

Winchcombe CSEC - Biodiversity Net Gain Assessment

National Grid Cotswolds Visual Impact Provision (VIP)

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CONTENTS

1	EXECUTIVE SUMMARY	1
2	INTRODUCTION	3
2.1	Background	3
2.2	Location and Setting	4
2.3	BNG in Policy and Legislation.....	5
3	METHODOLOGY	7
3.2	Data Preparation	7
3.3	Habitat Calculations	8
4	RESULTS.....	12
4.1	Baseline Biodiversity Units	12
4.2	Habitat Typology and Condition	12
4.3	Indicative Landscape Proposals (Post Development).....	17
4.4	Trading Summary	22
4.5	Summary Results	24
5	CONCLUSION	26
6	REFERENCES.....	27

TABLES

Table 1: Biodiversity Metric Criteria.....	7
Table 2: Area based habitat distinctiveness valuation bandings.....	9
Table 3: Tree size class and biodiversity metric area derived from BS 5837:2012	10
Table 4: On-site are baseline biodiversity units for area habitat	14
Table 5: On-site are baseline biodiversity units for linear habitats (10 hedgerow and one watercourse).....	15
Table 6: Condition assessment criteria for grassland	17
Table 7: Condition assessment for the proposed mixed scrub habitat	18
Table 8: condition assessment criteria for woodland	19
Table 9: Biodiversity area units retained on site.....	21
Table 10: Biodiversity units from created area habitats on-site, post-intervention.....	22
Table 11: biodiversity units from created hedgerow habitat on site, post intervention.....	22

Table 12: The changes in the total biodiversity unit values of medium and high distinctiveness area habitats on-site 23

Table 13: Hedgerow habitat trading summary 24

Table 14: Unit shortfall for reaching net gain targets..... 26

APPENDICES

APPENDIX A : BASELINE HABITAT MAP

APPENDIX B : POST INTERVENTION HABITAT MAP

1 Executive Summary

- 1.1.1 The Proposed Project forms part of the wider Cotswolds Visual Impact Provision (VIP) Project (hereafter referred to as the 'wider project'), the purpose of which is to underground a section of 400kV overhead electricity transmission lines, to mitigate the visual impact of existing electricity infrastructure through part of the Cotswolds National Landscape (CNL) (previously known as Area of Outstanding Natural Beauty (AONB)).
- 1.1.2 The Proposed Project is for the construction of a Cable Sealing End Compound (CSEC) at Winchcombe to facilitate the connection between new underground cables and the existing overhead line (OHL) and the associated permanent access road (and bell-mouth) to the CSEC, in addition temporary bell-mouths created to support the cable construction along classified roads.
- 1.1.3 As part of the wider project, Arcadis Consulting (UK) Limited was commissioned by National Grid to provide a Biodiversity Net Gain (BNG) assessment. This BNG report should be read in conjunction with the Ecological Impact Assessment (EclA) report and Landscape and Ecological Management Plan (LEMP).
- 1.1.4 An assessment of the submitted application for Winchcombe CSEC and associated access was conducted to determine if it can deliver the required biodiversity net gain. Although national and local policy states that 10% BNG is required, the Cotswold Nature Recovery Plan states that 20% BNG should be achieved within the Cotswold National Landscape. National Grid have therefore committed to achieving 20% BNG for the Winchcombe CSEC planning application.
- 1.1.5 This assessment was conducted using the statutory Biodiversity Metric (BM). This compares the baseline state of the site with the potential as-built state to determine if a net gain for biodiversity can be delivered.
- 1.1.6 Winchcombe CSEC and associated bell mouths (the site) is situated just south of the village of Winchcombe around Grid Reference SP 01036 27040. The redline boundary comprises of 4.44ha.
- 1.1.7 The baseline of the site primarily consists of modified grassland and cropland with some areas of lowland mixed deciduous woodland. There are multiple species rich hedgerows on site and a watercourse.
- 1.1.8 The proposed works within the Winchcombe CSEC redline comprise habitats of:
- Installation of a terminal pylon to connect the new underground cables to the remaining existing overhead line (note: the pylon is Permitted Development);
 - CSEC infrastructure;
 - Underground cabling from the Winchcombe CSEC towards the Whittington CSEC (note: this is Permitted Development);
 - A permanent access road to the CSEC, including a bell-mouth and turning area;
 - A hardstanding area where the overhead line meets with the new underground cables;
 - A retaining wall;
 - New screening comprising native trees, woodland and scrub planting; and
 - Temporary bell-mouths with the B4632 and a classified road to facilitate construction.

- 1.1.9 This assessment demonstrates that the design does allow for a positive biodiversity net gain, delivering 2.11 (18.15% net gain) total area units and 1.58 (23.49% net gain) of hedgerow biodiversity units. 0 watercourse biodiversity units have been delivered for this scheme.
- 1.1.10 However, space restrictions within the design and difficulty of woodland creation do not allow for the provision of enough high distinctiveness lowland mixed deciduous woodland habitat to satisfy the trading rules, specifically regarding the loss of lowland mixed deciduous woodland. Furthermore, the loss of very high distinctiveness hedgerow does not satisfy the trading rules, as the same habitat must be created to compensate for the loss. Offsite BNG credits will therefore be purchased to satisfy the trading rules and achieve 20% net gain, including 0.51 units of lowland mixed deciduous woodland and 0.08 units of species-rich native hedgerow with trees, and an additional 0.074 watercourse units. It is proposed that these units are purchased and secured from the Cotswolds National Landscape (CNL), or other similar third party, who retain local habitat banks and connections with local landowners.

2 Introduction

2.1 Background

- 2.1.1 In 2014, National Grid commissioned a Landscape and Visual Impact Assessment to identify areas across the UK that would benefit from the Visual Impact Provision (VIP) project. The purpose of the Landscape and Visual Impact Assessment was to identify those sections of electricity transmission lines within England and Wales that have the most important impacts on the landscape and visual amenity of these designated landscapes.
- 2.1.2 Arcadis Consulting (UK) Limited was commissioned by National Grid to provide Biodiversity Net Gain Assessment in support of the undergrounding of the central section of National Grid's ZF.2 overhead line (OHL) route through the Cotswolds Area of Outstanding Natural Beauty (AONB) as part of their VIP project.
- 2.1.3 The Proposed Project forms part of the wider Cotswolds Visual Impact Provision (VIP) Project (hereafter referred to as the 'wider project'), the purpose of which is to underground a section of 400kV overhead electricity transmission lines, to mitigate the visual impact of existing electricity infrastructure through part of the Cotswolds National Landscape (previously known as Area of Outstanding Natural Beauty). The wider project is located immediately south of the B4632 and from Breakheart Plantation, runs in a south-westerly direction to the east of Cleeve Common Site of Special Scientific Interest (SSSI), past Wontley, Drypool and Wood Farms, towards Dowdeswell Wood.
- 2.1.4 The wider project will comprise:
- The removal of a section of overhead lines (OHL), including the permanent removal of 16 pylons (18 pylons will be removed in total, however, two will be replaced under Permitted Development).
 - Underground cabling of approximately 7km in length.
 - Two new cable sealing end compounds (CSECs) at each end (north and south) and associated replacement terminal pylons (as mentioned above), to connect the new underground cables to the remaining existing overhead line.
 - Associated temporary works to facilitate construction, including temporary/permanent access junctions and roads, a temporary haul road, construction compounds, material storage and welfare facilities.
 - Ancillary off-site infrastructure (including installation of arcing horns and shunt reactor installation/connection).
- 2.1.5 The majority of the works will be undertaken using Permitted Development rights under Schedule 2 of the Town and Country Planning (General Permitted Development) (England) Order 2015 (as amended), however, the CSECs require planning permission and are therefore subject to the Biodiversity planning condition requiring a 10% biodiversity net gain. The scope of this report is for the Winchcombe CSEC only (hereafter referred to as the 'Proposed Project'). Furthermore, the project is within the CNL subject to local policy of achieving 20% biodiversity net gain. The scope of this report is for the Winchcombe CSEC only (hereafter referred to as the 'Proposed Project').

2.2 Location and Setting

- 2.2.1 The Proposed Project is for the construction of a CSEC at Winchcombe to facilitate the connection between new underground cables and the existing OHL and the associated permanent access road (and bell-mouth) to the CSEC, in addition to temporary bell-mouths created to support the cable construction along classified roads. The Proposed Project is located within Tewkesbury Borough.
- 2.2.2 The proposed works within the Winchcombe CSEC redline comprise:
- Installation of a terminal pylon to connect the new underground cables to the remaining existing overhead line (note: the pylon is Permitted Development);
 - CSEC infrastructure;
 - Underground cabling from the Winchcombe CSEC towards the Whittington CSEC (note: this is Permitted Development);
 - A permanent access road to the CSEC, including a bell-mouth and turning area;
 - A hardstanding area where the overhead line meets with the new underground cables;
 - A retaining wall;
 - New screening comprising native trees, woodland and scrub planting; and
 - Temporary bell-mouths with the B4632 and a classified road to facilitate construction.
- 2.2.3 Winchcombe CSEC is situated just south of the village of Winchcombe around Grid Reference SP 01036 27040 and the redline boundary comprises of 4.44ha
- 2.2.4 The site consists primarily of an agricultural open field setting with the existing OHL adjacent to the proposed underground route. There are multiple hedgerows within the site boundary and a single watercourse on site. The bell-mouth access primarily consists of hardstanding road with some cropland and hedgerows with trees. The route is located within Cotswolds AONB.

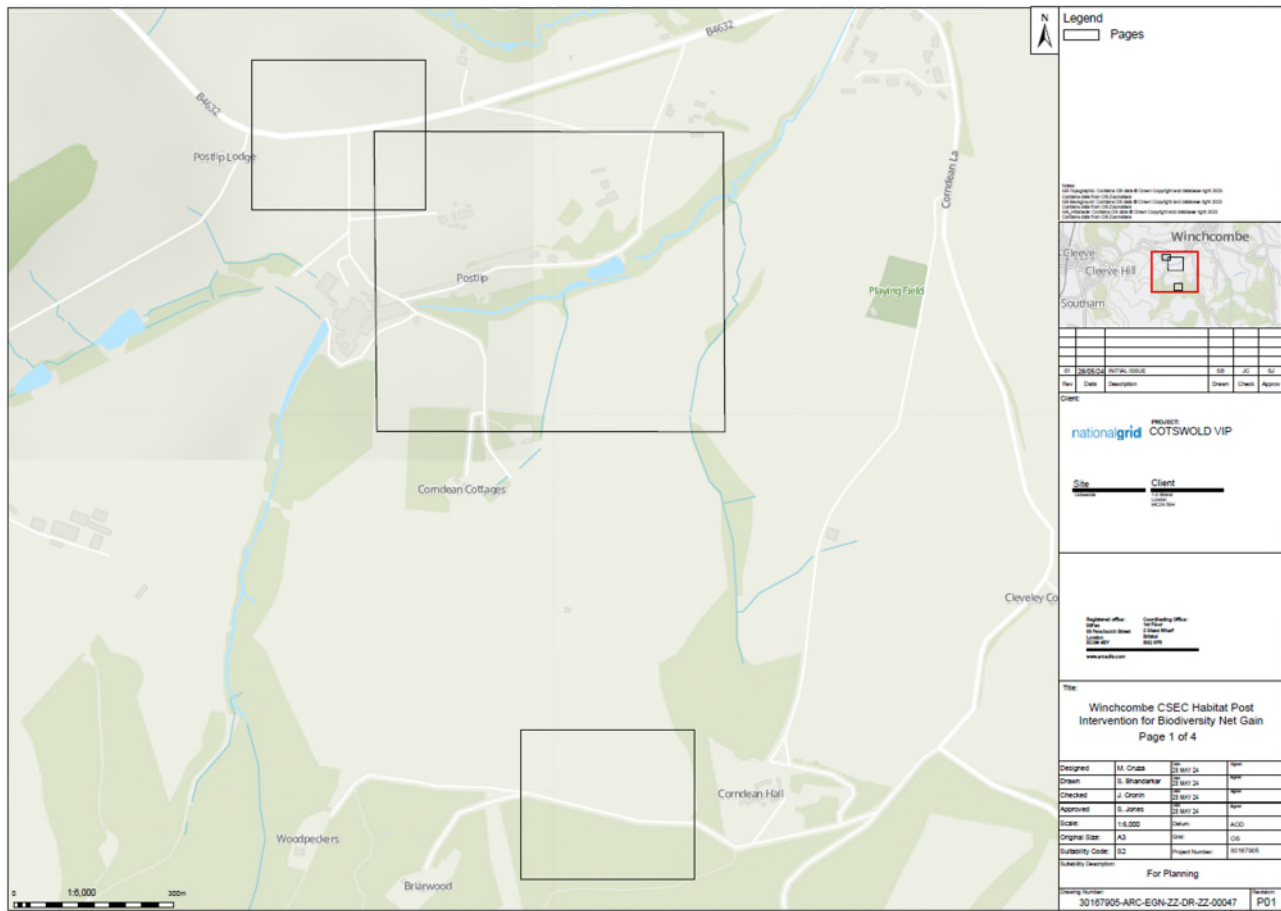


Image 1: Site aerial overview.

2.3 BNG in Policy and Legislation

- 2.3.1 In line with the 25 Year Plan for the Environment (HM Government, 2018) and the National Planning Policy Framework (MHCLG, 2021), new development should identify and pursue opportunities for securing measurable net gains for biodiversity and for the wider environment. The Environment Act 2021 (gov.uk, 2021) introduces a mandatory requirement for 10% biodiversity net gain for new developments to ensure that they enhance biodiversity. Mandatory biodiversity net gain from the Act was passed into law in February 2024.
- 2.3.2 If a planning application for a development was made before day one of mandatory BNG on 12 February 2024, the development is exempt from BNG.
- 2.3.3 Developments that are granted planning permission by a development order (including permitted development rights) are exempt by the Environment Act 2021.
- 2.3.4 Concerning local policy relevant to BNG, Winchcombe CSEC falls within Gloucestershire County Council and Tewksbury Borough Council. The site also falls within the Board of the Cotswolds National Landscape.
- 2.3.5 Gloucestershire County Council (GCC) has published Guidance on delivering Biodiversity Net Gain for planning applicants and developers in Gloucestershire in February 2024. This aims to help develops achieve a 10% net gain for developments.
- 2.3.6 In Gloucestershire, off-site biodiversity units can also be purchased from the Gloucestershire Nature and Climate Fund.

- 2.3.7 In accordance with Policy NAT1 (Biodiversity, Geodiversity and Important Natural Features) of the Tewkesbury Borough Plan. All major planning permissions granted in England, with a few exceptions, will be required to deliver a minimum of 10% BNG. Developments must achieve this net gain and manage the habitats for a minimum of 30 years, this is in line with national policy.
- 2.3.8 Under the Cotswold local authority, proposals that are likely to impact on the biodiversity of the National Landscape should have regard to – and be consistent with – the Cotswolds Nature Recovery Plan.
- 2.3.9 Measures to conserve and restore biodiversity including the outcomes, priorities, targets and measures within the Cotswolds Nature Recovery Plan should be delivered in a way that is compatible with conserving and enhancing the natural beauty of the Cotswolds National Landscape.
- 2.3.10 Although the national statutory requirement for net gain in biodiversity arising from development proposals will be 10%, this plan states that it should be 20% within the Cotswolds National Landscape. The justification includes:
- The Landscapes Review stating that National Landscapes should form the backbone of Nature Recovery Networks.
 - The Governments response to the Landscapes Review: “Linking improvements to the way these areas are protected and managed for nature recovery to the commitment to protect 30% of UK land for nature by 2030”.
 - Stating that they; “will put our protected landscapes at the heart of delivering our nature recovery”.
- 2.3.11 To summarise, national and local policy states that 10% BNG is required, whereas the Cotswold Nature Recovery Plan states that 20% BNG should be achieved within the Cotswold National Landscape. National Grid have therefore committed to achieving 20% BNG for the Winchcombe CSEC planning application.

3 Methodology

- 3.1.1 The purpose of this document is to estimate the potential net change in biodiversity value of the proposed development based on indicative proposals provided for full planning permission. This approach uses information on the habitats and features of the Site before and after the development to calculate the change in biodiversity value. If planning proposals change the biodiversity value will need to be recalculated.
- 3.1.2 These calculations were undertaken using the Statutory Biodiversity Metric (BM) issued by Defra and Natural England (Defra, 2024). The statutory BM is a spreadsheet-based tool into which data can be entered to carry out BNG calculations.
- 3.1.3 Data is entered into the metric using the UKHab habitat classification typologies. When considering baseline conditions, the metric takes account of several factors, detailed below in Table 1. The numbers in brackets show the multipliers used by the metric for each category.

Table 1: Biodiversity Metric Criteria

Evaluation	Values assigned	Criteria
Habitat type	UK habitat classification typologies	Based upon "species richness, rarity (at local, regional, national and international scales), and the degree to which a habitat supports species rarely found in other habitats"
Size of habitat parcel	Area measured in hectares and linear features measured in kilometres	N/A
The distinctiveness of the habitat type	Value predetermined for each habitat type on a scale of Very Low (0), Low (2), Medium (4), High (6) and Very High (8)	Distinctiveness considers the rarity of the habitat, the amount of the percentage of habitat protected in SSSIs, the UK Priority Habitat Status and the European Red List Categories for the habitat
The condition of each habitat parcel	Value assigned based on a scale of Poor (1), Fairly Poor (1.5), Moderate (2), Fairly Good (2.5) and Good (3). For some habitat types this is pre-determined	Condition sheets were used where possible to assess the condition. Or a River Condition Assessment was undertaken for watercourse features.
Whether the parcels are in locations identified as local nature priorities	Value assigned based on a scale of Low (1), Medium (1.1) and High (1.15) strategic importance	N/A

3.2 Data Preparation

Baseline Data Area and Hedgerow Habitats

- 3.2.1 The Statutory BM is designed to work with the UKHab Habitat Classification system, a dedicated UKHab survey was undertaken which classified area and hedgerow habitats on site.

- 3.2.2 A habitat condition assessment sheet is provided for each habitat type within the BM methodology¹, which should be used to assign each habitat parcel to each of the categories. Each condition sheet is composed of a list of pass/fail criteria. The ratio of 'passes' to 'fails' is used to determine the habitat condition.

Watercourse Habitats

- 3.2.3 For all watercourses (other than culverts and ditches) There is a separate condition assessment that uses River Condition Assessment (RCA) Methodology and required specific accreditation and training to conduct. The river condition assessment involves a site survey and a desk-based assessment.
- 3.2.4 There is one watercourse within the project boundary and an assessment was carried out by Madeleine Czura, an accredited river condition surveyor in January 2024. The assessment followed the guidance the Statutory Biodiversity Metric User Guide² and MoRPh survey manual (not publicly available).

3.3 Habitat Calculations

Unit Calculation

- 3.3.1 To calculate the habitat biodiversity unit total for the Site the units for each of the different habitat types are calculated and then summed. The unit number is based upon the habitat's size, distinctiveness, condition and strategic significance.

Habitat Size

- 3.3.2 The sizes of the different proposed habitats were calculated using a Geographical Information System using the baseline habitat data collected during the site survey. This was undertaken by Andrea Cordon in July 2023.
- 3.3.3 The area taken up by individual trees throughout the Site was calculated by inputting the trees into the 'Tree Helper Tool', included in the Biodiversity Metric calculation tool.
- 3.3.4 Hedgerows are recorded in kilometres using the centre line measurement along the length of the feature.
- 3.3.5 Watercourses are recorded in kilometres using the centre line measurement along the length of the feature.

Habitat Distinctiveness

- 3.3.6 The BM assigns a pre-defined distinctiveness band to each of the habitats and linear features.
- 3.3.7 This assessment is based upon "species richness, rarity (at local, regional, national and international scales), and the degree to which a habitat supports species rarely found in other habitats". Table 2 provides detail of the bandings to which each area-based habitat is assigned.

¹ Statutory biodiversity metric tools and guides - GOV.UK (www.gov.uk)

² Statutory biodiversity metric tools and guides - GOV.UK (www.gov.uk)

Table 2: Area based habitat distinctiveness valuation bandings

Distinctiveness band	Multiplier	Typical habitats
Very High	8	Priority habitats as defined in Section 41 of the Natural Environment and Rural Communities (NERC) Act (HMSO, 2006) that are highly threatened, internationally scarce and require conservation action e.g. blanket bog Small amount of remaining habitat with a high proportion unprotected by designation. Endangered or Critical European red list habitats.
High	6	Priority habitats as defined in Section 41 of the NERC Act (HMSO, 2006) requiring conservation action e.g., lowland fens Remaining Priority Habitats not in very high distinctiveness band & other red list habitats. Rivers and streams that are not classified as Priority River Habitat, other rivers and streams.
Medium	4	Semi-natural habitats not classed as a Priority Habitat but with significant wildlife benefit, e.g., mixed scrub. One Priority Habitat (arable field margins). An artificial body of water originally created for the purposes of navigation, whether it is currently navigable or not e.g. Canalised rivers. Artificially created linear water-conveyancing features which are less than 5 metres wide; and are likely to retain water for more than 4 months of the year e.g. ditches.
Low	2	Habitat of low biodiversity value e.g., temporary grass and clover ley. Agricultural and Urban land of lower biodiversity value. A covered channel or pipe designed to prevent the obstruction of a watercourse e.g. culvert.
Very low (hedgerow module)	1	
Very low (area module)	0	Little or no biodiversity value e.g., hard standing or sealed surface Urban – artificial structures which are un-vegetated, sealed surfaces or built linear features of very low biodiversity value.

Individual Trees

- 3.3.8 The biodiversity metric uses set values to represent the area of individual trees depending on their diameter at breast height.

Table 3: Tree size class and biodiversity metric area derived from BS 5837:2012

Size class	Diameter at breast height (cm)	Biodiversity metric area equivalent (ha)
Small	greater than 7.5cm and less than or equal to 30cm	0.0041
Medium	greater than 30cm and less than or equal to 60cm	0.0163
Large	greater than 60cm and less than or equal to 90cm	0.0366
Very large	greater than 90cm	0.076

- 3.3.9 The number of individual trees within the site are reported by inputting the tree count into the 'tree helper' within the biodiversity metric tool to generate area values for data input.
- 3.3.10 Any medium, large or very large trees within a hedgerow or 'rural' line of trees that are being removed have been recorded in the area baseline as individual trees.

Strategic Significance Assessment

- 3.3.11 Strategic significance is the local significance of the habitat based on its location and habitat type. This is usually informed by the Local Nature Recovery Strategy (LNRS)³, or where the LNRS has not been published alternative documents can be used.
- 3.3.12 Gloucestershire County Council and Gloucestershire Local Nature Partnership have been tasked with writing the LNRS which is predicted to be ready in 2025. Prior to this Gloucestershire Country Council recommended the use of the habitat inventory and Nature Recovery Network (NRN)⁴ an ecological network map for Gloucestershire, this shows the prioritised distribution of opportunities for creating a more resilient network of habitats and has been used to assign a strategic significance of each habitat in accordance with Guidance on delivering Biodiversity Net Gain for planning applicants and developers in Gloucestershire⁵.

Advanced and Delayed Habitat Creation

- 3.3.13 At this stage it was assumed that habitat interventions would not be delayed or advanced.

Calculation of Gains or Losses

- 3.3.14 The net change in biodiversity or hedgerow units on and off-site is calculated within the tool by subtracting the baseline units from the post-intervention units. The overall net change is the sum of

³ Local nature recovery strategies: responsible authorities - GOV.UK (www.gov.uk)

⁴ GLNP | Natural Capital (gcerdata.com)

⁵ BNG Guidance for LPA February 2024 (gloucestershire.gov.uk)

the change in units on-site and off-site. The percentage net gain is then calculated by dividing this overall net change by the number of baseline units on the Site, as shown in the equation below:

$$\text{overall percentage net gain} = \frac{\text{change in units on site} + \text{change in units off site}}{\text{baseline units on site}} \times 100$$

- 3.3.15 A positive value indicates a net gain has been made and a negative value indicates a net loss has been made.

4 Results

4.1 Baseline Biodiversity Units

- 4.1.1 A description of the habitats present within the red line boundary, shown in Appendix A, can be found in section 4.2 based on the site visit undertaken by Andrea Cordon in July 2023. Within this section a justification is provided for the alignment of these habitats with UKHab Habitat Classification typologies and their condition, connectivity, strategic significance scores.
- 4.1.2 The results of each habitat assessment and the total baseline units are presented in Table 4.
- 4.1.3 The baseline at Winchcombe CSEC currently provides 11.61 habitat, 6.73 hedgerow and 0.37 watercourse Biodiversity Units on-site.
- 4.1.4 The habitats present on the Site that were assessed for the baseline are presented in the Habitat Plan, Appendix A.

4.2 Habitat Typology and Condition

Modified Grassland

- 4.2.1 The grassland on the site was dominated by perennial rye grass (*Lolium perenne*), with frequent rough meadow grass (*Poa trivialis*) and white clover (*Trifolium repens*). The grassland was classified as low distinctiveness grassland with the specific habitat being modified grassland in poor condition.
- 4.2.2 Grassland was assessed to be poor condition due to failing essential criterion A with less than 6 vascular plant species per m2 and lack of variation in sward height.

Lowland Mixed Deciduous Woodland

- 4.2.3 Small areas totalling 0.19ha of woodland were present on site. These were part of a wider woodland classified as lowland mixed deciduous woodland, this is a high distinctiveness habitat. The woodland canopy was a mix of ash (*Fraxinus excelsior*), sycamore (*Acer pseudoplatanus*), and larch (*Larix decidua*), with occasional oak (*Quercus robur*), and other conifers including a row of Leyland cypress (*Cupressus x leylandii*). Understorey includes young ash and sycamore, and wych elm (*Ulmus glabra*). Dense Shrub layer of mainly hazel (*Corylus avellana*) and hawthorn (*Crataegus monogyna*) with occasional blackthorn (*Prunus spinosa*) field maple (*Acer campestre*) spindle (*Euonymus europaeus*), elder (*Sambucus nigra*), holly (*Ilex aquifolium*), Deutzia and cherry laurel (*Prunus laurocerasus*). Other species include primrose (*Primula vulgaris*), wild garlic (*Allium ursinum*), bluebell (*Hyacinthoides non-scripta*), wood avens (*Geum Urbanum*), red campion (*Silene dioica*), wood meadow grass (*Poa nemoralis*). More open areas had abundant nettle (*Urtica dioica*), and cleavers (*Galium aparine*).
- 4.2.4 0.09 ha of the woodland was classified as being in moderate condition due to only two age classes present, some standing deadwood and some nutrient enrichment present.
- 4.2.5 0.06 ha of the woodland was classified as being in good condition due to diversity of age classes, diversity of species present and presence of deadwood.

Urban

- 4.2.6 Some urban habitat was present on site, 0.08ha in the form of developed land sealed surface comprising hardstanding roads and 0.09ha in the form of bare ground in poor condition comprising a regularly used access track.
- 4.2.7 The bare ground was assessed as being in poor condition.

Individual Trees

- 4.2.8 Six large trees were present within the site boundary along hedgerow 2. These were assessed to be in good condition due to the maturity of the trees, presence of ecological niches and being native species.
- 4.2.9 None of these trees are expected to be impacted in the post intervention therefore accordance with the statutory biodiversity metric guidelines, these trees are not assessed as an area habitat.

Native Hedgerow

- 4.2.10 Hedgerow 1: Species-rich native hedgerow with trees in good condition. Well managed hedge between crops, with abundant blackthorn, elder and hawthorn, and frequent hazel, dog rose, mature oak tree and several willow trees.
- 4.2.11 Hedgerow 2: Species-rich native hedgerow with trees - associated with bank or ditch. Wide hedge along irrigation ditch, with abundant hawthorn, blackthorn, hazel and elder, lots of young sycamore and ash, and several large mature oaks with veteran features. The large trees here fall within the boundary and so have been recorded as individual rural trees see section 0.
- 4.2.12 Hedgerow 3: Species poor hedgerow in good condition. Tall, well managed hedge of hawthorn, blackthorn and field maple.
- 4.2.13 Hedgerow 4: Ecologically valuable line of trees in good condition. One veteran and two semi-mature oak and one semi-mature sycamore along edge of field.
- 4.2.14 Hedgerow 5 (bellmouth): Native hedgerow in good condition. Well managed hawthorn hedge along road, with occasional elder.
- 4.2.15 Hedgerow 6 (bellmouth): Species-rich native hedgerow with trees in moderate condition. Defunct hedge along road, with wych elm, willow, elder, blackthorn, dog rose, hawthorn, and occasional field maple, dog wood, alder buckthorn, damson, and hazel.
- 4.2.16 Hedgerow 7 (bellmouth): Native hedgerow in good condition. Well managed hedge along road, with abundant hawthorn and elder, and occasional blackthorn, privet, and young sycamore.
- 4.2.17 Hedgerow 8 (bellmouth): Native hedgerow with trees in good condition. Well managed hawthorn hedge along road, with occasional dog rose elder and hazel. Scattered semi mature and mature trees of sycamore, ash and oak.
- 4.2.18 Hedgerow 9 (bellmouth): Species rich native hedgerow in poor condition. Newly planted hedge of hawthorn, elder, spindle and dog rose.
- 4.2.19 Hedgerow 10 (bellmouth): Native hedgerow with trees in good condition. Well managed prunus sp. hedge, with occasional elder, hawthorn, or dog rose. Scattered semi mature and mature trees of ash and sycamore

Watercourse

- 4.2.20 One watercourse of 0.11km length is present within the site boundary with a river type is Straight/sinuuous, classified as other rivers and streams and was associated with a hedgerow containing trees. Using the River Condition Assessment (RCA), this watercourse is assessed to be in fairly poor condition due to the banks being impacted by poaching and large trash abundance.

Other Neutral Grassland

- 4.2.21 Areas within the bellmouth access to the site comprise of other neutral grassland.

- 4.2.22 0.12ha of other neutral grassland in poor condition. Road verge of rough grassland dominated by false oat-grass (*Arrhenatherum elatius*), with abundant cocksfoot (*Dactylis glomerata*), hogweed (*Heracleum sphondylium*), creeping thistle (*Cirsium arvense*), and nettle (*Urtica*). Locally abundant horsetail (*Equisetum*) and greater willowherb (*Epilobium hirsutum*).
- 4.2.23 0.1ha of other neutral grassland in moderate condition. Species poor grassland dominated by perennial rye grass (*Lolium perenne*) with abundant Yorkshire fog (*Holcus lanatus*), cocksfoot (*Dactylis glomerata*), crested dog's tail (*Cynosurus cristatus*), rough meadow grass, and frequent soft brome (*Bromus hordeaceus*). Abundant forbs limited to creeping (*Ranunculus repens*) and meadow buttercup (*Ranunculus acris*), red clover (*Trifolium pratense*), white clover (*Trifolium repens*), and common mouse-ear (*Cerastium fontanum*). Horse grazed.

Strategic Significance

- 4.2.24 The Site falls withing Gloucester County Council Local Authority for determining strategic significance. The Lowland Mixed deciduous woodland and other broadleaved woodland present on site is mapped as core woodland habitat in the NRN mapping and thus falls under high strategic significance 'Formally identified in local strategy'. All other habitats fall under low strategic significance 'Area/compensation not in local strategy/ no local strategy'.

Baseline Unit Summary

- 4.2.25 The tables below present a summary of the habitat valuations of the baseline habitat present for area and linear habitats.

Table 4: On-site are baseline biodiversity units for area habitat

Broad habitat	Habitat type	Area (ha)	Distinctiveness	Condition	Strategic significance	Habitat units
Grassland	Modified Grassland	2.88	Medium	Poor	Area/compensation not in local strategy/ no local strategy	5.76
Cropland	Cereal crops	0.55	Low	Condition Assessment N/A	Area/compensation not in local strategy/ no local strategy	1.11
Grassland	Other neutral grassland	0.12	Medium	Poor	Area/compensation not in local strategy/ no local strategy	0.47
Grassland	Other neutral grassland	0.10	Medium	Moderate	Area/compensation not in local strategy/ no local strategy	0.77
Urban	Bare ground	0.09	Low	Poor	Area/compensation not in local strategy/ no local strategy	0.17
Urban	Bare ground	0.09	Low	Good	Area/compensation not in local strategy/ no local strategy	0.51

Broad habitat	Habitat type	Area (ha)	Distinctiveness	Condition	Strategic significance	Habitat units
Woodland and forest	Lowland mixed deciduous woodland	0.06	High	Good	Formally identified in local strategy	1.24
Woodland and forest	Lowland mixed deciduous woodland	0.09	High	Moderate	Formally identified in local strategy	1.30
Woodland and forest	Other woodland; broadleaved	0.03	Medium	Moderate	Formally identified in local strategy	0.32
Urban	Developed land; sealed surface	0.43	V.Low	N/A - Other	Area /compensation not in local strategy/ no local strategy	0
Total						11.61

Table 5: On-site are baseline biodiversity units for linear habitats (10 hedgerow and one watercourse)

Number	Broad habitat	Habitat type	Length (km)	Distinctiveness	Condition	Strategic significance	Habitat units
1	Hedgerow	Native hedgerow	0.06	Low	Good	Area /compensation not in local strategy/ no local strategy	0.37
2	Hedgerow	Species-rich native hedgerow with trees - associated with bank or ditch	0.09	V.High	Good	Area/ compensation not in local strategy/ no local strategy	2.25
3	Hedgerow	Species-rich native hedgerow with trees	0.03	High	Good	Area/ compensation not in local strategy/ no local strategy	0.52
4	Hedgerow	Ecologically valuable line of trees	0.04	Medium	Good	Area/ compensation not in local strategy/ no local strategy	0.50

Number	Broad habitat	Habitat type	Length (km)	Distinctiveness	Condition	Strategic significance	Habitat units
5	Hedgerow	Native hedgerow	0.132102337	Low	Good	Area/ compensation not in local strategy/ no local strategy	0.79
6	Hedgerow	Native hedgerow with trees	0.133318286	Medium	Moderate	Area/ compensation not in local strategy/ no local strategy	1.07
7	Hedgerow	Native hedgerow with trees	0.017501641	Medium	Good	Area /compensation not in local strategy/ no local strategy	0.21
8	Hedgerow	Native hedgerow	0.055534031	Low	Goo	Area/ compensation not in local strategy/ no local strategy	0.33
9	Hedgerow	Species-rich native hedgerow with trees	0.049895858	High	Moderate	Area/ compensation not in local strategy/ no local strategy	0.6
10	Hedgerow	Species-rich native hedgerow	0.021235446	Medium	Poor	Area/ compensation not in local strategy/ no local strategy	0.08
						Total Hedgerow	6.73
	Watercourse	Other rivers and streams	0.11	High	Fairly poor	Area /compensation not in local strategy/ no local strategy	0.37
						Total watercourse	0.37

4.3 Indicative Landscape Proposals (Post Development)

Area Based Habitats

- 4.3.1 Landscape detail is indicative only. However, to determine whether the designs have the potential to deliver the required biodiversity net gain, the information was assessed. The calculation of potential biodiversity unit delivery is based upon habitats within the accessible areas and is considered to be precautionary.
- 4.3.2 Under predicted landscape plans an uplift of 2.11 habitat units (18.15% net gain) and 1.58 hedgerow units (23.49% net gain) biodiversity value is provided. 0 watercourse units are expected to be achieved, due to no condition change to the watercourse.

Retained Habitats (On-site)

- 4.3.3 The urban habitats and some of the grassland and woodland habitats will all be retained within the design totalling 9.11 area biodiversity units. The majority of the hedgerows on site will be retained totalling 6.44 hedgerow biodiversity units.

Watercourse

- 4.3.4 The watercourse on site will be mostly retained with a section being culverted, this culvert is not expected to change the current river condition of fairly poor totalling 0.37 watercourse biodiversity units.

Created Habitats (On-site)

Urban – Developed land/sealed surface and Artificial unvegetated, unsealed surface

- 4.3.5 The majority of the created habitats on site will be buildings and hardstanding (0.44ha). This habitat has a predefined condition of N/A so no condition assessment is required.

Grassland – other neutral grassland

- 4.3.6 Surrounding the buildings it is assumed that 0.12ha of other neutral grassland will be created, It is also assumed that this habitat will be in good condition.
- 4.3.7 Other neutral grassland is assessed using the grassland condition sheet from the statutory BM presented below. The grassland will be created to replace existing modified grassland. Due to the change in habitat, correct soil management including turnover and careful land sculpting should be carried out to ensure the condition is met and create a varied sward height. Furthermore, the use of local grassland seed mix ensuring high diversity of species and management of grassland to prevent invasives and bramble cover should be factored into management. This is expected to be achievable within the post intervention over the timeframe.

Table 6: Condition assessment criteria for grassland

Criterion	Description
A	The parcel represents a good example of its habitat type, with a consistently high proportion of characteristic indicator species present relevant to the specific habitat type.

Criterion	Description
B	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.
C	Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens.
D	Cover of bracken <i>Pteridium aquilinum</i> is less than 20% and cover of scrub (including bramble <i>Rubus fruticosus</i> agg.) is less than 5%.
E	Combined cover of species indicative of suboptimal condition and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area. If any invasive non-native plant species (as listed on Schedule 9 of WCA) are present, this criterion is automatically failed.
F	There are 10 or more vascular plant species per m2 present, including forbs that are characteristic of the habitat type

Condition Assessment Result	Description
Good (3)	Passes 5 or 6 criteria, including essential criterion A and additional criterion F.
Moderate (2)	Passes 3 - 5 criteria, including essential criterion A.
Poor (1)	Passes 2 or fewer criteria; OR Passes 3 or 4 criteria excluding criterion A and F.

Heathland and Shrub – Mixed Scrub

- 4.3.8 Additional scrub planting totalling 0.41 Ha is proposed to be planted within the landscaping of the development parcels.
- 4.3.9 Mixed scrub is assessed using the scrub condition sheet from the statutory BM presented below in Table 7. This habitat is targeted to be of good condition by using a mix of species and age ranges, management to prevent any invasive species and incorporating glades into the scrub patches.

Table 7: Condition assessment for the proposed mixed scrub habitat

Condition Assessment Criteria

- Habitat is representative of UKHab description (where in its natural range). There are at least three woody species, with no one species comprising more than 75% of the cover (except common juniper, sea buckthorn or box, which can be up to 100% cover).
- There is a good age range – all of the following are present: seedlings, young shrubs and mature shrubs.

Condition Assessment Criteria

- | | |
|---|--|
| 3 | There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981) and undesirable species ¹ make up less than 5% of ground cover. |
| 4 | The scrub has a well-developed edge with scattered scrub and tall grassland and/or herbs present between the scrub and adjacent habitat(s). |
| 5 | There are clearings, glades or rides present within the scrub, providing sheltered edges. |

Condition Assessment Result	Condition Assessment Score
-----------------------------	----------------------------

Passes 5 of 5 criteria	Good (3)
Passes 3 or 4 of 5 criteria	Moderate (2)
Passes 0, 1 or 2 of 5 criteria	Poor (1)

Woodland - Other Woodland; Mixed

- 4.3.10 Some woodland planting will be undertaken on site totalling 0.12ha. Taking a precautionary approach it is expected that the woodland would be in poor condition. This is due to planting a range of species, lack of browsing pressure, management to prevent invasives species. Due to it being newly planted woodland there will be a lack of age diversity, with only one storey present and lack of deadwood.

Table 8: condition assessment criteria for woodland

Condition Assessment Criteria for woodland

Indicator	Good (3 points)	Moderate (2 points)	Poor (1 point)
A. Age distribution of trees	Three age-classes present.	Two age-classes present.	One age-class present.
B. Wild, domestic and feral herbivore damage	No significant browsing damage evident in woodland ² .	Evidence of significant browsing pressure is present in 40% or less of whole woodland ² .	Evidence of significant browsing pressure is present in 40% or more of whole woodland ² .
C. Invasive plant species	No invasive species present in woodland.	Rhododendron <i>Rhododendron ponticum</i> or cherry laurel <i>Prunus laurocerasus</i> not present, other invasive species <10% cover.	Rhododendron or cherry laurel present, or other invasive species ³ >10% cover.
D. Number of native tree species	Five or more native tree or shrub species found across woodland parcel.	Three to four native tree or shrub species found across woodland parcel.	Two or less native tree or shrub species across woodland parcel.

Condition Assessment Criteria for woodland

Indicator	Good (3 points)	Moderate (2 points)	Poor (1 point)
E. Cover of native tree and shrub species	>80% of canopy trees and >80% of understory shrubs are native.	50 - 80% of canopy trees and 50 - 80% of understory shrubs are native.	<50% of canopy trees and <50% of understory shrubs are native.
F. Open space within woodland	10 - 20% of woodland has areas of temporary open space. Unless woodland is <10ha, in which case 0 - 20% temporary open space is permitted.	21 - 40% of woodland has areas of temporary open space.	<10% or >40% of woodland has areas of temporary open space. But if woodland <10ha has <10% temporary open space, please see Good category.
G. Woodland regeneration	All three classes present in woodland ⁸ ; trees 4 - 7 cm Diameter at Breast Height (DBH), saplings and seedlings or advanced coppice regrowth.	One or two classes only present in woodland ⁸ .	No classes or coppice regrowth present in woodland ⁸ .
H. Tree health	Tree mortality less than 10%, no pests or diseases and no crown dieback.	11% to 25% mortality and/or crown dieback or low-risk pest or disease present.	Greater than 25% tree mortality and or any high-risk pest or disease present.
I. Vegetation and ground flora	Recognisable NVC plant community at ground layer present, strongly characterised by ancient woodland flora specialists.	Recognisable woodland NVC plant community at ground layer present.	No recognisable woodland NVC plant community at ground layer present.
J. Woodland vertical structure	Three or more storeys across all survey plots or a complex woodland.	Two storeys across all survey plots.	One or less storey across all survey plots.
K. Veteran trees	Two or more veteran trees per hectare.	One veteran tree per hectare.	No veteran trees present in woodland.
L. Amount of deadwood	50% of all survey plots within the woodland parcel have deadwood, such as standing deadwood, large dead branches and or stems, branch stubs and stumps, or an abundance of small cavities.	Between 25% and 50% of all survey plots within the woodland parcel have deadwood, such as standing deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities.	Less than 25% of all survey plots within the woodland parcel have deadwood, such as standing deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities.

Condition Assessment Criteria for woodland

Indicator	Good (3 points)	Moderate (2 points)	Poor (1 point)
M. Woodland disturbance	No nutrient enrichment or damaged ground evident.	Less than 1 hectare in total of nutrient enrichment across woodland area and or less than 20% of woodland area has damaged ground.	More than 1 hectare of nutrient enrichment and or more than 20% of woodland area has damaged ground.
Total score >32 (33 to 39)	Good		
Total score 26 to 32	Moderate		
Total score <26 (13 to 25)	Poor		

Hedgerow

- 4.3.11 Two species rich hedgerows will be planted on site covering 0.22km. These habitats are expected to achieve moderate condition in line with the statutory BM hedgerow condition criteria. They are expected to reach at least 1.5m height and be maintained at 1.5m width. Management to prevent the establishment of invasive species and ensure that prevent gaps in the hedgerows.

Strategic Significance

- 4.3.12 The small woodland parcels created on site fall within the woodland high and medium priority areas within the Nature Recovery Network thus are classes as High strategic significance of "Formally identified in local strategy". All other habitats on the Site are still considered to have a strategic significance of "area/compensation not in local strategy/no local strategy".

Summary of Post Intervention Habitats

- 4.3.13 A summary of the valuation of the post intervention site for area habitats and hedgerow habitat is presented as retained units in Table 9, created area units in Table 10 and hedgerow creation units in Table 11.

Table 9: Biodiversity area units retained on site

Unit type	Biodiversity units
Area based habitats	9.11
Hedgerow	6.44
Watercourse	0.37

Table 10: Biodiversity units from created area habitats on-site, post-intervention

broad habitat	Habitat type	Area (ha)	Distinctiveness	Condition	Time to target condition (years)	Difficulty	Biodiversity units
Urban	Developed land/sealed surface	0.44	V. Low	N/A	N/A	Medium	0.00
Heathland and shrub	Mixed scrub	0.41	Medium	Good	10	Low	3.44
Grassland	Other neutral grassland	0.12	medium	Good	10	Low	1.04
woodland	Other woodland mixed	0.04	Medium	Poor	5	Low	0.14

Table 11: Biodiversity units from created hedgerow habitat on site, post intervention

Broad habitat	Habitat type	Length (km)	Distinctiveness	Condition	Time to target condition (years)	Difficulty	Biodiversity units
Hedgerow	Species-rich native hedgerow with trees	0.08	High	Moderate	10	Low	0.68
Hedgerow	Species-rich native hedgerow with trees	0.14	High	Moderate	10	Low	1.19

4.4 Trading Summary

- 4.4.1 The trading rules set minimum habitat creation and enhancement requirements to compensate for specific habitat losses, up to the point of no net loss. They are based on the habitat type and distinctiveness of the lost habitat.

Area Habitats

- 4.4.2 The changes to the medium and high distinctiveness habitats present within the development parcels are presented in Table 12.
- 4.4.3 According to the habitat trading rules for Medium distinctiveness habitats losses must be replaced by area habitat units of either medium band habitats within the same broad habitat type or, any habitat from a higher band from any broad habitat type. For high distinctiveness habitats losses must be replaced with area habitat units of the same habitat type.

- 4.4.4 Both medium and high distinctiveness area habitats are present in Winchcombe CSEC. Under the current landscape proposals the post intervention scenario does not satisfy the trading rules for woodland and forest high distinctiveness habitat. This is due to areas of lowland mixed deciduous woodland being lost (Table 12). The total loss of units not accounted for this habitat is -0.51 units. This will need to be offset through provision of lowland mixed deciduous woodland area units off-site.

Table 12: The changes in the total biodiversity unit values of medium and high distinctiveness area habitats on-site

Habitat group	Group	Distinctiveness	On-site unit change	Losses not yet accounted for
Woodland and forest - Lowland mixed deciduous woodland	Woodland and forest	High	-0.51	-0.51
Grassland - Other neutral grassland	Grassland	Medium	1.04	none
Heathland and shrub - Mixed scrub	Heathland and shrub	Medium	3.44	none
Woodland and forest - Other woodland; mixed	Woodland and forest	Medium	0.12	none

Hedgerow Habitats

- 4.4.5 The changes to very high and high distinctiveness hedgerow habitats are presented in Table 13.
- 4.4.6 Under the trading rules for the statutory biodiversity metric, for very high distinctiveness hedgerows, losses must be replaced with hedgerow units of the same habitat type. For high distinctiveness hedgerows losses must be replaced with hedgerow units of the same habitat type or of a higher band.
- 4.4.7 Both high and very high distinctiveness hedgerow is present in Winchcombe CSEC. Under the current indicative landscape proposals the post intervention scenario does not satisfy the trading rules for very high distinctiveness hedgerows, this is due to the small loss of species-rich native hedgerow with trees - associated with bank or ditch totalling a small unit loss of -0.08 units. This will need to be offset through provision of species-rich native hedgerow with trees - associated with bank or ditch hedgerow units either on or off-site.

Table 13: Hedgerow habitat trading summary

Habitat group	Habitat	Distinctiveness	On-site unit change	Losses not yet accounted for
Hedgerow	Species-rich native hedgerow with trees - associated with bank or ditch	Very High	-0.08	-0.08
Hedgerow	Species-rich native hedgerow with trees	High	1.87	none

4.5 Summary Results

The summary results of the assessment for the proposal, using the statutory Biodiversity Metric calculator are presented below.

Image 2: Final results of BNG calculation

On-site baseline	Habitat units	11.61	
	Hedgerow units	6.73	
	Watercourse units	0.37	
On-site post-intervention (including habitat restoration, creation & enhancement)	Habitat units	13.72	
	Hedgerow units	8.31	
	Watercourse units	0.37	
On-site net change (units & percentages)	Habitat units	2.11	18.18%
	Hedgerow units	1.58	23.49%
	Watercourse units	0.00	0.00%

Image 3: Area trading summary

Distinctiveness Group	Trading Rule	Trading Satisfied?
Very High	Same habitat required – bespoke compensation option ▲	Yes ✓
High	Same habitat required =	No ▲
Medium	Same broad habitat or a higher distinctiveness habitat required (≥)	Yes ✓
Low	Same distinctiveness or better habitat required ≥	Yes ✓

Image 4: Hedgerow trading summary

Distinctiveness Group	Trading Rule	Trading Satisfied?
Very High	Same habitat required =	No ▲
High	Like for like or better	Yes ✓
Medium	Same distinctiveness or better habitat required	Yes ✓
Low	Same distinctiveness or better habitat required	Yes ✓
Very Low	Same distinctiveness or better habitat required	Yes ✓

- 4.5.1 The BM indicates a biodiversity net gain of 18.15% can be delivered for area based habitats. In the baseline state, the modified grassland on site has a low baseline biodiversity value therefore it is possible to provide a large uplift of biodiversity value by making habitat changes to these areas.

Furthermore a 23.49% biodiversity net gain for hedgerow habitats is expected to be delivered due to the additional planting of two hedgerows.

- 4.5.2 No biodiversity net gain is delivered for the watercourse on site, as no change in condition is expected. A 20% net gain in watercourse biodiversity units will be achieved by purchasing off-site BNG credits.
- 4.5.3 Although the assessment results provided significant net gain the habitat trading rules were not met, this will be resolved through the purchase of off-site BNG credits to ensure 20% biodiversity net gain across all three habitat types.

5 Conclusion

- 5.1.1 An assessment of the submitted application for Winchcombe CSEC was conducted to determine if the design could deliver the required 10% biodiversity net gain required by local and national policy and the aspirational 20% required by the Cotswolds National Landscape. This assessment was conducted using the statutory Biodiversity Metric (BM). This compares the baseline state of the site with the potential as-built state to determine if a net gain for biodiversity will be delivered.
- 5.1.2 The proposed development areas were predominantly hardstanding with landscaping of mixed scrub, other neutral grassland and woodland. This assessment demonstrates that the landscape design would deliver 2.11 (18.15% net gain) area units and 1.58 (23.49% net gain) hedgerow units. However, the proposals deliver 0 watercourse units. To evidence a net gain in biodiversity and discharge the biodiversity condition at least 20% net gain in biodiversity units would need to be evidenced in all three habitat types.
- 5.1.3 Space restrictions within the design and difficulty of woodland creation do not allow for the provision of enough high distinctiveness lowland mixed deciduous woodland habitat to satisfy the trading rules regarding the loss of lowland mixed deciduous woodland, this is a small area of shortfall totalling - 0.51 units. Furthermore, the loss of very high distinctiveness hedgerow does not satisfy the trading rules as the same habitat must be created to compensate for the loss, this is a small area of loss totalling -0.08 units. An additional 0.074 watercourse units of other rivers and streams would satisfy the 20% net gain for watercourse units.
- 5.1.4 To satisfy the trading rules and the requirement for watercourse units off-site BNG credits will be purchased. It is proposed that these units will be purchased and secured from the Cotswolds National Landscape (CNL), or other similar third party, who retain local habitat banks and connections with local landowners.
- 5.1.5 National Grid have committed to purchasing off-site BNG credits in order to achieve 20% BNG and to satisfy all trading rules. It is National Grid's intention to purchase the credits required to meet the deficit shown in Table 14 from Cotswold National Landscape. As a result of this, Winchcombe CSEC will achieve 20% BNG and all trading rules will be satisfied.

Table 14: Unit shortfall for reaching net gain targets

Unit type	Baseline units	On Site unit difference post-intervention	Needed to achieve 10% net gain and satisfy trading rule	Needed to achieve 20% net gain and satisfy trading rules
Area	11.61	+2.11 (18.15%)	+0.51*	+0.51*
Hedgerow	6.73	+1.58 (23.49%)	+0.08 **	+0.08 **
Watercourse	0.37	0 (0%)	+0.037	+0.074

*must be Lowland Mixed Deciduous Woodland

**must be Species-rich native hedgerow with trees - associated with bank or ditch

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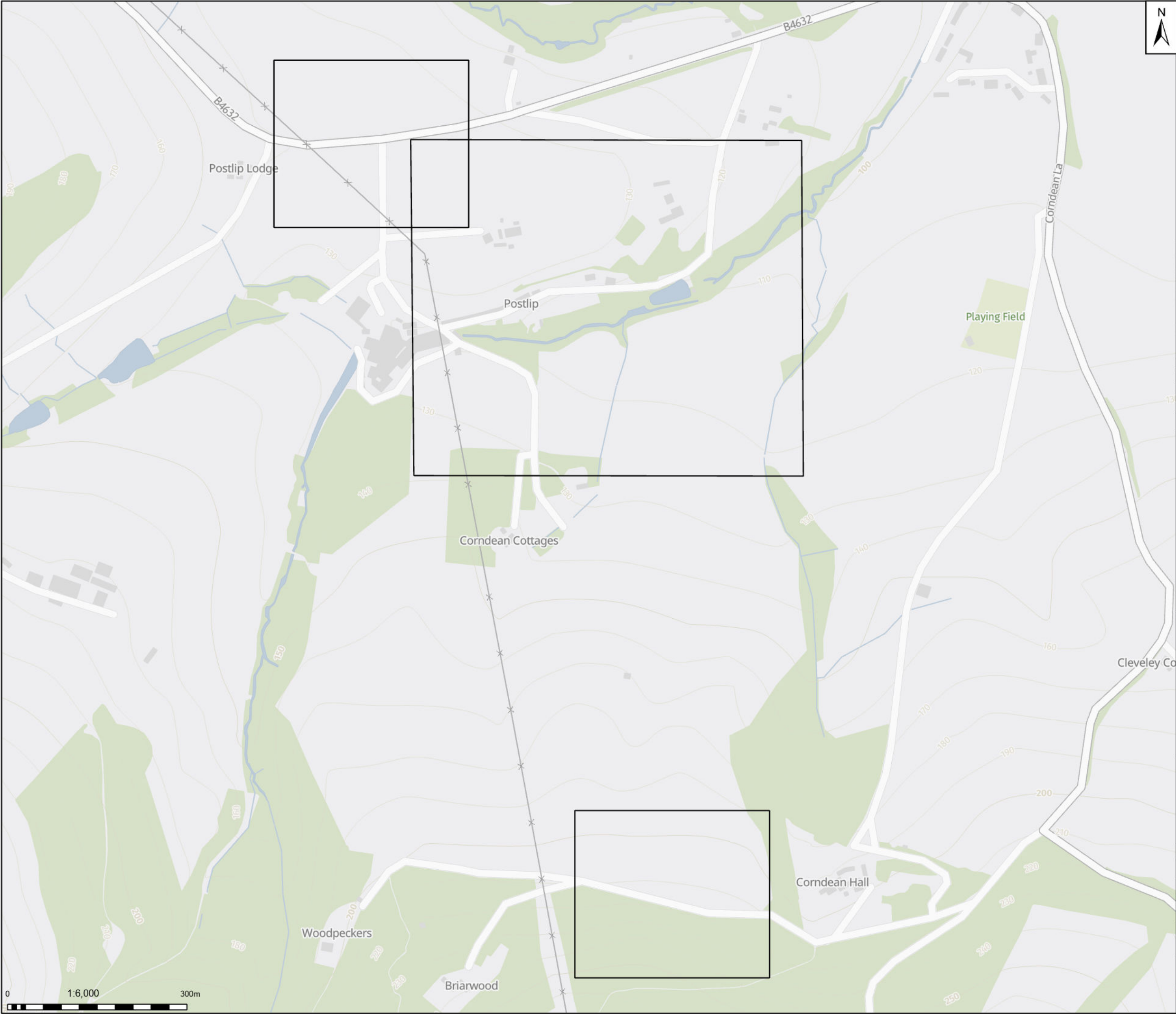
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APPENDIX A: Baseline Habitat Map



Legend

Pages

Notes:

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Winchcombe

Cleeve

Cleeve Hill

Southam

01	28/05/24	INITIAL ISSUE	SB	MC	SJ
Rev	Date	Description	Drawn	Check	Approv

Client:

PROJECT:

nationalgrid

COTSWOLD VIP

Site

Cotswolds

Client

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Registered office:
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Winchcombe CSEC Habitat
Baseline for Biodiversity Net Gain
Page 1 of 4

Designed	M. Czura	Date 28 MAY 24	Signed
Drawn	S. Bhandarkar	Date 28 MAY 24	Signed
Checked	M. Czura	Date 28 MAY 24	Signed
Approved	S. Jones	Date 28 MAY 24	Signed
Scale:	1:6,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	S2	Project Number:	30167905

Suitability Description:

For Planning

Drawing Number:

30167905-ARC-EGN-ZZ-DR-ZZ-00046

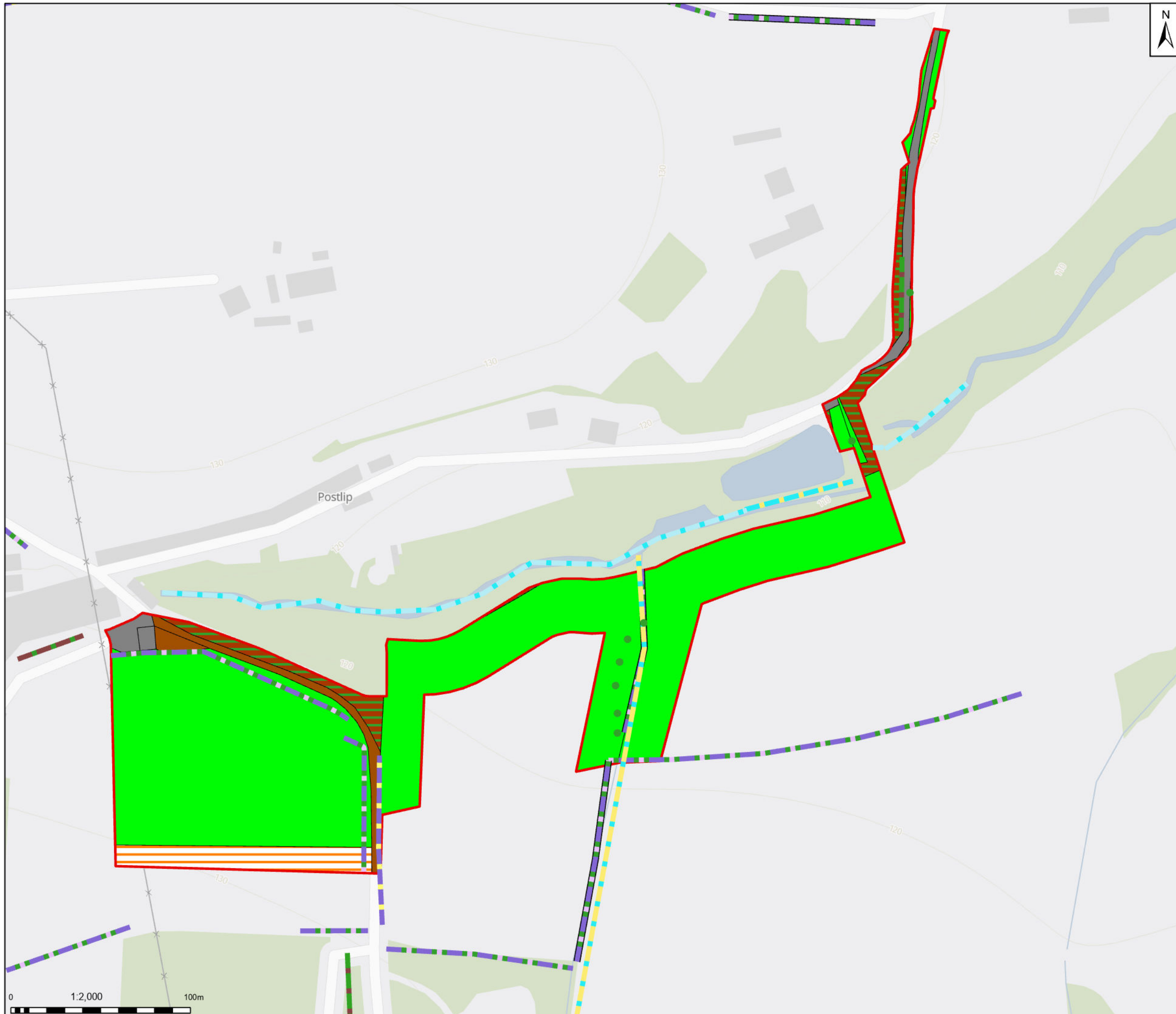
Revision:

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Print Date: 06-04-24 15:12:07

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N

Legend

Site Boundary

Baseline for Biodiversity Net Gain

Bare ground

Cereal crops

Urban- Developed land Sealed surface

Lowland mixed deciduous woodland

Modified grassland

Grassland- Other Neutral Grassland

Temporary grass and clover leys

Canals

Ditches

Other rivers and streams

Native hedgerow

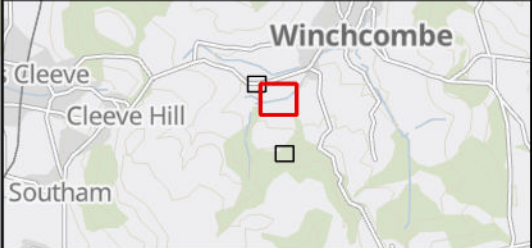
Species-rich native hedgerow with trees

Species-rich native hedgerow with trees - associated with bank or ditch

Rural Trees

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PROJECT:
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Site
Cotswolds

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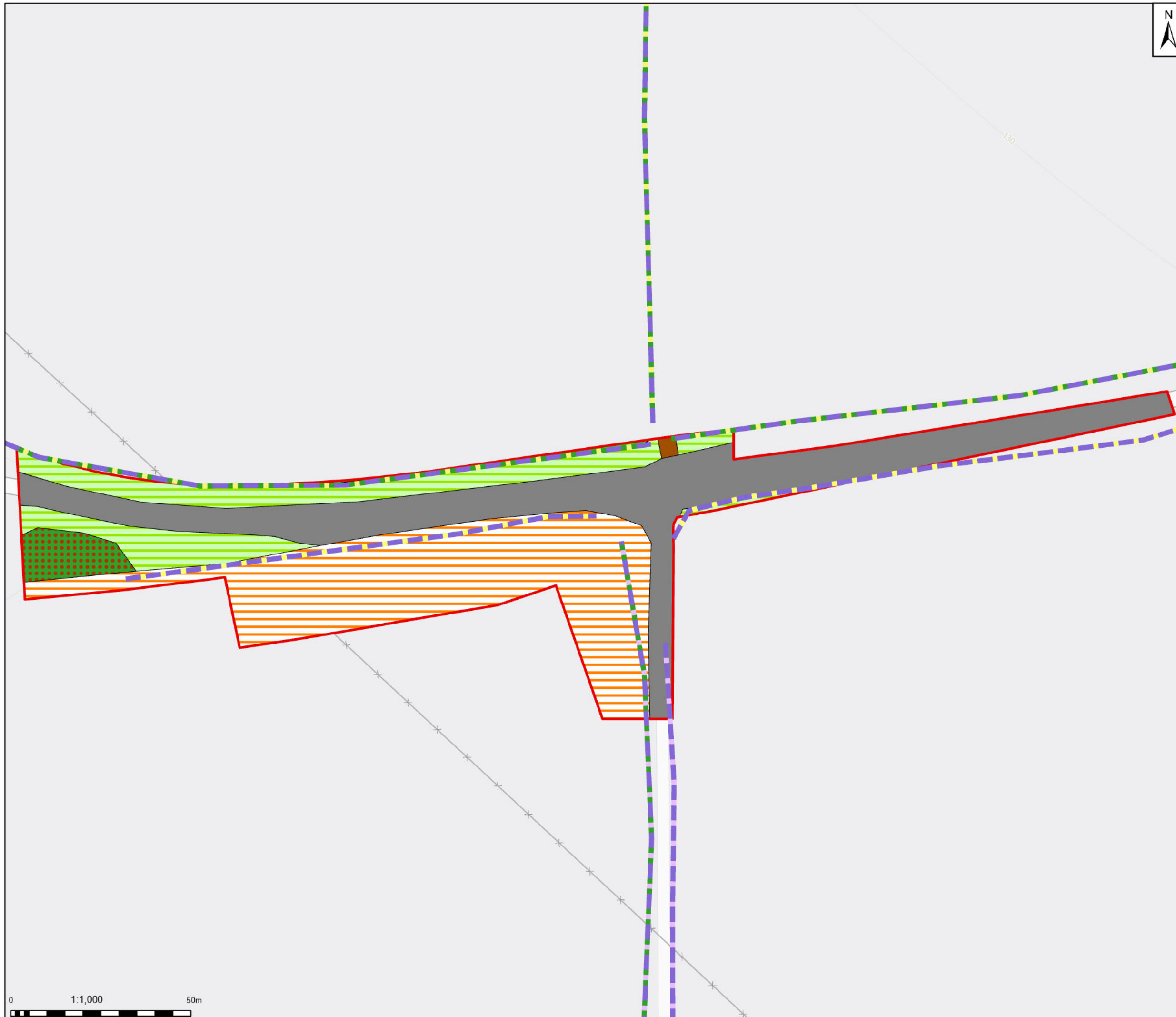
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Drawn	S. Bhandarkar	Date 28 MAY 24	Signed
Checked	M. Czura	Date 28 MAY 24	Signed
Approved	S. Jones	Date 28 MAY 24	Signed
Scale:	1:2,000	Datum:	AOD
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Suitability Code:	S2	Project Number:	30167905

Suitability Description:

For Planning

Drawing Number:
30167905-ARC-EGN-ZZ-DR-ZZ-00046

Revision:
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N

Legend

- Site Boundary
- Baseline for Biodiversity Net Gain
 - Bare ground
 - Cereal crops
 - Urban- Developed land Sealed surface
 - Modified grassland
 - Grassland- Other Neutral Grassland
 - Other woodland broadleaved
 - Native hedgerow
 - Native hedgerow with trees
 - Species-rich native hedgerow
 - Species-rich native hedgerow with trees

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Client:

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nationalgrid COTSWOLD VIP

Site Cotswolds

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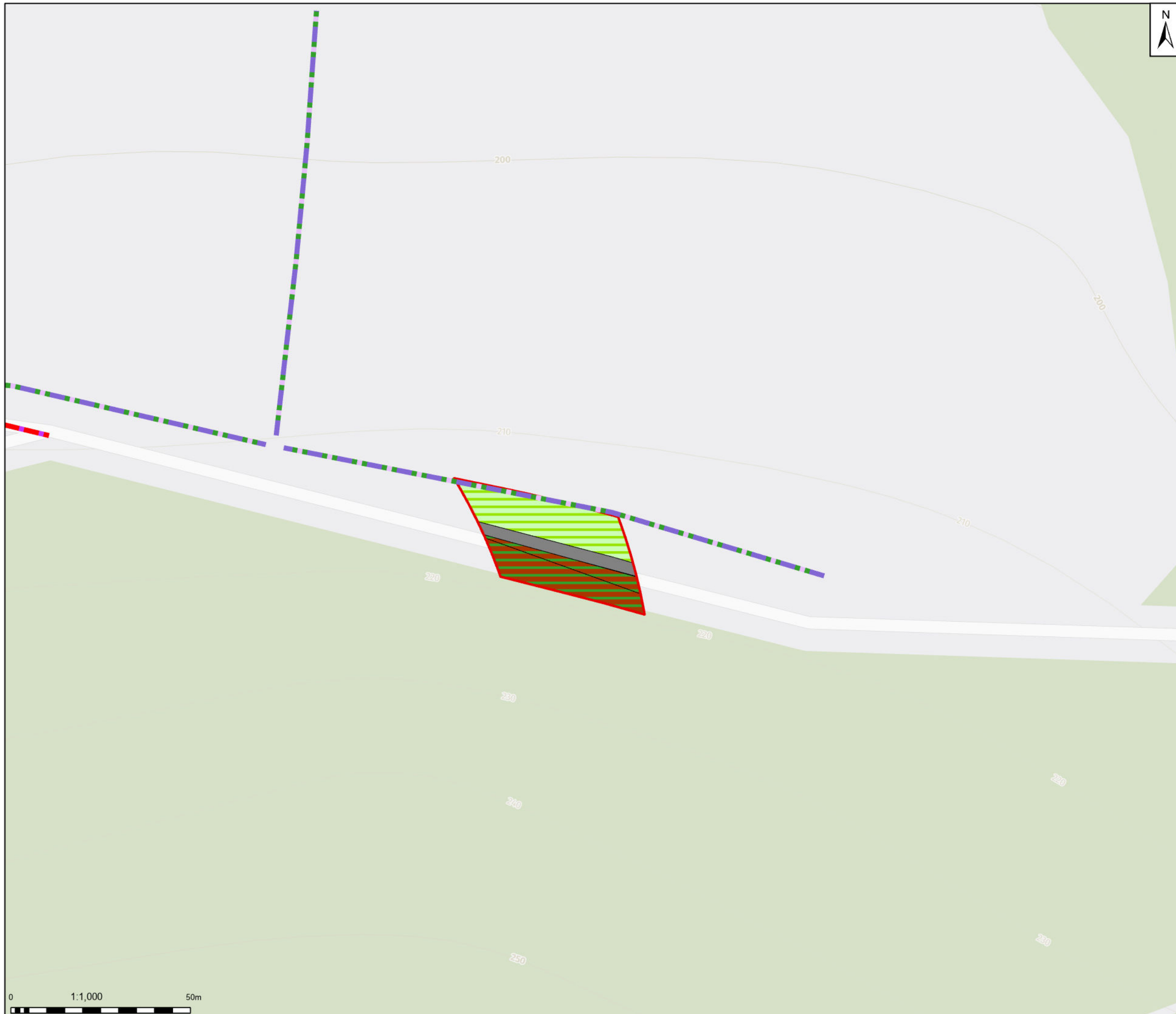
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Approved	S. Jones	Date 28 MAY 24	Signed
Scale:	1:1,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	S2	Project Number:	30167905

Suitability Description:

For Planning

Drawing Number:
30167905-ARC-EGN-ZZ-DR-ZZ-00046

Revision:
P01



N

Legend

Site Boundary

Urban- Developed land Sealed surface

Lowland mixed deciduous woodland

Grassland- Other Neutral Grassland

Non-native and ornamental hedgerow

Species-rich native hedgerow with trees

Notes:

GB Background: Contains OS data © Crown Copyright and database right 2023

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Winchcombe

Cleeve

Cleeve Hill

Southam

01	28/05/24	INITIAL ISSUE	SB	MC	SJ
Rev	Date	Description	Drawn	Check	Approv

Client:

PROJECT:

nationalgrid

COTSWOLD VIP

Site

Cotswolds

Client

1-3 Strand
London
WC2N 5EH

ARCADIS

Registered office:
80Fen
80 Fenchurch Street
London
EC3M 4BY

Coordinating Office:
1st Floor
2 Glass Wharf
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www.arcadis.com

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Winchcombe CSEC Habitat
Baseline for Biodiversity Net Gain
Page 4 of 4

Designed	M. Czura	Date 28 MAY 24	Signed
Drawn	S. Bhandarkar	Date 28 MAY 24	Signed
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Suitability Code:	S2	Project Number:	30167905

Suitability Description:

For Planning

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Revision:

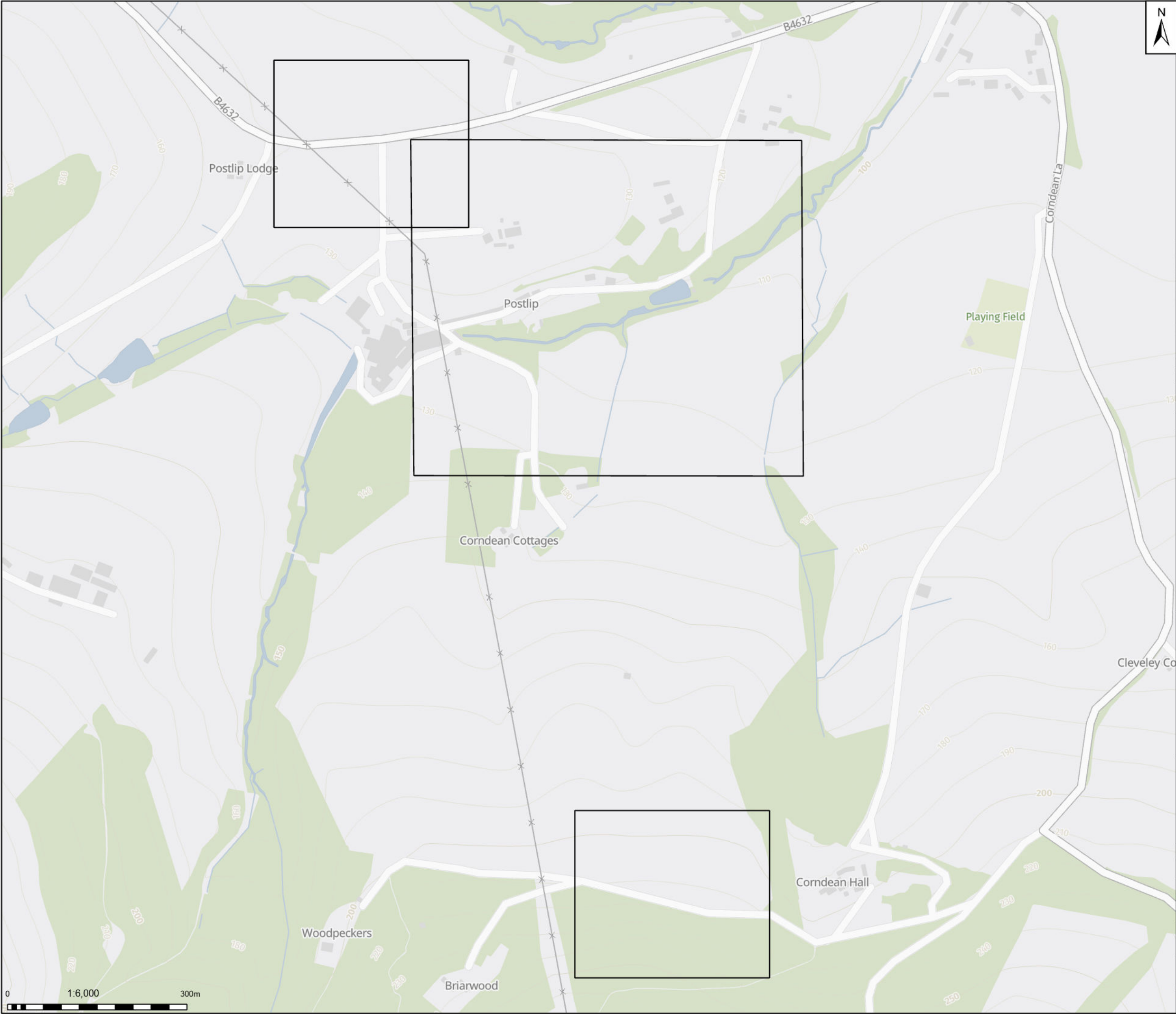
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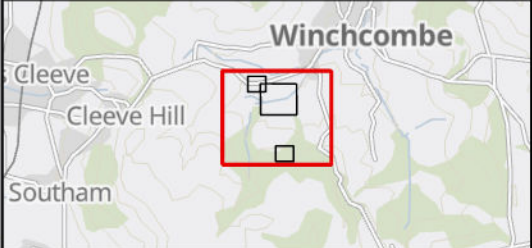
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APPENDIX B: Post Intervention Habitat Map



Legend
Pages

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Site Cotswolds

Client
1-3 Strand
London
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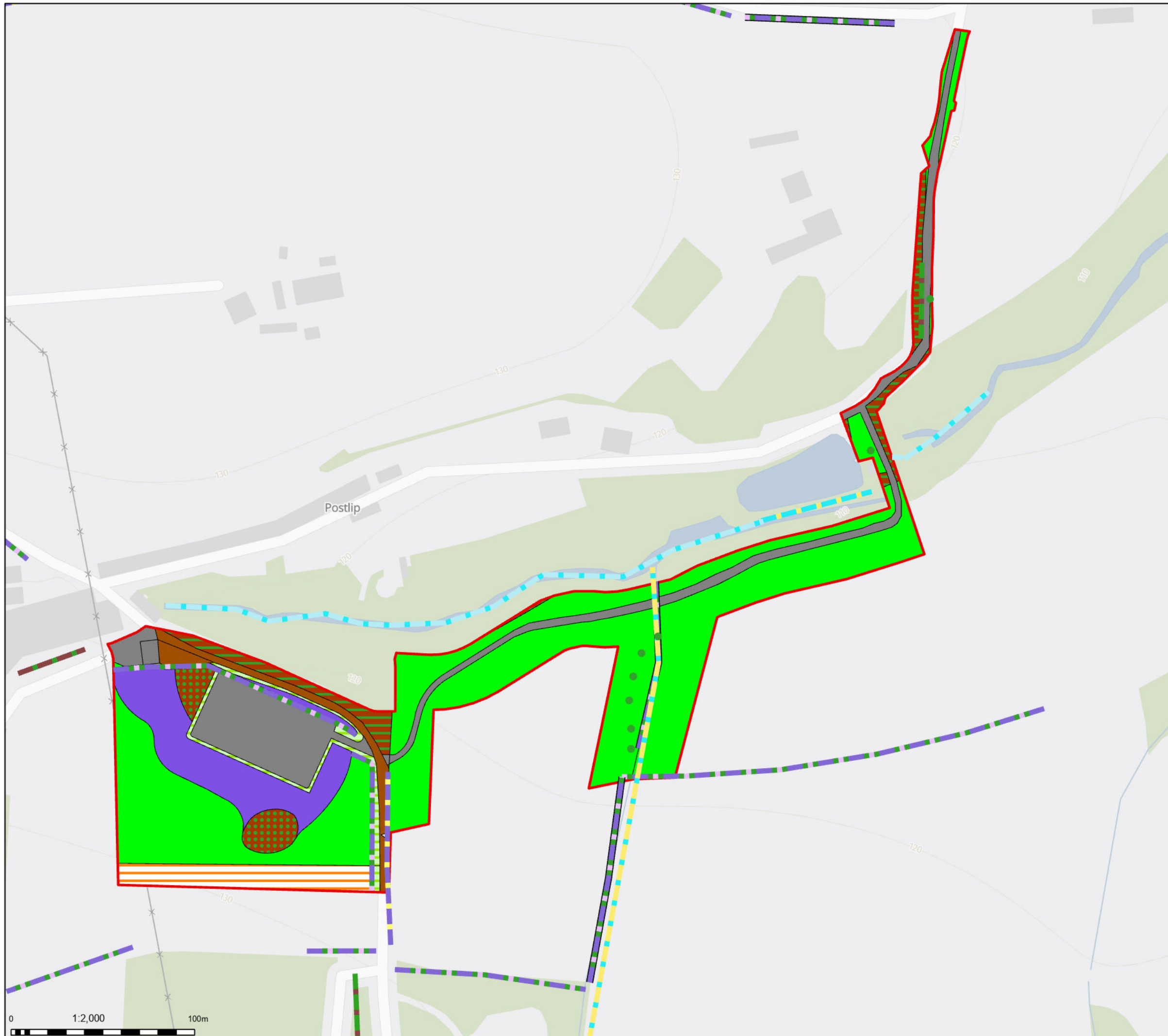
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Suitability Code:	S2	Project Number:	30167905

Suitability Description:

For Planning

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30167905-ARC-EGN-ZZ-DR-ZZ-00047-S2	P01



N

Legend

Site Boundary

Post Intervention Biodiversity Net Gain

Grassland- Other Neutral Grassland

Heathland and Scrub-mixed scrub

Urban- Developed land Sealed surface

Woodland- Other Woodland mixed

Bare ground

Cereal crops

Lowland mixed deciduous woodland

Modified grassland

Temporary grass and clover leys

Rural Trees

Native hedgerow

Species-rich native hedgerow with trees

Species-rich native hedgerow with trees - associated with bank or ditch

Canals

Ditches

Other rivers and streams

Ecologically valuable line of trees

Line of trees

Notes:

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COTSWOLD VIP

Site

Cotswolds

Client

1-3 Strand
London
WC2N 5EH

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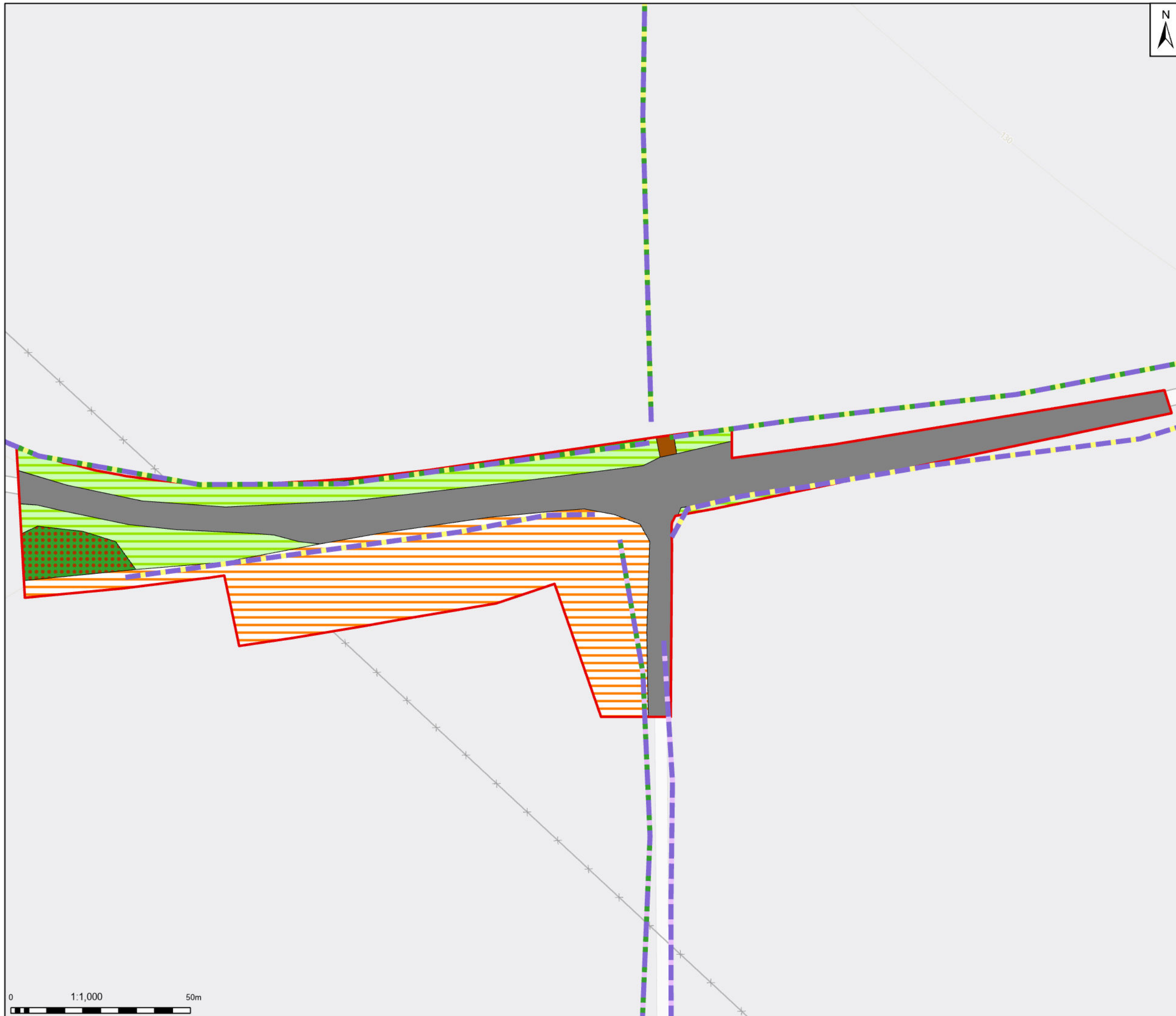
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N

Legend

Site Boundary

Post Intervention Biodiversity Net Gain

Grassland- Other Neutral Grassland

Urban- Developed land Sealed surface

Bare ground

Cereal crops

Modified grassland

Other woodland broadleaved

Native hedgerow

Native hedgerow with trees

Species-rich native hedgerow

Species-rich native hedgerow with trees

Notes:

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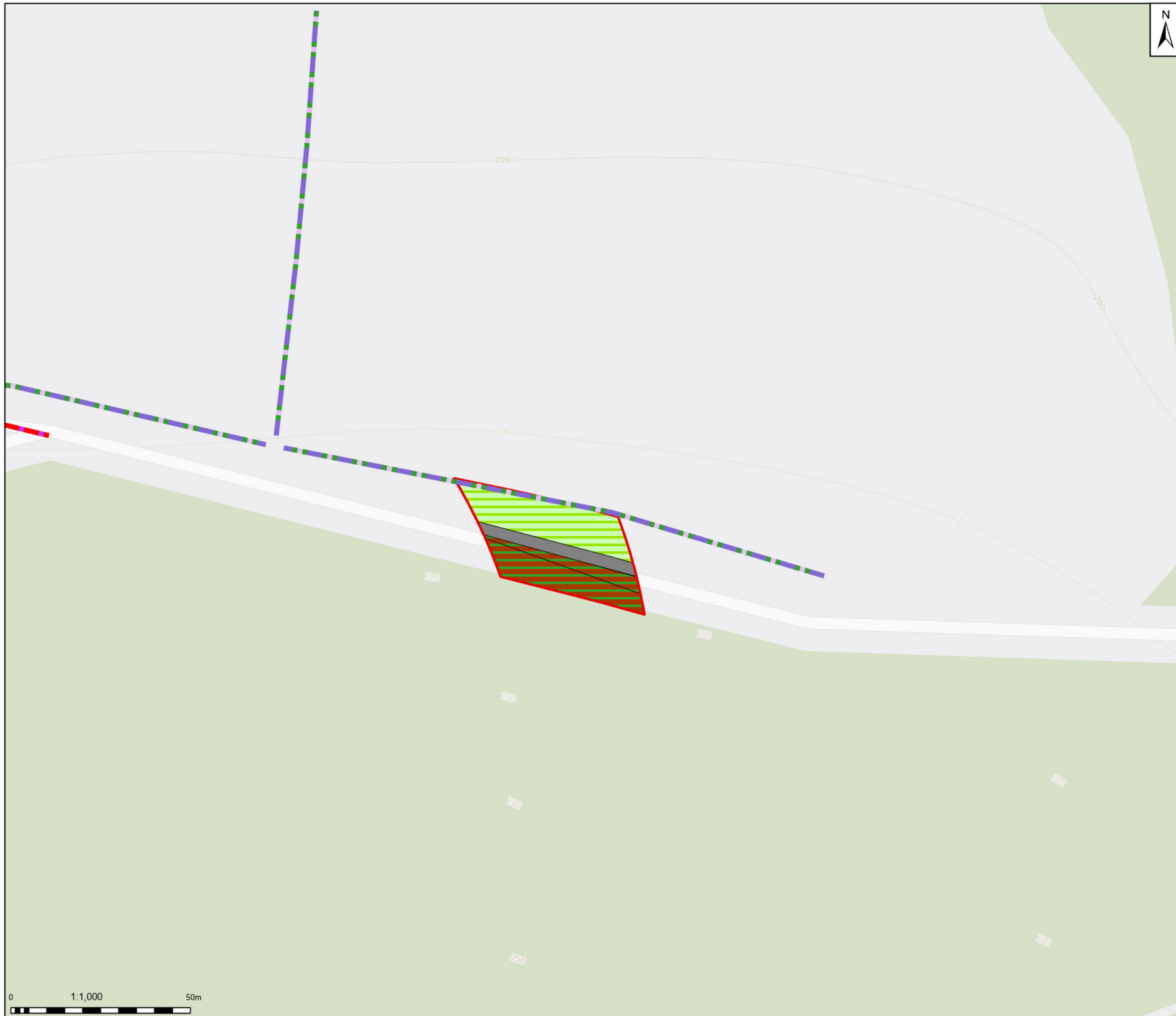
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N

Legend

Site Boundary

Post Intervention Biodiversity Net Gain

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Lowland mixed deciduous woodland

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Suitability Description:

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Revision:

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