

# **East Anglia ONE North Offshore Windfarm**

## Appendix 26.14

**HGV and LCV Traffic Assigned to the Construction Programme** 

## **Environmental Statement Volume 3**

Applicant: East Anglia ONE North Limited

Document Reference: 6.3.26.14

SPR Reference: EA1N-DWF-ENV-REP-IBR-000363 014 Rev 01

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

Author: Royal HaskoningDHV

Date: October 2019 Revision: Version 1

#### <u>Landfall - Average Materials and Welfare and Operation Plant Daily HGV Movements</u>

Activity	Total Working	Total HGVs																		Mon	th																	
Activity	Days	i otal HGVS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
IDD At Landfall																																						
stablish Landfall HDD construction compound / opsoil Strip in Landafall Laydown Area	66	197			3	3	3																															
lobilisation of HDD Kit and Welfare to Landfall	22	45					3																															
Compound HDD Drilling works & Ducting (assume working 24/7 7 lays a week)	240	1,160						5	5	5	5	5	5	5	5																							
Demobilisation of HDD kit and welfare	22	45														3																						
Establish CCS within Landfall Laydown Area																																						
Construction of CCS	66	158			3	3	3																															
Mobilisation of Welfare and Operation Plant to CCS	22	26					2																															
Fransition Bays at Landfall																																						
Excavation of transition bays	44	46										2	2																									
Construction of transition bay base	44	10											1	1																								
Connection of Cables in Transition Bays	66	0												0	0	0																						
Transition bay Walls	44	15													1	1																						
Transition bay roof and backfill over transition bay	44	21													1	1																						
Landfall Compound Removal and Reinstatement	0	197																																		5	5	_
Removal of CCS within Landfall Laydown Area and demobilisation of welfere	66	184																																		3	3	3
Average Section Skip HGV Movements Per Day	286	84					1	1	1	1	1	1	1	1	1	1																				1	1	1
		Total HGVs per day	0	0	6	6	12	6	6	6	6	8	9	7	8	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	9	4
	Total two-way HG	V movements per day	0	0	12	12	24	12	12	12	12	16	18	14	16	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	18	8

#### **Landfall - Construction Plant Requirements**

																	Mont	h																	
Plant	1 2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
D6 Dozer		2	2	2								1	1																				1	1	1
D6 Dozer 30T Excavator		2	2	2					1	1		1	1																				2	2	2
20T Dumper		3	3	3					2	2		2	2																				2	2	2
Smooth Drum vibrio road roller		1	1	1					1	1																							1	1	1
21T excavator		2	2	2					1	1		1	1																				1	1	1
5T Forward Tipping Dumper		2	2	2					1	1		1	1																				1	1	1
Loading shovel Trench Roller		1	1	1								1	1																				2	2	2
												1	1																						
Tractor & fencing kit		1	1	1																													1	1	1
Tractor & trailer		1	1	1						1	1	1	1																				1	1	1
Tractor & Fuel bowser (or self-propelled)		1	1	1					1	1	1	1	1																				1	1	1
Tractor & Water bowser (for dust suppression)		1	1	1					1	1	1	1	1																				1	1	1
Tractor & cable drum trailer																																			
Tractor & soil tiller, roller, seeder																																	1	1	1
Cement mixer Mobile crane												1	1																						
Mobile crane											1	1	1																						
Grader		1	1	1																															
Cable laying tracked crane											1	1	1																						
Cable winch																																			
Pre-cast concrete truck												1	1																						
Mobile concrete pump										1	1																								
Telehandler		1	1	1						1	1	1	1																						
Mobile self-contained welfare unit		1	1	1					1	1	1	1	1																				1	1	1
Crawler Crane											1	1	1																						
Crawler Crane Mobile generator		1	1	1					1	1	1	1	1																				1	1	1
Temporary lighting		1	1	1					1	1	1	1	1																				1	1	1
Temporary lighting Road surface paver & roller																																			
Pump									1	1	1	1	1																						
Total Plant Onsite In Section Per Month	0 0	22	22	22	0	0	0	0	12	15	12	21	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	18	18 18
Total Deliveries / Removals	0 0	22	0	0	22	0	0	0	12	3	9	11	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	0	18
Average Deliveries / Removals Per Day Average Total two-way HGV movements (Deliveries / Removals) Per Day	0 0	1	0	0	1	0	0	0	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Average Total two-way HGV movements (Deliveries / Removals) Per Day	0 0	2	0	0	2	0	0	0	2	2	2	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2

#### Landfall - Average Daily Personnel Requirements

Number of Additional Site Personel Per Activity	Total Working																		Month																	_
(general labourers, drillers, drilling foremen,	Days	Total Person Days 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18 19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35 3	36
Establish Landfall HDD construction compound	78	234		3	3	3																														
HDD Drilling works & Ducting (assume working 24/7 7 days a week) Includes Admin of HDD Compound	240	1,440					6	9	6	6	6	6	6	6																						
Demobilisation of HDD Kit and Welfare from Landfall Compound	26	156													6																					
Establish CCS within Landfall Laydown Area																																				
Construction of CCS	78	234		3	3	3																														
Transition Bays at Landfall																																				
Excavation of transition bays	52	156									3	3																								
Construction of transition bay base	52	156										3	3																							
Connection of Cables in Transition Bays	78	234											3	3	3																					
Transition bay Walls and Roof	52	156												3	3																					
Backfill over transition bay	52	156												3	3																					
Landfall Compound Removal and Reinstatement	52	156																																3	3	
Removal of CCS within Landfall Laydown Area and demobilisation of welfere	78	234																																3	3	3
Plant Operators																																				
Overall Plant Operators	208	3,016		19	19	19					8	11	8	16	16																					
Landfall HDD Engineering Personnel (non HDD)																																				
1 x engineer / surveyor, 1 x Foreman	286	572		2	2	2					2	2	2	2	2				,															2	2	2
		otal Employees per day 0	0	27	27	27	6	6	6	6	19	25	22	33	33	0	0	0	0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	8	5
Maximum Total Employee Two-w	ay Movements P	er Day (car/small van) 0	0	54	54	54	12	12	12	12	38	50	44	66	66	0	0	0	0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	16 '	10

#### Section 1 - Average Materials and Welfare and Operation Plant Daily HGV Movements

Activity	Total Working	Total HGVs																		Month																	
Activity	Days	TOTAL HOVS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17 18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
stablish construction consolidation site and site cesses	44	184	5	5																																	
obilisation of Welfare and Operation Plant to CCS	44	26	1	1																																	
e preparation including fencing, temporary ainage and haul road construction.	44	408	10	10																																	
shore Export Cable Installation East of SPA																																					
ench Route Clearance / Topsoil Strip	44	0					0	0																													
ench Excavation	220	231							2	2	2	2	2	2	2	2	2	2																			Ī
ıct Installation	220	139							1	1	1	1	1	1	1	1	1	1																			T
ench Backfill	198	11								1	1	1	1	1	1	1	1	1										ĺ									Ī
ointing Bay Excavation	242	230								1	1	1	1	1	1	1	1	1	1 1																		T
pinting Bay Base Constriction	198	16										1	1	1	1	1	1	1	1 1																		T
alling and connection of cables	198	43											1	1	1	1	1	1	1 1	1																	T
inting Bay Walls and Roof	198	47												1	1	1	1	1	1 1	1	1																Ī
ckfill over Jointing Bays	44	0																																	0	0	I
ench Route Reinstatement / Topsoil Reinstatement	66	0																																	0	0	1
edium Length HDD crossing of Obstacle 2.1																																					Ī
stablish Onshore HDD Entry Pit compound	66	178					3	3	3																												T
obilisation of HDD Kit and Welfare to Onshore rilling Compound	22	50								3																											T
DD Drilling works & Ducting (assume working 24/7 days a week)	120	105								1	1	1	1																								Ť
DD Drilling risk programme 'float' (Total HDD HGV ovements included in HDD Drilling Works &	30	0												0																							Ť
emobilisation of HDD kit and welfare	22	50													3																						Ť
emoval of Onshore HDD Entry pit compound	66	178															3	3	3																		Ť
																																					Ť
lovement of fence line to minimum extents	88	0																				0	0	0	0												T
aul Road Removal (includes removal of fencing) and	66	408				1																													7	7	İ
emobilisation of Welfare from CCS	66	26				1																													1	1	t
onstruction consolidation site and access road	154	184																				2	2	2	2										2	2	t
emoval verage Section Skip HGV Movements Per Day	550	115	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1 1	1	1	1	1	1	1										1	1	1
•		Total HGVs per day	17	17	0	0	4	4	7	10	7	8	9	9	12	9	12	12	8 5	3	2	3	3	3	3	0	0	0	0	0	0	0	0	0	11	11	1
		movements per day		34	0	0	8	8	14	20	14	16	18	18	24	18	24	24	16 10	6	4	6	6	6	6	0	0	0	0	0	0	0	0	0	22	22	+

Section 1 - Construction Plant Requirements

																		М	onth																	
Plant	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
D6 Dozer	2	2			2	2	1								2	2	2				2	2	2	2										2	2	2
30T Excavator	4	4			2	2	2	2	2	2	2	2	2	2	2	2	2	2			2	2	2	2										2	2	2
20T Dumper	4	4			4	4	4	4	4	4	4	4	4	4	4	4	4	2			2	2	2	2										4	4	4
Smooth Drum vibrio road roller	2	2			1	1	1								1	1	1				1	1	1	1										1	1	1
21T excavator	2	2			2	2	3	2	2	2	2	2	2	2	2	2	2	1			1	1	1	1										2	2	2
5T Forward Tipping Dumper	2	2			2	2	2	2	2	2	2	2	2	2	2	2	2	1			1	1	1	1										2	2	2
Loading shovel	2	2			2	2	2	2	2	2	2	2	2	2	2	2	2				2	2	2	2										2	2	2
Trench Roller							2	1	1	1	1	1	1	1	1	1																		1	1	1
	1	1			1	1	1														1	1	1	1												
Tractor & fencing kit	1	1			1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1										1	1	1
Tractor & trailer	1	1			1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1										1	1	1
Tractor & Fuel bowser (or self-propelled)																						_		<u>'</u>										_	'	-
Tractor & Water bowser (for dust suppression)	1	1			1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1										1	1	1
Tractor & cable drum trailer											1	1	1	1	1	1	1	1	1																	
Tractor & soil tiller, roller, seeder															1	1	1				1	1	1	1										1	1	1
Cement mixer												1	1	1	1	1	1	1	1	1																
Mobile crane												1	1	1	1	1	1	1	1	1																
Grader	1	1			1	1	1																													
Cable laying tracked crane																																				
Cable winch											1	1	1	1	1	1	1	1	1																	
Pre-cast concrete truck												1	1	1	1	1	1	1	1	1																
										1	1	1	1	1	1	1	1	1																		
Mobile concrete pump	1	1			1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1																$\overline{}$
Telehandler	1	1			4	1	1																											2	2	2
Mobile self-contained welfare unit		•				'												_																-	-	
Crawler Crane							1	1	1	1	1	1	1	1	1	1	1	1	1	1																
Mobile generator	2	2			2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1										2	2	2
Temporary lighting	2	2			2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	2	2	2	2	2										3	3	3
Road surface paver & roller	1	1																																		
Pump							1	2	2	2	2	2	2	2	2	2	2	2	2	1														1	1	1
Total Plant Onsite In Section Per Month		30	0	0	26	26	36	24	24	26	28	31	31	31	35	35	34	24	17	12	19	19	19	19	0	0	0	0	0	0	0	0	0	28		28
Total Deliveries / Removals	30	0	30	0	26	0	12	14	0	2	2	3	0	0	4	0	1	10	7	5	19	0	0	0	19	0	0	0	0	0	0	0	0	28		28
Average Deliveries / Removals Per Day		0	2	0	2	0	1	1	0	1	1	1	0	0	1	0	1	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	2	0	4
Average Total two-way HGV movements (Deliveries / Removals) Per Day	4	0	4	0	4	0	2	2	0	2	2	2	0	0	2	0	2	2	2	2	2	0	0	0	2	0	0	0	0	0	0	0	U	4	0	4

Section 1 - Average Daily Personnel Requirements

Number of Additional Site Personel Per Activity	Total Working																			N	onth																	
(general labourers, drillers, drilling foremen, electricians, joiners, bricklayers etc)	Days	Total Person Days	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
Establish construction consolidation site and site access off Sizewell Gap Road	52	156	3	3																																		
Site preparation including fencing, temporary drainage and haul road construction	52	208	4	4																																		
Onshore Export Cable Installation East of SPA																																						
Trench Route Clearance / Topsoil Strip	52	104					2	2																														
Trench Excavation	260	390							3	2	2	2	1	1	1	1	1	1																				
Duct Installation	260	390							3	2	2	2	1	1	1	1	1	1																				
Trench Backfill	234	312								2	2	2	1	1	1	1	1	1																				
Jointing Bay Excavation	286	416								2	2	2	1	1	1	1	1	1	2	2																		
Jointing Bay Base Constriction	234	312										2	1	1	1	1	1	1	2	2																		
Pulling and connection of cables	234	338											1	1	1	1	1	1	2	2	3																	
Jointing Bay Walls and Roof	234	390												1	1	1	1	1	2	2	3	3																
Backfill over Jointing Bays	52	156																																		3	3	
Trench Route Reinstatement / Topsoil Reinstatement	78	234																																		3	3	3
Medium Length HDD crossing of Obstacle 2.1 and 2.2																																						
Establish Onshore HDD drilling compound	78	234					3	3	3																													
HDD Drilling works & Ducting (assume working 24/7 7 days a week) Includes Admin of HDD Compound	120	120								1	1	1	1																									
HDD Drilling risk programme 'float'	30	120												4																								
Demobilisation of HDD kit and welfare	26	78													3																							
Removal of Onshore HDD compound	78	234															3	3	3																			
Movement of fence line to minimum extents	104	312																					3	3	3	3												
Haul Road Removal (includes removal of fencing) and reinstatement	78	234																																		3	3	3
Construction consolidation site d and access road Removal	182	546																					3	3	3	3										3	3	3
Plant Operators																																						
Overall Plant Operators	650	13,078	25	25			21	21	30	18	18	19	21	23	23	23	27	27	26	16	9	7	16	16	16	16										20	20	20
Section 1 Engineering Personnel																																						
Lead Engineer, 1 x Assistant Engineers, 1 x surveyors, 1 x Foreman	650	2,600	4	4			4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4								-		4	4	4
	Average To	tal Employees per day	36	36	0	0	30	30	43	31	31	34	32	38	37	34	41	41	41	28	19	14	26	26	26	26	0	0	0	0	0	0	0	0	0	36	36	33
Maximum Total Employee Two-w	ay Movements P	Per Day (car/small van)	72	72	0	0	60	60	86	62	62	68	64	76	74	68	82	82	82	56	38	28	52	52	52	52	0	0	0	0	0	0	0	0	0	72	72	66

#### Section 2 - Average Materials and Welfare and Operation Plant Daily HGV Movements

	Total Working																			M	onths																	
Activity	Days	Total HGVs	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
Establish construction consolidation sites and site accesses (month 6 construction of Hundred River CCS)	110	243	3	3	3	3		3																														
Mobilisation of Welfare and Operation Plant to CCS	110	37	1	1	1	1		1																														
Site preparation including fencing, temporary drainage and haul road construction	66	588				9	9	9																														
Onshore Export Cable Installation Sction 2A and 2B																																						
Trench Route Clearance / Topsoil Strip	44	0					0	0																														
Trench Excavation	220	320							2	2	2	2	2	2	2	2	2	2																				
Duct Installation	220	194							1	1	1	1	1	1	1	1	1	1																				
Trench Backfill	198	15								1	1	1	1	1	1	1	1	1																				
Jointing Bay Excavation	242	322								2	2	2	2	2	2	2	2	2	2	2																		
Jointing Bay Base Constriction	198	23										1	1	1	1	1	1	1	1	1																		
Pulling and connection of cables	198	53											1	1	1	1	1	1	1	1	1																	
Jointing Bay Walls and Roof	198	66												1	1	1	1	1	1	1	1	1																
Backfill over Jointing Bays	44	0																																		0	0	
Trench Route Reinstatement / Topsoil Reinstatement	66	0																																		0	0	0
Medium Length Onshore HDD Crossing of Obstacle 2.1																																						
Establish Onshore HDD Entry Pit compound	44	78						2	2																													
Mobilisation of HDD Kit and Welfare to Onshore drilling Compound	22	10								1																												
drilling Compound HDD Drilling works & Ducting (assume working 24/7 7 days a week)	120	0								0	0	0	0																									
HDD Drilling risk programme 'float' (Total HDD HGV movements included in HDD Drilling Works &	30	0												0																								
Demobilisation of HDD kit and welfare	22	10													1																							
Removal of Onshore HDD Enry pit compound	44	78															2	2																				
Movement of fence line to minimum extents	88	0																					0	0	0	0												
Haul Road Removal (includes removal of fencing) and reinstatement	66	588															ĺ																			9	9	9
Demobilisation of Welfare from CCS	66	37																																		1	1	1
Construction consolidation site and access road Removal	154	243																					2	2	2	2										2	2	2
Average Section Skip HGV Movements Per Day	594	177	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1										1	1	1
		Total HGVs per day	y 5	5	5	14	10	16	6	8	7	8	9	10	11	10	12	12	6	6	3	2	3	3	3	3	0	0	0	0	0	0	0	0	0	13	13	13
	Total two-wa	ay HGV movements per da	y 10	10	10	28	20	32	12	16	14	16	18	20	22	20	24	24	12	12	6	4	6	6	6	6	0	0	0	0	0	0	0	0	0	26	26	26

Section 2 - Construction Plant Requirements

																		M	onth																	
Plant	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
D6 Dozer	1	2	2	2	2	2	1								2	2	2				2	2	2	2										2	2	2
30T Excavator	3	3	3	4	2	2	2	2	2	2	2	2	2	2	2	2	2	2			2	2	2	2										2	2	2
20T Dumper	3	3	3	4	2	2	4	4	4	4	4	4	4	4	4	4	4	2			2	2	2	2										4	4	4
Smooth Drum vibrio road roller	1	1	1	2	1	1	1								1	1	1				1	1	1	1										1	1	1
21T excavator	1	1	1	2	1	1	2	2	2	2	2	2	2	2	2	2	2	1			1	1	1	1										2	2	2
ST Forward Tipping Dumper	1	1	1	2	1	1	2	2	2	2	2	2	2	2	2	2	2	1			1	1	1	1										2	2	2
Loading shovel	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2				2	2	2	2										2	2	2
Trench Roller							2	1	1	1	1	1	1	1	1	1																		1	1	1
Tractor & fencing kit	1	1	1	1																	1	1	1	1												
Tractor & trailer	1	1	1	1			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1										1	1	1
Tractor & Fuel bowser (or self-propelled)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1										1	1	1
Tractor & Water bowser (for dust suppression)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1										1	1	1
Tractor & cable drum trailer											1	1	1	1	1	1	1	1	1																	
Tractor & soil tiller, roller, seeder															1	1	1				1	1	1	1										1	1	1
Cement mixer												1	1	1	1	1	1	1	1	1																
Mobile crane												1	1	1	1	1	1	1	1	1																
Grader	1	1	1	2			1																													
Cable laying tracked crane																																				
Cable winch											1	1	1	1	1	1	1	1	1																	
Pre-cast concrete truck												1	1	1	1	1	1	1	1	1																
Mobile concrete pump										1	1	1	1	1	1	1	1	1																		
Telehandler	1	1	1	1			2	1	1	1	1	1	1	1	1	1	1	1	1	1																
Mobile self-contained welfare unit	1	1	1	1	1	1	1																											2	2	2
Crawler Crane							1	1	1	1	1	1	1	1	1	1	1	1	1	1																
Mobile generator	1	1	1	2	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1										2	2	2
Temporary lighting	1	1	1	2	1	1	2	2	2	3	3	3	3	3	3	3	3	3	3	2	2	2	2	2										3	3	3
Road surface paver & roller	1	1	1	1																																
Pump							1	2	2	2	2	2	2	2	2	2	2	2	2	1														1	1	1
Total Plant Onsite In Section Per Month	21	22	22		16	16	29	24	24	26	28	31	31		35	35	34	24				19	19	19	0	0		0	0	0	0	0	0	28	28	28
Total Deliveries / Removals	21	1	0	9	15	0	15	7	0	2	2	3	0	0	4	0	1	10			19	0	0	0	19	0		0	0	0	0	0	0	28	0	28
Average Deliveries / Removals Per Day		1	0	1	1	0	1	1	0	1	1	1	0	0	1	0	1	1			1	0	0	0	1	0		0	0	0	0	0	0	2	0	2
Average Total two-way HGV movements (Deliveries / Removals) Per Day	2	2	0	2	2	0	2	2	0	2	2	2	0	0	2	0	2	2	2	2	2	0	0	0	2	0	0	0	0	0	0	0	0	4	0	4

Section 2 - Average Daily Personnel Requirements

Number of Additional Site Personel Per Activity	Total Working																			N	Month																	
(general labourers, drillers, drilling foremen, electricians, joiners, bricklayers etc)	Days	Total Person Days	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
Establish construction consolidation sites and site accesses (month 6 construction of Hundred River CCS)	130	390	3	3	3	3		3																														
Site preparation including fencing, temporary drainage and haul road construction	78	312				4	4	4																														1
Onshore Export Cable Installation Sction 2A and 2B																																						
Trench Route Clearance / Topsoil Strip	52	104					2	2																														
Trench Excavation	260	390							3	2	2	2	1	1	1	1	1	1																				
Duct Installation	260	390							3	2	2	2	1	1	1	1	1	1																				
Trench Backfill	234	312								2	2	2	1	1	1	1	1	1																				
Jointing Bay Excavation	286	416								2	2	2	1	1	1	1	1	1	2	2																		
Jointing Bay Base Constriction	234	312										2	1	1	1	1	1	1	2	2																		
Pulling and connection of cables	234	338											1	1	1	1	1	1	2	2	3																	
Jointing Bay Walls and Roof	234	390												1	1	1	1	1	2	2	3	3																
Backfill over Jointing Bays	52	156																																		3	3	
Trench Route Reinstatement / Topsoil Reinstatement	78	234																																		3	3	3
Medium Length Onshore HDD Crossing of Obstacle 2.1 and 2.2																																						
Establish Onshore HDD drilling compound	52	156						3	3																													
HDD Drilling works & Ducting (assume working 24/7 7 days a week) Includes Admin of HDD Compound	120	120								1	1	1	1																									
HDD Drilling risk programme 'float'	30	120												4																								
Demobilisation of HDD kit and welfare	26	78													3																							
Removal of Onshore HDD compound	52	156															3	3																				
Movement of fence line to minimum extents	104	312																					3	3	3	3												
Haul Road Removal (includes removal of fencing) and reinstatement	78	234																																		3	3	3
Construction consolidation site and access road Removal	182	546																					3	3	3	3										3	3	3
Plant Operators																																						
Overall Plant Operators	936	13,312	18	19	19	26	13	13	23	18	18	19	21	23	23	23	27	27	26	16	9	7	16	16	16	16	0	0	0	0	0	0	0	0	0	20	20	20
Section 2 Engineering Personnel																																						
Lead Engineer, 1 x Assistant Engineers, 1 x surveyors, 1 x Foreman	936	3,744	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	Avera	ge Total Employees per da	y 25	26	26	37	23	29	36	31	31	34	32	38	37	34	41	41	38	28	19	14	26	26	26	26	4	4	4	4	4	4	4	4	4	36	36	33
Maximum Total Employee T	wo-way Moveme	ents Per Day (car/small van	50	52	52	74	46	58	72	62	62	68	64	76	74	68	82	82	76	56	38	28	52	52	52	52	8	8	8	8	8	8	8	8	8	72	72	66

#### Section 3 - Average Materials and Welfare and Operation Plant Daily HGV Movements

	Total Working																		М	lonths																	
Activity	Days	Total HGVs	1	2	3 4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
Establish construction consolidation site compound at Aldeburgh Road Crossing	22	59					3																														
Mobilisation of Welfare and Operation Plant to CCS	22	11					1																														
Site preparation including fencing, temporary drainage, haul road construction and access construction.	44	390				9	9																														
Onshore Export Cable Installation Sction 3A and 3B																																					
Trench Route Clearance / Topsoil Strip	44	0				0	0																														
Trench Excavation	220	202						1	1	1	1	1	1	1	1	1	1																				
Duct Installation	220	123						1	1	1	1	1	1	1	1	1	1																				
Trench Backfill	198	10							1	1	1	1	1	1	1	1	1																				
Jointing Bay Excavation	242	138							1	1	1	1	1	1	1	1	1	1	1																		
Jointing Bay Base Constriction	198	10									1	1	1	1	1	1	1	1	1																		
Pulling and connection of cables	198	32										1	1	1	1	1	1	1	1	1																	
Jointing Bay Walls and Roof	198	28											1	1	1	1	1	1	1	1	1																
Backfill over Jointing Bays	44	0																																	0	0	
Trench Route Reinstatement / Topsoil Reinstatement	66	0																																	0	0	0
Movement of fence line to minimum extents	88	0																				0	0	0	0												
Haul Road and Access Removal (includes removal of fencing) and reinstatement	66	390																																	6	6	6
Demobilisation of Welfare from CCS	66	11																																	1	1	1
Construction consolidation site Removal	154	59																				1	1	1	1										1	1	1
Average Section Skip HGV Movements Per Day	506	46				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1										1	1	1
		Total HGVs per day	y 0	0	0 0	10	14	3	5	5	6	7	8	8	8	8	8	5	5	3	2	2	2	2	2	0	0	0	0	0	0	0	0	0	9	9	9
	Total two-v	way HGV movements per day	у 0	0	0 0	20	28	6	10	10	12	14	16	16	16	16	16	10	10	6	4	4	4	4	4	0	0	0	0	0	0	0	0	0	18	18	18

#### Section 3 - Construction Plant Requirements

																	M	lonth																	
Plant	1	2	3 4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
D6 Dozer				3	3						Q	Q	Q	Q	Q					2	2	2	2										2	2	2
30T Excavator				3	3	2	2	2	2	2	2	2	2	2	2	2	2			2	2	2	2										2	2	2
20T Dumper				4	4	2	4	4	4	4	4	4	4	4	4	2	2			2	2	2	2										4	4	4
Smooth Drum vibrio road roller				1	1															1	1	1	1										1	1	1
21T excavator				2	2	2	2	2	2	2	2	2	2	2	2	1	1			1	1	1	1										2	2	2
				2	2	2	2	2	2	2	2	2	2	2	2	1	1			1	1	1	1										2	2	2
5T Forward Tipping Dumper				2	2	2	2	2	2	2	2	2	2	2	2					2	2	2	2										2	2	2
Loading shovel						1	1	1	1	1	1	1	1	1	1																		1	1	1
Trench Roller				1	1															1	1	1	1												
Tractor & fencing kit				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1										1	1	1
Tractor & trailer				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1										1	1	
Tractor & Fuel bowser (or self-propelled)					_	-	<u> </u>		'		'	1					1																1	·	
Tractor & Water bowser (for dust suppression)				1	1	1	1	1	1	1	1	·	1	1	1	1	-	1	1	1	1	1	1										_	1	
Tractor & cable drum trailer										1	1	1	1	1	1	1	1	1																	
Tractor & soil tiller, roller, seeder					_															1	1	1	1										1	1	1
Cement mixer											1	1	1	1	1	1	1	1	1															$\longrightarrow$	
Mobile crane											1	1	1	1	1	1	1	1	1																
Grader				1	1																														
Cable laying tracked crane																																			
Cable winch										1	1	1	1	1	1	1	1	1																	
Pre-cast concrete truck											1	1	1	1	1	1	1	1	1																
Mobile concrete pump									1	1	1	1	1	1	1	1	1																		
Telehandler				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1																
Mobile self-contained welfare unit				1	1	1																											2	2	2
Crawler Crane						1	1	1	1	1	1	1	1	1	1	1	1	1	1																
Mobile generator				2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1										2	2	2
				2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	2	2	2	2	2										3	3	3
Temporary lighting  Road surface paver & roller																																			
					+	2	2	2	2	2	2	2	2	2	2	2	2	2	1														1	1	1
Pump  Total Plant Onsite In Section Per Month	0	0	0 0	28	28	23		24	26	28	31	31	31	31	31	24	24	17	12	19	19	19	19	0	0	0	0	0	0	0	0	0	28		28
Total Deliveries / Removals	0	0	0 0		0	13	3	0	2	2	3	0	0	0	0	7	0	7	5	19	0	0	0	19	0	0		0	0	0	0	0	28	0	28
Average Deliveries / Removals Per Day	0	0	0 0		0	1	1	0	1	1	1	0	0	0	0	1	0	1	1	1	0	0	0	1	0	0		0	0	0	0	0	2	0	2
Average Total two-way HGV movements (Deliveries / Removals) Per Day	0	0	0 0	4	0	2	2	0	2	2	2	0	0	0	0	2	0	2	2	2	0	0	0	2	0	0	0	0	0	0	0	0	4	0	4

Section 3 - Average Daily Personnel Requirements

Number of Additional Site Personel Per Activity	Total Working																			ı	Month																	
(general labourers, drillers, drilling foremen, electricians, joiners, bricklayers etc)	Days	Total Person Days	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
Establish construction consolidation site and site access off Sizewell Gap Road	26	78						3																														
Site preparation including fencing, temporary drainage, haul road construction and access construction.	52	208					4	4																														
Onshore Export Cable Installation Sction 3A and 3B																																						
Trench Route Clearance / Topsoil Strip	52	104					2	2																													1	
Trench Excavation	260	390							3	2	2	2	1	1	1	1	1	1																			ĺ	
Duct Installation	260	390							3	2	2	2	1	1	1	1	1	1																			ĺ	
Trench Backfill	234	312								2	2	2	1	1	1	1	1	1																			ĺ	
Jointing Bay Excavation	286	416								2	2	2	1	1	1	1	1	1	2	2																		
Jointing Bay Base Constriction	234	312										2	1	1	1	1	1	1	2	2																	ĺ	
Pulling and connection of cables	234	338											1	1	1	1	1	1	2	2	3																	
Jointing Bay Walls and Roof	234	390												1	1	1	1	1	2	2	3	3																
Backfill over Jointing Bays	52	156																																		3	3	
Trench Route Reinstatement / Topsoil Reinstatement	78	234																																		3	3	3
Movement of fence line to minimum extents	104	242																					,	3		2												
Haul Road and Access Removal (includes removal of		312																					3	3	3	3										$\square$		
fencing) and reinstatement	78	234																																		3	3	3
Construction consolidation site Removal	182	546																					3	3	3	3										3	3	3
Plant Operators																																						
Overall Plant Operators	598	11,050					23	23	16	18	18	19	21	23	23	23	23	23	16	16	9	7	16	16	16	16										20	20	20
Section 3 Engineering Personnel																																						
Lead Engineer, 1 x Assistant Engineers, 1 x surveyors, 1 x Foreman	598	2,392					4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4							Ü			4	4	4
	Aver	rage Total Employees per da	у 0	0	0	0	33	36	26	30	30	33	31	34	34	34	34	34	28	28	19	14	26	26	26	26	0	0	0	0	0	0	0	0	0	36	36	33
Maximum Total Employee	Two-way Moven	ments Per Day (car/small van	) 0	0	0	0	66	72	52	60	60	66	62	68	68	68	68	68	56	56	38	28	52	52	52	52	0	0	0	0	0	0	0	0	0	72	72	66

#### Section 4 - Average Materials and Welfare and Operation Plant Daily HGV Movements

A. ativita	otal Working	T-4-1110V-																		М	onths																	
Activity	Days	Total HGVs	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
Establish construction consolidation site compound and site accesses	88	492	6	6	6	6																																
Mobilisation of Welfare and Operation Plant to CCS	88	51	1	1	1	1																																
Construction of tarmac haul road from access to CCS	44	227	6	6																																		
Site preparation including fencing, temporary drainage and haul road construction.	66	391		6	6	6																																
Onshore Export Cable Installation Sction 4A and 4B																																						
Trench Route Clearance / Topsoil Strip	44	0					0	0																														
Trench Excavation	220	213							1	1	1	1	1	1	1	1	1	1																				
Duct Installation	220	130							1	1	1	1	1	1	1	1	1	1																				
Trench Backfill	198	10								1	1	1	1	1	1	1	1	1																				
Jointing Bay Excavation	242	184								1	1	1	1	1	1	1	1	1	1	1																		
Jointing Bay Base Constriction	198	13										1	1	1	1	1	1	1	1	1																		
Pulling and connection of cables	198	35											1	1	1	1	1	1	1	1	1																	
Jointing Bay Walls and Roof	198	38												1	1	1	1	1	1	1	1	1																
Backfill over Jointing Bays	44	0																																		0	0	
Trench Route Reinstatement / Topsoil Reinstatement	66	0																																		0	0	0
Movement of fence line to minimum extents	88	0																					0	0	0	0												
Haul Road Removal (includes removal of fencing) and reinstatement	66	618																																		10	10	10
Demobilisation of Welfare from CCS	66	51																																		1	1	1
Construction consolidation site and access road Removal	154	492																					4	4	4	4										4	4	4
Average Section Skip HGV Movements Per Day	792	552	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		Total HGVs per day	14	20	14	14	1	1	3	5	5	6	7	8	8	8	8	8	5	5	3	2	5	5	5	5	1	1	1	1	1	1	1	1	1	16	16	16
	Total two-way	y HGV movements per day	y 28	40	28	28	2	2	6	10	10	12	14	16	16	16	16	16	10	10	6	4	10	10	10	10	2	2	2	2	2	2	2	2	2	32	32	32

Section 4 - Construction Plant Requirements

																		M	onth																
Plant	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19 20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
D6 Dozer	1	2	2	2	3	3														2	2	2	2										2	2	2
30T Excavator	3	4	4	4	3	3	2	2	2	2	2	2	2	2	2	2	2	2		2	2	2	2										2	2	2
20T Dumper	3	4	4	4	4	4	2	4	4	4	4	4	4	4	4	4	2	2		2	2	2	2										4	4	4
Smooth Drum vibrio road roller	1	2	2	2	1	1														1	1	1	1										1	1	1
21T excavator	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1		1	1	1	1										2	2	2
5T Forward Tipping Dumper	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1		1	1	1	1										2	2	2
Loading shovel	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2				2	2	2	2										2	2	2
Trench Roller							1	1	1	1	1	1	1	1	1	1																	1	1	1
Tractor & fencing kit	1	1	1	1	1	1														1	1	1	1												
Tractor & trailer	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 1	1	1	1	1										1	1	1
Tractor & Fuel bowser (or self-propelled)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 1	1	1	1	1										1	1	1
Tractor & Water bowser (for dust suppression)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 1	1	1	1	1										1	1	1
Tractor & cable drum trailer											1	1	1	1	1	1	1	1	1																
Tractor & soil tiller, roller, seeder																				1	1	1	1										1	1	1
Cement mixer												1	1	1	1	1	1	1	1 1																
Mobile crane												1	1	1	1	1	1	1	1 1																-
Grader	1	2	2	2	1	1																													
Cable laying tracked crane																																			
Cable winch											1	1	1	1	1	1	1	1	1																
Pre-cast concrete truck												1	1	1	1	1	1	1	1 1																
Mobile concrete pump										1	1	1	1	1	1	1	1	1																	
Telehandler	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 1																
Mobile self-contained welfare unit	1	1	1	1	1	1	1																										2	2	2
Crawler Crane							1	1	1	1	1	1	1	1	1	1	1	1	1 1																
Mobile generator	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2 1	1	1	1	1										2	2	2
Temporary lighting	1	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3 2	2	2	2	2										3	3	3
Road surface paver & roller	1	1	1	1																															
Pump							2	2	2	2	2	2	2	2	2	2	2	2	2 1														1	1	1
Total Plant Onsite In Section Per Month	21	31	31	31	28	28	23	24		26	28	31	31	31	31	31	24	24	17 12							0	0	0	0	0	0	0	28	28	28
Total Deliveries / Removals	21	10	0	0	5	0	13	3	0	2	2	3	0	0	0	0	7	0	7 5					19		0	0	0	0	0	0	0	28	0	28
Average Deliveries / Removals Per Day	1	1	0	0	1	0	1	1	0	1	1	1	0	0	0	0	1	0	1 1	_				1	0	0	0	0	0	0	0	0	2	0	2
Average Total two-way HGV movements (Deliveries / Removals) Per Day	2	2	0	0	2	0	2	2	0	2	2	2	0	0	0	0	2	0	2 2	2	0	0	0	2	0	0	0	0	0	0	0	0	4	0	4

Section 4 - Average Daily Personnel Requirements

Number of Additional Site Personel Per Activity .	Total Working																			м	onth																	
(general labourers, drillers, drilling foremen, electricians, joiners, bricklayers etc)	Days	Total Person Days	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
Establish construction consolidation site compound and site access off Snape Road	104	312	3	3	3	3																																·
Construction of tarmac haul road from access to CCS	52	156	3	3																																		
Site preparation including fencing, temporary drainage and haul road construction.	78	312		4	4	4																																
Onshore Export Cable Installation Sction 4A and 4B																																						
Trench Route Clearance / Topsoil Strip	52	104					2	2																														
Trench Excavation	260	390							3	2	2	2	1	1	1	1	1	1																				
Duct Installation	260	390							3	2	2	2	1	1	1	1	1	1																				·
Trench Backfill	234	312								2	2	2	1	1	1	1	1	1																				
Jointing Bay Excavation	286	416								2	2	2	1	1	1	1	1	1	2	2																		
Jointing Bay Base Constriction	234	312										2	1	1	1	1	1	1	2	2																		
Pulling and connection of cables	234	338											1	1	1	1	1	1	2	2	3																	1
Jointing Bay Walls and Roof	234	390												1	1	1	1	1	2	2	3	3																
Backfill over Jointing Bays	52	156																																		3	3	
Trench Route Reinstatement / Topsoil Reinstatement	78	234																																		3	3	3
Movement of fence line to minimum extents	104	312																					3	3	3	3												ı
Haul Road Removal (includes removal of fencing) and reinstatement	78	234																																		3	3	3
Construction consolidation site and access road Removal	182	546																					3	3	3	3										3	3	3
Plant Operators																																						
Overall Plant Operators	702	13,546	18	26	26	26	23	23	16	18	18	19	21	23	23	23	23	23	16	16	9	7	16	16	16	16										20	20	20
Section 4 Engineering Personnel																																						
Lead Engineer, 1 x Assistant Engineers, 1 x surveyors, 1 x Foreman	702	2,808	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4										4	4	4
Project Engineering Personnel Based at CSS 1.1																																						
Head Engineer, 2 x Admin Staff, QS, Assistant QS, Overall Site Foreman, H&S Supervisor, H&S Assistant, Environmental Clerk, Assistant Environemental Clerk, Lead Surveyor, 2 X catering staff, 2 x client representative and 2 x owners engineers	936	15,912	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
	Average	e Total Employees per da	y 45	57	54	54	46	46	43	47	47	50	48	51	51	51	51	51	45	45	36	31	43	43	43	43	17	17	17	17	17	17	17	17	17	53	53	50
Maximum Total Employee Two	o-way Movemer	nts Per Day (car/small van	90	114	108	108	92	92	86	94	94	100	96	102	102	102	102	102	90	90	72	62	86	86	86	86	34	34	34	34	34	34	34	34	34	106	106	100

#### $\underline{\textbf{Substation - Average Materials and Welfare and Operation Plant Daily HGV Movements}}$

	Total																		N	Months																		
Activity	Working Days	Total HGVs	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
Permanent Access Road	110	1,087				10	10	10	10	10																												
Construction Compound Construction	88	312				4	4	4	4																												, 	
Welfare Mobilisation	66	27				1	1	1																													i '	
Site Clearence Works	88	362					5	5	5	5																												
Development Platform Earthworks	88	77								1	1	1	1																								,	
Foundation Works	220	2,866									14	14	14	14	14	14	14	14	14	14																		
Sub-structure Works	110	20														1	1	1	1	1																		
Super-Structure Works	110	6																1	1	1	1	1															,	
M&E Kit Installation	110	230																		3	3	3	3	3														
Wiring Up	132	0																			0	0	0	0	0	0											,	
Commissioning	264	0																			0	0	0	0	0	0	0	0	0	0	0	0						
Reinstatement	66	0																																		0	0	0
Construction Compound Removal and Welfare Demobilisation	66	339																																		6	6	6
Average Section Skip HGV Movements Per Day	726	264				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Total	HGVs per day	0	0	0	16	21	21	20	17	16	16	16	15	15	16	16	17	17	20	5	5	4	4	1	1	1	1	1	1	1	1	1	1	1	7	7	7
Total two-wa	ay HGV move	ments per day	0	0	0	32	42	42	40	34	32	32	32	30	30	32	32	34	34	40	10	10	8	8	2	2	2	2	2	2	2	2	2	2	2	14	14	14

#### $\underline{\textbf{Substation - Monthly Construction Plant Requirements}}$

																	M	onths																		
Activity	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
D6 Dozer				2	4	4	4	4	4	4	4	2	2	2	2	2	2	2																1	1	1
30T excavator				2	4	4	4	6	6	4	4	2	2	2	2	2	2	2																1	1	1
20T dumper				2	4	4	4	6	6	4	4	2	2	2	2	2	2	2																1	1	1
Smooth Drum vibro road roller				2	4	4	2	2	2	4	4	2	2	2	2	2	2	2																1	1	1
21T excavator				2	4	4	4	6	6	4	4	2	2	4	4	4	4	4																1	1	1
5T Forward Tipping Dumper				2	4	4	4	6	6	4	4	2	2	4	4	4	4	4																1	1	1
Loading shovel				2	2	2	2	2	2	2	2	2	2	2	2	2	2	2																1	1	1
Tractor & trailer				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1				1	1	1
Tractor & Fuel bowser (or self-propelled)				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1				1	1	1
Tractor & Water bowser (for dust supression)				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1																1	1	1
Grader				2	2	2	2	2	2	2	2	1	1	1	1	1	1	1																1	1	1
Mobile self-contained welfare unit				1	1	1	1	1	1																									1	1	1
Road surface paver & roller				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1																		
Concrete batching plant										1	1	1	1	1	1	1	1	1	1	1																
Dry-mix silos										2	2	2	2	2	2	2	2	2	2	2																-
Cement mixer																1	1	1	1	1																
Mobile crane (light for general use)														1	1	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1						-
Mobile crane (heavy)																		1	2	2	1	1	1	1	1	1	1	1	1	1						-
Specialist heavy-lifting gantry & associated equipment																		1	2	2	1	1	1	1	1	1	1	1	1	1						
Static crane																1	1	2	2	2	1	1	1	1	1	1	1	1	1	1						
Pre-cast concrete truck										1	1	1	1	2	2	2	2	2	1	1																-
Mobile concrete pump										1	1	1	1	2	2	2	2	2	1	1																
Telehandler								1	1					1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2						
Mobile generator								1	1							1	1	2	2	2	2	2	2	2	2	2	2	2	2	2						
3T Forward Tipping Dumper														1	1	1	1	1																		
Scissor lift																1	1	2	2	2	2	2	2	2	2	2	2	2	2	2						
Mobile powered aerial platform (boom lift / 'cherry picker')																1	1	2	2	2	2	2	2	2	2	2	2	2	2	2						
Scaffolding (deliveries)																1	1	2	2	2	2	2	2	2	2	2	2	2	2	2						
Formwork (deliveries)										1	1	1	1	2	2	2	2	2	1	1																
JCB Wheeled excavator														1	1	2	2	2	1	1																
Forklift																		1	2	2	2	2	2	2	2	2	2	2	2	2						
Pump (4 per delivery)								2	2	2	2	2	2	2	2	2	2	2																		
Temporary lighting (8 per delivery)								2	2																									1	1	1
Trench Roller								1	1																											
Crawler Crane								1	1																											
Total Plant Onsite In Section Per Month	0	0	0	21	33	33	31	47	47	40	40	27	27	38	38	47	47	55	30	30	18	18	18	18	18	18	18	18	18	18	0	0	0	13	13	13
Total Deliveries / Removals	0	0	0	21	12	0	2	16	0	23	0	13	0	11	0	9	0	8	31	0	12	0	0	0	0	0	0	0	0	0	18	0	0	13	0	13
Average Deliveries / Removals Per Week	0	0	0	6	3	0	1	4	0	6	0	4	0	3	0	3	0	2	8	0	3	0	0	0	0	0	0	0	0	0	5	0	0	4	0	4
Average Total two-way HGV movements (Deliveries / Removals) Per Week	0	0	0	12	6	0	2	8	0	12	0	8	0	6	0	6	0	4	16	0	6	0	0	0	0	0	0	0	0	0	10	0	0	8	0	8
Average Total two-way HGV movements (Deliveries / Removals) Per Day	0	0	0	3	2	0	1	2	0	3	0	2	0	2	0	2	0	1	4	0	2	0	0	0	0	0	0	0	0	0	2	0	0	2	0	2

#### Substation - Average Daily Personnel Requirements

Number of Additional Site Personel Per Activity		Total Persor	, [																N	lonths																		
(general labourers, drillers, drilling foremen, electricians, joiners, bricklavers etc	Working Davs	Days	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
Permanent Access Road	130	520				4	4	4	4	4																									<u> </u>			
Construction Compound Construction	78	234				3	3	3																													1	1
Site Clearence Works	104	208					2	2	2	2																									<b>1</b>			1
Development Platform Earthworks	104	312								3	3	3	3																									
Foundation Works	260	962									4	4	4	4	4	4	4	3	3	3																		
Sub-structure Works	130	442														4	4	3	3	3															,	,		1
Super-Structure Works	130	442																3	3	3	4	4																
M&E Kit Installation	182	702																2	2	4	5	5	5	4														
Wiring Up	156	728																			4	4	5	5	5	5												
Commissioning	312	1,248																			3	3	3	3	3	3	5	5	5	5	5	5						
Reinstatement	78	234																																		3	3	3
Construction Compound Removal and Welfare Demobilisation	78	234																																		3	3	3
Plant Operators																																						(
Overall Plant Operators	780	16,380				20	32	32	30	39	39	34	34	21	21	31	31	36	36	39	16	16	9	9	9	9	9	9	9	9	9	9				11	11	11
Substation Engineering Personnel																																						(
Lead Engineer, 1 x Assistant Engineers, 1 x surveyors, 1 x Foreman	780	3,120				4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4				4	4	4
Project Engineering Personnel Based at Substation																																						
Head Engineer, 1 x Admin Staff, QS, Overall Site Foreman, H&S Supervisor, Environmental Clerk, Lead Surveyor, 1 x catering staff, 1 x client representative and 1 x owners engineers	858	8,580				10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Averaç	ge Total Em	oloyees per da	у 0	0	0	41	55	55	50	62	60	55	55	39	39	53	53	61	61	66	46	46	36	35	31	31	28	28	28	28	28	28	10	10	10	31	31	31
Maximum Total Employee Two-way Movement	ents Per Day	/ (car/small va	n 0	0	0	82	110	110	100	124	120	110	110	78	78	106	106	122	122	132	92	92	72	70	62	62	56	56	56	56	56	56	20	20	20	62	62	62

#### National Grid Works - Average Materials and Welfare and Operation Plant Daily HGV Movements

Activity	Total Working	Total HGVs																		N	Months																	
Activity	Days	Total figvs	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
Construction of access roads for National Grid Over Head Line Works	44	189	5	5																																		
Construction of tarmac access road to Sealing End Compound	22	132							6																													
Project Substation - National Grid Connection	44	10								1	1																											
Removal of access road for National Grid Overhead Line Works	66	189																																		3	3	3
		Total HGVs per day	5	5	0	0	0	0	6	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	3	3	3
	Total two-way	y HGV movements per day	y 10	10	0	0	0	0	12	2	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	6	6	6

#### National Grid Works - Construction Plant Requirements

		-	-	-	-					-						Мо	nth		-				-	-	-	-		-				
Plant	1	2	3	4	5	6	7	8 9	10	11	12	13 14	15	16 1	17	18	19 20	21	22	23	24 25	26	27	28	29	30	31	32	33	34	35	36
D6 Dozer	1	1					2	2 2																						2	2	2
30T Excavator	3	3					2	2 2																						2	2	2
20T Dumper	3	3					2	2 2																						2	2	2
Smooth Drum vibrio road roller	1	1					2																							1	1	1
21T excavator	1	1					2	2 2																						1	1	1
ST Forward Tipping Dumper	1	1					2	2 2																						1	1	1
Loading shovel	1	1					2	2 2																						2	2	2
Trench Roller								2 2																								
Tractor & fencing kit	1	1																												1	1	1
Tractor & trailer	1	1					1	1 1																						1	1	1
Tractor & Fuel bowser (or self-propelled)	1	1					1	1 1																						1	1	1
Tractor & Water bowser (for dust suppression)	1	1					1	1 1																						1	1	1
Tractor & cable drum trailer																															1	
Tractor & soil tiller, roller, seeder																														1	1	1
Cement mixer																															,	
Mobile crane																															,	
Grader	1	1					1																								,	
Cable laying tracked crane																															,	
Cable winch																															,	
Pre-cast concrete truck																															,	
Mobile concrete pump																															,	
Telehandler	1	1						2 2																								
Mobile self-contained welfare unit	1	1					1	2 2																						2	2	2
Crawler Crane								1 1																								
Mobile generator	2	2						2 2																						2	2	2
Temporary lighting	2	2						2 2																						2	2	2
Road surface paver & roller							1																								oxdot	
Pump								2 2																								
Total Plant Onsite In Section Per Month		22	0	0			20	28 28	0	0	0	0 0	0			0	0 0	0	0	0	0 0	0	0	0	0	0	0	0	0	22	22	22
Total Deliveries / Removals Average Deliveries / Removals Per Day		0	22	0			20	16 0	28 2	0	0	0 0	0			0	0 0	0	0	0	0 0	0	0	0	0	0	0	0	0	22 1	0	22 1
Average Deliveries / Removais Per Day  Average Total two-way HGV movements (Deliveries / Removals) Per Day			2	0			2	2 0	4	0	0	0 0				0	0 0	0	0	0	0 0	0		0	0	0	0	0	0	2	0	2

#### National Grid Works - Average Daily Personnel Requirements

Number of Additional Site Personel Per Activity (general labourers, drillers, drilling foremen,	Total Working	Total Person Days																		- 1	Month																	
electricians, joiners, bricklayers etc)	Days	Total Person Days	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
Construction of access roads for National Grid Over Head Line Works	52	156	3	3																																		
Construction of tarmac access road to Sealing End Compound	26	52							2																													
Project Substation - National Grid Connection	52	156								3	3																											
Removal of access road for National Grid Overhead Line Works	78	234																																		3	3	3
Plant Operators																																				1 '	1 /	
Overall Plant Operators	208	3,666	17	17					19	20	20																									16	16	16
Engineering Personnel																																						
Lead Engineer / surveyor, 1 x Foreman	208	416	2	2					2	2	2																									2	2	2
	Averag	ge Total Employees per da	y 22	22	0	0	0	0	23	25	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	21	21
Maximum Total Employee Tv	wo-way Moveme	nts Per Day (car/small van	) 44	44	0	0	0	0	46	50	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42	42	42

#### National Grid Works - Total Vehicle Movement Requirements

Activity																		V	Veek																	
Activity	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
Materials and Welfare and Operation Plant Daily HGV Movements Total Two-way HGV Movements Per Day		10	0	0	0	0	12	2	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	6	6	6
Increase to account for Miscellaneous allowances (nominal 25% increase	) 13	13	0	0	0	0	15	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	8	8
Construction Plant Average Total two-way HGV Movements (deliveries / Removals) Per Da	, 2	0	2	0	0	0	2	2	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
Average total two-way HGV Movements Per Day	15	13	2	0	0	0	17	5	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	8	10
																																				1
Maximum Total Employee Two-way Movements Per Day (car/small van)	44	44	0	0	0	0	46	50	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42	42	42
Employee Two-Way Movmentes Plus additional 10% for Miscellaneous Movement	s 49	49	0	0	0	0	51	55	55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47	47	47
Maximum Total HGV and Car/small van Two-way Movements Per Day (car/small van	64	62	2	0	0	0	68	60	58	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	57	55	57

#### National Grid Works

					Con	struction Veh	icle movemen	ts (quarterly)												
Activities	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Site Enabling		•			-					-										
HGVs	3000	3000	1500																	
LGVs	950	450	250																	
Substation Works																				
HGVs			160	300	650	650	650	650	800	800	1800	1800	1800	1800	500	500	20	20	40	44
LGVs			720	1120	1900	2180	2180	2180	1850	1850	1850	1850	800	800	800	400	200	200	200	200
Overhead Line Works																				
HGVs						268	268	268	268	402	402			134	264	264			402	402
LGVs						360	360	360	360	360	360			180	360	360				
Total two-way HGV movements per quarter	3000	3000	1660	300	650	918	918	918	1068	1202	2202	1800	1800	1934	764	764	20	20	442	446
Total two-way daily HGV movements (assuming 66 working days per quarter)	45	45	25	5	10	14	14	14	16	18	33	27	27	29	12	12	0	0	7	7
Total dail deliverieries	23	23	13	2	5	7	7	7	8	9	17	14	14	15	6	6	0	0	3	3
Total two-way LGV movements per quarter	950	450	970	1120	1900	2540	2540	2540	2210	2210	2210	1850	800	980	1160	760	200	200	200	200
Total two-way daily LGV movements (assuming 66 workidn days per quarter)	14	7	15	17	29	38	38	38	33	33	33	28	12	15	18	12	3	3	3	3
Total daily LGV arrivals	7	3	7	8	14	19	19	19	17	17	17	14	6	7	9	6	2	2	2	2

### **East Anglia ONE North Offshore Windfarm**

**Environmental Statement** 



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