Client Name: **Boralex**

Site Name: **Limekiln BESS**

Planning Ref: **25/02861/S36**

Date: **3rd February 2026**

Technical Note – Ecology, Highland Council Consultation Response

1.0 Introduction

1.1 This Technical Note has been prepared by Avian Ecology Ltd. (AEL) in relation to the proposed Limekiln Battery Energy Storage System (BESS) (hereafter referred to as the 'Proposed Development'). This Technical Note has been produced to address a holding objection from The Highland Council in relation to the Limekiln BESS planning application (Ref: 25/02861/S36). The issues raised within the consultation response are:

- *The proposal does not comply with the requirements of NPF4 Policy 3. The Environmental Report does not include quantified details of habitat loss, mitigation and 10% Biodiversity Net Gain, as is required for development proposals of this scale. The suggestion to "allow heathland to expand" appears to fall short of any significant active management.*
- *Planting a hedgerow around the BESS compound is unsuitable in this location as such fruit-bearing species are unlikely to survive on the site and if they do, they will have a detrimental effect on surrounding peatland through drying out.*
- *The siting of suggested owl and bat boxes needs careful consideration to avoid attracting species to the windfarm area, particularly given the mortality of bats and Crossbills recorded at three turbines on this site.*

2.0 Site Overview

2.1 'The Site' of the Proposed Development is located within the red line boundary illustrated on **Figure 1**. The Site lies entirely within the existing and operational Limekiln Wind Farm development (Energy Consents Unit reference: ECU00002070 and EC00003303). Access tracks are therefore pre-existing, and areas of bare earth are present which were formerly used as a borrow pit for the construction of the wind farm. An existing substation is present, and the tracks are bordered by open areas and plantation woodland. The surrounding wider landscape supports similar plantation woodland and open areas typical of commercial forests in the region.

2.2 An extended Phase 1 habitat survey was undertaken on 29th May 2025 by E. Richens who is a suitably experienced and qualified field ecologist. The survey followed UK industry standard JNCC

Phase 1 Habitat Methodology (JNCC, 2010[1]) and with reference to Chartered Institute of Ecology and Environmental Management (CIEEM) guidance (2017[2]).

2.3 Habitats within the Site comprises predominantly J4 bare ground, in the form of the existing access track and working areas associated with the operational Limekiln Wind Farm. Other habitats recorded within or immediately adjacent to the Site include wet heath (D2), coniferous woodland (A1.2.2), recently felled woodland (A4.2) and neutral grassland (B2.1).

2.4 Plantation coniferous woodland (including felled woodland) for the purposes of forestry is typically of low ecological value; however adjacent habitats are of greater ecological value locally. As mentioned above, the presence of areas of wet heath are considered likely to result from drying of bog habitats associated with forestry operations. Such habitats are restricted to the edges of plantation blocks, rides and land adjoining access tracks. The results of the Phase 1 habitat survey are shown on **Figure 2**.

3.0 Habitat Enhancement and Biodiversity Net Gain

3.1 Within the Environmental Report submitted with the planning application, the following recommendations were made in relation to habitat enhancement:

- Restoration of the remaining area surrounding the proposed Substation Extension to managed heathland and associated habitats.
- Allow heathland to expand into cable route areas.
- Restoration and enhancement of plantation woodland edge habitats following felling.
- Allow heathland to expand into open areas around the BESS.

3.2 The above habitat enhancement measures were not however quantified to provide a percentage biodiversity net gain (BNG). As per Highland Council recommendations, the Natural England statutory biodiversity metric (the 'Metric')[3] has been utilised in order to calculate BNG for the habitat enhancement proposals outlined above.

3.3 The Metric is a biodiversity accounting tool used to quantify biodiversity losses and gains using habitats as a proxy for overall biodiversity. It is recognised as an industry standard and has been developed through full and widespread consultation with stakeholders across all relevant sectors.

3.4 The BNG assessment was undertaken by a suitably qualified and experienced ecologist with experience utilising biodiversity metrics. Data gathering and Metric calculations were undertaken according to the methodology detailed with the Statutory Metric user guide, unless otherwise stated.

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[1] JNCC. (2010). *Handbook for Phase 1 habitat survey*. https://data.jncc.gov.uk/ Accessed February 2026

[2] CIEEM. (2017). *Guidelines for Preliminary Ecological Appraisal, 2nd edition*. Chartered Institute of Ecology and Environmental Management, Winchester.

[3] Statutory biodiversity metric tools and guides - GOV.UK (www.gov.uk) – Accessed January 2026.

3.5 The Metric calculates the value of a habitat (measured as 'biodiversity units') by multiplying the area (hectares), distinctiveness (intrinsic value and rarity), condition (quality) and strategic significance (ecological value of the location) of each habitat parcel. The distinctiveness of a habitat is pre-set within the Metric and cannot be changed.

Habitat Baseline

3.6 Habitats were converted to UKHab[4] classifications in order to allow for a calculation of the baseline habitat units at the Site. Information on habitat condition was gathered from the habitat survey notes, and assessed against the relevant criteria for each habitat type as set out in the Statutory Metric Technical Supplement. A summary of the habitats present within Site is provided in **Table 1**.

Table 1: Habitats within the Site

Phase 1 Habitat	UKHab Equivalent	Area (hectares)	Biodiversity Units
J4 Bare Ground	Artificial unvegetated, unsealed surface and Developed land; sealed surface	12.564	0.00
A1.2.2 Coniferous plantation woodland	Other coniferous woodland	8.865	17.73
A4.2 Recently felled coniferous woodland	Other coniferous woodland*	4.728	9.46
B2.1 Unimproved neutral grassland	Other neutral grassland	4.056	32.45
D2 Wet heath	Upland heathland	5.301	31.81

* Note 'Felled' not used within metric as felled woodland is being permanently converted to another habitat or land use

3.7 The Metric calculation shows that habitats on-Site (within the red line boundary) have baseline results of 91.44 Habitat Units, as show in the headline results extracted from the full Metric spreadsheet, reproduced below. The full Metric is supplied as a separate document (**Appendix 1**).

On-site baseline	*Habitat units*	91.44
	Hedgerow units	0.00
	Watercourse units	0.00

[4] http://www.ukhab.org - Accessed January 2026.

Post-Development

3.8 The Metric calculations show that the Proposed Development, including proposed habitat enhancement measures, would result in 100.73 Habitat Units, resulting in a gain of **9.29 Habitat Units (+10.16%)** as shown in the headline results extracted from the full Metric spreadsheet, reproduced below.

On-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	100.73
	Hedgerow units	0.00
	Watercourse units	0.00
On-site net change (units & percentage)	*Habitat units*	9.29
	Hedgerow units	0.00
	Watercourse units	0.00

3.9 The post-development calculations are based on the following assumptions:

- Creation of 3.53 hectares of 'Upland heathland' on areas currently comprising bare ground and coniferous / felled woodland (as shown on **Figure 3**).
- Retention of all existing areas of unimproved grassland.
- 10m buffer being retained around BESS in which no habitat creation will occur.

Habitat Creation Measures

3.10 A detailed habitat management plan will be provided; however, outline measures for heathland creation include:

- Ground preparation, including reprofiling of compacted areas.
- Drainage management.
- Vegetation establishment through encouragement of colonisation from adjacent heathland and seed bank, supplemented with heather brash spreading where required.
- Ongoing management, including control of conifer regeneration.

4.0 Hedgerow Planting

4.1 The Highland Council have stated that the planting of a hedgerow around the BESS is unsuitable in this location.

4.2 The proposed hedgerow species includes blackthorn (*Prunus spinosa*), broom (*Cytisus scoparius*), elder (*Sambucus nigra*), hawthorn (*Crataegus monogyna*) and dog rose (*Rosa canina*). These species were chosen as they are locally abundant and appear to thrive in the immediate environment. The proposed species are hardy and can yield large quantities of berries from late summer to late autumn. This is an important resource both for migrant flocks of winter thrushes

and resident berry feeding species. Furthermore, the flowers and blossoms of these species are a useful resource for resident finches and tits in the spring. These blossoms are also an important resource for numerous pollinating invertebrates, the larvae and adults of which are in turn an excellent prey resource for breeding warblers throughout the summer which include, but is not limited to, species of conservation concern such as grasshopper warbler (*Locustella naevia*).

4.3 Native hedgerow planting will provide foraging, nesting and sheltering opportunities for a variety of species of conservation interest such as linnet (*Linaria cannabina*), redpoll (*Acanthis flammea*) and tree pipit (*Anthus trivialis*) and provide an additional winter food resource for wintering thrushes.

4.4 Given that the proposed BESS is sited in an expansive plantation of non-native Sitka spruce (*Picea sitchensis*), effects on the local substrate, especially with regard the drying out of peat, are likely to be minimal. The substrate in and around the proposed BESS is already highly modified by the presence of the mature forestry plantation. The addition of a small area of native berry producing trees and shrubs is very unlikely to have detrimental effects on the substrate at any significant scale.

5.0 Bird Nesting and Bat Roosting Boxes

5.1 The Highland Council have raised concerns over the positioning of proposed owl and bat boxes in relation to attracting these species to the windfarm area, particularly given the mortality of bats and crossbills recorded at three turbines on this site.

5.2 The siting of nest boxes will be carefully considered in respect to impacts from the current and Proposed Development. In the case of barn owl (*Tyto alba*), the specific site for the barn owl box will take into account a reasonable safe distance from any development, the availability of structures at suitable height and with suitable cover with which to attach a box and the presence and proximity of a suitable area of open ground for hunting by barn owl. There are numerous locations several hundred meters to the north of the BESS/operational wind farm that satisfy the above considerations which limit possible negative effects, making this the most likely option for the placement of a barn owl box. Given that the risks of providing a nesting and roosting site for barn owl can be mitigated by careful consideration of the placement of the box, there is no reason to believe that this enhancement will result in a negative outcome.

5.3 For passerines, nestboxes are not used by crossbill (*Loxia spp.*), therefore crossbill is unlikely to be directly affected by the addition of nest boxes in their environment. It is probable that there will be an associated increase in the abundance of cavity nesting species in response to the placement of nestboxes in the local environment. However, this is unlikely to impact crossbill, as this species is highly specialised and has evolved to inhabit forests where other cavity nesting species are present. As with barn owl, the position and placement of nest boxes for passerines will be carefully considered. No nestboxes will be placed within the windfarm area and will instead be placed on the periphery of the Proposed Development in areas of suitable woodland.

Commercial conifers provide very little, if any, suitable nest cavities for these species. The intention is to provide 30 – 40 nestboxes for cavity nesting species away from the windfarm area to enhance the species richness and abundance of breeding passerines around the Proposed Development. With proper consideration given to the placement of nestboxes, the possible negative impacts of their addition to the scheme can be effectively mitigated.

5.4 No bat boxes will be placed within the windfarm area and will instead be placed on the periphery of the Proposed Development, a minimum of 200m from wind turbines, and a greater distance where possible. As with passerine species, commercial conifer plantations provide very limited roosting opportunities for bats therefore the provision of bat boxes is considered to be a suitable enhancement in this area, which with careful consideration of placement poses minimal risk to bat species.

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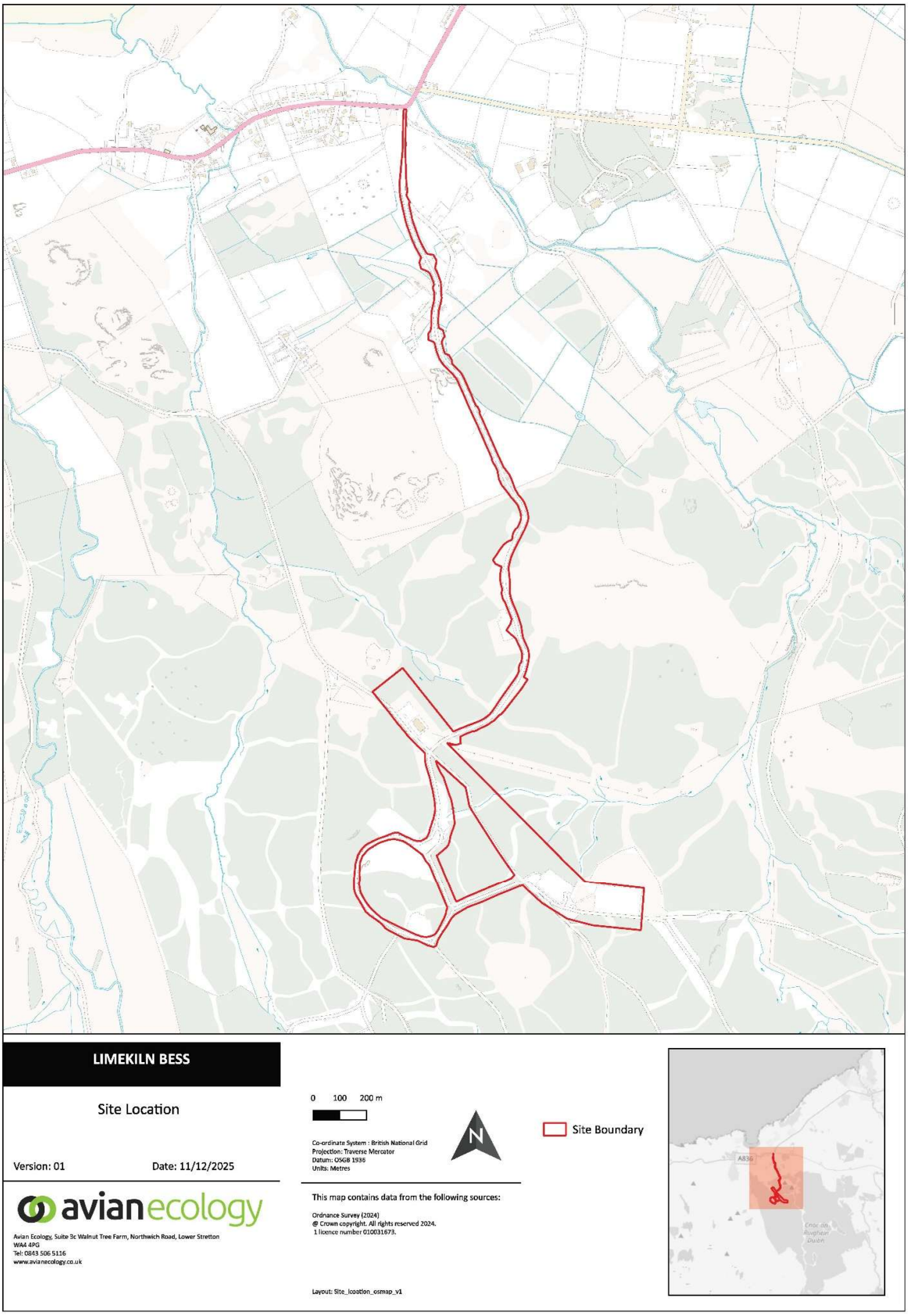
Checked by: A Logan *MSc MCIEEM* Principal Ecologist

FIGURES

Figure 1 - Site Location Plan

Figure 2 - Phase 1 Habitat Map

Figure 3 - Proposed Habitat Creation


LIMEKILN BESS
Site Location
Version: 01
Date: 11/12/2025
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Co-ordinate System : British National Grid
Projection: Traverse Mercator
Datum: OSGB 1936
Units: Metres
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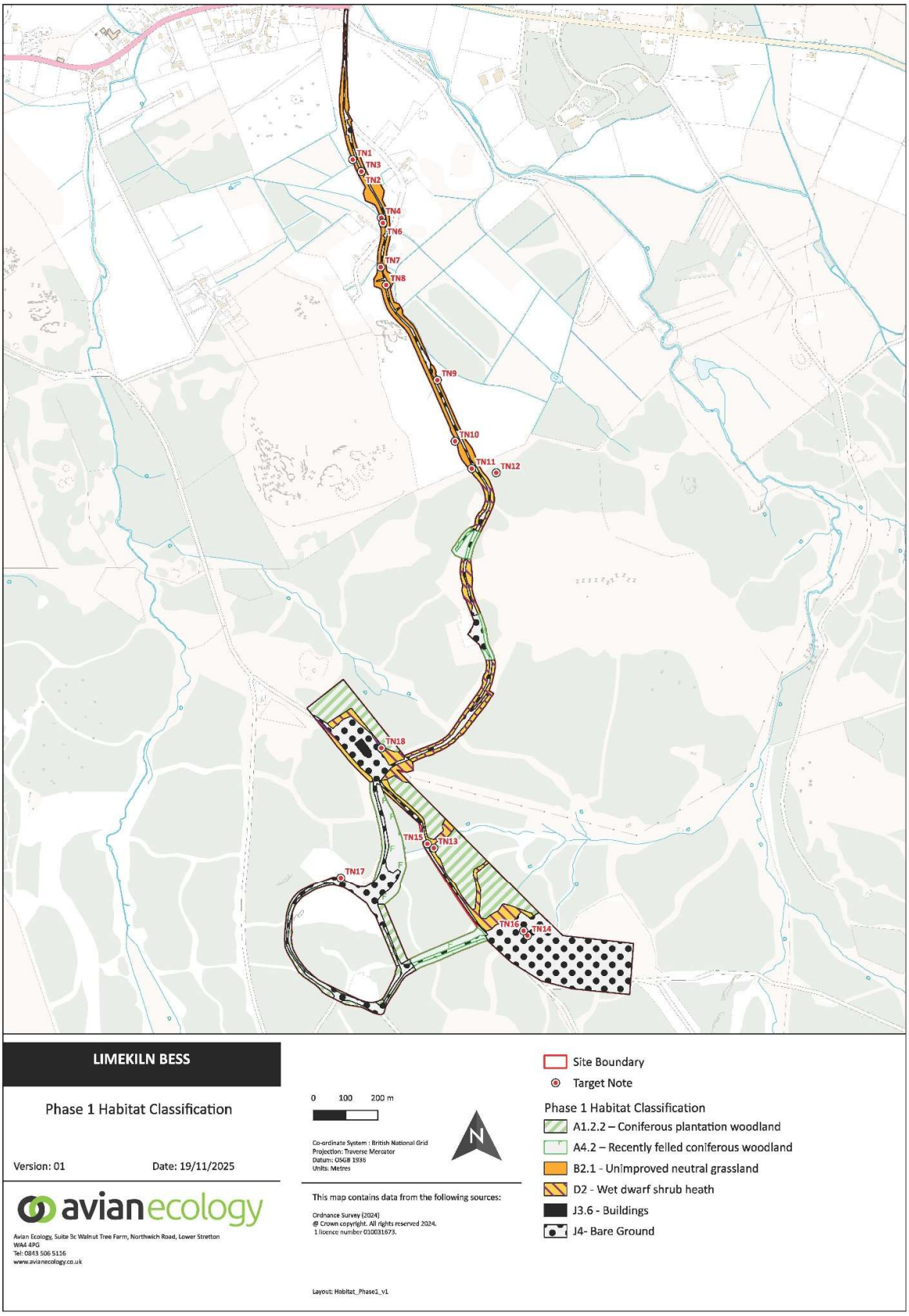
Site Boundary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TN16
TN14
LIMEKILN BESS
Phase 1 Habitat Classification
Version: 01
Date: 19/11/2025
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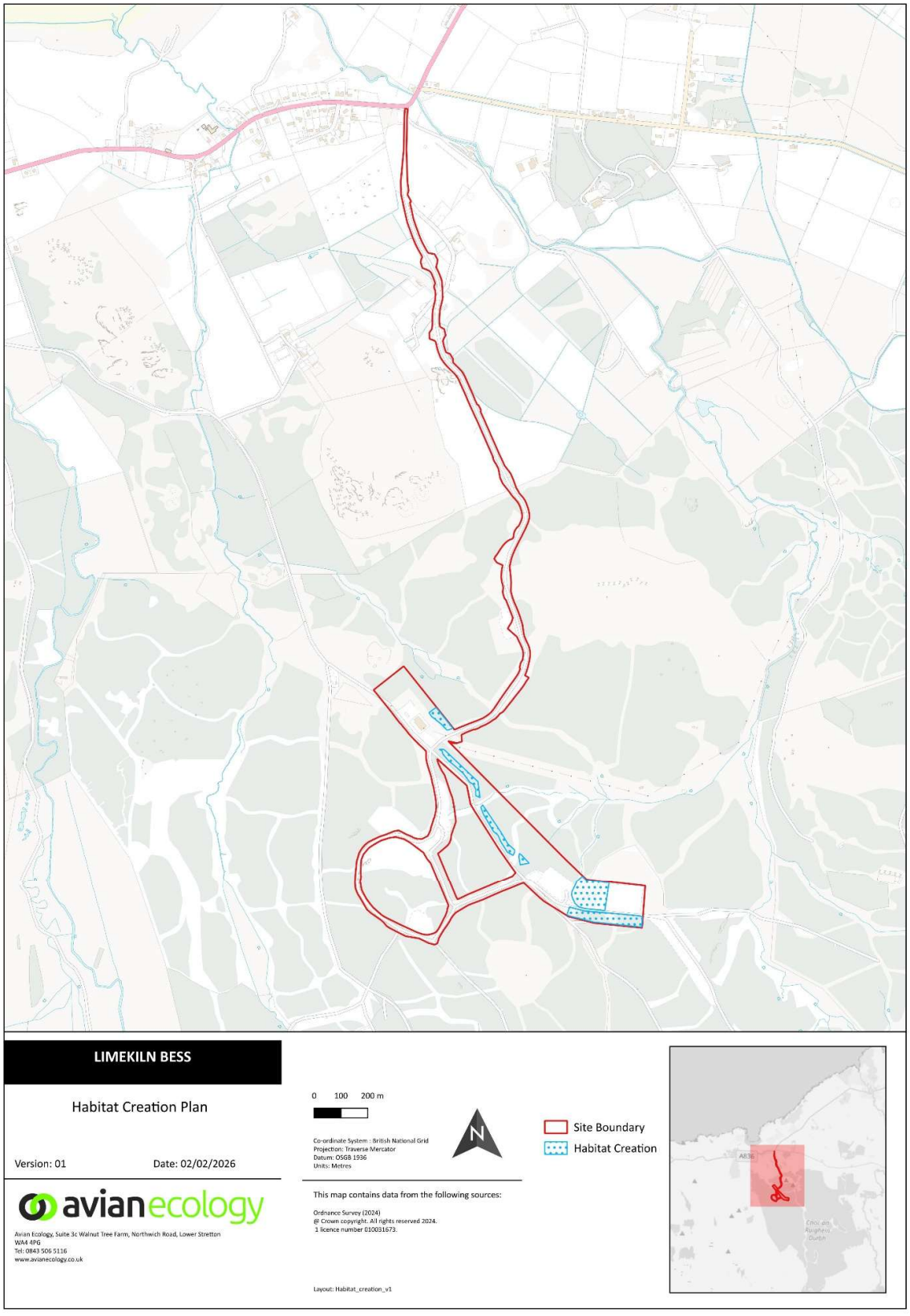
Layout: Habitat_Phase1_v1
Site Boundary
Target Note
Phase 1 Habitat Classification
A1.2.2 – Coniferous plantation woodland
A4.2 – Recently felled coniferous woodland
B2.1 - Unimproved neutral grassland
D2 - Wet dwarf shrub heath
J3.6 - Buildings
J4- Bare Ground


LIMEKILN BESS
Habitat Creation Plan
Version: 01
Date: 02/02/2026
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Site Boundary
Habitat Creation

Appendix 1

Statutory Biodiversity Metric