

# Biodiversity Net Gain – Small Developments

## A Guide for Developers & Planners

March 2024



# BIODIVERSITY NET GAIN

## SMALL DEVELOPMENTS guidance note 1:

### Small sites in the bigger picture

As a member of **Gloucestershire Local Nature Partnership** (GLNP), Gloucester City Council is committed to putting nature at the heart of decision-making. This Guidance Note is the first in a series of three reference documents aimed at helping to achieve this through the planning process on small development sites:

**Guidance Note 1:** Defining small development sites and their role in wider policy and Biodiversity Net Gain (BNG)

**Guidance Note 2:** Assessing the biodiversity value of small sites, and when and how to achieve mandatory BNG

**Guidance Note 3:** Biodiversity interventions for small or very small sites, including non-mandatory enhancements

The Guidance Notes should be used in conjunction with the document *Guidance on delivering Biodiversity Net Gain for planning applicants and developers in Gloucestershire* (GLNP, February 2024), and the latest Government guidelines and statutory Biodiversity Metric calculation tool. Links to this, along with user guides, background information, full list of exemptions and simplified Small Sites Metric are all available from the UK government collected BNG page\* here: <https://www.gov.uk/government/collections/biodiversity-net-gain>

## Background to Nature Recovery and Biodiversity Net Gain on small development sites

The need for active nature recovery in the UK - now one of the most nature-depleted areas of Europe - was recognised in the UK Government's 2019 Spring Statement, and subsequently built into the Environment Act 2021. Schedule 14 of the Act introduced a new element to the planning system, to begin in 2024: the requirement for new developments to incorporate a minimum of 10% Biodiversity Net Gain (BNG).

Habitat gained via BNG must have a 30-year management plan to ensure the continuation of the increased biodiversity, including habitats which take longer to establish. In recognition of the scale and complexity of the new requirements, some developments will either be exempt from mandatory BNG or covered by a simpler assessment framework for small developments. This set of three Guidance Notes concerns the latter category, broadly known as 'small sites'.

### Small sites

A small development means:

- residential development where the number of dwellings is between 1 and 9, or if this is unknown, the site area is less than 0.5 hectares;
- commercial development where floor space created is less than 1,000 square metres or total site area is less than 1 hectare;
- development that is not the winning and working of minerals or the use of land for mineral-working deposits;
- development that is not waste development

**Biodiversity Net Gain is mandatory for small developments from April 2<sup>nd</sup> 2024.**

### Small site example 1: proposed house on a 0.17ha site

The fictional site (right) fits the 'small development' category. It does not fall within an exemption category (see below) and is too small to be a major development. It has linear habitat (50m line of trees), a small pond (possible Priority Habitat) and a veteran tree (irreplaceable habitat) present on the site.

In this case, the veteran tree should remain on site and would not count towards BNG scores. The other habitats would require a 10% increase in Biodiversity Metric score in order for the development to fulfil mandatory BNG requirements.



## Exempted developments

A range of permitted or smaller developments do not require BNG. The main categories are:

### Existing applications

If a planning application for a development was made before day one of mandatory BNG on 12<sup>th</sup> February 2024, the development is exempt from BNG; in the case of small sites, developments are exempt until April 2<sup>nd</sup> 2024.

Variations of existing permissions will usually be exempt, although this may be subject to transitional arrangements.

### Permitted development

This includes temporary structures, most agriculture and forestry activities, and a range of small household and garden alterations. Note that species protection laws, including Tree Preservation Orders, may still apply.

### Developments below the minimum threshold

Application sites are below the threshold if they:

- do not impact a priority habitat;
- impact less than 25 square metres (5m by 5m) of habitat;
- Impact less than 5 metres of linear habitats such as hedgerows, lines of trees or watercourses.

### Householder applications

Where not already covered under the categories above, householder applications are the main BNG exemptions for most Local Planning Authorities. The category doesn't cover every type of application submitted by a householder: it is limited to the Town and Country Planning Act definition:

*a) an application for planning permission for development for an existing dwellinghouse, or development within the curtilage of such a dwellinghouse for any purpose incidental to the enjoyment of the dwellinghouse, or*

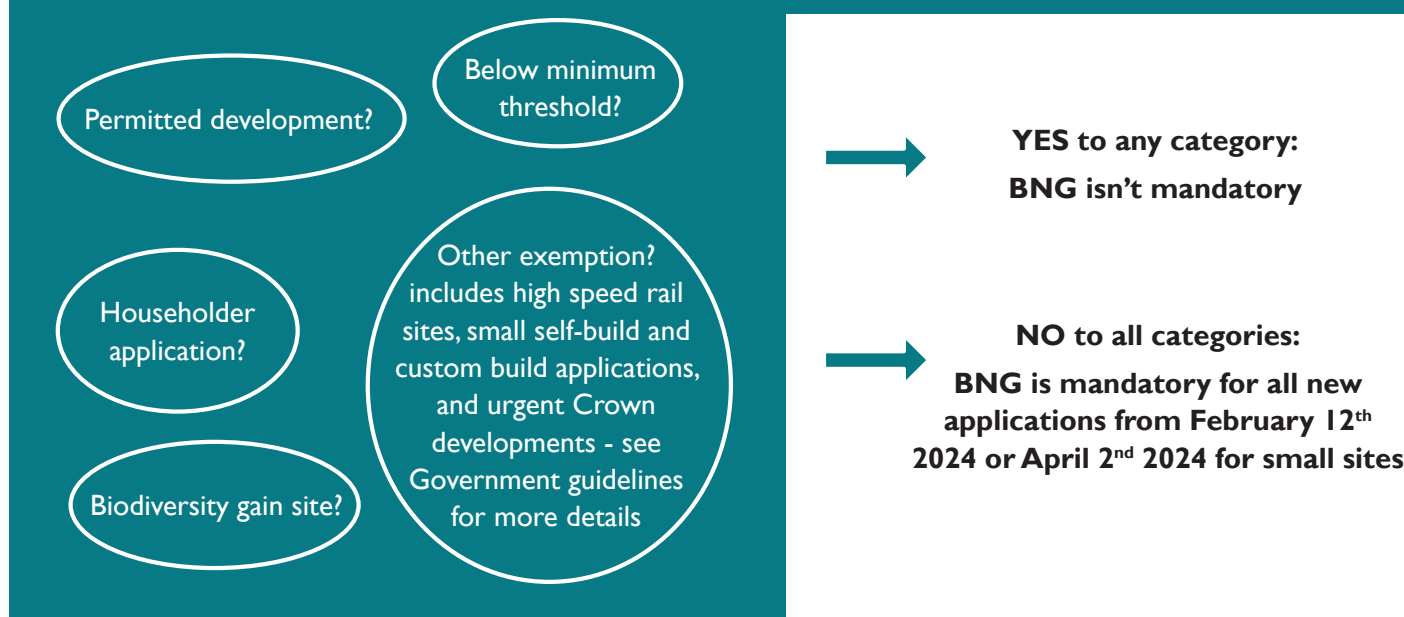
*b) an application for any consent, agreement or approval required by or under a planning permission, development order or local development order in relation to such development,*

but does not include an application for change of use or an application to change the number of dwellings in a building.

### Biodiversity gain sites

Developments undertaken mainly to fulfill the BNG planning condition for another development are also exempt.

## Quick guide: is BNG mandatory for a new development?



Note that Article 2(1) of the Town and Country Planning (Development Management Procedure) (England) Order 2015 contains a useful list of definitions of many of the above terms; a version is available online.

## Choosing the right Biodiversity Metric

BNG is achieved by using a standard Biodiversity Metric to calculate a score for the existing biodiversity interest on a site, then boosting that score by extending, diversifying or improving the habitat to both make up any losses and increase the original score by 10%. **Two metrics are available depending on the size and complexity of the site.**

For major sites, and small sites which have irreplaceable and/or Priority Habitats (excepting hedgerows) or European Protected Species on-site, the main statutory Biodiversity Metric is required alongside an assessment by a suitably qualified professional. Thus, small site example 1 above, whilst clearly a small development site, should be assessed in a similar way to a larger site, as it contains important existing wildlife habitats.

For developments which fit the small sites definition but have no Priority Habitats or Protected Species, there is a simpler Small Sites Metric and accompanying BNG calculation tool, which may be used by anyone familiar with the site and with the BNG requirements. This would be acceptable in the case of **Example 2**, below.



### Small site example 2: proposed workshop on 0.2ha site

The fictional site (left) has one existing habitat - a hedgerow that is part of a longer stretch of hedge and trees - which will be affected by the proposed development. However, there is limited scope for Biodiversity Net Gain on-site.

Where sufficient BNG is not practicable on-site, **off-site** biodiversity gain, often referred to as offsetting, should be considered at an early stage of the application process.

Off-site BNG will be governed by Gloucester City Council policy (see below) and is likely to require liaison with the landowner and managers of the receptor site.

**⚠** The latest version of the statutory BNG calculation tool and guidelines should always be used. Any calculations started on earlier versions (eg Biodiversity Metric v4.0) should be recalculated using the latest statutory version.

## Gloucester City Council biodiversity policy

A key principle of planning policy in Gloucester is to ensure that BNG aligns with wider nature restoration and Green and Blue Infrastructure policies. Within the Gloucester City Plan 2011-2031, policies **E1: Biodiversity and Geodiversity**, and **E2: Nature Recovery Area** (see end page) govern the Council's commitment to the Gloucestershire Local Nature Recovery Strategy and targeted biodiversity offsetting respectively.

Whilst the specific biodiversity and nature recovery policies E1 and E2 are crucial to successful BNG, the practical application of BNG relates to a much wider range of Gloucester City Plan policies. The following extracts from those policies may be particularly useful when considering which BNG is most suitable in any given City location:

### Policy A1: Effective and efficient use of housing land and buildings

*Development proposals should:*

*1. Result in overall improvements to the built and natural environment*

*Improvements to the natural environment will be proportionate to the scale of development and could range from SUDS systems that extend the Green Infrastructure network to smaller scale biodiversity support and habitat creation through green roofs, tree planting, bat boxes, bird boxes and the like.*

### Policy C5: Air quality

*Within the city's Air Quality Management Areas (AQMAs) and in areas near schools and hospitals, development which reduces tree cover, hedges and other forms of vegetation will be expected to make provision for a net gain in vegetation onsite and/or within the relevant buffer zone. The use of green roofs and walls in these areas will be strongly supported along with other suitable measures to increase vegetative cover.*

### Policy E3: Green/Blue Infrastructure

Development should contribute towards this objective, and to the broader network of green/blue corridors and assets across the city using SUDS, open space, green roofs and walls and tree planting. It is important that blue infrastructure such as rivers, streams, canals, lakes, ponds, wetlands and floodplains are fully considered as important assets.

### Policy E4: Flooding, sustainable drainage and wastewater.

Development proposals shall facilitate watercourse restoration, exploiting opportunities to open culverts, naturalise river channels, and protect and improve the floodplain, buffer strips and adjacent terrestrial habitats and water quality...

### Policy E7: Trees, woodlands and hedgerows

Development proposals should seek to ensure there are no significant adverse impacts on existing trees, woodlands or hedgerows and that every opportunity is taken for appropriate new planting on site, including trees and hedgerows. In the case of an unavoidable significant adverse impact on trees, woodlands and hedgerows, the developer must provide for measurable biodiversity net gain on site, or if this is not possible:

1. At nearby Green Infrastructure projects/areas; or
2. In suitable areas of parks, open spaces, verges; or
3. Through the restoration or creation of traditional orchards, prioritising sites identified as opportunities for increasing the connectivity of the ecological network; or
4. As new or replacement street trees.

Development which would result in the loss of irreplaceable habitats such as Ancient Woodland, Ancient Trees and veteran trees will not be permitted except in wholly exceptional circumstances.

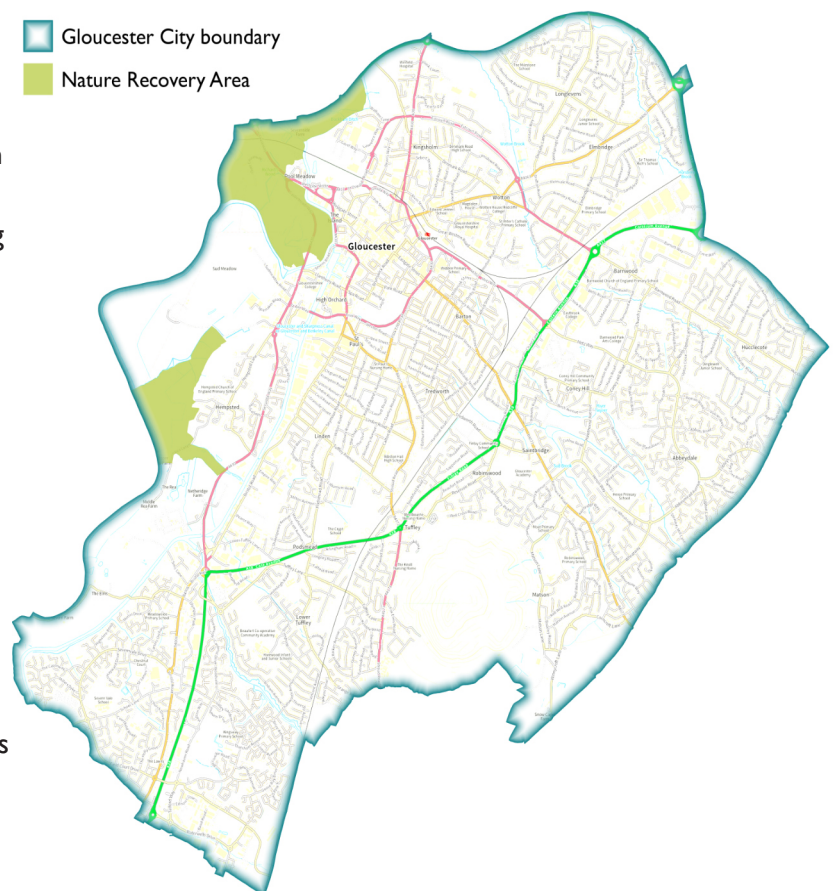
### Nature recovery

The Severn Vale Nature Recovery Area identified in **Policy 2E** of the City Plan - right, shown in green - is the preferred location for biodiversity offsetting for development sites in Gloucester where on-site BNG is not possible and there are no suitable Green Infrastructure projects available.

The goal of the Nature Recovery Area is to target creation and restoration of the habitats best suited to the local area as part of the Nature Recovery Network in the wider ecological setting.

See **Guidance Note 2** for an introduction to assessing habitat features on small sites in Gloucester and a list of the target habitats for nature restoration in the Severn Vale.

See **Guidance Note 3** for BNG recommendations relevant to the policies listed above, including enhancements to BNG-exempt sites.



# BIODIVERSITY NET GAIN

## SMALL DEVELOPMENTS guidance note 2:

### Habitat features on small sites

This Guidance Note is an introduction to how small development sites which are not exempt from Biodiversity Net Gain (BNG) are assessed, what measures can be taken to increase their biodiversity, and how BNG is scored.

BNG is mandatory for non-exempt small developments from April 2024, just as it is for major developments. However, habitat assessment will often be simpler and careful choices may need to be made about how much habitat extension can be added to a small site. It is also important to keep initial habitat loss to a minimum and to decide which small-scale habitat designs will offer the most for biodiversity in the wider ecological context.

This is the second in a series of three Guidance Notes; see Note 1 for details of which sites are exempt from BNG.

#### First steps: calculating on-site biodiversity and potential habitat loss

For BNG calculations, biodiversity is measured in standardised units. The unit 'score' is dependent on more than just the size of a habitat, with **distinctiveness**, **condition** and **strategic significance** all taken into account. For watercourses, two other factors are assessed: **riparian zone encroachment** and **watercourse encroachment**.

On major developments and small sites with high-value existing biodiversity features, a competent ecologist is required to look at the site, assess the habitat present and enter full details into the statutory Biodiversity Metric Tool. The tool outputs can then be used to report on how many biodiversity units are present on site and how many will be lost.

Small developments without Priority Habitat (except hedgerows), Irreplaceable Habitat or European protected species can be assessed without an ecologist, using the Small Sites Metric. This alternative metric is simpler, with fixed scores for each habitat type and no condition assessment required. However, it only covers a reduced list of habitats, so if unusual habitats are present it might still be necessary to use the full Biodiversity Metric on a small site. In all cases a thoughtful development layout can greatly reduce biodiversity impact; **habitat repair and replacement are therefore a second resort after initial biodiversity-friendly site layout and design.**

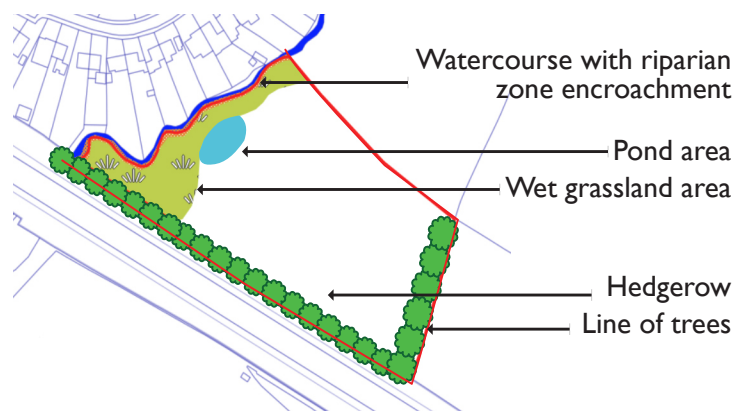
#### Baseline habitats have three categories

Watercourses, hedgerows and habitat areas are treated individually in BNG calculations. The 10% Net Gain rule applies to EACH category; they cannot be transferred, e.g. extra hedges don't make up for lost watercourse and adding a pond won't make up for lost units of hedgerow. In the fictional site on the right, BNG would be applicable to all three types - the stream, the areas (both) and the hedge+line of trees.

#### Example: two proposed houses on a 0.13ha site

The fictional proposal (right) fits the 'small development' category. It has linear Priority Habitat (105m of native hedgerow), and 'low distinctiveness' grassland. The Small Sites Metric could be used here as hedgerows, unlike most high-value habitats, are currently included in the Small Sites Metric Tool.

The development as submitted would result in loss of 25m of the hedgerow and most of the grassland. Note that a **different site layout** could be helpful here as it might enable the whole hedge to be kept.



## Second steps: calculating mandatory habitat gain

As with baseline habitats, more than one factor is taken into account in the biodiversity gain score. An extension to a diverse habitat very close to the lost habitat area and well-aligned with strategic habitat restoration goals is thus likely to score more BNG units for its size than an isolated gain some distance away which doesn't align with Gloucestershire's Local Nature Recovery Strategy or the Joint Core Strategy goals for Green and Blue Infrastructure.



The example site (shown above in red) is unlikely to have enough space on-site to replace the lost hedgerow habitat plus 10% BNG. In this example there is however a Green Infrastructure cycle route project (above, in green) within 300m of the site, which could benefit from a length of new hedgerow along one side. This would provide an opportunity to make up the required habitat gain whilst adding value to a project which links both people and wildlife.

Note that simply adding a few metres of hedgerow further away, without any wider ecological context, would have a lower BNG score and be insufficient in this case to meet the mandatory requirement.

### Targeting BNG

The Biodiversity Metric Tool shows how many units are needed to replace lost habitat and to achieve 10% gain, but it cannot provide a precise list of what, or where, the gain should be. The choice of added BNG units depends on ecologist recommendations and the wider ecological context. Creation of habitats which don't align with the aims of the Local Nature Recovery Strategy may not be a good use of resources, hence **habitat targeting** is an important part of the process.

Within the Gloucester Nature Recovery Area (see Guidance Note 1 for map), the following broad habitat types have high potential for restoration which complements the wider Nature Recovery Network:

- Lowland Meadows
- Coastal and Floodplain Grazing Marsh
- Traditional Orchards
- Ponds
- Wet Woodland
- Hedgerows
- Arable Field Margins
- Reedbed
- Coastal Saltmarsh and Intertidal Mudflats
- Lowland Mixed Deciduous Woodland

### Urban and small-scale features

The target habitats listed on the left favour key Severn Vale wetland features which are prioritised in the Gloucestershire Nature Recovery Network, including habitats typical of the Gloucester area, such as Traditional Orchards. It is not, however, mandatory to create these larger-scale habitats on small sites. 'Urban' designs, even at a very small scale, can also count towards a BNG score.

Small-scale interventions which complement local nature restoration strategy and count as units for BNG include:

#### Medium distinctiveness:

- Wildlife pond
- Green roof (diverse)

#### Low distinctiveness:

- Green roof (sedum only/intensive use)
- Rain garden
- Ornamental pond
- Green wall
- Vegetated garden or introduced shrubs
- Sustainable Urban Drainage System (SUDS)

Guidance Note 3 provides more details about BNG scoring for these small areas of habitat, and how to create other non-BNG, wildlife-friendly design features which work in an urban context on small sites.

# BIODIVERSITY NET GAIN

## SMALL DEVELOPMENTS guidance note 3:

### Creating opportunities for wildlife

This Guidance Note introduces some of the small-scale habitat creations and improvements which can build up Biodiversity Net Gain (BNG) units on small development sites, and provides guidance on how to optimise these. Also included are some ideas for non-mandatory biodiversity enhancements.

See Guidance Note 1 for background to BNG, including relevant Gloucester City Plan policies, and Guidance Note 2 for information about assessing existing habitats on small sites.

Note that the calculation of BNG is complex, involving an assessment of several factors in addition to simple area of habitat created. Background, guidance and downloads\* are available from the UK Government website here:

<https://www.gov.uk/guidance/understanding-biodiversity-net-gain>

and the Local Government Association maintains a detailed set of Frequently Asked Questions here:

<https://www.local.gov.uk/pas/topics/environment/biodiversity-net-gain-local-authorities/biodiversity-net-gain-faqs>

### Designing small habitat areas

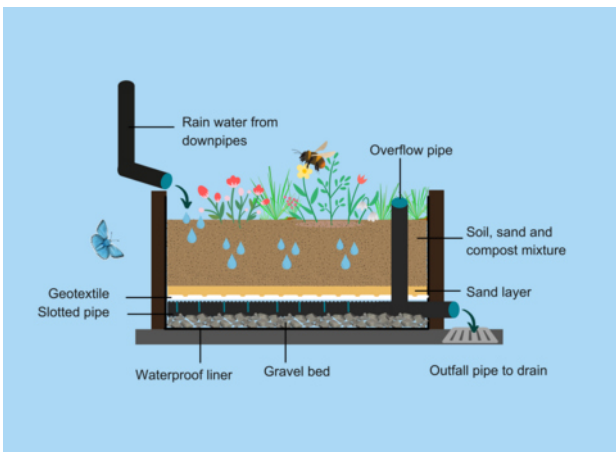
Even very small patches of new or improved habitat can count towards BNG and help improve habitat suitability and connectivity for wildlife. Below are some examples of small habitat creations which will count towards BNG:



#### Green roofs and walls

Green areas can be planted onto roofs (left) or walls, both of which can help with ecosystem services such as local climate regulation (cooling), slowing of rainwater runoff and sometimes insulating of the building in question. Well-chosen plants can thrive on flat, pitched or vertical surfaces, and the choice of drought-tolerant species such as Sedums helps the green surface to survive extreme dry weather.

[Image: Dreamstime]



#### Rain gardens

The problem of controlling rainwater runoff from built surfaces may be combined with provision of wildlife habitat by including rain gardens to take downpipe runoff. Drought-tolerant annuals or perennials that can survive occasional deluges are particularly good at supporting insect pollinators. They are also praised for the attractiveness of the flowers, which can improve people's quality of environment and access to nature.

[Image: GWT/Holly Turner]

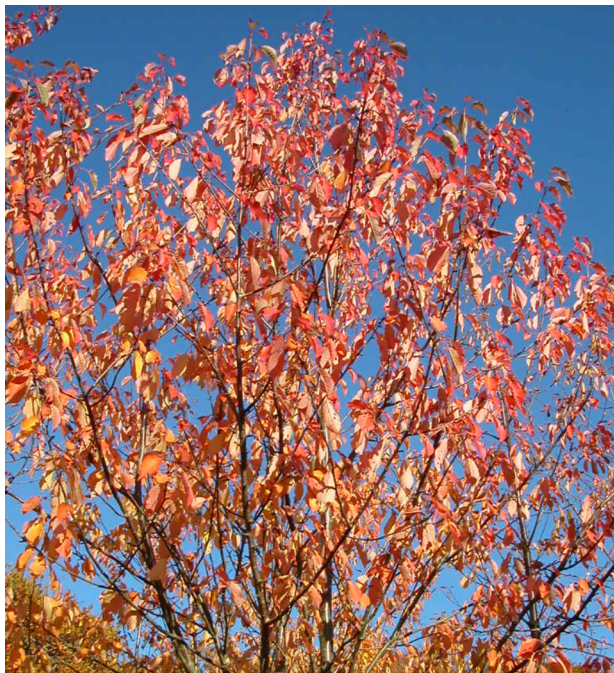


#### Wildflower planting

Even on sites where there is not room for a meadow creation scheme, cornfield annual or perennial meadow species can both be planted so as to improve pollinator habitat, join up insect feeding corridors and provide attractive, informal wildlife cover. Ground level planters, bioswales, field margins and vegetated gardens all count towards BNG. Clever use of species composition can create specialised habitats even at a small scale: for example, night-flowering perennials attract pollinating moths which in turn add a food source to bat feeding corridors.

[Image: GCER/Linda Moore]





### Example 1: a proposed large home office in a medium-sized, paved urban garden

The fictional site (right) has a 10m x 8m wildlife pond in only **moderate** condition, with a score of 0.07 biodiversity units. The pond (in orange) will be lost, and the lost habitat plus 10% Net Gain will be required. It must be an 'area' habitat, not linear. In this case a biodiverse green roof (shown in green) has been proposed (scoring 0.09 units) and two small rain gardens (blue). The total is 0.1 units - an acceptable increase on the original pond habitat.

### Ponds, tubs and swales

As with planted surfaces, it is acceptable to use non-traditional shapes, sizes or elevations of ponds and swales to create BNG. Ponds can be dug into gardens and lined, or created on an even smaller scale using pre-moulded liners. Ornamental tubs, baths, water planters and even suspended water containers can all support wetland vegetation and provide a home for aquatic insects, amphibians and feeding birds.

Left: creating a combined series of small ponds within a raised, planted rain garden

[Image: C Robson]

Bio-swales are usually at ground level and can be very large scale or simply run across the side of a garden to take storm water runoff. Attractive marsh vegetation or reeds can provide a feature that cleans surface water, catches silt, slows flooding and provides a wildlife habitat.

Left: newly-created swale with planting to both catch surface water and stabilise the banks.

[Image: Dreamstime]

### Specimen trees

The creation of new woodland and lengths of hedgerow would be very beneficial on a site that was large enough, given that these are target habitats for nature restoration in the Gloucester area. However, even a single tree may add to the BNG score on a new or enhanced small site. A category of 'individual tree' is available in the proposed habitat BNG metric, either for urban or rural settings.

Note that due to the long time it takes for larger species to grow to maturity (which is over 30 years and outside the longevity of BNG schemes), a non-standard BNG agreement might be needed in order to recognise the value of one or more individual trees. This is not a reason for avoiding them as a small-scale habitat intervention, especially shorter-lived species such as fruit trees.

[Image: Wild Cherry in a garden | Linda Moore]



## Tips for efficient small-scale BNG unit creation

**1 Reduce the need** to replace or repair habitats by choosing sites, and development layouts, carefully. This is especially important if more than one type of habitat is involved: for example, if hedgerows can be completely retained with no damage, linear BNG habitat replacement may be avoided, leaving more time and space for habitat area BNG.

**2 Plan ahead.** If habitat creation will be required, creating it in advance can help increase the biodiversity score due to the new or replacement habitat being in a better condition. It all helps to restore nature more quickly and effectively.

Example: using the main statutory Biodiversity Metric, an **urban intensive green roof** measuring 0.01 hectares and with low distinctiveness scores 2 (see below). If the condition is confirmed as Good, that is multiplied by 1.5 to 3. If it has medium strategic significance, there is an extra multiplier of 1.1. Other factors which may be entered include number of years the habitat has been created in advance, and whether there will be a delay. Thus even a very small area of new habitat will contribute more to the BNG (either on-site or off-site) if it is brought to a good condition in advance.

Project Name: Map Reference:		Area habitat summary	
A-2 On-Site Habitat Creation		Total Net Unit Change	0.00
Condense / Show Columns		Total Net % Change	0.00%
Condense / Show Rows		Trading Rules Satisfied	Yes ✓
Main Menu		Area Check	Area Acceptable ✓

Ref	Broad Habitat	Proposed habitat	Area (hectares)	Distinctiveness		Condition		Strategic significance				
				Distinctiveness	Score	Condition	Score	Strategic significance	Strategic significance	Strategic significance multiplier	Standard time to target condition (years)	Habitat in area (yr)
1	Urban	Intensive green roof	0.01	Low	2			Location ecologically desirable but not in local strategy	Medium strategic significance	1.1		
2												
3												

Screenshot taken from the first Statutory Biodiversity Metric Calculation Tool, November 29<sup>th</sup> 2023

**3 Keep up-to-date with BNG guidance.** This new element of the planning process was tested for the first time in 2024. The Biodiversity Metric and Small Sites Metric, and associated user guidelines, are likely to go through more updates after the first year of use. Only the most recent version of the calculation tools will satisfy the mandatory need to calculate biodiversity units. See the links at the top of this guidance sheet for downloads and support.

**4 Combine small features to create multi-use habitats.** A Sustainable Urban Drainage System (SUDS) may be created using a combination of bioswale, retention pond, small reedbed and porous pavers, adding value to the smaller interventions via thoughtful design. Likewise ponds, tubs and planters may be combined to increase the area of open water and vegetation on steep, awkward or inaccessible built environments. For example, a series of small, pre-moulded ponds might work well when set into a steep terraced garden where a larger pond would be impossible.

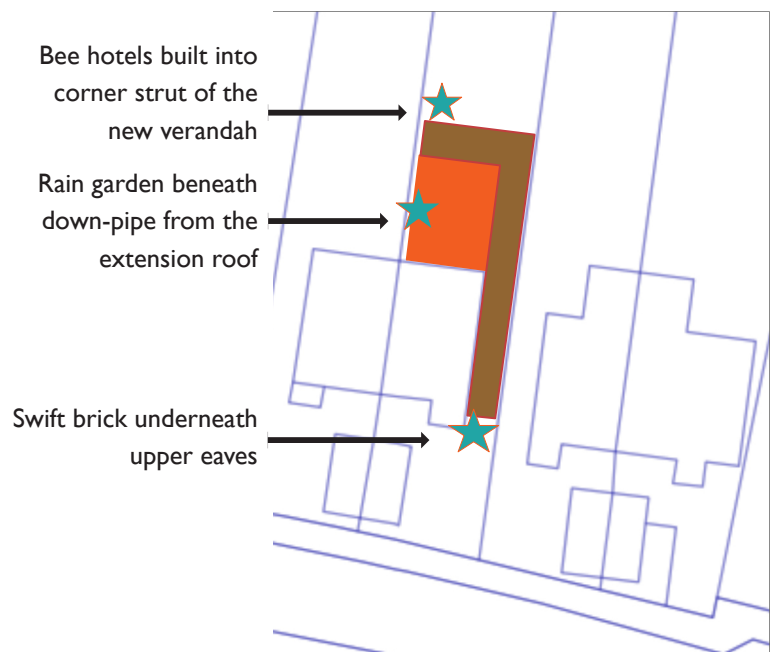
**5 Keep in mind long-term requirements.** BNG is not 'gain' unless the habitats in question remain in place long enough to achieve their final composition, structure and good condition. BNG will therefore be subject to auditing, and BNG agreements, whether on- or off-site, will involve long-term monitoring and maintenance. This should be borne in mind when making decisions about the best small-scale habitats to introduce.

### Example 2: proposed house extension, verandah and decking in a small garden

The fictional site (right) falls within the 'exempt' category as it is a householder application. It is also well below minimum site size, has no existing Priority Habitat or linear habitats, and no trees.

It is the policy of Gloucester City Council to recommend biodiversity gains even for sites outside of the mandatory Net Gain requirements. Small additions to developments and added garden habitats can help maintain habitat corridors, replace lost nesting habitats and complement more diverse habitats nearby.

In this case the house owners took the chance to install some permanent wildlife homes during the construction of the new extension and veranda.



## Other wildlife-friendly enhancements

Even developments such as Example 2, above, which are below the threshold for mandatory BNG, can still contribute to nature recovery, and it is the policy of Gloucester City Council to encourage this. All developments, whether exempt or not, can benefit from adding homes for wildlife, even if no actual habitat is initially present. The following additions don't add to BNG scores but are known to be particularly effective at encouraging wildlife in both urban and rural areas (links to more information are at the bottom of the page):



### Insect hotels

A range of insects require small, dry, hollow stalks, seeds or loose bark to hibernate in during harsh winter weather. Some need hollow stalks for nesting; a few use woody debris as hunting territory. Solitary bees, hibernating butterflies, lacewings, ladybirds and spiders will all use insect hotels.

Such habitats are easily created as a garden or craft project. Points to consider are positioning (it should be sunny, warm and open but sheltered from heavy rain and strong winds) and protection from predators. The creation on the left has a mesh cover to prevent bird predation.

[Image: Dreamstime]

### Artificial nests

**Swift bricks** are a good permanent solution to providing maintenance-free homes for swifts to return to each year. Two to four bricks are usually enough for a small to medium house. They should be installed high up, at least 5m off the ground and sheltered from strong sun and heavy rain. They should not be obstructed by trellis, ivy, fire escapes or window openings.

**Communal bird boxes** (left) are a step up from the usual garden nestbox: the most popular are 'sparrow terraces'. These can be mounted on a sheltered but accessible wall to encourage birds that do best when in a community.

It is best to reduce potential predator access, so try to place nestboxes high up, and avoid decorations which aid climbing.

[Image: RSPB sparrow terrace © RSPB]



## Roosts

Lightweight wool, woven or wooden **roosting pockets** can offer valuable safe roosting places for small birds in dangerously cold winter weather. Care should be taken to site these so that predators can't easily gain access.

**Bat bricks** can be included in new or renovated houses by simply replacing an existing brick. It should be in a warm place high up on the wall or under the eaves, with a good uninterrupted flight path and away from strong artificial light.

## Entry points

Habitat improvements are reduced in effectiveness if wild birds and animals can't get in and out of them. Fenced gardens are a particular problem in this respect. A hole at ground level with a diameter of around 13cm is enough to allow hedgehogs into and out of gardens. For flying wildlife, the occasional removal of excess vegetation can help birds and bats get safely to and from nestboxes without the risk of being either obstructed or ambushed by predators.

Useful links\* to specialist wildlife charities:

<https://www.buglife.org.uk/get-involved/gardening-for-bugs/building-for-bees/>

[https://www.swift-conservation.org/swift\\_bricks.htm](https://www.swift-conservation.org/swift_bricks.htm)

<https://www.bats.org.uk/our-work/buildings-planning-and-development/bat-boxes>

\* note that website links may change over time and downloads may change following updates

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Design and map:

Gloucestershire Centre for Environmental Records

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