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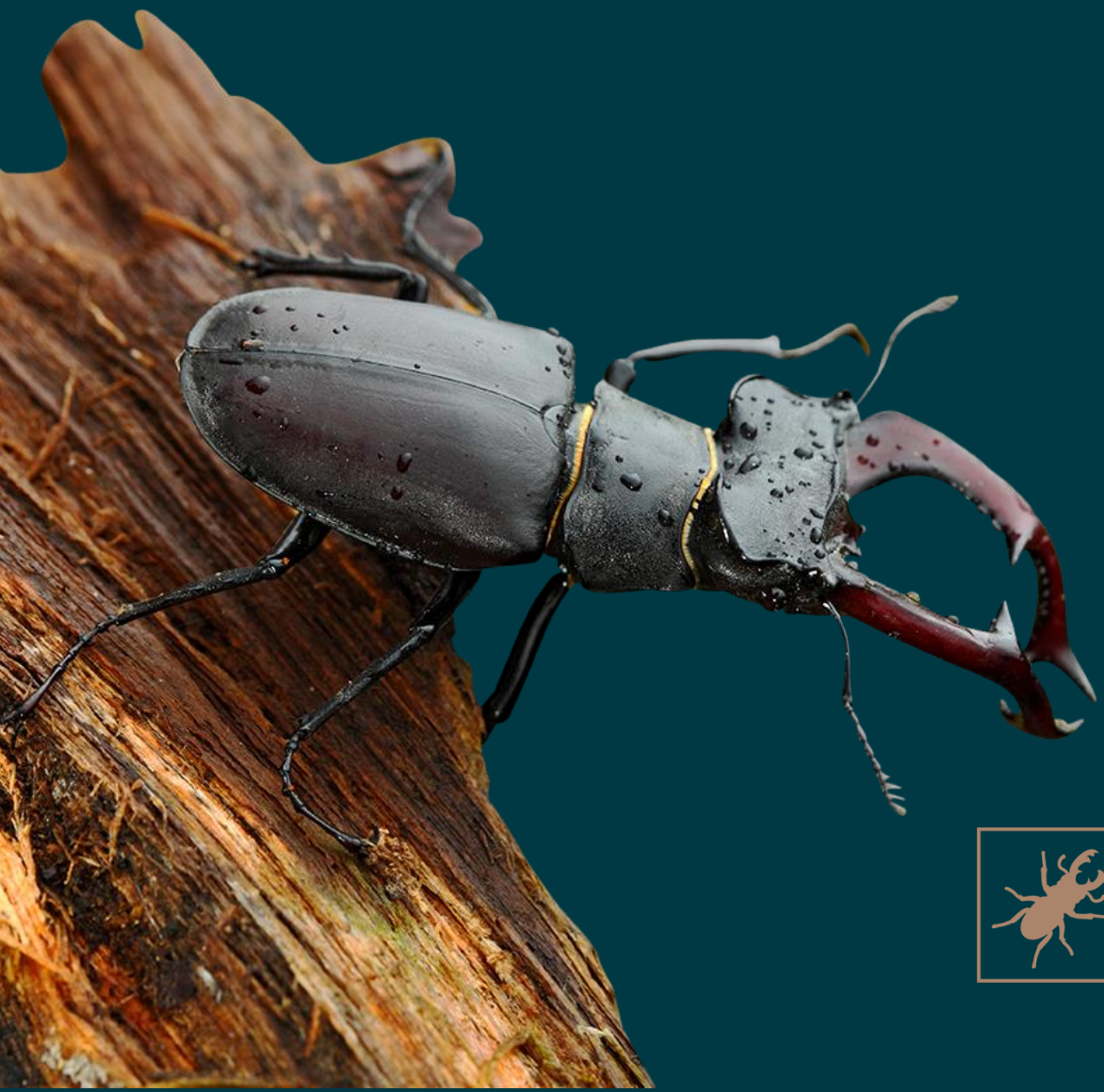
BIODIVERSITY PROJECT OFFICER

South Oxfordshire and Vale of White Horse Joint Local Plan 2041

Assessment of sites' BNG potential

August 2024



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Quality Management

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Thames Valley Environmental Records Centre

Executive Summary

The aim of this assessment is to understand how much Biodiversity Net Gain might feasibly be provided on sites in the districts and subsequently how many (if any) off-site units would need to be purchased under different Joint Local Plan BNG requirements. This assessment will help to evidence local opportunities for a higher BNG percentage. It will also provide key inputs for the Joint Local Plan Viability Assessment.

This assessment considers two types of site:

i) A sample of smaller/non-allocated sites (six sites). These sites are typical of the type of smaller/non-allocated residential development that might be expected to come forward in the districts over the plan period.

ii) Joint Local Plan proposed site allocations (eight sites). These are sites proposed for large-scale residential development that do not already have planning permission

Planning application information for the sample of smaller/non-allocated sites was entered into the statutory BNG metric and the resulting figures analysed to produce a model for calculating potential biodiversity gains or losses at the proposed site allocations.

Using this model, calculations were carried out to ascertain the likely effects on biodiversity of developments at the proposed allocation sites, in terms of the potential amount of biodiversity units generated or lost at BNG requirements from 10-25%.

Key Findings:

i. Using the post-development model Biodiversity Net Gain in terms of area habitat units of 20 to 25% is possible on the majority of sites.

ii. Sites that already have moderately high biodiversity will find it very difficult to meet the statutory minimum of 10% gain on site and would need delivery of biodiversity improvements off-site to meet BNG requirements.

iii. Hedgerow and watercourse components of BNG will be harder to achieve on some sites at this level and may need a greater proportion of biodiversity gain to be delivered off-site

Contents

1.1 List of Figures

1. Introduction

South Oxfordshire and Vale of White Horse District Councils are working together to produce a Joint Local Plan that will guide development in the districts to 2041. A key part of the emerging Joint Local Plan vision is: "*for this to be a place where nature is thriving, and nature reserves are no longer isolated pockets*".

The councils undertook consultation on the Joint Local Plan preferred options[1] from 10 January to 26 February 2024. This included a preferred option under Policy NH1 Nature Recovery that proposed the plan sets a biodiversity net gain (BNG) requirement higher than the mandatory minimum 10% and instead sets a minimum requirement between 11-25% (whatever is the maximum assessed as deliverable through the Joint Local Plan Viability Assessment).

Biodiversity Net Gain is an approach to development, and/or land management that leaves the natural environment in a measurably better state than beforehand, by assessing the extent and quality of habitats and comparing the habitats found on a site before and after development.

Since publishing the Joint Local Plan preferred options, mandatory BNG requirements have come into force and additional text has been added to the national Planning Practice Guidance (PPG)[2], which states:

> *"Plan-makers should not seek a higher percentage than the statutory objective of 10% biodiversity net gain, either on an area-wide basis or for specific allocations for development unless justified. To justify such policies they will need to be evidenced including as to local need for a higher percentage, local opportunities for a higher percentage and any impacts on viability for development. Consideration will also need to be given to how the policy will be implemented."*

The aim of this assessment is to understand how much BNG might feasibly be provided on sites in the districts and subsequently how many (if any) off-site units would need to be purchased under different Joint Local Plan BNG requirements. This assessment will help to evidence local opportunities for a higher BNG percentage as required by the PPG. It will also provide key inputs for the Joint Local Plan Viability Assessment.

[1] www.theconversation.southandvale.gov.uk/jlp/

[2] www.gov.uk/guidance/biodiversity-net-gain

The assessment of sites' BNG potential considers two types of site:

- Non-allocated sites/typology testing (six sites)
  - Small residential (4-9 dwellings) - brownfield
  - Small residential (4-9 dwellings) - greenfield
  - Medium residential (25-75 dwellings) - brownfield
  - Medium residential (25-75 dwellings) - greenfield
  - Large residential (150-300 dwellings) - brownfield
  - Large residential (150-300 dwellings) – greenfield
- Joint Local Plan proposed site allocations (eight sites)

Details of all sites are presented in section 3.3

To understand the impact of differing BNG minimum requirements on each site the following information is provided:

i. An estimate of each site's baseline pre-development biodiversity value.
   - Using existing baseline assessments, if available, transferred to the latest statutory metric.
   - If existing assessments are not available, estimated using a consistent method.

ii. An estimate of the number of biodiversity units that might be expected to be delivered on-site as part of development if reasonable measures were applied.
   - Using existing planning application information, if available.
   - Where no such information was available, an appropriate methodology based on indicative concept plans was developed.

iii. An estimate of how many biodiversity units might reasonably be expected to be delivered on-site/off-site if 11-25% BNG were required.

Along with:

iv. Commentary on the potential for sites in the districts to provide biodiversity units for other developments.

Where available, information has been taken from the original BNG metrics, ecological reports or other documents submitted as part of the planning process.

2 Method

2.1 Biodiversity Net Gain Summary

Biodiversity net gain (BNG) is a way of creating and improving natural habitats. BNG makes sure development has a measurably positive impact ('net gain') on biodiversity, compared to what was there before development.

BNG came into force for major development from 12 February 2024 and for small sites from 2 April 2024. There are a small number of development types that are exempt from BNG requirements. This includes householder development and small-scale self and custom build development. Developers must deliver a BNG of at least 10%. This means a development will result in more or better-quality natural habitat than there was before development.

Biodiversity Net Gain is an approach to development, and/or land management that leaves the natural environment in a measurably better state than beforehand

- It uses changes in the extent and quality of habitats as a proxy for nature and compares the habitat found on a site before and after development.
- It does not change existing environmental protections or legal requirements and is not applicable to irreplaceable habitats.
- Mandatory BNG requires use of the latest version of the Biodiversity Metric. The Statutory Biodiversity Metric was published in February 2024.
- The Biodiversity Metric is a habitat-based approach to determining a proxy biodiversity value developed by Natural England.
- The metric uses habitats and 'biodiversity units' as a proxy to describe biodiversity. There are three types of biodiversity units, area habitat units, hedgerow units and watercourse units.
- A minimum of 10% gain is required, calculated using the Biodiversity Metric. LPAs can set higher percentage gain targets. At least 10% gain is required for each type of unit present on a site (habitat, hedgerow and watercourse).
- BNG can be delivered on-site or off-site.

2.2 Key project tasks

1. Produce consistent estimates of the baseline biodiversity value of each site, using the current Biodiversity Metric.
2. Produce consistent estimates of post-development biodiversity value of each typology site.
3. Use the results of the baseline and post-development biodiversity assessments of the typology sites to provide a template for determining likely habitat outcomes at the allocated sites.
4. Use this template to determine potential post-development biodiversity scores for the allocated sites.
5. Use the baseline and post-development data to determine potential biodiversity unit delivery at a range of net gain values from10-25%.
6. Use these values to estimate the biodiversity units available/required across the range of sites at the different levels of net gain.

2.3 Sites included in report

There are two types of sites. Non-allocated sites which have been through the planning process have been used to develop a typology. Proposed Joint Local Plan site allocations have been assessed for their BNG potential. The correspondence between site names and site references is shown in Tables 1 and 2.

2.3.1 Non-allocated sites/typology testing (six sites)

The assessment tests a sample of planning applications that are typical, in terms of existing land use, type of development proposed, constraints, etc., of the type of smaller/non-allocated residential developments that might be expected to come forward in the districts over the plan period. To align with the Joint Local Plan Viability Assessment, which considers several different development typologies, six sites and their associated planning applications are assessed.

Table 1. Typology sites

Site Name	SiteType	Area (ha)	Site Details	Planning application reference
Alma Barn	Small greenfield (9 dwellings)	0.35	Alma Barn Didcot Road Harwell Didcot OX11 6DN	P23/V1024/FUL
Watlington Site C	Medium greenfield (60 dwellings)	4.53	Land between Pyrton Lane and Cuxham Road Watlington (site C)	P19/S1927/O P23/S0433/RM
Ladygrove	Large greenfield (176 dwellings)	14.86	Land at Lady Grove Didcot OX11 9BP	P20/S1577/O & P22/S3532/RM
Millbrook House	Small brownfield (5 dwellings)	0.38	Land at Millbrook House High Street Milton Abingdon OX14 4EL	P23/V1883/FUL
Milton Heights	Medium brownfield (42 dwellings)	2.02	Milton Heights Milton Abingdon OX14 4DR	P23/V2881/FUL
Sutton Courtenay	Large brownfield (195 dwellings)	6.43	Amey Roadstone Ltd Appleford Road Sutton Courtenay Abingdon Oxfordshire OX14 4PP	P14/V2061/RM

2.3.2 Joint Local Plan proposed site allocations (eight sites)

Most of the proposed site allocations in the Joint Local Plan are rolled forward from the existing local plans. A significant number of these sites already have planning permission and therefore do not require assessment. In addition, it is proposed that the employment allocations are not assessed as these sites tend to be existing large campuses or business parks where new/extended buildings will be added in a piecemeal fashion over time and it would not be possible to accurately estimate biodiversity net gain scenarios. Furthermore, some of the smaller allocations can be considered as part of the typology testing and therefore do not require individual assessment. This leaves eight proposed site allocations requiring BNG assessments.

Table 2. Proposed site allocations

Short Site Name	Site Type	Area (ha)	Full Site Name	Site reference
Berinsfield	Proposed Allocation	132	Land at Berinsfield Garden Village	AS1
Grenoble Road	Proposed Allocation	153	Land South of Grenoble Road, Edge of Oxford	AS3
Culham	Proposed Allocation	203	Land adjacent to Culham Science Centre	AS2
Northfield	Proposed Allocation	68	Land at Northfield, Edge of Oxford	AS4
Bayswater Brook	Proposed Allocation	110	Land at Bayswater Book, Edge of Oxford	AS5
NW Grove	Proposed Allocation	28	North West of Grove, Grove	AS8
NW Valley Park	Proposed Allocation	33	North West of Valley Park, Didcot	AS9
Dalton Barracks	Proposed Allocation	145	Land at Dalton Barracks Garden Village, Shippon	AS10

2.4 Data Sources

Table 3. Data sources:

Site boundaries	South Oxfordshire and Vale of White Horse District Councils, August 2024
Proposed site allocation concept plans, site-specific policy requirements, Joint Local Plan green infrastructure requirements	South Oxfordshire and Vale of White Horse District Councils, August 2024
Habitat data	TVERC Habitats Database, May 2024
Aerial photography	ESRI World Imagery August 2024
Linear features	Ordnance Survey 2024
Planning application survey reports and BNG metrics	South Oxfordshire and Vale of White Horse District Councils, August 2024, via planning portal (see reference links)

2.5 Project Assumptions

When developing the data model several assumptions have been made. These were required to ensure consistency between the different sites, allow efficient processing of the available data and to produce a consistent data output. Some apply across all sites; others are only applicable where there is no data available.

Strategic Assumptions

1. The BNG Metric causes an increase in the value of BNG in areas that are within a Local Strategy Area. For consistency the assumption is that the sites are not in such an area and are therefore not affected by the BNG uplift associated with this for either baseline or post-development calculations[3]. Applies to all sites.
2. Similarly, sites that are adjacent to Sites of Special Scientific Interest (SSSI) or Local Wildlife Sites (LWS) could also be treated as strategically significant and would benefit from BNG uplift for areas of green infrastructure in close proximity to these sites[4]. This element has not been implemented to ensure consistency and also as this would apply to only two proposed allocated sites (Grenoble Road & Dalton Barracks) and would require detailed plans on a site-by-site basis.
3. Where site allocation concept plans identify/safeguard areas for highways/railways, these are excluded from the calculation as they are assumed to be unavailable for long-term habitat creation. This affects three of the proposed allocation sites (Grenoble Road, Culham, NW Valley Park).

Assumptions for Baseline calculations

4. Habitat data is taken from the TVERC Habitats Database (2024) where recent survey data is not available. The assumption is that there have been no habitat changes on site since this data was generated. The date when the habitat was determined will vary between sites and may be up to 20 years old. This applies to all proposed allocation sites and one typology site. At one other typology site TVERC data was not suitable and aerial photography interpretation of pre-development images was used.
5. Habitat condition is assumed to be Moderate where this is an option, unless there is information indicating otherwise[5]. This applies in all cases where TVERC data was used.
6. Where hedgerows were not mapped/calculated in a survey report, all linear vegetated features on aerial photos that match to OS linear features are assumed to be native hedgerows, not species rich, and not associated with additional features such as trees or ditches[6]. This applies to all proposed allocation sites and two typology sites (Ladygrove and Sutton Courtenay).
7. Presence of hedgerows was assessed from aerial photography and the condition was assumed to be Moderate.
8. Watercourses are based on their presence in the TVERC habitats database, Ordnance Survey data and aerial photography. This applies to all proposed allocation sites.

[3] Local Strategy Areas – located in an area formally identified as a priority within a local strategy, e.g. Local Nature Recovery Strategy or similar, would benefit from an increase in biodiversity units (uplift) of 15% in BNG Metric
[4] These areas would meet Metric definition of 'location for habitat desirable, but not formally identified' and receive biodiversity uplift of 10%
[5] Habitats in Good condition would have a higher unit score and habitats in Poor condition score less.
[6] Lines of trees, species-rich hedgerows and those with additional features such as would have higher biodiversity scores, non-native hedges would score less. It is not possible to consistently assess this from aerial photographs.

9. Watercourses that appear from OS data and aerial photos to be straight and in an agricultural setting have been assumed to be ditches in Poor condition. This applies to seven of the eight proposed allocation sites.
10. Watercourses appearing to have a more sinuous/natural channel with adjoining woodland or natural vegetation are assumed to be rivers/streams in Moderate condition. This applies to four of the eight proposed allocation sites.
11. Unless already included in a baseline survey, no assessment is made in relation to Individual trees[7]. This applies to all proposed allocation sites.

Assumptions for Post-development calculations

12. Existing high value areas (Priority Habitats) will be retained[8], but not enhanced.
13. Woodland in Green Infrastructure areas will be retained, but not enhanced[9].
14. All other habitats will be lost/created.
15. Where a post-development habitat plan is not available, habitats creation will be based on the areas set out in the site allocation concept plans as Development, Green Infrastructure and Other:
    (a) Development areas are allotted 50% Developed Land, Sealed Surface; 20% Built Linear Features; 30% Vegetated Garden.
    (b) 'Other developed sites' are of two types:
        (i) At Culham and Grenoble Road they are designated as 'Science Park', 'Employment' and 'Transport Hub''. These are calculated on the basis of 90% Developed Land, Sealed Surface; 5% Modified Grassland; 5% Introduced Shrub.
        (ii) At Dalton Barracks it is designated as 'Playing Fields'. This has been assigned 100% Modified Grassland
    (c) Green Infrastructure areas will be based on outputs from the typology sites (see Table 8).
16. Hedgerows are removed if they fall within a Development area and retained if in a Green Infrastructure area, as set out in the site allocation concept plans[10].
17. No enhancement of hedgerows is being carried out, unless included on plan. Applies to all proposed allocation sites.
18. No new hedgerows are being created, unless included on plan. Applies to seven of the eight proposed allocation sites.
19. Watercourses assumed to be retained in full, with no enhancement or degradation/encroachment of watercourse or riparian zone[11]. Applies to all proposed allocation sites.
20. Habitat creation is assumed to have a zero post-development delay and would not incur any delay penalty[12]. Applies to all proposed allocation sites.
21. Unless already included in a post-development plan, no assessment is made in relation to Individual trees in post figures. Applies to all proposed allocation sites.

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[7] Individual trees would provide additional biodiversity area habitat units

[8] Priority habitats qualify as high-distinctiveness habitats and have relatively high biodiversity units scores. BNG Trading rules require retention of these habitats or replacement with the same habitat. Retention of these habitats does not incur the biodiversity unit penalty that would be associated with loss/recreation of the habitat.

[9] Habitat enhancement would improve the condition of the habitat resulting in a greater biodiversity unit score and resulting in a net gain for that habitat parcel.

[10] It is noted the emerging Joint Local Plan Policy NH3 Trees and hedgerows in the landscape requires that development should make every effort to retain, protect and enhance existing trees, woodlands and hedgerows.

[11] Joint Local Plan Policy HP10 – Watercourses requires that development must protect, and where possible enhance, watercourses and their biodiversity.

[12] Habitat creation can incur an additional penalty based on the delay between loss of the previous habitat and the creation of the new habitat. Delays of up to 1 year incur zero penalty. As no information on timing is available a blanket zero delay/penalty is applied.

2.6 Baseline BNG Metric

Habitat data was entered into the current statutory BNG metric for each typology and proposed allocation site to produce their baseline biodiversity scores.

2.6.1 Non-allocated sites/typology testing

Habitats

A new BNG metric was created for each of the six typology sites. Baseline habitat data for the six typology sites was entered into the statutory BNG metric based on the available data:

- Where a statutory BNG metric spreadsheet was available, this was used without changes.
- Where data was available from a previous version of the BNG metric, this was re-entered into the statutory metric. Some minor changes were made to ensure that data fit within the current habitat categories.
- If the original habitat areas were not available, these were calculated to fit with BNG figures previously presented in reports.
- In the original Ladygrove assessment, hedgerows had been entered into the original metric as broadleaved woodland. As this is not compatible with the current guidance, a full recalculation of the baseline habitats based on the TVERC habitat database was carried out and input to the statutory metric.
- At the Sutton Courtenay site only a partial habitat survey was available covering the western section. For the remainder of the site baseline habitat areas were estimated from aerial photos.

Where information on habitat condition was available, it was used in the metric, otherwise all habitats were entered as being in Moderate condition if this was an available option.

Data on Individual Trees was included as presented in the original data sources.

Habitat retention and enhancement was entered into the metric as supplied in the original data sources.

Hedgerows

Where available, information on hedgerow status, condition and length was taken from the original BNG metric or ecological report. The exception to this was at Ladygrove, where the original report had classified

hedges as areas of broadleaved woodland, requiring hedge length to be remeasured from aerial photographs and Ordnance Survey data. At Sutton Courtenay, as the available ecology report did not cover the eastern section, hedges there were also measured from aerials and OS data.

Hedgerow retention and enhancement was entered into the metric as supplied in the original data sources where available.

Watercourses

No sites had watercourses included in the BNG assessments and from aerial photographs and Ordnance Survey data there did not appear to be any crossing the sites. At Ladygrove, ditches adjacent to the boundaries may be close enough to warrant inclusion as watercourses under current guidance, but as this was not carried out as part of the original survey and given the complexity of river condition assessment it was not practical to do this retroactively. At Sutton Courtenay ditches are mentioned as being outside the site boundary beyond, the distance where they would need to be included for the western section of the site, but appear to be within 10m of the eastern section and would have needed to be assessed under current guidance.

Table 4. Typology sites data sources:

Site	Type	Area (ha)	Data Source	BNG elements	Original Metric used
Alma Barn	Small greenfield	0.35	Biodiversity Net Gain Design Stage Report	Habitat, Hedgerow	Statutory (re-entered)
Watlington Site C	Medium greenfield	4.53	BNG metric spreadsheet	Habitat, Hedgerow	3.0 (recalculated in statutory)
Ladygrove	Large greenfield	14.86	Biodiversity Impact Calculator Assessment	Habitat, Hedgerow	2.0 (Recalculated using TVERC data due to issues in original metric)
Millbrook House	Small brownfield	0.38	Biodiversity Net Gain Report	Habitat, Hedgerow	4.0 (recalculated in statutory)
Milton Heights	Medium brownfield	2.02	BNG metric spreadsheet	Habitat, Hedgerow	Statutory
Sutton Courtenay	Large brownfield	6.43	Western part of site - Ecological appraisal, aerial photos for east	Habitat, Hedgerow	None – new estimates made

2.6.2 Joint Local Plan proposed site allocations

Habitats

None of the proposed site allocations had habitat surveys or BNG reports available. All sites' baseline habitats were calculated by clipping TVERC's habitat database layer to the site boundary. All habitats were assumed to be in Moderate condition where this was an option.

No Assessments were made on proposed site allocations in relation to Individual Trees already present on site.

Hedgerows

From aerial photos, all sites appeared to have hedgerows or similar features within or along their boundary. Baseline hedgerows were measured where vegetated features visible on aerial photographs are coincident with 'Obstructing' linear features from Ordnance Survey data. All were assumed to be 'Native hedges' in Moderate condition without additional features such as trees or ditches associated.

Watercourses

All sites had watercourses within the site or along the boundaries. Watercourses were measured where they appeared in OS data as linear or area features or in the TVERC habitat database. Where other information was not available, straight watercourses in agricultural settings were assumed to be ditches in Poor condition and more sinuous watercourses with trees or other apparently natural vegetation were assumed to be rivers/streams in Moderate condition.

2.7 Post-development BNG Metric

2.7.1 Non-allocated sites/typology testing

Post-development data for the six sites was entered into the statutory BNG metric based on the available data:

- Where a statutory BNG metric spreadsheet was available, this was used without changes.
- Where data was available from a previous version of the BNG metric, this was re-entered to the statutory metric. Some minor changes were made to ensure that data fitted to the habitat categories used in the statutory metric

- If original habitat areas were not available, these were calculated to ensure consistency with BNG figures presented in reports.
- For Sutton Courtenay, figures for post-intervention habitats were not available and an estimate of 80% development was made, based on plans and aerial photographs. The area of scrub on the boundary appears to be retained and the remaining undeveloped portion was calculated on the basis of the process used for proposed site allocations.
- Data on Individual Trees was included as presented in the original data sources.

Table 5. Typology site data sources

Site Name	Site Type	Area (ha)	Data Source
Alma House	Small greenfield	0.35	Biodiversity Net Gain Design Stage Report
Watlington Site C	Medium greenfield	4.53	BNG metric spreadsheet
Ladygrove	Large greenfield	14.86	Biodiversity Impact Calculator Assessment
Millbrook	Small brownfield	0.38	Biodiversity Net Gain Report
Milton Heights	Medium brownfield	2.02	BNG metric spreadsheet
Sutton Courtenay	Large brownfield	6.43	Estimated from site plans

Using typology site data for allocated sites

Five of six the allocated sites are greenfield sites (Dalton Barracks is mixed with existing residential development on a third of the site) and range in size from 28 to 203 hectares. Ladygrove was selected as the best typology site to use for the allocated sites model. Using the current statutory metric this shows a 14% biodiversity net gain in habitat but a net loss of 12% in terms of hedgerows.

2.7.2 Joint Local Plan proposed site allocations

Post-development data for allocated sites was based on layers supplied showing the areas provisionally allocated to Development, Green Infrastructure, Highways and Other. These may not represent the final developments and are approximations but represent the best information currently available.

Table 6. Allocated sites breakdown

Site	Total Area (ha)	Development area	Green Infrastructure area	Other area
Berinsfield	132	70	62	
Grenoble Road	153	70	60	23
Culham	203	100	90	13
Northfield	68	43	25	
Bayswater Brook	110	33.8	68.8	
NW Grove	28	18	10	
NW Valley Park	30	16	14	
Dalton Barracks	145	86	56.5	2.5

Habitat retention:

- Existing high distinctiveness habitats, e.g. Ponds (priority habitat), are assumed to be retained as is with no enhancement
- Existing woodland in Green Infrastructure areas is assumed to be retained with no enhancement
- All other existing habitats are assumed to be lost
- All other post-development habitats are assumed to need to be created with a zero (less than 1 year) delay from loss to creation

Post-development habitats:

Post-development habitats were based on the allocations in Table 6 and subdivided based on figures supplied by South Oxfordshire/Vale of White Horse or on the habitat breakdown derived from the typology sites.

Development areas

Development areas are predominantly residential and were allocated post-development habitats, based on guidance from South Oxfordshire/Vale of White Horse, in the following proportions:

Table 7. Development allocation

Post-development habitat	Proportion of Development area
Built linear features	19.75%
Urban - Vegetated garden	30%
Urban - Developed land; sealed surface	50%
Urban - Artificial unvegetated, unsealed surface	0.25%

Green Infrastructure

Habitat allocations for Green Infrastructure areas (where existing habitats were not being retained) were based on the breakdown of post-development habitats for Ladygrove, as the typology site which was most appropriate for these sites (Large Greenfield). Figures were adjusted to the nearest 5%, except for the 0.25% allocation for Ponds (non-priority), which was subtracted from that the allocation for modified grassland.

Table 8. Green Infrastructure allocation

Post-development habitat	% of post habitat at Ladygrove	Metric allocation
Grassland - Other neutral grassland	56.6%	55%
Grassland - Modified grassland	36.1%	34.75%
Heathland and shrub - Mixed scrub	3.7%	5%
Woodland and forest - Other woodland; broadleaved	3.3%	5%
Lakes - Ponds (non-priority habitat)	0.30%	0.25%

Highways and Other areas

Highway and Other allocations were determined, based on their planned use, as described in the supplied GIS layers:

Table 9. Other allocations

Site	Type	Use	Breakdown
Grenoble Road	Highway Other	Transport Hub Science Park	Both: 90% Sealed Surface, 5% Modified Grassland, 5 % Introduced Shrub
Culham	Other Highway	Science Park Railway reservation	90% Sealed Surface, 5% Modified Grassland, 5% Introduced Shrub Removed from calculation
NW Valley Park	Highway	Road reservation	Removed from calculation
Dalton Barracks	Other	Playing fields	100% Modified Grassland

No Assessments were made on allocated sites in relation to Individual Trees post-development.

Hedgerows

- All hedgerows within development areas are assumed to be removed.
- All hedgerows outside development areas are assumed to be retained.
- Assumed to be no enhancement of retained hedgerows/
- Unless otherwise indicated no new hedgerows are assumed to be planted, except at Berinsfield where a plan of retained and indicative new hedgerows is available.

Watercourses

All watercourses are assumed to be retained in the same condition, with no encroachment into the watercourse or the riparian zone.

2.8 BNG Percentage calculations

The statutory BNG metric compares the baseline and post-development biodiversity units for the categories of area habitats, hedgerows and watercourses and indicates whether the plan for the site meets a minimum net gain in biodiversity units of 10% for each category.

Part of the project is to assess whether it is possible to use a net gain requirement higher than the statutory mandate of 10%. Figures have been calculated to show whether there would be a surplus or deficit of biodiversity units for each category if the net gain requirement was set at levels between 10 and 25% at 1% increments.

2.9 Limitations

Although this project has made use of the best available data, as a desk-based exercise, this process is not a substitute for full Biodiversity Net Gain assessments being made on any of the sites studied. Habitat data used to make calculations may be based on aerial photography interpretation, Ordnance Survey data or other third-party information rather than field survey. Even for field-surveyed data, land use and/or habitat changes may have taken place in the period since the survey took place. All sites would require field habitat survey and condition assessment prior to development.

Even with a net gain of 10% or more in terms of area habitat units many of the sites do not pass BNG requirements due to the way that hedgerow and watercourse data has been processed. In some cases, the BNG assessment may not meet requirements due to trading rule violations, which have not been investigated as part of this project.

3 Outputs

The key outputs for the project are:

i. An estimate of each site's baseline pre-development biodiversity value.

ii. An estimate of the number of biodiversity units that might be expected to be delivered on-site as part of development if reasonable measures were applied.

iii. An estimate of how many biodiversity units might reasonably be expected to be delivered on-site/off-site if 11-25% BNG were required.

Along with:

iv. Commentary on the potential for sites in the districts to provide biodiversity units for other developments.

3.1 Estimate of baseline pre-development biodiversity value.

3.1.1 Non-allocated sites/typology testing

Typology site baseline areas and scores

Table 10. Baseline BNG Units for typology sites

Site Name	Type	Area (ha)	Baseline area habitat units	Area habitat units/hectare	Baseline hedgerow Units	Baseline watercourse Units
Alma Barn	Small greenfield	0.35	0.7	0.5	Not assessed	0
Watlington Site C	Medium greenfield	4.53	9.18	2.0	6.0	0
Ladygrove	Large greenfield	14.86	51.0	3.4	24.8	Not assessed
Millbrook House	Small brownfield	0.38	0.5	1.3	0.29	0
Milton Heights	Medium brownfield	2.02	9.3	4.6	0	0
Sutton Courtenay	Large brownfield	6.43	3.2	0.5	3.6	Not assessed

No assessments have been carried out for watercourses at any of these sites. At Ladygrove and Sutton Courtenay there appear from Ordnance Survey data to be watercourses within 10m of the site boundary that would need to

be assessed under current guidance and are indicated as not assessed. All other sites appear not to have watercourses within 10m and have zero score.

The average area habitat unit score of each site, in terms of area habitat units/hectare varies from 0.5 (Sutton Courtenay) to 4.6 (Milton Heights) with an average site score of 2.6 area habitat units per hectare.

3.1.2 Joint Local Plan proposed site allocations

Proposed Allocation sites baseline habitat, hedgerow and watercourse units

Table 11. Baseline BNG Units for allocated sites

Site Name	Area (ha)	Baseline area habitat units	Area habitat units/hectare	Baseline Hedgerow Units	Baseline Watercourse Units
Berinsfield	132	273.4	2.1	24	1.2
Grenoble Road	153	392.4	2.6	24	9.9
Culham	203	471.2	2.3	28	6.6
Northfield	68	134.8	2.0	28.4	8.1
Bayswater Brook	110	268.2	2.4	30.8	27.2
NW Grove	28	141.4	5.1	10.8	0.8
NW Valley Park	33	60.2	1.8	10.0	3.0
Dalton Barracks	145	653.6	4.5	6.0	3.0

The average area habitat unit score of each site, in terms of area habitat units/hectare varies from 1.8 (NW Valley Park) to 5.1 (NW Grove) with an average site score between sites of 2.8 area habitat units per hectare.

Site	Area (ha)	Baseline Area habitat units	Baseline Area habitat units/ha
Berinsfield	153	392.4	2.6
Grenoble Road	203	471.2	2.3
Culham	68	134.8	2.0
Northfield	110	268.2	2.4
Bayswater Brook	28	141.4	5.1
NW Grove	33	60.2	1.8
NW Valley Park	145	653.6	4.5
All sites	**872**	**2395.2**	**2.7**

3.2 Estimates of post-development biodiversity value.

Tables show the scores at the different sites, baseline and post-development, for habitats, hedgerows and watercourses, where assessed, in terms of BNG units and percentage net gain.

3.2.1 Non-allocated sites/typology testing

Three sites (Millbrook House, Ladygrove, Sutton Courtenay) show a net gain in area habitat units of over 10%, two sites (Watlington Site C, Milton Heights) a gain of less than 10% and one site (Alma Barn) a net loss of area habitat units.

Ladygrove, which was used as a template for determining potential habitats in the proposed site allocations, has a net gain in area habitat units of 14.5%.

Table 12. Post-development area habitat units for typology sites

Site Name	Site Type	Area (ha)	Post Area habitat units	Units/ ha	Area habitat unit Gain	Habitat % Gain
Alma Barn	Small greenfield	0.35	0.25	0.7	-0.45	-64.3%
Watlington Site C	Medium greenfield	4.53	9.36	2.0	+0.18	+2%
Ladygrove	Large greenfield	14.86	58.39	3.9	+7.39	+14.5%
Millbrook House	Small brownfield	0.38	0.65	1.3	+0.15	+30%
Milton Heights	Medium brownfield	2.02	10.19	5.0	+0.89	+9.6%
Sutton Courtenay	Large brownfield	6.43	9.51	1.5	+6.31	+197%

Watlington Site C, Millbrook House and Milton House showed a net gain in hedgerow units, Ladygrove and Sutton Courtenay a net loss and Alma Barn no change.

Table 13. Post-development hedgerow Units for typology sites

Site Name	Site Type	Area (ha)	Post Hedgerow Units	Hedgerow Unit Gain	Hedgerow % Gain
Alma Barn	Small greenfield	0.35	NA	0	0
Watlington Site C	Medium greenfield	4.53	8.08	+2.08	+34.7%
Ladygrove	Large greenfield	14.86	21.88	-2.92	-11.8%
Millbrook House	Small brownfield	0.38	0.59	+0.3	+103.4%
Milton Heights	Medium brownfield	2.02	1.12	+1.12	NA
Sutton Courtenay	Large brownfield	6.43	1.8	-1.8	-50%

3.2.2 Joint Local Plan proposed site allocations

Based on the post-development habitat breakdown derived from the typology sites, five sites (Berinsfield, Culham, Northfield, Bayswater Brook, NW Valley Park) show a net gain in terms of area habitat units of over 10%, one site (Grenoble Road) a gain of less than 10% and two sites (NW Grove, Dalton Barracks) a net loss of area habitat units.

Due to the assumption of no new hedgerow planting without a concept plan, only Berinsfield shows a gain in hedgerow units, all others are no change or net loss for hedgerow units.

Due to the assumption of no change to watercourses, all sites show no change for watercourse units.

Table 14. Post-development BNG Units for allocated sites

Site	Area (ha)	Post Area habitat units	Area habitat unit gain	Habitat % Gain	Post Hedgerow Units	Hedgerow Unit Gain	Hedge % Gain
Berinsfield	132	389.4	116.0	+42.4%	30.7	6.7	+28%
Grenoble Road	153	398.6	6.2	+1.6%	17.4	-6.6	-27.3%
Culham	203	594.4	123.2	+26.2%	13.6	-14.4	-51.4%
Northfield	68	161.4	26.57	+19.7%	19.4	-9	-31.7%
Bayswater Brook	110	414.6	146.4	+54.6%	28.6	-2.3	-7%
NW Grove	28	69.2	-72.2	-51.1%	10.8	0	0
NW Valley Park	33	86.1	25.9	+43.1%	9.2	-0.8	-8%
Dalton Barracks	145	368.14	-285.5	-43.7%	6	0	0

Three of the sites show potential net gains for area habitat units well beyond the level assessed in this report, Berinsfield, Bayswater Brook and NW Valley Park all show potential gains in area habitat units of over 40%.

The two sites with deficits, NW Grove and Dalton Barrack show reduction in biodiversity of over 40%.

3.2.3 Comparison of baseline and post-development habitat scores

Post-development area habitat units/ha are between 2.4 and 2.9 for seven sites with one higher at 3.8.

Table 15. BNG comparison for allocated sites

Site	Area (ha)	Baseline Area habitat units	Baseline Area habitat units/ha	Post Area habitat units	Post Area habitat units/ha	Net change (units)	Net change (units/ha)
Berinsfield	153	392.4	2.6	398.6	2.6	+6.2	0
Grenoble Road	203	471.2	2.3	594.4	2.9	+123.2	+0.6
Culham	*68*	134.8	2.0	161.4	2.4	+26.6	+0.4
Northfield	110	268.2	2.4	414.6	3.8	+196.4	+1.4
Bayswater Brook	28	141.4	5.1	69.2	2.5	-72.2	-2.6
NW Grove	33	60.2	1.8	86.1	2.6	+25.9	+0.8
NW Valley Park	145	653.6	4.5	368.1	2.5	-285.5	-2.0
All sites	**872**	**2395.2**	**2.7**	**2481.8**	**2.8**	**+86.4**	**+0.1**

3.3 Post-development biodiversity delivery estimates for different BNG percentage requirements

3.3.1 Estimate of how many biodiversity units might reasonably be expected to be delivered on-site/off-site if 11-25% BNG were required

The surplus (black) or deficit (red) in area habitat and hedgerow units for each site is shown for each percentage point from 10 to 25. A surplus indicates the number of biodiversity units beyond requirements that would be delivered under the proposed post-development site breakdown and a deficit indicates the number of biodiversity units that would need to be delivered to reach the required BNG percentage.

Deficit units may be deliverable on site with a modified plan for the site or would need to be delivered off-site. Surplus units could be available to offset losses at other sites. Note that delivery of units off-site can incur a percentage penalty if the location of the donor site is outside of the Local Planning Authority or

National Character area relative to the recipient site. In this case the number of biodiversity units required off site may be higher[13].

3.3.2 Non-allocated sites/typology testing

Area Habitats

Using the data available from planning documents and reports, two sites, Millbrook House and Sutton Courtenay, meet a percentage gain requirement in area habitat units for all values up to 25%.

One site, Ladygrove, meets the percentage gain requirements for values up to 14% but fails to meet the requirements for 15% and beyond.

The other three sites do not meet the minimum 10% net gain that would be required under current legislation.

Positive numbers indicate that a surplus of area habitat units would be generated and could potentially be used off-site. Negative numbers indicate that additional biodiversity units would need to be delivered either on- or off-site to meet a biodiversity score uplift at that level.

Table 16. BNG area habitat unit surplus/deficit at gains from 10-25% on typology sites

	Alma Barn	Watlington Site C	Ladygrove	Millbrook House	Milton Heights	Sutton Courtenay
BNG habitat uplift %	SG	MG	LG	SB	MB	LB
10%	-0.52	-0.738	2.29	0.1	-0.04	1.67
11%	-0.527	-0.8298	1.78	0.095	-0.133	1.638
12%	-0.534	-0.9216	1.27	0.09	-0.226	1.606
13%	-0.541	-1.0134	0.76	0.085	-0.319	1.574
14%	-0.548	-1.1052	0.25	0.08	-0.412	1.542
15%	-0.555	-1.197	-0.26	0.075	-0.505	1.51
16%	-0.562	-1.2888	-0.77	0.07	-0.598	1.478
17%	-0.569	-1.3806	-1.28	0.065	-0.691	1.446
18%	-0.576	-1.4724	-1.79	0.06	-0.784	1.414
19%	-0.583	-1.5642	-2.3	0.055	-0.877	1.382
20%	-0.59	-1.656	-2.81	0.05	-0.97	1.35

[13] The Statutory Biodiversity Metric (July 2024) p35 – Spatial Risk

	Alma Barn	Watlington Site C	Ladygrove	Millbrook House	Milton Heights	Sutton Courtenay
21%	-0.597	-1.7478	-3.32	0.045	-1.063	1.318
22%	-0.604	-1.8396	-3.83	0.04	-1.156	1.286
23%	-0.611	-1.9314	-4.34	0.035	-1.249	1.254
24%	-0.618	-2.0232	-4.85	0.03	-1.342	1.222
25%	-0.625	-2.115	-5.36	0.025	-1.435	1.19

Hedgerows

Five of the six sites have data available for entry into the hedgerow metric.

Three meet a percentage gain requirement in hedgerow units for all values up to 25% gain and the other two fail to deliver the minimum 10% requirement.

Table 17. BNG hedgerow unit surplus/deficit at gains from 10-25% on typology sites

	Alma Barn	Watlington Site C	Ladygrove	Millbrook House	Milton Heights	Sutton Courtenay
BNG hedgerow uplift %	SG	MG	LG	SB	MB	LB
10%	'NA'	1.48	-5.4	0.271	1.12	-2.16
11%	'NA'	1.42	-5.648	0.2681	1.12	-2.196
12%	'NA'	1.36	-5.896	0.2652	1.12	-2.232
13%	'NA'	1.3	-6.144	0.2623	1.12	-2.268
14%	'NA'	1.24	-6.392	0.2594	1.12	-2.304
15%	'NA'	1.18	-6.64	0.2565	1.12	-2.34
16%	'NA'	1.12	-6.888	0.2536	1.12	-2.376
17%	'NA'	1.06	-7.136	0.2507	1.12	-2.412
18%	'NA'	1	-7.384	0.2478	1.12	-2.448
19%	'NA'	0.94	-7.632	0.2449	1.12	-2.484
20%	'NA'	0.88	-7.88	0.242	1.12	-2.52
21%	'NA'	0.82	-8.128	0.2391	1.12	-2.556
22%	'NA'	0.76	-8.376	0.2362	1.12	-2.592
23%	'NA'	0.7	-8.624	0.2333	1.12	-2.628
24%	'NA'	0.64	-8.872	0.2304	1.12	-2.664
25%	'NA'	0.58	-9.12	0.2275	1.12	-2.7

Watercourses

No assessments of watercourses were carried out on these sites.

3.3.3 Joint Local Plan proposed site allocations

Area Habitats

Using data derived from the typology sites model, four sites, Berinsfield, Culham, Bayswater Brook and NW Valley Park, meet a percentage gain requirement in area habitat units for all values up to 25%.

Northfield meets a percentage gain requirement in area habitat units of up to 19% but fails to meet the requirement at 20% gain and beyond.

Three sites, Grenoble Road, NW Grove and Dalton Barracks, fail to deliver 10% gain in area habitat units.

Table 18. BNG area habitat unit surplus/deficit at gains from 10-25% on allocated sites

BNG habitat uplift %	Berinsfield	Grenoble Road	Culham	Northfield	Bayswater Brook	NW Grove	NW Valley Park	Dalton Barracks
10%	88.68	-33.07	76.08	13.09	119.56	-86.37	19.92	-350.86
11%	85.94	-36.99	71.37	11.74	116.88	-87.78	19.32	-357.40
12%	83.21	-40.92	66.66	10.39	114.19	-89.20	18.72	-363.94
13%	80.47	-44.84	61.94	9.05	111.51	-90.61	18.11	-370.47
14%	77.74	-48.77	57.23	7.70	108.83	-92.03	17.51	-377.01
15%	75.01	-52.69	52.52	6.35	106.15	-93.44	16.91	-383.55
16%	72.27	-56.62	47.81	5.00	103.47	-94.85	16.31	-390.08
17%	69.54	-60.54	43.10	3.65	100.79	-96.27	15.71	-396.6
18%	66.80	-64.46	38.38	2.31	98.10	-97.68	15.1	-403.16
19%	64.07	-68.38	33.67	0.96	95.42	-99.10	14.5	-409.7
20%	61.34	-72.31	28.96	-0.39	92.74	-100.51	13.9	-416.23
21%	58.60	-76.24	24.25	-1.74	90.06	-101.92	13.30	-422.76
22%	55.87	-80.16	19.54	-3.09	87.37	-103.34	12.7	-429.3
23%	53.13	-84.08	14.82	-4.43	84.69	-104.75	12.09	-435.84
24%	50.40	-88.01	10.11	-5.78	82.01	-106.17	11.49	-442.37
25%	47.67	-91.93	5.4	-7.13	79.33	-107.58	10.89	-448.91

Hedgerows

As new hedgerows are not assumed to be created and existing hedgerows are assumed to be lost outside of Green Infrastructure areas, these figures show a reduction in hedgerow units for the other seven sites. The exception is at Berinsfield where hedgerows were included in a post-development plan and could be entered into the metric.

Table 19. BNG hedgerow unit surplus/deficit at gains from 10-25% on allocated sites

BNG habitat uplift %	Berinsfield	Grenoble Road	Culham	Northfield	Bayswater Brook	NW Grove	NW Valley Park	Dalton Barracks
10%	4.32	-8.96	-17.2	-11.84	-5.33	-1.08	-1.8	-0.6
11%	4.08	-9.2	-17.48	-12.12	-5.64	-1.19	-1.9	-0.66
12%	3.84	-9.44	-17.76	-12.41	-5.95	-1.30	-2	-0.72
13%	3.6	-9.68	-18.04	-12.69	-6.25	-1.40	-2.1	-0.78
14%	3.36	-9.92	-18.32	-12.98	-6.56	-1.51	-2.2	-0.84
15%	3.12	-10.16	-18.6	-13.26	-6.87	-1.62	-2.3	-0.9
16%	2.88	-10.4	-18.88	-13.54	-7.18	-1.73	-2.4	-0.96
17%	2.64	-10.64	-19.16	-13.83	-7.49	-1.84	-2.5	-1.02
18%	2.4	-10.88	-19.44	-14.11	-7.79	-1.94	-2.6	-1.08
19%	2.16	-11.12	-19.72	-14.40	-8.10	-2.05	-2.7	-1.14
20%	1.92	-11.36	-20.0	-14.68	-8.41	-2.16	-2.8	-1.2
21%	1.68	-11.6	-20.28	-14.96	-8.72	-2.27	-2.9	-1.26
22%	1.44	-11.84	-20.56	-15.25	-9.03	-2.38	-3	-1.32
23%	1.2	-12.08	-20.84	-15.53	-9.33	-2.48	-3.1	-1.38
24%	0.96	-12.32	-21.12	-15.82	-9.64	-2.59	-3.2	-1.44
25%	0.72	-12.56	-21.4	-16.1	-9.95	-2.7	-3.3	-1.5

Hedgerow creation can yield 0.3 hedgerow units per kilometre, assuming the creation of native hedgerow in Moderate condition. The length of this type of hedgerow that would need to be planted on-site to meet requirements at different percentage levels is shown below for each site (Berinsfield is negative as it already meets the requirements and hence shows an oversupply of hedgerow length).

Table 20. Length of hedgerow (km) required onsite to meet % BNG requirements

	Berinsfield	Grenoble Road	Culham	Northfield	Bayswater Brook	NW Grove	NW Valley Park	Dalton Barracks
10%	*-1.29*	2.67	5.13	3.53	1.59	0.32	0.54	0.18
15%	*-0.93*	3.03	5.55	3.96	2.05	0.48	0.69	0.27
20%	*-0.57*	3.39	5.97	4.38	2.51	0.64	0.84	0.36
25%	*-0.21*	3.75	6.39	4.81	2.97	0.81	0.99	0.45

Watercourses

As there are no plans for watercourses post-development, these figures are all negative.

Table 21. BNG watercourse unit deficit at gains from 10-25% on allocated sites

	Berinsfield	Grenoble Road	Culham	Northfield	Bayswater Brook	NW Grove	NW Valley Park	Dalton Barracks
BNG uplift % (watercourse)								
10%	-0.12	-0.99	-1.32	-0.81	-4.52	-0.08	-0.3	-3.6
11%	-0.132	-1.089	-1.452	-0.891	-4.972	-0.088	-0.33	-3.66
12%	-0.144	-1.188	-1.584	-0.972	-5.424	-0.096	-0.36	-3.72
13%	-0.156	-1.287	-1.716	-1.053	-5.876	-0.104	-0.39	-3.78
14%	-0.168	-1.386	-1.848	-1.134	-6.328	-0.112	-0.42	-3.84
15%	-0.18	-1.485	-1.98	-1.215	-6.78	-0.12	-0.45	-3.9
16%	-0.192	-1.584	-2.112	-1.296	-7.232	-0.128	-0.48	-3.96
17%	-0.204	-1.683	-2.244	-1.377	-7.684	-0.136	-0.51	-4.02
18%	-0.216	-1.782	-2.376	-1.458	-8.136	-0.144	-0.54	-4.08
19%	-0.228	-1.881	-2.508	-1.539	-8.588	-0.152	-0.57	-4.14
20%	-0.24	-1.98	-2.64	-1.62	-9.04	-0.16	-0.6	-4.2
21%	-0.252	-2.079	-2.772	-1.701	-9.492	-0.168	-0.63	-4.26
22%	-0.264	-2.178	-2.904	-1.782	-9.944	-0.176	-0.66	-4.32
23%	-0.276	-2.277	-3.036	-1.863	-10.396	-0.184	-0.69	-4.38
24%	-0.288	-2.376	-3.168	-1.944	-10.848	-0.192	-0.72	-4.44
25%	-0.3	-2.475	-3.3	-2.025	-11.3	-0.2	-0.75	-4.5

Watercourse units can be generated by enhancement of existing watercourses, either on- or off-site. Ditches are present on most of the sites, all are assumed to be in Poor condition. Enhancement of ditches from Poor to Moderate condition on-site could yield over three watercourse units per kilometre according to the BNG metric.

Table 22. Length of ditch enhancement (km) required onsite to meet % BNG requirements[14]

	Berinsfield	Grenoble Road	Culham	Northfield	Bayswater Brook	NW Grove	NW Valley Park	Dalton Barracks
10%	0.04	0.33	0.44	0.27	1.51	0.03	0.10	1.20
15%	0.06	0.50	0.66	0.41	2.26	0.04	0.15	1.30
20%	0.08	0.66	0.88	0.54	3.01	0.05	0.20	1.40
25%	0.10	0.83	1.10	0.68	3.77	0.07	0.25	1.50

[14] These figures use an estimate of 3 watercourse units/km

These figures may not be wholly applicable on-site, as there have not been any ditches assessed as being present at two of the sites (Culham, Dalton Barracks), and the requirements may go beyond the available ditch resource on site at others (such as Bayswater Brook). There may be opportunities for river or stream enhancement at some sites, this would need to be scored differently. Ditch condition of Poor is an assumption, if field survey indicated that any of the ditches were already in Moderate condition, they could not be enhanced in this way and would reduce the ditch resource available for enhancement. Some degradation of watercourses may take place in development areas which would require additional enhancement measures to be able to meet net gain targets.

3.4 Potential for sites in the districts to provide biodiversity units for other developments.

3.4.1 Non-allocated sites/typology testing

Area habitat units

Three of the six typology sites provide small surpluses of biodiversity area habitat units beyond the 10% statutory requirement for Biodiversity Net Gain which could be used to provide units for other developments. One retains the surplus up to 14% and two still have a net gain up to 25%. One other site comes close to the 10% requirement (9.6%) while another has a lower gain of 2%. The sixth site has a net loss in area habitat units. Across all six sites there is an overall surplus of 7 units at 10% net gain and this surplus drops below zero at a net gain of 20%.

Hedgerow Units

Three sites have surplus hedgerow units at 10% net gain and remain in surplus at a 25% gain. The losses at two other sites at 10% are higher than these gains. Overall, the typology sites have a deficit of 4.7 hedgerow units using the current statutory metric of 10%. This would equate to a requirement to create a total of at least 1.4km of native hedgerow off-site to bring these sites collectively into line if under consideration with the current legislation. This would rise to 3km of native hedgerow at a 25% gain level.

Watercourse Units

No assessment of watercourse units was carried out for the typology sites.

3.4.2 Joint Local Plan proposed site allocations

Area habitat units

Five of the eight typology sites provide surpluses of biodiversity area habitat units beyond the 10% statutory requirement for Biodiversity Net Gain which could be used to provide units for other developments. Four of these retain an area habitat unit surplus beyond a net gain level of 25% and the other retains a surplus up to 19%. In terms of area habitat units these five sites would collectively deliver a surplus of 317 area habitat units at a gain level of 10%. This surplus falls to 136 area habitat units at a gain level of 25%.

One other site has a lower habitat gain of 1.6%, which is below statutory requirements. The other two sites have losses in terms of area habitat units, falling to 49% and 57% of baseline values.

Hedgerow Units

As only one site (Berinsfield) has a concept plan that includes hedgerows, this is the only site for which the potential to deliver hedgerow units can be assessed. Berinsfield would deliver a surplus of 4.3 hedgerow units at 10% net gain and 0.7 units at 25%

Most of the other sites would show losses of hedgerows in the development areas, two would show no change. This would result in a loss or no change in hedgerow units and therefore fall below 10% net gain. On these sites the length (in kilometres) of native hedges that would need to be planted to meet each gain target has been calculated. It may be possible on some sites to plant more hedges than required in which case surplus units could be delivered for use on other sites. If it was not possible to plant this length of hedge, it would be necessary to acquire hedgerow units from other sites to meet BNG requirements.

Watercourse Units

No post-development concept plans for watercourses were available. All sites were scored as no change for watercourse units and fail to meet 10% gain requirements. Distances of ditch enhancement that would meet each gain requirements were calculated, but it may not be feasible to deliver this level of enhancement on site, in which case watercourse units would need to be delivered offsite. Conversely it may be possible to deliver higher levels of enhancement which could deliver surplus units from some sites for use elsewhere.

3.4.3 Site summaries

For each site and BNG levels of 10%, 15%, 20% and 25% the surplus/deficit for area habitat, hedgerow and watercourse units is shown, along with lengths of native hedgerow that would need to be planted and length of ditch that would need to be enhanced to overcome hedgerow and watercourse deficits

Table 23. Berinsfield BNG summary

BNG level	Area habitat unit Surplus/Deficit	Hedgerow Unit Surplus/Deficit	Watercourse units deficit	Hedgerow planting (km)	Enhancement of Ditches (km)
10%	88.68	4.32	-0.92	-1.29	0.31
15%	75.01	3.12	-1.38	-0.93	0.46
20%	61.34	1.92	-1.84	-0.57	0.61
25%	47.67	0.72	-2.3	-0.21	0.77

Berinsfield meets 25% BNG requirements for area habitat and hedgerow units. Would require 310m of ditch enhancement to meet 10% BNG watercourse units, which should be achievable on site, but 770m to meet 25% does not appear feasible.

Hedgerow planting figures for Berensfield are negative because the amount of hedgerow on the concept plan goes beyond that required to meet 25% gain. As a result, these figures represent the amount of hedgerow planting that could be used off-site to meet requirements at other sites.

Table 24. Grenoble Road BNG summary

BNG level	Area habitat unit Surplus/Deficit	Hedgerow Unit Surplus/Deficit	Watercourse units deficit	Hedgerow planting (km)	Enhancement of Ditches (km)
10%	-33.07	-8.96	-0.99	2.67	0.33
15%	-52.69	-10.16	-1.485	3.03	0.3
20%	-72.31	-11.36	-1.98	3.39	0.66
25%	-91.93	-12.56	-2.475	3.75	0.83

Grenoble Road would not meet 10% BNG requirements for area habitat units, but this could be achievable on site with some modifications to the post-development habitat breakdown. It would require 2.7km of native hedgerow planting to meet a 10% uplift in hedgerow units, which should be achievable on site. 25% uplift in hedgerow units would require 3.75km of new hedgerow which should be achievable. The site would require 330m of ditch enhancement to meet 10% BNG watercourse unit gain, and 830m to reach 25%, which should be achievable on site.

Table 25. Culham BNG summary

BNG level	Area habitat unit Surplus/Deficit	Hedgerow Unit Surplus/Deficit	Watercourse units deficit	Hedgerow planting (km)	Enhancement of Ditches (km)
10%	76.08	-17.2	-1.32	5.13	0.44
15%	52.52	-18.6	-1.98	5.55	0.66
20%	28.96	-20	-2.64	5.97	0.88
25%	5.4	-21.4	-3.3	6.39	1.1

Culham would meet 25% BNG requirements for area habitat units. It would require 6.4km of native hedgerow planting to meet 25% BNG hedgerow units, which should be achievable on site. 1.1km of ditch enhancement would be required to meet 25% gain in watercourse units and 440m to reach 10%. These would be achievable on site, as the site is bordered by stretches of river and stream rather than ditches which would require more comprehensive river assessments. Ditch enhancements could be delivered off site.

Table 26. Northfield BNG summary

BNG level	Area habitat unit Surplus/Deficit	Hedgerow Unit Surplus/Deficit	Watercourse units deficit	Hedgerow planting (km)	Enhancement of Ditches (km)
10%	13.09	-11.84	-0.81	3.53	0.27
15%	6.35	-13.26	-1.215	3.96	0.41
20%	-0.39	-14.68	-1.62	4.38	0.54
25%	-7.13	-16.1	-2.025	4.81	0.68

Northfield meets BNG requirements for area habitat units of 19%. Minor changes would make 20% easily achievable and 25% could be achievable with more extensive adjustments. It would require 4.8km of native hedgerow planting to meet 25% BNG hedgerow units, which should be achievable on site. It would require 670m of ditch enhancement to meet 25% BNG watercourse units which could be achievable on site.

Table 27. Bayswater Brook BNG summary

BNG level	Area habitat unit Surplus/Deficit	Hedgerow Unit Surplus/Deficit	Watercourse units deficit	Hedgerow planting (km)	Enhancement of Ditches (km)
10%	119.56	-5.33	-4.52	1.59	1.51
15%	106.15	-6.87	-6.78	2.05	2.26
20%	92.74	-8.41	-9.04	2.51	3.01
25%	79.33	-9.95	-11.3	2.97	3.77

Bayswater Brook would meet 25% BNG requirements for area habitat units. It would require 3km of native hedgerow planting to meet 25% BNG hedgerow units, which should be achievable on site. It would require

3.7km of ditch enhancement to meet 25% BNG watercourse units which may not be achievable on site. Some of watercourses are streams rather than ditches and enhancement of these may be possible, but likely to require delivery of watercourse units off-site to achieve 25%. 10% gain in watercourse units would require 1.5km of ditch enhancement which may be achievable on site.

Table 28. NW Grove BNG summary

BNG level	Area habitat unit Surplus/Deficit	Hedgerow Unit Surplus/Deficit	Watercourse units deficit	Hedgerow planting (km)	Enhancement of Ditches (km)
10%	-86.37	-1.08	-0.08	0.32	0.03
15%	-93.44	-1.62	-0.12	0.48	0.04
20%	-100.51	-2.16	-0.16	0.64	0.05
25%	-107.58	-2.7	-0.2	0.81	0.07

NW Grove would not meet 10% BNG requirements for area habitat units, and this is unlikely to be achievable on site due to its high baseline value and relatively small size. 87 area habitat units would need to be delivered to meet 10% net gain. This could be reduced by changing development plans, amending habitat retention criteria or enhancement of existing habitats. It would require 320m of native hedgerow planting to meet 10% BNG hedgerow units and 810m to reach 25%, which should be achievable on site. It would require 30m of ditch enhancement to meet 10% BNG watercourse units and 70m to reach 25% which should be achievable on site.

Table 29. NW Valley Park BNG summary

BNG level	Area habitat unit Surplus/Deficit	Hedgerow Unit Surplus/Deficit	Watercourse units deficit	Hedgerow planting (km)	Enhancement of Ditches (km)
10%	19.92	-1.8	-0.3	0.54	0.1
15%	16.91	-2.3	-0.45	0.69	0.15
20%	13.90	-2.8	-0.6	0.84	0.2
25%	10.89	-3.3	-0.75	0.99	0.25

NW Valley Park would meet 25% BNG requirements for area habitat units. It would require 1km of native hedgerow planting to meet 25% BNG hedgerow units, which could be achievable on site. It would require 250m of ditch enhancement to meet 25% BNGs watercourse units which could be achievable on site.

Table 30. Dalton Barracks BNG summary

BNG level	Area habitat unit Surplus/Deficit	Hedgerow Unit Surplus/Deficit	Watercourse units deficit	Hedgerow planting (km)	Enhancement of Ditches (km)
10%	-350.86	-0.6	-3.6	0.18	1.2
15%	-383.55	-0.9	-3.9	0.27	1.3
20%	-416.23	-1.2	-4.2	0.36	1.4
25%	-448.91	-1.5	-4.5	0.45	1.5

Dalton Barracks would not meet 10% BNG requirements for area habitat units, and unlikely to be achievable on site due to high baseline value. 350 area habitat units would need to be delivered to meet 10% net gain. This could be reduced by changing development plans, amending habitat retention criteria or enhancement of existing habitats. It would require 180m of native hedgerow planting to meet 10% BNG hedgerow units, which should be achievable on site. It would require 1.2km of ditch enhancement to meet 25% BNG watercourse units, which is unlikely to be achievable on site as it appears to be bordered by streams rather than ditches, enhancement of which may be possible, but it is likely to require delivery of watercourse units off-site to achieve 10% gain.

3.4.4 Cross-site summary

Across all eight of the proposed allocation sites there is net gain of 4% in area habitat units, which would require over 150 area habitat units to achieve 10% net gain. However, the overall situation is skewed by 2 sites with high baseline biodiversity values and 4 out of 8 sites would still provide a surplus of area habitat units even with a BNG requirement of 25%.

Gain figures for hedgerows and watercourses are not possible to work out using this model due the absence of post-development plans for them. Hedgerow planting of 13 to 20km across all sites would be required to reach a gain of 10 to 25% and 12 to 27 watercourse units would need to be delivered to meet these targets, some of which should be deliverable on site through enhancement of existing ditches.

4 Discussion

4.1 Potential for increasing net gain

This project uses a model to determine the potential biodiversity net gain for the eight proposed site allocations. This model was derived from planning application information from the large greenfield typology site. Whilst this site is smaller than the proposed site allocations, the proportional breakdown of habitat types in areas of green infrastructure is unlikely to vary significantly with development size. Larger developments tend to have more scope for delivering green infrastructure and so using a smaller development as the basis for the model is precautionary and represents a minimum standard approach. Additionally, the planning application for the large greenfield typology site predates the mandatory requirement for at least 10% biodiversity net gain and uses an earlier version of the BNG metric. As a result, the potential for gains beyond 10% may be underestimated. Again, this is a precautionary approach for the purposes of this assessment and in reality, it may be possible to deliver higher gains Using this model, net gains in area habitat units of 20-25% or beyond should be achievable at six out of the eight proposed allocation sites assessed. If this level of gain were to become the requirement, it should be possible to go beyond the 10% gain used as the basis of the model and design a new model for site development that would achieve the increased requirement. This could also deliver surplus units from some of these that could be used to offset losses at other sites.

On the two sites with baseline scores at higher levels for biodiversity, the model shows reaching on-site gains of 10% or higher is unlikely to be practical. Changes could be made to the development plans at these sites to retain and enhance as much of the higher value habitats as possible reducing the levels of biodiversity loss. This would reduce the amount of BNG units that would need to be secured off-site.

4.1.1 Non-allocated sites/typology testing

Area Habitats

None of these sites were designed with a potential for delivering biodiversity net gain of over 10%, one largely predated any use of BNG. There may have been opportunities to deliver a greater gain whilst delivering the development that were not implemented. The resultant model may therefore underestimate the potential for delivering BNG of up to 25% on other sites.

Overall, there is a net gain of 13.7% across the six typology sites. Three sites (Millbrook House, Ladygrove, Sutton Courtenay) show a net gain in area habitat units of over 10%, two sites (Watlington Site C, Milton Heights) a gain of less than 10% and one site (Alma Barn) a net loss of area habitat units.

Gains are greater for larger over smaller sites, and brownfield sites over greenfield sites. Larger sites appear to have a greater potential for biodiversity delivery but on the sites analysed there is only limited potential for the larger of the typology sites to provide any units for other developments, possibly only at the scale of similar or smaller projects. The percentage net gain appears to be higher at brownfield sites than at greenfield sites, although this is derived from having lower baseline levels, resulting in modest gains having disproportionately high percentage returns.

Hedgerows

Overall, there was a loss of hedgerow units across the six sites (-3.5%), however this is dominated by the two larger sites both having losses. There is a lower level of confidence in the original data at these sites - one was not designed with BNG in mind and the other did not originally deal with hedgerows in a manner that is compliant with the current guidelines.

Watercourses

Watercourses assessments for these sites were not carried out as part of the original BNG processes. As a result, it was not possible to consider watercourses for these sites.

4.1.2 Joint Local Plan proposed site allocations

Using the project's assumptions, the model derived from the typology sites and the site breakdowns provided, a net gain level of 10% across all three categories of biodiversity units would be achieved on-site at four out of eight sites.

Five sites could achieve at least a 10% gain in area habitat unit on-site. This level of gain would not be achieved at three sites. These five sites could also deliver 20% area habitat unit gain with four of them able to deliver more than 25% gain on-site.

All eight sites could deliver a 10% gain in hedgerow units on-site, but a 25% gain appears less likely at two of them. It appears feasible for six sites to deliver a 10% gain in watercourse units on-site. For five of them a 25% watercourse unit gain on-site appears achievable.

Looking at all three categories of BNG unit in combination, 10% gain on-site in each category appears feasible at five sites, whereas achieving 25% gain in all three categories only looks possible at one site.

Table 31. Summary of on-site achievability of net gain levels

Habitat Category	On site gain	Berinsfield	Grenoble Road	Culham	Northfield	Bayswater Brook	NW Grove	NW Valley Park	Dalton Barracks
All	10% feasible	Yes	Yes	No	Yes	Yes	No	Yes	No
All	25% feasible	No	No	No	No	No	No	Yes	No
Area Habitats	10% achieved	Yes	No	Yes	Yes	Yes	No	Yes	No
Area Habitats	25% achieved	Yes	No	Yes	No	Yes	No	Yes	No
Area Habitats	10% feasible	Yes	Yes	Yes	Yes	Yes	No	Yes	No
Area Habitats	25% feasible	Yes	No	Yes	Yes	Yes	No	Yes	No
Hedgerows	10% feasible	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Hedgerows	25% feasible	Yes	Yes	No	No	Yes	Yes	Yes	Yes
Watercourses	10% feasible	Yes	Yes	No	Yes	Yes	Yes	Yes	No
Watercourses	25% feasible	No	Yes	No	Yes	No	Yes	Yes	No

Note that in the table above 2 rows relating to area habitats refer to whether the gain would be achieved using the model and the others are a more subjective judgement as to whether the level of gain could be achieved on site

Area Habitats

Four of the eight proposed allocation sites show the potential for delivery of 25% net gain in area habitat units on site and at this level each would still deliver a surplus of area habitat units. A fifth site comes close to a gain figure of 20%, suggesting that this level of gain would be achieved with minor adjustments and that 25% gain could also be achievable there. One site delivers gain below the statutory minimum of 10% gain on site, but this level of gain might be possible on site with suitable changes to development plans.

On the remaining two sites there are significant losses in area habitat units due to high baseline biodiversity scores. Delivery of 10% net gain on these sites appears to be difficult to achieve without major changes and delivery of area habitat units off site is likely to be necessary. One of these sites would require off-site delivery of over 350 area habitat units to achieve 10% net gain.

Looking at all eight proposed allocation sites together, there is a potential under this model of a collective net gain of 4% in area habitat units, falling short of the statutory minimum of 10% and the Joint Local Plan's proposed site-dependent minimum of 11-25%. There would not be enough surplus area habitat units delivered at the proposed allocation sites that meet net gain requirements to overcome the deficits at the sites that show losses. An off-site delivery of 153 area habitat units would be required to bring the net gain across all sites to 10% and over 512 units to reach 25%.

If the sites with major losses were to be excluded from the calculation the combined net gain would be over 20%.

Normal baseline habitat sites

The six sites (Berinsfield, Grenoble Road, Culham, Northfield, Bayswater Brook, NW Valley Park) that have lower baseline habitat unit per hectare scores (1.8-2.6 units/ha) show potential gains of 6-146 area habitat units, collectively this would amount to a net surplus of 444 area habitat units. Using the statutory net gain figure of 10% this would equate to a surplus of 284 units that could be available for use as off-site units on other projects. This would fall to 204 units at 15%, 124 units at 20% and 44 units at 25% net gain.

High-baseline habitat sites

The two sites that show a net loss in area habitat units, Dalton Barracks and NW Grove, have much higher baseline habitat unit scores per hectare than the others, over 4.5 units/ha, compared to the average of 2.7 units/ha. They would respectively require 351 and 87 area habitat units to be delivered offsite to achieve a net gain of 10% in area habitat units, which would rise to 449 and 108 units at 25% gain.

It is possible that these unit losses could be reduced on a site-by-site basis by reducing the area of higher value habitat that is lost to development, by retaining more higher value habitat within the post-development metric and by enhancement the condition of existing/retained habitats. Reduction of the deficits through any of these changes at high baseline sites by 50% would reduce the number of biodiversity units that would need to be delivered off site. This could bring delivery of 10% net gain within

the range of the area habitat unit surpluses that would be generated under this model across the six lower baseline sites.

Hedgerows

As plans for post-development hedgerows were not available for seven out of eight sites and the assumption of no new hedge planting, all those sites have a negative or zero BNG score for hedgerow units. To meet net gain requirements of between 10-25% a deficit of 42 to 67 hedgerow units would need to be overcome. To meet this a total of 13 to 20km of native hedgerow would need to be planted across the range of sites or the acquisition of an equivalent number of hedgerow units would be needed from external sites.

Watercourses

As all the sites were assumed to have no changes in terms of extent or condition of watercourses, they all have zero gains in terms of watercourse units and consequently fail to meet targets at the 10% level. To meet requirements of between 10 and 25% net gain, a total of 12 to 27 watercourse units would need to be delivered across all sites. How much of this can be delivered on site or would need to be acquired from other sites will depend on the assessments and designs for each site.

4.1.3 Overview

The analysis shows that it is possible to deliver higher levels of BNG than is statutorily mandated on some sites, especially larger or brownfield sites. The study has shown that greenfield site allocations in many cases can deliver 25% gains within the site. There are a few cases where greenfield sites with a high biodiversity value before development where it may be difficult to meet the 10% target onsite, so off-site units will be required if they are to be developed.

Individual trees were not included in the habitat assessments and some additional area habitat unit gains may be made through planting of individual trees within both development and green infrastructure areas, but these gains may be marginal across the scale of the sites.

Hedgerow biodiversity units may be delivered by mandating hedgerow planting at sites, up to 20km would be required to meet a 25% gain across all sites.

Watercourse biodiversity gain will only be achievable through enhancement of existing watercourses, either on or off site. On some sites it may be possible to achieve gain through on-site enhancement or use this to reduce the need for external acquisition of watercourse units.

If it is possible to set different target percentage gains for each biodiversity unit category, habitat, hedgerow and watercourse, this may be desirable if all categories are not achievable at the same level.

5 Conclusion

At most of the proposed allocation sites, biodiversity net gains of 20 -25% appear to be achievable, but on two proposed sites, which already have moderately high baseline biodiversity scores, there would be a net loss in area habitat units. This suggests that on allocated sites where 10% gain is possible on-site then it is likely that 20-25% gain would also be achieved. Where 10% cannot be achieved then these developments will need to use off-site resources to cover their obligations.

Including the sites with a higher baseline biodiversity value, the aggregate net gain across all of the proposed allocation sites did not meet the statutory minimum of 10% across the full suite of allocated sites and with a shortfall of over 150 area habitat units. These units would need to be delivered off-site.

The six sites with a lower existing biodiversity value would each produce a surplus of biodiversity units using this model which might be available to offset losses at other sites.

Hedgerow and watercourse components of BNG will be harder to achieve on some sites at the 20-25% level and may need a greater proportion of biodiversity gain to be delivered off-site.

6 About TVERC

Thames Valley Environmental Records Centre (TVERC) is a not-for-profit organisation covering Berkshire and Oxfordshire. We are run by a partnership and are one of a national network of local records centres. We are a member of the Association of Local Records Centres (ALERC) and the National Biodiversity Network (NBN). Our funding partners include all the local authorities in Oxfordshire & Berkshire plus the Environment Agency. We also work closely with the Berkshire, Buckinghamshire and Oxfordshire Wildlife Trust.

6.1 What we do

We provide our funding partners with annually updated species and sites information and undertake surveys of local wildlife sites. We also carry out data analysis for the monitoring of local authority Local Plans. We provide information to parish councils, local people, conservation bodies, land-owners, students and commercial organisations such as ecological consultants and utilities companies via data searches, data licensing and data exchanges. We provide other services such as ecological surveys, data analysis & presentation and training.

6.2 Our records

We hold over 4.8 million records of flora and fauna in Berkshire and Oxfordshire plus information about Local Wildlife and Geological Sites, NERC Act S41 Habitats of Principal Importance (previously called UK Biodiversity Action Plan (BAP) habitats) and Ecological Networks (Conservation Target Areas and Biodiversity Opportunity Areas). We collect this data from the general public, skilled volunteer /amateur recorders, professionals working for wildlife charities (BBOWT and RSPB), professionals working for government agencies (the Environment Agency & local authorities) and ecological consultants. This information is used: by planning authorities and developers to make informed decisions on the design and location of sustainable development to help farmers, landowners and conservation organisations manage land in the best way to enhance biodiversity by nature, partnerships to direct wildlife conservation work by teachers, students and scientists for education and scientific research.

For more information, please visit our website: www.tverc.org

7 Appendices

7.1 BNG Metric Output Summaries

7.1.1 Typology Sites

Alma Barn BNG metric results

FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	-0.37
	Hedgerow units	0.00
	Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	-53.13%
	Hedgerow units	0.00%
	Watercourse units	0.00%
Trading rules satisfied?	No - Check Trading Summaries ▲	

Milton Heights BNG metric results

FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	0.89
	Hedgerow units	1.12
	Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	9.57%
	Hedgerow units	N/A
	Watercourse units	0.00%
Trading rules satisfied?	No - Check Trading Summaries ▲	

Watlington C BNG metric results

FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	0.18
	Hedgerow units	2.08
	Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	1.92%
	Hedgerow units	34.73%
	Watercourse units	0.00%
Trading rules satisfied?	No - Check Trading Summaries ▲	

Millbrook Heights BNG metric results

FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	0.16
	Hedgerow units	0.59
	Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	31.50%
	Hedgerow units	203.26%
	Watercourse units	0.00%
Trading rules satisfied?	Yes ✓	

Ladygrove BNG metric results

FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	13.08
	Hedgerow units	-2.92
	Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	25.66%
	Hedgerow units	-11.77%
	Watercourse units	0.00%
Trading rules satisfied?	No - Check Trading Summaries ▲	

Sutton Courtenay BNG metric results

FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	6.31
	Hedgerow units	-1.80
	Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	197.14%
	Hedgerow units	-50.00%
	Watercourse units	0.00%
Trading rules satisfied?	No - Check Trading Summaries ▲	

7.1.2 Proposed Allocation Sites

Berinsfield BNG metric results

FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	116.02
	Hedgerow units	6.72
	Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	42.44%
	Hedgerow units	28.01%
	Watercourse units	0.00%
Trading rules satisfied?	Yes ✓	

Culham BNG metric results

FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	123.23
	Hedgerow units	-14.40
	Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	26.15%
	Hedgerow units	-51.43%
	Watercourse units	0.00%
Trading rules satisfied?	No - Check Trading Summaries ▲	

Bayswater Brook BNG metric results

FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	146.38
	Hedgerow units	-2.25
	Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	54.58%
	Hedgerow units	-7.31%
	Watercourse units	0.00%
Trading rules satisfied?	No - Check Trading Summaries ▲	

Northfield BNG metric results

FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	26.57
	Hedgerow units	-9.00
	Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	19.71%
	Hedgerow units	-31.69%
	Watercourse units	0.00%
Trading rules satisfied?	No - Check Trading Summaries ▲	

Grenoble Road BNG metric results

FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	6.17
	Hedgerow units	-6.56
	Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	1.57%
	Hedgerow units	-27.33%
	Watercourse units	0.00%
Trading rules satisfied?	No - Check Trading Summaries ▲	

NW Grove BNG metric results

FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	-72.23
	Hedgerow units	0.00
	Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	-51.08%
	Hedgerow units	0.00%
	Watercourse units	0.00%
Trading rules satisfied?	No - Check Trading Summaries ▲	

NWVP BNG metric results

FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	25.94
	Hedgerow units	-0.80
	Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	43.09%
	Hedgerow units	-8.00%
	Watercourse units	0.00%
Trading rules satisfied?	No - Check Trading Summaries ▲	

Dalton Barrack BNG metric results

FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	-285.50
	Hedgerow units	0.00
	Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	-43.68%
	Hedgerow units	0.00%
	Watercourse units	0.00%
Trading rules satisfied?	No - Check Trading Summaries ▲	