

Biodiversity Net Gain Assessment: Design Stage

July 2026

Land North of Rectory Lane,
Ashington

Prepared by
CSA Environmental

On behalf of
Taylor Wimpey

Report No: CSA/4705/15

This report may contain sensitive ecological information. It is the responsibility of the Local Authority to determine if this should be made publicly available.

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CSA/4705/15	-	02/06/2026	JT	TS	Draft for comment
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EXECUTIVE SUMMARY

Residential development is proposed at Land North of Rectory Lane, Ashington. Outline planning permission is sought from Horsham District Council which will be subject to the Biodiversity Gain Condition in accordance with Schedule 14 of the Environment Act (2021).

CSA Environmental was instructed by Taylor Wimpey Strategic Land to undertake a 'Design Stage' Biodiversity Net Gain Assessment (BNGA) of the proposed development. The Statutory Biodiversity Metric Calculation Tool was used to determine pre- and post-development biodiversity values, and predict the net effect of the proposed development upon biodiversity.

Baseline habitats at the Site comprise predominantly arable land bounded and bisected by mature trees, species-rich native hedgerows and an adjacent watercourse, with habitats ranging from low to very high distinctiveness. The Site contains irreplaceable habitat in the form of veteran trees identified under the Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations (2024).

Post-development habitats at the Site will comprise residential dwellings with associated private gardens, access infrastructure, Sustainable Drainage System (SuDS) features, other neutral grassland, a wildlife pond, extensive tree planting and species-rich native hedgerows with trees. The proposals retain and enhance key boundary habitats, provide significant on-site biodiversity gains through habitat creation and watercourse enhancement, and deliver a more diverse habitat mosaic across the Site.

A net gain of biodiversity is predicted for the proposed development of 7.56 Habitat Units (44.11%), 3.25 Hedgerow Units (11.87%) and 0.42 Watercourse Units (16.22%). This is subject to the retention and enhancement of existing scrub, hedgerows, treelines and the adjacent watercourse, together with the creation of other neutral grassland, traditional orchard, SuDS features including a wildlife pond, new tree planting and 0.55km of species-rich native hedgerow with trees.

Subject to securing the above through relevant legal mechanisms, the Biodiversity Gain Condition could be discharged following grant of consent through submission of a Biodiversity Gain Plan template as drafted herein. The proposals accord with the Biodiversity Gain Hierarchy and Policy 31 of the Horsham District Planning Framework, and would deliver long-term biodiversity benefits through habitat creation, enhancement and management over a 30-year period.

To assist Horsham District Council in their consideration of BNG and the proposed development, relevant statements have been set out in Box 1 and 2 in respect of applicable BNG policy and legal requirements.

Box 1. Biodiversity Net Gain Statements
Planning permission sought for the development, if granted, would be subject to the Biodiversity Gain Condition as set out within Schedule 14 of the Environment Act (2021) given the following: • Planning permission is applied for after 12 February 2024 • Planning permission does not relate to development consented prior to 12 February 2024 ('major developments') and subject to a 'Section 73' amendment, or comprise a Reserved Matters application pursuant to such consent • Impacts to habitats are predicted on-site that either exceed 25 square metres per 5 linear metres with a value greater than zero, and/or impacts to any 'Section 41' habitat of principal importance • Planning permission sought does not relate to a 'householder application' or 'the high-speed railway transport network' • Planning permission is not for self-build or custom housebuilding and relates to more than 9 dwellings and/or proposals cover over 0.5ha • Planning permission does not relate directly to off-site gain developments to fulfil other BNG requirements
The biodiversity value of on-site habitats set out herein relate to the date of the planning application and not an earlier date.
The biodiversity value of on-site habitats set out herein are not lower than on date of application.
On-site biodiversity gain proposed herein is significant based upon the following: • Proposed habitats include those of medium and higher distinctiveness comprising: other neutral grassland, ponds (non-priority), urban trees and native species-rich hedgerows with trees • Proposed habitats comprise large areas of low distinctiveness habitat comprising: vegetated gardens, sustainable drainage systems, rain gardens and modified grassland
The Site contains irreplaceable habitat as defined under the Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations (2024). This comprises trees which meet the requirements under BNG guidance to be considered 'veteran', although do not necessarily meet the NPPF definition of a veteran tree. The locations of the irreplaceable habitats are clearly shown on (CSA/4705/145).
As set out herein measures have been taken in a step-wise fashion to: • First avoid adverse effects of the development upon on-site medium or higher distinctiveness habitat and, where they cannot be avoided, to mitigate these effects • Taking an approach to first seek on-site habitat enhancement, then habitat creation • Where the above cannot fully compensate, seek registered off-site gains • And finally, where off-site gains cannot be secured, seeking purchase of biodiversity credits

Box 2. Accordance with 'Biodiversity Net Gain: Good Practice Principles for Development' (Baker et al., 2019).	
Principle 1. Apply the 'Mitigation Hierarchy'	Designs decisions have been documented within the prepared EcIA with due consideration for the CIEEM Guidelines for Ecological Impact Assessment (EcIA) (CIEEM, 2018) including mitigation hierarchy. Trading rules have been accorded with in the prepared metric and ecologically justified decisions have been taken in respect of proposed habitats. Adverse effects of the development upon on-Site medium or higher distinctiveness habitats have been avoided except for access creation, which will require a small degree of loss to Hedgerow H3. This impact could not be avoided, and it is not possible to enhance other linear habitats on Site, so this impact is compensated through the creation of hedgerows within the scheme.
Principle 2. Avoid losing biodiversity which cannot be offset by gains elsewhere.	No ancient woodland habitats are present on-site or nearby. Notable habitats and features (including old hedgerows and mature trees) have been prioritised for protection as part of the proposed design.
Principle 3. Be inclusive & equitable	Design decisions taken have considered wider stakeholders including new residents and the existing neighbouring community. Open space design has sought to balance biodiversity benefits and access to nature, with recreational uses and delivery of housing.
Principle 4. Address risks (e.g., difficulty of achieving habitat creation/enhancement)	A precautionary approach has been taken to grassland habitat type and condition for on-site biodiversity gain provision, with the highest provision comprising other neutral grassland in moderate condition.
Principle 5. Make a 'measurable' Net Gain contribution.	The Statutory Biodiversity Metric has been used to demonstrate a clear and quantified calculation of the net effect of development upon biodiversity, using habitat as a proxy for wider biodiversity.
Principle 6. Ensure that Net Gain design achieves the best outcomes for biodiversity (quantitative and qualitative assessment) and create a net gain legacy for long-term benefits.	The decisions for design proposals have been subject to an iterative process with ecologists to ensure biodiversity is considered and the best outcomes for biodiversity are achieved.
Principle 7. Be additional Achieve nature conservation outcomes that demonstrably exceed existing obligations (i.e. do not deliver something that would occur anyway).	Proposed habitats on-site prioritise the planting of native species, which will provide better resources within the landscape than previous. Habitat creation at the Site has been included as a betterment to the Site, and not as compensation for protected species.
Principle 8. Create a Net Gain legacy Ensure Net Gain generates long-term benefits.	All habitats will be managed for at least 30 years to support long term benefits.
Principle 9. Optimise sustainability Optimise the wider environmental benefits for a sustainable society and economy.	Amenity use habitats are designed to be low maintenance to reduce costs and the need for any pesticides.
Principle 10. Be transparent Communicate all Net Gain activities in a transparent and timely manner, sharing the learning with all stakeholders.	An iterative approach has been used to inform the biodiversity net gain throughout the design of the Site. Inputs from stakeholders will be used to refine the approach as necessary through the planning process.

1.0 INTRODUCTION

- 1.1 This report has been prepared by CSA Environmental on behalf of Taylor Wimpey Strategic Land and sets out the findings of a 'Design Stage' Biodiversity Net Gain (BNG) Assessment. Residential development of up to 125 dwellings, access, public open space and associated landscaping, drainage and highways infrastructure, with all matters reserved except access, is proposed at Land at Rectory Lane, Ashington (hereafter 'the Site'). The plans at Appendices A and B display the Site boundary. This report details the predicted net effect of the proposed development upon biodiversity.
- 1.2 This report has been prepared with due consideration for the Chartered Institute of Ecology and Environmental Management's guidance for design stage reporting on Biodiversity Net Gain (CIEEM, 2021). The report also takes into account wider CIEEM best-practice guidance (2017 & 2024), Biodiversity Net Gain: Good Practice Principles for Development (Baker et al., 2019) and the Biodiversity: Code of Practice for Planning and Development, published by the British Standards Institute (BS 42020:2013).
- 1.3 The Site occupies an area of c. 7.39ha and consists of an arable field bounded and bisected by lines of mature trees and hedgerows (see Habitats Plan in Appendix A). The Site is located around central grid reference TQ 12626 16547, to the north-west of Ashington, a village to the north-east of the town of Storrington.
- 1.4 This report should be read in conjunction with the Ecological Impact Assessment (EcIA) (CSA/4705/05) prepared for the proposed development which provides full baseline habitat information upon which the post-development biodiversity value set out herein is based.
- 1.5 This 'Design Stage' BNG Assessment aims to:
 - Confirm whether planning permission sought for the development, if granted, would be subject to the Biodiversity Gain Condition as set out within the Environment Act (2021) [see Box 1].
 - Provide information about "...the steps taken or to be taken to minimise the adverse effect of the development on the biodiversity of the on-site habitat and any other habitat". Furthermore, evidence is provided as to how the Biodiversity Gain Hierarchy, as set out in as set out in the Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations (2024), has been applied.
 - Establish the following using the Statutory Biodiversity Metric Calculation, which uses habitat as a proxy for biodiversity and comprises three separate modules (Habitat Units, Hedgerow Units & Watercourse Units):
 - 'pre-development' (baseline) biodiversity value of the Site

- 'post-development' (post-intervention) biodiversity value of the Site
 - Any off-site biodiversity values (baseline & post-intervention)
 - Net effect of the proposed development
 - Whether relevant 'trading' rules and other controls have been accorded with
 - Whether the Biodiversity Gain Objective (10%) is met or not
 - State whether "...the biodiversity value of the on-site habitat will be lower on the date of application (or an earlier date) because of the carrying on of activities ('degradation') in which case the value is to be taken as immediately before the carrying on of the activities, and if degradation has taken place supporting evidence of this".
 - State whether any on-site biodiversity provision is 'significant' and if so, how the specific gains would be secured for 30 years, in accordance with Paragraph 9, Schedule 7A of the Town & Country Planning Act (1990).
 - Confirm the presence and location of any irreplaceable habitat at the Site, as set out in the Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations (2024).
 - Clearly identify any assumptions made or deviation from the Statutory Biodiversity Metric Guidance.
 - Detail any legal frameworks for how Biodiversity Net Gain would be secured subject to grant of planning permission.
- 1.6 In accordance with the Biodiversity Gain (Town and Country Planning) (Modifications and Amendments) (England) Regulations (2024) the following drawings have also been prepared:
- Baseline Habitats Plan (CSA/4705/145) provided in Appendix A
 - Proposed Habitats Plan (CSA/4705/146) provided in Appendix B
- 1.7 This report should be viewed in conjunction with the Draft Habitat Management and Monitoring Plan (HMMP; CSA/4705/14) prepared for the Site.
- 1.8 To assist the Council in their consideration of the application, a Draft Biodiversity Gain Plan is provided in Appendix C making use of the most recently published template. A final Biodiversity Gain Plan would be prepared to discharge the Biodiversity Gain Condition following the grant of the planning permission.

2.0 PLANNING POLICY & LEGISLATION

2.1 The following legislation brings into force Schedule 14 of the Environment Act (2021), making Biodiversity Net Gain (BNG) a condition of planning permission in England from 12 February 2024:

- The Biodiversity Gain (Town and Country Planning) (Consequential Amendments) Regulations 2024
- The Biodiversity Gain Site Register (Financial Penalties and Fees) Regulations 2024
- The Biodiversity Gain Site Register Regulations 2024
- The Biodiversity Gain Requirements (Exemptions) Regulations 2024
- The Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations 2024
- The Biodiversity Gain (Town and Country Planning) (Modifications and Amendments) (England) Regulations 2024

2.2 The National Planning Policy Framework (NPPF) (Ministry of Housing, Communities & Local Government, 2024) sets out existing government planning policies for England and how they should be applied. Chapter 15: Conserving and Enhancing the Natural Environment, paragraph 187, states that the planning system and planning policies should minimise impacts on and provide net gains for biodiversity.

2.3 Accompanying the NPPF, central government guidance on the implementation of planning policies is set out within online Planning Practice Guidance (PPG). That relating to the protection and enhancement of the Natural Environment was most recently updated in May 2024. The Natural Environment PPG addresses principles across a broad spectrum of topics targeting biodiversity conservation, from individual site and species protection through to the supporting of ecosystem services, and the use of local ecological networks to support the national Nature Recovery Network. In particular, the PPG promotes the delivery of measurable Biodiversity Net Gain through the creation and enhancement of habitats alongside development.

2.4 The following policy excerpt from the adopted Horsham District Planning Framework (2015) makes reference to biodiversity and the protection and enhancement of priority habitats and species:

Policy 31: Green Infrastructure and Biodiversity

1. *Development will be supported where it can demonstrate that it maintains or enhances the existing network of green infrastructure. Proposals that would result in the loss of existing green infrastructure will be resisted unless it can be demonstrated that new opportunities will be provided that mitigates or compensates for this loss, and ensures that the ecosystem services of the area are retained.*

2. *Development proposals will be required to contribute to the enhancement of existing biodiversity, and should create and manage new habitats where appropriate. The Council will support new development which retains and /or enhances significant features of nature conservation on development sites. The Council will also support development which makes a positive contribution to biodiversity through the creation of green spaces, and linkages between habitats to create local and regional ecological networks...*

3.0 METHODS

Biodiversity Calculations

- 3.1 The Statutory Biodiversity Metric (Defra, 2025) was used to determine baseline (pre-development) and post-intervention (post-development) biodiversity values, and to calculate the net effect of the development upon biodiversity. Specifically, the Statutory Biodiversity Metric Calculation Tool was populated and used to run all calculations present herein, and in accordance with the Statutory Metric User Guide (Defra, 2025).
- 3.2 The Statutory Biodiversity Metric uses habitat (vegetation and edaphic conditions) as a proxy for measuring biodiversity more widely. This reductive approach allows for the relative biodiversity 'value' of land to be calculated and expressed as transferrable 'Biodiversity Units'. The metric adopts the UK Habitat Classification (UK Hab; Butcher et al., 2023) system with some minor deviation.
- 3.3 The metric consists of a primarily 'Area' module which calculates 'Habitat Units' such as grassland, woodland and urban habitats, as well as two linear modules for 'Hedgerow Units' (including lines of trees) and 'Watercourse Units' (including rivers, canals and ditches). The separate Biodiversity Unit types cannot be converted between these modules and are addressed separately herein.
- 3.4 'Habitat trading' controls are integrated into the Statutory Metric to ensure any losses of habitat are mitigated or compensated for appropriately, in respect of conservation priorities and ecological functionality. Any deviation from habitat trading is cleared flagged within the Statutory Metric, and justifications, where necessary, are set out herein.
- 3.5 Any consideration of temporary impacts, those where habitats can be reinstated within 2 years of impacts as set out within the User Guide, are explained in full herein.
- 3.6 A Statutory Biodiversity Metric Calculation Tool has been prepared for the proposed development and is provided separately in full for interrogation by Horsham District Council, relevant consultees and stakeholders.
- 3.7 All metric calculations have been reviewed by Tom Richards MCIEEM who has completed numerous net gain assessments.

Baseline Habitats

- 3.8 The accompanying EclA report (CSA/4705/05) provides details of the UKHab survey undertaken at the Site in January 2026 including full survey methods.
- 3.9 Baseline (pre-development) habitat areas and linear measurements were taken from the Baseline Habitats Plan (Appendix A) prepared in mapping software Quantum Geographic Information Systems (QGIS). Mapping is based upon field survey, topographical survey, aerial photography and OS mapping to an accuracy of 10m² for area-based habitats and 0.005km for linear habitats.

Habitat & Hedgerow Condition Assessment

- 3.10 An assessment of habitat and hedgerow condition was undertaken on 17 April 2024 by CSA Environmental staff Jeff Turton MCIEEM (FISC Level 3) and William Campbell, in accordance with the Statutory Metric User Guide (Defra, 2024). Published condition assessment templates have been completed and are provided in Appendix D alongside wider condition information.

River Condition Assessment

- 3.11 Further condition assessment was undertaken of Lancing Brook by trained and accredited RCA surveyor Lydia Galbraith ACIEEM of CSA Environmental on 31 October 2024. The assessment was undertaken to determine the extent, diversity and structure of observed physical features in the watercourse channel and riparian zone, and the extent and types of human modification and disturbance.
- 3.12 Prior to the survey, an initial desktop scoping exercise and/or watercourse scoping survey was/were undertaken to determine the number of MoRPh5 (Modular River Physical) 'sub-reaches' to be sampled in line with published guidance (Gurnell et al., 2024). The desktop/scoping survey exercise assessed the number of applicable watercourses present, their widths, the presence of positive and negative features and any changes in habitat types within the four assessment zones (see below) that would impact upon the number of sub-reaches to be surveyed.
- 3.13 The number of required sub-reaches is defined by the number of river 'reaches' that are present within the study area and the requirement to survey a minimum 20% length of applicable watercourses within each reach that are situated on-site and within 10m of the site boundary. While a 20% minimum survey extent is required, additional sub-reaches are typically surveyed to ensure that the condition of varying sections of the watercourse are sufficiently understood and the survey data can be appropriately utilised as a proxy for condition across all sections of watercourse where impacts are predicted and enhancements are

proposed. Each sub-reach is comprised of five contiguous MoRPh modules, with the length of each module defined by the 'MoRPh river width' of the watercourse.

- 3.14 The RCA covered four survey criteria: bank top (the riparian zone, extending 10m from the top of each bank), bank face, channel-water margin and channel bed. Individual scores were calculated for the MoRPh5 sub-reach for 32 River Condition Indicators (RCI), which include both positive and negative aspects of the watercourse. Data pertaining to the presence and abundance of features was collected on-site and then inputted into cartographer.io software to generate numerical values for the 32 RCI. The RCIs quantify the geo-morphic features of the bank top, bank face, channel-water margin and channel bed with positive RCIs scored between 0 and 4 and negative RCIs scored between -4 and 0. The sum of average positive indicators and average negative indicators provides a Preliminary Condition Score for the sub-reach.
- 3.15 Following the field survey, a MoRPh River Type desk study assessment was undertaken on a homogenous reach of Lancing Brook, incorporating river habitat within the Site. Online geospatial data was used to calculate the valley confinement, planform, elevation and length of the reach, and data from the field component of the RCA was used to determine the average and coarsest bed material sizes within the sub-reach. This data was also entered into the cartographer.io software and each reach was assigned one river type from a possible 13 river types likely to be encountered in England. The River Type and Preliminary Condition Score data are combined to calculate a Final Condition Score for each sub-reach.
- 3.16 Assessments of any post-intervention condition score changes were completed by re-running revised sub-reach data through the cartographer.io software based on any predicted impacts or enhancements to sections of the watercourse.
- 3.17 Further details of RCA results are provided in Appendix E.

Post-Development Habitats

- 3.18 Post-development habitat areas and linear measurements were taken from the Proposed Habitats Plan (Appendix B) prepared in mapping software QGIS. This plan is based upon the Framework Masterplan prepared by Urban Place Lab (Drawing ref: 26001_03_B) on behalf of Taylor Wimpey UK Ltd, along with indicative landscape designs prepared by CSA Environmental (Illustrative Landscape Strategy CSA/4705/140). Wider consideration of construction methods, future land-use and management were used to determine the extent of existing habitat loss/deterioration, retention/enhancement and creation which would occur-post development.

- 3.19 Professional judgement was required throughout the calculation process to ensure target habitats were reasonable, achievable and ecologically justified. Habitat condition for both enhanced and created habitats was assigned taking a precautionary approach and with consideration of biotic and operational phase conditions (i.e. those which may limit the extent to which 'good' condition is likely to be reached).

Strategic Significance

- 3.20 A desktop assessment was undertaken to determine relevant strategic significance multipliers for pre- and post-development habitats in accordance with Table 7 of the Statutory Metric User Guide (Defra, 2025) with particular consideration of Local Nature Recovery Strategies (LNRS).

Encroachment (watercourses only)

- 3.21 Encroachment is a multiplier specific to the watercourses module of the metric and considers features that adversely affect the natural function of a watercourse, or result in localised changes in habitat, species and migratory pathways. The level of encroachment for both the watercourse and riparian zone at baseline and post-intervention were categorized based on the descriptions set out in Tables 11 and 12 of the User Guide (Defra, 2024) and typically consist of built structures, artificial features and management practices within these zones.

Additionality & Wider Considerations

- 3.22 In accordance with the good practice principles as set out above, the following additional considerations have been given:
- Wider consideration of ecological functionality, with a qualitative ecological assessment presented herein
 - Consideration of non-ecological stakeholders, such as end-users (e.g. residents) of the scheme and choices with regard to access and multi-functionality
 - Identification of opportunities to deliver wider environmental gain (e.g. carbon sequestration, water quality and climate resilience) guiding habitat/design choices beyond certain ecological outcomes

Assumptions & Limitations

- 3.23 Effort has been taken to ensure mapping, and measurements taken from mapping, are accurate to the level stated. However, given the nature of habitats, methods of field survey and the potential for inaccuracies in aerial photography and some other mapping, there remain some potential for errors in the calculations presented herein.
- 3.24 Professional judgement and a precautionary approach are required to establish baseline and post-development scenarios to assess current

habitat type and condition, and to predict future changes. Accordingly outcomes for habitats and biodiversity more widely may differ from those presented herein.

- 3.25 Specific assumptions with regard to certain existing and proposed habitats have been identified where relevant throughout the report.

4.0 BASELINE BIODIVERSITY

- 4.1 For full habitat descriptions and species lists, please refer to the EcIA (CSA/4705/05) with baseline habitats illustrated on the Habitats Plan (Appendix A). Appendix D sets out full details of habitat condition assessment including completed standard templates.

Strategic Significance

- 4.2 The West Sussex LNRS was published in June 2026 and has been interrogated to determine what parts of the site fall within mapped 'Areas that Could Become of Importance for Biodiversity' (ACIB). The relevant areas within ACIB mapping are displayed at Appendices A and B and have been accounted for within the metric.
- 4.3 The following additional documents have been reviewed in respect of assigning significant strategic significance:
- Green Infrastructure Strategy and Guide (2024)
 - Sussex Biodiversity Opportunity Areas
 - Horsham District's Nature Recovery Network (NRN)
- 4.4 Upon review of the above, the strategic significance of most habitats present on-Site at the baseline are recorded as 'low' strategic significance, except for the northern stretch of the adjacent watercourse which is recorded as 'high' strategic significance, i.e. 'formally identified in local strategy', as well as small parts of the arable field and parts of H5 (see Appendix A).
- 4.5 The above approach has also been adopted for post-intervention (post-development) habitat units as set out below.

Encroachment (relevant to watercourses only)

- 4.6 The extent of riparian encroachment selected at the baseline was 'major/major' due to the agricultural land management on either side, i.e. arable farming and cattle grazing. Watercourse encroachment was selected as 'no encroachment' due to the absence of applicable features.

Baseline Biodiversity Units

- 4.7 A summary of the on-site habitat areas and baseline Biodiversity Units, as calculated using the accompanying Statutory Biodiversity Metric are set out in Table 1 below.

Table 1. Summary of On-site Baseline Biodiversity Units

HABITATS		
Habitat Type (Assumed Condition)	Area (ha)	Habitat Units
Arable 'cereal crops' (N/A)	7.271	14.44
Arable 'cereal crops' (N/A) - inside ACIB	0.089	0.20
Mixed scrub	0.027	0.22
Rural tree	0.5718	0.00
Rural tree	0.0163	0.20
Rural tree	0.166	1.99
Total	7.39ha*	17.05
HEDGEROWS		
Hedgerow Type	Length (km)	Hedgerow Units
H1 Species-rich native hedgerow with trees	0.126	2.27
H2 Native hedgerow	0.055	0.33
H3 Species-rich native hedgerow with trees	0.415	7.47
H4 Species-rich native hedgerow with trees - associated with bank or ditch	0.191	4.58
H5 Species-rich native hedgerow with trees - associated with bank or ditch	0.317	7.61
H5 Species-rich native hedgerow with trees - associated with bank or ditch – inside ACIB	0.093	2.57
LT1 Ecologically valuable line of trees	0.193	1.54
LT2 Ecologically valuable line of trees	0.125	1.00
Total	1.52km	27.37
WATERCOURSES		
Habitat Type	Length (km)	Watercourse Units
Other rivers and streams	0.208	1.87
Other rivers and streams – inside ACIB	0.07	0.72
Total	0.28km	2.60

*Area measurements attributed to 'individual trees' are not included in the total area as trees oversail other habitats.

- 4.8 The majority of the Site area (99%) comprises arable land, which is a habitat of 'low' distinctiveness, and this contributes the majority of the overall biodiversity value (86%). Smaller areas of 'medium' distinctiveness habitats are present and contribute the remaining biodiversity value of the Site at baseline. No units are generated for the BNG veteran trees recorded as irreplaceable habitat.
- 4.9 The hedgerows on-Site range from 'low' to 'very high' distinctiveness. The categories associated with 'very high' distinctiveness are 'species-rich native hedgerows with trees – associated with bank or ditch' (H4 and H5) and equate to 0.6km cumulatively, representing 34% of total hedgerow length around the Site and 14.76 hedgerow units (54% of the total hedgerow units). Following this, 'high' distinctiveness 'species-rich native hedgerow with trees' H1 and H3 equate to 0.541km cumulatively, representing 36% of the total hedgerow length around the Site and 9.74 hedgerow units (35% of the total hedgerow units). The two treelines LT1 and LT2 have been recorded as 'medium' distinctiveness 'ecologically valuable line of trees' due to each containing trees recorded on the irreplaceable habitats tab, and together they represent 0.318km/21% of the total 'hedgerow' length value and 3.82/14% of the hedgerow unit

value. Hedgerow H2 is the only 'low' distinctiveness hedgerow habitat ('native hedgerow') and it accounts for the remaining hedgerow length/units value.

- 4.10 The watercourse (Lancing Brook), while technically off-Site, is recorded at the baseline due to being within 10m of the Site, i.e. the Site is within the riparian zone (as per the Statutory Metric User Guide). Just 0.278km of the watercourse is within this distance of the Site, as the watercourse deviates further north from the northern boundary before coming back into range further downstream.

5.0 POST-INTERVENTION BIODIVERSITY

- 5.1 The proposed development comprises the construction of 125 residential dwellings. There will be associated private gardens, access infrastructure, Sustainable Drainage System (SuDS) features and 3.82ha of Public Open Space.
- 5.2 The proposed scheme was subject to an iterative design process with the following specific aims and advice provided in accordance with the Biodiversity Gain Hierarchy:
- Avoid entirely direct losses of irreplaceable trees
 - Minimise necessary losses of hedgerows for access
 - Minimise losses of lower value trees
 - Utilise public open space focused towards the north of the Site for planting opportunities and watercourse buffering
 - Habitats proposed to contribute to aims of Policy 31 of the Horsham District Planning Framework
- 5.3 Post-intervention habitats are illustrated on the Proposed Habitats Plan in Appendix B. This drawing is based upon development parameters set out within Framework Masterplan prepared by Urban Place Lab (Drawing ref: 26001_03_B) on behalf of Taylor Wimpey UK Ltd, along with indicative landscape designs prepared by CSA Environmental (Illustrative Landscape Strategy CSA/4705/140). The following assumptions have been made with regard to these plans in line with the Statutory Metric User Guide (Defra, 2024) and professional judgement taking a precautionary approach where necessary:
- Residential development parcels are assumed to comprise 70% dwellings and built form, with 30% private gardens and incidental open space, netting out spine roads
 - All individual trees are assumed to be 'small' in size, and in poor condition for 'urban'/street contexts and moderate condition for 'rural' contexts
- 5.4 On-site habitat retention, enhancement and creation set out below would be secured through control of detailed development/landscape design, a Habitat Management & Monitoring Plan (HMMP) and appropriate application of a planning condition or legal condition.

Habitat Retention & Enhancement

- 5.5 The majority of area habitats at the Site will be lost to development, comprising principally arable land and one tree (T24), with the majority of linear habitats retained. The following habitats will be retained and/or enhanced:
- 0.027ha of mixed scrub will be retained in moderate condition

- All hedgerows/treelines will be retained in good condition, except for a c. 0.003km/3m loss from both Hedgerow H1 and Hedgerow H5 (i.e. 6m cumulative loss) to create foot/cycleway links into adjoining land, as well as a c. 0.1km/100m loss of Hedgerow H3 and c. 0.01km/10m 'loss' of LT1 (use of existing gap) for access purposes.
 - The adjacent watercourse will be enhanced through land-use change within the on-Site riparian zone but will be subject to a c. 2m 'loss' (0.002km) due to the construction of a small headwall from the outfall of the westernmost attenuation basin
- 5.6 As set out within the accompanying EclA the retention of these habitats will require protections during construction and in operation through the following:
- Tree protection measures in line with standard arboricultural practice (BS5837: 2012)
 - Construction Environmental Management Plan, to include standard pollution control measures to be implemented during construction
 - Landscape and Ecology Management Plan
- 5.7 Enhancement works would be delivered and secured through delivery of the associated HMMP.

Habitat Creation

- 5.8 As part of the proposed development a range of habitats will be created including residential dwellings and associated infrastructure, vegetated gardens and incidental greenspace, and large-scale habitat creation to include neutral grassland, a small traditional orchard, sustainable drainage infrastructure including three large attenuation basins (including a wildlife pond/permanently wet core within the central attenuation basin) and rain gardens, plus extensive tree planting (c. 105 new trees) which will compensate for the loss of T24.
- 5.9 The proposals also include the creation of 0.543km of 'species-rich native hedgerow with trees' and c. 0.007km of 'species-rich native hedgerow with trees – associated with bank or ditch' which will compensate for the loss of c. 100m of hedgerow H3 for access creation and ensure the scheme meets the trading rules.

Strategic Significance

- 5.10 The majority of post-intervention habitats are assigned as 'Low' strategic significance with the exception of the proposed watercourse enhancement to the north and the small sections of H5 and neutral grassland creation identified as within the LNRS ACIB at Appendix B. These areas have been segregated in the metric and assigned 'High' strategic significance.

Significant On-site Gain

5.11 The following proposed habitat enhancement and creation proposals are likely to be considered 'significant' by Horsham District Council:

- Creation of high distinctiveness species-rich native hedgerow with trees
- Creation of habitats of medium distinctiveness, including other neutral grassland, individual trees and the non-priority pond
- Creation of high distinctiveness traditional orchard
- Enhancement of the watercourse through the removal of on-site encroachment.

5.12 In accordance with Paragraph 9, Schedule 7A of the Town & Country Planning Act (1990) these habitats contributing to significant on-site gains require additional mechanisms to secure their creation/enhancement and management over 30-years, such as through an appropriate planning condition and/or legal agreement in accordance with an on-site HMMP.

6.0 NET EFFECT ON BIODIVERSITY

Biodiversity Units

- 6.1 The net effect on biodiversity as a result of the proposed development is set out within the accompanying Statutory Biodiversity Metric and summarised below in Tables 2A, 2B and 2C.

Table 2A. Net Effect on Biodiversity: Habitat Units

	Habitat Units	% Change
On-site baseline	17.15	
On-site post-intervention	24.71	
On-site net change	+7.56	+44.11%
Total net change	+7.56	+44.11%
<i>Trading Rules Satisfied</i>		

Table 2B. Net Effect on Biodiversity: Hedgerow Units

	Hedgerow Units	% Change
On-site baseline	27.37	
On-site post-intervention	30.62	
On-site net change	+3.25	+11.87%
Total net change	+3.25	+11.87%
<i>Trading Rules Satisfied</i>		

Table 2C. Net Effect on Biodiversity: Watercourse Units

	Watercourse Units	% Change
On-site baseline	2.60	
On-site post-intervention	3.02	
On-site net change	+0.42	+16.22%
Total net change	+0.42	+16.22%
<i>Trading Rules Satisfied</i>		

- 6.2 It is demonstrated that the proposed development will result in a net gain in excess of 10% for Habitat Units, Hedgerow Units and Watercourse Units with all relevant trading rules satisfied.

Habitat Coverage

- 6.3 The net change in cover (area and linear) for broad and priority habitat is summarised in Table 3 below.

Table 3. Net Effect Habitat Coverage

	Area (ha)/Length (km) change	% Change
Urban	+4.31 ha	n/a
Arable	-7.36 ha	-100%
Grassland	+3.03 ha	n/a
Ponds	+0.02 ha	n/a
Individual trees	+0.41 ha	+56%
Scrub	No change	
Hedgerow (priority habitat)	+0.44 km	+83%
Watercourses	No tangible change	0%

- 6.4 The proposed development will inevitably result in the net loss of arable habitats and a significant increase in urban habitats within residential development parcels. Several habitats, entirely unrepresented at the Site are proposed, including other neutral grassland, traditional orchard and aquatic features.
- 6.5 No net loss of priority hedgerow habitat is predicted through the planting of new hedgerows within the proposed development.
- 6.6 No net loss is anticipated to watercourses due to land-use change removing encroachment.

Qualitative Appraisal

- 6.7 A wider appraisal of the proposed development's effects upon biodiversity is set out below in Table 4 below. This includes factors not fully captured through the Statutory Biodiversity Metric, which uses only habitat type and condition as a proxy for biodiversity, omitting important factors such as connectivity and functioning of habitats.

Table 4. Qualitative Appraisal of effects upon Biodiversity

Ecological Features, Functions & Factors	Baseline Conditions	Potential Effects
Habitat Connectivity	Field hedgerows to the boundaries of the Site provide important ecological connective features within the local landscape and provide habitat for a range of species.	There will be a small loss of Hedgerow H3 for access purposes, but this will also sever a connective link along the southern boundary. However, habitat around the rest of the site's boundaries will stay in place. New hedgerow habitat is proposed to laterally bisect the Site and will increase habitat connectivity for more mobile species such as bats and birds, contributing to wider ecological networks.
Structural Diversity	The Site has very limited habitat structure with little or no interfaces between broad habitat types.	Proposed development and landscaping on-site will increase the structural diversity of habitat at the Site. Interfaces between formal (short mown) and informal habitats, as well as between broad habitat types (grassland, scrub and hedgerow) will provide a greater number of opportunities for biodiversity, at a range of scales.
Habitat Mosaics	The Site has a very low diversity of habitats.	Proposed development and habitats on-site will increase the number of habitat types and their structural diversity. The combination of grassland, scrub, ponds, trees and hedgerow will provide a medium-scale mosaic of habitat to benefit biodiversity.
Soil Biodiversity	Arable land which dominates the Site is subject to frequent chemical inputs (fertiliser, pH correction and herbicides) and physical disturbance. The soil biota is likely to be significantly impacted by such works, reducing soil carbon, other nutrient cycling and wider environmental benefits.	Residential development will include the loss and damage of soils to built form and will prevent natural functioning of this habitat. Where arable is converted to permanent grassland and other habitats substantive benefits are anticipated to soil environments and biodiversity.

7.0 MANAGEMENT & MONITORING

7.1 Full details of management and monitoring for delivery of on-site biodiversity gains are provided within the Draft Habitat Management and Monitoring Plan (HMMP) for a 30-year period. This HMMP includes the following principal elements:

- Establishment and management of the following 'significant' biodiversity gains:
 - Other neutral grasslands within informal open spaces and SuDS features (plus wet core 'wildlife pond')
 - Tree planting
 - Hedgerow creation
- Adaptive management options
- Monitoring regime and reporting process
- Roles and responsibilities
- Processes to ensure remedial measures can be undertaken in the event that target habitat or condition is not achieved

8.0 SUMMARY & CONCLUSIONS

- 8.1 Planning permission sought for the proposed development will be subject to the Biodiversity Gain Condition in accordance with Schedule 14 of the Environment Act (2021).
- 8.2 As set out herein, a net gain in biodiversity in excess of 10% is predicted as a result of the proposed development, based upon provision of significant on-site gains. The Statutory Biodiversity Metric Calculation Tool was used to calculate the following outcomes:
- +7.56 Habitat Unit gain or +44.11%
 - +3.25 Hedgerow Unit gain or +11.87%
 - +0.42 Watercourse Unit gain or +16.22%
 - All relevant trading rules satisfied
- 8.3 Following any grant of planning permission an application to discharge the Biodiversity Gain Condition would be submitted by completing the Biodiversity Gain Plan provided in draft in Appendix C.
- 8.4 On-site significant biodiversity gain would be secured through an appropriate legal mechanism (such as planning condition) subject to an on-site HMMP for a 30-year period.

9.0 REFERENCES

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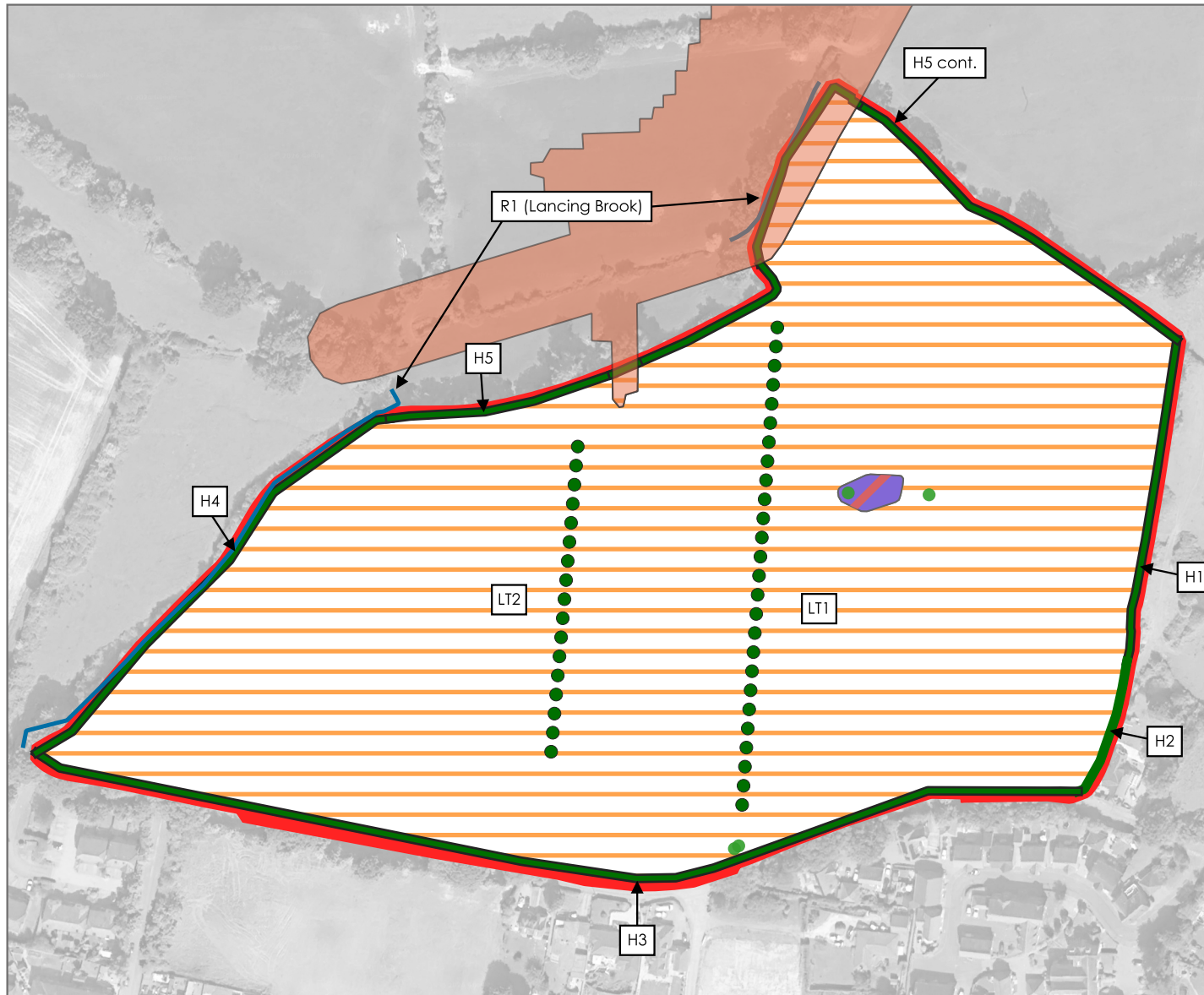
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Appendix A

Baseline Habitats Plan

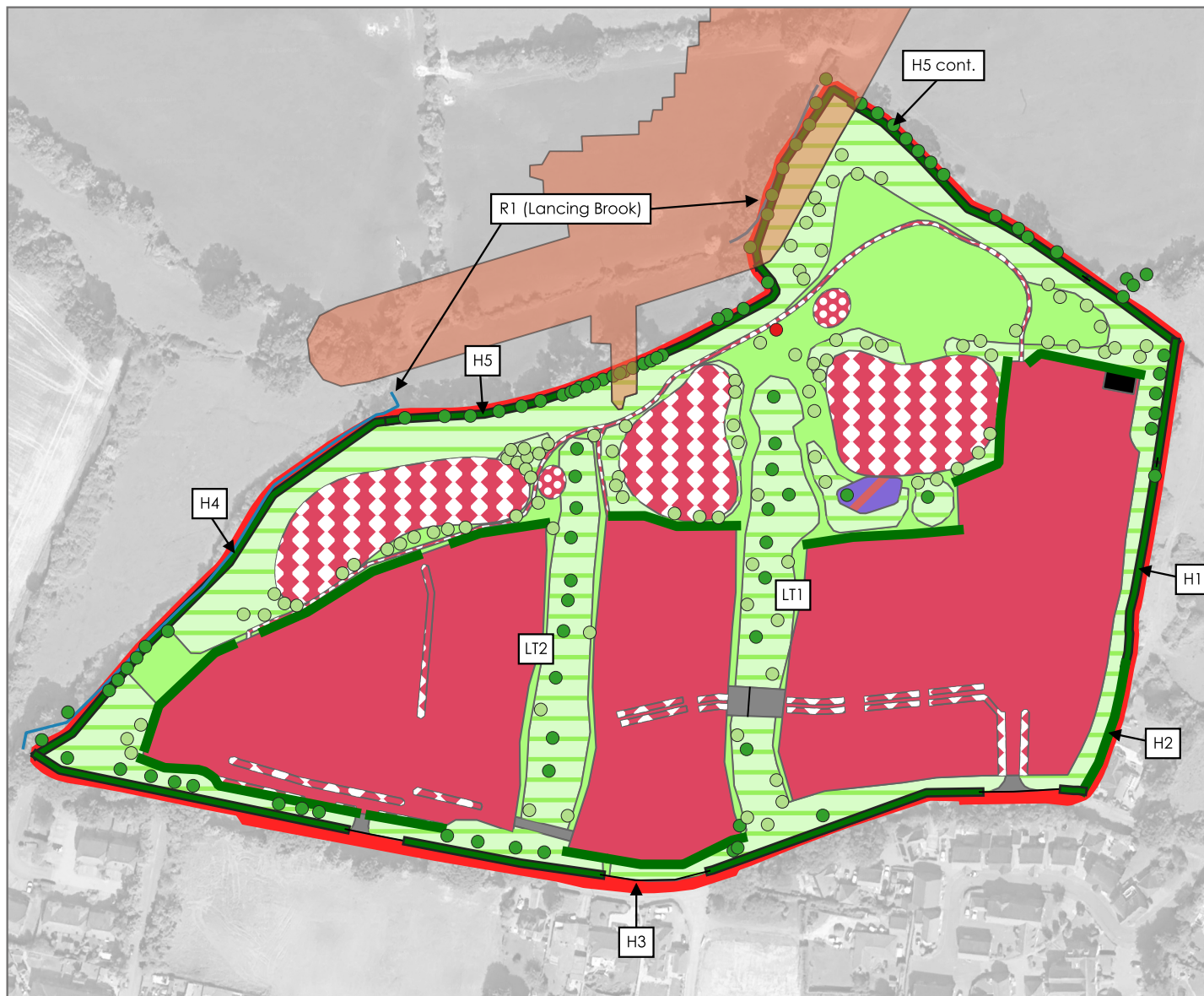


- Site boundary
- Cereal crops (c1c)
- Mixed scrub (h3h)
- Hedgerows (h2)
- Hedgerows (Priority Habitat) (h2a)
- Line of trees (w1g6)
- Stream (r2b)
- Individual tree
- West Sussex LNRS ACIB



Appendix B

Proposed Habitats Plan



- Site boundary
- Other neutral grassland (g3c)
- Modified grassland (g4)
- Mixed scrub (h3h)
- Urban (u), Residential development
- Developed land, sealed surface (u1b)
- Buildings (u1b5)
- Other developed land (u1b6)
- Artificial unvegetated unsealed surface (u1c)
- Stream (r2b)
- Hedgerows (h2)
- Hedgerows (Priority Habitat) (h2a)
- Pre-existing tree
- Newly planted tree
- Tree removed
- West Sussex LNRS ACIB



0 50 100 m



Appendix C

Draft Biodiversity Gain Plan



Biodiversity gain plan

Submit a biodiversity gain plan to show how your development will achieve biodiversity net gain.

When to use this form

A biodiversity gain plan shows how a development will achieve 10% biodiversity net gain (BNG). Submit this form to your local planning authority after they approve your planning application.

Unless your development is exempt, you cannot start the development until the LPA approves your biodiversity gain plan and biodiversity metric calculation tool.

1. Submission details

1.1 Date

For example, 3/11/2023

TBC

1.2 Planning application reference number

TBC

1.3 Local planning authority (LPA)

Horsham District Council

1.4 Development site address

If the site does not have an address, enter the OS grid reference.

Land North of Rectory Lane, Ashington, West Sussex

1.5 Describe the development

Tell us about the proposed development and any changes of use (250 words).

The proposed development comprises the construction of 125 residential dwellings with associated private gardens, access infrastructure, Sustainable Drainage System (SuDS) features and 7.34ha of Public Open Space.

2. Developer details

2.1 Applicant name

TBC

2.2 Company name

Taylor Wimpey Strategic Land

2.3 Address

TBC

2.4 Email address

TBC

2.5 Telephone number

TBC

2.6 Declaration

By signing this declaration, you confirm that the information you give is complete and correct. Any opinions are your genuine opinions.

2.7 Signature

TBC

2.8 Date

TBC

3. Responsible person details

Tell us about who is responsible for completing the biodiversity gain plan. For example, a consultancy ecologist or planning agent.

3.1 Name

Jeff Turton

3.2 Company name

CSA Environmental

3.3 Address

Office 20, Citibase, 95 Ditchling Road, Brighton, BN1
4ST

3.4 Email address

Jeff.turton@csaenvironmental.co.uk

3.5 Telephone number

07481 238 514

3.6 Declaration

By signing this declaration, you confirm that the information you give is complete and correct. Any opinions are your genuine opinions.

3.7 Signature

TBC

3.8 Date

TBC

4. Biodiversity net gain strategy

4.1 Is the relevant date for the pre-development biodiversity value the same date as the planning application?

- ☒ Yes
☐ No

4.2 If no, what earlier date did you agree with the LPA?

4.3 How have you met the guidance on ‘what counts towards your BNG’?

[Find out what you can count towards a development's BNG](#)

All habitat creation on site counts towards the BNG in full. No creation is for mitigation purposes and would otherwise be counted for in part.

4.4 How will you avoid or minimise impacts to habitats?

Tell us about the steps you've taken on site, including to avoid or minimise the impact on irreplaceable habitats.

Irreplaceable habitats will be retained and protected behind tree protection fencing during construction and root protection zones have been accounted for in scheme design such that the built for is pulled back from these trees.

4.5 Did you use your local nature recovery strategy to inform the strategic significance of habitats?

This includes other specified strategies if you do not have a local nature recovery strategy.

- ☒ Yes
☐ No

4.6 How will you achieve the target net gain percentage?

- ☒ On-site
☐ Off-site
☐ Both

4.7 Are any of your on-site enhancements considered ‘significant’?

[Find out what counts as a significant on-site enhancement.](#)

- ☒ Yes

☐ No

4.8 If yes, tell us about the significant on-site enhancements

Include the appropriate planning condition or how you've secured the habitat.

Creation of medium distinctiveness pond, other neutral grassland and planting of individual trees will count as 'significant'. Creation of high distinctiveness traditional orchard would also count as significant.

4.9 How many off-site biodiversity units do you need to meet 10% net gain?

0

4.10 Explain why you're using off-site biodiversity units

Only answer this question if you're planning to use off-site biodiversity units (250 words).

N/A

4.11 Explain why you're planning to use statutory biodiversity credits

Only answer this question if you're planning to use statutory biodiversity credits (250 words).

N/A

4.12 Do you have a habitat management and monitoring plan?

☒ Yes
☐ No

4.13 Have you used the statutory biodiversity metric tool?

☒ Yes
☐ No

4.14 Biodiversity metric calculation

Send your biodiversity metric calculation to the LPA and enter the file name.

4705_BNG Design Stage_20260708_ISSUE

4.15 Condition assessments

Send your condition assessments to the LPA and enter the file name.

Attached to report no. 4705_15_BNG Design Stage

4.16 Pre-development habitat survey report and map

Send your baseline habitat survey report and map to the LPA. Enter the file name.

Attached to report no. 4705_15_BNG Design Stage

4.17 Post-development habitat map or landscape plan

Send your post-development habitat survey report and map to the LPA. Enter the file name.

Attached to report no. 4705_15_BNG Design Stage

4.18 Have you included an approved habitat degradation in the baseline?

If yes, include the relevant consenting body and reference number.

☐ Yes

☒ No

Consenting body

Horsham District Council

Reference number

TBC

5. Irreplaceable habitats

5.1 Does the development impact any irreplaceable habitats?

If yes, tell us if you've submitted an approved compensation plan.

☐ Yes

☒ No

5.2 Have you submitted an approved compensation plan?

☐ Yes

☒ No

6. On-site habitat enhancements

Answer this section if your development includes on-site habitat enhancements.

6.1 Survey date

For example, 3/11/2023

N/A

6.2 Survey constraints

For example, access issues, weather, or seasonal constraints.

N/A

6.3 Total pre-development biodiversity value

Enter the number from the headline results in your statutory biodiversity metric calculation.

Number of area habitat biodiversity units

17.15

Number of hedgerow biodiversity units

27.37

Number of watercourse biodiversity units

2.60

6.4 Total post-development biodiversity value

Enter the number from the headline results in your statutory biodiversity metric calculation.

Number of area habitat biodiversity units

24.71

Number of hedgerow biodiversity units

30.62

Number of watercourse biodiversity units

3.02

6.5 Total net change in biodiversity units

Enter the number from the headline results in your statutory biodiversity metric calculation.

Area habitat biodiversity units

7.56

Area habitat biodiversity units % change

44.11

Hedgerow biodiversity units

3.25

Hedgerow biodiversity units % change

11.87

Watercourse biodiversity units

0.42

Watercourse biodiversity units % change

16.22

6.6 Will you register and allocate any biodiversity units from your site to other developments?

If yes or provisionally, give details.

☐ Yes

☒ No

6.7 Give details

Tell us about the amount of biodiversity units and the development location (250 words).

N/A

7. Off-site habitat enhancements

Answer this section if your development includes off-site habitat enhancements.

7.1 Tell us about the off-site habitat enhancements

Include whether you're delivering the off-site enhancements or buying biodiversity units.

N/A

7.2 Biodiversity gain site register reference number

N/A

7.3 How have you secured the off-site habitat enhancements?

Tell us about any responsible bodies and whether you've used an S106 or conservation covenant.

N/A

7.4 Total baseline biodiversity value

Enter the number from the headline results in your statutory biodiversity metric calculation.

Number of area habitat biodiversity units

N/A

Number of hedgerow biodiversity units

N/A

Number of watercourse biodiversity units

N/A

7.5 Total biodiversity value post-intervention

Enter the number from the headline results in your statutory biodiversity metric calculation.

Number of area habitat biodiversity units

N/A

Number of hedgerow biodiversity units

N/A

Number of watercourse biodiversity units

N/A

7.6 Total net change in biodiversity units

Enter the number from the headline results in your statutory biodiversity metric calculation.

Area habitat biodiversity units

N/A

Area habitat biodiversity units % change

N/A

Hedgerow biodiversity units

N/A

Hedgerow biodiversity units % change

N/A

Watercourse biodiversity units

N/A

Watercourse biodiversity units % change

N/A

8. Statutory biodiversity credits

Answer this section if you need to use statutory biodiversity credits.

8.1 Do you need to use statutory biodiversity credits?

☐ Yes

☒ No

8.2 How many statutory biodiversity credits do you need?

Tell us the unit shortfall by tier, including the spatial risk multiplier. Enter the number from the headline results in your statutory biodiversity metric calculation.

A1

A2

A3

A4

A5

H

W

8.3 What evidence is there that no units are available through the market?

Send a message from at least 3 habitat providers, or a search result from online registers.

8.4 Proof of purchase

Send proof of purchase and enter the reference number.

9. Trading summary

9.1 Distinctiveness group

Tell us if you met the BNG trading rules on habitat compensation for each distinctiveness group. If you did not meet the trading rules, tell us if you agreed bespoke habitat compensation.

Check the rules on habitat compensation in the [statutory biodiversity metric user guide](#).

Very high

Yes

High

Yes

Medium

Yes

Low

Yes

10. Sharing data (optional)

10.1 Can we share your ecological survey data with the Local Environmental Records Centre or other bodies?

☒ Yes

☐ No

Appendix D

Habitat & Hedgerow Condition Assessments

Condition Sheet: SCRUB Habitat Type			
Habitat Types			
Heathland and shrub - Blackthorn scrub Heathland and shrub - Gorse scrub Heathland and shrub - Hawthorn scrub Heathland and shrub - Hazel scrub Heathland and shrub - Mixed scrub Heathland and shrub - Dunes with sea buckthorn (H2160) Heathland and shrub - Willow scrub			
Habitat Description			
Mixed scrub			
For Dunes with sea buckthorn see:		Dunes with sea-buckthorn (Dunes with Hippophae rhamnoides) - Special Areas of Conservation (jncc.gov.uk)	
For other scrub types see:		ukhab – UK Habitat Classification	
On-site or off-site, site name and location	On-Site Land at Rectory Lane, Ashington	Survey date and Surveyor name	17.04.2024 JT
Limitations (if applicable)		Survey reference (if relating to a wider survey)	
Grid reference		Habitat parcel reference	
Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
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 species ² , - No single species comprises more than 75% of the cover (except hazel <i>Corylus avellana</i> , common juniper <i>Juniperus communis</i> , sea buckthorn <i>Hippophae rhamnoides</i> (only in its restricted native range), or box <i>Buxus sempervirens</i> , which can be up to 100% cover).	Y	
B	Seedlings, saplings, young shrubs and mature (or ancient or veteran ³) shrubs are all present.	Y	
C	There is an absence of invasive non-native plant species ⁴ (as listed on Schedule 9 of WCA ⁵) and species indicative of suboptimal condition ⁶ make up less than 5% of ground cover.	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	
E	There are clearings, glades or rides present within the scrub, providing sheltered edges.	N	
		Number of criteria passed	
Condition Assessment Result (out of 5 criteria)	Condition Assessment Score	Score Achieved x/√	
Passes 5 criteria	Good (3)		
Passes 3 or 4 criteria	Moderate (2)	X	
Passes 2 or fewer criteria	Poor (1)		
Suggested enhancement interventions to improve condition score			
Footnotes			
Footnote 1 – Professional judgement should be used alongside the UKHab description. Footnote 2 – Native woody species as defined and listed in the Hedgerow Survey Handbook: DEFRA (2007) <i>Hedgerow Survey Handbook: A standard procedure for local surveys in the UK</i> . 2nd ed. [online]. Defra, London. PB1195. Available from: Hedgerow Survey Handbook (publishing.service.gov.uk). Footnote 3 – See gov.uk standing advice on ancient and veteran species. Available from: Keepers of time: ancient and native woodland and trees policy in England (publishing.service.gov.uk) and Ancient woodland, ancient trees and veteran trees: advice for making planning decisions - GOV.UK (www.gov.uk) Footnote 4 – Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly, applying a buffer zone around the invasive non-native species with a size relative to its risk of spread into adjacent habitat, using professional judgement. Footnote 5 – Wildlife and Countryside Act 1981 (as amended). Footnote 6 – Species indicative of suboptimal condition for this habitat type may include: non-native conifers, tree-of-heaven <i>Alnus altissima</i> , holm oak <i>Quercus ilex</i> , European turkey oak <i>Quercus cerris</i> , cherry laurel <i>Prunus laurocerasus</i> , snowberry <i>Symphoricarpos</i> spp., shallon <i>Gaultheria shallon</i> , American skunk cabbage <i>Lysichiton americanus</i> , buddleia <i>Buddleia</i> spp., cotoneaster <i>Cotoneaster</i> spp., Spanish bluebell <i>Hyacinthoides hispanica</i> and hybrid bluebells <i>Hyacinthoides x massartiana</i> . There may be additional relevant species local to the region and or site.			

Condition sheet: HEDGEROW Habitat Types														
Habitat Type														
Native hedgerow Native hedgerow - associated with bank or ditch Native hedgerow with trees Native hedgerow with trees - associated with bank or ditch Species-rich native hedgerow Species-rich native hedgerow - associated with bank or ditch Species-rich native hedgerow with trees Species-rich native hedgerow with trees - associated with bank or ditch														
Habitat Description														
ukhab – UK Habitat Classification														
On-site or off-site, site name and location	On-site Land at Rectory Lane, Ashington			Survey date and Surveyor name	17.04.2024									
Limitations (if applicable)				Survey reference (if relating to a wider survey)										
Condition Assessment Details														
A series of ten attributes, representing key physical characteristics are used for this assessment. Each attribute is assigned to one of five functional groups (A – E) and the condition of a hedgerow is assessed according to the number of attributes from these functional groups which pass or fail the 'favourable condition' criteria.														
This assessment is based on the Hedgerow Survey Handbook ¹ and Favourable Conservation Status document ² . For further clarification please refer to the Hedgerow Survey Handbook.														
Best practice would be to record the species, age, spacing and other key information about all trees present along a hedgerow within the 'Habitat Description' box, as well as other key features of the hedgerow.														
Hedgerow favourable condition attributes														
Attributes and functional groupings (A, B, C, D and E)	Criteria - the minimum requirements for 'favourable condition'	Criteria description	Habitat parcel reference											
						H1	H2	H3	H4	H5				
			Grid reference											
Core groups - applicable to all hedgerow types				Criterion passed (Yes or No)										Notes (such as justification)
A1.	Height	>1.5 m average along length	The average height of woody growth estimated from base of stem to the top of the shoots, excluding any bank beneath the hedgerow, any gaps or isolated trees. Newly laid or coppiced hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice). A newly planted hedgerow does not pass this criterion (unless it is >1.5 m height).				Y	Y	Y	Y	Y			
A2.	Width	>1.5 m average along length	The average width of woody growth estimated at the widest point of the canopy, excluding gaps and isolated trees. Outgrowths (such as blackthorn <i>Prunus spinosa</i> suckers) are only included in the width estimate when they are >0.5 m in height. Laid, coppiced, cut and newly planted hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice).				Y	Y	Y	Y	Y			

B1.	Gap - hedge base	Gap between ground and base of canopy <0.5 m for >90% of length	This is the vertical 'gappiness' of the woody component of the hedgerow, and its distance from the ground to the lowest leafy growth. Certain exceptions to this criterion are acceptable (see page 65 of the Hedgerow Survey Handbook).				Y	Y	Y	Y	Y			
B2.	Gap - hedge canopy continuity	Gaps make up <10% of total length; and No canopy gaps >5 m	This is the horizontal 'gappiness' of the woody component of the hedgerow. Gaps are complete breaks in the woody canopy (no matter how small). Access points and gates contribute to the overall 'gappiness' but are not subject to the >5 m criterion (as this is the typical size of a gate).				Y	Y	Y	Y	Y			
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 hedgerow (at least).	This is the level of disturbance (excluding wildlife disturbance) at the base of the hedgerow. Undisturbed ground is present for at least 90% of the hedgerow length, greater than 1 m in width and must be present along at least one side of the hedgerow. This criterion recognises the value of the hedgerow base as a boundary habitat with the capacity to support a wide range of species. Cultivation, heavily trodden footpaths, poached ground etc. can limit available habitat niches.				Y	Y	Y	Y	Y			
C2.	Nutrient-enriched perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground.	The indicator species used are nettles <i>Urtica</i> spp., cleavers <i>Galium aparine</i> and docks <i>Rumex</i> spp. Their presence, either singly or together, does not exceed the 20% cover threshold.				Y	Y	Y	Y	Y			
D1.	Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (including those listed on Schedule 9 of WCA ³) and recently introduced species.	Recently introduced species refer to plants that have naturalised in the UK since AD 1500 (neophytes). Archaeophytes count as natives. For information on archaeophytes and neophytes see the JNCC website ⁴ , as well as the BSBI website ⁵ where the 'Online Atlas of the British and Irish Flora' ⁶ contains an up-to-date list of the status of species. For information on invasive non-native species see the GB Non-Native Secretariat website ⁷ .				Y	Y	Y	Y	Y			
D2.	Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities.	This criterion addresses damaging activities that may have led to or lead to deterioration in other attributes. This could include evidence of pollution, piles of manure or rubble, or inappropriate management practices (for example, excessive hedgerow cutting).				Y	Y	Y	Y	Y			
Additional group - applicable to hedgerows with trees only														
E1.	Tree class	There is more than one age-class (or morphology) of tree present (for example: young, mature, veteran and or ancient ⁸), and there is on average at least one mature, ancient or veteran tree present per 20 - 50m of hedgerow.	This criterion addresses if there are a range of age-classes or morphologies which allow for replacement of trees and provide opportunities for different species.				Y		Y	Y	Y			

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.	This criterion identifies if the trees are subject to damage which compromises the survival and health of the individual specimens.				Y		Y	Y	Y				
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The hedgerow condition assessment generates a weighting (score) ranging from 1 - 3, which is used within the Statutory Biodiversity Metric. The scores for each are set out in the tables below.

Condition categories for hedgerows without trees			Score achieved							
Category	Category Requirements	Metric Score								
Good	No more than 2 failures in total; AND No more than 1 failure in any functional group.	3								
Moderate	No more than 4 failures in total; AND <u>Does not fail both attributes</u> in more than one functional group (for example, fails attributes A1, A2, B1 and C2 = Moderate condition).	2								
Poor	Fails a total of more than 4 attributes; OR <u>Fails both attributes</u> in more than one functional group (for example, fails attributes A1, A2, B1 and B2 = Poor condition).	1								
Score achieved:										
Condition categories for hedgerows with trees			Score achieved							
Category	Category Requirements	Metric score								
Good	No more than 2 failures in total; AND No more than 1 failure in any functional group.	3								
Moderate	No more than 5 failures in total; AND <u>Does not fail both attributes</u> in more than one functional group (for example, fails attributes A1, A2, B1, C2 and E1 = Moderate condition).	2								
Poor	Fails a total of more than 5 attributes; OR <u>Fails both attributes</u> in more than one functional group (for example, fails attributes A1, A2, B1 and B2 = Poor condition).	1								
Score achieved:										

Suggested enhancement interventions to improve condition score

Condition Assessment Result (out of 5 criteria)	Condition Assessment Score	Score Achieved */✓										
Passes 5 criteria	Good (3)											
Passes 3 or 4 criteria	Moderate (2)	X	X									
Passes 2 or fewer criteria	Poor (1)											
Suggested enhancement interventions to improve condition score												
Footnotes												

Appendix E

River Condition Assessment

Project Name:	Land at Rectory Lane, Ashington, West Sussex				Watercourse Name:				Lancing Brook			
Location	Code	Name	Code	Positive or Negative	Subreach A		Subreach B		Likely Maximum Score for River Type ^a	River Type: K		
					Score	Enhancement Opportunities	Score	Enhancement Opportunities		Condition scores:		
										Subreach A: 0.643 (Moderate)		
										Subreach B: 1.012 (Moderate)		
Condition score thresholds for river type K:										Good		>1.9
										Fairly-good		>1.2
										Moderate		>0.2
										Fairly-poor		>-1.0
										Poor		<-1.0
Bank Top	B1	Bank top vegetation structure	B1	+	3		2		4	Count of five vegetation structural types (present or extensive only): 1. mosses/lichens, 2. short/creeping herbs/grasses, 3. tall herbs/grasses, 4. scrub/shrubs, 5. saplings/trees.		
	B2	Bank top tree feature richness	B2	+	0		2		4	Count of five tree features (present or extensive only): 1. fallen trees, 2. leaning trees, 3. j-shaped trees, 4. tree/shrub branches trailing into channel, 5. large wood.		
	B3	Bank top water-related features	B3	+	0		0		3	Presence of: 1. pond; disconnected, 2. pond; connected, 3. side channel, 4. wetland short non-woody vegetation (mosses, sedges), 5. wetland tall non-woody vegetation (reeds, rushes), 6. wetland shrubs and trees (alder/willow carr).		
	B4	Bank top NNIPS cover	B4	-	0		0		-	Presence of non-native invasive species, taking into account the number of different species and their abundances.		
	B5	Bank top managed ground cover	B5	-	-2		-2		-	Extent of dominant and sub-dominant artificial/managed ground cover types. Differ in severity. Vegetated agriculture, vegetated recreation and plantation woodland low severity, Transport, buildings, landfill higher severity. Remove managed ground cover types to improve score.		
Bank Face	C1	Bank face riparian vegetation structure	C1	+	2		3		4	Count of five structural types (present or extensive only): 1. mosses/lichens, 2. short/creeping herbs/grasses, 3. tall herbs/grasses, 4. scrub/shrubs, 5. saplings/trees.		
	C2	Bank face tree feature richness	C2	+	2		2		4	Count of seven tree features (present or extensive only): 1. fallen trees, 2. leaning trees, 3. j-shaped trees, 4. tree/shrub branches trailing into channel, 5. large wood, 6. exposed tree roots, 7. discrete organic accumulations.		
	C3	Bank face natural bank profile extent	C3	+	3		3		4	A maximum of 2 natural bank profile extents are recorded on each bank. This is the sum of the abundance of natural profiles (present or extensive only) across both banks. I.e. the more extensive natural bank profiles are the better. Natural profiles: vertical, vertical with top overhang, undercut or vertical with undercut, vertical with toe, steep (>45°), gentle (<45°) or composite.		
	C4	Bank face natural bank profile richness	C4	+	2		3		3	Count of the 7 different natural bank profile types (listed above) recorded as present or extensive along either bank, a single count is applied across both banks (i.e. maximum possible value of 7).		
	C5	Bank face natural bank material richness	C5	+	1		1		1	Count of 10 different natural bank material types that are recorded as dominant in the upper or lower parts of any of the bank profiles within the subreach (each type can only be counted once). Material types: 1. bedrock, 2. boulder, 3. cobble, 4. gravel-pebble, 5. sand, 6. silt/fine non-sticky sediments, 7. clay, 8. organic, 9. peat, 10. earth.		
	C6	Bank face bare sediment extent	C6	+	2		4		0	Total abundance of bare sediment on the bank face across both banks (non-linear close due to intermediate abundances of bare sediment providing the most varied habitat, i.e. low or high abundance of bare sediment isn't a positive feature).		
	C7	Bank face artificial bank profile extent	C7	-	0		0		-	A maximum of 2 artificial profile types are recorded on each bank. This is the total extent of artificial profiles recorded across both banks. Artificial profiles: 1. reshaped, 2. artificial two-stage, 3. embanked, 4. set-back embankment, 5. poached bank.		
	C8	Bank face reinforcement extent	C8	-	0		0		-	Extents of bank face reinforcement across the top, bottom or whole of the bank face.		
	C9	Bank face reinforcement material severity	C9	-	0		0		-	Severity level of the dominant reinforcement types observed. Most severe types include concrete, brick, stone and sheet piling. Low severity types include willow spiling, planted reeds and biotex/coir.		
	C10	Bank face NNIPS cover	C10	-	0		0		-	Presence of non-native invasive species, taking into account the number of different species and their abundances.		
Channel - Water Margin	D1	Channel margin aquatic vegetation extent	D1	+	1		1		4	Extent of 4 aquatic morphotypes at the channel margin - water edge, 1. Liverworts/mosses/lichens, 3. emergent broad-leaved, 3. emergent linear-leaved, 4. amphibious.		
	D2	Channel margin aquatic morphotype richness	D2	+	0		1		3	Count of the four aquatic morphotypes (above) recorded as present or extensive.		
	D3	Channel margin physical feature extent	D3	+	0		1		1	Extent of 8 physical features recorded as present or extensive (1. unvegetated side bar, 2. vegetated side bar, 3. berm, 4. bench, 5. stable cliff, 6. eroding cliff, 7. toe, 8. marginal backwater) and 1 physical feature recorded as a count (1. tributary junction).		
	D4	Channel margin physical feature richness	D4	+	0		1		1	Count of the number of 8 physical features recorded as present or extensive (above) and have a count of at least 1 (for tributary junction). Each feature can only be counted once within a subreach.		
	D5	Channel margin artificial features	D5	-	0		0		-	Presence of artificial features, weighted according to severity and number. Features: 1. jetties, 2. deflectors, 3. pipes/outfalls.		
Channel Bed	E1	Channel aquatic morphotype richness	E1	+	0		0		4	Count of aquatic plant morphotypes recorded on the channel bed (possible 9 types): 1. liverworts/mosses/lichens, 2. emergent broad-leaved, 3. emergent linear-leaved, 4. floating leaved (rooted), 5. free floating, 6. amphibious, 7. submerged broad-leaved, 8. submerged linear-leaved, 9. submerged fine-leaved.		
	E2	Channel bed tree features richness	E2	+	2		2		3	Count of 4 tree features on the channel bed recorded as present or extensive (1. vegetation shading channel, 2. submerged tree roots, 3. large wood, 4. discrete accumulation of organic material), or two tree features with a count of at least 1 (large wood, 2. fallen tree). Each feature can only be counted once.		
	E3	Channel bed hydraulic features richness	E3	+	1		1		1	Count of 8 possible water surface flow types observed as present or extensive. Each feature can only be counted once. 1. free fall, 2. chute, 3. broken standing waves, 4. unbroken standing waves, 5. upwelling, 6. rippled, 7. smooth, 8. no perceptible flow.		
	E4	Channel bed natural features extent	E4	+	0		0		0	Presence of 11 channel bed natural physical features. Includes 7 recorded in terms of abundance (1. exposed bedrock, 2. exposed unvegetated boulders, 3. exposed vegetated boulders, 4. unvegetated mid channel bars, 5. vegetated mid channel bars, 6. islands, 7. cascades) and 4 recorded as counts (1. pools, 2. riffles, 3. steps, 4. waterfalls).		
	E5	Channel bed natural features richness	E5	+	0		0		0	Count of the 11 physical features (above) that are observed as present or extensive or have a count of at least 1. Each feature is only counted once.		
	E6	Channel bed material richness	E6	+	2		1		1	Count of the 9 possible mineral and organic bed materials that are observed as present or extensive. Each type is only counted once. 1. peat, 2. organic, 3. clay, 4. silt, 5. sand, 6. gravel-pebble, 7. cobble, 8. boulder, 9. bedrock.		
	E7	Channel bed siltation	E7	-	-4		-4		-	Abundance of any patchy silt layer and continuous overlying silt layer.		
	E8	Channel bed reinforcement extent	E8	-	0		0		-	Extent of bed reinforcement in terms of abundance.		
	E9	Channel bed reinforcement severity	E9	-	0		0		-	Severity level of the dominant reinforcement types observed. Most severe types include concrete, brick, stone and sheet piling. Low severity types include builders waste and washed out.		
	E10	Channel bed artificial features severity	E10	-	0		0		-	Presence of artificial features, weighted according to severity and number. Features: 1. large trash, 2. bridge shadow, 3. weirs, 4. bridge pier in river bed, 5. culvert.		
	E11	Channel bed NNIPS extent	E11	-	0		0		-	Presence of non-native invasive species, taking into account the number of different species and their abundances.		
	E12	Channel bed filamentous algae extent	E12	-	0		0		-	Extent of filamentous algae on the channel bed.		

Positive Index Average	1.105263158	1.473684211
Negative Index Average	-0.461538462	-0.461538462
Preliminary Condition Score	0.643724696	1.012145749
Condition	Moderate	Moderate

^o Gurnell, A.M., Scott, S.J., England, J., Gurnell, D.J., Jeffries, R., Shuker, L., Wharton, G. (accepted 10.6.20) Assessing River Condition: A Multiscale Approach Designed for Operational Application in the Context of Biodiversity Net Gain, River Research & Applications.

■ Gurnell, A.M., England, J., Scott, S. J. & Shuker, L. J. (2020) A Guide to Assessing River Condition Part of the Rivers and Streams Component of the BioDiversity Net Gain Metric.



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