

Viking CCS Pipeline

**Environmental
Statement Volume IV –
Appendix 3-4: Bill of
Quantities**

Document Reference: EN070008/APP/6.4.3.4

Applicant: Chrysaor Production (U.K.) Limited,
a Harbour Energy Company
PINS Reference: EN070008
Planning Act 2008 (as amended)
The Infrastructure Planning (Applications: Prescribed Forms
and Procedure) Regulations 2009 - Regulation 5(2)(a)
Date: October 2023

PINS Reference	Document Reference	Document Revision	Date
EN070008	EN070008/APP/6.4.3.4	Revision 1	October 2023

Prepared by	Verified by	Approved by
MH and CC	MW	NP
Penspen Limited	EIA Technical Director	EIA Technical Director

Prepared by:

Penspen Limited



Viking CCS - Bill of Quantities

Information/equipment	Material type	Quantity	Unit	Size	Weight (if provided)	Unit	Further information/ comments
Inlet Facility at Immingham	<i>e.g. Steel, GRP, Aggregate</i>	<i>e.g. no., m3, length</i>			<i>per unit provided - e.g. 7kg/m for cabling</i>		<i>Please provide any additional useful information</i>
Permanent fixtures							
Venting system	carbon steel	1	lot	up to 25 metres, expected diameter of 24"			up to 25 metres, expected diameter of 24"
Instrument and control kiosk		1	lot				
Floodlights		4	ea				
CCTV		4	ea				
Lighting		8	ea				
Fencing							
Prison Type Security Fencing 3.2m High	Galvanised Steel			52.25m x 52.25m - Galvanised and Polyester Powder Coated			Allow 52.25m x 52.25m - Galvanised and Polyester Powder Coated
Posts Dig-in 3125mm High Palisade Post	Galvanised Steel	70	ea				2750mm centres
Posts Dig-in 3125mm High Palisade Corner Post	Galvanised Steel	4	ea				
Top Rail 2.75m	Galvanised Steel	66	ea				
Bottom Rail 2.75m	Galvanised Steel	66	ea				
Straight Fish Plate	Galvanised Steel	132	ea				2no. Per Panel
Triple Point W Pale	Galvanised Steel	1122	ea				17no. Per Panel
5m Wide Double Gates (5500mm over all)	Galvanised Steel	1	ea				
2M Pedestrian/Emergency Gate (2360 over all)	Galvanised Steel	1	ea				
2.4m High Concrete Post and Wire Fencing	Concrete						Allow 63.25m x 63.25m
Intermediate Concrete Posts 3225 x 125 x 100mm	Concrete	131	ea				1800mm centres
Straining Concrete Posts 3325 x 150 x 150mm	Concrete	6	ea				
Birdmouth Struts 3350 x 100 x 100mm	Concrete	10	ea				
Galvanised Wire 3.15mm 160m Coil	Steel	13	ea				8 Strands
Quickthorn (Hawthorn) Plants		247	ea				1-Year-Old 40/60cm at 6 Per Metre
Earthworks							
Cut		820	m3				52.25m x 52.25m x 0.3m
Fill			m3				
Unacceptable excavated material for disposal		820	m3				
Imported aggregates for earthworks (by type)			m3				
Construction materials							
Imported aggregates for other purposes (by type)	Type 1	546	m3				For Roads = 150MM compacted thickness of granular sub-base material to type 1 Clause 803
	Sharp Sand	20	m3				
	Gravel	411	m3				
Precast concrete			m3				
In situ concrete							
Pigtrap and Valve Base	C40	8.7					1.5 x 29 x 0.2m
Plinth Bases - Pigtrap and Pipe Supports	C40	1.83					0.9 x 0.45 x 0.45 Allow 10no.
Supports for Platforms	C40	3.24					1.2 x 0.45 x 0.3 Allow 20no.
Concrete Work Apron	C40	20					10 x 10 x 0.2m
Base for Site Office/Control Room	C40	3.6					4 x 3 x 0.3m
Kerb Race	C15	24					170 Linear Metres
Fence Posts	C15	18					0.3 x 0.3 x 0.8m + 2m3 for Gates
Other	C15	4.63					
Straight Kerb Half Battered 125 x 255 x 914mm		185	ea				
Angle Kerb Half Battered 125 x 255mm Internal		7	ea				
Radius Kerb Half Battered External 2MTR 125 X 255MM		8	ea				

Radius Kerb Half Battered External 3MTR 125 X 255MM		18	ea			
Radius Kerb Half Battered External 10.5MTR 125 X 255MM		28	ea			
Surface Cable Troughs		30	ea		45kg	Anderlite - 250x240x1000mm
Surface Cable Trough Lids		30	ea		22kg	Anderlite - 250x40x1000mm
Pavement Edgings		6	ea			Marshalls Bullnosed Concrete Edging 914 x 150 x 50mm Natural
450x450mm Paving Slabs		15	ea			
Hot Dipped Galvanised Steel Bollards		9	ea			Caverswall 900mm high above ground steel bollard
4 x 3m GRP Kiosk		1	ea			
Asphalt						
100mm thickness DBM Road Base Course		192	Tonnes			640m2
60mm thickness DBM Binder Course		128	Tonnes			640m2
30mm thickness of AC10 Surface Course 100/150 pen h/s		64	Tonnes			640m2
Steel reinforcing		3.61	tonnes			
Steel structural		6.96	tonnes		180kg/m	32 Metres of Raised Platform with Handrails and Floor Grating + 6 Stairs With Handrails Hot Dip Galvanised
Pipeline						
Line Pipe	carbon steel	4,700	m	24"		Please provide any additional useful information 12m lengths (approx)
Killingholme AGI						
Bend 5D	carbon steel	4	ea	24"		
Equal Tee	carbon steel	1	ea	24"		
ESD Ball Valve	carbon steel	2	ea	24"		#900
Ball Valve	carbon steel	4	ea	24"		#900
Pipework	carbon steel	22	m	8"		Pig Kicker Line
Ball Valve	carbon steel	2	ea	8"		#900
Pig trap (launcher / receiver)	carbon steel	1	ea	30"		#900 - Qty 1 24"/30"
Monolithic Isolating Joint	carbon steel	1	ea	24"		
Drain Valve	carbon steel	4	ea	2"		#900 plug valve
Vent Valve	carbon steel	4	ea	4"		#900 ball valve
Theddlethorpe AGI						
Bend 5D	carbon steel	6	ea	24"		
Equal Tee	carbon steel	1	ea	24"		
Reducing Tee	carbon steel	1	ea	36"		36"/24"
ESD Ball Valve	carbon steel	2	ea	24"		#900
Ball Valve	carbon steel	6	ea	24"		#900
Ball Valve	carbon steel	3	ea	36"		#900
Pipework	carbon steel	40	m	8"		Pig Kicker Line
Ball Valve	carbon steel	4	ea	8"		#900
Pig trap (launcher / receiver)	carbon steel	1	ea	30"		#900 - Qty 1 24"/30"
Pig trap (launcher / receiver)	carbon steel	1	ea	40"		#900 - Qty 1 36"/40"
Monolithic Isolating Joint	carbon steel	2	ea	24"		
Drain Valve	carbon steel	8	ea	2"		#900 plug valve
Vent Valve	carbon steel	6	ea	4"		#900 ball valve
Earthworks						
Topsoil Strip		352,000	m3			20m width at 300mm depth for RoW + Pipe Dumps
Cut			m3			
Fill			m3			
Unacceptable excavated material for disposal			m3			
Imported aggregates for earthworks (by type)	Type 1	80,000	Tonnes			Pipe Dumps, Major Accesses and RoW Access Roads
Imported aggregates for earthworks (by type)	Sharp Sand	9,500	m3			Pipe Dumps and Intimate Bedding and Surround 30% Pipeline
Theddlethorpe AGI - PLAN B OPTION						
Line Pipe	carbon steel	1050	m	36"		
Bend 5D	carbon steel	6	ea	24"		
Bend 5D	carbon steel	4	ea	36"		
Equal Tee	carbon steel	1	ea	24"		

Reducing Tee	carbon steel	1	ea	36"		36"/24"
ESD Ball Valve	carbon steel	2	ea	24"		#900
ESD Ball Valve	carbon steel	1	ea	36"		#900
Ball Valve	carbon steel	6	ea	24"		#900
Ball Valve	carbon steel	3	ea	36"		#900
Pipework	carbon steel	40	m	8"		Pig Kicker Line
Ball Valve	carbon steel	4	ea	8"		#900
Pig trap (launcher / receiver)	carbon steel	1	ea	30"		#900 - Qty 1 24"/30"
Pig trap (launcher / receiver)	carbon steel	1	ea	40"		#900 - Qty 1 36"/40"
Monolithic Isolating Joint	carbon steel	2	ea	24"		
Drain Valve	carbon steel	8	ea	2"		#900 plug valve
Vent Valve	carbon steel	6	ea	4"		#900 ball valve
BV Sites						
ESD Ball Valve	carbon steel	3	ea	24"		#900 - Qty 1 at each site
Reducing Tee	carbon steel	6	ea	12"		24"/12" - Qty 2 at each site
Ball Valve	carbon steel	18	ea	12"		#900 - Qty 6 at each site
Pipework	carbon steel	60	m	12"		20m at each site
Drain Valve	carbon steel	6	ea	2"		#900 plug valve
Vent Valve	carbon steel	2	ea	4"		#900 ball valve
Blank Flange	carbon steel	3	ea	12"		#900
Cathodic Protection						
Transformer Rectifier Unit, 50V 10A		2	ea			
Anode Cable. 35 mm2 tin-coated stranded single core copper with Kynar primary insulation and high molecular weight black polyethylene		300	m			
Drain cable 35 mm2 tin coated stranded single core copper with XLPE/PVC insulation		300	m			
Cable 10mm2 tin coated stranded single core copper with XLPE/PVC insulation		3200	m			
Silicon Iron Chromium Anode 1.2 m x 0.076 m c/w 16 mm2 10m tail		16	ea			1.2 m x 0.076 m
Anode junction box SS 316		2	ea			
Negative junction box		2	ea			
Permanent reference electrodes (Cu/CUSO4) with tail		12	ea			
M28 test post		108	ea			
AC Coupons 1 cm2 exposed area with 10 m tail		4	ea			
DC Coupons 25 cm2 exposed area with 10 m tail		53	ea			
Polarisation Cell Replacement (PCR)		2	ea			
Monobloc Isolating Joints		2	ea			
Pre-packaged High Potential Magnesium anodes		21	ea			4.1 kg 0.23 m x 0.12 m
Pin brazing consumables (for connections to pipeline)		232	ea			
Encapsulation kits (for connections to pipeline)		232	ea			
Calcined petroleum coke backfill		6000	kg			
Zinc Ribbon		200	m			
Block Valve 1						
RTU + Panel		1	lot			Assume the RTU handles both control and ESD
System Interface IT		1	lot			Includes network switches, hubs, routers
Transmitters		5	ea			
F&G Detectors		5	ea			
Field Cables		20	ea			
Cable Trays		2	ea			
Cable Glands		40	ea			
Junction Boxes		10	ea			
Fence Security & Accessories Field		1	lot			
CCTV & Accessories Field		2	lot			
Tele-Com (Field)		1	lot			
FO Cable		20	m			
Floodlights		4	ea			
CCTV		4	ea			
Lighting		4	ea			

Fencing						
Fortex 358 - 4.0m Dig-in Post	Steel	30	ea			80 x 80 RHS galvanised with polyester powder coating finish.
Fortex 358 - 4.0m Dig-in Corner Post	Steel	7	ea			80 x 80 RHS dig-in corner posts set at 2540mm centres galvanised with polyester powder coating finish.
Fortex 358 - 3.2m x 2.5m Heras Security Fencing	Steel	32	ea			Panels: wire 4mm diameter with mesh size 76.2mm x 12.7mm with 2 pressed beams and galvanised with polyester powder coating finish. Fixings: galvanised bolt, permacone security nut and full length clamp bar.
V-mex 358 - 3.0m x 2m Heras Security Gate	Steel	2	ea			3.2m High x 2.5m Wide 358 Prison Mesh Double Leaf Gate, galvanised with polyester powder coat finish.
V-mex 358 - 3.0m x 1.2m Heras Security Gate	Steel	2	ea			3.2m High x 1.2m Wide 358 Prison Mesh Pedestrian Gate, galvanised with polyester powder coat finish.
3 Bar Agricultural Post and Rail Fencing	Wood	157	LM			100mm square pressure treated fence post 2.1m long at 1.8m centres. Rails pressure treated 3.6m x 100mm x 38mm
5 Bar Gate	Wood	2	ea			5 bar gate -1.5m x 2.4m pressure treated with heavy duty galvanised field gate ironmongery and 150mm x 150mm x 2.4m pressure treated timber gate posts
Earthworks						
Cut		190	m3			
Fill			m3			
Unacceptable excavated material for disposal		190	m3			
Imported aggregates for earthworks (by type)						
Construction materials						
Imported aggregates for other purposes (by type)	Type 1	200	m3			For Roads = 150MM compacted thickness of granular sub-base material to type 1 Clause 803
	Sharp Sand	30	m3			
	Gravel	90	m3			
Precast concrete			m3			
Insitu concrete (C15)		36	m3			Kerb Race, Post Hole Fill etc
Insitu concrete (C40)		12	m3			Block Valve Base 2.9m3, Kiosk Base 4.2m3, and other
Steel Reinforcing		1.12	tonnes			Maximum quantity of steel required for 1 m ³ concrete beam is 2%, now 2% of 1m ³ = 0.02 m ³ , and we know that 1m ³ steel weight is 7850 Kg, so weight of 0.02 m ³ steel = 0.02 x 7850 = 157 kg, so maximum quantity of steel required for 1m ³ concrete beam is 157 Kg.
Straight Kerb Half Battered 125 x 255 x 914mm		112	ea			
Angle Kerb Half Battered 125 x 255mm Internal		6	ea			
Radius Kerb Half Battered External 1MTR 125 X 255MM		4	ea			
Radius Kerb Half Battered External 2MTR 125 X 255MM		8	ea			
Radius Kerb Half Battered External 10.5MTR 125 X 255MM		28	ea			
Surface Cable Troughs		16	ea	45kg		Anderlite - 250x240x1000mm
Surface Cable Trough Lids		16	ea	22kg		Anderlite - 250x40x1000mm
Pavement Edgings		4	ea			Marshalls Bullnosed Concrete Edging 914 x 150 x 50mm Natural
450x450mm Paving Slabs		8	ea			
Hot Dipped Galvanised Steel Bollards		6	ea			Caverswall 900mm high above ground steel bollard
3.5 x 3m GRP Kiosk		1	ea			
Asphalt						
100mm thickness DBM Road Base Course		84	tonnes			280sqm
60mm thickness DBM Binder Course		56	tonnes			280sqm
30mm thickness of AC10 Surface Course 100/150 pen h/s		28	tonnes			280sqm
Soil Preparation, Tree Planting, and Wild Seeding		1135	m2			
Block Valve 2						
RTU + Panel		1	lot			Assume the RTU handles both control and ESD
System Interface IT		1	lot			Includes network switches, hubs, routers
Transmitters		5	ea			
F&G Detectors		5	ea			
Field Cables		20	ea			
Cable Trays		2	ea			
Cable Glands		40	ea			
Junction Boxes		10	ea			
Fence Security & Accessories Field		1	lot			
CCTV & Accessories Field		2	lot			

Tele-Com (Field)		1	lot			
FO Cable		20	m			
Floodlights		4	ea			
CCTV		4	ea			
Lighting		4	ea			
Fencing						
Fortex 358 - 4.0m Dig-in Post	Steel	30	ea			80 x 80 RHS galvanised with polyester powder coating finish.
Fortex 358 - 4.0m Dig-in Corner Post	Steel	7	ea			80 x 80 RHS dig-in corner posts set at 2540mm centres galvanised with polyester powder coating finish.
Fortex 358 - 3.2m x 2.5m Heras Security Fencing	Steel	32	ea			Panels: wire 4mm diameter with mesh size 76.2mm x 12.7mm with 2 pressed beams and galvanised with polyester powder coating finish. Fixings: galvanised bolt, permacone security nut and full length clamp bar.
V-mex 358 - 3.0m x 2m Heras Security Gate	Steel	2	ea			3.2m High x 2.5m Wide 358 Prison Mesh Double Leaf Gate, galvanised with polyester powder coat finish.
V-mex 358 - 3.0m x 1.2m Heras Security Gate	Steel	2	ea			3.2m High x 1.2m Wide 358 Prison Mesh Pedestrian Gate, galvanised with polyester powder coat finish.
3 Bar Agricultural Post and Rail Fencing	Wood	157	LM			100mm square pressure treated fence post 2.1m long at 1.8m centres. Rails pressure treated 3.6m x 100mm x 38mm
5 Bar Gate	Wood	2	ea			5 bar gate -1.5m x 2.4m pressure treated with heavy duty galvanised field gate ironmongery and 150mm x 150mm x 2.4m pressure treated timber gate posts
Earthworks						
Cut		190	m3			
Fill			m3			
Unacceptable excavated material for disposal		190	m3			
Imported aggregates for earthworks (by type)						
Construction materials						
Imported aggregates for other purposes (by type)	Type 1	200	m3			For Roads = 150MM compacted thickness of granular sub-base material to type 1 Clause 803
	Sharp Sand	30	m3			
	Gravel	90	m3			
Precast concrete			m3			
Insitu concrete (C15)		36	m3			Kerb Race, Post Hole Fill etc
Insitu concrete (C40)		12	m3			Block Valve Base 2.9m3, Kiosk Base 4.2m3, and other
Steel Reinforcing		1.12	tonnes			Maximum quantity of steel required for 1 m ³ concrete beam is 2%, now 2% of 1m ³ = 0.02 m ³ , and we know that 1m ³ steel weight is 7850 Kg, so weight of 0.02 m ³ steel = 0.02 x 7850 = 157 kg, so maximum quantity of steel required for 1m ³ concrete beam is 157 Kg.
Straight Kerb Half Battered 125 x 255 x 914mm		112	ea			Allow for 130 LM of Concrete Kerb Race
Angle Kerb Half Battered 125 x 255mm Internal		6	ea			
Radius Kerb Half Battered External 1MTR 125 X 255MM		4	ea			
Radius Kerb Half Battered External 2MTR 125 X 255MM		8	ea			
Radius Kerb Half Battered External 10.5MTR 125 X 255MM		28	ea			
Surface Cable Troughs		16	ea	45kg		Anderlite - 250x240x1000mm
Surface Cable Trough Lids		16	ea	22kg		Anderlite - 250x40x1000mm
Pavement Edgings		4	ea			Marshalls Bullnosed Concrete Edging 914 x 150 x 50mm Natural
450x450mm Paving Slabs		8	ea			
Hot Dipped Galvanised Steel Bollards		6	ea			Caverswall 900mm high above ground steel bollard
3.5 x 3m GRP Kiosk		1	ea			
Asphalt						
100mm thickness DBM Road Base Course		84	tonnes			280sqm
60mm thickness DBM Binder Course		56	tonnes			280sqm
30mm thickness of AC10 Surface Course 100/150 pen h/s		28	tonnes			280sqm
Soil Preparation, Tree Planting, and Wild Seeding		1135	m2			
Block Valve 3						
RTU + Panel		1	lot			Assume the RTU handles both control and ESD
System Interface IT		1	lot			Includes network switches, hubs, routers
Transmitters		5	ea			
F&G Detectors		5	ea			
Field Cables		20	ea			

Cable Trays		2	ea			
Cable Glands		40	ea			
Junction Boxes		10	ea			
Fence Security & Accessories Field		1	lot			
CCTV & Accessories Field		2	lot			
Tele-Com (Field)		1	lot			
FO Cable		20	m			
Floodlights		4	ea			
CCTV		4	ea			
Lighting		4	ea			
Fencing						
Fortex 358 - 4.0m Dig-in Post	Steel	30	ea			80 x 80 RHS galvanised with polyester powder coating finish.
Fortex 358 - 4.0m Dig-in Corner Post	Steel	7	ea			80 x 80 RHS dig-in corner posts set at 2540mm centres galvanised with polyester powder coating finish.
Fortex 358 - 3.2m x 2.5m Heras Fencing	Steel	32	ea			Panels: wire 4mm diameter with mesh size 76.2mm x 12.7mm with 2 pressed beams and galvanised with polyester powder coating finish. Fixings: galvanised bolt, permacone security nut and full length clamp bar.
V-mex 358 - 3.0m x 2m Heras Gate	Steel	2	ea			3.2m High x 2.5m Wide 358 Prison Mesh Double Leaf Gate, galvanised with polyester powder coat finish.
V-mex 358 - 3.0m x 1.2m Heras Gate	Steel	2	ea			3.2m High x 1.2m Wide 358 Prison Mesh Pedestrian Gate, galvanised with polyester powder coat finish.
3 Bar Agricultural Post and Rail Fencing	Wood	157	LM			100mm square pressure treated fence post 2.1m long at 1.8m centres. Rails pressure treated 3.6m x 100mm x 38mm
5 Bar Gate	Wood	2	ea			5 bar gate -1.5m x 2.4m pressure treated with heavy duty galvanised field gate ironmongery and 150mm x 150mm x 2.4m pressure treated timber gate posts
Earthworks						
Cut		190	m3			
Fill			m3			
Unacceptable excavated material for disposal		190	m3			
Imported aggregates for earthworks (by type)						
Construction materials						
Imported aggregates for other purposes (by type)	Type 1	200	m3			For Roads = 150MM compacted thickness of granular sub-base material to type 1 Clause 803
	Sharp Sand	30	m3			
	Gravel	90	m3			
Precast concrete			m3			
Insitu concrete (C15)		36	m3			Kerb Race, Post Hole Fill etc
Insitu concrete (C40)		12	m3			Block Valve Base 2.9m3, Kiosk Base 4.2m3, and other
Steel Reinforcing		1.12	tonnes			Maximum quantity of steel required for 1 m ³ concrete beam is 2%, now 2% of 1m ³ = 0.02 m ³ , and we know that 1m ³ steel weight is 7850 Kg, so weight of 0.02 m ³ steel = 0.02 x 7850 = 157 kg, so maximum quantity of steel required for 1m ³ concrete beam is 157 Kg.
Straight Kerb Half Battered 125 x 255 x 914mm		112	ea			Allow for 130 LM of Concrete Kerb Race
Angle Kerb Half Battered 125 x 255mm Internal		6	ea			
Radius Kerb Half Battered External 1MTR 125 X 255MM		4	ea			
Radius Kerb Half Battered External 2MTR 125 X 255MM		8	ea			
Radius Kerb Half Battered External 10.5MTR 125 X 255MM		28	ea			
Surface Cable Troughs		16	ea	45kg		Anderlite - 250x240x1000mm
Surface Cable Trough Lids		16	ea	22kg		Anderlite - 250x40x1000mm
Pavement Edgings		4	ea			Marshalls Bullnosed Concrete Edging 914 x 150 x 50mm Natural
450x450mm Paving Slabs		8	ea			
Hot Dipped Galvanised Steel Bollards		6	ea			Caverswall 900mm high above ground steel bollard
3.5 x 3m GRP Kiosk		1	ea			
Asphalt						
100mm thickness DBM Road Base Course		84	tonnes			280sqm
60mm thickness DBM Binder Course		56	tonnes			280sqm
30mm thickness of AC10 Surface Course 100/150 pen h/s		28	tonnes			280sqm
Soil Preparation, Tree Planting, and Wild Seeding		1135	m2			

Theddlethorpe Facility (both options)						
Permanent fixtures						
Venting system	carbon steel	1	lot			Venting system size TBC during FEED
Instrument and control kiosk		1	lot			
Floodlights		4	ea			
CCTV		4	ea			
Lighting		8	ea			
Fencing						
Prison Style Security Fencing 3.2m High						Allow 52.25m x 52.25m - Galvanised and Polyester Powder Coated
Posts Dig-in 3125mm High Palisade Post	Galvanised Steel	70	ea			2750mm centres
Posts Dig-in 3125mm High Palisade Corner Post	Galvanised Steel	4	ea			
Top Rail 2.75m	Galvanised Steel	66	ea			
Bottom Rail 2.75m	Galvanised Steel	66	ea			
Straight Fish Plate	Galvanised Steel	132	ea			2no. Per Panel
Triple Point W Pale	Galvanised Steel	1122	ea			17no. Per Panel
5m Wide Double Gates (5500mm over all)	Galvanised Steel	1	ea			5500mm over all
2M Pedestrian/Emergency Gate (2360 over all)	Galvanised Steel	1	ea			2360mm over all
Earthworks						
Cut		820	m3			52.25m x 52.25m x 0.3m
Fill			m3			
Unacceptable excavated material for disposal		820	m3			
Imported aggregates for earthworks (by type)			m3			
Construction materials						
Imported aggregates for other purposes (by type)	Type 1	546	m3			For Roads = 150MM compacted thickness of granular sub-base material to type 1 Clause 803
	Sharp Sand	20	m3			
	Gravel	430	m3			
Precast concrete						
In situ concrete		108	m3			
Pigtrap and Valve Base	C40	8.7				1.5 x 29 x 0.2m (24-inch Pigtrap)
Plinth Bases - Pigtrap and Pipe Supports	C40	1.83				0.9 x 0.45 x 0.45 Allow 10no.
Supports for Platforms	C40	9.72				1.2 x 0.45 x 0.3 Allow 60no.
Concrete Work Apron	C40	20				10 x 10 x 0.2m (36-inch Pigtrap)
Concrete Work Apron	C40	24				10 x 12 x 0.2m (24-inch Pigtrap)
Base for Site Office/Control Room	C40	3.6				4 x 3 x 0.3m
Kerb Race	C15	29				214 Linear Metres
Fence Posts	C15	6.3				0.3 x 0.3 x 0.8m + 1m3 for Gates
Other	C15	4.85				
Straight Kerb Half Battered 125 x 255 x 914mm		197	ea			
Angle Kerb Half Battered 125 x 255mm Internal		8	ea			
Radius Kerb Half Battered External 2MTR 125 X 255MM		16	ea			
Radius Kerb Half Battered External 3MTR 125 X 255MM		12	ea			
Radius Kerb Half Battered External 10.5MTR 125 X 255MM		28	ea			
Surface Cable Troughs		30	ea	45kg		Anderlite - 250x240x1000mm
Surface Cable Trough Lids		30	ea	22kg		Anderlite - 250x40x1000mm
Pavement Edgings		6	ea			Marshalls Bullnosed Concrete Edging 914 x 150 x 50mm Natural
450x450mm Paving Slabs		15	ea			
Hot Dipped Galvanised Steel Bollards		6	ea			Caverswall 900mm high above ground steel bollard
4 x 3m GRP Kiosk		1	ea			
Asphalt						
100mm thickness DBM Road Base Course		174	Tonnes			580m2
60mm thickness DBM Binder Course		116	Tonnes			580m2
30mm thickness of AC10 Surface Course 100/150 pen h/s		58	Tonnes			580m2
Steel reinforcing		8.5	tonnes			

Steel structural		14.8	tonnes	180kg/m		70 Metres of Raised Platform with Handrails and Floor Grating + 11 Stairs With Handrails Hot Dip Galvanised
Temporary Construction Facilities						
Project Office Establishment						
32ft x 10ft steel anti-vandal ECOLink office cabin		12				32ft x 10ft steel anti-vandal ECOLink office cabin
32ft x 10ft steel anti-vandal ECOLink meeting room		2				32ft x 10ft steel anti-vandal ECOLink meeting room
32ft x 10ft steel anti-vandal ECOLink canteen/kitchen cabin		1				32ft x 10ft steel anti-vandal ECOLink canteen/kitchen cabin
32ft x 10ft steel anti-vandal 6+1 Toilet		2				32ft x 10ft steel anti-vandal 6+1 Toilet
Project Support Services						
24ft x 9ft steel anti-vandal office		1				24ft x 9ft steel anti-vandal office
Prefabricated Steel Workshop		1				Prefabricated Steel Workshop
40ft x 9ft Steel Storage Containers		10				40ft x 9ft Steel Storage Containers
30,000 Water Storage Tank		1				30,000 Water Storage Tank
100,000L Steel Bundel Diesel Storage & Dispensing Tank		1				100,000L Steel Bundel Diesel Storage & Dispensing Tank
Insitu Concrete	C40	24	m3			
North Construction Compound						
Security Fencing						
Fortex 358 - 4.0m Dig-in Post	Steel	351	ea			80 x 80 RHS galvanised with polyester powder coating finish.
Fortex 358 - 4.0m Dig-in Corner Post	Steel	8	ea			80 x 80 RHS dig-in corner posts set at 2540mm centres galvanised with polyester powder coating finish.
Fortex 358 - 3.2m x 2.5m Heras Security Fencing	Steel	356	ea			Panels: wire 4mm diameter with mesh size 76.2mm x 12.7mm with 2 pressed beams and galvanised with polyester powder coating finish. Fixings: galvanised bolt, permacone security nut and full length clamp bar.
V-mex 358 - 3.0m x 2m Heras Security Gate	Steel	2	ea			3.2m High x 2.5m Wide 358 Prison Mesh Double Leaf Gate, galvanised with polyester powder coat finish.
Imported aggregates for earthworks (by type)	Type 1	2,000	Tonnes			Total Area 21,500 sq m - 2,000 Tonnes Stone for Roads and Hardstandings
Imported aggregates for earthworks (by type)	Sharp Sand	1,000	m3			Sand Berms
Insitu concrete (C15)		6	m3			Post Hole Fill etc
Office and Welfare						
24ft x 9ft steel anti-vandal office		1	ea			24ft x 9ft steel anti-vandal office
32ft x 10ft steel anti-vandal canteen/drying room		1	ea			32ft x 10ft steel anti-vandal canteen/drying room
16ft x 9ft steel anti-vandal 3+1 Toilet		1	ea			16ft x 9ft steel anti-vandal 3+1 Toilet
4000L Effluent Waste Tank		1	ea			4000L Effluent Waste Tank
10,000L Water Storage Tank with Electric Water Pump		1	ea			10,000L Water Storage Tank with Electric Water Pump
Soundproofed 100kVA Diesel Generator		1	ea			Soundproofed 100kVA Diesel Generator
Central Construction Compound						
Security Fencing						
Fortex 358 - 4.0m Dig-in Post	Steel	349	ea			80 x 80 RHS galvanised with polyester powder coating finish.
Fortex 358 - 4.0m Dig-in Corner Post	Steel	8	ea			80 x 80 RHS dig-in corner posts set at 2540mm centres galvanised with polyester powder coating finish.
Fortex 358 - 3.2m x 2.5m Heras Fencing	Steel	354	ea			Panels: wire 4mm diameter with mesh size 76.2mm x 12.7mm with 2 pressed beams and galvanised with polyester powder coating finish. Fixings: galvanised bolt, permacone security nut and full length clamp bar.
V-mex 358 - 3.0m x 2m Heras Gate	Steel	2	ea			3.2m High x 2.5m Wide 358 Prison Mesh Double Leaf Gate, galvanised with polyester powder coat finish.
Imported aggregates for earthworks (by type)	Type 1	1,000	Tonnes			Total Area 20,892 sq m - 1,000 Tonnes Stone for Roads and Hardstandings
Imported aggregates for earthworks (by type)	Sharp Sand	880	m3			Sand Berms
Insitu concrete (C15)		6	m3			Post Hole Fill etc
Office and Welfare						

24ft x 9ft steel anti-vandal office		1	ea			24ft x 9ft steel anti-vandal office
32ft x 10ft steel anti-vandal canteen/drying room		1	ea			32ft x 10ft steel anti-vandal canteen/drying room
16ft x 9ft steel anti-vandal 3+1 Toilet		1	ea			16ft x 9ft steel anti-vandal 3+1 Toilet
4000L Effluent Waste Tank		1	ea			4000L Effluent Waste Tank
10,000L Water Storage Tank with Electric Water Pump		1	ea			10,000L Water Storage Tank with Electric Water Pump
Soundproofed 100kVA Diesel Generator		1	ea			Soundproofed 100kVA Diesel Generator
Southern Construction Compound						
Security Fencing						
Fortex 358 - 4.0m Dig-in Post	Steel	259	ea			80 x 80 RHS galvanised with polyester powder coating finish.
Fortex 358 - 4.0m Dig-in Corner Post	Steel	8	ea			80 x 80 RHS dig-in corner posts set at 2540mm centres galvanised with polyester powder coating finish.
Fortex 358 - 3.2m x 2.5m Heras Fencing	Steel	263	ea			Panels: wire 4mm diameter with mesh size 76.2mm x 12.7mm with 2 pressed beams and galvanised with polyester powder coating finish. Fixings: galvanised bolt, permacone security nut and full length clamp bar.
V-mex 358 - 3.0m x 2m Heras Gate	Steel	2	ea			3.2m High x 2.5m Wide 358 Prison Mesh Double Leaf Gate, galvanised with polyester powder coat finish.
Imported aggregates for earthworks (by type)	Type 1	500	Tonnes			Total Area 1,300 sq m - 500 Tonnes Stone for Roads and Hardstandings
Imported aggregates for earthworks (by type)	Sharp Sand	500	m3			Sand Berms
In situ concrete (C15)		6	m3			Post Hole Fill etc
Office and Welfare						
24ft x 9ft steel anti-vandal office		1	ea			24ft x 9ft steel anti-vandal office
32ft x 10ft steel anti-vandal canteen/drying room		1	ea			32ft x 10ft steel anti-vandal canteen/drying room
16ft x 9ft steel anti-vandal 3+1 Toilet		1	ea			16ft x 9ft steel anti-vandal 3+1 Toilet
4000L Effluent Waste Tank		1	ea			4000L Effluent Waste Tank
10,000L Water Storage Tank with Electric Water Pump		1	ea			10,000L Water Storage Tank with Electric Water Pump
Soundproofed 100kVA Diesel Generator		1	ea			Soundproofed 100kVA Diesel Generator
Major Laydown, Welfare and Parking Areas						
16 locations in total	Type 1	23,040	Tonnes			Total Area 10,000 sq m - 1,440 Tonnes Stone for Hardstandings
24ft x 9ft steel anti-vandal office		32	ea			24ft x 9ft steel anti-vandal office
32ft x 10ft steel anti-vandal ECO Link canteen/kitchen cabin		32	ea			32ft x 10ft steel anti-vandal ECO Link canteen/kitchen cabin
32ft x 10ft steel anti-vandal drying room		16	ea			32ft x 10ft steel anti-vandal drying room
32ft x 10ft steel anti-vandal 6+1 Toilet		16	ea			32ft x 10ft steel anti-vandal 6+1 Toilet
24ft x 9ft steel anti-vandal storage container		32	ea			24ft x 9ft steel anti-vandal storage container
6,500L Effluent Waste Tank		32	ea			6,500L Effluent Waste Tank
20,000L Water Storage Tank with Electric Water Pump		16	ea			20,000L Water Storage Tank with Electric Water Pump
Soundproofed 100kVA Diesel Generator		16	ea			Soundproofed 100kVA Diesel Generator
Minor Laydown, Welfare and Parking Areas						
7 locations in total.	Type 1	3,618	Tonnes			Total Area 3,600 sq m - 1,292 Tonnes Stone for Hardstandings
24ft x 9ft steel anti-vandal office		7	ea			24ft x 9ft steel anti-vandal office
32ft x 10ft steel anti-vandal ECO Link canteen/kitchen cabin		7	ea			32ft x 10ft steel anti-vandal ECO Link canteen/kitchen cabin
32ft x 10ft steel anti-vandal drying room		7	ea			32ft x 10ft steel anti-vandal drying room
32ft x 10ft steel anti-vandal 6+1 Toilet		7	ea			32ft x 10ft steel anti-vandal 6+1 Toilet
40ft x 9ft steel storage container		7	ea			40ft x 9ft steel storage container
6,500L Effluent Waste Tank		7	ea			6,500L Effluent Waste Tank
10,000L Water Storage Tank with Electric Water Pump		7	ea			10,000L Water Storage Tank with Electric Water Pump
Soundproofed 100kVA Diesel Generator		7	ea			Soundproofed 100kVA Diesel Generator

