

Arecleoch Windfarm Extension
EIA Report Technical Appendix 12.4: Materials Calculator
June 2019

Volume of Rock Required on Arecleoch Extension Windfarm

Infrastructure	Length m	As built surface width m	Construction width m	As built area m2	Depth m	Number	Volume m3	Final Volume m3	Notes:
0									
Access Tracks on site (new)	5005	5	7	35035	0.8	1	28028	28028	Assumes 5m width on surface with 7m average at base
Existing Upgraded	14300	5		71500	0.2	1	14300	14300	6.986
Existing Access Track (Maintenance Requirement)	20500	5					5000	5000	Assume 5000m3 for repairs (conservative estimate)
Access Track to Met Mast	10	4	4	40	0.8	1	32	32	Assumes 4m width
Access Track to Borrow Pit (Temporary)	10	5	6	60	0.8	6	288	288	Assumes 5m width on surface with 6m average at base
Passing Places	70	5	5	350	0.8	15	4200	4200	15 along new turbine tracks overall length 50m
Turbine Bases - formation only	20	20		400	0.3	13	1560	1560	Assume all concrete imported
Fill above Turbine Bases	28	28		784	3	13	30576	22126	Less volume of bases 13*650m3 =8450m3
Crane Pads	70	28		1960	1	13	25480	25480	
Crane Pad boom support	7	7		49	1	26	1274	1274	2 per crane hardstanding
Blade laydown and ancillaries	20	2		40	0.5	26	520	520	
Turning Heads	60	5		300	0.8	6	2730	2730	6.986
Substation	100	75		7500	1	1	7500	7500	
Met Mast Working area	25	25		625	1	1	625	625	
Laydown Area	100	50		5000	1	1	5000	5000	
Construction Compound	150	50		7500	0.5	1	3750	3750	
TOTAL REQUIREMENT							130863	122413	All volumes measurements in m3, based on Vestas Requirements

Borrow pit material won (estimate)

BP 1	48,000
BP 2	19,000
BP 3	32,000
BP 4	36,000
BP 5	14,400
BP 6	36,000
Total Volume from Site	185,400
Import requirements (shortfall)	-62987
Total import	-62987
plus 10% contingency	-69,286
Assume 8450m3 batched concrete for bases plus bases for substation, radar, met mast (150m3)	