

East Anglia ONE North Offshore Windfarm

Appendix 26.22

Derivation of Construction Material Quantities and Associated HGV Demand (Scenario 1)

Environmental Statement Volume 3

Applicant: East Anglia ONE North Limited

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Pursuant to APFP Regulation: 5(2)(a)

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Material Vehicle Movements

eference	General Data (Fixed Information)	Units	Value	Source/Comments
1.01	Number of Projects		2	OPEDA / Project Parameters
1.02	Number of circuits per project		2	OPEDA / Project Parameters
1.03	Tipper Truck Capacity	Tonnes	20	8x4 Rigid Tipper http://www.mqp.co.uk/vehicle.htm
1.04	Ready Mix Concrete truck Capacity	m³	6	6m3 Truck mixer https://www.hanson.co.uk/en/technical-information/truck-information
1.05	Steel reinforcement per m3 of concrete	t/m³	0.065	Assumed
1.06	Type 1 Stone Density	t/m³	2.3	MOT Type 1 https://www.smithsbletchington.co.uk/mot-type-1
1.07	Crusher Run Stone Density	t/m³	2.1	Crusher Run Stone https://www.smithsbletchington.co.uk/limestone-crusher-run
1.08	Compound / Haul Road Type 1 Sub-base Thickness	m	0.15	Drawing ED11892-GE-2040 A
1.09	Compound / Haul Road Crushed Stone Thickness	m	0.1	Drawing ED11892-GE-2040 A
1.10	Geogrid mass/Area	kg/m²	0.22	Tensar SS20 https://www.drainagesuperstore.co.uk/user/u/files/jdp-tensar-geogrid.pdf
1.11	Mass of geogrid per delivery	Tonnes	2	Assumed
1.12	Concrete Block Length	m	0.215	https://www.travisperkins.co.uk/Solid-Dense-Concrete-Block-7-3N-100mm/p/700064
1.13	Concrete Block Width	m	0.215	https://www.travisperkins.co.uk/Solid-Dense-Concrete-Block-7-3N-100mm/p/700064
1.18	Concrete Block Height	m	0.1	https://www.travisperkins.co.uk/Solid-Dense-Concrete-Block-7-3N-100mm/p/700064
1.19	Number of concrete blocks per pallet	-	60	10 block on base of 1.2x1m pallet then 6 rows high
1.20	Number of pallets per delivery	-	5	Assumed
1.21	Native Soil Density	t/m³	2	Worst case for Glacial Clays
1.22	Mass of bentonite bag	kg	25	https://mistralni.co.uk/products/sodium-bentonite-grg
1.23	Number of bentonite bags per pallet	-	42	https://mistralni.co.uk/products/sodium-bentonite-grg
1.24	Density of bentonite	t/m³	0.9	https://mistralni.co.uk/products/sodium-bentonite-grg
1.25	Number of bentonite pallets per delivery	-	5	Assumed
1.26	Volume of fluid delivery vehicle	litres	30,000	Articulated Water Tanker https://www.water-direct.co.uk/what-we-do/water-tankers
1.27	Heras Fencing Panel Hight	m	2	Heras HSG 151 Fencing https://www.heras-mobile.co.uk/fencing/151-system
1.28	Heras Fencing Panel Width	m	3.5	Heras HSG 151 Fencing https://www.heras-mobile.co.uk/fencing/151-system
1.29	Weight Per Panel	kg	16	Heras HSG 151 Fencing https://www.heras-mobile.co.uk/fencing/151-system
1.30	No of panels per delivery	-	125	Assumed 2T of panelling per delivery (includes all required feet and connectors)
1.31	Topsoil Depth	m	0.45	Assumed
1.32	Density of Topsoil	t/m³	0.67	https://www.rolawn.co.uk/calculating-topsoil-requirements
1.33	Length of stock fencing roll	m	500	1.15 Cattle Fence https://www.jacksons-fencing.co.uk/fencing/agricultural-fencing/wire-fencing-stock
1.34	Frequency of Wooden Post	m	5	Assumed
1.35	Frequency of tension post (includes 2 stay posts)	m	50	Assumed
1.36	Length of fencing (including required posts) per HGV Delivery	m	4000	Assumed

Reference	Landfall Data (Fixed Information)	Units	Value	Source/Comments
2.01	Width of HDD Compound	m	190	Drawing ED11892-GE-2016 Rev D
2.02	Length of HDD Compound	m	70	Drawing ED11892-GE-2016 Rev D
2.03	Number of HDDs per compound	-	8	Drawing ED11892-GE-2016 Rev D
2.04	Number of marine export cables per project	-	2	OPEDA / Project Parameters
2.05	Marine Export cable diameter	m	0.285	EA1 Metodology
2.06	Marine export cable length per drum	m	500	Unknown
2.07	Number of marine export cable drums per delivery	-	0	Brought in from offshore
2.08	Number of marine fibre cables per project	-	2	OPEDA / Project Parameters
2.09	Marine fibre cable diameter	m	0	Unknown
2.10	Marine fibre cable length per drum	m	0	Unknown
2.11	Number of marine fibre cable drums per delivery	-	0	Brought in from offshore
2.12	HDD reamed diameter	m	1.1	Calculated (2.16 * 4/3)
2.13	Volume of drill fluid required per metre length of bore	m³	2.38	(2.5 times volume of soil removed based on advice from Tim Riggall, Riggall & Associates on 31/07/2018)
2.14	Percentage of drill fluid removed from site	%	40	Assumed
2.15	Bentonite required	kg/m³ of drill fluid	37	Assumed 20kg/1000l for clay and 65kg/1000l for gravels
2.16	HDD duct diameter	m	0.8	EA1 Metodology
2.17	HDD duct section length	m	0	Brought in from offshore
2.18	No of HDD duct lengths per delivery	-	0	Brought in from offshore
2.19	Number of transition bays to be constructed	-	4	OPEDA / Project Parameters
2.20	Transition bay width (construction footprint)	m	42	Project Parameters
2.21	Transition bay height (construction footprint)	m	3	Project Parameters
2.22	Transition bay length (construction footprint)	m	37	Project Parameters
2.23	Transition bay width (underground infrastructure only)	m	6	OPEDA / Project Parameters
2.24	Transition bay height (underground infrastructure only)	m	1.8	OPEDA / Project Parameters
2.25	Transition bay length (underground infrastructure only)	m	21	OPEDA / Project Parameters
2.26	Transition bay slab surface area	m²	126	Calculated (2.23 x 2.25)
2.27	Transition bay slab thickness	m	0.2	To be confirmed
2.28	Transition bay slab concrete volume	m³	25.2	Calculated (2.26 x 2.27)
2.29	Transition bay steel reinforcement	Tonnes	1.638	Calculated (1.05 x 2.28)
2.30	Number of blocks per transition bay	-	2196	WA Calculation
2.31	Precast concrete slab length	m	5.26	Assumed (to be designed)
2.32	Precast concrete slab width	m	0.5	Assumed (to be designed)
2.33	Precast concrete slab height	m	0.25	Assumed (to be designed)
2.34	Number of precast concrete slabs per delivery	-	4	Each slab approx. 5T
2.35	Number of precast concrete slabs per transition bay	-	42	Calculated (2.25 x 2.32)
2.36	Depth to top of transition bay installed underground infrastructure	m	1.2	Project Parameters
2.37	Temporary HGV holding zone at Elm Tree farm	m ²	1200	From plan minus 2 public road access areas
2.38	Additional Area required of HGV Turning Area	m ²	250	Drawing ED11892-GE-20131

Reference	Onshore Data (Fixed Information)	Units	Value	Source/Comments Source
3.01	Large CCS compound length	m	200	Drawing ED11892-GE-2058
3.02	Large CCS compound width	m	165	Drawing ED11892-GE-2058
3.03	Large CCS compound tarmac area	m²	6,000	Drawing ED11892-GE-2058 Drawing ED11892-GE-2058
			21,200	
3.04	Large CCS compound hardstanding area	m²		Drawing ED11892-GE-2058
3.05	Medium CCS compound length	m	160	Drawing ED11892-GE-2057
3.06	Medium CCs compound width	m	88	Drawing ED11892-GE-2057
3.07	Medium CCS compound hardstanding area	m²	11050	Drawing ED11892-GE-2057
3.08	Small CCS compound length	m	100	Drawing ED11892-GE-2056
3.09	Small CCS compound width	m	50	Drawing ED11892-GE-2056
3.10	Small CCS compound Hardstanding Area	m²	3950	Drawing ED11892-GE-2056
3.11	Number of terrestrial export cables per project	-	6	OPEDA / Project Parameters
3.12	Number of terrestrial fibre cables per project	-	2	OPEDA / Project Parameters
3.13	Number of trenches per project	-	2	OPEDA / Project Parameters
3.14	Number of export cable ducts per trench	-	3	OPEDA / Project Parameters
	Number of fibre cable ducts per trench	_	1	OPEDA / Project Parameters
3.16	Number of Projects to have cables installed in ducts	-	2	OPEDA / Project Parameters
	Number of Projects to Have cables installed in ducts			
		-	0	OPEDA / Project Parameters
3.18	Normal Onshore Cable Route Width	m	50.1	OPEDA / Project Parameters
3.19	Reduced Onshore Cable Route Width	m	27.1	OPEDA / Project Parameters
3.20	Cable trench width	m	0.9	Project Parameters
3.21	Cable trench depth	m	1.615	Project Parameters
3.22	Cement Bound Sand (CBS) depth	m	1.1	ED11892-GE-2041 A
3.23	CBS Volume per m run of trench	m³	0.31	ED11892-GE-2041 A
3.24	CBS density	t/m³	1.6	Assumed
3.25	Tile length	m	11	https://www.powerandcables.com/product/product-category/stokbord-cable-protection-1000mm-x-450mm/
3.26	Tile width	m	0.45	https://www.powerandcables.com/product/product-category/stokbord-cable-protection-1000mm-x-450mm/
3.27	Tile Height	m	0.02	Assumed
3.28	Number of tiles per delivery	-	800	Assumed. Based on 40 per pack and 20 packs per delivery
3.29	Depth to top of tile	m	1.00	ED11892-GE-2041 A
3.30	Terrestrial export cable diameter	m	0.17	OPEDA Project Parameters
3.31	Terrestrial export cable length per drum	m	500	Project Parameters
3.32	Number of terrestrial export cable drums per delivery	-	1	Weight of cable 34T
3.33	Terrestrial fibre cable diameter	m	0.025	Assumed
3.34	Terrestrial fibre cable length per drum	m	2000	TBC
	Number of terrestrial fibre cable drums per delivery	-	1	TBC
	Diameter of terrestrial export cable ducts	m	0.25	ED11892-GE-2041 A
3.37	Diameter of terrestrial fibre cable ducts	m	0.11	ED11892-GE-2041 A
3.38	Length of terrestrial export cable duct	m	6	Page 32 http://www.emtelle.com/wp-content/uploads/2015/05/Duct-Catalogue-2015-1.pdf
3.39	Length of terrestrial fibre cable duct	m	6	Page 30 http://www.emtelle.com/wp-content/uploads/2015/05/Duct-Catalogue-2015-1.pdf
3.40	Number of terrestrial export cable ducts per pack	-	16	Page 32 http://www.emtelle.com/wp-content/uploads/2015/05/Duct-Catalogue-2015-1.pdf
3.41	Number of terrestrial fibre cable ducts per pack	-	90	Page 30 http://www.emtelle.com/wp-content/uploads/2015/05/Duct-Catalogue-2015-1.pdf
	Number of duct packs per delivery		4	r age of hippinnin contents appeared to the content ap
		1/2 . 6 0		ASSUMED ASSUMED ASSUMED
	Bentonite required for cable installation in ducts	kg/m³ of fluid	60	nounce
3.44	Maximum distance between joining bays	m	500	Project Parameters
3.45	Number of export cables per jointing bay	-	3	Project Parameters
3.46	Number of joining bays per location	-	2	Project Parameters
3.47	Jointing bay width (construction footprint)	m	18.6	Project Parameters
3.48	Jointing bay height (construction footprint)	m	2.9	Project Parameters
3.49	Jointing bay length (construction footprint)	m	30.6	Project Parameters Project Parameters
3.50	Jointing bay width (underground infrastructure only)	m	3	OPEDA / Project Parameters
3.51	Jointing bay height (underground infrastructure only)	m	1.7	OPEDA / Project Parameters
		m	15	OPEDA / Project Parameters
3.52	Jointing bay length (underground infrastructure only)	m²	45	Calculated (3.50 x 3.52)
3.52	Jointing bay length (underground infrastructure only) Jointing bay slab surface area	m²		
3.53	Jointing bay slab surface area			To be confirmed
3.53 3.54	Jointing bay slab surface area Jointing bay slab thickness	m	0.2	
3.53 3.54 3.55	Jointing bay slab surface area Jointing bay slab thickness Jointing bay slab concrete volume	m m³	0.2 9	Calculated (3.53x 3.54)
3.53 3.54 3.55 3.56	Jointing bay slab surface area Jointing bay slab thickness Jointing bay slab concrete volume Jointing bay steel reinforcement	m m³ Tonnes	0.2 9 0.585	Calculated (3.53x 3.54) Calculated (1.05 x 3.55)
3.53 3.54 3.55 3.56 3.57	Jointing bay slab surface area Jointing bay slab thickness Jointing bay slab concrete volume Jointing bay steel reinforcement Number of blocks per jointing bay	m m³ Tonnes	0.2 9	Calculated (3.53x 3.54) Calculated (1.05 x 3.55) WA Calculation
3.53 3.54 3.55 3.56 3.57 3.58	Jointing bay slab surface area Jointing bay slab thickness Jointing bay slab concrete volume Jointing bay steel reinforcement Number of blocks per jointing bay Precast concrete slab length	m m³ Tonnes - m	0.2 9 0.585	Calculated (3.53x 3.54) Calculated (1.05 x 3.55) WA Calculation Assumed (to be designed)
3.53 3.54 3.55 3.56 3.57 3.58 3.59	Jointing bay slab surface area Jointing bay slab thickness Jointing bay slab concrete volume Jointing bay slab concrete volume Jointing bay steel reinforcement Number of blocks per jointing bay Precast concrete slab length Precast concrete slab width	m m³ Tonnes - m	0.2 9 0.585 1394 3	Calculated (3.53x 3.54) Calculated (1.05 x 3.55) WA Calculation Assumed (to be designed) Assumed (to be designed)
3.53 3.54 3.55 3.56 3.57 3.58 3.59	Jointing bay slab surface area Jointing bay slab thickness Jointing bay slab concrete volume Jointing bay steel reinforcement Number of blocks per jointing bay Precast concrete slab length	m m³ Tonnes - m	0.2 9 0.585	Calculated (3.53x 3.54) Calculated (1.05 x 3.55) WA Calculation Assumed (to be designed)
3.53 3.54 3.55 3.56 3.57 3.58 3.59	Jointing bay slab surface area Jointing bay slab thickness Jointing bay slab concrete volume Jointing bay steel reinforcement Number of blocks per jointing bay Precast concrete slab length Precast concrete slab width Precast concrete slab height	m m³ Tonnes - m	0.2 9 0.585 1394 3	Calculated (3.53x 3.54) Calculated (1.05 x 3.55) WA Calculation Assumed (to be designed) Assumed (to be designed) Assumed (to be designed)
3.53 3.54 3.55 3.56 3.57 3.58 3.59 3.60 3.61	Jointing bay slab surface area Jointing bay slab thickness Jointing bay slab concrete volume Jointing bay steel reinforcement Number of blocks per jointing bay Precast concrete slab length Precast concrete slab width Precast concrete slab height Number of precast concrete slab beight Number of precast concrete slab beight	m m³ Tonnes - m m m - m m	0.2 9 0.585 1394 3 1 0.3	Calculated (3.53x 3.54) Calculated (1.05 x 3.55) WA Calculation Assumed (to be designed) Assumed (to be designed) Assumed (to be designed) Each slab approx. 2.5T
3.53 3.54 3.55 3.56 3.57 3.58 3.59 3.60 3.61 3.62	Jointing bay slab surface area Jointing bay slab thickness Jointing bay slab concrete volume Jointing bay slab concrete volume Jointing bay steel reinforcement Number of blocks per jointing bay Precast concrete slab length Precast concrete slab width Precast concrete slab width Precast concrete slab breight Number of precast concrete slabs per delivery Number of concrete slabs per joining bay	m m³ Tonnes - m m m m m	0.2 9 0.585 1394 3 1 0.3 8	Calculated (3.53x 3.54) Calculated (1.05 x 3.55) WA Calculation Assumed (to be designed) Assumed (to be designed) Each slab approx. 2.5T Calculated (3.52 x 3.59)
3.53 3.54 3.55 3.56 3.57 3.58 3.59 3.60 3.61 3.62 3.63	Jointing bay slab surface area Jointing bay slab thickness Jointing bay slab concrete volume Jointing bay steel reinforcement Number of blocks per jointing bay Precast concrete slab length Precast concrete slab width Precast concrete slab width Precast concrete slab height Number of precast concrete slabs per delivery Number of concrete slabs per joining bay Depth to top of jointing bay installed underground infrastructure	m m³ Tonnes - m m m - m m	0.2 9 0.585 1394 3 1 0.3	Calculated (3.53x 3.54) Calculated (1.05 x 3.55) WA Calculation Assumed (to be designed) Assumed (to be designed) Assumed (to be designed) Each slab approx. 2.5T
3.53 3.54 3.55 3.56 3.57 3.58 3.60 3.61 3.62 3.63 3.64	Jointing bay slab surface area Jointing bay slab thickness Jointing bay slab concrete volume Jointing bay slab concrete volume Jointing bay steel reinforcement Number of blocks per jointing bay Precast concrete slab length Precast concrete slab width Precast concrete slab width Precast concrete slab beight Number of precast concrete slabs per delivery Number of concrete slabs per joining bay Depth to top of jointing bay installed underground infrastructure Number if cable joint kits per jointing bay	m m³ Tonnes - m m m m m	0.2 9 0.585 1394 3 1 0.3 8	Calculated (3.53x 3.54) Calculated (1.05 x 3.55) WA Calculation Assumed (to be designed) Assumed (to be designed) Assumed (to be designed) Each slab approx. 2.5T Calculated (3.52 x 3.59) Project Parameters Assumed
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3.53 3.54 3.55 3.55 3.56 3.57 3.58 3.59 3.60 3.61 3.62 3.63 3.64 3.65 3.66 3.67	Jointing bay slab surface area Jointing bay slab thickness Jointing bay slab thickness Jointing bay slab concrete volume Jointing bay steel reinforcement Number of blocks per jointing bay Precast concrete slab length Precast concrete slab width Precast concrete slab height Number of precast concrete slabs per delivery Number of precast concrete slabs per joining bay Depth to top of jointing bay installed underground infrastructure Number if cable joint kits per jointing bay Number of cable joint kits per delivery Maximum distance between link boxes Number of link boxes per jointing bay	m m³ Tonnes m m m m m	0.2 9 0.585 1394 3 1 0.3 8 15 1.2 3 3 500	Calculated (3.53x 3.54) Calculated (1.05 x 3.55) WA Calculation Assumed (to be designed) Assumed (to be designed) Assumed (to be designed) Each slab approx. 2.5T Calculated (3.52 x 3.59) Project Parameters Assumed Assumed Project Parameters Project Parameters
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3.53 3.54 3.55 3.55 3.56 3.57 3.58 3.59 3.60 3.61 3.62 3.63 3.64 3.65 3.66 3.67 3.68 3.69 3.70	Jointing bay slab surface area Jointing bay slab thickness Jointing bay slab thickness Jointing bay slab concrete volume Jointing bay steel reinforcement Number of blocks per jointing bay Precast concrete slab length Precast concrete slab width Precast concrete slab height Number of precast concrete slabs per delivery Number of precast concrete slabs per joining bay Depth to top of jointing bay installed underground infrastructure Number if cable joint kits per jointing bay Number of cable joint kits per delivery Maximum distance between link boxes Number of link boxes per jointing bay Link box height Width of haul road / permanent access road Minimum distance between Passing Places	m m³ Tonnes	0.2 9 0.585 1394 3 1 0.3 8 15 1.2 3 3 500 2 1.5 4.5	Calculated (3.53x 3.54) Calculated (1.05 x 3.55) WA Calculation Assumed (to be designed) Assumed (to be designed) Assumed (to be designed) Each slab approx. 2.5T Calculated (3.52 x 3.59) Project Parameters Assumed Assumed Project Parameters
3.53 3.54 3.55 3.55 3.57 3.58 3.59 3.60 3.61 3.62 3.63 3.64 3.65 3.66 3.67 3.68 3.69 3.70	Jointing bay slab surface area Jointing bay slab thickness Jointing bay slab thickness Jointing bay slab concrete volume Jointing bay slab concrete volume Jointing bay steel reinforcement Number of blocks per jointing bay Precast concrete slab length Precast concrete slab height Number of precast concrete slabs per delivery Number of concrete slabs per joining bay Depth to top of jointing bay installed underground infrastructure Number if cable joint kits per jointing bay Number of cable joint kits per jointing bay Number of cable joint kits per iointing bay Number of licable joint kits per jointing bay Link box height Width of haul road / permanent access road Minimum distance between Passing Places Length of passing place	m m3 Tonnes	0.2 9 0.585 1394 3 1 0.3 8 15 1.2 3 500 2 1.5 4.5 87	Calculated (3.53x 3.54) Calculated (1.05 x 3.55) WA Calculation Assumed (to be designed) Assumed (to be designed) Assumed (to be designed) Each slab approx. 2.5T Calculated (3.52 x 3.59) Project Parameters Assumed Assumed Froject Parameters Project Parameters Project Parameters Project Parameters Project Parameters Project Parameters ED11892-GE-2006 ED11892-GE-2006
3.53 3.54 3.55 3.56 3.57 3.58 3.59 3.60 3.61 3.62 3.63 3.64 3.65 3.66 3.67 3.68 3.69 3.70	Jointing bay slab surface area Jointing bay slab thickness Jointing bay slab thickness Jointing bay slab concrete volume Jointing bay slab concrete volume Jointing bay steel reinforcement Number of blocks per jointing bay Precast concrete slab length Precast concrete slab width Precast concrete slab height Number of precast concrete slabs per delivery Number of concrete slabs per joining bay Depth to top of jointing bay installed underground infrastructure Number if cable joint kits per jointing bay Number of cable joint kits per delivery Maximum distance between link boxes Number of link boxes per jointing bay Link box height Width of haul road / permanent access road Minimum distance between Passing Places Length of passing place Width of passing place	m m³ Tonnes	0.2 9 0.585 1394 3 1 0.3 8 15 1.2 3 3 500 2 1.5 4.5 87	Calculated (3.53x 3.54) Calculated (1.05 x 3.55) WA Calculation Assumed (to be designed) Assumed (to be designed) Assumed (to be designed) Each slab approx. 2.5T Calculated (3.52 x 3.59) Project Parameters Assumed Assumed Project Parameters Project Parameters Project Parameters Project Parameters Project Parameters Project Parameters DPDEDA Project Parameters ED11892-GE-2006 ED11892-GE-2006 ED11892-GE-2006 ED11892-GE-2006
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Reference	Access and Permanent Haul Road Data (Fixed Information)	Units	Value	Source/Comments
4.01	Area of access tarmac surface	m²	170	ED11892-GE-2038 A
4.02	Length of R2 8m external radi kerbing required per access	m	25	ED11892-GE-2038 A
4.03	Maximum Length of K2 straight kerbing required per access	m	394.5	ED11892-GE-2038 A
4.04	Length of one R2 8m external radi kerb	m	0.78	https://www.marshalls.co.uk/commercial/assets/documents/product-specifications/kerb07.pdf
4.05	Length of one K2 straight kerb	m	0.914	https://www.marshalls.co.uk/commercial/assets/documents/product-specifications/kerb07.pdf
4.06	Number of internal radi kerbs required per access	-	32	Calculated (4.02 / 4.04)
4.07	Maximum Number of straigtht kerbs required per access	-	432	Calculated (4.03 / 4.05)
4.08	Number of R2 8m external radi kerbs per pallet	-	10	Assumed
4.09	Number of R2 straight kerbs per pallet	-	18	Assumed
4.10	Number of kerb pallets per delivery	-	6	Assumed
4.12	Maximum volume of concrete required for kerbing at each access	m³	33.2	Volume calculated from design drawing x length of kerbing required.
4.13	Maximum Depth of Type 1 mortar required	m	0.04	Worst case Assumed
4.14	Maximum Volume of Type 1 mortar required per access	m³	2.1	Calculated (125 x (4.02 + 4.02) x 4.13)
4.15	Maximum Volume of cement required per access	m³	0.49	Type 1 mortar 1 part cement, 1/4 parts lime and 3 parts sand
4.16	Density of cement	tonnes/m³	3.15	
4.17	Mass of cement required per access	tonnes	0.16	Calculated (4.15 / 4.16)
4.18	Mass of cement per bag	kg	25	https://www.condell-ltd.com/full-pallet-general-purpose-cement-opc-25kg-60-per-pallet?gclid=EAIalQobChMImPHW44702gIVB-MbCh2LUwy-EAQYBCABEgIQA_D_BwE
4.19	Number of cement bags per pallet	-	60	https://www.condell-ltd.com/full-pallet-general-purpose-cement-opc-25kg-60-per-pallet?gclid=EAlalQobChMImPHW44702gIVB-MbCh2LUwy-EAQYBCABEgIQA_D_BwE
4.20	Maxiumum Volume of lime required per access	m³	0.12	Type 1 mortar 1 part cement, 1/4 parts lime and 3 parts sand
4.21	Density of lime	tonnes/m³	2.21	https://www.slb.com/-/media/Files/miswaco/ps-drilling-fluids/lime.pdf?la=en&hash=2FD5F24971492980C016D52C63F7FFCC7B40F0A7
4.22	Mass of lime required per access	tonnes	0.06	Calculated (4.20 / 4.21)
4.23	Mass of lime per bag	kg	25	https://www.condell-ltd.com/rugby-lime-25kg?gclid=EAIaIQobChMI5suZyJDO2gIVQucbCh2r-wUAEAQYASABEgJRHPD_BwE
4.24	Number of lime bags per pallet	-	60	Assumed
4.25	Maxiumum Volume of sand required per access	m³	1.48	Type 1 mortar 1 part cement, 1/4 parts lime and 3 parts sand
4.26	Density of sand	tonnes/m³	1.70	https://www.smithsbletchington.co.uk/mixed-building-sand
4.27	Mass of sand required per access	tonnes	0.87	Calculated (4.20 / 4.21)
4.28	Mass of sand per bag	Tonnes	0.9	https://www.condell-ltd.com/rugby-lime-25kg?gclid=EAlalQobChMl5suZyJDO2gIVQucbCh2r-wUAEAQYASABEgJRHPD_BwE
4.29	Number of cement pallets / lime pallets / sand bags per delivery	-	4	Assumed (assumes all three items can be delivered in same delivery
4.30	Depth of sub-base beneth kerb	m	0.150	Assumed
	Maximum volume of sub-base beneath kerb	m³	25.17	Calculated from design drawing and length of kerbing.
4.32	Permanent access road sub-base depth	m	0.225	Suffolk County Council Estate Road Specification
4.33	Permanat access road Asphalt Depth	m	0.25	Suffolk County Council Estate Road Specification
4.34	Bulk Density of Asphalt	tonnes/m³	2.36	https://www.engineeringtoolbox.com/density-solids-d_1265.html
4.35	Width of Permanent Access Corridor	m	10.1	

Reference	Substation (Fixed Information)	Units	Value	Source/Comments
5.01	Length of Substation Compound	m	190	ED11892-GE-2037 A
5.02	Width of Substation Compound	m	190	ED11892-GE-2037 A
5.03	Area of Substation Compound	m²	36100	Calculated (5.01 x 5.03)
5.04	Depth of surface concrete slab	m	0.15	Nominal for non trafficed yard slab
5.05	Depth of sub-base beneath concrete slab	m	0.15	Nominal for non trafficed yard slab
5.06	Number of interconnector trenches per substation	-	2	Iberdrola Drawing EA1-GRD-DH-PRY-108930
5.07	Depth of trench	m	1.615	ED11892-GE-2044 A
5.08	Width of trench	m	1.450	ED11892-GE-2044 A
5.09	Diameter of 400kV cable	m	0.120	SPR Document EA1-GRD-H-PRY-028854-Rev1-ONCA - 400kV Technical Components Document
5.10	400kV cable length per drum	m	500	Assumed
5.11	Number of 400kV cable drums per delivery	-	1	Assumed
5.12	Diameter of fibre cable	m	0.025	TBC
5.13	Fibre cable length per drum	m	2000	Assumed
5.14	Number of fibre cable drums per delivery	-	1	Assumed
5.15	Diameter of ECC cable	m	0.05	TBC
5.16	ECC length per drum	m	2000	Assumed
5.17	Number of ECC cable drums per delivery	-	1	Assumed
5.18	Number of 400kV Cable Ducts per trench	-	3	ED11892-GE-2044 A
5.19	Diameter of 400kV cable ducts	m	0.20	ED11892-GE-2044 A
5.20	Length of 400kV cable duct	m	6	Page 32 http://www.emtelle.com/wp-content/uploads/2015/05/Duct-Catalogue-2015-1.pdf
5.21	Number of 400KV cable ducts per pack	-	25	Page 32 http://www.emtelle.com/wp-content/uploads/2015/05/Duct-Catalogue-2015-1.pdf
5.22	Number of fibre cable ducts per trench	-	1	ED11892-GE-2044 A
5.23	Diameter of fibre cable ducts	m	0.11	ED11892-GE-2044 A
5.24	Length of fibre cable ducts	m	6	Page 30 http://www.emtelle.com/wp-content/uploads/2015/05/Duct-Catalogue-2015-1.pdf
5.25	Number of fibre cable ducts per pack	-	90	Page 30 http://www.emtelle.com/wp-content/uploads/2015/05/Duct-Catalogue-2015-1.pdf
5.26	Number of sub ducts within fibre cable duct	-	4	ED11892-GE-2044 A
5.27	Diameter of sub ducts	m	0.032	ED11892-GE-2044 A
5.28	Length of sub duct coil	m	50	Page 37 http://www.emtelle.com/wp-content/uploads/2015/05/Duct-Catalogue-2015-1.pdf
5.29	Number of sub duct coils per pack	-	4	Page 37 http://www.emtelle.com/wp-content/uploads/2015/05/Duct-Catalogue-2015-1.pdf
5.30	Number of ECC cable ducts per trench	-	1	ED11892-GE-2044 A
5.31	Diameter of ECC Cable Ducts	m	0.11	ED11892-GE-2044 A
5.32	Length of fibre cable ducts	m	6	Page 30 http://www.emtelle.com/wp-content/uploads/2015/05/Duct-Catalogue-2015-1.pdf
5.33	Number of fibre cable ducts per pack	-	90	Page 30 http://www.emtelle.com/wp-content/uploads/2015/05/Duct-Catalogue-2015-1.pdf
5.34	Number of duct packs per delivery	-	4	Assumed
5.35	Cement Bound Sand (CBS) depth	m	1.24	ED11892-GE-2044 A
5.36	CBS Volume per m run of trench	m³	0.43	ED11892-GE-2044 A
5.37	CBS density	t/m³	1.6	Assumed
5.38	Tile length	m	1	https://www.powerandcables.com/product/product-category/stokbord-cable-protection-1000mm-x-450mm/
5.39	Tile width	m	0.45	https://www.powerandcables.com/product/product-category/stokbord-cable-protection-1000mm-x-450mm/
5.40	Tile Height	m	0.05	Assumed
5.41	Number of tiles per delivery	-	800	Assumed. Based on 40 per pack and 20 packs per delivery
5.42	Depth to top of tile	m	1.14	ED11892-GE-2044 A
5.43	Bentonite required for cable installation in ducts	kg/m³ of fluid	60	Assumed
5.44	Substation CCS compound length	m	190	Drawing ED11892-GE-2057
5.45	Substation CCs compound width	m	90	Drawing ED11892-GE-2057
5.46	Substation CCS compound hardstanding area	m²	11050	Drawing ED11892-GE-2057
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Measured Parameters	Heite	Landfall HDD	1	24	2B	24	3B	4A	4B and Substation Zo
Measured Parameters Number of accesses	Units -	Landfall HDD 0	1	2A	2B 0	3A	3B 2	4A 1	4B and Substation Zo
Permanent Haul road length	m	0	0	0	0	0	0	0	1700
Permanent Haul road width	m m	0	0	\	0	0	0	0	1700
empoary Hardstanding Haul road length			2428	2904	582	86	1728	1135	400
	m	0			0	00		453	0
empoary tarmac haul road length Jumber of HGV Turning Areas	m	0	0	0	0	0	0	453	0
	-				0	<u> </u>	_	1	
lumber of Large CCS lumber of Medium CCS	-	0	0	0	, and the second	0	0	1	0
	-	1	1	1	0	0	0	0	0
lumber of Small CCS	-	0	0	0	1	0	1	0	0
lumber of substation CCS	-	0	0	0	0	0	0	0	2
umber of HGV Holding Areas	-	0	0	0	0	0	0	0	0
umber of joint bays required per project	-	0	10	10	4	0	6	8	0
ength of Trenching	m	0	2078	2296	582	86	1728	1588	326
lumber of transition bays per project	-	2	0	0	0	0	0	0	0
umber of Landfall HDD locations	-	1	0	0	0	0	0	0	0
ength of Landfall HDD	m	1300	0	0	0	0	0	0	0
umber of Medium Length HDD Drilling Compounds	-	0	1	0	0	0	0	0	0
otal length of medium length HDD	m	0	407	0	0	0	0	0	0
umber of Medium Length HDD Exit Pit Compounds	m	0	0	1	0	0	0	0	0
umber of Short Length HDD Drilling Compounds	-	0	0	0	0	0	0	0	0
otal length of short length HDD	m	0	0	0	0	0	0	0	0
umber of Short Length HDD Exit Pit Compounds	-	0	0	0	0	0	0	0	0
umber of Substation Operational Compounds	-	0	0	0	0	0	0	0	2
olume of Topsoil to be removed from Substation Site and SUDS	m³	0	0	0	0	0	0	0	19,051
olume of Sub-soil to be imported/exported for Substation Site and SUDS	m³	0	0	0	0	0	0	0	612
istance between National Grid and Project Substations	m	0	0	0	0	0	0	0	20
		1		1		1			
otal Vehicle Movmenets (without miscellaneous allowances)		Landfall HDD	1	2A	2B	3A	3B	4A	4B and Substation Zo
ccess from Public Road HGV Movements		0	52	52	0	52	98	52	29
ermanent Haul Road HGV Movements		0	0	0	0	0	0	0	1,058
otal haul road construction HGV movements		0	816	976	200	34	596	1,030	206
otal CCS Construction HGV movements		624	624	624	226	0	226	1,854	1,242
otal HGV Holding Area at Elm Tree Farm HGV Movements		0	0	0	0	0	0	0	0
otal Marine Electrical Cable HGV Movements		0	0	0	0	0	0	0	0
otal Marine Fibre Cable HGV Movements		0	0	0	0	0	0	0	0
otal Terrestrial Electrical Cable HGV Movements		0	60	56	14	3	42	39	8
otal Terrestrial Fibre Cable HGV Movements		0	5	5	2	1	4	4	1
otal cable joint kits HGV movements		0	20	20	8	0	12	16	0
otal tile HGV movements		0	21	23	6	1	18	16	4
otal trench HGV movements		0	669	739	188	29	556	511	106
otal cable duct HGV movements		0	69	77	20	3	58	53	11
entonite (cable Installation in Ducts) HGV Movements		0	0	0	0	0	0	0	0
pinting bay HGV movements		0	583	583	235	0	351	468	0
ransition bay HGV movements		181	0	0	0	0	0	0	0
		3,066							
andfall HDD HGV movements			0	0	0	0	0	0	0
ledium Length Onshore HDD Drilling Compound HGV movements		0	898	0	0	0	0	0	0
edium Length Onshore HDD Exit Pit Compound HGV movements		0	0	298	0	0	0	0	0
hort Length Onshore HDD Drilling Compound HGV movements		0	0	0	0	0	0	0	0
hort Length Onshore HDD Exit Pit Compound HGV movements		0	0	0	0	0	0	0	0
Substation Compound Earthworks and Surface HGV Movements		0	0	0	0	0	0	0	3,863
Project Substation - National Grid Connection		0	0	0	0	0	0	0	15
			3,817	3,453	899	123	1,961		6,543
Grand total deliveries		3,871						4,043	
rand total deliveries		7,742	7,634	6,906	1,798	246	3,922	8,086	13,086
Grand total deliveries Grand total (two way movements)	Unite	7,742	7,634	6,906		246	3,922	8,086	T
rand total deliveries rand total (two way movements) ccess From Public Road Construction	Units	7,742 Landfall HDD		6,906 2A	2B		3,922 3B		4B and Substation Zo
rand total deliveries rand total (two way movements) ccess From Public Road Construction umber of accesses	m	7,742 Landfall HDD	7,634 1	6,906 2A 1	2B 0	246 3A 1	3,922 3B 2	8,086 4A 1	4B and Substation Z
rand total deliveries rand total (two way movements) ccess From Public Road Construction umber of accesses rea of tarmac surface	m m²	7,742 Landfall HDD 0 0	7,634 1 1 170	6,906 2A 1 170	2B 0 0	246 3A 1 170	3,922 3B 2 340	8,086 4A 1 170	4B and Substation Z
rand total deliveries rand total (two way movements) ccess From Public Road Construction umber of accesses rea of tarmac surface olume of Sub-base stone (Type 1)	m m² m³	7,742 Landfall HDD 0 0 0	7,634 1 1 170 63	2A 1 170 63	2B 0 0 0	3A 1 170 63	3,922 3B 2 340 127	8,086 4A 1 170 63	4B and Substation Z 1 170 63
rand total deliveries rand total (two way movements) ccess From Public Road Construction umber of accesses rea of tarmac surface olume of Sub-base stone (Type 1) ass of Type 1 stone required	m m² m³ Tonnes	7,742 Landfall HDD 0 0 0 0 0	7,634 1 1 170 63 146	2A 1 170 63 146	2B 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3A 1 170 63 146	3,922 3B 2 340 127 292	8,086 4A 1 170 63 146	4B and Substation Z 1 1770 63 146
rand total deliveries rand total (two way movements) ccess From Public Road Construction umber of accesses rea of tarmac surface olume of Sub-base stone (Type 1) ass of Type 1 stone required	m m² m³	7,742 Landfall HDD 0 0 0	7,634 1 1 170 63	2A 1 170 63	2B 0 0 0	3A 1 170 63	3,922 3B 2 340 127	8,086 4A 1 170 63	4B and Substation Z 1 170 63
rand total deliveries rand total (two way movements) ccess From Public Road Construction umber of accesses rea of tarmac surface olume of Sub-base stone (Type 1) ass of Type 1 stone required umber of Type 1 stone deliveries	m m² m³ Tonnes	7,742 Landfall HDD 0 0 0 0 0 0	7,634 1 1 170 63 146 8	6,906 2A 1 170 63 146 8	2B 0 0 0 0 0	246 3A 1 170 63 146 8	3,922 3B 2 340 127 292 15	8,086 4A 1 170 63 146 8	4B and Substation Z 1 170 63 146 8
rand total deliveries rand total (two way movements) ccess From Public Road Construction umber of accesses rea of tarmac surface olume of Sub-base stone (Type 1) ass of Type 1 stone required umber of Type 1 stone deliveries olume of Asphalt	m m² m³ Tonnes -	7,742 Landfall HDD 0 0 0 0 0 0 0 0 0	7,634 1 1 170 63 146 8	6,906 2A 1 170 63 146 8	2B 0 0 0 0 0 0	3A 1 170 63 146 8	3,922 3B 2 340 127 292 15	8,086 4A 1 170 63 146 8	4B and Substation Z 1 1 170 63 146 8
rand total deliveries rand total (two way movements) ccess From Public Road Construction umber of accesses rea of tarmac surface blume of Sub-base stone (Type 1) ass of Type 1 stone required umber of Type 1 stone deliveries blume of Asphalt ass of Asphalt	m m² m³ Tonnes m³ Tonnes	7,742 Landfall HDD 0 0 0 0 0 0 0 0 0 0 0 0	7,634 1 1 170 63 146 8 43 100	6,906 2A 1 170 63 146 8 43 100	2B 0 0 0 0 0 0	246 3A 1 170 63 146 8 43 100	3,922 3B 2 340 127 292 15 85 201	8,086 4A 1 170 63 146 8 43	4B and Substation Z 1 170 63 146 8 43 100
rand total deliveries rand total (two way movements) ccess From Public Road Construction umber of accesses rea of tarmac surface blume of Sub-base stone (Type 1) ass of Type 1 stone required umber of Type 1 stone deliveries blume of Asphalt ass of Asphalt	m m² m³ Tonnes -	7,742 Landfall HDD 0 0 0 0 0 0 0 0 0	7,634 1 1 170 63 146 8	6,906 2A 1 170 63 146 8	2B 0 0 0 0 0 0	3A 1 170 63 146 8	3,922 3B 2 340 127 292 15	8,086 4A 1 170 63 146 8	4B and Substation Z 1 170 63 146 8
rand total deliveries rand total (two way movements) ccess From Public Road Construction umber of accesses rea of tarmac surface olume of Sub-base stone (Type 1) ass of Type 1 stone required umber of Type 1 stone deliveries olume of Asphalt ass of Asphalt umber of Asphalt Deliveries	m m² m³ Tonnes - m³ Tonnes	7,742 Landfall HDD 0 0 0 0 0 0 0 0 0 0 0 0 0	7,634 1 1 170 63 146 8 43 100 6	6,906 2A 1 170 63 146 8 43 100 6	2B 0 0 0 0 0 0	246 3A 1 170 63 146 8 43 100 6	3,922 3B 2 340 127 292 15 85 201	8,086 4A 1 1 170 63 146 8 100 6	4B and Substation Z 1 170 63 146 8 43 100 6
rand total deliveries rand total (two way movements) ccess From Public Road Construction umber of accesses rea of tarmac surface olume of Sub-base stone (Type 1) ass of Type 1 stone required umber of Type 1 stone deliveries olume of Asphalt lass of Asphalt umber of Asphalt Deliveries umber of R2 8m external radi kerbs	m m² m³ Tonnes - m³ Tonnes	7,742 Landfall HDD 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	7,634 1 1 170 63 146 8 43 100 6	6,906 2A 1 170 63 146 8 43 100 6	2B 0 0 0 0 0 0	246 3A 1 170 63 146 8 43 100 6	3,922 3B 2 340 127 292 15 85 201 11	8,086 4A 1 170 63 146 8 43 100 6	4B and Substation Z 1 170 63 146 8 43 100 6
rand total deliveries rand total (two way movements) ccess From Public Road Construction umber of accesses rea of tarmac surface olume of Sub-base stone (Type 1) ass of Type 1 stone required umber of Type 1 stone deliveries olume of Asphalt ass of Asphalt umber of Asphalt to the sub-base stone umber of R2 8m external radi kerbs umber of R2 8m external radi kerbs umber of R2 straight kerbs	m m² m³ Tonnes - Tonnes	7,742 Landfall HDD 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	7,634 1 1 170 63 146 8 43 100 6	6,906 2A 1 170 63 146 8 43 100 6	2B 0 0 0 0 0 0 0 0 0 0	246 3A 1 170 63 146 8 43 100 6 32 432	3,922 3B 2 340 127 292 15 85 201 11 64 864	8,086 4A 1 170 63 146 8 43 100 6	4B and Substation Z 1 170 63 146 8 43 100 6 32 432
rand total deliveries rand total (two way movements) ccess From Public Road Construction umber of accesses rea of tarmac surface olume of Sub-base stone (Type 1) ass of Type 1 stone required umber of Type 1 stone deliveries olume of Asphalt ass of Asphalt umber of Asphalt leiveries umber of R2 8m external radi kerbs umber of K2 straight kerbs otal number of pallets of kerbs	m m² m² m³ Tonnes - m³ Tonnes	7,742 Landfall HDD 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	7,634 1 1 170 63 146 8 43 100 6 32 432 27	6,906 2A 1 170 63 146 8 43 100 6 32 432 27	2B 0 0 0 0 0 0 0 0 0 0 0	246 3A 1 170 63 146 8 43 100 6 32 432 27	3,922 3B 2 340 127 292 15 85 201 11 64 864 54	8,086 4A 1 1 170 63 146 8 43 100 6 32 432 27	4B and Substation Z 1 170 63 146 8 43 100 6 32 432 27
rand total deliveries rand total (two way movements) ccess From Public Road Construction umber of accesses rea of tarmac surface olume of Sub-base stone (Type 1) ass of Type 1 stone required umber of Type 1 stone deliveries olume of Asphalt ass of Asphalt umber of Asphalt leiveries umber of R2 8m external radi kerbs umber of K2 straight kerbs otal number of pallets of kerbs	m m² m³ Tonnes - Tonnes	7,742 Landfall HDD 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	7,634 1 1 170 63 146 8 43 100 6	6,906 2A 1 170 63 146 8 43 100 6	2B 0 0 0 0 0 0 0 0 0 0	246 3A 1 170 63 146 8 43 100 6 32 432	3,922 3B 2 340 127 292 15 85 201 11 64 864	8,086 4A 1 170 63 146 8 43 100 6	4B and Substation Z 1 170 63 146 8 43 100 6
rand total deliveries rand total (two way movements) ccess From Public Road Construction umber of accesses rea of tarmac surface olume of Sub-base stone (Type 1) ass of Type 1 stone required umber of Type 1 stone deliveries olume of Asphalt ass of Asphalt umber of Asphalt leass of Asphalt umber of R2 8m external radi kerbs umber of R2 straight kerbs otal number of pallets of kerbs umber of kerb deliveries	m m² m² Tonnes - m³ Tonnes	7,742 Landfall HDD 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	7,634 1 1 170 63 146 8 43 100 6 32 432 27 5	6,906 2A 1 170 63 146 8 43 100 6 32 432 27 5	2B 0 0 0 0 0 0 0 0 0 0 0 0 0	246 3A 1 170 63 146 8 43 100 6 32 432 27 5	3,922 3B 2 340 127 292 15 85 201 11 64 864 54 10	8,086 4A 1 170 63 146 8 100 6 32 432 27 5	4B and Substation Z 1 170 63 146 8 43 100 6 32 432 27 5
rand total deliveries rand total (two way movements) ccess From Public Road Construction umber of accesses rea of tarmac surface olume of Sub-base stone (Type 1) ass of Type 1 stone required umber of Type 1 stone deliveries olume of Asphalt ass of Asphalt umber of Asphalt loliveries umber of R2 8m external radi kerbs umber of K2 straight kerbs otal number of pallets of kerbs umber of kerb deliveries	m m² m³ Tonnes - m³ Tonnes	7,742 Landfall HDD 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	7,634 1 1 170 63 146 8 43 100 6 32 432 27 5	6,906 2A 1 170 63 146 8 43 100 6 32 432 27 5 33.2	2B 0 0 0 0 0 0 0 0 0 0 0 0 0	246 3A 1 170 63 146 8 43 100 6 32 432 27 5 33.2	3,922 3B 2 340 127 292 15 85 201 11 64 864 54 10	8,086 4A 1 1 170 63 146 8 43 100 6 32 432 27 5 33.2	4B and Substation Z 1 170 63 146 8 43 100 6 32 432 27 5
rand total deliveries rand total (two way movements) ccess From Public Road Construction umber of accesses ea of tarmac surface blume of Sub-base stone (Type 1) ass of Type 1 stone required umber of Type 1 stone deliveries blume of Asphalt ass of Asphalt umber of Asphalt least of K2 straight kerbs umber of K2 straight kerbs umber of kerb deliveries blume of concrete required	m m² m² Tonnes - m³ Tonnes	7,742 Landfall HDD 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	7,634 1 1 170 63 146 8 43 100 6 32 432 27 5	6,906 2A 1 170 63 146 8 43 100 6 32 432 27 5	2B 0 0 0 0 0 0 0 0 0 0 0 0 0	246 3A 1 170 63 146 8 43 100 6 32 432 27 5	3,922 3B 2 340 127 292 15 85 201 11 64 864 54 10	8,086 4A 1 170 63 146 8 100 6 32 432 27 5	4B and Substation Z 1 170 63 146 8 43 100 6 32 432 27 5
rand total deliveries rand total (two way movements) ccess From Public Road Construction umber of accesses rea of tarmac surface olume of Sub-base stone (Type 1) ass of Type 1 stone required umber of Type 1 stone deliveries olume of Asphalt ass of Asphalt umber of Asphalt deliveries umber of Asphalt deliveries umber of R2 8m external radi kerbs umber of R2 straight kerbs otal number of pallets of kerbs umber of kerb deliveries olume of concrete required umber of concrete deliveries	m m² m² m³ Tonnes	7,742 Landfall HDD 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	7,634 1 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6	6,906 2A 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6	2B 0 0 0 0 0 0 0 0 0 0 0 0 0	246 3A 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6	3,922 3B 2 340 127 292 15 85 201 11 64 864 54 10 66.4 12	8,086 4A 1 170 63 146 8 100 6 32 432 27 5 33.2 6	4B and Substation Z 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6
rand total deliveries rand total (two way movements) ccess From Public Road Construction umber of accesses rea of tarmac surface olume of Sub-base stone (Type 1) ass of Type 1 stone required umber of Type 1 stone deliveries olume of Asphalt ass of Asphalt umber of Asphalt less of Asphalt umber of FR2 8m external radi kerbs umber of K2 straight kerbs otal number of pallets of kerbs umber of kerb deliveries olume of concrete required umber of concrete required umber of concrete deliveries olume of mortor required	m m² m² m³ Tonnes - m³ Tonnes	7,742 Landfall HDD 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	7,634 1 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6	6,906 2A 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6	2B 0 0 0 0 0 0 0 0 0 0 0 0 0	246 3A 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6	3,922 3B 2 340 127 292 15 85 201 11 64 864 54 10 66.4 12	8,086 4A 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6	4B and Substation Z 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6
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rand total deliveries rand total (two way movements) ccess From Public Road Construction umber of accesses ea of tarmac surface olume of Sub-base stone (Type 1) ass of Type 1 stone required umber of Type 1 stone deliveries olume of Asphalt ass of Asphalt tumber of Asphalt umber of Asphalt deliveries umber of R2 8m external radi kerbs umber of R2 straight kerbs otal number of pallets of kerbs umber of kerb deliveries olume of concrete required umber of concrete deliveries olume of concrete deliveries olume of mortor required ass of cement required ass of cement required ass of cement required ass of cement required	m m² m² m² Tonnes	7,742 Landfall HDD 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	7,634 1 1 170 63 146 8 100 6 32 432 27 5 33.2 6 2 0.16 0.06	6,906 2A 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6 2 0.16 0.06	2B 0 0 0 0 0 0 0 0 0 0 0 0 0	246 3A 1 170 63 146 8 100 6 32 432 27 5 33.2 6 2 0.16 0.06	3,922 3B 2 340 127 292 15 85 201 11 64 864 54 10 66.4 12 4 0.31 0.11	8,086 4A 1 170 63 146 8 100 6 32 432 27 5 33.2 6 2 0.16 0.06	4B and Substation Z 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6 2 0.16 0.06
rand total deliveries rand total (two way movements) ccess From Public Road Construction umber of accesses rea of tarmac surface olume of Sub-base stone (Type 1) ass of Type 1 stone required umber of Type 1 stone deliveries olume of Asphalt ass of Asphalt umber of Asphalt leiveries umber of Asphalt leiveries umber of R2 8m external radi kerbs umber of K2 straight kerbs otal number of pallets of kerbs umber of kerb deliveries olume of concrete required umber of concrete deliveries olume of concrete deliveries olume of mortor requred ass of cement required ass of lime required	m m² m² m³ Tonnes	7,742 Landfall HDD 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	7,634 1 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6 2 0.16 0.06 0.87	6,906 2A 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6 0.16 0.06 0.87	2B 0 0 0 0 0 0 0 0 0 0 0 0 0	3A 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6 2 0.16 0.06 0.87	3,922 3B 2 340 127 292 15 85 201 11 64 864 54 10 66.4 12 4 0.31 0.11 1.74	8,086 4A 1 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6 0.16 0.06 0.87	4B and Substation Z 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6 2 0.16 0.06 0.87
rand total deliveries rand total (two way movements) ccess From Public Road Construction umber of accesses rea of tarmac surface olume of Sub-base stone (Type 1) ass of Type 1 stone required umber of Type 1 stone deliveries olume of Asphalt ass of Asphalt umber of Asphalt least of Road least least of Road least	m m² m² m² Tonnes	7,742 Landfall HDD 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	7,634 1 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6 2 0.16 0.06 0.87 1	6,906 2A 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6 2 0.16 0.06 0.87 1	2B 0 0 0 0 0 0 0 0 0 0 0 0 0	246 3A 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6 2 0.16 0.06 0.87 1	3,922 3B 2 340 127 292 15 85 201 11 64 864 54 10 66.4 12 4 0.31 0.11 1.74 1	8,086 4A 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6 2 0.16 0.06 0.87	4B and Substation Z 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6 2 0.16 0.06 0.87
rand total deliveries rand total (two way movements) ccess From Public Road Construction umber of accesses rea of tarmac surface olume of Sub-base stone (Type 1) ass of Type 1 stone required umber of Type 1 stone deliveries olume of Asphalt ass of Asphalt umber of Asphalt deliveries umber of Asphalt deliveries umber of R2 8m external radi kerbs umber of R2 straight kerbs otal number of pallets of kerbs umber of kerb deliveries olume of concrete required umber of concrete required umber of concrete required ass of cement required ass of sand required ass of sand required umber of Cement pallets required umber of Cement pallets required umber of Cement pallets required umber of Ime pallets required	m m² m² m³ Tonnes	7,742 Landfall HDD 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	7,634 1 1 170 63 146 8 43 100 6 32 432 27 5 5 33.2 6 0.16 0.06 0.87 1 1	6,906 2A 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6 2 0.16 0.06 0.87 1 1	2B 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	246 3A 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6 2 0.16 0.06 0.87 1 1	3,922 3B 2 340 127 292 15 85 201 11 64 864 54 10 66.4 12 4 0.31 0.11 1.74 1	8,086 4A 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6 0.16 0.06 0.87 1	4B and Substation Z 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6 2 0.16 0.06 0.87 1 1
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rand total deliveries rand total (two way movements) ccess From Public Road Construction umber of accesses ea of tarmac surface blume of Sub-base stone (Type 1) ass of Type 1 stone required umber of Asphalt ass of Asphalt ass of Asphalt ass of Asphalt blume of Asphalt comber of Asphalt comber of Asphalt comber of R2 8m external radi kerbs comber of R2 straight kerbs comber of R2 straight kerbs comber of kerb deliveries comber of kerb deliveries comber of concrete required comber of concrete deliveries comber of concrete deliveries comber of concrete required comber of comber	m m² m² m³ Tonnes Tonnes	7,742 Landfall HDD 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	7,634 1 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6 2 0.16 0.06 0.87 1 1 1 1	6,906 2A 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6 2 0.16 0.06 0.87 1 1 1 1	2B 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	246 3A 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6 2 0.16 0.06 0.87 1 1 1 1	3,922 3B 2 340 127 292 15 85 201 11 64 864 54 10 66.4 12 4 0.31 0.11 1.74 1 1 2 1	8,086 4A 1 170 63 146 8 8 43 100 6 6 32 432 27 5 6 0.16 0.06 0.87 1 1 1 1	4B and Substation Z 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6 2 0.16 0.06 0.87 1 1 1 1
rand total deliveries rand total (two way movements) ccess From Public Road Construction umber of accesses ea of tarmac surface blume of Sub-base stone (Type 1) ass of Type 1 stone required umber of Type 1 stone deliveries blume of Asphalt ass of Asphalt umber of Asphalt beliveries construction construction construction display the construction di	m m² m² m³ Tonnes	7,742 Landfall HDD 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	7,634 1 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6 2 0.16 0.06 0.87 1 1 1 1 0	6,906 2A 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6 2 0.16 0.06 0.87 1 1 1 1 1	2B 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	246 3A 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6 0.16 0.06 0.87 1 1 1 1 0	3,922 3B 2 340 127 292 15 85 201 11 64 864 54 10 66.4 12 4 0.31 0.11 1.74 1 1 2 1	8,086 4A 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6 0.16 0.06 0.87 1 1 1 1 0	4B and Substation Z 1 170 63 146 8 43 100 6 6 32 432 27 5 33.2 6 2 0.16 0.06 0.87 1 1 1 1 1 1 77
rand total deliveries rand total (two way movements) ccess From Public Road Construction umber of accesses ea of tarmac surface plume of Sub-base stone (Type 1) ass of Type 1 stone required umber of Type 1 stone deliveries plume of Asphalt ass of Asphalt ass of Asphalt umber of Asphalt deliveries umber of Asphalt deliveries umber of K2 8m external radi kerbs umber of K2 straight kerbs total number of pallets of kerbs umber of kerb deliveries plume of concrete required umber of concrete required umber of concrete required ass of cement required ass of sand required umber of cement pallets required umber of sand bags required umber of sand bags required umber of cement pallets required umber of cement pallet, lime pallet and sand bag deliveries plume of Topsoil to be removed from site (permanent access only) ass of Topsoil to be removed from site (permanent access only)	m m² m² m³ Tonnes Tonnes	7,742 Landfall HDD 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	7,634 1 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6 2 0.16 0.06 0.87 1 1 1 1 1 0 0	6,906 2A 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6 2 0.16 0.06 0.87 1 1 1 1 0 0	2B 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	246 3A 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6 2 0.16 0.06 0.87 1 1 1 1 0 0	3,922 3B 2 340 127 292 15 85 201 11 64 864 54 10 66.4 12 4 0.31 0.11 1.74 1 1 1 2 1 0 0	8,086 4A 1 170 63 146 8 43 100 6 32 432 27 5 6 2 0.16 0.06 0.87 1 1 1 1 0 0	4B and Substation Z 1 170 63 146 8 8 100 6 32 432 27 5 5 2 0.16 0.06 0.87 1 1 1 1 77 51
rand total deliveries rand total (two way movements) ccess From Public Road Construction umber of accesses rea of tarmac surface rolume of Sub-base stone (Type 1) ass of Type 1 stone required umber of Type 1 stone deliveries colume of Asphalt ass of Asphalt umber of Asphalt umber of Asphalt tumber of Asphalt tumber of Asphalt tumber of Asphalt tumber of K2 8m external radi kerbs tumber of K2 straight kerbs otal number of pallets of kerbs umber of kerb deliveries colume of concrete required tumber of concrete required tumber of concrete required comber of concrete deliveries colume of mortor required ass of sand required ass of sand required tumber of Cement pallets required tumber of Gement pallets required tumber of cement pallets required tumber of cement pallet, lime pallet and sand bag deliveries colume of Topsoil to be removed from site (permanent access only) ass of Topsoil to be removed from site (permanent access only)	m m² m² m³ Tonnes	7,742 Landfall HDD 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	7,634 1 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6 2 0.16 0.06 0.87 1 1 1 1 0	6,906 2A 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6 2 0.16 0.06 0.87 1 1 1 1 1	2B 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	246 3A 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6 0.16 0.06 0.87 1 1 1 1 0	3,922 3B 2 340 127 292 15 85 201 11 64 864 54 10 66.4 12 4 0.31 0.11 1.74 1 1 2 1	8,086 4A 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6 0.16 0.06 0.87 1 1 1 1 0	4B and Substation Z 1 170 63 146 8 43 100 6 6 32 432 27 5 33.2 6 2 0.16 0.06 0.87 1 1 1 1 1 1 77
rand total deliveries rand total (two way movements) ccess From Public Road Construction umber of accesses rea of tarmac surface olume of Sub-base stone (Type 1) ass of Type 1 stone required umber of Type 1 stone deliveries olume of Asphalt ass of Asphalt umber of Asphalt less of Asphalt umber of Asphalt beliveries umber of R2 8m external radi kerbs umber of R2 straight kerbs otal number of pallets of kerbs umber of kerb deliveries olume of concrete required umber of concrete deliveries olume of mortor requred ass of cement required ass of cement required umber of Cement pallets required umber of Cement pallets required umber of Sand bags required umber of concrete required umber of cement pallets required umber of cement pallets required umber of cement pallets required umber of sand bags required umber of cement pallet, lime pallet and sand bag deliveries olume of Topsoil to be removed from site (permanent access only) umber of topsoil removal movements (permanent access only) umber of topsoil removal movements (permanent access only)	m m² m² m² Tonnes	7,742 Landfall HDD 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	7,634 1 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6 2 0.16 0.06 0.87 1 1 1 1 0 0 0	6,906 2A 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6 0.16 0.06 0.87 1 1 1 1 1 0 0 0	2B 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	246 3A 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6 2 0.16 0.06 0.87 1 1 1 1 1 0 0 0	3,922 3B 2 340 127 292 15 85 201 11 64 864 54 10 66.4 12 4 0.31 0.11 1.74 1 1 2 1 0 0 0	8,086 4A 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6 2 0.16 0.06 0.87 1 1 1 1 1 0 0 0	4B and Substation Z 1 170 63 146 8 43 100 6 6 32 432 27 5 33.2 6 2 0.16 0.06 0.87 1 1 1 1 1 1 1 77 51 3
rand total deliveries rand total (two way movements) ccess From Public Road Construction umber of accesses rea of tarmac surface olume of Sub-base stone (Type 1) ass of Type 1 stone required umber of Type 1 stone deliveries olume of Asphalt ass of Asphalt umber of Asphalt least of Road least least of Road least	m m² m² m² Tonnes	7,742 Landfall HDD 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	7,634 1 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6 2 0.16 0.06 0.87 1 1 1 1 1 0 0	6,906 2A 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6 2 0.16 0.06 0.87 1 1 1 1 0 0	2B 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	246 3A 1 170 63 146 8 43 100 6 32 432 27 5 33.2 6 2 0.16 0.06 0.87 1 1 1 1 0 0	3,922 3B 2 340 127 292 15 85 201 11 64 864 54 10 66.4 12 4 0.31 0.11 1.74 1 1 1 2 1 0 0	8,086 4A 1 170 63 146 8 43 100 6 32 432 27 5 6 2 0.16 0.06 0.87 1 1 1 1 0 0	4B and Substation Z 1 170 63 146 8 8 100 6 32 432 27 5 5 2 0.16 0.06 0.87 1 1 1 1 77 51

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Permanent Haul Road Construction Haul road length	Units	Landfall HDD	1	2A	2B	3A	3B	4A	4B and Substation Zone
Haul road width Number of passing places required	m m	0 0 0	0	0 0	0 0	0 0	0 0 0	0 0	1700 8.0 0
Surface area Volume of Sub-base stone For road and kerbing	m² m³	0	0	0	0	0	0	0	13,600 3,264
Mass of stone Number of stone deliveries	Tonnes	0	0	0	0	0	0	0	7,507 376
Volume of Asphalt	m³	0	0	0	0	0	0	0	3,400
Mass of Asphalt Number of Asphalt Deliveries	Tonnes -	0 0	0 0	0 0	0 0	0	0 0	0	8,024 402
Number of K2 Straight Kerbs	-	0	0	0	0	0	0	0	1,860
Total number of pallets of kerbs Number of kerb deliveries	-	0 0	0 0	0 0	0 0	0 0	0 0	0	103 18
Maximum volume of concrete required for kerbing Number of concrete deliveries	m³	0	0	0	0	0	0	0	269.0 45
Volume of mortor required	m³	0	0	0	0	0	0	0	17.0
Volume of cement required Mass of cement required	m³ Tonnes	0	0	0	0	0	0	0	4.00 1.27
Volume of lime required Mass of lime required	m³ Tonnes	0	0	0	0	0	0	0	1.00 0.57
Volume of sand required Mass of sand required Number of Cement pallets required	m³ Tonnes	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	12.00 7.1 1
Number of lime pallets required Number of sand bags required	- - -	0	0	0	0	0	0	0	1 8
Number of cement pallet, lime pallet and sand bag deliveries	-	0	0	0	0	0	0	0	3
Length of permanent security fencing required Number of fencing panels required	m -	0	0	0	0	0	0	0	3,420.2 978
Number of fencing panel deliveries	-	0	0	0	0	0	0	0	8
Volume of Topsoil to be removed from site Mass of Topsoil to be removed from site Number of topsoil removal movements	m³ Tonnes	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0	0 0 0	6,120 4,100 206
Number of HGV movements	-	0	0	0	0	0	0	0	1,058
									, , , , , , , , , , , , , , , , , , , ,
Haul Road Construction	Units	Landfall HDD	1 2428	2A 2904	2B	3A	3B	4A 1135	4B and Substation Zone
Hardstanding Haul road length Number of passing places required Number of HGV Turning Areas	m -	0 0 0	2428 28 0	2904 34 0	582 7 0	86 1 0	1728 20 1	0 0	400 0.0 0
Volume of Sub-base stone required Mass of sub-base stone required	m³ Tonnes	0	2,177 5,006	2,613 6,010	527 1,213	77 178	1,588 3,652	1,532 3,524	540 1,242
Number of sub-base stone deliveries	-	0	251	301	61	9	183	177	63
Volume of Crusher Run stone required Mass of Crusher Run stone required Number of Crusher Run stone required	m³ Tonnes	0	1,451 3,047	1,742 3,658	352 738	52 108	1,059 2,223	1,022 2,145	360 756
Number of Crusher Run stone deliveries Surface area	m²	0	153 14,510	183 17,420	37 3,515	6 515	10,586	10,215	3,600
Mass of geogrid required Number of geogrid deliveries	Tonnes -	0.00 0	3.19 2	3.83 2	0.77	0.11 1	2.33 2	2.25	0.79 1
Length of stock proof fencing required Number of Stockproof fencing deliveries	m	0.0	4,956.2 2	5,908.2 2	1,264.2 1	272.2	3,556.2	2,370.2	900.2
Length of tarmac haul road	m	0	0	0	0	0	0	453	0
Area of tarmac haul road Volume of Sub-base stone	m² m³	0	0	0	0	0	0	4,077 917.325	0
Mass of stone Number of stone deliveries	Tonnes -	0 0	0 0	0 0	0 0	0 0	0 0	2,110 106	0 0
Volume of Asphalt Mass of Asphalt	m³ Tonnes	0	0	0 0	0 0	0	0	1,019 2,405	0
Number of Asphalt Deliveries	-	0	0	0	0	0	0	121	0
Removal of haul road movements Number of HGV movements	-	0	408 816	488 976	100 200	17 34	298 596	515 1,030	103 206
	1	1	I	T					
							1		
CCS Construction Number of CCS	Units m	Landfall HDD	1	2A	2B	3A 0	3B	4A	4B and Substation Zone
Number of CCS Compound Hard Standing Surface Area Volume of Sub-base stone required	m m² m³	1 11050 1,658	1 11050 1,658	1 11050 1,658	1 3950 593	0 0 0	1 3950 593	1 21200 3,180	2 22100 3,315
Number of CCS Compound Hard Standing Surface Area	m m²	1 11050	1 11050	1 11050	1 3950	0	1 3950	1 21200	2 22100
Number of CCS Compound Hard Standing Surface Area Volume of Sub-base stone required Mass of sub-base stone required Number of sub-base stone deliveries Volume of Crusher Run stone required	m m² m³ Tonnes	1 11050 1,658 3,812 191	1 11050 1,658 3,812 191	1 11050 1,658 3,812 191	1 3950 593 1,363 69	0 0 0 0 0	1 3950 593 1,363 69	1 21200 3,180 7,314 366	2 22100 3,315 7,625 382
Number of CCS Compound Hard Standing Surface Area Volume of Sub-base stone required Mass of sub-base stone required Number of sub-base stone deliveries Volume of Crusher Run stone required Mass of Crusher Run stone required Number of Crusher Run stone deliveries	m m² m³ Tonnes	1 11050 1,658 3,812 191	1 11050 1,658 3,812 191	1 11050 1,658 3,812 191	1 3950 593 1,363 69	0 0 0 0	1 3950 593 1,363 69	1 21200 3,180 7,314 366	2 22100 3,315 7,625 382
Number of CCS Compound Hard Standing Surface Area Volume of Sub-base stone required Mass of sub-base stone required Number of sub-base stone deliveries Volume of Crusher Run stone required Mass of Crusher Run stone required	m m² Tonnes - m³ Tonnes	1 11050 1,658 3,812 191 1,105 2,321	1 11050 1,658 3,812 191 1,105 2,321	1 11050 1,658 3,812 191 1,105 2,321	1 3950 593 1,363 69 395 830	0 0 0 0 0	1 3950 593 1,363 69 395 830	1 21200 3,180 7,314 366 2,120 4,452	2 22100 3,315 7,625 382 2,210 4,641
Number of CCS Compound Hard Standing Surface Area Volume of Sub-base stone required Mass of sub-base stone required Number of sub-base stone deliveries Volume of Crusher Run stone required Mass of Crusher Run stone required Number of Crusher Run stone deliveries Mass of geogrid required Number of geogrid deliveries Compound Tarmac Surface Area	m m² Tonnes m³ Tonnes m³ Tonnes - Tonnes - Tonnes - Tonnes	1 11050 1,658 3,812 191 1,105 2,321 117 2.43 2	1 11050 1,658 3,812 191 1,105 2,321 117 2,43 2	1 11050 1,658 3,812 191 1,105 2,321 117 2.43 2	1 3950 593 1,363 69 395 830 42 0.87 1	0 0 0 0 0 0 0 0 0	1 3950 593 1,363 69 395 830 42 0.87 1	1 21200 3,180 7,314 366 2,120 4,452 223 4.66 3	2 22100 3,315 7,625 382 2,210 4,641 233 4.86 3
Number of CCS Compound Hard Standing Surface Area Volume of Sub-base stone required Mass of sub-base stone required Number of sub-base stone deliveries Volume of Crusher Run stone required Mass of Crusher Run stone required Mass of Crusher Run stone deliveries Mass of geogrid required Number of Crusher Run stone deliveries Compound Tarmac Surface Area Volume of Sub-base stone Mass of stone	m m² m² Tonnes - Tonnes - Tonnes - m² Tonnes - m² Tonnes - Tonnes - m² m² Tonnes - m² m² Tonnes	1 11050 1,658 3,812 191 1,105 2,321 117 2.43 2	1 11050 1,658 3,812 191 1,105 2,321 117 2,43 2 0 0	1 11050 1,658 3,812 191 1,105 2,321 117 2.43 2 0 0 0 0 0	1 3950 593 1,363 69 395 830 42 0.87 1	0 0 0 0 0 0 0 0 0 0 0	1 3950 593 1,363 69 395 830 42 0.87 1	1 21200 3,180 7,314 366 2,120 4,452 223 4.66 3 6000 1350 3,105	2 22100 3,315 7,625 382 2,210 4,641 233 4.86 3
Number of CCS Compound Hard Standing Surface Area Volume of Sub-base stone required Mass of sub-base stone required Number of sub-base stone deliveries Volume of Crusher Run stone required Mass of Crusher Run stone required Mass of Crusher Run stone deliveries Number of Crusher Run stone deliveries Mass of geogrid required Number of geogrid deliveries Compound Tarmac Surface Area Volume of Sub-base stone	m m² m² Tonnes	1 11050 1,658 3,812 191 1,105 2,321 117 2.43 2 0	1 11050 1,658 3,812 191 1,105 2,321 117 2,43 2	1 11050 1,658 3,812 191 1.105 2,321 117 2.43 2 2 0 0 0	1 3950 593 1,363 69 395 830 42 0.87 1	0 0 0 0 0 0 0 0 0 0	1 3950 593 1,363 69 395 830 42 0.87 1	1 21200 3,180 7,314 366 2.120 4,452 223 4.66 3 6000 1350	2 22100 3,315 7,625 382 2,210 4,641 233 4.86 3
Number of CCS Compound Hard Standing Surface Area Volume of Sub-base stone required Mass of sub-base stone required Number of sub-base stone deliveries Volume of Crusher Run stone required Mass of Crusher Run stone required Mass of Crusher Run stone deliveries Number of Crusher Run stone deliveries Mass of geogrid required Number of geogrid deliveries Compound Tarmac Surface Area Volume of Sub-base stone Mass of stone Number of stone deliveries	m m² m² Tonnes	1 11050 1,658 3,812 191 1,105 2,321 117 2.43 2 2 0 0	1 11050 1,658 3,812 191 1,105 2,321 117 2.43 2 2 0 0 0	1 11050 1,658 3,812 191 1.105 2,321 117 2.43 2 2 0 0 0 0 0 0	1 3950 593 1,363 69 395 830 42 0.87 1 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 3950 593 1,363 69 395 830 42 1 0.87 1	1 21200 3,180 7,314 366 2.120 4,452 223 4.66 3 6000 1350 3,105 156	2 22100 3,315 7,625 382 2,210 4,641 233 4.86 3 0 0 0 0 0
Number of CCS Compound Hard Standing Surface Area Volume of Sub-base stone required Mass of sub-base stone required Number of sub-base stone deliveries Volume of Crusher Run stone required Mass of Crusher Run stone required Mass of Crusher Run stone deliveries Valume of Crusher Run stone deliveries Mass of geogrid required Number of Crusher Run stone deliveries Compound Tarmac Surface Area Volume of Sub-base stone Mass of stone Number of stone deliveries Volume of Asphalt Mass of Asphalt Number of Asphalt Deliveries Length of security fencing required	m m² m³ Tonnes - m³ Tonnes - Tonnes - Tonnes - m³ Tonnes - m³ Tonnes - m³ Tonnes - m³ Tonnes	1 11050 1,658 3,812 191 1,105 2,321 117 2.43 2 0 0 0 0 0	1 11050 1,658 3,812 191 1,105 2,321 117 2.43 2 0 0 0 0 0	1 11050 1,658 3,812 191 1,105 2,321 117 2,43 2 0 0 0 0 0	1 3950 593 1,363 69 395 830 42 0.87 1	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 3950 593 1,363 69 395 830 42 0.87 1	1 21200 3,180 7,314 366 2,120 4,452 223 4.66 3 3 6000 1350 3,105 156 1,500 3,540 177 730	2 22100 3,315 7,625 382 2,210 4,641 233 4.86 3
Number of CCS Compound Hard Standing Surface Area Volume of Sub-base stone required Mass of sub-base stone required Number of sub-base stone deliveries Volume of Crusher Run stone required Mass of Crusher Run stone required Mass of Crusher Run stone deliveries Mass of geogrid required Number of Crusher Run stone deliveries Compound Tarmac Surface Area Volume of Sub-base stone Mass of stone Number of stone deliveries Volume of Asphalt Mass of Asphalt Number of Asphalt Deliveries	m m² m³ Tonnes - m³ Tonnes - Tonnes - Tonnes - m² m³ Tonnes - m³ Tonnes	1 11050 1,658 3,812 191 1,105 2,321 117 2.43 2 0 0 0 0	1 11050 1,658 3,812 191 1,105 2,321 117 2,43 2 0 0 0 0 0 0 0	1 11050 1,658 3,812 191 1,105 2,321 117 2.43 2 0 0 0 0	1 3950 593 1,363 69 395 830 42 0.87 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 3950 593 1,363 69 395 830 42 0.87 1	1 21200 3,180 7,314 366 2,120 4,452 223 4.66 3 3 6000 1350 3,105 156 1,500 3,540 177	2 22100 3,315 7,625 382 2,210 4,641 233 4.86 3
Number of CCS Compound Hard Standing Surface Area Volume of Sub-base stone required Mass of sub-base stone required Number of sub-base stone deliveries Volume of Crusher Run stone required Mass of Crusher Run stone required Mass of Crusher Run stone deliveries Mass of geogrid required Number of crusher Run stone deliveries Compound Tarmac Surface Area Volume of Sub-base stone Mass of stone Number of stone deliveries Volume of Asphalt Mass of Asphalt Number of Asphalt Deliveries Length of security fencing required Number of fencing panels required	m m² m³ Tonnes	1 11050 1,658 3,812 191 1,105 2,321 117 2.43 2 0 0 0 0 0 0	1 11050 1,658 3,812 191 1,105 2,321 117 2.43 2 0 0 0 0 0	1 11050 1,658 3,812 191 1,105 2,321 117 2.43 2 2 0 0 0 0 0	1 3950 593 1,363 69	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 3950 593 1,363 69 395 830 42 0.87 1 0 0 0 0 300 86	1 21200 3,180 7,314 366 2.120 4,452 223 23 4.66 3 3 6000 1350 3,105 156 1,500 3,540 177 730 209	2 22100 3,315 7,625 382 2,210 4,641 233 4.86 3 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Number of CCS Compound Hard Standing Surface Area Volume of Sub-base stone required Mass of sub-base stone required Number of sub-base stone deliveries Volume of Crusher Run stone required Mass of Crusher Run stone required Mass of Crusher Run stone deliveries Mass of geogrid required Number of crusher Run stone deliveries Compound Tarmac Surface Area Volume of Sub-base stone Mass of stone Number of stone deliveries Volume of Asphalt Mass of Asphalt Number of Asphalt Deliveries Length of security fencing required Number of fencing panel deliveries Removal of compound movements	m m² m³ Tonnes	1 11050 1,658 3,812 191 1,105 2,321 117 2.43 2 0 0 0 0 0 0 0 496 142 2	1 11050 1,658 3,812 191 1,105 2,321 117 2,43 2 0 0 0 0 0 496 142 2	1 11050 1,658 3,812 191 1050 1,658 3,812 191 117 117 117 2.43 2 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 3950 593 1,363 69	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 3950 593 1,363 69 395 830 42 0.87 1 0 0 0 0 300 86 1	1 21200 3,180 7,314 366 2,120 4,452 223 4.66 3 3 4.66 5.50 3,105 156 1.500 3,540 177 730 209 2	2 22100 3,315 7,625 382 2,210 4,641 233 4.86 3 0 0 0 0 0 1,120 320 3 3
Number of CCS Compound Hard Standing Surface Area Volume of Sub-base stone required Mass of sub-base stone required Number of sub-base stone required Number of sub-base stone deliveries Volume of Crusher Run stone required Mass of Crusher Run stone required Number of crusher Run stone deliveries Mass of geogrid required Number of geogrid deliveries Compound Tarmac Surface Area Volume of Sub-base stone Mass of stone Number of stone deliveries Volume of Asphalt Number of Asphalt Number of Asphalt Deliveries Length of security fencing required Number of fencing panel deliveries Removal of compound movements Number of HGV movements Number of HGV movements HGV Holding Area at Elm Tree Farm to be constructed as part of	m m² m² m³ Tonnes - m³ Tonnes - Tonnes - m³ Tonnes - m³ Tonnes - m³ Tonnes	1 11050 1,658 3,812 191 1,105 2,321 117 2,43 2 0 0 0 0 0 0 0 496 142 2 312 624	1 11050 1,658 3,812 191 1,105 2,321 117 2,43 2 0 0 0 0 0 496 142 2	1 11050 1,658 3,812 191 1,105 2,321 117 2,43 2 0 0 0 0 0 0 0 496 142 2 2 312 624	1 3950 593 1,363 69 395 830 42 0.87 1 0 0 0 0 0 0 300 86 1 1 113 226	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 3950 593 1,363 69 395 830 42 0.87 1 0 0 0 0 0 0 1 1 113 226	1 21200 3,180 7,314 366 2,120 4,452 223 223 4.66 3 3 105 156 1.500 3,540 177 730 209 2 2 927 1,854	2 22100 3.315 7,625 382 2,210 4,641 233 4.86 3 0 0 0 0 0 1,120 320 3 1,1242
Number of CCS Compound Hard Standing Surface Area Volume of Sub-base stone required Mass of sub-base stone required Number of sub-base stone required Number of sub-base stone required Number of Sub-base stone required Mass of Crusher Run stone required Mass of Crusher Run stone required Number of crusher Run stone deliveries Mass of geogrid required Number of geogrid deliveries Compound Tarmac Surface Area Volume of Sub-base stone Mass of stone Number of stone deliveries Volume of Asphalt Number of Asphalt Number of Asphalt Deliveries Length of security fencing required Number of fencing panel deliveries Removal of compound movements Number of HGV movements HGV Holding Area at Elm Tree Farm to be constructed as part of Landfall HDD Enabling Works Number of Holding Areas	m m² m³ Tonnes	1 11050 1,658 3,812 191 1,105 2,321 117 2.43 2 0 0 0 0 0 0 0 496 142 2	1 11050 1,658 3,812 191 1,105 2,321 117 2,43 2 0 0 0 0 0 0 0 496 142 2 2 312 624	1 11050 1,658 3,812 191 1050 1,658 3,812 191 117 117 117 2.43 2 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 3950 593 1,363 69	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 3950 593 1,363 69 395 830 42 0.87 1 0 0 0 0 300 86 1	1 21200 3,180 7,314 366 2,120 4,452 223 4.66 3 3 4.66 5.50 3,105 156 1.500 3,540 177 730 209 2	2 22100 3,315 7,625 382 2,210 4,641 233 4.86 3 0 0 0 0 0 1,120 320 3 3
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27552.0 55.104 56 2A 2296 9184 4.592 5	13.968 14 2B 582 2328 1.164 2	2.064 3 3A 86 344 0.172 1	20736.0 41.472 42 3B 1728 6912 3.456 4	19056.0 38.112 39 4A 1588 6352 3.176	7.824 8 4B and Substation Zone 326 1304 0.652
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2296 9184 4.592 5	582 2328 1.164 2	86 344 0.172 1	1728 6912 3.456 4	1588 6352 3.176	326 1304 0.652
2296 9184 4.592 5	582 2328 1.164 2	86 344 0.172 1	1728 6912 3.456 4	1588 6352 3.176	326 1304 0.652
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2A 20 60				4	1
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	24	0	36	48	0
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	T	Ι	Γ		
					4B and Substation Zone
					326
					1304
					407
					651
230	59	9	173	159	33
	4000 540	190.404	3825.792	3515.832	721.764
5083.344	1288.548				
10166.688	2577.096	380.808	7651.584	7031.664	1443.528
		18368 4656 18368 4656 23 6 24 2B 2296 582 9184 2328 2,864 726 4583 1162	18368 4656 688 18368 4656 688 23 6 1 2A 2B 3A 2296 582 86 9184 2328 344 2,864 726 107 4583 1162 172	18368 4656 688 13824 18368 4656 688 13824 23 6 1 18 2A 2B 3A 3B 2296 582 86 1728 9184 2328 344 6912 2,864 726 107 2,156 4583 1162 172 3449	18368 4656 688 13824 12704 18368 4656 688 13824 12704 23 6 1 18 16 2A 2B 3A 3B 4A 2296 582 86 1728 1588 9184 2328 344 6912 6352 2,864 726 107 2,156 1,981 4583 1162 172 3449 3170

Bentonite (cable installation in Tench Ducts)	Units	Landfall HDD	1	2A	2B	3A	3B	4A	4B and Substation Zone
Volume of fluid required for export cable	m³	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Volume of fluid required for fibre cable	m³	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total mass of bentonite required	kg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Number of bags required	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Number of bentonite deliveries	-	0	0	0	0	0	0	0	0
Water required Number of water deliveries	m³	0.00	0.00 0	0.00 0	0.00 0	0.00	0.00 0	0.00	0.00
Number of HGV movements	-	0	0	0	0	0	0	0	0
Number of FIGV movements	-	,	•	· · · · · · · · · · · · · · · · · · ·	•				•
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Jointing Bays Construction	Units	Landfall HDD	1	2A 20	2B	3A 0	3B 12	4A 16	4B and Substation Zone
Number of jointing bays Total Jointing bay concrete volume (m³)	- m³	0	180	180	8 72	0	108	144	0
Number of concrete deliveries	-	0	30	30	12	0	18	24	U O
Trained of control of control of		, i		,,,		·	.,		
Total Number of blocks	-	0	27,880	27,880	11,152	0	16,728	22,304	0
Number of block movements	-	0	93	93	38	0	56	75	0
Total number of slabs	-	0	0	0	0	0	0	0	0
Number of slab movements	-	0	0	0	0	0	0	0	0
Total Native soil to be disposed of	m³	0	1530	1530	612	0	918	1224	0
Total Native Soil Tonnage	Tonnes	Ö	9,180	9,180	3,672	Ö	5,508	7,344	Ö
Number of native soil movements	-	0	459	459	184	0	276	368	0
Total Steel reinforcement (t)	Tonnes	0	11.7	11.7	4.68	0	7.02	9.36	0
Number of steel deliveries	-	0	1 500	1 502	1 225	0	1 254	1	0 0
Number of HGV movements	-	0	583	583	235	0	351	468	l U
Transition Bays Construction	Units	Landfall HDD	1	2A	2B	3A	3B	4A	4B and Substation Zone
Number of transition bays	-	4	0	0	0	0	0	0	0
Total Transition bay concrete volume Number of concrete deliveries	m³	100.8	0	0	0	0	0	0	0
INUMBER OF CONCRETE GENERALS	-	17	0	0	0	0	0	0	0
Total Number of blocks	-	8,784	0	0	0	0	0	0	0
Number of block movements	-	30	0	Ö	0	Ö	Ö	Ö	ő
Total number of slabs	-	168	0	0	0	0	0	0	0
Number of slab movements	-	42	0	0	0	0	0	0	0
Total Native soil to be disposed of	m³	907.2	0	0	0	0	0	0	0
Total Native Soil to be disposed of	Tonnes	1814.4	0	0	0	0	0	0	0
		91	0	0	0	o o	0	0	Ö
Inumper of native soil movements									
Number of native soil movements	-		•	·	<u> </u>				
Total Steel reinforcement (t)	Tonnes	6.552	0	0	0	0	0	0	0
Total Steel reinforcement (t) Number of steel deliveries	Tonnes -	6.552 1	0	0	0	0	0	0	Ö
Total Steel reinforcement (t)	Tonnes	6.552	0	0	0				
Total Steel reinforcement (t) Number of steel deliveries	Tonnes -	6.552 1	0	0	0	0	0	0	Ö
Total Steel reinforcement (t) Number of steel deliveries	Tonnes -	6.552 1	0	0	0	0	0	0	Ö
Total Steel reinforcement (t) Number of steel deliveries Number of HGV movements Landfall HDDs	Tonnes -	6.552 1	0 0 0	0 0 0	0 0 0	0 0 3A	0 0 3B	0 0	Ö
Total Steel reinforcement (t) Number of steel deliveries Number of HGV movements Landfall HDDs Number of Landfall HDD locations	Tonnes	6.552 1 181 Landfall HDD	0 0 0	0 0 0 0	0 0 0 0	0 0 3A 0	0 0 3B	0 0 4A	4B and Substation Zone
Total Steel reinforcement (t) Number of steel deliveries Number of HGV movements Landfall HDDs Number of Landfall HDD locations Compound Surface Area	Tonnes	6.552 1 181 Landfall HDD	0 0 0 1 0	0 0 0 0	0 0 0 0	3A 0 0	3B 0	0 0 4A 0 0	4B and Substation Zone
Total Steel reinforcement (t) Number of steel deliveries Number of HGV movements Landfall HDDs Number of Landfall HDD locations Compound Surface Area Volume of Sub-base stone required	Tonnes Units - m² m³	6.552 1 181 Landfall HDD 1 13300 1,995	0 0 0 1	2A 0 0 0	0 0 0 0	3A 0 0	3B 0 0 0	4A 0 0 0	4B and Substation Zone 0 0 0 0 0
Total Steel reinforcement (t) Number of steel deliveries Number of HGV movements Landfall HDDs Number of Landfall HDD locations Compound Surface Area Volume of Sub-base stone required Mass of sub-base stone required	Tonnes Units - m² m³ Tonnes	6.552 1 181 181 Landfall HDD 1 13300 1,995 4,589	0 0 0 0	2A 0 0 0	0 0 0 0	3A 0 0 0 0	3B 0 0 0 0	4A 0 0 0 0	4B and Substation Zone 0 0 0 0 0 0 0 0
Total Steel reinforcement (t) Number of steel deliveries Number of HGV movements Landfall HDDs Number of Landfall HDD locations Compound Surface Area Volume of Sub-base stone required	Tonnes Units - m² m³	6.552 1 181 Landfall HDD 1 13300 1,995	0 0 0 1	2A 0 0 0	0 0 0 0	3A 0 0	3B 0 0 0	4A 0 0 0	4B and Substation Zone 0 0 0 0 0
Total Steel reinforcement (t) Number of steel deliveries Number of HGV movements Landfall HDDs Number of Landfall HDD locations Compound Surface Area Volume of Sub-base stone required Mass of sub-base stone required Number of sub-base stone deliveries Volume of Crusher Run stone required	Tonnes	6.552 1 181 181 Landfall HDD 1 13300 1,995 4,589 230	0 0 0 0	2A 0 0 0 0 0 0 0 0 0	0 0 0 0	3A 0 0 0 0	3B 0 0 0 0	4A 0 0 0 0 0	4B and Substation Zone 0 0 0 0 0 0 0 0
Total Steel reinforcement (t) Number of steel deliveries Number of HGV movements Landfall HDDs Number of Landfall HDD locations Compound Surface Area Volume of Sub-base stone required Mass of sub-base stone required Number of sub-base stone deliveries Volume of Crusher Run stone required Mass of Crusher Run stone required Mass of Crusher Run stone required	Tonnes - Units - m² m³ Tonnes	6.552 1 181 Landfall HDD 1 13300 1,995 4,589 230 1,330 2,793	0 0 0 0 1 0 0 0 0 0 0	2A 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	3A 0 0 0 0 0 0 0	3B 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	4B and Substation Zone 0 0 0 0 0 0 0 0 0 0
Total Steel reinforcement (t) Number of steel deliveries Number of HGV movements Landfall HDDs Number of Landfall HDD locations Compound Surface Area Volume of Sub-base stone required Mass of sub-base stone required Number of sub-base stone deliveries Volume of Crusher Run stone required	Tonnes	6.552 1 181 181 Landfall HDD 1 13300 1,995 4,589 230	0 0 0 0	2A 0 0 0 0 0 0 0 0 0	0 0 0 0	3A 0 0 0 0 0 0	3B 0 0 0 0 0 0	0 0 0 0 0 0 0 0	4B and Substation Zone 0 0 0 0 0 0 0 0 0 0 0
Total Steel reinforcement (t) Number of steel deliveries Number of HGV movements Landfall HDDs Number of Landfall HDD locations Compound Surface Area Volume of Sub-base stone required Mass of sub-base stone deliveries Volume of Crusher Run stone required Mass of Crusher Run stone required Number of Crusher Run stone required Number of Crusher Run stone deliveries	Tonnes	6.552 1 181 Landfall HDD 1 13300 1,995 4,589 230 1,330 2,793 140	0 0 0 0 1 0 0 0 0 0	2A 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	0 0 0 3B 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	4B and Substation Zone 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Total Steel reinforcement (t) Number of steel deliveries Number of HGV movements Landfall HDDs Number of Landfall HDD locations Compound Surface Area Volume of Sub-base stone required Mass of sub-base stone required Number of sub-base stone deliveries Volume of Crusher Run stone required Mass of Crusher Run stone required Number of Crusher Run stone deliveries Mass of Grusher Run Stone deliveries	Tonnes	6.552 1 181 Landfall HDD 1 13300 1,995 4,589 230 1,330 2,793	0 0 0 0 1 0 0 0 0 0 0	2A 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	3A 0 0 0 0 0 0 0	3B 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	4B and Substation Zone 0 0 0 0 0 0 0 0 0 0 0
Total Steel reinforcement (t) Number of steel deliveries Number of HGV movements Number of HGV movements Landfall HDDs Number of Landfall HDD locations Compound Surface Area Volume of Sub-base stone required Mass of sub-base stone required Number of sub-base stone deliveries Volume of Crusher Run stone required Mass of Crusher Run stone required Number of Crusher Run Stone deliveries Mass of geogrid required Number of geogrid required Number of geogrid deliveries	Tonnes - Units - m² m³ Tonnes - m³ Tonnes - Tonnes	6.552 1 181 Landfall HDD 1 13300 1,995 4,589 230 1,330 2,793 140 2.93 2	0 0 0 0 1 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0	0 0 0 3B 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0	4B and Substation Zone 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Total Steel reinforcement (t) Number of steel deliveries Number of HGV movements Landfall HDDs Number of Landfall HDD locations Compound Surface Area Volume of Sub-base stone required Mass of sub-base stone required Number of Sub-base stone deliveries Volume of Crusher Run stone required Mass of Crusher Run stone required Number of Crusher Run Stone deliveries Mass of geogrid required Number of geogrid deliveries Length of security fencing required	Tonnes - Units - m² m³ Tonnes - m³ Tonnes - m³	6.552 1 181 181 Landfall HDD 1 13300 1,995 4,589 230 1,330 2,793 140 2.93 2	0 0 0 0 1 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 3B 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	4B and Substation Zone 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Total Steel reinforcement (t) Number of steel deliveries Number of HGV movements Landfall HDDs Number of Landfall HDD locations Compound Surface Area Volume of Sub-base stone required Mass of sub-base stone required Number of sub-base stone deliveries Volume of Crusher Run stone required Nass of Crusher Run stone required Number of Crusher Run Stone deliveries Mass of Crusher Run Stone deliveries Mass of geogrid required Number of Geogrid deliveries Length of security fencing required Number of fencing panels required	Tonnes	6.552 1 181 Landfall HDD 1 13300 1,995 4,589 230 1,330 2,793 140 2.93 2 520 149	0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 3B 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 4B and Substation Zone 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Total Steel reinforcement (t) Number of steel deliveries Number of HGV movements Landfall HDDs Number of Landfall HDD locations Compound Surface Area Volume of Sub-base stone required Mass of sub-base stone required Number of Sub-base stone deliveries Volume of Crusher Run stone required Mass of Crusher Run stone required Number of Crusher Run Stone deliveries Mass of geogrid required Number of geogrid deliveries Length of security fencing required	Tonnes - Units - m² m³ Tonnes - m³ Tonnes - m³	6.552 1 181 181 Landfall HDD 1 13300 1,995 4,589 230 1,330 2,793 140 2.93 2	0 0 0 0 1 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 3B 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	4B and Substation Zone 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Total Steel reinforcement (t) Number of steel deliveries Number of HGV movements Landfall HDDs Number of Landfall HDD locations Compound Surface Area Volume of Sub-base stone required Mass of sub-base stone required Number of sub-base stone deliveries Volume of Crusher Run stone required Nass of Crusher Run stone required Number of Crusher Run Stone deliveries Mass of Crusher Run Stone deliveries Mass of geogrid required Number of Geogrid deliveries Length of security fencing required Number of fencing panels required	Tonnes	6.552 1 181 Landfall HDD 1 13300 1,995 4,589 230 1,330 2,793 140 2.93 2 520 149	0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 3B 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 4B and Substation Zone 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Total Steel reinforcement (t) Number of steel deliveries Number of HGV movements Number of Landfall HDDs Number of Landfall HDD locations Compound Surface Area Volume of Sub-base stone required Mass of sub-base stone required Number of sub-base stone required Number of Crusher Run stone required Mass of Crusher Run stone required Number of Crusher Run Stone deliveries Volume of Crusher Run Stone deliveries Mass of geogrid required Number of geogrid deliveries Length of security fencing required Number of fencing panels required Number of fencing panels required Number of fencing panel deliveries Removal of compound movements	Tonnes - Units - m² m³ Tonnes - m³ Tonnes - m³ Tonnes - Tonnes - Tonnes	6.552 1 181 Landfall HDD 1 13300 1,995 4,589 230 1,330 2,793 140 2.93 2 520 149 2	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 3B 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 4B and Substation Zone 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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Total Steel reinforcement (t) Number of steel deliveries Number of HGV movements Number of Landfall HDD locations Compound Surface Area Volume of Sub-base stone required Mass of sub-base stone required Number of sub-base stone required Number of sub-base stone deliveries Volume of Crusher Run stone required Mass of Sub-base stone deliveries Volume of Crusher Run stone required Number of Crusher Run stone required Number of Crusher Run Stone deliveries Mass of geogrid required Number of fencing panels required Number of fencing panels required Number of fencing panel deliveries Removal of compound movements Length of Landfall HDD Total Number of HDDs Total length of HDD Number of HDPE ducting required Number of HDPE duct deliveries Volume of excavated material Total Native Soil Tonnage Number of excavated material deliveries (off site) Drill fluid required Number of drill fluid removed from site Number of waste drill fluid deliveries	Tonnes	6.552 1 181 181 Landfall HDD 1 13300 1,995 4,589 230 1,330 2,793 140 2.93 2 520 149 2 374 1300 8 10400 #DIV/0! 0 9883.45 19766.9 989 24708.6 824 9883.5 330	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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Total Steel reinforcement (t) Number of steel deliveries Number of HGV movements Number of Landfall HDD locations Compound Surface Area Volume of Sub-base stone required Mass of sub-base stone required Number of sub-base stone required Number of sub-base stone deliveries Volume of Crusher Run stone required Mass of Crusher Run stone required Number of Crusher Run stone deliveries Wolume of Crusher Run stone deliveries Mass of geogrid required Number of Grusher Run stone deliveries Mass of geogrid required Number of fencing panels required Number of fencing panels required Number of fencing panel deliveries Removal of compound movements Length of Landfall HDD Total Number of HDDS Total length of HDD Number of HDPE ducting required Number of HDPE ducting required Number of HDPE duct deliveries Volume of excavated material Total Native Soil Tonnage Number of water deliveries Volume of drill fluid removed from site Number of waste drill fluid deliveries Total nass of bentonite required for drilling Volume of fluid required required for drilling	Tonnes	6.552 1 181 181 Landfall HDD 1 13300 1,995 4,589 230 1,330 2,793 140 2,93 2 520 149 2 374 1300 8 10400 #DIV/0! 0 9883.45 19766.9 989 24708.6 824 9883.5 330	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Total Steel reinforcement (t) Number of steel deliveries Number of HGV movements Number of Landfall HDD locations Compound Surface Area Volume of Sub-base stone required Mass of Sub-base stone required Number of sub-base stone required Number of sub-base stone deliveries Volume of Crusher Run stone required Mass of Sub-base stone deliveries Volume of Crusher Run stone required Number of Crusher Run Stone deliveries Mass of geogrid required Number of Grusher Run Stone deliveries Length of security fencing required Number of fencing panels required Number of fencing panel deliveries Removal of compound movements Length of Landfall HDD Total Number of HDDs Total length of HDD Number of HDPE ducting required Number of HDPE duct deliveries Volume of excavated material Total Native Soil Tonnage Number of excavated material deliveries (off site) Drill fluid required Number of drill fluid removed from site Number of waste drill fluid deliveries Total mass of bentonite required for drilling Volume of fluid required for export cable duct Total mass of bentonite required to infili cable duct	Tonnes	6.552 1 181 181 Landfall HDD 1 13300 1,995 4,589 230 1,330 2,793 140 2.93 2 520 149 2 374 1300 8 10400 #DIV/0! 0 9883.45 19766.9 989 24708.6 824 9863.5 330 914219.2 0.0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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Total Steel reinforcement (t) Number of steel deliveries Number of HGV movements Number of Landfall HDD locations Compound Surface Area Volume of Sub-base stone required Mass of Sub-base stone required Number of sub-base stone required Number of sub-base stone deliveries Volume of Crusher Run stone required Mass of Sub-base stone deliveries Volume of Crusher Run stone required Number of Crusher Run Stone deliveries Mass of geogrid required Number of Grusher Run Stone deliveries Length of security fencing required Number of fencing panels required Number of fencing panel deliveries Removal of compound movements Length of Landfall HDD Total Number of HDDs Total length of HDD Number of HDPE ducting required Number of HDPE duct deliveries Volume of excavated material Total Native Soil Tonnage Number of excavated material deliveries (off site) Drill fluid required Number of drill fluid removed from site Number of waste drill fluid deliveries Total mass of bentonite required for drilling Volume of fluid required for export cable duct Total mass of bentonite required to infili cable duct	Tonnes	6.552 1 181 181 Landfall HDD 1 13300 1,995 4,589 230 1,330 2,793 140 2.93 2 520 149 2 374 1300 8 10400 #DIV/0! 0 9883.45 19766.9 989 24708.6 824 9863.5 330 914219.2 0.0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Total Steel reinforcement (t) Number of steel deliveries Number of HGV movements Number of Landfall HDD locations Compound Surface Area Volume of Sub-base stone required Mass of sub-base stone required Number of sub-base stone required Number of sub-base stone deliveries Volume of Crusher Run stone required Mass of Crusher Run stone required Number of Crusher Run Stone deliveries Mass of geogrid required Number of Grusher Run stone required Number of geogrid deliveries Length of security fencing required Number of fencing panels required Number of fencing panels required Number of fencing panel deliveries Removal of compound movements Length of Landfall HDD Total Number of HDDS Total length of HDD Number of HDPE ducting required Number of HDPE duct deliveries Volume of excavated material Total Native Soil Tonnage Number of waster deliveries Volume of drill fluid removed from site Number of waste drill fluid deliveries Total mass of bentonite required for drilling Volume of fluid required for export cable duct Total mass of bentonite required to infill cable duct Total mass of bentonite required Number of bags required Number of bags required Number of bags required	Tonnes	6.552 1 181 181 Landfall HDD 1 13300 1,995 4,589 230 1,330 2,793 140 2,93 2 520 149 2 520 149 2 374 1300 8 10400 #DIV/0! 0 9883.45 19766.9 989 24708.6 824 9883.5 330 914219.2 0.0 914219.2 36568.8	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Medium Length Onshore HDD Drilling Compound Number of Medium Length HDD Drilling Compounds	Units -	Landfall HDD	1 1	2A 0	2B	3A	3B	4A	4B and Substation Zone
Compound Surface Area	m²	0	12250	0	0	0	0	0	0
Volume of Sub-base stone required	m³	0	1,838	0	0	0	0	0	0
Mass of sub-base stone required Number of sub-base stone deliveries	Tonnes -	0	4,226 212	0	0	0	0	0	0
variable of sub-base storic deliveries		†	212	•	•	†	†	†	- ·
Volume of Crusher Run stone required	m³	0	1,225	0	0	0	0	0	0
Mass of Crusher Run stone required Number of Crusher Run Stone deliveries	Tonnes -	0	2,573 129	0	0	0	0	0	0 0
Number of Crustier Rull Storie deliveries		-	129	, ,	, ,	· ·	<u> </u>	+ -	
Mass of geogrid required	Tonnes	0.00	2.70	0.00	0.00	0.00	0.00	0.00	0.00
Number of geogrid deliveries	-	0	2	0	0	0	0	0	0
Length of security fencing required	m	0	490	0	0	0	0	0	0
Number of fencing panels required Number of fencing panel deliveries	-	0	140 2	0	0	0	0	0	0
Number of lending parter delivertes	-	•	-	·	•	† °	•	,	+ •
Removal of compound movements	-	0	345	0	0	0	0	0	0
Total length of medium length HDD	m	0	407	0	0	0	0	0	0
Total Number of HDDs		0	18	0	0	0	0	0	0
Total length of HDD Number of HDPE ducting required	m	0	7326 732.6	0	0	0	0	0	0
Number of HDPE duct deliveries	-	0	30	, o	0	Ö	Ö	0	o o
Makes and a second of the seco		0.00	000.0	0.0	0.00	0.00	0.00	0.00	0.00
Volume of excavated material Total Native Soil Tonnage	m³ Tonnes	0.00	920.6 1841	0.0	0.00	0.00	0.00	0.00	0.00
Number of excavated material deliveries (off site)	-	0	93	0	0	0	0	0	0
Drill fluid required for drilling	m³	0	1381	0	0	0	0	0	0
Number of water deliveries	- m-	0	47	0	0	0	0	0	0
Volume of drill fluid removed from site	m³	0	820	0	0	0	0	0	0
Number of waste drill fluid deliveries		0	820 28	0	0	0	0	0	0
	E.								
Total mass of bentonite required for drilling Number of bags required	kg -	0	51094 2044	0	0	0	0	0	0
Number of bentonite deliveries	<u> </u>	0	10	0	0	0	0	0	0
Number of HGV movements	-	0	898	0	0	0	0	0	0
Medium Laurath Onehous LIBB 5-14 BY C	11*	1			25		20	4.5	4D and Out of S
Medium Length Onshore HDD Exit Pit Compound Number of Medium Length HDD Exit Pit Compounds	Units -	Landfall HDD 0	1	2A	2B 0	3A 0	3B 0	4A 0	4B and Substation Zone
Compound Surface Area	m²	0	0	5250	0	0	0	0	0
Volume of Sub-base stone required	m³	0	0	788	0	0	0	0	0
Mass of sub-base stone required Number of sub-base stone deliveries	Tonnes -	0	0	1,811 91	0	0	0	0	0
Volume of Crusher Run stone required Mass of Crusher Run stone required	m³ Tonnes	0	0	525 1,103	0	0	0	0	0
Number of Crusher Run Stone deliveries	-	0	0	56	Ö	Ö	Ö	ŏ	Ö
Maria of manufacture and a second	T	0.00	0.00	4.40	0.00	0.00	0.00	0.00	0.00
Mass of geogrid required Number of geogrid deliveries	Tonnes -	0.00 0	0.00 0	1.16 1	0.00 0	0.00 0	0.00 0	0.00	0.00 0
			_		_	_		_	_
Length of security fencing required Number of fencing panels required	m	0	0	410 118	0	0	0	0	0
Number of fencing panel deliveries	-	0	0	1	Ö	Ö	Ö	ŏ	Ö
Domestical of community and an accommunity				440					
Removal of compound movements Number of HGV movements	-	0	0	149 298	0	0	0	0	0
Short Length Onshore HDD Drilling Compound Number of Short Length HDD Drilling Compounds	Units -	Landfall HDD 0	1	2A 0	2B 0	3A	3B 0	4A 0	4B and Substation Zone
Compound Surface Area	m²	0	0	0	0	0	0	0	0
Volume of Sub-base stone required	m³	0	0	0	0	0	0	0	0
Mass of sub-base stone required Number of sub-base stone deliveries	Tonnes -	0	0 0	0	0	0	0	0	0
				_	_	_	_		_
Volume of Crusher Run stone required Mass of Crusher Run stone required	m³ Tonnes	0	0	0	0	0	0	0	0
Number of Crusher Run Stone deliveries	-	0	0	Ö	0	Ö	0	0	0
Mass of geogrid required	Tonnes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Number of geogrid deliveries	-	0	0	0	0	0	0	0	0
Length of security fencing required	m	0	0	0	0	0	0	0	0
Number of fencing panels required	- m	0	0	0	0	0	0	0	0
Number of fencing panel deliveries	-	0	0	Ō	Ō	Ō	Ō	0	0
Removal of compound movements	-	0	0	0	0	0	0	0	0
•									
Total length of short length HDD Total Number of HDDs	m	0	0	0	0	0	0	0	0
Total length of HDD	m	0	0	0	0	0	0	0	0
Number of HDPE ducting required Number of HDPE duct deliveries	-	0	0	0	0	0	0	0	0
NUMBER OF FIDE CHARLES	-	0	0	0	0	0	0	0	0
/olume of excavated material	m³	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Native Soil Tonnage Number of excavated material deliveries (off site)	Tonnes -	0.0	0.0 0	0.0	0.0	0.0	0.0	0.0	0.0
nambor of excavated material deliveries (OII SIR)	<u> </u>				U	U			
Drill fluid required for drilling	m³	0.0	0.0	0.0	0.0	0	0	0	0
Number of water deliveries	-	0	0	0	0	0	0	0	0
olume of drill fluid removed from site	m³	0.0	0.0	0.0	0.0	0	0	0	0
Number of waste drill fluid deliveries	-	0	0	0	0	0	0	0	0
F. (.)	kg	0.0	0.0	0.0	0.0	0	0	0	0
lotal mass of bentonite required								0	0
Number of bags required	-	0.0	0.0	0.0	0.0	0	0		
Total mass of bentonite required Number of bags required Number of bentonite deliveries Number of HGV movements	-	0.0 0 0	0.0 0	0.0 0	0.0	0	0	0	0

Short Length Onshore HDD Exit Pit Compound	Units	Landfall HDD	1	2A	2B	3A	3B	4A	4B and Substation Zone
Number of Short Length HDD Exit Pit Compounds Compound Surface Area	m²	0	0	0	0	0	0	0	0
Volume of Sub-base stone required	m³	0	0	0	0	0	0	0	0
Mass of sub-base stone required	Tonnes	0	0	0	0	0	0	0	0
Number of sub-base stone deliveries	-	0	0	0	0	0	0	0	0
Volume of Crusher Run stone required	m³	0	0	0	0	0	0	0	0
Mass of Crusher Run stone required	Tonnes	0	0	0	0	0	0	0	0
Number of Crusher Run Stone deliveries	•	0	0	0	0	0	0	0	0
Mass of geogrid required	Tonnes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Number of geogrid deliveries	•	0	0	0	0	0	0	0	0
Locath of consists for size and size of			^						
Length of security fencing required Number of fencing panels required	m -	0	0	0	0	0	0	0	0
Number of fencing panel deliveries	-	0	Ö	Ö	0	0	Ö	0	Ō
Removal of compound movements Number of HGV movements	<u> </u>	0	0	0	0	0	0	0	0
Number of FIGV movements	-	, ,	·						
		1		ı	1	ı	1	1	1
Substation Compound Earthworks, Road and Hardstanding	Units	Landfall HDD	1	2A	2B	3A	3B	4A	4B and Substation Zone
Number of Substation Operational Compounds	•	0	0	0	0	0	0	0	2
Length of Tarmac Road	m	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1800.0
Surface area of tarmac road Volume of Sub-base stone for tarmac road	m² m³	0	0	0	0	0	0	0	8,100 1,823
Mass of stone for tarmac road	Tonnes	0	0	0	0	0	0	0	4,192
Area of concrete slab	m²	0	0	0	0	0	0	0	64,100
Volume of Sub-base stone for concrete slab	m³	0	0	0	0	0	0	0	9,615
Mass of stone for Sub-base Number of stone deliveries	Tonnes -	0	0 0	0 0	0	0 0	0 0	0	22,115 1,316
		<u> </u>	<u> </u>	<u> </u>		<u> </u>	<u> </u>	<u> </u>	
Volume of Asphalt	m³	0	0	0	0	0	0	0	2,025
Mass of Asphalt Number of Asphalt Deliveries	Tonnes	0	0 0	0	0	0 0	0	0	4,779 239
Trainibor of Asphalt Deliveries	<u> </u>	, ,	u u		•	,	•	<u> </u>	200
Volume of concrete required	m³	0	0	0	0	0	0	0	9,615
Number of Concrete deliveries	-	0	0	0	0	0	0	0	1,603
Volume of Topsoil to be removed from Substation Site (earthworks)	m³	0	0	0	0	0	0	0	19,051
Mass of Topsoil to be removed from site	Tonnes	0	0	0	0	0	0	0	12,764
Number of topsoil removal movements	•	0	0	0	0	0	0	0	639
Volume of Sub-soil to be removed from site Substation Site (earthworks)	m³	0	0	0	0	0	0	0	612
Mass of Sub-soil to be removed from site	Tonnes	0	0	0	0	0	0	0	1,224
				_			0	1 0	62
Number of Sub-soil removal movements	-	0	0	0	0	0	U	U	02
				-	, and the second	·			
Length of permanent security fencing required	m	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,520.0
				-	, and the second	·			
Length of permanent security fencing required Number of fencing panels required Number of fencing panel deliveries	m - -	0.0 0 0	0.0 0 0	0.0 0 0	0.0 0 0	0.0 0 0	0.0 0 0	0.0 0 0	1,520.0 435 4
Length of permanent security fencing required Number of fencing panels required	m -	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,520.0 435
Length of permanent security fencing required Number of fencing panels required Number of fencing panel deliveries	m - -	0.0 0 0	0.0 0 0	0.0 0 0	0.0 0 0	0.0 0 0	0.0 0 0	0.0 0 0	1,520.0 435 4
Length of permanent security fencing required Number of fencing panels required Number of fencing panel deliveries	m - -	0.0 0 0	0.0 0 0	0.0 0 0	0.0 0 0	0.0 0 0	0.0 0 0	0.0 0 0	1,520.0 435 4
Length of permanent security fencing required Number of fencing panels required Number of fencing panel deliveries Number of HGV movements Project Substation - National Grid Connection Total Length of Trenching	m Units -	0.0 0 0 0 Landfall HDD	0.0 0 0 0	0.0 0 0 0	0.0 0 0 0	0.0 0 0 0	0.0 0 0 0	0.0 0 0 0	1,520.0 435 4 3,863 4B and Substation Zone
Length of permanent security fencing required Number of fencing panels required Number of fencing panel deliveries Number of HGV movements Project Substation - National Grid Connection Total Length of Trenching Total CBS volume	m	0.0 0 0 0 Landfall HDD	0.0 0 0 0	0.0 0 0 0	0.0 0 0 0 0	0.0 0 0 0	0.0 0 0 0 0 3B	0.0 0 0 0 4A 0 0	1,520.0 435 4 3,863 4B and Substation Zone 80 34
Length of permanent security fencing required Number of fencing panels required Number of fencing panel deliveries Number of HGV movements Project Substation - National Grid Connection Total Length of Trenching Total CBS volume CBS mass	m Units -	0.0 0 0 0 Landfall HDD	0.0 0 0 0	0.0 0 0 0	0.0 0 0 0	0.0 0 0 0	0.0 0 0 0	0.0 0 0 0	1,520.0 435 4 3,863 4B and Substation Zone
Length of permanent security fencing required Number of fencing panels required Number of fencing panel deliveries Number of HGV movements Project Substation - National Grid Connection Total Length of Trenching Total CBS volume CBS mass CBS number of deliveries	m Units - m³ Tonnes	0.0 0 0 0 0 Landfall HDD 0 0	0.0 0 0 0 0 1 0 0 0 0	0.0 0 0 0 0 0 2A 0 0 0	0.0 0 0 0 0 2B 0 0 0	0.0 0 0 0 3A 0 0 0	0.0 0 0 0 0 3B 0 0 0	0.0 0 0 0 0 4A 0 0 0	1,520.0 435 4 3,863 4B and Substation Zone 80 34 55
Rength of permanent security fencing required Number of fencing panels required Number of fencing panel deliveries Number of HGV movements Project Substation - National Grid Connection Total Length of Trenching Total CBS volume CBS mass CBS number of deliveries Total exported native soil volume	m Units - m³ Tonnes - m³	0.0 0 0 0 Landfall HDD 0 0 0	0.0 0 0 0 1 0 0 0 0 0	0.0 0 0 0 0 2A 0 0 0 0	0.0 0 0 0 0 2B 0 0 0 0	0.0 0 0 0 0 3A 0 0 0 0	0.0 0 0 0 3B 0 0 0	0.0 0 0 0 0 4A 0 0 0 0	1,520.0 435 4 3,863 4B and Substation Zone 80 34 55 3
Project Substation - National Grid Connection Total Length of Trenching Total CBS volume CBS number of deliveries Total exported native soil volume Total exported native soil volume Total exported native soil volume Total exported native soil mass	m Units - m³ Tonnes	0.0 0 0 0 0 Landfall HDD 0 0	0.0 0 0 0 0 1 0 0 0 0	0.0 0 0 0 0 0 2A 0 0 0	0.0 0 0 0 0 2B 0 0 0	0.0 0 0 0 3A 0 0 0	0.0 0 0 0 0 3B 0 0 0	0.0 0 0 0 0 4A 0 0 0	1,520.0 435 4 3,863 4B and Substation Zone 80 34 55 3
Length of permanent security fencing required Number of fencing panels required Number of fencing panel deliveries Number of HGV movements Project Substation - National Grid Connection Total Length of Trenching Total CBS volume CBS mass CBS number of deliveries Total exported native soil volume Total exported native soil number of deliveries	m Units - m³ Tonnes - m³	0.0 0 0 0 0 0 Landfall HDD 0 0 0 0 0	0.0 0 0 0 0 1 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 2B 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 3B 0 0 0 0 0	0.0 0 0 0 0 0 4A 0 0 0 0 0 0	1,520.0 435 4 3,863 4B and Substation Zone 80 34 55 3
Project Substation - National Grid Connection Total Length of Deliveries CBS mass CBS number of deliveries Total exported native soil volume Total exported native soil number of deliveries	m Units - m³ Tonnes - Tonnes - m	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 3B 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1,520.0 435 4 3,863 4B and Substation Zone 80 34 555 3 10.2 6
Length of permanent security fencing required Number of fencing panels required Number of fencing panel deliveries Number of HGV movements Project Substation - National Grid Connection Total Length of Trenching Total CBS volume CBS mass CBS number of deliveries Total exported native soil volume Total exported native soil mass Total exported native soil number of deliveries Total Length of 400kV Cable Required Total number of 400kV Cable Required Total number of 400kV Cable Required	m Units - m³ Tonnes m° Tonnes	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 1 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 3B 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1,520.0 435 4 3,863 4B and Substation Zone 80 34 55 3 55.10 110.2 6
Length of permanent security fencing required Number of fencing panels required Number of fencing panel deliveries Number of HGV movements Number of HGV movements Project Substation - National Grid Connection Total Length of Trenching Total CBS volume CBS mass CBS number of deliveries Total exported native soil volume Total exported native soil mass Total exported native soil number of deliveries Total Length of 400kV Cable Required Total number of 400kV Cable drums Total length of fibre cable drums Total length of fibre cable drums Total length of fibre cable drums	m Units - m³ Tonnes - Tonnes - m	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 3B 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1,520.0 435 4 3,863 4B and Substation Zone 80 34 55 3 1 110.2 6
Length of permanent security fencing required Number of fencing panels required Number of fencing panel deliveries Number of HGV movements Number of HGV movements Project Substation - National Grid Connection Total Length of Trenching Total CBS volume CBS mass CBS number of deliveries Total exported native soil volume Total exported native soil mass Total exported native soil number of deliveries Total Length of 400kV Cable Required Total number of 400kV Cable drums Total length of fibre cable required Total number of fiber cable drums Total length of ECC cable required	m Units - m³ Tonnes m° Tonnes m - m	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	1,520.0 435 4 3,863 4B and Substation Zone 80 34 55 3 55.10 110.2 6 240.0 1 320.0 1 80
Project Substation - National Grid Connection Total Length of Deliveries Total exported native soil volume Total exported native soil number of deliveries Total exported native soil number of deliveries Total exported native soil wolume Total exported native soil mass Total exported native soil mass Total exported native soil rotal exported native soil mass Total exported native soil number of deliveries Total length of 400kV Cable drums Total length of fibre cable required Total number of fiber cable drums Total length of ECC cable required Total number of ECC cable drums	m	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 3B 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1,520.0 435 4 3,863 4B and Substation Zone 80 34 55 3 55.10 110.2 6 240.0 1 320.0 1 80 1
Length of permanent security fencing required Number of fencing panels required Number of fencing panel deliveries Number of HGV movements Number of HGV movements Project Substation - National Grid Connection Total Length of Trenching Total CBS volume CBS mass CBS number of deliveries Total exported native soil volume Total exported native soil mass Total exported native soil number of deliveries Total Length of 400kV Cable Required Total number of 400kV Cable Required Total length of fibre cable required Total number of fiber cable drums Total length of ECC cable required	m Units - m³ Tonnes m° Tonnes m - m	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	1,520.0 435 4 3,863 4B and Substation Zone 80 34 55 3 55.10 110.2 6 240.0 1 320.0 1 80
Project Substation - National Grid Connection Total Length of Tenching Total CBS volume CBS mass CBS number of deliveries Total exported native soil volume Total exported native soil number of deliveries Total Length of Trenching Total CBS volume CBS mass CBS number of deliveries Total exported native soil volume Total exported native soil mass Total exported native soil mass Total exported native soil roume Total exported native soil number of deliveries Total Length of 400kV Cable Required Total number of 400kV Cable drums Total length of fibre cable required Total number of fiber cable drums Total length of ECC cable required Total number of ECC cable drums Total length of ECC cable drums Total number of cable drum deliveries	m	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1,520.0 435 4 3,863 4B and Substation Zone 80 34 55 3 55.10 110.2 6 240.0 1 320.0 1 80 1 320.0 1 80 1 3240
Length of permanent security fencing required Number of fencing panels required Number of fencing panel deliveries Number of HGV movements Project Substation - National Grid Connection Total Length of Trenching Total CBS volume CBS mass CBS number of deliveries Total exported native soil volume Total exported native soil mass Total exported native soil mass Total exported native soil number of deliveries Total Length of 400kV Cable Required Total number of 400kV Cable drums Total length of fibre cable required Total number of fecc cable required Total number of fecc cable required Total number of ECC cable drums Total number of cable drums	m	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	1,520.0 435 4 3,863 4B and Substation Zone 80 34 555 3 55.10 110.2 6 240.0 1 320.0 1 80 11 330.0
Length of permanent security fencing required Number of fencing panels required Number of fencing panel deliveries Number of HGV movements Number of HGV movements Project Substation - National Grid Connection Total Length of Trenching Total CBS volume CBS mass CBS number of deliveries Total exported native soil volume Total exported native soil mass Total exported native soil mass Total exported native soil number of deliveries Total Length of 400kV Cable Required Total number of 400kV Cable drums Total length of fibre cable drums Total length of ECC cable required Total number of ECC cable drums Total number of cable drums Total number of cable drums Total number of cable drum deliveries Number of cable cover tiles required Total Cable tile deliveries	m	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	1,520.0 435 4 3,863 4B and Substation Zone 80 34 555 3 55.10 110.2 6 240.0 1 80 1 320.0 1 80 1 320.0 1 320.0 1 1 320.0 1 1 320.1
Length of permanent security fencing required Number of fencing panels required Number of fencing panel deliveries Number of HGV movements Number of HGV movements Project Substation - National Grid Connection Total Length of Trenching Total CBS volume CBS mass CBS number of deliveries Total exported native soil volume Total exported native soil volume Total exported native soil number of deliveries Total exported native soil number of deliveries Total length of 400kV Cable Required Total number of 400kV Cable drums Total length of fibre cable required Total number of ECC cable drums Total length of ECC cable drums Total length of cable drum deliveries Number of cable cover tiles required Total number of cable drum deliveries Number of cable cover tiles required Total Cable tile deliveries Total length of 200mm cable ducting (for 400kV cable) Total length of 110mm Fibre cable ducting	m	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1,520.0 435 4 3,863 4B and Substation Zone 80 34 55 3 55.10 110.2 6 240.0 1 80 1 320.0 1 80 1 320.0 1 1 80 1 240 80 80
Length of permanent security fencing required Number of fencing panels required Number of fencing panel deliveries Number of HGV movements Number of HGV movements Project Substation - National Grid Connection Total Length of Trenching Total CBS volume CBS mass CBS number of deliveries Total exported native soil volume Total exported native soil mass Total exported native soil number of deliveries Total Length of 400kV Cable Required Total number of 400kV Cable Required Total number of fiber cable drums Total length of fore cable required Total number of ECC cable required Total number of ECC cable required Total number of ECC cable drums Total number of cable drum deliveries Number of cable cover tiles required Total Cable tile deliveries Total Length of 200mm cable ducting (for 400kV cable) Total length of 50mm fibre cable ducting Total length of 30mm fibre cable ducting	m	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	1,520.0 435 4 3,863 4B and Substation Zone 80 34 555 3 555.10 110.2 6 240.0 1 320.0 1 80 1 3 240 1 240 80 80 320
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Length of permanent security fencing required Number of fencing panels required Number of fencing panel deliveries Number of HGV movements Number of HGV movements Project Substation - National Grid Connection Total Length of Trenching Total CBS volume CBS mass CBS number of deliveries Total exported native soil volume Total exported native soil volume Total exported native soil mass Total exported native soil number of deliveries Total length of 400kV Cable Required Total number of 400kV Cable drums Total length of fibre cable required Total number of FEC cable drums Total length of ECC cable drums Total length of ECC cable drums Total length of coable drum deliveries Number of cable cover tiles required Total Cable tile deliveries Total length of 200mm cable ducting (for 400kV cable) Total length of 32mm fibre cable ducting Total length of 400kV cable ducting Total length of 400kV cable ducting Total length of 400kV cable ducting	m	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	1,520.0 435 4 3,863 4B and Substation Zone 80 34 555 3 555.10 110.2 6 240.0 1 320.0 1 80 1 3 240 1 240 80 80 320
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Length of permanent security fencing required Number of fencing panels required Number of fencing panel deliveries Number of HGV movements Number of HGV movements Project Substation - National Grid Connection Total Length of Trenching Total CBS volume CBS mass CBS number of deliveries Total exported native soil volume Total exported native soil mass Total exported native soil mass Total exported native soil number of deliveries Total Length of 400kV Cable Required Total number of 400kV Cable required Total number of fiber cable required Total length of fibre cable drums Total length of ECC cable required Total number of cable drums Total length of ECC cable required Total number of cable drum deliveries Number of cable cover tiles required Total Cable tile deliveries Total length of 110mm Fibre cable ducting Number of 400kV cable duct packs required Number of 110mm Fibre cable duct packs required Number of 110mm ECC cable duct coils required Number of 110mm ECC cable duct packs required	m	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0	0.0 0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1,520.0 435 4 3,863 4B and Substation Zone 80 34 55 3 55.10 110.2 6 6 240.0 1 320.0 1 80 1 33 240 1 240 80 320 80 22 1 1 2 1 2 1 2 0.00 0.00 0.00 0.00 0
Length of permanent security fencing required Number of fencing panels required Number of fencing panel deliveries Number of HGV movements Number of HGV movements Project Substation - National Grid Connection Total Length of Trenching Total CBS volume CBS mass CBS number of deliveries Total exported native soil volume Total exported native soil mass Total exported native soil number of deliveries Total Length of 400kV Cable Required Total number of 400kV Cable drums Total length of fibre cable required Total number of FEC cable drums Total length of ECC cable nequired Total number of ECC cable required Total number of cable drums Total length of 200mm cable ducting Total Cable tile deliveries Total length of 110mm Fibre cable ducting Total length of 32mm fibre cable ducting Total length of 32mm fibre cable ducting Number of 400kV cable duct packs required Number of 110mm Fibre cable ducting Number of 110mm Fibre cable ducting Number of 110mm Fibre cable duct packs required	m	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0	0.0 0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	1,520.0 435 4 3,863 4B and Substation Zone 80 34 555 3 555.10 110.2 6 6 240.0 1 320.0 1 80 11 320.0 1 1 80 240 1 1 240 80 320 80 2 1 1 2 1 2 1 2 1 2 1 2 1 0.00 0.00 0.
Length of permanent security fencing required Number of fencing panels required Number of fencing panel deliveries Number of HGV movements Number of HGV movements Project Substation - National Grid Connection Total Length of Trenching Total CBS volume CBS mass CBS number of deliveries Total exported native soil volume Total exported native soil mass Total exported native soil number of deliveries Total Length of 400kV Cable Required Total number of 400kV Cable Required Total number of fiber cable required Total length of fiber cable drums Total length of ECC cable drums Total length of ECC cable drums Total length of totale cover tiles required Total number of cable cover tiles required Total Cable tile deliveries Total length of 100mm Fibre cable ducting Total length of 110mm Fibre cable ducting Total length of 32mm fibre cable ducting Total length of 31mm fibre cable ducting Total length of 31mm fibre cable ducting Number of 400kV cable duct packs required Number of 31mm Fibre cable duct packs required Number of 31mm Fibre cable duct packs required Number of 31mm Fibre cable duct packs required Number of 110mm Fibre cable duct packs required Number of 110mm Fibre cable duct packs required Number of 110mm Fibre cable duct packs required Number of fluid required for export cable Volume of fluid required for export cable Volume of fluid required for fibre cable Volume of fluid required for 52mm fibre ducts Volume of fluid required for 62mm fibre ducts Volume of fluid required for 52mm fibre ducts Volume of bags required Number of bentonite deliveries	m	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0	0.0 0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	1,520.0 435 4 3,863 4B and Substation Zone 80 34 55 3 55.10 110.2 6 6 240.0 1 320.0 1 80 1 3 240 1 240 80 320 80 2 1 1 2 1 2 1 2 1 2 1 2 0.00 0.00 0.00
Length of permanent security fencing required Number of fencing panels required Number of fencing panel deliveries Number of HGV movements Number of HGV movements Project Substation - National Grid Connection Total Length of Trenching Total CBS volume CBS mass CBS number of deliveries Total exported native soil volume Total exported native soil wolume Total exported native soil mass Total exported native soil mumber of deliveries Total Length of 400kV Cable Required Total number of 400kV Cable required Total length of fibre cable required Total number of fiber cable drums Total length of ECC cable required Total number of ECC cable drums Total length of cable drum deliveries Number of cable cover tiles required Total cable tile deliveries Total length of 32mm fibre cable ducting Total length of 110mm ECC cable ducting Number of 400kV cable duct packs required Number of 110mm Fibre cable ducting Number of 110mm ECC cable duct packs required Number of 110mm ECC cable duct olds required Number of 110mm ECC cable duct packs required Number of 110mm ECC cable duct olds required Number of fluid required for export cable Volume of fluid required for fibre cable Nounder of bags required Number of bags required	m	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0	0.0	0.0 0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1,520.0 435 4 3,863 3,863 4B and Substation Zone 80 34 55 3 55.10 110.2 6 240.0 1 320.0 1 80 1 320.0 1 1 80 240 1 1 240 880 2 1 1 240 80 22 1 1 2 2 1 2 0.00 0.00 0.00 0.00 0.0
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Miscellaneous allowances and total HGV estimates

Activity	Units	Value	Comment
Access from Public Road HGV Movements	%	25	If unfavourable ground is found thicker sub-base may be required
Permanent Haul Road HGV Movements	%	25	If unfavourable ground is found thicker sub-base may be required
Total haul road construction HGV movements	%	20	If unfavourable ground is found geogrid / geotextiles can be introduced which will reduce stone depth therefore low risk of significant increase in vehicle movements
Total CCS Construction HGV movements	%	20	If unfavourable ground is found geogrid / geotextiles can be introduced which will reduce stone depth therefore low risk of significant increase in vehicle movements
Total HGV Holding Area at Elm Tree Farm HGV Movements	%	20	If unfavourable ground is found geogrid / geotextiles can be introduced which will reduce stone depth therefore low risk of significant increase in vehicle movements
Total Marine Electrical Cable HGV Movements	%	0	Worst case already assumed -1300m of cable required
Total Marine Fibre Cable HGV Movements	%	0	Worst case already assumed - separate fibre cable required
Total Terrestrial Electrical Cable HGV Movements	%	0	Worst case already assumed - 1 cable per delivery
Total Terrestrial Fibre Cable HGV Movements	%	0	Worst case already assumed - 1 cable per delivery
Total cable joint kits HGV movements	%	0	Worst case already assumed - 1 delivery per JB.
Total tile HGV movements	%	0	Tile Specs TBC
Total trench HGV movements	%	50	If unfavourable ground is encountered trench sides can be battered back to 1/3 therefore increased CBS required and more natural soils to be removed
Total cable duct HGV movements	%	15	Nominal percentage for damage to ducts
Bentonite (cable Installation in Ducts) HGV Movements	%	10	Nominal percentage for spillages and waste
Jointing bay HGV movements	%	0	Worst case already assumed
Transition bay HGV movements	%	0	Worst case already assumed
Landfall HDD HGV movements	%	25	Possible occurrence of poor ground conditions at HDD locations.
Medium Length Onshore HDD Drilling Compound HGV movements	%	25	Possible occurrence of poor ground conditions at HDD locations.
Medium Length Onshore HDD Exit Pit Compound HGV movements	%	25	Possible occurrence of poor ground conditions at HDD locations.
Short Length Onshore HDD Drilling Compound HGV movements	%	25	Possible occurrence of poor ground conditions at HDD locations.
Short Length Onshore HDD Exit Pit Compound HGV movements	%	25	Possible occurrence of poor ground conditions at HDD locations.
Substation Compound Earthworks and Surface HGV Movements	%	25	Possible occurrence of poor ground conditions at HDD locations.
Project Substation - National Grid Connection	%	50	If unfavourable ground is encountered trench sides can be battered back to 1/3 therefore increased CBS required and more natural soils to be removed

otal Vehicle Movmenets (with miscellaneous allowances)		Landfall HDD	1	2A	2B	3A	3B	4A	4B and Substation Zon
ccess from Public Road HGV Movements	1	0	65	65	0	65	123	65	37
ermanent Haul Road HGV Movements	1	0	0	0	0	0	0	0	1,323
tal haul road construction HGV movements		0	980	1,172	240	41	716	1,236	248
tal CCS Construction HGV movements	1	749	749	749	272	0	272	2,225	1,491
tal HGV Holding Area at Elm Tree Farm HGV Movements	1	0	0	0	0	0	0	0	0
al Marine Electrical Cable HGV Movements	1	0	0	0	0	0	0	0	0
tal Marine Fibre Cable HGV Movements	1	0	0	0	0	0	0	0	0
tal Terrestrial Electrical Cable HGV Movements	1	0	60	56	14	3	42	39	8
tal Terrestrial Fibre Cable HGV Movements	1	0	5	5	2	1	4	4	1
tal cable joint kits HGV movements	1	0	20	20	8	0	12	16	0
al tile HGV movements	1	0	21	23	6	1	18	16	4
al trench HGV movements	1	0	1,004	1,109	282	44	834	767	159
al cable duct HGV movements	1	0	80	89	23	4	67	61	13
ntonite (cable Installation in Ducts) HGV Movements	1	0	0	0	0	0	0	0	0
nting bay HGV movements	1	0	583	583	235	0	351	468	0
nsition bay HGV movements	1	181	0	0	0	0	0	0	0
ndfall HDD HGV movements	1	3,833	0	0	0	0	0	0	0
dium Length Onshore HDD Drilling Compound HGV movements	1	0	1,123	0	0	0	0	0	0
dium Length Onshore HDD Exit Pit Compound HGV movements	1	0	0	373	0	0	0	0	0
ort Length Onshore HDD Drilling Compound HGV movements	1	0	0	0	0	0	0	0	0
ort Length Onshore HDD Exit Pit Compound HGV movements	1	0	0	0	0	0	0	0	0
ostation Compound Earthworks and Surface HGV Movements	1	0	0	0	0	0	0	0	4,829
ject Substation - National Grid Connection		0	0	0	0	0	0	0	23
Grand total deliveries		4,763	4,690	4,244	1,082	159	2,439	4,897	8,136
Grand total (two way movements)]	9,526	9,380	8,488	2,164	318	4,878	9,794	16,272
centage increase in Two Way Vehicle Movements	0/_	23.0	22.9	22.9	20.4	29.3	24.4	21.1	24.3

Compound Welfare and Plant Requirements

General Data	Value	Source/Comments
Number of Welfare / Container Units Per Delivery	1	Worst Case
Number of plant per delivery	1	Worst Case
Frequency of Skip Emptying (weeks)	2	Assumed

Large CCS Requirements (Welfare and Operation Plant)	Value	Source/Comments
Site Office Unit	24	ED11892-GE-2058
Canteen Unit	8	ED11892-GE-2058
Tool Storage Unit	12	ED11892-GE-2058
Workshop Unit	4	ED11892-GE-2058
Mobile Toilet Unit	8	ED11892-GE-2058
Washing / Changing Unit	4	ED11892-GE-2058
First Aid Unit	2	ED11892-GE-2058
Drying Room Unit	4	ED11892-GE-2058
Freshwater Storage Container (2 per delivery)	8	ED11892-GE-2058
Foul Water Storage Container (2 per delivery)	8	ED11892-GE-2058
Bunded Fuel Tank (1 per delivery)	4	ED11892-GE-2058
Generator (2 per delivery)	8	ED11892-GE-2058
General Waste Skip (1 per delivery)	8	ED11892-GE-2058
Wheel Wash (assume 3 deliveries to mobilise)	1	ED11892-GE-2058
Weigh bridge (assume 3 deliveries to mobilise)	0	ED11892-GE-2058
Telehandler	4	
Road Sweeper	1	
Number of HGV Movements	98	

Medium CCS Requirements (Welfare and Operation Plant)	Value	Source/Comments
Site Office Unit	8	ED11892-GE-2057
Canteen Unit	4	ED11892-GE-2057
Tool Storage Unit	8	ED11892-GE-2057
Workshop Unit	2	ED11892-GE-2057
Mobile Toilet Unit	4	ED11892-GE-2057
Washing / Changing Unit	2	ED11892-GE-2057
First Aid Unit	0	ED11892-GE-2057
Drying Room Unit	2	ED11892-GE-2057
Freshwater Storage Container (2 per delivery)	4	ED11892-GE-2057
Foul Water Storage Container (2 per delivery)	4	ED11892-GE-2057
Bunded Fuel Tank (1 per delivery)	2	ED11892-GE-2057
Generator (2 per delivery)	4	ED11892-GE-2057
General Waste Skip (1 per delivery)	4	ED11892-GE-2057
Wheel Wash (assume 3 deliveries to mobilise)	1	ED11892-GE-2057
Weigh bridge (assume 3 deliveries to mobilise)	0	ED11892-GE-2057
Telehandler	2	
Road Sweeper	1	
Number of HGV Movements	48	

Small CCS Requirements (Welfare and Operation Plant)	Value	Source/Comments
Site Office Unit		
Canteen Unit	2	ED11892-GE-2056
Tool Storage Unit	4	ED11892-GE-2056
Workshop Unit		
Mobile Toilet Unit	2	ED11892-GE-2056
Washing / Changing Unit	2	ED11892-GE-2056
First Aid Unit		
Drying Room Unit	2	ED11892-GE-2056
Freshwater Storage Container (2 per delivery)	2	ED11892-GE-2056
Foul Water Storage Container (2 per delivery)	2	ED11892-GE-2056
Bunded Fuel Tank (1 per delivery)	1	ED11892-GE-2056
Generator (2 per delivery)	2	ED11892-GE-2056
General Waste Skip (1 per delivery)	2	ED11892-GE-2056
Wheel Wash (assume 3 deliveries to mobilise)		
Weigh bridge (assume 3 deliveries to mobilise)		
Telehandler	1	
Road Sweeper		
Number of HGV Movements	19	

Landfall HDD Compound Requirements (Welfare and Operation Plant)	Value	Source/Comments
Site Office Unit	4	ED11892-GE-2016 Rev D
Canteen Unit / Lunch Room	4	ED11892-GE-2016 Rev D
Welfare Unit	4	ED11892-GE-2016 Rev D
Tool Storage Unit	4	ED11892-GE-2016 Rev D
Workshop Unit	4	ED11892-GE-2016 Rev D
Generator (2 per delivery)	4	
Freshwater Storage Container (2 per delivery)	4	
Foul Water Storage Container (2 per delivery)	4	
General Waste Skip (1 per delivery)	4	
Bunded Fuel Tank	4	ED11892-GE-2016 Rev D
Bentonite Storage Container	4	ED11892-GE-2016 Rev D
Mixing Tank	4	ED11892-GE-2016 Rev D
Cuttings Container	4	ED11892-GE-2016 Rev D
Drill Pipe Rack	8	ED11892-GE-2016 Rev D
Mud Pump	4	ED11892-GE-2016 Rev D
Power Pack	4	ED11892-GE-2016 Rev D
Driller's Cabin	4	ED11892-GE-2016 Rev D
HDD Rig	1	ED11892-GE-2016 Rev D
Telehandler	1	
Number of HGV Movements	68	

Plant)	Value	Source/Comments
Site Office Unit	2	ED11892-GE-2017 Rev C
Canteen Unit / Lunch Room	2	ED11892-GE-2017 Rev C
Welfare Unit	2	ED11892-GE-2017 Rev C
Tool Storage Unit	2	ED11892-GE-2017 Rev C
Workshop Unit	2	ED11892-GE-2017 Rev C
Generator (2 per delivery)	2	
Freshwater Storage Container (2 per delivery)	2	
Foul Water Storage Container (2 per delivery)	2	
General Waste Skip (1 per delivery)	2	
Bunded Fuel Tank	2	ED11892-GE-2017 Rev C
Bentonite Storage Container	2	ED11892-GE-2017 Rev C
Mixing Tank	2	ED11892-GE-2017 Rev C
Cuttings Container	2	ED11892-GE-2017 Rev C
Drill Pipe Rack	9	ED11892-GE-2017 Rev C
Mud Pump	9	ED11892-GE-2017 Rev C + 2 Fibre drills per project
Power Pack	9	ED11892-GE-2017 Rev C + 2 Fibre drills per project
Driller's Cabin	9	ED11892-GE-2017 Rev C + 2 Fibre drills per project
HDD Rig	2	ED11892-GE-2017 Rev C + 2 Fibre drills per project
Telehandler	2	
Number of HGV Movements	63	

Onshore HDD Exit Pit Compound Requirements (Welfare and Operation Plant)	Value	Source/Comments
Site Office / Welfare Unit	4	
General Waste Skip (1 per delivery)	2	
Generator (2 per delivery)	4	
Tool Storage Unit	4	
Drill Pipe Rack	4	
Number of HGV Movements	15	

Substation Construction Compound Requirements (Welfare and Operation Plant)	Value	Source/Comments
Site Office Unit	6	ED11892-GE-2059 + 2061
Canteen Unit	2	ED11892-GE-2059 + 2061
Tool Storage Unit	6	ED11892-GE-2059 + 2061
Workshop Unit	1	ED11892-GE-2059 + 2061
Mobile Toilet Unit	2	ED11892-GE-2059 + 2061
Washing / Changing Unit	1	ED11892-GE-2059 + 2061
First Aid Unit	0	ED11892-GE-2059 + 2061
Drying Room Unit	1	ED11892-GE-2059 + 2061
Freshwater Storage Container (2 per delivery)	2	ED11892-GE-2059 + 2061
Foul Water Storage Container (2 per delivery)	2	ED11892-GE-2059 + 2061
Bunded Fuel Tank (1 per delivery)	1	ED11892-GE-2059 + 2061
Generator (2 per delivery)	2	ED11892-GE-2059 + 2061
General Waste Skip (1 per delivery)	2	ED11892-GE-2059 + 2061
Telehandler	1	
Road Sweeper	1	
Number of HGV Movements	27	

Section	Landfall HDD	1	2A	2B	3A	3B	4A	4B and Substation Zone
Compound Welfare and Operation Plant Requirements	400	452	372	146	0	130	772	54
Grand total deliveries	400	452	372	146	0	130	772	54
Grand total (two way movements)	800	904	744	292	0	260	1,544	108

Compound Welfare and Operation Plant Requirements	Units	Landfall HDD	1	2A	2B	3A	3B	4A	4B and Substation Zone
Number of Large CCS	-	0	0	0	0	0	0	1	0
Number of Medium CCS	-	1	1	1	0	0	0	0	0
Number of small CCS	-	0.0	0	0	1	0	1	0	0
Duration of Construction Consolidation Site	Weeks	52	100	108	108		92.0	144.0	0
Number of Skip Movements	-	104	200	216	108	0	92	576	0
Number of Landfall Compounds	-	1	0	0	0	0	0	0	0
Duration of Landfall Compound Usage	Weeks	32	0	0	0	0	0	0	0
Number of Skip Movements	-	64	0	0	0	0	0	0	
Number of Onshore HDD Drilling Compounds (medium and short length)	-	0	1	0	0	0	0	0	0
Combined Duration of Onshore HDD Drilling Compound Usage	Weeks	0	30	0	0	0	0	0	0
Number of Skip Movements	-	0	30	0	0	0	0	0	0
Number of HDD Exit Pit Compounds (medium and short length)	-	0	0	1	0	0	0	0	0
Combined Duration of Landfall Compound Usage	Weeks	0	0	30	0	0	0	0	0
Number of Skip Movements	-	0	0	30	0	0	0	0	0
Number of Substation Constuction Compounds	-	0	0	0	0	0	0	0	2
Duration of Substation Construction Compound Usage	Weeks	0	0	0	0	0	0	0	132
Number of Skip Movements	-	0	0	0	0	0	0	0	264
Number of HGV movements to Establish Compounds	-	116	111	63	19	0	19	98	54
Number of HGV movements to Demobilise Compounds	-	116	111	63	19	0	19	98	54
Total Number of Skip Movements	-	168	230	246	108	0	92	576	264
Total Number of Compound HGV Movements	-	400	452	372	146	0	130	772	372

Compound Welfare and Plant Requirements

Reference	General Data (Fixed Information)	Units	Value	Source/Comments
1.03	Tipper Truck Capacity	Tonnes	20	8x4 Rigid Tipper http://www.mqp.co.uk/vehicle.htm
1.04	Ready Mix Concrete truck Capacity	m³	6	6m3 Truck mixer https://www.hanson.co.uk/en/technical-information/truck-information
1.06	Type 1 Stone Density	t/m³	2.3	MOT Type 1 https://www.smithsbletchington.co.uk/mot-type-1
1.07	Crusher Run Stone Density	t/m³	2.1	Crusher Run Stone https://www.smithsbletchington.co.uk/limestone-crusher-run
1.08	Compound / Haul Road Type 1 Sub-base Thickness	m	0.15	Drawing ED11892-GE-2040 A
1.09	Compound / Haul Road Crushed Stone Thickness	m	0.1	Drawing ED11892-GE-2040 A
1.10	Geogrid mass/Area	kg/m²	0.22	Tensar SS20 https://www.drainagesuperstore.co.uk/user/u/files/jdp-tensar-geogrid.pdf
1.11	Mass of geogrid per delivery	Tonnes	2	Assumed
1.27	Heras Fencing Panel Hight	m	2	Heras HSG 151 Fencing https://www.heras-mobile.co.uk/fencing/151-system
1.28	Heras Fencing Panel Width	m	3.5	Heras HSG 151 Fencing https://www.heras-mobile.co.uk/fencing/151-system
1.29	Weight Per Panel	kg	16	Heras HSG 151 Fencing https://www.heras-mobile.co.uk/fencing/151-system
1.30	No of panels per delivery	-	125	Assumed 2T of panelling per delivery (includes all required feet and connectors)
1.33	Length of stock fencing roll	m	500	1.15 Cattle Fence https://www.jacksons-fencing.co.uk/fencing/agricultural-fencing/wire-fencing-stock
1.34	Frequency of Wooden Post	m	5	Assumed
1.35	Frequency of tension post (includes 2 stay posts)	m	50	Assumed
1.36	Length of fencing (including required posts) per HGV Delivery	m	4000	Assumed
3.61	Width of haul road / permanent access road	m	4.5	OPEDA / Project Parameters
3.62	Minimum distance between Passing Places	m	87	ED11892-GE-2006
3.63	Length of passing place	m	32	ED11892-GE-2006
3.64	Width of passing place	m	4	ED11892-GE-2006
3.65	Area of passing place	m²	128	Calculated (3.63 x 3.64)
3.66	Volume of Type 1 Stone required per passing place	m³	19.2	Calculated (1.08 x 3.65)
3.67	Volume of Crusher Run Stone Required per passing place	m³	12.8	Calculated (1.09 x 3.65)

Reference	Access and Permanent Haul Road Data (Fixed Information)	Units	Value	Source/Comments
4.01	Area of access tarmac surface	m²	170	ED11892-GE-2038 A
4.02	Length of R2 8m external radi kerbing required per access	m	25	ED11892-GE-2038 A
4.03	Maximum Length of K2 straight kerbing required per access	m	394.5	ED11892-GE-2038 A
4.04	Length of one R2 8m external radi kerb	m	0.78	https://www.marshalls.co.uk/commercial/assets/documents/product-specifications/kerb07.pdf
4.05	Length of one K2 straight kerb	m	0.914	https://www.marshalls.co.uk/commercial/assets/documents/product-specifications/kerb07.pdf
4.06	Number of internal radi kerbs required per access	-	32	Calculated (4.02 / 4.04)
4.07	Maximum Number of straigtht kerbs required per access	-	432	Calculated (4.03 / 4.05)
4.08	Number of R2 8m external radi kerbs per pallet	-	10	Assumed
4.09	Number of R2 straight kerbs per pallet	-	18	Assumed
4.10	Number of kerb pallets per delivery	-	6	Assumed
4.12	Maximum volume of concrete required for kerbing at each access	m³	33.2	Volume calculated from design drawing x length of kerbing required.
4.13	Maximum Depth of Type 1 mortar required	m	0.04	Worst case Assumed
4.14	Maximum Volume of Type 1 mortar required per access	m³	2.1	Calculated (125 x (4.02 + 4.02) x 4.13)
4.15	Maximum Volume of cement required per access	m³	0.49	Type 1 mortar 1 part cement, 1/4 parts lime and 3 parts sand
4.16	Density of cement	tonnes/m³	3.15	
4.17	Mass of cement required per access	tonnes	0.16	Calculated (4.15 / 4.16)
4.18	Mass of cement per bag	kg	25	https://www.condell-ltd.com/full-pallet-general-purpose-cement-opc-25kg-60-per-pallet?gclid=EAlalQobChMImPHW447O2gIVB-MbCh2LUwy-EAQYBCABEgIQA_D_BwE
4.19	Number of cement bags per pallet	-	60	https://www.condell-ltd.com/full-pallet-general-purpose-cement-opc-25kg-60-per-pallet?gclid=EAIaIQobChMImPHW447O2gIVB-MbCh2LUwy-EAQYBCABEgIQA_D_BwE
4.20	Maxiumum Volume of lime required per access	m³	0.12	Type 1 mortar 1 part cement, 1/4 parts lime and 3 parts sand
4.21	Density of lime	tonnes/m³	2.21	https://www.slb.com/-/media/Files/miswaco/ps-drilling-fluids/lime.pdf?la=en&hash=2FD5F24971492980C016D52C63F7FFCC7B40F0A7
4.22	Mass of lime required per access	tonnes	0.06	Calculated (4.20 / 4.21)
4.23	Mass of lime per bag	kg	25	https://www.condell-ltd.com/rugby-lime-25kg?gclid=EAlalQobChMI5suZyJDO2gIVQucbCh2r-wUAEAQYASABEgJRHPD_BwE
4.24	Number of lime bags per pallet	-	60	Assumed
4.25	Maxiumum Volume of sand required per access	m³	1.48	Type 1 mortar 1 part cement, 1/4 parts lime and 3 parts sand
4.26	Density of sand	tonnes/m³	1.70	https://www.smithsbletchington.co.uk/mixed-building-sand
4.27	Mass of sand required per access	tonnes	0.87	Calculated (4.25 / 4.26)
4.28	Mass of sand per bag	Tonnes	0.9	https://www.condell-ltd.com/rugby-lime-25kg?gclid=EAlalQobChMI5suZyJDO2gIVQucbCh2r-wUAEAQYASABEgJRHPD_BwE
4.29	Number of cement pallets / lime pallets / sand bags per delivery	-	4	Assumed (assumes all three items can be delivered in same delivery
4.30	Depth of sub-base beneth kerb	m	0.150	Assumed
4.31	Maximum volume of sub-base beneath kerb	m³	25.17	Calculated from design drawing and length of kerbing.
4.32	Permanent access road sub-base depth	m	0.225	Suffolk County Council Estate Road Specification
4.33	Permanat access road Asphalt Depth	m	0.25	Suffolk County Council Estate Road Specification
4.34	Bulk Density of Asphalt	tonnes/m³	2.36	https://www.engineeringtoolbox.com/density-solids-d_1265.html
4.35	Width of Permanent Access Corridor	m	10.1	
4.36	Width of Access Road to Sealing End Compounds	m	3.7	Instruction from PRW email 25/04/2019

Access From Public Road Construction	Units	Access to Pylons 16, 17 and 18	Access to Pylons	Access to Pylons 21, 22 and 23	
Number of accesses	m	0	19 and 20	21, 22 and 23	
Area of tarmac surface	m²	0	0	0	
Volume of Sub-base stone (Type 1)	m³	0	0	0	
Mass of Type 1 stone required	Tonnes	0	0	0	
Number of Type 1 stone deliveries	-	0	0	0	
realiser of Type 1 stone delivenes		•	<u> </u>	•	
Volume of Asphalt	m³	0	0	0	
Mass of Asphalt	Tonnes	0	0	0	
Number of Asphalt Deliveries	-	0	0	0	
Number of R2 8m external radi kerbs	-	0	0	0	
Number of K2 straight kerbs	-	0	0	0	
Total number of pallets of kerbs	-	0	0	0	
Number of kerb deliveries	-	0	0	0	
Volume of concrete required	m³	0.0	0.0	0.0	
Number of concrete deliveries	-	0	0	0	
Volume of mortor requred	m³	0	0	0	
Mass of cement required	Tonnes	0.00	0.00	0.00	
Mass of lime required	Tonnes	0.00	0.00	0.00	
Mass of sand required	Tonnes	0.00	0.00	0.00	
Number of Cement pallets required	-	0	0	0	
Number of lime pallets required		0	0	0	
Number of sand bags required		0	0	0	
Number of cement pallet, lime pallet and sand bag deliveries		0	0	0	
Volume of Topsoil to be removed from site (permanent access only)	m³	0	0	0	
Mass of Topsoil to be removed from site (permanent access only)	Tonnes	0	0	0	
Number of topsoil removal movements (permanent access only)	-	0	0	0	
Removal of tempoary access movements	-	0	0	0	
Number of HGV movements	-	0	0	0	
Total Number of Two-way HGV movements	-	0	0	0	Ī

Stone Haul Road Construction	Units	Access to Pylons 16, 17 and 18	Access to Pylons 19 and 20	Access to Pylons 21, 22 and 23	
Haul road length	m	1100	13 and 20	21, 22 and 25	
Number of passing places required	-	13	0	0	
Volume of Sub-base stone required	m³	992	0	0	
Mass of sub-base stone required	Tonnes	2,282	0	0	
Number of sub-base stone deliveries	-	115	0	0	
Volume of Crusher Run stone required	m³	661	0	0	
Mass of Crusher Run stone required	Tonnes	1,389	0	0	
Number of Crusher Run stone deliveries	-	70	0	0	
Surface area	m²	6,614	0	0	
Mass of geogrid required	Tonnes	1.46	0.00	0.00	
Number of geogrid deliveries	-	1	0	0	
Length of stock proof fencing required	m	2,209.0	0.0	0.0	
Number of Stockproof fencing deliveries	-	1	0	0	
Removal of haul road movements	-	187	0	0	Tota
Number of HGV movements	-	374	0	0	374
Total Number of Two-way HGV movements	-	748	0	0	748

Tarmac Haul Road Construction to Sealing End Compounds	Units	Location TBC
Haul road length	m	500
Surface area	m²	1,850
Volume of Sub-base stone for road	m³	417
Mass of stone	Tonnes	959
Number of stone deliveries	-	48
Volume of Asphalt	m³	463
Mass of Asphalt	Tonnes	1,092
Number of Asphalt Deliveries	-	55
Length of stock proof fencing required	m	1,000
Number of stock proof fencing deliveries	-	1
Volume of Topsoil to be removed from site	m³	833
Mass of Topsoil to be removed from site	Tonnes	558
Number of topsoil removal movements	-	28
Number of HGV movements	-	132
Total Number of Two-way HGV movements	-	264

Compound Welfare and Plant Requirements

Building	Height (m)	Length (m)	Width (m)	Area (m²)	Number of
Control Building	6.00	40.00	25.00	1000.00	1.00
Statcom/SVC Building	15.00	30.00	22.00	660.00	2.00
GIS Building	15.00	40.00	20.00	800.00	1.00
Observed December		40.00	40.00	0.40.00	0.00
Shunt Reactor	8.00	18.00	12.00	216.00	2.00

Other Structures	Height (m)	Length (m)	Width (m)	Area (m²)	Number of	Loading Weight (t)
External Blast Walls	16.00	26.00	0.30	N/A	0.00	N/A
Main Transformer	10.00	23.00	17.00	391.00	2.00	575.00
Auxiliary Transformer	5.00	6.00	3.00	18.00	2.00	15.00
Reactors + STATCOM equipment	15.00	25.00	20.00	500.00	2.00	100.00
Switch Board Assemblies	3.00	75.00	1.50	112.50	10.00	3.00
Control Panel assemblies	3.00	1.50	1.00	1.50	20.00	0.30
HPL Compact Breaker	3.00	14.00	0.60	8.40	12.00	1.50
HV Horizontal Line Disconnect Switch	12.00	0.50	0.50	0.25	10.00	0.30
HV Vertical break feeder disconnect switch	12.00	0.50	0.50	0.25	10.00	0.30
Emergency Diesel Generator	4.00	10.00	5.00	50.00	1.00	15.00
Emergency Diesel Fire Pump	1.00	2.50	2.00	5.00	2.00	20.00
Filter/Capacitor Bank	18.00	10.00	10.00	100.00	2.00	10.00

			Unit Weight		Total Area	Density				HGV	Number of	Total HGV
Building	Item	Description	(kg/m²)	Total Volume (m³)	(m²)	(kg/m³)	Total Weight (t)	Material	Delivery	Movements	unit	Movements
		5x5x1m deep RC concrete on a										
		25x8m grid plus ridge column at										
Control Building (total for 1No.)	pad foundations	both gables		350		2,400	840	Concrete	6	59	1	59
	concrete slab within											
	building	200mm thick concrete slab	480	200	1,000	2,400	480	Concrete	6	34	1	34
		on 150mm thick type 1 sub base	345	180	1,200	2,300	414	Stone	20	21	1	21
	extra concrete plinths for											
	equipment in building	TBC									1	0
		450mm deep x 600mm wide, 130m										
	perimeter ground beam	long		35		2,400	84	Concrete	6	6	1	6
	steel frame	80 kg/m2 includes secondary steel (purlins and cladding rails and door framing, and a 10% allowance for connections. Based on max 25m span and 8m bay centres, 6m ridge height.	80		1,000		80	Steel	12.5	7	1	7
	cladding	composite cladding panels 150mm thick -	10		1,780		18	Cladding	12.5	2	1	2
						•		Total	(1no)	129	Total	129

								Total	(1no)	129	Total	129
Building	Item	Description	Unit Weight (kg/m²)	Total Volume (m³)	Total Area (m²)	Density (kg/m³)	Total Weight (t)	Material	Delivery	HGV Movements	Number of unit	Total HGV Movements
Statcom/SVC Building (total for	DO D 11 1 1	4.5x4.5x1m deep RC concrete on a 22x6m grid plus ridge column at						0 1				
1No.)	RC Pad foundations Concrete ground bearing	both gables		284		2,400	680	Concrete	6	48	2	96
	slab within building	200mm thick concrete slab	480	132	660	2,400	317	Concrete	6	22	2	44
		on 150mm thick type 1 sub base	345	119	792	2,300	273	Stone	20	14	2	28
	extra concrete plinths for equipment in building	TBC									2	0
	Perimeter ground beam	450mm deep x 600mm wide, 104m long		28		2,400	67	Concrete	6	5	2	10
	Steel frame	134 kg/m2 includes secondary steel (purlins and cladding rails and door framing, and a 10% allowance for connections. Based on max 22m span and 6m bay centres, 8m ridge height.	134		660		88	Steel	12.5	8	2	16
	Steel Italile	composite cladding panels 150mm	134		000		00	Sieei	12.5	0		10
	Cladding	thick -	10		2,220		22	Cladding	12.5	2	2	4
								Total	(1no)	99	Total	198
		<u>, </u>					1			Ш		
Building	Item	Description	Unit Weight (kg/m²)	Total Volume (m³)	Total Area (m²)	Density (kg/m³)	Total Weight (t)	Material	Delivery	HGV Movements	Number of unit	Total HGV Movements
GIS Building	RC Pad foundations	5x5x1m deep RC concrete on a 20x8m grid plus ridge column at both gables		433		2,400	1,040	Concrete	6	73	1	73
GIS Building	Concrete ground bearing	both gables		433		2,400	1,040	Concrete	0	73	!	73
	slab within building	200mm thick concrete slab	480	160	800	2,400	384	Concrete	6	27	1	27
		on 150mm thick type 1 sub base	345	144	960	2,300	331	Stone	20	17	1	17
	extra concrete plinths for equipment in building	TBC 450mm deep x 600mm wide, 120m									1	0
	Perimeter ground beam	long		32		2,400	78	Concrete	6	6	1	6
		80 kg/m2 includes secondary steel (purlins and cladding rails and door framing, and a 10% allowance for connections. Based on max 20m span and 8m bay centres, 15m										
	Steel frame	ridge height.	80		800		64	Steel	12.5	6	1	6
	Cladding	composite cladding panels 150mm thick -	10		2,600		26	Cladding	12.5	3	1	3
				<u> </u>		<u> </u>		Total	(1no)	132	Total	132

Building	Item	Description	Unit Weight (kg/m²)	Total Volume (m³)	Total Area (m²)	Density (kg/m³)	Total Weight (t)	Material	Delivery	HGV Movements	Number of unit	Total HGV Movements
		3x3x0.75m deep RC concrete on a 12x6m grid plus ridge column at										
Shunt Reactor	RC Pad foundations	both gables		68		2,400	162	Concrete	6	12	2	24
	Concrete ground bearing slab within building	200mm thick concrete slab	480	43	216	2.400	104	Concrete	6	8	2	16
		on 150mm thick type 1 sub base	345	39	259	2,300	89	Stone	20	5	2	10
	extra concrete plinths for equipment in building	TBC				•					2	0
	Perimeter ground beam	450mm deep x 600mm wide, 60m long		16		2,400	39	Concrete	6	3	2	6
	Steel frame	80 kg/m2 includes secondary steel (purlins and cladding rails and door framing, and a 10% allowance for connections. Based on max 12m span and 6m bay centres, 8m ridge height.	80		216		17	Steel	12.5	2	2	4
	Cladding	composite cladding panels 150mm thick -	10		696		7	Cladding	12.5	1	2	2
,	·	·					•	Total	(1no)	31	Total	62

			Unit Weight		Total Area	Density				HGV	Number of	Total HGV
Structure	Item	Description	(kg/m²)	Total Volume (m³)	(m²)	(kg/m³)	Total Weight (t)	Material	Delivery	Movements	unit	Movements
	10 No. Blast walls between	16m high x 26m long x 450mm thick										
External blast walls	transformers	blast walls		187		2,400	449	Concrete	6	31	0.00	0
								Total	(1no)	31	Total	0

			Unit Weight		Total Area	Density				HGV	Number of	Total HGV
Structure/Bases	Item	Description	(kg/m²)	Total Volume (m³)	(m²)	(kg/m³)	Total Weight (t)	Material	Delivery	Movements	unit	Movements
Main Transformer	RC Base/Foundation	1no. 23m x 17m x 450mm thick	1,080	175.95	391.00	2,400	422.28	Concrete	6	30	2	60
	Sub base	150mm thick type 1 sub base	345	70.38	469.20	2,300	161.87	Stone	20	9	2	18
Auxiliary Transformer	RC Base/Foundation	1no. 6m x 3m x 300mm thick	720	5.40	18.00	2,400	12.96	Concrete	6	1	2	2
	Sub base	150mm thick type 1 sub base	345	3.24	21.60	2,300	7.45	Stone	20	1	2	2
Reactors + STATCOM equipment	RC Base/Foundation	1no. 25m x 20m x 450mm thick	1,080	225.00	500.00	2,400	540.00	Concrete	6	38	2	76
	Sub base	150mm thick type 1 sub base	345	90.00	600.00	2,300	207.00	Stone	20	11	2	22
Switch Board Assemblies	RC Base/Foundation	1no. 75m x 1.5m x 300mm thick	720	33.75	112.50	2,400	81.00	Concrete	6	6	10	60
	Sub base	150mm thick type 1 sub base	345	20.25	135.00	2,300	46.58	Stone	20	3	10	30
Control Panel assemblies	RC Base/Foundation	1no. 1.5m x 1.5m x 300mm thick	720	0.45	1.50	2,400	1.08	Concrete	6	1	20	20
	Sub base	150mm thick type 1 sub base	345	0.27	1.80	2,300	0.62	Stone	20	1	20	20
HPL Compact Breaker	RC Base/Foundation	1no. 14m x 0.6m x 300mm thick	720	2.52	8.40	2,400	6.05	Concrete	6	1	12	12
	Sub base	150mm thick type 1 sub base	345	1.51	10.08	2,300	3.48	Stone	20	1	12	12
HV Horizontal Line Disconnect Switch	RC Base/Foundation	1no. 0.5m x 0.5m x 300mm thick	720	0.08	0.25	2,400	0.18	Concrete	6	1	10	10
	Sub base	150mm thick type 1 sub base	345	0.05	0.30	2,300	0.10	Stone	20	1	10	10
HV Vertical break feeder disconnect switch	RC Base/Foundation	1no. 0.5m x 0.5m x 300mm thick	720	0.08	0.25	2,400	0.18	Concrete	6	1	10	10
	Sub base	150mm thick type 1 sub base	345	0.05	0.30	2,300	0.10	Stone	20	1	10	10
Emergency Diesel Generator	RC Base/Foundation	1no. 10m x 5m x 450mm thick	720	15.00	50.00	2,400	36.00	Concrete	6	3	1	3
	Sub base	150mm thick type 1 sub base	345	9.00	60.00	2,300	20.70	Stone	20	2	1	2
Emergency Diesel Fire Pump	RC Base/Foundation	1no. 2.5m x 2m x 300mm thick	720	1.50	5.00	2,400	3.60	Concrete	6	1	2	2
	Sub base	150mm thick type 1 sub base	345	0.90	6.00	2,300	2.07	Stone	20	1	2	2
Filter/Capacitor Bank	RC Base/Foundation	1no. 10m x 10m x 300mm thick	720	30.00	100.00	2,400	72.00	Concrete	6	5	2	10
	Sub base	150mm thick type 1 sub base	345	18.00	120.00	2,300	41.40	Stone	20	3	2	6
								Total	(1no)	122	Total	399

Total	920