A83 Rest and Be Thankful

LTS EIAR VOLUME 4, APPENDIX 11.5 - BRYOPHYTE REPORT

Transport Scotland

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A11-5. Bryophyte Report

A11-5.1. Introduction

Terms of Reference

A11-5.1.1. AtkinsRéalis WSP Joint Venture (AWJV) were commissioned by Transport Scotland as part of the A83 Rest and Be Thankful Project (hereafter referred to as the Proposed Scheme), to prepare a Bryophyte baseline report. This Technical Appendix is intended to provide baseline information regarding Protected and Notable Bryophytes including indicator species of temperate rainforest in the wooded area of the upper Coire Croe Burn, within the Croe Water catchment for the Proposed Scheme.

A11-5.1.2. Volume 2, Chapter 4: The Proposed Scheme, provides details of the construction works, the Receptor Sites and Natural Capital (NC) and Biodiversity Net Gain (BNG) enhancement sites. The findings for these enhancement sites are considered in Appendix 11.16 Enhancement Site Survey Report. They are not discussed within this report. The Proposed Scheme, excluding the NC and BNG enhancement sites, will be referred to as the Proposed Scheme (excl. NC & BNG) hereafter.

Purpose of Report

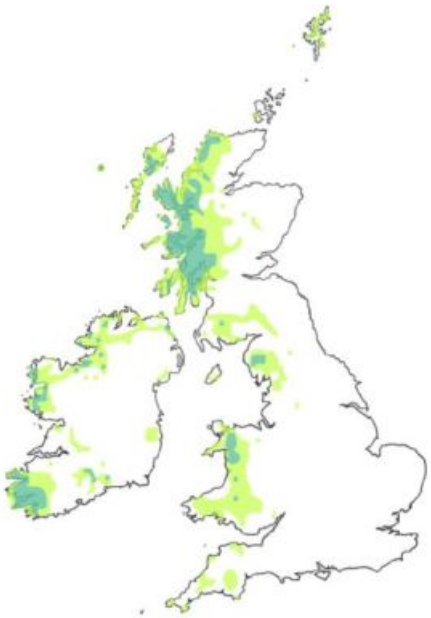
A11-5.1.3. This report is intended to provide baseline information regarding notable assemblages of bryophytes to inform the Environmental Impact Assessment (EIA) Report for the Proposed Scheme.

A11-5.1.4. This report focuses on uncommon bryophyte species that are hygrophilous (adapted to wet conditions; living or growing in moist places). Oceanic bryophytes are commonest in humid habitats such as rocks and trees along fast-flowing watercourses, particularly in wooded ravines. These potentially vulnerable taxa are predominantly oceanic species which are restricted geographically in Europe to western oceanic areas with a consistent cool, wet climate.

A11-5.1.5. The western Highlands is the richest part of Great Britain for oceanic bryophytes and contains many of the species-rich sites for oceanic bryophytes in Europe (Table A11-5.1). The distribution figure shown in Plate A11-5.1 is taken from the Provisional Definition of Temperate Rainforest in Britain and Ireland. The map shows the potential distribution of Temperate rainforest in the UK based on locations where species make up >10% of the total Bryophyte flora at the 10km^2 scale.

A11-5.1.6. Lighter green areas indicate where hyperoceanic bryophytes make up 10-49% of all bryophyte species per 10x10km^2 square. Darker green areas indicate where hyperoceanic bryophytes make up >50% of all recorded bryophyte species per 10x10km^2.

Plate A11-5.1 – Potential Temperate Rainforest Distribution in Britain and Ireland



A11-5.1.7. Many sites in this geographical area are of international importance for their rich oceanic bryophyte floras, which are classified as temperate rainforest. Temperate rainforest is considered internationally important as it is a biome with a very restricted global distribution.

Plate A11-5.2 - Global distribution of Temperate Rainforest (Mackey, B. Cadman, S. Rogers, N. Hugh, S. 2017. Assessing the risk to the conservation status of temperate rainforest from exposure to mining, commercial logging, and climate change: A Tasmanian case study. Biological Conservation. 215: 19-29)

A11-5.1.8. Within this report, records for other taxa with species recognised as indicators of Temperate Rainforest have also been included within the desk study, in accordance with the Provisional Definition of Temperate Rainforest in Britain and Ireland.

A11-5.1.9. The report presents ecological information obtained during the following:

- review of Jacobs Aecom (2022) Access to Argyle and Bute (A83) Medium Term Solution Habitats Report and the associated botanical datasets from surveys undertaken in 2021
- a desk-study undertaken In July 2024
- a review of the botanical data collected as part of the UKHab and NVC surveys undertaken between May and September 2023 with a small number of supplementary survey visits being undertaken in November 2023 and May 2024

- a detailed bryophyte survey of the upper Coire Croe Burn and a 250m buffer undertaken on 14th June 2024 by Nick Hodgetts, a technical expert in botany and bryology.

A11-5.2. Legislation

A11-5.2.1. See Appendix 11.2 Biodiversity Legislation, Policy and Guidance for species legislation.

A11-5.3. Methodology

Desk Study

NatureScot Bryophyte Map

A11-5.3.1. A review of the NatureScot Bryophytes Map was undertaken to identify watercourses with potential notable oceanic bryophyte assemblages within 250m of the Proposed Scheme.

A11-5.3.2. There are 5,600 watercourses across north-west Scotland that have been assessed for the potential importance of their oceanic bryophyte assemblages. This map was designed for hydroelectric schemes, however, is suitable for use where water flow and abstraction have the potential to be altered by a development. Watercourses are assigned a category according to their potential for notable assemblages and the requirement for further survey in relation to developments which may affect the watercourse (Table A11-5.1).

Table A11-5.1 - Categories used to classify West Highland watercourses by their bryological significance from the NatureScot Bryophytes Map.

Category	Category description and NatureScot's advice on assessment and consultation
A – Nationally/Internationally important watercourse	The watercourse has been surveyed and has a score of six or more points. This means that sections of the watercourse support a rich nationally and internationally important flora of uncommon hygrophilous oceanic bryophyte species. There is a high risk that development may not be appropriate on this watercourse (NatureScot may object or provide advice to SEPA with regards a CAR abstraction license). Further survey may help locate stretches of watercourse that do not support important bryophyte populations, but this is normally not the case where the entire watercourse is a steep wooded ravine. Early engagement with NatureScot (and SEPA) is highly recommended in line with their 'Planning for Development - Service Statement'.

Category	Category description and NatureScot's advice on assessment and consultation
B – Nationally/Internationally important site	Targeted bryophyte survey required. The general area has been surveyed and has a score of six or more points (i.e. a rich flora of uncommon hygrophilous species), but the indicated watercourse and its environs form only a part of the site. The site species list may include records made well away from the watercourse, and this watercourse may be one of two or more watercourses within the site. Some of the records contributing to the site score may not therefore be from this particular watercourse and may not be relevant for consideration in relation to a proposed hydroelectric scheme. Targeted survey for the 29 water-loving oceanic bryophytes (listed in NatureScot Commissioned Report 449b) is therefore required. This survey should cover the entire length of watercourse that would be subject to altered flow.
C – watercourse not of national importance	The watercourse has already been surveyed by expert bryologists and has a score of between zero and five points. No further bryophyte survey is necessary in relation to a proposed scheme and the impact of reduced flow on bryophytes can be scoped out of further consideration.
D - watercourse potentially important but not surveyed	The site has a score of between zero and five points and is either unsurveyed or only partially surveyed, but maps and aerial photographs show topography and/or woodland that suggest potential for a site score exceeding 6 points. Further survey of the watercourse area is required in relation to any proposal that may affect the watercourse.

Category	Category description and NatureScot's advice on assessment and consultation
E - Watercourse not likely to be important but not surveyed	The watercourse has a score that is less than six points and is either unsurveyed (score = zero points), or in a few cases partially surveyed. Maps and aerial photographs show a gentle watercourse gradient and/or little or no ravine topography or woodland, so it seems unlikely that the bryophyte flora present will score as much as six points (the threshold for category A assessment). No further bryophyte survey is necessary in relation to a proposed scheme and the impact of reduced flow on bryophytes can be scoped out of further consideration. Note: All uncategorised watercourses (those that are not depicted on the 1:250,000 OS map or to the east of the assessed area) should also be treated as Category E.

BSBI and NBN Atlas

A11-5.3.3. A desk study was undertaken and comprised a search for commercially available National Biodiversity Network (NBN) Atlas records within the Proposed Scheme and a 2km buffer. The desk study included a search for records for oceanic species of bryophytes (NatureScot Commissioned Report 449b; NatureScot Research Report 1314) as well as bryophyte species meeting the following criteria:

- bryophytes listed under Schedule 8 of the Wildlife & Countryside Act 1981 (as amended) or Schedule 5 of the Conservation of Habitats and Species Regulations 2017 (as amended)
- bryophytes listed on the Scottish Biodiversity List
- bryophytes included in the Revised Lists of Nationally Rare and Scarce Bryophytes for Britain and
- bryophytes listed in IUCN Red List of the bryophytes of Britain.

UKHab and NVC Field Survey Data Review

A11-5.3.4. Bryological species data from UKHab and NVC surveys undertaken in 2021 and 2023 was reviewed for notable bryophyte species identified within the Proposed Scheme.

Field Survey

A11-5.3.5. A detailed bryophyte survey of the Coire Croe Burn plus a 250m buffer, was carried out on 14 June 2024. This area was surveyed because the UKHab/NVC survey identified it as potentially supporting notable bryophyte populations. This habitat was selected for further assessment based on the initial survey findings. The survey area was surveyed on both sides of the burn within the 250m limit, and the burn itself was surveyed where access allowed. The aim of the survey was to identify notable and priority species of bryophytes as well as any Atlantic/oceanic bryophyte assemblages.

A11-5.3.6. A bryophyte list was made on a standard Biological Records Centre (BRC) RP39 card, with further notes made where appropriate. Specimens were collected for where necessary for later microscopic examination and digital photographs were taken in the field. Other notable species were noted where observed and bryophyte nomenclature followed the New Checklist of the Bryophytes of Britain and Ireland. Frequency of species was recorded on the DAFOR scale (Frequency on DAFOR scale: D = dominant, A = abundant, F = frequent, O = occasional, R = rare. The qualifier ‘L’ (‘locally’) is also used where appropriate). Oceanic, or ‘Atlantic’, species, were defined according to definitions from relevant literature (Ellis, C.J. 2016. Oceanic and temperate rainforest climates and their epiphyte indicators in Britain. Ecological Indicators, 70: 125-133; Hill, M.O., Preston, C.D., Bosanquet, S.D.S. & Roy, D.B. 2007. BRYOATT. Attributes of British and Irish mosses, liverworts and hornworts. Abbots Ripton, NERC Centre for Ecology and Hydrology & Countryside Council for Wales; Preston, C.D., and Hill M.O. 1997. The Geographical Relationships of British and Irish Vascular Plants. Botanical Journal of the Linnean Society, 124:1-120). ‘Western British’ species were defined as per Ratcliffe, D.A. 1968. An ecological account of Atlantic bryophytes in the British Isles. New Phytologist 67: 365–439.

A11-5.3.7. Species were also assigned a temperate rainforest indicator code in accordance with methodology outlined in the Provisional Definition of Temperate Rainforest in Britain and Ireland, adapted in Table A11-5.2 below.

Table A11-5.2 – Temperate rainforest indicator codes

Rainforest indicator code	Description
R1	Very good rainforest indicators where they occur in native woodland.
R2	Good rainforest indicators where they occur in native woodland.
R3	Generally good rainforest indicators where they occur in native woodland (as for R2), but some of the outlier records appear to be, or are known to be, in less humid (semi-rainforest or non-rainforest) habitats
R4	Generally good rainforest indicators where they occur in native woodland (as for R2 and R3), but with a more significant minority of records from outside the rainforest climate zone and including less humid (semi-rainforest or non-rainforest) habitats
R5	Commonest in optimal zones for temperate rainforest but unreliable as indicators of rainforest because their frequency in this habitat appears to be related to non-rainfall factors at least as much as to rainfall.

Assessment of Bryophyte Assemblages

Sites of Special Scientific Interest Assessment Criteria

A11-5.3.8. The 250m buffer survey area was assessed and scored according to the Guidelines for the selection of Biological Sites of Special Scientific Interest (SSSIs). The assessment against the SSSI criteria serves to determine the national significance of a habitat. By evaluating these criteria, we can ascertain whether a habitat holds considerable ecological value on a national scale.

A11-5.3.9. The two primary oceanic bryophyte assemblages in Britain are associated with Atlantic woodland and with Oceanic-montane liverwort-heath. The former was used to assess assemblages within the ravine. The scoring adopts a system based on oceanic climate affinity, rarity/scarcity, and IUCN threat status; this reflects the importance of assemblages in an international context. The species scoring system for bryophytes is detailed in Table A11-5.3 below.

Table A11-5.3 - Species scoring system for Hyperoceanic and rare, scarce or European endemic Oceanic species that occur in Atlantic woodland (NatureScot Commissioned Report 449b and Guidelines for the selection of Biological Sites of Special Scientific Interest).

Score	Description
1	Hyperoceanic, or Oceanic and endemic to western Europe, but neither Nationally Scarce nor Nationally Rare
3	Oceanic or Hyperoceanic and Nationally Scarce
6	Oceanic or Hyperoceanic and Nationally Rare
9	Vulnerable
12	Endangered

A11-5.3.10. A site score is typically obtained by combining the scores of all species recorded on the site within the last 50 years; species for which there are no recent records, but which are considered potentially still extant should also be counted:

- all localities that equal or exceed a cumulative score of 12 should be considered for SSSI designation
- sites that do not attain 12 points, but which are the highest scoring within an Area of Search should still be considered, particularly where this represents important populations of scoring species at the edge of their oceanic range and

- where a site supports a population of a GB Bryophyte Red List Vulnerable species but does not attain the threshold, the criteria for red list species should be followed.

A11-5.3.11. For site selection, 'Red List species' should be considered to include all species Red Listed (CR, EN or VU) on the IUCN Red List of the bryophytes of Britain. All localities for Red List species should be considered, but assessment against the following criteria is advised.

A11-5.3.12. One GB Bryophyte Red List species qualifies a site for selection if it has:

- the largest population of the species in either of England, Scotland or Wales so that no Red List species becomes regionally extinct with respect to each country's devolved biodiversity duties
- a viable population of the species in an Area of Search (AoS) supporting a substantial proportion of localities for the species. The AoS is a 2km buffer area in which records are searched. In this case, several sites may be selected to provide a site network that is robust, especially in the face of climate change; a viable population on the edge of the species' geographical range, but excluding known increasing species (consult country bryophyte specialist for guidance) and
- the only viable population of the species in the particular AoS.

Hydroelectric Scheme Assessment Criteria

A11-5.3.13. As the SSSI assessment criteria is a true/false criterion in relation to SSSI sites only, the assessment criteria for hydroelectric schemes have also been used to ascertain a more detailed assessment of the importance and classification of the bryophyte communities present (NatureScot Commissioned Report 449b). The species assessment criteria are as per Table A11-5.3. The 36 species used for this methodology along with their score, oceanic climate affinity and conservation status are detailed in.

A11-5.3.14. The classification of bryophyte assemblages for this methodology also follows Table A11-5.1.

A11-5.3.15. The total number of points for bryophytes recorded within a site determines the category of the site as per Table A11-5.1.

Limitations

A11-5.3.16. This section identifies any limitations to the surveys and provides an explanation as to the effect of these on the assessment.

A11-5.3.17. During the 2024 bryophyte survey, the survey area was surveyed for bryophyte species only. Other taxa such as fungi and lichens were not targeted in this survey.

A11-5.3.18. Much of the ravine that was the focus of the 2024 bryophyte survey was inaccessible in a deep narrow gorge. However, enough of it could be reached to gain a reasonable impression of what was present, and most representative habitats were examined, so it is considered unlikely that a significant number of species were missed. The survey was also somewhat hampered by the weather, with at times some substantial rainfall. Also, survey south-west of the A83 Cobbler Bridge was not permitted due to landowner access restrictions, but this section of the Coire Croe Burn was much less suitable for oceanic bryophytes due to its topography and lack of woodland cover.

A11-5.3.19. The NBN Atlas records are not all precise, some records are recorded to a 1km grid, and an exact location is not possible to ascertain. Those records which are generalised to 1km grid areas or similar are included within the desk study results.

A11-5.3.20. The NBN Atlas records are not exhaustive, and the absence of records does not necessarily demonstrate the absence of a species.

A11-5.3.21. Ecological surveys are limited by factors which affect the presence of plants such as the time of year. The survey undertaken to support this report may have not therefore produced a complete list of bryophytes, and the absence of evidence of any particular species should not be taken as conclusive proof that the species is not present or that it will not be present in the future. The above limitation/s has/have been addressed through taking the precautionary approach within the assessment.

A11-5.4. Results

Desk Study

NatureScot Bryophyte Map

A11-5.4.1. Three watercourses are present in the desk study area on the NatureScot bryophyte map tool. These include the Coire Croe Burn, the Croe Water, and Restil Burn. None of these watercourses had been surveyed previously for bryophytes. The Coire Croe Burn and the Croe Water are assigned as category D (potentially important but not surveyed). The Restil Burn was assigned as category E (not likely to be important but not surveyed).

Data Search

A11-5.4.2. The full list of records returned from the desk study is available in Annex 11.5.A summary is provided below.

Bryophytes

A11-5.4.3. 1360 records comprising 349 species of Bryophytes were returned from the NBN atlas data search (Blockeel TL, Bosanquet SDS, Hill M, Preston C (eds) 2014. Atlas of British and Irish bryophytes. Newbury: Pisces Publications, British Bryological Society 2024 Bryophyte data for Great Britain and Ireland from the British Bryological Society held by BRC; and NatureScot 2024 Standing Waters Database - Scotland).

A11-5.4.4. No bryophyte species listed under Schedule 8 of the Wildlife & Countryside Act 1981 (as amended) were returned from the search. The records included:

- 11 near threatened and four vulnerable IUCN Red List species
- 37 Nationally Scarce and two Nationally Rare species on the Revised Lists of Nationally Rare and Scarce Bryophytes for Britain
- five SBL priority species: *Aongstroemia longipes*, *Bryum dixonii*, *Hedwigia ciliata*, *Oncophorus wahlenbergii*, and *Tortula marginata*
- 37 oceanic/hyperoceanic species (Hill, M.O., Preston, C.D., Bosanquet, S.D.S. & Roy, D.B. 2007. BRYOATT. Attributes of British and Irish mosses,

liverworts and hornworts. Abbots Ripton, NERC Centre for Ecology and Hydrology & Countryside Council for Wales) and

- 31 rainforest indicator species (NatureScot Research Report 1314).

UKHab and NVC Field Survey Data Review

A11-5.4.5. The full list of relevant bryophyte species from the botanical surveys undertaken in 2021 and 2023 is presented in A11.5.2 and A11.5.3.

2021 Surveys

A11-5.4.6. Seven species of bryophytes were recorded, none of which are oceanic or notable in terms of conservation status.

2023 Surveys

A11-5.4.7. 36 species of bryophytes were recorded from NVC/UKHab surveys within the survey area in 2023. None of these species are oceanic or notable in terms of conservation status.

Field Survey

Habitat Descriptions

A11-5.4.8. A total of 115 bryophyte taxa were recorded during the site walkover bryophyte survey in 2024 (See A11.5.3 for the full species list and A11.5.4 for Photographs). Of these, 37 species were oceanic or hyperoceanic, and 30 species were indicators of temperate rainforest.

A11-5.4.9. The birch woodland towards the lower section of the survey area, above the A83, comprises limited species of interest with common epiphytes on the trees, including the common oceanic liverwort *Plagiochila punctata*, and a limited variety of common large pleurocarpous bryophytes and Sphagnum species on the ground.

A11-5.4.10. The richer bryophyte flora of the rocks is more or less confined to the upper reaches of the burn, where there is little or no tree cover. Here, the burn is largely typical of this part of the Highlands, with emergent rocks dominated by *Sciuro-hypnum plumosum*, *Racomitrium* spp., *Andreaea rupestris* and

Hedwigia stellata. Some of the rocks within and adjacent to the water are very large and flat. More interesting species on these rocks included *Grimmia ramondii* and *Kiaeria blyttii*.

A11-5.4.11. A rocky 'chasm' on the left bank within this section (NN24550627) supports a good oceanic bryophyte flora, including three species of *Lejeunea* and *Saccogyna viticulosa* plus the oceanic Wilson's filmy fern *Hymenophyllum wilsonii*. There are extensive deeply incised sections of the burn upstream from here, where the bryophyte flora is likely to be similar, but most of them were inaccessible.

A11-5.4.12. Two stands of Near Threatened (IUCN Red List)/Nationally Scarce (Revised Lists of Nationally Rare and Scarce Bryophytes for Britain)/Scottish Biodiversity List moss *Bryum dixonii* were present (NN24330613; NN24650636). This species was until recently thought to be endemic to Scotland, but a specimen from Norway was found in 2015 (Hodgetts & Lockhart 2020), meaning that this a near-endemic species.

A11-5.4.13. The Coire Croe Burn record for *Bryum dixonii* is also of note as it is only the second recorded location of this species in this hectad (10km OS square) (NN20) since H.N. Dixon discovered it new to science at its type locality, the Allt Sugach above Succoth, in 1898, where it was rediscovered by botanists from the Royal Botanic Garden Edinburgh in 2016 (Global rare Scottish moss rediscovered Royal Botanical Garden Edinburgh, 2016).

A11-5.4.14. Ground within the field survey area of the Coire Croe Burn in the upper section of the site (e.g. at NN24750648) contains some extensive base-rich flush systems on both sides of the burn, with base-demanding Sphagnum species such as *Sphagnum contortum*, *Sphagnum teres* and *Sphagnum warnstorfii*, along with 'brown mosses' such as *Campylium stellatum* and *Scorpidium revolvens*, and the club-moss *Selaginella selaginoides*.

A11-5.4.15. The ground near the uppermost part of the site, just below the confluence, is more acid, and dominated in the bryophyte layer by heath and bog plants such as *Sphagnum papillosum*.

A11-5.5. Discussion

Assessment of Indicator Species

A11-5.5.1. Six oceanic indicator species accumulating a total of eight points were identified on the burn (Table A11-5.4). Under the bryological assessment approach for hydroelectric schemes, the site has achieved a score greater than 6, making it a category A site. However, it should be noted that the areas which have notable assemblages are relatively localised on the Coire Croe burn. As the minimum score for SSSI selection is 12 points the site does not meet the criteria for SSSI selection on that basis. However, it could be designated as it supports a viable population of *Bryum dixonii*, which is a near-endemic species, despite not being included in the list of near-endemics in the SSSI selection guidelines. The species is nonetheless described as a possible endemic in the bryophyte atlas on which this list of endemic species is based (Blockeel *et al,* 2014).

Table A11-5.4 - Oceanic Indicator Species identified in proximity to the Burn

Species	Habitat	Frequency	Score
Lejeunea lamacerina	Damp shaded rocks	F	1
Lejeunea patens	Damp shaded rocks & epiphytic	F	1
Plagiochila punctata	Epiphytic on birch	O/LF	1
Scapania gracilis	Epiphytic & on rocks	F	1
Breutelia chrysocoma	Banks, wet heath	F	1
Ulota calvescens	Epiphytic	O	3
n/a	n/a	Total score	8

A11-5.5.2. A total of 30 rainforest indicator species were identified within the survey area (Table A11-5.5). As 10 species present within the survey area have been

identified at R1, and therefore known only to be present where temperate rainforest occurs (Provisional Definition of Temperate Rainforest in Britain and Ireland). R1-4 is considered generally good indicators of temperate rainforest, with R5 being unreliable as their frequency is related to non-rainfall factors. Due to the presence of more than 15 indicator species with R1-R4 codes, it is probable that the habitat within the ravine is temperate rainforest.

Table A11-5.5 - Rainforest indicator species summary

Rainforest indicator code	Number of species within the survey area
R1	10
R2	5
R3	2
R4	13

A11-5.6. Conclusion

A11-5.6.1. Representation of oceanic species is good, especially in dark ravines and rock crevices in the immediate vicinity of the Coire Croe Burn above the lower more wooded section. Due to the presence of the near-endemic Bryum dixonii the upper section of the Coire Croe Burn meets the minimum scoring for SSSI designation. It is also scored as category A using the hydroelectric scheme methodology and the rainforest indicator species present indicate that the habitat is likely to conform to the description of temperate rainforest. The section of the Coire Croe Burn downstream of the bridge is unlikely to be notable or considered to be of the same value due to the surrounding terrain and habitat being considerably different to the upstream areas. Downstream of the bridge the surrounding habitat is grassy and improved due to the influence from grazing livestock in the adjacent fields, there are also few trees present and the burn is not heavily incised.

A11-5.6.2. Most of the bryophyte interest is concentrated either well within the ravine of the Coire Croe Burn, or at some distance uphill from the A83. Therefore, providing that works are restricted more or less to the immediate vicinity of the A83, the bryophytes are unlikely to be significantly affected. This includes the population of *Bryum dixonii*, which is the most notable bryophyte species present (Nationally Rare, Scottish Biodiversity List and red-list Near Threatened).

Annexes

Annex 11.5.A. Desk Study Data

A11.5.1. Notable Records obtained from BSBI and NBN

Table A11-5.6 - Data Search Records

Table Key:

SBL – Scottish Biodiversity List Priority Species

Vascular Plants:

LC – Least concern on the IUCN Red List

Oceanic status according to Preston and Hill (1997)

Bryophytes:

Oceanic status according to Hill, M.O. & Preston C.D. 1998 The geographical relationships of British and Irish bryophytes, Journal of Bryology, 20:1, 127-226, DOI: 10.1179/jbr.1998.20.1.127

IUCN Red List of Bryophytes in Britain:

LC – Least concern

VU – Vulnerable

NT – Near Threatened

The Revised Lists of Nationally Rare and Scarce Bryophytes for Britain:

NS - Nationally Scarce

NR – Nationally Rare

Lichens:

Oceanic status according to Ellis (2016)

LC – Least concern on the IUCN Red List

NS – Nationally Scarce -. An indication of rarity, based on post-1960 records held by the British Lichen Society Mapping Scheme Database

Nationally Scarce taxa are those recorded from 16–100 hectads according to the Conservation Evaluation of British Lichens and Lichenicolous Fungi

IR – International Responsibility - Lichens for which Britain is considered to have International Responsibility in the current GB Red List, according to Conservation Evaluation of British Lichens and Lichenicolous Fungi

Species	Number of records	Rainforest indicator code	Oceanic status	Legal and Conservation status
Vascular Plants	n/a	n/a	n/a	n/a
Hymenophyllum wilsonii	9	R4	Oceanic Boreo temperate	LC
Mosses		n/a	n/a	n/a
Amphidium lapponicum	2	n/a	n/a	LC, NS
Anastrepta orcadensis	7	R4	Suboceanic Boreal montane	LC
Anthelia juratzkana	2	n/a	n/a	LC, NS
Aongstroemia longipes	3	n/a	n/a	LC, NR, SBL
Arctoa fulvella	5	n/a	n/a	LC, NS
Bartramia halleriana	1	n/a	n/a	LC, NS
Bazzania tricrenata	5	R4	n/a	LC
Bazzania trilobata	3	R4	n/a	LC
Breutelia chrysocoma	10	n/a	Hyperoceanic temperate	LC
Bryum dixonii	1	n/a	n/a	NT, NS

Species	Number of records	Rainforest indicator code	Oceanic status	Legal and Conservation status
Bryum riparium	1	n/a	Hyperoceanic temperate	LC, NS
Bryum weigelii	1	n/a	n/a	LC, NS
Campylium bambergeri	1	n/a	n/a	VU
Campylopus atrovirens	12	R4	Hyperoceanic temperate	LC
Campylopus gracilis	4	n/a	n/a	LC, NS
Campylopus schimperi	1	n/a	n/a	NT, NS
Campylopus setifolius	1	R1	Hyperoceanic temperate	LC, NS
Cephalozia albescens	1	n/a	n/a	NT
Chionoloma cylindrotheca	1	R1	n/a	LC
Chionoloma hibernicum	1	R1	Hyperoceanic temperate	LC
Chionoloma recurvifolium	1	R1	Oceanic Boreal montane	LC
Conostomum tetragonum	4	n/a	n/a	NT, NS
Cynodontium jenneri	1	n/a	n/a	LC, NS

Species	Number of records	Rainforest indicator code	Oceanic status	Legal and Conservation status
Dicranodontium asperulum	1	n/a	n/a	LC, NS
Dicranodontium uncinatum	2	R2	n/a	LC, NS
Ditrichum zonatum	2	n/a	n/a	LC, NS
Douinia ovata	6	R4	Oceanic temperate	LC
Drepanolejeunea hamatifolia	1	R3	Hyperoceanic Southern temperate	LC
Encalypta ciliata	2	n/a	n/a	LC, NS
Gymnomitrion brevissimum	1	n/a	n/a	NT
Gymnomitrion crenulatum	3	R2	Oceanic Boreal montane	LC
Hageniella micans	2	R1	Oceanic temperate	VU, NS
Harpalejeunea molleri	1	R3	Hyperoceanic Southern temperate	LC
Hedwigia ciliata	1	n/a	n/a	LC, SBL
Herbertus hutchinsiae	5	R1	Oceanic Boreal montane	LC

Species	Number of records	Rainforest indicator code	Oceanic status	Legal and Conservation status
Herbertus stramineus	5	n/a	Oceanic Boreal montane	LC
Herzogiella striatella	1	n/a	n/a	LC, NS
Hylocomiastrum umbratum	4	R4	n/a	LC
Hyocomium armoricum	5	n/a	Oceanic temperate	LC
Isopterygiopsis muelleriana	1	n/a	n/a	LC, NS
Kiaeria falcata	1	n/a	n/a	NT, NS
Kiaeria glacialis	1	n/a	n/a	VU, NS
Kiaeria starkei	2	n/a	n/a	NT, NS
Lejeunea lamacerina	3	n/a	Hyperoceanic Southern temperate	LC
Lejeunea patens	4	R4	Hyperoceanic Southern temperate	LC
Lepidozia pearsonii	1	R4	Hyperoceanic temperate	LC
Marsupella sphacelata	1	n/a	n/a	LC, NS
Marsupella stableri	1	n/a	n/a	NT, NS

Species	Number of records	Rainforest indicator code	Oceanic status	Legal and Conservation status
Metzgeria leptoneura	3	R1	Hyperoceanic Southern temperate	LC
Mnium thomsonii	1	n/a	n/a	LC, NS
Moerckia blyttii	3	n/a	n/a	NT, NS
Molendoa warburgii	4	R4	Oceanic Boreal montane	LC
Odontoschisma elongatum	2	n/a	n/a	LC, NS
Oedipodium griffithianum	9	n/a	Oceanic Boreal montane	NT, NS
Oncophorus wahlenbergii	5	n/a	n/a	VU, NR, SBL
Orthothecium rufescens	2	n/a	n/a	LC, NS
Plagiochila carringtonii	1	R2	Oceanic Boreal montane	LC
Plagiochila exigua	1	R1	Hyperoceanic Southern temperate	LC
Plagiochila punctata	1	R4	Hyperoceanic Southern temperate	LC

Species	Number of records	Rainforest indicator code	Oceanic status	Legal and Conservation status
Plagiochila spinulosa	5	R4	Hyperoceanic Southern temperate	LC
Plagiopus oederianus	1	n/a	n/a	LC, NS
Pleurozia purpurea	6	R2	Oceanic Boreal montane	LC
Pohlia ludwigii	1	n/a	n/a	NT, NS
Pseudomarsupidium decipiens	2	R1	Hyperoceanic Southern temperate	LC
Ptychomitrium polyphyllum	2	n/a	Oceanic southern temperate	LC
Racomitrium ellipticum	6	n/a	Oceanic Boreal montane	LC
Radula aquilegia	1	R1	Hyperoceanic Southern temperate	LC
Rhabdoweisia crenulata	8	R2	Oceanic Boreal montane	LC

Species	Number of records	Rainforest indicator code	Oceanic status	Legal and Conservation status
Saccogyna viticulosa	4	R4	Oceanic southern temperate	LC
Scapania gracilis	7	R5	Hyperoceanic Southern temperate	LC
Scapania nimbosa	1	n/a	Oceanic Boreal montane	LC, NS
Schistidium maritimum	1	n/a	Oceanic Boreo temperate	LC
Schistidium strictum	4	n/a	Oceanic Boreal montane	LC
Seligeria donniana	1	n/a	n/a	LC, NS
Solenostoma paroicum	2	n/a	Oceanic temperate	LC
Solenostoma subellipticum	1	n/a	n/a	LC, NS
Sphagnum strictum	1	n/a	Hyperoceanic temperate	LC, NS
Syzygiella autumnalis	3	R4	n/a	LC
Tortula marginata	1	n/a	n/a	LC, SBL

A11.5.2. Species data from NVC and UKHab surveys in 2023

Table A11-5.7- Species recorded from 2023 NVC and UKHab surveys

Table Key:

Nationally Scarce – Revised lists of nationally rare and scarce bryophytes for Britain

IUCN Red List of Bryophytes in Britain:

NA – Not Applicable

LC – Least concern

Species	Rainforest indicator code	Oceanic status	Legal and Conservation status
Mosses	n/a	n/a	n/a
Aulacomnium palustre	n/a	n/a	LC
Bartramia pomiformis	n/a	n/a	LC
Bryum pseudotriquetrum	n/a	n/a	LC
Calliergonella cuspidata	n/a	n/a	LC
Campylopus flexuosus	n/a	n/a	LC
Campylopus introflexus	n/a	n/a	Not Applicable (not native)
Ctenidium molluscum	n/a	n/a	LC
Dicranum majus	n/a	n/a	LC
Dicranum scoparium	n/a	n/a	LC

Species	Rainforest indicator code	Oceanic status	Legal and Conservation status
Homalothecium lutescens	n/a	n/a	LC
Hylocomium splendens	n/a	n/a	LC
Hypnum jutlandicum	n/a	n/a	LC
Isothecium myosuroides	n/a	n/a	LC
Mnium hornum	n/a	n/a	LC
Plagiothecium undulatum	n/a	n/a	LC
Pleurozium schreberi	n/a	n/a	LC
Polytrichum formosum	n/a	n/a	LC
Polytrichum commune	n/a	n/a	LC
Polytrichum strictum	n/a	n/a	LC
Pseudoscleropodium purum	n/a	n/a	LC
Racomitrium lanuginosum	n/a	n/a	LC
Rhytidiadelphus loreus	n/a	n/a	LC
Rhytidiadelphus squarrosus	n/a	n/a	LC

Species	Rainforest indicator code	Oceanic status	Legal and Conservation status
Sphagnum capillifolium	n/a	n/a	LC
Sphagnum compactum	n/a	n/a	LC
Sphagnum cuspidatum	n/a	n/a	LC
Sphagnum auriculatum	n/a	n/a	LC
Sphagnum fallax	n/a	n/a	LC
Sphagnum fimbriatum	n/a	n/a	LC
Sphagnum palustre	n/a	n/a	LC
Sphagnum papillosum	n/a	n/a	LC
Sphagnum rubellum	n/a	n/a	LC
Sphagnum subnitens	n/a	n/a	LC
Sphagnum subsecundum	n/a	n/a	LC
Sphagnum tenellum	n/a	n/a	LC
Thuidium tamariscinum	n/a	n/a	LC

Table A11-5.8 - Species recorded from 2021 NVC and UKHab surveys

Table Key:

Vascular Plants:

Oceanic status according to Preston, C.D., and Hill M.O. 1997. The Geographical Relationships of British and Irish Vascular Plants. Botanical Journal of the Linnean Society, 124:1-120

LC – Least Concern on the IUCN Red List

Mosses:

Oceanic status according to Hill and Preston (1998)

IUCN Red List of Bryophytes in Britain:

LC – Least concern

Species	Rainforest indicator code	Oceanic status	Legal and Conservation status
Vascular species	n/a	n/a	n/a
Hymenophyllum wilsonii	R4	Oceanic Boreo temperate	LC
Mosses	n/a	n/a	n/a

Species	Rainforest indicator code	Oceanic status	Legal and Conservation status
Aulacomnium palustre	n/a	n/a	LC
Campylium stellatum	n/a	n/a	LC
Hylocomium splendens	n/a	n/a	LC
Hylocomium splendens	n/a	n/a	LC
Hypnum cupressiforme	n/a	n/a	LC
Hypnum jutlandicum	n/a	n/a	LC
Pleurozium schreberi	n/a	n/a	LC
Polytrichum commune	n/a	n/a	LC
Racomitrium lanuginosum	n/a	n/a	LC
Rhytidiadelphus loreus	n/a	n/a	LC
Sphagnum auriculatum	n/a	n/a	LC
Sphagnum cuspidatum	n/a	n/a	LC
Sphagnum fallax	n/a	n/a	LC

Species	Rainforest indicator code	Oceanic status	Legal and Conservation status
Sphagnum palustre	n/a	n/a	LC
Sphagnum papillosum	n/a	n/a	LC

A11.5.3. Survey Species List

Table A11-5.9 - Bryophyte species recorded from the Coire Croe Burn survey area

Table Key:

SBL -Scottish Biodiversity List priority species

Vascular Plants:

LC – Least Concern on IUCN red list

Oceanic status according to Preston, C.D., and Hill M.O. 1997. The Geographical Relationships of British and Irish Vascular Plants. Botanical Journal of the Linnean Society, 124:1-120

Mosses and Liverworts:

Oceanic status according to Preston, C.D., and Hill M.O. 1997. The Geographical Relationships of British and Irish Vascular Plants. Botanical Journal of the Linnean Society, 124:1-120. and Ratcliffe, D.A. 1968. An ecological account of Atlantic bryophytes in the British Isles. New Phytologist 67: 365–439

Species	Habitat	Frequency	Rainforest Indicator Code	Oceanic Status	SSSI Site selection score	Legal and Conservation Status
Vascular Species	n/a	n/a	n/a	n/a	n/a	n/a
Hymenophyllum wilsonii	Bank	Not given	R4	Oceanic Boreo temperate	N/A	LC
Liverworts	n/a	n/a	n/a	n/a	n/a	n/a
Aneura pinguis	Flushes	o	n/a	n/a	n/a	LC
Blasia pusilla	Wet ground	r	n/a	n/a	n/a	LC
Calypogeia arguta	Earth banks	o	n/a	n/a	n/a	LC
Diplophyllum albicans	Earth banks, rocks, etc	a	n/a	n/a	n/a	LC
Frullania dilatata	Epiphytic on willow	f	n/a	n/a	n/a	LC

Species	Habitat	Frequency	Rainforest Indicator Code	Oceanic Status	SSSI Site selection score	Legal and Conservation Status
Frullania tamarisci	Epiphytic & on rocks	a	n/a	n/a	n/a	LC
Gymnomitrion concinnatum	Exposed rocks	o	n/a	n/a	n/a	LC
Lejeunea cavifolia	Damp shaded rocks & epiphytic	r	n/a	n/a	n/a	LC
Lejeunea lamacerina	Damp shaded rocks	f	n/a	Hyperoceanic southern temperate	1	LC
Lejeunea patens	Damp shaded rocks & epiphytic	f	R4	Hyperoceanic southern temperate	1	LC
Lophocolea bidentata	Damp turf	f	n/a	n/a	n/a	LC

Species	Habitat	Frequency	Rainforest Indicator Code	Oceanic Status	SSSI Site selection score	Legal and Conservation Status
Lophozia sudetica	Thin soil on rocks	r	n/a	n/a	n/a	LC
Lophozia ventricosa	Banks & wet heath	o	n/a	n/a	n/a	LC
Marsupella aquatica	Wet rocks	o/lf	n/a	n/a	n/a	LC
Marsupella emarginata	Rocks	f	n/a	n/a	n/a	LC
Metzgeria furcata	Epiphytic & on rocks	f	n/a	n/a	n/a	LC
Metzgeria violacea	Epiphytic on willow	r/lf	n/a	n/a	n/a	LC
Microlejeunea ulicina	Epiphytic	f	n/a	n/a	n/a	LC

Species	Habitat	Frequency	Rainforest Indicator Code	Oceanic Status	SSSI Site selection score	Legal and Conservation Status
Nardia scalaris	Bare soil banks	f	n/a	n/a	n/a	LC
Pellia endiviifolia	Damp soil & rocks	o/lf	n/a	n/a	n/a	LC
Pellia epiphylla	Wet ground	f	n/a	n/a	n/a	LC
Plagiochila porelloides	Rocks	o	n/a	n/a	n/a	LC
Plagiochila punctata	Epiphytic on birch	o/lf	R4	Hyperoceanic southern temperate	1	LC
Pleurozia purpurea	Wet heath & bog	r/lf	R2	Oceanic boreal montane	n/a	LC
Riccardia chamedryfolia	Flushed turf	o	n/a	Western British	n/a	LC

Species	Habitat	Frequency	Rainforest Indicator Code	Oceanic Status	SSSI Site selection score	Legal and Conservation Status
Riccardia multifida	Damp rock crevices	o	n/a	Western British	n/a	LC
Saccogyna viticulosa	Damp shaded rocks, turf	o	n/a	Oceanic southern temperate	n/a	LC
Scapania compacta	Emergent rocks in burn	r	R4	Western British	n/a	LC
Scapania gracilis	Epiphytic & on rocks	f	n/a	Hyperoceanic southern temperate	1	LC
Scapania undulata	Wet rocks & turf	f	R5	n/a	n/a	LC

Species	Habitat	Frequency	Rainforest Indicator Code	Oceanic Status	SSSI Site selection score	Legal and Conservation Status
Solenostoma hyalinum	Detritus by burn	o	n/a	n/a	n/a	LC
Mosses	n/a	n/a	n/a	n/a	n/a	n/a
Amphidium mougeotii	Rock crevices	o/lf	n/a	n/a	n/a	LC
Andreaea rothii	Exposed rocks	f/la	n/a	n/a	n/a	LC
Andreaea rupestris	Exposed rocks	a	n/a	n/a	n/a	LC
Anoectangium aestivum	Rock crevices	o	n/a	n/a	n/a	LC
Anomobryum julaceum	Wet rocks	r	n/a	n/a	n/a	LC
Atrichum undulatum	Banks	r	n/a	n/a	n/a	LC

Species	Habitat	Frequency	Rainforest Indicator Code	Oceanic Status	SSSI Site selection score	Legal and Conservation Status
Aulacomnium palustre	Wet heath & bog	f	n/a	n/a	n/a	LC
Blindia acuta	Wet rocks	f	n/a	n/a	n/a	LC
Breutelia chrysocoma	Banks, wet heath	f	n/a	Hyperoceanic temperate	1	LC
Bryum dixonii	Emergent rocks in burn	o	n/a	Suboceanic Boreal montaine	Near-endemic Species (Automatically meets minimum standard for site selection)	NS, NT, SBL
Bryum pseudotriquetrum	Damp ground, flushes	o/lf	n/a	n/a	n/a	LC
Campylium stellatum	Flushes	o/lf	n/a	n/a	n/a	LC

Species	Habitat	Frequency	Rainforest Indicator Code	Oceanic Status	SSSI Site selection score	Legal and Conservation Status
Campylopus atrovirens	Wet rocks, wet heath	o	R4	Hyperoceanic temperate	n/a	LC
Campylopus pyriformis	Peaty ground	o	n/a	n/a	n/a	LC
Chionoloma cylindrotheca	Rock crevices	r	R1	n/a	n/a	LC
Chionoloma tenuirostre	Rock crevices	o	n/a	n/a	n/a	LC
Ctenidium molluscum	Rocks & flushes	o/lf	n/a	n/a	n/a	LC
Dichodontium palustre	Flushes	o	n/a	n/a	n/a	LC
Dichodontium pellucidum	Detritus by burn	f	n/a	n/a	n/a	LC
Dicranella heteromalla	Earth banks	o	n/a	n/a	n/a	LC

Species	Habitat	Frequency	Rainforest Indicator Code	Oceanic Status	SSSI Site selection score	Legal and Conservation Status
Dicranum majus	Banks	f	n/a	n/a	n/a	LC
Dicranum scoparium	Banks, turf, epiphytic & on rocks	a	n/a	n/a	n/a	LC
Ditrichum heteromallum	Bare ground	o	n/a	n/a	n/a	LC
Fissidens bryoides	Shaded banks	r	n/a	n/a	n/a	LC
Fissidens dubius	Rock crevices	o	n/a	n/a	n/a	LC
Fissidens taxifolius	Earthy banks	o	n/a	n/a	n/a	LC
Grimmia hartmanii	Emergent rocks in burn	r/lf	n/a	Western British	n/a	LC

Species	Habitat	Frequency	Rainforest Indicator Code	Oceanic Status	SSSI Site selection score	Legal and Conservation Status
Grimmia ramondii	Emergent rocks in burn	o/lf	n/a	n/a	n/a	LC
Hedwigia stellata	Exposed rocks	f	n/a	n/a	n/a	LC
Hookeria lucens	Shaded crevices	r	n/a	n/a	n/a	LC
Hylocomium splendens	Banks, heath, turf, etc	a	n/a	n/a	n/a	LC
Hyocomium armoricum	Rocks & banks by burn	a	n/a	Oceanic temperate	n/a	LC
Hypnum andoi	Epiphytic	o	n/a	n/a	n/a	LC
Hypnum cupressiforme var. *cupressiforme*	Rocks & turf	f	n/a	n/a	n/a	LC

Species	Habitat	Frequency	Rainforest Indicator Code	Oceanic Status	SSSI Site selection score	Legal and Conservation Status
Hypnum cupressiforme var. *resupinatum*	Rocks	o	n/a	Western British	n/a	LC
Hypnum jutlandicum	Heath & bog	a	n/a	n/a	n/a	LC
Isopterygiopsis pulchella	Rock crevices	r	n/a	n/a	n/a	LC
Isothecium myosuroides	Tree bases & on rocks	a	n/a	n/a	n/a	LC
Kiaeria blyttii	Emergent rocks in burn	r	n/a	n/a	n/a	LC
Mnium hornum	Banks & shaded crevices	o	n/a	n/a	n/a	LC
Oligotrichum hercynicum	Bare ground	o	n/a	n/a	n/a	LC

Species	Habitat	Frequency	Rainforest Indicator Code	Oceanic Status	SSSI Site selection score	Legal and Conservation Status
Philonotis fontana	Flushes & runnels	o	n/a	n/a	n/a	LC
Plagiomnium undulatum	Turf	o	n/a	n/a	n/a	LC
Plagiothecium succulentum	Shaded ground	r	n/a	n/a	n/a	LC
Pleurozium schreberi	Banks, heath	f	n/a	n/a	n/a	LC
Pogonatum urnigerum	Thin soil on rocks	o	n/a	n/a	n/a	LC
Polytrichum commune	Wet ground	f/la	n/a	n/a	n/a	LC
Polytrichum juniperinum	Thin soil on rocks	o	n/a	n/a	n/a	LC
Polytrichum perigoniale	Bare ground	r	n/a	n/a	n/a	LC

Species	Habitat	Frequency	Rainforest Indicator Code	Oceanic Status	SSSI Site selection score	Legal and Conservation Status
Polytrichum piliferum	Thin soil on rocks	f	n/a	n/a	n/a	LC
Pseudoscleropodium purum	Banks, turf	f/la	n/a	n/a	n/a	LC
Pseudotaxiphyllum elegans	Shaded rock crevices	o	n/a	n/a	n/a	LC
Ptychomitrium polyphyllum	Exposed rocks	o	n/a	Oceanic southern temperate	n/a	LC
Racomitrium aciculare	Rocks in and by burn	a	na	n/a	n/a	LC
Racomitrium ellipticum	Emergent rocks in burn	o	n/a	Oceanic Boreal montane	n/a	LC

Species	Habitat	Frequency	Rainforest Indicator Code	Oceanic Status	SSSI Site selection score	Legal and Conservation Status
Racomitrium ericoides	Bare ground	o	n/a	Suboceanic Wide boreal	n/a	LC
Racomitrium fasciculare	Rocks	f	n/a	n/a	n/a	LC
Racomitrium heterostichum	Rocks	f	n/a	n/a	n/a	LC
Racomitrium lanuginosum	Rocks, heath, bog	f/la	n/a	n/a	n/a	LC
Rhizomnium punctatum	Damp shaded ground	o	n/a	n/a	n/a	LC
Rhytidiadelphus loreus	Banks, heath, etc	a	n/a	n/a	n/a	LC
Rhytidiadelphus squarrosus	Damp turf, banks	a	n/a	n/a	n/a	LC

Species	Habitat	Frequency	Rainforest Indicator Code	Oceanic Status	SSSI Site selection score	Legal and Conservation Status
Sarmentypnum sarmentosum	Flushes	o	n/a	n/a	n/a	LC
Sciuro-hypnum plumosum	Rocks in and by burn	a	n/a	n/a	n/a	LC
Scorpidium revolvens	Flushes	o/la	n/a	n/a	n/a	LC
Sphagnum auriculatum	Wet heath, banks, bog	f	n/a	n/a	n/a	LC
Sphagnum capillifolium	Wet heath & bog	o	n/a	n/a	n/a	LC
Sphagnum contortum	Flushes	o/lf	n/a	n/a	n/a	LC
Sphagnum girgensohnii	Banks	f	n/a	n/a	n/a	LC
Sphagnum inundatum	Flushes	f	n/a	n/a	n/a	LC
Sphagnum palustre	Wet ground	f/la	n/a	n/a	n/a	LC

Species	Habitat	Frequency	Rainforest Indicator Code	Oceanic Status	SSSI Site selection score	Legal and Conservation Status
Sphagnum papillosum	Wet heath & bog	f/la	n/a	n/a	n/a	LC
Sphagnum quinquefarium	Banks	f	n/a	Western British	n/a	LC
Sphagnum rubellum	Wet heath, banks, bog	f/la	n/a	n/a	n/a	LC
Sphagnum subnitens	Flushes, banks	f/la	n/a	n/a	n/a	LC
Sphagnum teres	Flushes	r	n/a	n/a	n/a	LC
Sphagnum warnstorfii	Flushes	r	n/a	n/a	n/a	LC
Thamnobryum alopecurum	Shaded rock crevices	o/lf	n/a	n/a	n/a	LC
Thuidium delicatulum	Flushes	r	n/a	Western British	n/a	LC

Species	Habitat	Frequency	Rainforest Indicator Code	Oceanic Status	SSSI Site selection score	Legal and Conservation Status
Thuidium tamariscinum	Banks, rocks, tree bases, etc	a	n/a	n/a	n/a	LC
Trichostomum brachydontium	Rock crevices	f	n/a	n/a	n/a	LC
Ulota bruchii	Epiphytic	f	n/a	n/a	n/a	LC
Ulota calvescens	Epiphytic	o	n/a	Oceanic southern temperate	3	LC, NS
Ulota hutchinsiae	Exposed rocks	r	n/a	Western British	n/a	LC

A11.5.4. Survey Photographs

Plate A11-5.3 – Coire Croe Burn, looking upstream in lower wooded zone

Plate A11-5.4 – Coire Croe Burn, looking upstream in lower wooded zone