TIM MOYA ASSOCIATES

Biodiversity Net Gain Assessment

The Downs
Stebbing
Essex
CM6 3SH

January 2025

230654-ED-02a

Limitations and Copyright

Project	The Downs, Stebbing
Report Type	Biodiversity Net Gain Assessment
Author	Bradley Collins, Senior Ecologist
Reviewed by	Simon Thomas MCIEEM, Director of Ecology
Original Report Date	19/09/2023
Updates	10.01.2025 - Version a: Revisions made to the red line boundary and corresponding updates have been implemented

CONTENTS PAGE (CLICK TO FOLLOW LINKS)

NON-TECHNICAL SUMMARY 3
1 INTRODUCTION 4
BACKGROUND 4
PURPOSE OF THE REPORT 4
SITE DESCRIPTION AND LOCATION 4
LIMITATIONS 4
PLANNING LEGISLATION AND POLICY 5
UTTLESFORD LOCAL PLAN – ADOPTED JANUARY 2005 5
2 METHODOLOGY 7
PRE-DEVELOPMENT HABITAT INFORMATION 7
POST-DEVELOPMENT HABITAT INFORMATION 7
CONDITION ASSESSMENT 8
BIODIVERSITY NET GAIN CALCULATIONS 8
ASSUMPTIONS, LIMITATIONS AND EXCLUSIONS 8
3 THE BIODIVERSITY GAIN HIERARCHY 13
AVOID 13
MINIMISE 13
REMEDIATE 13
COMPENSATE 14
4 VALUE OF CURRENT HABITATS 15
EXISTING HABITATS 15
EXISTING HEDGES AND TREE LINES 15
EXISTING WATER COURSES 16
5 VALUE OF RETAINED/PROPOSED HABITATS 17
RETAINED/ENHANCED HABITAT AREAS 17
RETAINED HEDGES 17
ENHANCED WATER COURSES 18
HABITATS LOST 18
WATER COURSES LOST 19
NEW PROPOSED HABITAT AREAS 19
NEW HEDGES 20
6 BIODIVERSITY NET GAIN ESTIMATE - RESULTS 21
HEADLINE RESULTS 21
ASSESSMENT 21
ACHIEVING BIODIVERSITY NET GAIN 22
7 REFERENCES 25
8 APPENDICES 26
APPENDIX 1 - EXISTING HABITAT PLAN 26
APPENDIX 2 – PROPOSED SITE LAYOUT (SUBJECT TO CHANGE) 26
APPENDIX 3 - PHOTOGRAPHS 26

NON-TECHNICAL SUMMARY

This report assesses the Biodiversity Net Gain or loss anticipated as a result of the proposed development at The Downs, Stebbing. The proposed development involves the erection of 28 residential dwellings (comprising 14 affordable & 11 private market homes together with 3 self-build plots) and provision of public open space and associated local amenity facilities (activating Local Green Space allocation); together with integrated landscaping and car parking (to include additional community parking facility).

The baseline habitat calculations are based on site habitat data collected prior to development-related activities (see report for details). The post-development habitat calculations are based on proposed landscape plans (see report for details).

The Biodiversity Net Gain Assessment relies on a number of assumptions which are detailed within this report. The Biodiversity Metric calculator spreadsheet (Microsoft excel format) contains full details of the calculations and results. As such, the Biodiversity Metric calculator spreadsheet should always accompany this report and vice versa.

Key results:

The development is estimated to result in a Biodiversity Net Gain of **+17.37% (**+**7.97 biodiversity units)**, compared with the baseline habitats present. This is largely due to the retention of trees and valuable habitats, and the proposed enhancement of woodland and grassland habitat.

Hedgerow and water course units are counted separately. Hedgerow units have a net gain of **180.21% (+6.86 hedgerow units).** This is due to the creation of new hedgerows across the site. Water courses have a net gain of **35.52% (+0.60 watercourse units).** This is due to the enhancements of existing ditches.

1 INTRODUCTION

Background

1.1 This report has been instructed by Montare.

1.2 The proposed development involves the erection of 28 residential dwellings (comprising 14 affordable & 11 private market homes together with 3 self-build plots) and provision of public open space and associated local amenity facilities (activating Local Green Space allocation); together with integrated landscaping and car parking (to include additional community parking facility).

Purpose of the report

1.3 This report assesses the biodiversity value of the existing habitats on site and the proposed changes to the development site. This report provides an overview of the change in Biodiversity Value (Biodiversity Net Gain/Loss) generated by the proposals.

Site description and location

1.4 The central grid reference for the site is TL 65832 24546. The site covers approximately 5.87 hectares.

1.5 The existing site is dominated by grassland, scrub and woodland habitats with ditches. Adjacent to the site on the east is Stebbing village. The wider landscape includes large areas of arable farmland.

Limitations

1.6 As the attributes of the site and its habitats may change over time, this report is broadly considered valid for a duration of **two years**, after which time it is recommended that an update site assessment is undertaken.

1.7 Biodiversity Net Gain assessments and calculations can only provide a proxy measure for the real long-term biodiversity changes that occur on any given site.

1.8 This assessment has been produced using the information available at this stage. As such, the assessment is based on a number of important assumptions. This report aims to make any such assumptions explicit so that they can be reviewed or updated as appropriate.

1.9 Whilst the Biodiversity Metric tool assesses the numerical losses and gains of habitats affected as part of the development, it does not include certain other important outcomes or benefits which cannot be assessed numerically.

1.10 The site was accessed during July 2023, a time when the majority of plant species would be expected to be evident, particularly extensive stands of invasive species such as Japanese knotweed (*Fallopia japonica*) or giant hogweed (*Heracleum mantegazzianum*). Where further botanical or invasive species surveys are considered necessary, these have been recommended within this report.

1.11 All areas were accessed fully except a small overgrown area to the south of the site due to dense nettles and brambles. The trees in this southern area have not been mapped due to limited access (See assumptions 2.11).

Planning Legislation and Policy

1.12 In England, Biodiversity Net Gain (BNG) is mandatory under Schedule 7A of the Town and Country Planning Act 1990 (as inserted by Schedule 14 of the Environment Act 2021). All planning permissions granted (with some exemptions) must deliver at least 10% Biodiversity Net Gain compared to the pre-development biodiversity value of the on-site habitat, resulting in more or better-quality natural habitats.

1.13 The National Planning Policy Framework (NPPF) (Ministry of Housing, Communities and Local Government, 2024) states that planning policies and decisions should contribute to and enhance the natural and local environment by minimising impacts on and providing net gains for biodiversity, and that plans should identify and pursue opportunities for securing measurable net gains for biodiversity.

Uttlesford Local Plan – Adopted January 2005

1.14 Uttlesford are currently updating their local plan, and it is not available at time of this report. As of January 10th, 2025 the new local plan is still not available. The 2005 plan has been used in relation to this report.

1.15 **Policy ENV8** – Other Landscape Elements of Importance for Nature Conservation Development that may adversely affect these landscape elements;

- Hedgerows
- Linear tree belts
- Larger semi natural or ancient woodlands

- Semi-natural grasslands
- Green lanes and special verges
- Orchards Plantations
- Ponds reservoirs
- River corridors
- Linear wetland features
- Networks or patterns of other locally important habitats.

will only be permitted if the following criteria apply:

a) The need for the development outweighs the need to retain the elements for their importance to wild fauna and flora; Uttlesford Local Plan – Adopted January 2005 29

b) Mitigation measures are provided that would compensate for the harm and reinstate the nature conservation value of the locality. Appropriate management of these elements will be encouraged through the use of conditions and planning obligations.

2 METHODOLOGY

Pre-development habitat information

2.1 This report is based on data collected during a survey undertaken on 17th July 2023 by Bradley Collins of Tim Moya Associates, an experienced Consultant Ecologist and Qualifying Member of the Chartered Institute for Ecology and Environmental Management (CIEEM). During the survey the weather conditions were not considered to pose any limitations to the survey. The vegetation and habitat types within the site were noted during the survey in accordance with the categories specified in the UK Habitat Classification ("UKHab") (Butcher et al., 2020a). Dominant plant species were recorded for each habitat present.

2.2 The above-mentioned site visit was preceded by a Preliminary Ecological Appraisal survey, undertaken in May 2021 by Gemma Holmes ACIEEM, of Hybrid Ecology (report published September 2021). The habitats recorded within both surveys as well as a national vegetation classification (NVC) survey have assisted in the classification of habitats for the biodiversity net gain assessment (MKA Ecology, November 2022 Land at Stebbing, Essex: National Vegetation Classification Survey).

2.3 For reference, the pre-development habitat plan is included in Appendix 1 of this report.

Post-development habitat information

2.4 The post-development habitat calculations are based on the following supplied plans, showing the proposed development layout and landscaping (at this stage):

- Proposed Planting Plan for North Field (A&B), Austin Design Works, 16.09.2023 (GA-600 S62A).
- Proposed Planting Plan for South Field (C&D), Austin Design Works, 16.09.2023 (GA-601 S62A).

2.5 For reference, the post-development habitat plan is included in Appendix 2 of this report. Please note, this plan may be superseded or updated without warranting an update of this report, if the changes are insignificant to the impact of the development on biodiversity. The version included within this report is for indicative purposes only and should not be relied upon as the definitive version.

Condition Assessment

2.6 Part of the Biodiversity Net Gain Assessment process requires an estimate for the 'condition' of existing habitats, as defined by the Biodiversity Metric 4.0 Technical Supplement (Natural England, 2023).

2.7 The pre-development site survey described above has included an on-site assessment of each habitat type in accordance with the condition criteria. The survey was undertaken at an appropriate time of year to be able to sufficiently assess the condition of the habitat types present within the site. The condition categories for each habitat type are given within the Biodiversity Metric calculator accompanying this report.

Biodiversity Net Gain calculations

2.8 The value of the on-site habitats is calculated using the Biodiversity Metric 4.0 calculation tool (Natural England, 2023). Once the biodiversity value of the baseline and proposed habitats is calculated, this tool is then used to measure the anticipated overall Biodiversity Net Gain or loss of the proposed development. Metric 4.0 has been used due to the survey and condition assessment taking place in 2023 before the statutory metric was published.

2.9 The value for biodiversity of a habitat is measured using 'biodiversity units'. These are calculated based on the type of habitat (based on the UK Habitat Classification ("UKHab") and the size and condition of each habitat parcel. The metric also considers whether the habitat and/or its location is identified locally, typically in a relevant policy or plan, as being of strategic significance for nature.

2.10 Habitats which are to be created, restored or enhanced during the development are calculated with additional consideration given for 'risk'. The risk components of this include the difficulty of creating or restoring the habitat and the risk associated with the length of time it takes for a habitat to establish. This means that if a high-quality habitat is removed from the site and re-established elsewhere on the site, it is likely to result in a biodiversity net loss due to the length of time it will take to establish the new habitat and the risk that the habitat will never fully establish.

Assumptions, Limitations and Exclusions

2.11 Due to the predictive nature of Biodiversity Net Gain estimates, it is always necessary to make certain assumptions and judgements about the habitats present within the

site currently and the land-use types and habitats that will be present within and around the developed site. Such assumptions and judgements are detailed below.

2.12 As certain trees were inaccessible, a baseline condition score of 'large' size tree in 'good' condition has been assigned, reflecting their age and structure. All trees within this area on the site are planned to be retained.

2.13 Due to a change in the redline boundary, a small area on the eastern side of the site has been included. This area was not previously surveyed. However, based on a review of Google Maps imagery and knowledge of the area gained during the previous survey, the area has been assessed. As a precautionary measure, all areas have been assigned a 'good condition' score to avoid the risk of undervaluation.

2.14 The calculations do not take into account areas outside the site footprint, which are assumed not to be affected by the development. If areas outside the footprint are to be affected, they should also be taken into account in the calculations.

Habitat Classifications

Table 1. Habitat Classifications and definitions

UK Habitat Classification	**UK Habitat Classification workbook (Butcher et al., 2020b) definition.**	**Species List**
Modified grassland	Vegetation dominated by a few fast-growing grasses on fertile, neutral soils. It is frequently characterised by an abundance of rye-grass (*lolium spp.*) and white clover (*Trifolium repens*). Species poor – less than 9 species per m^2.	Creeping butter cup (*Ranunculus repens*), soft rush (*Juncus effusus*), Yorkshire fog (*Holcus lanatus*), creeping thistle (*Cirsium arvense*), common nettles (*Urtica dioica*), yellow nutsedge (*Cyperus esculentus*), perennial rye-grass (*Lolium perenne*).
Other neutral grassland	Neutral grassland that does not meet the priority habitat definitions. Perennial rye-grass *(Lolium perenne*) is likely to be present at <30% with between 9 and 15 further species ($m^{2)}$ also present.	Common bent (*Agrostis capillaris*), yarrow (*Achillea millefolium*), common ragwort (*Jacobaea vulgaris*), Timothy (*Phleum pratense*), Yorkshire fog (*Holcus lanatus*), hairy sedge (*Carex hirta*), creeping thistles (*Cirsium arvense*), common nettles (*Urtica dioica*), meadow grass (*Poa annua*), cock's-foot (*Dactylus glomerata*), common rush (*Juncus effusus*), broadleaved dock

UK Habitat Classification	**UK Habitat Classification workbook (Butcher et al., 2020b) definition.**	**Species List**
		(*Rumex obtusifolius*), curly dock (*Rumex crispus*), red fescue (*Festuca rubra*), creeping butter cup (*Ranunculus repens*), red sorrel (*Rumex acetosella*), ribwort plantain (*Plantago lanceolata),* creeping cinquefoil (*Potentilla reptans*), Brome spp (*Bromus*), doves foot cranes bill, (*Geranium molle*), nodding thistle (*Carduus nutans*).
Bracken	Land with bracken *Pteridium aquilinum* at >95% canopy cover at the height of the growing season	Bracken (*Pteridium aquilinum)*.
Bramble scrub	Dense scrub with dominant bramble (*Rubus fruticosus agg.*)	Bramble (*Rubus fruticosus agg.*)
Blackthorn Scrub	Dense scrub with dominant blackthorn (*Prunus spinosa.*)	Blackthorn (*Prunus spinosa.*)
Wet Woodland	Wet woodland occurs on poorly drained or seasonally wet soils usually with alder (*Alnus glutinosa*), birch (*Betula spp.*) and willows (*Salix spp.*).	White willow (*Salix alba*).
Sparsely Vegetated Land - Tall Forbs	Unvegetated, disturbed, or sparsely vegetated habitats, inhabited by stress tolerant vegetation.	Common nettles (*Urtica dioica*), mare's tail (*Hippuris vulgaris*).
Hedgerow – Ecologically valuable line of trees	A line of trees that has at least 1 mature tree per 30 m length.	Poplar spp (*Populus spp*), Hawthorn (*Crataegus monogyna*), elder (*Sambucus nigra*).
Ditch	An artificial standing-water linear feature less than 5m wide that is at least 20 times longer than its width.	Creeping bent (*Agrostis stolonifera*), nettles (*Urtica dioica),* water mint (*Mentha aquatica*), Marsh thistle (*Cirsium palustre*), round fruited rush (*Juncus compressus*), wood dock (*Rumex sanguineus*), cleaver (*Galium aparine*), St Peters wort (*Hypericum crux-andreae*), red fescue (*Festuca rubra*), water forget-me-not (*Myosotis scorpioides*).

Strategic Significance

2.15 The Biodiversity Metric 4.0 User Guide (Natural England, 2023) states that "*Assessors must provide evidence by referencing relevant documents. If published, the relevant strategy is the Local Nature Recovery Strategy (LNRS). If an LNRS has not been published, the relevant consenting body or planning authority may specify alternative plans, policies or strategies to use*".

2.16 The categories are as follows:

- High – Where the location has been identified within a local plan, strategy or policy as being ecologically important for the specific habitat type or where that habitat has been identified as being locally ecologically important.
- Medium – Where there is no relevant plan, strategy or policy in place, professional judgement may be used to justify the use of the medium strategic significance category. This judgement should consider the importance of that habitat in providing a linkage between other strategic locations.
- Low – If the habitat is not included in local plans, strategy or policy, and there is no evidence to suggest that the habitat is of medium strategic significance.

2.17 It is understood that Essex does not currently have a published Local Nature Recovery Strategy (LNRS). TMA are also not aware of alternative plans, policies or strategies currently specified by the Local Planning Authority for the assessment of Strategic Importance for Biodiversity Net Gain assessment.

2.18 Other plans, policies and strategies considered for the assessment of Strategic Significance include the following: Local Plans and Neighbourhood Plans, Local Planning Authority Local Ecological Networks, Tree Strategies, Area of Outstanding Natural Beauty Management Plans, Biodiversity Action Plans, Species and protected sites conservation strategies, Woodland strategies, Green Infrastructure Strategies, River Basin Management Plans, Catchment Plans and Catchment Planning Systems, Shoreline management plans, Estuary Strategies.

2.19 All habitat types have been classed as 'Area/compensation not in local strategy/ no local strategy' due to habitats not being mentioned within the local plan.

Limitations

2.20 Biodiversity Net Gain estimates have various limitations as covered within this report. The following limitations are notable with respect to the accuracy of figures produced from the Biodiversity Metric calculator:

2.21 The Habitat Survey can only provide a snapshot of habitat classifications present at the time of the survey. Some habitats may be in a process of change, including natural succession of habitats or areas under sporadic management or clearance.

3 THE BIODIVERSITY GAIN HIERARCHY

3.1 The Biodiversity Gain Hierarchy and its effect for the purpose of the statutory framework for biodiversity net gain is set out in Articles 37A and 37D of the Town and Country Planning (Development Management Procedure) (England) Order 2015. This hierarchy (which does not apply to irreplaceable habitats) sets out a list of priority actions:

- First, in relation to habitats which have a medium, high and very high distinctiveness, the **avoidance** of adverse effects from the development must be prioritised and, if they cannot be avoided, those effects must be **mitigated**.
- Then, in relation to all habitats which are adversely affected by the development, the adverse effect should be compensated by prioritising in order, where possible, the **enhancement** of existing on-site habitats, **creation** of new on-site habitats, allocation of registered **off-site gains** and finally the purchase of **biodiversity credits**.

3.2 Planning authorities must take into account how the Biodiversity Gain Hierarchy has been applied.

Avoid

3.3 Impacts on key ecological features within the site have been avoided as follows:

3.4 The line of trees on the southern boundary is due to be retained.

3.5 No trees are to be removed during the development.

Minimise

3.6 The impact of the development has been minimised by ensuring the landscape plans prioritise ecological value. The proposed project has preserved areas of habitat unaffected by the site development, creating opportunities for enhancement.

Remediate

3.7 The grassland lost due to the development will be offset by improving the remaining grassland on site to a higher distinctiveness habitat and/ or condition score. For example, poor condition ‘modified grassland’ will be enhanced to moderate condition ‘other neutral grassland’.

Compensate

3.8 No habitats require compensation, however extra trees are to be planted across the site to increase the overall habitat value of the site.

4 VALUE OF CURRENT HABITATS

Existing Habitats

4.1 The habitats currently on site, the baseline habitats, as well as their condition, are shown in table 2 below.

Table 2. Value of existing on-site habitats

Broad Habitat	Habitat Type	Area (ha)	Condition	Biodiversity units
Grassland	Other Neutral Grassland	3.13	Moderate	25.04
Grassland	Modified Grassland	0.44	Poor	0.88
Grassland	Bracken	0.04	Condition Assessment N/A	0.08
Woodland	Wet Woodland	1.21	Poor	7.26
Heathland and Shrub	Blackthorn Scrub	0.03	Poor	0.12
Heathland and Shrub	Bramble Scrub	0.04	Condition Assessment N/A	0.16
Sparsely Vegetated Land	Tall Forbs	0.78	Poor	1.56
Urban	Rural Tree	0.1303	Moderate	1.04
Urban	Rural Tree	0.6116	Good	7.34
Heathland and Shrub	Bramble scrub	0.0086	Condition Assessment N/A	0.03
Grassland	Other neutral grassland	0.1957	Good	2.35
	TOTAL	**5.87** (trees not included)		**45.86**

4.2 In the table above, trees are not included in the overall site area as they occupy a separate plane overlapping other habitat types.

Existing Hedges and tree lines

4.3 The linear habitats currently on site (except water courses), the baseline linear habitats, as well as their condition are shown in table 3 below.

Table 3. Value of existing on-site hedges and tree lines

Hedge type	Length (km)	Condition	Hedgerow units
Ecologically valuable line of trees	0.12	Moderate	0.96
Ecologically valuable line of trees	0.09	Moderate	0.72
Species-rich native hedgerow	0.061	Good	0.73
Ecologically valuable line of trees	0.1744	Moderate	1.40
TOTAL	**0.45**		**3.81**

Existing Water Courses

4.4 The water course habitats currently on site, the baseline water course habitats, as well as their condition are shown in table 4 below.

Table 4. Value of existing on-site water courses

Water course type	Length (km)	Condition	Watercourse units
Ditches	0.42	Poor	1.68
TOTAL	**0.42**		**1.68**

5 VALUE OF RETAINED/PROPOSED HABITATS

Retained/enhanced habitat areas

5.1 The following habitats are due to be retained and/or enhanced within the proposed development.

Table 5. Value of proposed retained or enhanced habitats

Broad Habitat	Habitat Type	Area (ha) to be retained/ enhanced	Retained or enhanced	Enhancement	Biodiversity units
Grassland	Other Neutral Grassland	1.94	Enhanced	Moderate to Good	20.95
Grassland	Modified Grassland	0.32	Enhanced	Poor Modified to Moderate Other Neutral Grassland	2.52
Woodland	Wet Woodland	1.17	Enhance	Poor to Moderate	10.31
Heathland and Shrub	Blackthorn Scrub	0.03	Enhance	Poor Blackthorn Scrub to Moderate Mixed Scrub	0.22
Urban	Rural Tree	0.1303	Retained	-	-
Urban	Rural Tree	0.6116	Retained	-	-
Heathland and Shrub	Bramble scrub	0.0086	Retained	-	-
Grassland	Other neutral grassland	0.1717	Retained	-	-
	TOTAL	**3.64** (trees not included)			**34.00**

5.2 In the table above, trees are not included in the overall site area as they occupy a separate plane overlapping other habitat types.

Retained hedges

5.3 The following linear habitats are due to be retained within the proposed development.

Table 6. Value of proposed retained on-site hedges

Hedge type	Length (km)	Condition	Hedgerow units
Ecologically valuable line of trees	0.12	Moderate	0.96
Ecologically valuable line of trees	0.09	Moderate	0.72
Species-rich native hedgerow	0.048	Good	0.58
Ecologically valuable line of trees	0.131	Moderate	1.05

Enhanced water courses

5.4 The following water course habitats are due to be enhanced within the proposed development. Marginal vegetation will be added, water levels will be maintained and a there will be a diverse range of floating plant species.

Table 7. Value of enhanced water course habitats

Water course type	Length (km)	Enhancement	Watercourse units
Ditches	0.36	Poor to Moderate condition	2.28
TOTAL	**0.36**		**2.28**

Habitats lost

5.5 All habitats shown in table 8 below, are due to be removed to accommodate the development, and replaced with the habitats shown in table 10.

Table 8. Value of lost habitats

Broad Habitat	Habitat Type	Area lost (ha)	Habitat Units lost
Grassland	Other Neutral Grassland	1.19	9.52
Grassland	Modified Grassland	0.12	0.24
Grassland	Bracken	0.04	0.08
Woodland	Wet Woodland	0.04	0.24

Broad Habitat	Habitat Type	Area lost (ha)	Habitat Units lost
Heathland and Shrub	Bramble Scrub	0.04	0.16
Sparsely Vegetated Land	Tall Forbs	0.78	1.56
Grassland	Other neutral grassland	0.02	0.29
	TOTAL	**2.23**	**12.09**

Water courses lost

5.6 A small area of ditch habitat is to be lost to accommodate the new pond.

Table 9. Value of lost water course habitats

Water course type	Length lost (km)	Habitat units lost
Ditches	0.06	0.24
TOTAL	**0.06**	**0.24**

New proposed habitat areas

5.7 All habitats shown in table 10, below, are new habitats to be created to replace the lost habitats within table 8.

Table 10. Value of proposed new habitats

Broad Habitat	Habitat Type	Area (ha)	Condition	Biodiversity units
Grassland	Traditional orchards	0.07	Moderate	0.41
Grassland	Modified grassland	0.03	Poor	0.06
Woodland and forest	Wet woodland	0.1	Moderate	0.47
Woodland and forest	Other woodland; broadleaved	0.28	Moderate	1.31
Lakes	Pond (non-priority habitat)	0.05	Moderate	0.40

Broad Habitat	Habitat Type	Area (ha)	Condition	Biodiversity units
Heathland and shrub	Mixed scrub	0.1	Moderate	0.67
Individual trees	Rural tree	0.1629	Moderate	0.50
Individual trees	Rural tree	1.4291	Moderate	4.37
Individual trees	Rural tree	0.0407	Moderate	0.12
Urban	Vegetated garden	0.37	Condition Assessment N/A	0.71
Urban	Introduced shrub	0.12	Condition Assessment N/A	0.23
Urban	Artificial unvegetated, unsealed surface	0.46	N/A - Other	0.00
Urban	Developed land, sealed surface	0.62	N/A - Other	0.00
Urban	Other green roof	0.008	Condition Assessment N/A	0.02
Urban	Ground based green wall	0.03	Moderate	0.04
Urban	Developed land, sealed surface	0.012	N/A - Other	0.00
Grassland	Modified grassland	0.0124	Moderate	0.04
	TOTAL	**2.23** (trees/ green walls not included)		**9.35**

5.8 In the table above, trees are not included in the overall site area as they occupy a separate plane overlapping other habitat types.

New hedges

5.9 All habitats shown in table 11, below, are new linear habitats to be created.

Table 11. Value of proposed new on-site hedges

Hedge type	Length (km)	Condition	Biodiversity units
Species rich native hedge	1.1	Moderate	7.36
TOTAL	**1.1**		**7.36**

6 BIODIVERSITY NET GAIN ESTIMATE - RESULTS

Headline Results

6.1 The Biodiversity Metric calculator spreadsheet (Microsoft excel format) prepared for the proposed development contains full details of the calculations and results. As such, the Biodiversity Metric calculator spreadsheet should always accompany this report and vice versa. The figures given below provide an overview of key results only.

Table 12. Headline results comparison

FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	7.97
	Hedgerow units	6.86
	Watercourse units	0.60
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	17.37%
	Hedgerow units	180.21%
	Watercourse units	35.52%
Trading rules satisfied?	Yes ✓	

Unit Type	Target	Baseline Units	Units Required	Unit Deficit
Habitat units	10.00%	45.86	50.45	0.00
Hedgerow units	10.00%	3.81	4.19	0.00
Watercourse units	10.00%	1.68	1.85	0.00

Assessment

6.2 As shown above, the Biodiversity Metric calculator concludes that the development is due to result in 17.37% gain (+7.97biodiversity units) compared with the existing site prior to development activities. As can be seen in the tables in sections 4 and 5 above, this is largely due to the proposed enhancement of valuable habitat types such as other neutral grassland and wet woodland.

6.3 Hedgerow and water course units are counted separately. Hedgerow units have a net gain of 180.21% (+6.86 hedgerow units). This is due to the creation of new hedgerows across the site. Water courses have a net gain of 35.52% net gain (+0.60 watercourse units). This is due to the enhancements of existing ditches.

Trading Rules

6.4 All trading rules are met within the metric.

Achieving Biodiversity Net Gain

Table 13. Criteria required to meet desired condition

Habitat/ Condition	Criteria
Traditional orchard – Moderate	At least 95% of the trees are free from damage caused by humans or animals, for example browsing, bark stripping or rubbing on non-adjusted ties. Grassland is not overgrazed, poaching is not evident around the trees, with no more than 10% of trees poached under the canopy. Species richness of the grassland is equivalent to a medium, high, or very high distinctiveness grassland. There is an absence of invasive non-native plant species (as listed on Schedule 9 of WCA) and species indicative of sub-optimal condition make up less than 10% of ground cover.
Modified grassland – Poor	The modified amenity grassland will not meet: There are 6-8 vascular plant species per m^2 present, including at least 2 forbs. Note - this criterion is essential for achieving Moderate or Good condition.
Other neutral grassland - Good	The grassland is a good representation of the habitat type it has been identified as, based on its UKHab description - the appearance and composition of the vegetation closely matches the characteristics of the specific grassland habitat type. Indicator species listed by UKHab for the specific grassland habitat type are consistently present. Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens. Cover of bracken Pteridium aquilinum is less than 20% and cover of scrub (including bramble Rubus fruticosus agg.) is less than 5%. 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. If any invasive non-native plant species (as listed on Schedule 9 of WCA4) are present, this criterion is automatically failed. There are 10 or more vascular plant species per m2 present, including forbs that are characteristic of the habitat type (species referenced in Footnote 2 and 4 cannot contribute towards this count).

Wet woodland – moderate	Must score at least 26 points within the BM 4.0 – technical annex 1 – condition assessment sheets. The point scores are based 1-3 depending how they score on the following categories: • Age distribution of trees • Wild, domestic and feral herbivore damage • Invasive plant species • Number of native tree species • Cover of native tree and shrub species • Open space within woodland • Woodland regeneration • Tree health • Vegetation and ground flora • Woodland vertical structure • Veteran trees • Amount of deadwood • Woodland disturbance
Other woodland broadleaved – moderate	Must score at least 26 points within the BM 4.0 – technical annex 1 – condition assessment sheets. The point scores are based 1-3 depending how they score on the following categories: • Age distribution of trees • Wild, domestic and feral herbivore damage • Invasive plant species • Number of native tree species • Cover of native tree and shrub species • Open space within woodland • Woodland regeneration • Tree health • Vegetation and ground flora • Woodland vertical structure • Veteran trees • Amount of deadwood • Woodland disturbance
Pond – moderate	Must score 5 out of 7 of the following: The pond is of good water quality, with clear water (low turbidity) indicating no obvious signs of pollution. Turbidity is acceptable if the pond is grazed by livestock. There is semi-natural habitat (moderate distinctiveness or above) completely surrounding the pond, for at least 10 m from the pond edge for its entire perimeter. Less than 10% of the water surface is covered with duckweed Lemna spp. or filamentous algae. The pond is not artificially connected to other waterbodies, e.g. agricultural ditches or artificial pipework. Pond water levels can fluctuate naturally throughout the year. No obvious artificial dams2, pumps or pipework. There is an absence of listed non-native plant and animal species3.

	The pond is not artificially stocked with fish. If the pond naturally contains fish, it is a native fish assemblage at low densities.
Mixed scrub - Moderate	The scrub is a good representation of the habitat type it has been identified as, based on its UKHab description (where in its natural range). The appearance and composition of the vegetation closely matches the characteristics of the specific scrub type. At least 80% of scrub is native, and there are at least three native woody species, with no single species comprising more than 75% of the cover (except hazel Corylus avellana, common juniper Juniperus communis, sea buckthorn Hippophae rhamnoides or box Buxus sempervirens, which can be up to 100% cover). There is an absence of invasive non-native plant species (as listed on Schedule 9 of WCA) and species indicative of sub-optimal condition make up less than 5% of ground cover. The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.
Rural tree – Moderate	The tree is a native species (or at least 70% within the block are native species). 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). More than 20% of the tree canopy area is oversailing vegetation beneath.
Ground based green wall – poor	Invasive non-native plant species (listed on Schedule 9 of WCA) and others which are to the detriment of native wildlife (using professional judgement) cover less than 5% of the total vegetated area.

7 REFERENCES

- Baker, J., Hoskin, R. & Butterworth, T. (2019). Biodiversity net gain. Good practice principles for development. CIRIA.
- British Standards Institution (2013). BS42020 – Biodiversity – Code of practice for planning and development.
- Butcher, B., Carey, P., Edmonds, R., Norton, L. and Treweek, J. (2020a). The UK Habitat Classification User Manual Version 1.1 at http://www.ukhab.org/
- Butcher, B., Carey, P., Edmonds, R., Norton, L. and Treweek, J. (2020b). The UK Habitat Classification – Habitat Definitions V1.1 at http://www.ukhab.org/
- CIEEM (2019). Biodiversity net gain. Good practice principles for development.
- Department for Environment Food and Rural Affairs (2019). Net gain. Summary of responses and government responses.
- John Mitchell (2005). Uttlesford Local Plan. Uttlesford District Council. Local Plan 2005 - Uttlesford District Council
- Ministry of Housing, Communities and Local Government (2024). National Planning Policy Framework (NPPF).
- Natural England (2023). The Biodiversity Metric 4.0 User Guide. Natural England Joint Publication JP039.
- Royal Horticultural Society (no date). Plants for Pollinators – Garden Plants. rhs.org.uk/plantsforpollinators

8 APPENDICES

Appendix 1 - Existing Habitat Plan

Appendix 2 – Proposed Site Layout (subject to change)

Appendix 3 - Photographs

Appendix 1 - Existing Habitat Plan

NORTH

Key:

Redline Boundary

Habitat Key:

Existing Tree

H2A - Hedgerow (Priority Habitat)

W1G6 - Line of Trees

H3D - Bramble Scrub

G3C - Other Neutral Grassland

G1C - Bracken

S - Sparsely Vegetated Land

G4 - Modified Grassland

W1D - Wet Woodland

50 - Ditch

REV	Date	Description	Drawn by
P01	06/01/2023	Updated Redline Boundary	LJ

Base drawing:

Title:
Base Line Plan

Stage:
Planning

Client:
Montare

Project:
The Downs, Stebbing

Date:	Drawn by:	Authorised:
19/09/2023	LJ	BC

Drawing Number:
230654-TMA-XX-DR-EC-3001

REV: P01

Scale: 1:500 @A1

tma
The Barn, Feltimores Park
Chalk Lane, Harlow
Essex CM17 0PF

0845 094 3268
info@tma-consultants.co.uk
www.timmcyaassociates.co.uk

NORTH

Key:

Redline Boundary

Habitat Key:

Existing Tree

H2A - Hedgerow (Priority Habitat)

W1G6 - Line of Trees

H3D - Bramble Scrub

G3C - Other Neutral Grassland

G1C - Bracken

S - Sparsely Vegetated Land

G4 - Modified Grassland

W1D - Wet Woodland

50 - Ditch

REV	Date	Description	Drawn by
P01	06/01/2023	Updated Redline Boundary	LJ

Base drawing:

Title:
Base Line Plan

Stage:
Planning

Client:
Montare

Project:
The Downs, Stebbing

Date:	Drawn by:	Authorised:
19/09/2023	LJ	BC

Drawing Number:
230654-TMA-XX-DR-EC-3002

REV: P01

Scale: 1:500 @A1

The Barn, Feltimores Park
Chalk Lane, Harlow
Essex CM17 0PF

0845 094 3268
info@tma-consultants.co.uk
www.timmcyaassociates.co.uk

Appendix 2 – Proposed Site Layout (subject to change)

NORTH

Key:

- Redline Boundary

BNG Key

- Existing Tree to be Retained
- Proposed Tree
- R1E - Ditch
- F2D - Aquatic Marginal Vegetation
- G3C - Other Neutral Grassland
- G4 - Modified Grassland
- H2 - Hedgerow
- H2A - Native Species Rich Hedgerow
- H3 - Dense Scrub
- Introduced Scrub
- Orchard
- R - Rivers and Lakes
- S - Sparsely Vegetated Land
- U1B - Developed Land. Sealed Surface
- U1B5 - Buildings
- W1D - Wet Woodland
- W1G6 - Line of Trees
- Vegetated Gardens
- Green Roofs
- Green Walls

REV	Date	Description	Drawn by
P01	19/01/2023	Updated Redline Boundary	LJ

Base drawing:

Title:
Biodiversity Net Gain - Plot A&B

Stage:
Planning

Client:
Montare

Project:
The Downs, Stebbing

Date:	Drawn by:	Authorised:
19/09/2023	LJ	BC

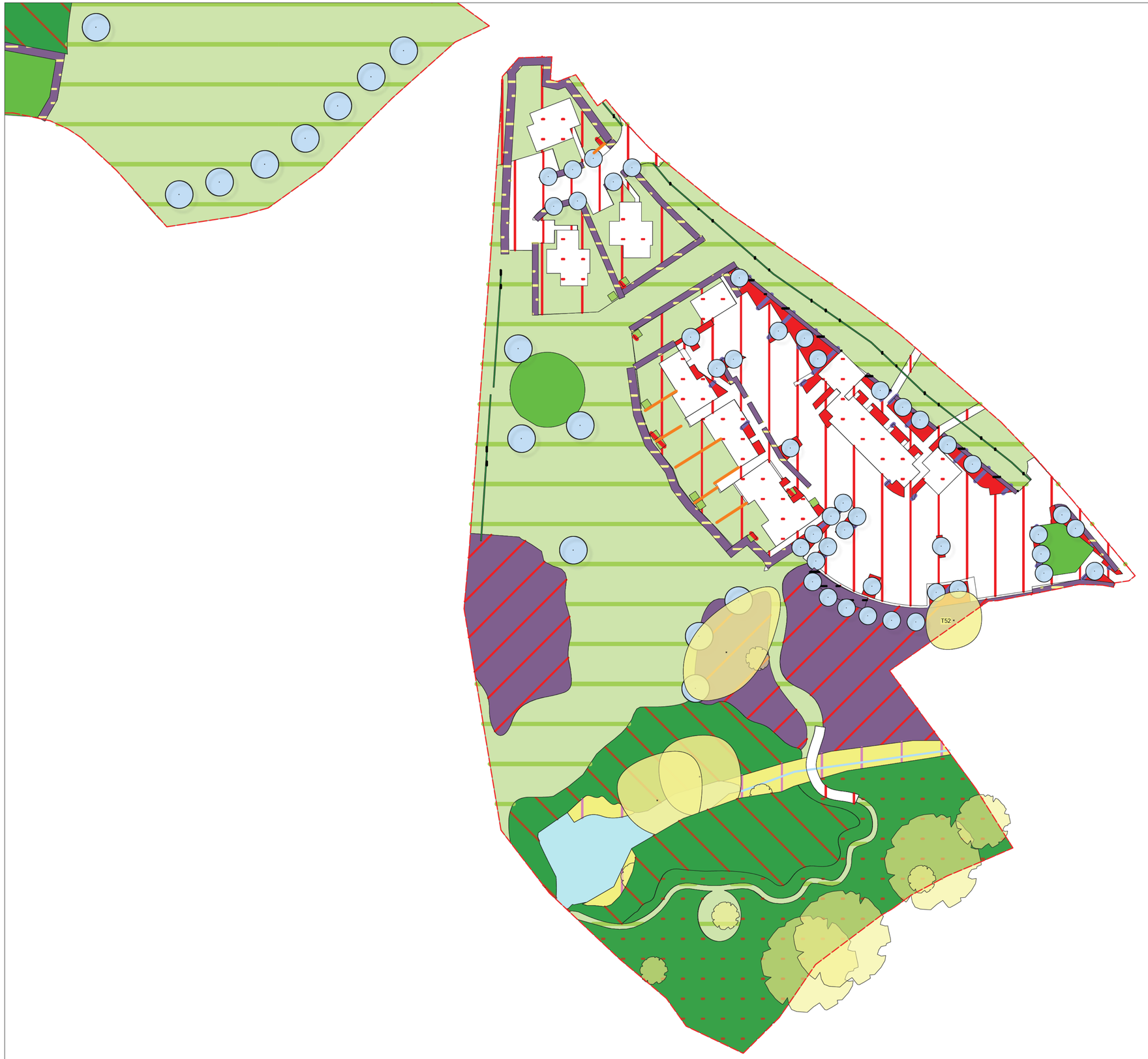
Drawing Number:
230654-TMA-XX-DR-EC-3003

REV: P01

Scale: 1:500 @A1

The Barn, Feltimores Park
Chalk Lane, Harlow
Essex CM17 0PF

0845 094 3268
info@tma-consultants.co.uk
www.tmmcyaassociates.co.uk



NORTH

Key:

Redline Boundary

BNG Key

Existing Tree to be Retained

Proposed Tree

R1E - Ditch

F2D - Aquatic Marginal Vegetation

G3C - Other Neutral Grassland

G4 - Modified Grassland

H2 - Hedgerow

H2A - Native Species Rich Hedgerow

H3 - Dense Scrub

Introduced Scrub

Orchard

R - Rivers and Lakes

S - Sparsely Vegetated Land

U1B - Developed Land. Sealed Surface

U1B5 - Buildings

W1D - Wet Woodland

W1G6 - Line of Trees

Vegetated Gardens

Green Roofs

Green Walls

REV	Date	Description	Drawn by
P01	06/01/2023	Updated Redline Boundary	LJ

Base drawing:

Title:
Biodiversity Net Gain - Plot C&D

Stage:
Planning

Client:
Montare

Project:
The Downs, Stebbing

Date:	Drawn by:	Authorised:
19/09/2023	LJ	BC

Drawing Number:
230654-TMA-XX-DR-EC-3004

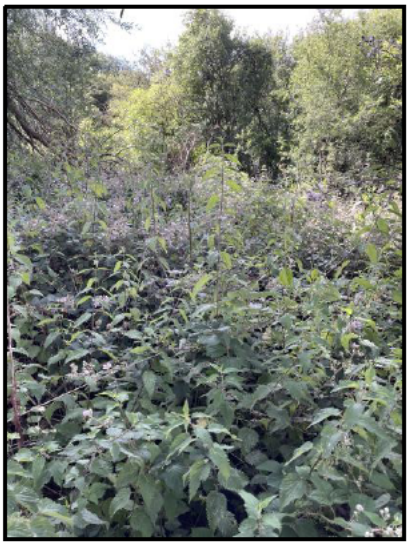
REV: P01

Scale: 1:500 @A1

The Barn, Feltimores Park
Chalk Lane, Harlow
Essex CM17 0PF

0845 094 3268
info@tma-consultants.co.uk
www.tmmcyaassociates.co.uk

Appendix 3 - Photographs

Photo 1 – Site overview – other neutral grassland.	Photo 2 – Site overview – modified grassland.
	
Photo 3 – Site overview – other neutral grassland.	Photo 4 – Wet woodland
	
Photo 5 – Large tree with potential to support a range of species.	Photo 6 – Dense nettles.
	

TMA Environmental Consultants

2 The Stables, Cannons Mill Lane, Bishop's Stortford CM23 2BN

0845 094 3268 | info@tma-consultant.co.uk | www.tma-consultants.co.uk