

Beavers in Scotland - Environmental Report Addendum 2022 _ NatureScot Monitoring of designated interest since 2017

A response to the consultation by the British Lichen Society (BLS)

The British Lichen Society <https://www.britishlichensociety.org.uk> was formed in 1958 and has the following aims:

- to promote and advance the teaching and study of lichens;
- to encourage and actively support the conservation of lichens and their habitats;
- to raise public awareness of the beauty of lichens and of their importance as indicators of the health of our environment.

The Society is one of the leading societies studying lichens worldwide and produces a journal of international standing, *The Lichenologist*.

The BLS Conservation Committee oversees the BLS role to support the conservation of lichens and their habitats. The Committee consists of members with a wide range expertise in a range of ecological fields including researchers at academic institutions, botanic gardens, ecological fieldworkers, ecological consultants and advisory staff of conservation organisations and wildlife trusts.

Monitoring

The 'Addendum' highlights some limitations of Site Condition monitoring since 2014 primarily relating to the fact that only a selection of sites have been subject to full SCM. :

'Cycle 3 of Site Condition monitoring (2014 – 2020) used a statistical method of randomised site selection'. 'Cycle 4 (2020 – 2030), however, is operating using a risk-based method, where those sites in unfavourable condition or where negative pressures are suspected/highly likely are prioritised for assessment. This has meant that possibly fewer interests have been re-assessed than may have been anticipated in 2017.'

'Moving to our new three tier method has also reduced the proportion of assessments which are full SCM (tier 2) with more sites being subject to a site check (tier 1). However, any new pressures identified by the more light touch and opportunistic site check methods, will trigger a full follow up Site Condition Monitoring assessment. 'The current Site Condition Monitoring programme is a 10 year cycle, so the features not covered in 2022 will be incorporated in to the programme for the coming years'.

The BLS considers that appropriate condition monitoring is essential on sites with notable lichen floras where beaver is present, and additional *baseline* monitoring might be necessary to pick up beaver impacts. Given the potential for beavers to remove the things we want to monitor, and depending on the frequency and detail of tier 1-type, monitoring it might be advisable to establish additional baseline lichen monitoring sooner rather than later.

In addition to monitoring on designated sites, the BLS response to the Lomond/Forth translocation assessment consultation discusses baseline assessment and monitoring of non-designated sites and that document should be referred to when considering this Addendum consultation response.

The addendum advocates 'identifying which catchments are likely to present the best opportunities for beaver restoration in terms of net benefits and lowest conflicts. We propose to carry out an assessment of the environmental effect of beaver releases in individual catchments as a stand-alone summary for each catchment that is to be assessed. In this first tranche we include assessments for the River Leven (Loch Lomond) and adjacent Forth catchment '

The BLS welcomes opportunity to respond to consultation on proposed translocations in catchments. The BLS response to the proposed Lomond/Forth translocation assessments is included and cross references to 'Scotland's Beaver Strategy - 31 August 2022 - implementation plan'. Many of the issues highlighted in the BLS consultation on the Lomond/Forth proposals are relevant to the Addendum. To minimise repetition of BLS views, both consultation responses should be considered together.

It is important to note that the Natura qualifying species (Table 5) do not include any lichens despite the international and national importance of the Scottish lichen flora. Many of the epiphytic species of national/international importance are associated with Natura qualifying habitats but River Jelly Lichen *Lathagrium dichotomum* is not a Natura species or associated with Natura habitats.

River Jelly Lichen *Lathagrium dichotomum* is only mentioned in the Table in the section on 'survey and monitoring of wider interests' by 'citizen science'. Monitoring of woodland habitats of bryophytes, lichens and fungi' is also mentioned in the same section advocating citizen science. The use of citizen science where appropriate is welcomed by BLS. However, the commentary box in this Table makes no mention of specialist input. Input by specialists will be essential to i) conduct some of the surveys for these lichen species/lichen habitats, ii) consider where citizen science will be useful and when it would be inappropriate, and iii) develop any useful/meaningful citizen science procedure, provide appropriate training.

The High level summary of impacts and significance of effects from the 2017 ER Table 4a Biodiversity states that no significant Likely Significant Effects (LSE) at national level, but notes 'both notified moss species to move into potential core beaver habitat in the future' (N.B. it's unclear what 'both notified moss species refers to here).

It is interesting that potential negative impacts on freshwater pearl mussel, birds, and tree regeneration are highlighted in this table and included in bold text, but the potential negative impacts on lichens are not explicit in this table (the terms 'potential negative' are

not used for lichens only only 'concern'). BLS thinks potential negative impacts it should be more explicit/transparent in current/ future iterations of this Table, and in any discussions of impacts on biodiversity.

National overview 2022

Key role for this addendum is to identify if there are any impacts not recognised in our 2017 assessment where we cannot be assured that mitigation can satisfactorily address any impacts, or if we have reason to change our assessment from 2017 based on experience. The BLS considers that there are key impacts that were not addressed in the 2017 assessment and now need to be addressed (see comments above and below).

Table 8 lists the datasets analysed in relation to overlap with Potential Core Beaver Woodland (PCBW).

The Bryophytes lichens and fungi are considered as 'covered here by our analysis of rainforests'. This is a key limitation in assessing potential impacts on lichens. Many notable lichens including Scottish Biodiversity List species and UK Threatened, and European Threatened species.

Limitations 'does not reflect known locations for notable species' – this is a key limitation in assessing potential impacts on lichens including Scottish Biodiversity List species and UK Threatened, and European Threatened species.

The National Assessment of the environmental effects on key receptors arising from beaver translocations

The 2022 review considers that there has been no changes since the 2017 assessment, including 'no change' in the SEA objective to 'conserve and enhance the integrity of biodiversity interests' The 'effects are likely to be on balance positive for biodiversity. The importance of effects will vary geographically, with greater focus given to endemic, and nationally and locally vulnerable species'. The BLS welcomes mention of 'nationally and locally vulnerable species', but considers that as per 2017 comments above, the potential negative impacts are under-played in the 2022 SEA.

Mitigation

Re. Table 3c - Techniques used to manage beaver foraging activity

- i) **Tree protection.** The established techniques outlined for tree protection in Table 3c include 'tree wrapping using wire mesh and for using WOBRA deterrent paint' and notes these ... 'have been found to be effective'.
The existing guidance needs to be updated to take account of potential high negative impacts on epiphytes of paint and wrapping with wire.

- ii) **Deterrent fencing (on land)** Exclusion fencing. The only commentary in the Table 3c relates to effectiveness in excluding beavers.
The commentary should include consideration of any potential unintended negative impacts of fencing (e.g. on lichen floras). This will be dependent on factors such type of fencing, existing lichen flora.

The BLS is concerned that lichen habitats and species have been scoped out or not adequately considered, due to inadequate consideration of ecologically important/notable habitats/species (e.g. Scottish Biodiversity List species) that are, for example, associated with

- 1) Ancient woodland outwith the rainforest zone
- 2) Ancient Woodland outwith Natura/SAC sites
- 3) Ancient Woodland within SSSIs that are not specifically designated for lichens (but where lichen interest might nevertheless be high)
- 4) Aquatic lichens

Lichen floras of international, national (Scottish), UK and regional importance.(including species that are threatened/vulnerable at these various scales) are associated with all of the above (1-4) and any appropriate assessment needs to carefully consider these and, if they are scoped out, provide adequate reasons why.

To our knowledge A) the existing BLS datasets have not been queried and B) there has been no analysis of knowledge gaps with regard to any areas of potentially high quality lichen habitat that have not been visited by lichenologists (e.g. Ancient Woodland, potential River Jelly Lichen *Lathagrium dichotomum* habitat). It is recommended that both these issues (A&B) need to be addressed in order to undertake meaningful impact assessments/cost benefit analysis.

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