



## Why we need a new Bristol Tree Replacement Standard

We believe the time has come to revise the Bristol Tree Replacement Standard (BTRS), to reflect our changing understanding of the vital importance of urban trees to Bristol.

The current Standard, adopted nearly a decade ago in July 2014, provides a mechanism for calculating the number of replacements needed for any trees that are removed for developments. It was ground-breaking in its time as it, typically, required more than 1:1 replacement of trees lost to development.

Since then, Natural England has published the [statutory version of the Biodiversity Metric](#) (SBNG) (on 29 November 2023), which will become mandatory when the balance of the Environment Act 2021 comes into force early in 2024. In addition, Bristol has adopted Climate and Ecological Emergency Declarations, so an updated BTRS would be an important part of implementing these declarations. It would require nearly all new developments to achieve a Biodiversity Net Gain (BNG) of at least 10%.

Although Councillors rejected our proposals for a new Standard at their [meeting on 31 October last](#), we've revisited our July 2023 proposals and recast our calculations. These proposals, set out below, provide a mechanism for complying with the new requirements and align the BTRS with the BNG provisions of the EA 2021.

The purpose of the BTRS is that it should only ever be a last resort and not the default choice - which, unfortunately, it has become. When considering any development involving established trees, the presumption should always be that trees will be retained. If this is not possible, then the impact of the proposed development must be mitigated. Only if this is impossible, should compensation for their loss be considered. This is the meaning of the Mitigation Hierarchy, as set out in [paragraph 180 a\) of the National Planning Policy Framework](#), which states:

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

This is reflected in the **Bristol Core Strategy, policy BCS9** (page 29), which states that:

*Individual green assets should be retained wherever possible and integrated into new developments.*

This is repeated in the proposed replacement for BCS9 - [Policy BG1: Green infrastructure and biodiversity in new development](#) (page 124) - which 'aims to ensure that green and blue infrastructure and provision for nature is incorporated into new development' so that, among other things:

*The provision of green infrastructure in new development should ... Retain and incorporate important existing green infrastructure such as trees (Policy BG4 'Trees'), hedgerows and water features ...*



It is a shame that the requirement is only an aspiration, not an obligation.

## Background

Under the new proposed policy - [BG4: Trees](#) (page 131) - trees lost to development will be replaced using this table:

Trunk diameter of tree lost to development (cm measured at 1.5 m)	Number of replacement trees <sup>4</sup>
7 – 19.9	1
20 – 29.9	2
30 – 39.9	3
40 – 49.9	4
50 – 59.9	5
60 – 69.9	6
70 – 79.9	7
80+	8

<sup>4</sup>See also Biodiversity Net Gain requirements, which may require a higher level of provision.

*Table 1 The proposed BG4 tree replacement table.*

However, when the balance of EA 2021 takes effect, the current version of the BTRS will not, in most cases, be enough to achieve the 10% BNG minimum required for nearly all developments. A new Section 90A and Schedule 7A will be added to the [Town and Country Planning Act 1990](#) and will set out the level of BNG required.

The [Draft BNG planning practice guidance](#) states:

*Under the statutory framework for biodiversity net gain, every grant of planning permission is deemed to have been granted subject to a general biodiversity gain condition to secure the biodiversity gain objective. This objective is to deliver at least a 10% increase in relation to the pre-development biodiversity value of the development granted permission ...*

Many development proposals will aim to achieve more the minimum 10% gain voluntarily. Others may not but will still need to achieve much more in order to comply with the [SBNG trading rules](#) (page 140). This is based on the habitat type lost and its distinctiveness. In the case of Individual tree habitats - Urban or Rural - losses must be replaced within the same broad habitat (i.e. more Individual trees) or with a habitat of a higher distinctiveness.

However, for the sake of certainty, we propose only using the minimum 10% BNG required.

## Our proposed new BG4 (BTRS) model

We propose that the table in BG4 be amended to reflect the requirements of the EA 2021 and



SBNG and that the BG4 table (Table 1 above) be replaced with Table 2 below:

Statutory BNG			BTRS Obligation
Category	DBH (cm)	Area (ha)	Replacement Trees Required
Small	greater than 7.5cm and less than or equal to 30cm	0.0041	2
Medium	greater than 30cm and less than or equal to 60cm	0.0163	5
Large	greater than 60cm and less than or equal to 90cm	0.0366	10
V. Large	greater than 90cm	0.0765	21

*Table 2 Our proposed BG4 tree replacement requirement*

The Replacement Trees Required number is based on the habitat area of each of the four SBNG tree category sizes (Table 13 below), divided by the area habitat of one BNG 4.0 Small category tree (see section 3 below) plus a 10% net gain. This is rounded up to the nearest whole number, since you can't plant a fraction of a tree.

The reasoning for our proposal is set out below:

### 1. Applying the Biodiversity Metric to Urban trees

The most recent SBNG guide, published by Natural England on 29 November 2023, defines trees as Individual trees habitats as follows:

#### ***When to record individual trees***

*Use the broad habitat type 'Individual trees' to record trees where:*

- they are found as an individual or as part of a group
- are over 7.5cm in diameter at breast height (DBH).

*Individual trees should also be recorded where they meet the definition of an irreplaceable habitat but would not otherwise be recorded.*

*Do not otherwise record individual trees if they occur within an area habitat type characterised by the presence of trees, examples of these are:*

- woodlands



- orchards
- wood-pasture and parkland

Individual trees are classed as ‘urban’ or ‘rural’. You should consider the degree of ‘urbanisation’ of habitats around the tree and assign the best fit for the location.

## 2. Calculating Individual trees habitat

Table 13 in the SBNG User Guide is used to calculate the ‘area equivalent’ of individual trees:

The biodiversity metric uses set values to represent the area of trees depending on their diameter at breast height. This value is a representation of canopy biomass, and is based on the root protection area formula, derived from [BS 5837:2012](#).

Table 13 sets out class sizes of trees and their area equivalent.

**Table 13 Tree size classes and area equivalents**

Size class	Diameter at breast height (cm)	Biodiversity metric area equivalent (ha)
Small	greater than 7.5cm and less than or equal to 30cm	0.0041
Medium	greater than 30cm and less than or equal to 60cm	0.0163
Large	greater than 60cm and less than or equal to 90cm	0.0366
Very large	greater than 90cm	0.0765

You should report the number of individual trees within your project and input tree count into the ‘tree helper’ within the biodiversity metric tool to generate area values for data input. For multi-stemmed trees, use the DBH of the largest stem. You should:

- account for each individual tree within a group or block of trees
- record the habitat underneath the tree canopy separately
- not reduce any area generated by the tree helper
- not deduct the area of individual trees from other habitats
- make clear in the user comments how many trees contribute towards the total area.

### Recording trees within private gardens

You should assess most individual trees that are recorded in private gardens. You should record:

- any medium, large and very large trees as individual trees
- any small trees that are ancient or veteran.



### **Recording trees within hedgerows**

*You should assess most individual trees that are recorded within hedgerows. You should record:*

- *any medium, large and very large trees as individual trees*
- *any small trees unless they are ancient or veteran.*

*You must assess the linear value of hedgerows within the hedgerow module separately.*

Individual Tree habitats have medium distinctiveness and so, under Rule 1 of SBNG, '*Losses must be replaced by area habitat units of either medium band habitats within the same broad habitat type or, any habitat from a higher band from any broad habitat type.*'

### **3. Forecasting the post-development area of Individual trees**

The SBNG User Guide provides this guidance:

*You should use the tree helper to calculate the area for created trees.*

*You should categorise most newly planted individual trees as 'small', unless the tree is medium sized or above at the time of planting.*

*You should not factor in the age of nursery stock when using the 'creation in advance' function. The 'creation in advance' function should only be used where trees are planted in advance of the development (for example, as screening or as structural landscaping).*

#### **Exceptions**

*You cannot count:*

- *newly planted trees within private gardens*
- *natural size increases of baseline trees*
- *trees planted as part of hedgerow creation or enhancement as individual trees.*

Our calculations are based on *Small* category replacement trees being planted. We calculate that only semi-mature Nursery Stock trees grown in accordance with BS 3936-1 will become *Medium* category trees in moderate condition after the 30 years projected under SBNG.

### **4. The likely impact of this policy change**

We have analysed tree data for 1,038 surveyed trees taken from a sample of BS:5837 2012 tree surveys submitted in support of previous planning applications. Most of the trees in this sample, 60.5%, fall within the SBNG *Small* tree category, 32.9% are within the *Medium* tree category, 5.4% are in the *Large* tree category with the balance, 1.3%, being categorised as *Very Large*.

Table 4 below sets out the likely impact of the proposed changes to BG4. It assumes that all these trees were removed (though that was not the case for all the planning applications we sampled) and replaced with SBNG *Small* category trees:



SBNG Category	Tree Analysis		BG4 Impact		Habitat (ha)	
	Sample Tree Count	% Share	Current Policy	New Policy	Current Policy	New Policy (Small Tree)
Small	628	60.5%	957	1,246	4.32	5.62
Medium	341	32.9%	1,248	1,705	5.63	7.69
Large	56	5.4%	380	560	1.71	2.53
V. Large	13	1.3%	104	273	0.47	1.23
<b>Totals</b>	<b>1,038</b>	<b>100%</b>	<b>2,689</b>	<b>3,784</b>	<b>12.13</b>	<b>17.07</b>

Table 3 Proposed BG4 impact analysis.

The spreadsheet setting out the basis of our calculations can be downloaded here - [RPA Table Statutory BNG 13 table Comparison](#).

**Bristol Tree Forum**  
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