



Bristol Tree Forum comments

21/05164/F | *Erection of 157 no. dwellings (MAJOR).* | *Land On The West Side Of Novers Hill Bristol*



Figure 1 The proposed development site - an important part of the Western Slopes SNCI and Wildlife Network

Summary of our objections

- a) This application fails to comply with both national and local planning policies - in particular with BCS9 and DM17. DM17 expressly identifies the Western Slopes as a '*prominent green hillside*' and states that development will not be permitted unless the development is ancillary to the open space use.
- b) The proposed development is contrary to the Climate and Ecological Emergencies declared by the Council, to the undertaking to double Bristol's tree canopy by 2046, to the Ecological Emergency Action Plan¹ (which promises to '*embed nature into all decisions*') and to the recently approved Council *Green* motion which resolved to protect green spaces in Bristol from development.
- c) This site, part of the Western Slopes, is an important area of green space with trees that should be protected. This proposal to remove most of the existing trees does not comply with Bristol's Local Planning policy, which states that existing green assets be retained on development sites.
- d) The proposed development will result in the loss of just over six hectares of habitat that will not be replaced.
- e) The applicant has used a biodiversity net gain metric calculator which has been superseded.
- f) The biodiversity net gain calculation upon which the application is based has not been provided. **Appendix 1** gives a brief outline of the principles upon which biodiversity net gain is calculated.

¹ https://www.bristol.gov.uk/documents/20182/5572361/Ecological_Emergency_Action_Plan.pdf/2e98b357-5e7c-d926-3a52-bf602e01d44c?t=1630497102530



- g) This application uses incorrectly formulated data to calculate the biodiversity net gain the proposals offer.
- h) The LPA has no power to permit any work to be done to the ancient hedgerow growing on Novers Common along the eastern boundary of the site because it is a Town and Village Green (TVG) and is protected by the Hedgerow Regulations 1997. Any purported approval affecting the status of the TVG would be *ultra vires*² and any proposal to undertake works on the ancient hedgerow would require separate approval under the Hedgerow Regulations 1997.
- i) The attempt to 'offset' the site's habitat loss at Crox Bottom does not stand up to scrutiny. Crox Bottom (owned by Bristol City Council on our behalf, not by the developer) already has 72% tree canopy cover. It is an SNCI and forms part of an existing Wildlife Network. It is fine in its current state. The developer is grasping at straws in its attempt to find some nearby land for which to claim "enhancements" to compensate for the six hectares of habitat being destroyed on Novers Hill.

This application should not be allowed to proceed until the omissions and errors in d), e) and f) have been resolved.

Background

The proposed development site³ forms part of the Western Slopes and covers 5.35 hectares at its northern end. The Western Slopes are a Site of Nature Conservation Interest (SNCI BC80). The development site connects with the SNCI at Cox Bottom (BC42) just on the south-west side of Hartcliffe Way and with the SNCIs BC54 & BC32 on the Northern Slopes. Novers Hill forms an important part of the Wildlife Network, which runs almost unbroken from Dundry Hill, through Crox Bottom, the Western Slopes, Novers Common and across the Northern Slopes to the Northern Slopes Nature Reserve. Novers Hill helps to maintain and strengthen the integrity and connectivity of this Wildlife Network.

Perhaps because the majority of the site was identified in the 2014 Local Plan (BSA1114 & part of BSA1108)⁴ as suitable for housing development, it was not designated as a Park or Green Space, even though it clearly is. However, these designations directly contradict the designation of the whole of the Western Slopes under DM17 as '*prominent green hillside*' which may not be developed (see section 3c of **The planning context** below). This appears to have been rectified when the last iteration of the draft Local Plan was put forward for consultation in 2019.

² Outside the LPA's powers.

³ <https://bristoltrees.space/Tree/sitecode/BTF-027>.

⁴ Site Allocations and Development Management Policies ANNEX: SITE ALLOCATIONS INFORMATION - <https://www.bristol.gov.uk/documents/20182/34540/Site%20Allocations%20Annex%20Adopted%20July%202014%20Indexed.pdf/d6dfdc7e-0f55-4a07-be74-9cd5fffaa64d>.



The site's eastern boundary is also shared with Novers Common, a Town and Village Green (see figure 4 below) which was registered by the Council in October 1970⁵. In our view, the common was extended along Novers Hill specifically to protect the ancient hedgerow growing there. We address the implications of this at section 3 of **The problems with this application** below.

It is also noteworthy that another area of the Western Slopes of some eight hectares, just to the south of this site, is also identified as suitable for development in the 2014 Local Plan - BSA1108: Land at Novers Hill.⁶

The planning context

The National Planning Policy Framework (the Framework), the Mitigation Hierarchy and Bristol's core planning policy, BCS9 - Green Infrastructure, DM15: Green Infrastructure Provision and DM17 Development Involving Existing Green Infrastructure - the local policies upon which the goals of the Framework may be achieved - are set out below. This is the case whether or not the forthcoming Environment Bill has been enacted by the time this application is decided.

1. The National Planning Policy Framework

This Framework seeks to ensure that new development is sustainable. It stresses the importance of green Infrastructure as one of three overarching, interdependent objectives - economic, social and environmental. This means that sustainable environmental development is no less important than the economic and social development objectives.

The whole emphasis of the environmental objective has changed to become much more imperative with the publication of the latest version of the Framework last July. It now reads (previous wording struck out, new wording in blue):

an environmental objective - to ~~contribute to protecting~~ protect and ~~enhancing~~ enhance our natural, built and historic environment; including making effective use of land, ~~helping to improve~~ improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.

Furthermore, with the introduction of a new paragraph 131, trees are made an integral part of this:

Trees make an important contribution to the character and quality of urban environments, and can also help mitigate and adapt to climate change. Planning policies and decisions should ensure that new streets are tree-lined, that opportunities are taken to incorporate trees elsewhere in developments (such as parks and community orchards), that appropriate measures are in place to secure

⁵ <https://www.bristol.gov.uk/documents/20182/0/Novers+Common.+Village+Green+Register.+VG7.>

⁶ <https://bristoltrees.space/Tree/sitecode/BTF-044.>



the long-term maintenance of newly-planted trees, and that existing trees are retained wherever possible. Applicants and local planning authorities should work with highways officers and tree officers to ensure that the right trees are planted in the right places, and solutions are found that are compatible with highways standards and the needs of different users.

The status of habitat and biodiversity has also been given greater emphasis. Paragraph 181 c) now makes it clear that (previous wording struck out, new wording in blue):

*development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to **incorporate improve** biodiversity **improvements** in and around developments should be **encouraged integrated as part of their design**, especially where this can secure measurable net gains for biodiversity **or enhance public access to nature where this is appropriate**.*

With the recent publication of Biodiversity Metric 3.0, (BM3.0), a new way of measuring and accounting for biodiversity losses and gains resulting from development or land management change has been adopted. The biodiversity metric defines Net Gain as an:

... approach to development that aims to leave the natural environment in a measurably better state than beforehand. This means protecting existing habitats and ensuring that lost or degraded environmental features are compensated for by restoring or creating environmental features that are of greater value to wildlife and people. It does not change the fact that losses should be avoided where possible, a key part of adhering to a core environmental planning principle called the mitigation hierarchy.

2. The Mitigation Hierarchy

Ideally, development should always be planned around existing trees whatever their size or quality. This is because an established tree that is retained offers far more benefits and ecoservices than newly planted trees (no matter how many are planted), whose potential will take decades to be realised, if indeed it ever is.

The mitigation hierarchy provides a cascading decision process: only if the preceding choice is unavailable is the next one considered.

1. Avoid - Where possible, habitat damage should be avoided.
2. Minimise - Where possible, habitat damage and loss should be minimised.
3. Remediate - Where possible, any damage or lost habitat should be restored.
4. Compensate - As a last resort, damaged or lost habitat should be compensated for.

3. Local planning policies

Local Planning Authorities have a duty to consider both the protection and planting of trees (an important part of Green Infrastructure) when considering planning applications. The potential



impact of development on all trees is therefore a material consideration. These are the key planning policies which relate to this application.⁷

a. BCS9 - Green Infrastructure

BCS9 states that ‘Individual green assets should be retained wherever possible and integrated into new development.’

Where habitat damage cannot be avoided (which we would dispute) BTRS and the Biodiversity Metric are two tools which the planning authority can use to ensure that:

- the integrity and connectivity of the strategic green infrastructure network will be maintained, protected and enhanced.
- opportunities to extend the coverage and connectivity of the existing strategic green infrastructure network are taken.
- individual green assets are retained wherever possible and integrated into new development.
- appropriate mitigation of the lost green infrastructure assets is required.
- development should incorporate new and/or enhanced green infrastructure of an appropriate type, standard and size.
- where on-site provision of green infrastructure is not possible, contributions will be sought to make appropriate provision for green infrastructure off site.

b. DM15: Green Infrastructure Provision

The provision of additional and/or improved management of existing trees will be expected as part of the landscape treatment of new development. The design, size, species and placement of trees provided as part of the landscape treatment will be expected to take practicable opportunities to:

- connect the development site to the Strategic Green Infrastructure Network, and/or Bristol Wildlife Network
- assist in reducing or mitigating run-off and flood risk on the development site
- assist in providing shade and shelter to address urban cooling
- create a strong framework of street trees to enclose or mitigate the visual impact of a development.

We have set out Bristol’s planning policies as they relate to trees in more detail here - [Planning obligations in relation to trees in Bristol](#).

⁷ [https://www.bristol.gov.uk/documents/20182/34540/Core+Strategy+WEB+PDF+\(low+res+with+links\)_0.pdf](https://www.bristol.gov.uk/documents/20182/34540/Core+Strategy+WEB+PDF+(low+res+with+links)_0.pdf).



c. **DM17: Development Involving Existing Green Infrastructure**

DM17 also recognises the important status of trees - 2.17.1 Trees are considered valuable multifunctional green infrastructure assets - and makes provision for their preservation and replacement.

Furthermore, the Western Slopes (of which this site is a part) is described as a '*prominent green hillside*' in the Site Allocations and Development Management Policies Local Plan - Valuable urban landscapes within Bristol map⁸ (figure 2 below).

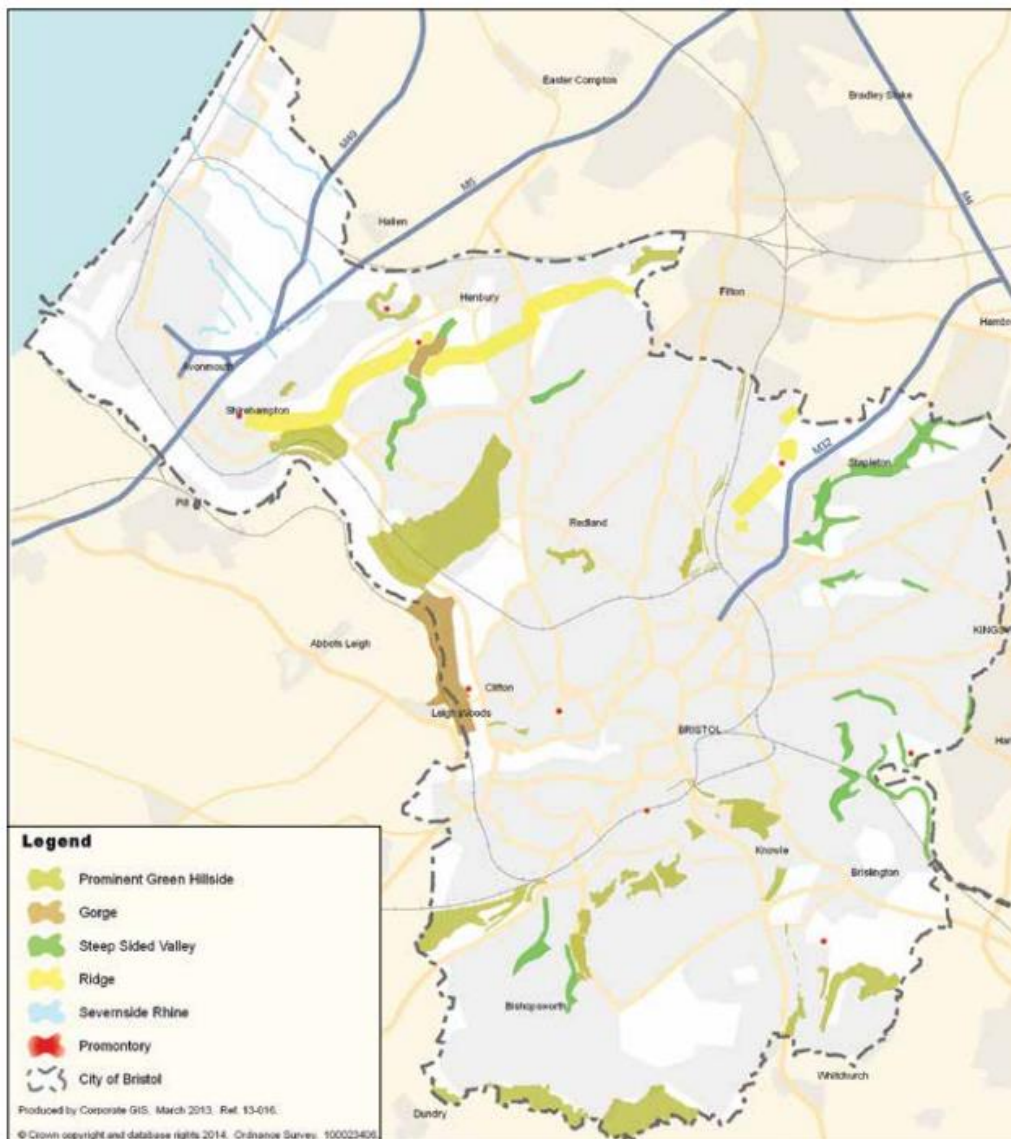


Figure 2 Map 4: Valuable urban landscapes within Bristol - this includes the Western Slopes

⁸ https://www.bristol.gov.uk/documents/20182/34540/BD5605%20Site%20Allocations_MAIN_text%20V8_0.pdf/46c75ec0-634e-4f78-a00f-7f6c3cb68398 - section 2.17.5, page 37.



Under DM17, development of features such as these:

- Will not be permitted unless the development is ancillary to the open space use.
- Which would result in the loss of open space which is locally important for recreation, leisure and community use, townscape and visual amenity will not be permitted.
- Proposals which would harm important features such as green hillsides, promontories, ridges, valleys, gorges, areas of substantial tree cover and distinctive manmade landscapes will not be permitted.

These policies were retained in the last iteration of the draft Local plan which went to consultation in 2019.

The problems with this application

1 Use of a redundant biodiversity net gain calculator

The applicant relies on Biodiversity Net Gain Metric 2.0 (BNG2.0) but this has been superseded by BNG3.0.⁹ As the applicant's proposal was not published until 1 October 2021, BNG3.0 should have been relied on, not BNG2.0, which was only ever issued as a beta test version to allow wider public consultation before the final version (BNG3.0) was published. The recent changes to the Framework, together with emerging government policy and recent publicity about the threats to biodiversity (for example, the 'Biodiversity in the UK: bloom or bust' report by the parliamentary Environmental Audit Committee¹⁰) make this an imperative.

The Chair of Natural England has stated that '*Biodiversity Metric 3.0 will become the industry standard biodiversity metric for all on-land and intertidal development types in England, becoming a requirement for ecological consultants, developers, local planning authorities, land owners and more through the landmark Environment Bill*'¹¹.

The blog published by Natural England - Biodiversity Metric 3.0¹² states that:

Publishing Biodiversity Metric 3.0 was a landmark moment for biodiversity net gain, it will become the metric used to calculate and evidence whether a project has achieved the biodiversity net gain requirements set out in the Environment Bill. Biodiversity Net Gain (BNG) is:

⁹ <http://publications.naturalengland.org.uk/publication/6049804846366720>.

¹⁰ <https://committees.parliament.uk/publications/6498/documents/70656/default/>.

¹¹ <https://www.gov.uk/government/news/biodiversity-30-metric-launched-in-new-sustainable-development-toolkit>.

¹² <https://naturalengland.blog.gov.uk/2021/07/21/biodiversity-metric-3-0-a-milestone-moment-for-biodiversity-net-gain/>.



an approach to development, and/or land management, that leaves nature in a measurably better state than beforehand

... Metric 3.0 significantly updates and improves that earlier metric. It encourages users to create and enhance habitats where they are most needed to help establish or improve ecological networks through rural and urban landscapes. By linking to current and future habitat plans and strategies, including the future Local Nature Recovery Strategies (LNRS), Metric 3.0 incentivises habitat creation and enhancement where most needed.

What Metric 3.0 does ensure, however, is that all habitats, from street trees to woodlands, green roofs to grasslands are recorded, scored and valued for their importance for wildlife. At the same time, it provides an evidence-based, transparent, consistent and easy to use way of ensuring that nature is considered within the design of developments and in land management practice, leaving nature in a better place than it was before, benefitting wildlife, people and places.

2 Inconsistent treatment of tree/scrub habitats

Figure 3 below is from the *Biodiversity Net Gain Assessment (BNGA)*¹³, dated August 2021. It shows the baseline area habitats on the site.



Figure 3 BNGA Existing habitats map

¹³ 21_05164_F-BIODIVERSITY_NET_GAIN_ASSESSMENT_AUGUST_2021-3045061.pdf.



Figure 4 below is annexed to the *Planning Obligations for Tree Removal* report dated July 2021 which supplements the main *Tree Survey, Arboricultural Impact Assessment, Method Statement and Tree Protection Plan* report (collectively called the AIA)¹⁴. It shows the level of proposed tree losses within the tree groups and is a close match with the woodland and scrub habitats shown in figure 3 above.



Figure 4 AIA Tree Groups map

It is notable that only some of the trees that comprise Groups G5 & G9 are identified as trees in the BNGA, where they are described as a *Woodland and forest - Lowland mixed deciduous woodland* habitat. The remaining areas, which are described as tree groups in AIA, are

¹⁴ 21_05164_F-ARBORICULTURE_IMPACT_ASSESSMENT_-_INC._TREE_SURVEY_AND_TPP-3045054.pdf and 21_05164_F-BTRS_PLANNING_OBLIGATIONS_REPORT_FOR_TREE_REMOVAL-3045060.pdf.



described as ‘Scrub’ - either bramble, hawthorn or mixed - in the BNGA. We do not agree with this latter description.

All the groups identified in the AIA as being made up of **BS5837:2012 Category B** trees should be assigned to the *Woodland and forest - Lowland mixed deciduous woodland* habitat. Only the **BS5837:2012 Category U** trees should be described as scrub. We have assigned only these to the habitat, *Mixed Scrub* as set out in table 1 below.

Group Number	Tree Species	BS5837 Cat.	TCC / RPA (ha)	TCC / RPA Removed (ha)	TCC / RPA Retained (ha)	TCC / RPA % Loss
G1	Blackthorn, elder, field maple and hawthorn	U	0.0633	0.0633	0.0000	100.0%
G2	Hawthorn, elder, blackthorn, field maple, ash, dogwood and elm	<i>Native Species Rich Hedgerow with trees - 0.33 km long</i>				
G3						
G4	Elder, field maple, hawthorn, blackthorn and hazel	B	0.0311	0.0311	0.0000	100.0%
G5	Hawthorn with some elder, blackthorn, ash and elm	B	0.6855	0.2249	0.4606	32.8%
G6	Elder, blackthorn	U	Off site			
G7	Buddleia, elder, blackthorn and hawthorn	U	0.1469	0.1159	0.0310	78.9%
G8	Hawthorn and elder	U	0.0846	0.0817	0.0029	96.6%
G9	Elder, blackthorn, hawthorn and ash	B	0.6602	0.4544	0.2058	68.8%
Mixed scrub			0.2948	0.2609	0.0339	88.5%
Lowland mixed deciduous woodland			1.3768	0.7104	0.6664	51.6%
Totals (Ha)			1.6716	0.9713	0.7003	58.1%

Table 1 Tree groups growing on site

3 Ancient hedgerow growing along Novers Hill is protected

The hedge growing along the eastern boundary of the site with Novers Hill is an ancient hedgerow and forms part of the Town and Village Green (TVG) known as Novers Common (coloured dark green in figure 4 below). Because of this, the planning authority has no power to consent to any works which will involve the removal or alteration of any part of this hedge since this would involve disturbing the soil of the TVG (which is a criminal offence) and would not be for the better enjoyment of the registered TVG land. To do so would be *ultra vires* (i.e. without legal authority).

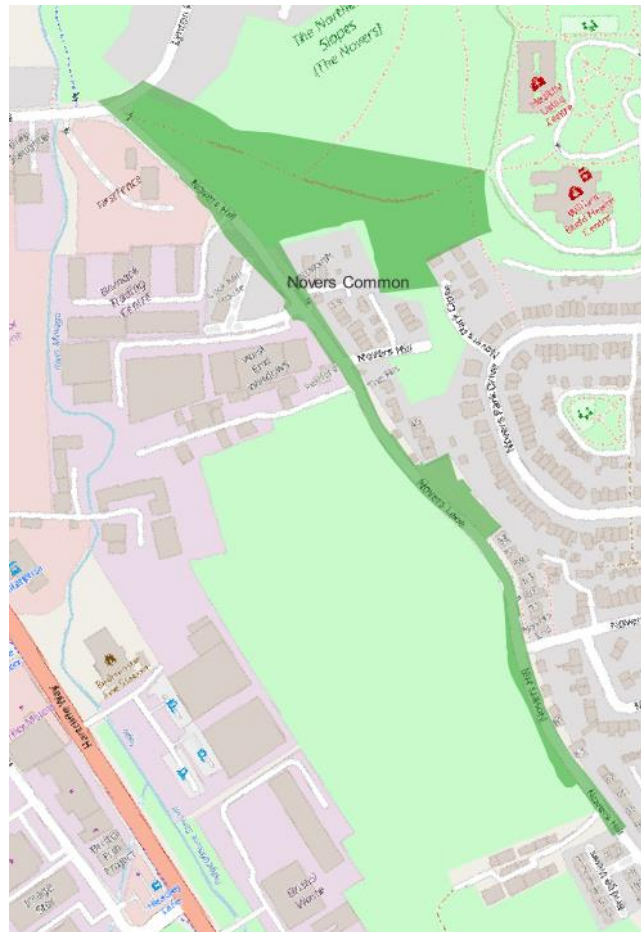


Figure 5 Novers Common along the eastern boundary of the development site.

The hedgerow also has statutory protection under the Hedgerow Regulations 1997.¹⁵ This is

¹⁵ <https://www.gov.uk/guidance/countryside-hedgerows-regulation-and-management> - see Check if a hedgerow is protected.



because of its age, length, location (in a TVG) and the protected species that live in or depend upon it¹⁶ give it protection under the regulations. As a result, a separate application to undertake any works which will involve the removal or alteration of any part of this hedge is required before any such work can be done. We also note that, under the regulations, any such application cannot be considered by any officer whose '*...responsibilities include any aspect of the management of the land in which is situated the hedgerow to which the notice relates*'.

It is also likely that the tree features G1 & G4 identified in the AIA (figure 3 above) also fall to be protected by these regulations because they too are hedges.

The BNGA describes this hedgerow as a linear habitat, *Native Species Rich Hedgerow with trees*. It is in **Good** condition (page 20), yet the table 9 gives its condition as **Moderate**. Given the condition assessment at table 7, the condition of the hedgerow must be **Good**.

At paragraph 5.1.5, the BNGA goes on to state (our emphasis in **bold**):

*As part of the development, **0.31km of native species rich hedgerow along the eastern boundary will be retained and enhanced** with the creation of 0.07km native species rich hedgerow creating a buffer to the north of the retained grassland and scrub habitat.*

The retained hedgerow will be enhanced to good condition through active management of the hedgerow and surrounding habitats ...

It is not possible to enhance a hedgerow in **Good** condition using BNG3.0. Good is the best condition state available using either BNG metric, Given this, we have assumed that all 0.33km of this habitat will be retained. It cannot be 'enhanced' using BNG3.0 even though it does need to be restored, having been left unmanaged, we suspect, for decades.

We also note that this hedgerow is described as a *native species rich hedgerow* habitat in the quote above, and at table 16, yet it is initially described as a linear habitat, *Native Species Rich Hedgerow with trees*. We have used the linear habitat, *Native Species Rich Hedgerow with trees* in our calculation, especially as the AIA identifies some 12 trees growing here.

Lastly, BNG2.0 assigns a **Medium** Distinctiveness score of 4 to the linear habitat, *Native Species Rich Hedgerow with trees*, whilst BNG3.0 assigns it a **High** Distinctiveness score of 6. This is a difference, in this case, of **4.55** Hedgerow Units under BNG2.0 compared to **6.83** under BNG3.0.

¹⁶ See the applicant's Ecological Assessment, Section 6 – Assessment of Protected Species – see paragraphs 6.1, 6.5.1, 6.6 & 7.3.



4 No allowance made for individual trees

No habitat allowance has been made for the 32 individual trees identified in the AIA. We calculate that these trees cover a habitat area of 1,755 square metres (0.1755 ha). We have used their combined Root Protection Areas as per guidance set out in BNG3.0 (even though we do not agree with this approach - our reasoning is set out in our blog, [Valuing our urban trees](#)) and assigned them to the habitat *Urban Trees* as used in BNG3.0 in the baseline calculation.

We also note that all the trees identified in the AIA, either individuals or grouped trees, have been included in the applicant's Bristol Tree Replacement Standard calculation.¹⁷ In the methodology adopted for estimating the trees in each tree group, we think there should have been more sampling done with an estimate of the distribution of tree stem diameters. These which could then be converted using BTRS rather than applying BTRS directly to the samples taken in the report. However, on the basis that 441 replacement trees will need to be planted - 313 on site and 128 - we have allowed for these replacements in our calculations. We have assumed that Standard-sized trees will be planted in due course (we estimate three years after these habitats are removed), and so have assigned them as Small *Urban Tree* habitat trees. These will eventually provide a combined habitat area of 0.1994 ha after their time-to-target size is eventually reached in 30 plus years.

5 Strategic Significance undervalued

As we have pointed out above (section 3c of **The planning context**) the Western Slopes are specifically identified in DM17 as a '*prominent green hillside*' and given special protection against development. It is also an SNCI. In light of this, the site is within an area formally identified in local strategy, so we have assigned **High strategic significance** to all the on-site habitats.

We have made no other changes to the other on-site habitats in the NBGA.

6 The offsetting proposals at Crox Bottom

Crox Bottom Green Space¹⁸ is a Council-owned site in Bishopsworth ward covering about 8.4 hectares. Our tree canopy survey shows that it has a tree canopy cover of around 72%¹⁹ (6.05 ha). This does not take account of recent planting in about 2017-2018 when the Metrobus route was being completed, nor the mixed woodland planting undertaken in open space in the northern corner of the site which were planted at about the same time.

Crox Bottom is also an SNCI (BC42) and forms part of a Wildlife Network running from the Northern slopes down to Dundry Hill and connecting Manor Woods Valley as well as forming a

¹⁷ See 21_05164_F-BTRS_PLANNING_OBLIGATIONS_REPORT_FOR_TREE_REMOVAL-3045060.

¹⁸ <https://bristoltrees.space/Tree/sitecode/CROXBO>.

¹⁹ <https://bristoltrees.space/trees/i-Tree/canopy.xq?areacode=CROXBO&mode=view>.



link with Henbury Mounds and Hengrove Park beyond. Pigeonhouse Stream, which rises on Dundry Hill, runs through it.

In his 2010 report, *Wildlife Survey of PIGEONHOUSE STREAM AND THE MALAGO*²⁰, Phil Quinn (Ecology and land use) MIEEM writes of Crox bottom (from page 37 - **our emphasis in bold**):

Flowing through the Crox Bottom SNCI - an attractive public open space between the residential district of Headley Park and the A4174 Hartcliffe Way - Pigeonhouse Stream has two very distinct aspects.

*In the south it is rather sluggish **and heavily shaded**. A series of masonry weirs have been built across the stream causing it to consist largely of pools usually 0.5- 1m deep but occasionally up to 1.5m deep or more in May. The stream is frequently 4m wide and flows over an earth bed with stones of varying sizes as well as patches of gravel. Given the slow flow here there is much deposition of silt on the bed. The banks (both comprising earth with some unstratified stone) are asymmetrical: the left bank is generally steep and 2m high whilst the right bank is generally 0.5m high and with a much gentler gradient. Within the stream there are small patches of curled pond weed and fennel pondweed *Potamogeton pectinatus*, both are tolerant of moderate levels of pollution.*

On top of the left bank there is a thin band of mature scrub and semi-mature trees with a broad hard-surfaced footpath /cyclepath to the immediate west of this and only thin bands of tall herb /rank grassland community between them. The right bank however grades into semi-mature woodland where in spring there are large populations of ramsons with ivy generally the dominant ground flora species. Mature alder are very common along both banks with pendulous sedge and some hemlock water-dropwort common amongst these trees.

A footbridge crosses the stream in the south and just north of this there is a foul water outlet which was discharging an unpleasant-smelling milky-grey coloured fluid at the time of both May and August surveys. Near this point an adult kingfisher was recorded during the August survey.

*The northern half of this section is in considerable contrast to the southern half. A large silt trap pond has largely infilled with silt (proving the design works). **The eastern edge of this pond abuts dense scrub woodland which overhangs the very sluggish stream** which meanders on the right (eastern) side of the pond. Large fish (possibly roach *Rutilus rutilus* or rudd *Scardinius erythrophthalmus*) were noted just upstream of the silt trap pond.*

*The term pond is misleading here as effectively it is a wetland with a luxuriant emergent and tall herb vegetation dominated in the autumn by common reed *Phragmites australis* but with branched bur-reed *Sparganium erectum* more dominant in the spring. Bittersweet *Solanum nigrum*, greater pond sedge *Carex riparia*, flag iris *Iris pseudacorus* and great willowherb are all very common here. Pendulous sedge *Carex pendula*, hemlock water-dropwort *Oenanthe crocata*, great sweet-grass *Glyceria maxima*, water-starwort *Callitriche**

²⁰ <https://www.bristol.gov.uk/documents/20182/2578605/Further+Evidence+1%28b%29+--+Malago.pdf/01b751e6-8869-62e2-69fa-9e44139ca94f>.



sp., fool's watercress *Apium nodiflorum*, angelica *Angelica sylvestris* and water-cress *Rorippa nasturtium-aquaticum* are also frequent whilst common water-plantain *Alisma plantago-aquatica* is present but rare. In August trifold bur-marigold was common here and some fennel pondweed was recorded in the sections of deeper open water. **The west bank of the pond has a very high level of light as recent felling works had removed a number of mature and semi-mature trees here.** This silted pond and its immediate environs would be expected to provide excellent conditions for many invertebrate species (large red damselfly *Pyrrhosoma nymphula* was noticeably abundant during the May survey) and is a rare habitat type within Bristol.

A wide foot /cycle bridge crosses the dam forming the upper (downstream) edge of the pond. There is a substantial spillway here with a 5m wide spread of what is effectively a thin smear of water running over the concrete. At the base of the chute is a 6m square concrete pool, the lip of which acts as a weir for the stream to flow over.

Downstream of the spillway the stream is fairly brisk and runs over a very rocky bed. The right bank is approximately 3-4m high, steep and covered with tall herbs and an occasional tree. **The left bank is a very steep hillside supporting a mature broadleaved woodland with many large trees overhanging the stream** and in May with a field layer dominated by ramsons. This section terminates near Hartcliffe Way where the stream is channelled into a very large metal grated and concrete sided culvert.

In light of this, it is hard to see why the site should be considered to be suitable for the applicant to offset the habitat deficits it plans to create at Novers Hill.

7 Off-site baseline data anomalies

The off-site baseline data is set out at table 17 of the BNGA. However, we note the following anomalies:

- a) The habitat *Grassland - Other neutral grassland* is only 0.95 hectares, yet it is proposed (table 21, BNGA) to enhance 2.18 hectares of this habitat. We have only allowed for the baseline 0.95 hectares to be enhanced.
- b) The habitat *Heathland and Shrub - Bramble scrub* is only 0.02 hectares, yet it is proposed (table 21, BNGA) to enhance 4.1 hectares of this habitat to *Heathland and Shrub - Mixed scrub* (not a baseline habitat). We have only allowed for the baseline 0.02 hectares to be enhanced.
- c) As the habitat *Urban - Amenity grassland* is no longer available in BNG3.0, we have selected *Grassland - Modified grassland* as the nearest habitat equivalent.
- d) We have assigned all the Crox Bottom habitats as having **High strategic significance** rather than the mixture of High and Low strategic significance used in the BNGA (see section 5 above).
- e) The habitat *Woodland and forest - Lowland mixed deciduous woodland* is given a **Poor** condition (see the assessment at Table 20 BNGA). Even on the basis that this assessment uses the technical criteria set out in BNG2.0 (The criteria in BNG3.0 has been substantially



changed), these trees cannot be said to be in a poor condition. Figure 6 below sets out the BNG2.0 condition assessment criteria for the Woodland Broad Habitat Type. On this basis, these trees are in a **Moderate** condition.

Condition	Assessment Criteria	Score
Good	<ul style="list-style-type: none"> Meets at least 10 of the criteria with only minor variation. No more than 1 of the indicators of poor condition are present: Stands of native trees that do not obviously originate from planting should be classified as native semi-natural woodland. 	3
Moderate	<ul style="list-style-type: none"> Clearly fails at least 2 of the criteria above. OR invasive non-native plants are 5-20%. OR where non-native species comprise more than 20% of the canopy, the woodland should be recorded as either non-native plantation or mixed woodland. A mixed woodland is woodland with native and non-native species. (This includes woodlands established by planting and by natural regeneration.) Trees of similar age and height structure throughout the woodland. Little standing or fallen deadwood present. 	2
Poor	<p>The following characteristics can help to identify plantations: (note: BAP woodlands can be plantation woodlands)</p> <ul style="list-style-type: none"> Non-native trees often of a single species or the same age are the dominant component; OR invasive non-native plants are greater than 20%. Mixed species show a consistent planting pattern across the site. Original planting lines, or remains of planting lines, can be seen. Drainage features and channel straightening of watercourses. 	1

Figure 6 BNG2.0 condition assessment criteria for Woodland Broad Habitat Type

- f) Our survey shows that Crox Bottom has 72% tree canopy cover - 6.05 hectares. We have used this value rather than the 5.36 hectares used in the BNGA.
- g) We have allowed for a delay of two years before any enhancement works commence even though we do not believe that they should be undertaken.
- h) The site is designated as a Park and Green Space in the current Local Plan. The last iteration of the draft Local Plan identified it as a potential **Reserved Open Space** to be covered by draft policy GI2²¹. It is also an SNCI. In light of this, the site is within an area formally identified in local strategy, so we have assigned **High strategic significance** to all its habitats.

²¹ <https://www.bristol.gov.uk/documents/20182/34536/Local+Plan+Review+-+New+protection+for+open+space+-+Web.pdf/6b443275-293f-e56e-7009-764c4122fc59> - Pages 9 & 38



- i) We note that no off-site river baseline survey has been undertaken even though Pigeonhouse Stream, which runs through Crox Bottom (for about 520 metres), is an important habitat on this site.

We have made no other changes to the other off-site habitats in the NBGA, though we have added off-site habitat creation to take account of the 128 BTRS replacement trees proposed to be planted off-site.

7 Crox Bottom: questions arising

1. Has the Council (as opposed to the LPA) agreed to these proposed changes?
2. Does the Council (as opposed to the LPA) intend to publish ecological and arboricultural comments on this proposal?
3. How will the proposed works be designed, scheduled and funded?
4. Who will have stewardship of the proposed works?
5. How will the proposed works and their outcomes be audited? A major part of the proposed enhancement (to the woodland) will take over 30 years to come to fruition.



Conclusion

On the basis of these habitat inputs, we calculate that the biodiversity net gain results do not meet the minimum breakeven biodiversity net gain requirements required by the planning authority, let alone the 10% threshold proposed in the Environment Bill. As currently cast under BNG3.0, the applicant’s proposals will cause the site to lose **44.69%** of its baseline Habitat units, though its Hedgerow units will remain unchanged at **8.29%**.

Figure 7 below summarises the on-site habitat losses by distinctiveness.

Combined area lost by distinctiveness band		
Category	Area lost (hectares)	Area lost (%)
V.High	0	
High	0.71042	12
Medium	2.9308	49
Low	1.93	32
V.Low	0.44	7

Figure 7 Combined area lost by distinctiveness band

This represents a cumulative area loss of just over six hectares of habitat that will not be replaced. In our view this is unacceptable, especially given the site’s status as an SNCI and as an important part of the wildlife network in south Bristol.

Even if the applicant is allowed to offset this loss by enhancing some of the habitats at Crox bottom, their plans still show a shortfall of **24.37%**. This is still insufficient to achieve breakeven, let alone meet the 10% net gain proposed in the Environment Bill.

Figure 8 below shows the BNG3.0 Headline results.



On-site baseline	<i>Habitat units</i>	37.96
	<i>Hedgerow units</i>	6.83
	<i>River units</i>	0.00
On-site post-intervention (Including habitat retention, creation & enhancement)	<i>Habitat units</i>	21.00
	<i>Hedgerow units</i>	7.40
	<i>River units</i>	0.00
On-site net % change (Including habitat retention, creation & enhancement)	<i>Habitat units</i>	-44.69%
	<i>Hedgerow units</i>	8.29%
	<i>River units</i>	0.00%
Off-site baseline	<i>Habitat units</i>	97.77
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Off-site post-intervention (Including habitat retention, creation & enhancement)	<i>Habitat units</i>	105.49
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Total net unit change (including all on-site & off-site habitat retention, creation & enhancement)	<i>Habitat units</i>	-9.25
	<i>Hedgerow units</i>	0.57
	<i>River units</i>	0.00
Total on-site net % change plus off-site surplus (including all on-site & off-site habitat retention, creation & enhancement)	<i>Habitat units</i>	-24.37%
	<i>Hedgerow units</i>	8.29%
	<i>River units</i>	0.00%

Figure 8 BNG3.0 Headline results

Our BNG calculation (in .xlsx format) can be downloaded here - [BNG3.0 Calculation](#)

The Bristol Tree Forum
25 October 2021



Appendix 1

How is biodiversity net gain calculated?

Biodiversity net gain (BNG) is the principle whereby a habitat affected by a proposed development must be left in as least as good a state as it was in before the development took place. The BNG3.0 calculator identifies 128 different types of habitat. The Environment Bill 2020 proposes that overall site biodiversity net gain should be 10%. BNG3.0,²² published by Natural England on 7 July 2021, is the approved tool used to calculate biodiversity net gain for any proposed development.

BNG3.0 uses four factors to calculate habitat units (HU)²³. These are:

1. **Habitat size** - this is measured in hectares for habitat areas and in kilometres for linear habitats such as hedgerows.
2. **Distinctiveness** - this is fixed by BNG3.0 and ranges from 0 to 8: the more distinctive the habitat, the higher the score.
3. **Condition** - this is assessed using a number of standardised criteria for each habitat type, as set out in the BNG3.0 technical supplement. Condition assessment scores range from 0 to 3: the better the condition of the habitat, the higher the score.
4. **Strategic significance** - this depends on whether the location of the habitat is within the local strategy or, if not, whether its preservation is ecologically desirable. Strategic significance scores are either Low (1), Medium (1.1) or High (1.15).

All these scores are multiplied together to give the HU value. For example, a *Lowland mixed deciduous woodland* habitat of 0.5 hectares has a fixed **Distinctiveness** value of 6. If it is in a moderate **Condition** (2) and has **Medium Strategic Significance** (1.1), then it is valued as $HU = 0.5 \times 6 \times 2 \times 1.1 = 6.60$ HUs.

Once the baseline HUs of the site have been measured and the area or length of habitats to be retained is ascertained, steps may be taken to enhance any existing habitats or to create new ones, either on or off site. This exercise introduces a number of other factors into the calculation, which allow for the difficulty in creating the site and the time the changes will take - called time-to-target - to achieve their final condition. When this exercise is complete, the losses and gains calculated are combined and the final net habitat gain, or loss, is generated²⁴.

²² <http://publications.naturalengland.org.uk/publication/6049804846366720>

²³ BNG2.0, now redundant, also used Connectivity, but this has been abandoned in BNG3.0.

²⁴ Interestingly, reversing this formula for each habitat will give the size of the replacement habitat required. The results can be surprising.



While some habitat units must be replaced like-for-like, many may be substituted for the same broad habitat or with a higher distinctiveness habitat.

It is also possible to offset habitat lost on the target site to off-site habitats, though the offset will be discounted if it is done outside the Local Planning Authority or is deemed not to be sufficiently local to the site.

The same methodology applies to so-called linear habitats such as hedgerows and lines of trees, and to rivers and streams. However, because these three habitat types are unique they may not be combined together to give an overall habitat value, neither may they be used to offset one habitat type against another.