

Appendix 4B

Material Volume Calculations

Client	Greensource	Description: Tables populated from EIAR Calculations Tab and inserted into EIAR chapters
Project Number	22635	
Project Name	Ballinlee WF	
Project Manager	Aileen O'Connor	

Table: Permanent Land Use Requirements

Item	Description	Unit	Quantity
Wind Turbine Construction	Wind turbine hardstand area for vehicle during construction and operational phase 1797m2	m2	30549
Access Tracks	Existing, new and upgraded access tracks both founded and floated required for construction and operational phases. 10.8km x 5.5m	m2	59400
Substation	Compound including fences, grid connection access tracks & attenuation for operational phase	m2	9350
Independent Power Provider	Compound + maintenace compound including attenuation for operational phase	m2	3500
Met Mast	Permanent met mast + vehicle hardstand for operational phase	m2	806
Deposition Areas	9 No. permanent deposition areas throughout site	m2	43627
Sediment Settlement Ponds	Permanent sediment settlement ponds used for the operational phase throughout the site each pond is 24m2 and is sized to treat an area of 2400m2	m2	2400

Table: Temporary Land Use Requirements

Item	Description	Unit	Quantity
Construction Compound	3 No. Temporary construction compounds to be installed/removed as part of the construction phase Site compound No1. 4750m2 Site compound No2. 4750m2 Site compound No3. 1375m2	m2	10875
Borrow Pit	2 No. temporary borrow pits for site won aggregate, to be infilled as part of construction phase Northern Borrow Pit 35200m2 Southern Borrow Pit 25500m2	m2	60700
Sediment Settlement Ponds	Temprary sediment settlement ponds used for the construction phase throughout the site each pond is 24m2 and is sized to treat an area of 2400m2	m2	1440
Wind Turbine Construction	Wind turbine blade set down area 2x 80m2 and the wind turbine crane hardstand area 2x 174m2	m2	8636
Deposition Areas	2 No. temporary material deposition areas adjacent to borrow pits Northern deposition area 21000m2 Southern deposition area 22750m2	m2	43750

Table: Summary of Approximate Aggregate and Reinforced Steel Quantities

Item	Unit	Quantity
Total volume of aggregate required (including site won and imported)	m3	167592
Site won aggregate from onsite borrow pit	m3	99852
Total volume of site won aggregate required	m3	99852
Imported stone for turbine bases	m3	16905
Imported stone for turbine hardstand	m3	7548
Imported stone for access tracks	m3	9801
Imported stone for temporary compound	m3	1320
Imported stone for substation area	m3	10362
Imported stone for independent power provider	m3	5313
Imported stone for met mast area	m3	532
Imported stone for internal cable route	m3	1203
Imported stone for external cable route	m3	14755
Total volume of imported aggregate required	m3	67740
Concrete for turbine bases	m3	19097
Concrete for substation	m3	63
Concrete for independent power provider	m3	66
Concrete for met mast	m3	12
Concrete for internal cable route	m3	4922
Concrete for external cable route	m3	11426
Total volume concrete required	m3	35586
Reinforced steel for turbine bases	tonnes	2865
Reinforced steel for substation	tonnes	8

Reinforced steel for independent power provider	tonnes	8
Reinforced steel for met mast	tonnes	1
Total volume of imported steel reinforcement required	tonnes	2882

Table: Excavation and Material Volumes

Item	Unit	Quantity
Total Excavation Volume	m3	321758
Excavated Material from the Wind Farm Site	m3	296918
Excavated Material from External Grid Route	m3	24840
Total Aggregate Volume	m3	167592
Imported Aggregate	m3	67740
Site Won Aggregate	m3	99852
Total Concrete Volume	m3	35586
Total Reinforcement Volume	Tonnes	2882