arbtech

15th May 2024.

File Note: BNG report for Land at Nailcote Farm, Fillongley, Coventry, North Warwickshire, CV7 8DW

Ref: Biodiversity Net Gain (BNG) reporting file note

Site address: Land at Nailcote Farm, Fillongley, Coventry, North Warwickshire, CV7 8DW

National Grid Reference: Centred on SP 276 859

Site area: 62.56ha

Recipients: Enviromena Project Management UKLtd

Record of activity

- **Background**

  Arbtech consulting Ltd were instructed by Enviromena Project Management UKLtd to undertake a Biodiversity Net Gain (BNG) evaluation of a development on the site, subject to a planning application with North Warwickshire Borough Council for:

  - Photovoltaic arrays

- **Purpose of survey**

  The National Planning Policy Framework (NPPF) makes it clear (para 170) that "Planning policies and decisions should contribute to and enhance the natural and local environment by; minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures".

  Paragraph 174 requires the promotion of "the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity".

  Proposals for net gain should be clearly recorded and reported through use of an appropriate metric such as the DEFRA Biodiversity Metric 3.1. Natural England advise that any net gain should be fully secured and funded for the lifetime of the development.

Therefore, the purpose of this survey report is to provide an evaluation of the proposed plans compared to the ecological baseline, and to report any net gain (or loss) to biodiversity using the DEFRA Biodiversity Metric 3.1 scheme.

- **Surveyor and date of survey**

  This survey report was carried out by Craig Williams, BSc (Hons), MSc, DIC, MRSB of Arbtech Consulting Ltd, carried out iteratively with the latest (6th) version carried out on 15th May 2024. A previous preliminary ecological appraisal (PEA) is used as the ecological baseline and was carried out on 1st December 2022. The baseline habitat map and the current proposed soft landscaping plans are fond in appendix 1 and 2.

Summary findings

- The full results of the metric are included in the excel file:

  Biodiversity Metric 3.1 (Land at Nailcote Farm CV7 8DW) v6

  This highlights that the change in biodiversity metrics is:

  - +63.17% in habitat units
  - +25.76% in linear units

  - The results indicate a net gain in area and linear units, contributed to the creation of moderate condition modified grassland underneath the photovoltaic arrays, the retention of neutral grass and a woodland copse as well as boundary hedges and tree lines and the planting of a new native hedges through the centre of the site and 108 trees across the site. Also included are areas of swale and a community garden.

  - The area gain is measured at 83.70 units, from a baseline of 132.49 units.

  - The linear gain is measured at 8.26 units, from a baseline of 32.05 units.

  The modified grass habitat onsite would need to satisfy the following condition criteria for this gain:

Enhancement details

Modified grassland of moderate condition

Criteria of success:

1. There must be 6-8 species per m2. If a grassland has 9 or more species per m2 it should be classified as a medium distinctiveness grassland habitat type. NB - this criterion is essential for achieving moderate condition.
2. Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.
3. Some scattered scrub (including bramble) may be present, but scrub accounts for less than 20% of total grassland area. Note - patches of shrubs with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.
4. Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.
5. Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens).
6. Cover of bracken less than 20%.
7. There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981).

Four of these conditions are to be met for the targeted moderate condition including mandatory condition 1 as well as e.g., 3, 5 and 6.

Discussion

- Although the metric 3.1 technically fails trading rules for small losses of arable margins (tussocky grass) and other neutral grass loss from the baseline site, this is considered wholly outweighed by the strong net gain in the metric for grassland units in general over the existing arable fields and is considered acceptable for the wider net gain and habitat benefits provided. The proposed grass, scrub and hedges also contribute more as a matrix and would likely tend towards tussocky, neutral grass anyway.
- The creation management of the habitats on site to the appropriate condition would need to be secured for at least 30 years - linked to the application through a planning obligation in

Section 106 (S106) agreement. A management and monitoring plan would also be required for this.

Skylark (*Alauda arvensis*) compensation measures

Skylark are a red-listed species and a NERC Act Section 41 Priority Species due to declining populations. An ornithological Impact Assessment for the site based on surveys carried out in summer 2023 concluded that 8 breeding pairs of skylarks were using the arable fields on site for the following behaviours:

- Holding territory within
- Singing from
- Foraging

It also states on page 18:

> *The impact of solar farms on Skylark in particular is not fully understood; however, recent research by the RSPB shows that the species were found holding territory and likely breeding within several solar developments*
>
> *https://community.rspb.org.uk/ourwork/b/biodiversity/posts/bird-use-of-solar-farms-interim-results (Accessed Oct 2023).*
>
> *The creation and proper management of habitat beneath and between the solar panels has the potential to provide a more consistent, undisturbed habitat for Skylark as well as other nesting and foraging species.*

Parameters of skylark compensation measures used

Mitigation must be provided on site to ensure that the species does not decline/abandon it. In order, As the skylark is a ground nesting bird of open habitats (including grassland as proposed beneath the solar panels), to satisfy the requirement for skylark habitat in site a range of 'skylark plots' are proposed in suitable unseeded gaps in long grass between and around panels to provide breeding habitat. These are large enough for easy landing and foraging area and diversity of ephemeral forbs and areas of bare soil and seeds. A density of 2 plots per ha of habitat, each at least 3m wide with an area of 16m^2 i.e. 4mx4m is considered suitable. Also, as skylarks avoid tall structures these should be situated at least 50m from trees, tall hedges, buildings, power lines etc. It is also advised that . plots are not situated closer than 25m to field margins, linear features, roads, tracks etc. to avoid

giving predators cover, and to protect from general disturbance. Resulting calculated areas narrower than 15m were culled, resulting in 10 parcels. After this, parcels smaller than 5ha in size, or smaller than 10ha in size when bounded by woodland or tree lines were culled from the provision areas due to increased chance of predation. After These parameters have been applied one large central area of the site considered suitable for skylark plots has been calculated and is presented below:

7.4053ha field centred on SP274859, see figure appendix 3.

The plot locations can be specified using a random pattern generator within the limited parcel area as shown here, with a minimum distance of 50m between plots (to be located between rows) or they can be selected manually between rows of the solar panels but spaced out as much as possible.

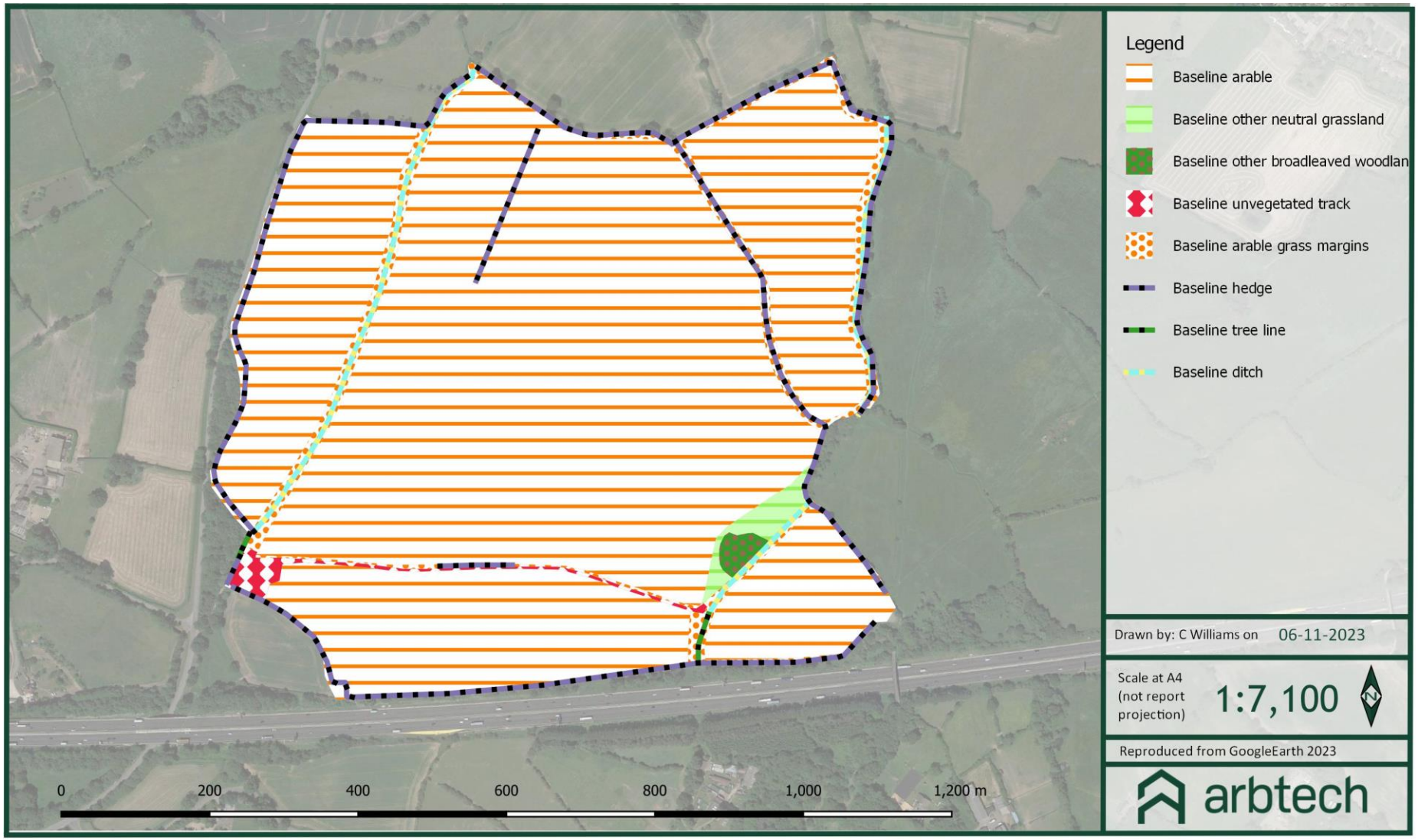
2 plots/hectare within this area would give 15 plots in total (rounded up). Since 8 breeding pairs were observed on the site in the baseline study, this increase in potential breeding pair numbers of nearly 100% is considered suitable to offset the unknown factor the solar panels would discourage the species from using the plots.

These plots could be achieved without affecting the overall habitat or condition score of the grassland (i.e. still an overall classification of modified grass, moderate condition) which uses an average across the habitat for the criteria. Since the 15 plots of 16m^2 each would measure 240m^2 or 0.024ha in total, this would only make up ~0.0004% of the total ~59ha grassland area on site. As such, their addition is considered negligible to the habitat condition.

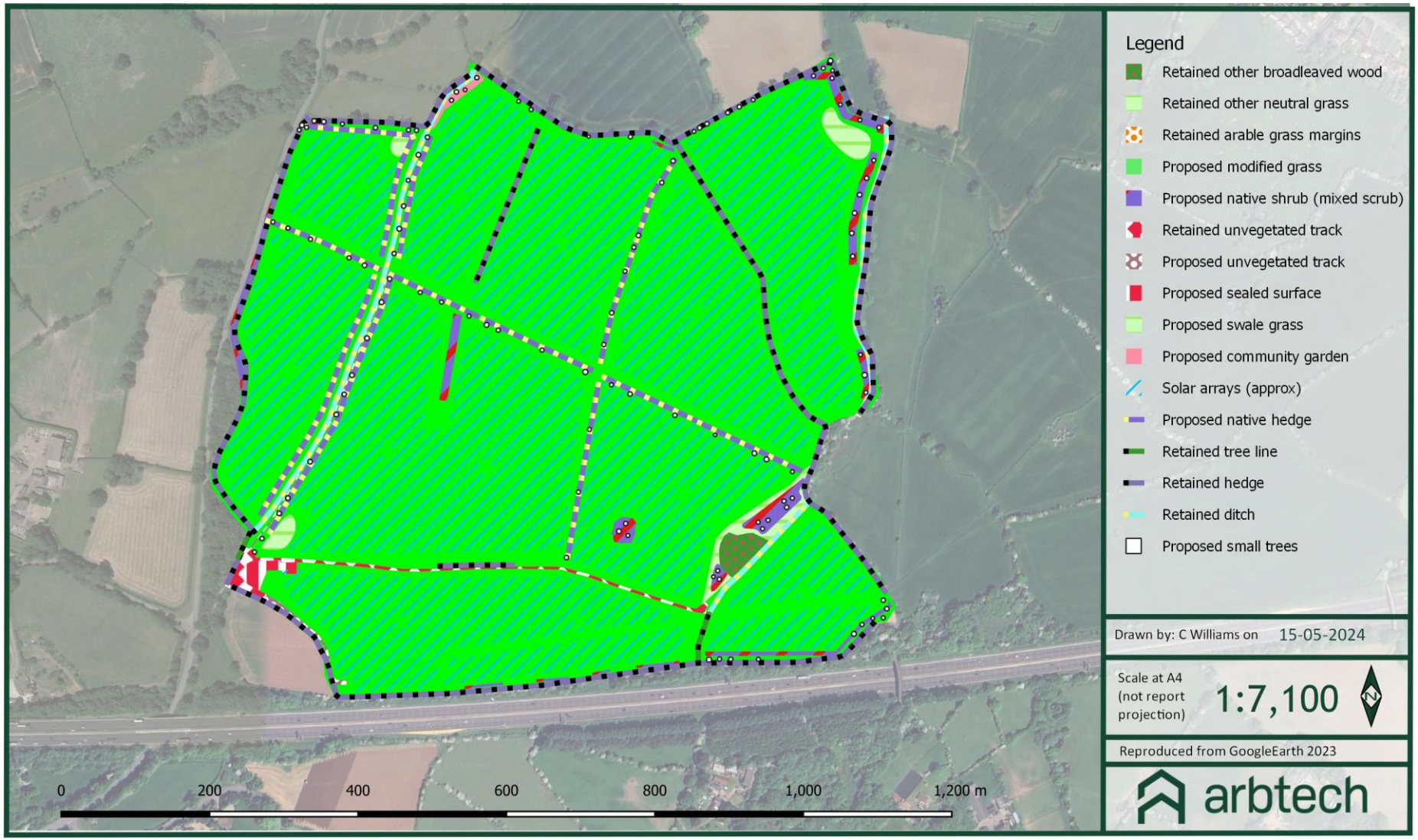
If the plots cannot be created on site for any reason, an area of arable field of at least 4ha with 8 skylark plots should be used to create at least 8 plots as close as possible to the site, or to secure an off-site financial contribution from the developer for a skylark compensatory habitat and management plan. Both would require a Section 106 agreement.

To create the plots, during the autumn/winter fallow areas without grass will be created within the wider sward through vegetation removal. These plots will be retained until the annual hay cut in late summer (timed to late august to avoid the skylark breeding season). The annual creation of the plots should be retained for the duration of the BNG on site (i.e. at least 30 years). During this time, skylark breeding activity will be monitored annually by a competent ornithologist and mapping of singling males will be done on two occasions between April and June. Monitoring results will be submitted annually to the planning authority.

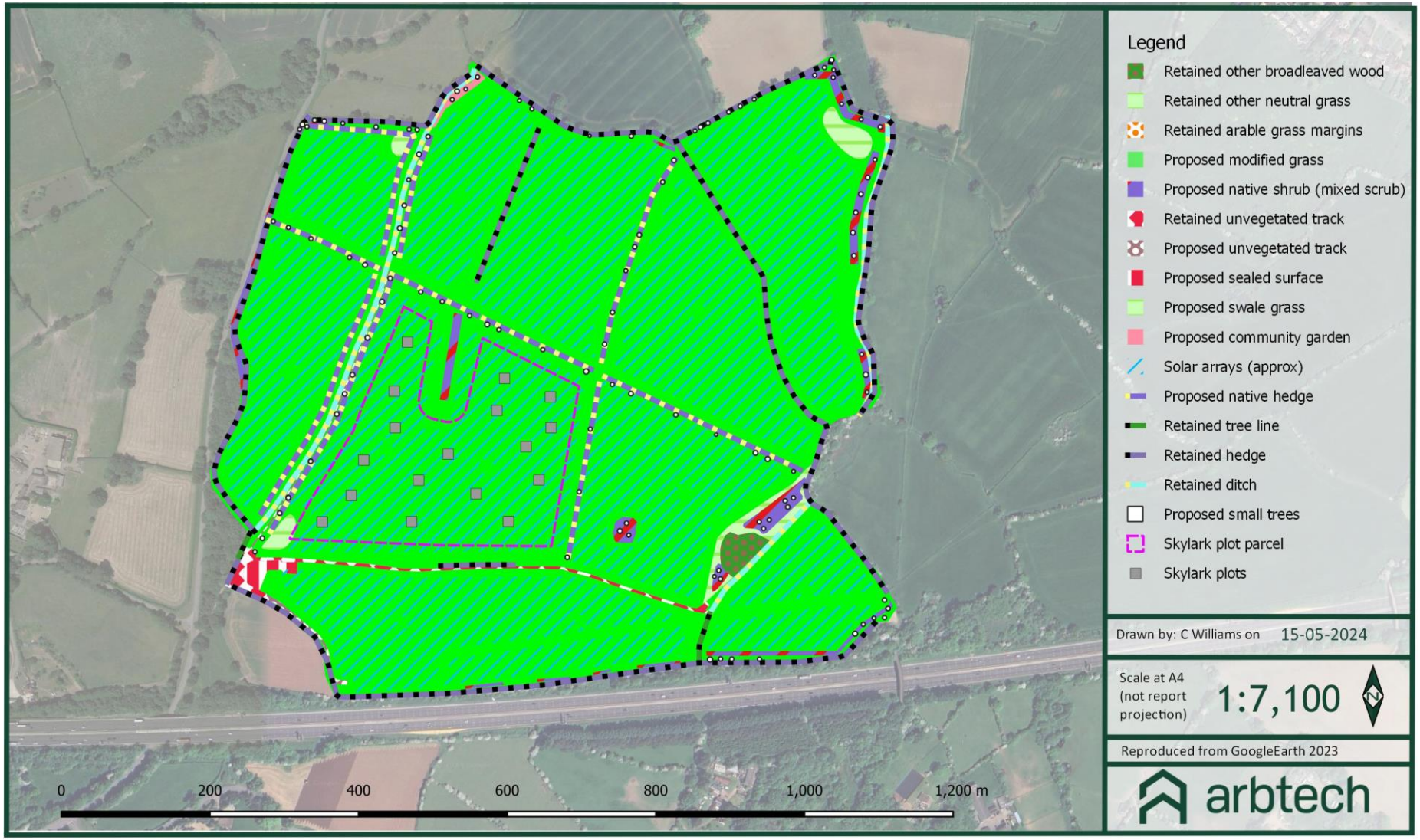
Appendix 1: Habitat baseline map



Appendix 2: Proposed ecological map of the site (based on the site habitats in the metric)



Appendix 2: Proposed skylark plot map in central area meeting location paramaters



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Arbtech Consultant's Contact details:

Craig Williams BSc (Hons), MSc, DIC, MRSB

cw@arbtech.co.uk

Arbtech Consulting Ltd

https://arbtech.co.uk

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