



PROVIDING TRUSTED ECOLOGICAL ADVICE

BIODIVERSITY NET GAIN REPORT FOR THE PINN RIVER SCHOOL PROJECT

Project	Prepared By	Approved by	Client	Status	Date
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INTRODUCTION

Instruction

Richard Graves Associates were instructed by Wynne-Williams Associates Ltd to complete a Biodiversity Net Gain (BNG) calculation for the reprovisioning proposals for a new school (Pinn River School) on the site of the existing Grangewood School site.

Background

The site is located centred at Ordnance Survey (OS) grid reference TQ 09915 88835, to the west of Eastcote in the London Borough of Hillingdon. The existing school has a shared access point with Coteford Junior School which borders it to the south and borders with Ruislip Woods to the west, north and east.

The site was visited for the Phase 1 by Richard Graves on the 24th August and 14th September 2022. Habitats were identified and are plotted on a map (Appendix A)

A biodiversity net gain assessment has been requested by the local planning authority.

Project Ecologist

Richard Graves BSc (Hons) MSc PGDip CEcol CEnv FCIEEM has been appointed to undertake the BNG assessment for the site. Richard is the director of Richard Graves Associates with over 27 years' experience of ecological issues in relation to development projects. Richard is a chartered ecologist and environmentalist and fellow of the Chartered Ecology and Environmental Management (CIEEM) and holds survey licences for protected species.

Biodiversity Net Gain Requirements

A BNG calculation has been requested by the local Planning Authority (LPA), the London Borough of Hillingdon fulfilling the requirements of the National Planning Policy Framework (NPPF) (DCLG, 2021).

The NPPF – which applies only to England – was first published in 2012. It provides the framework for producing local plans for housing and other development, which in turn provide the background against which applications for planning permission are decided.

The NPPF must be taken into account in preparing the development plan and is a material consideration in planning decisions. Planning policies and decisions must also reflect relevant international obligations and statutory requirements.

When determining planning applications, local planning authorities should apply the following principles:

- If significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused



- Development on land within or outside a Site of Special Scientific Interest (SSSI), and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of SSSIs
- Development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists
- Development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity. while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

Of particular significance in the 2021 amendments, the NPPF now requires opportunities to incorporate biodiversity improvements in and around development. This demonstrates further steps taken by the government towards achieving the 25 Year Environment Plan (2018) which sets out the aspiration to mainstream BNG in the planning system and move towards approaches that integrate natural capital benefits.

The site is adjacent to a National Nature Reserve (NNR), which is also a Site of Special Scientific Interest. The site itself is not an SSSI and does contain Biodiversity Action Plan (BAP) priority woodland habitat, most of which will be retained, with the potential to be enhanced. The proposals do not result in significant harm to biodiversity and opportunities to deliver biodiversity improvements have been maximised as part of the landscaping and architectural design.



BIODIVERSITY NET GAIN - APPROACH

Introduction

Biodiversity is essential to sustain our society and economy. Enhancing biodiversity is integral to sustainable development, and BNG is an approach to embed and demonstrate biodiversity enhancement within development. It involves first avoiding and then minimising biodiversity loss as far as possible and achieving measurable net gains that contribute towards local and strategic biodiversity priorities. BNG does not apply to statutorily designated sites or irreplaceable habitats.

BNG is defined as *“development that leaves biodiversity in a better state than before, and an approach where developers work with local governments, wildlife groups, landowners and other stakeholders in order to support their priorities for nature conservation.”* (Baker, 2019)

Achieving BNG relies on the different stakeholders recognising the aims, and sometimes constraints, of each stakeholder involved. Stakeholders are defined as *“individuals and organisations who are actively involved in the project, or whose interests may be positively or negatively affected as a result of project execution or successful project completion.”* At a strategic level, national policies set the context for LPAs and corporate strategies drive an organisation’s BNG agenda. At the project level, stakeholders influence decisions through consultations and how they communicate and collaborate.

BNG should be proportionate to the development and the potential impact on biodiversity. Such proportionate approaches are more likely to be achieved if strategically planned for and incorporated within local plans from the outset.

The Environment Act 2021 (HMG, 2021) received royal assent in November 2021.

Mandatory BNG as set out in the Environment Act 2021 (HMG, 2021) applies in England only by amending the Town & Country Planning Act (TCPA) and is likely to become law in 2023. The Act sets out the following key components to mandatory BNG:

- Minimum 10% gain required calculated using Biodiversity Metric & approval of net gain plan.
- Habitat secured for at least 30 years *via* obligations/conservation covenant.
- Habitat can be delivered on-site, off-site or *via* statutory biodiversity credits.
- There will be a national register for net gain delivery sites.
- The mitigation hierarchy still applies of avoidance, mitigation and compensation for biodiversity loss.
- Does not apply to Nationally Significant Infrastructure Projects (NSIPs) or marine development.
- Does not change existing legal environmental and wildlife protections.



The current Biodiversity Metric 3.1 was launched in April 2022 by DEFRA. The Biodiversity Metric is designed to provide ecologists, developers, planners and other interested parties with a means of assessing changes in biodiversity value (losses or gains) brought about by development or changes in land management. The Metric is a habitat-based approach to determining a proxy biodiversity value.

BNG is now mandated in The Environment Act 2021, a minimum of 10% net gain will be required, once regulations are issued, by most developments, but currently this is an aspirational percentage.

There will be some exceptions to the BNG requirement, for example permitted development or minor householder applications, although this will be detailed in secondary legislation, which means that the regime is not expected to be implemented until 2023.



THE MITIGATION HIERARCHY

The mitigation hierarchy is the cornerstone of achieving BNG. The sequential order of mitigation actions is listed below:

1. Avoidance: This first stage is to avoid harm to biodiversity, for example, by locating to an alternative site.
2. Minimisation: If avoiding all adverse effects is not possible, action is taken to minimise these effects, which can include timing works to avoid sensitive periods.
3. Compensation: Addressing residual adverse effects is the final stage, only considered after all possibilities for avoiding and minimising the effects have been implemented. Compensation does not prevent the effects, rather it involves measures to make up for residual effects that cannot be prevented.

Offsetting is a form of compensation that trades losses of biodiversity in one location with measurable gains in another – biodiversity offsets have a formal requirement for measurable outcomes. Offsetting losses of biodiversity with gains elsewhere can be within or outside of the development footprint.

By following the mitigation hierarchy, developers should demonstrate that they have tried to maximise habitat retention and creation on site, before considering off-site locations. If they choose an off-site location, the Government expects a range of offset providers to offer their land, for example local authorities, wildlife trusts or bespoke offset providers.



STAKEHOLDER ENGAGEMENT

Good practice for BNG is to engage stakeholders early in the process; this can significantly improve the biodiversity outcomes. The scale of the stakeholder engagement should be proportionate to the size of the project.

The following stakeholders have been identified at this application stage:

- The London Borough of Hillingdon (the local planning authority)
- The Client (Department for Education and Eden Academy Trust)
- The Design and Build Contractor
- Richard Graves Associates Ltd (Project Ecologist)
- Wynne-Williams Associates Ltd (Landscape Architect)



BASELINE CONDITIONS

The following baseline habitats in Table 1 were identified from a site assessment by the project ecologist with areas confirmed by clients and used in the BNG calculation using the Metric 3.1. The habitats were surveyed using the Phase 1 method translated into the UK Habitat Classification method (Butcher, 2020). Interpreted to the level of detail that the metric supports

The baseline areas before January 2020 as required for the metric assessed from Google Earth Pro aerial images suggests that the habitats present at that time were substantially the same as recorded in 2022. For the purpose of the calculation this has been interpreted as *“Location ecologically desirable but not in local strategy”* in the strategic significance column.

Table 1: Baseline habitat types and sizes

Broad Habitat type (UK Habitat Classification) for use within the Metric	Habitat type (UK Habitat Classification) for use within the Metric	Size of habitat type (area ha / length km)
Urban	Developed land sealed surfaces	0.7336
Grassland	Modified Grassland	0.056815
Woodland and Forest	Lowland Mixed Deciduous Woodland	2.098668
Urban	Urban Tree	0.0226
	Total Site Area (excluding Urban Trees):	2.9 ha



ONSITE HABITAT CREATION AND ENHANCEMENT

Habitat creation is the removal or loss of an existing habitat to create a new, different habitat. It can also involve creating habitat where none was previously present (including from bare earth and hardstanding). Habitat enhancement is increasing the biodiversity value of an existing habitat, for example by improving its biodiversity capacity or removing factors that degrade its value. When designing BNG, a mixture of habitat creation and enhancement can be appropriate.

Table 2 summarises the habitat creation in terms of the Metric 3.1 calculation. The habitats proposed are taken from high landscape plans prepared by Wynne-Williams Associates Ltd, translated into the best available UK Habitat Classification habitat that can be selected in the metric.



Table 2: Habitat types and sizes – Habitat creation and Enhancement

New / Enhanced Habitat	Size (ha / km)
Urban - Developed land sealed surfaces	0.9704
Mixed Scrub	0.0693
Lowland Meadows	0.0647
Modified Grassland	0.0099
Introduced Shrub	0.0186
Urban – Urban Tree	0.0855
Lowland Mixed Deciduous Woodland	2.08
Native Hedgerow	0.0031 km
Total Site Area (Excluding Urban Trees) 2.9 ha	



BIODIVERSITY NET GAIN RESULTS

The Headline results from the Metric 3.1 are shown below in Table 3.

Table 3: BNG Headline Results

Pinn River SEND School

Headline Results

Return to results menu

On-site base line	Habitat units	28.15
	Hedgerow units	0.00
	River units	0.00
On-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	31.12
	Hedgerow units	0.01
	River units	0.00
On-site net % change (Including habitat retention, creation & enhancement)	Habitat units	10.56%
	Hedgerow units	0.00%
	River units	0.00%
Off-site base line	Habitat units	0.00
	Hedgerow units	0.00
	River units	0.00
Off-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	0.00
	Hedgerow units	0.00
	River units	0.00
Total net unit change (including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	2.97
	Hedgerow units	0.01
	River units	0.00
Total on-site net % change plus off-site surplus (including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	10.56%
	Hedgerow units	100.00%
	River units	0.00%
Trading rules Satisfied?	Yes ✓	

The master Metric 3.1 has been included as a separate document (Excel spreadsheet).

The results show a total net percentage change of 10.56% for habitat units, reflecting a net gain of 2.97 habitat units resulting from implementing the proposals and a 100% gain in hedgerow units a gain of 0.01.

This achieves a significant net gain for habitat units and hedgerow units and the trading rules for the calculation are satisfied.

In order to achieve the significant net gain, it has been assumed in the calculation that the woodland within the school site will be enhanced through active management. As the site is adjacent to Ruislip Woods National Nature Reserve (also a Site of Special Scientific Interest), which has a long term management plan any management should be aligned to be consistent with the objectives of that plan.



The drawings of baseline and proposed habitats are shown as Appendix A.



REFERENCES

- Baker, J. H. (2019). *Biodiversity Net Gain, Good Practice Principles for Development, Part A a Practical Guide*. CIRIA.
- Butcher, B. C. (2020). *Uk Habitat Classification User Manual Version 1.1*.
- DCLG. (2021). *National Planning Policy Framework*. London: GLG.
- HMG. (2021). *The Environment Act*. London: HMSO.



APPENDIX A**Figure 1 Baseline Habitats**



- Legend
- Survey boundary
 - A1.1.1 Broadleaved woodland - semi-natural
 - A3.1 Broadleaved parkland/scattered trees
 - J1.2 Cultivated/disturbed land - amenity grassland
 - J3.6 Buildings
 - J5 Hard standing


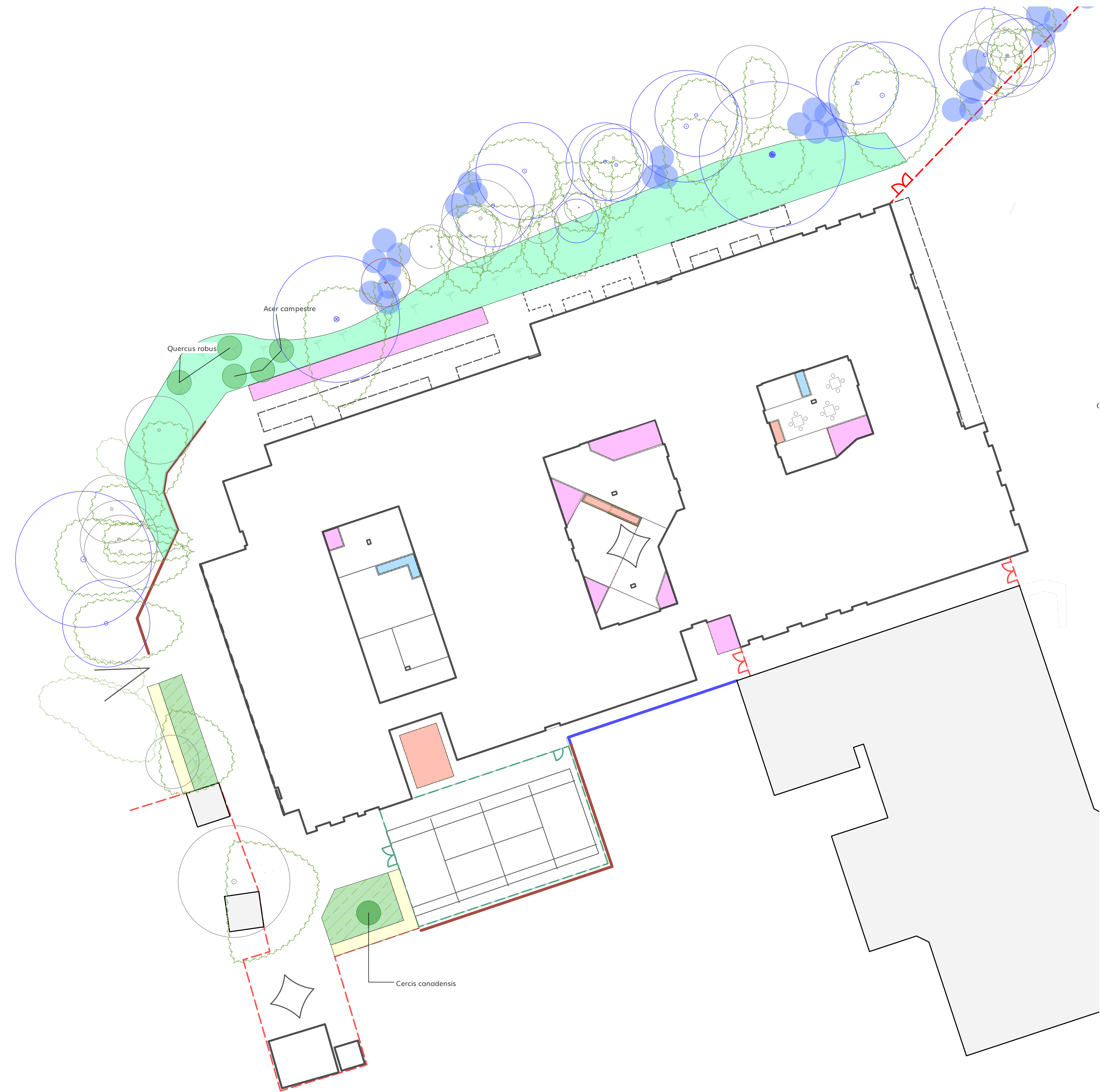
0	03/11/2022	FIRST ISSUE	JMG	RG	RG
Rev	Revision Date	Purpose of revision	Drawn	Check'd	App'd
<div><div>Richard Graves Associates Ltd 49 London Road, Ipswich, IP1 2HF e-mail: richard@richardgravesassociates.com Phone: 020 3286 1419 Mobile: 07713 247636 Web: www.richardgravesassociates.com</div></div>					
Project		Grangewood School Harrow			
Drawing title		Phase 1 Habitat Survey			
Scale	1:1250 @ A3		Drawn	03 Nov 2022	
Drawing number					Rev
22RG-28-10					0
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Figure 2 Habitats after Development








- Native understory planting - 60-80cm transplants and CG shrubs planted in random in clusters of 5-7 plants within defined boundary. Species to include; Ilex aquifolium, Cornus sanguinea, Corylus avellana, Viburnum opulus and Acer campestre . TOTAL NUMBER 50
- Wildflower mix - shade tolerant native mix. Emorsgate Wild Flowers for Woodland EW1F or similar.
- Ornamental shrub planting - CG shrubs at 3/m. Species to include; Skimmia 'Kew Green', Ilex aquifolium 'Silver Queen', Pachysandra terminalis 'Variegata', Ajuga reptans, Matteuccia struthiopteris, Asplenium scolopendrium.
- Carpinus betulus hedge planting - 60-80cm transplants.
- Hebe champagne hedge planting 5L CG
- Sensory planting - shrubs and perennials. CG @ 3/m. Species to include; Deschampsia cespitosa, Hakonechloa macra, Heuchera 'Palace Purple', Heuchera 'Marmalade', Mentha spicata, Salvia rosmarinus, Lavandula angustifolia 'Hidocle', Lavandula stoechas, Stachys byzantia, Jasminum officinale
- Amenity grass laid as turf
- Selected tree planting 12-14cm girth. TOTAL 6

02		14/10/22		Layout updated for planning, suggested species added	
No.	Date	Appr	Revision Notes		
Note: All Dimensions must be checked on site and not scaled from this drawing.					
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Scale/North Point					
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-  Native understory planting - 60-80cm transplants and CG shrubs planted in random in clusters of 5-7 plants within defined boundary. Species to include; Ilex aquifolium, Cornus sanguinea, Corylus avellana, Viburnum opulus and Acer campestre. TOTAL 150
-  Selected tree planting 12-14cm girth. TOTAL 15
-  Native understory CG @ 3/m herbaceous and bulbs: Primrose, Ferns, Sweet Woodruff, Wood Anemone, Wood Violet, Wild Garlic, Snowdrops

P 02		14/10/22		Layout updated planning, planting species added	
No.	Date	Appr	Revision Notes		
Note: All Dimensions must be checked on site and not scaled from this drawing.					
All cross references are to the latest revision of the relevant drawing or specification being referenced					
© Copyright					
wynne-williams associates					
landscape architects & arboricultural consultants					
tel: 01376 573050					
web: www.co.uk					
Scale/North Point					
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