BIODIVERSITY NET GAIN - – DESIGN STAGE REPORT

FAIRGREEN BATTERY ENERGY STORAGE SYSTEM (BESS), RAYLEIGH, ESSEX

carried out by

CLARKSON & WOODS
ECOLOGICAL CONSULTANTS

commissioned by

PEGASUS GROUP / RES GROUP

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FAIRGREEN BESS, RAYLEIGH, ESSEX

CONTENTS

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The information, data and advice which has been prepared and provided is true and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's (CIEEM) Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions. This report and its contents remain the property of Clarkson and Woods Ltd. until payment has been made in full.

EXECUTIVE SUMMARY

Clarkson and Woods Ltd. was commissioned by RES Group to carry out a Biodiversity Net Gain assessment for the proposed Fairgreen Battery Energy Storage System (BESS), situated near to the town of Rayleigh, Essex. This report details the methodology and rationale applied to conduct the Biodiversity Impact Assessment, using the Natural England Statutory Biodiversity Metric calculation tool. A description of baseline and post-development habitat type and condition is provided, including justification for the condition assessments applied within the Metric.

The Site is dominated by conventionally managed arable farmland and modified grassland, with field peripheries comprising small areas of grassland (modified grassland and other neutral grassland), dense scrub (blackthorn, bramble and mixed scrub), hedgerow and wet ditches. Fields were cropped with cereal at the time of the update baseline survey. The ditches were seasonally wet and associated with native hedgerows, some of which were species-rich. More widely, the Site was encompassed by other broadleaved woodland. Major highways also surround the Site, effectively creating an 'island', with established access tracks leading onto the Site. Site access will predominantly be obtained via existing access tracks, which comprise artificial surfaces (unsealed and sealed surfaces). Habitats adjacent to access routes are those previously mentioned above.

Post development, the Site will comprise three BESS compounds, connected by new access routes, including the creation of up to four new culverts across wet ditches. The majority of remaining cropland within Fields 1 – 3 will be created as modified grassland in 'good' condition, with a belt of higher diversity, other neutral grassland along the southern boundary of Field 1. A length of native, species-rich hedgerow (approx. 230m) will also be created on Site.

Habitats due to be lost as a result of the development are restricted to approximately 12.8ha of cropland; 40m of wet ditch and associated hedgerow across four proposed access routes, plus approx. 20m cumulative hedgerow loss at two additional access routes. The western part of the Site lies within Essex Local Nature Recovery Strategy Strategic Opportunity Area targeting grassland creation, where at least 15% Biodiversity Net Gain (BNG) is considered to be achievable by the strategy. This target has been considered within this report, although the ultimate proposals for BNG delivery have been determined by what is reasonable and achievable within the constraints of the Site.

The proposed development will result in **23.66% gain in Habitat Units (HU**, **11.39% gain in Hedgerow Units (HeU) and 10.19% in Watercourse Units (WU),** in line with national planning legislation and policy.

1 INTRODUCTION

1.1 Overview

1.1.1 Clarkson and Woods Ltd. was commissioned by RES Group to carry out a Biodiversity Net Gain (BNG) assessment for a proposed battery energy storage system (BESS) within land named as Fairgreen BESS in Rayleigh, Essex, SS12 9SN, hereafter referred to as 'the Site'.

1.1.2 This report should be read alongside the Ecological Impact Assessment for the Site (Clarkson and Woods Ltd, June 2025).

1.1.3 The purpose of this report is to provide a quantitative assessment of the BNG impact that the project will achieve post-development, justifying and comparing the valuation of baseline and proposed habitats.

1.1.4 This report must be read in conjunction with the Figures provided in Appendix A, B and C of this document, which have been used as the basis for this assessment.

Site Context

1.1.5 The Site, Fairgreen proposed BESS lies between Basildon and Rayleigh, situated in south Essex with the nearest postcode at SS12 9SN. The Site within the main development area is comprised of three fields separated by wet ditches and hedgerows. As shown in Figure 1 the Site is entirely surrounded by major A-road networks, comparable to an island encompassed by three roads. The Site is approx. 18.27ha in area (including access routes). The surrounding landscape is a combination of arable farmland and small field systems (likely grazed paddocks) connected by a mosaic of hedgerows and woodlands, with frequent small villages and larger conurbations beyond.

1.1.6 The approximate centre of the Site is situated at Ordnance Survey Grid Reference TQ 77664 90612, with the location of the Site shown in Figure 1.

Figure 1: Aerial Photograph of Site Red Line Boundary (©2025 Google)

1.3 Development Proposals

1.3.1 The proposed works comprise the installation of a BESS compound, substation, and associated infrastructure. The proposed works would result in the loss of approximately 12.8ha of cropland to accommodate the built footprint of the development. Four small sections of hedgerow and wet ditch will be removed to facilitate the installation of new access tracks, plus a further two sections of hedgerow where a new access routes are proposed on the western and eastern aspect of Site. However, only some of these access routes may be taken forward, which is understood to be informed by local highways authorities.

1.3.2 Existing access tracks will be improved to allow the transportation of abnormal loads into the Site during construction, and ensure emergency access for health and safety purposes during the operational phase. In addition to this, two new access routes will be created to connect the Site to the surrounding road network.

1.3.3 The assessment has been calculated using the Proposed Infrastructure Layout provided in Appendix C. Any changes to the proposed design and layout and landscaping made subsequent to publication of this report should be issued to Clarkson and Woods Ltd. for review. Ecological impacts and mitigation opportunities may be affected by any such changes.

1.3.4 The baseline habitats within the main development footprint are dominated by cereal cropland, with fields bounded by narrow field margins, wet ditches and hedgerows with trees, in addition to various scrub types and tall forbs. Small pockets of other neutral grassland and modified grassland were also recorded. Broadleaved woodland parcels bound parts of the western aspect of the Site.

1.3.5 Current access and field tracks are a combination of bare ground and artificial, unsealed developed surface. The proposed new access routes will impact arable and grassland habitats, however also include some un-surveyed areas (illustrated within Appendix A). At these locations, habitats have been assessed and determined on a precautionary basis using available desk-study information including aerial images and professional judgement. Assumptions have had to be made with regards to actual habitat type. The unsurveyed areas are considered to comprise a combination of grassland (modified grassland and other neutral grassland); broadleaved, other woodland; mixed scrub; few individual rural trees; a line of non-native trees and species-rich hedgerows.

1.3.6 Any changes to the proposed layout and landscaping made subsequent to publication of this report should be issued to Clarkson and Woods Ltd. for review. Ecological impacts and mitigation opportunities may be affected by any such changes.

1.4 Assessment Scope

1.4.1 This report, alongside other relevant documents (see below), provide a quantitative assessment of the likely BNG which the project will achieve post-development, assuming successful implementation of proposed landscaping and ecological management measures. With reference to the Proposed Infrastructure Layout (Appendix C), this report also sets out the habitat creation, mitigation and enhancement measures that will be implemented to achieve BNG.

1.4.2 Habitat features are used as a proxy measure for quantifying the value and importance of nature within a site. Each habitat type is assigned a numerical value, based on various parameters, enabling assessments to be made of the present and future biodiversity value of a site through the calculation of biodiversity gains and losses.

1.4.3 The process itself follows the mitigation hierarchy: this prioritises avoidance of impacts; then minimisation of negative impacts through appropriate mitigation; with compensation for residual impacts as a last resort. For this scheme, impacts have been avoided where possible through careful design and mitigation.

1.4.4 Whilst the BNG assessment quantifies biodiversity losses and gains, this process is conducted in parallel to the valuation of ecological features conducted as part of an Ecological Impact Assessment. Additionally, this report is separate to the legal and planning duties accounting for the protection afforded to habitats and species, which decision-makers and developers should discharge. Therefore, due consideration must still be given to ensure legal compliance and that no environmental offences are committed.

1.4.5 This document aims to:

- Establish the quantitative baseline value of the Site, in terms of Habitat Units (HU), Hedgerow Units (HeU) and Watercourse Units (WU) present;
- Establish the future value of the Site, in terms of HU, HeU and WU, by quantifying the value of all retained, enhanced or created habitats;
- Determine whether the proposals will result in net loss, no net loss, or net gain for biodiversity;
- Establish how BNG will be secured at the Site in the long term;
- Assess compliance with relevant policies regarding biodiversity gain; and
- Justify how each of the CIEEM BNG Principles[1] have been applied to the Site.

1.4.6 In summary, the landscape proposals for the Site include the following habitats to be created and / or enhanced:

- Approx. 7.9 hectares (ha) of modified grassland creation;
- Approx. 230m native, species-rich hedgerow creation
- Approx. 390m wet ditch enhanced through land-use change, resulting in riparian encroachment reducing from major/major to either minor/no encroachment or moderate/ no encroachment, where undeveloped margins no less than 15m (but ideally 30m) will be managed as tussocky grassland adjacent to wet ditches.

Relevant Documents

1.4.7 This document makes reference to, and should be read in conjunction with, the following documents:

- Proposed Infrastructure Layout (RES, 05560-RES_LAY-DR-PT-001, 11/06/2025);
- Ecological Impact Assessment, Fairgreen BESS (Clarkson and Woods Ltd., June 2025);
- Baseline Habitats Plan, Fairgreen BESS (see Appendix A, Clarkson and Woods Ltd., June 2025);
- Proposed Habitats Plan, Fairgreen BESS (see Appendix B, Clarkson and Woods Ltd, June 2025).

Cross-referencing

<u>BNG Metric</u>

1.4.8 This report should be read alongside the Statutory Biodiversity Metric excel spreadsheet. It is presumed that any reviewers of this BNG assessment will be conversant in the Statutory Biodiversity Metric (hereafter 'the Metric'), and rather than repeat all the information contained therein, this report focuses on the justification for the habitat types, conditions and strategic significance values assigned to both baseline and post-development habitats.

1.4.9 To enable easy cross-referencing, the habitat and hedgerow references given in the Metric are used in this report to identify individual features. In this way, this report functions as a succinct document which should be read alongside the Metric.

1.4.10 Where permission is approved, a Habitat Management and Monitoring Plan (HMMP), in addition to the Landscape Ecological Management Plan (LEMP) detailed within the EcIA, is to be prepared for the Site and will set out a series of Method Statements detailing measures for the creation, enhancement, and management of all habitats once the Site become operational. If followed correctly, the Method Statements will ensure that the target habitat types and conditions detailed in this BNG report can be achieved and biodiversity gains delivered.

[1] *Biodiversity Net Gain: Good Practice Principles for Development (CIEEM, CIRA, IEMA 2016)*.

1.5 Relevant Policy & Legislation

1.5.1 This BNG Assessment has been prepared with reference to the relevant planning policies as detailed within Table 1, below.

1.5.2 The Essex Local Nature Recovery Strategy (Draft) and Natural England's National Habitat Network Maps were also reviewed to inform the appropriate strategic significance applied within the Metric (Item 4.2 refers).

National Policy:

- The National Planning Policy Framework (NPPF, December 2023);
- The Environment Act (November 2021).

Local Policies:

- Basildon District Local Plan Saved Policies (September 2007);
- Essex Local Nature Recovery Strategy (Draft)

Table 1: Summary of Relevant Policies

Policy Reference	Relevant Content
National Policy	
The National Planning Policy Framework (2024)	
Para. 187	'Planning policies and decisions should contribute to and enhance the natural and local environment by: a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan); b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland; …… d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures and incorporating features which support priority or threatened species such as swifts, bats and hedgehogs; e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; ……'
Para. 188	'Plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries'
Para 192	' To protect and enhance biodiversity and geodiversity, plans should: (a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity [68]; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation [69]; and (b) promote 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'
Para. 193	'When determining planning applications, local planning authorities should apply the following principles: (a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused; (b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest; (c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons [70] and a suitable compensation strategy exists; and (d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.'

Policy Reference	Relevant Content
Para. 195	'The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site'
Para. 198	'Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should: (a) mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life [72]; (b) identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason; and (c) limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.'
Para. 201	'The focus of planning policies and decisions should be on whether proposed development is an acceptable use of land, rather than the control of processes or emissions (where these are subject to separate pollution control regimes). Planning decisions should assume that these regimes will operate effectively. Equally, where a planning decision has been made on a particular development, the planning issues should not be revisited through the permitting regimes operated by pollution control authorities'.
Environment Act (2021)	
Schedule 14	Under this Act, BNG became mandatory in England under Schedule 14 of the Act. This means that all planning permissions granted in England (with a few exemptions) must deliver at least 10% biodiversity net gain (for all Biodiversity Units type – HU, HeU and RU) as of January 2024, and small sites from April 2024. BNG must be measured using the Statutory biodiversity metric and habitats will need to be secured for at least 30 years. The Act sets out the following key components to mandatory BNG: • Minimum 10% gain required calculated using Biodiversity Metric & approval of net gain plan; • Habitat secured for at least 30 years via obligations/ conservation covenant; • Habitat can be delivered on-site, off-site or via statutory biodiversity credits; • There will be a national register for net gain delivery sites; • The mitigation hierarchy still applies - avoidance, mitigation and compensation for biodiversity loss; • Will also apply to Nationally Significant Infrastructure Projects (NSIPs); • Does not apply to marine development; and • Does not change existing legal environmental and wildlife protections.
Local Policies	
Basildon District Local Plan Saved Policies (September 2007)	
Protected Areas - Policy BAS C1	The Council will not permit development which may have an adverse material effect on a Site of Special Scientific Interest (SSSI). When considering planning applications affecting Sites of Importance for Nature Conservation (SINC) or other important wildlife habitats, the Council will have full regard to the nature conservation value of the site The criteria which the Council will take into account in dealing with planning applications affecting SSSIs, SINCs and other important habitats will be:- i. effects on significant nature conservation or scientific features of the site; ii. the importance of the site and of any nature conservation or scientific features affected; and iii. any benefits of the proposed development.
Trees and Woodland - Policy BAS C5	Existing woodlands should be retained, especially where they are Ancient Woodlands.
Essex Local Nature Recovery Strategy (Draft)	
All	Strategic nature recovery document, in consultation, but with Strategic Opportunity Areas presumed to remain accurate and identified using interactive portals accessible via https://www.essex.gov.uk/about-council/plans-and-strategies/environment-and-planning/local-nature-recovery-strategy

3 METHODS

3.1 Desk Study and Field Survey

3.1.1 The methodologies used for the desk study and field surveys are set out within the following report/s:

- Ecological Impact Assessment – Fairgreen BESS (Clarkson and Woods Ltd., June 2025)
- Preliminary Ecological Appraisal and Ecological Constraints and Opportunities Plan – Fairgreen BESS (Clarkson and Woods Ltd., April 2025)

3.1.2 In addition to the standardised assessment of designated sites with the locality of Site, and to identify areas previously identified for habitat restoration, Natural England's National Habitat Network (All Habitats Combined) map was also consulted through Defra Magic website.

3.1.3 Ordnance Survey maps (1:25,000) and aerial images of the Site were examined online (bing.com/maps and maps.google.co.uk) to allow a better understanding of the context of the Site and its connections to potentially important habitats, known species records and protected sites.

3.2 Approach to the BNG Assessment

3.2.1 This report follows the guidance set out within *Biodiversity Net Gain Report & Audit Templates (Version 1). CIEEM. July 2021*. It is also in line with the British Standard 8683:2021 (Process for Designing and Implementing Biodiversity Net Gain).

3.2.2 The stages of design of the Site and application of the mitigation hierarchy have followed *Biodiversity Net Gain: Good Practice Principles for Development (CIEEM, CIRA, IEMA 2016)*.

3.2.3 The Statutory Biodiversity Metric, referred to hereafter as 'the Metric', has been used to complete the calculation and assessment which accompanies this document, with mapping carried out on QGIS Version 3.28.

3.2.4 The Metric uses habitat condition as one of the measures of habitat quality. The process of assessing habitat condition considers key physical characteristics and where habitats have the potential to support typical flora and fauna. Condition sheets included within '*The Statutory Biodiversity Metric -Technical Annex 1: Condition Assessment Sheets and Methodology November 2023 Natural England Joint Publication JP039*' have been used to assess habitats within this report, with completed versions included within Appendix D. This method of assessing habitat condition has been used to:

a) Assess the condition of baseline habitats to inform baseline Biodiversity Unit calculations;

b) Assess the condition of post-intervention habitats as part of ongoing monitoring requirements;

c) Inform habitat creation and enhancement interventions by defining what each condition state would look like for each target habitat.

3.2.5 For greater clarity, detailed justifications for the choice of habitat types, distinctiveness and condition have been provided within this BNG report rather than added to the comments column of the Metric

3.2.6 Figures showing baseline and proposed habitats, as well as relevant landscaping plans, are provided within Appendices A-C.

3.3 Quality Assurance

3.3.1 A suitably competent person is defined within the BNG British Standard BS8683:2020 as a 'person who can demonstrate they have acquired through training, qualifications or experience, or a combination of these, the knowledge and skills enabling that person to perform a specified task. This BNG assessment has been overseen by Heather Parris, an Associate member of the Chartered Institute of Ecology and Environmental Management (CIEEM) who has attended in-house BNG training. All ecologists employed by Clarkson and Woods are members of the Chartered Institute of Ecology and Environmental Management (CIEEM) and follow the Institute's Code of Professional Conduct[2] when undertaking ecological work.

3.3.2 The report has been subject to a two-stage quality assurance review by appropriately experienced senior consultants who are full members of CIEEM.

3.4 Habitat Assessment Limitations

3.4.1 Survey of the habitats present within the Sites were carried out in February 2025 and May 2025. Although the initial survey was conducted in February, which is outside the optimal time for UKHab survey (April to October inclusive), it was still possible to adequately classify and assess the nature conservation value of the habitats present. An update survey was also carried out in May 2025, during the optimal survey period, to ensure that groups of species such as flowering herbs and spring ephemerals which may have been under-recorded or missed in February were correctly identified.

3.4.2 As described above, redline boundary amendments were made post survey which have resulted in small areas of habitat not being subject to full habitat surveys. The location of these areas is shown in Appendix A. This report has been prepared showing these additional habitat parcels categorised and included on a precautionary basis.

3.4.3 It should be noted that it is possible that only some of the proposed access routes will be taken forward for development, however all are included as a precaution with a worst-case assumption that all will be required. A full habitat assessment of these areas will be needed to confirm the exact habitat types and condition as part of the BNG condition requirements.

3.4.4 Habitat type and condition within the unsurveyed areas was determined based on open source data, aerial imagery interpretation, professional judgement and by applying a precautionary approach, which is likely to have potentially inflated the condition of some habitats in the absence of full information.

3.4.5 While this cannot be guaranteed to be correct without ground-truth surveys, it is considered to be a proportionate approach due to the restricted area and given that not all proposed access locations are due to be taken forward as part of the scheme. Furthermore, the provision of pre-construction surveys will be made to ensure that these areas are surveyed as part of a BNG pre-commencement planning condition.

3.4.6 As recommended within the UK Habitat Classification System User Manual Version 1.0 (but omitted from Version 2.0 of the User Manual Version at the time of writing), application of Minimum Mapping Units (MMU) set at 25m^2 was considered, especially for overlapping habitat such as scrub within grassland.

3.4.7 It is anticipated that a non-significant margin of error in the mapping may occur throughout the process from collecting data in the field to mapping on GIS software.

4 RESULTS

4.1.1 The baseline habitat types recorded within the Site, and their associated condition are described below, with completed condition assessment criteria included within Appendix D. A Baseline Habitats Plan, prepared on QGIS and using the UK Habitat Classification system, is also provided in Appendices A and B.

4.2 Desk Study

4.2.1 There are no designated sites for nature conservation present within Site, with the closest designated site (non-statutory) located over 400m south of the Site.

4.2.2 The Essex Nature Recovery Strategy: Taking Action for Nature, Today, Together (Essex County Council, date unknown) was subject to public consultation in 2024 and presumed to have been implemented despite final versions not yet being published. The Site partially falls within a 'Strategic Habitat Creation Opportunities' area[2], identified by Local Authorities as a target area where 15% Biodiversity Net Gain is considered achievable compared to other sites. Recommendations for this habitat included within the Essex LNR Strategy include: '*Create New Habitats: Established grassland habitats along road verges; 2. Nature-Friendly Management: Implement grassland management practices, like "No Mow May," that consider seasonal behaviours. 3. Reduce Chemicals: Decrease or eliminate the use of chemical fertilizers and pesticides*'. As the Essex Nature Recovery Strategy had not been adopted at the time of writing, habitats have been included as 'low' Strategic Significance. However, where this changes, the metric should be revisited and updated as required.

4.3 Baseline Habitats

4.3.1 The baseline habitat types recorded within the Site are described in full within the EcIA report Table 2 below provides a summary of the habitat types and condition found on Site.

Table 2: UKHab Baseline Habitats

UK Hab Category	Condition	Approx. Area (ha) / Length (km)	Overview/comments, including reference to BNG Condition Assessment Criteria
Area Habitats (HU)			
Modified grassland	Poor	0.94ha	Areas of modified grassland were present in field corners and adjacent to access tracks, as well as Field 6. Failures of Criterion A (low species count) and Criterion D (damage, such as vehicle tracks)
Modified grassland	Good	0.17ha	Un-surveyed paddock, included at good condition on a precautionary basis
Other neutral grassland	Poor	0.05ha	Small area within margins, Field 1
Other neutral grassland	Moderate	1.05ha	Restricted areas of other neutral grassland also in field margins, but also in field margins and areas adjacent to access routes. Moderate condition only, failing Criterion D due to increased scrub coverage. Also includes unsurveyed road verges where aerial imagery
Cereal cropland	N/A	13.37ha	Conventionally managed cropland fields
Other broadleaved woodland	Moderate	1.02ha	Other broadleaved woodland west of Field 3 (Woodland 1) and adjacent to access tracks. Species are indicative of likely planting scheme associated with road infrastructure (online maps confirm established 2010). Some ash dieback and lower scores on Criterion 8 (tree health), Criterion 11 (no veteran trees), Criterion 12 (limited deadwood) and Criterion 13 (<1ha and some damage adjacent to access routes)

[2] Essex County Council (2025) *Combined Strategic Habitat Creation Opportunities (interactive map)* [online] Available at: https://consultations.essex.gov.uk/rci/ddb68e54/ [Accessed 23 May 2025]

UK Hab Category	Condition	Approx. Area (ha) / Length (km)	Overview/comments, including reference to BNG Condition Assessment Criteria
			Also includes a small area of woodland extending along the eastern boundary/proposed access route
Blackthorn scrub	Moderate	0.08ha	South of Field 6 bounding field margin
Bramble scrub	N/A	<0.01ha	Areas of bramble scrub adjacent to field margins
Mixed scrub	Moderate	0.0.34ha	Mixed scrub habitat extending from field margins, with some areas failing Criterion D and/or Criterion E due to lack of structural diversity and edge habitat types.
Mixed scrub	Good	0.29ha	Un-surveyed mixed scrub at the western aspect of site where a new access route has been proposed
Tall forbs	Moderate	0.16ha	Present within Field 6, adjacent to margin
Artificial unvegetated, unsealed surface	N/A	33ha	Hardcore tracks of varying composition across Site
Developed land; sealed surface	N/A	0.28ha	Developed tracks where adjoining onto public highways
Individual trees; rural tree	Good	0.05ha	Three mature standard oak trees (adjacent to farm track in Field 1 and Field 4) in good condition, although will continue to mature and development more ecological niches
Linear Habitats (HeU and WU)			
Non-native and ornamental hedgerow	Poor	0..03 km	Line of trees partially bounding Field 4 comprising *Leylandii* spp., although not ground-truthed
Hedgerow, including hedgerows with trees	Poor and Good	1.52 km	A combination of native hedgerow, native hedgerow with trees and species-rich native hedgerows in varying condition. Generally Moderate or Good, but Poor where hedgerow adjacent to the access tracks along the northern boundary of Field 2 and Field 3. Criteria failures mostly associated with gaps (Criterion B2), nutrient enrichment (Criterion C2) and limited standard trees (Criterion E1). All unsurveyed hedgerows have been included as species-rich in good condition on a precautionary basis
Ditches (wet)	Poor	0.69 km	Small, seasonally wet and with some evidence of pollution around access routes. Heavily overgrown. Watercourse encroachment low, excluding a section of culverted Ditch 2 but also where running adjacent a farm track (Field 3). Riparian encroachment predominantly major due to arable land-use. Failures include poor water quality (Criterion A), lack of vegetation (Criteria B and D), low water flows (Criterion F) and dense shade (Criterion G). Watercourses may be present at the western boundary, but presumed culverted as shown on desk study maps as beneath asphalt tracks

5 PROPOSED HABITAT DESIGN AND OPPORTUNITIES

5.1.1 The proposed habitat plan has been prepared using the Proposed Infrastructure Layout (RES, 05560-RES_LAY-DR-PT-001, 11/06/2025 (see Appendix D).

5.1.2 The specific details of habitat creation and management will be detailed within the Construction Environmental Management Plan: Ecology (CEMP: Ecology) and Landscape Ecological Management Plan (LEMP)/Habitat Management and Monitoring Plan (HMMP), to be prepared for the Site. It is assumed that these will be conditioned documents.

5.1.3 The proposed habitat types within the Site and their associated targeted condition assessments are outlined in Tables 3 and 5 below. The Proposed Habitats Plan, which includes retention of habitats, has been prepared using QGIS and included as Appendix C.

5.1.4 It has been necessary to make assumptions about the classification, condition and distinctiveness of created habitats to complete the Statutory BNG Metric. Habitat creation in the Metric is based on a realistic and achievable scenario, using professional judgement combined with many years of monitoring over numerous renewable infrastructure projects undertaken by Clarkson and Woods Ltd. Targeted conditions and condition assessments are provided in Appendix E.

5.1.5 The access route upgrades are understood to involve the replacement/enhancement of vehicle access tracks already present on Site, rather than widening of these or impacting adjacent habitats. Therefore, no habitat change has been included for baseline habitats associated with the vehicle access route upgrades. Should this change (or any other design changes take place), it will be necessary to review and update the Metric.

5.1.6 In summary, the following habitat changes will occur:

Habitat loss

- Permanent loss of cropland (approx. 12.78ha);
- Loss of approx. 40m wet ditch to facilitate construction of culverts across four separate locations;
- Loss of approx. 40m total of species-rich, native hedgerow associated with the above wet ditch, (although micro-siting may enable this to be reduced)
- Loss of 20m of hedgerow at the proposed western and eastern access routes;

Habitat Retention

- Retention of marginal field habitats, including modified grassland, other neutral grassland and patches of scrub;
- Retention of other broadleaved woodland;

Habitat Creation

- Creation of species-diverse, modified grassland (approx. 8.01ha) across open field and field margins, managed to create species-diverse grassland combined with tussocky field margins;
- Creation of 0.19 ha other neutral grassland within the southern field margin of Field 1;
- Creation of 0.15 ha of mixed scrub within the eastern boundary of Field 2;
- Creation of approx. 230m of native, species-rich hedgerow to the west of the substation compound.

Habitat Enhancement

- Retention of all remaining watercourses, with the creation of field margins/cessation arable management enhancing ditches through reduced riparian encroachment.

Table 3: Post-development Habitats – Retained, Enhanced and Newly Created

Full details of proposed habitat management regimes (implementation/maintenance) will be included within the CEMP: Ecology and LEMP to be prepared for the Site

UK Hab Category	Targeted Condition	Area (ha) / Length (km)	Overview/comments, including reference to BNG Condition Assessment Criteria
Loss			
Cropland	N/A	12.78ha	Conventionally farmed cropland will be lost to the creation of access routes and BESS station, comprising three compounds
Modified grassland and other neutral grassland	N/A	2.03 ha	Small areas of grassland adjacent to or associated with proposed new access
Mixed scrub	N/A	0.07ha	Loss associated with proposed new access routes
Artificial, unvegetated, unsealed surface	N/A	0.62ha	Access routes upgrades will ensure all tracks are capable of withstanding increased vehicle traffic
Wet ditch	N/A	0.04km	Wet ditch habitat loss facilitating the creation of 4x culverted access routes across wet ditches
Native hedgerow	N/A	0.06km	Loss of hedgerow associated with the wet ditches described immediately above. Potential for affected length to be reduced where micro-siting of new access enables this to be created in hedgerow gaps Additional loss of approx. 20m associated with new proposed access routes
Retained			
Cereal crops, modified grassland, other neutral grassland, other broadleaved woodland, blackthorn scrub, bramble scrub, mixed scrub, bare ground, tall forbs, artificial, unvegetated unsealed surface, developed land, sealed surface, individual trees; rural tree	As per Table 2 above	Table 2 refers	With the exception of cropland and grassland within the footprint of the main development and new access routes, all habitats within the redline boundary will be retained and management recommendations intended to enhance the biodiversity value of these features, where possible. Although this will change some habitat form, habitat condition is not expected to change and as such all habitats are retained here
Non-native and ornamental hedgerow, native hedgerow with trees, native hedgerow and species-rich, native hedgerow	As per Table 2 above	Included within Table 2 values	The majority of hedgerows will be retained, with losses associated with new access routes only. These are of varying condition and will be managed to increased structural diversity, but with no targeted enhancements
Native hedgerow with trees, species-rich hedgerows	As per Table 2 above	Exc. losses detailed above	With the exception of hedgerow loss described above, all hedgerows and line of trees present within the redline boundary will be retained. These are of varying condition and will be managed to increased structural diversity, but with no targeted enhancements

UK Hab Category	Targeted Condition	Area (ha) / Length (km)	Overview/comments, including reference to BNG Condition Assessment Criteria
Enhanced			
Wet ditch	Poor	0.39km	Although the ditches will remain in poor condition overall, change from cropland into grassland will reduce riparian encroachment associated with adjacent land-use. This will change from major/major to either minor/no encroachment or moderate/encroachment, dependent on the proximity of ditches to new access routes however this is not sufficient to alter the condition assessment
Newly Created			
Modified grassland	Good	8.01 ha	Within Fields 1 – 3, undeveloped land will be created into modified grassland, which is anticipated to achieve good condition. Any bare areas created during construction will be sown with an appropriate seedmix, such as Emorsgate EM2 – Standard General Purpose Meadow Mixture (or similar, as advised by an ecologist) to enable the establishment of species-rich modified grassland that can be managed through cutting or with low density, conservation livestock grazing
Other neutral grassland	Moderate	0.19 ha	Created along the southern boundary of Field 1 to mitigate for the loss of road verge, other neutral grassland habitat
Mixed scrub	Moderate	0.15 ha	As above, to mitigate for the loss of mixed scrub associated with the loss of road verge to facilitate the creation of a new access routes
Species-rich, native hedgerow	Good	0.23km	New, species-rich, native hedgerow will be created west of the proposed substation to meet 10% BNG gain for hedgerow units. The proposed hedgerow species mix includes predominantly hawthorn, followed by hazel and in lesser proportions, blackthorn, field maple, guelder rose *Viburnum opulus*, dog rose *Rosa canina* and holly with proposed hedgerow trees including English oak *Quercus robur,* crab apple *Malus sylvestris,* field maple and hornbeam *Carpinus betulus*. This hedgerow will be managed to create robust hedgerow approx. 2-3m wide, 2-3m height and managed through rotational cutting.
Artificial unvegetated, unsealed surface; Developed land; sealed surface	N/A	4.83ha	Proposed BESS and associated infrastructure, including upgraded access, new access routes and new tracks connecting with substations
Culvert	Poor	0.04km	New culverts in four locations to facilitate access

6 BNG GOOD PRACTICE PRINCIPLES FOR DEVELOPMENT

6.1.1 Table 4 below provides full justification of how each of the 10 BNG Principles have been applied as part of the BNG assessment.

Table 4: BNG Good Practice Principles and Justification

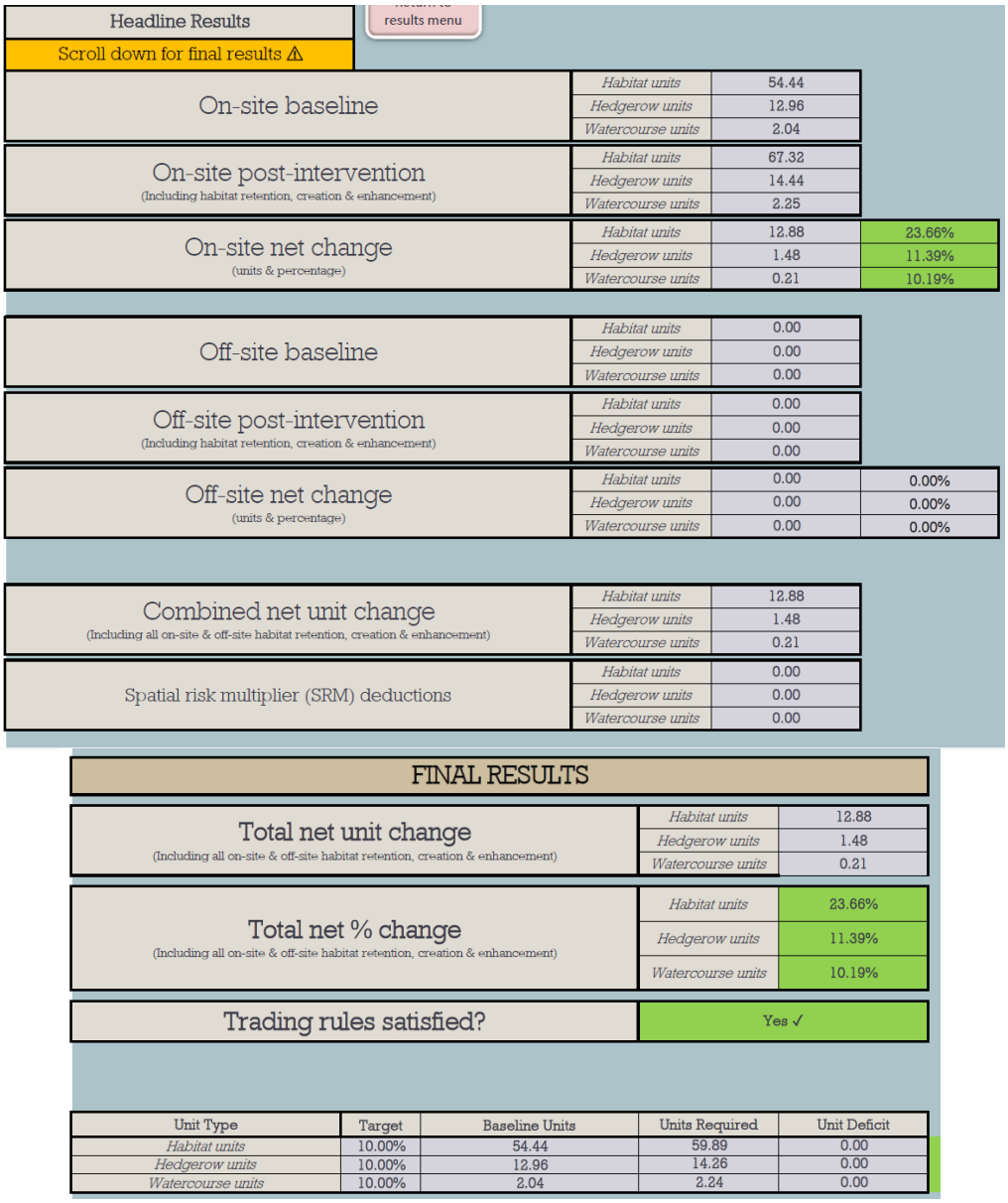
BNG Principle	Justifications
Principle 1. Apply the Mitigation Hierarchy	Measures to avoid and minimise biodiversity loss and to rehabilitate/restore biodiversity affected by the project are defined and documented within the prepared Ecological Impact Assessment for the Site (May 2025). Their implementation, management and monitoring requirements will be detailed within the CEMP: Ecology and LEMP to be prepared for the Site.
Principle 2. Avoid losing biodiversity that cannot be offset by gains elsewhere	No irreplaceable habitats are impacted by the Proposed Development.
Principle 3. Be inclusive and equitable	The BNG Report and Metric will be provided to the LPA to enable officers to adequately determine whether sufficient BNG can feasibly be achieved within the proposed development.
Principle 4. Address risks	The LEMP/HMMP will set out a programme of regular monitoring for the life of the scheme to ensure habitat creation and management objectives are met. It will ensure that personnel are appointed to be responsible for this delivery throughout the duration of the scheme. The LEMP/HMMP will also allow for the adaptive management through the variation of management objectives and practices to best suit the conditions on Site, specific practicalities and challenges, and the outcome of monitoring which may arise over the life of the scheme.
Principle 5. Make a measurable Net Gain	See Section 8 below. The BNG assessment using the Statutory Metric determined a quantitative: • 23.66% net gain in Habitat Units • 11.39% net gain in Hedgerow Units • 10.19% net gain in Watercourse Units
Principle 6. Achieve the best outcomes for biodiversity	The BNG design has considered local conservation priorities (habitats and species). This includes the Essex Biodiversity Action Plan (BAP), as well as relevant national and local policies. The presence of locally and nationally designated sites for nature conservation have also been considered. In particular, the BNG design has considered contributing to supporting the following priority habitats and priority species populations: Hedgerows and hedgerow trees; woodland, wet ditches, rivers and streams and ponds; plus bats, reptiles, amphibians, farmland birds and otter.
Principle 7. Be additional	The proposed conservation gains will be caused by the project activities and would not have occurred in other circumstances. The reversion from conventional agriculture to low (or no) artificial input (fertiliser and soil improvers) grassland habitats is expected to provide a reasonable net gain in plant and invertebrate species diversity over time. The establishment of grassland habitat within a predominately arable landscape will also contribute towards habitat diversification of local habitats more typical of historical land use patterns, where agriculture in the region was characterised by a mix of arable and pasture farming and associated abundant wildlife.

BNG Principle	Justifications
Principle 8. Create a Net Gain legacy	Section 6 details habitat to be created. Minimum professional and technical requirements for those responsible for the delivery of the LEMP and BNG-related habitat management are specified in the LEMP. Legal agreements would also be provided upon scheme approval to ensure the fulfilment of LEMP commitments. The lifespan will be 40 years. Contracts with providers of habitat creation and management will form part of this process.
Principle 9. Optimise sustainability	The proposed habitat creation, such as hedgerow creation, will contribute towards increased climate resilience within the local landscape, such as enhancing species commuting routes throughout Site and beyond. Where possible, local contractors should be used as much as possible.
Principle 10. Be transparent	This document and associated ecological assessments, in addition to the CEMP: Ecology and LEMP to be prepared for the Site have been prepared by ecologists with consultation of other relevant disciplines facilitating the project. All BNG supporting information will be shared with the LPA and with this report presumed to become publicly available once the application has been determined. The LEMP will refine measures detailed within this report and contain a reporting commitment at key project milestones and relevant ecological monitoring, such as Ecological Indicators of Success.

7 BNG METRIC

7.1.1 The information included within the Metric is directly related to the Habitat Baseline Plan (Appendix A) and the Proposed Habitats Plan (Appendix B) and with the completed Metric spreadsheet submitted separately.

7.1.2 The proposed development will result in a significant net gain of biodiversity units, including HU, HeU and WU, as shown in the headline results below.



Headline Results			
Scroll down for final results ⚠			
On-site baseline	Habitat units	54.44	
	Hedgerow units	12.96	
	Watercourse units	2.04	
On-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	67.32	
	Hedgerow units	14.44	
	Watercourse units	2.25	
On-site net change (units & percentage)	Habitat units	12.88	23.66%
	Hedgerow units	1.48	11.39%
	Watercourse units	0.21	10.19%
Off-site baseline	Habitat units	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Off-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Off-site net change (units & percentage)	Habitat units	0.00	0.00%
	Hedgerow units	0.00	0.00%
	Watercourse units	0.00	0.00%
Combined net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	12.88	
	Hedgerow units	1.48	
	Watercourse units	0.21	
Spatial risk multiplier (SRM) deductions	Habitat units	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	

FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	12.88
	Hedgerow units	1.48
	Watercourse units	0.21
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	23.66%
	Hedgerow units	11.39%
	Watercourse units	10.19%
Trading rules satisfied?		Yes ✓

Unit Type	Target	Baseline Units	Units Required	Unit Deficit
Habitat units	10.00%	54.44	59.89	0.00
Hedgerow units	10.00%	12.96	14.26	0.00
Watercourse units	10.00%	2.04	2.24	0.00

Figure 3: Headline Results (taken from Statutory Biodiversity Metric)

7.1.3 The proposals will result in a total net change of **12.88 HU**, representing an increase of **23.66 %**. All Area Habitat Units will be delivered by the creation of modified grassland in good condition, which will be managed to maximise biodiversity value.

7.1.4 The proposals will result in a total net change of **1.48 HeU**, representing an increase of **11.39 %.** The net gain in Hedgerow Units will be provided as a result of native, species-rich hedgerow planting.

7.1.5 The proposals will result in a total net change of **0.21 WU**, representing an increase of **10.19 %.** A net gain in Watercourse Units will be provided as a result of enhancement of watercourses through a reduction of riparian encroachment affecting wet ditches, due to land-use change within Site, and is considered proportionate as further enhancement opportunities are restricted.

8 CONSTRUCTION PLAN AND PROJECT IMPLEMENTATION

8.1.1 The information required to support the construction of the Proposed Infrastructure Layout (Appendix C refers) and project implementation, will be provided within the following documents (to be prepared for the Site) and should be referred to before and during works:

- Landscape Ecological Management Plan / Habitat Management and Monitoring Plan;
- Construction Environmental Management Plan (Biodiversity) (CEMP: Biodiversity)

8.1.2 These reports should be referred prior to during construction and once the Site becomes operational to maximise the likelihood for the target conditions to be achieved. The information provided in these documents has not been fully included in the BNG report, so as to avoid duplication.

9 BIODIVERSITY NET GAIN HABITAT MANAGEMENT AND MONITORING PLAN

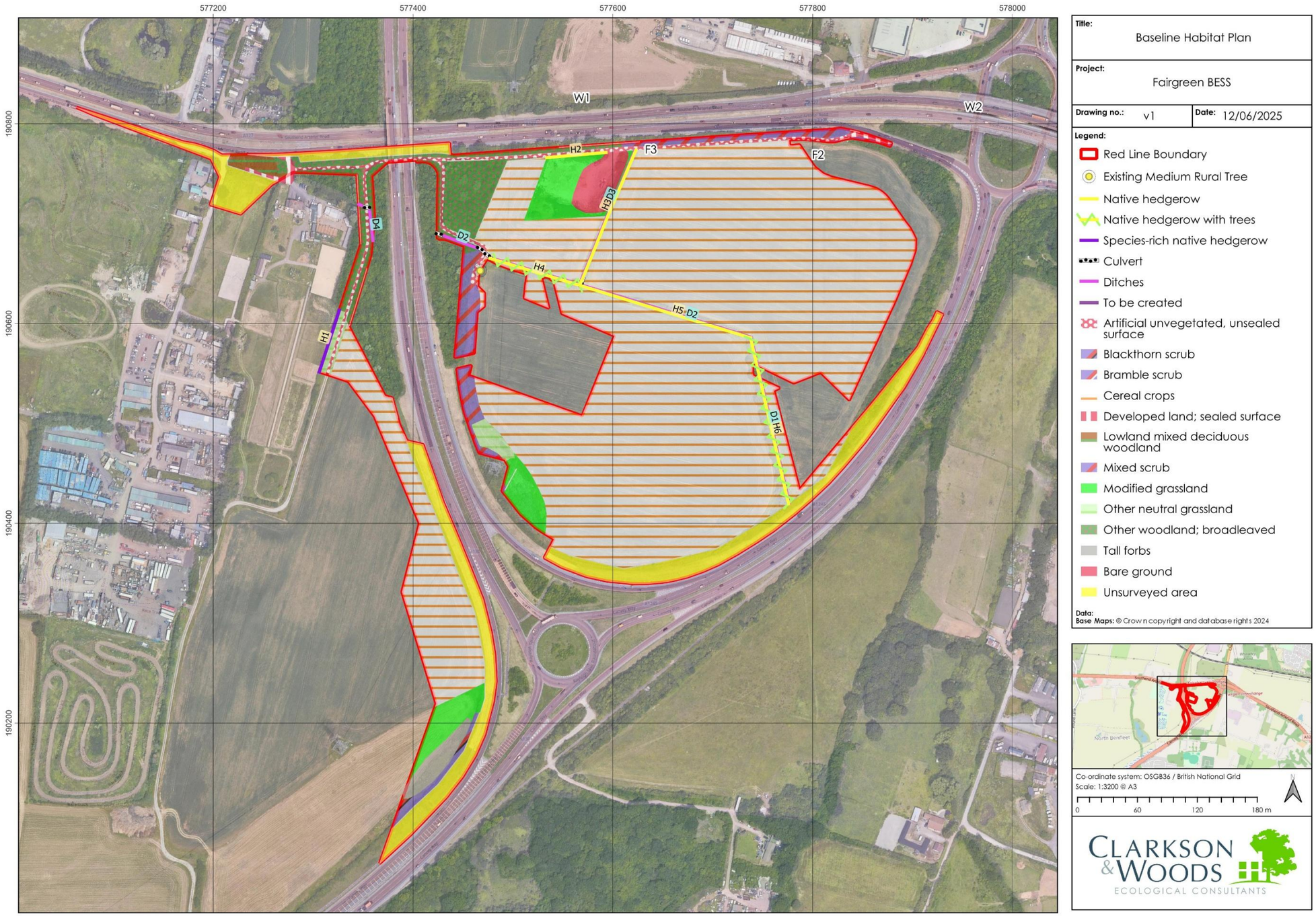
9.1.1 The LEMP/HMMP report will provide detailed management and maintenance information for Years 1 – 5 and will contain broader management aims for the lifetime of the BNG commitment (minimum 30 years) and the lifetime of the project (anticipated at 40 years). Successful ecological performance indicators will also be detailed within the LEMP/HMMP, as appropriate, to ensure that appropriate, quantitative data is collected enabling measurable change (and informing adaptive management responses, as needed).

9.1.2 A UK Habitat survey and associated BNG Condition Assessment of the establishing habitats will be undertaken at an appropriate time of the year (April to September inclusive) throughout the length of the BNG commitments of the project (30 years). The BNG monitoring surveys will be spread out so that they coincide with the timeframes for habitat creation, and will overlap with, or shortly follow, the timeframes for achieving target condition (as stated in the Metric) for the various habitats proposed at the Site. The recommended specific years are annually Years 1-5 inclusive; then Year 6, 8, 10, 15, 20 and 30. Each monitoring survey will focus on the relevant targeted habitat but will also assess the progression of other habitats not yet established to monitor progress and likely success.

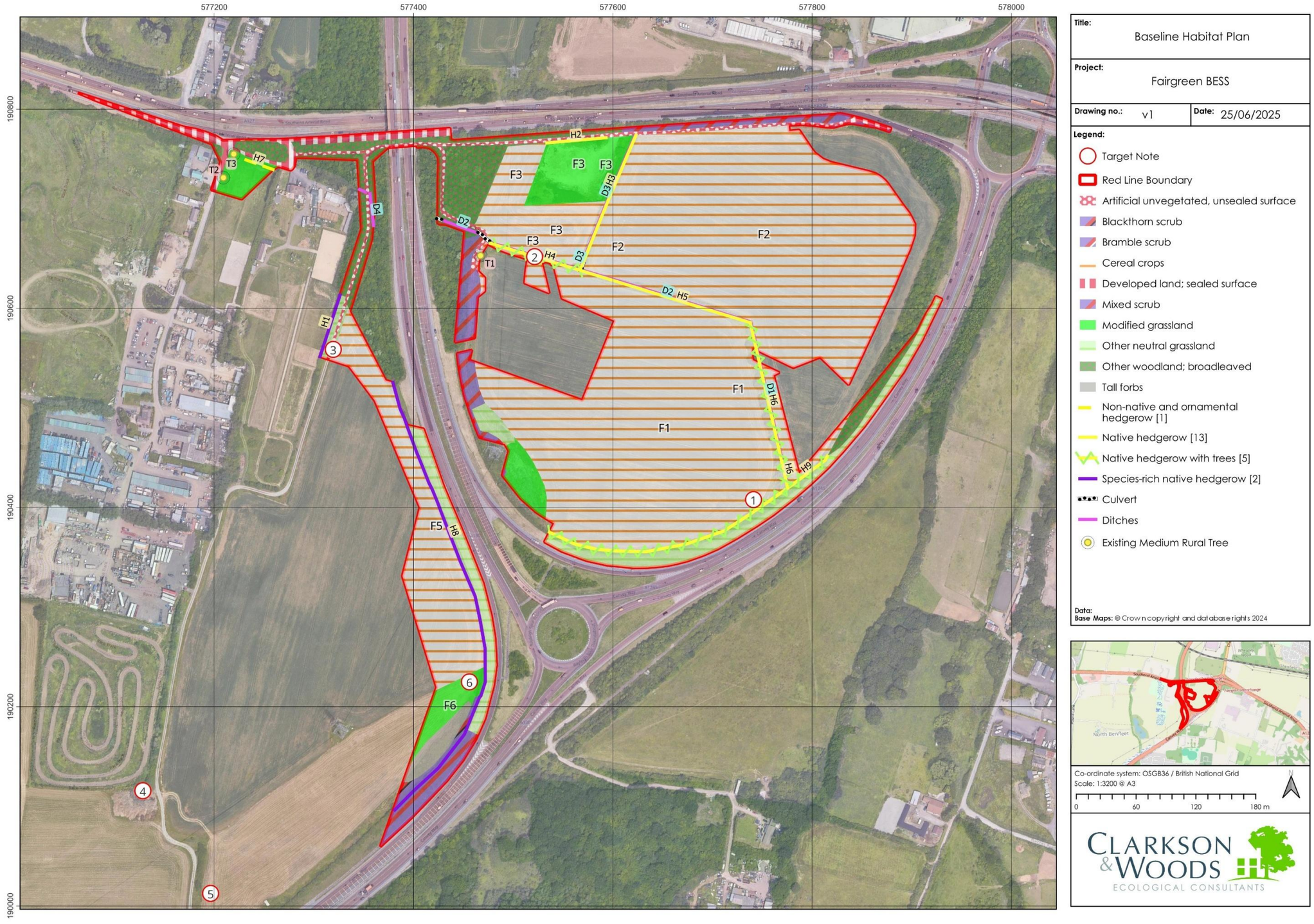
9.1.3 Outcomes of the BNG monitoring surveys will help to inform adaptive habitat management and ongoing maintenance activities to ensure that biodiversity gains can still be delivered.

9.1.4 A BNG monitoring report will be prepared after each survey and will include a summary of habitat type, extent, and condition (with comparisons, where applicable, against the expected condition proposed in the BNG report). It is recommended that the BNG monitoring report are to be submitted to the Local Planning Authority.

Appendix A: Baseline UK Habitat Plan for Site, including Unsurveyed Areas Highlighted in Yellow



APPENDIX B: BASELINE UK HABITAT PLAN FOR SITE, WITH UNSURVEYED AREAS CATEGORISED INTO ASSUMED HABITAT TYPES



Title: Baseline Habitat Plan

Project: Fairgreen BESS

Drawing no.: v1 **Date:** 25/06/2025

Legend:

- Target Note
- Red Line Boundary
- Artificial unvegetated, unsealed surface
- Blackthorn scrub
- Bramble scrub
- Cereal crops
- Developed land; sealed surface
- Mixed scrub
- Modified grassland
- Other neutral grassland
- Other woodland; broadleaved
- Tall forbs
- Non-native and ornamental hedgerow [1]
- Native hedgerow [13]
- Native hedgerow with trees [5]
- Species-rich native hedgerow [2]
- Culvert
- Ditches
- Existing Medium Rural Tree

Data:
Base Maps: © Crown copyright and database rights 2024

Co-ordinate system: OSGB36 / British National Grid
Scale: 1:3200 @ A3

0 60 120 180 m

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ECOLOGICAL CONSULTANTS

Title: Proposed Habitat Plan

Project: Fairgreen BESS

Drawing no.: v1 **Date:** 25/06/2025

Legend:

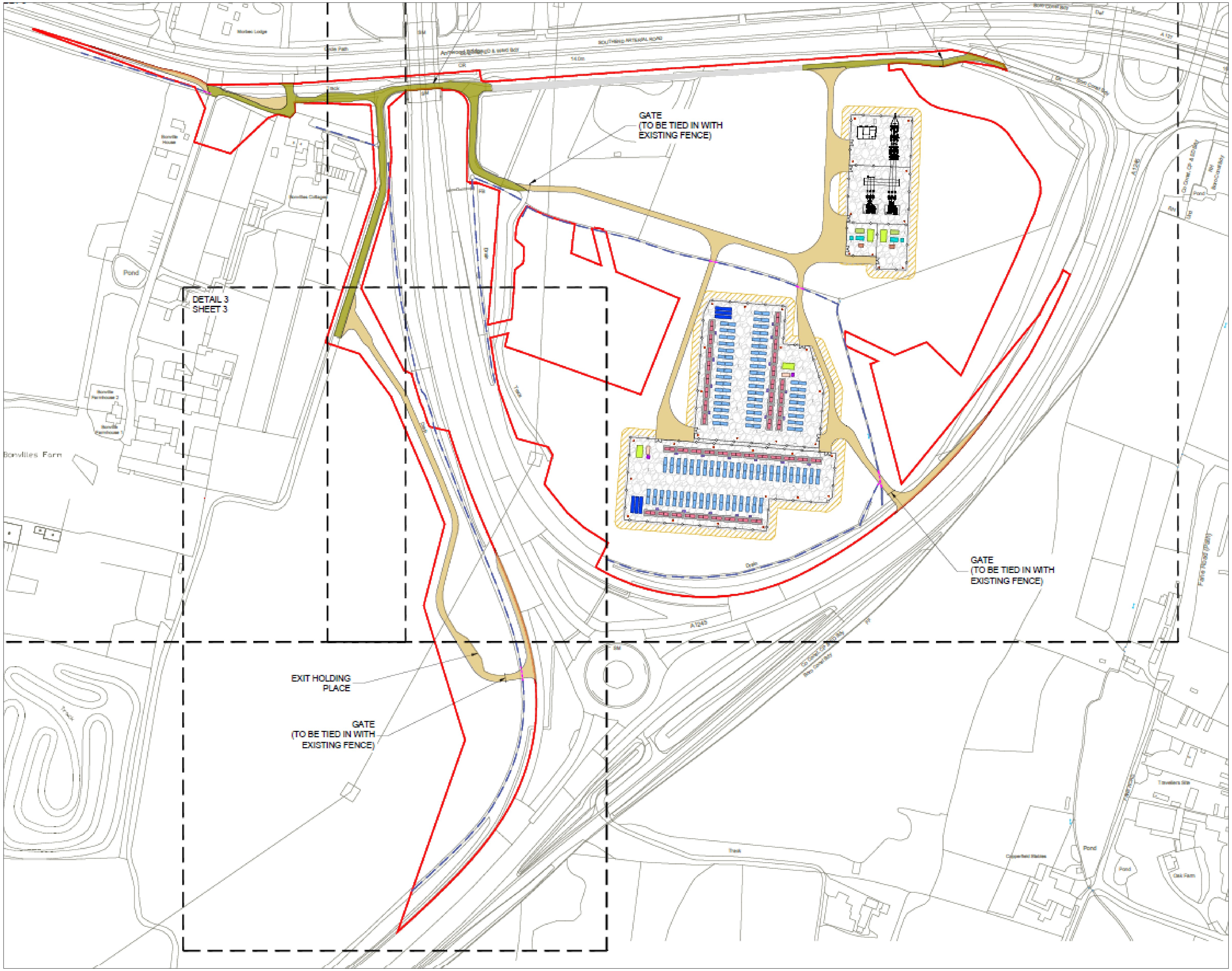
- Red Line Boundary
- Artificial unvegetated, unsealed surface
- Blackthorn scrub
- Bramble scrub
- Cereal crops
- Developed land; sealed surface
- Mixed scrub
- Modified grassland
- Other neutral grassland
- Other woodland; broadleaved
- Tall forbs
- Bare ground
- Non-native and ornamental hedgerow
- Native hedgerow
- Native hedgerow with trees
- Species-rich native hedgerow
- Culvert
- Ditches
- Retained Medium Rural Tree

Data:
Base Maps: © Crown copyright and database rights 2024

Co-ordinate system: OSGB36 / British National Grid
Scale: 1:3000 @ A3
N
0 60 120 180 m

CLARKSON & WOODS
ECOLOGICAL CONSULTANTS

Appendix D: Proposed Infrastructure Layout (taken from RES, 05560-RES_LAY-DR-PT-001)



APPENDIX E: BASELINE & PROPOSED HABITAT CONDITION ASSESSMENTS

The Statutory Biodiversity Metric uses habitat condition as one of the measures of habitat quality. The process of assessing habitat condition considers key physical characteristics and a habitat's ability to support typical flora and fauna. The tables included below cover all habitat types found in within the Site and their relevant condition sheet. On completion of condition assessments using the condition sheets, all habitat parcels have been assigned one of three condition categories: Good, Moderate or Poor. The Metric tool does allow for intermediate categories (Fairly Good and Fairly Poor) if it is not possible to distinguish between two main condition categories.

This method of assessing habitat condition has been used to:

a) Assess the condition of pre-intervention or baseline habitats to inform baseline biodiversity unit calculations.

b) Assess the condition of post-intervention habitats as part of ongoing monitoring requirements.

c) Inform habitat creation and enhancement interventions by defining what each condition state would look like for the habitat in question.

E1 Condition Assessment Sheet: GRASSLAND Habitat Type (low distinctiveness)

Grassland - Modified Grassland (MG)

	BNG Condition Assessment **Criterion Achieved (Y/N)**	**Baseline Small areas within Field 1, Field 3 and Field 6**	**Baseline (Field 5) and Proposed - MG to be created to targeted condition - good within Fields 1-3**
1	There must be 6-8 species per m^2. 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.**	N	Y
2	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	N	Y
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.	Y	Y
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 cause by high levels of access, or any other damaging management activities.	Y	Y
5	Cover of bare ground between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens).	N	Y
6	Cover of bracken less than 20%	Y	Y
7	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981).	Y	Y
Condition		**Poor (4/7 excluding essential criterion 1)**	**Good (7/7 including essential criterion 1)**

Condition Assessment Result	**Condition Assessment Score**
Passes 6 or 7 criteria including passing essential criterion 1	Good (3)
Passes 4 or 5 of 7 criteria; OR Passes 4 or 5 of 7 criteria including passing essential criterion 1	Moderate (3)
Passes 0, 1, 2 or 3 of 7 criteria; OR 4, 5 or 6 criteria but failing criterion 1	Poor (1)

E2 Condition Assessment Sheet: GRASSLAND Habitat Type (medium, high & very high distinctiveness)

Grassland - Other Neutral Grassland

BNG Condition Assessment **Criterion Achieved (Y/N)**		**Baseline – All ONG areas, including unsurveyed roadside verges**	**Proposed – ONG within Field 1**
1	The appearance and composition of the vegetation closely matches characteristics of the specific grassland habitat type (see UKHab definition). sedges and indicator species for the specific grassland habitat type are very clearly and easily visible throughout the sward. NB - **This criterion is essential for achieving Moderate condition for non-acid grassland types only.**	Y	Y
2	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	Y	Y
3	Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens.	Y	N
4	Cover of bracken less than 20% and cover of scrub (including bramble) less than 5%.	N	Y
5	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981). Combined cover of species indicative of sub-optimal 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.	Y	Y
6	There are greater than 9 species per metre squared. **NB - This criterion is essential for achieving Good condition (non-acid grassland types only).**	N	N
Condition		**Moderate (4/6, including essential criterion 1)**	**Moderate (4/6, including essential criterion 1)**

Condition Assessment Result	**Condition Assessment Score**
Passes 5 or 6 criteria, including essential criteria 1 and 6	Good (3)
Passes 3 or 4 criteria, including essential criterion 1	Moderate (2)
Passes 0, 1 or 2 of 6 criteria; OR Passes 3 or 4 criteria excluding criteria 1 and 6	Poor (1)

E3 Condition Assessment Sheet: WOODLAND Habitat Type

Woodland and forest - Other woodland; broadleaved

BNG Condition Assessment					Baseline and Proposed (retained) - Woodland 1 and unsurveyed area immediately adjacent to H9
Indicator		Good (3 points)	Moderate (2 points)	Poor (1 point)	
1	**Age Distribution**	3 age classes present	2 age classes present	1 age class present	3
2	**Herbivore Damage**	No significant browsing damage evident	Evidence of significant browsing pressure in 40% or less of whole woodland	Evidence of significant browsing pressure in 40% or more of whole woodland	3
3	**Invasive Species**	No invasive plant species	Rhododendron & laurel not present, other invasive species cover <10%	Rhododendron or laurel present, or other invasive species cover >10%	3
4	**No. of Native Tree Species**	5 or more native tree/shrub species present	3-4 native tree/shrub species present	0-2 native tree or shrub species present	3
5	**Cover of Native Species**	>80% of canopy & understory shrubs are native	50-80% of canopy & understory shrubs are native	<50% canopy & understory shrubs are native	3
6	**Open Space**	0-20% woodland has temporary areas of open space	21-40% woodland has temporary areas of open space	>40% woodland has temporary areas of open space	3
7	**Regeneration**	All 3 classes present	1 or 2 classes present	No classes or coppice regrowth present	3
8	**Tree Health**	Tree mortality <10%	11-25% tree mortality	>25% tree mortality and any high risk pest/disease	2
9	**Vegetation & Ground Flora**	Ancient woodland indicators present	Recognisable NVC community present	No recognisable NVC community	1
10	**Vertical Structure**	3 or more storeys across all survey plots	2 storeys across all survey plots	1 or less storeys across all survey plots	3
11	**Veteran Trees**	2 or more veteran trees/ha	1 veteran tree/ha	No veteran trees present	1
12	**Deadwood**	50% survey plots have deadwood	25-50% survey plots have deadwood	<25% survey plots have deadwood	2
13	**Disturbance**	No nutrient enrichment or damaged ground	<20% damaged ground and/or <1ha nutrient enrichment	>20% damaged ground and/or >1ha nutrient enrichment	1
Woodland Condition					**Moderate (32/39)**

Condition Assessment Result	Condition Assessment Score
Total score >32 (33 to 39)	Good (3)
Total score 26 to 32	Moderate (2)
Total score <26 (13 to 25)	Poor (1)

E4 Condition Assessment Sheet: SCRUB Habitat Type

Blackthorn scrub and Mixed scrub

BNG Condition Assessment Criterion Achieved (Y/N)		Mixed baseline – adjacent to Field 1	Mixed baseline – adjacent Field 2 and Field 6	Blackthorn baseline – adjacent Field 6	Proposed – mixed scrub
A	The parcel represents a good example of its habitat type - the appearance and composition of the vegetation closely matches its UKHab description (where in its natural range).1 - At least 80% of scrub is native, - There are at least three native woody species2, - No single species comprises more than 75% of the cover (except hazel *Corylus avellana*, common juniper *Juniperus communis*, sea buckthorn *Hippophae rhamnoides* (only in its restricted native range), or box *Buxus sempervirens*, which can be up to 100% cover).	Y	Y	N	Y
B	There is semi-natural habitat (i.e. Moderate distinctiveness or above) for at least 10 m from the pond edge.	Y	Y	N	Y
C	There is an absence of invasive non-native plant species3 (as listed on Schedule 9 of WCA4) and species indicative of sub-optimal condition5 make up less than 5% of ground cover.	Y	Y	Y	Y
D	The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.	Y	N – field margins restricting extent of ecotones	Y	Y
E	There are clearings, glades or rides present within the scrub, providing sheltered edges.	Y	Y	Y	N
Condition		**Good (5 /5)**		**Moderate (3/5)**	**Moderate (4 /5)**

Condition Assessment Result	Condition Assessment Score
Passes 5 criteria	Good
Passes 3 or 4 criteria	Moderate
Passes 2 or fewer criteria	Poor

E5 Condition Assessment Sheet: URBAN Habitat Type

Sparsely vegetated land - Ruderal/ephemeral (R/E)

Urban - Vacant / derelict land / bare ground (BG)

BNG Condition Assessment **Criterion Achieved (Y/N)**		**Baseline - Field 6**
1	Vegetation structure is varied, providing opportunities for insects, birds and bats to live and breed. A single ecotone (i.e. scrub, grassland, herbs) should not account for more than 80% of the total habitat area.	Y
2	There is a diverse range of flowering plant species, providing nectar sources for insects. These species may be either native, or non-native but beneficial to wildlife. NB - To achieve GOOD condition, criterion 2 must be satisfied by native species only (rather than non-natives beneficial to wildlife). Note that Biodiverse green roofs are exempt from this requirement, and can include non-native sedums, as set out in footnote 1.	N
3	Invasive non-native species (Schedule 9 of WCA) cover less than 5% of total vegetated area. NB - To achieve GOOD condition, criterion 3 must be satisfied by a complete absence of invasive non-native species (rather than <5% cover).	Y
Condition		**Moderate (2/3)**

Condition Assessment Result	**Condition Assessment Score**
Passes 3 of 3 core criteria; AND Meets the requirements for good condition within criteria 2 and 3	Good (3)
Passes 2 of 3 core criteria: OR Passes 3 of 3 core criteria but does not meet the requirements for good condition within criteria 2 and 3	Moderate (2)
Passes 0 or 1 of 3 criteria	Poor (1)

E6 Condition Assessment Sheet: RURAL TREES Habitat Type

Rural – Rural tree (RT)

BNG Condition Assessment Criterion Achieved (Y/N)		Baseline and Proposed (habitat retained) (all Rural Trees)
1	The tree is a native species (or more than 70% within the block are native species).	Y
2	The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion).	Y
3	The tree is mature or veteran (or more than 50% within the block are mature or veteran).	N
4	There is little or no evidence of an adverse impact on tree health by anthropogenic activities such as vandalism or herbicide use. There is no current regular pruning regime so the trees retain >75% of expected canopy for their age range and height.	Y
5	Micro-habitats for birds, mammals and insects are present e.g. presence of deadwood, cavities, ivy or loose bark	Y
6	More than 20% of the tree canopy area is oversailing vegetation beneath.	Y
Condition		**Good (5/6)**

Condition Assessment Result	Condition Assessment Score
Passes 5 or 6 of 6 criteria	Good (3)
Passes 3 or 4 of 6 criteria	Moderate (2)
Passes 0, 1 or 2 of 6 criteria	Poor (1)

E7 Condition Assessment Sheet: HEGDEROW Habitat Type

Native hedgerow

Native hedgerow with trees

Species-rich native hedgerow

Attributes and functional groupings (A, B, C, D & E)		Criteria (the minimum requirements for 'favourable condition'	Baseline - Hedgerow 2 and 7	Baseline - Hedgerow 2 , 3, 4, 6 and 9	Baseline Hedgerow 1, 5, 8 and Proposed (New H1)
Core groups - applicable to all hedgerow types					
A1.	Height	>1.5 m average along length	Y	Y	Y
A2.	Width	>1.5 m average along length	Y	Y	Y
B1.	Gap - hedge base	Gap between ground and base of canopy <0.5 m for >90% of length (unless 'line of trees')	N	Y	Y
B2.	Gap - hedge canopy continuity	Gaps make up <10% of total length and No canopy gaps >5 m	N	Y-N	Y-N
C1.	Undisturbed ground and perennial vegetation	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: - measured from outer edge of hedgerow, and - is present on one side of the hedge (at least)	N	Y-N	Y
C2.	Undesirable perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground	N	N	Y
D1.	Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species	Y	Y	Y
D2.	Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities	N	Y-N	Y
Hedgerow Condition			**Poor**	**Moderate**	**Good**
Additional group - applicable to hedgerows with trees only					
E1.	Tree age	At least one mature tree per 30m stretch of hedgerow. A mature tree is one that is at least 2/3 expected fully mature height for the species.	n/a	N	n/a
E2.	Tree health	At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	n/a	Y	n/a
Hedgerow With Trees Condition			**3 (Poor)**	**8 (Moderate)**	**8 (Good)**

Condition Categories for Hedgerows without Trees	
Maximum number of attributes that can fail to meet 'favourable condition' criteria	**Metric Score**
No more than 2 failures in total; AND No more than 1 in any functional group	3
No more than 4 failures in total; AND Does not fail both attributes in more than one functional group (e.g. fails attributes A1, A2, B1 & C1 = Moderate condition)	2
Fails a total of more than 4 attributes; OR Fails both attributes in more than one functional group (e.g. fails attributes A1, A2, B1 & B2 = Poor condition)	1
Condition Categories for Hedgerows with Trees	
Maximum number of attributes that can fail to meet 'favourable condition' criteria	**Metric Score**
No more than 2 failures in total; AND No more than 1 in any functional group	3
No more than 5 failures in total; AND Does not fail both attributes in more than one functional group (e.g. fails attributes A1, A2, B1, C1 & E1 = Moderate condition)	2
Fails a total of more than 5 attributes; OR Fails both attributes in more than one functional group (e.g. fails attributes A1, A2, B1 & B2 = Poor condition)	1

E9 Condition Assessment Sheet: DITCH Habitat Type

Rivers and streams - Ditches

BNG Condition Assessment Criterion Achieved (Y/N)		Baseline and Proposed – D1	Baseline and Proposed – D2	Baseline and Proposed – D3
A	The ditch is of Good water quality, with clear water (low turbidity) indicating no obvious signs of pollution.	N	N	N
B	A range of emergent, submerged or floating leaved plants are present. As a guide >10 species of emergent, floating or submerged plants in a 20m ditch length.	N	N	N
C	There is less than 10% cover of filamentous algae and/or duckweed (these are signs of eutrophication).	Y	Y	Y
D	A fringe of marginal vegetation is present along more than 75% of the ditch.	Y	Y	Y
E	Physical damage evident along less than 5% of the ditch, such as excessive poaching, damage from machinery use or storage, or any other damaging management activities.	Y	Y	Y
F	Sufficient water levels are maintained; as a guide a minimum summer depth of approximately 50cm in minor ditches and 1m in main drains.	N	N	N
G	Less than 10% of the ditch is heavily shaded.	N	N	N
H	There is an absence of invasive non-native plant and animal species.	Y	Y	Y
Ditch Condition		**Poor (4-5/8)**	**Poor (4-5/8)**	**Poor (4/8)**

Condition Assessment Result	Condition Assessment Score
Passes 8 of 8 criteria	Good (3)
Passes 6 or 7 of 8 criteria	Moderate (2)
Passes 0, 1, 2, 3, 4 or 5 of 8 criteria	Poor (1)

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