



Burnside to Greens 400kV Connection Outline Biodiversity Enhancement Report

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Document Notes

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Document History

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1 Introduction

1.1 Background

Tetra Tech Limited (Tetra Tech) was commissioned by RPS TetraTech in August 2025 to produce an Outline Biodiversity Enhancement Report for up to four 400 kilovolt (kV) underground cable circuits, connecting Caledonia Offshore Wind Farm Burnside Onshore Substations to the Scottish and Southern Energy Networks Transmission (SSEN-T) Greens Substation, together with associated works, hereafter referred to as the 'Proposed Development'.

This report has been prepared by Senior Ecologist Jake Brendish ACIEEM, and the conditions pertinent to it are included within Annex A.

1.2 Site Description

The site is centred at Ordnance Survey Grid Reference NJ 8275 4619 and covers approx. 160ha of farmland around Maryhill and Greens, near Turriff, Aberdeenshire. Cropland and sheep-grazed pastures dominate the site, some bordered by hedgerows and tree lines. Multiple farm buildings are present immediately adjacent to the boundary, with small villages and individual domestic properties scattered throughout the wider landscape.

1.3 Development Proposals

The Proposed Development includes the following elements:

- A working cable corridor up to 100 metres wide, accommodating all temporary works areas required for installation;
- Up to four 400 kV cable circuits installed in trenches;
- Up to two temporary haul roads;
- Haul road access points;
- Up to four Joint Bays for each cable circuit;
- Up to two Satellite construction compounds; and
- Temporary crossing infrastructure for haul road(s), road, watercourse and utilities.

The parameters set out are presented to enable consideration and determination of Planning Permission in Principle (PPP).

1.4 Purpose of Report

In the absence of detailed layout plans for the Proposed Development, the purpose of this report is to:

- Quantify the pre-development baseline habitat, hedgerow and watercourse units as applicable;
- Provide recommendations on potential on and off-site biodiversity gains; and

- Provide advice on the next steps required to achieve a minimum of 10% net gain (if required).

1.5 Validity

The details of this report will remain valid for a period of eighteen months from the date of the survey (until April 2027), after which the validity of this assessment should be reviewed to determine whether further updates are necessary.

The recommendations within this report should be reviewed (and reassessed if necessary) should there be any changes to the red line boundary or development proposals which this report was based on.

Scientific names are provided at the first mention of each species and common names (where appropriate) (both according to Stace, 2019) are then used throughout the rest of the report for ease of reading.

If best practice guidance, legislation, or other relevant policy is updated during this period, the findings and recommendations within this report may no longer be valid and should be reassessed to ensure compliance with the most current requirements.

2 Methodology

2.1 Biodiversity Guidance

This baseline assessment has been made using Department for Environment, Food and Rural Affairs (DEFRA's) Statutory Biodiversity Metric [1] in conjunction with the User Guide [2], Biodiversity Net Gain: Good Practice Principles for Development [3], and Chartered Institute of Ecology and Environmental Management (CIEEM) guidance on applying BNG in Scotland [4]. The baseline Biodiversity Net Gain (BNG) assessment comprises the following steps, outlined in Section 2.2.

2.2 Survey & Assessment

2.2.1 Baseline Habitats

An extended UK Habitat Classification (UKHab) survey and condition assessment was undertaken on 19th August and 29th September 2025 by a Tetra Tech Senior Ecologist of 'proficient' competency for this type of survey, as per the CIEEM Competency Framework [5].

Existing habitats on site were mapped in accordance with the UKHab Professional Edition V2 (UKHab Ltd., 2023), hereafter referred to as UKHab (shown in Annexe B). Where required, the habitats were converted into classifications compatible with the Statutory Biodiversity Metric ('*The Metric*'), from UKHab.

The area of identified habitats were calculated in hectares (ha) to two decimal places. Linear features (hedgerows and watercourses) were measured separately in kilometres (km) to two decimal places.

Note that scores for habitats, hedgerows and watercourses are reported separately and therefore should not be summed or averaged to produce a final overall biodiversity value for the site.

Further detail of habitat descriptions with target notes can be found in the Ecological Appraisal undertaken for this project [6].

2.2.2 Distinctiveness

The Metric automatically assigns a score for distinctiveness to each habitat type. The distinctiveness score acts as a proxy to capture parameters such as species richness, diversity, rarity (at regional, national and international scales) and the degree to which a habitat supports species rarely found in other habitats [2].

Under the current Metric definitions, habitats are assigned High or Very High distinctiveness only if listed under Section 41 of the NERC Act 2006 (S.41). Following CIEEM advice on adapting distinctiveness data for use in Scotland, categories have been assigned according to the Scottish Biodiversity List (SBL) [7] with reference to the existing S.41 criteria.

2.2.3 Condition

The condition of each habitat was assessed using the methods set out in the Statutory Metric's condition assessment spreadsheet [8].

It should be noted that some habitats have a fixed condition score, and some watercourse types use a different condition assessment methodology. If applicable, further justification is provided in Section 3.

2.2.4 Strategic Significance

Strategic significance is a measure of the local importance of a habitat, as determined by habitat type and location.

The Metric intends for strategic significance to be informed by a Local Nature Recovery Strategy (LNRS). Scotland has yet to adopt mandatory BNG at the national level, and in the absence of LNRSs strategic significance is instead dependent on the identification of specific areas within local planning policy. This tends to result in a greater difficulty assigning 'high' strategic significance to Scottish habitats in comparison with those in England and Wales. To account for this, habitats highlighted within the Highland Biodiversity Action Plan (BAP) [9] and Biodiversity Enhancement Planning Guidance [10] have been given additional weighting when assessing local significance.

2.2.5 Irreplaceable Habitats

No 'irreplaceable habitats' were present on site. For reference, however, these habitats cannot be accounted for in the Metric and require separate consideration.

2.3 Limitations

The conclusions and recommendations detailed in this report are based upon the site redline boundary and the development proposals as outlined by the client at the time of writing. Should there be any changes to the site redline boundary, landscape plans or development proposals at a later stage, this assessment should be reviewed to determine whether any amendments or additional survey work is required.

The best possible effort was made during the mapping process to ensure that all habitats identified on site were mapped accurately and represent the area of habitats present on site. Some margin of error is possible due to the difficulty defining the continuous nature of habitat boundaries. However, this margin of error has been minimised as far as practically possible using the professional opinion of two experienced ecologists, desk-based information and up to date aerial imagery.

The assessment of habitats required conversion from UKHab primary categories into Metric categories. This information is then entered into the Metric in terms of the habitat areas being retained, lost or enhanced. Whilst not a significant limitation, when using the Metric calculation tool to convert the UKHab types into Metric categories, the different habitat types do not exactly align. Therefore, some habitats were included within a more general habitat category under UKHab to allow the calculation tool to be applied, this also applies to the post development landscape plan used for the site. For transparency, the conversion tables in Section 2.2.1 set out which habitats have been paired during the conversion.

3 Baseline Habitats

3.1 Baseline Units

The on-site baseline comprises the following habitats:

- g3c Other neutral grassland
- g4 Modified grassland
- w1g Other broadleaved woodland
- w1h Mixed woodland
- w2c Other coniferous woodland
- h2a5 Species-rich native hedgerow
- h2a6 Other native hedgerow
- h3e Gorse scrub
- c1c Cereal crops
- c1d Non-cereal crops
- u1b Developed land; sealed surface
- r1g Other standing water
- r2b Other rivers and streams

Full habitat descriptions and species lists are available in the associated Ecological Appraisal report [11]. A UKHab Plan is provided in Annex B.

3.1.1 Baseline Habitat Unit Summary

The baseline habitats present on-site are shown in Tables 3-1 to 3-3 below alongside their distinctiveness and condition categories. In total, the baseline provides 721.57 habitat units, 23.03 hedgerow units, and 7.34 watercourse units.

Table 3-1: Baseline Habitat Units

Habitat Type	Area (Ha)	Distinctiveness	Condition	Strategic Significance	Total Habitat Units
Other neutral grassland	30.14	Medium	Moderate	High	277.29
Modified grassland	38.95	Low	Good	High	268.76
Gorse scrub	0.26	Medium	Moderate	High	2.39
Cereal crops	71.83	Low	N/A	Low	143.66
Non-cereal crops	14.14	Low	N/A	Low	28.28
Developed land; sealed surface	1.06	V. Low	N/A	Low	0.00

Habitat Type	Area (Ha)	Distinctiveness	Condition	Strategic Significance	Total Habitat Units
Ponds (non priority)	0.13	Medium	Moderate	High	1.20
Total Units:					721.57

Table 3-2: Baseline Hedgerow Units

Hedgerow Type	Length (km)	Distinctiveness	Condition	Strategic Significance	Total Hedgerow Units
Species-rich native hedgerow	1.021	Medium	Moderate	High	9.39
Species-rich native hedgerow	0.414	Medium	Poor	High	1.90
Native hedgerow	0.168	Low	Moderate	High	0.77
Ecologically valuable line of trees - associated with bank or ditch	0.819	Medium	Moderate	Medium	7.21
Ecologically valuable line of trees	0.333	Medium	Moderate	Medium	2.93
Line of trees	0.079	Low	Moderate	Low	0.32
Line of trees	0.255	Low	Poor	Low	0.51
Total Units:					23.03

Table 3-3: Baseline Watercourse Units

River Type	Length (km)	Distinctiveness	Condition	Strategic significance	Total Watercourse Units
Ditches	2.225	Medium	Poor	Medium	7.34
Total Units:					7.34

4 Post-Development Mitigation and Enhancement

The landscaping design for the Proposed Development will be brought forward at MSC stage once the exact cable route is known. This section highlights opportunities to maximise biodiversity units on site in the absence of a known route, taking the following into consideration:

- The baseline habitats present within the red line boundary;
- Anticipated habitat losses and relevant trading rules; and
- Ecological enhancement opportunities

4.1 Habitat Creation and Enhancement Opportunities

4.1.1 Area-based Habitat Units

It is expected that the cable installation will not result in permanent grassland loss. The grassland is anticipated to regenerate naturally once works are complete, though an appropriate native seed mix may be sown to encourage vegetative re-colonisation. Temporary habitat loss is defined as less than two years, and reinstatement is expected within this timeframe. Existing agricultural practices, including grazing and arable use, will continue, so no change in grassland habitat units is anticipated.

Compensatory woodland planting is proposed as part of the mitigation for the overarching project. While woodland creation is likely feasible on site, no woodland habitat loss is expected, and compensatory woodland planting is therefore not a requirement.

4.1.2 Hedgerow Units

The Proposed Development is likely to require the fragmentation of hedgerows and/or tree lines during construction. When fragmenting linear features, the working width of the construction corridor should be minimised as far as practicable to retain habitat connectivity for protected species including badger, bats, breeding birds, and hedgehog. Fragmentation should be avoided where possible, and any opportunities to retain and improve habitat connectivity should be implemented. All hedgerows will be reinstated post-construction to maintain available commuting, foraging, and refuge habitat.

Proposed habitat creation should include the provision of native hedgerows to offset the anticipated losses and achieve the required net gain. Species-rich native hedgerows (Medium Distinctiveness) should be prioritised to maximise the units returned from habitat creation.

Root and canopy protection zones should be established around existing tree lines, with movement of construction plant minimised to avoid soil compaction.

Enhancing the condition of retained tree lines would require the maintenance of a 6m-wide strip of undisturbed vegetation either side and is likely to be difficult in a predominantly agricultural landscape. Provision of new native species tree lines is recommended where additional hedgerow units are required.

4.1.3 Watercourse Units

Works must be carried out in accordance with permitting requirements, including the Environmental Authorisations (Scotland) Regulations 2018. Scottish Environment Protection Agency (SEPA) pollution prevention guidelines should be followed to avoid pollution of adjacent habitats [12].

To enhance lengths of ditch, a 5m buffer could be planted or sown with suitable native marginal vegetation, reducing riparian zone encroachment and providing a higher-quality foraging and refuge habitat for birds, amphibians, and small mammals including water vole. If this is not achievable within the red line boundary due to the agricultural nature of the site, enhancement opportunities should be secured off-site.

5 References

- [1] Defra, "The Statutory Biodiversity Metric Calculation Tool," 2024c.
- [2] Defra, "The Statutory Biodiversity Metric: User Guide," 2024a.
- [3] J. Baker, R. Hoskin and T. Butterworth, "Biodiversity Net Gain. Good practice principles for development: A practical guide," 2019.
- [4] CIEEM, "Biodiversity Net Gain in Scotland: Briefing Notes for Local Planning Authorities," 2021. [Online]. Available: <https://cieem.net/wp-content/uploads/2021/04/Implementing-BNG-in-Scotland-Apr2021-1.pdf>.
- [5] CIEEM, "CIEEM's Competency Framework," 2024. [Online]. Available: <https://cieem.net/resource/competency-framework/>.
- [6] Tetra Tech, "Burnside to Greens Grid Connection: Ecological Appraisal," 2025.
- [7] NatureScot, "Scottish Biodiversity List," 2022. [Online]. Available: <https://www.nature.scot/scotlands-biodiversity/scottish-biodiversity-strategy-and-cop15/scottish-biodiversity-list>.
- [8] Defra, "The Statutory Biodiversity Metric - Technical Annex 1: Condition Assessment Sheets and Methodology," 2024b.
- [9] Highland Nature, "Biodiversity Action Plan 2021 - 2026," 2022. [Online]. Available: <https://www.highlandenvironmentforum.info/biodiversity/action-plan/>.
- [10] The Highland Council, "Biodiversity Enhancement Planning Guidance," 2024. [Online]. Available: https://www.highland.gov.uk/downloads/file/28840/biodiversity_enhancement_planning_guidance.
- [11] Tetra Tech, "Burnside to Green Grid Connection: Ecological Appraisal.," 2025.]
- [12] SEPA, "Pollution Prevention and Control (PPC) Technical Guidance," 2017.]
- [13] Tetra Tech, "DIV2 01 Inverness: Preliminary Ecological Appraisal.," 2025.]
- [14] The Highland Council, "Draft Biodiversity Planning Guidance (Report No. ECI/19/2024)," 2024.]
- [15] Caledonia Offshore Wind Farm Ltd, "Scope of Work - Planning Application for Burnside to Greens 400kV Cable. Document No UKCAL-CWF-CON-ENV-SOW-00002," 2025.]
- [16] Caledonia Offshore Windfarm Ltd, "Volume 7E Proposed Development (Onshore) Appendices: Appendix 3-1 Biodiversity Enhancement Report," 2024.]

[17 Caledonia Offshore Wind Farm Limited, "Volume 7 Standalone Appendices:
] Appendix 7 Proposed Development (Onshore) Schedule of Mitigation," 2024.

6 Annex A – Report Conditions

This Report has been prepared using reasonable skill and care for the sole benefit of Caledonia Offshore Windfarm Limited (“the Client”) for the proposed uses stated in the report by Tetra Tech Limited (“Tetra Tech”). Tetra Tech exclude all liability for any other uses and to any other party. The report must not be relied on or reproduced in whole or in part by any other party without the copyright holder’s permission.

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The whole of the report must be read as other sections of the report may contain information which puts into context the findings in any executive summary.

Tetra Tech reserves the right to share this Report and any related materials, surveys, drawings and/or documents at any time with the relevant Local Ecological Records Centre (LERC), any relevant statutory body or any equivalent organisation as Tetra Tech may reasonably require from time-to-time.

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7 Annex B – UKHab Plan
