

BIODIVERSITY NET GAIN CALCULATION

SHINFIELD BAPTIST CHURCH 1 FAIRMEAD ROAD SHINFIELD RG2 9DL

Client: Nathan Hunt

Our reference: Eco3634b

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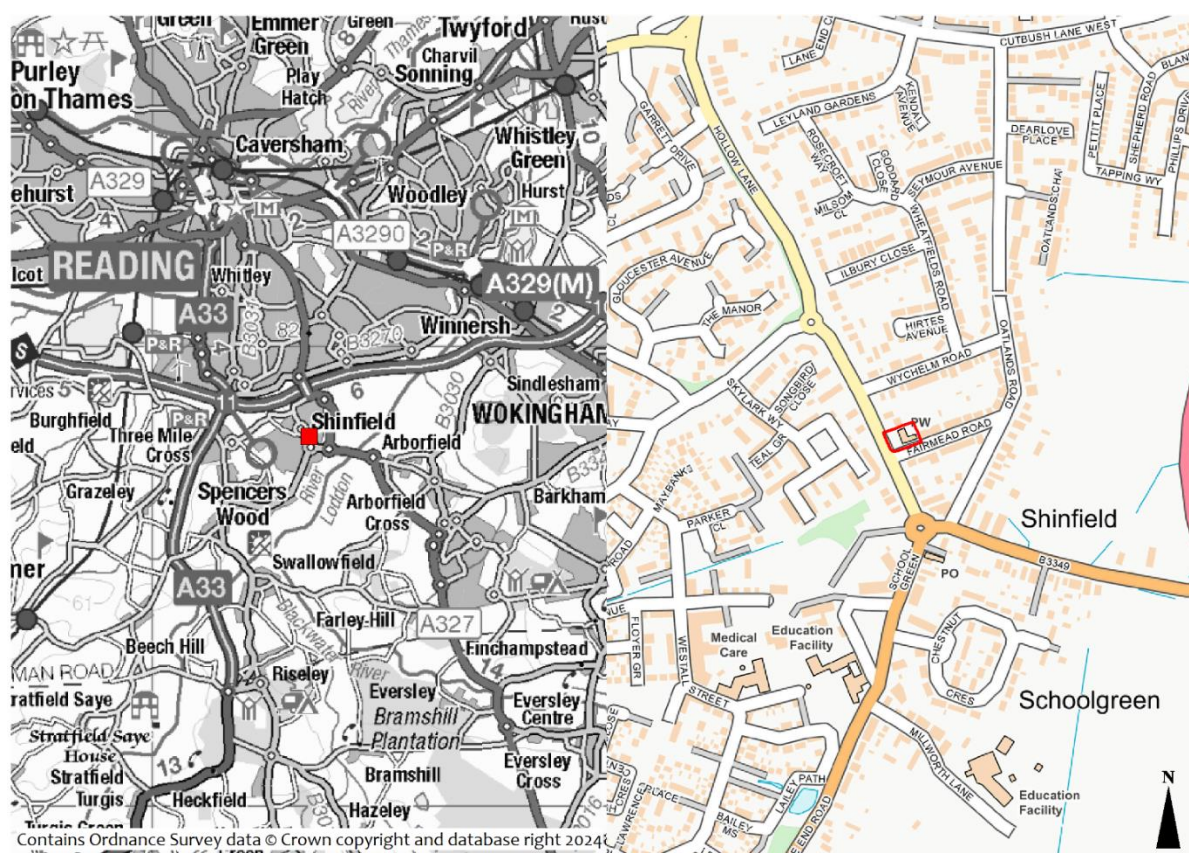
1.0 Survey and reporting

- 1.1 This report details the results of a Biodiversity Net Gain Calculation for a proposed development at Shinfield Baptist Church, 1 Fairmead Road, Shinfield, RG2 9DL
- 1.2 It has been undertaken using the Statutory Biodiversity Metric published by DEFRA on 29 November 2023 (updated in July 2024).

The survey site

- 1.3 Shinfield Baptist Church is located at the intersection of Fairmead Road and Hollow Lane, two residential roads in Shinfield (Grid reference SU73406804, Figure 1).
- 1.4 It comprises a church hall with a link-attached bungalow, garage, store building, hardstanding car parking area and its associated gardens.
- 1.5 The total area of the application site is approximately 0.13 hectares.

Figure 1 – Site location plan



The proposed scheme

- 1.6 It is proposed to demolish the bungalow, garage and the western section of the church hall and erect a new church building. The southern section of the store building will also be demolished (see Figure 2 for proposed site layout).
- 1.7 In addition, the existing car park will be renovated. It is also understood that roof repair works will be undertaken to the retained section of church hall.
- 1.8 No trees will be affected by the proposed works.

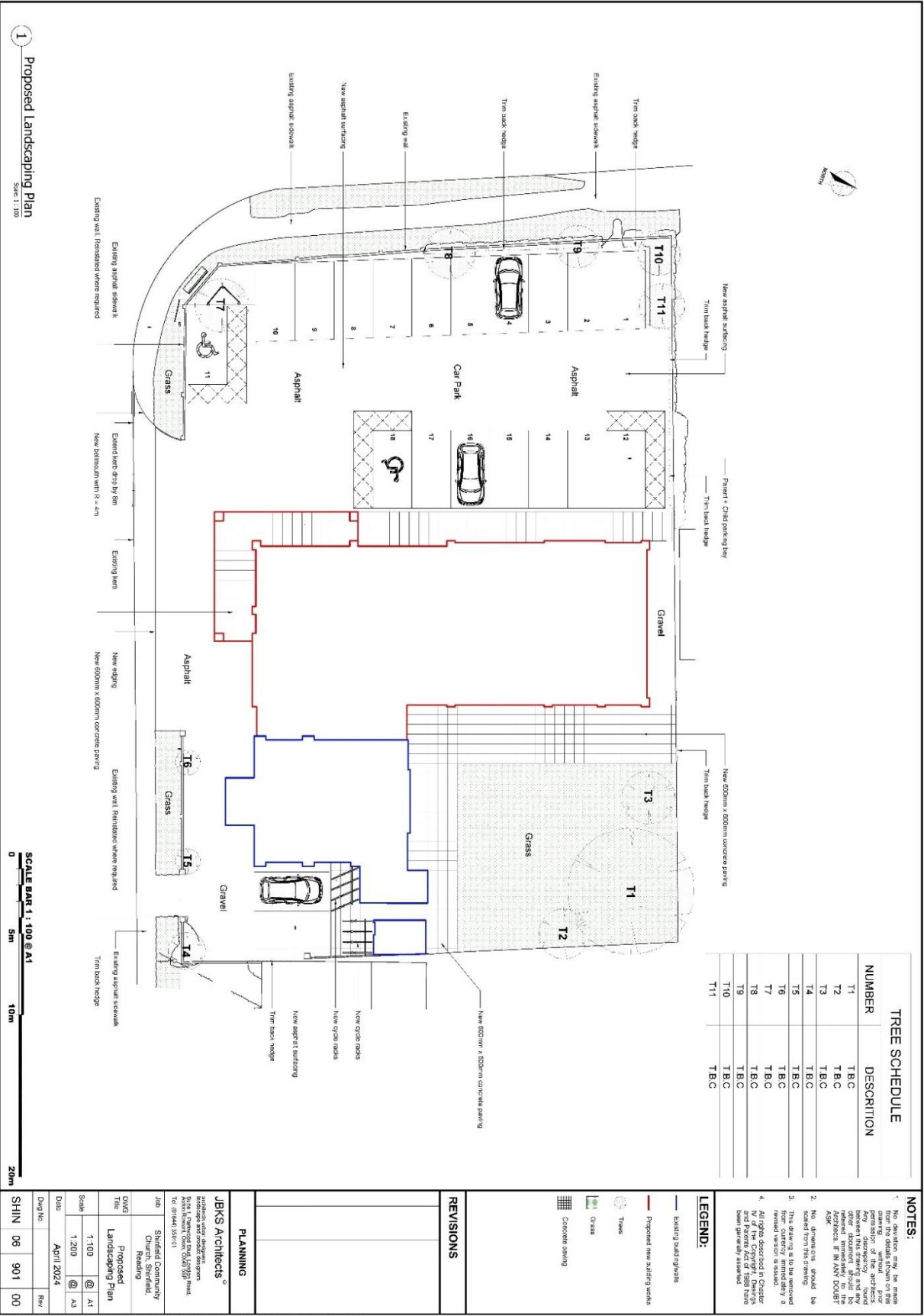
Survey to inform the assessment

- 1.9 The assessment was based on an ecological survey, carried out on 8 November 2024.

Surveyor details

- 1.10 The survey was undertaken by Ryan Davies ACIEEM (senior ecologist) of GS Ecology Ltd.
- 1.11 The survey was undertaken by Ryan Davies ACIEEM of GS Ecology Ltd. Ryan holds a Natural England great crested newt survey licence (WML-CLo8), a Natural England WML A34 Level 2 bat survey licence and is an associate member of the Chartered Institute of Ecology and Environmental Management with more than 10 years' experience as professional ecologist.

Figure 2 – Proposed site plan



2.0 Biodiversity net gain calculation

- 2.1 The Environment Act 2021 became law on 9 November 2021. It requires (through amendments to the Town and Country Planning Act 1990) all planning permissions in England, with some exemptions, to be granted subject to a new general pre-commencement condition that requires approval of a biodiversity gain plan.
- 2.2 This system is commonly referred to as Biodiversity Net Gain and it is a cornerstone of the government's 25 Year Environment Plan.
- 2.3 This became mandatory on 12 February 2024 for major applications and 2 April 2024 for minor applications.
- 2.4 Article 7 of The Town and Country Planning (Development Management Procedure) (England) Order 2015 sets out the minimum information that a planning application must be accompanied by (see Table 1 below).
- 2.5 It is worth noting that the minimum information does not require an assessment of post development biodiversity units. This is because this information would have to be provided in the Biodiversity Gain Plan when the biodiversity gain condition is discharged.

Table 1 – Statutory BNG minimum information requirements

Minimum information	Response for this application
1) Confirmation that the applicant believes that planning permission, if granted, the development would be subject to the biodiversity gain condition;	Yes if granted, the development would be subject to the biodiversity gain condition
2) The pre-development biodiversity value(s), either on the date of application or earlier proposed date (as appropriate);	See completed Statutory Metric tool provided with this report.
3) Where the applicant proposes to use an earlier date, this proposed earlier date and the reasons for proposing that date;	8 November 2024 (the date of survey)
4) The completed metric calculation tool showing the calculations of the pre-development biodiversity value of the onsite habitat on the date of application (or proposed earlier date) including the publication date of the biodiversity metric used to calculate that value;	Provided with this report
5) A statement whether activities have been carried out prior to the date of application (or earlier proposed date), that result in loss of onsite biodiversity value ('degradation'), and where they have: - a statement to the effect that these activities have been carried out; - the date immediately before these activities were carried out; - the pre-development biodiversity value of the onsite habitat on this date; - the completed metric calculation tool showing the calculations, and - any available supporting evidence of this;	No activities had been carried out prior to the date of the survey that had resulted in the loss of onsite biodiversity value.
6) A description of any irreplaceable habitat (as set out in column 1 of the Schedule to the Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations 2024) on the land to which the application relates, that exists on the date of application, (or an earlier date); and	There are no irreplaceable habitats on the land to which the application relates

Minimum information	Response for this application
7) Plan(s), drawn to an identified scale and showing the direction of North, showing onsite habitat existing on the date of application (or earlier proposed date), including any irreplaceable habitat (if applicable).	See plans in Appendix 2.

Degradation of habitats

- 2.6 There are special provisions for the calculation of the pre-development biodiversity value of onsite habitat when loss or impact to habitats (or ‘degradation’) has occurred prior to the submission of a planning application and Biodiversity Gain Plan in order to discourage the deliberate degradation of existing onsite habitats to reduce the pre-development biodiversity value.
- 2.7 For the Biodiversity Plan, Paragraph 6 of Schedule 7A of the Town and Country Planning Act 1990 makes provision relating to unauthorised degradation takes place, and Paragraph 6A of the 1990 Act makes provision relating to degradation taking place which is in accordance with a planning permission:
- Where unauthorised degradation of the onsite habitat has taken place on the land between 30 January 2020 and the date of relevant date, the biodiversity pre-development value of the onsite habitat should be calculated as the biodiversity value of the habitat on the date immediately before the carrying out of these degradation activities. The relevant date should therefore be set as a date immediately before these activities. Unauthorised degradation of onsite habitat is any degradation which is not in accordance with a previous planning permission.
 - If activities to implement or in connection with a planning permission are carried out after 25 August 2023 that lower the biodiversity value of the onsite habitat, the pre-development biodiversity value of the onsite habitat is taken to be the biodiversity value immediately before the carrying out of the activities. The relevant date should therefore be set as a date immediately before these activities.
- 2.8 If there has been degradation and there is insufficient evidence about the biodiversity value of the onsite habitat immediately before the degradation, the pre-development biodiversity value of the onsite habitat must be taken to be the highest biodiversity value of the habitat which is reasonably supported by any available evidence relating to it. This requirement must be applied to the calculation of pre-development biodiversity value in the metric tool, and the Biodiversity Gain Plan template asks for information regarding whether there has been prior habitat degradation.
- 2.9 Unauthorised degradation is defined in the environment act as
- “activities on land on or after 30 January 2020 otherwise than in accordance with—*
- (i) planning permission, or*
- (ii) any other permission of a kind specified by the Secretary of State by regulations”*

The biodiversity gain condition

- 2.10 All planning applications will be approved subject to the biodiversity gain condition. The condition requires a Biodiversity Gain Plan (as a separate discharge of conditions application) to be submitted and approved by the planning authority to discharge the biodiversity gain condition prior to the commencement of development.
- 2.11 The Biodiversity Gain Plan can be submitted no earlier than the day after planning permission has been granted. It needs to include the following:
- (1) information about the steps taken or to be taken to minimise the adverse effect of the development on the biodiversity of the onsite habitat and any other habitat;
 - (2) the pre-development biodiversity value of the onsite habitat;
 - (3) the post-development biodiversity value of the onsite habitat;
 - (4) any registered off-site biodiversity gain allocated to the development and the biodiversity; and
 - (5) any biodiversity credits purchased for the development.

Purpose of this report

- 2.12 The purpose of this report is to provide the planning authority with the information required to determine the planning application in relation to BNG. It includes the minimum information as set out in the Article 7 of The Town and Country Planning (Development Management Procedure) (England) Order 2015 (see Table above).
- 2.13 It also details the anticipated habitats (if known) after development and whether a 10% BNG will be achieved. If 10% BNG not be achieved it provides possible options for doing this.
- 2.14 It is worth noting that National Planning policy Guidance reads:
- “The statutory framework for biodiversity net gain involves the discharge of the biodiversity gain condition following the grant of planning permission to ensure the objective of at least 10% net gain will be met for a development. The determination of the Biodiversity Gain Plan under this condition is the mechanism to confirm whether the development meets the biodiversity gain objective. Development may not be begun until the Biodiversity Gain Plan is approved.
- Given this, it would generally be inappropriate for decision makers, when determining a planning application for a development subject to biodiversity net gain, to refuse an application on the grounds that the biodiversity gain objective will not be met.”

The Statutory Biodiversity Metric

- 2.15 The Statutory Biodiversity Metric is a system for calculation habitat losses or gains from a project using habitats, measured using Habitat Units (HUs) as a proxy measure. It is accompanied by an excel spreadsheet calculator that assigns values to habitats before a change (PRE-intervention values) and assumed habitat values after the change (POST-intervention values).

- 2.16 The metric uses the habitat categories that mainly align with UK Habitat Classification Habitat (which is a system for habitat classification that has been developed as an alternative to the Phase 1 Habitat Classification).
- 2.17 The metric calculates two values: PRE-intervention HU Values and POST-intervention HU values – described below.

PRE-intervention Habitat Unit Values

- 2.18 The baseline or PRE-intervention Habitat Unit (HU) Value is a factor of:
- The area of the habitat parcel
 - The distinctiveness of the Habitat Type [Very Low; Low; Medium; High; Very High]
 - The habitat condition assessed using the Condition assessment sheets - [Poor; Moderate; Good]
 - The strategic significance [High, within area formally identified in local strategy; Moderate - location ecologically desirable but not in local strategy; Low - area/compensation not in local strategy/ no local strategy]

POST-intervention HU values

- 2.19 The POST-intervention HU value is a factor of:
- The area of the habitat parcel
 - The distinctiveness of the Habitat Type ranging [Very Low; Low; Medium; High; Very High]
 - The target habitat condition at a defined number of years [Poor; Moderate; Good]
 - The strategic significance [High, within area formally identified in local strategy; Moderate - location ecologically desirable but not in local strategy; Low - area/compensation not in local strategy/ no local strategy]
 - The time to target condition [assigned by the Metric to a default time]
 - The difficulty of creation of that habitat [assigned by the Metric]
 - The spatial risk category - a multiplier to discourage creation of habitats far from the site of biodiversity loss.

Types of HU

- 2.20 There are three types of HU:
- Area habitats (such as grasslands and woodlands) – “A-HUs”
 - Linear hedgerows and lines of trees – “L-HUs”
 - Linear rivers and streams – “R-HUs”
- 2.21 The HU types are not interchangeable.

Description of habitats within the red line planning boundary

- 2.22 The application site comprises a church hall with a link-attached bungalow, garage, store building, hardstanding car parking area and its associated gardens.
- 2.23 A Phase 1 habitat map, associated target notes and photographs are provided in our Preliminary Ecological Appraisal dated 14 January 2025 (reference ECO3634).

Assumptions made

- 2.24 The proposed plan given in Figure 2 above was used to calculate the post-intervention habitats.
- 2.25 Maps showing habitats before and after development are given in Appendix 2 and 3.

Pre-intervention

- 2.26 The Statutory Biodiversity Metric Habitats within the application site at the time of our survey, and their descriptions, extent and condition pre-development are as follows:

Area Habitat Units

Developed land – sealed surface (0.104 hectares pre-development).

- 2.27 These are the buildings, hardstanding car parking area and footpaths associated with the church buildings.
- 2.28 There is no condition assessment for this habitat type as the metric does not require one.

Urban – Vegetated garden (0.03ha pre-development)

- 2.29 These are the areas lawn and garden planting, primarily located at the north east of the site.
- 2.30 The UK Habitat Classification definition for ‘Vegetated Garden’ is:
“Garden that is principally vegetated, for example with large areas of grass and flower beds.”
- 2.31 There is no condition assessment for this habitat type as the metric does not require one.
- 2.32 0.018ha of the garden will be retained.

Post-intervention

- 2.33 The assumed Statutory Biodiversity Metric Habitats and their descriptions, extent and condition post-development are described below.

New and retained: Urban - Developed land- sealed surface (0.116 ha total post development)

- 2.34 This is the retained buildings, newly erected building and newly created car parking area and surrounding hardstanding.
- 2.35 There is no condition assessment for this habitat type as the metric does not require one.

Retained: Urban – Vegetated garden (0.018 ha post development)

- 2.36 This is the retained garden area to the north east of the church.
- 2.37 There is no condition assessment for this habitat type as the metric does not require one.

New: Individual trees - urban (0.0326 ha as per the Metric’s Tree Helper)

- 2.38 These are the 8 new trees to be planted on site (see Figure 2 for locations). New trees planted in private gardens are not counted in the metric (there are three trees shown as being planted in the retained garden area) as the guidance states:

“You should not:

- *count newly planted trees sited within private gardens”.*

2.39 As such, only the trees planted around the car park have been counted.

2.40 It is assumed that these new trees will reach at least ‘poor’ condition in 10 years.

Linear Habitat Units

Pre-intervention

Non-native and ornamental hedgerow (0.052km in total)

2.41 These are the ornamental hedges, comprising a mix of mixed cypress, laurel and privet, along the northwestern (H1, 0.034km) and northern (H2, 0.18km) boundary.

2.42 This habitat type can only achieve ‘poor’ condition in the metric calculation.

2.43 All of these will be retained.

Post-intervention

2.44 The assumed Statutory Biodiversity Metric Habitats and their extent and condition post-development are described below.

Retained: Non-native and ornamental hedgerow (0.052km in total)

2.45 These are the retained ornamental hedgerows at the northwestern and northern site boundary.

3.0 Results and Assessment

Area Habitat Units

- 3.1 The calculation shows that there are 0.06 A-HUs before development and 0.13 A-HUs after development. This equates to a net gain of 0.07 A-HUs, or 112.19% above the on-site A-HU baseline.
- 3.2 The summary sheet from the Metric is given in Appendix 2.
- 3.3 This achieves the national guidance of a 10% net gain in biodiversity, provided that the new trees are maintained (replaced if they die) for a minimum of 30 years.

Linear Habitat Units

- 3.4 The calculation shows that there are 0.05 L-HUs before development and 0.05 L-HUs after development. This equates to no change between the on-site and off-site L-HU baseline.
- 3.5 The development does not achieve the 10% net gain in L-HU that is required by law.
- 3.6 It might be possible to achieve the 10% net gain in L-HU by planting 13m of ornamental hedgerow - which matches the existing landscaping within the application site - for example along the western site boundary.
- 3.7 The summary sheet from the Metric is given in Appendix 1.

Biodiversity Gain Condition

- 3.8 Details of on-site or off-site creation or enhancement will be provided in the Biodiversity Gain Plan that will be submitted to discharge the Biodiversity Gain condition.
- 3.9 A developer must submit the Biodiversity Gain Plan to be approved by the planning authority. This can be done no earlier than the day after planning permission has been granted.

Appendix 1 – Statutory Biodiversity Metric summary sheet

Shinfield Baptist Church		Return to results menu		
Headline Results				
Scroll down for final results ▲				
On-site baseline	Habitat units	0.06		
	Hedgerow units	0.05		
	Watercourse units	0.00		
On-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	0.13		
	Hedgerow units	0.05		
	Watercourse units	0.00		
On-site net change (units & percentage)	Habitat units	0.07	112.19%	
	Hedgerow units	0.00	0.00%	
	Watercourse units	0.00	0.00%	
On-site net gain is less than target set ▲				
Off-site baseline	Habitat units	0.00		
	Hedgerow units	0.00		
	Watercourse units	0.00		
Off-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	0.00		
	Hedgerow units	0.00		
	Watercourse units	0.00		
Off-site net change (units & percentage)	Habitat units	0.00	0.00%	
	Hedgerow units	0.00	0.00%	
	Watercourse units	0.00	0.00%	
Combined net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	0.07		
	Hedgerow units	0.00		
	Watercourse units	0.00		
Spatial risk multiplier (SRM) deductions	Habitat units	0.00		
	Hedgerow units	0.00		
	Watercourse units	0.00		
FINAL RESULTS				
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	0.07		
	Hedgerow units	0.00		
	Watercourse units	0.00		
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	112.19%		
	Hedgerow units	0.00%		
	Watercourse units	0.00%		
Total net gain achieved is less than target set ▲				
Trading rules satisfied?	Yes ✓			
Unit Type	Target	Baseline Units	Units Required	Unit Deficit
Habitat units	10.00%	0.06	0.07	0.00
Hedgerow units	10.00%	0.05	0.06	0.01
Watercourse units	10.00%	0.00	0.00	0.00
No additional area habitat units required to meet target ✓				
No additional watercourse units required to meet target ✓				

Appendix 2 – Habitats before development

Legend

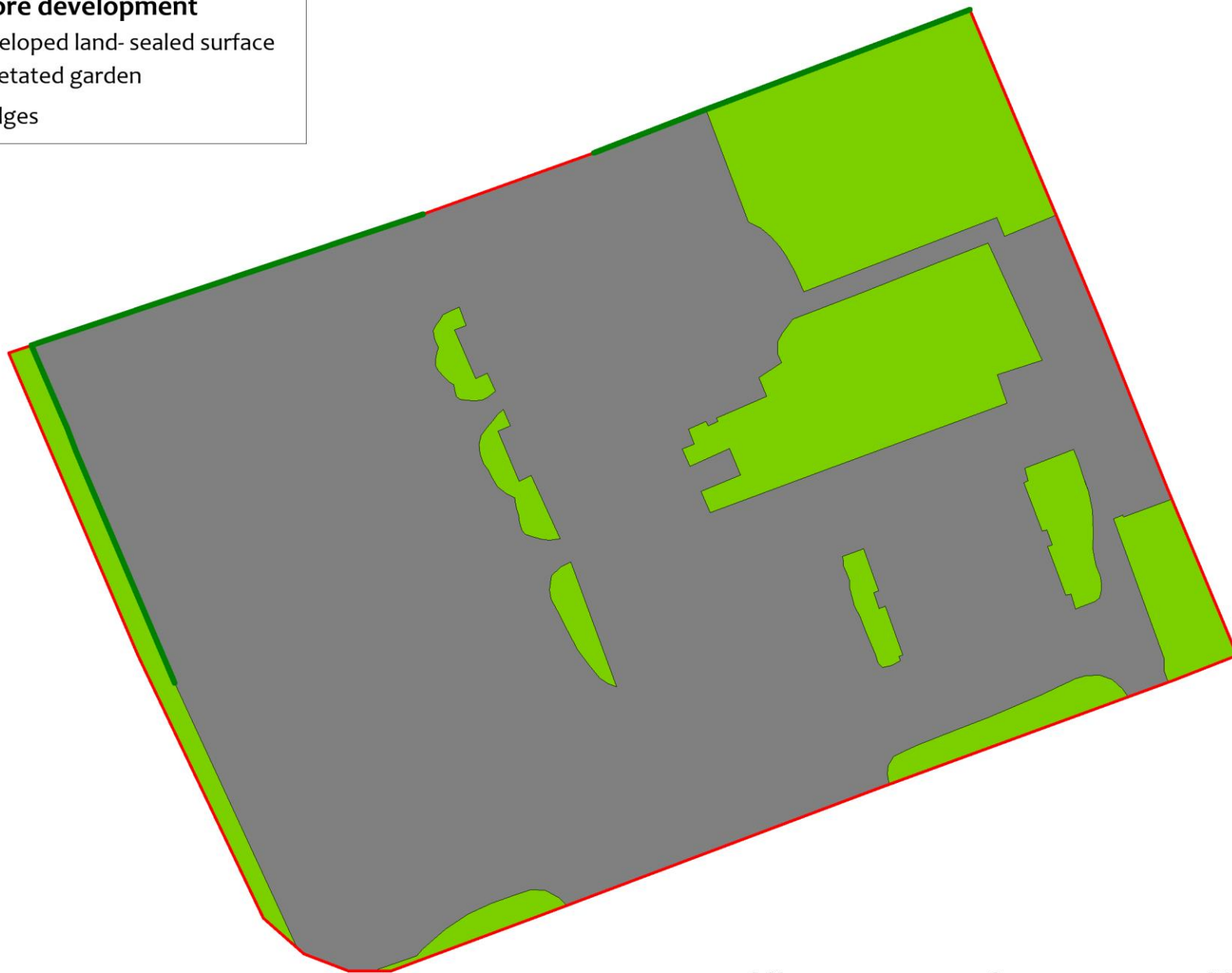
 Application site boundary

Habitat type before development

 Urban - Developed land- sealed surface

 Urban - Vegetated garden

 Existing hedges



Scale: 1:250 when printed on A4

Appendix 3 – Habitats after development

Legend

 Application site boundary

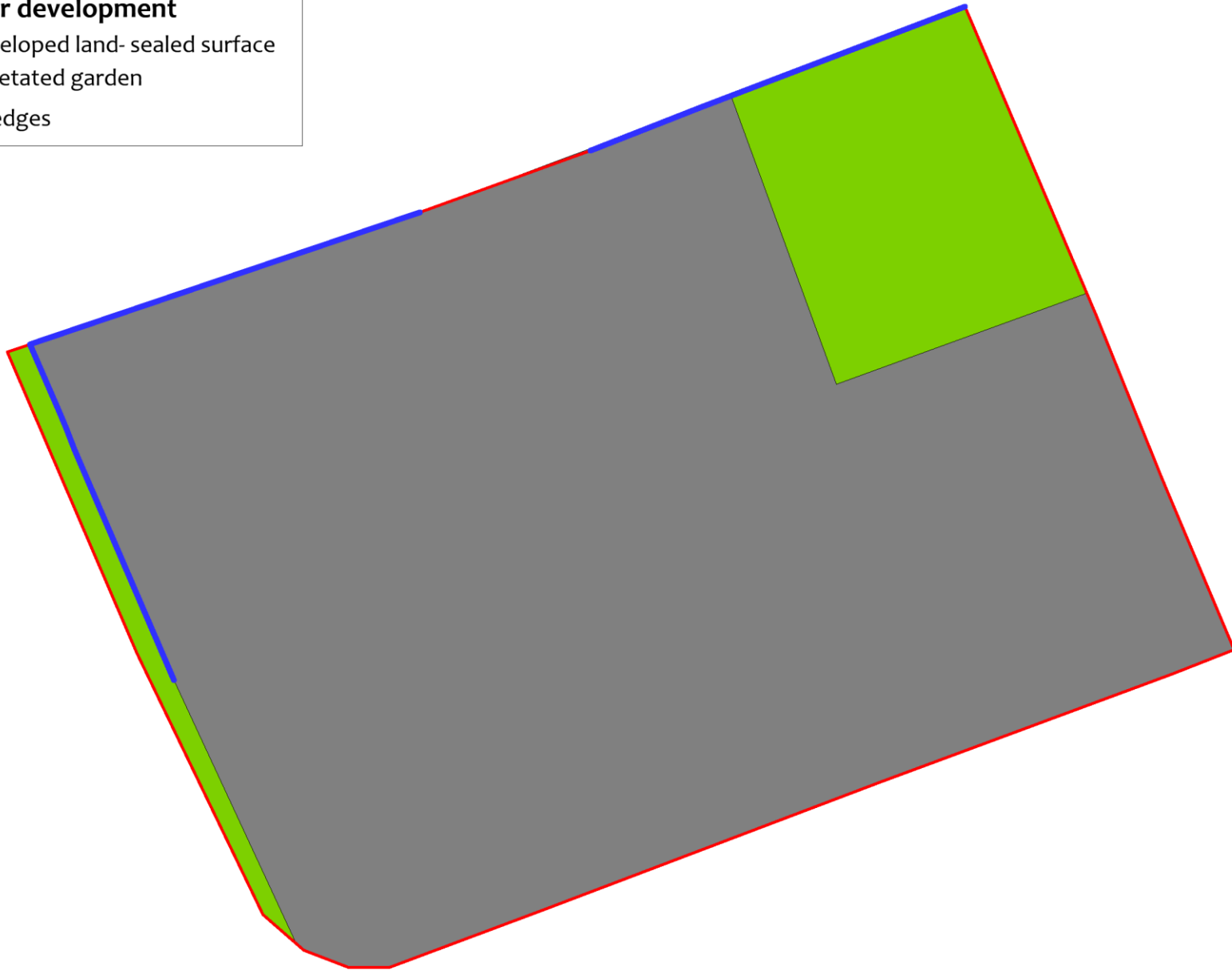
Habitat type after development

 Urban - Developed land- sealed surface

 Urban - Vegetated garden

 Retained hedges

N



Kilometres

Scale: 1:250 when printed on A4

Appendix 4 - About GS Ecology

Established in 2009, GS Ecology is an independent ecological consultancy in Berkshire. We carry-out surveys and ecological consultancy services for public and private sector clients.

Our work is undertaken by experienced and qualified ecologists, who are members of the Chartered Institute of Ecology and Environmental Managers. Our services include:

- Ecology surveying and reporting to inform planning applications, e.g.
 - Preliminary Ecological Appraisal
 - Extended Phase 1 Habitat Survey
 - Protected species surveys, e.g. bats, badgers, dormouse, great crested newts
- BREEAM ecology assessments – to demonstrate the sustainability of a new building
- Protected species licensing such as bat and great crested newt licences for development sites after planning permission has been obtained
- Providing advice to land managers and writing ecological management plans, such as woodland management plans and farm environmental plans for England woodland Grant Scheme and Environmental Stewardship applications
- Providing ecology advice to Local Authorities and Local Planning Authorities