.6	19.8	16.8	18.6	20.2	19.4	20.6	20.1	k - (S) = S	ment Co	3
Oxygen V/v %	(a)	19.8	20.4	19.9	20.6	19.8	16.8	18.6	20.5	19.4	20.6	20.1	(P) = Peal	evelopr	.: &
A/A % apixoici	(S)	0.2	0.1	0.1	0.1	7.0	3.2	6,	0.1	0.4	0.1	0.1	zometer.	Gees De	Approved By :-
Carbon	(P)	0.2	0.1	0.1	0.1	0.7	3.2	1.9	0.1	0.4	0.1	0.1	pipe Piez	South 7	Appr
131 %	(S)	<2.0	8.0	2.0	2.0	8,0	2.0	<2.0	10.0	2.0	42.0	10.0	= Stand	, ,	
Methane	(A)	<2.0	8.0	2.0	<2.0	0.8	2.0	<2.0	10.0	2.0	<2.0	10.0	ipe - SPIE	Client :	
Wethane % v/v	(8)	1.00	4.	0.1	1.0	6.0	0.1	0.1	0.5	0.1	6.1	0.5	= Standp		11
7529011	(E)	6	4,0	0.1	1.0	0.4	1.0	0,1	0.5	0.1	0,	0.5	Sp		2
A Pressure 1ge (mbar)	NTA IBA	1002	1027	1016	1002	1027	1015	1002	1027	1016	1002	1027	other details.		Checked By
Pressure (mbar)		0.05	-2.46	0.14	0.15	-2.29	0.28	0.05	5.20	90'0-	0.24	-5.74	, and any		Che
(IVhr)	기크	1.0	9.0	0.0	0.0	Ę	0.1	1.0	4.4	0.2	0.0	-7.1	Model No	,,	
uced Water el (mAOD)	Red	3.75	4.77	5.98	5.43	2.00	6.95	7.04	6.66	7.72	8,51	3.86	rtificate for	n Works	
iter Depth mBGL)	sW )	1.51	3.94	2.73	3.28	3.16	3.21	3.12	2.20	41.14	0.35	5,00	bration Ce	estigatio	2 of 3
(GOAm	01Đ )	8.26	8.71	8.71	1.2	10.16	10.16	10.16	8.86	8.86	8.86	8.86	See attached Calibration Certificate for Model No. and any otl	und Inv	o N
bns of Well	) 1\(\frac{1}{2}\)	11 00m 50mm SP	10.00m 50mm SP	10.00m 50mm SP	10.00m 50mm SP	8,00m 50mm SP	8.00m 50mm SP	8.00m 50mm SP	5.00m 19mm SPIE	6.00m 19mm SPIE	6.00m 19mm SPIE	14.00m 50mm SP	See att	Prairie Site Ground Investigation Works	Page No.
°C nperalure	n <del>9</del> T	15	4	5	ŧ,	41	5	45	4	15	15	4		Pra	
Veather	0 ^	Overcast	Fair	Overcast	Overcast	Fair	Overcast	Overcast	Fair	Overcast	Overcast	Ta Ta			05/11/2020
bne əls əmiT	a	30/06/2020	05/05/2020	15/06/2020	30/06/2020	06/05/2020	15/06/2020	30/06/2020	06/05/2020	15/06/2020	30/06/2020	06/05/2020		Contract Title :-	
pantoning Point	ρM	PRAIRIE_AUK_BH105	PRAIRIE_AUK_BH106	PRAIRIE_AUK_BH106	PRAIRIE_AUK_BH106	PRAIRIE_AUK_BH107	PRAIRIE_AUK_BH107	PRAIRIE_AUK_BH107	PRAIRIE_AUK_BH108	PRAIRIE_AUK_BH108	PRAIRIE AUK BH108	PRAIRIE_AUK_BH108			Date of Issue

# 

Remarks							
Carbon Monoxide (ppm)	V	1.0	1.0	10.0	3.0	32.0	13.0
(ppm) (ppm) (ppm)	-	1.0	4.0	0.0	1.0	1,0	0 10
	(S)	19.9	18.4	15.4	20.4	9,11	5.5
Oxygen v/v %	(a)	19.9	18.4	15.4	20.4	9,11	5.5
۸/۸ %	(S)	0.2	1.7	0,4	0.1	0.2	4.0
Carbon Dioxide	(P)	9.0	1.7	4.0	0.1	0.2	4.0
131%	(S)	8.0	2.0	10.0	10.0	2.0	2.0
Methane	(P)	8.0	2.0	10.0	10.0	2.0	2.0
Metham V/v %	(S)	6.0	0.1	0.5	0.5	0.1	1.0
anedlaM	(P)	0.4	0.1	0.5	0.5	0.1	1.0
N Pressure nge (mbar	ATA DBR	1027	1015	1002	1028	1016	1001
Pressure (mbar)		-1.92	0.02	4.79	-2.25	20'0-	-0.21
(Nhr)	이크	4.	0.1	0.4	9.0-	0,1	0.1
uced Wate (DOAm) le		6.65	6.12	5.37	3.80	3,96	3,93
der Depth mBGL)	eW )	5,44	2.97	6.72	4.00	3.84	387
laval bruu (GOAm	610 ()	12.09	12.09	12.09	7.80	7.80	7.80
bus ride	PG RYT	11.80m 50mm SP	11,80m 50mm SP	11.80m 50mm SP	20.80m 50mm SP	20.80m 50mm SP	20.80m 50mm SP
oC oC oC	Ten	41	15	ć.	4	5	\$
Veather	C	Fair	Overcast	Overcast	Fair	Overcast.	Overcast
and and	a	06/05/2020	15/06/2020	30/06/2020	06/05/2020	15/06/2020	30/06/2020
Point	PW.	PRAIRIE_AUK_BH109	PRAIRIE_AUK_BH109	PRAIRIE_AUK_BH109	PRAIRIE_AUK_BH110	PRAIRIE_AUK_BH110	PRAIRIE_AUK_BH110







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:

GA5000

Serial Number: G506066

### **UKAS Accredited results:**

### Results after adjustment:

Methane (CH₄)								
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 (CO₂)								
Certified Gas (%)	Instrument Reading (%)	Uncertainty (%)						
5.0	4.9	0.43						
15.0	14.8	0.70						
50.0	50.3	1.1						

Oxygen (O₂)								
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 | LPO15GIUKAS-2.4

www.qedenv.com +44 (0) 333 800 0088

sales@qedenv.co.uk







Certificate Number: G506066 2/25251

Date Of Calibration: 09-Mar-2020

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:

Barom	neter (mbar)
Reference	Instrument Reading
1002	1002

	Additional Gas Cells	
Gas '	Certified Gas (ppm)	Instrument Reading (ppm)
СО	504	509
H₂S	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 | LP015GIUKAS-2.4

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Certificate Number: G506065\_2/25880

Date Of Calibration: 18-Jun-2020

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 (CH₄)								
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 (CO₂)								
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 <sub>2</sub> )	
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

02 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 | LP015GIUKAS-2.4

www.gedenv.com +44 (0) 333 800 0088

sales@gedenv.co.uk







Certificate Number: G506065\_2/25880

Date Of Calibration: 18-Jun-2020

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:

Barom	eter (mbar)
Reference	Instrument Reading
1000	1001

. Inte	ernal Flow
Applied (I/hr)	Instrument Reading (I/hr)
5.0	5.1
10.0	9.9

Date of Issue: 19-Jun-2020

**Approved by Signatory** 

Laura McBride

**Laboratory Inspection** 

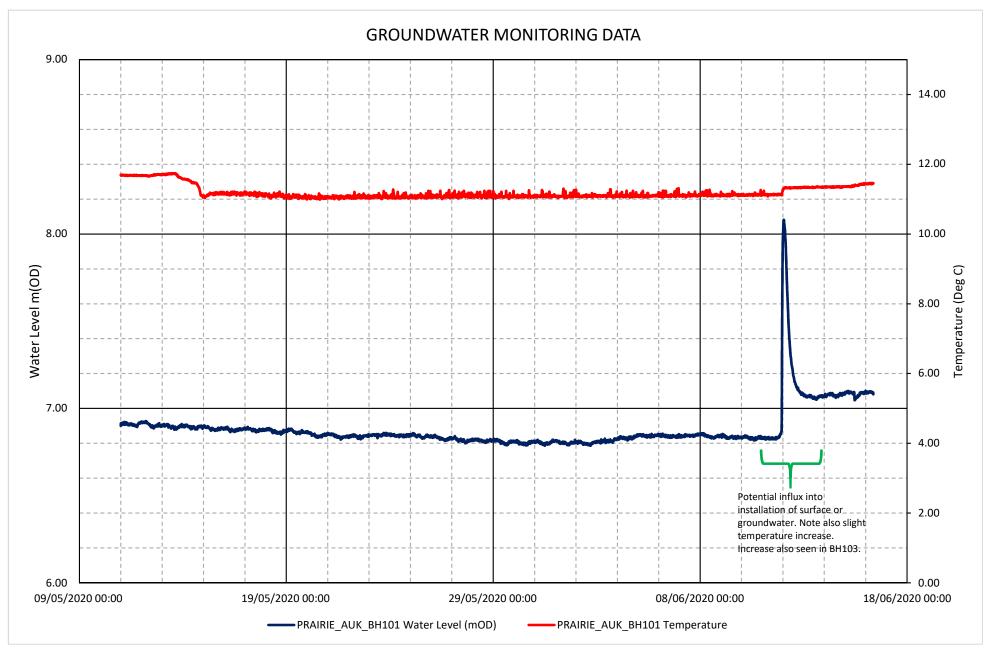
This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to the SI system of units and/or to units of measurement realised at the National Physical Laboratory or other recognised national 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 | LPO15GIUKAS-2.4

**Continuous Groundwater/Tidal Monitoring Results** 

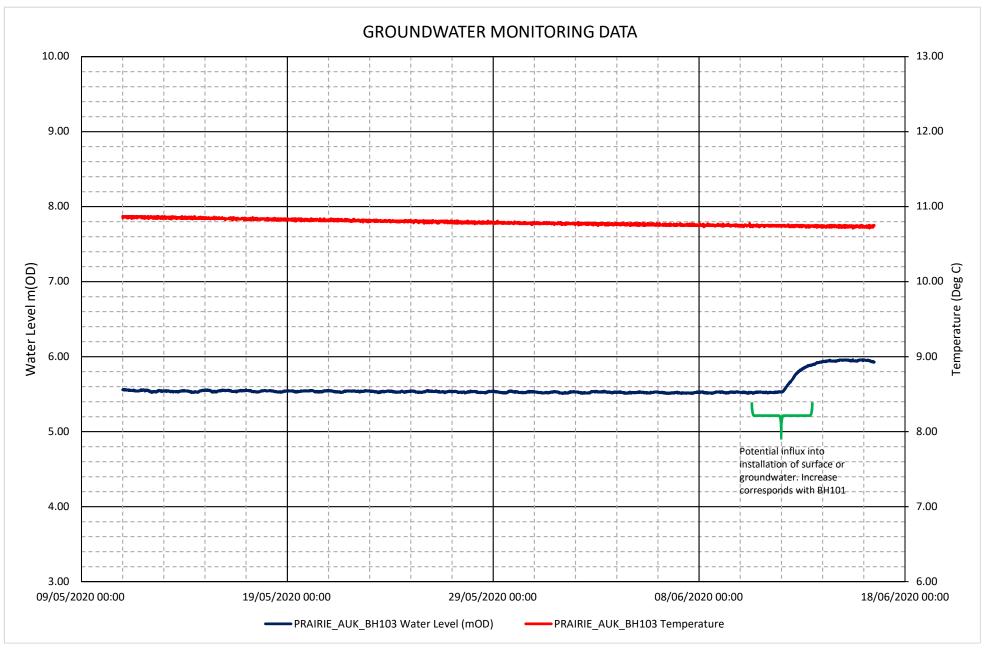




Title: Prairie Site Ground Investigation Works

Contract No: 4251

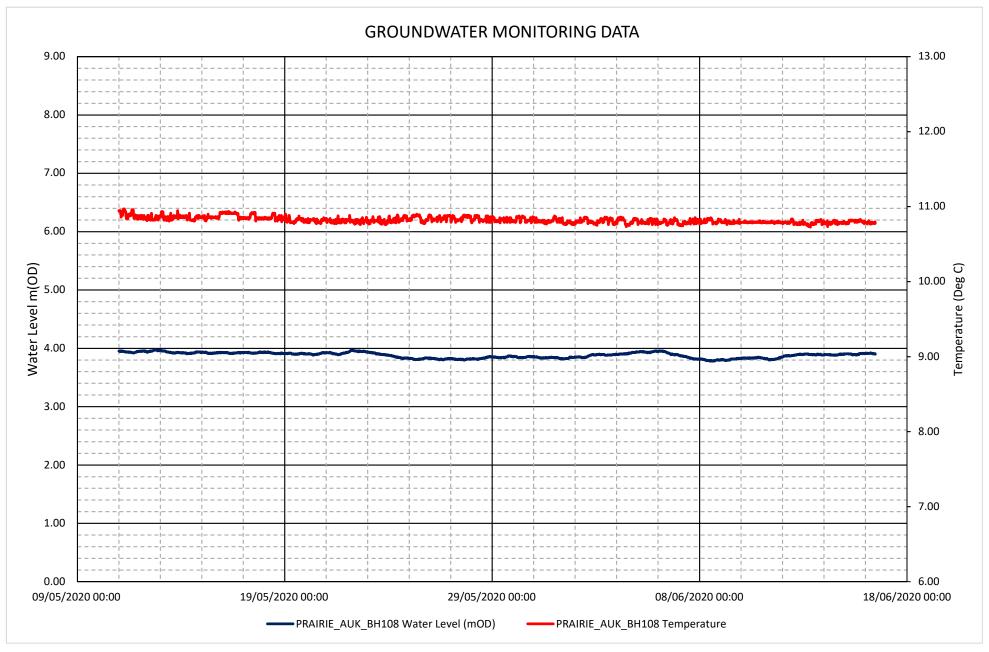
Client: South Tees Development Corporation



Title: Prairie Site Ground Investigation Works

Contract No: 4251

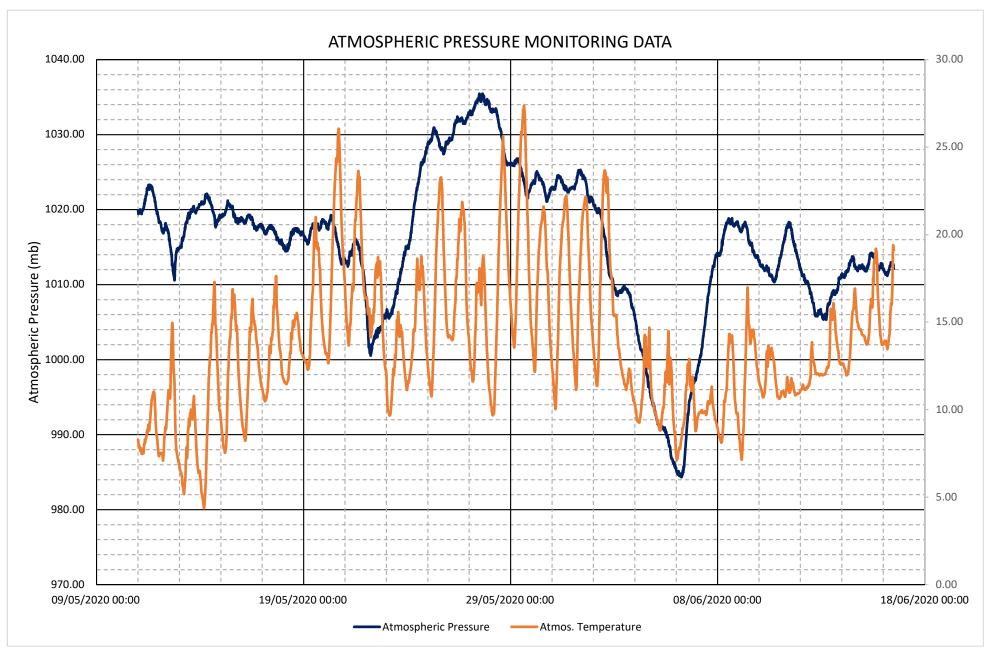
Client: South Tees Development Corporation



Title: Prairie Site Ground Investigation Works

Contract No: 4251

Client: South Tees Development Corporation



Title: Prairie Site Ground Investigation Works

Contract No: 4251

Client: South Tees Development Corporation

In-situ Test Report Certificate



### **ALLIED EXPLORATION & GEOTECHNICS LIMITED**

Head Office: Unit 25 Stella Gill Industrial Estate, Pelton Fell, Chester-le-Street, Co. Durham, DH2 2RG- Tel: 0191 3874700 Fax: 0191 3874710 Regional Office: Unit 20 Business Development Centre, Eanam Wharf, Blackburn, BB1 5BL – Tel: 01254 503 200 Fax: 01254 662 590



Signed

### **IN-SITU TESTING REPORT CERTIFICATE**



Contract Title:	Prairie Site Ground Investigation Works	AEG Reference:	4251
Client Address:	South Tees Development Corporation		
outlined in BS	In-situ testing was carried out on the above S 1377: 1990: Part 9 or other appropriate standattached enclosures, were obtained.		
The tests can number of pa	rried out are indicated in the attached table shages.	owing the enclosure nur	mber and the total
For and on b	ehalf of Allied Exploration & Geotechnics Limite	d	
	Nick Vater (Managing Director)		
B	Kerry Wade (Technical Manager)		
	M 2		

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

Date: 05 November 2020

### **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	In-situ Water Quality Parameter Test Results	No		9
5	Hydraulic Conductivity: Slug Test Results	No	5 (1 - 184) 3.5 du	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 Soakaway Design	No	BRE Digest 365:1991	-

**Standard Penetration Test Results** 



# ALLIED EXPLORATION & GEOTECHNICS LIMITED Head office: Unit 26 Stells and Undustrial Estate, Peten Fell, Character-Settled, 200 Cultum, 1912 And 1912 Using Stells and Unit 20 Units D Units D

	Remarks													UKAS TESTING 1367
əuo	Shoe or S	S/C	v	Ø	w	ψ,	w	o o	w	co.	w	w	NOTE: Please refer to calibration certificate for additional information and corresponding Exploratory Hole record for sampling details. Uncorrected and corrected SPTN values are presented on the attached graphical plot reliative to each Exploratory Hole.    AEG Contract No :-   AEG Contract No :-   A251	51/1
8	SPTN' Value (Cort.) N <sub>E</sub>		80	12	35	146	->	To 1	47	-		<u>₩</u>	AEG Contract No :- 4251	No.:- SPT/4251/1
6	SPT'N' Value		5	12	86		0.0	ю	22	30		50	AEG	Certificate No.:>
M	Pen (mm)/Blo		23.08	17.65	16.67	2.85	2.85	2.45	5 5	0,25	0.20	15,00	graphical p	Cer
,TIO	nergy Ratio C	3	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	e attached ration	
1336	god Length Co		97.0	0.84	86.0	1,00	1.00	1.00	1.00	1 00	1.00	0.74	corrected SPTN values are presented on the attact	2
	swolla listoT	No.	5.	17	8	100	100	100	55	100	100	20	opmer	3
	Total Pen	mm	300	300	300	285	285	245	300	25	50	300	N' values Devel	ed By
	SWOIB	No.	4	5	·o	56	59	5	30			ω	Tees	Approved By :
	Pen	mm	75	75	75	09	09	50	75			75	South	⋖
INE	Blows	No.	т	5	ú	28	22	30	12			40	ected an	
TEST DRIVE	ben	mm	52	75	22	75	75	75	75		- 1	75	Client :-	
	swola	No.	m	4	r.	24	23	30	æ			io	g details	
	neg	шш	75	75	75	75	75	75	75			75	samplir	2
	swola	No	60	ю	m	22	26	25	w	100	100	4	ecord for	ed By
	neg	шш	75	75	75	75	75	75	75	25	20	75	y Hole n	Checked By
	swola latoT	No.	S	s,	w	19	32	37	27	20	20	9	xplorator	
	neq lstoT	шш	150	150	150	150	150	150	150	20	15	150	Shading E	
SEATING DRIVE	Swola	No	6	67	3	10	16	20	10			6	corresponding Mor	
SEATING	neq	шш	75	75	75	75	75	75	75	1		75	tigatio	1 of 5
	swola	No.	23	2	2	o	16	17	17	90	50	22	Inves	J.
	Pen	mm	75	75	52	75	75	75	75	20	15	75	round	Page No.
∃ o	Energy Ratio	%	51	51	51	51	5	50	51	51	51	51	ion certificate for additional information and correspond Prairie Site Ground Investigation Works	Page
.19	A nammeH Tq	S	ATHDS	ATH09	ATHOB	ATH09	ATH09	АТНОВ	АТНОЭ	АТНОВ	АТНОВ	АТНОВ	Prairie	
u	вод геид	E	4.00	6.00	9.50	12.50	14.00	15,50	17.00	18,00	18.40	3.50	efer to call	20
u	qeO nateW (gnissO)	Ε	Dry (3.80)	Dry (5.80)	Dry (9.30)	Dry (12,30)	Dry (13.80)	11.36 (15.30)	12.06 (16,80)	10.47 (17.80)	11.02 (18.20)	Dry (3.30)	E. Please	05/11/2020
(jeve	Test Deplied Le	Е	4.00 (4.64)	6.00	9.50	12.50 (-3.86)	14.00 (-5.36)	15.50 (-6.86)	17.00 (-8.36)	18.00 (-9.36)	18.40 (-9.76)	3.50 (4.18)	NOTE	Date of Issue ∹
,	Exploratory Hole No.	l	PRAIRIE_AUK_BH101	PRAIRIE_AUK_BH101	PRAIRIE_AUK_BH101	PRAIRIE_AUK_BH101	PRAIRIE_AUIC_BH101	PRAIRIE_AUK_BH101	PRAIRIE AUK BH101	PRAIRIE_AUK_BH101	PRAIRIE_AUN_BH101	PRAIRIE_AUK_BH103		Date of

# ALLIED EXPLORATION & GEOTECHNICS LIMITED Hoad corties: Unit 28 Statio and industrial Estate Petition Feet, Charlestoner, Selection, Bit 354. Hoad 20 Station Station Centre, Estate What, Blackburn, Bit 354. STANDARD PENETRATION TEST RESULTS (BS EN ISO 22476-3; 2005)

	Remarks													UKAS TISTING 1367
auo	Shoe or S	S/C	Ø	w	vs.	w	w	w	in	ω	ω	w	details. Uncorrected and corrected SPTN' values are presented on the attached graphical plot relative to each Exploratory Hole.    Client :- South Tees Development Corporation 4251	51/2
E	SPT'N' Value (Corr.) N <sub>®</sub>		ŧō.	30	89	8=	1	24	25	30	10	œ	Contra	No. :- SPT/4251/2
ē	SPT'N' Value		27	37	80	1.3		32	36	7.0	x	13	AEG	Certificate No. :- SPT/4
M	Pen (mm)/Blo		14.29	8.11	3.75	2.00	1.30	9.38	8,33	2.70	2.25	23.08	graphical p	Cer
סנני	nergy Ratio C	9	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	e attached ation	
-114	C <sup>E</sup> 30q reudip co		0.82	0.94	1.00	1,00	1.00	0.88	1.00	1.00	1.00	92.0	corrected SPTN values are presented on the attact	7
	Total Blows	No.	21	37	90	100	100	32	36	100	100	5	are prese	3
	neq listoT	mm	300	300	300	200	130	300	300	270	225	300	N' values Develo	Approved By
	swola	No.	φ	=	20			10	9	56		4	Tees	pprove
	Pen	шш	75	75.	75			22	52	45		75	South	₹
IVE	swola	So.	ιņ.	10	60	34		80	o	25	43	m	ected an	
TEST DRIVE	Pen	mm	75	75	75	90	11	75	75	75	75	75	Client :-	Ш
	swola	S.	ю	80	18	4	53	80	o,	24	34	ю	g details	
	pen	mm	75	22	75	75	55	75	75	75	75	75	samplin	
	Blows	No	so.	60	24	25	47	ω	ω	9	23	69	ecord for	Checked By
	Pen	mm	75	75	75	75	75	75	75	75	75	75	y Hole n	Check
	swol8 lstoT	No	7	o	23	25	48	10	5	26	30	w	xplorato	
	neq letoT	mm	150	150	150	150	150	150	150	150	150	150	onding E ks	
SEATING DRIVE	Blows	No	4	5	17	16	26	5	7	18	20	ю	n Wor	
SEATING	Pen	mm	75	75	75	75	75	75.	75	75	75	75	tigatio	2 of 5
	Blows	No	n	4	ø	o	22	49	6	80	10	2	Inves	2.
	Pen	mm	75	75	75	75	75	22	75	75	75	75	stditiona	Page No.
₩3 ¢	Energy Ratio	%	5	15	51	51	51	51	19	51	15	5	ion certificate for additional information and correspond Prairie Site Ground Investigation Works	Pag
,10	ot Hammer Ro	IS	АТН09	ATHOS	ATHOS	ATH09	ATH09	АТНОЭ	АТНОВ	ATHOS	ATH09	АТНОВ	Prairie	
ч	Rod Lengi	ε	5.50	8.50	11.50	13.00	13.50	7.00	10.00	12.00	13.00	4.00	efer to calit	20
	Water Dep (Casing)	Е	Dry. (5.30)	Dry (8.30)	Dry (11.30)	Dry (12.80)	Dry (13.30)	Dry (6.80)	(9.80)	Dry (11.80)	Dry (12.80)	Dry (3.80)	NOTE: Please refer to calibration certificate for additional information and corresponding Exploratory Hole record for sampling tle :- Prairie Site Ground Investigation Works	05/11/2020
	Test Depli (Reduced Le	ε	5.50 (2.18)	8.50 (-0.82)	11.50 (-3.82)	13.00 (-5.32)	13.50 (-5.82)	(1.70)	10.00	12.00	13.00 (-4.30)	4.00 (4.26)	NOTE Contract Title :-	Date of Issue :- 0
	Exploratory Hole No.	1	PRAIRIE_AUK_BH103	PRAIRIE_AUK_BH103	PRAIRIE_AUK_BH103	PRAIRIE_AUK_BH103	PRAIRIE_AUK_BH103	PRAIRIE_AUK_BH104	PRAIRIE_AUK_BH104	PRAIRIE_AUK_BH104	PRAIRIE_AUK_BH104	PRAIRIE_AUK_BH105		Date of

# ALLIED EXPLORATION & GEOTECHNICS LIMITED Head office: Unit 25 Stells Citi Insulation Estate, Pedicon Fed. Chealerche-Street, Ca. Dunnam, Oriz 2005 300 Feat; O1712 735 999 STANDARD PENETRATION TEST RESULTS (BS EN ISO 22476-3: 2005)

	Remarks												-8(2	UKAS TREING
auo	O no eorlo	S/C	S	w	Ø	w	Ø	v	Ø	S	w	Ø	NOTE: Please refer to calibration certificate for additional information and corresponding Exploratory Hole record for sampling details. Uncorrected and corrected SPTN' values are presented on the attached graphical plot relative to each Exploratory Hole.    AEG Contract No :-   AEG Contract No :-   A251	173
8	SPTN' Value		4	27	ī	14	20	4	7	7	42		AEG Contract No :- 4251	No. :- SPT/4251/3
8	SPT'N' Valu		9	4		14	27	52	3	17	11	3.0	AEC AEC	Certificate No. :- SPT/
M	Pen (mm)/Blo		15.79	1.85	0.70	0.55	11.33	5.77	0.40	17.65	17.65	0.40	graphical p	Š
mo	nergy Ratio C	3	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	e attached	
-,1,10	yod Length Co	4	0.86	96.0	1,00	1.00	0.88	1.00	1,00	0.76	0.86	96.0	corrected SPTN values are presented on the attact	3
ì	zwola listoT	No	9	100	100	100	27	52	901	17	11	100	opmen	3
	neq letoT	mm	300	185	70	55	300	300	40	300	300	40	N' value	Approved By :-
	Blows	No.	φ		- 11		a	12		9	40		Tees	pprove
	naq	mm	75				75	22		75	75		South	∢
INE	swola	No.	ıo.	26			7	52		2	in .		ected an	
TEST DRIVE	pen	шш	75	35			75	75		75	75		Client :-	1
	awola	o <sub>N</sub>	4	38			9	12		4	4		g details	,
	Pen	mm	75	75			75	75		75	75	1 . 1	samplin	7
	Blows	No.	4	38	100	100	eg.	16	100	m	'n	100	ecord for	ed By
	naq	mm	75	75	70	55	75	75	04	75	75	40	y Hole n	Checked By:
	awola letoT	No.	2	35	50	30	10	42	20	ιn	ø	20	xplorator	
	naq latoT	mm	150	150	50	50	150	150	22	150	150	110	anding E	
SEATING DRIVE	Blows	No	4	23			Ŋ	10		m	'n	25	n Worl	
SEATING	Pen	шш	75	75			7.5	7.5		75	75	35	tion and ligation	3 of 5
0,	swola	No	ço.	12	20	30	S.	10	20	2	60	25	informa	30
	Pen	mm	75	75	90	90	75	7.5	75	75	7.5	75	round	Page No.
9 E"	Energy Rati	%	51	51	5	51	15	51	51	54	15	51	ion certificate for additional information and correspond Prairie Site Ground Investigation Works	Page
je	7 Hammer P	dS.	АТНОВ	АТНО9	АТНО9	АТНОЭ	ATH09	АТНОЭ	АТНОЯ	АТНОВ	АТНОВ	АТНОЭ	ration certi	
ч	Rod Leng	ε	6.50	9.50	11.00	11.20	7.00	10.00	10.50	4.00	6.50	00'6	efer to calit	20
ч	Water Dep (pnissO)	E	Dry (6.30)	4.32 (9.30)	7.36 (10.80)	7.89 (11.00)	Dry (6.80)	Dry (9.80)	(10.30)	1.63	Dry (6.30)	Dry (7.80)	E. Please	05/11/2020
	Test Dept (Reduced Le	ε	6.50 (1.76)	9.50	11.00 (-2.74)	11.20	7.00 (1.71)	10.00 (-1.29)	10,50	4.00 (6.16)	(3.66)	9.00 (1,16)	NOTE	Date of Issue :-
,	zploratory Hole No.	3	PRAIRIE_AUK_BH105	PRAIRIE_AUK_BH105	PRAIRIE AUK BH105	PRAIRIE_AUK_BH105	PRAIRIE_AUK_BH106	PRAIRIE_AUK_BH106	PRAIRIE_AUN_BH106	PRAIRIE_AUK_BH107	PRAIRIE_AUK_BH107	PRAIRIE_AUK_BH107		Date o

# ALLIED EXPLORATION & GEOTECHNICS LIMITED Head Office: Unit 29 States Call Industrial Earlies Person Feet, Care Durham, DP12.7870 Head Office: Unit 29 States Call Industrial Earlies Development Cente, Earlies Warf, Blackburn, BB1 SBL STANDARD PENETRATION TEST RESULTS (BS EN ISO 22476-3: 2005)

	Remarks														UKAS UKAS Issing
		0											atory Hole.	- CO T	
auo	Shoe or C	S/C	Ø	S	S	w	SO.	is.	Ø	S	w	· vo	h Explora	4251	No. :- SPT/4251/4
6	SPT'N' Value		ω.	34	25	913	Ť	on '	4	4	1	9	ve to eac	AEG Contract No :- 4251	SPT/
	SPT'N' Value		55	6	92	¥.	Ŧ	15	23	a.	÷	5	plot relat	₹	Certificate No. :- SPT/4
M	Pen (mm)/Blo		23.08	6.12	3.95	0.55	0.40	20.00	14.29	1.10	0.45	23.08	d graphica		Ö
.110	nergy Ratio C	9	0.85	0.85	0.85	0.85	0.85	0.85	0.86	0,85	0,85	0.85	ne attache	ration	
-110	C <sup>E</sup> 30q Feudip Co		0.74	0.82	0.88	0.94	96'0	89.0	92.0	0,84	0.86	0.86	ented on th	South Tees Development Corporation	2
Ī	swola latoT	No.	to	6	92	100	100	45	27	100	100	60	s are pres	lopmen	7
	Total Pen	mm	300	300	300	55	40	300	300	110	55	300	'N' value	Deve	Approved By
	Blows	No.	4	48	21			N)	2			4	ted SPT	Tees	pprov
	Pen	mm	75	75	75			75	75			75	d correc	South	∢
INE	swola	No.	ю	41	23			4	ω			ю	ected an	20	
TEST DRIVE	Pen	шш	75	75	75	1		52	22			52	. Uncorr	Client :-	
	swola	No.	69	12	4	11		m	0	47		m	g details		
	Pen	mm	75	75	75	T.		75	75	35		75	samplin		
	Blows	No.	e	w	15	100	100	ю	0	53	100	e	ecord for		Checked By :
	Pen	mm	75	75	75	55	40	75	75	75	45	75	y Hole n		Check
	awol8 lstoT	No.	4	rD.	16	20	20	u)	4	29	50	ω	xplorator		
	Total Pen	шш	150	150	150	02	35	150	150	150	90	150	anding E	S	
SEATING DRIVE	Blows	No.	m	ю	00	-1		69	23	20		6	correspo	Worl	1
SEATING	ned	mm	75	75	75			75	75	75		75	ion and	igation	4 of 5
0,	Blows	No	٠	0	80	20	- 20	61	2	o	9	ю.	informal	Invest	
	Pen	mm	75	75	75	70	35	75	75	22	9	75	dditional	round	Page No. ∵
"∃ ¢	Energy Ratio	%	15	52	10	53	19	5	51	15	51	15	icate for a	Prairie Site Ground Investigation Works	Page
19	A Hammer R	S	АТНОЭ	ATHOS	ATH09	ATHO9	ATH09	ATHOB	АТНОЭ	АТНОЭ	ATHOS	АТНОЭ	NOTE. Please refer to calibration certificate for additional information and corresponding Exploratory Hole record for sampling details. Uncorrected and corrected and corrected on the attached graphical plot relative to each Exploratory Hole	Prairie	
ų	дбиет роу	ε	3,50	5.50	7.00	8.50	00.6	2.00	4.00	6.00	6.50	6.50	fer to calib		30
u	(gniseO)	ш	Dry (3.30)	Dry (5.30)	Dry (6.80)	Dry (8.30)	Dry (8.80)	Dry (1.80)	Dry (3.80)	Dry (5.80)	Dry (6.30)	Dry (6.30)	Please re		05/11/2020
	Test Depti educed Le	ε	3.50 (5.36)	5.50 (3.36)	7.00 (1.86)	8.50	9.00	2.00 (10.09)	4.00 (8.09)	(60.9)	6.50	6.50	NOTE	t Title :-	Date of Issue :-
	Exploratory Hole No	1	PRAIRIE_AUK_BH108	PRAIRIE_AUK_BH108	PRAIRIE_AUK_BH108	PRAIRIE_AUK_BH108	PRAIRIE_AUK_BH108	PRAIRIE_AUK_BH109 (1	PRAIRIE_AUN_BH109	PRAIRIE_AUK_BH109	PRAIRIE_AUK_BH109	PRAIRIE_AUK_BH110		Contract Title :-	Date of

# ALLIED EXPLORATION & GEOTECHNICS LIMITED Head office: Unit 25 Stein Cell industries Easible Person Feel, Considerate Co. Courtain, Dirt 25 Stein Cell industries Exercipent Certité, Earlan Wharf, Biochaum, Bit 561. STANDARD PENETRATION TEST RESULTS (BS EN ISO 22476-3: 2005)

	Remarks							8
euo	Shoe or C	S/C	w	s,	w	ဟ	S	NOTE: Please refer to calibration certificate for additional information and corresponding Exploratory Hole record for sampling details. Uncorrected and corrected SPTN values are presented on the attached graphical plot relative to each Exploratory Hole.    AEG Contract No :-   South Tees Development Corporation   AEG Contract No :-   AEG Cont
-	SPT'N' Value M (.mo2)		49	83		18-	*	AEG Contract No :-
-	SPT'N' Value		26	86	X.	100	4	plot relativ
M	Pen (mm)/Blo	di	5.08	3.06	2.20	0.70	0.50	graphical
סוו.	nergy Ratio C	3	0.85	0.85	0.86	0.85	0.85	ne attached ration
ארה	C <sup>E</sup> 30q Feudip Co	3	0.98	1.00	1.00	1.00	1 00	ented on the
	awola latoT	No	59	88	100	100	100	corrected SPTN' values are presented on the attact
	na9 lstoT	mm	300	300	220	02	95	N' values Devel
	Swola	oN.	8	4				Tees
	Pen	mm	75	75				South
NE	swola	o N	0	25	8			cted and
TEST DRIVE	hen	mm	75	75	70			Client :-
+	swol8	No.	o	9	27			) details.
	Pen	mm	22	92	75			samplini
	Blows	No.	60	5	52	100	100	cord for
	nag	mm	75	75	75	70	90	/ Hole re
	awol8 lstoT	No.	O)	21	34	90	20	ploratory
	Total Pen	шш	150	150	150	55	35	nding E
DRIVE	swola	No.	ω	12	19		1 -	oorrespo Nork
SEATING DRIVE	neg	шш	75	75	75	H		ion and
ψ	Swola	No	63	6	15	50	20	informat
	ben	mm m	75	75	75	55	35	dditional
"a c	Energy Ratio	%	51	51	19	56	51	ion certificate for additional information and correspond Prairie Site Ground Investigation Works
.10	9 Hammer P	is	ATHO9	ATHOB	ATH09	АТНОВ	ATHOB	ration certil
ч	Rod Leng	Ε	9.50	12.50	14.00	15.00	15.50	fer to calib
4)	qe DateW (gniss D)	E	Dry (9.30)	Dry (12.30)	6,74 (13,80)	7.02 (14.80)	7.39 (15.30)	Please re
(lexi	Test Dept (Reduced Le	ε	9.50	12.50 (-4.70)	14.00 (-6.20)	15.00 (-7.20)	15.50	NOTE Contract Title :-
9	Exploratory Hole No.	1	PRAIRIE AUK BH110	PRAIRIE_AUK_BH110	PRAIRIE_AUK_BH110	PRAIRIE_AUK_BH110	PRAIRIE AUK BH110	Contrac

**ALLIED EXPLORATION & GEOTECHNICS LIMITED Exploratory Hole No** STANDARD PENETRATION TEST RESULTS (BS EN ISO 22476-3: 2005) PRAIRIE\_AUK\_BH101 Depth (m) 10 12 14 16 18 50 'N' Value 30 40 80 100 10 Uncorrected 'N' Values Corrected 'N' Values Note: Graph does not display extrapolated SPT results (e.g. refusals). Client :-Contract Title :-Prairie Site Ground Investigation Works South Tees Development Corporation Certificate No :-Date of issue :-Operator:-05/11/2020 SPT/4251/Graph/PRAIRIE\_AUK\_BH101 L. Selkirk Approved By :-Checked By :-AEG Contract No. :-4251

**ALLIED EXPLORATION & GEOTECHNICS LIMITED Exploratory Hole No** STANDARD PENETRATION TEST RESULTS (BS EN ISO 22476-3: 2005) PRAIRIE\_AUK\_BH103 8 Depth (m) 10 12 14 16 50 'N' Value 80 100 Uncorrected 'N' Values ♦ Corrected 'N' Values Note: Graph does not display extrapolated SPT results (e.g. refusals). Contract Title :-Client :-Prairie Site Ground Investigation Works South Tees Development Corporation Certificate No :-Date of issue :-Operator:-05/11/2020 SPT/4251/Graph/PRAIRIE\_AUK\_BH103 L. Selkirk

Approved By :-

AEG Contract No. :-4251

Checked By :-

### **ALLIED EXPLORATION & GEOTECHNICS LIMITED**

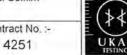
**Exploratory Hole No** STANDARD PENETRATION TEST RESULTS (BS EN ISO 22476-3: 2005) PRAIRIE\_AUK\_BH104 Depth (m) 10 12 16 50 'N' Value 100 Uncorrected 'N' Values Note: Graph does not display extrapolated SPT results (e.g. refusals). Corrected 'N' Values Client :-Contract Title :-Prairie Site Ground Investigation Works South Tees Development Corporation Date of issue :-Certificate No :-Operator :-05/11/2020 SPT/4251/Graph/PRAIRIE\_AUK\_BH104 L.S./L.H. Checked By :-Approved By :-AEG Contract No. :-

4251





AEG Contract No. :-



**ALLIED EXPLORATION & GEOTECHNICS LIMITED Exploratory Hole No** STANDARD PENETRATION TEST RESULTS (BS EN ISO 22476-3: 2005) PRAIRIE\_AUK\_BH106 8 Depth (m) 10 12 14 16 50 'N' Value 80 100 Uncorrected 'N' Values Note: Graph does not display extrapolated SPT results (e.g. refusals). ♦ Corrected 'N' Values Client :-Contract Title :-Prairie Site Ground Investigation Works South Tees Development Corporation Operator :-Date of issue :-Certificate No :-

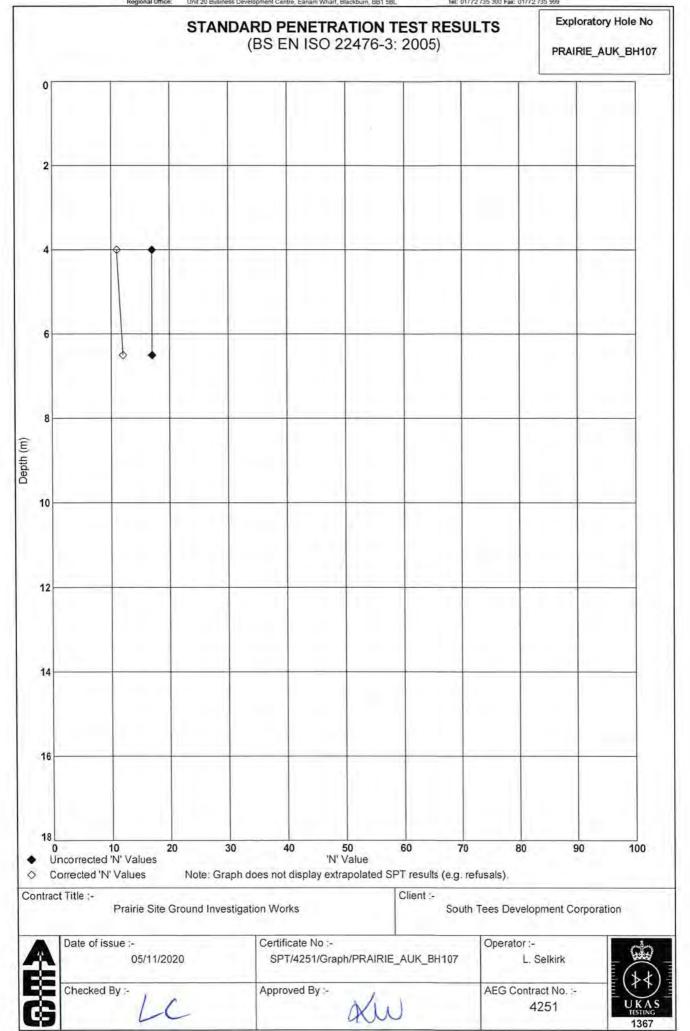
05/11/2020 SPT/4251/Graph/PRAIRIE\_AUK\_BH106 L. Selkirk

Checked By :- AEG Contract No. :4251



### **ALLIED EXPLORATION & GEOTECHNICS LIMITED**

Head Office: Unit 25 Stella Gill Industrial Estate, Pelton Fell, Chester-le-Street, Co. Durham, DH2 2RG Tel: 0191 387 4700 Fax: 0191 387 4710



### **ALLIED EXPLORATION & GEOTECHNICS LIMITED**

STANDARD PENETRATION TEST RESULTS **Exploratory Hole No** (BS EN ISO 22476-3: 2005) PRAIRIE\_AUK\_BH108 8 Depth (m) 10 12 14 16 80 100 'N' Value Uncorrected 'N' Values Note: Graph does not display extrapolated SPT results (e.g. refusals). Corrected 'N' Values Client :-Contract Title :-Prairie Site Ground Investigation Works South Tees Development Corporation Certificate No :-Operator :-Date of issue :-SPT/4251/Graph/PRAIRIE\_AUK\_BH108 05/11/2020 L.S./L.H. Checked By :-Approved By :-AEG Contract No. :-4251

**ALLIED EXPLORATION & GEOTECHNICS LIMITED Exploratory Hole No** STANDARD PENETRATION TEST RESULTS (BS EN ISO 22476-3: 2005) PRAIRIE\_AUK\_BH109 8 Depth (m) 10 12 14 16 18 20 30 50 100 10 Uncorrected 'N' Values 'N' Value ♦ Corrected 'N' Values Note: Graph does not display extrapolated SPT results (e.g. refusals). Client :-Contract Title :-South Tees Development Corporation Prairie Site Ground Investigation Works Certificate No :-Operator :-Date of issue :-05/11/2020 SPT/4251/Graph/PRAIRIE\_AUK\_BH109 L.S./L.H.



Checked By:- Approved By:-

XIII

AEG Contract No. ;-4251



### **ALLIED EXPLORATION & GEOTECHNICS LIMITED**

**Exploratory Hole No** STANDARD PENETRATION TEST RESULTS (BS EN ISO 22476-3: 2005) PRAIRIE\_AUK\_BH110 Depth (m) 10 12 14 16 50 'N' Value 100 10 Uncorrected 'N' Values ♦ Corrected 'N' Values Note: Graph does not display extrapolated SPT results (e.g. refusals). Client :-Contract Title :-Prairie Site Ground Investigation Works South Tees Development Corporation Certificate No :-Operator:-Date of issue :-SPT/4251/Graph/PRAIRIE\_AUK\_BH110 L.S./L.H. 05/11/2020 Checked By :-Approved By :-AEG Contract No.:-4251

### Allied Exploration & Geotechnics Ltd.

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

### **SPT Hammer Energy Test Report**

in accordance with BSEN ISO 22476-3:2005

QUALITY CONTROL CHECKED 0 7 JAN 2020

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<sub>r</sub> (mm):

54

Wall Thickness t<sub>r</sub> (mm):

6.5

Assumed Modulus Ea (GPa): 208

5991

Accelerometer No.1: Accelerometer No.2:

5990

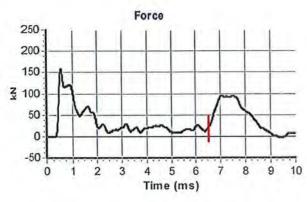
### **SPT Hammer Information**

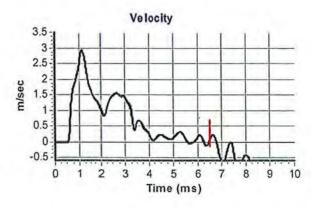
Hammer Mass m (kg): 63

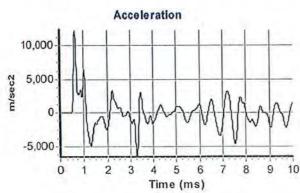
Falling Height h (mm): 760

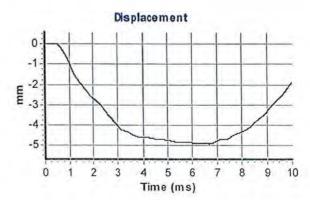
SPT String Length L (m): 14.1

### Comments / Location









### Calculations

Area of Rod A (mm2):

970

Theoretical Energy  $E_{theor}$  (J):

473

Measured Energy E<sub>meas</sub> (J):

3): 241

Energy Ratio E<sub>r</sub> (%):

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 20 Business Development Centre, Easien What! Backburn, Bit 18LL HAND SHEAR VANE TEST RESULTS HAND SHEAR VANE TEST RESULTS

Exploratory Hole No.	Date	Depth	1st Result kPa	2nd Result kPa	3rd Result kPa	4th Result kPa	Average kPa		Remarks
PRAIRIE AUK TP101	01/04/2020	1.80	72 (32)	64	99	69	68 (32)		
PRAIRIE AUK_TP101	01/04/2020	2.80	50 (22)	54	99	42	53 (22)		
PRAIRIE_AUK_TP101	01/04/2020	4.40	52 (18)	44	44	48	47 (18)		
PRAIRIE AUK TP104	01/04/2020	3.00	90 (22)	82	88	88	87 (22)		
PRAIRIE_AUK_TP104	01/04/2020	3.90	90 (32)	84	06	80	86 (32)		
PRAIRIE_AUK_TP105	01/04/2020	2.00	60 (20)	09	09	09	60 (20)		
PRAIRIE_AUK_TP105	01/04/2020	3.00	64 (24)	09	68	62	64 (24)		
PRAIRIE_AUK_TP106	23/04/2020	2.00	72 (26)	7.2	68	89	70 (26)		
PRAIRIE AUK TP106	23/04/2020	3.00	130	130	130	130	130	Results in excess of 130kPa - exceeds the device measuring range.	eds the device measuring range.
PRAIRIE_AUK_TP107	06/04/2020	1.00	73 (34)	72	68	92	72 (34)		
PRAIRIE AUK TR107	06/04/2020	2.50	64 (34)	62	68	72	67 (34)		
PRAIRIE AUK_TP109	21/04/2020	2.00	76 (40)	82	82	86	82 (40)		
					Res	Residual results given in brackets.	ckets.		
Contra	Contract Title :-	P	airie Site Ground Ir	Prairie Site Ground Investigation Works		Client		South Tees Development Corporation	AEG Contract No :- 4251
Date	Date of Issue :- 05/11/2020	20	Page No.:-	1 of 7	Checked By:	27	Appro	Approved By:-	Certificate No. :- HSV/4251/1

# ALLIED EXPLORATION & GEOTECHNICS LIMITED Head office. Unit 30 Busines Development Certain What Backborn, Bot Bott. HAND SHEAR VANE TEST RESULTS HAND SHEAR VANE TEST RESULTS

21/04/2020     3.00       21/04/2020     3.00       21/04/2020     4.00       22/04/2020     2.50       22/04/2020     3.00       22/04/2020     3.50       22/04/2020     3.50	100 (40) 60 (18) 50 (12) 60 (30) 100 (32) 68 (38)	110 58 64 64 92	25 56 90	110	90000		
3.00 4.00 2.50 3.00 3.10 3.50	60 (18) 50 (12) 60 (30) 100 (32) 68 (38)	92 64 44	25 56		103 (40)		
21/04/2020 4.00 22/04/2020 2.50 22/04/2020 3.00 22/04/2020 2.50 22/04/2020 3.10 06/04/2020 3.50	50 (12) 60 (30) 100 (32) 68 (38)	64 64	25	09	59 (18)		
22/04/2020 2.50 22/04/2020 3.00 22/04/2020 2.50 22/04/2020 3.10 06/04/2020 3.50	60 (30) 100 (32) 68 (38)	95	Co	50	49 (12)		
22/04/2020 3.00 22/04/2020 2.50 22/04/2020 3.10 06/04/2020 3.50	100 (32) 68 (38)	92	08	74	70 (30)		
22/04/2020 2.50 22/04/2020 3.10 06/04/2020 3.50	68 (38)		112	100	101 (32)		
22/04/2020 3.10 06/04/2020 3.50		78	88	89	76 (38)		
06/04/2020 3.50	54 (24)	52	58	58	56 (24)		
	50 (20)	50	09	56	54 (20)		
PRAIRIE_AUK_TP115 08/04/2020 2.00	30 (8)	20	30	20	25 (8)		
PRAIRIE_AUK_TP116 23/04/2020 2.00 10	100 (68)	06	86	110	100 (68)		
PRAIRIE_AUK_TP116 23/04/2020 3.00	130	130	130	130	130	Results in excess of 130kPa - exceeds the device measuring range.	the device measuring range.
PRAIRIE_AUK_TP118 23/04/2020 1.60 6	64 (42)	72	89	89	68 (42)		
			Resid	Residual results given in brackets.	ets.		
Contract Title >	Prairie Site Ground Investigation Works	stigation Works		Client :-		South Tees Development Corporation	AEG Contract No :- 4251
Date of Issue :- 05/11/2020	Page No, ∵	2 of 7	Checked By :-	1	Approved By	de	Certificate No.:- HSV/4251/2