

Cambourne North Ecology Strategy | Annex 3



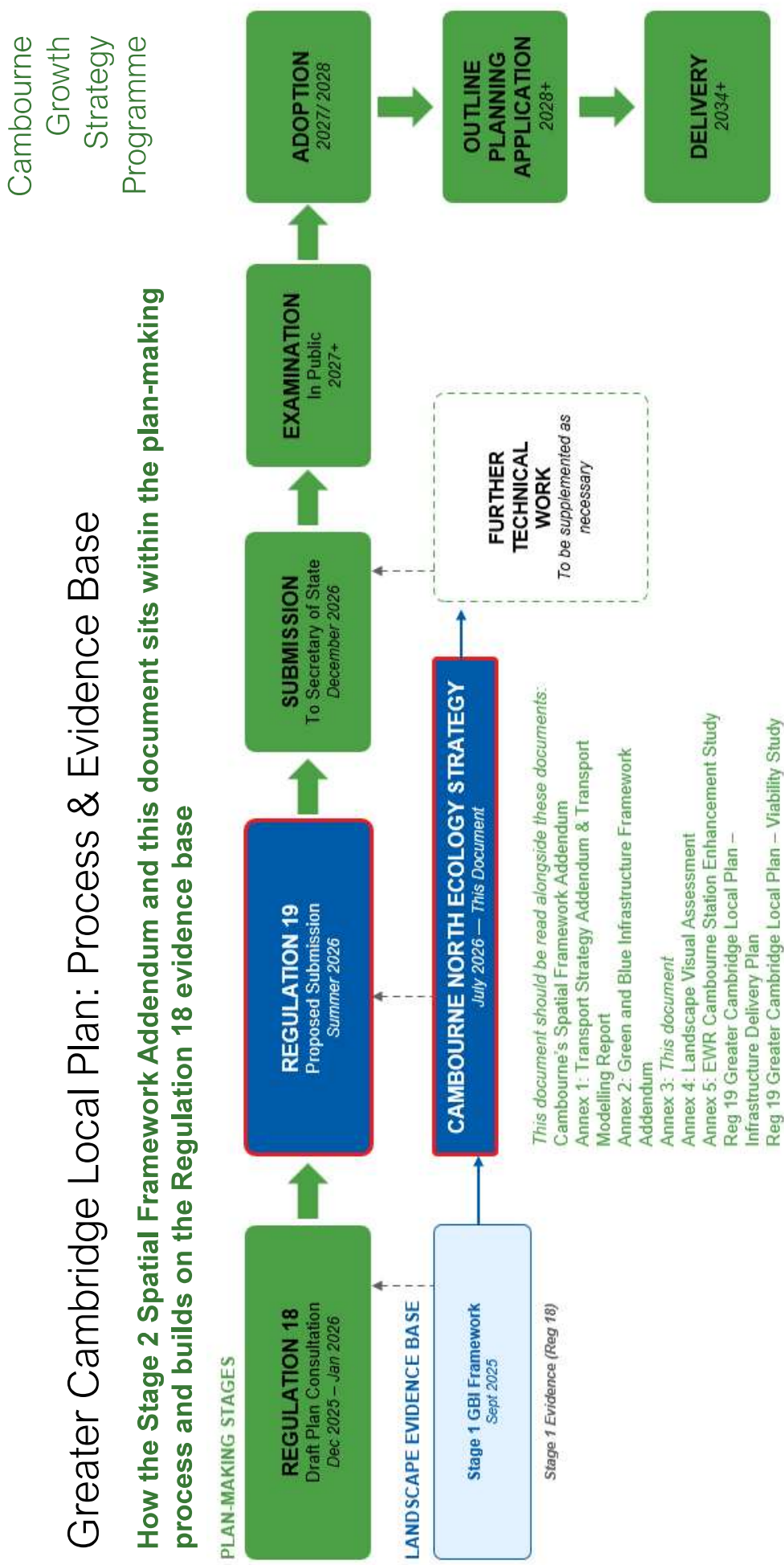
The Spatial Framework describes the opportunity to grow Cambourne to become a thriving regional town which is renowned for its natural environment. The arrival of East West Rail (EWR) and the Cambourne to Cambridge public transport scheme (CtoC) will increase the accessibility of Cambourne by public transport to Cambridge, Bedford, Milton Keynes and Oxford. This creates an opportunity for Cambourne to grow and provide new homes and jobs which will benefit from the improved connectivity.

The Spatial Framework illustrates the spatial form which Cambourne's expansion could take and describes the type of place it could be, supporting new neighbourhoods connected by a robust set of landscape features.

This report sits alongside a wider suite of evidence being submitted for the Regulation 19 statement of the emerging Greater Cambridge

This Spatial Framework has been prepared in collaboration with the Cambridge Shared Planning Scheme (GCSP) and other key stakeholders draws on a suite of evidence based documents which have been prepared to inform growth at Cambourne and is a key document in informing proposed strategic policy allocations for emerging Greater Cambridge Local Enterprise Zones.

Developing a Spatial Framework for growth at this scale is complex and requires many considerations to be balanced against each other. The scale and nature of growth has been informed by the baseline evidence and engagement with technical and stakeholders.



This report is part of a wider suite of evidence being submitted for Reg 19.

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Executive Summary

This Ecology Strategy has been produced in support of the development of the Local Plan, focusing on the Cambourne North area. It relates to and builds upon the work undertaken at Stage 1, specifically the Green Blue Infrastructure (GBI) Framework.

The Strategy seeks to positively contribute to the delivery of an enhanced natural environment across the area, at a landscape scale, against the context of the Council's delivery of housing and employment needs in sustainable locations. This vision should be based on the Lawton principles of developing natural assets (including the full protection of existing assets) that are 'bigger, better and more connected'.

The process of developing the Strategy has involved the review of stakeholder and landowner feedback on the Stage 1 work (including the GBI Framework and the draft Greater Cambridge Local Plan policies), the resetting of the vision, and the production of a series of principles that will support the achievement of the vision. This has been undertaken for three priority ecology items, namely ancient woodlands, barbastelle bats and dark corridors, each of which are interlinked. Recommendations have also been made for alterations or additions to earlier draft policy wording.

In summary, the intended outcomes of the Strategy are to:

- Better protect, enhance and connect the existing ancient woodland resource across the area, including the future management of these resources;
- Facilitate the maintenance and strengthening of the barbastelle bat populations that use these woodlands and move across the landscape between them; and
- Enable the creation of a series of dark, unlit habitat corridors that protect and promote the dispersal of these bat populations and other wildlife.

The results of detailed ecological surveys underway will need to be used to inform the spatial evolution of these requirements and in support of Habitats Regulations Assessments at both project and Local Plan levels to ensure their regulatory viability. Furthermore, existing and proposed projects like the A428 upgrade and EWR scheme will have an impact on the existing baseline position and will need to be taken into account.

The principles developed will need to be embedded within an update to the GBI Framework and assist in the further development of that Framework to include, in particular, the treatment of the Strategic Enhancement Area as a mosaic of semi-natural and SANG-like habitats and nature-friendly farming practices.

Scope

This Strategy forms part of the further development of supporting technical evidence for the Greater Cambridge Local Plan.

Based on the Stage 1 Green and Blue Infrastructure (GBI) Framework, the Strategy looks to further explore and refine the relationship with existing habitats and species and opportunities for mitigation and enhancement.

Its focus is on key themes raised through the consultation and engagement process, namely the requirements for the protection and enhancement of:

- Ancient Woodlands;
- Barbastelle bats; and
- Dark corridors.

The principles within this Strategy will feed into an update to the GBI Framework that is being produced at this time. The proposed local policy wording for Cambourne North has also been reviewed, and recommendations made for amendments, where appropriate.



Figure 2: Stage 1 and Reviewed Deliverables and Documents

Strategy Vision and Context

Cambourne North is sat within an intensive agricultural landscape (the majority of which is of limited ecological value), featuring isolated - & therefore vulnerable - designated and ancient woodland sites, gappy, missing or heavily managed hedgerows, and neglected drainage ditches.

This current condition represents a threat to populations of scarce species (including barbastelle bats) seeking to move through & across the wider landscape.

As development comes forward, this needs to respond, in a strategic matter, not only to the protection of scarce valued assets and result only in the loss of lowest ecological value land, but also to the need to rehabilitate and stitch the landscape back together again.

Significant opportunities therefore exist across the Greater Cambridge area to deliver meaningful enhancement to biodiversity, in line with the vision of the Local Nature Recovery Strategy, to restore and repair connectivity and improve the health & resilience of the natural environment.

If embedded into the Local Plan process and the policy supporting that, this Strategy can positively contribute to the achievement of that broader vision.



Figure 3: Cambourne context. Source: Local Nature Recovery Strategy for Cambridgeshire & Peterborough (December 2025)

Process and Approach to Strategy

The approach to the development of this Strategy has involved:

- Review of the GBI Framework and other supporting documents produced at the previous Stage (1);
- Review of feedback received from the consultation process on those frameworks and documents;
- Workshops held and engagement with specific key stakeholders and landowners and GCSP;
- Input from desk study results and professional understanding of area; and
- Liaison with those updating the GBI Framework to ensure alignment.
- For each of the sub-topic areas (ancient woodlands, barbastelle bats, and dark corridors):
 - ✓ Analyse the **feedback received** from stakeholders & landowners;
 - ✓ Respond to that feedback creating a renewed **aim**; and
 - ✓ Set out **principles** to allow that aim to be achieved under future development scenarios

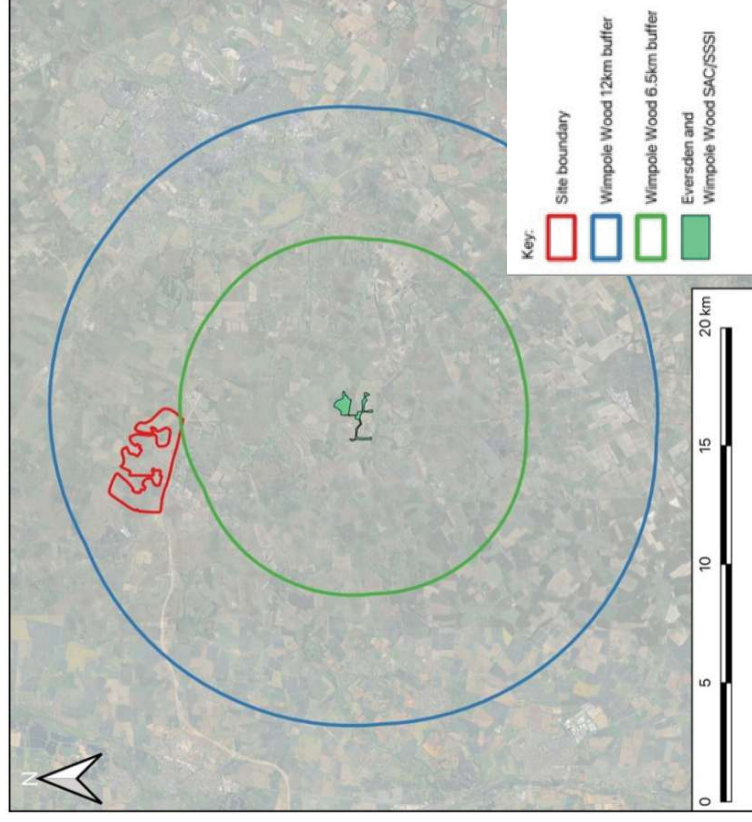


Figure 4: Site boundary and Eversden and Wimpole Wood SAC/SSSI. Source: MGL

Ancient Woodlands

Feedback received

- Wildlife Trusts state that with the scale of development proposed, it will not be possible to fully avoid and mitigate impacts to ancient woodlands and that compensatory measures will therefore be required.
- County Council & Wildlife Trusts are seeking bigger, better and more connected woodland habitats, with greater levels of protection to (existing ancient woodlands) and connectivity between (existing and new) woodlands than has been shown to date (by the Stage 1 work).
- Wildlife Trusts have suggested a minimum viable area of existing and new woodlands should be a 40-hectare (ha) block, ideally with a central 100-ha core block. Management is not considered to be viable for woodlands of less than 20ha. Where these sizes are not achievable, there is an increased need for connecting habitats between them.
- Landowner groups MGL & EE recognise the need to buffer existing ancient woodlands and suggest that extent of these should be evidence-based, from surveys carried out on site, assessment work and masterplanning.
- Natural England & Wildlife Trusts have fed back that preventing access is not tenable and achievable in practice.

Aim

To contribute to the creation and enhancement of a more resilient network of ancient woodlands across the wider Cambridge landscape, addressing the need for these to be larger, better connected and positively managed.

Ancient Woodlands (2)

Principles

- At a sub-regional scale, treat Eversden and Wimpole Woods SAC as the core woodland block (existing site area is 66ha), to/from which all other satellite woodland blocks (existing and new) should be connected.
- New woodland blocks within the SEA (or other areas beyond red line) should achieve a minimum block size of 20ha, with aspirational target of 40ha where possible to create significant new woodlands (for example, as part of the Oxford-Cambridge Arc). This could be achieved as individual blocks, or groups of smaller, linked woodlands.
- Buffer and expand existing woodlands. An aspiration of at least 50m should be set as a buffer, to meet other LPA policy requirements and Woodland Trust guidance.
- Seek to at least double the wooded extents of Elsworth and Knapwell Woods to create a combined woodland and buffer area of more than 40ha and look for opportunities to grow Overhall Grove SSSI.
- To mitigate further fragmentation, create new uninterrupted habitat connectivity between Elsworth and Knapwell Wood (east-west) and Overhall Grove to Bourn Airfield (north-south). Such connections should comprise unbroken green corridors that include hedgerows, tree lines and/or ditch lines.
- Proactively manage existing ancient woodland sites and new woodland sites, acknowledging their sensitivities whilst not proposing to exclude people from those sites. Maintain existing access restrictions where these exist for the benefit of biodiversity.

Cambourne North Ecology Strategy

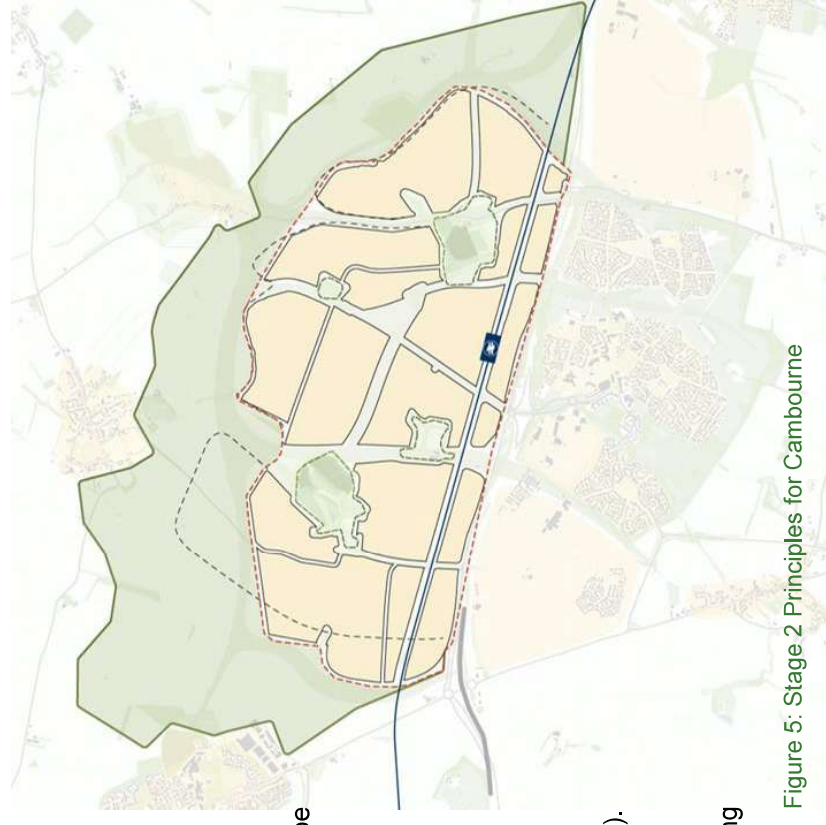


Figure 5: Stage 2 Principles for Cambourne

Barbastelle Bats

Feedback received

- New information has been received from Natural England on the Core Sustainance Zone (CSZ) and additional Landscape Connectivity Zone (outer LCZ) that needs to be considered in future development planning and impact assessment.
- Habitats Regulations Assessment (HRA) will need to follow the (this) Strategy and updated GBI Framework to consider legal compliance of the Plan.
- The Wildlife Trusts state that, as with ancient woodlands, it will not be possible to fully avoid and mitigate impacts to the barbastelle bat population and compensatory measures will therefore be required.

Aim

To enable the creation of a well-connected landscape of habitats that support the ongoing favourable conservation status of barbastelle bats across the region. These will provide enhancements to woodland habitat resources for roosting and to linear (and/other) habitat resources for foraging and commuting.

Barbastelle Bats (2)

Principles

- Support research and ongoing detailed baseline surveys to provide greater understanding of how barbastelle bats utilise the landscape and target mitigation. These may extend beyond the North Cambourne boundary to ensure proposals are based on all relevant evidence.
- Undertake Local Plan and project level Habitats Regulations Assessments (HRAs) as required for Plan making, based on this research and baseline, in line with Natural England's new bat protocol and Impact Risk Zones.
- Develop a Supplementary Planning Document on the SAC and barbastelle bats as a mechanism for delivering joined up measures at a sub-regional scale. This could include targeting measures aligned with the SAC Site Improvement Plan, including assistance with the improved management of the SAC and its supporting habitat.
- To facilitate barbastelle bat movement from the SAC to the south, across East West Rail and the A428 to the north and beyond, green bridges (of at least 30m wide) and/or green underpasses (of at least 10m wide) will need to be included.
- More locally, seek to restore lost or degraded habitats and features that could benefit barbastelle bats e.g. ditch lines buried beneath agriculture and historic woodland footprints (including riparian woodland planting).
- Where development parcels border buffer zones implemented around ancient woodland, green space (such as back gardens of new residential properties) should sit adjacent to that buffer to further facilitate barbastelle bat movement around these areas.

Cambourne North Ecology Strategy

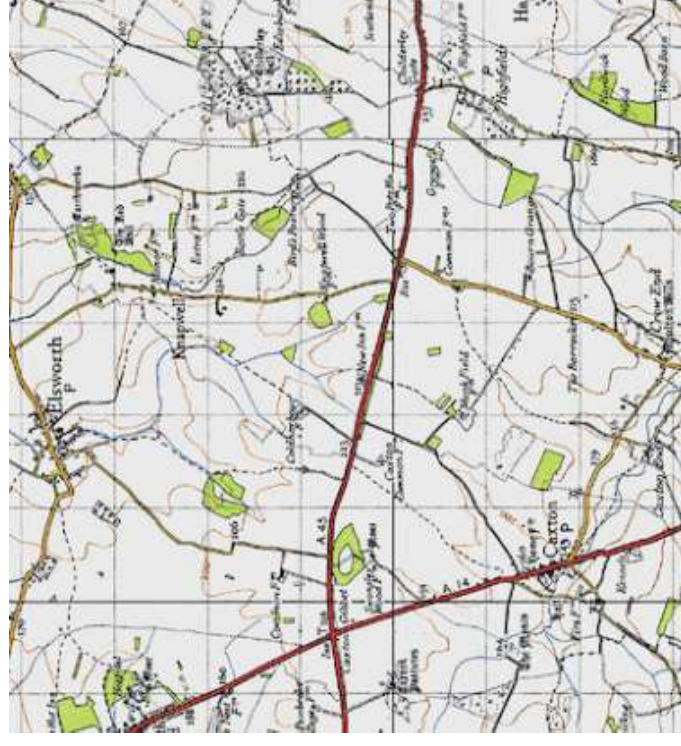


Figure 6: Historic woodland footprint, Cambourne, 1946

Dark Corridors

Feedback Received

- Natural England have stated that incorporating dark corridors into the new settlement will be especially important for avoiding and mitigating potential impacts to bats associated with Eversden and Wimpole Woods SAC but will equally be of benefit to many other species.
- County Council have suggested that there is a clear need for the separation of active travel routes from dark corridors, as active travel routes could be adopted and then required to be lit. It is critical to ensure that the Plan requires the creation and maintenance of viable corridors for bat movement that will remain dark.
- Site promoters support the principle of creating dark corridors within the development. They recognise the importance of retention (of woodlands, buffers, ditches and hedge lines) in order to deliver dark corridors and to contribute positively to biodiversity.

Aim

- To enable the free and unrestricted movement and dispersal of barbastelle bats (and other nocturnal, light-sensitive wildlife) between new and existing woodland blocks and across the wider landscape, through the creation of a series of unbroken and unlit corridors of semi-natural habitat.

Dark Corridors (2)

Principles

- Dark corridors should be designed to be as wide as possible, in line with emerging Natural England guidance. It is proposed that North Cambourne's dark corridors be a minimum of 60m wide, with additional buffers to development outside of this.
- Dark corridors should comprise unbroken linear features comprised of semi-natural habitat, including hedgerow, tree lines, ditches and streams. Where hedgerows are created to form part of a dark corridor, these should be double-planted (two hedge lines in parallel) to ensure sufficient width and cover.
- Where breaks in a corridor are unavoidable, an assessment will be made of the need to provide an alternative dark route across the break area, noting that the corridor should take priority.
- In addition to retaining and enhancing existing habitat features that form and serve as dark corridors (maintaining habitat connectivity and strengthening by filling gaps and removing barriers (e.g. removal of lighting, installation of green bridges or underpasses), opportunities should be sought to create new dark corridors where existing connectivity is poor (such as through the resurfacing of buried watercourses).
- Dark corridors and active travel routes should be provided separately from each other, except where it is certain that the active travel routes will remain unlit.
- Dark corridors should avoid interfacing with road crossings, junctions and roundabouts, as these typically require lighting for safety, unlike straight road sections. Where dark corridors interface with lit transport infrastructure routes, the darkness of the corridor should be prioritised and maintained across its width in order to secure its intended function.
- Lighting will also need to be proactively managed during construction to avoid adverse impacts to bats and existing flight paths and dark corridors.



Figure 7: Barbastelle bat flying low over water (© Woodland Trust)

GBI Framework Update

The intention is that all of the principles with respect to ancient woodlands, barbastelle bats and dark corridors outlined are embedded within the update to the GBI Framework. However, key elements of additional feedback were received on the Stage 1 Framework that focus on other (related) topics, which are picked up and discussed below.

Feedback received

- The Wildlife Trusts have suggested that the Greater Cambridge area requires a much higher level of provision of strategic natural greenspace than has been previously referenced. Specifically, the provision of accessible natural greenspace is significantly less than required, as it is not sufficient to prevent increasing impacts from the recreational use of nature sites across Greater Cambridge. Following the receipt of these comments, further guidance on recreational pressure assessments in relation to SSSIs has been provided, in draft, by Natural England. This guidance should be followed and used to inform design plans.
- The Wildlife Trusts & County Council have called for the updated Framework to align with the Local Nature Recovery Strategy for Cambridgeshire.
- Each of the stakeholders have stated that the Strategic Enhancement Area should not comprise a “forest” of wall-to-wall trees but should be a mixture of new semi-natural habitats and nature-friendly farming practices. The nature-friendly farming implemented at RSPB Hope Farm should not be compromised and should be replicated elsewhere within the Strategic Enhancement Area.

Aim

To facilitate the creation of a programme of strategic and accessible natural greenspace provision that moves beyond the minimum per capita requirements and buffers the potential impacts of increased recreational pressure on existing designated sites. The greenspace should be aligned with the opportunities already identified in local strategy and provide a resilient mixture of semi-natural habitat types that complement existing woodlands and synergise the expansion of nature-friendly farming.

GBI Framework Update (2)

Principles

- Implement actions that directly align with the opportunities identified within the Local Nature Recovery Strategy (Local Habitat Map), for example, the expansion of woodland habitat at Elsworth and Knapwell Woods and specific locational opportunities for woodland habitat creation within the Strategic Enhancement Area.
- Clarify that the Strategic Enhancement Area will comprise a mosaic of semi-natural habitats that include all of the following habitat types - woodlands, scrub, meadows, hedgerows, ponds and other wetland features.
- Where new woodlands are created as part of the Strategic Enhancement Area, design these to be natural in form (including managed access for people) and comprise native and/or naturalised tree and shrub species that are appropriate to the location.
- Undertake project-level Recreational Pressure Assessments and consider the need to contribute to additional SANG-like habitats, as per emerging Natural England guidance.
- Look to identify specific locations for nature-friendly farming that can follow and replicate the model of Hope Farm within the SEA, to complement the habitat mosaic to be created.

Policy Wording

S/CBN: Cambourne North

Stakeholder and landowner responses were generally positive about and supportive of the proposed policy wording of S/CBN: Cambourne North (December 2025). However, several of the organisations consulted requested revisions to wording or additions of points to address perceived omissions. These have been reviewed and evaluated, where relevant to the Ecology Strategy, with the following results.

Proposed Revisions

- The future layout of the town will consider these assets, seeking to avoid adverse impacts where possible and identifying and implementing measures that mitigate any impacts but also deliver compensation and enhancement wherever possible (8) **Wildlife Trusts**
- The Strategic Enhancement Area will comprise a mixture of new woodlands, scrub, meadows with hedgerows, ponds and other wetland features and continued nature friendly farming (11) **Wildlife Trusts**
- Ensure that public access to the ancient woodlands and SSSIs is effectively and well managed to limit impacts of recreational disturbance (22a) **Wildlife Trusts**
- Monitor the effectiveness of measures put in place to manage access, in addition to a commitment to implementing alternative solutions if the initial measures are ineffective (22) **Natural England**
- Provide ~~adequate~~ sufficient green infrastructure on site that is semi-natural and SANG-like (including the 'Cambourne Forest'), to compensate for any additional recreation pressure created (32) **Natural England**

Policy Wording (2)

S/CBN: Cambourne North

Proposed Additions

- Based on the results of detailed ecological surveys to be carried out, a draft Habitats Regulations Assessment of the Local Plan must be undertaken. This may identify changes to the site allocation boundary of the Cambourne North and adjacent Strategic Enhancement Area, and/or requirements for more substantial mitigation (e.g. green bridges over A428) to enable the development to be delivered. **County Council**
- Habitat connectivity must be provided between Elsworth and Knapwell Woods (west-east) **Wildlife Trusts**
- Habitat connectivity must also be provided between Elsworth and Knapwell Woods and the Wimpole SAC woodland complex (north-south), including across the A428 and East West Rail infrastructure corridors **Wildlife Trusts**
- These key green infrastructure connections must be dark corridors that fully support and enable the movement and dispersal of barbastelle bats. **Wildlife Trusts**

Supporting Information

Cambourne
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Programme

Ancient Woodlands: Images

Precedent Images

Clapham Park Wood SSSI (near Bedford)
understorey view, including of coppicing © Neil
Hanwood



Figure 8: Ancient Woodland

Ancient Woodlands: Ask

Sizes and Location

The following information contextualises the ask for new and existing woodland blocks to be at least 40 ha in size. There are 76 ancient woodlands mapped within a 12.5km radius of Eversden and Wimpole SAC (MAGIC maps) .

Of these, four woodlands/woodland complexes meet the threshold of over 40ha in size. The smallest of these is Weaveley Wood at 43ha and the largest is Potton Wood at 85ha. Only six are over 20ha in size (i.e. between 20 and 40ha).

There are a further 66 additional woodlands between 0.05ha and 15.1ha in size. 11 are 10ha or above; 34 are between 1ha and 10ha (including Knapwell and Elsworth Woods); and 27 are less than 1ha in size.

Woodlands over 10ha are displayed in the table.

Table 1: Ancient Woodlands within 12.5km of Eversden and Wimpole SAC.

Woodland name (over 40 ha)	SSSI?	CWS?	Area (ha)	Orientation from Eversden-Wimpole	Distance from Eversden- Wimpole (km)
Potton Wood	Yes	No	85	West	7.0
Eversden & Wimpole	Yes	No	66	N/A	0
Hayley Wood	Yes	No	46	West	3.5
Weaveley Wood	Yes	No	43	Northwest	11.6
Woodland name (under 40ha)	SSSI?	CWS?	Area (ha)	Orientation from Eversden-Wimpole	Distance from Eversden- Wimpole (km)
Cockayne Hatley Wood	No	No	39.2	Southwest	7.9
Gamlingay Wood	Yes	No	38.5	West	9.9
Kingston Wood	Yes	No	32.9	Northwest	2.2
Waresley Wood	Yes	No	27.0	Northwest	8.2
White Wood	No	No	26.7	West	11.2
Eltisley Wood	No	Yes	25.0	Northwest	9.3
Overhall Grove	Yes	No	15.1	North	10.6
Buff Wood	Yes	No	13.7	Southwest	4.6
Sand Wood	Yes	No	13.3	Northwest	11.2
Cobb's Wood	No	No	11.1	Southeast	1.3
Emmanuel Wood Gransden Wood	No	No	10.8	Northwest	8.2

Ancient Woodlands: Challenges

Challenges in Providing Access

Issues with introducing large numbers of new residents to ancient woodland sites include:

1. trampling of understorey vegetation;
2. increased littering and opportunities for fly-tipping;
3. predation of wildlife by cats;
4. dogs damaging habitats (including by increased fouling) and/or disturbing birds; and
5. ii) anti-social behaviour, including public being abusive towards site staff, vandalism etc.

Occasionally, this has led to sites being temporarily closed to the public, causing additional friction.

Efforts are needed to ensure that rules are obeyed, public are cognisant of site staff and respectful towards them, understanding of conservation objectives and of implications of failure to comply.

This requires a proactive approach to site management, specifically focusing on the management of access.



Figure 9: Path through Hayley Wood

Barbastelle Bats: Images

Precedent Images

Barbastelle, Austria © Neil Harwood

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Growth
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Programme



Figure 10: Barbastelle bat. © Neil Harwood

Barbastelle Bats: Zones

Core Sustenance & Landscape Connectivity Zones

While core sustenance zones only extend to 6km, recent information from Natural England on Impact Risk Zones describe additional landscape connectivity zones that extend to 10.2km, meaning that barbastelle bat populations from Eversden-Wimpole SAC (9km to the south) could be impacted by developments within area of Cambourne North.

A further Bat Protocol is due to be published by Natural England, which should be referenced and followed by future developments.

HRAs of Plan and project level proposals will require the assessment of construction and operational impacts and the implementation of measures that ensure the maintenance of the favourable conservation status of barbastelle bats, individually and cumulatively with other plans (including East West Rail).

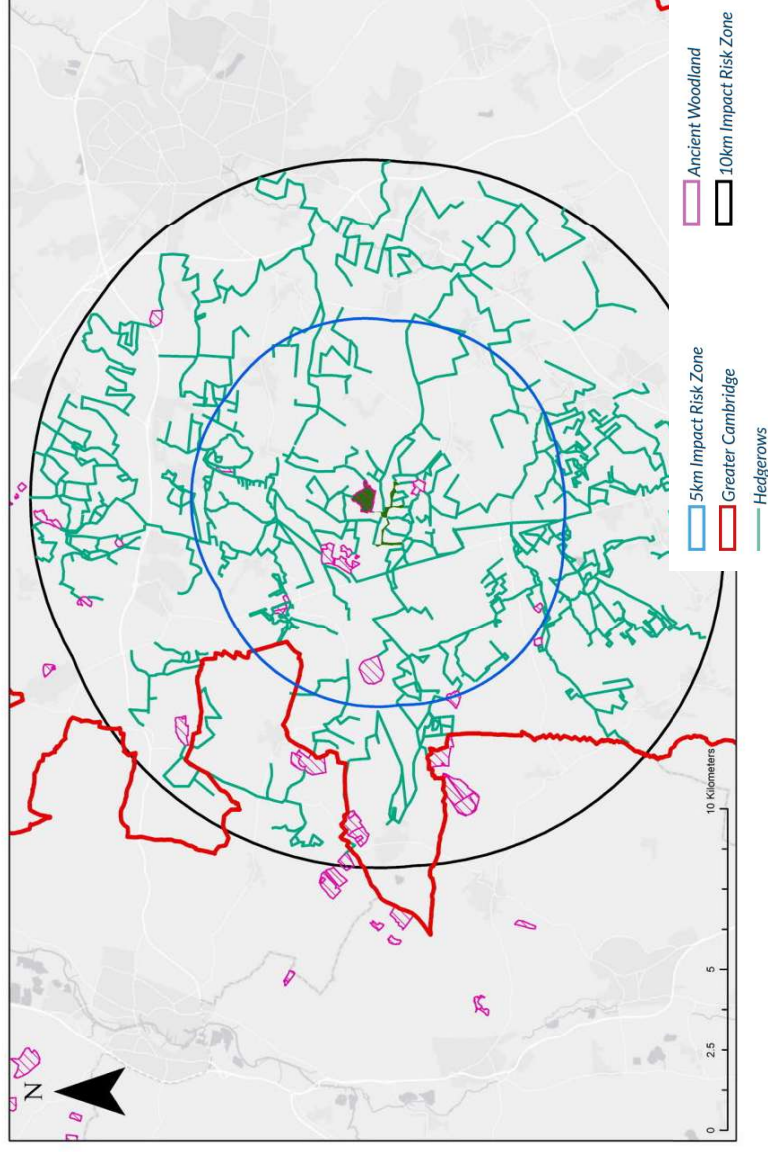


Figure 11: Ancient Woodlands and Risk Zones around Eversden and Wimpole SAC. Source: MGL

Barbastelle Bats: Requirements

Dispersal & Commuting Requirements

Connectivity is key to bat flightlines.

Commuting routes resemble tall, branching trees, with several bats sharing the path along the trunk and major limbs, separating off into smaller branches, each of which ends in a discrete individual foraging area.

By the time bats have travelled 6+km from their woodland roosts, it has usually become dark enough for them to cross more open spaces, meaning that greater connectivity and shade is most important within that core area.

Woodland, hedgerow, ditch lines and watercourses create the most important flightline habitat.

Unbroken dense strips of mature woodland connecting down to water is an ideal habitat composition.

The most favoured routes often have old tracks or rides running down the length of the interior, with a clear central trackway.

Hedgerows that are double-planted, comprise unmanaged form and/or non-uniform structure are important components of well-used routes.

The types of water feature followed vary from larger hedgerow ditches to medium-sized rivers. A stream with tree lines on both banks and the canopies touching creates an ideal flightline.

Restoring woodland connections up and down watercourses and their minor tributaries will be extremely beneficial in addressing fragmentation effects.

Cambourne

WOODLAND FLYWAYS

When flightlines pass through woodlands the bats normally follow streams or woodland tracks.

Such woodland features are only followed if the general direction is correct, if it is wrong they will be totally unused.

Without such interior woodland features the barbastelles will follow a direct path using the space between the canopy base and the top of the understorey.



Barbastelles utilising flyways fly at sustained high speeds over several kilometers before pausing to forage. Woodland tracks become high speed flyways with the bats moving at about chest height. The dark zone in the shade of overhead trees and understorey gives a considerable measure of protection from avian predators.

When such trackways lead towards water features they can become ideal sites to monitor for the presence of barbastelles.



Figure 12: Woodland flyways for Barbastelle bats.

Dark Corridors: Considerations

Precedent Images and Corridor Considerations

Enclosed section of Armshold Lane track, Toft, facing south © *Neil Harwood*

Artificial lighting at night (ALAN) is known to have a negative impact on bats, causing strong avoidance behaviour and increasing landscape fragmentation.

Dark corridors often use 0.5 lux as a guide of maximum illuminance, as this level is similar to the illuminance of a clear-moon light.

Nevertheless, the absence of lighting is the best approach for a dark corridor.

There are no lux level thresholds for individual species, as requirements are site-specific.

Slower flying, broad winged species, including the barbastelle bat, have been shown to avoid commuting and foraging routes illuminated at a variety of light levels, including <1 lux.



Figure 13: Dark Corridor.