

Biodiversity Metric and Net Gain Calculations

Land at Walburton, West Sussex

Presented to Land Allocation Limited

Issued: September 2021

Delta-Simons Project Number: 20-1611.01

Issue No.	Status	Issue Date	Comments	Author	Technical Review	Authorised
1	Draft	28 th September 2021				
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1.0 Context and Purpose

Delta-Simons was instructed by AAH Planning on behalf of Land Allocation Limited ('the Client') to provide Biodiversity Net Gain Calculations (BNG) for the proposed development of land at Walburton, West Sussex (hereafter referred to as the "Site").

2.0 Methodology

The following have been completed for the Site:

- ▲ A habitat condition assessment was completed using the DEFRA Metric 2.0 (Beta edition) Technical Supplement Criteria and was based on the information obtained during the Preliminary Ecological Appraisal (PEA) of the Site undertaken by Delta-Simons in April 2020;
- ▲ Using the DEFRA Metric 2.0 (Beta edition), baseline biodiversity units for the Site were calculated;
- ▲ Area based habitat calculations were made using metres squared (m²) instead of hectares (ha), to calculate the gain of smaller landscaped areas more accurately; and
- ▲ A post-development calculation has been completed using the masterplan and landscaping information for the Site.

3.0 Baseline Score

The Site is centred at Ordnance Survey (OS) grid reference SU 97808 06006, to the east of Walburton in West Sussex. The Site covers an area of approximately 7.6 hectares (ha) and comprises a large arable field with continuous hedgerows along three boundaries and scattered broadleaved trees on all four boundaries. The Site did not support standing water at the time of the survey.

Table 1 below, provides a summary of the habitats, areas and overall baseline biodiversity units for the on-Site habitats. Table 2 below provides a summary of the overall baseline biodiversity units for the on-Site hedgerow.

Table 1 – On-Site Area Baseline Score

Existing Habitats	Area (ha)	Biodiversity Units
Cropland - Cereal crops	7.34	14.68
Grassland - Modified grassland	0.23	0.46
Total		15.14

Table 2 – On-Site Hedgerow Baseline Score

Existing Hedgerows	Length (km)	Biodiversity Units
Native Hedgerow with trees	3.63	8.35

4.0 Post Development Calculation

Tables 3 and 4, below, provide a summary of the post-development score based on the landscaping plan for the Site.

The existing area of modified grassland and arable field will be lost as part of the proposed development plan. The majority of the native hedgerow will be retained, with a further 5 m of native hedgerow planted. All bar one of the trees within the hedgerow will be retained, except from T5 which is part of the section of hedgerow that will be removed for the access road.

In addition, the perimeter of the Site will comprise native scrub with tree species that could include hazel *Corylus avellana*, common dogwood *Cornus sanguinea*, hawthorn *Crataegus monogyna*, alder *Alnus glutinosa*, beech *Fagus sylvatica*, crab apple *Malus sylvestris*, birch *Betula sp.*, English oak *Quercus robur*, rowan *Sorbus aucuparia*, willow *Salix sp.*, and wild cherry *Prunus avium*. Species-rich native meadow grass will be the primary vegetation cover within the green spaces, planted with orchard trees and a suitable mix of native grasses and wildflowers. Ornamental shrubs and herbaceous plants will be chosen specifically to attract insects/pollinators and birds, in the front gardens of the residential properties. The rear gardens, along with the grassland areas adjacent to hardstanding and the pond, will be amenity grassland. Native hedgerow will be planted along the north, east, and south Site boundaries.

Table 3 – On-Site Post Development Area Score

Proposed Habitat	Retained Area (ha)	Area (ha) Enhanced	Area (ha) Created	Biodiversity Units Delivered
Heathland and shrub - Mixed scrub	-	-	0.80	6.33
Grassland - Modified grassland	-	-	0.70	1.96
Urban – Developed land; sealed surface	-	-	1.83	0.00
Urban - Orchard	-	-	1.19	6.14
Urban - Amenity grassland	-	-	2.71	5.23
Lakes - Ponds (Non- Priority Habitat)	-	-	0.19	2.25
Urban - Introduced shrub	-	-	0.15	0.29
Total				22.20

Table 4 – On-Site Post Development Hedgerow Score

Proposed Hedgerow	Retained Length (km)	Length (km) Enhanced	Length (km) Created	Biodiversity Units Delivered
Native Hedgerow with trees	2.34	-	0.05	5.54
Native Hedgerow	-	-	0.95	3.66
Total				9.20

The DEFRA Metric used to generate the above scores is appended to this Report, with the existing habitats surveyed by Delta-Simons shown in Figure 1, and the proposed landscape plan shown in Drawing 1.

5.0 Results and Conclusions

The above assessment results in a total net unit change of:

Habitat Units = +7.06 **Total net % change = +46.61%**

Hedgerow Units = +0.85 **Total net % change = +10.19%**

See completed DEFRA Metric for detailed results (Appendix A).

Based on the information provided, this assessment indicates that the development will achieve a net gain in biodiversity of 46.61% in terms of habitats, and 10.19% in terms of hedgerows. As such, it is considered that the proposed development complies with the NPPF and local policies for provision of net gain for biodiversity on-Site.

Enclosed:

Figures

Figure 1 Phase 1 Habitat Survey Plan

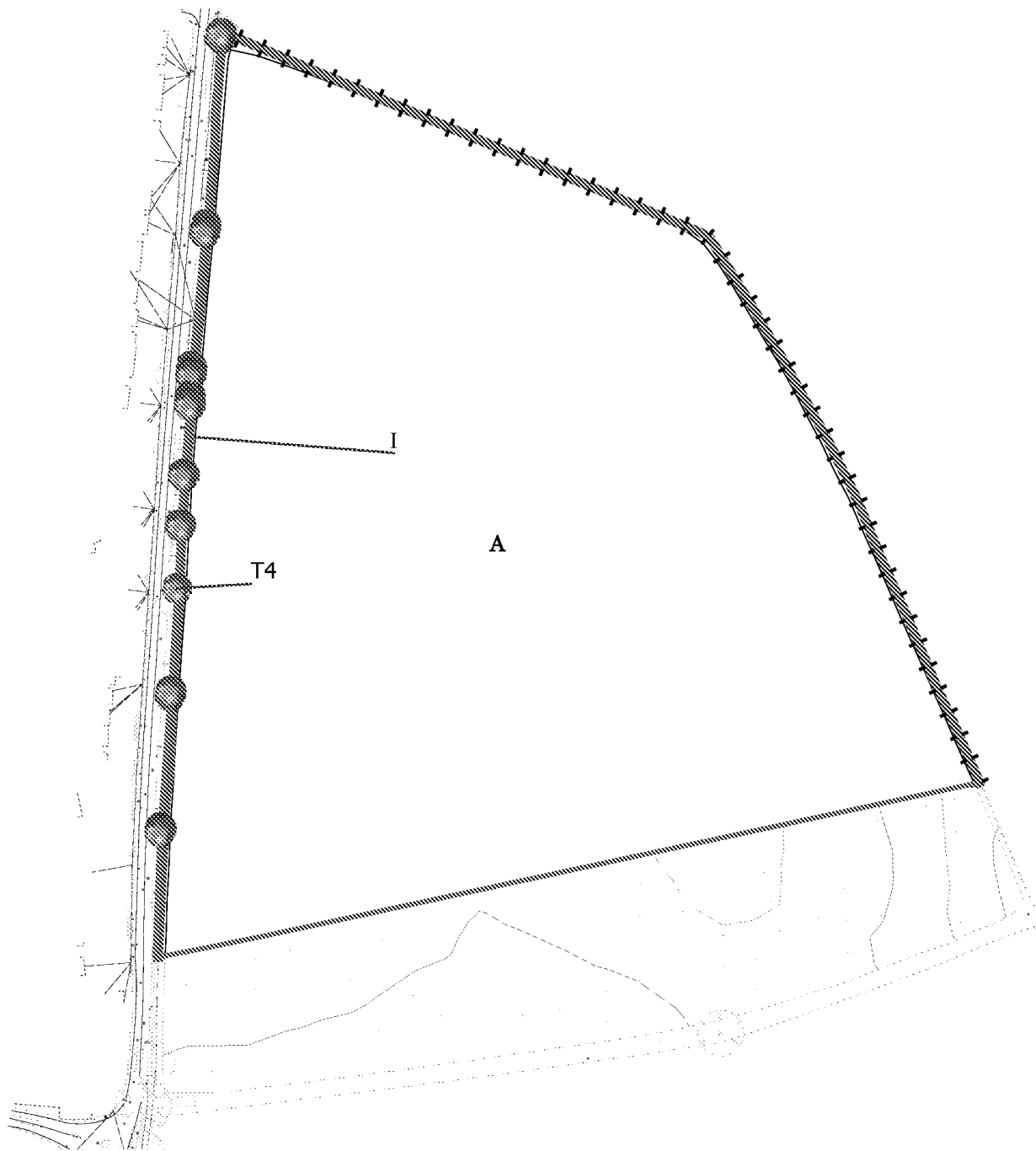
Drawings

Drawing 1 Landscape Proposal Plan

Appendices

Appendix A BNG Calculation Tool (issued separately)

Figure 1 – Phase 1 Habitat Survey Plan



Site Plan Provided by Client

LEGEND

-  Site Boundary
-  Scattered broadleaved trees
-  Intact species-poor hedgerow
-  Fence
-  Improved grassland
-  Arable

TITLE:

Phase 1 Habitat Survey Plan
Land East of Yapton Lane, Walberton
West Sussex

DRAWN BY:

CD

SCALE (@A4):

1:2,500

PROJECT NO:

20-1611.01

CHECKED BY:

PM

REVISION:

-

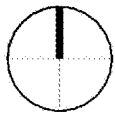
FIGURE NO:

1

DATE:

28 September 2021

Drawing 1 – Landscape Proposal Plan



Legend

- Site Boundary
- Existing trees and hedgerow retained
- Close-mown grass
- Planting for pollinators
Shrub and herbaceous plants chosen to have year round interest, form, texture and colour. Ornamental varieties, as normally found in a domestic setting, should be specified to attract insects/pollinators and birds.
- Urban orchard
Species-rich native meadow grass will be the primary vegetation cover within the green spaces. An appropriate species mix should be chosen in response to analysis of the soils and site conditions, which would include a suitable mix of native grasses and wildflowers. Within these areas orchard trees will be established to form a community orchard for the benefit of all local residents. Local varieties will be chosen as appropriate.
- Native scrub - wildflower meadow with shrubs and small trees
Tree species should be selected to be appropriate to the setting, including specifying fruiting trees, to provide seasonal colour and fruit. Tree species could include hazel, dogwood, alder, beech, apple, birch, oak, hawthorn, hazel, rowan, wild cherry and willow, and of course oak, at key locations.
- Marginal and aquatic planting
Ponds and Marginal Areas Indicative Planting List (To be developed and agreed with County ecologist):
 - Ground Flora: Errorsgate EM8 Meadow Mixture (or similar) for seasonally wet soils
 - Marginal Plants - Pond edges: Errorsgate EPTF Wild Flowers for Pond Edge (or similar)
 - Marginal Plants - Deep water, including: *Alisma plantago-aquatica*, *Botanoc umbellatus*, *Ceratophyllum demersum*, *Geum rivale*, *Mentha aquatica*, *Menyanthes trifoliata*, *Myosotis scorpioides*, *Myriophyllum spicatum*, *Ranunculus flammula*
- Wildflower Meadow
Species-rich native meadow grass appropriate to the soils and site conditions, which would include a suitable mix of native grasses and wildflowers. Within these areas orchard trees will be established to form a community orchard for the benefit of all local residents. Local varieties will be chosen as appropriate.
- Rear gardens
- Native hedgerow
Species-diverse new hedgerow sections to connect existing hedgerows and reinforce wildlife corridors around the Site's perimeters - species to be confirmed
- Site constraints (Archaeology and proposed highways)
- Visibility splays as shown on JNP Group drawing 'Site Access General Arrangement' C86484-JNP-66-XX-DR-C-2001 Revision P01

Drawing Nr: 21-16-BNG-GR-01
Rev Nr: 1
Drawn by: TF
Checked by: OB
Scale @ A3: 1:1,500

Land east of Yapton Lane,
Walberton

Indicative Ecological
Treatments

Appendix A – BNG Calculation Tool (issued separately)