



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

5	T	1		T	Maiaht /:f	I	
Information/equipment	Material type	Quantity	Unit	Size	Weight (if provided)	Unit	Further information/ comments
Inlet Facility at Immingham	e.g. Steel, GRP, Aggregate	e.g. no., m3, length			per unit provided - e.g. 7kg/m for cabling		Please provide any additoinal useful information
Permanent fixtures							
Venting system	carbon steel	1	lat	up to 25 metres, expected diametre of 24"			up to 25 matros, avanceted diametro of 24"
Venting system Instrument and control kiosk		1	lot	01 24	+		up to 25 metres, expected diametre of 24"
		1 4	lot				
Floodlights CCTV		4	ea		+		
Lighting		8	ea ea				
Fencing		0	Ca				
reneing	Galvanised Steel			52.25m x 52.25m - Galvanised and Polyester Powder			
Prison Type Security Fencing 3.2m High				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
<u>Earthworks</u>	1	1	_	T	Г	T	
Cut		820	m3				52.25m x 52.25m x 0.3m
Fill		000	m3				
Unacceptable excavated material for disposal		820	m3				
Imported aggregates for earthworks (by type)			m3				
Construction materials	Tuno 1	546	m3	<u> </u>	Γ	I	For Boards - 150NANA source at add thickness of graphylan sub-base material to ture 1 Clause 202
Imported aggregates for other purposes (by type)	Type 1	20	m3		+		For Roads = 150MM compacted thickness of granular sub-base material to type 1 Clause 803
	Sharp Sand Gravel	411	m3		+		
Precast concrete	Gravei	411	m3		+		
Insitu concrete		84	m3		+		
Pigtrap and Valve Base	C40	8.7	1113		+		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		1	1		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				

D 1: 1/ 1 1/ 1/ 1/ 1 1 1 1 1 1 1 1 1 1 1		10		T	 	
Radius Kerb Half Battered External 3MTR 125 X 255MM		18	ea		 	
Radius Kerb Half Battered External 10.5MTR 125 X 255MM		28	ea	ļ	 	
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			
, and the second						
Hot Dipped Galvanised Steel Bollards		9	ea		1	Caverswall 900mm high above ground steel bollard
Hot Dipped Gaivanised Steel Bollards			Ca			Caverswan 500mm night above ground steer bonard
4 - 2 - CDD (C - 1		<u> </u>			 	
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		+	
Steer reministring		3.01	torrics			22 Motros of Paicod Platform with Handrails and Floor Crating L & Stairs With Handrails Hot
					1001 - /	32 Metres of Raised Platform with Handrails and Floor Grating + 6 Stairs With Handrails Hot
Steel structural		6.96	tonnes		180kg/m	Dip Galvanised
<u>Pipeline</u>						Please provide any additional useful information
Line Pipe	carbon steel	4,700	m	24"		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"	1	#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
vene valve	00.20300.	1	Cu	<u> </u>	+ + + + + + + + + + + + + + + + + + + +	insection value
Theddlethorpe AGI						
Bend 5D	carbon steel	6	ea	24"	+ + + + + + + + + + + + + + + + + + + +	
Equal Tee	carbon steel	1		24"		
Reducing Tee	carbon steel	1	ea	36"	+ +	36"/24"
ESD Ball Valve		1 2	ea			#900
Ball Valve	carbon steel carbon steel	2	ea	24"	+	#900
		2	ea	24"		
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 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"	1	#900 plug valve
Vent Valve	carbon steel	6	ea	4"		#900 ball valve
<u>Earthworks</u>						
Topsoil Strip		352,000	m3			20m width at 300mm depth for RoW + Pipe Dumps
Cut			m3			
Fill			m3			
Unacceptable excavated material for disposal			m3		1	
Imported aggregates for earthworks (by type)	Type 1	80,000	Tonnes		1	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
F - 122 200 20120 101 001 011 0110 (w) (1/40)	5a. p 54.14			1	+ +	F
Theddlethorpe AGI - PLAN B OPTION					+	
Line Pipe	carbon steel	1050	m	36"	+	
Bend 5D	carbon steel		m		+ +	
Bend 5D		6	ea	24"	+	
	carbon steel	4	ea	36"	+	
Equal Tee	carbon steel	1	ea	24"		

D. J. C. T.		4 1		I 26"		2611/2411
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"	1 1	#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 #900
S.G.M. Fidinge	cui soil steel	3	ca	14	+	1.555
Cathodic Protection						
Cathodic Protection Transformer Rectifier Unit, 50V 10A		3	00			
		2	ea			
Anode Cable. 35 mm2 tin-coated stranded single core copper		200				
with Kynar primary insulation and high molecular weight black		300	m			
polyethylene						
Drain cable 25 mm ² tip coated stranded single core conner with						
Drain cable 35 mm2 tin coated stranded single core copper with		300	m			
XLPE/PVC insulation						
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		108	ea			
DC Coupons 25 cm2 exposed area with 10 m tail		53			 	
		23	ea		+ +	
Polarisation Cell Replacement (PCR)		2	ea			
Monobloc Isolating Joints		24	ea		 	441.022042
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			<u> </u>			
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			+	
		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			
ביסיייייים		-7	Cu	1	<u> </u>	

Fencing					
Fortex 358 - 4.0m Dig-in Post	Steel	30	ea		80 x 80 RHS galvanised with polyester powder coating finish.
			Cu		80 x 80 RHS dig-in corner posts set at 2540mm centres galvanised with polyester powder coating
Fortex 358 - 4.0m Dig-in Corner Post	Steel	7	ea		finish.
					Panels: wire 4mm diameter with mesh size 76.2mm x 12.7mm with 2 pressed beams and galvanised
	Steel	32	ea		with polyester powder coating finish. Fixings: galvanised bolt, permacone security nut and full length
Fortex 358 - 3.2m x 2.5m Heras Security Fencing	Steel	32	ea		clamp bar.
Tortex 330 S.2111 x 2.311 Heras Security Ferraing					3.2m High x 2.5m Wide 358 Prison Mesh Double Leaf Gate, galvanised with polyester powder coat
V-mex 358 - 3.0m x 2m Heras Security Gate	Steel	2	ea		finish.
V-IIIEX 336 - 3.0111 X 2111 Heras Security Gate					3.2m High x 1.2m Wide 358 Prison Mesh Pedestrian Gate, galvanised with polyester powder coat
V-mex 358 - 3.0m x 1.2m Heras Security Gate	Steel	2	ea		finish.
V-illex 536 - 5.011 x 1.2111 Heras Security Gate					100mm square pressure treated fence post 2.1m long at 1.8m centres. Rails pressure treated 3.6m x
3 Bar Agricultural Post and Rail Fencing	Wood	157	LM		100mm x 38mm
5 bal Agricultural Post allu Kall Pericing					
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
<u>Earthworks</u>					
Cut		190	m3		
Fill			m3		
Unacceptable excavated material for disposal		190	m3		
Imported aggregates for earthworks (by type)					
Construction materials	'	I	<u> </u>	ı	
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
imported aggregates for other purposes (by type)	Sharp Sand	30	m3		To though I sommit compacted thickness of grandian sub-sub-sub-time to type I clause out
	Gravel	90	m3		
	Gravei	90	-		
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
					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
		4.40			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
Steel Reinforcing		1.12	tonnes		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		Allow for 130 LM of Concrete Kerb Race
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	l		Warshalls Bulliosed Concrete Edging 514 x 150 x 30mm Natural
430X430HHH Favilig Slabs		•	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
John thickness of Acto Surface Course 100/150 pen n/s		20	torines		20034111
CALL CONTRACT OF THE CONTRACT		4407	- 2	 	
Soil Preparation, Tree Planting, and Wild Seeding		1135	m2		
Block Valve 2					Assessment to the second secon
RTU + Panel		1 .	lot		Assume the RTU handles both control and ESD
System Interface IT		1 1	lot	ļ	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	 	
CCT V & ACCESSOTIES FIEID			IUL	ļ	

Tala Cam (Field)	1	4	1	 	
Tele-Com (Field)		1	lot		
FO Cable		20	m		
Floodlights		4	ea		
CCTV		4	ea		
Lighting		4	ea		
<u>Fencing</u>					
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.
					Panels: wire 4mm diameter with mesh size 76.2mm x 12.7mm with 2 pressed beams and galvanised
	Steel	32	ea		with polyester powder coating finish. Fixings: galvanised bolt, permacone security nut and full length
Fortex 358 - 3.2m x 2.5m Heras Security Fencing					clamp bar.
	6. 1				3.2m High x 2.5m Wide 358 Prison Mesh Double Leaf Gate, galvanised with polyester powder coat
V-mex 358 - 3.0m x 2m Heras Security Gate	Steel	2	ea		finish.
	Stool	2	0.2		3.2m High x 1.2m Wide 358 Prison Mesh Pedestrian Gate, galvanised with polyester powder coat
V-mex 358 - 3.0m x 1.2m Heras Security Gate	Steel	2	ea		finish.
	Wood	157	LM		100mm square pressure treated fence post 2.1m long at 1.8m centres. Rails pressure treated 3.6m x
3 Bar Agricultural Post and Rail Fencing	Wood	137	LIVI		100mm x 38mm
	Wood	2	ea		5 bar gate -1.5m x 2.4m pressure treated with heavy duty galvanised field gate ironmongery and
5 Bar Gate	Wood		Ca		150mm x 150mm x 2.4m pressure treated timber gate posts
<u>Earthworks</u>					
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		Summer of Summer
	Gravel	90	m3		
Precast concrete	Graver	30	m3		
Insitu concrete (C15)	+	36	m3		Kerb Race, Post Hole Fill etc
	+	12		 	
Insitu concrete (C40)		12	m3		Block Valve Base 2.9m3, Kiosk Base 4.2m3, and other 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
Steel Reinforcing		1.12	tonnes		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		Allow for 130 LM of Concrete Kerb Race
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
Johnn Chickness of Acto Surface Course 100/130 pen n/s		20	tomics		20034111
Soil Preparation, Tree Planting, and Wild Seeding		1135	m2		
Block Valve 3					
block valve 5			lat		
RTU + Panel		1	lot		Assume the RTU handles both control and ESD
		1 1	lot		Assume the RTU handles both control and ESD Includes network switches, hubs, routers
RTU + Panel		1 1 5			
RTU + Panel System Interface IT		1 1 5 5	lot		

Cable Trays		2	63		
Cable Glands		40	ea		+ +
	+		ea		
Junction Boxes		10	ea		
Fence Security & Accessories Field	1	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		
<u>Fencing</u>					
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.
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Fortex 358 - 3.2m x 2.5m Heras Fencing					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.
The state of the s		+			3.2m High x 1.2m Wide 358 Prison Mesh Pedestrian Gate, galvanised with polyester powder coat
V-mex 358 - 3.0m x 1.2m Heras Gate	Steel	2	ea		finish.
2.222 2.2 12.00 00.0		+			100mm square pressure treated fence post 2.1m long at 1.8m centres. Rails pressure treated 3.6m x
3 Bar Agricultural Post and Rail Fencing	Wood	157	LM		100mm x 38mm
0	<u> </u>	_			5 bar gate -1.5m x 2.4m pressure treated with heavy duty galvanised field gate ironmongery and
5 Bar Gate	Wood	2	ea		150mm x 150mm x 2.4m pressure treated timber gate posts
Earthworks			l		
Cut		190	m3		
Fill			m3		
Unacceptable excavated material for disposal		190	m3		
Onacceptable excavated material for disposal		150	1113		
Imported aggregates for earthworks (by type)					
Imported aggregates for earthworks (by type)			J		
Construction materials Imported aggregates for other purposes (by type)	Tuno 1	200	m ²		For Roads = 150MM compacted thickness of granular sub-base material to type 1 Clause 803
Imported aggregates for other purposes (by type)	Type 1		m3		For hodus – Idoliviivi compacted thickness of granular sub-base material to type I 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
					Maximum quantity of steel required for 1 m³ concrete beam is 2%, now 2% of 1m³ = 0.02 m³, and we know that 1m³ steel weight is 7850 Kg, so weight of 0.02 m³ steel = 0.02 x 7850 = 157 kg, so maximum quantity of steel
Steel Reinforcing		1.12	tonnes		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		Allow for 130 LM of Concrete Kerb Race
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	<u> </u>	Marshalls Bullnosed Concrete Edging 914 x 150 x 50mm Natural
450x450mm Paving Slabs		8	ea		
0-1-1-1		+			
Hot Dipped Galvanised Steel Bollards		6	ea		Caverswall 900mm high above ground steel bollard
ipped carramod otter bollards		 	Cu		Care. Swan Soomming above ground steel bondra
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		

- 111 - 111 - 111 - 111					
Theddlethorpe Facility (both options)					
Permanent fixtures		1	• .		V .:
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		
<u>Fencing</u>					
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
Zivi i edestrially Emergency date (2500 over ally	Guivarnisca Steel	-	Cu		
Earthworks	1			<u> </u>	
		820	m3		52.25m x 52.25m x 0.3m
Cut		020			32.23III X 32.23III X U.3III
riii		000	m3		
Unacceptable excavated material for disposal		820	m3		
Imported aggregates for earthworks (by type)			m3		
Construction materials	Ī			Г	
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					
Insitu 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			0.5 x 0.5 x 0.6m + 1m5 for Gates
Other	C13	4.85			
Churcialat Mouth Holf Dottoured 125 v 255 v 01 (moute	+	107	00		
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
John thickness of ACTO surface Course 100/150 pen fl/s	-	30	ronnes		JOUITE
Steel reinforcing		8.5	tonnes		

		1	I	1	
					70 Metres of Raised Platform with Handrails and Floor Grating + 11 Stairs With Handrails Ho
Steel structural		14.8	tonnes	180kg/m	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/kitche	en				32ft x 10ft steel anti-vandal ECOlink canteen/kitchen cabin
cabin		1			3211 X Tott steel anti-varidal EGOIIIIK cariteeli/kitchen cabiii
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	1	
		 		1	
North Construction Compound					
TOTAL CONSTRUCTION COMPOUND					
Security Fencing					
Fortex 358 - 4.0m Dig-in Post	Steel	351	0.2	T 1	80 x 80 RHS galvanised with polyester powder coating finish.
Fortex 558 - 4.0111 Dig-III Post	Steel	221	ea	+	80 x 80 RHS dig-in corner posts set at 2540mm centres galvanised with polyester powder coating
Fortex 358 - 4.0m Dig-in Corner Post	Steel	8	ea		finish.
	+			+ + + + + + + + + + + + + + + + + + + +	
	Charl	356			Panels: wire 4mm diameter with mesh size 76.2mm x 12.7mm with 2 pressed beams and galvanised
Fortov 259 2 2m v 2 5m Horac Cocurity Foncing	Steel	350	ea		with polyester powder coating finish. Fixings: galvanised bolt, permacone security nut and full length
Fortex 358 - 3.2m x 2.5m Heras Security Fencing				+	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
V-mex 556 - 5.0m x 2m Heras Security Gate				+	finish.
	T4	2.000	T	+	T 1-1A 24 500 2 000 T (1-2 D 1
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	<u> </u>	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		+	Soundproofed 100kVA Diesel Generator
Soundproofed Tookva Dieser Generator		+ -	ea	+ + -	Journaphoolea Tookay Diesel Geliefatoi
Control Construction Command					
Central Construction Compound					
Security Fencing	Charl	240			
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
<u> </u>				1	finish.
					Panels: wire 4mm diameter with mesh size 76.2mm x 12.7mm with 2 pressed beams and galvanised
	Steel	354	ea		with polyester powder coating finish. Fixings: galvanised bolt, permacone security nut and full length
Fortex 358 - 3.2m x 2.5m Heras Fencing				1	clamp bar.
	Steel	2	ea		3.2m High x 2.5m Wide 358 Prison Mesh Double Leaf Gate, galvanised with polyester powder coat
V-mex 358 - 3.0m x 2m Heras Gate				1	finish.
		1,000	Tonnes		Total Area 20,892 sq m - 1,000 Tonnes Stone for Roads and Hardstandings
Imported aggregates for earthworks (by type)	Type 1		Torrics		· · · · · · · · · · · · · · · · · · ·
Imported aggregates for earthworks (by type) Imported aggregates for earthworks (by type)	Type 1 Sharp Sand	880	m3		Sand Berms
					· · · · · · · · · · · · · · · · · · ·
					· · · · · · · · · · · · · · · · · · ·

24ft x 9ft steel anti-vandal office		1 1	02		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
		1	ea		
10,000L Water Storage Tank with Electric Water Pump		-	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.
-					80 x 80 RHS dig-in corner posts set at 2540mm centres galvanised with polyester powder coating
Fortex 358 - 4.0m Dig-in Corner Post	Steel	8	ea		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
Insitu concrete (C15)		6	m3		Post Hole Fill etc
Office and Welfare			1113		r ost flore fill etc
24ft x 9ft steel anti-vandal office		1	02		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	 	
		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		22		 	24ft x 9ft steel anti-vandal office
32ft x 10ft steel anti-vandal ECO Link canteen/kitchen		32	ea	 	24it x 9it steel anti-varidal onice
cabin		32	ea		32ft x 10ft steel anti-vandal ECO Link canteen/kitchen cabin
32ft x 10ft steel anti-vandal drying room	1	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		32	Ea		20,000L Water Storage Tank with Electric Water Pump
20,000L Water Storage Tank with Liectife Water I unip	7	1 40		I I	20,000L Water Storage Tank with Electric Water Lump
<u> </u>		16	ea		
Soundproofed 100kVA Diesel Generator		16	ea ea		Soundproofed 100kVA Diesel Generator
Soundproofed 100kVA Diesel Generator Minor Laydown, Welfare and Parking Areas					Soundproofed 100kVA Diesel Generator
Minor Laydown, Welfare and Parking Areas		16	ea		
	Type 1				Soundproofed 100kVA Diesel Generator Total Area 3,600 sq m - 1,292 Tonnes Stone for Hardstandings
Minor Laydown, Welfare and Parking Areas 7 locations in total.	Type 1	16	ea Tonnes		Total Area 3,600 sq m - 1,292 Tonnes Stone for Hardstandings
Minor Laydown, Welfare and Parking Areas 7 locations in total. 24ft x 9ft steel anti-vandal office	Type 1	3,618	ea		Total Area 3,600 sq m - 1,292 Tonnes Stone for Hardstandings 24ft x 9ft steel anti-vandal office
Minor Laydown, Welfare and Parking Areas 7 locations in total.	Type 1	3,618	ea Tonnes		Total Area 3,600 sq m - 1,292 Tonnes Stone for Hardstandings
Minor Laydown, Welfare and Parking Areas 7 locations in total. 24ft x 9ft steel anti-vandal office 32ft x 10ft steel anti-vandal ECO Link canteen/kitchen	Type 1	3,618	Tonnes ea		Total Area 3,600 sq m - 1,292 Tonnes Stone for Hardstandings 24ft x 9ft steel anti-vandal office
Minor Laydown, Welfare and Parking Areas 7 locations in total. 24ft x 9ft steel anti-vandal office 32ft x 10ft steel anti-vandal ECO Link canteen/kitchen cabin	Type 1	3,618 7	Tonnes ea ea		Total Area 3,600 sq m - 1,292 Tonnes Stone for Hardstandings 24ft x 9ft steel anti-vandal office 32ft x 10ft steel anti-vandal ECO Link canteen/kitchen cabin
Minor Laydown, Welfare and Parking Areas 7 locations in total. 24ft x 9ft steel anti-vandal office 32ft x 10ft steel anti-vandal ECO Link canteen/kitchen cabin 32ft x 10ft steel anti-vandal drying room 32ft x 10ft steel anti-vandal 6+1 Toilet	Type 1	3,618 7 7 7	Tonnes ea ea ea ea ea		Total Area 3,600 sq m - 1,292 Tonnes Stone for Hardstandings 24ft x 9ft steel anti-vandal office 32ft x 10ft steel anti-vandal ECO Link canteen/kitchen cabin 32ft x 10ft steel anti-vandal drying room 32ft x 10ft steel anti-vandal 6+1 Toilet
Minor Laydown, Welfare and Parking Areas 7 locations in total. 24ft x 9ft steel anti-vandal office 32ft x 10ft steel anti-vandal ECO Link canteen/kitchen cabin 32ft x 10ft steel anti-vandal drying room	Type 1	3,618 7 7 7	ea Tonnes ea ea ea ea ea ea		Total Area 3,600 sq m - 1,292 Tonnes Stone for Hardstandings 24ft x 9ft steel anti-vandal office 32ft x 10ft steel anti-vandal ECO Link canteen/kitchen cabin 32ft x 10ft steel anti-vandal drying room
Minor Laydown, Welfare and Parking Areas 7 locations in total. 24ft x 9ft steel anti-vandal office 32ft x 10ft steel anti-vandal ECO Link canteen/kitchen cabin 32ft x 10ft steel anti-vandal drying room 32ft x 10ft steel anti-vandal 6+1 Toilet 40ft x 9ft steel storage container		7 7 7 7 7	ea Tonnes ea ea ea ea ea ea ea ea		Total Area 3,600 sq m - 1,292 Tonnes Stone for Hardstandings 24ft x 9ft steel anti-vandal office 32ft x 10ft steel anti-vandal ECO Link canteen/kitchen cabin 32ft x 10ft steel anti-vandal drying room 32ft x 10ft steel anti-vandal 6+1 Toilet 40ft x 9ft steel storage container



