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CAM VALLEY FORUM RESPONSE TO THE GREATER CAMBRIDGE ONLINE SURVEY ON GREEN INFRASTRUCTURE

This paper responds to the invitation from the Greater Cambridge Green Infrastructure Opportunity Mapping project to comment on assets, weaknesses and gaps in the green infrastructure network in Greater Cambridge, and to share priorities. Further information on the project is available on the website https://greater-cambridge-consultation-hub-luc.hub.arcgis.com/.

1. Which green infrastructure sites are thriving and provide the most value to people and wildlife in Greater Cambridge?

It is difficult to respond without knowing what is meant by 'thriving' and 'value'. Sites can be well-used while being degraded ecologically (e.g. Jesus Green has little ecological value as a grassland habitat). Sites can be less well-used (low 'utility' value) but provide valuable wildlife habitats (high 'existence' value).

Paradise, Sheeps Green and Coe Fen are exemplars of good practice. These areas have quite high biodiversity, very capable management and combine traditional wetland pasture management by cattle with provision of open recreational space. The Rush stream also provides a very valuable site for wildlife in a near urban setting.

Urban wildlife (in Cambridge) is substantially more biodiverse than in the surrounding countryside, especially where there are major gardens with good tree and shrub cover.

2. Which green infrastructure sites need intervention to enable them to provide more value to people and wildlife in Greater Cambridge?

See question 4

3. What are the main pressures and threats to green infrastructure in Greater Cambridge in the future?

(select as many as relevant)

1. Recreational pressure YES
2. Climate change YES
3. Lack of funding YES
4. Development pressures YES
5. Agricultural activity YES
6. Other YES

Please describe any other pressures or threats

All these pressures are important to varying extents, and in varying combinations, across Greater Cambridge.

A fundamental concern is that 'green infrastructure' is treated as a mere 'add on' to development planning when it should be an integral consideration from the outset. Developers need to understand the concept of natural capital in all its forms and do their utmost to safeguard and enhance it.

Please add any relevant comments regarding pressures and threats

Water abstraction should also be recognised as a threat. Reduced flows put water habitats and fisheries under stress and at times lead to local extinctions and long-term habitat damage. Reduced flows also reduce the dilution of treated sewage discharges and of nutrients in urban and rural run-off.

While water abstraction is largely a matter under the control of central Government, the water industry and its regulators, how it is managed is highly relevant to the future health of our local environment. The Cam is an iconic river and, with its tributaries, merits greater protection and enhancement.

The Cam Valley Forum is pursuing substantial changes in abstraction practice through its Let it Flow! report (https://camvalleyforum.uk/water/) and follow-up initiatives (see https://camvalleyforum.uk/letter-to-minister/).

4. Where do you consider the key opportunities for green infrastructure creation and enhancement in Greater Cambridge to be over the next 5 years and beyond? (please also provide the location of these where appropriate)

[This text split between Questions 2 and 4 as not enough space to submit online under Question 4]

[Put under Q2]

Commons, parks, fields and paths that provide access to the Cam and its tributary rivers, streams and brooks are particularly highly valued. Residents and visitors alike enjoy being beside water, if not also on it in boats of many types, or in it as swimmers. The river is also valued for its historical uses, landscape and architecture and as a corridor for wildlife (e.g. eels, sea trout, kingfishers and terns).

It should be recognised that much of the green infrastructure that has survived is on land that forms part of the Cam Valley flood plain. If the riverside commons had never been flooded they might not now exist at all! This green space is part of the river ecosystem and cannot be separated from it. Indeed, opportunities should be taken to reconnect it more fully with the river, e.g. by creating new inlets, ponds and ditches.

We urge a strong focus on enhancing green infrastructure in 'river corridors'. Opportunities for environmental improvement should be sought within corridors that extend at least 50 metres each side of the main rivers, streams and brooks within Greater Cambridge. The more opportunities that are acted on within these corridors the better.

These corridors should be formally defined and recognised as 'Riverscape Opportunity Areas' (or 'River Corridor' instead of 'Riverscape' if you prefer) in the Local Plan, in local Biodiversity Action Plans, and in the estate management strategies of the Colleges and other businesses that own land within them. To support land managers in delivering enhancements, Defra should recognise them as

target areas for the delivery of Environmental Land Management projects under the new scheme that will replace Countryside Stewardship.

In these areas, the aim should be to encourage natural processes so far as possible. For example: buffering watercourses against surface water run-off and improving habitats in built-up areas; and, in rural areas, reconnecting rivers with their flood plains, tackling the damage caused by over-deepening and straightening, buffering them against nutrient, pesticide and soil inputs, and restoring light grazing.

Opportunities that should be sought within 'Riverscape Opportunity Areas' include:

(a) Vary mowing regimes in urban parks to create more diverse vegetation.

(b) Actively reintroduce meadow species into rye-grass swards on the urban commons and parks (including parts of the more intensively-managed local Nature Reserves) using local seed sources (e.g. as on King's College lawn) to strengthen populations of less common wild flowers that are vulnerable to local extinction.

(c) Recreate scrapes and ditches on riverine commons in Cambridge to restore habitats for wetland plants lost when the commons were infilled and levelled in the 19th century (for examples of the impacts and their extent in Cambridge see C. D. Preston *et al* (2003): The long-term impact of urbanisation on aquatic plants: Cambridge and the River Cam. *The Science of the Total Environment* 314-316: 67-87).

(d) Create further inlets and ponds to create new water habitats, provide refuge areas for fish during high flows and areas where young fish can flourish. The new inlet created on Logan's Meadow in Chesterton is valuable in many ways although further work appears to be necessary to improve water quality as the stream and pond bed appears to be dominated entirely by algal growth.

(e) Replace sealed surfaces where possible with permeable paving to allow water to filter into the soil rather than running into the river, creating pollution risks (e.g. in front of boathouses in Cambridge).

(f) Install and maintain silt and pollutant traps in all surface water drains from highways or private land (e.g. Colleges) that run directly into the river, or connect these instead into the sewer network, to reduce water pollution from hydrocarbons, microplastics, and silt.

(g) Commission and implement expert advice (e.g. from the Wild Trout Trust and Wildlife Trust) to restore and enhance rivers and their tributaries in Greater Cambridge. Reports available on the Wild Trout Trust website include: Cam (Hinxton 2015), Granta (Linton 2019, Babraham 2019), and Cherry Hinton Brook (2017). These make many valuable recommendations to tackle concerns such as: low flows; pollution from sewage works, surface water drains and contaminated land; tree and vegetation management; siltation; channel over-deepening and straightening; and barriers (e.g. weirs).

(h) Establish significant buffer strips of natural vegetation alongside watercourses to protect them from spray drift and run-off of soil and nutrients from intensively-managed farmland.

(i) Remove invasive non-native species such as Floating Pennywort *Hydrocotyle ranunculoides*, and Himalayan Balsam *Impatiens glandulifera*, which threaten indigenous biodiversity.

[Text put under Q4]
Other spheres not necessarily linked to water where there is scope to improve green infrastructure generally include:

(j) Ensure that the City's Local Nature Reserves (LNRs) are managed to high standards to protect and enhance their biodiversity and landscape. The LNRs are: Barnwell East, Barnwell West, Bramblefields, Byron's Pool, Coldham's Common, Logan's Meadow, Nine Wells, Paradise, Sheep's Green and Coe Fen, Stourbridge Common, and West Pit.

(k) Establish green roofs on all new buildings to increase biodiversity, absorb carbon dioxide and attenuate rainfall.

(l) Build Sustainable Urban Drainage Systems (SUDS) into future developments wherever possible to attenuate run-off. New retention ponds should be as natural as possible to provide opportunities for wildlife. SUDS should be retrofitted to recent major developments that lack them, wherever possible (e.g. the St Andrews Park Estate, Chesterton, built in 2003).

(m) Build rainwater harvesting systems and greywater recycling systems into future developments wherever possible (e.g. as done at the Eddington development).

(n) Include nest bricks for Swifts, House sparrows and Starlings in new buildings. Swift nest bricks were included in a new development at Fulbourn but not at Trumpington, a missed opportunity.

(o) Ensure a higher ratio of greenspace to built development in new developments. Sealing of surfaces should be minimised wherever possible.

(p) Ensure a higher proportion of houses with gardens in new developments. The Covid-19 crisis has highlighted the value of private gardens (even if only small) to the mental and physical health of people. They are important for local biodiversity, absorb rainfall (rather than sending it into surface water drains) and cool the atmosphere by absorbing heat from hard surfaces. Shrubs and trees absorb carbon dioxide, filter out pollutants, reduce noise levels, and provide shade.

(q) Encourage hedgehogs by requiring new developments to enable their free movement between gardens and encourage homeowners to create gaps in the bottom of their fences to help them.

(r) Use native flowers and shrubs in roadside planting (e.g. along Green End Road in Chesterton, in place of failed exotics).

(s) Assess the scope to improve biodiversity around sports grounds and buildings. While sports turf itself needs to be managed to meet the demands of the players the surrounding grounds could be managed much less intensively (without herbicides, with reduced cutting regimes), saving money and reducing the carbon footprint and providing opportunities to create more diverse grassland habitats for wildlife (e.g. by reintroducing meadow species from local seed sources if any).

(t) Actively seek out the remaining colonies of scarce plants in Cambridge and propagate them for reintroduction to suitable habitats.

(u) Diversify the farmed landscape by recreating lowland meadows and pastures lost through land drainage, built development close to the river in urban settings, and the specialisation and intensification of agriculture. Some far-thinking land managers have redressed the balance through imaginative projects, and these should be encouraged through Environmental Land

Management schemes. For example the Trumpington Farm Company have transformed arable land adjoining part of the upper river north of Grantchester into a wetland nature reserve.

(v) Restore the ecological health of farmland. Intensive arable farming, involving a switch to winter rather than spring crops, the loss of fallows, reduced use of organic manures, and herbicides and insecticides, has depleted soil organic matter, soil carbon, and populations of microorganisms, and invertebrates, with knock on effects on farmland birds (e.g. rooks, lapwings, skylarks, cuckoos) and insects (e.g. butterflies and pollinators). This will require significant changes in farming practice, with a stronger emphasis on protecting and enhancing natural capital. This should also be encouraged through Environmental Land Management projects.

5. What are the major challenges in delivering green infrastructure schemes? (select as many as relevant)

1. Lack of local government funding YES
2. Lack of community support YES
3. The planning process YES
4. Development viability YES
5. Lack of collaboration between different bodies YES
6. Other YES

Please describe any other challenges

Other challenges include policies and approaches, whether from national Government, local government or the business sector that prioritise cost over quality, fail to recognise the value of natural capital, and fail to build in resilience to withstand future environmental and societal changes. A stronger focus is needed on actions to stem the loss of biodiversity, and to reduce and adapt to climate change.

Please add any relevant comments regarding major challenges

All these challenges are important to varying extents, and in varying combinations, across Greater Cambridge.

South Cambridgeshire has only ONE ecology officer. He spends all his time dealing with planning enquiries and has no time for field visits. This is a disgrace. Greater provision needs to be made in Local Government funding locally and nationally to safeguard and enhance natural capital assets.

Community support is widespread but lacks influence. The 'Friends Groups' that exist for almost all our green spaces are often not part and parcel of site management or are insufficiently involved in decision making. This needs to change. City and district governance is very weak (reflecting central government constraints). By contrast, commercial building developers have immense influence over patterns of development and pay insufficient attention to the importance of natural capital and the nature and future management of green infrastructure.

6. Are you aware of any innovative approaches to date in Greater Cambridge or elsewhere in delivering and funding green infrastructure assets?

One significant example is provided by the Trumpington Meadows Country Park. This demonstrated how the interests of wildlife, flood management, and people's enjoyment can all be met by taking an integrated approach to opportunities presented by significant new developments.

When, in 2009, 1,200 new homes were planned upstream of Byron's Pool, the land between the new estate and the river, previously inaccessible to the public, was converted into Trumpington Meadows country park:

- Changes to the river and its banks balanced the interests of residents and wildlife. In places steep banks were re-graded to make it easier and safer for people to paddle or launch a canoe while, further upstream, ditches were widened to discourage access to the river banks where kingfishers nest and otters live.

- Gravel was placed in the river to create riffles which disturb and quicken the flow and thus scour silt from the river bed and oxygenate the water.

- A low-lying wild-flower meadow was created beside the river, which is attractive for people and insects in summer and, in winter, when water levels are high, provides a sanctuary for wading birds and helps to reduce the risk of flooding downstream in the city.

7. Are there certain geographical areas that are particularly poorly served by green infrastructure in Greater Cambridge?

Arbury, Petersfield and Romsey in North Cambridge are the poorest areas in housing provision and in the provision of open space. What open space they have is preyed upon by the development of the City itself, that has nowhere else to build on affordably for low cost housing.

St Albans Recreation Ground (Arbury) and St Matthew's Piece (Petersfield) are two examples of green space losses to development (the second was a Common and given in perpetuity to local residents!).

8. Are there certain geographical areas in Greater Cambridge that are completely lacking green infrastructure?

Areas that have lost their green spaces to development in recent years should be a focus for new provision.

9. Are there certain communities (e.g. the elderly, children etc) that are particularly poorly served by green infrastructure in Greater Cambridge?

Poorer people in flats and houses of multiple occupation with limited access to private greenspace and/or public greenspace in their immediate area.

10. Would you like to answer the part 2 questions (which relate to the Infrastructure Delivery Plan)?

NO

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