

Turbine: T01

Photos: See below

Grid reference: E112712 N235902		
Date: 20/11/2018		
Altitude: Approx. 191 metres		
Species	Common name	Cover abundance (DAFOR)
Vascular Plants		
<i>Pinus contorta</i>	Lodgepole Pine	A
<i>Picea sitchensis</i>	Sitka Spruce	A
<i>Calluna vulgaris</i>	Heather	O
<i>Molinia caerulea</i>	Purple Moor-grass	O
<i>Blechnum spicant</i>	Hard fern	R
<i>Potentilla erecta</i>	Tormentil	R
<i>Schoenus nigricans</i>	Black bog-rush	R
<i>Erica tetralix</i>	Cross-leaved heath	R
Non-vascular Plants		
<i>Polytrichum commune</i>		F
<i>Sphagnum palustre</i>		F
<i>Sphagnum capillifolium</i>		O
<i>Hypnum jutlandicum</i>		O
<i>Pseudoscleropodium purum</i>		O
<i>Hylocomium splendens</i>		R
% Tree cover	80 % canopy;	
% Bare ground	0 %	
% Exposed rock	+	
% Bryophyte/lichen cover	60 %	
% Heath	5 %	
% Graminoids	80 %	
Slope	Flat	
Aspect	SW	
Mean vegetation height	6-7 m canopy; 40cm ground flora	
Peat depth	>50 cm	
Habitat Classification	Conifer plantation (WD4) with PB2 where trees failed.	

Turbine Base Botanical Study – Ardderroo 2018

Turbine: T02

Photos: See below

Grid reference: E113460 N235727		
Date: 20/11/2018		
Altitude: Approx. 210 metres		
Species	Common name	Cover abundance (DAFOR)
Vascular Plants		
<i>Molinia caerulea</i>	Purple Moor-grass	A
<i>Pinus contorta</i>	Lodgepole Pine	A
<i>Picea sitchensis</i>	Sitka Spruce	A
<i>Calluna vulgaris</i>	Ling Heather	F
<i>Erica tetralix</i>	Cross-leaved Heath	O
<i>Potentilla erecta</i>	Tormentil	R
<i>Blechnum spicant</i>	Hard Fern	R
<i>Schoenus nigricans</i>	Black bog-rush	R
<i>Trichophorum germanicum</i>	Deergrass	R
<i>Eriophorum</i> spp.	Cotton grass	R
Non-vascular Plants		
<i>Sphagnum capillifolium</i>		O
<i>Sphagnum papillosum</i>		R
<i>Cladonia</i>		O
<i>Racomitrium lanuginosum</i>		R
<i>Hylocomium splendens</i>		O
<i>Polytrichum</i> spp.		O
<i>Rhytidiadelphus loreus</i>		O
<i>Sphagnum palustre</i>		F
% Tree cover	80 % canopy	
% Bare ground	0 %	
% Exposed rock	15 %	
% Bryophyte/lichen cover	80 %	
% Heath	10 %	
% Graminoids	15 %	
Slope	5 degrees	
Aspect	SSE	
Mean vegetation height	8m trees; 40cm ground	
Peat depth	>50cm	
Habitat Classification	Immature conifer plantation (WD4); Blanket bog (PB2) in forestry rides	

Turbine Base Botanical Study – Ardderroo 2014

Turbine: T03

Photos: See below

Grid reference: E114228 N235747		
Date: 19/04/2014		
Altitude: Approx. 120 m		
Species	Common name	Cover abundance (DAFOR)
Vascular Plants		
<i>Pinus contorta</i>	Lodgepole Pine	D
<i>Picea sitchensis</i>	Sitka Spruce	D
<i>Blechnum spicant</i>	Hard Fern	R
<i>Pteridium aquilinum</i>	Bracken	O
Non-vascular Plants		
<i>Breutelia chrysocoma</i>		O
<i>Kindbergia praelonga</i>		F
<i>Polytrichum commune</i>		R
<i>Rhytidiadelphus loreus</i>		O
<i>Sphagnum subnitens</i>		A
<i>Thuidium tamariscinum</i>		F
% Tree cover	90 % canopy; 10 % ground	
% Bare ground	0 %	
% Exposed rock	0 %	
% Bryophyte/lichen cover	90 %	
% Heath	0 %	
% Graminoids	0 %	
Slope	30 degrees	
Aspect	E	
Mean vegetation height	10 m canopy; 5 cm ground	
Peat depth	<0.5 m litter & moss & over rock	
Habitat Classification	Conifer plantation (WD4)	

Turbine Base Botanical Study – Ardderroo 2018

Turbine: T04

Photos: See below

Grid reference: E112219 N235006		
Date: 20/11/2018		
Altitude: Approx. 112m		
Species	Common name	Cover abundance (DAFOR)
Vascular Plants		
<i>Pinus contorta</i>	Lodgepole Pine	A
<i>Picea sitchensis</i>	Sitka Spruce	A
<i>Molinia caerulea</i>	Purple Moor Grass	A
<i>Myrica gale</i>	Bog-myrtle	F
<i>Calluna vulgaris</i>	Heather	O
<i>Juncus effusus</i>	Soft rush	O
<i>Potentilla erecta</i>	Tormentil	R
<i>Erica tetralix</i>	Cross-leaved heath	R
<i>Salix spp.</i>	Willow	R
<i>Trichophorum germanicum</i>	Deergrass	R
Non-vascular Plants		
<i>Polytrichum commune</i>		R
<i>Hylocomium splendens</i>		R
<i>Thuidium tamariscinum</i>		O
<i>Hypnum jutlandicum</i>		O
<i>Sphagnum capillifolium</i>		O
<i>Plagiothecium undulatum</i>		O
% Tree cover	65 % canopy	
% Bare ground	0 %	
% Exposed rock	0 %	
% Bryophyte/lichen cover	75 %	
% Heath	15 %	
% Graminoids	65 %	
Slope	20 degrees	
Aspect	E	
Mean vegetation height	6-8m canopy; 40-50 cm ground	
Peat depth	<50 cm; occasional rocky outcrops	
Habitat Classification	Conifer plantation (WD4); Some failed WD4 on Raised Bog (PB1)	

Turbine Base Botanical Study – Ardderroo 2018

Turbine: T05

Photos: See below

Grid reference: E112881 N235297		
Date: 20/11/2018		
Altitude: Approx. 205 m		
Species	Common name	Cover abundance (DAFOR)
Vascular Plants		
<i>Pinus contorta</i>	Lodgepole Pine	A
<i>Picea sitchensis</i>	Sitka Spruce	A
<i>Molinia caerulea</i>	Purple Moor-grass	A
<i>Calluna vulgaris</i>	Ling Heather	O
<i>Erica tetralix</i>		O
<i>Blechnum spicant</i>	Hard Fern	R
<i>Potentilla erecta</i>	Tormentil	R
<i>Erica cinerea</i>	Bell Heather	R
<i>Carex panicea</i>	Carnation sedge	R
<i>Trichophorum germanicum</i>	Deergrass	R
Non-vascular Plants		
<i>Sphagnum capillifolium</i>		F
<i>Sphagnum palustre</i>		O
<i>Hypnum jutlandicum</i>		R
<i>Racomitrium lanuginosum</i>		R
% Tree cover	80 %	
% Bare ground	0 %	
% Exposed rock	+	
% Bryophyte/lichen cover	30 %	
% Heath	5 %	
% Graminoids	90 %	
Slope	5 degrees	
Aspect	SW	
Mean vegetation height	8-10 m conifers; <i>Molinia</i> 40cm;	
Peat depth	>50 cm	
Habitat Classification	Conifer plantation (WD4); Blanket bog (PB2) where trees have failed.	

Turbine Base Botanical Study – Ardderroo 2014

Turbine: T06

Photos: See below

Grid reference: E113486 N235115		
Date: 23/06/2014		
Altitude: Approx. 180 metres		
Species	Common name	Cover abundance (DAFOR)
Vascular Plants		
<i>Blechnum spicant</i>	Hard Fern	R
<i>Calluna vulgaris</i>	Ling Heather	R
<i>Dryopteris dilatata</i>	Broad Buckler Fern	R
<i>Erica cinerea</i>	Bell Heather	R
<i>Molinia caerulea</i>	Purple Moor-grass	F
<i>Pinus contorta</i>	Lodgepole Pine	A
<i>Picea sitchensis</i>	Sitka Spruce	A
Non-vascular Plants		
<i>Diplophyllum albicans</i>		R
<i>Hypnum jutlandicum</i>		O
<i>Polytrichum commune</i>		R
<i>Pseudoscleropodium purum</i>		O
<i>Rhytidiadelphus squarrosus</i>		R
<i>Sphagnum capillifolium</i>		R
<i>Sphagnum fallax</i>		R
<i>Thuidium tamariscinum</i>		R
% Trees cover	80 % canopy; 10 % ground	
% Bare ground	60 % (litter)	
% Exposed rock	0 %	
% Bryophyte/lichen cover	20 %	
% Heath	1 %	
% Graminoids	10 %	
Slope	10 degrees	
Aspect	SE	
Mean vegetation height	5 m (canopy)	
Peat depth	Not measured	
Habitat Classification	Conifer plantation (WD4)	

Turbine Base Botanical Study – Ardderroo 2018

Turbine: T07

Photos: See below

Grid reference: E111632 N234350		
Date: 11/11/2018		
Altitude: Approx. 87 m		
Species	Common name	Cover abundance (DAFOR)
Vascular Plants		
<i>Picea sitchensis</i>	Sitka Spruce	D
Non-vascular Plants		
<i>Rhytidiadelphus loreus</i>		F
<i>Brachythecium rutabulum</i>		0
<i>Sphagnum capillifolium</i>		0
<i>Cladonia</i> spp.		0
<i>Thuidium tamariscinum</i>		D
<i>Usnea subfloridana</i>		A
% Tree cover	100 %	
% Bare ground	0%	
% Exposed rock	0%	
% Bryophyte/lichen cover	90 %	
% Heath	0%	
% Graminoids	0 %	
Slope	+/- level	
Aspect	N/A	
Mean vegetation height	15-18 m (trees), 1-2 c m (ground)	
Peat depth	>1 m	
Habitat Classification	Conifer plantation (WD4)	

Turbine Base Botanical Study – Ardderroo 2014

Turbine: T08

Photos: See below

Grid reference: E112295 N234380		
Date: 11/11/2018		
Altitude: Approx. 91 metres		
Species	Common name	Cover abundance (DAFOR)
Vascular Plants		
<i>Pinus contorta</i>	Lodgepole Pine	D
<i>Molinia caerulea</i>	Purple Moor-grass	D
Non-vascular Plants		
<i>Hypnum jutlandicum</i>		D
<i>Sphagnum capillifolium</i>		A
<i>Rhytidiadelphus loreus</i>		O
<i>Plagiothecium undulatum</i>		F
<i>Thuidium tamariscinum</i>		F
<i>Cladonia portentosa</i>		R
<i>Usnea subfloridana</i>		A
% Tree cover	100 % canopy	
% Bare ground	0 %	
% Exposed rock	0 %	
% Bryophyte/lichen cover	75 %	
% Heath	0 %	
% Graminoids	0 %	
Slope	+/- level	
Aspect	N/A	
Mean vegetation height	15 m canopy; 30 cm ground	
Peat depth	Not recorded	
Habitat Classification	Conifer plantation (WD4)	

Turbine Base Botanical Study – Ardderroo 2018

Turbine: T09

Photos: See below

Grid reference: E112950 N234335		
Date: 21/11/2018		
Altitude: Approx. 82 metres		
Species	Common name	Cover abundance (DAFOR)
Vascular Plants		
<i>Pinus contorta</i>	Lodgepole Pine	A
<i>Molinia caerulea</i>	Purple Moor-grass	A
<i>Juncus effusus</i>	Soft Rush	A
<i>Rubus fruticosus agg.</i>	Bramble	F
<i>Eriophorum angustifolium</i>	Common Cottongrass	0
<i>Salix spp.</i>	Willow	0
<i>Chamerion angustifolium</i>	Rosebay Willowherb	0
<i>Digitalis purpurea</i>	Foxglove	0
<i>Potentilla erecta</i>	Tormentil	R
Non-vascular Plants		
<i>Thuidium tamariscinum</i>		0
<i>Hypnum jutlandicum</i>		F
<i>Polytrichum spp.</i>		F
<i>Thuidium tamariscinum</i>		0
<i>Campylopus introflexus</i>		0
<i>Polytrichum commune</i>		0
<i>Rhytidiadelphus loreus</i>		0
% Tree cover	70 %	
% Bare ground	0 %	
% Exposed rock	0 %	
% Bryophyte/lichen cover	40 %	
% Heath	0 %	
% Graminoids	30 %	
Slope	+/- level	
Aspect	N/A	
Mean vegetation height	1-2 m tree canopy; 60cm ground	
Peat depth	Not recorded	
Habitat Classification	Recently felled woodland (WS5)/ Conifer plantation (WD4)	

Turbine Base Botanical Study – Ardderroo 2018

Turbine: T10

Photos: See below

Grid reference: E113625 N234507		
Date: 20/11/2018		
Altitude: Approx. 99 metres		
Species	Common name	Cover abundance (DAFOR)
Vascular Plants		
<i>Molinia caerulea</i>	Purple Moor-grass	A
<i>Pinus contorta</i>	Lodgepole Pine	A
<i>Juncus effusus</i>	Soft rush	A
<i>Rubus fruticosus agg.</i>	Bramble	F
<i>Calluna vulgaris</i>	Heather	0
<i>Salix spp.</i>	Willow	0
<i>Carex echinata</i>	Star sedge	0
<i>Betula pubescens</i>	Downy birch	0
<i>Erica tetralix</i>	Cross-leaved heath	R
<i>Sorbus acuparia</i>	Rowan	R
<i>Picea sitchensis</i>	Sitka Spruce	R
<i>Potentilla erecta</i>	Tormentil	R
Non-vascular Plants		
<i>Sphagnum palustre</i>		A
<i>Hypnum jutlandicum</i>		F
<i>Polytrichum commune</i>		F
<i>Hylocomium splendens</i>		0
<i>Rhytidiadelphus loreus</i>		0
<i>Sphagnum capillifolium</i>		0
<i>Cladonia spp.</i>		R
% Tree cover	20 % canopy	
% Bare ground	+	
% Exposed rock	0 %	
% Bryophyte/lichen cover	80 %	
% Heath	2 %	
% Graminoids	90 %	
Slope	+/- level	
Aspect	N/A	
Mean vegetation height	2m canopy; other vegetation 1-2m	
Peat depth	>50cm	
Habitat Classification	Replanted Conifer plantation (WD4); with Wet grassland (GS4)/Blanket bog (PB2) revegetating	

Turbine Base Botanical Study – Ardderroo 2014

Turbine: T11

Photos: See below

Grid reference: E114300 N234700		
Date: 21/04/2014		
Altitude: Approx. 80 metres		
Species	Common name	Cover abundance (DAFOR)
Vascular Plants		
<i>Picea sitchensis</i>	Sitka Spruce	D
<i>Polystichum aculeatum</i>	Hard Shield Fern	0
Non-vascular Plants		
<i>Hypnum jutlandicum</i>		A
<i>Kindbergia praelonga</i>		F
<i>Plagiothecium undulatum</i>		0
<i>Rhytidiadelphus loreus</i>		D
<i>Sphagnum capillifolium</i>		F
<i>Thuidium tamariscinum</i>		0
% Tree cover	95 % canopy; 10 % ground	
% Bare ground	0 %	
% Exposed rock	0 %	
% Bryophyte/lichen cover	90 %	
% Heath	0 %	
% Graminoids	0 %	
Slope	+/- level	
Aspect	N/A	
Mean vegetation height	10-12 m trees; 2-3 cm ground	
Peat depth	> 1m	
Habitat Classification	Conifer plantation (WD4)	

Turbine Base Botanical Study – Ardderroo 2018

Turbine: T12

Photos: See below

Grid reference: E111118 N233704		
Date: 20/11/2018		
Altitude: Approx. 87 metres		
Species	Common name	Cover abundance (DAFOR)
Vascular Plants		
<i>Molinia caerulea</i>	Purple Moor-grass	D
<i>Pinus contorta</i>	Lodgepole Pine	0
<i>Juncus effusus</i>	Soft Rush	0
<i>Picea sitchensis</i>	Sitka Spruce	0
<i>Juncus effusus</i>	Soft Rush	0
<i>Calluna vulgaris</i>	Heather	0
<i>Potentilla reptans</i>	Tormentil	0
<i>Rubus fruticosus</i> agg.	Bramble	0
<i>Agrostis stolonifera</i>	Creeping bent	0
<i>Salix</i> spp.	Willow	0
<i>Ulex europaeus</i>	Gorse	R
Non-vascular Plants		
<i>Hypnum jutlandicum</i>		F
<i>Polytrichum commune</i>		0
<i>Sphagnum capillifolium</i>		0
<i>Sphagnum palustre</i>		0
<i>Polytrichum</i> spp.		0
<i>Thuidium tamariscinum</i>		0
<i>Campylopus introflexus</i>		0
<i>Hylocomium splendens</i>		0
% Tree cover	5 %	
% Bare ground	10 %	
% Exposed rock	5 %	
% Bryophyte/lichen cover	80 %	
% Heath	0 %	
% Graminoids	80 %	
Slope	+/- level	
Aspect	N/A	
Mean vegetation height	60 cm	
Peat depth	Not measured	
Habitat Classification	Recently felled woodland (WD4)	

Turbine Base Botanical Study – Ardderroo 2018

Turbine: T13

Photos: See below

Grid reference: E111858 N233787		
Date: 20/11/2018		
Altitude: Approx. 82 metres		
Species	Common name	Cover abundance (DAFOR)
Vascular Plants		
<i>Molinia caerulea</i>	Purple Moor-grass	A
<i>Calluna vulgaris</i>	Heather	F
<i>Erica tetralix</i>	Cross-leaved Heath	0
<i>Eriophorum vaginatum</i>	Hare's-tail Cottongrass	0
<i>Eriophorum angustifolium</i>	Common Cottongrass	0
<i>Juncus effusus</i>	Soft Rush	R
<i>Potentilla reptans</i>	Tormentil	0
<i>Vaccinium myrtillus</i>	Bilberry	R
Non-vascular Plants		
<i>Sphagnum capillifolium</i>		F
<i>Polytrichum spp.</i>		F
<i>Thuidium tamariscinum</i>		0
<i>Sphagnum palustre</i>		0
<i>Dicranium majus</i>		0
<i>Hylocomium splendens</i>		0
% Tree cover	0 %	
% Bare ground	0 %	
% Exposed rock	0 %	
% Bryophyte/lichen cover	60 %	
% Heath	0 %	
% Graminoids	90 %	
Slope	+/- level	
Aspect	N/A	
Mean vegetation height	50cm	
Peat depth	Not recorded	
Habitat Classification	Recently felled woodland (WS5)	

Turbine Base Botanical Study – Ardderroo 2018

Turbine: T14

Photos: See below

Grid reference: E112547 N233828		
Date: 11/11/2018		
Altitude: Approx. 85 metres		
Species	Common name	Cover abundance (DAFOR)
Vascular Plants		
<i>Picea sitchensis</i>	Sitka Spruce	0
Non-vascular Plants		
<i>Cladonia portentosa</i>		0
<i>Rhytidiadelphus loreus</i>		0
<i>Sphagnum palustre</i>		F
<i>Thuidium tamariscinum</i>		0
% Tree cover	100 % canopy	
% Bare ground	0 %	
% Exposed rock	0 %	
% Bryophyte/lichen cover	80 %	
% Heath	0 %	
% Graminoids	0 %	
Slope	+/- level	
Aspect	N/A	
Mean vegetation height	10m trees; 25 cm ground	
Peat depth	Not measured	
Habitat Classification	Conifer plantation (WD4)	

Turbine Base Botanical Study – Ardderroo 2018

Turbine: T15

Photos: See below

Grid reference: E113400 N233770		
Date: 21/11/2018		
Altitude: Approx. 94 metres		
Species	Common name	Cover abundance (DAFOR)
Vascular Plants		
<i>Pinus contorta</i>	Lodgepole Pine	A
<i>Molinia caerulea</i>	Purple Moor-grass	A
<i>Calluna vulgaris</i>	Heather	F
<i>Picea sitchensis</i>	Sitka Spruce	F
<i>Polystichum aculeatum</i>	Hard Shield Fern	0
<i>Chamerion angustifolium</i>	Rosebay Willowherb	0
<i>Erica tetralix</i>	Cross-leaved Heath	0
<i>Salix spp.</i>	Willow	0
<i>Eriophorum vaginatum</i>	Hare's-tail Cottongrass	0
<i>Rubus fruticosus agg.</i>	Bramble	R
Non-vascular Plants		
<i>Campylopus introflexus</i>		F
<i>Aulacomnium palustre</i>		0
<i>Hypnum jutlandicum</i>		F
<i>Polytrichum commune</i>		F
<i>Sphagnum capillifolium</i>		F
<i>Cladonia portentosa</i>		A
<i>Dicranum scoparium</i>		A
<i>Dicranum majus</i>		A
% Tree cover	20 % canopy	
% Bare ground	10 %	
% Exposed rock	<5 %	
% Bryophyte/lichen cover	90 %	
% Heath	0 %	
% Graminoids	30 %	
Slope	+/- level	
Aspect	N/A	
Mean vegetation height	Trees 8-10 m; ground 50 cm	
Peat depth	> 50 cm	
Habitat Classification	Recently-felled Woodland (WS5)	

Turbine Base Botanical Study – Ardderroo 2018

Turbine: T16

Photos: See below

Grid reference: E111146 N233160		
Date: 20/11/2018		
Altitude: Approx. 85 metres		
Species	Common name	Cover abundance (DAFOR)
Vascular Plants		
<i>Molinia caerulea</i>	Purple Moor-grass	D
<i>Pinus contorta</i>	Lodgepole Pine	A
Non-vascular Plants		
<i>Sphagnum capillifolium</i>		
% Tree cover	0 %	
% Bare ground	0 %	
% Exposed rock	0 %	
% Bryophyte/lichen cover	50 %	
% Heath	0 %	
% Graminoids	1 %	
Slope	+/- level	
Aspect	N/A	
Mean vegetation height	60 cm	
Peat depth	Not recorded	
Habitat Classification	Recently-felled woodland (WS5)	

Turbine Base Botanical Study – Ardderroo 2018

Turbine: T17

Photos: See below

Grid reference: E112270 N233254		
Date: 20/11/2018		
Altitude: Approx. 81 metres		
Species	Common name	Cover abundance (DAFOR)
Vascular Plants		
<i>Pinus contorta</i>	Lodgepole Pine	A
<i>Molinia caerulea</i>	Purple Moor-grass	A
<i>Eriophorum vaginatum</i>	Hare's-tail Cottongrass	F
<i>Eriophorum angustifolium</i>	Common Cottongrass	0
<i>Salix spp.</i>	Willow	0
<i>Juncus bufonius</i>	Toad Rush	0
<i>Juncus effusus</i>	Soft Rush	0
<i>Calluna vulgaris</i>	Heather	0
<i>Picea sitchensis</i>	Sitka Spruce	0
<i>Chamerion angustifolium</i>	Rosebay Willowherb	0
<i>Rubus fruticosus</i> agg.	Bramble	0
<i>Polystichum aculeatum</i>	Hard Shield Fern	R
<i>Holcus lanatus</i>	Yorkshire Fog	R
Non-vascular Plants		
<i>Hypnum jutlandicum</i>		F
<i>Polytrichum spp.</i>		F
<i>Thuidium tamariscinum</i>		0
<i>Campylopus introflexus</i>		0
<i>Aulacomnium palustre</i>		0
<i>Sphagnum capillifolium</i>		0
<i>Sphagnum palustre</i>		0
<i>Polytrichum commune</i>		0
<i>Rhytidiadelphus triquetrus</i>		0
<i>Hylocomium splendens</i>		0
<i>Cladonia portentosa</i>		R
<i>Cladonia spp.</i>		R
% Tree cover	85%	
% Bare ground	0 %	
% Exposed rock	<5 %	
% Bryophyte/lichen cover	70 %	
% Heath	0 %	
% Graminoids	15 %	
Slope	+/- level	
Aspect	N/A	
Mean vegetation height	1-2 m trees; 60 cm ground	
Peat depth	Not recorded	
Habitat Classification	Conifer plantation (WD4)/Recently-felled woodland	

Turbine Base Botanical Study – Ardderroo 2018

Turbine: T18

Photos: See below

Grid reference: E113412 N233258		
Date: 20/11/2018		
Altitude: Approx. 82 metres		
Species	Common name	Cover abundance (DAFOR)
Vascular Plants		
<i>Molinia caerulea</i>	Purple Moor-grass	D
<i>Calluna vulgaris</i>	Heather	A
<i>Pinus contorta</i>	Lodgepole Pine	F
<i>Picea sitchensis</i>	Sitka Spruce	0
<i>Chamerion angustifolium</i>	Rosebay Willowherb	0
<i>Erica tetralix</i>	Cross-leaved Heath	0
<i>Juncus effusus</i>	Soft rush	0
<i>Polystichum aculeatum</i>	Hard Shield Fern	0
<i>Salix spp.</i>	Willow	0
<i>Potentilla reptans</i>	Tormentil	0
<i>Luzula multiflora</i> agg.	Heath Woodrush	R
<i>Juncus bufonius</i>	Toad Rush	R
Non-vascular Plants		
<i>Hypnum jutlandicum</i>		F
<i>Thuidium tamariscinum</i>		F
<i>Sphagnum capillifolium</i>		0
<i>Campylopus introflexus</i>		0
<i>Campylopus flexuosus</i>		0
<i>Dicranium majus</i>		0
<i>Polytrichum commune</i>		0
<i>Polytrichum spp.</i>		0
% Tree cover	70 % canopy	
% Bare ground	5 %	
% Exposed rock	0 %	
% Bryophyte/lichen cover	70 %	
% Heath	0 %	
% Graminoids	90 %	
Slope	N/A	
Aspect	N/A	
Mean vegetation height	60cm	
Peat depth	Not recorded	
Habitat Classification	Recently-felled woodland (WS5)	

Turbine Base Botanical Study – Ardderroo 2014

Turbine: T19

Photos: See below

Grid reference: E114099 N233365		
Date: 19/04/2014		
Altitude: Approx. 110 metres		
Species	Common name	Cover abundance (DAFOR)
Vascular Plants		
<i>Pinus contorta</i>	Lodgepole Pine	D
<i>Molinia caerulea</i>	Purple Moor-grass	R
<i>Polystichum aculeatum</i>	Hard Shield Fern	O
<i>Rubus fruticosus agg.</i>	Bramble	O
Non-vascular Plants		
<i>Hypnum jutlandicum</i>		F
<i>Sphagnum capillifolium</i>		O
% Tree cover	70 % canopy	
% Bare ground	90 % (needles)	
% Exposed rock	0 %	
% Bryophyte/lichen cover	5 %	
% Heath	0 %	
% Graminoids	1 %	
Slope	+/- level	
Aspect	N/A	
Mean vegetation height	8-10 m trees; 5 cm	
Peat depth	> 1m	
Habitat Classification	Conifer plantation (WD4), some trees down through wind-throw	

Turbine Base Botanical Study – Ardderroo 2018

Turbine: T20

Photos: See below

Grid reference: E111206 N232296		
Date: 11/11/2011		
Altitude: Approx. 78 metres		
Species	Common name	Cover abundance (DAFOR)
Vascular Plants		
<i>Pinus contorta</i>	Lodgepole Pine	A
<i>Molinia caerulea</i>	Purple Moor-grass	D
<i>Trichophorum germanicum</i>	Deergrass	0
<i>Calluna vulgaris</i>	Ling	F
<i>Potentilla erecta</i>	Tormentil	0
<i>Blechnum spicant</i>	Hard Fern	0
Non-vascular Plants		
<i>Polytrichum spp.</i>		0
<i>Sphagnum capillifolium</i>		0
<i>Campylopus introflexus</i>		F
<i>Cladonia spp</i>		0
<i>Racomitrium lanuginosum</i>		0
<i>Hylocomium splendens</i>		0
<i>Polytrichum spp.</i>		0
% Tree cover	3 %	
% Bare ground	2 %	
% Exposed rock	0 %	
% Bryophyte/lichen cover	40 %	
% Heath	0 %	
% Graminoids	90 %	
Slope	+/- level	
Aspect	N/A	
Mean vegetation height	60 cm ground	
Peat depth	Not recorded	
Habitat Classification	Recently felled woodland (WS5)	

Turbine Base Botanical Study – Ardderroo 2018

Turbine: T21

Photos: See below

Grid reference: E111996 N232611		
Date: 11/11/2018		
Altitude: Approx. 65 metres		
Species	Common name	Cover abundance (DAFOR)
Vascular Plants		
<i>Digitalis purpurea</i>	Foxglove	R
<i>Blechnum spicant</i>	Hard Fern	0
<i>Pteridium aquilinum</i>	Bracken	0
<i>Molinia caerulea</i>	Purple Moor-grass	0
<i>Ulex europaeus</i>	Gorse	R
<i>Potentilla erecta</i>	Tormentil	0
<i>Juncus effusus</i>	Soft Rush	0
<i>Salix spp.</i>	Willow	0
Non-vascular Plants		
<i>Sphagnum capillifolium</i>		F
<i>Polytrichum spp.</i>		0
<i>Sphagnum palustre</i>		0
% Tree cover	0 %	
% Bare ground	0 %	
% Exposed rock	0 %	
% Bryophyte/lichen cover	55 %	
% Heath	5 %	
% Graminoids	90 %	
Slope	+/- level	
Aspect	N/A	
Mean vegetation height	50 cm	
Peat depth	Not recorded	
Habitat Classification	Recently-felled woodland (WS5)	

Turbine Base Botanical Study – Ardderroo 2018

Turbine: T22

Photos: See below

Grid reference: E112637 N232775		
Date: 11/11/2018		
Altitude: Approx. 78 metres		
Species	Common name	Cover abundance (DAFOR)
Vascular Plants		
<i>Molinia caerulea</i>	Purple Moor-grass	A
<i>Calluna vulgaris</i>	Ling	A
<i>Pinus contorta</i>	Lodgepole Pine	0
<i>Erica tetralix</i>	Cross-leaved Heath	0
<i>Chamaerion angustifolium</i>	Rosebay	0
<i>Rhododendron ponicum</i>	Rhododendron	0
<i>Potentilla reptans</i>	Tormentil	0
<i>Salix spp.</i>	Willows	0
<i>Picea sitchensis</i>	Sitka Spruce	0
<i>Pteridium aquilinum</i>	Bracken	0
<i>Blechnum spicant</i>	Hard Fern	R
<i>Dryopteris dilatata</i>	Broad Buckler Fern	R
<i>Trichophorum germanicum</i>	Deergrass	R
Non-vascular Plants		
<i>Hypnum jutlandicum</i>		F
<i>Polytrichum commune</i>		F
<i>Sphagnum capillifolium</i>		0
<i>Campylopus introflexus</i>		0
<i>Aulacomnium palustre</i>		0
<i>Cladonia portentosa</i>		0
<i>Dicranum scoparium</i>		0
% Tree cover	5 % saplings	
% Bare ground	20 %	
% Exposed rock	0 %	
% Bryophyte/lichen cover	45 %	
% Heath	10 %	
% Graminoids	60 %	
Slope	+/- Flat	
Aspect	NA	
Mean vegetation height	60 cm	
Peat depth	Not recorded	
Habitat Classification	Recently-felled Woodland (WD4)	

Turbine Base Botanical Study – Ardderroo 2014

Turbine: T23

Photos: See below

Grid reference: E110573 N231801		
Date: 22/04/2014		
Altitude: Approx. 80 metres		
Species	Common name	Cover abundance (DAFOR)
Vascular Plants		
<i>Pinus contorta</i>	Lodgepole Pine	F
<i>Calluna vulgaris</i>	Ling Heather	F
<i>Molinia caerulea</i>	Purple Moor-grass	F
<i>Chamaerion angustifolium</i>	Rosebay	0
Non-vascular Plants		
<i>Hypnum jutlandicum</i>		D
% Tree cover	10 %	
% Bare ground	5 %	
% Exposed rock	0 %	
% Bryophyte/lichen cover	65 %	
% Heath	10 %	
% Graminoids	10 %	
Slope	+/- level	
Aspect	N/A	
Mean vegetation height	50 cm	
Peat depth	>1 m	
Habitat Classification	Very recently-planted second rotation conifer plantation (WD4) with brash piles still in place nearby	

Turbine Base Botanical Study – Ardderroo 2014

Turbine: T24

Photos: See below

Grid reference: E111208 N231589		
Date: 22/04/2014		
Altitude: Approx. 85 metres		
Species	Common name	Cover abundance (DAFOR)
Vascular Plants		
<i>Polystichum aculeatum</i>	Hard Shield Fern	0
<i>Vaccinium myrtillus</i>	Bilberry	0
<i>Molinia caerulea</i>	Purple Moor-grass	R
<i>Pinus contorta</i>	Lodgepole Pine	D
Non-vascular Plants		
<i>Hypnum jutlandicum</i>		F
<i>Polytrichum commune</i>		0
<i>Rhytidiadelphus loreus</i>		0
<i>Sphagnum capillifolium</i>		F
% Tree cover	70 % canopy; 10 % ground	
% Bare ground	60 % (needles)	
% Exposed rock	10 %	
% Bryophyte/lichen cover	20 %	
% Heath	0 %	
% Graminoids	+	
Slope	+/- level	
Aspect	N/A	
Mean vegetation height	13-15 m trees; 0-2 cm ground	
Peat depth	50-90 cm	
Habitat Classification	Very recently-planted second rotation conifer plantation (WD4) with brash piles still in place	

Turbine Base Botanical Study – Ardderroo 2014

Turbine: T25

Photos: See below

Grid reference: E111778 N231971		
Date: 22/04/2014		
Altitude: Approx. 85 metres		
Species	Common name	Cover abundance (DAFOR)
Vascular Plants		
<i>Pinus contorta</i>	Lodgepole Pine	D
<i>Erica tetralix</i>	Cross-leaved Heath	R
<i>Molinia caerulea</i>	Purple Moor-grass	R
Non-vascular Plants		
<i>Dicranum scoparium</i>		0
<i>Hypnum jutlandicum</i>		0
<i>Plagothecium undulatum</i>		0
<i>Sphagnum capillifolium</i>		F
% Tree cover	80 % canopy; 15 % ground	
% Bare ground	75 % (needles)	
% Exposed rock	0 %	
% Bryophyte/lichen cover	10 %	
% Heath	+	
% Graminoids	+	
Slope	+/- level	
Aspect	N/A	
Mean vegetation height	10-15 m trees; 0-2 cm ground	
Peat depth	50-90 cm	
Habitat Classification	Conifer plantation (WD4)	

Turbine Base Botanical Study – Ardderroo 2014**Meteorological Mast Site****Photos: See below**

Grid reference: E114332 N234946		
Date: 20/01/2017		
Altitude: Approx. 90 metres		
Species	Common name	Cover abundance (DAFOR)
Vascular Plants		
<i>Pinus contorta</i>	Lodgepole Pine	F
<i>Epilobium spp.</i>	Willowherb	R
<i>Juncus squarrosus</i>	Heath Rush	O
<i>Juncus effusus</i>	Soft Rush	F
<i>Rubus fruticosus agg.</i>	Bramble	O
<i>Calluna vulgaris</i>	Ling	R
<i>Holcus lanatus</i>	Yorkshire Fog	R
<i>Eriophorum spp.</i>	Cotton-grass	R
<i>Digitalis purpurea</i>	Foxglove	R
Habitat Classification	Young conifer plantation (WD4)	

Turbine Base Botanical Study – Ardderroo 2014

Borrow Pit 01

Photos: See below

Grid reference: E114200 N235600		
Date: 19/04/2014		
Altitude: Approx. 115 metres		
Species	Common name	Cover abundance (DAFOR)
Vascular Plants		
<i>Picea sitchensis</i>	Sitka Spruce	A
<i>Molinia caerulea</i>	Purple Moor-grass	A
<i>Calluna vulgaris</i>	Ling	0
<i>Salix cinerea ssp. oleifolia</i>	Rusty Willow	0
<i>Myrica gale</i>	Bog Myrtle	0
Non-vascular Plants		
<i>Sphagnum capillifolium</i>		0
% Tree cover	50 %	
% Bare ground	0 %	
% Exposed rock	0 %	
% Bryophyte/lichen cover	5 %	
% Heath	5 %	
% Graminoids	40 %	
Slope	15 degrees	
Aspect	E	
Mean vegetation height	5 m trees; 50 cm ground	
Peat depth	< 1m	
Habitat Classification	Road edge bank with <i>Molinia</i> , within conifer plantation (WD4)	

Turbine Base Botanical Study – Ardderroo 2014

Borrow Pit 02

Photos: See below

Grid reference: E112200 N234800		
Date: 21/04/2014		
Altitude: Approx. 95 metres		
Species	Common name	Cover abundance (DAFOR)
Vascular Plants		
<i>Picea sitchensis</i>	Sitka Spruce	A
<i>Molinia caerulea</i>	Purple Moor-grass	A
<i>Calluna vulgaris</i>	Ling	0
<i>Salix cinerea ssp. oleifolia</i>	Rusty Willow	0
<i>Myrica gale</i>	Bog Myrtle	0
Non-vascular Plants		
<i>Sphagnum capillifolium</i>		0
% Tree cover	50 %	
% Bare ground	0 %	
% Exposed rock	0 %	
% Bryophyte/lichen cover	5 %	
% Heath	5 %	
% Graminoids	40 %	
Slope	+/- level	
Aspect	N/A	
Mean vegetation height	3-6 m trees; 75 cm ground	
Peat depth	< 1m	
Habitat Classification	Road edge bank with <i>Molinia</i> , within conifer plantation (WD4)	

Borrow Pit 03

Photos: See below

Grid reference: E109800 N232500		
Date: 22/04/2014		
Altitude: Approx. 100 metres		
Species	Common name	Cover abundance (DAFOR)
Vascular Plants		
<i>Picea sitchensis</i>	Sitka Spruce	D
<i>Polystichum aculeatum</i>	Hard Shield Fern	O
<i>Betula pubescens</i>	Downy Birch	R
Non-vascular Plants		
<i>Rhytidiadelphus loreus</i>		D
<i>Thuidium tamariscinum</i>		D
% Tree cover	100 % canopy; 10% ground	
% Bare ground	0 %	
% Exposed rock	0 %	
% Bryophyte/lichen cover	90 %	
% Heath	0 %	
% Graminoids	0 %	
Slope	+/- level	
Aspect	N/A	
Mean vegetation height	3/6 m trees; 2-3 cm ground	
Peat depth	> 1m	
Habitat Classification	Conifer plantation (WD4)	

Turbine Base Botanical Study – Ardderroo 2014**Sub-station Site**

Photos: See below

Grid reference: E113890 N234920		
Date: 20/01/2017		
Altitude: Approx. 85 metres		
Species	Common name	Cover abundance (DAFOR)
Vascular Plants		
<i>Pinus contorta</i>	Lodgepole Pine	D
Habitat Classification		
Conifer Plantation (WD4)		

Turbine Base Botanical Study – Ardderroo 2014**Alternative Compound****Photos: See below**

Grid reference: E110410 N232120		
Date: 20/01/2017		
Altitude: Approx. 60 metres		
Species	Common name	Cover abundance (DAFOR)
Vascular Plants		
<i>Pinus contorta</i>	Lodgepole Pine	D
<i>Molinia caerulea</i>	Purple Moor-grass	D
<i>Calluna vulgaris</i>	Ling	F
<i>Erica tetralix</i>	Cross-leaved Heath	O
<i>Potentilla erecta</i>	Tormentil	O
<i>Juncus effusus</i>	Soft Rush	F
<i>Rubus fruticosus</i> agg.	Bramble	O
Non-vascular Plants		
<i>Polytrichum commune</i>		R
Habitat Classification	Young conifer plantation (WD4)	

Plates



T01



T02



T03



T04



T05



T06



T07



T08



T09



T10



T11



T12



T13



T14



T15



T16



T17



T18



T19



T20



T21



T22



T23



T24



T25



T25



Meteorological Mast Site



Borrow Pit 01



Borrow Pit 02



Borrow Pit 03



Sub-station Site



Alternative Compound Site