21/05219/F | Plot 5 Bedminster Green, Hereford Street, Clarke Street, Whitehouse Lane, Bristol BS3 4NA

The Bristol Tree Forum remains unable to support this application as currently formulated. Our reasons are as follows:

1. The Bristol Highways Department (Highways) has removed 15 trees and a number of other habitats (mixed scrub/hedging), on or near the proposed development site. Whilst Highways always planned to remove some of these trees, the applicant had identified others to be retained.
2. The applicant's evidence is out of date:
   a. The arboricultural evidence (AIA) is based on a survey undertaken on 15 June 2018 and 16 March 2021,[1] but trees continue to grow and so their habitat value has increased since then.
   b. The ecological field surveys were conducted on 27 May 2020, March 2021 and updated in September 2021,[2] more than two-and-a-half years ago. Since then, works have been undertaken on the adjacent highway, development has continued on nearby sites, trees have been removed, and onsite habitat has been destroyed.
3. The Malago River restoration proposals have now been published: 23/00611/FB | *Proposed restoration of a section of the River Malago, including bringing the existing underground river back above ground, replacing some channel walls with vegetated embankments, in-channel improvements, public realm improvements, including construction of new seating and associated landscaping*. The evidence within this application is therefore no longer aligned with the more recent evidence produced in support of the recent Malago River restoration proposals.[3]
4. The Biodiversity Metric Model used by the applicant – BNG 3.0 – (which the applicant has yet to produce) has now been superseded by BNG 3.1, which has corrected many of the known flaws identified in BNG 3.0, not least the methodology used to calculate Urban

[1] 21_05219_F-ARBORICULTURAL_ASSESSMENT-3044804
[2] 21_05219_F-ECOLOGICAL_APPRAISAL-3045128
[3] 23_00611_FB-RIVER_CONDITION_SURVEY_AND_BIODIVERSITY_NET_GAIN__BNG__ASSESSMENT-3398650

tree habitat areas.

5. This BNG 3.1 model has been produced as part of the Malago River restoration proposals. As a result, the premises and parameters upon which these closely interlinked habitats have been assessed are no longer aligned. Given this close interconnection between the sites, it is important that these proposals are each assessed using the same metric.

We also note the following:

1. The applicant's calculation – which we have had to undertake based on what little evidence the applicant has produced – fails to comply with the BNG 3.0 Trading Rule requirements. Medium Distinctiveness habitats have not been replaced in accordance with Rule 3 of the BNG 3.0 User Guide, which requires that: '*Trading down' must be avoided. Losses of habitat are to be compensated for on a "like for like" or "like for better" basis. New or restored habitats should aim to achieve a higher distinctiveness and/or condition than those lost'.*
2. The applicant has failed to set out the methodology used to calculate baseline *Urban tree* habitat areas.
3. The area of the development footprint and the habitat creation exceeds the area of the habitat lost by 0.03 hectares, which is contrary to the requirements of BNG 3.0/3.1.

Tree removal by Bristol Highways Department

Highways has been undertaking works on Malago Road. This has resulted in the removal of 15 trees identified in the applicant's AIA – T19, G2.2 – G2.11, G6.9, G6.11, G6.13 & G6.14. The technical reasons for the removal of these trees are unclear, but we assume this was necessary to facilitate these highways works. Many of these trees appear to have been growing within the applicant's proposed redline development area. Some were not identified for removal in the application.

We are advised that Highways plans to comply with DM17. We calculate that 54 BTRS[4] trees will be required to replace what has been lost, but it remains unclear if *all* the trees removed by Highways will indeed be replaced.

Taken together, these trees had a BNG 3.1 *Urban tree* habitat area of 0.1298 hectares, which we have valued at 1.1426 BNG 3.1 Habitat Units – each being of Medium distinctiveness, in Moderate condition and growing in an area of Medium strategic significance.

If they are to be replaced under BNG 3.1, then 279 Standard-sized trees will need to be planted, each of which would need to grow into a BNG 3.1 Small-category tree with an *Urban tree* habitat area of 0.0041 hectares after 30 years. This assumes that all the trees planted survive for 30 years. If a 10% net gain were required, then 307 such trees would have to be planted.

As highways projects are treated as Permitted Development, we understand that there is no obligation for Highways to comply either with national or local planning policies in this regard.

[4] Bristol Tree Replacement Standard.

As a result, the Biodiversity losses we have identified will not be compensated for and Bristol will suffer yet a further decline in both tree cover and biodiversity.

Compliance with the BNG 3.1 Trading Rules

We ask that the LPA exercise its discretion[5] and require the applicant to update its arboricultural and ecological evidence and to recast its BNG calculation using BNG 3.1.

We have recast our Biodiversity Metric calculation using BNG 3.1, which we submit with these further comments. In particular, this uses the methodology set out at paragraph 7.9 of the BNG 3.1 User Guide for the baseline *Urban tree habitat* area, which advises:

> *The area calculation for Urban trees is worked out using the Root Protection Area (RPA) (British Standards Institution, 2012)44 formula* ***area = π × r2*** *where* ***r*** *is twelve times the tree's Diameter at Breast Height (DBH) for a single stemmed tree. For multi-stemmed trees the DBH of the largest stem in the cluster should be used to determine radius (****r****).*
>
> - *Where detailed measurements are available to the assessor, through an Arboricultural Impact Assessment (AIA) or similar, these measurements should be used to determine the area measurement for use with the biodiversity metric.*
> - *The area of all trees within the project boundary should be accounted for, regardless whether a tree would require root protective measures or not. Therefore, DBH values within AIA reports should be used to calculate area*

Our BNG 3.1 baseline *Urban tree* habitat area calculation is set out at Appendix 1.

Given the above, we have also recalculated the number of BTRS trees required under DM17 to be 74 trees needed to compensate for the 38 trees which will be lost. The applicant plans to plant 19 trees within Dalby Avenue Open Space plus another 20 elsewhere on the development site, making a total of 39 new trees planned.

Whilst this is enough to satisfy the requirements of DM17, we calculate that there will still be a net loss of *Urban tree* habitat of 0.87 units, which will need to be replaced in order to comply with the BNG 3.1 Trading Rules.

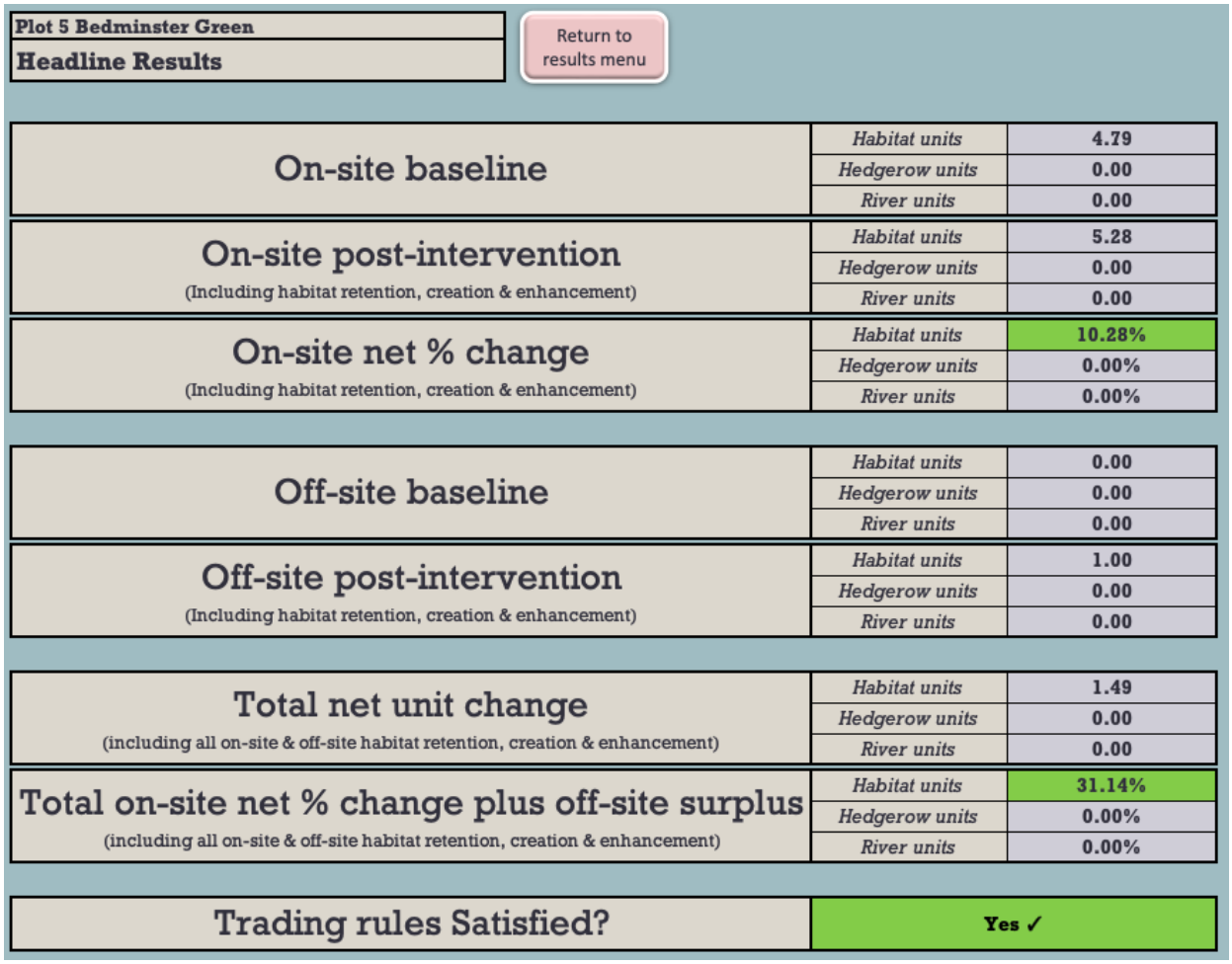
To ensure that these are complied with, we calculate that a further 71 Standard-sized trees need to be planted offsite in order to achieve BNG 3.1 Urban tree Small-category habitat size after 30 years (assuming that none have died in the meantime).

In addition, 0.01 hectares each of Broad habitat *Heathland and shrub* (we have used *Mixed shrub* habitat, which has Medium Distinctiveness, in our calculation) and Lakes - *Ponds (Non-Priority Habitat)* habitat will also need to be created to comply with the BNG 3.1 Trading Rules.

[5] http://publications.naturalengland.org.uk/publication/6049804846366720 - 'Users of the previous Biodiversity Metric 3.0 should continue to use that metric (unless requested to do otherwise by their client or consenting body) ...'

Save for this, we have adopted all the other areas and parameters used by the applicant in its BNG 3.0 calculation.

On this basis, in order to comply with the BNG 3.1 Trading Rules, we calculate that the proposed development needs to turn a **10.28%** net habitat gain into a **31.14%** net habitat gain.



Plot 5 Bedminster Green

Headline Results

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On-site baseline	*Habitat units*	4.79
	Hedgerow units	0.00
	River units	0.00
On-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	5.28
	Hedgerow units	0.00
	River units	0.00
On-site net % change (Including habitat retention, creation & enhancement)	*Habitat units*	10.28%
	Hedgerow units	0.00%
	River units	0.00%
Off-site baseline	*Habitat units*	0.00
	Hedgerow units	0.00
	River units	0.00
Off-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	1.00
	Hedgerow units	0.00
	River units	0.00
Total net unit change (including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	1.49
	Hedgerow units	0.00
	River units	0.00
Total on-site net % change plus off-site surplus (including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	31.14%
	Hedgerow units	0.00%
	River units	0.00%
Trading rules Satisfied?	Yes ✓	

Figure 1: Headline BNG 3.1 Calculation

Appendix 1

Methodology used to calculate the baseline habitat area of the *Urban tree habitat* on the development site.

Trees included in the Malago River restoration Scheme				
Trees removed by Highways				
Tree Count	**Trees Removed**	**Baseline RPA (ha)**	**RPA removed (ha)**	**RPA Retained (ha)**
62	**38**	**0.4161**	**0.1519**	**0.2641**

Tree ID	Tree Count	Trees Removed	DBH (cm)	RPA (m^2)	Baseline RPA (ha)	RPA removed (ha)	RPA Retained (ha)
T11	1	1	40	72.38	0.0072	0.0072	0.0000
T12	1	1	38	65.33	0.0065	0.0065	0.0000
T13	1	1	20	18.10	0.0018	0.0018	0.0000
T14	1	1	21	19.95	0.0020	0.0020	0.0000
T15	1	1	13	7.65	0.0008	0.0008	0.0000
T16	1	1	21	19.95	0.0020	0.0020	0.0000
T17	1	1	36	58.63	0.0059	0.0059	0.0000
T19							
T20							
T21							
G2							
G.2.1	1	1	32	46.32	0.0046	0.0046	0.0000
G2.2							
G2.3							
G2.4							
G2.5							
G2.6							
G2.7							
G2.8							
G2.9							
G2.10							

Tree ID	Tree Count	Trees Removed	DBH (cm)	RPA (m^2)	Baseline RPA (ha)	RPA removed (ha)	RPA Retained (ha)
G2.11							
G3							
G3.1	1	1	12	6.51	0.0007	0.0007	0.0000
G3.2	1	1	18	14.66	0.0015	0.0015	0.0000
G3.3	1	1	10	4.52	0.0005	0.0005	0.0000
G3.4	1	1	10	4.52	0.0005	0.0005	0.0000
G3.5	1	1	10	4.52	0.0005	0.0005	0.0000
G3.6	1	1	45	91.61	0.0092	0.0092	0.0000
G3.7	1	1	18	14.66	0.0015	0.0015	0.0000
G3.8	1	1	13	7.65	0.0008	0.0008	0.0000
G3.9	1	1	22	21.90	0.0022	0.0022	0.0000
G3.10	1	1	29	38.05	0.0038	0.0038	0.0000
G3.11	1	1	24	26.06	0.0026	0.0026	0.0000
G3.12	1	1	13	7.65	0.0008	0.0008	0.0000
G3.13	1	1	16	11.58	0.0012	0.0012	0.0000
G3.14	1	1	40	72.38	0.0072	0.0072	0.0000
G3.15	1	1	28	35.47	0.0035	0.0035	0.0000
G3.16	1	1	30	40.72	0.0041	0.0041	0.0000
G3.17	1	1	11	5.47	0.0005	0.0005	0.0000
G3.18	1	1	17	13.07	0.0013	0.0013	0.0000
G3.19	1	1	11	5.47	0.0005	0.0005	0.0000
G3.20	1	1	20	18.10	0.0018	0.0018	0.0000
G3.21	1	1	14	8.87	0.0009	0.0009	0.0000
G3.22	1	1	25	28.27	0.0028	0.0028	0.0000
G3.23	1	1	65	191.13	0.0191	0.0191	0.0000
G4							
G4.1	1	1	26	30.58	0.0031	0.0031	0.0000
G4.2	1	1	20	18.10	0.0018	0.0018	0.0000
G5							
G5.1	1	0	28	35.47	0.0035	0.0000	0.0035
G5.2	1	1	26	30.58	0.0031	0.0031	0.0000
G6							
G6.1	1	0	42	79.80	0.0080	0.0000	0.0080
G6.2	1	0	46	95.73	0.0096	0.0000	0.0096
G6.3	1	0	39	68.81	0.0069	0.0000	0.0069
G6.4	1	0	41	76.05	0.0076	0.0000	0.0076
G6.5	1	0	39	68.81	0.0069	0.0000	0.0069
G6.6	1	0	34	52.30	0.0052	0.0000	0.0052

Tree ID	Tree Count	Trees Removed	DBH (cm)	RPA (m^2)	Baseline RPA (ha)	RPA removed (ha)	RPA Retained (ha)
G6.7	1	0	47	99.93	0.0100	0.0000	0.0100
G6.8	1	0	42	79.80	0.0080	0.0000	0.0080
G6.9							
G6.10	1	0	38	65.33	0.0065	0.0000	0.0065
G6.11							
G6.12	1	0	37	61.93	0.0062	0.0000	0.0062
G6.13							
G6.14							
G6.15	1	0	26	30.58	0.0031	0.0000	0.0031
G7							
G7.1	1	1	16	11.58	0.0012	0.0012	0.0000
G7.2	1	0	28	35.47	0.0035	0.0000	0.0035
G7.3	1	1	71	228.05	0.0228	0.0228	0.0000
G7.4	1	0	13	7.65	0.0008	0.0000	0.0008
G7.5	1	1	65	191.13	0.0191	0.0191	0.0000
G8							
G8.1	1	1	25	28.27	0.0028	0.0028	0.0000
G8.2							
G10							
G10.1							
G10.2							
G11							
G11.1							
G11.2							
G11.3							
G11.4							
G11.5	1	0	35	55.42	0.0055	0.0000	0.0055
G11.6	1	0	58	152.18	0.0152	0.0000	0.0152
G11.7	1	0	49	108.62	0.0109	0.0000	0.0109
G11.8	1	0	52	122.33	0.0122	0.0000	0.0122
G11.9	1	0	63	179.55	0.0180	0.0000	0.0180
G11.10	1	0	75	254.47	0.0254	0.0000	0.0254
G12							
G12.1							

Tree ID	Tree Count	Trees Removed	DBH (cm)	RPA (m^2)	Baseline RPA (ha)	RPA removed (ha)	RPA Retained (ha)
G12.2							
G12.3							
G12.4							
G12.5							
G12.6							
G12.7							
G12.8							
G12.9							
G12.10							
G12.11							
G12.12							
G12.13							
G13							
G13.1	1	0	81	296.81	0.0297	0.0000	0.0297
G13.2	1	0	92	382.90	0.0383	0.0000	0.0383
G14							
G14.1	1	0	53	127.08	0.0127	0.0000	0.0127
G14.2	1	0	48	104.23	0.0104	0.0000	0.0104