

Cambridge Nature Network: A Nature Recovery Network for Cambridge

Presentation by James Littlewood, Chief Executive, Cambridge Past, Present & Future to South Cambs District Council Environment & Climate Change Committee, 9 March 2021

1. Request to the Committee

- I. The Committee is asked to give its support, in principle, to an emerging Cambridge Nature Network.
- II. If the Committee is supportive, how could South Cambs Council be involved in helping to deliver a Cambridge Nature Network?

2. Summary

A partnership of local NGO's is developing a local nature recovery network for the Cambridge area. This is based around ecological principles at a landscape scale. Surveys and research have been carried out over the past 2 years which have identified 5 priority areas that would comprise a nature recovery network within a 10km radius of Cambridge.

This Cambridge Nature Network has been adopted by the Cambridgeshire & Peterborough Local Nature Partnership as one of their 6 priority landscape areas for nature recovery, as part of their programme to double nature by 2050.

One of the purposes of the nature recovery network is to target limited resources where they will have the greatest benefit.

Discussions have been carried out with landowners and are ongoing, these have generally been positive.

The research and information produced by this work is being submitted to the Local Plan process in stages and dialogue has taken place with Land Use Consultants and the Greater Cambridge Shared Planning Service.

The work has also considered how a Cambridge Nature Network could be funded and sustained financially.

An advisory group has been helping to inform the project, chaired by Dame Fiona Reynolds and including John Torlesse, Kim Wilkie, Robert Myers and Sir Nicholas Bacon.

The next steps include:

- Raising awareness of the network, building support for it, and encouraging stakeholders to get involved and to take action.
- Creating new nature-rich green spaces through the opportunities identified.
- Advice and support for farmers to adopt more nature-friendly farming.
- Collaborative working to make the best use of limited resources and maximise opportunities.

3. Introduction

Since 2018, Cambridge Past, Present & Future, the local Wildlife Trust and other organisations have been carrying out work to identify a Nature Network for the Cambridge area that could halt the decline in nature and enable it to recover.

This is a network of wildlife friendly habitats that would be of sufficient scale to make a difference in tackling the biodiversity crisis and achieve the Cambridgeshire Doubling Nature Vision and also help to meet the greenspace and access to nature needs of the rapidly growing population. It will also help our prosperity by making our area an attractive place to live, learn or do business.

The network takes a hierarchical approach based on the Lawton principles for the design of ecological networks (Lawton et al, 2010). The key elements of this are that natural green spaces should be (in order of importance): Of better quality > Bigger in size > There should be more of them > They should be more connected to each other by stepping-stones of habitat and nature friendly farming > Or connected through corridors of habitat.

A Cambridge Nature Network is not a giant park or nature reserve, instead it would consist of clusters of individual parks, nature reserves and natural habitats that are linked together. The land between these places is mostly farmed or urban and is likely to mostly stay that way in the short-term but there are opportunities for nature friendly farming that can buffer, connect or provide stepping-stones between high quality nature sites.

Over time, there will be opportunities to expand or create new nature areas and green spaces through philanthropy, fund-raising and to support new developments or economic growth. In relation to development this could be either through biodiversity net gain or provided as ancillary to new developments, as we have seen at Trumpington.

The nature network is not a new designation. It is about prioritising areas for action because of their existing value to nature or their potential to contribute to a functioning nature network. Nevertheless, adoption of the nature network within the OxCam Arc Spatial Framework, in the Greater Cambridge Local Plan, in supplementary planning documents, or recognition that it meets the requirements of a [Local Nature Recovery Strategy](#), would provide formal recognition and this in turn would facilitate access to funds to help achieve it. For example, to benefit from Biodiversity Off-setting or to benefit from the new Environmental Land Management Scheme (ELMS, which will replace Countryside Stewardship from 2024).

Where is it?

It is focussed on an area that includes Cambridge and a 10 km radius. This was partly for practical purposes and the amount of funding available, but also recognising the benefits of being close to population and where growth is most likely.

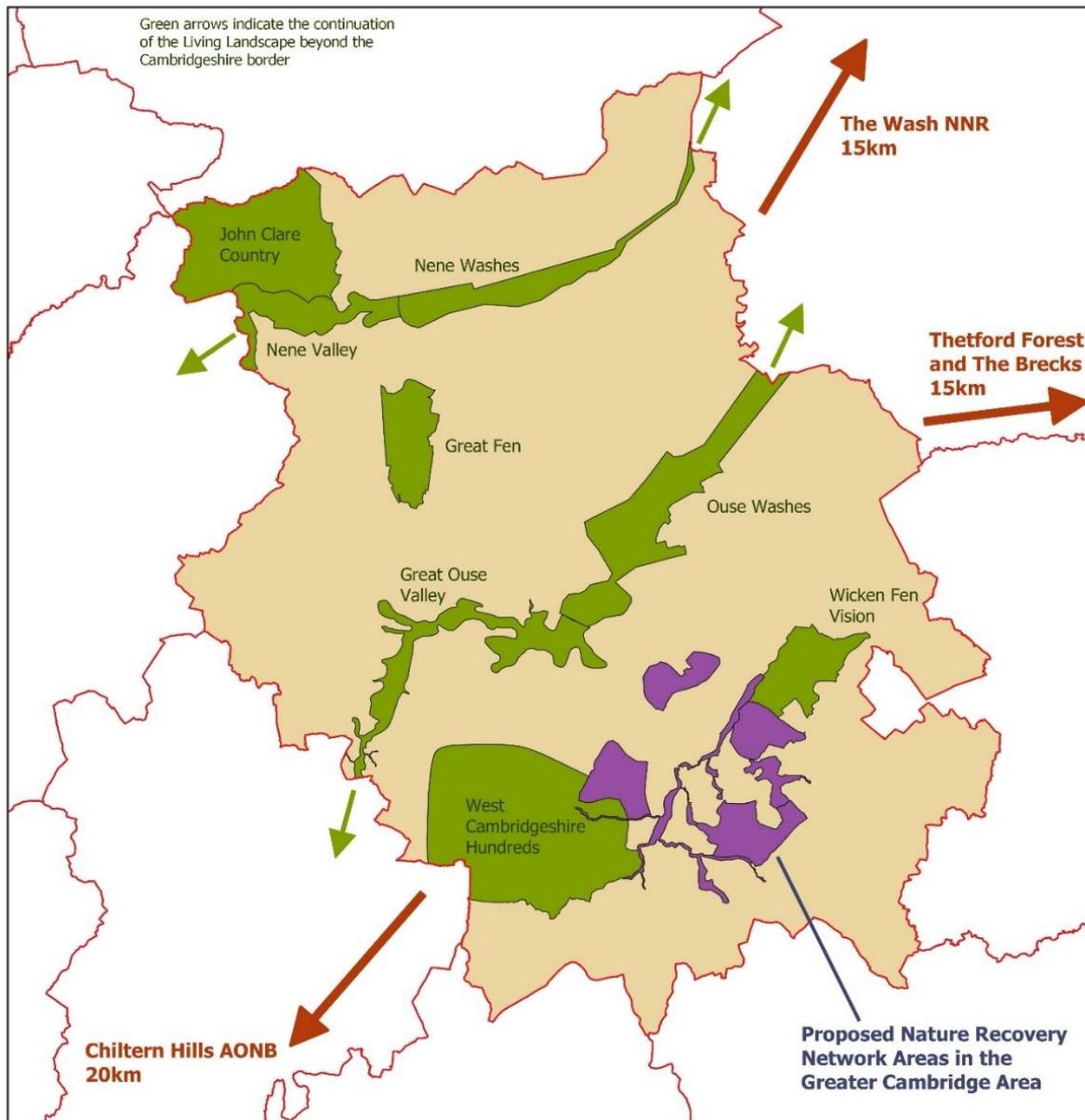
However, nature knows no boundaries and the Cambridge Nature Network is connected to other landscape scale conservation initiatives, such as the Wicken Fen Vision to the north east and the West Cambridgeshire Hundreds to the west. To the north east is the Ouse Valley Priority Landscape Area (Fen Drayton).

The Cambridgeshire & Peterborough Local Nature Partnership has agreed 6 priority landscape areas for nature recovery, including the Cambridge Nature Network (Map 1).

Based on analysis of data, land ownership and ground-truthing surveys, the Cambridge Nature Network is composed of five nature priority areas and one opportunity area, which are shown on Map 2.

The precise boundaries of these areas are not totally fixed, but they are mostly based on landscape features which reflect habitat quality - such as contour levels, floodplain and soil types.

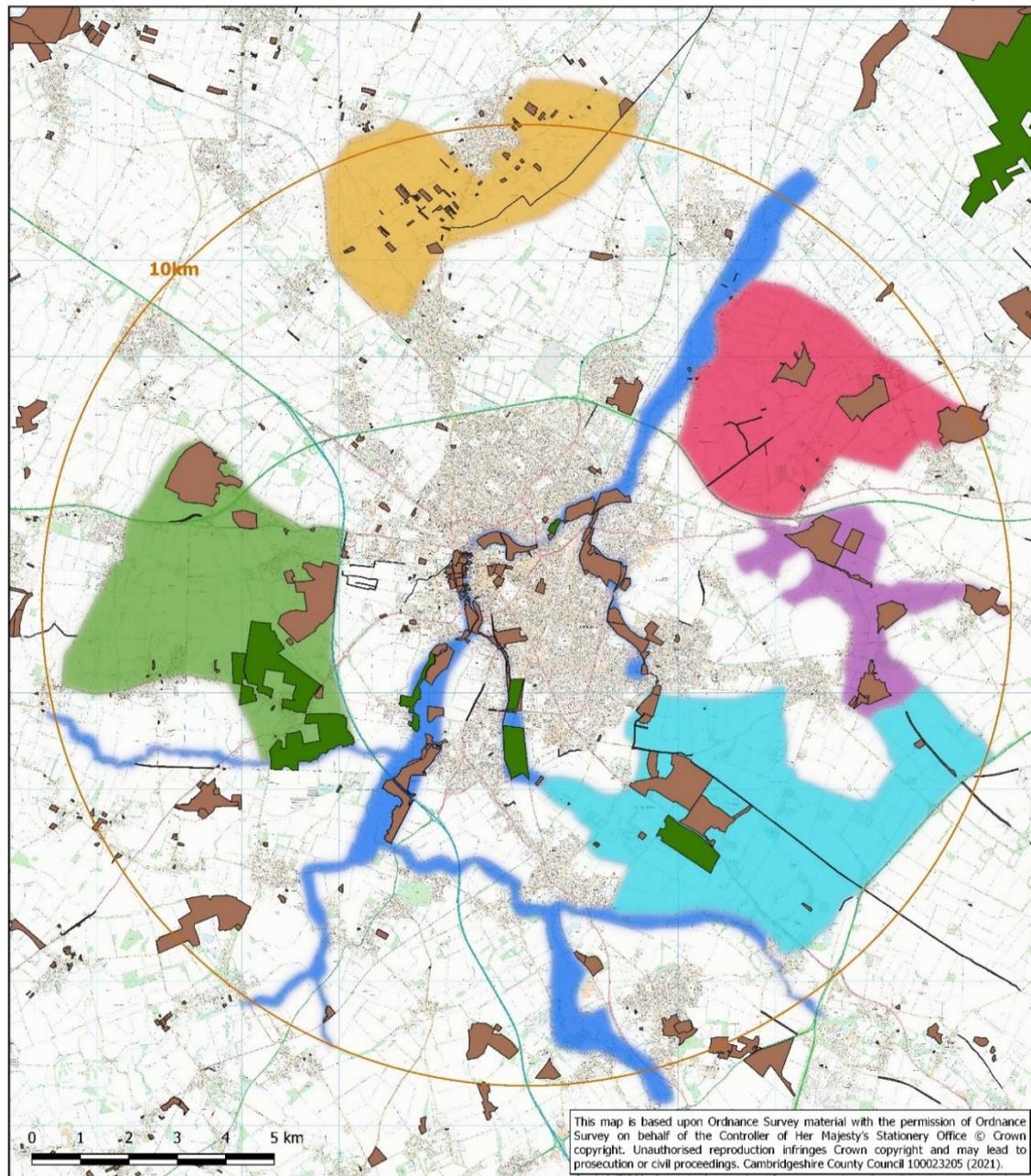
Map 1. Priority Landscape Scale Nature Recovery Network in Cambs & Peterborough



Map 2: Overview of Cambridge Nature Network

Cambridge Nature Network

Showing the locations of designated sites for nature
February 2021



Nature Recovery Network

- Gog Magog Hills Priority Area
- Cambridge Fens Priority Area
- Boulder Clay and Woodlands Priority Area
- River Cam Corridor Priority Area
- Wicken Fen Vision South Priority Area
- Fen-edge Orchards and Drovers Opportunity Area

- Sites with designation for nature (not all accessible)
- Accessible Natural Greenspace without designation

Below is a description of each of these areas. We are developing a vision for each of them and a detailed map showing the best opportunities for creating new habitats and natural green spaces in each area. Maps for the Gog Magog Hills are shown as an example of this approach.

Gog Magog Hills

This large area of approximately 25km² south-east of Cambridge is defined by where the underlying chalk geology comes to the surface, which corresponds well to the 25m contour line. The southern boundary is marked by the A11, with the urban areas of Cambridge defining the northern boundary and the River Granta and riverside villages the western boundary. The area directly connects with both the Cambridge Fens and River Cam priority areas. It includes the chalk grassland SSSIs of Cherry Hinton Chalk Pits, Fleam Dyke, Gog Magog golf course and Roman Road, as well as other Wildlife Sites and accessible natural greenspaces such as Wandlebury Country Park, Magog Down and Beechwoods LNR.

Cambridge Fens

East of Cambridge, Fulbourn, Teversham and Wilbraham Fens mark the edge of the Fens landscape character area. Three SSSIs - Fulbourn Fen, Wilbraham Fen and Great Wilbraham Common - form the core of this 7km² area, which connects them. The area is largely defined by the 10m contour line in the north and 15m contour line to the south and the surface geology comprises both peat and Holocene river terrace gravels. The A14 forms the northern boundary, separating this area from Wicken Fen (South), while the villages of Teversham, the Wilbrahams and Fulbourn also form discrete boundaries being located on the higher ground.

Wicken Fen (South)

The National Trust has a long-term vision to extend its Wicken Fen reserve southwards towards the edge of the city of Cambridge, covering an area of over 50km². The southern part of this vision area (approx. 17km²) provides a gateway from the city into the fen proper. Defined by geographical constraints, this area has the A14 to the south (marking the northern edge of the city), the River Cam Corridor to the west, the B1102 to the east and an approximate distance of 10 Km from the city centre as its northern boundary. The area is characterised by low-lying, wet, clay soils on top of the underlying Cretaceous marly chalk. It lies beneath the 10m contour line and is cross-cut by a series of drains, including Quy Water and Bottisham Lode. Quy Fen SSSI sits at the heart of this area and demonstrates the potential habitat which could be restored across it. Further north, the fen peats come to the surface, forming a direct link to the core, northern part of the Wicken Fen vision area.

River Cam Corridor

Amounting to a total of 15km², this is a linear area stretching through the Greater Cambridge area and connecting many of the other Priority Areas. It encompasses the River Cam, its floodplain and catchment tributaries including the Bourn Brook, Cherry Hinton Brook, River Granta and the River Rhee. The underlying geology is Holocene river terrace gravels overlying Cretaceous gault clay, though the River Granta from Babraham flows down on the Cretaceous marly chalk. This area includes many sites which are already part of the green infrastructure within Cambridge, for example Grantchester Meadows, the college Backs, many of Cambridge's commons and Ditton Meadows. It also includes several County or City Wildlife Sites e.g. Cherry Hinton Brook and Skater's Meadow, LNRs such as Paradise and Bryon's Pool and other more recently created strategic green space such as those at Trumpington Meadows and Hobson's Park (Clay Farm, Great Kneighton).

Boulder Clay Woodlands

This area of approximately 18km² covers the higher ground (over 25m) to the west of Cambridge and sits upon the glacial boulder clay deposits, which overlay the Cretaceous marly chalk and gault clay. Madingley Wood SSSI lies on the plateau and the ground conditions are conducive to woodland cover, which has been expanded in recent years through small-scale woodland planting. The area

extends down to the A428 and M11 in the north and east. Although at present the majority of the area is intensive arable farmland with scattered hedgerows and woods, it does include or adjoin the Coton Countryside Reserve (CPPF), Burwash Manor Farm and Lark Rise Farm (CRT), all of which are farms not only demonstrating wildlife-friendly practices, but also engaging with the public through a series of permissive footpaths. Thus, this area presents an opportunity to extend this network, increasing the quantity and quality of habitats and accessible countryside. The long-distance footpath the Harcamlow Way passes through the area and could provide a nucleus for a green corridor. The Bin Brook flows through the area, and the Bourn Brook lies to the south, connecting this priority area to the strategic West Cambridgeshire Hundreds landscape area to the west beyond the study area. This area forms a significant part of what has been termed the quarter to six quadrant of Cambridge.

Fen-edge Orchards and Drovers

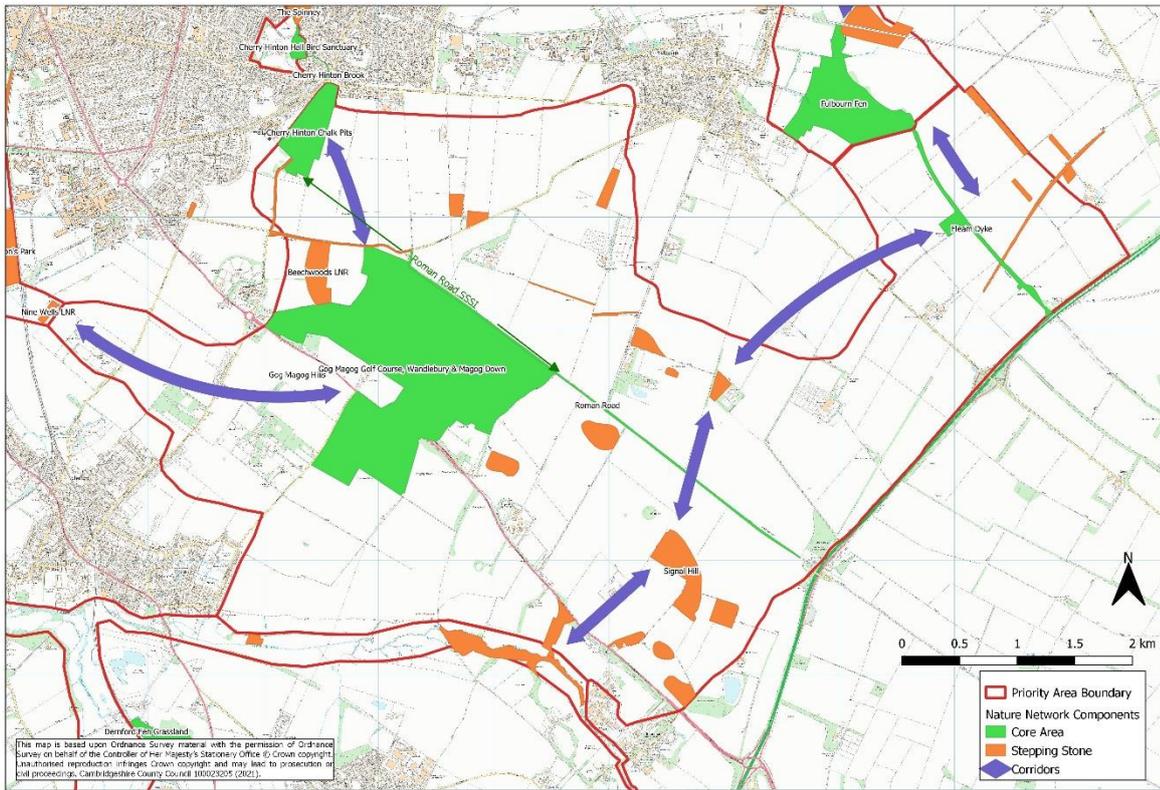
In addition to the five Priority Areas listed above we have also identified a sixth Priority Area to the north-west of Cambridge. This area does not have the same existing concentration of wildlife-rich habitats or countryside as the other five Priority Areas and as such it should be considered as a “stepping-stone” for nature between Cambridge and the wildlife-rich areas in the Ouse Valley. This fen-edge area links well to the wider strategy for a connected fens landscape set out in the Fens for the Future Strategy, the proposed Fens Biosphere as well connecting to the New Life on the Old West project area.

In the past, this area of approx. 15km² was a major producer of fruit, and was covered in orchards, a small number of which remain. This area is underlain by Jurassic and Cretaceous clays and sands, is mostly beneath the 10m contour line and is well drained by a series of ditches and drains, including Beach Ditch, a County Wildlife Site. This could become a strategic area to provide residents of Cottenham, Histon, Oakington, Rampton and Landbeach with an area of countryside to explore by a series of newly created pathways along ditches and old droves, which could provide wildlife corridors through the area for the benefit of the aquatic plants and animals. To the west, this area also connects to Northstowe and could provide an area of accessible countryside beyond the relatively constrained urban greenspaces of the new town. The condition of the remaining orchards would need to be assessed but allowing public access into some of these would provide a link to the heritage of the area. There is scope to create a number of community orchards, combining wildflower areas and orchard trees, including local varieties of which there are many that have been developed in this area.

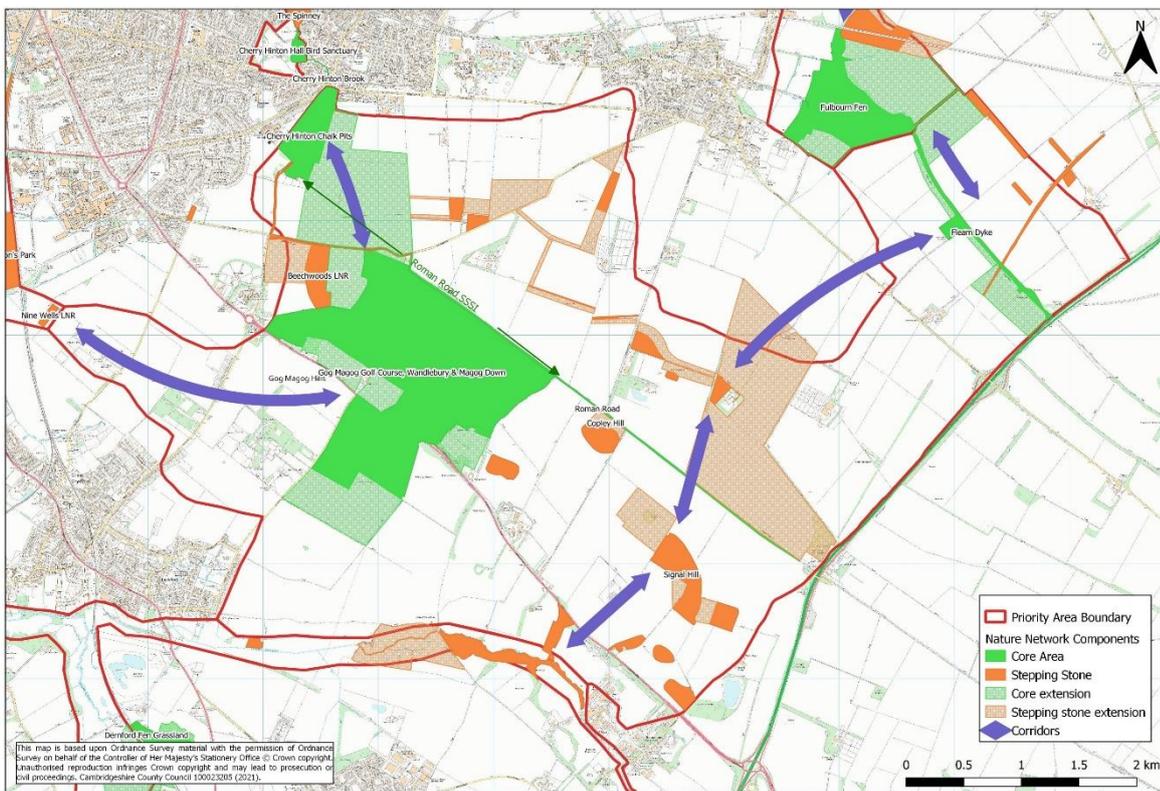
Land Outside the Priority Areas

Outside of the priority areas there are important nature conservation sites and areas of semi-natural habitat, but these are fewer and more isolated. In these areas, at the present time, it will be very difficult to achieve the agglomeration benefits of landscape scale conservation. However, nature can and should occur everywhere, so being outside of the Nature Network does not preclude actions that contribute to nature recovery. Nature friendly farming can occur anywhere. Wildlife friendly management of open spaces, gardens and buildings can occur throughout the City and villages. Ideally these should also follow the same principles of the Nature Network: Better site quality > Bigger sites > More sites > Stepping stones & nature friendly farming > corridors. There may also be opportunities to connect with the Nature Network priority areas.

Map 3. Gog Magog Hills current situation



Map 4. Gog Magog Hills priority opportunities for nature recovery (future vision)



4. Key Findings

Within each of the priority areas there are already areas of green space and natural habitats and there are already examples of nature friendly farming. In some areas there is already a network of habitats that link places for nature together, for example the cluster of sites on the top of the Gog Magog Hills.

However, in all the priority areas the habitats are too poor quality, too small and too isolated and considerable effort and resources will be needed over decades to restore a healthy nature network.

As part of our research, we have examined public access to natural greenspace in the Cambridge area. This shows that historically Cambridgeshire has lacked the large-scale open access land found in other southern counties, such as downland, heaths, forests or coasts. Over the past 20 years the population of Cambridgeshire has grown by around 30% and in addition, over the past 10 years research suggests that nationally there has been a 27% growth in visits to the countryside. Our research indicates that since 2000, the provision of natural greenspace in Cambridgeshire has not kept pace with population growth, let alone rising demand. We conclude Cambridgeshire also has one of the lowest percentages of open access land and accessible natural greenspace.

One consequence of this is that natural green spaces in our area are under pressure, impacting on nature and heritage and in some cases being full, so that people cannot even get in. The pandemic has exacerbated this, giving us an insight into what will happen if the amount of green space is not increased in-line with population growth and demand.

People want access to nature for their health and well-being and this is increasingly seen as a key determinant of quality of life. In a recent survey of young employees in the Cambridge Area (aged 21-35) conducted through Cambridge Ahead, access to nature was the top ranked concern, ahead of housing, transport or traditional political topics.

There is clearly a need for more natural greenspace in the Cambridge area, both for nature and for people.

There are, of course, reasons why this situation has arisen:

- Cambridgeshire has a lot of high-quality agricultural land, resulting in higher land prices, higher tenancy costs and little marginal land.
- Land around Cambridge has very high hope value (as demonstrated by the Local Plan call for sites) disincentivising it for non-economic uses and making it (too) expensive for purchase by NGOs or public sector.
- Since 2000 large development sites have mostly provided adequate levels of natural greenspace but smaller development sites have not, and they account for around 50% of population growth.
- Many nature sites are water or wetland, so that the area available for recreation is small compared to the size of site (eg Milton Country Park, Fen Drayton Lakes, Wicken Fen, etc)

5. How will it be funded?

Resources for this work are likely to be limited, and so targeting investment where it will have the biggest benefit for nature and people is crucial. Despite political rhetoric, public sector funding for this type of work is minimal and the amount that can be fund-raised by NGOs is limited. Future agricultural subsidies have the potential to deliver nature friendly farming. Biodiversity net-gain from new developments might provide some funding and any new developments that are close to the

Nature Network could provide new natural green spaces (eg redevelopment of Cambridge airport or Cambridge North East). There is evidence that income can be generated from users of green spaces in order to fund the ongoing care of nature sites (eg through admission charges, car parking, catering, events, etc) and maximising this will be essential. We are also exploring whether there are opportunities for collaborative marketing that would encourage more individuals and local companies to help pay for the network.

The work that we have undertaken on the finances has been supported with expertise from Cambridge Ahead and is also linked to the Cambridgeshire Future Parks Accelerator Project.

6. Who is responsible for the Cambridge Nature Network?

We all are. A Nature Network will take decades to create and it can only happen if everyone works together towards a shared vision. It will need the support of landowners, local authorities, parish councils, government agencies, business, charities and the wider community.

Nature can only recover on land (or water) and therefore landowners are fundamental to the delivery of a Nature Network.

Individual landowners will be responsible for what happens on their land.

We are engaged in discussions with farming landowners and in general they have been positive about improving biodiversity and more nature friendly farming. We are providing reports for each landowner highlighting opportunities for biodiversity improvements on their land. We hope to be able to establish nature friendly farming clusters which can encourage and support them.

Being part of the Nature Network is also likely to help farmers access financial support from the ELMS when it is introduced.

The City Council and charities are likely to be those providing green spaces with access for the public. A meeting has taken place between CambridgePPF, Wildlife Trust, National Trust, Milton Country Park, Magog Trust, RSPB, botanic garden and city council and in principle they are all supportive of the nature network and can see how their individual work and projects can help to deliver the nature network.

We are also talking to some of the landowners who have put forward their sites for future development so that we can discuss how any new green infrastructure provided as part of their schemes could also help to deliver the Cambridge Nature Network. For example, the development of Cambridge Airport. These discussions are on a without prejudice basis.

The initial work to identify and progress a Cambridge Nature Network has mostly been carried out by CambridgePPF and the Wildlife Trust funded through a grant from the Gatsby Foundation.

Cambridge Ahead are working on the financial sustainability of the network.

An advisory group is helping to inform the project, chaired by Dame Fiona Reynolds and including John Torlesse, Kim Wilkie, Robert Myers and Sir Nicholas Bacon.

A final report will be published by the end of March 2021.

We have provided draft reports of our work to the local councils as part of the evidence base for the Greater Cambridge Local Plan process.

7. Next Steps

We are still working on the next steps for this work, but they include:

- Incorporation into Greater Cambridge Local Plan as part of the NPPF requirement for Local Plans to set out a strategy for a coherent ecological network. We would also like to see the nature network form part of the OxCam Arc Strategic Framework (along with the other 5 LNP priority landscape areas).
- The work we have done is supported by government policy as set out in the Environment Bill, which will require local areas to prepare nature recovery strategies. The Cambridge Nature Network would meet this requirement for the area around Cambridge.
- Development of a pipeline of projects that can be put forward for funding opportunities. This would include individual projects within the network delivered by landowners, for example creation of a new integrated sewage filtration wetland at Coton Countryside Reserve or the expansion Wandlebury (both CambridgePPF). It would also include themed collaborative projects, such as chalk streams or health.
- Provide support for farmers/landowners to adopt nature friendly farming. This is likely to involve employing a farm adviser to support new farmer clusters as well as working with institutional landowners.
- Working with developers and planners to ensure that new housing, employment and transport schemes do not damage the network and that any opportunities to help deliver the network are maximised.
- Communication with parish councils, local communities and businesses in the network, seeking their support and asking them what they can do. The Local Nature Partnership has developed a [Local Nature Recovery Toolkit](#) that could be used for this purpose.
- Exploring governance and communication arrangements for the nature network.