

3.1 Schedule A – General Items						
	Item Reference	Description	Unit	Quantity	Unit Price	Price
3.1.1	A1.1	Mobilise, commission and demobilise welfare facilities, offices and stores for Contractor that comply with Construction (Design and Management) Regulations 2015, for the Works	Day			
3.1.2	A1.2	Provision and maintenance of welfare facilities, offices and stores for Contractor that comply with Construction (Design and Management) Regulations 2015, for the duration of the Works	week	2		
	Note	Note Details				
3.1.3	A2	Establish on site all plant, equipment and services for a Green Category Site. (The Tenderers rates provided for items A2.0 – A2.13 must be inclusive of mobilisation, establishment and demobilisation).				
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.1.4	A2.1	Provision of Cable Percussive Boring Rig	sum			
3.1.5	A2.2	Provision of Lorry Mounted Rotary Drilling Rig	sum			
3.1.6	A2.3	Provision of Track Mounted Rotary Drilling Rig	sum	1		
3.1.7	A2.4	Provision of Track Mounted Rotary Drilling Rig with Dynamic Sampling Capacity	sum			
3.1.8	A2.5	Provision of Rotary Percussive Drilling Plant and Equipment	sum			
3.1.9	A2.6	Provision of Wheel Mounted Excavator (JCB 3CX ECO or Similar)	sum			
3.1.10	A2.7	Provision of Tracked (rubber or metal) Excavator (8 tonne)	sum			
3.1.11	A2.8	Provision of Lorry Mounted Static Cone Penetrometer Unit	sum			
3.1.12	A2.9	Provision of Track Mounted Static Cone Penetrometer Unit	sum			
3.1.13	A2.10	Provision of Self Boring Pressure meter	sum			
3.1.14	A2.11	Provision of Window Sampling Unit	sum			
3.1.15	A2.12	Provision of Dynamic Sampling Unit	sum			
3.1.16	A2.13	Provision of Dynamic Probing Unit	sum			
3.1.17	A2.14	Provision of Hand Auger	sum			
3.1.18	A2.15	Provision of Water Bowser	sum	1		
3.1.19	A2.16	Provision & Maintenance of Fencing/barriers around the working areas per panel. (As per the Authority's standard drawing (CA - SD 2 - Heras style fencing)	Day	320		
	Note	Note Details				
3.1.20	A2.17	Provision, installation, maintenance and removal on Completion of suitable safety platform / bridge (incl. any foundations) for allowing GI plant and labour to safely investigate potentially voided grounds, mine entries and deep fill. Include for the use of safety harnesses and all other safety precautions necessary when working over and around abandoned mine workings to the following safety platform spans				
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price

3.1.21	A2.17.1	Up to 6m span	sum			
3.1.22	A2.17.2	6 and 12m span	sum			
3.1.23	A2.17.3	12 and 16m span	sum			
3.1.24	A2.17.4	16 and 22m span	sum			
	Note	Note Details				
3.1.25	A2.18	If required, relocate safety platform at each exploratory hole position within the working area and set up.				
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.1.26	A2.18.1	Up to 6m span	sum			
3.1.27	A2.18.2	6 and 12m span	sum			
3.1.28	A2.18.3	12 and 16m span	sum			
3.1.29	A2.18.4	16 and 22m span	sum			
3.1.30	A2.19	Provision of Breaker and Compressor	sum			
3.1.31	A2.20	Provision of Pump	sum			
	A2.21	Provision of High Pressure Dilatometer	sum			
	A2.22	Provision of Drive or Push-in Pressuremeter	sum			
	A2.23	Provision of Menard Pressuremeter	sum			
		Provision of track mounted Donic Drill Rig				
	A2.24	Area 1 & 2	sum			
	A2.25	Srea 3	sum			
	A2.26	Area 5 & 6	sum			
	A2.27	Area 4, 7, 8 & 9	sum			
3.1.32	A3	Extra over item A2 for Yellow Category Site (Tenderers rates must be inclusive of all additional resources, services, ppe and equipment)	sum			
3.1.33	A4	Maintain on site all site safety equipment for a Yellow Category Site	week			
3.1.34	A5	Decontamination of equipment during and at end of intrusive investigation for a Yellow Category Site	sum			
3.1.35	A6	Appropriate storage, transport and off-site disposal of contaminated arisings and any PPE equipment, excluding Laboratory testing	m3			
	Note	Note Details				
3.1.36	A7	Provide professional attendance in accordance with Clause 3.5.2				
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.1.37	A7.1	Provide Technician	Per Day			
3.1.38	A7.2	Provide Graduate Ground Engineer	Per Day	10		
3.1.39	A7.3	Provide Experienced Ground Engineer	Per Day			
3.1.40	A7.4	Provide Registered Ground Engineering Professional	Per Day			
3.1.41	A7.5	Provide Registered Ground Engineering Specialist	Per Day			
3.1.42	A7.6	Provide Registered Ground Engineering Advisor	Per Day			
3.1.43	A8	Establish the location and elevation of the ground at each exploratory hole	sum	1		

3.1.44	A9	Preparation of Health and Safety documentation and Safety Risk Assessment	sum	1		
3.1.45	A9.1	Extra Over A9 for undertaking role of Principal Contractor under Construction (Design and Management) Regulation 2015.	sum	1		
3.1.46	A10	Facilities for the Investigation Supervisor	sum			
3.1.47	A11	Vehicle(s) for the Investigation Supervisor	veh per week			
3.1.48	A12	Fuel for vehicle for the Investigation Supervisor	provisional sum			
3.1.49	A13	Investigation Supervisor's telephone & facsimile charge	provisional sum			
3.1.50	A14	Deliver selected cores and samples to the specified address	provisional sum			
3.1.51	A15	Special testing and sampling required by Investigation Supervisor	provisional sum			
3.1.52	A16	Traffic and safety management.	provisional sum	1		
3.1.53	A17	One master copy of the Desk Study Report	sum			
3.1.54	A18	Additional copies of the Desk Study Report	nr.			
3.1.55	A19	One master copy of the Ground Investigation Report (or specified part thereof)	sum	1		
3.1.56	A19.1	Provision of Ground Investigation Report - Per Borehole.	item			
3.1.57	A19.2	Provision of Ground Investigation Report - Per Trial Pit	item			
3.1.58	A19.3	Provision of Ground Investigation Report - Per Window Sample	item			
3.1.59	A19.4	Provision of Ground Investigation Report - Per Dynamic Sampling hole	item			
3.1.60	A19.5	Provision of Ground Investigation Report - Per Dynamic Probe	item			
3.1.61	A19.6	Provision of Ground Investigation Report - Per Static Core Test	item			
3.1.62	A19.7	Provision of Ground Investigation Report - Per Pressure Meter Test	item			
3.1.63	A20	Additional copies of the Ground Investigation Report (or specified part thereof)	nr.			
3.1.64	A21	Electronic copy of Ground Investigation Report (or specified part thereof)	sum	1		
3.1.65	A22	One master copy of the Geotechnical Design Report (or specified part thereof)	sum			
3.1.66	A23	Additional copies of Geotechnical Design Report (or specified part thereof)	nr.			
3.1.67	A24	Electronic copy of Geotechnical Design Report (or specified part thereof)	sum			
3.1.68	A25	Digital data in AGS transfer format	sum	1		
3.1.69	A26	Hard-copy photographs	nr.			
3.1.70	A27	Photographic Volume	nr.			
3.1.71	A28	Long-term storage of geotechnical samples (Appendix B)	provisional sum			
3.1.72	A29	Long-term storage of geoenvironmental samples (Appendix B)	provisional sum			
	Note	Note Details				
3.1.73	A30	Security				

	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.1.74	A30.1	Provide for site security personnel at GI site between 0600 hours to 1800 hours (rate to be fully inclusive of transport to and from site and adequate welfare facilities)	hour	44		
3.1.75	A30.2	As per Item A31.1 but 1800 hours to 0600 hours	hour	132		
3.1.76	A31	Extra over item A2 for Red Category Site (Tenderers rates must be inclusive of all additional resources, services, ppe and equipment)	sum			
3.1.77	A32	General reinstatement of site (see preamble to the schedule of rates for further details)	sum	1		
3.1.78	A33	Obtaining all relevant Public Utility & Privately Owned Services service information	sum			
Section Sub Total						14,581.00

3.2 Schedule B – Percussion Boring (Diameter minimum 150mm)						
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.2.1	B1	Move boring plant and equipment to the site of each exploratory hole & set up	nr			
3.2.2	B2	Extra over item B1 for setting up on a slope of gradient greater than 20%	nr			
3.2.3	B3	Break out surface obstruction where present at exploratory borehole	h			
3.2.4	B4	Advance borehole between existing ground level and 10 m depth	m			
3.2.5	B5	As item B4 but between 10 and 20 m depth	m			
3.2.6	B6	As item B4 but between 20 and 30 m depth	m			
3.2.7	B7	As item B4 but between 30 and 40 m depth	m			
3.2.8	B8	As item B4 but between 40 and 50 m depth	m			
3.2.9	B9	Advance borehole through hard stratum or obstruction	h			
3.2.10	B10	Provide aquifer protection measures at a single aquiclude/aquifer boundary or cross-contamination control measures at a single soil boundary in a borehole	nr			
3.2.11	B11	Backfill borehole with cement/bentonite grout or bentonite pellets	m			
3.2.12	B12	Standing time for borehole plant, equipment and crew	h			
	Note	Note Details				
3.2.13	B13 - B21	Dynamic Sampling (Diameter up to U100 & UT100 sample recovery)				
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.2.14	B13	Move dynamic sampling equipment to the site of each exploratory hole and set up	nr			
3.2.15	B14	Extra over Item B13 for setting up on a slope of gradient greater than 20%	nr			
3.2.16	B15	Advance dynamic sample hole between existing ground level and 5 m depth	m			
3.2.17	B16	As Item B15 but between 5 and 10 m depth	m			

3.2.18	B17	As Item B15 but between 10 and 15 m depth	m		
3.2.19	B18	Standing time for dynamic sampling equipment and crew	hr		
3.2.20	B19	Provision of dynamic sampling equipment and crew for sampling as directed by the Investigation Supervisor; maximum depth 15 m	day		
3.2.21	B20	Backfill dynamic sampling hole with cement/bentonite grout or bentonite pellets	m		
3.2.22	B21	Backfill borehole with arisings	m		
Section Sub Total					-

3.3 Schedule C – Rotary Drilling: Hand Augering (up to 150mm diameter)						
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.3.1	C1	Bring hand auger equipment to the position of each exploratory hole	nr			
3.3.2	C2	Bore with hand auger from existing ground level to 2 m depth	m			
3.3.3	C3	As item C2 but between 2 and 4 m depth	m			
3.3.4	C4	Standing time for hand auger equipment and crew	h			
3.3.5	C5	Provision of hand augering equipment and crew for augering as directed by the Investigation Supervisor; maximum depth 4 m	day			
3.3.6	C6	Backfill hand auger hole with cement/bentonite grout or bentonite pellets	m			
Section Sub Total						-

3.4 Schedule C – Rotary Drilling: Continuous flight						
	Note	Note Details				
3.4.1	Note	(up to 200mm diameter) and hollow-stem flight augering (up to 165mm diameter)				
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.4.2	C7	move mechanical augering plant & equipment to the site of each exploratory hole and set up	nr			
3.4.3	C8	Extra over item C7 for setting up on aslope of gradient greater than 20%	nr			
3.4.4	C9	Break out surface obstructions where present at auger hole	h			
3.4.5	C10	Standing time for rotary auger equipment and crew	h			
3.4.6	C11	Auger in materials other than hard strata at the specified diameter between existing ground level and 10 m depth	m			
3.4.7	C12	As item C11 but between 10 and 20 m depth	m			
3.4.8	C13	As item C11 but between 20 and 30 m depth	m			
3.4.9	C14	Backfill auger hole with cement/bentonite grout or bentonite pellets	m			
Section Sub Total						-

3.5 Schedule C – Rotary Drilling: With and without Core Recovery						
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.5.1	C15	Move rotary drilling plant and equipment to the site of each exploratory drill hole and set up	nr	1		
3.5.2	C16	Extra over Item C15 for setting up on a slope of gradient greater than 20%	nr			
3.5.3	C17	Extra over Item C15 for setting up drilling plant for inclined drill hole	nr			
3.5.4	C18	Break out surface obstructions where present at exploratory drill hole	h			
3.5.5	C19	Standing time for rotary drilling plant, equipment and crew	h			
3.5.6	C20	Provide aquifer protection measures at a single aquiclude/aquifer boundary in a drill hole	nr	1		
3.5.7	C21	Discount for drilling with air or air-mist flush medium instead of water flush. (Discount shall be a lump sum reduction to be included within the Price List for a package order)	sum			
Section Sub Total						423.00

3.6 Schedule C – Rotary Drilling: Drilling without cores (Diameter 121mm)						
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.6.1	C22	Rotary drill in materials other than hard strata at the specified diameter, from which cores are not required, between existing ground level and 10 m depth	m			
3.6.2	C23	As item C22 but between 10 and 20 m depth	m			
3.6.3	C24	As item C22 but between 20 and 30 m depth	m			
3.6.4	C25	As item C22 but between 30 and 40 m depth	m			
3.6.5	C26	As item C22 but between 40 and 50 m depth	m			
3.6.6	C27	Extra over items C22 to C26 for inclined rotary drill hole	m			
3.6.7	C28	Rotary drill in hard strata at the specified diameter, from which cores are not required, between existing ground level and 10 m depth	m			
3.6.8	C29	As Item C28 but between 10 and 20 m depth	m			
3.6.9	C30	As item C28 but between 20 and 30 m depth	m			
3.6.10	C31	As item C28 but between 30 and 40 m depth	m			
3.6.11	C32	As item C28 but between 40 and 50 m depth	m			
3.6.12	C33	Extra over Items C28 to C32 for inclined drill hole	m			
3.6.13	C34	Backfill rotary drill hole with cement/bentonite grout or bentonite pellets	m	64		

3.6.14	C35	Standing time for rotary drilling plant , equipment and crew.	h	10		
Section Sub Total						1,882.00

3.7 Schedule C – Rotary Drilling: Drilling to obtain cores (92.1mm diameter cores)

	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.7.1	C36	Rotary drill in materials other than hard strata to obtain cores of the specified diameter between existing ground level and 10 m depth	m			
3.7.2	C37	As Item C36 but between 10 and 20 m depth	m			
3.7.3	C38	As Item C36 but between 20 and 30 m depth	m			
3.7.4	C39	As Item C36 but between 30 and 40 m depth	m			
3.7.5	C40	As Item C36 but between 40 and 50 m depth	m			
3.7.6	C41	Extra over Items C36 to C40 for use of semi-rigid core liner	m			
3.7.7	C42	Extra over Items C36 to C40 for coring inclined rotary drill hole	m			
3.7.8	C43	Rotary drill in hard strata to obtain cores of the specified diameter between existing ground level and 10 m depth	m			
3.7.9	C44	As Item C43 but between 10 and 20 m depth	m			
3.7.10	C45	As Item C43 but between 20 and 30 m depth	m			
3.7.11	C46	As Item C43 but between 30 and 40 m depth	m			
3.7.12	C47	As Item C43 but between 40 and 50 m depth	m			
3.7.13	C48	Extra over Items C43 to C47 for use of semi-rigid liner	m			
3.7.14	C49	Extra over Items C43 to C47 for coring inclined rotary drill hole	m			
3.7.15	C50	Backfill rotary drill hole with cement/bentonite grout or bentonite pellets	m			
3.7.16	C51	Core box to be retained by client	nr			
3.7.17	C52	Standing time for rotary drilling plant , equipment and crew.	h			
Section Sub Total						-

3.8 Schedule C – Rotary Drilling: Rotary Percussive Drilling

	Note	Note Details				
3.8.1	Note	(76mm diameter drill hole)				
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.8.2	C53	Move rotary percussive drilling plant and equipment to the site of each drill hole and set up	nr			
3.8.3	C54	Extra over Item C50 for setting up on a slope of gradient greater than 20%	nr			
3.8.4	C55	Rotary percussive drill at the specified diameter in any material between existing ground level and 10 m depth	m			

3.8.5	C56	As Item C55 but between 10 and 20 m depth	m		
3.8.6	C57	As Item C55 but between 20 and 30 m depth	m		
3.8.7	C58	As Item C55 but between 30 and 40 m depth	m		
3.8.8	C59	As Item C55 but between 40 and 50 m depth	m		
3.8.9	C60	Standing time for rotary percussive drilling plant, equipment and crew	h		
3.8.10	C61	Backfill rotary percussive drill hole with cement/bentonite grout or bentonite pellets	m		
Section Sub Total					-

3.9 Schedule C – Rotary Drilling: Resonance (sonic) drilling						
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.9.1	C62	Move sonic drilling plant and equipment to the site of each exploratory drill hole and set up	nr			
3.9.2	C63	Extra over Item C62 for setting up on a slope of gradient greater than 20%	nr			
3.9.3	C64	Extra over Item C62 for setting up sonic drilling plant for inclined drill hole	nr			
3.9.4	C65	Break out surface obstructions where present at exploratory drill hole	h			
3.9.5	C66	Standing time for sonic drilling plant, equipment and crew	h			
Section Sub Total						-

3.10 Schedule C – Rotary Drilling: Sonic Drilling Without Cores						
	Note	Note Details				
3.10.1	Note	(up to 150mm diameter)				
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.10.2	C67	Sonic drill in materials other than hard strata at the specified diameter, from which cores are not required, between existing ground level and 10 m depth	m			
3.10.3	C68	As Item C67 but between 10 and 20 m depth	m			
3.10.4	C69	As Item C67 but between 20 and 30 m depth	m			
3.10.5	C70	As Item C67 but between 30 and 40 m depth	m			
3.10.6	C71	As Item C67 but between 40 and 50 m depth	m			
3.10.7	C72	Extra over Items C67 to C71 for inclined sonic drill hole	m			
3.10.8	C73	Sonic drill in hard strata at the specified diameter, from which cores are not required, between existing ground level and 10 m depth	m			
3.10.9	C74	As Item C73 but between 10 and 20 m depth	m			
3.10.10	C75	As Item C73 but between 20 and 30 m depth	m			

3.10.11	C76	As Item C73 but between 30 and 40 m depth	m		
3.10.12	C77	As Item C73 but between 40 and 50 m depth	m		
3.10.13	C78	Extra over Items C73 to C77 for inclined sonic drill hole	m		
3.10.14	C79	Backfill sonic drill hole with cement/bentonite grout or bentonite pellets	m		
Section Sub Total					-

3.11 Schedule C – Rotary Drilling: Sonic Drilling To Obtain Cores							
	Note	Note Details					
3.11.1	Note	(92.1mm diameter cores)					
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price	
3.11.2	C80	Sonic drill in materials other than hard strata to obtain cores of the specified diameter between existing ground level and 10 m depth	m				
3.11.3	C81	As Item C80 but between 10 and 20 m depth	m				
3.11.4	C82	As Item C80 but between 20 and 30 m depth	m				
3.11.5	C83	As Item C80 but between 30 and 40 m depth	m				
3.11.6	C84	As Item C80 but between 40 and 50 m depth	m				
3.11.7	C85	Extra over Items C80 to C84 for use of semi-rigid core liner	m				
3.11.8	C86	Extra over Items C80 to C84 for coring inclined sonic drill hole	m				
3.11.9	C87	Sonic drill in hard strata to obtain cores of the specified diameter between existing ground level and 10 m depth	m				
3.11.10	C88	As item C87 but between 10 and 20 m depth	m				
3.11.11	C89	As item C87 but between 20 and 30 m depth	m				
3.11.12	C90	As item C87 but between 30 and 40 m depth	m				
3.11.13	C91	As item C87 but between 40 and 50 m depth	m				
3.11.14	C92	Extra over Items C87 to C91 for use of semi rigid liner	m				
3.11.15	C93	Extra over Items C87 to C91 for coring inclined sonic drill hole	m				
3.11.16	C94	Backfill sonic drill hole with cement/bentonite grout or bentonite pellets	m				
Section Sub Total							-

3.12 Schedule D – Pitting and Trenching: Inspection Pits						
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.12.1	D1	Excavate inspection pit by hand to 1.2m.	nr.	1		
3.12.2	D2	Extra over item D1 for breaking out surface obstructions.	h			

Section Sub Total	65.00
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3.13 Schedule D – Pitting and Trenching: Trial Pits and Trenches

	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.13.1	D3	Move equipment to the site of each trial pit or trench if not greater than 4.5 m depth	nr			
3.13.2	D4	Extra over Item D3 for setting up on a slope of gradient greater than 20%	nr			
3.13.3	D5	Extra over Item D3 for trial pit or trench between 4.5 and 6 m depth	nr			
3.13.4	D6	Excavate trial pit between existing ground level and 3.0 m depth	m			
3.13.5	D7	As Item D6 but between 3.0 and 4.5 m depth	m			
3.13.6	D8	As Item D6 but between 4.5 and 6 m depth	m			
3.13.7	D9	Excavate trial trench between existing ground level and 3.0 m depth	m3			
3.13.8	D10	As Item D9 between 3.0 and 4.5 m depth	m3			
3.13.9	D11	As Item D9 between 4.5 and 6 m depth	m3			
3.13.10	D12	Extra over Items D5 to D11 inclusive for breaking out hard material or surface obstructions	h			
3.13.11	D13	Standing time for excavation plant, equipment and crew for machine dug trial pit or trench	h			

Section Sub Total	-
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3.14 Schedule D – Pitting and Trenching: Observation pits and trenches

	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.14.1	D14	Move equipment to the site of each observation pit or trench of not greater than 4.5 m depth	nr			
3.14.2	D15	Extra over Item D14 for setting up on a slope of gradient greater than 20%	nr			
3.14.3	D16	Extra over Item D14 for trial pit or trench between 4.5 and 6 m depth	m			
3.14.4	D17	Excavate observation pit between existing ground level and 3.0 m depth	m			
3.14.5	D18	As Item D17 but between 3.0 and 4.5 m depth	m			
3.14.6	D19	As Item D17 but between 4.5 and 6 m depth	m			
3.14.7	D20	Extra over Item D17 for hand excavation	m			
3.14.8	D21	Excavate observation trench between existing ground level and 3.0 m depth	m3			
3.14.9	D22	As Item D21 but between 3.0 and 4.5 m depth	m3			
3.14.10	D23	As Item D21 but between 4.5 and 6 m depth	m3			
3.14.11	D24	Extra over Item D21 for hand excavation	m3			
3.14.12	D25	Extra over Items D17 to D19 and D21 to D23 for breaking out hard strata or obstructions	h			

3.14.13	D26	Extra over Items D17 and D21 for breaking out hard strata or obstructions by hand	h		
3.14.14	D27	Standing time for excavation plant, equipment and crew for machine dug observation pit or trench	h		
3.14.15	D28	Standing time for excavation plant, equipment and crew for hand dug observation pit or trench	h		
Section Sub Total					-

3.15 Schedule D – Pitting & Trenching: Provision of Pitting Crew & Equipment						
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.15.1	D29	Provision of excavation plant equipment and crew for machine dug trial pits or trenches as directed by the Investigation Supervisor; maximum depth 3.0 m	day			
3.15.2	D30	As item D29 but between 3.0 and 4.5 m depth	day			
3.15.3	D31	As item D29 but between 4.5 and 6 m depth	day			
3.15.4	D32	Provision of excavation plant, equipment and crew for machine dug observation pit or trench as directed by the Investigation Supervisor; maximum depth 3.0 m	day			
3.15.5	D33	As Item D32 but between 3.0 and 4.5 m depth	day			
3.15.6	D34	As Item D32 but between 4.5 and 6.0 m depth	day			
3.15.7	D35	As Item D32 but for hand excavation	day			
3.15.8	D36	Extra over items D32 to D34 for breaking out hard strata or obstructions	day			
Section Sub Total						-

3.16 Schedule D – Pitting and Trenching: General						
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.16.1	D37	Bring pump to the position of each exploratory pit or trench	nr			
3.16.2	D38	Pump water from pit or trench	h			
3.16.3	D39	Extra over Item D38 for temporary storage, treatment and disposal of contaminated water	Provisional sum			
3.16.4	D40	Leave open observation pit or trench	m2/day			
3.16.5	D41	Leave open trial pit or trench	m2/day			
Section Sub Total						-

3.17 Schedule E - Sampling & Monitoring During Intrusive Investigation:						
	Note	Note Details				
3.17.1	Note	Geotechnical Purposes				
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.17.2	E1	Small disturbed sample	nr.			
3.17.3	E2	Bulk disturbed sample	nr.			

3.17.4	E3	Large bulk disturbed sample	nr.		
3.17.5	E4.1	Open-tube sample using thick-walled (OS-TK/W) sampler	nr.		
3.17.6	E4.2	Open-tube sample using thin-walled (OS-T/W) sampler	nr.		
3.17.7	E5	Piston sample	nr.		
3.17.8	E6	Groundwater sample	nr.		
3.17.9	E7	Ground gas sample	nr.		
3.17.10	E8	Cut, prepare and protect core sub-sample	nr.		
Section Sub Total					-

3.18 Schedule E - Sampling & Monitoring During Intrusive Investigation:

	Note	Note Details				
3.18.1	Note	Continuous or Semi-continuous sampling				
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.18.2	E9	Move Delft continuous or Mostap semi-continuous sampling plant and equipment to the site of each exploratory hole and set up	nr.			
3.18.3	E10	Extra over Item E9 for setting up on a slope of gradient greater than 20%	nr.			
3.18.4	E11	Break out surface obstruction where present at exploratory hole	h			
3.18.5	E12	Advance sampler between existing ground level and 10 m depth	m			
3.18.6	E13	As item E12 but between 10 and 20 m depth	m			
Section Sub Total						-

3.19 Schedule E - Sampling & Monitoring During Intrusive Investigation:

	Note	Note Details				
3.19.1	Note	Containers for contamination assessment and WAC testing				
	Item Reference	Description	Unit of Measure ment	Quantity	Unit Price	Price
3.19.2	E14.1	Provision of containers and collection of samples for contamination Suite E (S1.20.3)	nr.			
3.19.3	E14.2	Provision of containers and collection of samples for contamination Suite F (S1.20.3)	nr.			
3.19.4	E14.3	Provision of containers and collection of samples for contamination Suite G (S1.20.3)	nr.			
3.19.5	E15.1	Provision of containers and collection of samples for WAC Suite H (S1.20.5)	nr.			
3.19.6	E15.2	Provision of containers and collection of samples for WAC Suite I (S1.20.5)	nr.			
3.19.7	E15.3	Provision of containers and collection of samples for WAC Suite J (S1.20.5)	nr.			
Section Sub Total						-

3.20 Schedule F - Probing and Penetration Testing: Dynamic probing

	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.20.1	F1	Bring dynamic probe equipment (DPH or DPSH) to the site of each test location	nr			
3.20.2	F2	Extra over item F1 for setting up on a slope of gradient greater than 20%	nr			
3.20.3	F3	Carry out dynamic probe test from existing ground level to 5 m depth	m			
3.20.4	F4	As item F3 but between 5 and 10 m depth	m			
3.20.5	F5	As item F3 but between 10 and 20 m depth	m			
3.20.6	F6	Standing time for dynamic probe test equipment and crew	h			
3.20.7	F7	Provision of dynamic probing equipment and crew for probing as directed by the Investigation Supervisor; maximum depth 20 m	day			
3.20.8	F8	Bring hand operated dynamic probing equipment (DPM) to the site of each borehole.	nr			
3.20.9	F9	Carry out hand probing between existing ground level and 10m depth.	m			
Section Sub Total						-

3.21 Schedule F - Probing and Penetration Testing: Cone penetration testing						
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.21.1	F10	Bring static cone penetration test equipment to the site of each test location	nr			
3.21.2	F11	Extra over Item F8 for setting up on a slope of gradient greater than 20%	nr			
3.21.3	F12	Carry out static cone penetration test measuring both cone and sleeve resistance from existing ground level to 10 m depth	m			
3.21.4	F13	As Item F12 but between 10 and 20 m depth	m			
3.21.5	F14	As Item F12 but between 20 and 30 m depth	m			
3.21.6	F15	As Item F12 but between 30 and 40 m depth	m			
3.21.7	F16	As Item F12 but between 40 and 50 m depth	m			
3.21.8	F17	Extra over Items F12 to F16 for use of piezo cone	m			
3.21.9	F18	Extra over Items F12 to F16 for interpretation of CPT/CPTU data	m			
3.21.10	F19	Carry out dissipation test up to 1 hour duration	nr			
3.21.11	F20	Extra over Item F19 for test duration exceeding 1 hour	h			
3.21.12	F21	Standing time for static cone penetration test equipment and crew	h			
3.21.13	F22	Extra over items F12 to F16 for use of seismic cone	m			
3.21.14	F23	Carry our seismic cone test	nr			
3.21.15	F24	Extra over F23 for interpretation of seismic cone data	nr			
3.21.16	F25	Standing time for seismic cone test equipment and crew	h			

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3.22 Schedule G - Geophysical Testing: Land based mapping techniques

	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.22.1	G1	Collect and process conductivity, magnetic or gravimetric data	lin.m			
3.22.2	G2	Collect and process microgravity data at each measuring station	nr			

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3.23 Schedule G - Geophysical Testing: Land based profiling techniques

	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.23.1	G3	Collect and process resistivity, seismic or ground probing radar data	lin.m			

Section Sub Total	-
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3.24 Schedule G - Geophysical Testing: Land based borehole techniques

	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.24.1	G4	Move down-hole logging equipment to the site of each exploratory hole and set up	nr			
3.24.2	G5	Carry out down-hole calliper, natural gamma, resistivity (where hole is uncased), fluid temperature, conductivity and fluid flow logging	m			

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3.25 Schedule G - Geophysical Testing: Overwater

	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.25.1	G6	Collect and process echo sounding, side-scan sonar, magnetic, conductivity, seismic reflection, seismic refraction, resistivity imaging or ground probing radar data	day			

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3.26 Schedule G - Geophysical Testing: Wireline Geophysics

	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.26.1	G7	Mobilisation of Wireline field crew and winch/recording equipment	sum			
3.26.2	G8	Mobilisation of caliper sonde	sum			
3.26.3	G9	Mobilisation of Natural Gamma Sonde	sum			
3.26.4	G10	Mobilisation of Formation Resistivity Sonde	sum			
3.26.5	G11	Mobilisation of Sonic Sonde	sum			
3.26.6	G12	Mobilisation of Gamma-Gamma density sonde	sum			
3.26.7	G13	Mobilisation of Acoustic imaging sonde	sum			

3.26.8	G14	Mobilisation of Optical Imaging Sonde	sum		
3.26.9	G15	Mobilisation of Downhole camera	sum		
3.26.10	G16	Mobilisation of Sonic Cavity system	sum		
3.26.11	G17	Mobilisation of Laser Cavity System	sum		
3.26.12	G18	Mobilisation of Neutron Porosity Sonde	sum		
3.26.13	G19	Provision of field crew with wireline system	day		
3.26.14	G19.1	Provision of and data acquisition with Caliper sonde	day		
3.26.15	G19.2	Provision of and data acquisition with Gamma-Gamma Density Sonde	day		
3.26.16	G19.3	Provision of and data acquisition with Formation Resistivity Sonde	day		
3.26.17	G19.4	Provision of and data acquisition with Sonic sonde	day		
3.26.18	G19.5	Provision of and data acquisition with Gamma density sonde	day		
3.26.19	G19.6	Provision of and data acquisition with Acoustic Imaging sonde	day		
3.26.20	G19.7	Provision of and data acquisition with Optical Imaging sonde	day		
3.26.21	G19.8	Provision of and data acquisition with Downhole Camera	day		
3.26.22	G19.9	Provision of and data acquisition with Sonic Cavity Sonde	day		
3.26.23	G19.10	Provision of and data acquisition with Laser Cavity Sonde	day		
3.26.24	G19.11	Provision of and data acquisition with Neutron Porosity Sonde	day		
3.26.25	G19.12	Process and analysis of 16m-1	m		
3.26.26	G19.13	Process and analysis of 16m-2	m		
3.26.27	G19.14	Process and analysis of 16m-3	m		
3.26.28	G19.15	Process and analysis of 16m-4	m		
3.26.29	G19.16	Process and analysis of 16m-5	m		
3.26.30	G19.17	Process and analysis of 16m-6	m		
3.26.31	G19.18	Process and analysis of 16m-7	m		
3.26.32	G19.19	Process and analysis of 16m-8	m		
3.26.33	G19.20	Process and analysis of 16m-9	m		
3.26.34	G19.21	Process and analysis of 16m-10	m		
3.26.35	G19.22	Process and analysis of 16m-11	m		
3.26.36	G20	Draft report	sum		
3.26.37	G21	Final report	sum		
3.26.38	G22	Additional hard copies	item		
Section Sub Total					-

3.27 Schedule G - Geophysical Testing: Electrical Resistivity Tomography (ERT)						
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.27.1	G23	Mobilisation of ERT field crew and equipment	sum			
3.27.2	G24	Provision of field crew and ERT equipment	day			
3.27.3	G25	Setup at survey lines	nr			
3.27.4	G26	Data acquisition & processing per electrode	nr			

3.27.5	G27	Draft report prior to intrusive investigation (including recommendation for intrusive locations)	sum		
3.27.6	G28	Re-analysis with incorporation of intrusive information per electrode	nr		
3.27.7	G29	Final report	sum		
3.27.8	G30	Additional hard copies	item		
Section Sub Total					-

3.28 Schedule G - Geophysical Testing: Electrical Resistivity Tomography (ERT)						
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.28.1	G31	Mobilisation of SR field crew and equipment	sum			
3.28.2	G32	Provision of field crew and SR equipment	day			
3.28.3	G33	Setup at survey lines	nr			
3.28.4	G34	Data acquisition & processing per geophone	nr			
3.28.5	G35	Draft report prior to intrusive investigation (incl recommendation for intrusive locations)	sum			
3.28.6	G36	Re-analysis with incorporation of intrusive information per geophone	nr			
3.28.7	G37	Final report	sum			
3.28.8	G38	Additional hard copies	item			
Section Sub Total						-

3.29 Schedule G - Geophysical Testing: Microgravity (MG)						
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.29.1	G39	Mobilisation of microgravity field crew and equipment	sum			
3.29.2	G40	Provision of field crew and microgravity equipment	day			
3.29.3	G41	Data acquisition - microgravity measurement per station	nr			
3.29.4	G42	Provision of suitable digital elevation model	m2			
3.29.5	G43	Processing & reduction to residual Bouguer per station	nr			
3.29.6	G44	Draft report prior to intrusive investigation (incl recommendation for intrusive locations)	sum			
3.29.7	G45	Reanalysis with incorporation of intrusive information per station	nr			
3.29.8	G46	2-D Modelling per station	nr			
3.29.9	G47	3-D Modelling per station	nr			
3.29.10	G48	Final report	sum			
3.29.11	G49	Additional hard copies	item			
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3.30 Schedule G - Geophysical Testing: Multichannel Analysis of Surface Waves (MASW)						
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price

3.30.1	G50	Mobilisation of MASW field crew and equipment	sum		
3.30.2	G51	Provision of field crew and MASW equipment	day		
3.30.3	G52	Data acquisition & processing - reconnaissance per shot	nr		
3.30.4	G53	Data acquisition & processing - detailed per shot	nr		
3.30.5	G54	Draft report prior to intrusive investigation (incl recommendation for intrusive locations)	sum		
3.30.6	G55	Reanalysis with incorporation of intrusive information per shot	nr		
3.30.7	G56	Final report	sum		
3.30.8	G57	Additional hard copies	item		
Section Sub Total					-

3.31 Schedule G - Geophysical Testing: Ground Penetrating Radar (GPR)						
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.31.1	G58	Mobilisation of GPR field crew and equipment	sum			
3.31.2	G59	Provision of field crew and GPR equipment	day			
3.31.3	G60	Data acquisition & processing - single frequency	linear m			
3.31.4	G61	Data acquisition & processing - dual frequency	linear m			
3.31.5	G62	Draft report prior to intrusive investigation (incl recommendation for intrusive locations)	sum			
3.31.6	G63	Reanalysis with incorporation of intrusive information - single frequency	linear m			
3.31.7	G64	Reanalysis with incorporation of intrusive information - dual frequency	linear m			
3.31.8	G65	Final report	sum			
3.31.9	G66	Additional hard copies	item			
Section Sub Total						-

3.32 Schedule G - Geophysical Testing: Frequency Domain Electromagnetics (F-EM)						
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.32.1	G67	Mobilisation of F-EM field crew and equipment	sum			
3.32.2	G68	Provision of field crew and F-EM equipment	day			
3.32.3	G69	Data acquisition & processing - EM38	linear m			
3.32.4	G70	Data acquisition & processing - EM31	linear m			
3.32.5	G71	Data acquisition & processing - EM34	linear m			
3.32.6	G72	Draft report prior to intrusive investigation (incl recommendation for intrusive locations)	sum			
3.32.7	G73	Reanalysis with incorporation of intrusive information - EM38	linear m			
3.32.8	G74	Reanalysis with incorporation of intrusive information - EM31	linear m			
3.32.9	G75	Reanalysis with incorporation of intrusive information - EM34	linear m			

3.32.10	G76	Final report	sum		
3.32.11	G77	Additional hard copies	item		
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3.33 Schedule G - Geophysical Testing: Time Domain Electromagnetics						
	Note	Note Details				
3.33.1	Note	Time Domain Electromagnetics (T-EM) - to be EM61/EM61 Mark 2				
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.33.2	G78	Mobilisation of T-EM field crew and equipment	sum			
3.33.3	G79	Provision of field crew and T-EM equipment	day			
3.33.4	G80	Data acquisition & processing	linear m			
3.33.5	G81	Draft report prior to intrusive investigation (incl recommendation for intrusive locations)	sum			
3.33.6	G82	Reanalysis with incorporation of intrusive information	linear m			
3.33.7	G83	Final report	sum			
3.33.8	G84	Additional hard copies	item			
Section Sub Total						-

3.34 Schedule G - Geophysical Testing: Vertical Magnetic Gradiometry (MAG)						
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.34.1	G85	Mobilisation of MAG field crew and equipment	sum			
3.34.2	G86	Provision of field crew and MAG equipment	day			
3.34.3	G87	Data acquisition & processing	linear m			
3.34.4	G88	Draft report prior to intrusive investigation (incl recommendation for intrusive locations)	sum			
3.34.5	G89	Reanalysis with incorporation of intrusive information	linear m			
3.34.6	G90	Final report	sum			
3.34.7	G91	Additional hard copies	item			
Section Sub Total						-

3.35 Schedule G - Geophysical Testing: Utility Clearance (UTL)						
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.35.1	G92	Mobilisation of UTL field crew and equipment	sum			
3.35.2	G93	Provision of field crew and UTL equipment	day			
3.35.3	G94	Data acquisition & processing	m2			
3.35.4	G95	Visual inspection per feature/structure	nr			
3.35.5	G96	Draft report prior to intrusive investigation (incl recommendation for intrusive locations)	sum			
3.35.6	G97	Reanalysis with incorporation of intrusive information - if applicable	linear m			
3.35.7	G98	Final report	sum			

3.35.8	G99	Additional hard copies	nr		
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3.36 Schedule G - Geophysical Testing: Surface UXO Clearance (sUXO)						
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.36.1	G100	Mobilisation of sUXO field crew and equipment	sum			
3.36.2	G101	Provision of field crew and sUXO equipment	day			
3.36.3	G102	Data acquisition & processing	linear m			
3.36.4	G103	Draft report prior to intrusive investigation (incl recommendation for intrusive locations)	sum			
3.36.5	G104	Reanalysis with incorporation of intrusive information	linear m			
3.36.6	G105	Final report	sum			
3.36.7	G106	Additional hard copies	item			
Section Sub Total						-

3.37 Schedule G - Geophysical Testing: Cross-Hole Seismic Tomography (XHT)						
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.37.1	G107	Mobilisation of XHT field crew and equipment (Vp)	sum			
3.37.2	G108	Provision of field crew and XHT equipment (Vp)	day			
3.37.3	G109	Set up at test borehole panel location	nr			
3.37.4	G110	Data acquisition	m			
3.37.5	G111	2-D Processing & tomographic analysis	m			
3.37.6	G112	2.5-D Processing & tomographic analysis	m			
3.37.7	G113	Draft report	sum			
3.37.8	G114	Final report	sum			
3.37.9	G115	Additional hard copies	item			
Section Sub Total						-

3.38 Schedule G - Geophysical Testing: P&S Wave Direct Cross-Hole Seismic (XH-PS)						
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.38.1	G116	Mobilisation of XH-PS field crew and equipment (Vph & Vshv sources)	sum			
3.38.2	G117	Additional mobilisation Vshh source	sum			
3.38.3	G118	Provision of field crew and XH-PS equipment (Vph & Vshv sources)	day			
3.38.4	G119	Additional provision of Vshh source	day			
3.38.5	G120	Set up at test borehole locations	nr			
3.38.6	G121	Data acquisition - Vph & Vshv sources at 1m depth increments	m			
3.38.7	G122	Data acquisition - Vshh source at 1 m depth increments	m			
3.38.8	G123	Data acquisition - borehole verticality	m			
3.38.9	G124	Processing & analysis - Vph & Vshv velocities & elastic moduli	m			

3.38.10	G125	Processing & analysis - Vshh velocities & elastic moduli	m			
3.38.11	G126	Damping ratio - Vshv	m			
3.38.12	G127	Damping ratio - Vshh	m			
3.38.13	G128	Draft report	sum			
3.38.14	G129	Final report	sum			
3.38.15	G130	Additional hard copies	item			
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3.39 Schedule G - Geophysical Testing: P&S Wave Down-Hole Seismic (DH-PS)						
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.39.1	G131	Mobilisation of DH-PS field crew and equipment (Vpv & Vsvh sources)	sum			
3.39.2	G132	Provision of field crew and DH-PS equipment (Vpv & Vsvh sources)	day			
3.39.3	G133	Setup at test borehole location	nr			
3.39.4	G134	Data acquisition - Vpv & Vsvh sources taken at 1 m depth increments	m			
3.39.5	G135	BH 1 - Processing & analysis - Vpv & Vsvh velocities & elastic moduli	m			
3.39.6	G136	Draft report	sum			
3.39.7	G137	Final report	sum			
3.39.8	G138	Additional hard copies	item			
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3.40 Schedule G - Geophysical Testing: Seismic CPT (sCPT)						
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.40.1	G139	Mobilisation of sCPT field crew and equipment (CPT truck & Vsvh source)	sum			
3.40.2	G140	Mobilisation of sCPT field crew and equipment (CPT crawler & Vsvh source)	sum			
3.40.3	G141	Provision of field crew and sCPT equipment (Vsvh source)	day			
3.40.4	G142	Setup at SCPT location	nr			
3.40.5	G143	Data acquisition Vsvh source) - 1m depth increments	m			
3.40.6	G144	Processing & analysis - Vsvh velocities & shear modulus	m			
3.40.7	G145	Draft report	sum			
3.40.8	G146	Final report	sum			
3.40.9	G147	Additional hard copies	item			
Section Sub Total						-

3.41 Schedule G - Geophysical Testing: Magcone Intrusive UXO Clearance (uCPT)						
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.41.1	G148	Mobilisation of uCPT field crew and equipment (CPT truck)	sum			
3.41.2	G149	Mobilisation of uCPT field crew and equipment (CPT crawler)	sum			

3.41.3	G150	Provision of field crew and uCPT equipment (magcone)	day		
3.41.4	G151	Setup at probe location	nr		
3.41.5	G152	Magcone intrusive UXO clearance data acquisition	m		
3.41.6	G153	Processing & analysis	m		
3.41.7	G154	Draft report (includes UXO clearance certificate and summary of results)	sum		
3.41.8	G155	Final report	sum		
3.41.9	G156	Additional hard copies	item		
Section Sub Total					-

3.42 Schedule H - In situ testing						
	Item Reference	Description	Unit of Measurem ent	Quantity	Unit Price	Price
3.42.1	H1	Standard penetration test in borehole	nr			
3.42.2	H2	Standard penetration test in rotary drill hole	nr			
	Note	Note Details				
3.42.3	H3	In situ density testing				
	Item Reference	Description	Unit of Measurem ent	Quantity	Unit Price	Price
3.42.4	H3.1	Small pouring cylinder method	nr			
3.42.5	H3.2	Large pouring cylinder method	nr			
3.42.6	H3.4	Core cutter method	nr			
3.42.7	H3.5	Nuclear method	day			
3.42.8	H3.6	Water replacement method	nr			
3.42.9	H4	California Bearing Ratio test	nr			
3.42.10	H5	Van shear strength test in borehole	nr			
3.42.11	H6	Penetration vane test, penetration from ground level	nr			
3.42.12	H7	Hand penetrometer test (set of 3 readings)	nr			
3.42.13	H8	Hand vane test (set of 3 readings)	nr			
Section Sub Total						-

3.43 Schedule F – In situ testing: Other Tests						
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.43.1	H9	Apparent resistivity of soil	nr			
3.43.2	H10	Redox Potential	nr			
Section Sub Total						-

3.44 Schedule H - In Situ Testing: Permeability Testing						
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.44.1	H11	Set up and dismantle variable head permeability test in borehole	nr			
3.44.2	H12	Set up and dismantle constant head permeability test in borehole	nr			
3.44.3	H13	Carry out permeability test in borehole	h			

3.44.4	H14	Set up and dismantle variable head permeability test in standpipe/standpipe piezometer	nr		
3.44.5	H15	Set up and dismantle constant head permeability test in standpipe/standpipe piezometer	nr		
3.44.6	H16	Carry out permeability test in standpipe/standpipe piezometer	h		
3.44.7	H17	Set up and dismantle variable head permeability test in rotary drill hole	nr	1	
3.44.8	H18	Set up and dismantle constant head permeability test in rotary drill hole	nr		
3.44.9	H19	Carry out permeability test in rotary drill hole	h	1	
3.44.10	H20	Set up and dismantle single packer permeability test	nr		
3.44.11	H21	Set up and dismantle double packer permeability test	nr		
3.44.12	H22	Carry out single packer permeability test	h		
3.44.13	H23	Carry out double packer permeability test	h		
Section Sub Total					180.00

3.45 Schedule H - In Situ Testing: Self-boring Pressuremeter						
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.45.1	H24	Move and set up self-boring pressuremeter and exploratory hole-forming equipment to site of each exploratory hole	nr			
3.45.2	H25	Extra over item H24 for setting up on a slope of gradient greater than 20%	nr			
3.45.3	H26	Advance exploratory hole to pressuremeter test location between ground level and 10 m depth	m			
3.45.4	H27	As Item H76 but between 10 and 20 m depth	m			
3.45.5	H28	As Item H27 but between 20 and 30 m depth	m			
3.45.6	H29	Advance exploratory hole through hard stratum or obstruction	h			
3.45.7	H30	Self bore to form test pocket between ground level and 10 m depth	m			
3.45.8	H31	As Item H31 but between 10 and 20 m depth	m			
3.45.9	H32	As Item H31 but between 20 and 30 m depth	m			
3.45.10	H33	Carry out pressuremeter test, provision of data and report, test duration not exceeding 1.5 hours	nr			
3.45.11	H34	Extra over item H34 for test duration in excess of 1.5 hours	h			
	Note	Note Details				
3.45.12	H35	Carry out additional calibrations as instructed by the Investigative Supervisor				
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.45.13	H35.1	Displacement transducers	nr			
3.45.14	H35.2	Pore pressure transducers	nr			
3.45.15	H35.3	Total pressure transducers	nr			
3.45.16	H35.4	Membrane stiffness	nr			

3.45.17	H36	Carry out membrane compression calibrations as instructed by the Investigative Supervisor	nr		
3.45.18	H37	Backfill exploratory hole for pressuremeter with cement/bentonite grout	m		
3.45.19	H38	Standing time for self-boring pressuremeter and crew	h		
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3.46 Schedule H - In Situ Testing: High Pressure Dilatometer						
	Item Reference	Description	Unit of Measurem ent	Quantity	Unit Price	Price
3.46.1	H39	Move and set-up high pressure dilatometer and exploratory hole-forming equipment to site of each exploratory hole	nr			
3.46.2	H40	Extra over ItemH39 for setting up on a slope of gradient greater than 20%	nr			
3.46.3	H41	Advance exploratory hole to dilatometer test depth between ground level and 10 m depth	m			
3.46.4	H42	As Item H41 but between 10 and 20 m depth	m			
3.46.5	H43	As Item H41 but between 20 and 30 m depth	m			
3.46.6	H44	Advance exploratory hole through hard stratum or obstruction	h			
3.46.7	H45	Rotary core to form dilatometer test pocket between ground level and 10 m depth	m			
3.46.8	H46	As Item H45 but between 10 and 20 m depth				
3.46.9	H47	As Item H45 but between 20 and 30 m depth	m			
3.46.10	H48	Carry out dilatometer test, provision of data and report, test duration not exceeding 1.5. hours	h			
3.46.11	H49	Extra over Item H48 for test duration in excess of 1.5 hours	h			
	Note	Note Details				
3.46.12	H50	Carry out additional calibrations as instructed by the Investigation Supervisor				
	Item Reference	Description	Unit of Measurem ent	Quantity	Unit Price	Price
3.46.13	H50.1	Displacement Transducers	nr			
3.46.14	H50.2	Total Pressure Transducers	nr			
3.46.15	H50.3	Membrane stiffness	nr			
	Note	Note Details				
3.46.16	H51	Carry out membrane compression calibrations as instructed by the Investigation Supervisor				
	Item Reference	Description	Unit of Measurem ent	Quantity	Unit Price	Price
3.46.17	H52	Backfill exploratory hole for high pressure dilatometer with cement/bentonite grout	m			
3.46.18	H53	Standing time for dilatometer equipment and crew	h			
Section Sub Total						-

3.47 Schedule H - In Situ Testing: Driven or Push-in Pressuremeter
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	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.47.1	H54	Move and set up pressuremeter and exploratory hole-forming equipment to site of each exploratory hole	nr			
3.47.2	H55	Extra over Item H54 for setting up on a slope of gradient greater than 20%	nr			
3.47.3	H56	Advance exploratory hole to pressuremeter test location between ground level and 10 m depth	m			
3.47.4	H57	As Item H57 but between 10 and 20 m depth	m			
3.47.5	H58	As item H57 but between 20 and 30 m depth	m			
3.47.6	H59	Advance exploratory hole through hard stratum or obstruction	h			
3.47.7	H60	Install pressuremeter at base of exploratory hole between ground level and 10 m depth	m			
3.47.8	H61	As Item H61 but between 10 and 20 m depth	m			
3.47.9	H62	As Item H61 but between 20 and 30 m depth	m			
3.47.10	H63	Carry out pressuremeter test, provision of data and report, test duration not exceeding 1.5 hours	nr			
3.47.11	H64	Extra over Item H64 for test duration in excess of 1.5 hours	h			
	Note	Note Details				
3.47.12	H65	Carry out additional calibrations as instructed by the Investigation Supervisor				
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.47.13	H65.1	Displacement Transducers	nr			
3.47.14	H65.2	Pore pressure Transducers	nr			
3.47.15	H65.3	Total pressure Transducers	nr			
3.47.16	H65.4	Membrane stiffness	nr			
3.47.17	H66	Carry out membrane compression calibrations as instructed by the Investigation Supervisor	nr			
3.47.18	H67	Backfill exploratory hole for pressuremeter with cement/bentonite grout	m			
3.47.19	H68	Standing time for driven or push-in self boring pressuremeter and crew	h			
Section Sub Total						

3.48 Schedule H - In Situ Testing: Menard Pressuremeter						
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.48.1	H69	Move and set-up pressuremeter and exploratory hole-forming equipment to site of each exploratory hole	nr			
3.48.2	H70	Extra over Item H69 for setting up on a slope of gradient greater than 20%	nr			
3.48.3	H71	Advance exploratory hole to presssuremeter test location between ground level and 10m depth	m			
3.48.4	H72	As Item H72 but between 10 and 20 m depth	m			

3.48.5	H73	As Item H72 but between 20 and 30 m depth	m		
3.48.6	H74	Advance exploratory hole through hard stratum or obstruction	h		
3.48.7	H75	Rotary core to form pressuremeter test pocket between ground level and 10 m depth	m		
3.48.8	H76	As item H76 but between 10 and 20 m depth	m		
3.48.9	H77	As item H76 but between 20 and 30 m depth	m		
3.48.10	H78	Carry out Menard pressuremeter test	nr		
3.48.11	H79	Backfill exploratory hole for pressuremeter with cement/bentonite grout	m		
3.48.12	H80	Standing time for Menard pressuremeter and crew	h		
Section Sub Total					-

3.49 Schedule H - In Situ Testing: Soil Infiltration Test						
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.49.1	H81	Provide equipment and carry out set of 3 infiltration tests at selected location up to 1 day, including hire of excavation equipment	nr			
3.49.2	H82	Extra over Item H82 for additional days	day			
3.49.3	H83	Calculation of infiltration rate for each tested location	nr			
Section Sub Total						

3.50 Schedule H - In Situ Testing: Miscellaneous site testing						
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.50.1	H84	Reading of free product level in borehole using an interface probe	nr			
3.50.2	H85	Provide contamination screening test kits per sample	nr			
3.50.3	H86	Carry out headspace testing by FID/PID	nr			
Section Sub Total						

3.51 Schedule I - Instrumentation: Standpipes and piezometers						
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.51.1	I1	Backfill exploratory hole with cement/bentonite grout below standpipe or standpipe piezometer	m			
3.51.2	I2	Provide and install standpipe (19mm)	m			
3.51.3	I3	Provide and install standpipe piezometer (19mm)	m			
3.51.4	I4	Provide and install standpipe piezometer (50mm)	m			
3.51.5	I5	Provide and install standpipe piezometer (75mm)	m	84		
3.51.6	I6	Provide and install ground gas monitoring standpipe (19mm)	m			

3.51.7	I7	Provide and install ground gas monitoring standpipe (50mm)	m		
3.51.8	I8	Provide and install ground gas monitoring standpipe (75mm)	m		
3.51.9	I9	Provide and install headworks for ground gas monitoring standpipe, standpipe or standpipe piezometer	nr		
3.51.10	I10	Provide and install protective cover (flush)	nr		
3.51.11	I11	Provide and install protective cover (raised)	nr		
3.51.12	I12	Extra over Item I10 for heavy duty cover in highways	nr		
3.51.13	I13	Supply and erect protective fencing around standpipe or piezometer installation	nr		
3.51.14	I14	Supply and erect 1.5 m high marker post	nr		
Section Sub Total					1,050.00

3.52 Schedule I - Instrumentation: Standpipe and piezometer development						
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.52.1	I15.1	Supply equipment and personnel to carry out development by surging	nr			
3.52.2	I15.2	Develop standpipe or piezometer by surging	h			
3.52.3	I15.3	As Item I15.1 but by airlift pumping	nr			
3.52.4	I15.4	As Item I15.2 but by airlift pumping	h			
3.52.5	I15.5	As item I15.1 but by over pumping	h			
3.52.6	I15.6	As Item I15.2 but by over pumping	h			
3.52.7	I15.7	As Item I15.1 but by jetting	nr			
3.52.8	I15.8	As Item I15.2 but by jetting	h			
3.52.9	I15.9	Disposal of development water, not including chemical testing	Provisional sum			
Section Sub Total						-

3.53 Schedule I - Instrumentation: Inclinator						
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.53.1	I16	Supply and install inclinometer tubing in exploratory hole, not including hole formation	m			
3.53.2	I17	Hire of inclinometer readout unit	day			
3.53.3	I18	Carry out base set of inclinometer readings per installation and installation report	h			
3.53.4	I19	Provide and install protective cover (flush)	nr			
3.53.5	I20	Provide and install protective cover (raised)	nr			
Section Sub Total						-

3.54 Schedule I - Instrumentation: Slip indicators						
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.54.1	I21	Supply and install slip indicators in exploratory hole, including brass probe and not including hole formation	nr			
3.54.2	I22	Provide and install protective cover (flush)	nr			

3.54.3	I23	Provide and install protective cover (raised)	nr		
Section Sub Total					-

3.55 Schedule I - Instrumentation: Extensometers						
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.55.1	I24	Supply and install RIGID borehole rod extensometer - stainless steel rod - incl. sleeves, anchors, reference head, protective cap and lockable metal surface flush cover to manufacturers specification	m			
3.55.2	I25	E/O I24 for additional rods within the same installation (max 3No.)	additional rod			
3.55.3	I26	Supply and install FLEXIBLE borehole rod extensometer - fibreglass or carbon fibre rod - incl. sleeves, anchors, reference head, protective cap and lockable metal surface flush cover to manufacturers specification	m			
3.55.4	I27	E/O I26 for additional rods within the same installation (max 3No.)	additional rod			
3.55.5	I28	Provide to the Employer all associated mechanical measuring equipment for borehole rod extensometer measuring	sum			
Section Sub Total						-

3.56 Schedule J - Installation Monitoring and Sampling (during fieldwork period):						
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.56.1	J1	Reading of water level in standpipe or standpipe piezometer during fieldwork period	nr			
3.56.2	J2	Ground gas measurement in gas monitoring standpipe during fieldwork period	nr			
3.56.3	J3	Set of inclinometer readings (as defined in Specification Clause 11.6.5 or Schedule S1.16.7)per installation during fieldwork period and report results	nr			
3.56.4	J4	Check for ground slippage in slip indicator installation during fieldwork period	nr			
3.56.5	J5	Water sample from standpipe or standpipe piezometer during fieldwork period, including purging or micro-purging up to 3 hours	nr			
3.56.6	J6	Extra over item J5 for purging or micro-purging in excess of 3 hours	h			
3.56.7	J7	Ground gas sample from gas monitoring standpipe during fieldwork period	nr			
3.56.8	J8	Reading of free product level in standpipe using an interface probe during fieldwork period	nr			
Section Sub Total						-

3.57 Schedule J - Installation monitoring and sampling (post fieldwork period)						
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price

3.57.1	J9	Return visit to the site following completion of fieldwork to take readings in, or recover samples from, installations	per visit		
3.57.2	J10	Extra over Item J9 for reading of water level in standpipe or standpipe piezometer during return visit	nr		
3.57.3	J11	Extra over Item J9 for ground gas measurement in ground gas monitoring standpipe during return visit	nr		
3.57.4	J12	Extra over Item J9 for set of inclinometer readings (as defined in Specification Clause 11.6.5 or Schedule S1.16.7) per installation during a return visit and report results	nr		
3.57.5	J13	Extra over Item J9 to check for ground slippage in slip indicator installation during return visit to site	nr		
3.57.6	J14	Extra over Item J9 for water sample from standpipe or standpipe piezometer during return visit to site, including purging or micro-purging up to 3 hours	nr		
3.57.7	J15	Extra over Item J14 for purging or micro-purging in excess of 3 hours	h		
3.57.8	J16	Extra over Item J9 for ground gas sample from gas monitoring standpipe during return visit to site	nr		
3.57.9	J17	Extra over Item J9 for reading of free product level in standpipe using an interface probe during return visit to site	nr		
Section Sub Total					-

3.58 Schedule J - Surface water body sampling and testing

	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.58.1	J18	Surface water body sample taken during fieldwork period	nr			
3.58.2	J19	Surface water body sample taken during return visit to site	nr			
3.58.3	J20	Determination of dissolved oxygen, conductivity, pH and temperature of surface water body during fieldwork period	nr			
3.58.4	J21	Determination of dissolved oxygen, conductivity, pH and temperature of surface water body during return visit to site	nr			
Section Sub Total						-

3.59 Schedule K - Geotechnical laboratory testing: Classification

	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.59.1	K1.1	Moisture content	nr.			
3.59.2	K1.2	Liquid limit, plastic limit and plasticity index	nr.			
3.59.3	K1.3	Volumetric shrinkage	nr.			
3.59.4	K1.4	Linear shrinkage	nr.			
3.59.5	K1.5	Density by linear measurement	nr.			
3.59.6	K1.6	Density by immersion in water or water displacement	nr.			

3.59.7	K1.7	Dry density and saturation moisture content for chalk	nr.		
3.59.8	K1.8	Particle density by gas jar or pycnometer	nr.		
3.59.9	K1.9	Particle size distribution by wet sieving	nr.		
3.59.10	K1.10	Particle size distribution by dry sieving	nr.		
3.59.11	K1.11	Sedimentation by pipette	nr.		
3.59.12	K1.12	Sedimentation by hydrometer	nr.		
3.59.13	K1.13	Pre-sieve for item K1.12	nr.		
Section Sub Total					-

3.60 Schedule K - Geotechnical laboratory testing: Chemical and electrochemical						
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.60.1	K2.1	Organic matter content	nr.			
3.60.2	K2.2	Mass loss on ignition	nr.			
3.60.3	K2.3	Sulphate content of acid extract from soil	nr.			
3.60.4	K2.4	Sulphate content of water extract from soil	nr.			
3.60.5	K2.5	Sulphate content of groundwater	nr.			
3.60.6	K2.6	Carbonate content by rapid titration	nr.			
3.60.7	K2.7	Carbonate content by gravimetric method	nr.			
3.60.8	K2.8	Water soluble chloride content	nr.			
3.60.9	K2.9	Acid soluble chloride content	nr.			
3.60.10	K2.10	Total sulphur content	nr.			
3.60.11	K2.11	Total dissolved solids	nr.			
3.60.12	K2.12	pH value	nr.			
3.60.13	K2.13	Resistivity	nr.			
3.60.14	K2.14	Redox potential	nr.			
3.60.15	K2.15	Sulphide content	nr.			
Section Sub Total						-

3.61 Schedule K - Geotechnical laboratory testing: Compaction related						
	Item Reference	Description	Unit of Measurem ent	Quantity	Unit Price	Price
3.61.1	K3.1	Dry density/moisture content relationship using 2.5 kg rammer	nr			
3.61.2	K3.2	Dry density/moisture content relationship using 4.5 kg rammer	nr			
3.61.3	K3.3	Dry density/moisture content relationship using vibrating rammer	nr			
3.61.4	K3.4	Extra over Items K3.1, K3.2 and K3.3 for use of CBR mould	nr			
3.61.5	K3.5	Maximum and minimum dry density for granular soils	nr			
3.61.6	K3.6	Moisture Condition Value at natural moisture content	nr			
3.61.7	K3.7	Moisture Condition Value/moisture content relationship	nr			
3.61.8	K3.8	Chalk crushing value	nr			
3.61.9	K3.9	California Bearing Ratio on re-compacted disturbed sample	nr			
3.61.10	K3.10	Extra over Item K3.9 for soaking	day			
Section Sub Total						-

3.62 Schedule K - Geotechnical laboratory testing:						
	Note	Note Details				
3.62.1	Note	Compressibility, permeability and durability				
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.62.2	K4.1	One dimensional consolidation properties, test period 5 days	nr			
3.62.3	K4.2	Extra over Item K4.1 for test period in excess of 5 days	day			
3.62.4	K4.3	Measurements of swelling pressure, test period 2 days	nr			
3.62.5	K4.4	Measurement of swelling, test period 2 days	nr			
3.62.6	K4.5	Measurement of settlement on saturation test period 1 day	nr			
3.62.7	K4.6	Extra over Items K4.3 to K4.5 for test period in excess of 2 or 1 day(s)	day			
3.62.8	K4.7	Permeability by constant head method	nr			
3.62.9	K4.8	Dispersibility by pinhole method	nr			
3.62.10	K4.9	Dispersibility by crumb method	nr			
3.62.11	K4.10	Dispersibility by dispersion method	nr			
3.62.12	K4.11	Frost heave of soil	nr			
Section Sub Total						-

3.63 Schedule K - Geotechnical laboratory testing:						
	Note	Note Details				
3.63.1	Note	Consolidation and permeability in hydraulic cells				
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.63.2	K5.1	Consolidation properties of a 76 mm diameter specimen using a hydraulic cell, test period 4 days	nr			
3.63.3	K5.2	As Item K5.1 but using a 100 mm diameter specimen	nr			
3.63.4	K5.3	As Item K5.1 but using a 150 mm diameter specimen	nr			
3.63.5	K5.4	As Item K5.1 but using a 250 mm diameter specimen	nr			
3.63.6	K5.5	Extra over Items K5.1-K5.4 for text period in excess of 4 days	day			
3.63.7	K5.6	Permeability of a 76 mm diameter specimen in hydraulic consolidation cell, test period 4 days	nr			
3.63.8	K5.7	As K5.6 but using a 100 mm diameter specimen	nr			
3.63.9	K5.8	As K5.6 but using a 150 mm diameter specimen	nr			
3.63.10	K5.9	As K5.6 but using a 250 mm diameter specimen	nr			
3.63.11	K5.10	Extra over Items K5.6-K5.9 for text period in excess of 4 days	day			
3.63.12	K5.11	Isotropic consolidation properties in a triaxial cell, test period 4 days	nr			
3.63.13	K5.12	Extra over Item K5.11 for test period in excess of 4 days	day			

3.63.14	K5.13	Permeability in a triaxial cell, test period 4 days	nr		
3.63.15	K5.13.1	Remould disturbed sample to specified density and moisture	nr		
3.63.16	K5.14	Extra over Item K5.13 and K5.13.1 for test period in excess of 4 days	day		
Section Sub Total					-

3.64 Schedule K - Geotechnical laboratory testing:						
	Note	Note Details				
3.64.1	Note	Shear strength (total stress)				
3.64.2	K6.1	Shear strength by the laboratory vane method (set of 3)				
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.64.3	K6.2	Shear strength by hand vane (set of 3)	nr			
3.64.4	K6.3	Shear strength by hand penetrometer (set of 3)	nr			
3.64.5	K6.4	Shear strength of a set of three 60 mm x 60 mm square specimens by direct shear, test duration not exceeding 1 day per specimen	nr			
3.64.6	K6.5	Extra over Item K6.4 for test duration in excess of 1 day per specimen	sp.day			
3.64.7	K6.6	Shear strength of a single 300 mm x 300 mm square specimen by direct shear, test duration in excess of 1 day	nr			
3.64.8	K6.7	Extra over Item K6.6 for test duration in excess of 1 day	day			
3.64.9	K6.8	Residual shear strength of a set of three 60 mm x 60 mm square specimens by direct shear, test duration not exceeding 4 days per specimen	nr			
3.64.10	K6.9	Extra over Item K6.8 for test durations in excess of 4 days per specimen	sp.day			
3.64.11	K6.10	Residual shear strength of a 300 mm square specimen by direct shear, test duration not exceeding 4 days	nr			
3.64.12	K6.11	Extra over Item K6.10 for test duration in excess of 4 days	day			
3.64.13	K6.12	Residual shear strength using the small ring shear apparatus at three normal pressures, test duration not exceeding 4 days	nr			
3.64.14	K6.13	Extra over Item K6.12 for test duration in excess of 4 days	day			
3.64.15	K6.14	Unconfined compressive strength of 38mm diameter specimen	nr			
3.64.16	K6.15	Undrained shear strength of a set of three 38 mm diameter specimens in triaxial compression without the measurement of pore pressure	nr			
3.64.17	K6.16	Undrained strength of a single 100 mm diameter specimen in triaxial compression without the measurement of pore pressure	nr			
3.64.18	K6.17	Undrained shear strength of a single 100 mm diameter specimen in triaxial compression with multi-stage loading and without measurement of pore pressure	nr			
Section Sub Total						-

3.65 Schedule K - Geotechnical laboratory testing: Shear strength (effective stress)						
	Note	Note Details				
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.65.1	K7.1	Consolidated undrained triaxial compression test with measurement of pore pressure (set of three 38 mm specimens), test duration not exceeding 4 days per specimen	nr			
3.65.2	K7.2	As K7.1 but single-stage or multi-stage test using 100 mm diameter specimen	nr			
3.65.3	K7.2.1	Remould soil to specified dry density to test K7.2	nr			
3.65.4	K7.3	Consolidated drained triaxial compression test with measurement of volume change (set of three 38 mm specimens), test duration not exceeding 4 days per specimen	nr			
3.65.5	K7.4	As Item K7.3 but single-stage or multi-stage test using 100 mm diameter specimen, test duration not exceeding 4 days	nr			
3.65.6	K7.5	Extra over Items K7.1 and K7.3 for test duration in excess of 4 days per specimen	sp.day			
3.65.7	K7.6	Extra over Items K7.2 and K7.4 for test duration in excess of 4 days	day			
3.65.8	K7.7	Consolidated drained (CD –SB) direct shear on remoulded sample in a large shear box. Test period up to 1 day, including consolidation and shearing. Rate of shearing determined from consolidation characteristics. Normal pressures up to 450 Kn/m2. Rate to include sample preparation and remoulding to specified moisture content and density.	nr			
3.65.9	K7.8	Extra over item K7.7 for test duration in excess of 1 day per specimen.	day			
Section Sub Total						-

3.66 Schedule K - Geotechnical laboratory testing: Rock testing						
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.66.1	K8.1	Natural water content of rock sample	nr			
3.66.2	K8.2	Porosity/density using saturation and calliper techniques	nr			
3.66.3	K8.3	Porosity/density using saturation and buoyancy	nr			
3.66.4	K8.4	Slake durability index	nr			
3.66.5	K8.5	Soundness by magnesium sulphate	nr			
3.66.6	K8.6	Magnesium sulphate test	nr			
3.66.7	K8.7	Shore scleroscope	nr			
3.66.8	K8.8	Schmidt rebound hardness	nr			
3.66.9	K8.9	Resistance to fragmentation	nr			
3.66.10	K8.10	Aggregate abrasion value	nr			
3.66.11	K8.11	Polished stone value	nr			
3.66.12	K8.12	Aggregate frost heave	nr			
3.66.13	K8.13	Resistance to freezing and thawing	nr			

3.66.14	K8.14	Uniaxial compressive strength	nr		
3.66.15	K8.15	Deformability in uniaxial compression	nr		
3.66.16	K8.16	Indirect tensile strength by Brazilian test	nr		
3.66.17	K8.17	Undrained triaxial compression without measurements of porewater pressure	nr		
3.66.18	K8.18	Undrained triaxial compression with measurements of porewater pressure	nr		
3.66.19	K8.19	Direct shear strength of a single specimen	nr		
3.66.20	K8.20	Swelling pressure test	nr		
3.66.21	K8.21	Measurement of point load strength index of rock specimen (set of ten individual determinations)	nr		
3.66.22	K8.22	Single measurement of point load strength on irregular rock lump or core sample (either axial or diametral test)	nr		
3.66.23	K8.23	Aggregate crushing value	nr		
3.66.24	K8.24	Ten percent fines	nr		
3.66.25	K8.25	Aggregate impact value	nr		
Section Sub Total					-

3.67 Schedule K - Geotechnical laboratory testing: Ground/ground water aggressivity						
	Item Reference	Description	Unit of Measurem ent	Quantity	Unit Price	Price
3.67.1	K9.1	Suite A (Greenfield site - pyrite absent Schedule 1.19.6)	nr			
3.67.2	K9.2	Suite B (Greenfield site - pyrite present Schedule 1.19.6)	nr			
3.67.3	K9.3	Suite C (Brownfield site - pyrite absent Schedule 1.19.6)	nr			
3.67.4	K9.4	Suite D (Brownfield site - pyrite present Schedule 1.19.6)	nr			
Section Sub Total						-

3.68 Schedule L - Geoenvironmental laboratory testing: Contamination testing						
	Item Reference	Description	Unit of Measure ment	Quantity	Unit Price	Price
3.68.1	L1.1	Suite E (Soil samples Schedule S1.20.3)	nr			
3.68.2	L1.2	Suite F (Water samples Schedule S1.20.3)	nr			
3.68.3	L1.3	Suite G (Gas samples Schedule S1.20.3)	nr			
Section Sub Total						-

3.69 Schedule L - Geoenvironmental laboratory testing:						
	Note	Note Details				
3.69.1	Note	Waste acceptance criteria testing				
	Item Reference	Description	Unit of Measurem ent	Quantity	Unit Price	Price
3.69.2	L2.1	Suite H (Inert waste landfill Schedule S1.20.5)	nr			
3.69.3	L2.2	Suite I (Stable, non-reactive hazardous waste in non-hazardous waste landfill Schedule S1.20.5)	nr			
3.69.4	L2.3	Suite J (Hazardous waste landfill Schedule S1.20.5)	nr			

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3.70 Schedule L - Geoenvironmental laboratory testing:

	Note	Note Details				
3.70.1	Note	Testing of Soil samples: primary contaminants				
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.70.2	L3.1	Arsenic –total	nr			
3.70.3	L3.2	Cadmium- total	nr			
3.70.4	L3.3	Chromium-total	nr			
3.70.5	L3.4	Chromium-hexavalent	nr			
3.70.6	L3.5	Lead-total	nr			
3.70.7	L3.6	Mercury-total	nr			
3.70.8	L3.7	Selenium-total	nr			
3.70.9	L3.8	Boron-water soluble	nr			
3.70.10	L3.9	Copper-total	nr			
3.70.11	L3.10	Nickel-total	nr			
3.70.12	L3.11	Zinc-total	nr			
3.70.13	L3.12	Cyanide-total	nr			
3.70.14	L3.13	Cyanide-complex	nr			
3.70.15	L3.14	Cyanide-free	nr			
3.70.16	L3.15	Thiocyanate	nr			
3.70.17	L3.16	Phenols-total	nr			
3.70.18	L3.17	Sulphide	nr			
3.70.19	L3.18	Sulphate-total, acid soluble	nr			
3.70.20	L3.19	Sulphate-water soluble, 2:1 extract	nr			
3.70.21	L3.20	Sulphur-free	nr			
3.70.22	L3.21	pH value	nr			
3.70.23	L3.22	Toluene extractable matter	nr			
3.70.24	L3.23	Coal tar/polyaromatic hydrocarbon	nr			
3.70.25	L3.24	Asbestos	nr			
3.70.26	L3.25	Leachate extraction, NRA R & D Note 301	nr			

Section Sub Total	-
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3.71 Schedule L - Geoenvironmental laboratory testing:

	Note	Note Details				
3.71.1	Note	Testing of Soil samples: secondary contaminants				
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.71.2	L4.1	Antimony	nr			
3.71.3	L4.2	Barium	nr			
3.71.4	L4.3	Beryllium	nr			
3.71.5	L4.4	Vanadium	nr			
3.71.6	L4.5	Cyclohexane extractable matter	nr			
3.71.7	L4.6	Freon extractable matter	nr			
3.71.8	L4.7	Mineral oils	nr			
3.71.9	L4.8	Chloride	nr			
3.71.10	L4.9	Manganese	nr			
3.71.11	L4.10	Potassium	nr			

3.71.12	L4.11	Phosphorous	nr		
3.71.13	L4.12	Nitrogen	nr		
3.71.14	L4.13	Organic Matter	nr		
3.71.15	L4.14	Stone Content	nr		
3.71.16	L4.15	Gross Calorific Content	nr		
3.71.17	L4.16	Magnesium	nr		
Section Sub Total					-

3.72 Schedule L - Geoenvironmental laboratory testing:						
	Note	Note Details				
3.72.1	Note	Chemical testing for contaminated ground: Water samples				
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.72.2	L5.1	Arsenic	nr			
3.72.3	L5.2	Cadmium	nr			
3.72.4	L5.3	Chromium-total	nr			
3.72.5	L5.4	Chromium-hexavalent	nr			
3.72.6	L5.5	Lead-total	nr			
3.72.7	L5.6	Mercury-total	nr			
3.72.8	L5.7	Selenium-total	nr			
3.72.9	L5.8	Boron-water soluble	nr			
3.72.10	L5.9	Copper-total	nr			
3.72.11	L5.10	Nickel-total	nr			
3.72.12	L5.11	Zinc-total	nr			
3.72.13	L5.12	Cyanide-total	nr			
3.72.14	L5.13	Cyanide-complex	nr			
3.72.15	L5.14	Cyanide-free	nr			
3.72.16	L5.15	Thiocyanate	nr			
3.72.17	L5.16	Phenols-total	nr			
3.72.18	L5.17	Sulphide	nr			
3.72.19	L5.18	Sulphate	nr			
3.72.20	L5.19	Sulphur-free	nr			
3.72.21	L5.20	pH value	nr			
3.72.22	L5.21	Polyaromatic hydrocarbons	nr			
3.72.23	L5.22	Antimony	nr			
3.72.24	L5.23	Barium	nr			
3.72.25	L5.24	Beryllium	nr			
3.72.26	L5.25	Vanadium chloride	nr			
3.72.27	L5.26	Chloride	nr			
3.72.28	L5.27	Ammoniacal nitrogen	nr			
3.72.29	L5.28	Nitrate-nitrogen	nr			
3.72.30	L5.29	Chemical oxygen demand	nr			
3.72.31	L5.30	Biochemical oxygen demand	nr			
3.72.32	L5.31	Total organic carbon	nr			
3.72.33	L5.32	Volatile fatty acids	nr			
3.72.34	L5.33	Iron	nr			
3.72.35	L5.34	Manganese	nr			
3.72.36	L5.35	Calcium	nr			
3.72.37	L5.36	Sodium	nr			

3.72.38	L5.37	Magnesium	nr		
3.72.39	L5.38	Potassium	nr		
Section Sub Total					-

3.73 Schedule L - Geoenvironmental laboratory testing:						
	Note	Note Details				
3.73.1	Note	Chemical testing for contaminated ground: Gas samples				
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.73.2	L6.1	Carbon dioxide	nr			
3.73.3	L6.2	Hydrogen	nr			
3.73.4	L6.3	Hydrogen Sulphide	nr			
3.73.5	L6.4	Methane	nr			
3.73.6	L6.5	Nitrogen	nr			
3.73.7	L6.6	Oxygen	nr			
3.73.8	L6.7	Ethane	nr			
3.73.9	L6.8	Propane	nr			
3.73.10	L6.9	Carbon Monoxide	nr			
3.73.11	L6.10	Suite 1: Carbon dioxide, hydrogen, hydrogen sulphide, methane, nitrogen, oxygen and carbon monoxide. (please provide a lump sum fixed price for testing the above gas samples: l4.1- l4.6 + l4.9 as a suite)	per suite			
3.73.12	L6.11	Suite 2: Ethane, Propane (please provide a lump sum fixed price for testing the above gas samples: l4.7 and l4.8 as a suite)	per suite			
Section Sub Total						-

3.74 Appendix A. Rates for Ground Practitioners and other Personnel						
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.74.1	1	Technician	h			
3.74.2	2	Graduate ground engineer	h			
3.74.3	3	Experienced ground engineer	h			
3.74.4	4	Registered Ground Engineering Professional	h			
3.74.5	5	Registered Ground Engineering Specialist	h			
3.74.6	6	Registered Ground Engineering Advisor	h			
3.74.7	7	Expenses incurred by staff on site visits or who are resident by agreement with the investigation Supervisor	day			
3.74.8	8	Rate per mile from Contractor's premises and return for Items 1, 2 and 3	mile			
3.74.9	9	As above but items 4, 5 and 6	mile			
3.74.10	10	All other expenses incurred in conjunction with a site visit where a return journey is made on the same day for Items 1, 2 and 3	visit			
3.74.11	11	As above but for Items 4, 5 and 6	visit			
3.74.12	12	All other expenses incurred in conjunction with a site visit where an overnight stay is necessary for Items 1, 2 and 3	overnight			
3.74.13	13	As above but for Items 4, 5 and 6	overnight			

3.74.14	14	Attendance at Framework Managers' Meeting as per item 2.2.4 of the Framework Information Document. (Rate to include all fees and disbursements to attend meeting at Mansfield. Please see the preamble for further details.)	sum		
Section Sub Total					-

3.75 Appendix B. Long-Term Sample Storage: Geotechnical Samples						
	Note	Note Details				
3.75.1	B	Where samples comprise more than one container, the rate entered shall be per container				
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.75.2	1	Dynamic (windowless) samples	nr			
3.75.3	2	Rotary drilling core in core box	nr			
3.75.4	3	Rotary drilling core sub-samples	nr			
3.75.5	4	Bulk samples	nr			
3.75.6	5	Large bulk samples	nr			
3.75.7	6	Open-tube samples (thick wall sampler)	nr			
3.75.8	7	Open-tube samples (thin wall sampler)	nr			
3.75.9	8	Disturbed samples	nr			
3.75.10	9	Groundwater samples	nr			
3.75.11	10	Delft samples	nr			
3.75.12	11	Mostap samples	nr			
3.75.13	12	Piston samples	nr			
Section Sub Total						-

3.76 Appendix B. Long-Term Sample Storage: Contamination samples						
	Note	Note Details				
3.76.1	B	Where samples comprise more than one container, the rate entered shall be per container				
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.76.2	13	Soil samples in plastic tubs	nr			
3.76.3	14	Soil samples in glass containers	nr			
3.76.4	15	Groundwater samples	nr			
3.76.5	16	Gas samples	nr			
Section Sub Total						-

3.77 Appendix C. Regional Adjustment						
	Note	Note Details				
3.77.1	C	Please indicate the percentage adjustment to be applied to the Tender Items A2.0 - A2.20 for the				
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.77.2	Region 1	Scotland - EAST	%			
3.77.3	Region 2	Scotland - WEST	%			
3.77.4	Region 3	Northumberland / Newcastle / Sunderland / Co. Durham / Cumbria	%	2220.00		
3.77.5	Region 4	Somerset / South Gloucestershire / Bristol	%			
3.77.6	Region 5	North Wales / Cheshire / Lancashire / Merseyside	%			

3.77.7	Region 6	North Yorkshire / West Yorkshire	%		
3.77.8	Region 7	South Yorkshire (Barnsley, Sheffield, Rotherham, Doncaster) / Nottinghamshire / Derbyshire / Leicestershire	%		
3.77.9	Region 8	Staffordshire / Shropshire / West Midlands / Herefordshire / Worcestershire	%		
3.77.10	Region 9	South Wales / Pembrokeshire / North Gloucestershire (Forest of Dean)	%		
Section Sub Total					111.00

3.78 Appendix D. Additional Items						
	Item Reference	Description	Unit of Measurement	Quantity	Unit Price	Price
3.78.1	1	Defined Cost Item: Provision of permanent casing	m	64		
3.78.2	2	Extra over defined cost "item 1"	%			
3.78.3	3	Defined Cost Item: Provision of permanent casing shoe	no	1		
3.78.4	4	Extra over defined cost "item 3"	%			
3.78.5	5	Drilling borehole at up to 200mm diameter to 84m	m	84		
3.78.6	6	Provision of Trakway and safe working areas (First week)	sum	1		
3.78.7	7	E.O. Item 6 for weeks beyond week 1	wk	1		
3.78.8	8	Extra over defined cost "item 6"	%			
3.78.9	9	Lockable manhole cover and chamber construction as specified	sum	1		
3.78.10	10	Discount on report compilation against printing costs	Sum	1		
Section Sub Total					23,772.74	