



The Cambourne to Cambridge Off-Road Busway

FACTS AND FIGURES

There are many reasons why the GCP's Off-Road busway scheme should be avoided:

- An off-road busway is not a requirement for the Local Plan.
- The GCP's scheme does not provide good routes to most key destinations.
- The off-road section, across fields on Madingley Hill and through Coton, was opposed by the public in all consultations.
- The existence of a congestion problem was not supported by traffic data, and post-Covid work and travel data have not been taken into account.
- The scheme will encroach on Green Belt, bisect green corridors, and desecrate the a BAP Priority Habitat and a City Wildlife Site. The deepening environmental crisis means that unnecessary destruction of green spaces is now unconscionable.
- The relatively unspoiled landscape to the west of Cambridge, and some of the few countryside walks easily accessible from the city will be spoiled.
- The peaceful setting of The American Cemetery will be compromised.
- The scheme is disproportionately expensive (at least £200M) and poor value for money

**THERE IS A FEASIBLE, COST-EFFECTIVE ALTERNATIVE SCHEME
THAT IS BETTER FOR THE ENVIRONMENT**

THE PROPOSED PROJECT

The **Cambourne to Cambridge (C2C) Better Public Transport Project** is one of four corridor schemes within the Greater Cambridge Partnership's (GCP) sustainable transport programme. The GCP's defines the role of the C2C project as:

"To connect existing and new communities along the A428/A1303 to places of employment, study and key services to enable the sustainable growth for Greater Cambridge. We will deliver this through improved, faster and more reliable High Quality Public Transport services, together with high quality cycling and walking facilities serving a new Park and Ride site to the west of Cambridge."

Its stated objectives are to:

- achieve improved accessibility to support the economic growth of Greater Cambridge
- deliver a sustainable transport network/system that connects areas between Cambourne and Cambridge along the A428 / A1303
- contribute to enhanced quality of life by relieving congestion and improving air quality within the surrounding areas along the A428 / A1303 and within the city centre.

(Outline Business Case: non-technical summary, 2022. pp.12–13)

This C2C proposal was formulated by the City Deal in 2014 in response to the [South Cambridgeshire District Council draft Local Plan](#). This included a significant development along the A428 corridor, west of Cambridge. The plan (adopted 2018) stated that there should be improvements to public transport, to include:

“provision of high quality bus priority measures or busway on or parallel to the A1303”
(p.74)

AN OFF-ROAD BUSWAY IS NOT A REQUIREMENT OF THE LOCAL PLAN.

THE GCP SCHEME ROUTE

- The Greater Cambridge Partnership (GCP) scheme runs on road in Cambourne, then off road from Bourn to Scotland Road, parallel to the A428.
- It rejoins the road, diverts to a new Park & Ride at Scotland Farm, then runs on the A1303 through Hardwick village.
- The route leaves the A1303 before the ‘Madingley Mulch’ roundabout, and cuts through fields, hedges and the Coton Orchard.
- It then goes over a new motorway bridge and through a wildlife site to run on road through the West Cambridge University Site.
- The final section then goes off-road through another wildlife site, across the West Fields, and along a narrow access road to reach Grange Road, where it joins the city’s road network.

A LACK OF EVIDENCE

The need to move to sustainable modes of transport is not in question, and the provision of high-quality public transport should be part of the plan to achieve this. But, contrary to GCP claims, congestion on the Madingley Road was *not* part of the problem.

Pre-pandemic

Congestion along the Cambourne to Cambridge route caused traffic delays only in the city-bound morning rush hour (7–9 am). Real-time bus journey data generated pre-Covid by transport specialists Vix indicated that there were no material delays along the A1303 (Madingley Road)

outside morning peak in the in-bound direction, or at any time outbound. The GCP’s own pre-pandemic modelling indicated that this would still be the case beyond 2031, even with proposed new home building. This has been confirmed repeatedly in GCP technical documentation.

According to the GCP’s own reporting, the off-road journey time from Cambourne to Cambridge is only marginally shorter than the on-road time:

	On-road	Off-road
Cambourne to Madingley Mulch	10-15 mins	10-15 mins
Madingley Mulch to Grange Road	10 mins	5–8 mins
Time taken for stops	2 mins	0.5mins
Grange Road to City Centre	3–8 mins	6–10 mins
TOTAL	25–35 mins	21.5–33.5 mins

For journey times of around half an hour, a reduction of 3 minutes is not sufficient to justify the extra expense and environmental destruction.

An optimised on-road route would deliver a service with an average peak-hours journey time of under 9 minutes from Madingley Mulch roundabout to the junction at the bottom of Grange Road – at a considerably lower cost.

Post-pandemic

Post-pandemic, the rush-hour delays have not returned. Real-time data from the Citi-4 bus service from Cambourne to Emmanuel Street (City Centre) for May–July 2022 show:

- Cambourne to Emmanuel Street – average time for 7–9am peak 31.8 mins
Cambourne to Emmanuel Street – average time overall 28.3 mins
- From Madingley Mulch to the JJ Thomson turning on Madingley Rd, the difference between rush hour and off-peak journeys is only 1.5 mins.
- Total congestion impact in the morning rush hour is therefore about 3 minutes, of which less than 1.5 minutes is attributable to Madingley hill.
- 95% of journeys are completed within 6 mins of the 28-min average – so there is not much variation within these average times.

What this means is that, even with no intervention, there is already an efficient bus service between Cambourne and Cambridge. With a bus lane and optimisation, this would improve still further.

Changes to working patterns have not been taken into account

With the proposed new developments at Cambourne and Bourn airfield, there is a requirement for sustainable, efficient transport routes to places of employment and education. But post-pandemic, working and commuting patterns have changed and will continue to do so.

Working from Home, Hybrid Working and Flexible Working are all on the increase. The proportion of workers hybrid working has risen from 13% in early February 2022 to 24% in May 2022. (*Is Hybrid Working here to stay?* Office for National Statistics, May 2022).

This is reflected locally. Just for example:

- The University of Cambridge has been reviewing its working practices. Its Hybrid Working Policy aims to enable as many staff as possible to work in a hybrid way if they wish.
- Cambridge City Council say, “we have adopted a flexible office base arrangement where flexible working arrangements are encouraged and should be informed by business need”.
- South Cambridgeshire District Council has adopted a hybrid working policy where “flexibility is the norm rather than the exception”. It is now trialling a 4-day working week.

No one knows exactly how patterns will settle down over the next few years, but what *is* clear is that working and commuting patterns are in flux. And with companies such as Microsoft bringing out IT tools for more effective hybrid working, it seems highly unlikely that commuting to work will ever return to pre-pandemic levels.

PROBLEMS WITH THE GCP'S OFF-ROAD ROUTE

An off-road option has never been preferred by the general public

The Cambourne to Cambridge Busway Project was launched with a range of on-road and off-road options. In all phases of public consultation, the ‘off-road’ option has *not* been the stated majority preference.

- **2015.** The initial proposal and public consultation – 6 options presented. The majority of respondents agreed better bus services are needed, and most preferred an in-bound, on-road bus lane.
- **2017.** An optimised on-road route proposed by residents and endorsed by the Local Liaison Forum (established by the GCP). This route was repeatedly misrepresented in GCP reporting.
- **2017–18.** Public consultation on Options A, B and C. The public still preferred an on-road scheme by a 2:1 margin.

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The small rush-hour delays have not returned after the pandemic

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Other issues

Buses join the city network at Grange Road, which means they cannot return the same way because of the one-way system – resulting in a lengthy circuitous route and journey times that are no faster than buses using Madingley Road.

There is no guarantee that the off-road section will carry buses at the proposed 10-min interval – no bus companies have indicated that they will want or be able to run such services.

A cycle route on a steep hill, which is potentially dangerous and discriminatory, as well as duplicating the much better Comberton Greenway route, now under construction.

UNJUSTIFIABLE ENVIRONMENTAL DAMAGE

The route encroaches on Green Belt

The off-road route would go over green belt land with restrictive covenants in favour of The National Trust. The area includes scrub, meadows and mature trees that previous surveys have indicated are habitats for a variety of important species. Surveys conducted for the GCP recorded, for example:

- *61 birds species* (winter), of which 31 are on at least one conservation priority list¹⁴ being on the ‘red list’ (UK and Local Biodiversity Action Plan (BAP) Priority Species and the Birds of Conservation Concern).
- *A population of brown hares* in the arable fields to the west of Coton (Cambridge Ecology, 2018–19). This is a Species of Principal Importance under the Natural Environment and Rural Communities (NERC) Act 2006; a UK BAP Priority Species and included in the Local BAPs for Cambridgeshire.

Those surveys stressed that the presence of these species “could constitute a constraint to the scheme and therefore are of material consideration during the planning decision process”.

It cuts across green corridors

Cambridge is already one of the most nature-depleted counties in the UK. Initiatives such as the **Cambridge Nature Network** are trying to ensure that green corridors – which we now understand are crucial for the survival and recovery of wildlife – are protected and developed.

But the off-road busway cuts right across green corridors on the west side of Cambridge.

This stands in direct conflict with the UK Government’s National Planning Policy Framework (2021), adopted by Greater Cambridge, which states:

“Planning policies and decisions should contribute to and enhance the natural and local environment by ... minimising impacts on and providing net gains for biodiversity, including by *establishing coherent ecological networks that are more resilient to current and future pressures*” (p.50, italics ours) and that plans should “*safeguard ... wildlife corridors and stepping stones that connect them*” (p.51, italics ours).

These wildlife corridors are particularly vulnerable because they are not included by Defra’s biodiversity metric – which would presumably be used to calculate this scheme’s projected BNG.

This acknowledged problem with the BNG calculation means it could show an adequate score whilst actually sustaining critical losses in ecological connectivity (*Chartered Institute of Environmental Management Guidelines*, 2019).

Coton Orchard will be destroyed

The 100-year-old Coton Orchard meets all the criteria for a **Traditional Orchard**. These low-management orchards are designated **Priority Habitats**, recognised “hotspots for biodiversity”, make a “significant contribution to biodiversity and local distinctiveness”, and frequently contain Nationally Rare or Nationally Scarce Species (*UK Biodiversity Action Plan Priority Habitat Descriptions: Traditional Orchards*, Defra 2016, p. 1).

This Traditional Orchard is the largest one in Cambridgeshire and the eighth largest in the UK. The full results of the environmental surveys are not yet in, but previous surveys have shown that the hedgerow running along the eastern border of the Orchard (Hedgerow 10) is “notable for bat activity”. At least 8 different species use it for foraging – an indication of the orchard’s rich biodiversity. And that count includes the highest numbers of Noctule and the rare *Nathusius pipistrelle* in the area to the west of Cambridge, as well as the extremely rare *Barbastelle* bat. This is an IUCN red list species, a UK Biodiversity Action Plan species, and conservation priority on both a local and national scale.

The off-road busway will run a 20-metre-wide swathe of tarmac across the orchard. This, and the considerable clearance required for construction, will remove many of the most mature trees, a long section of Hedgerow 10, and the undisturbed scrub that is so valuable for wildlife. Contrary to GCP statements, this will effectively wipe out the Orchard. The construction itself will also create enormous disturbance for the wildlife, which, once displaced, may never return.

The damage to the environment cannot be mitigated – contrary to GCP claims

In the Environmental Impact Assessment Consultation, the GCP stress that they will be doing all they can to “manage and mitigate” the impact on the environment. They claim that their measures will achieve the required Biodiversity Net Gain (BNG) of at least 10% – with a target of 20%. This sounds impressive, but is in fact misleading.

The GCP’s proposed mitigation relies partly on newly planted areas of grassland. As pointed out by Cambridge Past, Present and Future (CPPF), these small, isolated areas do not achieve real biodiversity and are often difficult and expensive to maintain. The second proposal is to plant small areas of new woodland – near the school, in Coton Orchard by the new bus stop, and on Rectory Farm land. This, too, is unlikely to achieve significant BNG because of the low score given to *new* woodland in the biodiversity scoring matrix.

The proposed mitigation measures are therefore “replacing with features of lower value or replacing locally important features with features further away” – a pitfall that environmental management guidelines specifically warn against (*Chartered Institute of Environmental Management Guidelines*, 2019).

Even more importantly, under the principle of *Mitigation Hierarchy*, which has to be applied to all development projects, the first obligation is to seek *Avoidance* – for example by moving the site or changing the design. Only after all other possibilities have been exhausted should measures such as *Minimisation* and *Compensation* be deployed. Critically, if the scheme could have been avoided, then any BNG score is necessarily cancelled out.

Since an off-road route *can* be avoided, this C2C scheme does not adhere to guidelines and cannot claim any meaningful Biodiversity Net Gain.

IMPACT ON LANDSCAPE AND HERITAGE

Some of the few countryside walks accessible from the city will be spoiled

From Cambridge, there are very few easily accessible places for people to go in order to get the benefits of walking in nature. But the landscape to the west of Cambridge offers some of the most rural views around, and is accessible without a car.

Walks from the village of Coton, through the Coton Reserve and up Red Meadow Hill, or up the rise towards Madingley, offer some of the most unspoiled views anywhere around Cambridge. These are hugely valued – not only by villagers but by the many visitors who make the short trip from the city, many by foot or bike.

From Red Meadow Hill the busway infrastructure may be partially concealed, but the buses would be visible and would significantly alter the character of this landscape. The path up to Madingley would be crossed by the busway, the view towards Coton despoiled and the peaceful walk interrupted by the noise of buses.

The setting of The American Cemetery will be compromised

The Grade I listed Cambridge American Military Cemetery at the top of Madingley Hill is the only military cemetery in the United Kingdom that commemorates American service men and women and civilian volunteers who died in World War II. More than 3,800 are buried there, and the Walls of the Missing list over 5,000 names in the sacred memory of those who were lost missing in action.

Dedicated in 1956 on land donated by the University at the top of Madingley Hill. The site was selected specifically for its setting, with its natural beauty and views. Matthew Brown, Superintendent of the Cemetery says:

“The US Government asked for this specific terrain – no other terrain would do because the viewshed was the key ... We are concerned that GCP’s proposal to build a tarmac bus road across the south side of the hill would irreparably damage this unique and precious landscape, compromising the setting of the American Military Cemetery, severing historic community access routes and paving the way for further urban encroachment in its vicinity.”

AN UNJUSTIFIABLE WASTE OF MONEY

The scheme is by far the most expensive option and poor value for money

The scheme was originally estimated to cost £160 million – a figure that has since been revised to £200 million. This is the 2018 estimate multiplied by the ONS annual rate of inflation. This does not allow for, e.g. extra steel price rises. probably conservative, nor that Cambridgeshire County Council

schemes consistently exceed their budget by a significant proportion of the original estimate. In addition, there will be an annual maintenance cost of £4.5 million.

One reason the off-road scheme is so expensive is that it involves building another bridge over the M11 – within a few hundred metres of both the existing road bridge and the foot/cycle bridge. C2C is disproportionately expensive relative to other schemes – even more so when measured by the Cost–Benefit Ratio, which is only 0.43³. Schemes rated < 2.00 do not normally proceed. This would be even worse if East West Rail goes ahead, because the number of passengers using the GCP busway would be significantly lower.

Spending on an on-road bus lane, by contrast, would be a small fraction of the off-road costs.

**“An in-bound bus lane along the A1303 could be implemented at minimal cost compared with the estimated £150–200 million cost of an off-road scheme.”
(C2C Outline Business Case Options Assessment Report, Section 8)**

THERE IS A FEASIBLE ALTERNATIVE

Contrary to what the GCP are claiming, an in-highway scheme is entirely feasible. This is borne out by detailed analysis in the GCP’s own C2C Outline Business Case Options Assessment Report, Section 8 and this 2021 Report, and was deemed to have merit by an Independent Audit.

The proposed alternative, in-highway scheme comprises a range of measures that include some sections of bus lane and some new bus-priority traffic signals. Together, these measures would enable buses and other traffic to run freely along the A428 and A1303, and then into Cambridge, as well as south on the M11 to the Biomedical Campus.

Other transport schemes, such as East West Railway and the Congestion Charge, would have a major impact on travel in the area if they go ahead. These would result in the GCP off-road busway being under-used and a financial failure. This is a significant risk.

An in-highway scheme, on the other hand, makes better use of existing infrastructure and therefore does not carry this risk. Its success does not depend on other schemes.

Provision for cycling and other active travel will all be made by the GCP’s Comberton-to-Cambridge Greenway, already under construction. This route is more direct, safer and does not include a very steep hill.

Additional recommendations under the alternative scheme include:

- The westward extension of the Comberton Greenway as far as Cambourne
- Dropping the Park and Ride at Scotland Farm in favour of high-quality bus services from Cambourne
- A proper bus station in Cambourne with appropriate facilities.

The estimated cost of the in-highway measures is no more than £20M.

The advantages of the scheme include:

- Similar journey times for a fraction of the cost
- Far less damage to the environment
- Lower carbon emissions
- More direct journeys to Biomedical Campus, and the same journey time to other key destinations
- A safer, pleasanter, more direct cycle route
- Does not depend on Congestion Charge for funding
- Significantly lower maintenance costs
- No risk of being expensive 'white elephant' for the County Council
- Frees up GCP budget to deliver other vital projects.

THE ESTIMATED COST OF THE IN-HIGHWAY MEASURES IS NO MORE THAN £20M.

GLOSSARY / LINKS

Cambridge American Cemetery

C2C – Cambourne to Cambridge Better Public Transport Project

Cambridge Nature Network – an initiative aimed to bring a systematic approach to nature recovery in an around Cambridge, by developing an interlinked network of habitats

Cambridge Past, Present and Future – Cambridge's independent charity that cares for heritage and green spaces

City Deal – central Government's investment in Cambridge and Greater Cambridgeshire, worth £1 billion over 15 years

Defra – central Government's Department for the Environment, Food and Rural Affairs

Greater Cambridge Partnership – the local delivery body for the City Deal

Biodiversity Net Gain – a calculation used in development projects, with the aim of leaving the biodiversity of a site in a better state than it was before the development

Mitigation Hierarchy – a tool which aims to help manage biodiversity risk, and is commonly applied in Environmental Impact Assessments (EIAs). The hierarchy of steps includes. Avoidance (first priority), Minimisation, Rehabilitation, Restoration and Offset (last resort).