Environment & Green Spaces Committee Agenda

Environment & Green Spaces Committee

16/11/2021 19:00 - 20:30 ((UTC+00:00) Dublin, Edinburgh, Lisbon, London)

AGENDA

Topic	
1 QUESTION TIME OPEN TO PUBLIC AND PRESS (Not to exceed 30 minutes). *The public are welcome to ask questions on matters that are on the agenda and other matters at the Chairman's discretion. The question should not be a statement and limited to no more than 2 minutes. The Chairman will call the question from those who are indicating that they wish to speak.* *A record of any public participation session shall not be included in the Minutes, but included as an appendix note to the Minutes of the meeting and will be made public via our website and held in archive.*	
2 Apologies *To accept any apologies*	
3 Declarations of Interests *To receive any Declaration(s) of Interest under The Relevant Authorities (Disclosable Pecuniary Interest) Regulation 2012 made under Section 30 (3) of the Localism Act 2011 and under the Code of Conduct adopted by the Town Council.*	
4 Minutes *To approve the minutes of meeting for the Environment & Green Spaces Committee meeting on 28th September 2021.* 2021.09.28_EGSmins.pdf	3
5 Carbon counting survey and domestic heat event *To look at next steps for promoting the survey*	
6 Green Space Officer *To give an update on:* *i) Becky Addy Woods and die back strategy* *ii) Tree planting and nursery* *iii) Healthy River Project, including Barton Farm* *Country Park, ash die-back survey, working with river users, monitoring pollution.* *Report to follow* 2021-11-16 BAW & ADB Committee Report.pdf	11
7 Lighting Strategy *To note first draft/ discussion. Report to follow* J00730 Noctural Animals & Lighting Leaflet V2 Draft.pdf J00730~2.PDF	15 20
8 Climate Emergency focus sessions *To note the timetable attached and discuss themes/events through to 2022* CEE FOCUS SESSIONS 280921.pdf	46
9 Living Green Wall *To give an update and project timing*	
10 Chairman's report EG 161121 chair rep.pdf	47
11 Wiltshire Council Climate Emergency & Blue/Green Infrastructure Strategies *To note the response made by Bradford on Avon Town Council to the Blue/Green Infrastructure.* BOATC FINAL WC CE BGI Strategy 140921.pdf	48
12 Correspondence to note - there was none	

Attendees

Chris Hogg	Unconfirmed
Cllr Alex Kay	Unconfirmed
Cllr Alison Potter	Unconfirmed
Cllr David Garwood	Unconfirmed
Cllr Emma Franklin	Unconfirmed
Cllr Jack Vittles	Unconfirmed
Cllr Jennifer Parker	Unconfirmed
Cllr Kate Bessant	Unconfirmed
Cllr Katie Vigar	Unconfirmed
Cllr Sam Blackwell	Unconfirmed
Cllr Sarah Gibson	Unconfirmed
Cllr Simon Mcneill-Ritchie	Unconfirmed
Cllr Tim Trimble	Unconfirmed
Ian Brown	Unconfirmed

Bradford on Avon Town Council

LOCAL COUNCIL AWARD SCHEME QUALITY GOLD

Minutes of the Environment & Green Spaces Committee meeting of
BRADFORD ON AVON TOWN COUNCIL held
on Tuesday 28th September 2021 at 7.00 p.m in St. Margaret's Hall

Attendance – Town Council
Cllr A Kay (Chairman)
Cllr E Franklin
Cllr A Potter (Vice Chairman)
Cllr T Trimble
Cllr K Vigar
Cllr J Vittles
V Baker – Admin Clerk
I Brown (Director of Operations)
C Hogg (Green Spaces Officer)

Apologies: Cllr Gibson & Cllr Bessant

Members of the Public: Louise Weissel, Stevie Edwards, Jes Wire, Kate Nottage Simon Forsyth and 6 others.

15. Declarations of interest- there was none.

16. Minutes
It was proposed by Cllr Trimble and seconded by Cllr Vigar and with all in favour it was **RESOLVED**:
To accept the Environment & Planning Committee minutes held on 20th July 2021.

17. Chairman's report- this was deferred until after item 25 of the agenda.

18. Climate & Ecological Emergency Fund & to consider changes to the Terms of Reference
Terms of Reference (TORs) for EGS had been circulated with the agenda concerning information about the grant process for this committee. Cllr Kay said that the TOR for the E&GS committee approved at the Full Council meeting on the 6th of July differed from the TOR as published on the website. A discussion took place. Cllr Kay recommended that the following two clauses should be added to the E&GS committee and to consider the following proposal:

- under item 2. *Aims the committee can also approve grants to support environmental projects.*
- Under item 3. Delegated Business: Item 3.8 *Encourage and assist in the development of climate projects from individuals, groups or small businesses in the Town which can include approving grants from the Climate & Ecological Emergency Community Fund*
- Existing item 3.8 to be renumbered

Cllr Vigar responded by saying that the Town Council already has a 'grants panel' where grants are submitted; where co-ordination between the Town Council, the Area Board and the CLPET (Colonel & Llewellyn Palmer Educational Trust) are reviewed, adding that the above amendment would contradict this process. She added that if the EGS committee were to continue to approve grants by this method then similarly other committees could follow suit. Cllr Kay responded by saying that the EGS grant system was set up separately and if the Town Council are not prepared to act with urgency on 'Climate Emergency' projects, then it undermines its declaration of CE. A discussion took place.

It was proposed by Cllr Kay seconded by Cllr Franklin and with 3 in favour 2 against and one abstention later changed to against, it was **RESOLVED:** to recommend changing the TORs for the EGS for items 2, 3 and 3.8 as above at Full Council in November.
Cllr Vigar reported that while she supported this, she preferred to approach this with a level of understanding and suggested that there should be a review of the grant awarding arrangements to see how we could increase the frequency of the meetings and address the problems. Cllr Kay explained that this was an entirely separate issue and suggested that this could be raised at Full Council if so wished.

19. Wiltshire Council Climate Emergency & Blue/Green Infrastructure Strategies
Cllr Kay had attended a WC Climate Emergency zoom meeting for the Blue/Green Strategy and a draft response to this as edited by her was circulated today. She encouraged members to respond individually by the 17th October deadline and, asked if the Town Council should submit their own comments and amendments similarly done for the Neighbourhood Plan. Comments were noted, Cllr Kay suggested arranging a zoom meeting prior to the deadline date for interested parties to engage and voice further comments.

20. Green Prescribing Pilot
A project produced by Louise Weissel was circulated with the agenda. Her project covers 'Community Green Space utilisation for the benefit of health & well-being'. She gave some background on how the project had evolved and the benefits of this service. Cllr Trimble asked how she would co-ordinate the various partnerships like WC and the Wiltshire Area Sports Partnerships as this was not clear? Further questions were asked.
Cllr Vittles commended the project but asked that Louise forward her email to Cllrs with her report so that members could review the document to enable them to ask further questions at a future meeting.
It was proposed by Cllr Kay seconded by Cllr Trimble and with all in favour **RESOLVED:** that the committee supports this project in principle and requests that Town Council's Officers help with the logistics and other issues related to this to decide whether this is a feasible project or not.

21. Carbon Counting
Simon Forsyth Chairman of Climate Friendly Emergency Group gave a more detailed account of the report (attached) concerning Carbon Counting. Climate Friendly request guidance and support from the Town Council to deliver a detailed carbon counting survey. This would enable them to get more granularity, particularly concerning domestic heating that is used in the diverse buildings within Bradford on Avon. Responses to this survey would provide detail that would validate and generalise the carbon footprint of the town thus help to formulate actions to reduction in the local area. Statistically about a third of the town would be required to respond to the survey. It was **agreed** to send the questionnaire initially to members of this committee so that CF could get feedback about the form.
It was proposed by Cllr Kay seconded by Cllr Franklin and with all in favour **RESOLVED:** that the Town Council support to promote the distribution of the questionnaire.

22. Healthy River Management Project proposal
A report was circulated with the agenda.
Cllr Kay reported that when the Asset Transfer from WC is finally agreed Bradford on Avon Town Council will become the riparian owners of the south bank of the river from Westbury Gardens through to just above the Avoncliff Weir and would be responsible for the trees and water quality therein. A discussion took place.
It was proposed by Cllr Kay seconded by Cllr Franklin and with all in favour **RESOLVED:** That the Environment & Green Spaces committee commits to support and 'cost up' a riverside tree survey and water analysis programme, and for continued development of a Healthy River Project, to bring together appropriate 'user groups' and expertise to manage the river Avon from Westbury Gardens to the Avon Weir (south bank) for enhanced biodiversity, wellbeing and safe use of this beautiful multi-recreational space.

23. CluB update & clarifications
Derrick Hunt the co-ordinator for Clean-up Bradford (CluB) explained that the group was initially set up by the previous Mayor, the Preservation Trust and the CluB group which had migrated into a close working group with the Town Council. He explained that communication between the Group and the Council was good. He added that as long as requests were reasonable, tasks were easily resolved between the Town Council and CluB. A weekly plan of jobs is categorised between the two and this

method of communication works well. Volunteers are very welcome and forms to join this active group can be obtained through the Town Council. Cllr Kay thanked the group for all the challenging work that they do in and around the town.

24. Food waste pilot
A food waste report by Cllr Vigar was circulated with the agenda. She had attended a seminar in January about food waste where it was highlighted how significant food waste was to carbon emissions, contributing nearly a third of emissions. WC do not currently collect food waste and are not required to so until 2023. It was felt that by setting up a pilot scheme, aimed initially a people who live in flats/or have small gardens to compost their own waste would be beneficial for both residents and the Council. The Green Spaces Officer added this was a community based proposed 'trial' and would initially start with composting uncooked vegetable waste. A container would be made available at the Youth Centre where an 'invited' number of people would have access to a combination-locked bin. Ian Brown explained that the project would have an overall cost of £500 which would come out of the 'Operations budget' therefore no additional costs to the Council. Simon Forsythe recommended talking to 'Resource Futures' in Bristol who have been doing this for at least 20 years.
It was proposed by Cllr Vigar, seconded by Cllr Trimble and with all in favour **RESOLVED:** This committee approves this project to measure and address food waste and to raise awareness of composting, and recommends moving ahead with costing logistics, consultation with further information and progress made to this committee at a later date.
It was envisaged that this could have a start update shortly in the new Year.

25. Living Green Wall update
Ian Brown reported that the lease had been received on 27th September and the order was placed by the Town Council the same day. He had spoken to the supplier who will get back to us at a later date with further updates of when work could begin. Stevie Edwards thanked the Town Council for all their help in setting up this project especially to Ian Brown who had sorted out the legalities.

26. Chairman's Update (attached)
Ian Brown reported that the Warden's electric vehicle is now fully registered.

27. Green Spaces update on Management Plan
A comprehensive management plan was circulated with the agenda for land currently owned by the Town Council (attached).
The Forestry Commission through its Local Authority Treescapes Fund is providing £96,252.44 for tree planting in Bradford on Avon. The funding application was made by Wiltshire Council supported by Bradford on Avon Town Council. The overall value of the project using Forestry Commission standard costs is £137,601, but Bradford on Avon Town Council showed a reduction of £47,349. This accounts for staff time to deliver the project, including the ongoing inspection and care of planted trees. Savings will also be made because the planting will be within the town and on land we control. By purchasing equipment, we will also save contractor costs. This saving shows as an in-kind contribution on top of the £96252.44 grant offered by the Forestry Commission.

28. Correspondence to Note- there was none.

29. Date of next meeting
The next meeting has been arranged for 16th November 2021.

The meeting closed at 8.45 p.m.

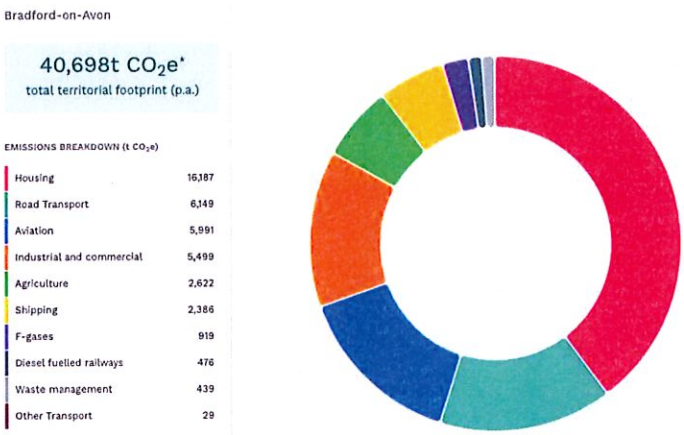
Carbon counting proposal: Simon Forsyth
E&GS 28/09/21 (Draft AK)

Climate Friendly Bradford's Energy Group are planning to do a carbon survey of the town and surrounding villages. We feel there is little point planning for net zero unless we can measure what our footprint is now, and whether it is reducing (or not) year by year.

Excellent though the 'Impact' tool from Centre for Sustainable Energy is (image below), it provides at best an estimate based on national and regional databases (*AK: actually has very local input from 'post-code –pixel' consumer databases*). Our view is that we need a bottom-up survey to corroborate the top-down estimate it offers.

To this end, one of our members has drafted a Google Forms survey, designed to be simple enough to fill in quickly but complete enough to provide a footprint estimate for the filler-in. Our thinking is that if we get enough of the households in the town to complete it, it will give us sufficiently many data-points to estimate a meaningful footprint to set against that from the Impact tool. It feels to us that it would form a natural part of the Council's response to the climate emergency - but we are very aware that from your perspective there will be a number of practical constraints to address.

PROPOSAL: Request Town Council support to promote and distribute such a questionnaire. At this stage no funds are requested.



Healthy River Project

AK 28th Sept 2021

The River Avon and its green corridor is what makes BoA the beautiful and vibrant place it is and is key to much of the much-loved wildlife we love to see here. It is a much-used recreational amenity that needs to be the best it can be. I have long felt that in despite its importance, we have not given enough focus to health of our major artery: the river. The imminent Asset transfer, from Wiltshire to Town Council, mean will we take on responsibility for the river from above the Library down to Avoncliff, it is important to get a range of issues resolved or at least planned for, working with Wiltshire Council, the Environment Agency and others as necessary.

1. **Tree Survey in conjunction with WC and EA**: After sending the email about the rowers wanting to do tree-work, I paddled up and down the river between the Barton (Pack Horse) Bridge and the Avoncliff Weir and took a good look at the river side trees and noticed some alarming things, that need addressing for safety, flood-protection, and river infrastructure damage and ecological reasons:
    a. there are several ash trees with evident ash-die-back and some of these trees are really leaning into the river. As we move into autumn/winter stormy weather, there could be significant risk of these falling;
    b. there is a considerable arch of healthy ashes but these may need protection;
    c. other trees and plants management and potential new planting;
2. **Water Quality analysis programme**:
    a. I have several times been approached this summer to take measures to get some sections of the river to be designated for Wild Swimming;
    b. recent email (forwarded from Graham Hill today) about massive sewage leaks on 2nd and 6th August into the Lambrok Stream, to the Biss and into the Avon. This is very serious. There are a lot of river users and this raw sewage breach had not been reported. I noticed that it has been quite smelly some days when kayaking, exacerbated by the very low water levels. I know of children who were ill after swimming in the river. Others have reported smells, strange coloration, minor illness.
    c. regular testing from a couple of places could identify problems sooner and hopefully help get the appropriate authorities to improve cleanliness.
3. **Riparian owner directory of the river through BoA**: for notification, permissions, inform of responsibilities; including weir integrity and sluice-gate management.
4. **Community River Watch & User Group**: engagement, river-user safety guidelines, litter picks, minor plant management, etc.

PROPOSED MOTION: The Environment & Green Space committee commits to TC support to cost and work logistics of riverside tree survey and water quality analysis and for continued development of a Healthy River Project to bring together appropriate user groups and expertise to manage the River Avon through Bradford on Avon for enhanced biodiversity, wellbeing and safe and beautiful mulita-recreational space.

Proposal for a composting project

Background

Estimates suggest that around one third of the food we produce globally is wasted. And that around 6-8% of human caused greenhouse gas emissions could be reduced if we stop wasting food. (Source: https://www.worldwildlife.org/stories/fight-climate-change-by-preventing-food-waste)

Tackling food waste is something that can be tackled effectively at local level and encouraging composting is one of the ways to go about doing so.

Wiltshire Council does not currently collect food waste, although all Councils will be required to do so by 2023. Meanwhile we can do more at town level and in a way that will have on-going benefits for residents and the council.

Currently, the Town Council purchases compost for use on our own green spaces. The proposed scheme will mean that we will be creating more of the compost we need ourselves.

Proposed pilot scheme

The proposed pilot scheme is for managing composting, including trialling food waste. The intention is to help people who live in flats or with very small gardens to be able to compost their waste. Even once Wiltshire Council do collect food waste, some residents may prefer to use the local scheme.

Physically, the set up will consist of a compost receptor for compostable material to be deposited in, and a separate composting unit.

It will be a free subscription scheme.

The Town Council will install a compost receptor with a combination lock that will be issued to subscribers.

The lock is necessary so that we can monitor the pilot, as well as prohibit the casual deposit of compostable material, which could prove a health hazard.

The receptor will need to be robust, easily cleaned, protected from the weather and vermin proof.

The aim will be to start with a limited number of subscribers to gauge interest, manage capacity and so that we can gain feedback from participants.

The trial will start with uncooked vegetable material.

Further items (cooked food and dairy, meat etc) might be added depending on the performance of composting. It will take some time (months) for the composting process to mature enough to reliably handle the wider range of inputs.

It is proposed that the compost receptor to be located near the Tetra cycle station at the Youth Centre. Therefore, the proposal is to start by inviting participation from householders in flats and properties with small gardens near to the Youth Centre.

Apart from the receptor, the TC will also construct and install a composting unit.

The deposits of compostable material will be moved periodically by TC staff from the receptor to the composting unit.

This will allow the deposits to be inspected as part of the pilot.

The deposits can be mixed appropriately with other material (such as woodchip from the TC estate).

The temperature, humidity, and presence of organisms in the composting can also be monitored.

We will aim to compost at a raised temperature to increase the effectiveness, speed, and quality of compost.

The intention is that the higher temperature will allow the introduction of more items to compost, including food waste.

The unit will therefore be insulated, and of a sufficient capacity to enable the composting to create and retain heat.

Both composting receptor and composting unit will need to be secure, resist vermin, be robust, be easily cleaned and be monitored.

The Town Council will design and build the composting unit. We have considered commercially available versions and they are either intended for household use or very expensive systems designed for large schemes. Many household units are made from plastic (such as the Green Johanna design) and are not reliably vermin proof, or are too small for this trial, particularly as we want to maintain raised temperatures of composting in cooler months. This is a pilot so we can tailor the design to suit our needs and to optimise the composting process.

Benefits of the project

To assist residents in properties with small or no garden compost some of their food waste.

To provide a source of compost that will be used by the Town Council on its own land.

To provide an opportunity to further promote the benefits of composting. We can place an article about the scheme in the next Town Council newsletter with additional information on composting.

Note: The Town Council has sent details of the reduced cost 'Green Johanna' offer on Wiltshire Council's website to all allotment holders at Sladesbrook and Bancroft. We can also promote home composting across the town using the Town Council website and social media.

Alex Kay, Environment & Greenspaces Chairman's report for Tuesday 28/09/21

Environment

1. **Big Green Week Sept 18-26: feedback:** the Climate Festival on Saturday 25th was very successful, with many interesting and useful stalls and displays full of hopeful ideas for a lower carbon future; there was vibrant entertainment and passionate speakers, new volunteers signed up. We also had a one-day opening of the community fridge which I hope we can launch properly in near future. The EV charge points were officially opened by the Mayor and the wardens' electric vehicle was on display.
2. **Asset Transfer update**: signage, litter bins, parking, land management….
3. **Climate & Ecological Emergency Display in Library:** set up now; requires constant updating for current events, relevant themes and consultations.
4. **John Pearce list:** Any more takers for topic ownership? Useful source of themes for a program of CE&E events (circulated separately).
5. **Climate Emergency focus sessions** timetable, owners and themes (circulated separately)
6. **COP26, 1-12 November**. Let your government know if you want action on Climate issues.
7. **WC Climate and BGI consultation**: attended online session 15/09/21; responses required by midnight 17th October. (Preliminary AK response circulated separately).

Planning: moved to Town Development

Environment and Green Spaces Committee

Tuesday 16th November 2021

Becky Addy Woods and Ash Dieback (ADB)

Becky Addy Wood

Becky Addy Wood is an ancient woodland, 4.13ha or 10.2 acres in area. Ancient woodland means that the site has been woodland since 1600. The importance of ancient woodlands is not just the trees, but the entire ecosystem including soils, other flora and fauna. There are notable ancient wood indicator species, such as Toothwort, Herb Paris, Yellow Archangel as well as Bluebell and wild garlic (Ramson).

There have been impacts in the past at Becky Addy Wood, including felling (likely during the construction of the canal, associated or other quarrying, and on at least one occasion in the early 1900s). Past management has included coppicing and other harvesting from the woods, with the wood named on the Tithe Maps in 1841 as Inner Hanger Coppice, Addy Wood and Outer Hanger Coppice.

In the 1970s the structure of the woodland was radically changed by the effects of Dutch Elm Disease, a fungal disease that caused the death of over 30 million Elm trees in the UK. Whilst ash is native to the woodland, with some ancient ash coppice, Becky Addy Wood is now dominated by ash and sycamore, both species that quickly occupy open ground. The history of the wood means that the current mix of trees is limited and the woodland structure does not reflect the true natural state of the woodland.

Over recent years, the wood has been inappropriately managed and neglected including use for motorcycle trials that caused extensive damage. This has led to erosion, damage to the understory and ground vegetation of the wood.

There is little evidence of woodland management in recent years, apart from limited work following the attention of Wiltshire Council in dealing obstruction of the public footpath from fallen and dangerous trees.

However, the wood is an important ancient woodland, a habitat which is now rare in the wider landscape, with extensive features of ecological importance, which, with careful management can be enhanced to improve its biodiversity value.

The woodland is a County Wildlife Site and is covered by a Tree Preservation Order (for the entire woodland). The woodland is bounded by private meadows, a road and a public footpath runs east-west through the centre of the wood.

Becky Addy Wood and Bradford on Avon Town Council

Bradford on Avon Town Council are the landowners of Becky Addy Wood.

Following the advertisement of the sale of Becky Addy Wood by auction, local people around Becky Addy Wood approached Bradford on Avon Town Council and the woodland was purchased in April 2020, with an agreement established between Bradford on Avon Town Council and the Friends of Becky Addy Wood. The Town Council and the Friends of Becky Addy Wood have worked closely on plans for the wood and its management. Given the past damage and neglect, there is an opportunity to improve the biodiversity of the woodland to bring it into a favourable condition.

This has included, with funding from the Cotswold AONB's Caring for the Cotswolds grant scheme, a project to carry out tree surveys of the wood, improve biodiversity, establish volunteers and communicate qualities of the wood with the public. Some of this work is complete (such as the installation of bat boxes) but the rest is on hold with the agreement of the Cotswold AONB, to be completed when the current issue with Ash Dieback is resolved.

Partly funded by the Caring for the Cotswolds grant, with a licenced ecologist working on a voluntary basis, we have been carrying out a bat project, initiating a long-term study of bats in the woodland and environs. This is relevant to the Bath and Bradford on Avon Bat Special Area of Conservation (SAC), a European designation that reflects the importance of the area for bats. The study has included the erection of 24 bat boxes in the wood that can be inspected under licence, as well as bat transect surveys, and autumn swarming surveys. Other surveys of botany and birds have been undertaken.

Ash dieback (Hymenoscyphus fraxineus)

Ash dieback (ADB) is a highly destructive disease of ash trees (Fraxinus species), especially the United Kingdom's native ash species, common ash (Fraxinus excelsior). It is caused by a fungus named Hymenoscyphus fraxineus (H. fraxineus), which is of eastern Asian origin. The disease is also known as 'chalara', ash dieback, and chalara dieback of ash.

ADB is a fungal disease, that spreads from airborne spores, initially infecting newer growth of ash trees, such as buds and leaves, then spreading through the tree. Trees can be infected with ADB for a number of years before the visible signs are obvious.

ADB It is likely to have been introduced into Europe by infected plant material, and spread within Europe through tree movements, and via tree nurseries. Its incidence in the UK is likely to be a combination of this as well as airborne spores. It is more likely occur and spread quickly in woodland settings compared to open grown ash trees. The spread of ADB is variable, as is the effect on individual trees.

Trees infected with ADB are also vulnerable to damage from other diseases and environmental effects. Trees can become unstable, with leaf and limb drop and can be dangerous to climb to undertake works. It is expected that not all ash trees will be affected by ADB, and the speed of the effect of the disease in each tree will be different. There is also evidence that there can be cycles of affect and recovery in trees. Fortunately, some trees are likely to be resistant to ADB, but trees that are infected with ADB are expected to eventually succumb to ADB as well as other diseases.

Proposed approach to trees.

The approach to the management of Becky Addy Wood has been for the benefit of biodiversity, whilst maintaining our responsibilities as landowner, particularly regarding safety. The Friends of Becky Addy Wood have been involved in the preparation of this approach throughout, including regular site visits and correspondence, though they have not made any formal decision of their view.

This approach takes account of guidance and advice from Forest Research, the Woodland Trust, Forestry Commission, the Arboricultural Association, Wildlife Trusts, Tree Council, Natural England, Wiltshire Council. The preparation of this approach has involved ecologists, bat ecologists, botanists, and discussions with individuals in the above organisations. Where possible, we are taking an innovative approach, and we will continue to do so in the ongoing recovery and maintenance of the wood.

We have monitored the progression of ADB in the woods and the additional risk has informed this approach. Visible signs of ADB have been present in the woods for at least three years, increased during 2020, but in the summer of 2021 the extent of the visible impact of ADB has become extensive.

This responsibility means the Town Council has to survey trees on our land to ensure that risks from them to users and property are kept below an acceptable level. This is based on assessing the risk on ‘targets’ – the people or property that might be hit from a falling tree or part of a tree, and for how long those people or property are exposed to that hazard. This dictates the need for surveys and the frequency of those surveys. Once risks are identified by this process they need to be addressed. We have zoned the woodland in terms of risk. Broadly, in Becky Addy Wood, the zones have identified areas that require the surveying of trees, and areas where there are negligible levels of access so full ground level surveys will not take place.

In terms of ash trees, rather than take overall assessments of the woodland, the survey was instructed on the basis of 50% of canopy leaf loss in each ash tree, surveyed individually, with recommendations based on the professional expertise and experience of the tree surveyor at the time of the survey. The tree surveys were carried out by Lantra qualified arborists, approved by the Arboricultural Association and with relevant British Standard accreditations, with the survey undertaken to British Standards. The contractor has completed the Bat Conservation Trust and Arboricultural Association approved Bats in Trees course. The surveys included a walk-through of the site to define the survey zones, and to brief on the overall biodiversity approach to the woodland.

The principal targets in the wood are the public footpath, the adjacent road, the path along the western edge known as ‘the goat track’ and informal paths within the wood. There is also an area where there is evidence of a fire pit where people gather. The survey zones of the wood were defined as the fall distance of trees from the targets.

From the initial walk-through survey, it was clear that the north-eastern area of the woodland near the informal path was extensively affected by ADB. There are also significant veteran trees in this area, including ash, sycamore and field maple, and there is a known bat roost in this area. It is proposed to close the informal path, rather than be required to carry out extensive tree felling. This, with appropriate signs, will mitigate the risk in this area. A similar approach is proposed for other informal paths in the woodland – to inform visitors to the woods to keep to the public right of way, in order to prioritise the biodiversity. It might also be possible to address the area of the fire pit and the upper areas of the woodland in this way.

This leaves the risks to users of the public footpath and the road, as well as the 'goat track' at the west of the wood. Risks here cannot be mitigated by removing users or by advising them that access is at their own risk, as the use of the path and road is by right. Therefore, the professional survey has mainly identified hazards alongside the public footpath and road. Because of the gradient in the wood, trees below the path lean away from users, and any risk is reduced because trees would fall away from the path, so where possible, the tree survey has accounted for this reduced risk.

The resulting survey, carried out at the beginning of October before any autumn leaf fall, is shown on the map below. Unfortunately, a significant number of hazards have been identified in the survey. The map shows further work necessary on approximately 128 trees. These are predominantly ash trees but also include other tree species that have hazards. This work needs to be done within six months. Many of these trees will need felling or significant reduction, and some need further inspection or monitoring. The map shows that these trees are mainly associated with use of the public footpath and road.

We propose to take an approach that carefully considers and enhances the biodiversity of the woodland the to this work as feasible, including:

- Carrying out ecological assessment as part of the preparation of tree works, considering ground flora, bats, badgers and other protected species
- To limit the works to trees, for instance in leaving standing deadwood, 'monoliths', to reduce trees.
- To install enhancements to the trees, such as veteranisation features
- Where possible, to limit works to felled trees, to mimic natural processes such as storm impact
- To install bird boxes alongside the bat boxes already installed in the wood
- To carry out the work in the winter to limit ecological impacts
- To mark and seek to protect areas of particular botanical interest
- To widen the species mix of the woods, with native species to enhance the biodiversity, considering planting of disease resistant elm

Following this work, it is expected that following a season of monitoring, there will be opportunities to restock the wood, following guidance from Forest Research and other organisations.

External Funding

No current funding has been identified to manage the tree work necessary, including that resulting from ADB. A Forestry Commission pilot is available in some regions of the UK relating to tree health, but it is not available in this area, and is unlikely to be rolled out during before 2022/23. We will continue to look for opportunities for funding from other sources, particularly for replanting or managing natural succession in the woodland. Funding from the Cotswold AONB is on hold for completion of projects after this work is completed.

Proposed Resolution

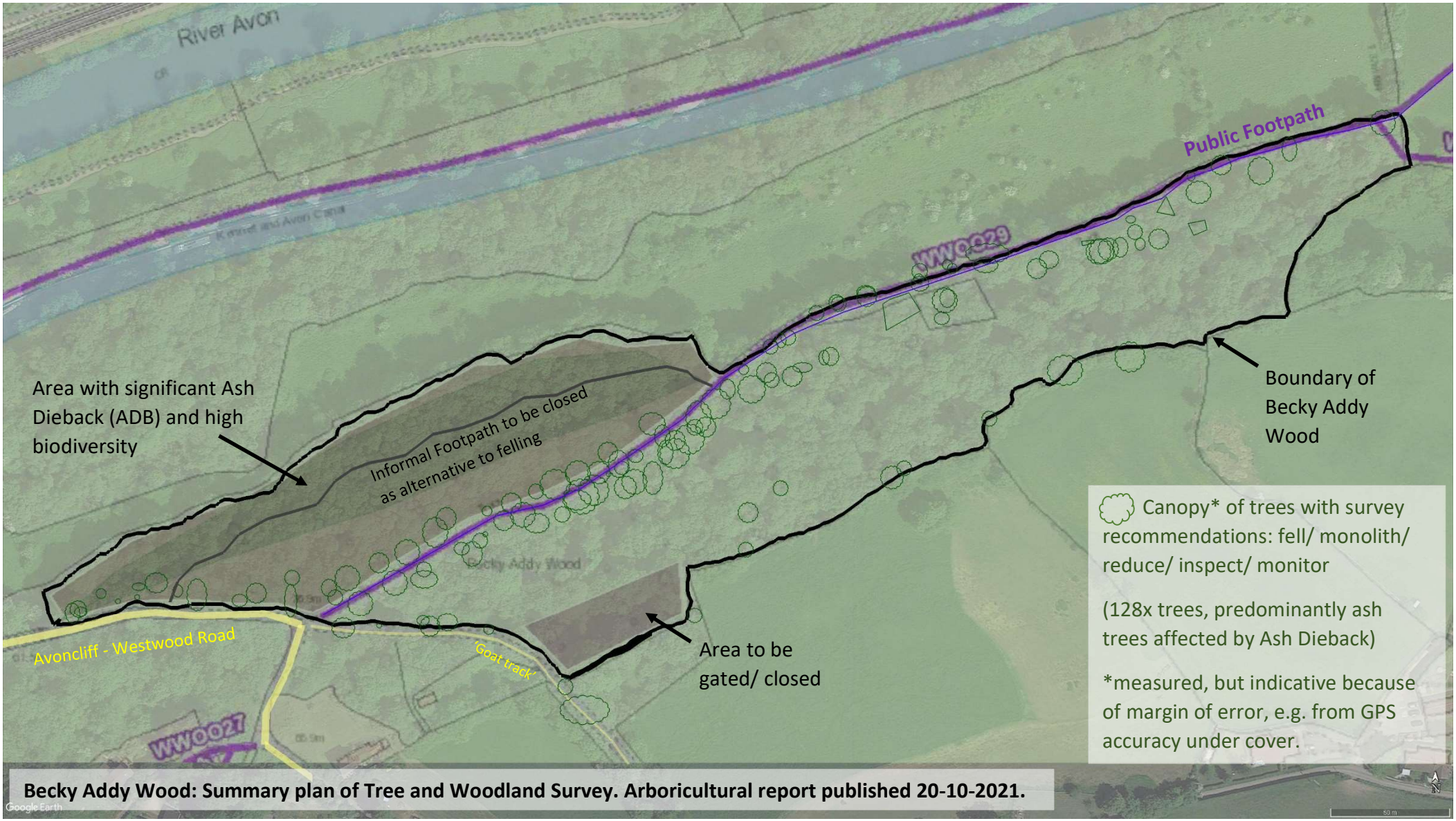
To close the informal footpath in the north-western section of Becky Addy Wood.

Prepare signs on site and communications to explain the approach.

To commission forestry and arboricultural work to address the hazards associated with use of the public footpath, based on the survey carried out in early October 2021.

To arrange ecological surveys, gain approval for works to trees covered by Tree Preservation Order, to obtain a Felling Licence, traffic regulation orders and to meet regulations and legal responsibilities to enable the works.

To fund the above work, following the council's financial regulations to appoint appropriate contractors for the works.


River Avon
Public Footpath
WW0029
Area with significant Ash Dieback (ADB) and high biodiversity
Informal Footpath to be closed as alternative to felling
Boundary of Becky Addy Wood
Canopy* of trees with survey recommendations: fell/ monolith/ reduce/ inspect/ monitor
(128x trees, predominantly ash trees affected by Ash Dieback)
*measured, but indicative because of margin of error, e.g. from GPS accuracy under cover.
Area to be gated/ closed
Avoncliff - Westwood Road
'Goat track'
WW0027
Becky Addy Wood: Summary plan of Tree and Woodland Survey. Arboricultural report published 20-10-2021.

BRADFORD ON AVON TOWN COUNCIL

Public Guidance Document Text

Nocturnal Animals and Artificial Lighting

1 FIRST DRAFT TEXT

1.1 NOCTURNAL ANIMALS

Nocturnal animals are a much loved and charismatic part of British wildlife and include hedgehogs, badgers, bats, foxes, owls, newts and dormice. Unfortunately, human lighting interference has a significant negative effect on many of these species, which tend to avoid well-lit areas for fear of being seen by predators.

1.2 LIGHTING AND WILDLIFE

With global and UK wildlife populations in decline as a result of human pressure, we want to provide some simple steps and advice to householders and local businesses to reduce the overall lighting levels in and around Bradford-on-Avon which will be of benefit to our local nocturnal wildlife (and also your electricity bills!) by providing safe darker corridors for animals to move through at night.

External lighting on buildings is required for us to be able to move safely around properties and walkways in the dark, however the number of lights can be minimised and certain lighting may be able to be avoided all together to increase the chances of seeing nocturnal animals in gardens and natural habitats around Bradford on Avon. Careful placement of lighting in the right place and setting lighting further apart should result in a reduction in the number of lights on a property or land and even some lighting being avoided all together. This consideration can also help with planning new internal lighting and the location of new windows and skylights in property alterations. The location and height of internal lights and windows can be planned to minimise lightspill onto dark corridors.

1.3 LIGHTING RECOMMENDATIONS

We appreciate that avoidance of lighting is not always possible so the next step is to try to reduce the lighting levels and/or the duration of lighting. This can be achieved by focussing and directing the light on exactly where it is needed and not allowing light to spill out onto green habitats such as trees, hedgerows, gardens and the River Avon. Using lighting with hoods and shields, placing it as low to the ground as possible and directing it in a downward direction away from vegetation helps to illuminate the required area only. The use of short duration timers and well-aimed PIR sensors are a very successful measure to ensure that lighting is off or dimmed when not in use.

Lighting with the following specifications are proven to reduce the negative effects on nocturnal animals:

- Metal Halide, mercury light and fluorescent sources should not be used.
- LED lights should be used.
- Use low level illuminated bollards, down-lights and handrail lighting where possible.
- Position light to point away from the river/trees and vegetation.
- Position light to point towards the ground.
- Position light as low as possible.
- Warm coloured lights should be used (<2,700 Kelvin).
- Avoid blue-white lights.
- Keep garden lighting to a minimum, place in locations away from native vegetation and turn off when not in use.
- Placement of new windows, home extensions and skylights should be considered to create the least lighting impact.
- Curtains and blinds and light-reducing tinting/film should be considered as should placing internal lighting away from windows and at heights to reduce reflection and direct lightspill to vegetation.

With a small amount of planning the levels of lighting can be greatly reduced.

1.4 LIGHT SCREENING

Where light spill on natural habitats can't be avoided, screening can be used to minimise the illuminance. This can include putting up panel fencing with a small hole at ground level for nocturnal animals to pass through. Fencing can be planted with night scented climbers to attract insects which provide night time food for animals. Night time scented species include:

- Cherry pie (*Heliotropium arborescens*)
- Evening primrose (*Oenothera biennis*)
- Honeysuckle (*Lonicera periclymenum*)
- Night-scented catchfly (*Silene noctiflora*)
- Night-scented stock (*Matthiola bicornis*)
- Nottingham catchfly (*Silene nutans*)
- Soapwort (*Sapnoria officinalis*)
- Sweet rocket (*Hesperis matronalis*)

- Tobacco plant (*Nicotiana alata*)
- White jasmine (*Jasminum officinale*)

1.5 IMPROVING YOUR GARDEN FOR NOCTURNAL WILDLIFE

Gardens and outside spaces can be enhanced to increase shelter opportunities and food for nocturnal animals.

- Bat, bird and insect boxes can be installed in suitable trees and on buildings and fences to increase the habitat available for nocturnal animals.
- Hedgehog shelters can be installed in gardens or alternatively habitat piles for species like hedgehogs and newts can be created with brush and grass clippings.
- Bird baths and ponds are great way to provide some hydration to wildlife.
- Planting native tree, shrub, plant and climber species attracts native insects to provide a food source; variants of native species should be avoided.
- Avoid using lawn treatments including pesticides, insecticides and slug pellets to ensure the highest number of worms are available for birds and hedgehogs to eat.

Why don't you go into your garden at dusk or dawn to have a look at what nocturnal animals you can spot? It is best to avoid using torches!

Alexas fotos

Andy Chiltern

Nis Bouillard

Juntus Menke

Biodiversity and Artificial Light at Night

Technical Guidance

DRAFT

J00730/Report Version: V4.0

Client: Bradford on Avon Town Council

Date: 10 November 2021

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1 INTRODUCTION

1.1 PURPOSE OF THIS DOCUMENT

This document is intended as a repository of technical guidance to inform Bradford-on-Avon Town Council (BoATC) on the emerging research into Artificial Light At Night (ALAN) in order to assess and respond to planning applications and enquiries regarding the potential effects of proposals on biodiversity.

The purpose of this report is to provide information on:

- Legislation and Policy;
- Key Species and Groups negatively affected by light;
- Existing and New Artificial Light at Night;
- Potential Impacts of Artificial Light at Night;
- Survey Requirements;
- Recommendations, Consideration and Mitigation; and
- Lighting Design Solutions.

References and citation links are provided for further information and specific policies/guidance from other authorities on the subject.

2 LEGISLATION AND POLICY

2.1 LEGISLATION

Many species of animal and plant receive some degree of legal protection. For the purposes of this report, legal protection refers to: species included on Annex II of the Habitats Directive 1992 (Council of European Communities, 22/07/1992), Schedules 2 and 5 of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and Schedules 1, 5 and 8 of the Wildlife and Countryside Act 1981 (as amended), excluding species that are only protected in relation to their sale (see Section 9[5] and 13[2]) reflecting the fact that the proposed development does not include any proposals relating to the sale of species.

Legal offences associated with species listed on Schedule 2 of the Conservation of Habitats and Species Regulations and Schedule 5 of the Wildlife and Countryside Act in England and Wales include *inter alia*:

- Deliberate capture, injury or killing of animals or taking or destroying their eggs;
- Deliberately disturb animals in a way that would significantly affect their local distribution or abundance, or affect their ability to survive, breed or rear young;
- Intentional or reckless disturbance of an animal in its place of shelter or protection;
- Damaging or destroying a resting place or breeding site;
- Intentionally or recklessly obstructing access to a place of shelter or protection; and
- Possess, control, transport, sell, exchange or offer for sale/exchange any live or dead animal or any part of an animal.

All species of bat receive full protection from all legal offences listed above.

All species of wild bird are protected under the Wildlife and Countryside Act (WCA 1981, as amended) from killing or injury. In addition, it is an offence to take or damage/destroy their eggs and to damage or destroy a nest whilst it is in use. Species listed on Schedule 1 of the WCA (such as barn owl) receive additional protection in that it is illegal to also *disturb* birds or their young whilst occupying, or near to, an active nest.

A number of wild plants, habitats and animals (including reptiles, hedgehog and seven species of bat) are also included within Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 which lists flora, fauna and habitats considered by the Secretary of State to be of principal importance for conserving biodiversity. The publication of the "England Biodiversity List" satisfies the requirements of Section 41 of the NERC Act 2006 for the conservation of biodiversity. Section 40 of the NERC Act 2006 requires public bodies, including local planning authorities, to have regard for the conservation of biodiversity in England, when carrying out their normal functions.

Badgers are protected under the Protection of Badgers Act 1992 (UK Government, 1992) which makes it an offence to willfully kill, injure or take (or attempt to kill, injure or take) a badger; or to disturb badgers whilst occupying their setts.

2.1.1 Additional protection

The Bath and Bradford-on-Avon Bats SAC (hereafter 'the SAC') is a European Site designated under the Habitats Directive 92/43/EEC (European Council, 1992), which is transposed into UK law under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (the Habitats Regulations) (UK Government, 2019). The citation for the SAC designation represents a formal description of the reasons why the site has been designated for its conservation importance. SACs are afforded stringent legal protection under Regulation 63 of the Habitats Regulations. In summary,

the legal protection of the SAC prevents permission from being granted for development which will adversely affect the integrity of a SAC unless the conditions of three prohibitive tests (the 'derogation tests') are met. When deciding whether the integrity of a SAC would be adversely affected by development, the legislation requires the application of the precautionary principle, i.e. where there is 'reasonable scientific doubt' as to whether an adverse effect on the integrity of the site would occur, development should not be permitted (unless the three derogation tests are met).

Regulation 63 of the Habitats Regulations requires the decision-taker (the 'Competent Authority') to undertake a strict step-wise assessment process for any plans or projects to ascertain potential impacts on European Sites and whether the 'integrity' of the European Site will be adversely affected. This assessment process is known as 'Habitats Regulations Assessment' (HRA). It is important to note that HRA must be applied to 'plans' as well as 'projects'. This means that strategic local plan documents must be subject to HRA as well as individual developments which are subject to planning applications. In practice, HRA at the strategic 'plan' level enables more meaningful consideration of potential 'in-combination' impacts; and means that strategic mitigation can be applied effectively to deal with such cumulative effects.

A series of Conservation Objectives for the SAC have been published for the Bath and Bradford on Avon Bats SAC, which provide a statutory framework for decision making in respect of development proposals and therefore help inform HRAs undertaken at the plan and project (planning application) level. In addition, the objectives are to be used to inform the design and delivery of mitigation measures deemed necessary to conserve or restore the SAC and/or to prevent the deterioration or significant disturbance of its qualifying features as required by the provisions of Article 6(1) and 6(2) of the Habitats Directive. The Site Improvement Plan prepared for the SAC by Natural England identifies an action for planning authorities to produce and promote guidance to inform strategic planning and enable developers to take full account of the SAC in their schemes. The Trowbridge Bat Mitigation Strategy contributes to the delivery of this priority requirement.

2.2 POLICY

2.2.2 National Planning Policy

National planning policy is set out within the National Planning Policy Framework (NPPF) (UK Government, 2021). The NPPF is clear that pursuing sustainable development includes moving from a net loss of biodiversity to achieving net gains for nature, and that a core principle for planning is that it should contribute to conserving and enhancing the natural environment.

Paragraph 179 of the NPPF requires planning policy to plan for biodiversity at a strategic landscape-scale across local authority boundaries. Planning policy should identify and map components of the local ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity, wildlife corridors and stepping stones that connect them and areas identified by local partnerships for habitat restoration or creation. The NPPF requires planning policy and decisions to minimise impacts on and provide net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

Paragraphs 179, 180 and 181 underline the overriding importance of European sites and removes the presumption in favour of sustainable development (Paragraph 182) where development requiring appropriate assessment under the Birds or Habitats Directives is being considered, planned or determined.

2.2.3 Local Planning Policy - Wiltshire Core Strategy

Core Policy 50 within the Wiltshire Core Strategy (WCS) provides protection for features of biodiversity and geological value. As a result of Core Policy 50, concerning development potentially affecting the Bath and Bradford on Avon SAC, must provide avoidance and mitigation measures to ensure no adverse impact on integrity of the SAC. Core Policy 50

also requires development to be undertaken in accordance with the Wiltshire Council Bat SAC Guidance (Wiltshire Council, September, 2015).

Provision of a coherent and linked landscape for bats is also in accordance with Core Policy 52, which requires development to make provision for the retention and enhancement of the local green infrastructure network. This includes the requirement to identify and provide opportunities to enhance and improve linkages between the natural and historic landscapes of Wiltshire.

2.2.4 Wiltshire Council Bat SAC Guidance

The Wiltshire Bat SAC guidance (Wiltshire Council, September, 2015) has been prepared jointly by Natural England (NE), Wiltshire Council and local experts and researchers. It is aimed at applicants, agents, consultants and planners involved in producing and assessing development proposals in the landscapes surrounding Wiltshire's most sensitive bat roosting sites which are protected by European wildlife legislation. The Wiltshire Bat SAC guidance sets out a requirement for adequate survey information, mitigation and compensation for bats in order to demonstrate that development proposals will not impact on the designated bat populations. The guidance applies to all types of development that are subject to planning control.

The Wiltshire Bat SAC guidance explains how development activities can affect Wiltshire's bat SACs and what must be done to avoid or mitigate any impacts. It aims to flag up the types and locations of development that present risks to the SACs so that the needs of bats can be taken into consideration as early as possible in order to avoid unnecessary delays to development projects.

3 KEY SPECIES/GROUPS NEGATIVELY AFFECTED BY LIGHT

3.1 INVERTEBRATES

Invertebrates make up the majority of biodiversity on earth and are vital to ecosystems. Many invertebrates are also listed as national priority species for conservation under the UK Biodiversity Action Plan (BAP) and are listed on Section 41 of the NERC Act 2006.

Many invertebrates depend on the natural rhythms of day/night and on seasonal and lunar changes in light levels to trigger vital stages in their life cycles such as oviposition (egg laying), emergence and diapause (hibernation). For example, some species of insects complete their lifecycle within a lunar cycle of 28 days. The presence or absence of moonlight provides a trigger for the beginning or end of each lifecycle, therefore, some insects can become disorientated by artificial light and can fail to successfully perform important aspects of their life cycle (Nowinszky, 2004) which may reduce and fragment populations.

3.2 BATS

Bats have a complex life cycle in which they rely on a network of different sites for roosting throughout the year. Hibernation and maternity roosts are the most critical, but a series of other 'transitory' roosts are also used as bats move around from one area to another, using different food sources from a variety of habitats as the seasons unfold. 'Swarming' sites where bats congregate for socialising and mating in the autumn (and to a lesser degree also in spring) are also vitally important for maintaining populations. The roost network used by the SAC species throughout the year can include a wide range of features including:

- Mines, shafts and adits[1];
- Caves;
- Culverts and tunnels;
- Buildings – particularly loft voids and cellars; and
- Trees – rot holes, flaking bark, woodpecker holes.

Foraging areas used by bats vary between species and throughout the year and include a wide range of habitats which support their invertebrate prey. Suitable semi-natural habitats such as woodlands, mature hedgerows, grazed pasture, rough grassland, watercourses and wetlands closest to bat roosts are most likely to be important to the bat populations, particularly for juveniles, however some species are highly mobile and may forage several kilometres from their roosts on a regular basis.

In order to migrate between the network of summer, winter and transitory roosts, and commute to and from their numerous foraging areas, bats use established 'commuting corridors'. Although bats are capable of crossing (and frequently do cross) large open areas, good quality connective habitats are preferred. These are generally well vegetated, dark and sheltered linear features that provide direct routes between foraging areas and roosts. They generally provide some protection from predators; and the sheltered conditions also ensure that the bats use less energy in flight rather than flying into the wind. Such connective linear habitat includes:

[1] Horizontal entrance to underground mine

- Hedgerows, stone walls and tree lines;
- Woodland edges and scrub belts;
- Riparian corridors e.g. rivers, stream, brooks, canals; and
- Embankments and cuttings e.g. railways, roads, visibility bunds.

3.2.1 Bath and Bradford on Avon Bats SAC

The following text has been taken from Bat Special Areas of Conservation (SAC) Planning Guidance for Wiltshire (Wiltshire Council, 2015).

"*The internationally important designation of Bath and Bradford-on-Avon Bats SAC is comprised of a network of significant underground sites in both the Wiltshire and BANES administrative areas, including four nationally important Sites of Special Scientific Interest (SSSIs), namely Box Mine, Winsley Mines, Combe Down and Bathampton Down Mines, and Brown's Folly. These component sites comprise extensive networks of caves, mines and man-made tunnels which are used by bats for hibernation, breeding, mating and as a staging post prior to dispersal. The grassland, watercourses, scrub and woodland surrounding them are used by bats for feeding and commuting. Although these habitats are not included in the SAC designation, they are vital to support the bats which are features of the SAC. Bat species using these sites include the rare Bechstein's bat, greater horseshoe bat and lesser horseshoe bat.*"

As such, the designated sites themselves should be seen as "*the main hubs or nodes. Beyond these lie an integrated network of commuting routes, foraging areas and roosts which are used throughout the year. Even activities which occur some distance from the designated sites may damage important elements of the network and disrupt population dynamics.*"

"*All three species are highly mobile throughout the year and use a network of other important roost sites in the surrounding landscape including Iford Manor SSSI, which is the fourth largest breeding colony of greater horseshoe bats in England and one of only 15 breeding roosts in the country. Bats which use the above hibernation sites are known to breed at Iford Manor each year. The network of significant roosts includes sites that are not covered by any statutory designation, such as the breeding colonies of Bechstein's bats at Biss Wood and Green Lane Wood, a pair of ancient woodlands to the east of Trowbridge. This colony is known to swarm at Box Mine SSSI and uses the intervening landscape to commute between these sites.*"

3.3 OTHER MAMMALS

There has been little research conducted on the effect of artificial light at night (ALAN) on mammal species other than bats. One study (D. Finch *et al*, 2020) studied the potential impact of ALAN on hedgehogs in UK gardens using a large-scale citizen science project and found that there was no significant effect on the hedgehogs feeding at the supplementary feeding stations, however that there could be other costs to reproductive success, territory maintanance and natural prey availability which need to be considered.

A study in Berlin into evidence for influence of ALAN on the behaviour of hedgehogs found that the majority of hedgehogs in a group of 22 hedgehogs studied for four years proffered to move in less illuminated areas rather than strongly illuminated areas (A. Berger *et al*. 2020). The study proved that the behaviour of hedgehogs is affected by ALAN.

Badgers, foxes and owls all predate hedgehogs and other small mammals and therefore the effects of ALAN will also affect these species. Those species with a higher tolerance to ALAN may have an advantage in feeding compared to those which don't. A Dutch study found that badgers, which heavily predate on hedgehogs are less common in urban,

recreational and road habitats. Therefore, there appears to be a complex interrelationship between nocturnal animals and light.

4 DESK STUDY

Bats are frequently used as a bioindicator or a 'canary in a coal mine' due to their position near the top of the food chain and their sensitivity to a number of environmental factors. There have been more studies on the effects of lighting on bats than other nocturnal animals and there have been a high number of bat activity surveys and monitoring surveys conducted in and around BoA due to the presence of the Bath and BoA Bats SAC and the legal requirement to maintain the conservation status of the SAC. As a result, a focus has been made on the study of bats in BoA in order to inform this Technical Guidance on biodiversity and artificial light at night.

A desk study has been conducted to investigate the location of known bat roosts and flight paths within BoA. A summary of the results is provided in Appendix A. The following sources of information have informed the plan:

- Fiona Matthews, University of Sussex;
- Wiltshire and Swindon Biological Records Centre (WSBRC) data search for key species (Bechstein's, greater horseshoe and lesser horseshoe bats) conducted in 2020;
- A review of bat survey reports produced in support of planning applications within BoA; and
- Preliminary Ecological Appraisal Reports produced for key areas in BoA by Ecosulis in 2020.

5 ARTIFICAL LIGHT AT NIGHT

5.1 EXISTING LIGHTING IN BOA

Existing lighting within BoA comprises lighting for road safety, the railway, commercial lighting, internal and external shop lighting, security lighting, internal and external residential lighting and decorative lighting. The majority of this lighting is required for reasons of night time safety, however poor design including location, angle, duration, direction, level of illuminance and height of lighting can result in over illumination with no resulting additional benefit to safety and visibility. Additionally, the effect of artificial lighting can have detrimental effects to nocturnal wildlife.

Internal lighting from windows, glass fronts and skylights of properties and businesses e.g. shop fronts contributes a significant amount of light spill without mitigation.

Stuart Brown, Exterior Light Consultant at Atkins has provided the location of lighting within BoA that is to be updated to LED lighting. The location of the lighting to be replaced is provided in Appendix B.

An indicative assessment (non-industry standard) of lighting levels by JA Ecologists at key locations in BoA was conducted on 8 November 2021 to provide initial information regarding the current lighting levels in BoA around main commuting routes and key roosts in the town shown on Appendix A. The results of the indicative light sampling are provided in Appendix C. It was found that while the conditions beneath street lights is very bright and unsuitable for the SAC species to use, there were dark areas between the lights and in gardens and unlit areas that provide suitable dark areas for bats. The centre of the River Avon through the middle of the town was very dark (0.01 Lux) and this provides a likely main flight path for bats to use.

There were several lights with very high Lux levels which it is hoped will be reduced with the new LED lighting. There were several lights including two near to the Kingston Mills maternity roost that were very bright and should be reviewed to mitigate in the future.

5.2 PROPOSED NEW LIGHTING IN BOA

The lighting within Appendix B will be updated to LED lighting with the following specifications: 2700K CCT LED, utilising Urbis Schreder Axia 3 lanterns. Any existing equipment already changed prior to LED replacement project may be 4000K or 3000K CCT LEDs. The funding to convert these to 2700K is currently unavailable. Only higher CCT LED equipment within the Cotswold Area of Outstanding Natural Beauty (AONB) have been included in conversion as part of this project.

New developments including roads, walkways, residential and commercial require new lighting to be installed and the following sections provide more information on assessing the effects of new lighting upon nocturnal wildlife.

Alterations to residential properties can also increase lightspill e.g from new windows in extensions/conversions and new skylights in existing and new residential developments.

6 POTENTIAL IMPACTS

6.1 ARTIFICIAL LIGHT AT NIGHT

6.1.1 Impacts of Artificial Light on Invertebrates

Artificial light has the potential to significantly disrupt ecosystems and it is widely observed that some invertebrates, such as moths, are attracted to artificial lights at night (Bruce-White, 2011). In addition, the polarisation of light shiny surfaces attracts aquatic insects, particularly egg laying females away from water and reflected light has the potential to attract pollinators and impact on their populations, predators and pollination rates.

Light reflected off coloured artificial surfaces also has the potential to impact on invertebrate populations. Some colours are very attractive to pollinating insects as they are strongly associated with flower colours. Many invertebrates are known to be repelled by light, subsequently, as artificial light increases in distribution and intensity, there are fewer suitable places for the sensitive species to survive and reproduce.

Dormancy

Changes in activity levels can be caused by an increase in artificial light. A high level of illumination can cause night flying insects to cease flying and settle preventing insects from feeding and breeding and reducing the level of prey for other species such as bats. Many diurnal (day active) invertebrates such as butterflies have larvae that feed at night to avoid predation. It is thought that changes in artificial light levels impacts the behaviour of night feeding larvae by inhibiting their feeding patterns and making them more susceptible to predation.

Many flowers are pollinated at night, mainly by moths and light pollution has many spectral peaks that would affect the apparent colour and contrast of flowers at dusk and night. Moths require visual and olfactory floral stimuli in order to locate and feed on flowers (Raguso, 2005) and unlike humans and bats, moths have colour vision at low light intensity. There is a possibility, that flowers that are adapted to nocturnal pollination can be affected by emitted light pollution although no studies have been published to date investigating the impact.

6.1.2 Impacts of Artificial Light on Bats

Artificial light is known to have severe impacts on bats, acting through a range of different mechanisms (Stone E., 2013). Light falling on a bat roost exit point, regardless of species, will at least delay bats from emerging, which shortens the amount of time available to them for foraging. As the main peak of nocturnal insect abundance occurs at, and soon after dusk, a delay in emergence means this vital time for feeding is missed. At worst, the bats may feel compelled to abandon the roost. Bats are faithful to their roosts over many years and disturbance of this sort can have a significant effect on the future of the colony.

In addition to causing disturbance to bats at the roost, artificial light can also affect the feeding behaviour of bats and their use of commuting routes. There are two aspects to this: one is the attraction that short-wavelength light (UV and blue light) has to a range of insects; the other is the presence of lit conditions.

Many night-flying species of insect are attracted to lamps that emit short wavelength component (Bruce-White, 2011). Studies have shown that, although noctules, serotines, pipistrelle and Leisler's bats, take advantage of the concentration of insects around white street lights as a source of prey, this behaviour is not true for all bat species. The slower flying, broad-winged species, such as long-eared bats, barbastelle, greater and lesser horseshoe bats and the Myotis species (which include Brandt's, whiskered, Daubenton's, Natterer's and Bechstein's bats) generally avoid external lights (Bat Conservation Trust, 2009).

This means that light that spills onto bat commuting routes or foraging areas can cause avoidance behaviour by some light-sensitive species (including the rarer SAC species greater horseshoe, lesser horseshoe and Bechstein's) and isolate or fragment habitat in the landscape (Stone E., 2013). This will mean that bats may be forced to abandon foraging areas or commuting routes for sub-optimal habitat (which may ultimately result in abandonment of roosts if that alternative habitat is insufficient to sustain the colony). Lighting can be particularly harmful if it illuminates important foraging habitats such as river corridors, woodland edges and hedgerows used by bats. Studies have shown that continuous lighting along roads creates barriers which some bat species cannot cross (Fure A., 2012).

It is also known that insects are attracted to lit areas from further afield. This could result in adjacent habitats supporting reduced numbers of insects, causing a further impact on the ability of light-avoiding bats to feed.

The introduction of new lighting is therefore a significant issue for greater horseshoe, lesser horseshoe and Bechstein's bats, the important designation species for the Bath and BoA Bat SAC.

6.1.3 Impacts of Artificial Light on Birds

The effect of artificial light on birds in an urban setting is less significant. The majority of urban bird species are diurnal and are largely unaffected by ALAN. The indirect effect of light that degrades invertebrate foraging resource is one possible effect but this has not been the subject of extensive research at this point.

Clearly nocturnal species such as owls will prefer to forage in unlit areas as there will be more prey available. Migrating birds can be drawn to light sources and there can be increased mortality risk in collision with buildings at night (e.g. lighthouses) – but this is not considered to be an issue in BoA due to the area not being a night time migration hot spot.

ALAN has the potential to benefit some species of birds, particularly those that predate on bats, as the increase in light allows diurnal bird species (such as peregrine falcon *Falco peregrinus*) that have been observed hunting bats around historic buildings that are lit at night. Clearly this is a source of conflict and would not occur naturally without the influence of artificial light.

6.1.4 Impacts of Artificial Light on Other Mammals

Lighting can impact on commuting routes of animals such as otter and badger.

The effects of ALAN on small mammals in the wild is also poorly defined. Artificial light has been shown to increase predation risk and, similar to bats, create areas that mammals will no longer feel safe enough to forage in as a result of light.

The effect of PIR lighting (i.e. the sudden bright lighting of an animal) has the compounding impact of affecting mammalian night vision and will render the vision of nocturnal mammals significantly less effective for an extended period of time, affecting its capacity to forage and avoid predation.

7 SURVEY REQUIREMENTS

7.1 LIGHTING SURVEY

Some of the technical information in this section has been reproduced with the kind permission of Bath and North East Somerset Council from their Waterways Design Guidance Protecting Bats in Waterside Development (Bath and North East Somerset Council, 2018).

In addition to the guidance set out in this section, it is expected that the approach to lighting for new development, including a lighting survey, is undertaken in accordance with the guidance in (Bat Conservation Trust and Institution of Lighting Professionals, 2018) and (Gazaryan, S., and Meyer-Cords, T. (Eds) (2018).

The introduction of new lighting can result in adverse impacts to populations of Bechstein's, greater horseshoe and lesser horseshoe bat in BoA. It is therefore critical to maintain functional dark foraging habitats and commuting corridors for these species. In order to achieve this alongside new development, it will be essential that the bats and lighting issue is acknowledged and integrated into the design process from the outset, and in an iterative way. It should not be left to later design stages or be retrofitted into development proposals. In order to demonstrate that the development has been designed to accommodate light-sensitive bats, it will be necessary to provide the baseline lighting survey and modelling information set out below.

Where baseline lighting surveys are confirmed to be required in consultation with the Council, they must be undertaken by a suitably experienced and competent lighting professional (member of the Chartered Institution of Building Services Engineers (CIBSE), Society of Light and Lighting (SLL), Institution of Lighting Professionals (ILP) or similar). The lighting professional should determine the appropriate number and location for sample readings to be taken, considering the habitats of value to bats on site and the potential need for the samples to be repeated post-development as closely as possible.

Baseline measurements should be taken systematically across development sites or features in question. That is, they will need to be repeated at intervals to sample across the site or feature, either in a grid or linear transect as appropriate. At each sample location, a reading should be taken at ground level on the horizontal plane (to give illuminance hitting the ground). Vertical readings should also be taken at each sample location at 1.5m (to replicate the height at which horseshoe bats will typically fly); and at 4m (to replicate the height at which Bechstein's bats will typically fly). The orientation for vertical readings should be perpendicular to the surface/edge of the habitat feature in question (such as a wall or hedgerow) in order to produce a 'worst case' reading. Further measurements at other orientations may prove beneficial in capturing influence of all luminaires in proximity to the feature or principal directions of flight used by bats. This should be discussed in pre-application discussions with Wiltshire Council.

An appropriately high-quality light meter must be used which is V-Lambda and Cosine Corrected and the type of light meter used for the survey must be specified in a baseline survey report (e.g. Minolta T10). Measurements should always be taken in the absence of moonlight, either on nights of a new moon or heavy cloud to avoid artificially raising the baseline. Baseline surveys must be undertaken with all existing luminaires switched on and undimmed, and where possible, with all internal lighting switched on and with blinds or screens over windows removed. Where possible, measurements should be taken during the spring and summer when vegetation is mostly in leaf, in order to accurately represent the baseline during the principal active season for bats and again to avoid artificially raising the baseline.

A horizontal illuminance contour plan (isolux plot) should be prepared by the lighting professional, plotted at ground level. Vertical illuminance contour plots for 1.5m above ground level and at 4m above ground level, or similar graphic representations of illuminance levels showing light spill on vertical planes, will also need to be submitted with the

planning application. Each contour plan should be accompanied by a table showing their minimum and maximum lux values.

8 RECOMMENDATIONS, CONSIDERATION & MITIGATION

8.1 RECOMMENDATIONS

8.1.1 Assessment

The potential impacts of obtrusive light on wildlife should be a routine consideration in new development proposals and lighting decisions around town. Risks should be eliminated or minimised wherever possible.

When planning a new development or re-evaluating an old lighting scheme the first thing that should be considered is whether lighting is really necessary and the following should be considered;

- Could the scheme function without artificial lighting?
- Do the benefits of lighting outweigh any negative effects? and
- Are there alternatives to lighting such as better security methods?

If lighting is necessary, then aspects of the lighting scheme must be considered to reduce the impact on biodiversity in particular the lighting location and design.

It is recommended that a desk-based lighting assessment is conducted for the existing and proposed lighting schemes e.g. the new LED BoA lighting scheme to assess the effects of the changes in lighting in particular along bat flight routes and around known roosts/swarming sites.

8.2 CONSIDERATION

Lighting schemes should be developed after a detailed site appraisal for all new developments. Appendix C should be used to inform the level of consideration given to new development lighting or lighting schemes. Alterations to existing properties and businesses e.g. extensions into current dark habitat/dark corridors, skylights and new windows require consideration through the planning process.

The results of lighting scheme assessments would inform whether further mitigation measures are required on certain lights or whether there is in fact an improvement in light levels. Should the LED lighting scheme or other proposed development lighting schemes identified through the planning process have an expected increase in lighting in key bat areas, there may be a negative effect to the conservation status of the Bath & BoA Bats SAC: this should be subject to Habitat Regulation Assessment.

8.3 MITIGATION

It can be seen that the impacts of artificial lighting on wildlife can be severe and it is consequently essential to mitigate these impacts. It should be noted that larger development schemes are likely to require bespoke lighting mitigation, designed by a lighting engineer, working in collaboration with an ecologist. However, some common principles, together with minimum mitigation standards that will be expected in planning application submissions, have been outlined below.

Where the effects of lighting may have a significant negative effect upon the SAC species of bats and in particular within the areas identified in Appendix C, a Habitat Regulations Assessment Appropriate Assessment (AA) will be required to be conducted to assess whether there will be a significant effect upon the integrity of the conservation status of the Bath

and BoA Bats SAC. The AA will outline any mitigation measures required for lighting and will inform an HRA to be conducted by Wiltshire Council.

The Bath Pattern Book Lighting Strategy should be referred to inform new lighting choices for BoA. The river should remain unlit and new/updated lighting along the river should comprise unidirectional bollard lighting pointing away from the riparian habitat. Lighting should be designed to avoid direct and reflected lighting to the river, around known bat roosts and along flight paths (Appendix A).

As an overarching principle, dark corridors must be maintained around resting places, foraging areas and commuting corridors with no net increase in light levels as a result of the development in areas used by sensitive wildlife. It should be noted that enhancements would also be welcome i.e. development schemes that actively reduce lux levels associated with habitat features. These principles should be achieved through the following:

- Planning applications should be submitted with pre and post development lux contour plans, which should be based on topographic survey and prepared by a lighting engineer.
- Derivation of post-development lux contours must include the illuminance arising from all light sources, including highways lighting, flood lighting, security lighting, other external lighting and internal lighting (i.e. light spill from windows). The latter is particularly important where buildings are designed as glass-fronted or are located in close proximity to habitat features.
- Post-development lux contours need to be considered and presented at the height at which local species occur i.e. not just at ground level. As such, consideration needs to be given to calculating vertical illuminance in lux for given habitat features, as well as horizontal lux contours at different heights.
- Lux levels for important wildlife habitat features to be retained or created would ideally be zero. As a minimum requirement, lux levels at the height at which the target species are active must be < 1 lux measured at the outer perimeter of the habitat feature.
- Dark corridors for hedgehogs should be created to help safely connect isolated populations and avoid dangerous areas by leading them around roads through dark corridors.
- It is likely to be necessary to buffer habitat features considerably from light sources in order to secure suitable light levels, taking into account the potential for private owners to fit their own external/security lighting in the future.
- Installing the right type of lamp and luminaire can minimise the impact and simple measures such as use of timers, closing curtains and switching off lights can reduce domestic light pollution.
- Placement of new windows, home extensions and skylights should be considered to create the least lighting impact. Curtains and blinds and light-reducing tinting/film should be considered as should placing internal lighting away from windows and at heights to reduce reflection and direct lightspill to vegetation.
- For larger or more sensitive developments, a competent lighting designer should be employed who will apply the principles of providing the right light, in the right place, at the right time and controlled by the right system.

- There are a range of guidance documents available that set out excellent design principles that could be considered for lighting; and these should be used to assist with design of lighting schemes that are sensitive to wildlife. As a starting point, it is important to consider whether lighting is necessary at all before going on to consider design. Consider no lighting solutions where possible such as white lining, good signage and LED cats eyes.
- Minimise the spread of light to at, or near horizontal and ensure that only the task area is lit. Flat cut-off lanterns or accessories should be used to shield or direct light to where it is required. Consider a range of design solutions to target light to where it is needed ie not the habitat features, including height of lighting, low intensity luminaires with shielding designed to prevent light spill, deployment of fencing and tree/ shrub planting to screen light sources.
- There is frequently a conflict between highways lighting requirements and requirements for dark corridors e.g. there is typically only a limited design that will be acceptable to the Highways Authority before they will adopt a new road. These conflicts must be identified at the earliest opportunity; and developers will be expected to find innovative solutions to these conflicts, including consideration of sections of non-adopted private highway if necessary.

9 LIGHTING DESIGN SOLUTIONS

The following measures should be considered for incorporation within lighting schemes to reduce and minimise the impact from development. Lighting design must be undertaken by a suitably competent lighting professional.

9.1.1 Mitigating Light spill from Exterior Lighting Provision

Consider whether exterior lighting is absolutely required and avoid lighting where unnecessary. The likely uses of the external spaces/routes of a development must be fully understood to determine whether they should be lit after dark, and if so how, to what level and during which hours of use after dark. All of these should be articulated as part of a proposal.

Consider using barriers to light: light intensity can be reduced in some locations by creating a light barrier to restrict the amount of light spill reaching sensitive areas. Barriers can be in the form of walls, bunds or fences. Vegetation can be used to enhance these features, but shouldn't be relied upon in achieving desired light levels.

Where lighting is unavoidable, seek to reduce light intensity and numbers of luminaires, and ensure the use of the most directional and focused luminaires available. Careful specification of optics and light shielding/shaping accessories fitted to luminaires as specified by a lighting professional can further reduce light spill. Aim to ensure that the Upward Light Ratio (ULR) of the installation is limited to 0% in order to stop poorly aimed luminaires and reduce glare. Mounting heights should be minimised to reduce the distance light can spill.

Light sources with low blue and low UV content to be employed. In preference modern LEDs should be selected as these emit significantly less or no UV light so are less disruptive to both insects and bats Warm colour temperature LED light sources to be employed preferably at 3000Kelvin (as these have been shown to cause less impact on bats) (Stone E. L., 2015; Stone E. L., 2009; Stone E. L.).

Installation by developers of specified security lighting will minimise the likelihood of new occupants installing their own devices. Such essential specified security lighting should exclusively use PIR motion-sensitive luminaires located and designed to avoid light spill into bat habitat and buffer zones. Security lighting must be specified to minimise above horizontal outputs and should comprise LED warm light sources (at 3000Kelvin).

Consider the use of Control Management Systems (CMS) to apply dimming regimes during the night to reduce levels of illuminance during periods of high bat activity (typically soon after dusk and the hours pre-dawn) or to ensure lighting only comes on when it is needed –e.g. when activated by the movement of pedestrians. Pre-programmed dimming must be included on all highway lighting with the dim level appropriate to the location and highway safety requirement. Even colour shifting can be considered. This should not be at the expense of public safety and could include the use of presence detectors to enable light levels to intensify or light colours to shift when required. E.g. Low levels of amber-red light could be employed along protected corridors, with warm white light with increased colour rendering activated to support pedestrian safety and security.

9.1.2 Mitigating Light Spill from Interior Lighting Provision

Building set back and orientation can dramatically reduce the reach of light spill and the encroachment on sensitive bat habitat features so should be carefully considered with the input of a lighting professional.

The careful planning of internal building layout and proposed use may be an option for achieving the above standards near bat habitats where: there are space restrictions on small developments; existing buildings are being retrofitted; or in very limited circumstances for larger developments. The following factors should be taken into consideration.

However, as many of these factors are difficult to enforce for the lifetime of the development, their suitability will be assessed against the particular significance of the bat feature concerned.

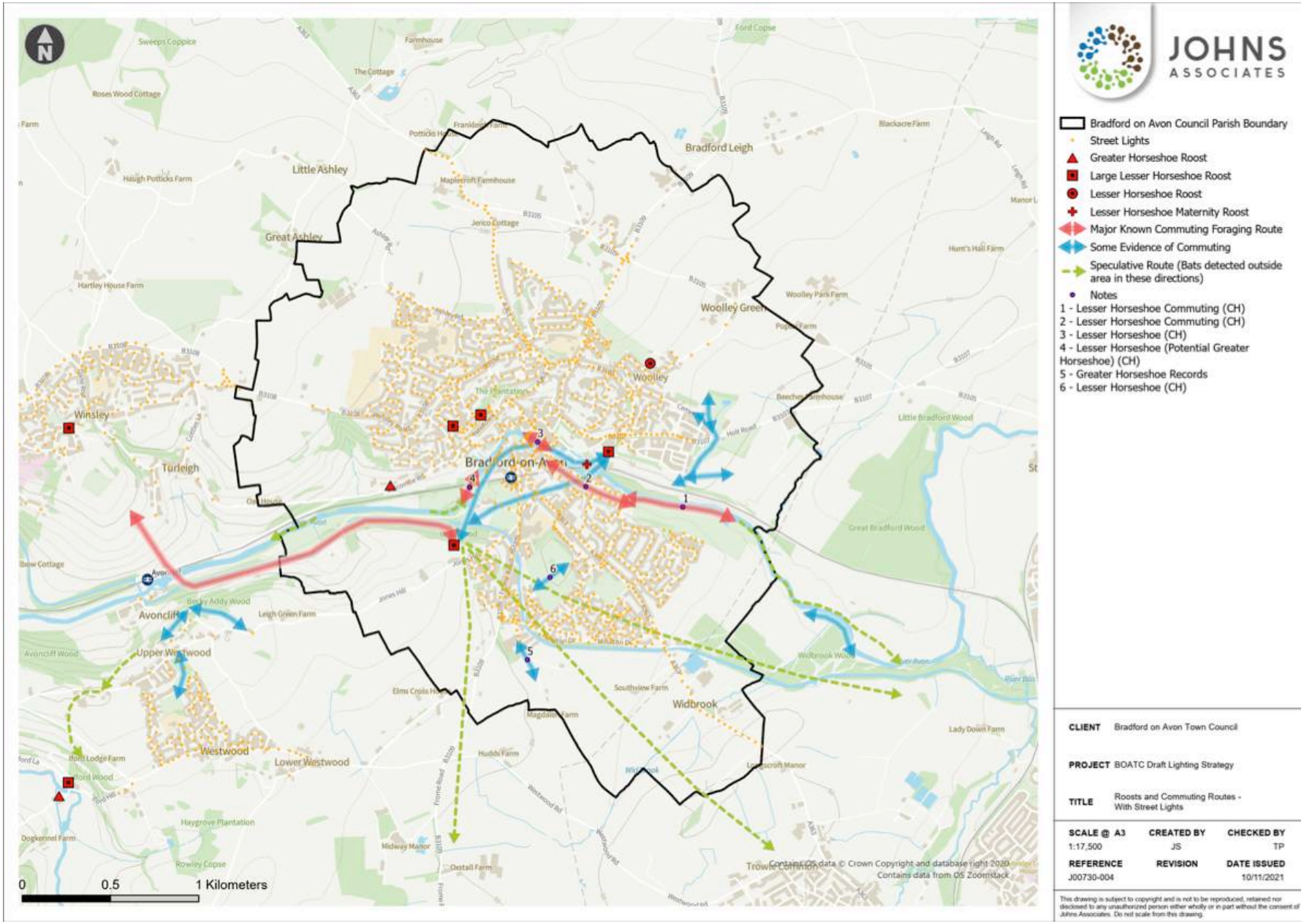
- The design and depth of window reveals and reduced transparency of glazing to substantially reduce light transmission.
- The use of balconies and louvered windows to reduce light transmission onto sensitive bat habitat features.
- Tight optical control must be applied to any luminaire within 1.5m of glazing. This includes the use of, for example, 'darklight' type downlights with deep recessed light sources and focused beams. Diffuse fluorescent type luminaires should be avoided alongside glazing.
- Light fittings can be set back away from windows and also recessed into ceilings rather than using pendant luminaires to further control light transmission.
- Light spill from ground floor spaces should not extend beyond 1.5m of the glazing line.
- In the case of office lighting, lighting to areas behind glazing should be controlled on a separate lighting circuit to enable them to be switched off or dimmed separately when a different area of the office floor is in use.
- All internal lighting must be switched off when the room is unoccupied – this is only relevant to commercial buildings and should be achieved through the use of lighting control systems and/or appropriate building management.
- The use of automated dimming circuits and automated blinds on windows to attenuate light spill is unacceptable due to concerns regarding their long-term maintenance.

9.1.3 Minimising Light Spill from Domestic Properties

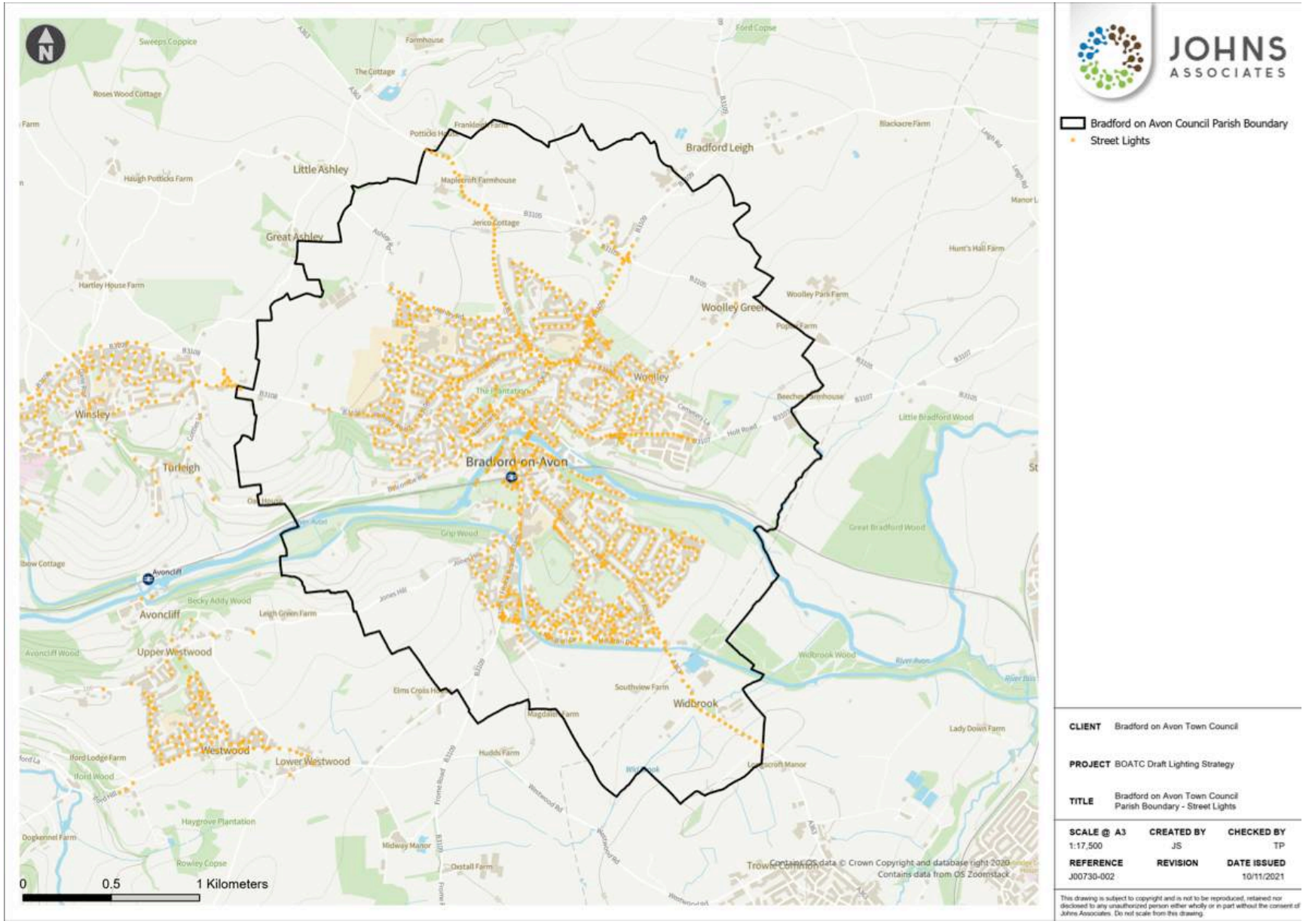
Raising awareness will help reduce light pollution from residential properties. Domestic lighting is mostly outside of planning control and it too can have an impact on biodiversity.

Most security lighting is purchased and installed by members of the public who are not fully aware of the environmental impacts of artificial lighting. Information on lighting types, installation and maintenance can be given by local councils and manufacturers and retailers should be informed of the impacts.

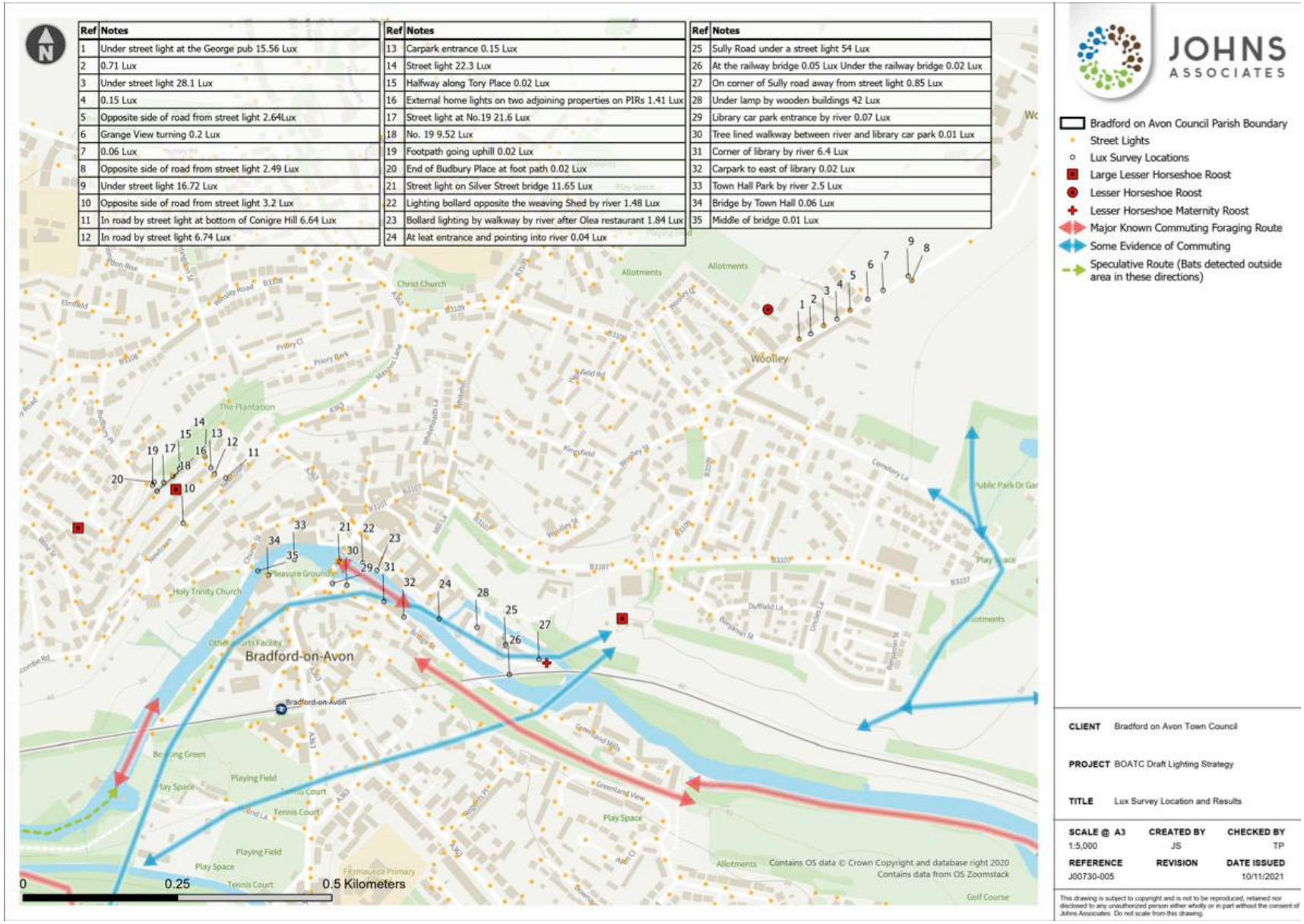
APPENDIX A - LOCATION BAT ROOSTS & FLIGHT PATHS WITHIN BOA



APPENDIX B – LIGHTING TO BE REPLACED IN BOA



APPENDIX C – INDICATIVE LIGHT SAMPLING RESULTS IN BOA



C&EE focus sessions

Theme (suggestions)	Date	Owners	Format ideas
CARBON COUNTING: DOMESTIC HEATING	February 2022	S. Forsyth, AK	Training, talk & discussion group, development of case studies, open-homes, survey launch
FOOD WASTE TO GARDEN COMPOST DEMONSTRATIONS		KV? CH?	Demos, food-waste collection start up Community fridge?
LIGHT STRATEGY AND THE VALUE TO ECOLOGY			Bat talks, night walks????
HEALTHY RIVER MANAGEMENT		AK, CH	
WASTE MINIMISATION and MANAGEMENT			Community fridge?
LOW-CARBON TRAVEL		TT	

Alex Kay, Environment & Greenspaces Chairman's report for Tuesday 16/11/21

Environment

1. **Greener Christmas cards:** printed up and to distribute from Xmas switch on.
2. **Asset Transfer update?**: signage, litter bins, parking, land management….
3. **Climate & Ecological Emergency Display in Library:** new material needed.
4. **Climate Emergency focus sessions** timetable, owners and themes (circulated separately)
5. **COP26, 1-12 November**. Disappointing silence from TC, no comms., although community members have been involved. AK and others from craftivism made canaries to send to our MP to raise plight of Climate and air quality. National and international promises made. WC show-cased their Climate Toolkit with projects from BoA included.
6. **WC Climate Emergency and Green-Blue Infrastructure**, 14/10/21: discussion and feedback zoom (final version attached).
7. **WC Climate webinar/conference**: attending online session 16/11/21.

Bradford on Avon Town Council Comments for Wiltshire Council Climate Emergency and Blue-Green Strategy Response

October 2021

Bradford on Avon Town Council welcomes the fact that Wiltshire Council (WC) is developing a Climate Emergency (CE) Strategy. We appreciate that this a complex issue and approve of the range of ideas included in the draft strategy. The lack of integration of this document with the WC Local Plan reduces its efficacy. The CE Strategy lacks vision and commitment to achieving its goal of seeking to make Wiltshire carbon neutral by 2030. The recent IPCC Sixth Assessment Report (AR6) predicts that the world will reach or pass 1.5°C between 2030 and 2035 and is likely to exceed 2°C between the early 2040s and early 2050s. Every fraction of a degree of warming leads to more dangerous and costly impacts. Urgent actions could remediate this to some useful extent.

Without WC commitment and urgency, there is little chance of us making much progress at all, and the impact of the Local Plan (unless the final is significantly improved from the draft) is likely to increase the County's carbon footprint rather than address the problem. It is interesting to note, that excessive, poorly thought out housing in the wrong places, of the wrong type and not of environmentally sustainable quality, is referred to as a *Plan*, whereas the Climate Emergency and Blue-Green Infrastructure documents are both referred to as *Strategies*; some of the right words, but not really a plan! The CE and BGI need to be fully integrated with the Local Plan and of at least equivalent weight of importance.

Comments about the consultation process:

1. Hard copies are difficult to come by for those less able to engage with the internet (but a few were at Climate Festival and in Library);
2. The online Teams information session was tricky to join, the link was partially lost during (my) session and deleted my questions, attendees could not see who/how many attending, attendees could not see questions from others, responses were poor;
3. The documentation is attractive and nicely illustrated, although key figures, especially maps, have poor resolution, and generally text is repetitive and lacking in detail making it difficult to respond in the questionnaires;
4. Examples of answers (other answers to follow from all sessions):
    a. Clean Air Zones are generally not a good idea, because WC didn't expect any problems in BoA with the Bath CAZ start-up, although everyone in BoA knew about it and expected it to be a problem for the town whilst WC did no preparation;
    b. Wiltshire cannot press for more sustainable housing (and several other issues) because they can only do what central government say … which in effect have no intention of making any effort for a 2030 target, as Westminster have committed to a less ambitious 2050 (with little real progress). Wiltshire Council has a position of significant influence to change government position on planning regulations, other Unitary Councils have pushed for stronger standards of sustainability.

WC Climate & Blue Green Infrastructure Strategy response.

1. The Climate Emergency should be at the heart of all Wiltshire Council policies and have primacy;
2. Climate Mitigation should be a significant goal in its own right, bringing a focus on carbon sequestration projects;
3. We would like to see significant changes to policy and real action sooner than the suggested 2 years;
4. There is no detail of how objectives will be delivered, referring simply to 'future delivery plans';
5. It seems clear therefore that Wiltshire Council's decarbonisation objectives will be no more than a 'wish list' in the Local Plan, Local Transport Plan and other plans, most of which have completely contrary objectives and will not be in place for at least 2 years.
6. There is a lack of measurable objectives and associated milestones. If the strategy is to be succeed, there needs to be more detail on clear aims on a yearly or every two years basis;
7. There is a lack of capital investment and budget commitments;
8. If the Strategy is to achieve its aims, immediate reversal of plans implementing climate destructive, high emission plans and policies, until such time as detailed carbon reduction delivery plans have been adopted, including the excessive housing target and poor housing standards, Westbury Incinerator etc.;
9. Active travel infrastructure needs significantly better emphasis: more than 'encouragement' for active travel. Greater provision of safe walking and cycling routes, EV charging points, EV taxis, car-sharing/clubs and all other possibilities to help reduce emissions as well as reducing the total number of vehicles on our roads;
10. There is no clear path for improving public transport which should be so much more than buses, especially improvement and protection of existing routes on the train services as these efficiently removes vehicles from the roads. This is highlighted by the local outrage about removal of the direct route to Waterloo with no consultation and expectation that Wiltshire Council should champion that cause;
11. No detail on sites to generate renewable energy, plant trees, apply regenerative agriculture or produce food for local consumption;
12. Complete dependency on other plans and strategies that are yet to be developed, which in themselves present a significant risk of increasing the County's emissions (e.g. through more commuter based development and road building);
13. All Wiltshire Council business should aspire to carbon-zero operationally. Recently announced, the Silverwood School extension approval with a recommendation to be operationally carbon-zero is commendable. However it is needs to consider all aspects, including that a majority of students will be transported there (cars? buses?), rather than gaining education and support within or near their own communities.
14. Lack of detail of what is included specifically in BGI Strategy, makes it difficult to comment as a community;
15. The BGI has limited definitions of what types of protection will be provided at designated sites and what are those sites;
16. The consultation response from Bradford on Avon was overwhelmingly in support of protecting existing greenspaces for well-being and wildlife; it is uncertain whether (for example) the Old Golf Course is 'in' the BGI and if it is, what protection it would be given;
17. The BGI document focuses on 'access' to wildlife and economic impacts, but despite all the evidence of massive loss insect, bird and mammal wildlife both in quantity and species, there are no actions suggested for enhancement or regeneration of habitats and safe corridors for wildlife. BOATC's made Neighbourhood Plan has green space protections, but the green corridors policy was removed due to *lack of evidence* (pre-2016). We now have a significant amount of evidence and consultation, which will be incorporated into a Neighbourhood Plan update.
18. BOATC employing a dedicated Green Space Officer putting our community in the vanguard of BGI;

19. The Council could do more to indicate how it will use its influence to educate and lead residents and businesses to do more to reduce their own carbon footprint and protection of wildlife in areas beyond the Council's control.

Bradford on Avon Town Council is keen to continue to support Wiltshire Council and its councillors in taking the urgent action that is now required. We declared a similar Climate Emergency within days of WC's declaration in 2019, which we augmented in 2020 with an Ecological Emergency.
https://bradfordonavontowncouncil.gov.uk/town-council-commits-to-a-greener-future/
We have been working hard to engage with our community, doing projects and taking actions as best we can, but we are a small town and need support and leadership for the County to make any significant impact. There is little need for more evidence gathering, investigations and assessments; the evidence is irrefutable. There is an urgent need for more ambition and immediate action.

Bradford on Avon Town Council is extremely interested in the BGI, strategy particularly along the River Avon which is central to the wellbeing, biodiversity and heritage of our whole community. We would be keen to work with Wiltshire Council to protect and enhance our riverside and other green spaces and continue to take a strong lead on this, as we take on responsibility for these in the imminent asset transfers.

Prepared by Cllr Alex Kay 14/10/21, in conjunction with BOATC and support from residents and groups including Climate Friendly BOA, BOA Preservation Trust.