

Balnakailly Rainforest - Annual Habitat Monitoring Report & Baseline Data

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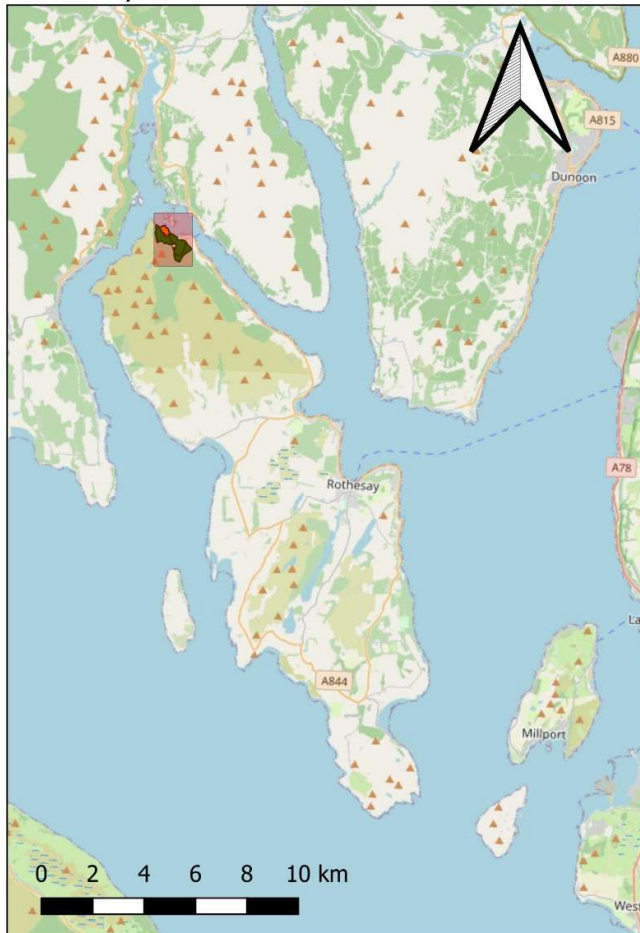
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1. Site Overview

Map showing location on Isle of Bute
Balnakailly Rainforest



Map data from OpenStreetMap | Boundary Data: Samuel Lindsay, Bute Community Forest (n.d.) | Map Surveyor: Melissa Peakman | Map Date: June 2026

Site Name: Balnakailly Rainforest, Isle of Bute

Survey Dates: 27 April 2026 to 29 April 2026

Principal Surveyors: Melissa Peakman (PDA EcoSurv), Jenny Fincher (PDA EcoSurv)

Purpose: Annual repeatable habitat monitoring baseline

2. Methodology & Equipment

2.1 Field Survey

A ground cover and canopy baseline survey was carried out during the last week of April 2026 for the Bute Rainforest restoration project. This data was collected to inform a broader Phase 1 Habitat Survey and was used alongside a subsequent site walkthrough to establish final target notes and recommendations. The sampling method is designed to be repeated annually to monitor long-term forest regeneration.

The survey covered five distinct compartments (Compartments A–E). To account for habitat variation, two representative plots were surveyed in the higher-variability A1.1.1 compartments (A, B, and C), and one representative plot was set up in both Compartment D (C1.1) and Compartment E (A1.2.2).

2.2 Plot Layout and Dimensions

Ground Flora Layer: Surveyed using 4m x 4m square plots to record vascular plants, bryophytes, and indicators of natural tree regeneration in line with JNCC (2010) standards.

Canopy Layer: Assessed using a larger 25m radius circular plot centred on the middle of the 4m x 4m ground quadrat.

2.3 Field Equipment

Plot Setup: Bamboo posts were driven into the ground to mark the corners of the 4m x 4m ground plots, and high-visibility tape was wrapped around them to mark out the recording boundary.

Measurements: A standard tape measure was used to set out the 4m squares. A pre-measured 25m rope pulled from the centre post was used to calibrate the canopy circle, with visual estimates used to determine the outer tree boundary in dense scrub.

Data Recording: All percentage cover assessments were logged manually in the field using paper data sheets, compartment maps, a clipboard, and a pencil.

Plant Identification: Fieldwork was carried out by Melissa Peakman and Jenny Fincher and was supported by Ben Mitchell (specialist bryophytes and lichens), alongside other volunteers. On-site identification was assisted using the iNaturalist and Seek mobile apps.

Coordinates and Photos: Fixed-point photographs were taken with smartphone cameras. The exact OS grid references for each plot location were extracted post-survey directly from the GPS metadata embedded within those photographs.

Environmental Tools: An ETI Ltd Digital Max/Min Thermometer was utilised at plots to record temperature during the survey. A 6-in-1 Intelligent Soil Tester was inserted at the centre of each quadrat to record soil pH and soil temperature. The soil moisture readings for this piece of equipment were inoperative.

3. Survey Locations

Compartment	Phase 1 Code	Plot	OS Grid Reference	Latitude / Longitude	Date Surveyed
A	A1.1.1	A1	NS 021 741 (NS 02133 74148)	55.91960, -5.16809	29 April 2026
A	A1.1.1	A2	NS 021 737 (NS 02134 73756)	55.91608, -5.16779	29 April 2026
B	A1.1.1	B1	NS 024 739 (NS 02404 73951)	55.91794, -5.16362	27 April 2026
B	A1.1.1	B2	NS 022 736 (NS 02266 73697)	55.91561, -5.16564	27 April 2026
C	A1.1.1	C1	NS 018 741 (NS 01800 74135)	55.91934, -5.17341	27 April 2026
C	A1.1.1	C2	NS 014 741 (NS 01496 74198)	55.91978, -5.17830	28 April 2026
D	C1.1	D	NS 014 746 (NS 01414 74695)	55.92421, -5.17998	28 April 2026
E	A1.2.2	E	NS 019 740 (NS 01975 74004)	55.91824, -5.17052	28 April 2026

4. Compartment Baseline Data

4.1 Compartment A

Sessile oak dominated (23.3 ha)

Phase 1 Habitat Code: A1.1.1 (Semi-natural broadleaved woodland)

NVC Classification (MAVIS): W17c (Score: 47.59)

Key Species: Sessile oak (*Quercus petraea*), downy birch (*Betula pubescens*), purple moor grass (*Molinia caerulea*), red fescue (*Festuca rubra*), glittering wood moss (*Hylocomium splendens*).

Structural Summary

Canopy: Mature sessile oak forms 90% of the canopy in A1, dropping to 40% in A2. Downy birch cover increases from 5% in A1 to 20% in A2. Open sky increases from 5% (A1) to 40% (A2). No conifers are present in the canopy.

Ground Layer: A1 ground cover is 40% bare ground, 32% bryophytes, and 30% vascular flora (mainly purple moor grass at 22%). A2 ground cover is 65% bryophytes (dominated by *Hylocomium splendens* at 23%), 22% vascular flora (mainly red fescue at 16%), and 10% bare ground.

Regeneration: Natural regeneration is minimal, limited to trace levels (<1%) of downy birch and sitka spruce saplings in A2.

Deadwood and Epiphytes: Fallen deadwood is constant at 5% cover across both plots. This substrate supports epiphytic lichens (primarily *Hypotrachyna laevigata*) and liverworts (*Frullania* species).

4.2 Compartment B

Downy birch dominated (18.0 ha)

Phase 1 Habitat Code: A1.1.1 (Semi-natural broadleaved woodland)

NVC Classification (MAVIS): W17 (Field override of W10d score; see Appendix B)

Key Species: downy birch (*Betula pubescens*), cock's-foot (*Dactylis glomerata*), common bracken (*Pteridium aquilinum*), common bilberry (*Vaccinium myrtillus*), common tamarisk moss (*Thuidium tamariscinum*).

Structural Summary

Canopy: Downy birch forms 100% of the canopy cover in Q1, dropping to 60% in Q2 where there is 40% open sky. No other canopy species or conifers are present.

Ground Layer: B1 ground cover is 35% bare ground, 35% vascular flora (dominated by cock's-foot at 25% and common bilberry at 10%), and 30% bryophytes (primarily common tamarisk moss at 18%). B2 ground cover is 55% bryophytes (dominated by common tamarisk moss at 48%), 25% ferns (entirely common bracken), and 22% vascular flora (mainly cock's-foot at 20%).

Regeneration: No tree saplings or regeneration indicators were recorded within either ground plot.

Deadwood and Epiphytes: No deadwood was present in either plot. Epiphytes noted on trees in B1 include loop lichen, dragon horn lichen, shield lichen, beard lichen, dilated scalewort, staircase moss, and waved silk moss.

4.3 Compartment C

Sessile oak and downy birch mix (24.8 ha)

Phase 1 Habitat Code: A1.1.1 (Semi-natural broadleaved woodland)

NVC Classification (MAVIS): W4a (*Evaluated via split analysis; see Appendix B*)

Key Species: downy birch (*Betula pubescens*), sessile oak (*Quercus petraea*), purple moor grass (*Molinia caerulea*), red fescue (*Festuca rubra*), common honeysuckle (*Lonicera periclymenum*), lanky moss (*Rhytidiadelphus loreus*).

Structural Summary

Canopy: C1 canopy is 50% downy birch and 40% sessile oak, leaving 10% open sky. C2 canopy is 67% downy birch and a single holly (3%, representing an evergreen component), leaving 30% open sky. No conifers are present.

Ground Layer: C1 ground cover is 47% vascular flora (dominated by purple moor grass at 30% and common honeysuckle at 11%), 30% bare ground, 13% bryophytes (primarily lanky moss at 8%), 10% deadwood, and 1% ferns. C2 ground cover is 60% vascular flora (dominated by red fescue at 25%, purple moor grass at 16%, and common bilberry at 10%), 25% bare ground, 10% bryophytes (primarily common feather moss at 4%), 4% deadwood, and 1% ferns.

Regeneration: C1 contains trace levels (<1%) of mountain ash saplings. C2 contains 1% downy birch saplings and trace levels (<1%) of mountain ash saplings.

Deadwood and Epiphytes: Deadwood is present at 10% in C1 with 4% in C2. No lichen species were recorded on the ground layer in either plot.

Disturbance Notes: Quadrat C2 is located within a fire-damaged area, which corresponds with a lack of mature oak canopy, increased open canopy (30%), and a ground layer shift toward red fescue and downy birch sapling regeneration.

4.4 Compartment D

Bracken dominated (9.2 ha)

Phase 1 Habitat Code: C1.1 (Continuous bracken)

NVC Classification (MAVIS): W25a (Score: 32.16)

Key Species: common bracken (*Pteridium aquilinum*), common honeysuckle (*Lonicera periclymenum*), wood sorrel (*Oxalis acetosella*), common feather moss (*Kindbergia praelonga*).

Structural Summary

Canopy: Open sky dominates the plot at 98%. Deciduous canopy is limited to a single individual mountain ash (*Sorbus aucuparia*) tree, representing 2% total canopy cover. No conifers are present.

Ground Layer: The ground layer is heavily dominated by common bracken, which forms 68% of the total cover and is the only fern species present. Vascular flora accounts for 17% (primarily common honeysuckle at 8% and wood sorrel at 3%). Bryophytes provide 10% cover, consisting entirely of common feather moss. Bare ground is recorded at 5%.

Regeneration: No tree saplings or regeneration indicators were recorded within the ground plot.

Deadwood and Epiphytes: No deadwood or lichen species were recorded within the plot boundaries.

4.5 Compartment E

Sitka spruce dominated (2.8ha)

Phase 1 Habitat Code: A1.2.2 (Coniferous plantation)

UKHab Classification Code: w2c (Other coniferous woodland)

NVC Classification (MAVIS): None (*No valid NVC community match; see Appendix B*)

Key Species: sitka spruce (*Picea sitchensis*), common feather moss (*Kindbergia praelonga*), brittle bladder fern (*Cystopteris fragilis*), purple foxglove (*Digitalis purpurea*).

Structural Summary

Canopy: Coniferous canopy cover is 60%, consisting entirely of sitka spruce. Open sky is recorded at 40%. No deciduous species are present in the canopy.

Ground Layer: Bryophytes form 48% of the total ground cover, heavily dominated by common feather moss at 46% with minor silk feather moss at 2%. Bare ground accounts for 46%. Deadwood accounts for 2%. Ferns account for 2% (brittle bladder fern at 1% and broad buckler fern at <1%). Vascular flora accounts for 2% (purple foxglove at 1%, with purple moor grass and soft rush at trace levels <1%).

Regeneration: Conifer regeneration is present at a trace level (<1%), limited to occasional sitka spruce saplings.

Deadwood and Epiphytes: Fallen deadwood forms 2% of the ground cover. No lichen or fungi species were recorded within the plot boundaries.

Appendix A – Full Botanical Raw Data

Compartment A

	Quadrat 1	Quadrat 2
Lat/Long	55.91960, -5.16809	55.91608, -5.16779
Grid Reference	NS 02133 74148	NS 02134 73756
Date	29 April 2026	
Weather Conditions	Sunny, warm, light breeze	
Abiotic Conditions		
Soil pH	N/A	N/A
Soil moisture	N/A	N/A
Soil temperature	N/A	N/A
Air temperature	approx. 19 °C	approx. 22 °C
Notes	No abiotic recording equipment available	

Canopy Cover

Quadrat size: 25 metre radius

Surveyors: Melissa Peakman, Jenny Fincher

Percentage cover assessment	Quadrat 1	Quadrat 2
% deciduous	95	60
% coniferous	-	-
% bare	5	40

Species observed		
Downy birch (<i>Betula pubescens</i>)	5	20
Sessile oak (<i>Quercus petraea</i>)	90	40

Ground Cover

Quadrat size: 4m x 4m

Surveyors: Melissa Peakman, Jenny Fincher, Ben Mitchell (bryophytes/lichens)

Percentage cover assessment	Quadrat 1	Quadrat 2
% Bare ground	40	10
% Bryophyte	32	65
% Dead wood	5	5
% Fern	-	2
% Flora	30	22
% Fungi	-	-
% Lichens	4	5

Compartment A - Species observed	Quadrat 1	Quadrat 2
Flora		
Bluebell <i>Hyacinthoides non-scripta</i>	<1	-
Cock's-foot <i>Dactylis glomerata</i>	-	1
Common bracken <i>Pteridium aquilinum</i>	-	2
Common dog violet <i>Viola riviana</i>	1	-
Common honeysuckle <i>Lonicera periclymenum</i>	-	1
Downy birch (sapling) <i>Betula pubescens</i>	-	<1
Purple moor grass <i>Molinia caerulea</i>	22	-
Red fescue <i>Festuca rubra</i>	-	16
Sitka spruce (sapling) <i>Picea sitchensis</i>	-	<1
Soft rush <i>Juncus effusus</i>	1	-
Sweet vernal <i>Anthoxanthum odoratum</i>	1	3
Tormentil <i>Potentilla erecta</i>	2	-
Wood sorrel <i>Oxalis acetosella</i>	-	1
Yellow pimpernel <i>Lysimachia nemorum</i>	2	-
Bryophytes		
Bank haircap moss <i>Polytrichum formosum</i>	6	13
Bifid crestwort <i>Lophocelia bidentata</i>	2	-
Common tamarisk moss <i>Thuidium tamariscum</i>	-	10
Five-ranked bog moss <i>Sphagnum quinquefarium</i>	6	13
Glittering wood moss <i>Hylocomium splendens</i>	5	23
Greater fork moss <i>Dicranium majus</i>	-	6
Little shaggy moss <i>Rhytidiadelphus loreus</i>	3	-
Red stemmed feather moss <i>Pleurozium shreberi</i>	6	-
Swan's neck thyme moss <i>Mnium hornum</i>	2	-
Waved silk moss <i>Plagiothecium undulatum</i>	2	-
Dilated scalewort <i>Frullania dilatata</i> (on dead wood)	-	2
<i>Frullania tamarisci</i> (on dead wood)	<1	-
Lichen		
<i>Hypotrachyna laevigata</i> (on dead wood)	2	3
Shield lichen <i>Parmelia sulcata</i> (on dead wood)	-	<1
Tube lichen <i>Hypogymnia physodes</i> (on dead wood)	-	<1
Powdered ruffle lichen <i>Parmotrema perlatum</i> (on dead wood)	1	-
Common greenshield lichen <i>Flavoparmelia caperata</i> (on dead wood)	<1	-
Oakmoss <i>Evernia prunastri</i> (on dead wood)	<1	-

Compartment B

	Quadrat 1	Quadrat 2
Lat/Long	55.91794, -5.16362	55.91561, -5.16564
Grid Reference	NS 02404 73951	NS 02266 73697
Date	27 April 2026	
Weather Conditions	Sunny, mild, after early drizzle	Sunny, warm, very little cloud
Abiotic Conditions		
Soil pH	7.0	7.0
Soil moisture	N/A	N/A
Soil temperature	6.8 °C	9.2 °C
Air temperature	14.5 °C	19.6 °C
Notes	Soil moisture equipment inoperative	

Canopy Cover

Quadrat size: 25 metre radius

Surveyors: Melissa Peakman, Jenny Fincher

Percentage cover assessment	Quadrat 1	Quadrat 2
% deciduous	100	60
% coniferous	-	-
% bare	-	40

Species observed		
Downy birch (<i>Betula pubescens</i>)	100	60

Ground Cover

Quadrat size: 4m x 4m

Surveyors: Melissa Peakman, Jenny Fincher

Percentage cover assessment	Quadrat 1	Quadrat 2
% Bare ground	35	-
% Bryophyte	30	55
% Dead wood	-	-
% Fern	-	25
% Flora	35	22
% Fungi	-	-
% Lichens	-	-

Compartment B - Species observed	Quadrat 1	Quadrat 2
Flora		
Cock's-foot <i>Dactylis glomerata</i>	25	20
Common bilberry <i>Vaccinium myrtillus</i>	10	-
Common bracken <i>Pteridium aquilinum</i>	-	25
Wood sorrel <i>Oxalis acetosella</i>	-	2
Soft rush <i>Juncus effusus</i>	<1	-
Bryophytes		
Common tamarisk moss <i>Thuidium tamariscinum</i>	18	48
Red stemmed feather moss <i>Pleurozium schreberi</i>	12	3
Rock moss <i>Racomitrium heterostichum</i>	-	4
Lichen		
	-	-
Notes		
Lichen observed on trees Q B1: Loop lichen Dragon horn Shield lichen Beard lichen	Bryophytes on trees Q B1: Dilate scalewort Stairstep moss Waved silk moss	

Compartment C

	Quadrat 1	Quadrat 2
Lat/Long	55.91934, -5.17341	55.91978, -5.17830
Grid Reference	NS 01800 74135	NS 01496 74198
Date	27 April 2026	28 April 2026
Weather Conditions	Cloudy, breezy, dry	Sunny, warm
Abiotic Conditions		
Soil pH	7.0	7.0
Soil moisture	N/A	N/A
Soil temperature	8.1 °C	8.7 °C
Air temperature	17.9 °C	18.4 °C
Notes	Soil moisture equipment inoperative	

Canopy Cover

Quadrat size: 25 metre radius

Surveyors: Melissa Peakman, Jenny Fincher

Percentage cover assessment	Quadrat 1	Quadrat 2
% deciduous	90	67
% coniferous	-	-
% bare	10	30
% evergreen	-	3

Species observed		
Downy birch (<i>Betula pubescens</i>)	50	67
Holly <i>Ilex aquifolium</i>	-	3
Sessile oak <i>Quercus petraea</i>	40	-

Ground Cover

Quadrat size: 4m x 4m

Surveyors: Melissa Peakman, Jenny Fincher

Percentage cover assessment	Quadrat 1	Quadrat 2
% Bare ground	30	25
% Bryophyte	13	10
% Dead wood	10	4
% Fern	1	1
% Flora	47	60
% Fungi	0	0
% Lichens	0	0

Compartment C - Species observed	Quadrat 1	Quadrat 2
Flora		
Cock's-foot <i>Dactylis glomerata</i>	1	-
Common bilberry <i>Vaccinium myrtillus</i>	-	10
Common bracken <i>Pteridium aquilinum</i>	1	1
Common honeysuckle <i>Lonicera periclymenum</i>	11	-
Common sedge <i>Carex nigra</i>	-	1
Downy birch (sapling) <i>Betula pubescens</i>	-	1
Mountain ash (sapling) <i>Sorbus aucuparia</i>	<1	<1
Perennial ryegrass <i>Lolium perenne</i>	-	2
Red fescue <i>Festuca rubra</i>	-	25
Sweet vernal <i>Anthoxanthum odoratum</i>	2	3
Purple moor grass <i>Molinia caerulea</i>	30	16
Wood sorrel <i>Oxalis acetosella</i>	1	1
Bryophytes		
Common feather moss <i>Kindbergia praelonga</i>	-	4
Glittering wood moss <i>Hylocomium splendens</i>	3	-
Lanky moss <i>Rhytidiadelphus loreus</i>	8	-
Red stemmed feather moss <i>Pleurozium schreberi</i>	2	-
Silk feather moss <i>Homalothecium sericeum</i>	-	3
Five-ranked bog moss <i>Sphagnum quinquefarium</i>	-	3
Notes		
Quadrat C2 is within fire damaged area		

Compartment D

Lat/Long	55.92421,- 5.17998
Grid Reference	NS 01414 74695
Date	28 April 2026
Weather Conditions	Dry, cloudy
Abiotic Conditions	
Soil pH	7.0
Soil moisture	N/A
Soil temperature	10.6 °C
Air temperature	21 °C
Notes	Soil moisture equipment inoperative

Canopy Cover

Quadrat size: 25 metre radius

Surveyors: Melissa Peakman, Jenny Fincher

Percentage cover assessment	
% deciduous	2
% coniferous	-
% bare	98
% evergreen	-

Species observed		
Mountain ash <i>Sorbus aucuparia</i>	2	

Ground Cover

Quadrat size: 4m x 4m

Surveyors: Melissa Peakman, Jenny Fincher

Percentage cover assessment	
% Bare ground	5
% Bryophyte	10
% Dead wood	-
% Fern	68
% Flora	17
% Fungi	-
% Lichens	-

Compartment D - Species observed	
Flora	
Bird's-foot trefoil <i>Lotus corniculatus</i>	1
Bluebell <i>Hyacinthoids non-scripta</i>	2
Common bracken <i>Pteridium aquilinum</i>	68
Common honeysuckle <i>Lonicera periclymenum</i>	8
Common sorrel <i>Rumex acetosa</i>	1
Greater stitchwort <i>Stellaria holostea</i>	<1
Soft rush <i>Juncus effusus</i>	2
Wood sorrel <i>Oxalis acetosella</i>	3
Bryophytes	
Common feather moss <i>Kindbergia praelonga</i>	10

Compartment E

Lat/Long	55.91824,-5.17052
Grid Reference	NS 01975 74004
Date	28 April 2026
Weather Conditions	Sunny, slight cloud
Abiotic Conditions	
Soil pH	7.0
Soil moisture	N/A
Soil temperature	7.3 °C
Air temperature	15.5 °C
Notes:	Soil moisture equipment inoperative

Canopy Cover

Quadrat size: 25 metre radius

Surveyors: Melissa Peakman, Jenny Fincher

Percentage cover assessment	
% deciduous	-
% coniferous	60
% bare	40

Species observed	
Sitka spruce <i>Picea sitchensis</i>	60

Ground Cover

Quadrat size: 4m x 4m

Surveyors: Melissa Peakman, Jenny Fincher

Percentage cover assessment	
% Bare ground	46
% Bryophyte	48
% Dead wood	2
% Fern	2
% Flora	2
% Fungi	-
% Lichens	-

Compartment E - Species observed	
Flora	
Brittle bladder fern <i>Cystopteris fragilis</i>	1
Broad buckler fern <i>Dryopteris dilatata</i>	<1
Purple moor grass <i>Molinia caerulea</i>	<1
Purple foxglove <i>Digitalis purpurea</i>	1
Soft rush <i>Juncus effusus</i>	<1
Sitka spruce (sapling) <i>Picea sitchensis</i>	<1
Bryophytes	
Common feather moss <i>Kindbergia praelonga</i>	46
Silk feather moss <i>Homalothecium sericeum</i>	2

Appendix B – MAVIS Interpretation Outputs

Data from the ground and canopy cover surveys carried out in April 2026 was entered into the MAVIS data interpretation application. The results are shown below for each of the 5 separate compartments, A-E.

Results from MAVIS were evaluated using both the raw floristic data and field observations to determine NVC codes for the compartments, with UKHab codes where the habitat was outside the standard NVC classification.

Compartment A

NVC Code Compartment A	W17c
MAVIS data interpretation for Compartment A	Group 0: <u>BalnakaillyA</u> NVC: W17c 47.59 NVC: W17 45.66 NVC: W17b 44.82 NVC: W11 43.23 NVC: W17d 42.60 NVC: W11b 42.16 NVC: W19 39.23 NVC: W11a 38.89 NVC: W17a 38.31 NVC: W11c 36.92
MAVIS analysis of the combined 2 quadrats shows a strong match to the W17c sub-community (W17 <i>Quercus petraea</i> - <i>Betula pubescens</i> - <i>Dicranum majus</i> woodland, <i>Anthoxanthum odoratum</i> - <i>Agrostis capillaris</i> sub-community). Combining the data from the 2 quadrats reflects the natural variation across the compartment.	

Compartment B

NVC Code	W17
MAVIS data interpretation for Compartment B	Group 1: <u>BalnakaillyB</u> NVC: W10d 26.51 NVC: W17 26.46 NVC: W17d 25.44 NVC: W22c 25.12 NVC: W16 24.32 NVC: W16b 24.23 NVC: W17b 24.10 NVC: H12a 24.07 NVC: U20b 23.93 NVC: W10 23.47
MAVIS analysis of the combined quadrats for Compartment B shows a close result between several communities, with the highest match being W10d and secondly W17. Both areas share a downy birch canopy and a dominant cocksfoot grass layer. The variation between them is structural; the second quadrat samples a more open canopy. The survey was carried out in late April and the software is working from early-season indicators. Field judgement over-rides the W10d score and the compartment is classed as W17 <i>Quercus petraea</i> - <i>Betula pubescens</i> - <i>Dicranum majus</i> woodland.	

Compartment C

NVC Code Compartment C	W4a
MAVIS data interpretation for combined Compartment C	Group 0: BalnakaillyC NVC: W17b 34.64 NVC: W17c 33.88 NVC: W16 32.90 NVC: W4a 32.58 NVC: W16b 32.18 NVC: W17 31.49 NVC: W4 29.01 NVC: W16a 28.50 NVC: W17d 27.79 NVC: U20 27.42
MAVIS interpretation was initially carried out using data from two quadrats within separate areas of Compartment C. As the second quadrat, C2, covers an area affected by historic fire damage it has affected the overall NVC scores. The data has therefore been split to evaluate each area independently, confirming W4a is the community across the compartment.	
NVC Code Quadrat C1	W4a
MAVIS data interpretation for Quadrat C1	Group 2: BalnakaillyC1 NVC: W4a 30.52 NVC: W10d 28.24 NVC: W4 28.00 NVC: W16 25.91 NVC: W16b 25.79 NVC: W10 23.11 NVC: W17c 23.07 NVC: W16a 21.79 NVC: W22c 21.71 NVC: W25b 21.59
MAVIS analysis of the undamaged quadrat, C1 returned a mix of scores, pointing toward both NVC W4a (<i>Betula pubescens</i> - <i>Molinia caerulea</i> woodland, <i>Dryopteris dilatata</i> - <i>Rubus fruticosus</i> sub-community) and damp oak woodland (NVC W10d). The mixed scores are a result of the canopy being both downy birch (50%) and sessile oak (40%). Because the NVC system does not have a single community profile that combines a heavy oak canopy with a birch and purple moor-grass understory, the software has created a split match. The high cover of purple moor-grass (30%) and the downy birch canopy gives the primary result as W4a. The presence of sessile oak and honeysuckle (11%) created the secondary W10d oakwood match.	
NVC Code Quadrat C2	W4a
Mavis data interpretation for Quadrat C2	Group 1: BalnakaillyC2 NVC: W4a 33.01 NVC: W16 31.75 NVC: W16b 29.13 NVC: W4 29.01 NVC: W16a 28.43 NVC: H2b 26.62 NVC: W15c 26.30 NVC: W10 25.62 NVC: W10d 25.59 NVC: W15d 24.79
MAVIS analysis of the fire-damaged quadrat shows the highest match to NVC W4a, closely followed by dry acidic birch-oak woodland (NVC W16). These scores reflect the combined impact of historic wildfire damage and deer browsing. The downy birch canopy (67%) and remaining purple moor-grass (16%) maintain the underlying W4a result, with wet conditions confirmed by the presence of five-ranked bog moss. The high secondary match to W16 has been caused by the wildfire, which stripped the peat flora allowing nutrient-responsive grasses to colonise, giving the impression of a drier woodland habitat.	

Compartment D

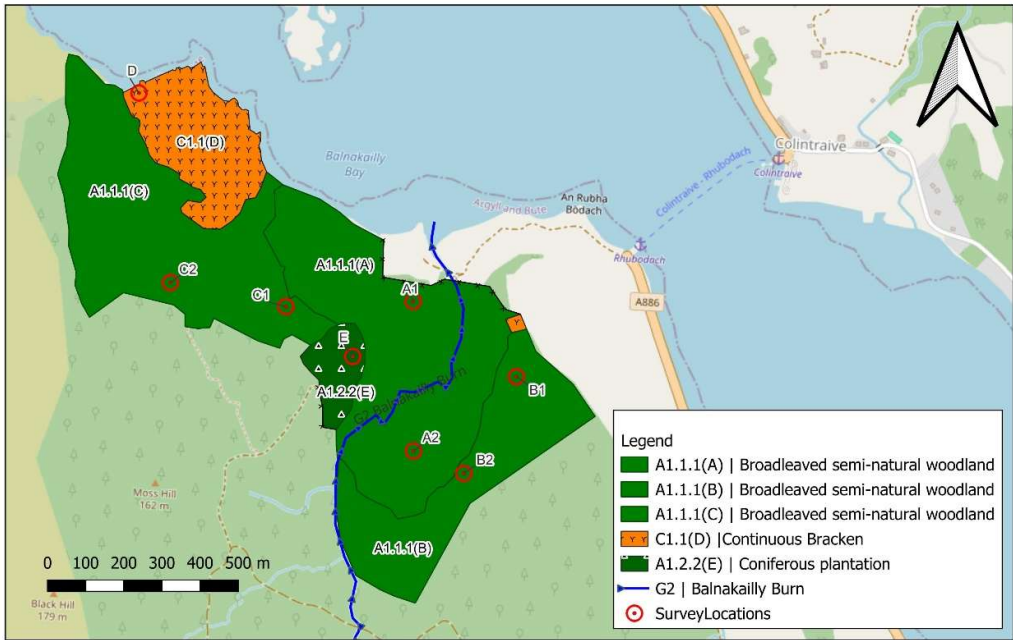
NVC Code	W25a
MAVIS data interpretation for Compartment D	Group 1: <u>BalnakaillyD</u> NVC: W25a 32.16 NVC: W25 30.41 NVC: W10 30.21 NVC: W10e 29.46 NVC: MC12 28.66 NVC: W10d 28.64 NVC: MC12b 28.29 NVC: W10a 27.21 NVC: W10c 26.64 NVC: W10b 25.53
MAVIS analysis shows a clear match to the W25a sub-community (W25 <i>Pteridium aquilinum</i> - <i>Rubus fruticosus</i> underscrub, <i>Hyacinthoides non-scripta</i> sub-community).	

Compartment E

NVC Code	Conifer Plantation (No NVC code)
UKHab code	w2c
MAVIS data interpretation for Compartment E	Group 2: <u>BalnakaillyE</u> NVC: M27c 19.38 NVC: M25c 18.91 NVC: W4 17.95 NVC: W4b 17.74 NVC: M25 16.65 NVC: M6c 16.30 NVC: H9e 16.13 NVC: W4c 16.02 NVC: W1 15.83 NVC: W4a 15.30
This quadrat is located within a commercial forestry furrow and is surrounded by windthrow. MAVIS software indicated weak mathematical affinities across a range of ecological formations, including mires, wet woodlands, and heaths. These low coefficients fail to confirm an NVC community. Data was skewed by a dense carpet of common feather-moss (<i>Kindbergia praelonga</i>, 46% cover). As the commercial, non-native canopy (<i>Picea sitchensis</i>, 60% cover) lacks an NVC profile, the software operated on the bryophyte layer. In accordance with JNCC guidelines, automated software outputs can be overruled by field judgement. The localised presence of mosses and ferns within a windthrow furrow does not indicate a wider NVC mire or wet woodland community. Based on structural reality and non-native canopy composition, the overall habitat is classified under UKHab as w2c (Other coniferous woodland), while the bryophyte ground habitat is similar to that within NVC W18.	

Appendix C: Sampling Location Maps

Phase 1 Habitat & Survey Point Map
Balnakailly Rainforest Project



Map Data from OpenStreetMap | Boundary Data: Samuel Lindsay, Bute Community Forest (n.d.) | Map Surveyor: Melissa Peakman | Map Date: June 2026

Appendix D: Sampling Location Photographic Record

Photographer key: MP = Melissa Peakman (Report Author), JF = Jenny Fincher (Surveyor)

Compartment A

Quadrat A1



MP



JF



JF

Quadrat A2



MP



JF



JF

Compartment B

Quadrat B1



JF



JF



JF

Quadrat B2



MP



JF



JF

Compartment C

Quadrat C1



MP

Quadrat C2



MP



JF

Compartment D

Quadrat D



MP



JF



JF

Compartment E

Quadrat E



MP



JF



JF