



## Bristol Tree Forum - Additional comments

**21/01331/F - Caravan Club, Cumberland Road, Bristol BS1 6XG - Erection of residential dwellings (166), commercial floorspace, integrated car and bicycle parking, refuse storage, landscaping and associated infrastructure and services.**

Our previous comments were as follows:

### 1 May 2021

*The Bristol Tree Forum objects to this application as currently formulated. The application:*

- *Does not comply with Bristol Core Strategy (BCS9), Development Management Policies (DM15, DM17 and DM19) or provisions set out in the Bristol Central Area Plan, adopted in March 2015 (Policy BCAP41<sup>1</sup>).*
- *Does not apply the environmental objectives of the NPPF.*
- *Is contrary to Bristol City Councils declarations of Climate and Ecological Emergencies and commitments made in the One City Plan to be Carbon Neutral by 2030 and to double tree canopy cover by 2046.*
- *Does not make the required mitigation for the proposed loss of trees.*

### 23 July 2021

*The Bristol Tree Forum continues to object to this application as currently formulated. Our reasons remain the same. In summary this is because planning policy BCS9 states that individual green assets should be retained wherever possible and integrated into new developments. This has not been done, despite the developer being directly owned by the council, and therefore especially responsible for setting an example by following its own local planning policies.*

These documents, along with the other 306 comments made to date about this application, can also be found here - <https://bristoltrees.space/Planning/application/QPSRENDN0DG00>.

We have also written a blog on the issue: [Baltic Wharf Caravan Park: a controversial planning proposal](#).

---

<sup>1</sup><https://www.bristol.gov.uk/documents/20182/34540/BCAP%20Adopted%20March%202015%20-%20Main%20Document%20&%20Annex%20-%20Web%20PDF.pdf/d05a0c22-ab91-4530-926a-f26160ab72a5> - page 71.



## Additional comments

We make the following additional comments in the light of the applicant's new Arboricultural Impact Assessment (AIA) dated September 2021 (based on a new survey done in early June 2021) and their newly published Biodiversity Metric 3.0 calculation (BNG3.0), 21\_01331\_F-BIODIVERSITY\_METRIC-3047887.xlsm.

We are pleased to see that the applicant has finally provided data for each individual tree on or proximate to the site (see appendix A of the AIA) and that they have now adopted the latest BNG model published by Natural England in their net gain calculations.

However, we are still unable to support this application for the following reasons:

### 1. Bristol Tree Replacement Standard (BTRS) calculation anomalies

We accept that there are 102 trees growing on the site. The AIA also refers to three tree groups - though only one is listed in the table at appendix A. We can only identify one, G1. This comprises 4 trees and is on the south-east corner of the site. As it is off-site and the trees are not earmarked for removal, we have not included these trees in our calculations.

Whilst the AIA states that 82 trees will be removed, we can only identify 79 (see the table at paragraph 3.6 of the AIA). This difference needs to be clarified.

The removal of these trees will result in a requirement to replace what is lost with 222 trees under BTRS (Appendix 1). The AIA states that the BTRS compensation calculation is 227 replacements. This difference also needs to be resolved. It is proposed to plant 65 trees on site. This means that the remaining 162 replacements will need to be funded under an S106 agreement, but we calculate that only 157 replacements will need to be funded.

We note that the Goram Homes say that 10 trees will be planted nearby, but it is hard to think where this might be (or that any of the 222 replacements might be accommodated within a mile of this site), especially given that the only sites available around the harbourside are already earmarked for development (The nearby SS Great Britain car park, one of the last remaining 'open spaces' on the island, has already been identified).

There may be planting opportunities within one mile, but these are not likely to be within the ward, or indeed within the city centre where they are most needed - canopy cover is about 7% around the floating harbour and 10% in the city centre as a whole<sup>2</sup>. It is also possible that, with the current consultation on the so-called 'Western Harbour' development, any trees planted will be removed within the next few years to make way for subsequent development anyway.

---

<sup>2</sup> <https://bristoltrees.space/trees/treecover-map.xq>.



Even if new planting sites are found nearby, it is likely that they will need planting pits to be installed, which will add considerably to any S106 compensation that may be required.

## 2. Biodiversity Net Gain calculation anomalies

We note that the BNG3.0 calculation uses tree canopy cover calculated at 0.2564 hectares. We assume that this includes the 11 trees growing within H3<sup>3</sup> which is treated as part of linear habitat baseline calculation for *Native Hedgerow with trees*. This would explain why only 0.2 hectares of Urban Tree habitat has been allocated to the baseline A-1 Site Habitat Baseline calculation.

On the basis of the data set out in Appendix A of the AIA, we have calculated the combined tree canopy cover, including these 11 trees in H3, as 0.3741 hectares. Our calculation is based on the average canopy radius for each of the 102 trees surveyed. If the 11 trees in H3 are excluded, then the canopy area is 0.3357 hectares.

On the basis that the development site area is 0.85 hectares<sup>4</sup>, this means that the canopy cover of the site is about 44% or 39% respectively.

However, BNG3.0 does not calculate habitat areas using tree canopy (though we have argued that it should<sup>5</sup>). It has adopted the Root Protection Area (RPA) calculation used in BS5837:2012 which calculates RPA radius as 12 times the stem diameter (in centimetres) of each tree and then assigns the RPA of each tree to one of three categories - Small (trees with a stem diameter of 10 cm), Medium (trees with a stem diameter of 30 cm) and Large (trees with a stem diameter of 50 cm). How each tree surveyed is allocated to one of these three tree sizes is not stated, but we have assigned each tree to one of these three groups on this basis:

- Small tree = <20cm stem diameter
- Medium tree = >=20cm & <40cm stem diameter
- Large tree = >=40cm stem diameter

Also, given that overall, total RPA is 40% larger than combined RPA canopy cover - evidence that the canopy of these trees has been reduced over the years - we take the view that, in this case, RPA is a better measure of the habitat value of these trees than residual canopy cover.

Using this approach, we have calculated the combined the RPA of all the trees on site (excluding the 11 trees in H3) as 0.4899 hectares, of which 0.0769 hectares will be retained and 0.413 hectares will be removed.

---

<sup>3</sup> T42 & T44 and T94-T102.

<sup>4</sup> <https://bristoltrees.space/Tree/sitecode/BCCA-7304>.

<sup>5</sup> <https://bristoltreeforum.org/2021/07/25/valuing-our-urban-trees/>.



We note that the BNG3.0 calculation has assigned a Poor condition to the trees on site. This is based on the Condition Assessment Criteria set out in Biodiversity Metric 3.0 Technical Supplement, which uses this table as part of the assessment process:

| Score     | Condition Assessment Criteria  |
|-----------|--|
| 1         | More than 70% of trees are native species.   |
| 2         | Tree canopy is predominantly continuous with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide.  |
| 3         | More than 50% of trees are mature <sup>2</sup> or veteran <sup>3</sup> .   |
| 4         | There is little or no evidence of an adverse impact on tree health by anthropogenic activities such as vandalism or herbicide use. There is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height. |
| 5         | Management regime has encouraged micro habitat sites for birds, mammals and insects e.g. presence of deadwood, cavities or loose bark etc.   |
| 6         | Trees are immediately adjacent to other vegetation, and tree canopies are oversailing vegetation beneath.  |
| Condition | FC Condition Assessment Score  |
| Good      | Passes 5 or 6 of 6 criteria  |
| Moderate  | Passes 3 or 4 of 6 criteria  |
| Poor      | Passes 0, 1 or 2 of 6 criteria   |

In our view the trees on this site meet at least three of the above criteria and so should be assigned a Moderate condition score - *the majority of the trees are natives, more than 50% of the trees are mature, having been planted at least 30 years ago, and there is little or no evidence of an adverse impact on tree health by anthropogenic activities such as vandalism or herbicide use. There is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height. Arguably, criteria 6 (Trees are immediately adjacent to other vegetation, and tree canopies are oversailing vegetation beneath) also applies.*

In addition, the state of the trees as set out in Appendix A of the AIA shows that the majority are either mature (2/102) or middle-aged (98/102), are in good to fair condition (100/102). As a result, the majority of the trees (67/102) have been assigned category A or B under BS5837:2012. Taken as a whole this collection should not be described as being in Poor condition.

On this basis, we have calculated the baseline Habitat Units (HU) for the trees on the site as 4.31 with a loss of habitat of 3.63 HUs on the basis of the current proposals.

We have adopted all the remaining baseline habitats and the habitat creation proposals made



by the applicant, save that we have:

- allowed for 65 Small trees to be planted on site, which will provide an eventual Urban Tree habitat area of 0.0294 hectares after 27 *time-to-target* years have elapsed
- allowed for off-site habitat creation as a result of the 157 Small replacement trees being planted under BTRS after a delay of 3 years<sup>6</sup> from the loss of the habitat. This will result in an eventual Urban Tree habitat area of 0.0710 hectares after 30 *time-to-target* years have elapsed.

However, even with these additions, the current proposals still fail to meet even the minimal zero percentage net gain habitat and hedgerow habitat units required for biodiversity net gain required by the local planning authority (let alone the 10% net gain envisaged by the Environment Bill as currently proposed).

We calculated the headline percentage biodiversity net gain as follows:

|   |                            |         |
|---|----------------------------|---------|
| On-site baseline  | <i>Habitat units</i>       | 4.51    |
|   | <i>Hedgerow units</i>      | 1.62    |
|   | <i>River units</i>         | 0.00    |
| On-site post-intervention<br><small>(including habitat retention, creation &amp; enhancement)</small>   | <i>Habitat units</i>       | 1.87    |
|   | <i>Hedgerow units</i>      | 0.56    |
|   | <i>River units</i>         | 0.00    |
| On-site net % change<br><small>(including habitat retention, creation &amp; enhancement)</small>  | <i>Habitat units</i>       | -58.47% |
|   | <i>Hedgerow units</i>      | -65.29% |
|   | <i>River units</i>         | 0.00%   |
| Off-site baseline   | <i>Habitat units</i>       | 0.00    |
|   | <i>Hedgerow units</i>      | 0.00    |
|   | <i>River units</i>         | 0.00    |
| Off-site post-intervention<br><small>(including habitat retention, creation &amp; enhancement)</small>  | <i>Habitat units</i>       | 0.21    |
|   | <i>Hedgerow units</i>      | 0.00    |
|   | <i>River units</i>         | 0.00    |
| Total net unit change<br><small>(including all on-site &amp; off-site habitat retention, creation &amp; enhancement)</small>                            | <i>Habitat units</i>       | -2.42   |
|   | <i>Hedgerow units</i>      | -1.06   |
|   | <i>River units</i>         | 0.00    |
| Total on-site net % change plus off-site surplus<br><small>(including all on-site &amp; off-site habitat retention, creation &amp; enhancement)</small> | <i>Habitat units</i>       | -53.72% |
|   | <i>Hedgerow units</i>      | -65.29% |
|   | <i>River units</i>         | 0.00%   |
| Trading rules Satisfied?  | No - Check Trading Summary |         |

This is why we are still unable to support this proposal.

<sup>6</sup> We have assumed that the habitat will be destroyed at the start of construction, that it will then take two years for construction to be completed and a further year before any s106 funds agreed can be allocated to the next season's winter tree planting.



Our detailed analysis is available here - [BNG3.0 Calculation](#).

**Bristol Tree Forum**

**06 October 2021**



## Appendix 1 - the BTRS calculation

Trees on site: 102  
 Proposed trees removals: 79  
 BTRS compensatory trees: 222

| Tree ID | Tree Category | Tree Count | Trees Removed | DBH (cm) | BTRS Trees x Tree Count |
|---------|---------------|------------|---------------|----------|-------------------------|
| T1      | B ,2          | 1          | 1             | 29       | 2                       |
| T2      | C ,2          | 1          | 1             | 18       | 1                       |
| T3      | C ,2          | 1          | 1             | 17       | 1                       |
| T4      | C ,2          | 1          | 1             | 21       | 2                       |
| T5      | B ,2          | 1          | 1             | 34       | 3                       |
| T6      | B ,2          | 1          | 1             | 33       | 3                       |
| T7      | B ,2          | 1          | 1             | 39       | 3                       |
| T8      | B ,2          | 1          | 0             | 30       | 0                       |
| T9      | B ,2          | 1          | 1             | 38       | 3                       |
| T10     | C ,2, 3       | 1          | 1             | 79       | 7                       |
| T11     | C ,2, 3       | 1          | 1             | 65       | 6                       |
| T12     | C ,2          | 1          | 0             | 30       | 0                       |
| T13     | B ,2          | 1          | 0             | 48       | 0                       |
| T14     | C ,2          | 1          | 0             | 31       | 0                       |
| T15     | B ,2          | 1          | 0             | 36       | 0                       |
| T16     | C ,2          | 1          | 0             | 21       | 0                       |
| T17     | B ,2          | 1          | 0             | 29       | 0                       |
| T18     | C ,2          | 1          | 1             | 28       | 2                       |
| T19     | C ,2          | 1          | 0             | 9        | 0                       |
| T20     | C ,3          | 1          | 1             | 40       | 4                       |
| T21     | C ,3          | 1          | 1             | 40       | 4                       |
| T22     | C ,3          | 1          | 1             | 41       | 4                       |
| T23     | B ,1, 2       | 1          | 1             | 39       | 3                       |
| T24     | B ,1, 2       | 1          | 1             | 34       | 3                       |
| T25     | B ,1, 2       | 1          | 1             | 39       | 3                       |
| T26     | C ,2          | 1          | 0             | 20       | 0                       |
| T27     | B ,2          | 1          | 0             | 32       | 0                       |



| Tree ID | Tree Category | Tree Count | Trees Removed | DBH (cm) | BTRS Trees x Tree Count |
|---------|---------------|------------|---------------|----------|-------------------------|
| T28     | B ,1, 2       | 1          | 1             | 20       | 2                       |
| T29     | B ,1, 2       | 1          | 1             | 20       | 2                       |
| T30     | B ,2          | 1          | 0             | 28       | 0                       |
| T31     | C ,3          | 1          | 1             | 41       | 4                       |
| T32     | C ,2          | 1          | 1             | 22       | 2                       |
| T33     | B ,1, 2       | 1          | 1             | 36       | 3                       |
| T34     | C ,3          | 1          | 1             | 30       | 3                       |
| T35     | B ,1, 2       | 1          | 1             | 39       | 3                       |
| T36     | C ,3          | 1          | 1             | 38       | 3                       |
| T37     | C ,2          | 1          | 1             | 31       | 3                       |
| T38     | C ,2          | 1          | 0             | 28       | 0                       |
| T39     | B ,1, 2       | 1          | 0             | 29       | 0                       |
| T40     | C ,3          | 1          | 1             | 28       | 2                       |
| T41     | B ,1, 2       | 1          | 0             | 36       | 0                       |
| T42     | C ,2          | 1          | 0             | 22       | 0                       |
| T43     | B ,1, 2       | 1          | 0             | 35       | 0                       |
| T44     | B ,1, 2       | 1          | 0             | 39       | 0                       |
| T45     | B ,2          | 1          | 1             | 40       | 4                       |
| T46     | B ,1, 2       | 1          | 1             | 33       | 3                       |
| T47     | A ,1, 2       | 1          | 1             | 41       | 4                       |
| T48     | C ,2          | 1          | 1             | 23       | 2                       |
| T49     | C ,2          | 1          | 1             | 10       | 0                       |
| T50     | B ,2          | 1          | 0             | 29       | 0                       |
| T51     | B ,1, 2       | 1          | 1             | 28       | 2                       |
| T52     | C ,2          | 1          | 1             | 11       | 0                       |
| T53     | C ,2          | 1          | 1             | 10       | 0                       |
| T54     | C ,2          | 1          | 1             | 24       | 2                       |
| T55     | A ,1, 2       | 1          | 1             | 46       | 4                       |
| T56     | B ,1, 2       | 1          | 1             | 39       | 3                       |
| T57     | B ,1, 2       | 1          | 1             | 38       | 3                       |
| T58     | B ,1, 2       | 1          | 1             | 40       | 4                       |
| T59     | C ,2          | 1          | 1             | 21       | 2                       |
| T60     | C ,2          | 1          | 1             | 29       | 2                       |
| T61     | B ,1, 2       | 1          | 1             | 40       | 4                       |
| T62     | B ,1, 2       | 1          | 1             | 42       | 4                       |
| T63     | B ,1, 2       | 1          | 1             | 40       | 4                       |





| Tree ID | Tree Category | Tree Count | Trees Removed | DBH (cm) | BTRS Trees x Tree Count |
|---------|---------------|------------|---------------|----------|-------------------------|
| T64     | B ,1, 2       | 1          | 1             | 39       | 3                       |
| T65     | B ,1, 2       | 1          | 1             | 38       | 3                       |
| T66     | C ,2          | 1          | 1             | 28       | 2                       |
| T67     | B ,2          | 1          | 1             | 26       | 2                       |
| T68     | C ,2          | 1          | 1             | 16       | 1                       |
| T69     | B ,1, 2       | 1          | 1             | 28       | 2                       |
| T70     | B ,1, 2       | 1          | 1             | 37       | 3                       |
| T71     | B ,1, 2       | 1          | 1             | 40       | 4                       |
| T72     | B ,1, 2       | 1          | 1             | 31       | 3                       |
| T73     | B ,1, 2       | 1          | 1             | 40       | 4                       |
| T74     | B ,2          | 1          | 1             | 29       | 2                       |
| T75     | B ,2          | 1          | 1             | 28       | 2                       |
| T76     | B ,2          | 1          | 1             | 26       | 2                       |
| T77     | B ,2          | 1          | 1             | 26       | 2                       |
| T78     | B ,1, 2       | 1          | 1             | 26       | 2                       |
| T79     | B ,1, 2       | 1          | 1             | 29       | 2                       |
| T80     | B ,1, 2       | 1          | 1             | 38       | 3                       |
| T81     | C ,1          | 1          | 1             | 22       | 2                       |
| T82     | B ,2          | 1          | 1             | 20       | 2                       |
| T83     | B ,2          | 1          | 1             | 34       | 3                       |
| T84     | B ,2          | 1          | 1             | 21       | 2                       |
| T85     | B ,1, 2       | 1          | 1             | 38       | 3                       |
| T86     | B ,1, 2       | 1          | 1             | 40       | 4                       |
| T87     | B ,1, 2       | 1          | 1             | 41       | 4                       |
| T88     | B ,1, 2       | 1          | 1             | 42       | 4                       |
| T89     | B ,1, 2       | 1          | 1             | 33       | 3                       |
| T90     | B ,1, 2       | 1          | 1             | 40       | 4                       |
| T91     | B ,2          | 1          | 1             | 31       | 3                       |
| T92     | B ,1          | 1          | 0             | 25       | 0                       |
| T93     | B ,1, 2       | 1          | 0             | 39       | 0                       |
| T94     | B ,1, 2       | 1          | 0             | 34       | 0                       |
| T95     | B ,1, 2       | 1          | 0             | 40       | 0                       |
| T96     | B ,2          | 1          | 0             | 35       | 0                       |
| T97     | B ,2          | 1          | 1             | 35       | 3                       |
| T98     | B ,2          | 1          | 1             | 32       | 3                       |
| T99     | C ,2          | 1          | 1             | 30       | 3                       |



| Tree ID | Tree Category | Tree Count | Trees Removed | DBH (cm) | BTRS Trees x Tree Count |
|---------|---------------|------------|---------------|----------|-------------------------|
| T100    | C ,2          | 1          | 1             | 33       | 3                       |
| T101    | B ,2          | 1          | 1             | 30       | 3                       |
| T102    | B ,2          | 1          | 1             | 31       | 3                       |
| G1      | B ,2          | 4          | 0             | 25       | 0                       |
|         |               |            |               |          |                         |