



Glen Earrach Pumped Storage Hydro

Upland Heathland Biodiversity Net Gain Review

Glen Earrach Energy

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Executive Summary

This technical note reviews and clarifies the proposed enhancement of upland heath habitats through the introduction of native trees and scrub associated with the proposed Glen Earrach Pumped Storage Hydro project ('the project') and explains the rationale for the revised approach to quantifying associated Biodiversity Net Gain (BNG) using the SSER Biodiversity Net Gain Toolkit ('the SSER metric').

This addresses comments provided by The Highland Council in July 2026, which stated that the submitted native woodland planting outlined in the project's EIA Report, Appendix 6.4: Outline Landscape and Ecology Management Plan (oLEMP) should not be considered as enhancement within the SSER metric, because the Upland Heathland would fail a future assessment under Common Standards Monitoring (CSM) due to woodland presence.

In the EIA Report Appendix 7.5: Biodiversity Net Gain, the native woodland planting was originally considered habitat enhancement rather than creation because the existing heathland would be retained in the ground flora. The target habitat outcome has now been revised to retained Upland Heathland with scattered native trees and scrub.

The technical note provides information explaining why the revised habitat outcome can appropriately be treated as enhancement of retained Upland Heathland within the SSER metric, and how the ecological benefits of a controlled scattered native tree and scrub component are represented in the revised calculation. In summary, the key findings are:

- Upland Heathland on site can be considered as being a 'Fairly Good' Condition representation of Annex I-listed North Atlantic wet heath, which is abundant and widespread across the Highlands. Evidence suggests that the large majority of this habitat in Britain is semi-natural and maintained by grazing or burning. Without these influences, it is likely that there would be greater native tree and woodland cover on site, exemplified by pockets of upland birchwood and Scots pine recorded in the local area.
- Evidence suggests that complex habitat mosaics are common features of upland landscapes and not adequately represented within biodiversity metrics to date. Landscapes which include low-density scattered trees have been repeatedly shown in scientific studies to have higher species abundance and richness, and greater connectivity, than areas without these "*keystone structures for biodiversity*".
- As part of a suite of enhancement measures, scattered native trees and scrub would be established within 539.63 ha of Upland Heathland with combined mature native tree and scrub cover remaining below 20% and no continuous canopy established. Detailed design, habitat exclusions, monitoring and management through the final LEMP would secure retention of at least 'Fairly Good' Condition.¹
- Although this management would not result in a predicted increase in Condition under the SSER metric, the metric contains a number of measures used to determine the overall level of biodiversity change resulting from habitat creation or enhancement. In addition to Condition these are: Connectivity; Strategic Significance; and Distinctiveness. Thus, overall biodiversity enhancement can occur through a combination of these measures without relying upon an improvement in existing habitat Condition.
- A revised SSER metric calculation has been undertaken in light of the evidence provided, and summarised in this technical note. The key aspects relating to predicted 'After Work' measures are:
 - Condition: the Condition of Upland Heathland would remain 'Fairly Good', with no improvement in Condition claimed.
 - Connectivity: this has been given a 'Moderate' score (increased from 'Low' baseline) because the post-intervention habitat is assigned 'High' Distinctiveness (in accordance with SSER metric guidelines). This is considered appropriate due to the evidence suggesting scattered native trees and scrub would increase connectivity with areas of ancient and other semi-natural woodland in the local area.
 - Strategic Significance: this has been determined to be a conservative 'Medium' score (increasing from a 'Low' baseline, due to the inclusion of low-density scattered native trees and scrub), because the habitat is considered more ecologically desirable within the location than before. This is a reflection of the importance of upland habitat mosaics which include low-density scattered native trees, and associated increase in ecological connectivity, including for species associated with ancient and other semi-natural upland birchwoods and native pine woodland in the local area.

¹ The large majority of the treatment area is recorded at Fairly Good baseline Condition. Two small polygons totalling 4.03 ha are recorded at Moderate baseline Condition and are conservatively retained at Moderate in the revised calculation. Management through the final LEMP will seek to improve those polygons to Fairly Good Condition, but no biodiversity units arising from that potential Condition improvement are claimed.

- Distinctiveness: this has been determined to be 'High' due to the inclusion of low-density scattered native trees and scrub, which would result in a more natural landscape, providing a structurally diverse habitat mosaic with increased species diversity and the capacity to support species associated with scattered trees, compared to the majority of the treeless Upland Heathland in the region.
- The predicted biodiversity enhancement of Upland Heathland is estimated at +33.4% for areas previously assessed as Upland birchwood and +27.9% for areas previously assessed as Other Scots pine woodland, which are reasonably similar to the +36.8% and +30.8% gains, respectively, predicted in the EIA Report Appendix 7.5. There would be a slight reduction in the whole-scheme area-based overall biodiversity gain, down from 22%, albeit it still remains healthy at 19%.
- As part of a final Landscape and Ecology Management Plan, management measures would be specified in a planting plan and monitoring plan, which would secure retention of Upland Heathland in at least 'Fairly Good' Condition and delivery of the predicted biodiversity enhancement over the long term.

1 Introduction

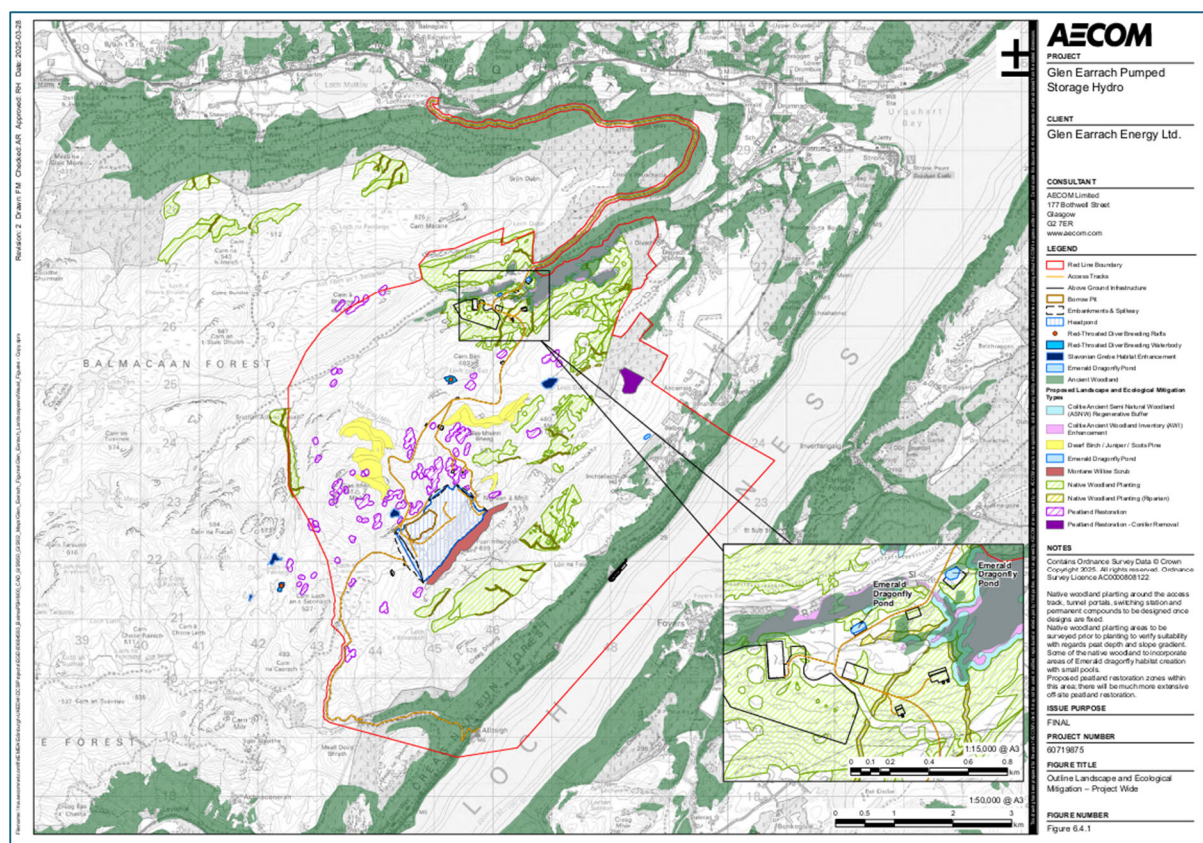
- 1.1.1 This technical note reviews and clarifies the proposed enhancement of upland heath habitats through the introduction of native trees and scrub associated with the proposed Glen Earrach Pumped Storage Hydro project ('the project') and explains the rationale for the revised approach to quantifying associated Biodiversity Net Gain (BNG) using the SSER Biodiversity Net Gain Toolkit ('the SSER metric'). The key aspects discussed are:
- The level of naturalness and potential natural state of existing Upland Heathland within the areas identified for the proposed introduction of low-density scattered trees and scrub;
 - The nature of the proposed introduction of native trees and scrub on Upland Heathland, and the resulting target habitat of Upland Heathland with scattered native trees and scrub;
 - Why, in this case, enhancement of retained Upland Heathland is considered ecologically desirable and appropriately represented in the SSER metric as enhancement rather than woodland habitat creation;
 - Why biodiversity enhancement can occur through various measures within the SSER metric despite no predicted material change in Condition of existing Upland Heathland post-planting; and
 - The measures required to retain at least 'Fairly Good' Condition in existing Upland Heathland and prevent deterioration during post-planting management.
- 1.1.2 Also provided are the results of a revised SSER metric calculation based on the revised habitat outcome described in this note. Overall, despite a more conservative evaluation of enhancement measures, the predicted whole-scheme area-based biodiversity net gain remains healthy at 19% (compared to 22% predicted in the project's EIA Report Appendix 7.5: Biodiversity Net Gain).

2 Background

- 2.1.1 This technical note addresses The Highland Council's (THC) comments on the BNG calculations associated with the project, specifically the submitted treatment of native woodland planting on existing Upland Heathland as enhancement as part of a suite of enhancement measures.
- 2.1.2 In summary, THC, in their most recent consultation response (letter dated 14 July 2026) state that they "*do not accept the conclusion of planting Native Woodland as an enhancement of Heathland*" and therefore "*planting woodland could not be considered an improvement of the condition [of existing heathland]*" because the heathland would fail any future assessment under Common Standards Monitoring (CSM) due to woodland presence. THC further states that the limitations of the SSER metric must not be used to suggest that the biodiversity measures would deliver more units than are achievable.
- 2.1.3 This comment was made in response to a Technical Clarification on Biodiversity Net Gain submitted by Glen Earrach Energy (the Applicant) in September 2025, which set out the position that the proposed native woodland planting on upland heath would be low-density and therefore should be considered as enhancement of existing habitat rather than creation of woodland, as the woodland types would reflect natural Scottish upland conditions and retain characteristic heathland flora. Although described as low density, no quantitative planting density or future mature tree and scrub cover limit was specified in the oLEMP. It was stated that this approach aligns with NatureScot guidance, which advises that biodiversity metrics in Scotland should reflect Scottish-specific ecological conditions. The present note responds by defining the intended habitat outcome and future mature cover limit more precisely and revising the metric treatment accordingly.

3 Submitted Native Woodland Planting and Revised Habitat Outcome

- 3.1.1 As outlined in the EIA Report, Appendix 7.5: Biodiversity Net Gain, the submitted assessment proposed a total area of 528.18 ha of 'Fairly Good' Condition Upland birchwood, of which 522.50 ha would be established on baseline Upland Heathland (in this case, mainly wet heath). A total area of 18.72 ha of 'Fairly Good' Condition 'Other Scots pine woodland' was also proposed, of which 17.13 ha would be established on baseline UKHab category Upland Heathland (again, mainly wet heath). The revised retained-Upland-Heathland treatment considered in this note therefore applies to 539.63 ha of baseline Upland Heathland. It does not apply to the separate 24.17 ha riparian planting measure or the native woodland planting on 7.26 ha of bracken and acid grassland within the wider non-riparian planting zones, whose treatment is unchanged from that presented in the BNG calculations in EIA Report, Appendix 7.5.
- 3.1.2 In the submitted assessment, planted Upland birchwood and Scots pine woodland were expected to reach 'Fairly Good' Condition after 25 and 30 years respectively (with 'Low' Difficulty rating), thus using the same formal Condition category as that assigned to the existing Upland Heathland.
- 3.1.3 The native woodland planting was considered habitat enhancement rather than creation by the Applicant because the existing heathland would be retained in the ground flora.
- 3.1.4 This was based on the premise outlined in EIA Report Appendix 6.4: Outline Landscape and Ecology Management Plan (oLEMP), that in planting birch-dominated woodland on heathland, an appropriate ground flora for Upland birchwood would automatically be provided, and that the existing heathland vegetation is not removed but becomes the suitable ground flora of the planted Upland birchwood (or in places, native Scots pine woodland). The oLEMP also states that native woodland planting would aim to complement the existing (including ancient) woodland in the local area (see Figure below for planned planting and existing habitat distribution).
- 3.1.5 Based on the evidence presented in the following sections, the target habitat outcome for the identified 539.63 ha has been revised to retained Upland Heathland enhanced with scattered native trees and scrub, rather than Upland birchwood or Other Scots pine woodland.



4 Wet Heath Habitat Description and Naturalness

4.1 Wet Heath as an Annex I Habitat

- 4.1.1 All wet heath on site constitutes EU Habitats Directive Annex I “H4010 North Atlantic wet heaths with *Erica tetralix*”.
- 4.1.2 Annex I of the Directive comprises a list of “*Natural Habitat Types of Community Interest whose Conservation Requires the Designation of Special Areas of Conservation*”. However, the Directive defines natural habitats as “*terrestrial or aquatic areas distinguished by geographic, abiotic and biotic features, whether entirely natural or semi-natural*”. Thus, a habitat does not need to be ‘natural’ to be considered of sufficient importance for Annex I listing.
- 4.1.3 According to the UKBAP Priority Habitat Descriptions (Maddock, 2011²), the ‘favourable condition’ of wet heath should comprise a habitat dominated by mixtures of cross-leaved heath *Erica tetralix*, deer grass *Scirpus cespitosus*, heather *Calluna vulgaris* and purple moor-grass *Molinia caerulea*, over an understorey of mosses often including carpets of *Sphagnum* species.
- 4.1.4 On the EU’s Biodiversity Information System for Europe webpage for wet heath³, the indicators of good quality are given as:
- Dominance of cross-leaved heath;

² Maddock, A. (2011), UK Biodiversity Action Plan: Priority Habitat Descriptions.

³ [habitats_r1 | Habitats | Biodiversity Information System for Europe](#)

- No overwhelming encroachment of grasses, shrubs or trees (for example, downy birch *Betula pubescens*);
 - Occurring as part of a wider heath landscape, forming mosaics with drier heath, mires and water bodies; and
 - Long continuation of management (grazing, mowing, sod-cutting or combinations of these).
- 4.1.5 The description, however, also says that *"In many cases, the habitat exists due to human activities, like grazing, sod cutting or mowing and continuation of traditional management is needed for its maintenance. In other situations it forms a natural succession stage towards woodlands"*.
- 4.1.6 Indeed, Averis *et al.* (2004⁴) note that very little wet heath in Britain is natural, although some higher altitude stands of the NVC M15c lichen sub-community on rocky slopes may be nearly so. The authors state that *"There would once have been woodlands on most of the ground that is now covered with this type of vegetation. When woodlands are cleared and there are no trees to take up water, the soils can become waterlogged and wet heaths may develop on shallow slopes."* It was also noted that *"Most wet heath is grazed by deer or sheep and may be managed by burning. Without grazing and burning these heaths could potentially revert to woodland, although this might be a slow process on the impoverished acid soils"*.
- 4.1.7 Elkington *et al.* (2002⁵) likewise state that for M15 wet heath *"Although progression to woodland is theoretically possible over most, if not all, of its altitudinal range, widespread deforestation has often removed potential seed-parents, and continued grazing by livestock and deer and sporadic burning may be enough to set back succession continually."*
- 4.1.8 Thus, North Atlantic wet heath can be considered as being a mostly semi-natural Annex I habitat, maintained by grazing or burning, yet still regarded as a habitat of high conservation value under European legislation.

4.2 Wet Heath and Native Woodland Habitats on Site

- 4.2.1 EIA Report Appendix 7.3: Habitats states that the majority of surveyed wet heath on site is an open and shorter form of the habitat (often NVC category M15c) with lichens, moss and often visible rock. Cross-leaved heath is invariably present with often some bell heather, as well as smaller amounts of heather and occasionally other ericoids. Apart from occasional instances of bracken coverage, it was generally found to be in good condition, with reasonable ericoid cover and no suggestion of heavy grazing pressure, although it was noted in EIA Report Appendix 7.5 that *"dwarf birch where occasionally present in wet heath (and more often in blanket bog) was frequently browsed and would likely achieve better stature and reproductive success under still lower grazing pressure"*.
- 4.2.2 The recorded ancient semi-natural upland birchwoods (NVC W17b) in the area have a canopy mainly of birch with occasional rowan and Scots pine. The ground layer is mossy and often has much heather and bilberry. There is often also a thin cover of other vascular plant species. Surveyed semi-natural upland birchwood that is not ancient comprises a generally heathy or mossy ground layer.
- 4.2.3 Hall *et al.* (2004⁶) correspondingly notes that the field layer of birch woodland W17 is characterised by ericoid shrubs, bracken and grasses. Bilberry can be abundant even in shaded situations, with heather and bell heather more sensitive to shade. Sub-communities can range from sparse field layer due to grazing (W17a), grassy (W17c), or with heathy heather, bell heather and bilberry (W17d).

⁴ Averis, A., Averis, B., Birks, J., Horsfield, D., Thompson, D. & Yeo, M. (2004) An Illustrated Guide to British Upland Vegetation, JNCC, Peterborough, ISBN 1 86107 553 7.

⁵ Elkington, T., Dayton, N., Jackson, D.L. & Strachan, I.M. (2002) National Vegetation Classification field guide to mires and heaths, JNCC, Peterborough, ISBN 1 86107 526 X

⁶ Hall, J.E., Kirby, K.J. & Whitbread, A.M. (revised 2004) National vegetation classification field guide to woodland, JNCC, Peterborough, ISBN 1 86107 554 5.

- 4.2.4 Averis *et al.* (2004) also note that this community includes heathy and mossy woodlands, where dwarf shrubs predominate in the field layer, and the typical sub-community W17b is very heathy, with a thick field layer of heather or bilberry or both.
- 4.2.5 Therefore, evidence suggests that a 'Fairly Good' baseline Condition for the large majority of wet heath is appropriate for use in the SSER metric (this was assumed in EIA Report Appendix 7.5, with two small areas of 'Moderate' Condition). Some extents of M15c vegetation, particularly in higher altitude rocky areas, are likely to represent near-natural habitats. Under more natural conditions, however, it is likely that there would be greater tree cover in most places, exemplified by the semi-natural upland birchwood patches extant within the site. Areas confirmed through pre-planting inspection as near-natural wet heath would be excluded from planting.

4.3 Introduction of Native Trees and Scrub to Wet Heath

- 4.3.1 The JNCC (2009⁷) *Common Standards Monitoring Guidance for Upland Habitats* provides guidance for nature conservation bodies in setting conservation objectives and assessing feature Condition of upland habitats. For each habitat, a number of targets are provided, and in this case, for wet heath, two are particularly relevant:
- There should be no measurable decline in the area of the feature; and
 - Less than 20% of vegetation cover should be made up of scattered native trees and scrub (this can be compared to, for example, a 10% cover target for bog).
- 4.3.2 In relation to these targets, the UKHab guidance⁸ states that for Upland birchwoods (W1e) "*On all but the most acidic sites, Birch Betula spp. influences the soil to allow development of a grass-herb flora on sites previously dominated by dwarf shrub heath*", which suggests a reduction in extent, and/or reduction in Condition of wet heath habitat may occur if unchecked, with a change to a more woodland habitat in certain circumstances.
- 4.3.3 No quantitative planting density or future mature tree and scrub cover limit was provided in the oLEMP, although it is stated that "*All native woodland planting would be graded in density so that the higher parts are less dense and more naturalistic (corresponding to low density Upland Birchwood or low density Scots Pine woodland)*".
- 4.3.4 The CSM guidance indicates that scattered native trees and scrub can be consistent with retention of wet heath where their combined vegetation cover remains below 20%. Because Upland Heathland would remain the primary habitat throughout the treatment area, with no removal or loss of the wet-heath feature, the measure would also avoid any measurable decline in its area. The revised measure would therefore maintain combined mature native tree and scrub cover below 20%, with no continuous canopy established. This threshold addresses one relevant Condition attribute, while maintenance of overall wet-heath Condition would also be secured through planting design, habitat exclusions, monitoring and corrective management through the final LEMP.
- 4.3.5 Another factor in the introduction of scattered native trees and scrub is the importance of considering habitat mosaics in the landscape, including low-density scattered trees. The recent NatureScot *Review of Habitat Classification* report (Averis & Averis, 2026⁹) has a section entitled "Habitat Mosaics", within which the authors note that "*it is very common to find areas with complex small-scale mosaics of different vegetation/habitat types, especially on upland sites with large areas of semi-natural vegetation*", and go on to describe the inability of the English Defra metric to deal with mosaic polygons as a "*serious shortcoming*" and advise that a future Scottish metric should "*be able to deal with the mosaics that are an ineradicable fact of life in semi-natural upland vegetation*". Within the report is a table of 'Vegetation Pairs' often found occurring in Scotland together as a

⁷ JNCC (2009) *Common Standards Monitoring Guidance for Upland Habitats*, Version July 2009, JNCC, Peterborough, ISSN 1743-8160.

⁸ UKHab Ltd (2023). *UK Habitat Classification Version 2.0*, available at: [ukhab – UK Habitat Classification](#)

⁹ Averis, A.B.G. and Averis, A.M. (2026). *A review of habitat classifications for their potential use in a Scottish planning biodiversity metric*. NatureScot Research Report 1391.

mosaic occupying most or all of a polygon. Native pine woodland has been coupled with upland wet heath, noted as being locally common in parts of the Highlands. Although upland birchwood was not specifically given a recognised association with wet heath in this table, the site-specific evidence presented in Sections 4.2.2 to 4.2.4 shows that local upland birchwoods, including W17b, can have heathy or mossy ground layers characterised by heather and bilberry, showing that the wet heath vegetation community can coexist with the scattered birch trees and shrub component of the proposed planting.

- 4.3.6 The importance of scattered trees within a landscape has been highlighted in a meta-analysis by Prevedello *et al.* (2018¹⁰) who describe them as “*keystone structures for biodiversity*” with “*disproportionately high ecological importance*”, for example, by offering shelter and food sources for animals, enhancing landscape connectivity by acting as stepping stones, and functioning as nuclei for plant regeneration in disturbed landscapes. The study found that local abundance of arthropods, vertebrates and woody plants, as well as overall species richness, was generally much higher in areas with scattered trees than in open areas.
- 4.3.7 Wet heath can therefore retain its defining characteristics and favourable condition while forming part of a wider ecological mosaic that includes tree cover, an outcome which is not well reflected in current BNG metrics.

5 Review of Biodiversity Project Toolkit

5.1 Summary of SSER Toolkit Measures

- 5.1.1 Based on the information provided above, a review of the SSER metric has been undertaken in order to reflect the revised ‘After Work’ values of Upland Heathland resulting from the revised target habitat outcome of retained Upland Heathland with scattered native trees and scrub.
- 5.1.2 Table 1 presents a summary of the ‘Baseline’ and ‘After Work’ values of the four SSER metric measures (Condition, Connectivity, Strategic Significance and Distinctiveness) allocated to Upland Heathland habitat by the project in EIA Report Appendix 7.5 Biodiversity Net Gain. The proposed enhancement was predicted to result in a net gain in biodiversity of 36.8% within Upland birchwood and 30.8% within areas assessed as Other Scots pine woodland.
- 5.1.3 The sections below explain the basis for the revised values assigned to the four ‘After Work’ measures and the resulting biodiversity gain, while retaining Upland Heathland in at least ‘Fairly Good’ Condition.

¹⁰ Prevedello JA, Almeida-Gomes M, Lindenmayer DB (2018). The importance of scattered trees for biodiversity conservation: A global meta-analysis. *J Appl Ecol.*, 55: 205–214.

Table 1: Submitted and Revised SSER Metric Values for the 539.63 ha Upland Heathland Treatment Area

Measure	Project: Baseline	Project: After Work	Revised After Work	Rationale
Baseline / After Work Habitat	Heathland and shrub - Upland Heathland	Woodland and forest - Upland birchwoods / Other Scots pine woodland	Heathland and shrub - Upland Heathland	The revised target habitat is retained Upland Heathland with scattered native trees and scrub. Upland Heathland therefore remains the primary habitat and enhancement, rather than habitat creation, is considered the appropriate intervention.
Condition / Target Condition	Fairly Good [†]	Fairly Good	Fairly Good	Evidence provided above suggests that existing Condition of wet heath is 'Fairly Good', with limited browsing impacts. Combined mature native tree and scrub cover will remain below 20%, consistent with the relevant JNCC Common Standards Monitoring criterion for wet heath, and no continuous canopy will be established. Together with habitat exclusions, planting design, monitoring and corrective management through the final LEMP, these controls are intended to retain at least 'Fairly Good' Condition.
Connectivity	Low	Moderate	Moderate	This measure has been removed from the Defra metric; however, under SSER metric guidance (and previous Defra guidance), 'High' Distinctiveness habitats are considered to have 'Moderate' Connectivity. Baseline Upland Heathland was considered to be of 'Low' Connectivity due to its 'Medium' Distinctiveness.
Strategic Significance	Low	High	Medium	The introduction of scattered native trees and scrub within wet heath raises the strategic significance of the wet heath from Low to Medium because the habitat is considered more ecologically desirable within the location (reflecting the importance of upland habitat mosaics which include scattered trees), and aids ecological connectivity, including for species associated with ancient and other semi-natural upland birchwoods and native pine woodland in the local area, which often have a heathy ground layer.
Distinctiveness	Medium	High	High	The scattered native tree and scrub component would create a more natural and structurally diverse habitat mosaic, with greater species diversity and capacity to support species associated with scattered trees than the extensive treeless Upland Heathland to which the project-specific Medium assessment was applied. High Distinctiveness is therefore assigned on the basis of professional ecological judgement.

Measure	Project: Baseline	Project: After Work	Revised After Work	Rationale
Net change – Upland Heathland enhancement		+36.8% (Upland birchwoods) +30.8% (Other Scots pine woodland)	+33.4% (areas previously assessed as Upland birchwood) +27.9% (areas previously assessed as Other Scots pine woodland)	These are the calculated changes for the retained Upland Heathland under the revised values. The whole-scheme result is set out in Section 5.6 and example workings are provided in Appendix 1 to this Technical Note.

** Project Baseline and Project After Work values as presented in EIA Report Appendix 7.5 Biodiversity Net Gain*

† The large majority of the treatment area is recorded at Fairly Good baseline Condition. Two small polygons totalling 4.03 ha are recorded at Moderate baseline Condition and are conservatively retained at Moderate in the revised calculation. See footnote 1 to the Executive Summary.

5.2 Habitat Creation / Enhancement

5.2.1 It was considered in EIA Report Appendix 7.5 Biodiversity Net Gain that planting of native woodland on upland heath constitutes enhancement rather than habitat creation / change. The revised assessment does not treat the creation of woodland as enhancement; it assesses the enhancement of retained Upland Heathland through the introduction of scattered native trees and scrub.

5.2.2 The SSER metric guidance has the following definition for habitat enhancement:

“The improvement of the condition of an existing habitat, thereby increasing the biodiversity value of habitat type. Enhancement is achieved through measures that improve habitat biodiversity capacity and/or remove factors that detract from its value,

This includes increasing the diversity of species that can be supported by a habitat, for example by managing improved grassland so that it becomes semi improved grassland, which would seek to increase species diversity.”

5.2.3 The English Defra metric¹¹, which the SSER metric was based on, advises that the habitat enhancement option should be chosen:

“...where the habitat is retained and there is:

- *an improvement in condition compared to the baseline state*
- *a change to a higher distinctiveness¹² habitat within the same broad habitat group compared to the baseline state*
- *restoration of relict high or very high distinctiveness habitats*
- *restoration of intertidal habitats*

When recording enhancement, you should take measures to ensure condition stays the same (when enhancing distinctiveness) or improves, including when enhancing to a higher distinctiveness habitat”.

5.2.4 For habitat creation, the SSER metric defines this as:

“The removal or the loss of the present habitat in the action of creating the new one or creating habitat where none was previously present (including bare ground).

This includes, for example, removing scrub in order to create a wetland habitat or removing hardstanding to create new grassland habitat.”

5.2.5 And the Defra metric:

“You should choose habitat creation where there is:

- *a loss of baseline habitat (and it is replaced with another)*
- *a change in broad habitat type, such as a change from grassland to woodland*

For example, if young native trees and shrubs are planted on an area of arable land to create a new broadleaved woodland, the arable land would be recorded as a loss and the woodland would be recorded as creation.”

5.2.6 From these definitions, there are some aspects to highlight:

- The SSER metric states that enhancement includes measures that increase the biodiversity capacity of the habitat and the diversity of species it can support.
- Defra guidance expressly provides that enhancement may involve a change to a higher-distinctiveness habitat within the same broad habitat group and that Condition may remain the same when Distinctiveness is enhanced.

¹¹ Defra (2026). The Statutory Biodiversity Metric User Guide (June 2026). Department for Environment, Food & Rural Affairs.

¹² Defined in the guidance as: A measure based on the type of habitat and its distinguishing features. This includes:

- consideration of species richness and rarity
- the extent to which the habitat is protected by designations
- the degree to which a habitat supports species rarely found in other habitats.

- For habitat creation, the SSER metric describes the active removal or loss of a habitat to create another, whereas the Defra metric also mentions a change in broad habitat type.
- 5.2.7 As outlined above, where planting within existing Upland Heathland is controlled so that combined mature native tree and scrub cover remains below 20%, consistent with the relevant JNCC Common Standards Monitoring criterion for wet heath, no continuous canopy is established and at least 'Fairly Good' Condition is maintained through the measures described above, the existing habitat remains Upland Heathland. This does not constitute habitat removal or loss, or a change in broad habitat type. Enhancement is therefore considered the more appropriate management action rather than habitat creation, with the biodiversity benefit represented through Distinctiveness, Connectivity and Strategic Significance (as discussed in the following sections) rather than an improvement in Condition.

5.3 Connectivity

- 5.3.1 This measure has been removed from the Defra metric; however, it is retained in the SSER metric until further information regarding its application within Scotland has been evaluated.
- 5.3.2 The SSER metric guidance defines Connectivity as "*The relationship of a particular habitat patch to other surrounding similar or related semi-natural habitats facilitating flows of species and ecosystem service*" and advises a simplified approach for assigning a connectivity score whereby high and very high distinctiveness habitats are assigned a 'Moderate' connectivity score and all other habitats are assigned a 'Low' connectivity score. This was followed in EIA Report Appendix 7.5, and again in this evaluation, where Upland Heathland has been given a **Moderate Connectivity** score (see Table 1 and Section 5.5). This is also supported by the expected improvement in functional links with ancient and other semi-natural woodland in the local area arising from the scattered native tree and scrub component.

5.4 Strategic Significance

- 5.4.1 The SSER metric guidance states that "*Strategic significance gives extra value to habitats that are located in optimum locations for biodiversity and other environmental objectives, such as areas that are the focus of green infrastructure or local biodiversity plans.*"
- 5.4.2 The Defra metric guidance defines it as "*The local significance of the habitat based on its location and the habitat type*", referring to inclusion in Local Strategies, or where not relevant, if the location is ecologically desirable.
- 5.4.3 In EIA Report Appendix 7.5, the existing Upland Heathland was considered as being of Low Strategic Significance, due to its regional abundance, with similar habitat (lacking more natural woodland presence) occupying a large proportion of the Highlands.
- 5.4.4 As shown in Table 1, the enhanced Upland Heathland habitat is now considered to have a conservative **Medium Strategic Significance** (instead of High as was allocated in EIA Report Appendix 7.5) because the habitat is considered more ecologically desirable within the location than before. This is a reflection of the importance of upland habitat mosaics which include scattered native trees and scrub, and the associated increase in ecological connectivity, including for species associated with ancient and other semi-natural upland birchwoods and native pine woodland in the local area.

5.5 Distinctiveness

- 5.5.1 The SSER metric guidance defines Distinctiveness as "*a collective measure of biodiversity and includes parameters such as species richness, diversity, rarity and the degree to which a habitat supports species rarely found in other habitats*".
- 5.5.2 Distinctiveness is automatically populated depending on the UKHab classification in the SSER metric. In EIA Report Appendix 7.5, baseline Upland Heathland was manually changed from High to Medium Distinctiveness given that Upland Heathland present within the site is an extremely common and widespread habitat type in the Scottish Highlands.

- 5.5.3 The submitted assessment did not apply the Medium override uniformly. Upland Heathland west of Meall Fuar-mhonaidh was retained at High Distinctiveness because of the notably diverse species composition of that heath stand (EIA Report, Appendix 7.5, para. 5.2.4). The submitted assessment therefore already distinguishes between stands within the same primary habitat category according to their particular ecological character.
- 5.5.4 On this review, Upland Heathland within the revised treatment area is assigned its default High Distinctiveness value in the SSER metric. On the basis of professional ecological judgement, the controlled scattered native tree and scrub component would create a more natural and structurally diverse habitat mosaic, with greater species diversity and capacity to support species associated with scattered trees, compared with the extensive treeless Upland Heathland to which the project-specific Medium assessment was applied.

5.6 BNG Scores

- 5.6.1 Table 1 shows that while formal Condition remains 'Fairly Good', the revised Distinctiveness, Connectivity and Strategic Significance values result in a calculated biodiversity gain for the retained Upland Heathland.
- 5.6.2 A review of the SSER metric has followed the same procedure as presented in EIA Report Appendix 7.5, but with the 'After Work' habitat type retained as Upland Heathland and Strategic Significance reduced to a conservative 'Medium' level (Table 1).
- 5.6.3 For this revision, the calculated biodiversity gain due to enhancement of 'Fairly Good' Upland Heathland is 33.4% for areas previously assessed as Upland birchwood and 27.9% for areas previously assessed as Other Scots pine woodland (the difference being due to the different time-to-target periods applied), which are similar to the corresponding values calculated for 'Fairly Good' Upland Heathland in EIA Report Appendix 7.5 (+36.8% gain for enhancement to Upland birchwoods and +30.8% for enhancement to Other Scots pine woodland).
- 5.6.4 These changes result in an overall calculated biodiversity gain of 19%, down from 22% calculated in EIA Report Appendix 7.5. A summary of the process which has led to the 19% whole-scheme result is provided in Appendix 1 to this Technical Note. No part of the revised 19% result treats the 539.63 ha of Upland Heathland as woodland or scores a transition from Upland Heathland to woodland as enhancement.

6 Conclusion

- 6.1.1 It has been determined that, within the defined 539.63 ha treatment area, carefully planned scattered native tree and scrub planting, with combined mature native tree and scrub cover remaining below 20%, consistent with the relevant JNCC Common Standards Monitoring criterion for wet heath, would retain Upland Heathland as the primary habitat. No continuous canopy would be established, and at least 'Fairly Good' Condition would be maintained through the controls set out in the final LEMP. The management is therefore appropriately treated as enhancement of retained Upland Heathland rather than woodland habitat creation.
- 6.1.2 Although this management would not result in a predicted improvement in Condition, Condition is only one of the measures used by the SSER metric to calculate overall biodiversity change. Defra guidance also recognises enhancement where habitat is retained and changes to a higher-distinctiveness habitat within the same broad habitat group, while Condition remains the same. In the revised assessment, the biodiversity benefit is therefore represented through Distinctiveness, Connectivity and Strategic Significance rather than through an improvement in Condition.
- 6.1.3 Within the defined treatment area, evidence suggests that much of the existing semi-natural habitat is representative of the abundant wet heath that predominates across the Highlands and often lacks more natural habitat mosaic features, including native scattered trees and scrub. The controlled introduction and management of scattered native broadleaved trees, Scots pine and scrub within the

wet heath, excluding areas of near-natural wet heath and other unsuitable areas, is ecologically desirable and would increase the levels of Connectivity, Strategic Significance and Distinctiveness compared to baseline conditions, whilst retaining at least 'Fairly Good' Condition through the planting controls, habitat exclusions, monitoring and corrective management set out in the final LEMP.

6.1.4 Therefore, although the formal 'Fairly Good' Condition of the retained Upland Heathland would not increase, the scientific evidence supports the conclusion that the prescribed management would deliver an overall positive biodiversity enhancement through the resulting more natural habitat mosaic and the associated changes in Distinctiveness, Connectivity and Strategic Significance. The revised calculation predicts gains of 33.4% for areas previously assessed as Upland birchwood and 27.9% for areas previously assessed as Other Scots pine woodland. These contribute to a revised whole-scheme biodiversity gain of 19%, reduced from the 22% reported in EIA Report Appendix 7.5.

6.1.5 In order to put these measures into practice, the final Landscape and Ecology Management Plan, as part of an appropriately worded condition, will contain the following details:

- A planting plan, outlining the location of scattered native tree and scrub planting, species mix (including birch or Scots pine), planting pattern, initial stocking densities and tree protection measures, to ensure that combined mature native tree and scrub cover remains below 20%, no continuous canopy is established and wet heath is retained in at least 'Fairly Good' Condition;
- Identification of any areas of existing wet heath that are considered near-natural or otherwise unsuitable for planting, and their exclusion from planting;
- Monitoring of planted tree and scrub establishment during the early years to determine whether remedial management, including beating up, weed treatment or protection repairs, is required, provided that any such measures remain consistent with the target habitat outcome and mature-cover limit; and
- Longer-term monitoring of combined mature native tree and scrub cover and wet-heath Condition to determine whether tree and scrub density is changing the ground vegetation, and, if so, what corrective management is required to maintain cover below 20%, prevent a continuous canopy and retain or restore the wet heath to at least 'Fairly Good' Condition.

Appendix 1 Example BNG Calculation

Figure 1 provides an example of the BNG calculations used for the proposed enhancement of Upland Heathland habitats through the introduction of native trees and scrub, as described in the main text above. This example takes the largest polygon of contiguous Upland Heathland that was recorded on site (291.69 ha) and used in a single row of the SSER metric spreadsheet.

The example shows how the Baseline and After Work target habitat biodiversity units were calculated using specific multipliers built into the SSER metric spreadsheet, for each value selected for Distinctiveness, Condition, Connectivity and Strategic Significance measures (multipliers are shown in parentheses). The formula is as follows:

$$\text{Area (ha)} \times \text{Condition Score} \times \text{Connectivity} \times \text{Strategic Significance} \times \text{Distinctiveness Score} = \text{Biodiversity Units}$$

Risk correction factors relating to Difficulty and Time to Target to achieve the enhancement goals are applied to the target habitat score, in this case, a 'Low' Difficulty in achieving enhancement of scattered birch etc. and scrub over a period of 25 years, which is consistent with the values used in EIA Report Appendix 7.5.

From these baseline and target habitat values, the percentage biodiversity change can be calculated, in this case, +33.4%. A summary for each Upland Heathland polygon which would be subject to enhancement by planting of scattered trees and scrub is presented in Table 2.

All other BNG calculations presented in EIA Report Appendix 7.5 for other baseline habitat types are unchanged. The overall revised level of biodiversity change is +19%, down from 22% in the EIA Report Appendix 7.5. Figure 2 below provides a summary of the procedure which has resulted in this estimate.

Table 2: BNG Calculation Summary of Upland Heathland habitat polygons subject to enhancement through planting of scattered trees and scrub.

Target habitat	Area (ha)	Baseline Condition	Baseline Units	Post-development Units	Biodiversity Net Change
Upland Heathland > Upland Heathland with scattered birch and shrubs	291.69	Fairly Good	2916.90	3891.58	+33%
Upland Heathland > Upland Heathland with scattered Scots pine	7.53	Fairly Good	75.30	96.35	+28%
Upland Heathland > Upland Heathland with scattered birch and shrubs	219.14	Fairly Good	2191.40	2923.66	+33%
Upland Heathland > Upland Heathland with scattered Scots pine	8.60	Fairly Good	86.00	110.04	+28%
Upland Heathland > Upland Heathland with scattered birch and shrubs	3.03	Moderate*	24.24	32.34	+33%
Upland Heathland > Upland Heathland with scattered Scots pine	1.00	Moderate*	8.00	10.24	+28%
Upland Heathland > Upland Heathland with scattered birch and shrubs	8.64	Fairly Good	86.40	115.27	+33%

* For the two small polygons recorded at Moderate baseline Condition, Moderate has also been retained as the target Condition in the revised calculation. Management through the final LEMP would seek to improve these areas to Fairly Good Condition, consistent with the other treatment-area polygons. However, no biodiversity units arising from that potential Condition improvement are claimed here. This conservative treatment demonstrates the wider biodiversity enhancement arising through Distinctiveness, Connectivity and Strategic Significance independently of any improvement in Condition.

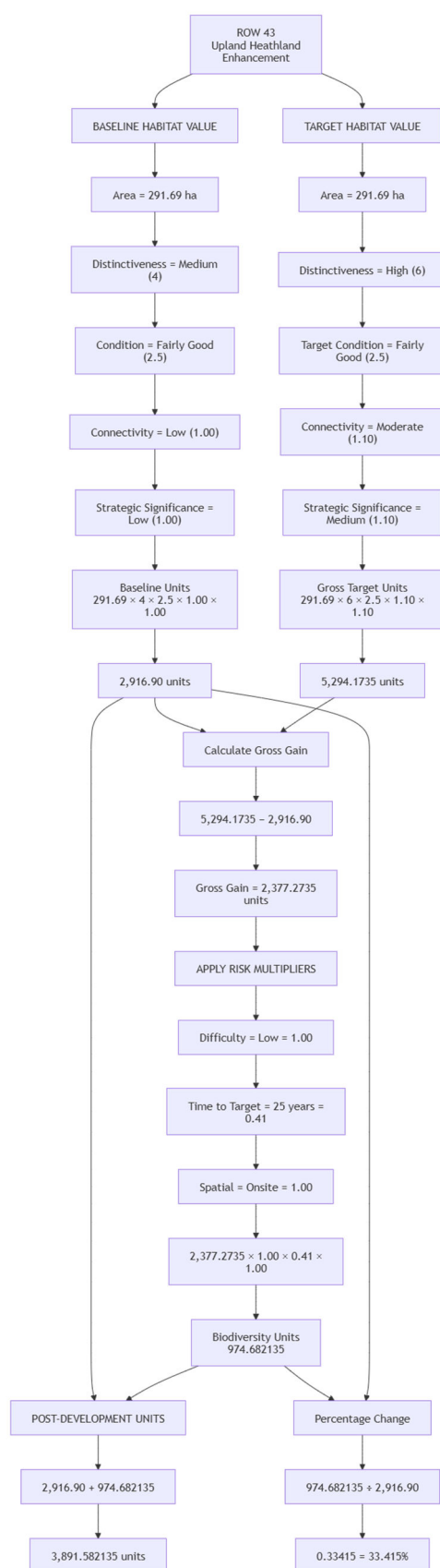


Figure 1: Example BNG Calculation for a polygon of Upland Heathland habitat enhanced with scattered birch etc. and scrub

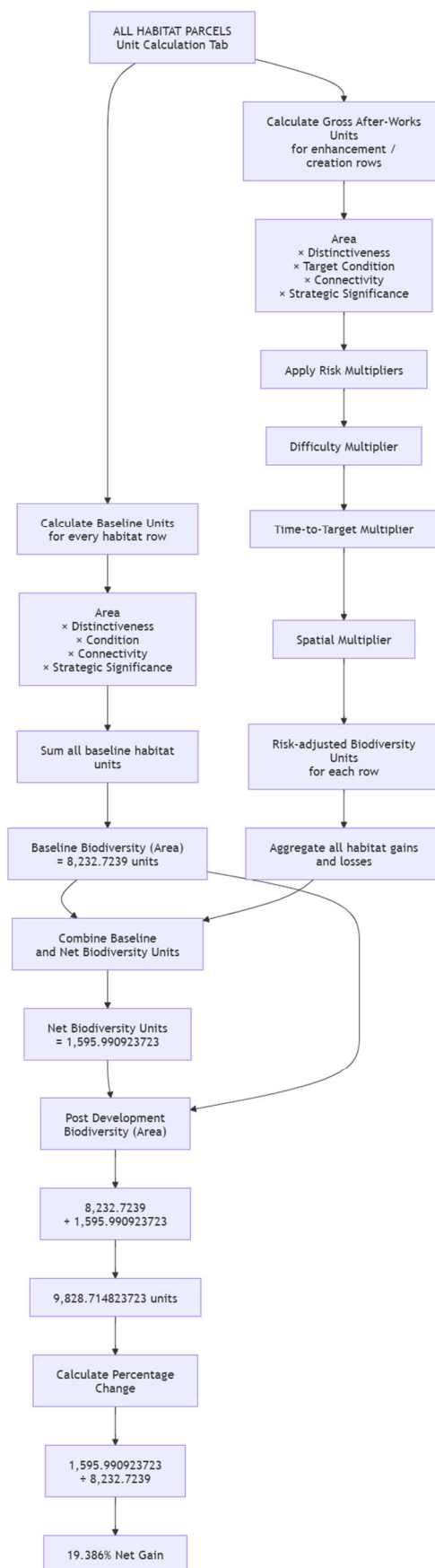


Figure 2: Process used to estimate overall level of area-based biodiversity change (+19%)