Feasibility study

Wilburton to Cottenham

25 April 2024

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About Sustrans

Sustrans is the charity making it easier for people to walk and cycle. We connect people and places, create liveable neighbourhoods, transform the school run and deliver a happier, healthier commute. Join us on our journey. **www.sustrans.org.uk.**

Registered Charity No. 326550 (England and Wales) SC039263 (Scotland).

Our vision

A society where the way we travel creates healthier places and happier lives for everyone.

Our mission

We make it easier for people to walk and cycle.

How we work

— **We make the case for walking and cycling** by using robust evidence and showing what can be done.

— **We provide solutions**. We capture imaginations with bold ideas that we can help make happen.

— **We're grounded in communities**, involving local people in the design, delivery and maintenance of solutions.

What we do

Contact us

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1. Executive summary

This report looks at potential new walking and cycling routes between Wilburton and Cottenham. East Cambridgeshire District Council are keen to provide better facilities for residents and visitors and Sustrans is keen to look at ways that the two communities can be linked with the National Cycle Network and with other routes studied in the area.

The study considers six possible alignments for new provision and looks at the pros and cons of each. All routes have to cross the River Great Ouse, and this is a major factor in route selection and analysis, because of the cost of a new bridge. Ecology is also a significant factor because of the potential biodiversity net gain costs of routes following watercourses. The options vary in how direct they are and how they enter and leave Wilburton and Cottenham.

For all options it is clear that good links within both Wilburton and Cottenham are needed if the investment in links between the communities is to be justified. This is particularly difficult in Wilburton which has the A1123 running through the centre of the community. Options A and B enter Wilburton from the west on an alignment that has already been proposed as part of the Haddenham to A142 Feasibility study.

The six options are shown in Figure 1.1.

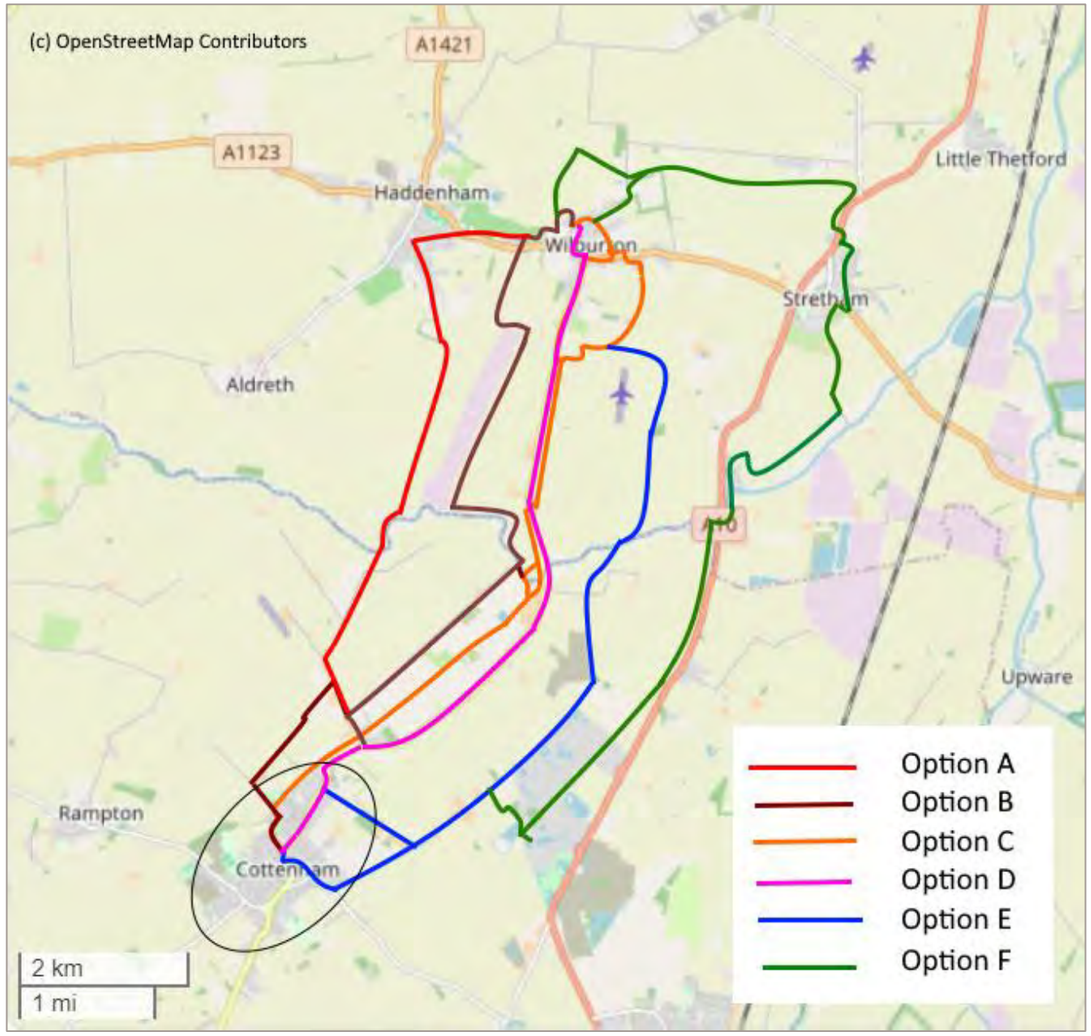

Figure 1.1 – Route options overview

Points to note about the options:

- **Option A** takes the route via Haddenham. This is not an obvious alignment, because there are no current direct links between the communities but the road layout on either side of the River Great Ouse suggests that there was a historic route between the two, possibly with a ferry crossing of the river. From a map it appears that if there were a new bridge over the River Great Ouse it would be relatively simple to create a new route between Haddenham and Cottenham, which could then be linked with Wilburton.

  There are however many difficulties with this option.

- **Option B** uses Broad Fen/ Great Fen Drove and Setchel Drove, from Cottenham, with a new link between them. These are quiet roads but still need major works. The route then follows an obvious field edge alignment along the edge of a solar farm. This again requires a new bridge and links over the River Great Ouse. Making a good route into Wilburton is challenging, because of the nature of the A1123.

- **Option C** closely follows the existing road between Wilburton and Cottenham, (the B1049). There is not sufficient highway verge for a highway verge route so private land will be needed to allow a new path to be built. The Option considers two ways to cross the River Great Ouse – either a new bridge or changes to the traffic flows over the existing road bridge to allow for walking and wheeling. For the approach to/ exit from Wilburton the option proposes a new route that enters/exits Wilburton via rights of way on the eastern side of Wilburton.

- **Option D** uses the existing B1049 and assumes that the road will be closed to through traffic, as it was in winter 2023/24 for a lengthy period. This simple measure would establish a good route and would allow access to all properties along the road. It has been shown to work, even during a period when there were other roadworks and road closures in the area. The route enters/exits Wilburton past the Garden Centre and requires some works along a short stretch of the A1123 to make a suitable connection with Wilburton.

- **Option E** uses an existing minor road and a field edge alignment to link up with the same right of way entry to Wilburton as for Option C. The route has not been surveyed over the whole length because it is private land but can be seen from Google Earth and part of the alignment is designated for potential mineral extraction, which may provide opportunities. This again requires a new bridge over the River Great Ouse.

- **Option F** is a very indirect alignment that would not serve well as a route between Wilburton and Cottenham, but it picks up a number of potentially useful short trips that have no provision at present including:

    - Cottenham to Cambridge Research Park (Waterbeach) and Waterbeach New Town West development.

    - Cambridge Research Park to Stretham Ferry Marina area.

    - Stretham Ferry Marina to Stretham,

    - Stretham to Grunty Fen Road.

    - Grunty Fen Road to Wilburton.

Some of these links could form part of the A10 Ely to A14 improvements which are currently being progressed by Cambridgeshire County Council supported by Cambridgeshire and Peterborough Combined Authority as project sponsor, but Sustrans has not seen details of these proposals, at this stage.

The route proposed in this study uses field edge paths, routes besides major roads, an existing bridge over the River Great Ouse and two new crossings of the A10, so has merits for local trips that are worth considering. It enters/exits Wilburton from the north.

Some options are likely to be very difficult to deliver and there are major challenges in using some rights of way and minor roads, due to the quality of these, but the biggest issues relate to crossing the River Great Ouse and ecology.

Option F does not make sense as a route between Wilburton and Cottenham, but it has the potential to attract the greatest usage and to address a number of separate local issues.

Option D is clearly the best value for money and the simplest option, and it has been shown to be deliverable during the lengthy closure of the road to through traffic in winter 2023/24, but there will need to be a lot of community engagement to progress this.

2. Introduction

Sustrans has been asked to look at options for new walking and cycling routes between Wilburton and Cottenham, that spans between East Cambridgeshire and South Cambridgeshire, as part of a series of reports. This request has come from East Cambridgeshire District Council who are looking to improve local facilities and want to progress plans for routes, so that when funding becomes available, they can bid for funding. The objective of the report is to identify the advantages and disadvantages of the various options, so that further consultation can be had with the local community, local employers, and landowners to consider the best way forward.

2.1 Background to the project

There is a well-established cycling culture in and around Cambridge, which extends to cycling between Cambridge and Cottenham. However, Wilburton appears to have low levels of cycling and feels cut off from neighbouring communities due to the nature of the A1123 that runs through Wilburton, and which includes significant high usage.

To address this sort of issue local and national policies have been giving high priority to walking and cycling, as well as offering the potential for major funding in future.

Locally East Cambridgeshire District Council has developed a Cycling and Walking Routes Strategy and this route forms part of the strategy.

Sustrans has also been reviewing the National Cycle Network and this review noted that the National Cycle Network is a local asset with incredible reach, connecting people and places across the UK and providing traffic-free spaces for everyone to enjoy.

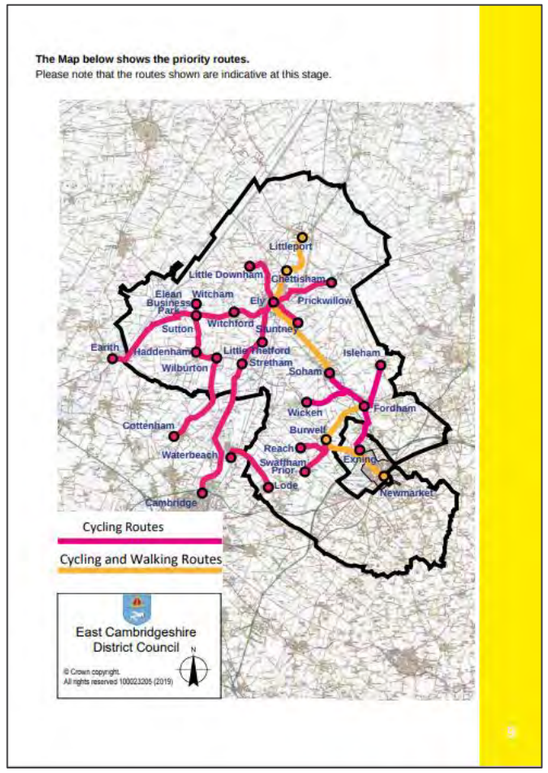

Figure 2.1 – Extract from East Cambridgeshire District Council Cycling and Walking Routes

The review identified that the Network is used by a broad range of people – walkers (for over half of journeys) and people on cycles, as well as joggers, wheelchair users and horse riders – but there is a lot more we can do to make it safe and accessible for everyone. The Network's routes have great potential for improvement. The character and quality vary hugely, and whilst 54% of the Network is Good or Very Good, 46% is Poor or Very Poor.

The review included a vision for a UK-wide network of traffic-free paths for everyone, connecting cities, towns, and countryside, loved by the communities they serve.

Figure 2.2 – There is some overlap between this study and the April 2022 study, which is currently on the East Cambridgeshire District Council website.

2.2 Purpose of the project

- To describe the current problems, obstacles, and propensity to walk and cycle in the area.
- To identify at least one high quality route that can be delivered between Wilburton and Cottenham. (Sustrans is also aware that links between Wilburton and Haddenham and Wilburton and Stretham are also of interest locally and has chosen to consider if there are merits in incorporating routes via Haddenham or Stretham).
- To consider ways to improve links within communities.
- To rank the route options in terms of benefits and costs and to consider ways to deliver improvements, including timetables and costings.

3. NCN principles

3.1 Why we have the NCN principles:

The National Cycle Network design principles set out key elements that make the Network distinctive and need to be considered during design of new and improved routes forming part of the Network.

Where the Network is not traffic-free it should either be on a quiet-way section of road or be fully separated from the carriageway.

For a National Cycle Network route on a quiet-way section of road traffic speed and flows should be sufficiently low with good visibility to comply with design guidance for comfortable sharing of the carriageway.

Signs and markings should highlight the Network.

Principle 1:

Traffic-free or quiet-way.

Where the Network is not “traffic-free” it should either be on a quiet-way section of road or be fully separated from the adjacent carriageway.

For a National Cycle Network route on a quiet-way section of road the traffic speed and flows should be sufficiently low enough to encourage cycling for all ages and abilities.

It should have good visibility to comply with design guidance to allow for comfortable sharing of the carriageway.

Signs and road markings should highlight the Network.

Figure 3.1: Safe crossing for all, helping continuity on traffic free routes.

Principle 2:

Wide enough to accommodate all users.

Width of a route should be based on the level of anticipated usage, allowing for growth. A minimum width of 3m shall be delivered.

Where it is not possible to deliver this, all other avenues should be fully explored before path widths are reduced.

Physical separation between users should be considered where there is sufficient width and a higher potential for conflict between different users.

Structures should be designed to maximise movement space. A minimum path width between parapets of 4m shall be maintained.

Figure 3.2: Adequate space for all users that allows for growth and busy times, with separation of cyclists and pedestrians.

Principle 3:

Designed to minimise maintenance.

A maintenance plan should be put in place during the development process.

Construction quality should be maximised to minimise future maintenance needs.

New planting should be kept well clear of the path.

Sufficient tree work should be undertaken as part of construction to minimise future issues.

Routes should be managed in a way that enhances biodiversity.

Figure 3.3: Easily maintained.

Principle 4:

Signed clearly and consistently.

Signage should be a mix of signs, surface markings and wayfinding measures.

Every junction or decision point should be signed.

Signage should be part of a network-wide signing strategy directing users to and from the route.

Signage should direct users of the Network to trip generators such as places of interest, hospitals, universities, colleges.

Signage should be used to increase route legibility and branding of routes.

Signage should help to reinforce responsible behaviour by all users.

Figure 3.4: Clear signing

Principle 5:

Smooth surface that is well drained.

Path surfaces should be suitable for all users, irrespective of age, ability, or mobility needs.

Path surfaces should be maintained in a condition that is free of undulations, rutting and potholes.

Path surfaces should be free draining, and verges finished to avoid water ponding at the edges of the path.

In, or close to, built-up areas a Network route should have a sealed surface to maximise the number of path users.

Figure 3.5: Smooth, tarmac surface, accessible for all non-motorised users

Principle 6:

Fully accessible to all legitimate users.

All routes should accommodate a cycle design vehicle 2.8 metres long x 1.2metres wide.

Any barriers should have a clear width of 1.5 metres.

Gradients should be minimised and as gentle as possible.

The surface should be maintained in a condition that makes it passable by all users.

Figure 3.6: Convenient access for all legitimate users.

Principle 7:

Feel like a safe place to be.

Route alignments should avoid creating places that are enclosed or not overlooked.

Consideration should be given as to whether lighting should be provided.

Figure 3.7: Safe for all

Principle 8:

Enable all users to crossroads safely.

Road crossings should be in accordance with current best practice guidance.

Approaches to road crossings should be designed to facilitate a slow approach speed to a crossing, have enough space for several users to wait safely.

Signalised road crossings should be designed to minimise the wait time for NCN users. Where possible advanced notification systems should be used.

All grade separated crossings should provide step-free access.

Figure 3.8: Safe crossing for all

Principle 9:

Be attractive and interesting.

Network routes should be attractive places to be in and pass along.

Landscaping, planting, artwork, and interpretation boards should be used to create interest.

Seating should be provided at regular intervals along a route.

Opportunities should be taken to enhance ecological features.

Figure 3.9 Attractive and interesting areas

4. Guidelines, Standards and Policy

4.1 National Guidance

The most relevant guidance is listed on the Sustrans website at https://www.sustrans.org.uk/for-professionals/ infrastructure.

Local Authority Guidance and policies are also relevant. Examples of relevant guidance are given in this chapter.

LTN 1/20 Cycle Infrastructure Design and its implications for design options.

Although LTN 1/20 is issued as guidance, its adoption will also be a condition for Government funding of all local highways' investment, as well as new cycle infrastructure.

"It will be a condition of any future Government funding for new cycle infrastructure that it is designed in a way that is consistent with this national guidance. The Department for Transport will also reserve the right to ask for appropriate funding to be returned for any schemes built in a way which is not consistent with the guidance. In short, schemes which do not follow this guidance will not be funded." (Extract from Foreword LTN1/20)

General guidance for England

- Department for Transport LTN 1/20 Cycle Infrastructure Design
- Highways England CD 195 Designing for cycle traffic
- Department for Transport Local Transport Notes
- LCWIP Technical Guidance for Local Authorities (DfT).

Figure 4.1.1 Guidance documents

Figure 4.1.2. LTN 1/20 Core Design Principles.

The Government set out its ambitions to see a "step change in cycling and walking in coming years" in Gear Change – A bold vision for cycling and walking (Department for Transport, July 2020).

Figure 4.1.3 Gear Change Cover

Gear Change sets out key design principles, which are the basis for the updated national guidance for highway authorities and designers.

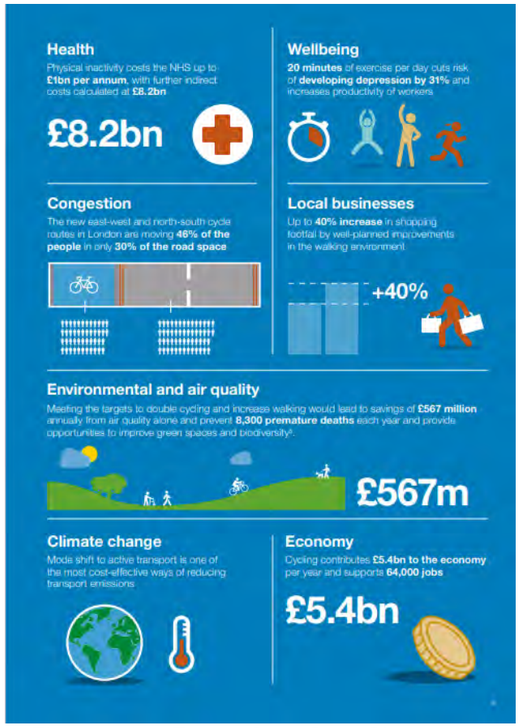

Figure 4.1.4 Extract from Gear Change

Figure 4.1.5 Extract from Gear Change

LTN 1/20 has been taken as the starting point when considering design options for this scheme. Some of the major implications in relation to the space needed for cycling, to ensure that the guidelines are met are:

• Properly protected bike lanes, cycle-safe junctions and interventions for low-traffic streets are needed for the whole scheme, with little scope for exceptions.

• Cycle infrastructure should be accessible to everyone from 8 to 80 and beyond.

• On urban streets, cyclists must be physically separated from pedestrians and should not share space with pedestrians.

• Cyclists must be physically separated and protected from high-volume motor traffic, both at junctions and on the stretches of road between them.

• Cycle infrastructure should be designed for significant numbers of cyclists, and for non-standard cycles

Figure 4.1: Appropriate protection from motor traffic on highways

Speed Limit[1]	Motor Traffic Flow (pcu/24 hour)[2]	Protected Space for Cycling: Fully Kerbed Cycle Track	Protected Space for Cycling: Stepped Cycle Track	Protected Space for Cycling: Light Segregation	Cycle Lane (mandatory/ advisory)	Mixed Traffic
20 mph[3]	0					
	2000					
	4000					
	6000+					
30 mph	0					
	2000					
	4000					
	6000+					
40 mph	Any					
50+ mph	Any					

Provision suitable for most people

Provision not suitable for all people and will exclude some potential users and/or have safety concerns

Provision suitable for few people and will exclude most potential users and/or have safety concerns

Notes:
1. If the 85th percentile speed is more than 10% above the speed limit the next highest speed limit should be applied
2. The recommended provision assumes that the peak hour motor traffic flow is no more than 10% of the 24 hour flow
3. In rural areas achieving speeds of 20mph may be difficult, and so shared routes with speeds of up to 30mph will be generally acceptable with motor vehicle flows of up to 1,000 pcu per day

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Figure 4.1.6 Extract from LTN 1/20 (Figure 4.1) showing the type of provision needed depending on traffic volumes and speeds.

Table 6-1: Minimum recommended horizontal separation between carriageway and cycle tracks*

Speed limit (mph)	Desirable minimum horizontal separation (m)	Absolute minimum horizontal separation (m)
30	0.5	0
40	1.0	0.5
50	2.0	1.5
60	2.5	2.0
70	3.5	3.0

*Separation strip should be at least 0.5m alongside kerbside parking and 1.5m where wheelchair access is required.

26 Guidance on the use of tactile paving surfaces, DfT, 2007
27 Inclusive Mobility – A Guide to best Practice on Access to Pedestrian and Transport Infrastructure, DfT, 2002

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Figure 4.1.7 Extract from LTN 1/20 (Table 6-1) showing buffer distances between carriageway and cycle track.

LTN 1/20 notes that physical separation of cyclists from motor traffic can be an option in all situations but may not be necessary at lower speeds and lower volumes of traffic. This is an important factor in scheme design because measures that reduce traffic volumes and/ or speeds can change the requirements for provision for cyclists.

LTN 1/20 has many other implications for cycle infrastructure design and maintenance and needs to be read as a whole, to fully understand the required design standards (including the Cycling Level of Service Tool and Junction Assessment Tool). To justify expenditure on this scheme the whole scheme must be to a good standard and there should be no Critical Fails using the Cycling Level of Service Tool, with junctions to a good standard for all movements.

Figure 4.1 and Table 6-1 of LTN 1/20 show the appropriate protection from motor traffic on highways, with the aim being that traffic flow, speed and type of separation should fit within the green area. Space for cycling needs to allow for pedestrians and should be separated from motorised traffic by the desired or absolute minimum separation as outlined above. The absolute minimum is a last resort.

LTN 1/20 generally recommends that cyclists are segregated from pedestrians but suggests that; “Shared use may be appropriate in some situations, if well-designed and implemented.” The guidance on widths for rural routes is given in Table 6-3, which states that a route’s recommended minimum width is 3m. This is the width that has been used throughout this study.

Table 10-2: Crossing design suitability

Speed Limit	Total traffic flow to be crossed (pcu)	Maximum number of lanes to be crossed in one movement	Uncontrolled	Cycle Priority	Parallel	Signal	Grade separated
≥ 60mph	Any	Any					
40 mph and 50 mph	> 10000	Any					
	6000 to 10000	2 or more					
	0-6000	2					
	0-10000	1					
≤ 30mph	> 8000	> 2					
	> 8000	2					
	4000 8000	2					
	0-4000	2					
	0-4000	1					

Provision suitable for most people

Provision not suitable for all people and will exclude some potential users and/or have safety concerns

Provision suitable for few people and will exclude most potential users and/or have safety concerns

Notes:
1. If the actual 85th percentile speed is more than 10% above the speed limit the next highest speed limit should be applied
2. The recommended provision assumes that the peak hour motor traffic flow is no more than 10% of the 24 hour flow

Figure 4.1.8 Extract from LTN 1/20 (Table 10-2) showing the type of crossing provision needed to cross roads.

For rural roads, the speed limit is generally 60mph or 50mph, which means that any path must be at least 1.5m from the edge of the carriageway. Paths also must be kept well clear of hedges, which could be another 2m, so with a 3m wide path that means that at least 6.5m of space is needed.

On routes separate from traffic, such as disused railways, this figure comes down to 5m since the 1.5m buffer isn’t needed.

LTN 1/20 includes information about how routes should cross side roads and more major roads. The type of crossing required is dependent on traffic volumes and speeds and is given in Table 10-2 of LTN 1/20.

Healthy Streets

Healthy Streets is a measure of how healthy our environment is. It is a recognition that “Every decision we make about our built environment, however small, is an opportunity to deliver better places for people to live in and thereby improve their health.” (https://www.healthystreets.com/what-is-healthy-streets)

There are 10 evidence-based Healthy Streets indicators and streets can be assessed and given a score, which can be audited.

The expectation is that Local Authorities and designers should aim to improve the Healthy Streets score on their streets and for any new infrastructure an assessment should be made before design work starts and after a scheme has been delivered. To properly assess a street, traffic flow data is needed, and the professionals involved should have been trained in the process. For this study, it is premature to conduct Healthy Streets Audits, but it is essential that these are undertaken to guide engineers and planners when developing options. This will ensure that solutions are provided that benefit the end users and reflect the challenges raised by the audits.

Figure 4.1.9 Healthy Streets Factors

4.2 Local Authority Guidance and Policies

As the Strategic Transport Authority for Cambridgeshire and Peterborough, the Combined Authority published the Local Transport and Connectivity Plan in November 2023. The plan includes policies supportive of Active Travel.

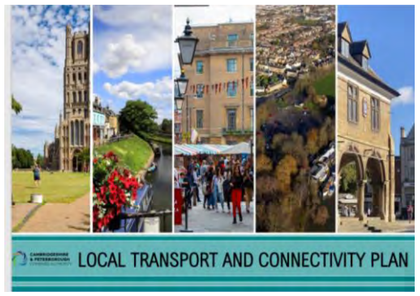

Figure 4.2.1 - Local Transport and Connectivity Plan

As the highway authority Cambridgeshire County Council is the body that is reponsible for the public highway in Cambridgeshire. Larger scale projects are prioritised each year by officers and members of the County Council. These arise from strategic plans, such as the Local Transport Plan and Transport Strategies, as well as more immediate maintenance and safety requirements. Transport plans and policies are shown on the County website.

The County Council expects bids for 20 mph funding to fit into one of the following, which are all relevant for active travel. In general, a new 20mph limit should be in an area with features that justify a lower speed limit to drivers, for example, an area that has:

- evidence of traffic incidents or potential dangers within an existing 30/40mph
- vulnerable road users e.g. pedestrians (of all ability), cyclists, equestrian users and motorcyclists
- visible homes, shops, and business frontages
- a school or a school route
- a cycling route
- a quiet lane designation
- an area that would benefit from more active travel such as cycling and walking.

Figure 4.2.2 Recently completed 20mph zone in Haddenham.

The Greater Cambridge Partnership is leading on the development of the Greater Cambridge Greenways. The intention is that they will make it easier both to travel in a pleasant and sustainable way into and out of Cambridge and to enjoy our countryside for leisure purposes. They will also help to make local journeys such as school and nursery runs safer and easier. In some cases, these are new routes, or routes with new sections, whilst others will be based on existing paths". The St Ives Greenway will link Cottenham with the Guided Bus greenway and the Waterbeach Greenway will link with Waterbeach NewTown. This brings the

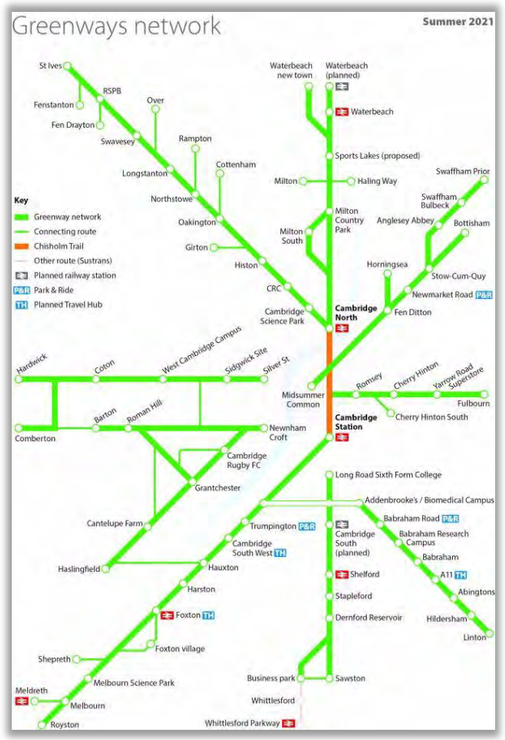

Figure 4.2.3 - Cambridge Greenways Network Plan.

Cambridge Greenways network very close to routes considered as part of this study.

The previous study Haddenham to the A142 identified a potential good route between Wilburton and Witchford and improvements to the existing Witchford – Ely route are already being considered , so it can be argued that Wilburton to Cottenham is a missing link in a potential Ely-Cambrudge route. This could become part of the National Cycle Network if completed to standard.

The East Cambridgeshire Local Plan sets out future plans for the District and includes the following within section 2.4.1 Spatial Vision:

"Better cycling and pedestrian facilities and links will be provided, including segregated cycle routes along key routes linking towns and villages……

Figure 4.2.4 - East Cambridgeshire Local Plan.

There will be better access to the countryside and green spaces for local communities which helps to improve people's quality of life…"

It should be noted that Cottenham falls within South Cambridgeshire rather than East Cambridgeshire with any route adopted traversing the district boundary. South Cambridgeshire's Local Plan makes a similar pledge to sustainable transport infrastructure:

"*The transport system needs to be balanced in favour of sustainable modes; walking, cycling and public transport, in order to give people a real choice about how they travel."*

The Cambridgeshire and Peterborough Minerals and Waste Local Plan identifies land near Cottenham as a Mineral Safeguarding area (Sand and Gravel). This is relevant for at least one of the options.

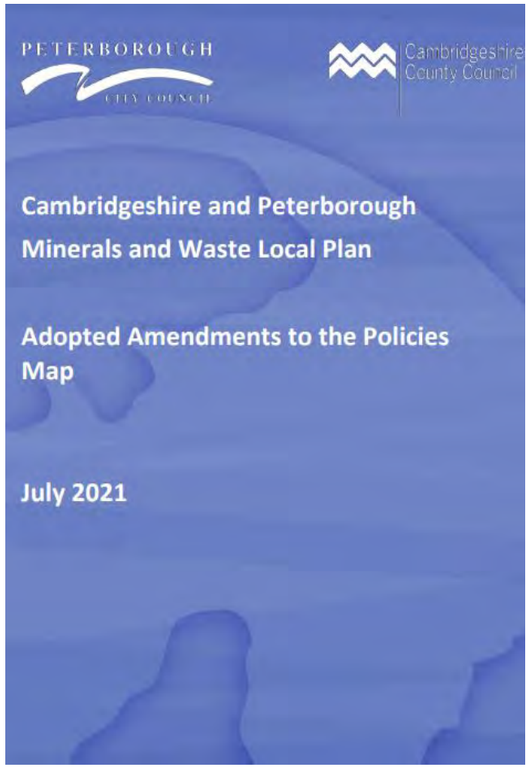

Figure 4.2.5 Cambridgeshire and Peterborough Minerals and Waste Local Plan.

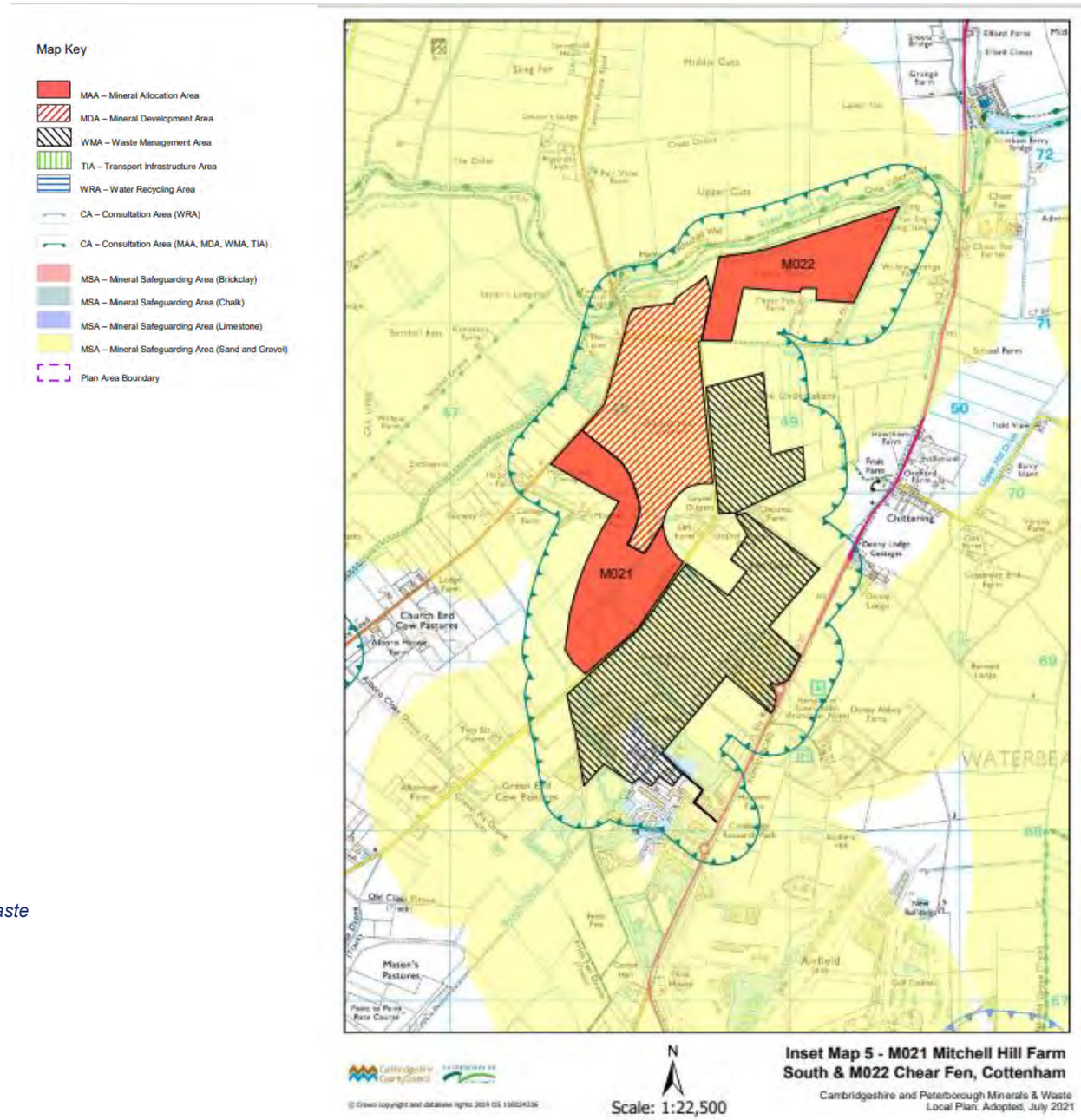

Figure 4.2.6 Inset Map 5 from Cambridgeshire and Peterborough Minerals and Waste Local Plan..

4.3 Local Planning

Cottenham Neighbourhood Plan has established a “pavement improvement project” as a means of improving pedestrian safety within and around the village. This is a medium-term vision within the village and long-term as far as 800m outside the village along the arterial roads. 800m northwards along Twenty Pence Road reaches approximately the junction with Lockspit Hall Drove. The Plan also established a long-term cycleway project to connect Cottenham to its neighbouring villages.

This is part of a broader effort to mitigate the risks of “becoming an expensive dormitory town for rapidly growing Cambridge, with through-traffic increasing as commuters move to lower priced housing elsewhere.”

A look at the respective local authorities’ planning portals shows no significant short-term population growth in either Cottenham or Wilburton. On the other hand, 83 homes are proposed in the western side of the A10 in Stretham and 34 in Haddenham.

4.4 East Cambridgeshire District Council- Cycling and Walking Routes strategy.

East Cambridgeshire District Council has produced a Cycling and Walking routes strategy which was informed by public consultation in 2020. It includes information on the responses and an analysis of all the options put forward, such as the many proposed cycle routes as shown in Figure 4.4.1

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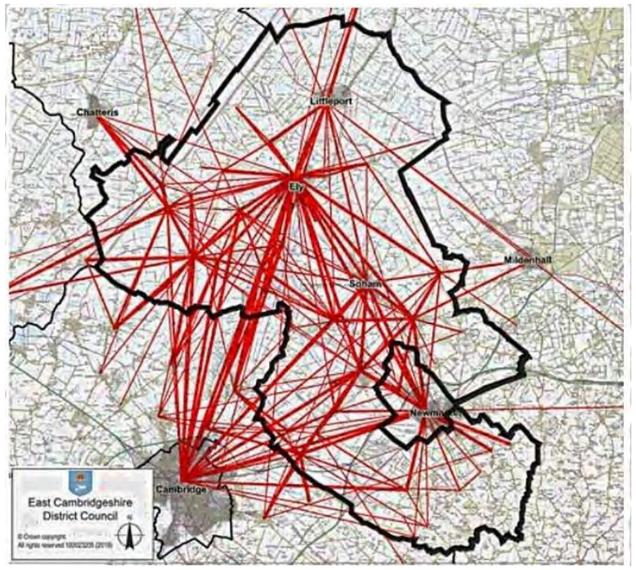
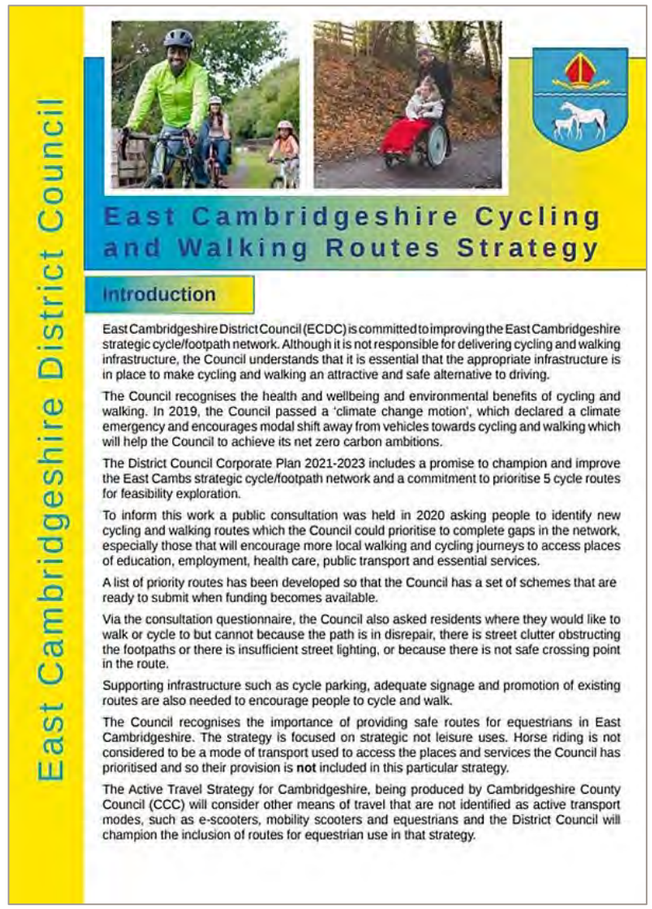


Figure 4.4.1 – Route requests map from or ECDC Walking and Cycling Strategy.


East Cambridgeshire District Council

East Cambridgeshire Cycling and Walking Routes Strategy

Introduction

East Cambridgeshire District Council (ECDC) is committed to improving the East Cambridgeshire strategic cycle/footpath network. Although it is not responsible for delivering cycling and walking infrastructure, the Council understands that it is essential that the appropriate infrastructure is in place to make cycling and walking an attractive and safe alternative to driving.

The Council recognises the health and wellbeing and environmental benefits of cycling and walking. In 2019, the Council passed a ‘climate change motion’, which declared a climate emergency and encourages modal shift away from vehicles towards cycling and walking which will help the Council to achieve its net zero carbon ambitions.

The District Council Corporate Plan 2021-2023 includes a promise to champion and improve the East Cambs strategic cycle/footpath network and a commitment to prioritise 5 cycle routes for feasibility exploration.

To inform this work a public consultation was held in 2020 asking people to identify new cycling and walking routes which the Council could prioritise to complete gaps in the network, especially those that will encourage more local walking and cycling journeys to access places of education, employment, health care, public transport and essential services.

A list of priority routes has been developed so that the Council has a set of schemes that are ready to submit when funding becomes available.

Via the consultation questionnaire, the Council also asked residents where they would like to walk or cycle to but cannot because the path is in disrepair, there is street clutter obstructing the footpaths or there is insufficient street lighting, or because there is not safe crossing point in the route.

Supporting infrastructure such as cycle parking, adequate signage and promotion of existing routes are also needed to encourage people to cycle and walk.

The Council recognises the importance of providing safe routes for equestrians in East Cambridgeshire. The strategy is focused on strategic not leisure uses. Horse riding is not considered to be a mode of transport used to access the places and services the Council has prioritised and so their provision is **not** included in this particular strategy.

The Active Travel Strategy for Cambridgeshire, being produced by Cambridgeshire County Council (CCC) will consider other means of travel that are not identified as active transport modes, such as e-scooters, mobility scooters and equestrians and the District Council will champion the inclusion of routes for equestrian use in that strategy.

Figure 4.4.2 –Introduction from ECDC Walking and Cycling Strategy.

5. Active Travel and usage of existing routes

Levels of Active Travel are determined by many factors including distance, topography, the ease of alternative modes, the quality of provision and the points of interest or destinations that people want to access.

5.1 Points of Interest.

Points of Interest (or local amenities) are a useful way of ascertaining where people might be drawn to, and therefore justify the existence of a route, guide its alignment, and give indicators of the nature of travel within and between towns. It can be seen in figure 5.1.1 that points of interest, or trip generators, are somewhat dispersed across the area, particularly around Wilburton. This would justify an expansion of scope to the neighbouring villages of Stretham and Haddenham, especially considering the lack of active travel infrastructure in the area.

Public Rights of Way (PROWs) indicate a means by which people can currently walk and wheel in the area. There are two significant public footpaths; one connecting Cottenham to the River Great Ouse and another connecting Wilburton and Stretham via a detour to the north. The latter isn't useable as a link to Stretham, however, since users would need to continue the highly inaccessible A10. There is also a bridleway connecting the eastern side of Wilburton to Twenty Pence Road.

A look at topographic data shows that the area of study is mostly flat and therefore accessible. This is except for some areas around Wilburton and Haddenham.

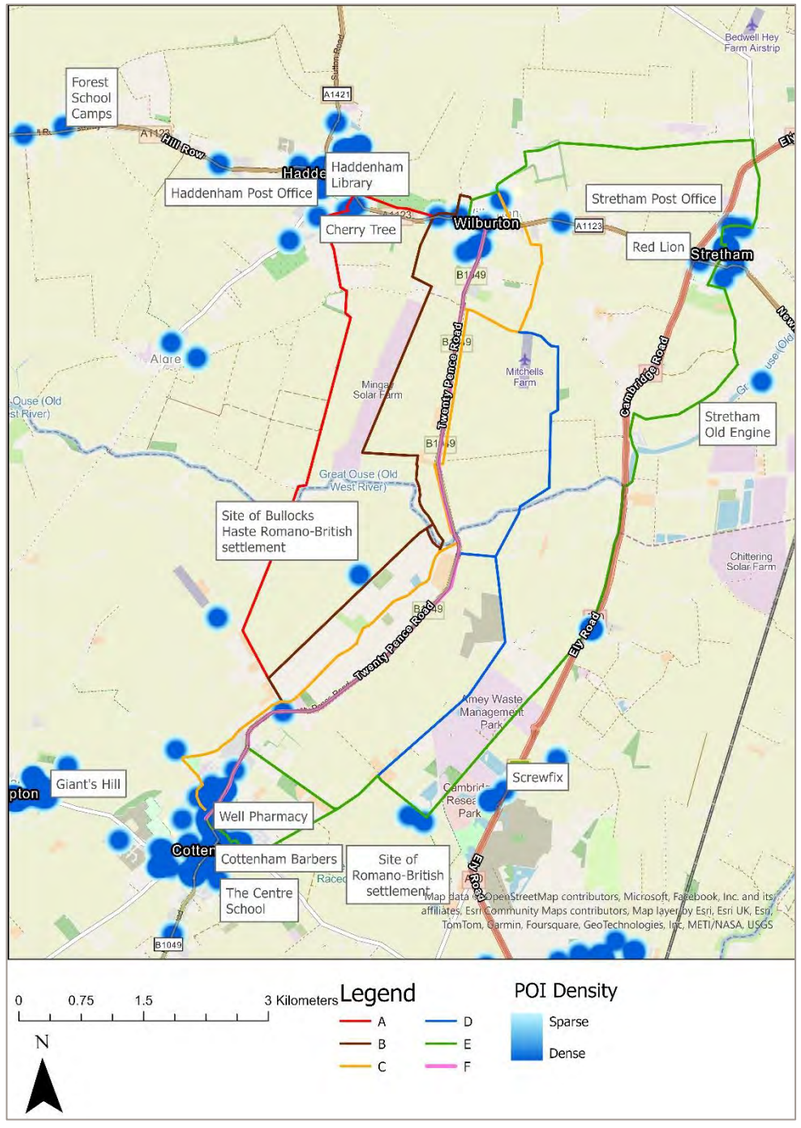


Figure 5.1.1 – Points of Interest

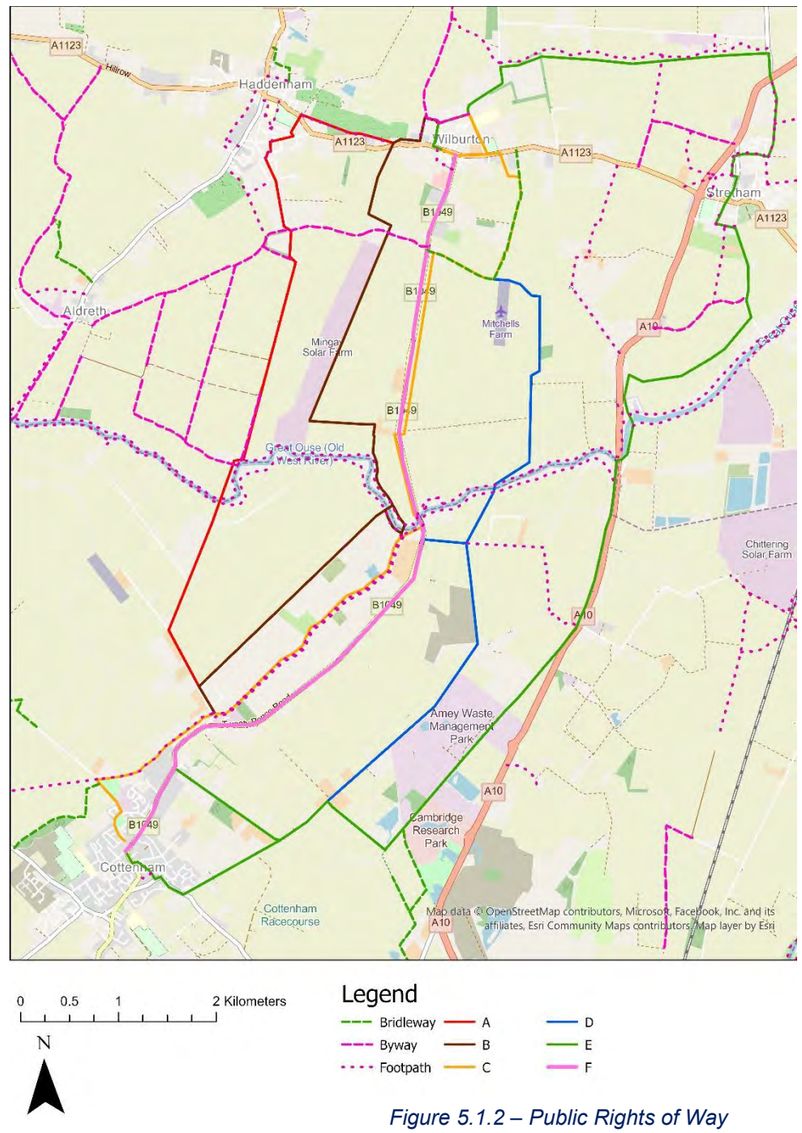


Figure 5.1.2 – Public Rights of Way

5.2 – Issues between the villages

With only a single crossing of the river that doesn't involve a significant deviation, the ways by which residents can currently travel actively between Wilburton and Cottenham are limited. The B1049 (Twenty Pence Road) is the only continuous route between the two villages. In 2019 a manual count recorded around 5,723 motor vehicles and 32 pedal cycles per day according to the DfT and, as such, is inappropriate for cycling for most people following LTN 1/20. There is also no footway on either side of the carriageway and the speed limit is mostly 60 mph with some at 40 mph making it an uncomfortable environment for cycling and unusable for walking. The carriageway at the bridge is pinched to around 2.5m per lane before the road continues on to Wilburton.

Figure 5.2.1 – Twenty Pence Road bridge

It is worth noting that, at the time of writing, the road was closed for utility works. It was therefore inadvertently a highly pleasant cycle route at the time.

Figure 5.2.2– Twenty Pence Road closure, near Wilburton

Figure 5.2.3 – Twenty Pence Road

An alternative to Twenty Pence Road south of the river is Cottenham Lode, a public right of way (PROW) that connects to Cottenham. It is a more direct route than the road alternative and is completely traffic-free. It is also, however, unpaved,

Figure 5.2.4 – Cottenham Lode during recent flooding.

and prone to flooding. Gates with stepladders that users must climb over at points also makes this option not accessible to all.

Long Drove is also an option that runs parallel to Twenty Pence Road south of the river, but it to the southeast relative to the road so would be indirect for most people. The track is paved with concrete at points which has split over the years and created a somewhat bumpy surface. Although less trafficked than Twenty Pence Road, Long Drove is used by heavy farm machinery which may be uncomfortable for some users.

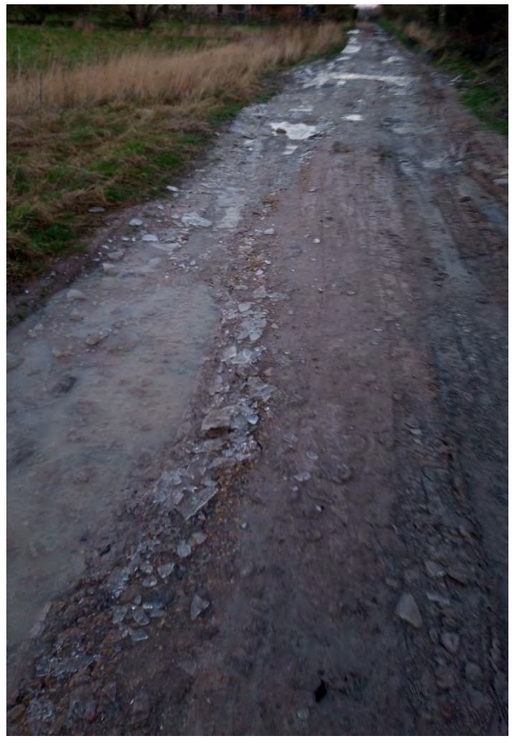


Figure 5.2.5 – Long Drove, near Cottenham

The A1123 connecting and running through Haddenham, Wilburton, and Stretham carried 9095 motor vehicles a day to the east of Wilburton including 423 hgvs and 1291 light goods vehicles ad just 4 pedal cycles according to a count in 2016.

Footways are often narrow and an overall lack of space means scope for reconfiguration is limited. Connecting these three villages to the north is therefore problematic. There is a footpath connecting Haddenham with Wilburton north of the A1123. At present though users would still need to use the A1223 to get out of Wilburton and to get into Haddenham.

Figure 5.2.6 – A1123 slightly west of Wilburton centre

The issues outlined above are reflected in Figure 5.2.7, a collision map. Incidents are concentrated unsurprisingly around population centres, with an emphasis on Cottenham and Haddenham, with the former having more total accidents and the latter having a greater proportion of severe accidents. Incidents line the busy roads in the area, with the greatest proportion of severe cyclist accidents being on the A1123, but there is one serious incident involving a cyclist on the B1049 between Wilburton and Cottenham.

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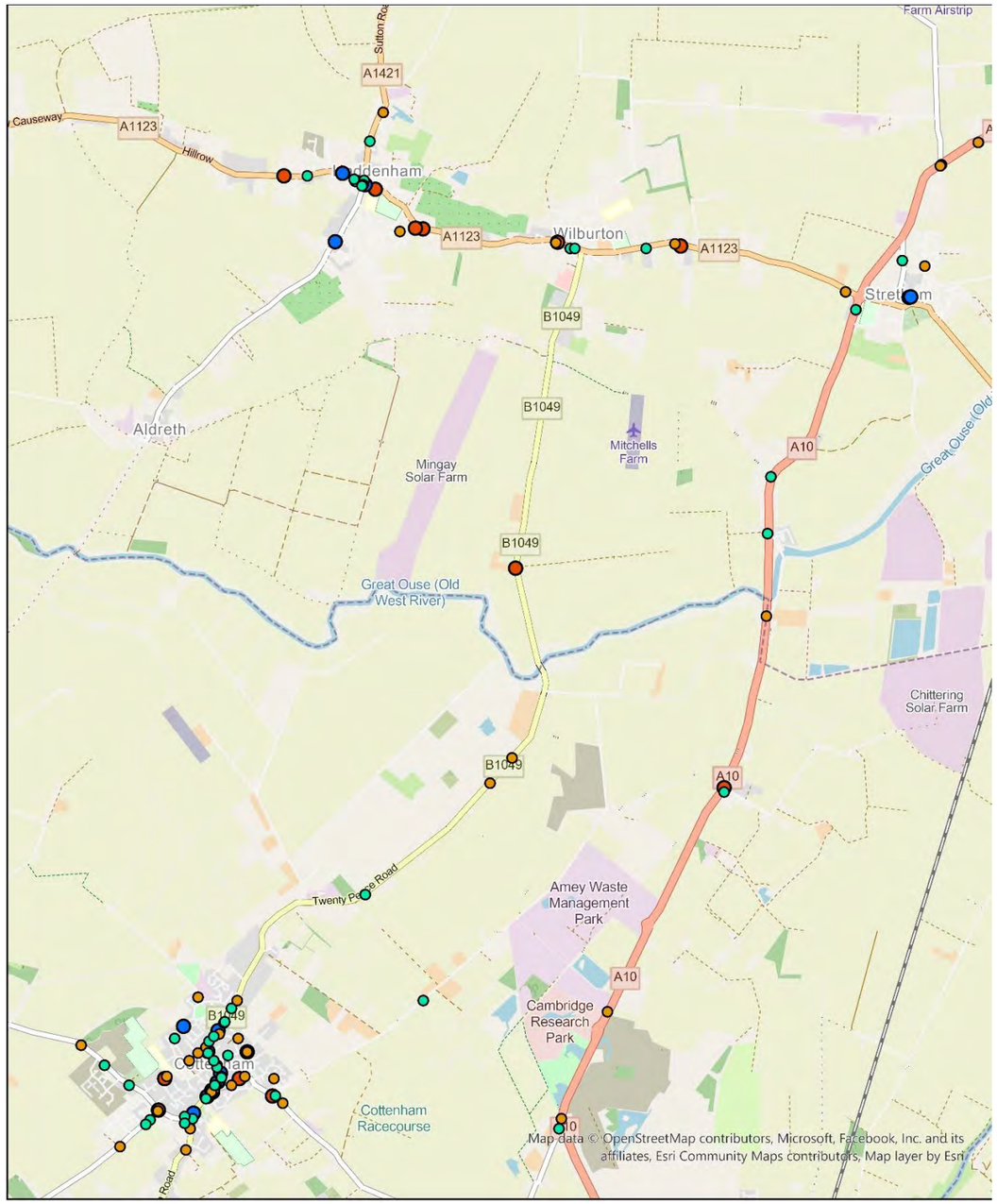


Figure 5.2.7 – Collision map

The travel time maps in Figures 5.2.8 and 5.2.9 give a scale to the area and by extension show where people will realistically travel. By foot, the maps show that Haddenham is the most accessible village to Wilburton, the only village within half an hour of walking. It can also be seen that Cottenham is accessible from Wilburton within half an hour of cycling, but only just.

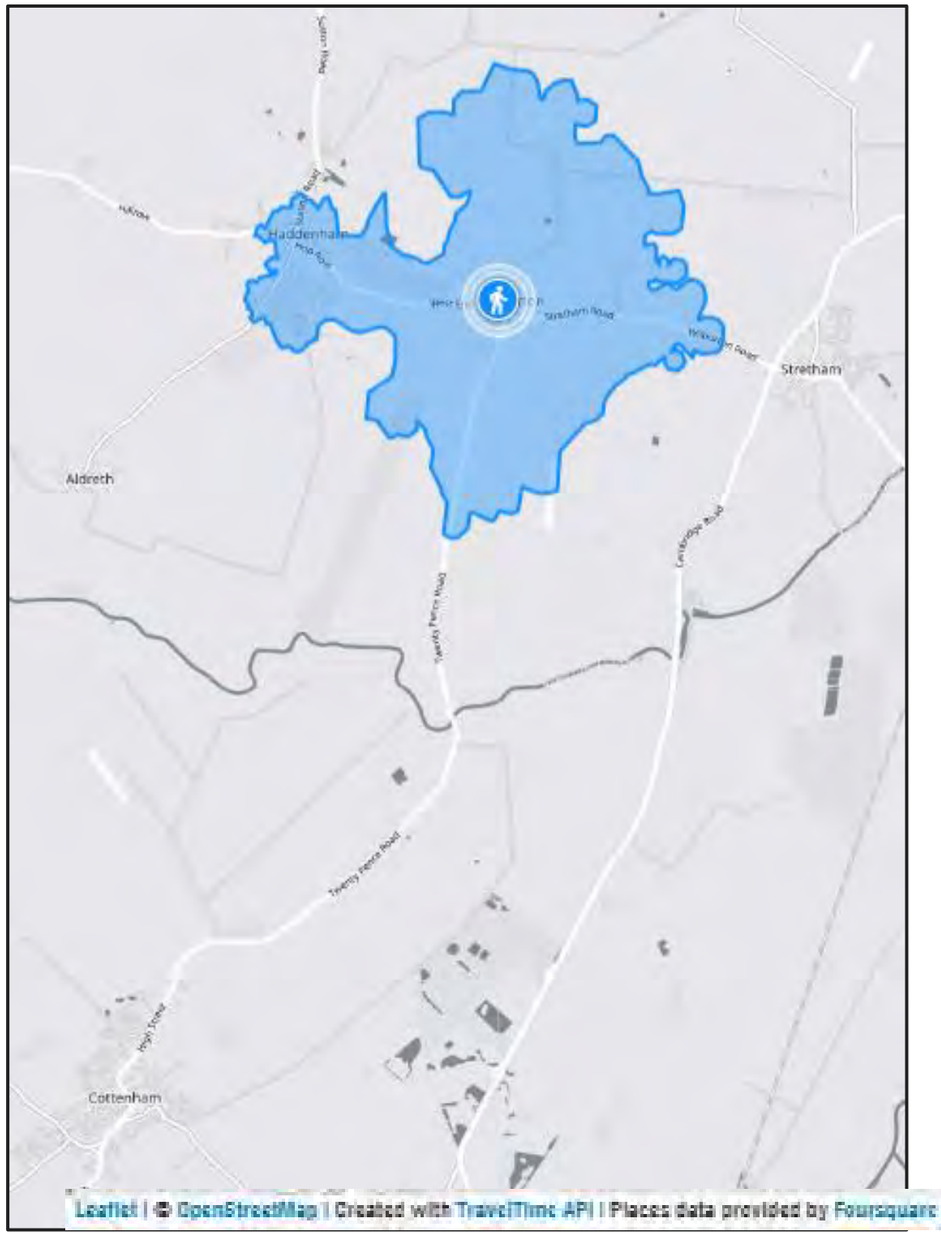


Figure 5.2.8 – travel time map walking showing 30 minutes walk from the A1123 in Wilburton.

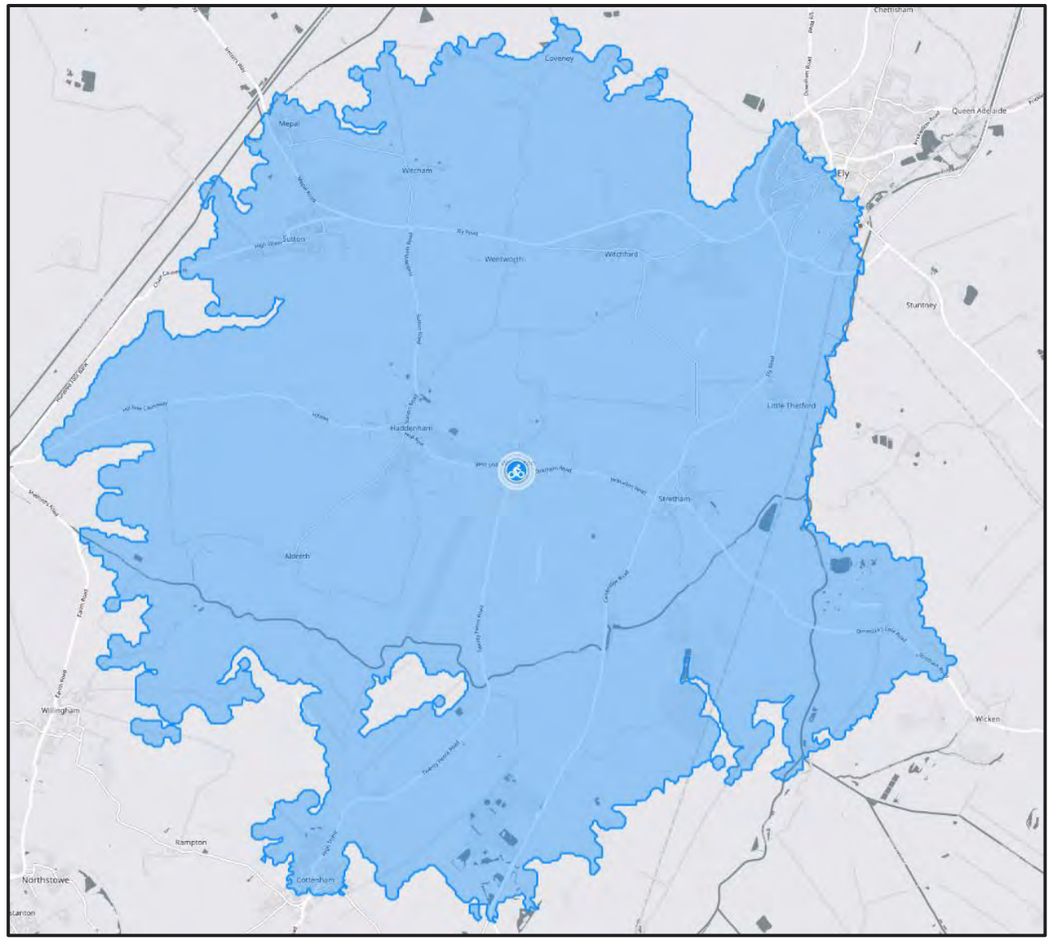


Figure 5.2.9 – travel time map walking showing 30 minutes cycle from the A1123 in Wilburton.

6. Design constraints

6.1 Environment Agency

The fens are historically prone to flooding, which is reflected in the study area particularly. It can be seen in Figure 6.1.1, a flood map, that few sections of any route fall outside of a zone 3 flood zone, meaning a flood is once in ten years. The map shows that more easterly options would be less prone to flooding, such as option E following the A10, or option F along Twenty Pence Road. It should also be noted that Sustrans has a history of working sensitively within flood zones, including in places such as Wicken Fen, showing that routes within flood zones should not be excluded outright.

Figure 6.1.2 – Fields near Cottenham Lode during recent flooding

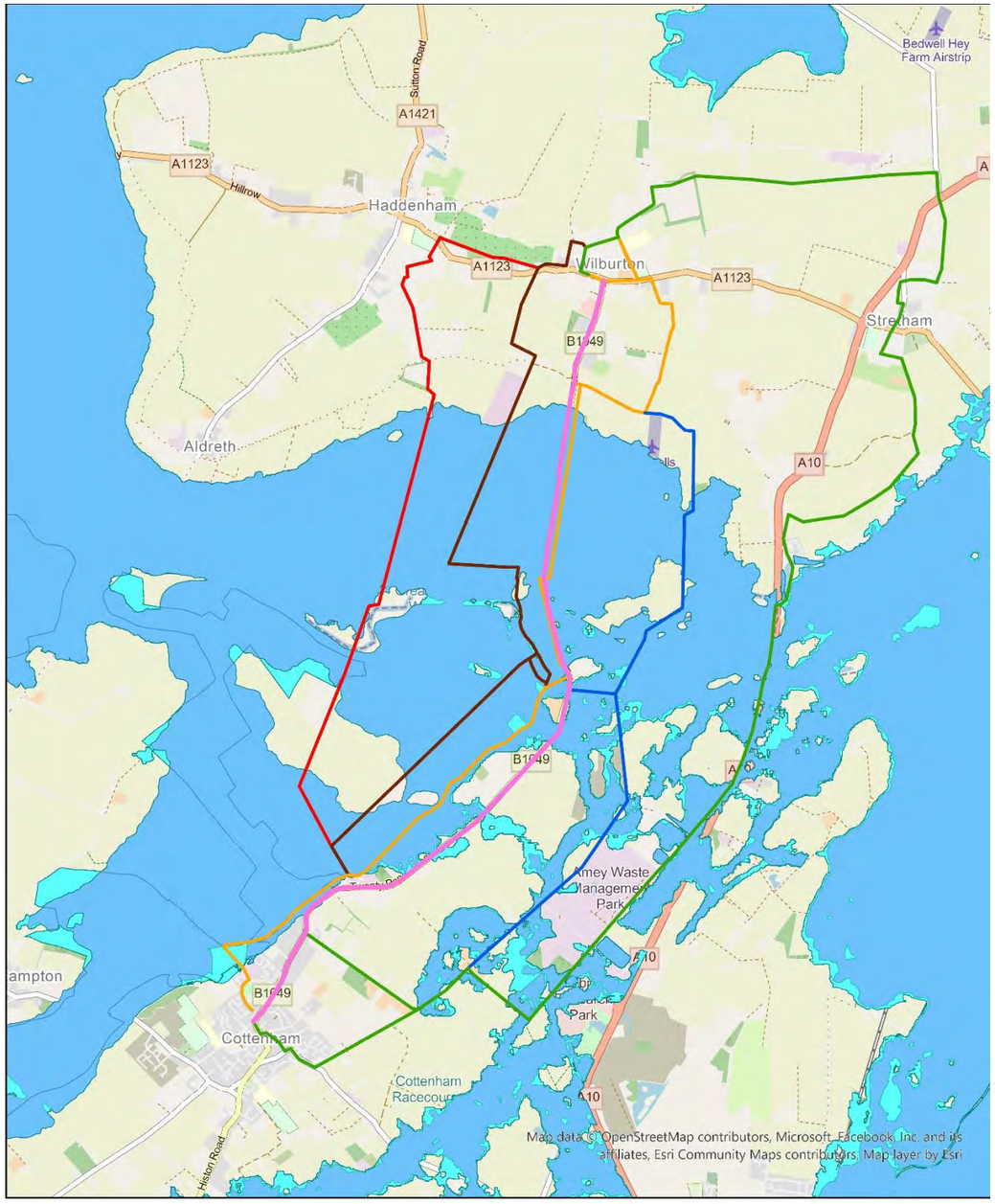


Figure 6.1.1 – Flood map for Planning

6.2 Geology

The soilscape map in Figure 6.2.1 shows that most route options sit on impermeable loamy or clayey soils with naturally high groundwater, aligning with the flood risk. Further groundwork may also need to be conducted just south and east of Wilburton, where the soil is shallower, and sand based. It should also be noted that Fen roads are notorious for undulation and cracking as the land dries or dampens and moves, as can be seen on many concrete tracks in the area. It will therefore be important to ensure that the foundations are of sufficient depth.

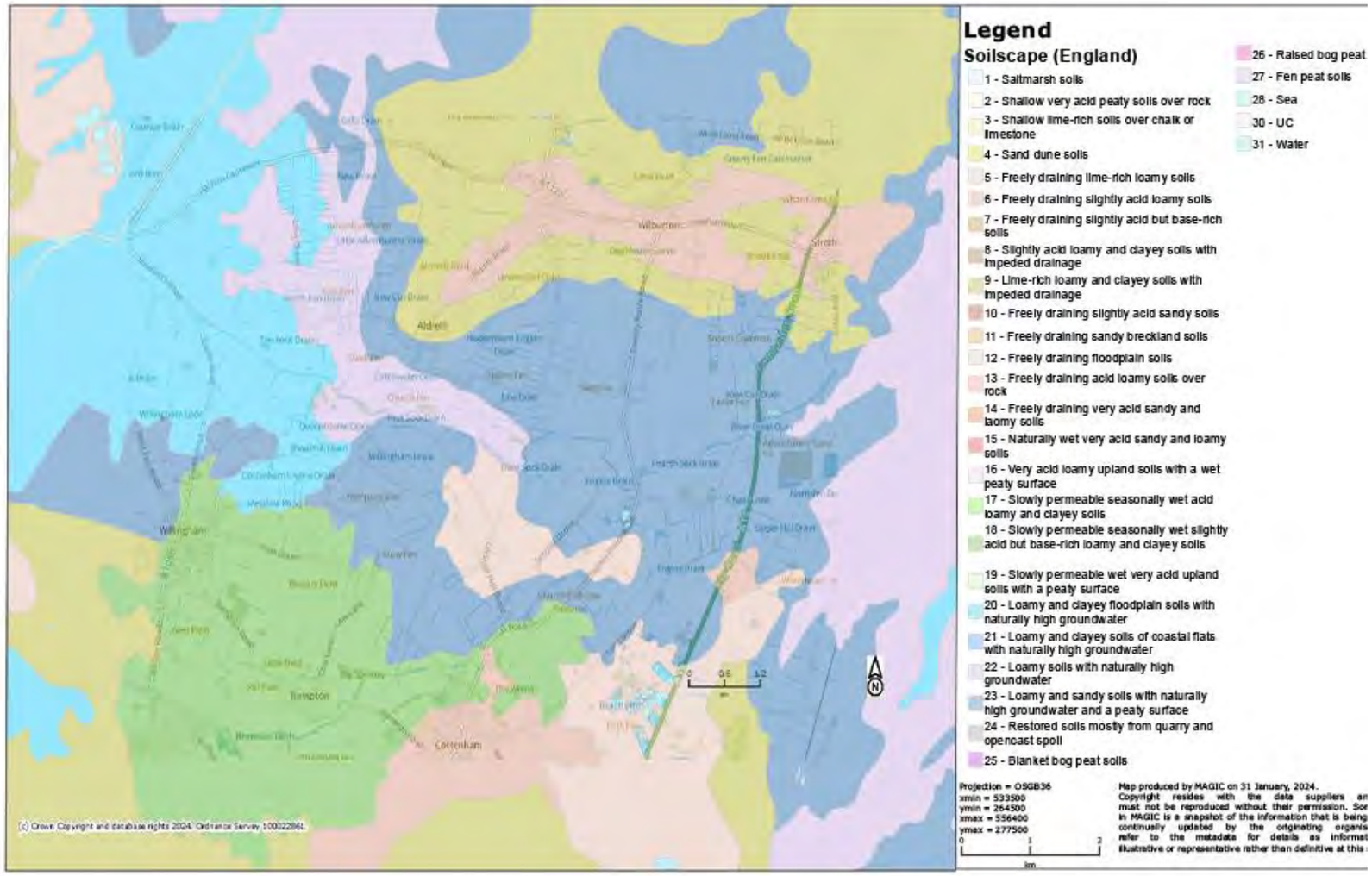


Figure 6.2.1 – Soilscape of study area

6.3 – Road, River, and Rail Crossings

The biggest barrier between Wilburton and Cottenham is the River Great Ouse. The distance between the embankments on either side of the river would require a large span, with associated engineering difficulties and costs.

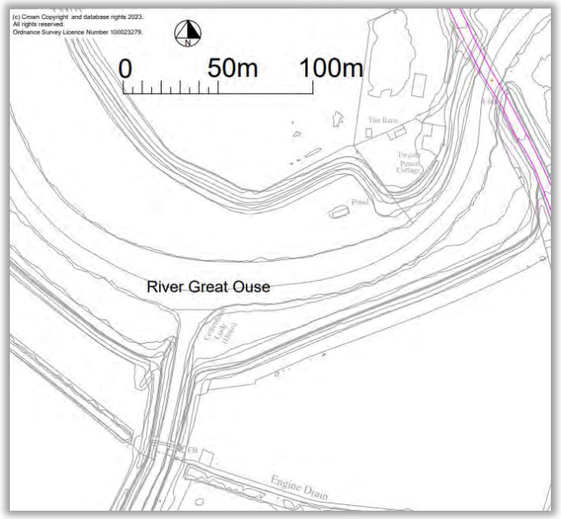


Figure 6.4 – Map with dense contours showing the flood banks. It is assumed that a bridge would have to span between the bank tops.

Certain routes involving Stretham would also require a new crossing of the A10. The speed of the road and traffic volume makes any sort of at-grade crossing unlikely, leaving a bridge or underpass as the most viable solution. A point has been identified to pass under the A10 alongside the river which will be further examined in Option E of the route appraisal.

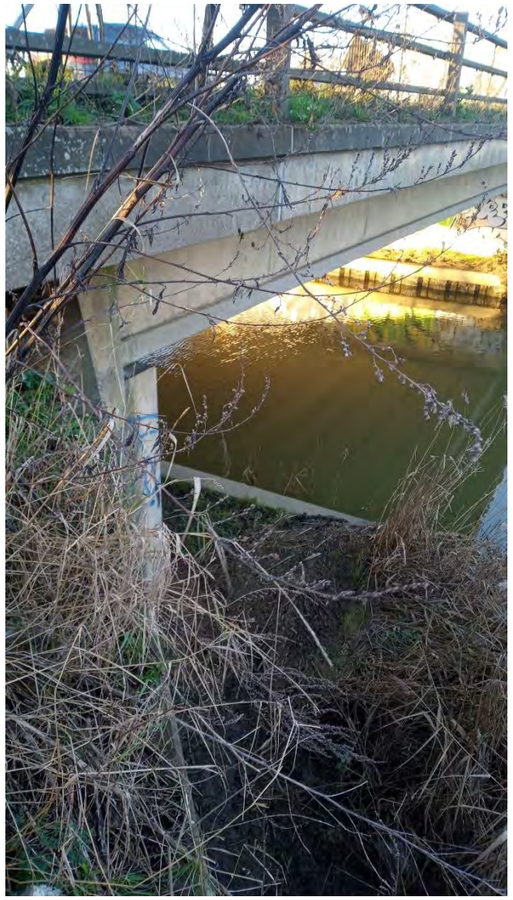


Figure 6.5 – Possible underpass of A10 south of Stretham

6.4 Ecology

Ecology is an important issue with any project, especially since the introduction of Biodiversity Net Gain (BNG) which has developers mitigate any environmental harm caused by works. Surfaced paths are no exception to this. Ecology is covered in detail in a dedicated chapter, but a standout feature to be noted here is the priority habitat lining the rivers. This would increase the already expensive costs of a new bridge crossing the Great Ouse, which may push future decisions towards a roadspace re-alignment option on the Twenty Pence Road bridge.

6.5 – Utilities

A cursory utility search has not revealed any major issues as far as Cadent, or the UK Power Network are concerned. As could be expected, gas pipes pass under many roads in both Wilburton and Cottenham, including Twenty Pence Road in Cottenham. Short of major road space reconfiguration, this should not be an issue. No mains have been identified in areas where new path construction could take place, such as on the various existing public footpaths, but further utility checks are recommended.

6.6 – Historic Environment

Figure 6.6 shows the extent of heritage assets in the area. It can be seen that the entire area of study south of the river is in a Conservation Area, as well as Haddenham, Wilburton, and Stretham centres. There are also various scheduled monuments which would affect options B and E. Historic England will need to be engaged as design work progresses.

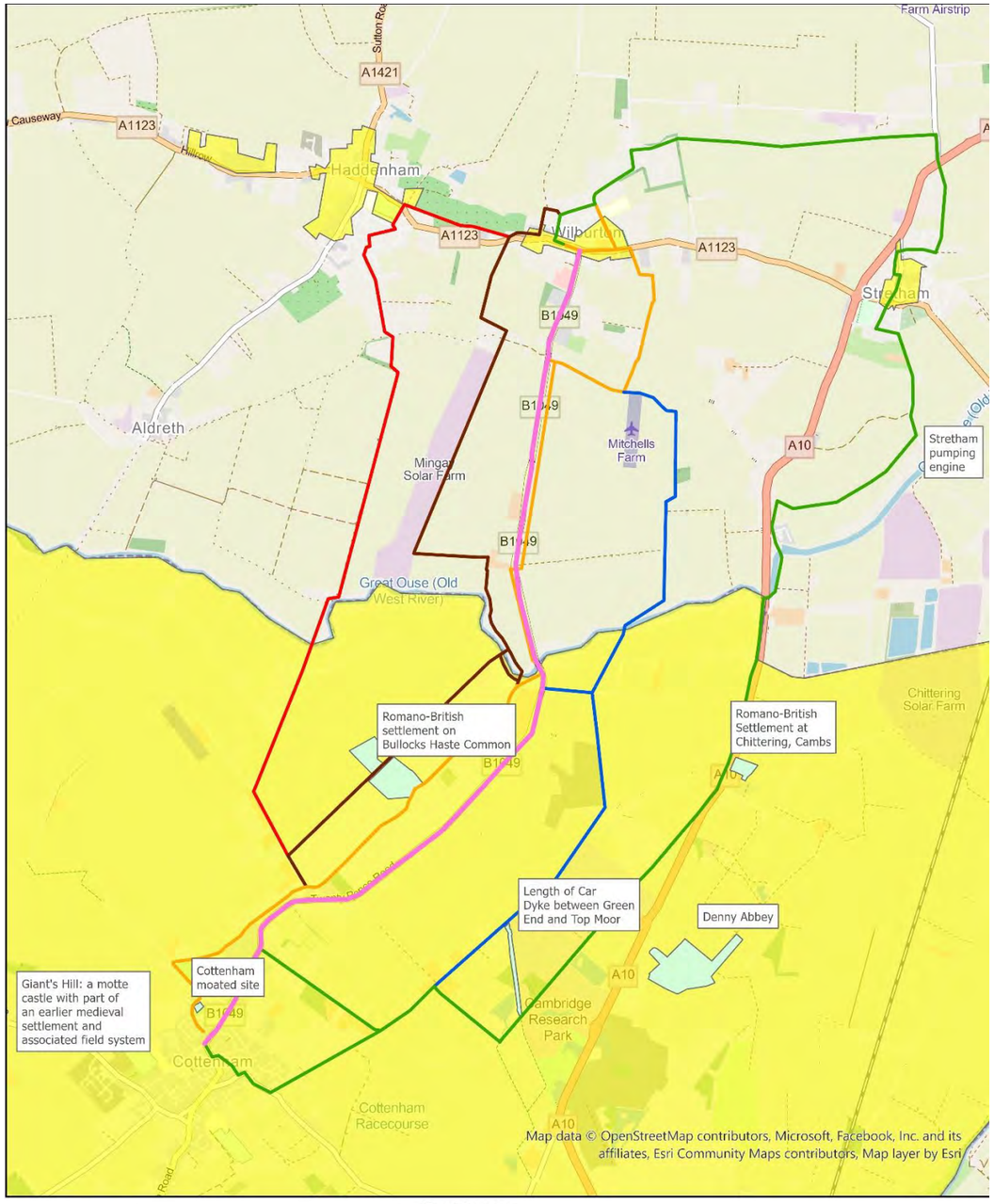


Figure 6.6.1 – Local heritage assets

7. Route Options Appraisal

Any route between Wilburton and Cottenham needs to be useful for as many residents of the villages, as possible and should ideally be as direct as possible and serve as many intermediate points as possible.

The conflict between directness and intermediate destinations is apparent in the range of options, especially given that LTN 1/20 Figure 1.1 says "*Cycle routes should be at least as direct – and preferably more direct – than those available for private motor vehicles*." If this study were to simply consider trips starting and finishing in Wilburton and Cottenham the choice would simply be between Options B, C and D, but the study has taken account of other factors including nearby destinations and possible future developments, which make choices more complicated, but which may offer better value for money.

For routes between the villages to work well there needs to be a good cycling and walking network within Wilburton and Cottenham, but this is not easy, particularly in Wilburton, where a lack of space and heavy traffic along the A1123 make it hard to see how an LTN 1/20 compliant route can be achieved along the main road through Wilburton. For Cottenham the obvious main route the High Street is also challenging, and the report considers ways to improve this or avoid it.

For the purposes of the study and in order to compare distances it is normal to select one location in each settlement and measure distances from that point. For the purposes of this study the locations have been taken as a point on the High Street in Cottenham that is relatively central and a junction in Wilburton that has already been identified in the Haddenham to A142 study as a key junction point for links within Wilburton and links

Figure 7.1 Map showing locations used for Route Appraisal and other significant destinations.

with Haddenham and Witchford. The two locations are shown in white boxes on Figure 7.1 linked by a straight-line route. The straight-line distance is almost exactly 5 miles and the shortest distance by road is another 14% further. It has already been noted that the distance between Wilburton and Cottenham is at the limits of what is considered normal cycling range so any additional distance could be a deterrent to usage.

Within Cottenham the obvious destination not served by the chosen start/ finish point on the High Street is Cottenham Village College, but the High Street itself and onward links with the Cambridge Greenway are also important. Within Wilburton the Garden Centre is a significant destination. Other destinations in the area that have been considered are highlighted in yellow boxes in Figure 1 and include:

- Haddenham
- Stretham
- Waterbeach New Town West development.
- Cambridge Research Park
- The Waste Management Site
- Various sites off the A10 near Stretham Ferry Marina
- Various sites near Stretham Old Engine

It is beyond the scope of this study to include detailed investigation of links to all the potential destinations, but they do need to be considered and as other links develop it will be essential that networks join up in a direct, safe, coherent, attractive and comfortable manner.

The options considered are shown in Figure 7.2 and are discussed in detail in this chapter. In summary the options are:

- **Option A** takes the route via Haddenham. This is not an obvious alignment, because there are no current direct links between the communities but the road layout on either side of the River Great Ouse suggests that there was a historic route between the two, possibly with a ferry crossing of the river. From a map it appears that if there were a new bridge over the River Great Ouse it would be relatively simple to create a new route between Haddenham and Cottenham, which could then be linked with Wilburton. There are however many difficulties with this option.

- **Option B** uses existing rights of way and an obvious field edge alignment along the edge of a solar farm. This again requires a new bridge over the River Great Ouse. Making a good route into Wilburton is challenging, because of the nature of the A1123.

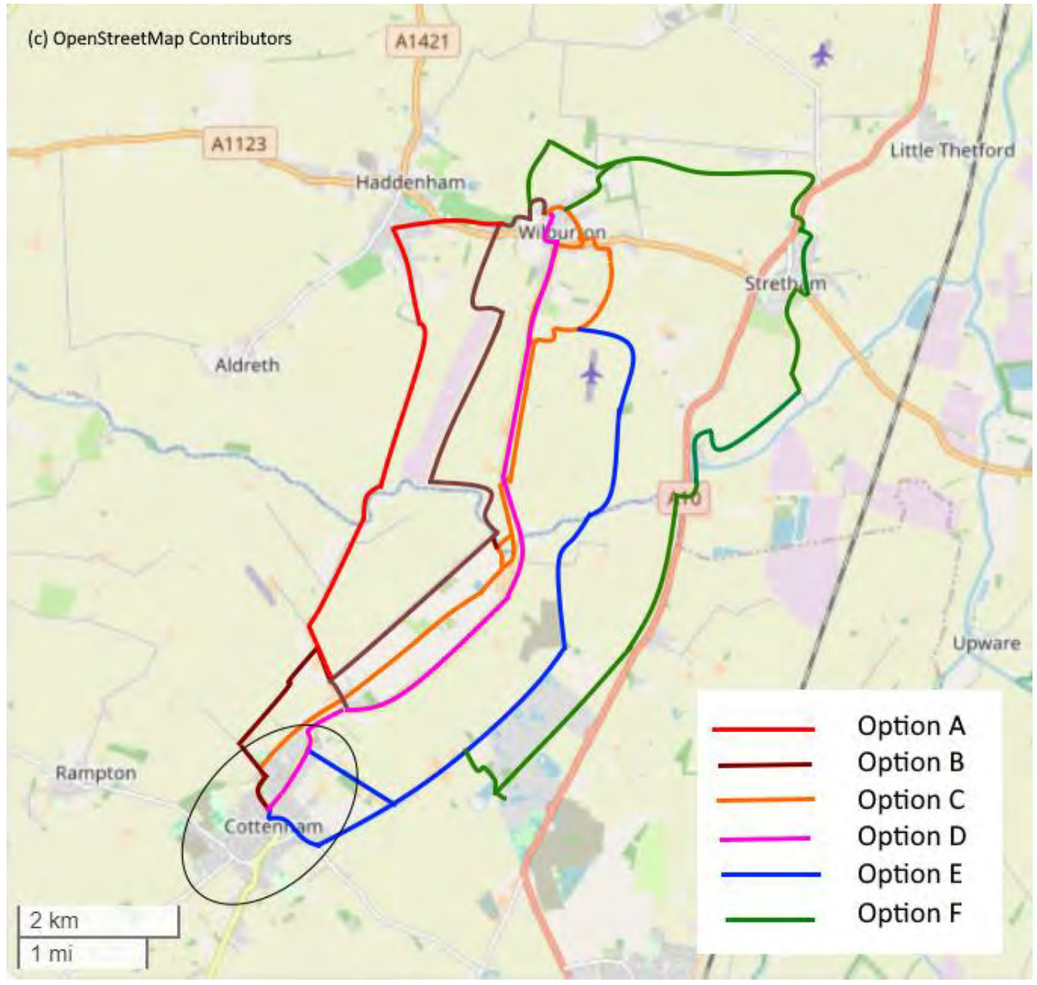
- **Option C** closely follows the existing road between Wilburton and Cottenham, (the B1049). There is not sufficient highway verge for a highway verge route so private land will be needed to allow a new path to be built. The Option considers two ways to cross the River Great Ouse – either a new bridge or changes to the traffic flows over the existing road bridge to allow for walking and wheeling. For the approach to/ exit from Wilburton the option proposes a new route that enters/ exits Wilburton via rights of way on the eastern side of Wilburton.

- **Option D** uses the existing B1049 and assumes that the road will be closed to through traffic, as it was in winter 2023/24 for a lengthy period. This simple measure would establish a good route and would allow access to all properties along the road. It has been shown to work, even during a period when there were other roadworks and road closures in the area. The route enters/exits Wilburton past the Garden Centre and requires some works along a short stretch of the A1123 to make a suitable connection with Wilburton.

- **Option E** uses an existing minor road and a field edge alignment to link up with the same right of way entry to Wilburton as for Option C. The route has not been surveyed over the whole length because it is private land but can be seen from Google Earth and part of the alignment is designated for potential mineral extraction, which may provide opportunities. This again requires a new bridge over the River Great Ouse.

- **Option F** is a very indirect alignment that would not serve well as a route between Wilburton and Cottenham, but it picks up a number of potentially useful short trips that have no provision at present including:

    - Cottenham to Cambridge Research Park (Waterbeach).
    - Cambridge Research Park to Stretham Ferry Marina area.
    - Stretham Ferry Marina to Stretham,
    - Stretham to Grunty Fen Road.
    - Grunty Fen Road to Wilburton.



The route uses field edge paths, routes besides major roads, an existing bridge over the River Great Ouse and two new crossings of the A10, so has merits for local trips that are worth considering. It enter/exits Wilburton from the north.

Figure 7.2 Route Options considered in study

Option A

This option takes the route via Haddenham. This is not an obvious alignment, because there are no current direct links between the communities but the road layout on either side of the River Great Ouse suggests that there was a historic route between the two, possibly with a ferry crossing of the river. From a map it appears that if there were a new bridge over the River Great Ouse it would be relatively simple to create a new route between Haddenham and Cottenham, which could then be linked with Wilburton. There are however many difficulties with this option.

The route is considered in detail in the following pages and is described in sections as in Figure 7A.1.

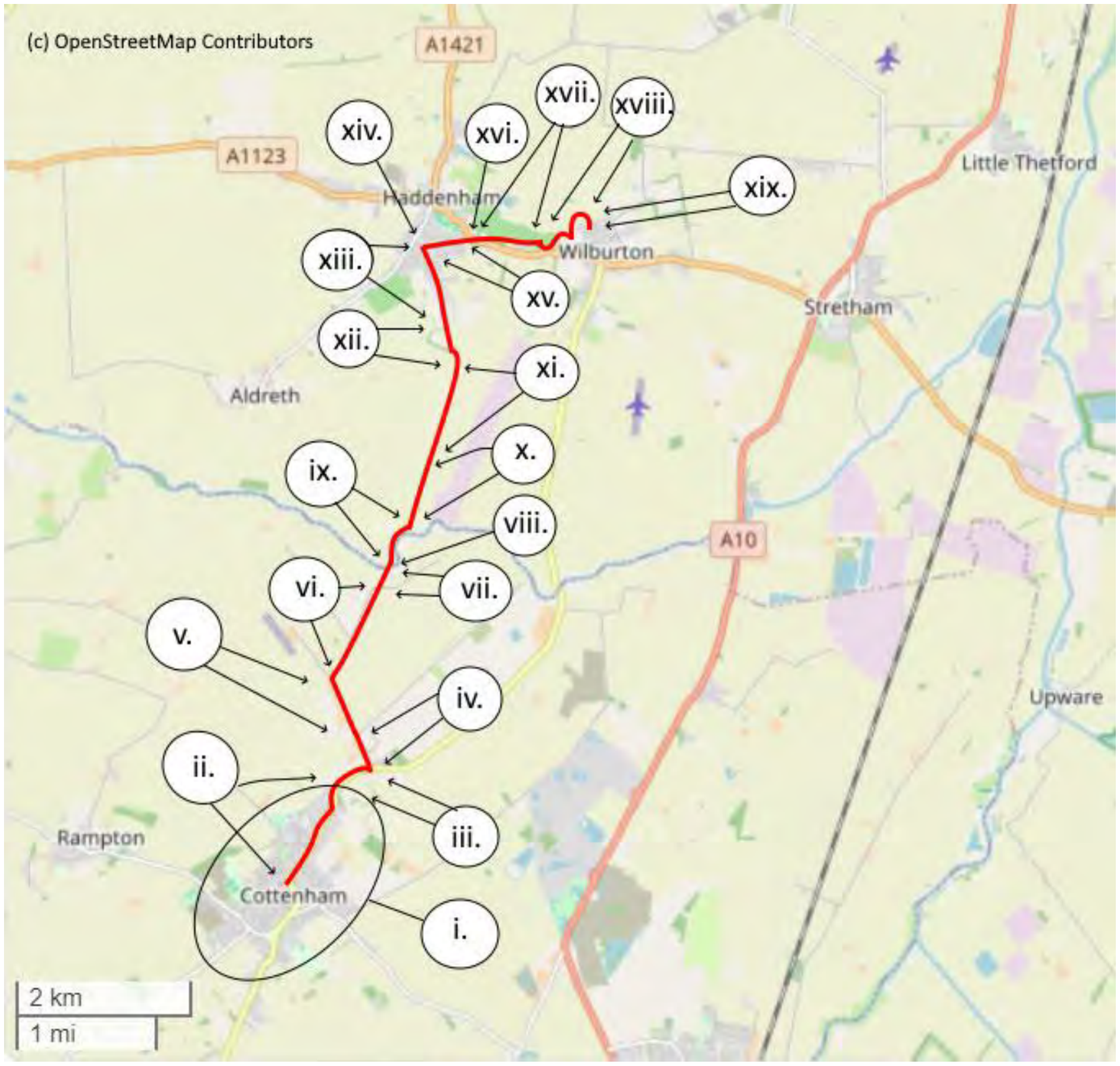


Figure 7A.1 Option A showing sections considered.

i.

Traffic in Cottenham is dominated by the B1049, which goes along the High Street. A manual count in 2019 recorded 7647 motor vehicles passing along the High Street with 190 pedal cycles and 147 Heavy Goods Vehicles. Given the traffic volume LTN 1/20 points out that, without some form of segregation from traffic for cyclists, the High Street will only be suitable for a few and not suitable for all, unless there is a significant reduction in traffic as proposed on Option C and as happened in winter 2023/24.

Most other roads in Cottenham carry lower volumes of traffic and would be suitable for cyclists to mix with traffic in a 20 mph limit, although Broad Lane is a concern, because it includes a small industrial estate and a relatively high proportion of heavy goods vehicles and light goods vehicles.

It is beyond the scope of this study to come up with a detailed design for Cottenham High Street if there is no reduction in traffic. The High Street is wider than other locations studied, such as Burwell, but it is hard to see how any segregated route can be provided without removing car parking places. It will also be important to look at junctions and crossings at slow speeds. Cottenham Village College and Cottenham Primary School are at the southern end of the village, and it might be possible to provide segregated cycleways in that area, simply by introducing a one-way system and allocating one-lane as a cycleway segregated by kerbs from the traffic. There are pros and cons to this and there will need to be a lot of community engagement to agree the best solution for Cottenham. Trials are an option, and it is interesting that during the time of this study there was a period when conditions on the High Street were greatly improved due to a road closure and there were also periods where carriageway space was reduced during roadworks. It certainly appeared that Cottenham continued to function during these changes and there will certainly have been some benefits.

The Cottenham Greenway is expected to enter Cottenham along the Oakington Road corridor and a good link with that will be essential, whatever the final alignment is. This looks challenging due to limited space at the Cottenham end of Oakington Road.

A link with Tenison Road looks achievable if the roadspace is reallocated and an existing link path is used.

Cottenham Village College already has some facilities that will need linking with the new provision.

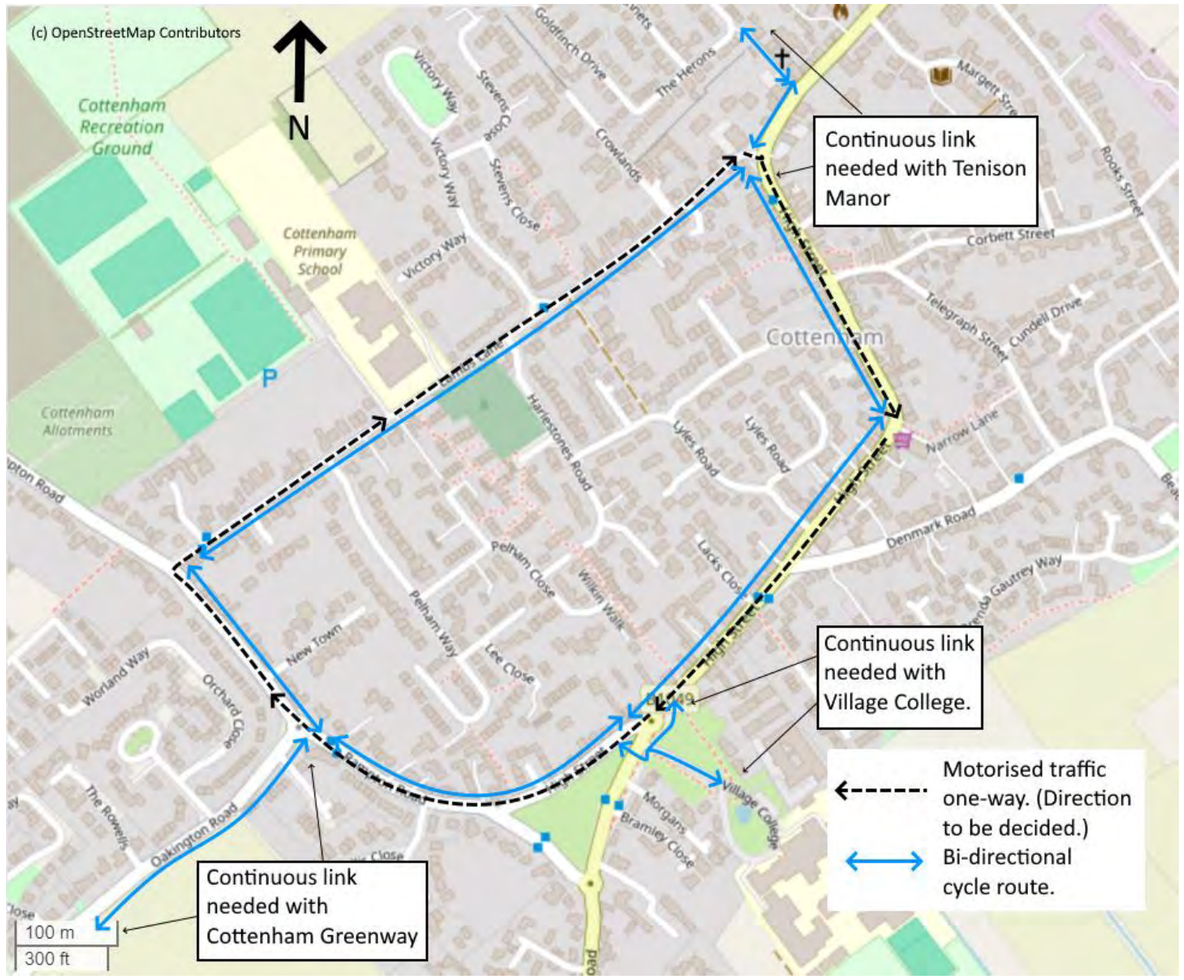


Figure 7A1.1 Possible one-way arrangement in Cottenham. This would need to be considered as part of community engagement regarding access across the whole Village.

Figure 7A1.2. Road closure on Lambs Lane during time of survey, showing that changes are possible.

Figure 7A1.3 View north along High Street. Space is variable and most restricted near the Coop.

Figure 7A1.4 High Street/ B1049 junction near the Village College.

ii.

As mentioned previously it is beyond the scope of this study to come up with a detailed design for Cottenham High Street if there is no reduction in traffic. Over this length the High Street is wide, in places with roadspace allocated to parking, in other places there is a wide verge, but elsewhere it is narrow with little potential to reallocate roadspace unless traffic is changed. A detailed study and community engagement will be needed if it is required to get a route on this busy road without traffic changes. It may be possible to use a combination of parking changes, construction of paths in verges and lengths of single way alternate working for traffic, but this needs more work. It will also be important to look at junctions and crossings at slow speeds for a 20 mph route.

Figure 7A2.1 In places the High Street is wide and there should be space for a segregated cycleway or cycleways and maintaining existing traffic flow.

Figure 7A2.2 In places the High Street is narrow and it is hard to see how there could be space for a segregated cycleway or cycleways and maintaining existing traffic flow.

iii.

At the village edge the current speed limit changes from 30 mph to 40 mph and the road becomes more rural. There is a give-way arrangement and other measures to try to reduce speeds. There is a verge, and, in this area, a shared use path may be an acceptable solution. Detailed design is needed, particularly if any shared use path introduces a new road crossing requirement.

Figure 7A3.1 This part of the B1049 has a different nature to the High Street. Traffic reduction or a shared path are options that need further consideration.

Figure 7A3.2 The route turns into Smithy Lane. Any shared use option will need to consider this carefully.

iv.

Smithy Lane is a relatively quiet road, but it is damaged at the edges and needs some repairs. For the route to be appropriate it should be designated as a 20 mph road.

Figure 7A4.1 Smithy Lane view towards 7A3.2 and Cottenham, showing surface issues on Smithy Lane and difficulties at the junction that need addressing.

Figure 7A4.1 Smithy Lane crosses Cottenham Lode on a narrow bridge.

v.

Lockspit Hall Drove is an adopted road that leads from Cottenham to a number of farms. On the face of it, it would make an ideal cycle route, given the low traffic volumes, but the road is one of many concrete roads in the area that are in poor condition. The concrete slabs have moved, and the surface is uneven making for uncomfortable riding. If it were to be used the road would need resurfacing to a high standard that would make it smooth for cycling and strong enough for the occasional heavy farm traffic. White Fen Drove near Lode was in a similar condition and now forms part of the National Cycle Network after the concrete was broken up and a new road surface was added, so use of Lockspit Hall Drove would involve major works.

Figure 7A5.1 Lockspit Hall Drove with the gaps between concrete sections visible.

vi.

Lockspit Hall Drove continues towards the River Great Ouse on an alignment that suggests it might have been a historical route to and from Haddenham. The surface appears to get even worse over this stretch, but the route has not been ridden over its full length and would need a detailed survey if it were to be used.

Figure 7A6.1 Lockspit Hall Drove – a full survey would be needed to determine the extent of works needed to provide a smooth, durable surface.

vii.

As it approaches the River Great Ouse Lockspit Hall Drove finishes and continues as Little Setchel Drove on a different alignment parallel with the river. An unsurfaced track continues to the River Great Ouse and although it might be expected that this would be a byway on historic alignment it is not recorded as such. The track is therefore private access and has not been surveyed.

viii.

For the route to continue it would need to cross the River Great Ouse – crossing from one flood bank to another. The site has been visited from the north side but would need a detailed survey to determine the best crossing point, which minimised the distance of any required bridge and fitted in with local farming and other activities and complied with Environment Agency requirements. A simple estimate from Google Earth suggests a bridge span of some 50m would be needed. Access for construction would be a major issue in such a remote location. The bridge would need to be 4m width minimum and if it is to accommodate equestrian usage would require 1.8m parapets or otherwise 1.4m parapets.

Figure 7A8.1 A new bridge would be needed in this area spanning between the floodbanks and across the river.

ix.

There is a public footpath that runs along the flood bank on both sides, but any route would need to be on private land beyond the foodbank, keeping as far as required to minimise the Biodiversity Net Gain requirements. This will need the landowner's agreement to construct a 3m sealed surface and it may need to be fenced from the remaining farmland. Additional land would be required if there is to be equestrian use. This has not been surveyed as it is private but can be seen from the public footpath and Google Earth.

x.

An existing track and byway heads from the river towards Haddenham. This requires surfacing to 3m and will need to accommodate farm traffic walkers, cyclists and horse riders. In summer the track was passable, but in winter it was very wet and constructing a year-round path would be very challenging.

Figure 7A10.1 The track/ byway that needs surfacing. Seen here in summer.

xi.

The track links to Hoghill Drove, a concrete adopted road that serves farms and links with Haddenham and Aldreth. The route to Aldreth has not been surveyed, but the route to Haddenham has been ridden in summer and was attempted in winter. The road is in very poor condition and was very uncomfortable to ride in winter and could not be ridden in winter when it was covered in standing water and mud, which was very difficult combined with large potholes and cracks. It is an adopted road so if it were to be used it could be rebuilt. It would need to be built higher to minimised flooding and would need to accommodate all the farming activities.

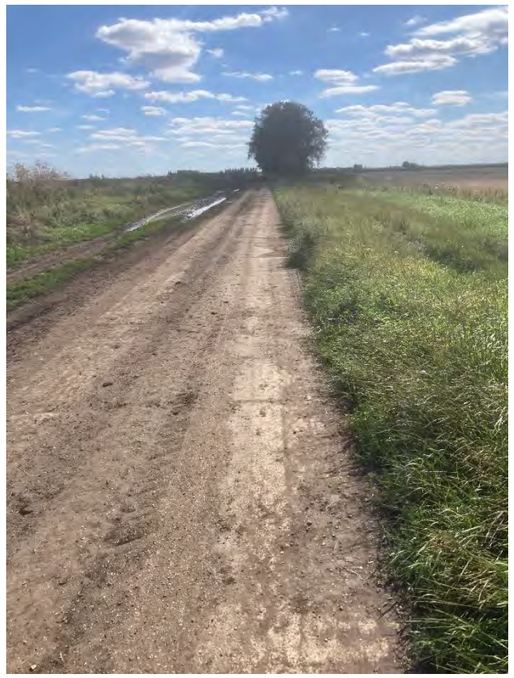


Figure 7A11.1 Hoghill Drove in summer.

Figure 7A11.2 Hoghill Drove in winter.

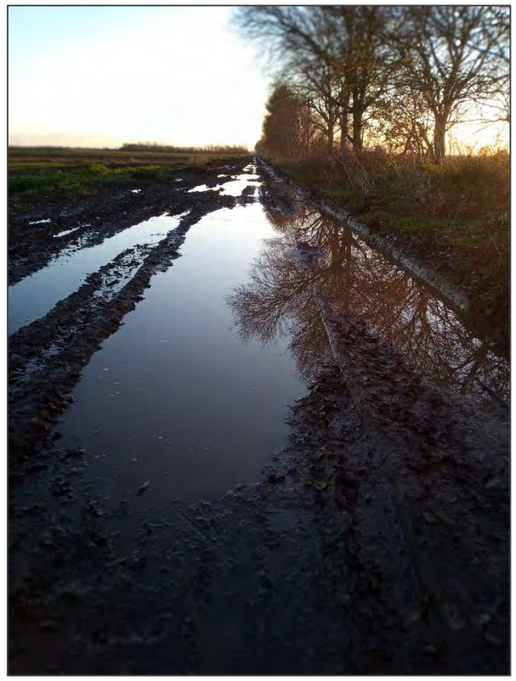


Figure 7A11.3 Hoghill Drove in winter.

xii.

As it approaches Haddenham, and farm buildings Hoghill Drove is in better condition and does not show signs of flooding in winter. Nevertheless, it is a bumpy concrete road that will require significant work and detailed survey.

Figure 7A12.1 Hoghill Drove in winter, near to Haddenham.

xiii.

Within Haddenham Hoghill Drove becomes Lode Way and then Froize End – a residential road with a reasonable surface. Froize End has a 20 mph limit and it is recommended that this is extended over the whole length of Lode Way and Hoghill Drove.

Figure 7A13.1 Lode Way.

xiv.

Froize End meets Duck Lane at a big wide junction, and it is recommended that this is redesigned to reduce speeds and facilitate crossing, particularly on foot.

Figure 7A14.1 Froize End/ Duck Lane junction, which needs amending.

xv.

Haddenham has already been considered in the Haddenham to A142 study. Since than a 20 mph zone has been introduced in part of Haddenham, which should benefit walking and cycling. This report repeats some of the text and images used in the Haddenham to A142 Feasibility Study.

An on-road route mixed with traffic is needed along Linden End, Duck Lane and part of the Rampart which should all be 20mph. Traffic levels will need monitoring to determine if an LTN 1/20 compliant route is possible. From The Rampart a route on the edge of the Recreation Ground can link with another new path along the edge of the Recreation Ground and with a new safe crossing of New Road. A new parallel crossing is proposed (see xvi.). An agreement will be needed to construct new paths in the Recreation Ground and to move some sports equipment. (See plan on following page with photo following).

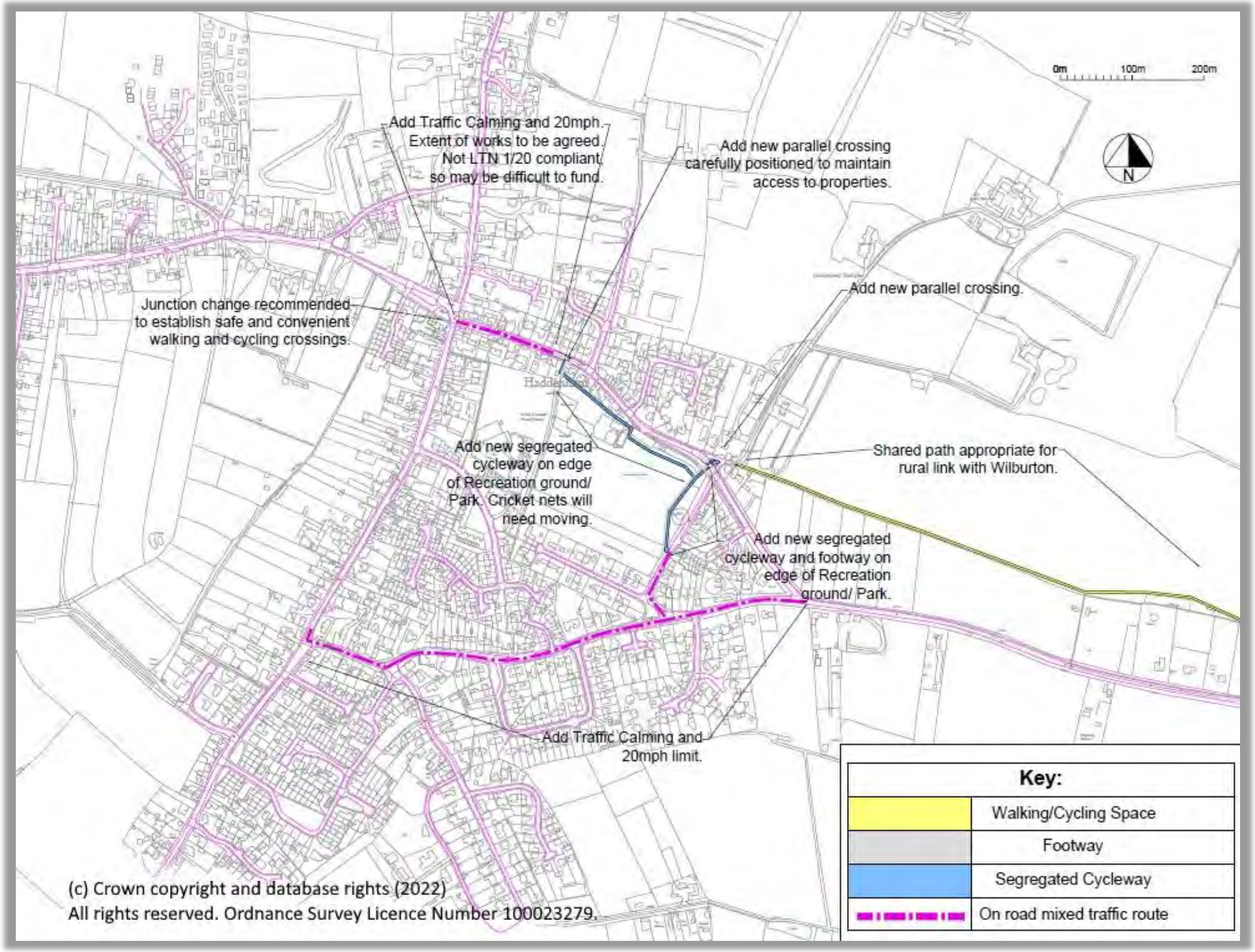


Figure 7A15.1 Haddenham route suggestions from Haddenham to A 142 report. Froize End and Lode Way link logically to this if the Duck End junction is amended as in xiv.

Figure 7A.15.2 Linden Road has some natural traffic calming due to bends but would benefit from additional measures and a 20mph limit.

Figure 7A.15.3 Duck Lane has some physical calming measures, but a review is recommended to compliment a 20mph limit.

xvi.

A new crossing is needed of New Road to link with the Recreation Ground paths as outlined in xv. Detailed design and surveys are needed.

Figure 7A.16.1 A new safe, convenient crossing is needed of New Road here together with new paths within the Recreation Ground.

Figure 7A.16.2 – a new parallel crossing here would link the grass island on the right and the grass verge and Recreation Ground on the left.

xvii.

A public footpath between Haddenham and Wilburton runs along field edges close to but set back from the busy A1123. This would make a very good route but needs surfacing to give at least a 3m sealed shared path and would need landowners' agreement.

Figure 7A.17.1 View from Hinton Hall Lane along the line of the public footpath. Any future development must incorporate the route.

Figure 7A.17.2 View towards Wilburton along existing field edge path, which would need widening.

Figure 7A.17.3 View towards Haddenham along existing field edge path, which would need widening.

xviii.

The A1123 is unsuitable for use by all but the most confident cyclist due to the volume, speed and nature of traffic. At the time of visits there were a lot of HGVs on the road. There is a public footpath between the two settlements and at the Haddenham end a good link should be possible. This must be accommodated within any new development in the area. For most of the way between the settlements there is scope for a new field edge path, which will need to be agreed with landowners, but at the Wilburton end the path ends on the A1123 and a new field edge link is needed as indicated, which needs to join up with Hinton Way. This will need the landowners' agreement and is vital for the success of this route. The potential alignment is shown in Figure 7A. 18.1 adjacent.

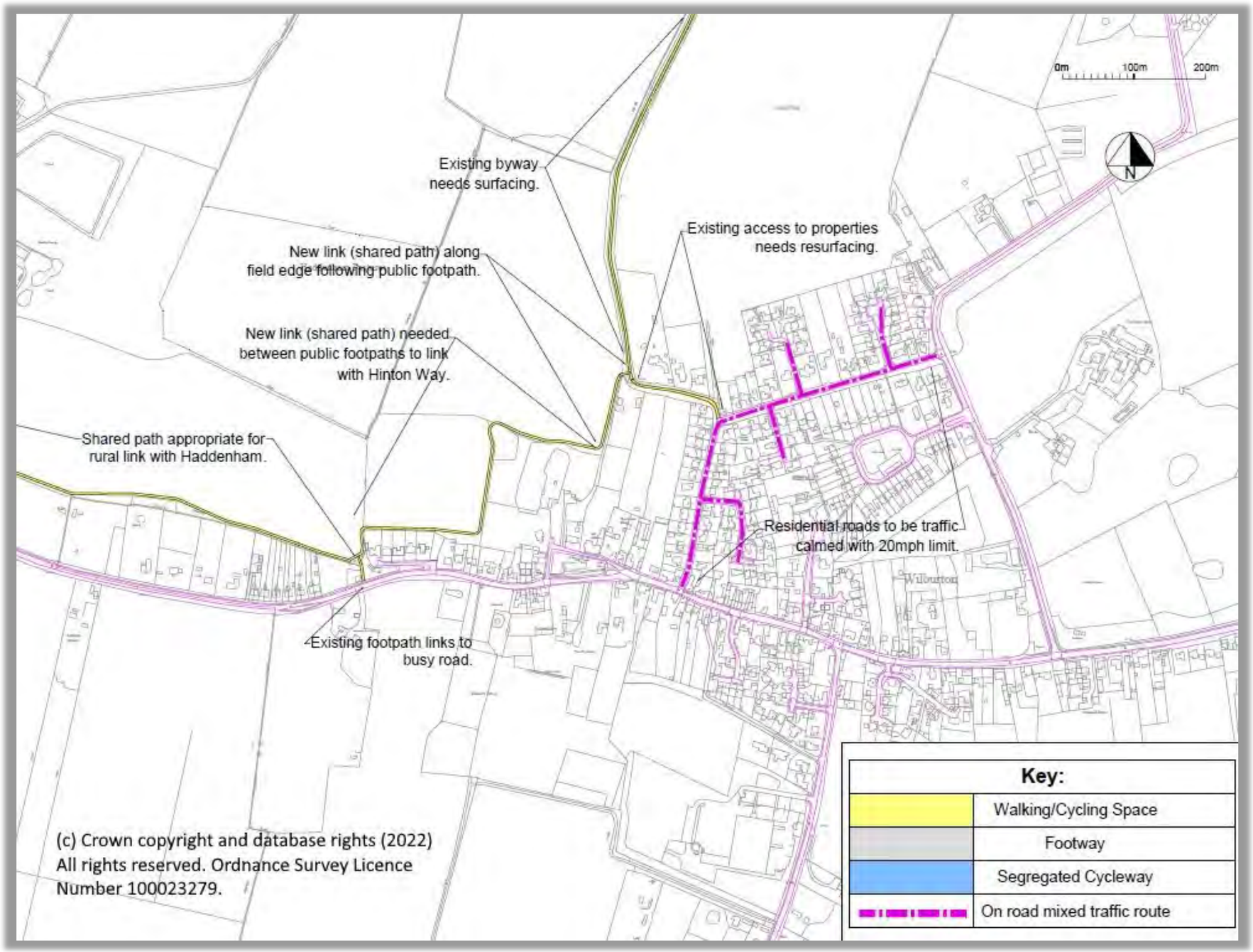


Figure 7A.18.1 showing potential route for Option A in and around Wilburton with the onward link north towards Witchford along a byway.

Figure 7A.18.2 A new field edge path will need to be agreed with landowners to link the Haddenham public footpath with Hinton Way.

Figure 7A.18.3 A new field edge path will need to be agreed with landowners to link the Haddenham public footpath with Hinton Way.

Figure 7A.18.4 A new field edge path will need to be agreed with landowners to link the Haddenham public footpath with Hinton Way. View from Hinton Way of existing Church Lane footpath.

xix.

The route can join Hinton Way – a partially surfaced byway. It needs resurfacing to the junction with Clarke's Lane where users can connect with the road network in Wilburton, away from the busy A1123. It is recommended that all roads are designated as 20 mph.

Figure 7A.19.1 Hinton Way, Wilburton needs resurfacing.

Option A **Summary**	
Comparative Length	Shortest distance by road Wilburton - Cottenham = 9.1km, Distance using this option Wilburton - Cottenham = 10.4km Shortest distance by road Haddenham - Cottenham = 12.8km, Distance using this option Haddenham - Cottenham = 8km
Likely estimated cost	Works in Cottenham 1.5km works along High Street and B1049 north, Road, track and byway resurfacing = 4.7km. Bridge over river 4m wide x 50 m span + 80m earthwork ramps 4 Junction changes Haddenham, 8 road humps Haddenham 1 parallel crossing Haddenham. Path and field edge surfacing = 1.6km Byway surfacing Wilburton= 180m Works in Wilburton
Engineering difficulties	Resurfacing damaged concrete roads will be a major challenge due to ground conditions and heavy usage. Constructing major bridge in remote location will be challenging.
Ecological issues	River crossing sensitive.
Land ownership issues	Whilst a large part of the route is highway or byway there is a section of private land north of the river and parcels of private land between Haddenham and Wilburton that are needed for the route, so some challenges.
Other issues	If the route is not built at a higher level than the existing one it will be prone to flooding, but this will need Environment Agency consent, which is not guaranteed.
Overall	This works well as a route between Haddenham and Cottenham but is less direct than the road route for a Wilburton – Cottenham route. The Haddenham – Wilburton route is needed irrespective of the onward route to Cottenham. Overall though the route appears to be very difficult due to the nature of the existing roads and the very difficult winter conditions, so this is not recommended.

Option B

This option B uses Broad Fen/ Great Fen Drove and Setchel Drove, from Cottenham, with a new link between them. These are quiet roads but still need major works. The route then follows an obvious field edge alignment along the edge of a solar farm. This again requires a new bridge and links over the River Great Ouse. Making a good route into Wilburton is challenging, because of the nature of the A1123.The route is considered in detail in the following pages and is described in sections as in Figure 7B.1.

1.

See Option A.

Figure 7B.1 View from Haddenham towards Cottenham with the solar panels at x. just visible.

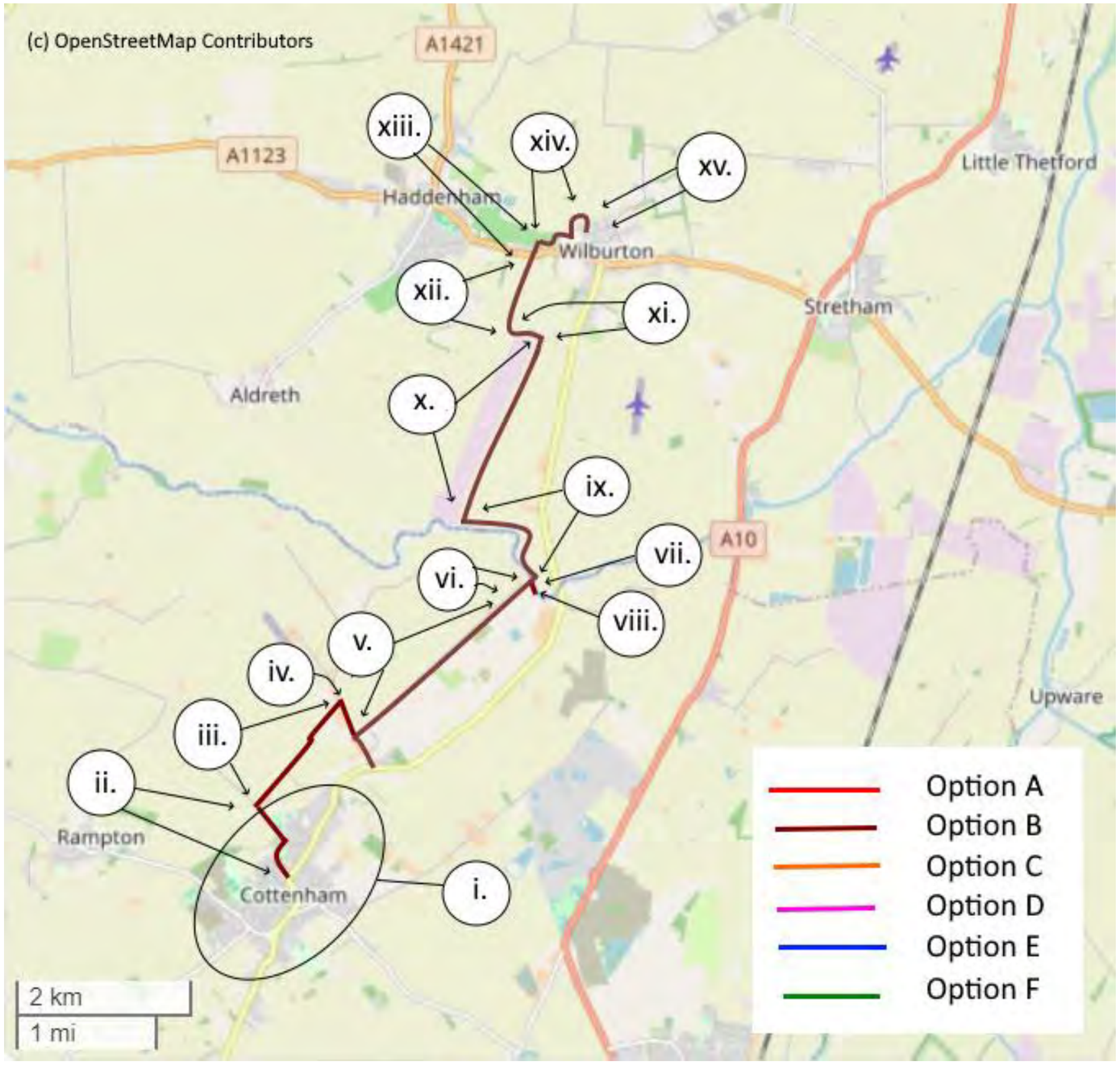


Figure 7B.2 Option B

ii.

Tenison Manor and Broad Lane are quiet roads that lead to the countryside. Tenison Manor is residential with a link to the High Street that is closed to motorised traffic, so this makes Tenison Manor a relatively quiet road. Broad Lane has some small industrial units on it and then is rural in nature and becomes Great North Fen Drove. There is possibility of HGV usage, but numbers are expected to be low. Any further development would be a concern though. A 20 mph limit is recommended over the whole route.

Figure 7B2.1 Existing good link between Tenison Manor and the High Street.

Figure 7B2.2 Existing good link seen from Tenison Manor looking towards the High Street.

Figure 7B2.3 Tension Manor is already traffic calmed and needs few changes.

Figure 7B2.4. Broad Lane would benefit from speed reduction measures.

Figure 7B2.5. Broad Lane crosses Cottenham Lode and becomes Great North Fen Drove.

iii.

It appears to be possible to follow field edges and drains between Great North Fen Drove and Lockspit Hall Drove passing close to Bassedholly Farm. The route would be on private land and has not been surveyed but appears possible from Google Earth and Ordnance Survey maps. Any route would need to be agreed with landowners and would need to be set away from watercourses and fenced from retained farmland as required.

iv.

Lockspit Hall Drove is a quiet road that leads to Twenty Pence Road and Setchel Drove. It is a concrete road that is uncomfortable to ride in places. It will need detailed surveys, but it has to be assumed that it will need major rebuilding to create a suitable smooth surface.

Figure 7B4.1 Lockspit Hall Drove at Setchel Drove junction showing the poor surface.

v.

Setchel Drove is a public road in poor condition that serves agricultural properties near the River Great Ouse. It is in need of resurfacing, and this will need detailed design. As has been suggested in Option A a possible solution would be to break up the existing concrete road and use that as a base for a new sealed surface. A 20 mph limit is recommended.

Figure 7B5.1 Setchel Drove view towards Cottenham.

Figure 7B5.2 Setchel Drove view towards Cottenham.

vi.

Setchel Drove finishes at some farm buildings near the River Great Ouse and there is no right of way through to the River Great Ouse. The farm buildings do not appear to be being used and it is possible that they will be redeveloped or repaired, so identifying a route through to the river is not easy, but there appear to be a number of options to create a link with the River Great Ouse Flood bank. Any route will need to be agreed with landowners and will need to tie in with plans for the lane.

Figure 7B6.1 View from River Great Ouse floodbank towards farm buildings, Setchel Drove and towards Cottenham.

vii.

To continue towards Wilburton the route would need to cross the River Great Ouse. Any bridge would need to span across the flood banks, and these are a long way apart, in this area, so a bridge would need to span approximately 90m. A 4m minimum bridge would be needed with earthwork ramps leading to the start of the bridge at flood bank level. If equestrians are to be accommodated the bridge would need 1.8m parapets and consideration will need to be given as to whether 4m is adequate. This is a remote location to construct such a bi structure. Topographical surveys and detailed structural design would be needed to progress this.

Figure 7B7.1 View from River Great Ouse floodbank towards the river and the opposite floodbank showing the wide span.

viii.

The location at vii is the obvious location to cross the river based on a route using Setchel Drove. A route following Cottenham Lode (as in Option C) could cross the river nearby, so in many ways the routes on either side of the river are interchangeable. All that would be needed would be a link path as indicated here. This has not been surveyed but would need to be on a field edge away from the floodbank. Any route should be set at least 10m from the floodbank and may need fencing. The route would of course need to be agreed with landowners.

It would therefore be possible to use the alignment shown for Option B between Cottenham and the River Great Ouse and the alignment shown for Option C between the River Great Ouse and Wilburton or vice-versa.

Figure 7B8.1 View from River Great Ouse potential crossing point for Option C towards the potential crossing point for Option B. Any path would need to be in fields to the right and be designed to minimise flooding.

ix.

This section has not been surveyed but would need to be on a field edge away from the floodbank. Any route should be set at least 10m from the floodbank and may need fencing. The route would of course need to be agreed with landowners. The route appears possible from Google Earth and Ordnance Survey mapping. The route may also be prone to flooding (see Figure 7B8.1) and the design will need to minimise the risk of flooding.

x.

The obvious alignment for the route would be to follow the edge of a large solar farm. This is private and has not been surveyed and the route would of course need to be agreed with landowners. The route appears possible from Google Earth and Ordnance Survey mapping. There is currently no access to the land which can be seen from the north (as in the photo below). Security may be a significant issue and fencing may be required.

Figure 7B10.1 View from public right of way River Great Ouse floodbank towards the solar farm and the river.

xi.

A public byway runs to the north of the solar farm and a route could use this. The byway would need surfacing to 3m with a smooth, durable, sealed surface and would need to accommodate all users, including farm traffic and equestrians. The byway is not wide so a separate equestrian path would be difficult.

Figure 7B11.1 View of public byway. It is in variable condition and will need detailed surveys and major works.

xii.

A permissive path runs from the byway north to the A1123. This is a route for walkers and is narrow, but it would be possible to construct a 3m wide path along a similar alignment following field edges. The route has only been seen from the ends, but various alignments appear possible from Google Earth and Ordnance Survey.

Figure 7B12.1 Permissive path notice at byway end.

Figure 7B12.2 Permissive path view towards A1123. Any surfaced route would need to be in a wider corridor.

Figure 7B12.3 View towards solar farm from A 1123.

xiii.

The A1123 is a major challenge for routes in the Wilburton area and this is perhaps one of the hardest parts of the route because a safe, convenient crossing is needed of the A1123. The exact position will depend on the linking routes on each side and also on satisfying safety requirements. In this area the A1123 has a 30 mph limit but visibility is restricted because of hedges and the alignment of the carriageway. It may be necessary to clear significant lengths of hedgerow to obtain the required visibility as set down in LTN 1/20 sections 5.7 and 5.8. It is anticipated that a signalised crossing will be required which may need to be a Pegasus crossing if there is to be equestrian use on the existing paths.

It is anticipated that the route will need to pass through the hedge/ small woodland between 2 and 10, Haddenham Road. This has not been surveyed and is hard to access at present. Any works would of course need landowners' agreement.

Figure 7B 13.1 The crossing would need to be in this vicinity.

Figure 7B 13.2 10 and 12, Haddenham Road with the hedge/ small woodland to the right. The crossing would need to be in this vicinity.

xiv.

The route will need to link with the public footpath that links Wilburton and Haddenham that is already identified for Option A xviii and xviii. It is recommended that the route is completed to Haddenham, although that is not costed as part of this option and that the route extends on a new alignment to Hinton Way, for Wilburton (which is costed for this alignment. See Option A for more details.

Figure 7B 14.1 View towards Haddenham of the path that would need surfacing with the hedge/ small woodland to the left. The crossing would need to emerge from the woodland in this vicinity.

Figure 7B 14.2 View towards Hinton Way. A field edge route is possible if agreed with landowners.

xv.

The route can join Hinton Way – a partially surfaced byway. It needs resurfacing to the junction with Clarke's Lane where users can connect with the road network in Wilburton, away from the busy A1123. It is recommended that all roads are designated as 20 mph.

Figure 7B.15.1 Hinton Way, Wilburton needs resurfacing.

Option B Summary	
Comparative Length	Shortest distance by road Wilburton - Cottenham = 9.1km, Distance using this option Wilburton - Cottenham = 11.4km
Likely estimated cost	Works in Cottenham Road, field edge path and byway resurfacing = 10.1km. Bridge over river 4m wide x 90 m span + 80m earthwork ramps 1 x signalised crossing A1123 Works in Wilburton
Engineering difficulties	Resurfacing damaged concrete roads will be a major challenge due to ground conditions and heavy usage. Constructing major bridge will be challenging. The A1123 crossing looks difficult, due to visibility and speed concerns.
Ecological issues	River crossing sensitive.
Land ownership issues	Whilst some of the route is highway a lot of the route is field edge paths and there are likely to be many landowners involved, so this looks challenging.
Other issues	There may be security issues raised in relation to the route adjoining solar panels.
Overall	Overall though the route appears to be more achievable than Option A but is indirect and this will detract from usage.

Option C

This option closely follows the existing road between Wilburton and Cottenham, (the B1049). There is not sufficient highway verge for a highway verge route so private land will be needed to allow a new path to be built. The Option considers two ways to cross the River Great Ouse – either a new bridge or changes to the traffic flows over the existing road bridge to allow for walking and wheeling. For the approach to/ exit from Wilburton the option proposes a new route that enters/ exits Wilburton via rights of way on the eastern side of Wilburton.

The route is considered in detail in the following pages and is described in sections as in Figure 7C.1.

i.

See Option A.

ii.

Existing good link to High Street from Tenison Manor. See Option B.

iii.

Tenison Manor is already traffic calmed but should be designated as a 20 mph limit. Broad Lane is less quiet and would benefit from traffic calming. See Option B.

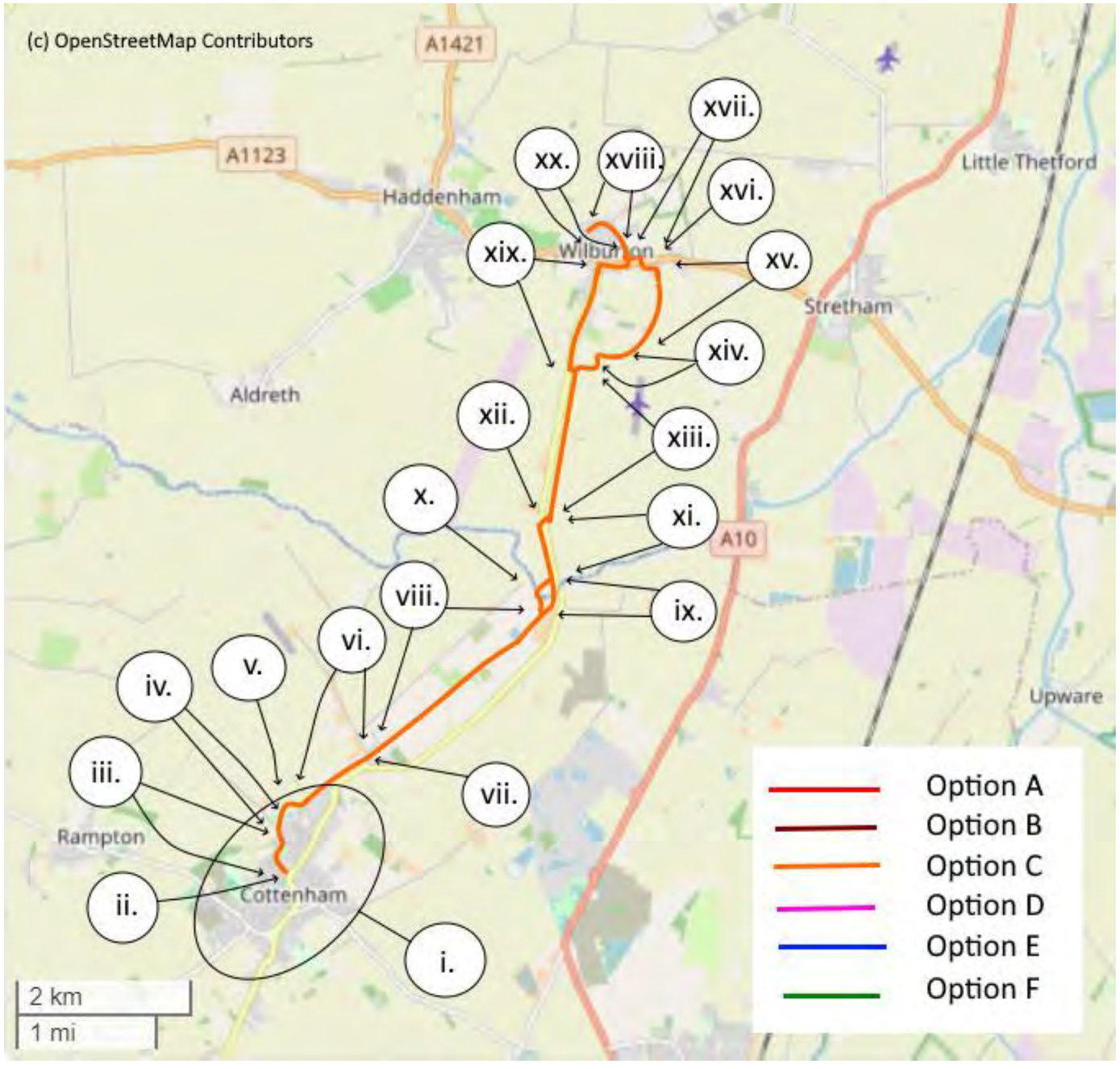


Figure 7C.1 Option C

iv.

Broad Lane Amenity Area is an attractive open space that has no surfaced paths. A 3m wide sealed path could be built along the open space in a position to be agreed. The existing barriers to Broad Lane would need to be replaced by accessible barriers such as bollards at 1.6m spacing. The route will need to link with a new ramp to a new bridge over Cottenham Lode. Any works will need to be agreed with the community and amenity site users and will have to address ecology issues.

Figure 7C4.1 The amenity area will need detailed surveys and community engagement.

Figure 7C4.2 A narrow section will need careful design.

Figure 7C4.2 In places there is a lot of space, but good route selection and detailing is important.

v.

Any route will need to cross Cottenham Lode. There is an existing road bridge on Cottenham Lode but access to it involves going along a narrow bank top in front of properties and a new bridge is recommended to link with a path in the corner of the open space in iv.

The new bridge would need to span between bank tops (approximately 15m) and link with earthwork ramps to ground level on both sides.

Figure 7C5.1 The bridge would need to ramp up from the open space on the right to the bank top and then cross the Lode to the left.

Figure 7C5.2 The bridge would need to cross the Lode in this area. Lode on the left looking towards Broad Lane.

vi.

Cottenham Lode is an attractive watercourse between flood banks. The bank tops are too narrow to accommodate a 3m wide path, so any route following the Lode would need to be in fields on private land. For biodiversity reasons the path should be at least 10m from the bank so a lot of land will be needed. Over some of this length the land is used by horses for grazing and is fenced, so any works would need to accommodate the usage of the land and would need new or relocated fencing. Landowners' agreement will be an essential part of the scheme.

Figure 7C6.1 View towards Broad Lane. Any new path would need to be in fields to the right.

Figure 7C6.2 View towards Broad Lane. Any new path would need to be in fields to the right.

Figure 7C6.3 View towards Broad Lane. Barriers such as these will need replacing with more suitable ones such as cattle grids and gates.

Figure 7C6.4 View towards Broad Lane. Any new path would need to be in fields to the right, with the fence moved as necessary.

Figure 7C6.5 The route meets Lockspit Hall Drove with a kissing gate that needs replacing with a cattle grid and gate or similar.

vii.

Lockspit Hall Drove is a quiet road that serves as a useful link to Twenty Pence Road and the northern part of Cottenham and also could link to the alignment used for Option B. (Option B and Option C are close and parts of the two options could be used together.) Twenty Pence Road is not ideal and would need major changes to make it suitable for all users. A safety audit and visibility check will be needed for the crossing. Speeds are low, but it may be necessary to remove some vegetation that is obscuring views.

Figure 7C7.1 View across Lockspit Hall Road to the kissing gate in Figure 7C6.5.

viii.

Cottenham Lode continues in a similar manner to section vi. A public footpath runs along both banks and there is space next to the flood banks along most of the length, but there is no continuity along the south-easterly side and a route following the north-westerly side appears to be the only option (left side heading towards Wilburton). As with section vi. the bank tops are too narrow to accommodate a 3m wide path, so any route following the Lode would need to be in fields on private land. For biodiversity reasons the path should be at least 10m from the bank so a lot of land will be needed. Over some of this length the land is used by horses for grazing and is fenced, so any works would need to accommodate the usage of the land and would need new or relocated fencing. Landowners' agreement will be an essential part of the scheme. It was evident during surveying in winter 2023/ 24 when there was a lot of rain that some of the fields were flooded so the positioning of any path will need to take into account the need to maintain the path open as far as possible during flooding. That may include constructing the path on a raised causeway if that can gain assent, so there are many challenges with this route. Nevertheless, it is an attractive and obvious alignment.

Figure 7C8.1 Banktop and field in summer. The suggested path would be in the field. View towards Wilburton.

Figure 7C8.2 View across Cottenham Lode towards the location where Figure 7C8.1 was taken and towards Cottenham, showing flooded field.

Figure 7C8.3 Eastern banktop, Lode and fields in winter. The suggested path would be in the fields on the right. View towards Cottenham.

Figure 7C8.4 View across Cottenham Lode towards Cottenham. A field path near the opposite bank would be needed for this option.

ix-xiii.

Cottenham Lode joins the River Great Ouse near the point where Twenty Pence Road crosses the River Great Ouse. There are sub-options in this area, with alternative ways to cross the River Great Ouse and to cross Twenty Pence Road. The options are considered on the following pages.

Figure 7C9-13.1 New River Great Ouse Bridge Option.

ix.

This is perhaps the most obvious alignment in that it continues the Cottenham Lode alignment used in xiii. and crosses straight over the River Great Ouse. It requires a new bridge and field edge paths on fields set away from the riverbank. The paths should be set well away from the banks to comply with biodiversity net gain requirements. It should be noted that in the winter the fields were very wet with some flooding, so detailed surveys will be needed to ensure that the route is accessible. This may mean constructing a raised causeway. This is likely to be the most expensive of the three sub-options considered because of the major new bridge.

Figure 7C9.1 View from River Great Ouse north bank towards Twenty Pence Road and Wilburton. Note the flooded field.

Figure 7C9.2 View from Twenty Pence Road towards River Great Ouse north bank and Cottenham. Note the same flooded field as in Figure 7C9.1.

x.

A new river bridge in this area would be a major structure and construction will not be easy because access from the road network Is not easy, if the bridge is positioned west of Cottenham Lode. It may be easier to construct the bridge east of Cottenham Lode, with a smaller bridge over the Lode. This will need to be part of detailed design and will need further surveys. Any bridge would need to span across the flood banks, and these are a long way apart, in this area, so a bridge would need to span approximately 90m. A 4m minimum bridge would be needed with earthwork ramps leading to the start of the bridge at flood bank level. If equestrians are to be accommodated the bridge would need 1.8m parapets and consideration will need to be given as to whether 4m is adequate. This is a remote location to construct such a bi structure. Topographical surveys and detailed structural design would be needed to progress this.

Figure 7C10.1 View from River Great Ouse south bank towards the north bank and Cottenham, with Cottenham Lode on the right. Note the wide span.

xi.

Given existing traffic volumes and speeds on Twenty Pence Road any route will have to continue away from the carriageway and there is not sufficient space on highway land so a field edge path will be needed, subject to landowners' agreement.

Figure 7C11.1 View of field edge with Twenty Pence Road behind hedge to the right. Any new path would need to be on this field and agreed with landowners.

xii.

Due to traffic speeds in this area a signalised crossing or bridge is needed to cross Twenty Pence Road. The exact location is to be finalised but it will need to have good visibility and be near to New Australia Farm The road currently operates at national speed limit and a 50 or 40 mph limit will be needed to allow a signalised crossing. Measures may be needed to slow speeds and speed surveys will be needed. This crossing needs detailed design and safety audit.

Figure 7C12.1 The potential crossing point will need to be ahead of this point, near New Australia Farm.

Figure 7C12.2 The potential crossing point will need near this point, near New Australia Farm.

xiii.

Given existing traffic volumes and speeds on Twenty Pence Road any route will have to continue away from the carriageway and there is not sufficient space on highway land so a field edge path will be needed, subject to landowners' agreement. The route can continue on field edges to the east of the road until it gets close to Wilburton.

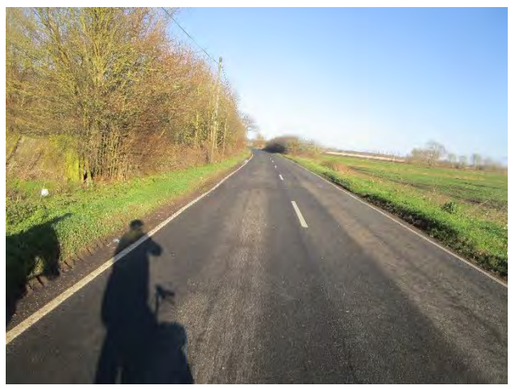


Figure 7C13.1 The route could be on field edges to the right subject to landowners' agreement.

Figure 7C13.2 The route could be on field edges to the right subject to landowners' agreement.

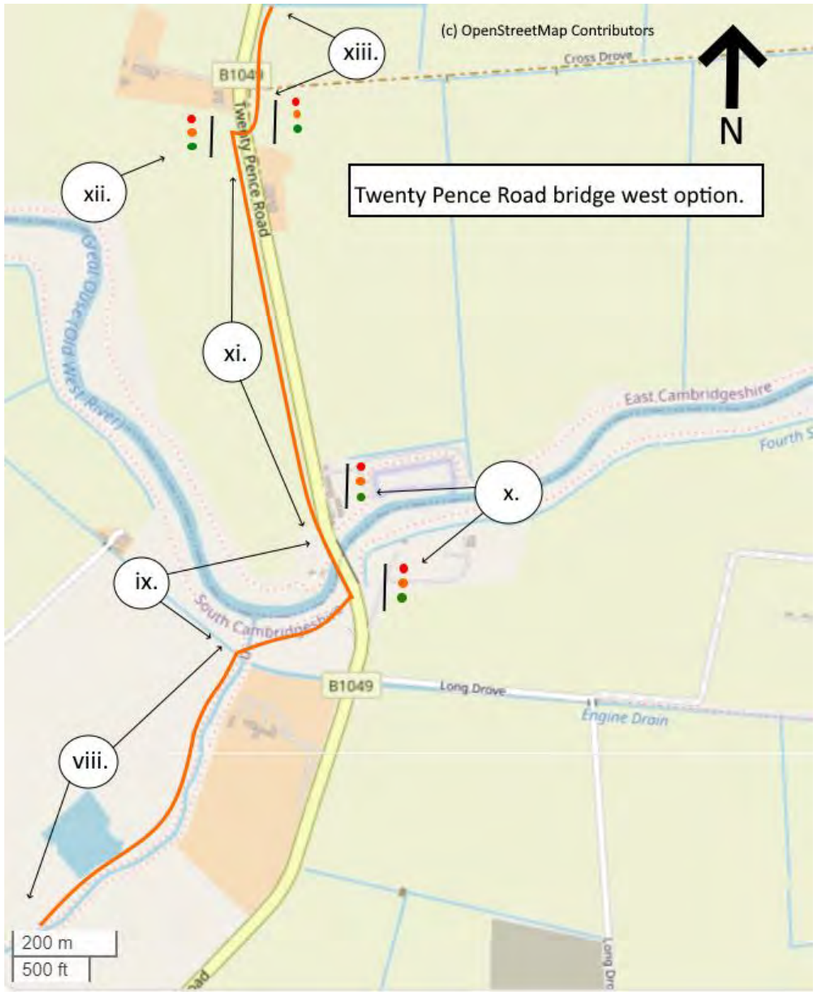


Figure 7C9-13.2 Twenty Pence Road bridge west Option.

ix.

This sub-option uses the existing road bridge to cross the River Great Ouse and uses the River Great Ouse flood bank to link from Cottenham Lode to Twenty Pence Road. The flood bank is wide in this area and can accommodate a new path but will need consent and this will need to address the flooding and biodiversity net gain implications. The sub-option will need a new bridge over Cottenham Lode to replace or in addition to the existing narrow bridge and this will need further surveys and detailed design. The bridge will need to be at least 4m wide.

Figure 7C9.3 The existing bridge over Cottenham Lode. A wider bridge would be needed for the route in a similar location.

Figure 7C9.4 River Great Ouse flood bank view towards Cottenham Lode from Twenty Pence Road. A path here looks achievable, subject to consent.

Figure 7C9.5 River Great Ouse flood bank view towards Twenty Pence Road. Improved access is needed here.

x.

Twenty Pence Road crosses the River Great Ouse on a narrow bridge that carries two-way traffic and has no provision for walking, cycling or wheeling. It should be possible to install signals to allow non-motorised traffic to cross the bridge. This could be a push button arrangement that stops all traffic while non motorised traffic uses the road or could be a one-way arrangement that allocated one lane to bi-directional non-motorised traffic and the other lane to one-way motorised traffic with the flow controlled by signals. In this case the space available for walking, cycling, wheeling and equestrians (if required) would be well below standard due to the narrowness of the bridge. This may be a necessary compromise given the high cost of a new bridge. The arrangement would need surveys, detailed design and safety audit.

Figure 7C10.1 Twenty Pence Road where is crosses the River Great Ouse. The path is not a continuous footway but may be useful.

xi-xiii.

Same as for new River Great Ouse Bridge option. See previous pages.

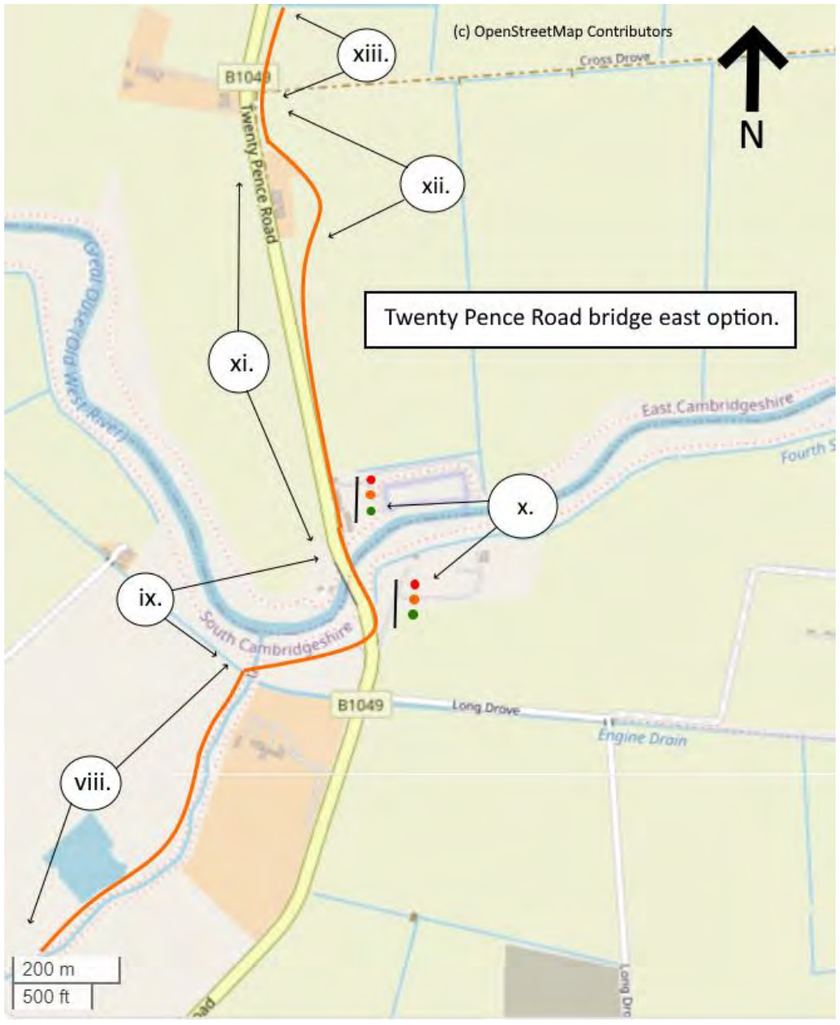


Figure 7C9-13.3 Twenty Pence Road bridge east Option.

ix.

See west option.

x.

See west option.

xi.

Given existing traffic volumes and speeds on Twenty Pence Road any route will have to continue away from the carriageway and there is not sufficient space on highway land so a field edge path will be needed, subject to landowners' agreement. If the route can cross to the east side at Twenty Pence Road bridge, there would be no need to cross the road further north but there are challenges with a route to the east:

- To the north of the river there are a number of properties and space is constrained near the road. In order to construct a 3m path that is separated from boundaries by at least 0.5m and separated from the carriageway by at least 0.5m. It may be necessary to move the carriageway in order to create the necessary space. This needs a survey and detailed design.

- The route needs to pass buildings and gardens near Maple Lodge and The Sycamores at xiii. This is a challenge.

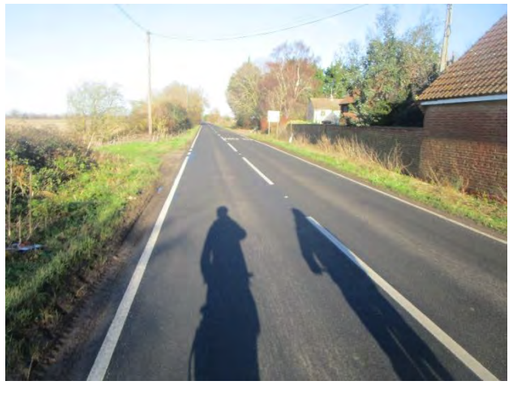


Figure 7C11.2 Twenty Pence Road north of the river bridge with properties to the right, making path construction on the right challenging.

Figure 7C11.2 Twenty Pence Road north of the river bridge with space on fields to the right but properties to the right, in the distance (see xii.).

xii.

There is insufficient highway space between the boundary fences of Maple Lodge and the Sycamores, and the carriageway and it would be necessary for any path to pass behind the properties and on field edges. This would need landowners' agreement and there may be security concerns. This makes this a challenging option.

Figure 7C12.3 The route would have to pass behind these farm buildings.

xiii.

Same as for the new River Great Ouse Bridge option. See previous pages.

xiv.

As Twenty Pence Road approaches Sharp's Farm and a public bridleway there are buildings and gardens near the road, and it would not be possible to continue a path set away from the carriageway without major impact on the private property. A good alternative would be to construct a route around the properties to join up with the bridleway. This will of course require the landowners' agreement.

red

Figure 7C14.1 Local map (below)

Figure 7C14.2 View from Twenty Pence Road across fields to right of way. (left)

Figure 7C14.3 Twenty Pence Road by Sharp's Farm. View towards Wilburton (above).

xv.

A public bridleway known as Cut Bank runs east from Twenty Pence Road. It appears to be used for farm access and is a poorly surfaced pot-holed road. The bridleway continues north as Millfield Lane in a similar nature passing farm buildings and gradually becoming more residential as it enters Wilburton. Major works are required to bring it up to a good standard which would mean reconstructing it as a road. It is recommended that measures are taken to prevent through traffic and keep speeds low. There will be concerns about adopting this as a public road, so this is not an easy option although it has the advantage of already having rights of use by equestrians, cyclists and pedestrians. However, the quality of the surface and the indirect nature of the route are major weaknesses of this route.

Figure 7C15.1 Cut Bank in one of the better parts.

Figure 7C15.2 Millfield Lane at its southern end.

Figure 7C15.3 Millfield Lane near farm buildings.

Figure 7C15.4 Millfield Lane in winter.

Figure 7C15.5 Millfield Lane in winter becomes residential nearer the A1123.

xvi.

Wilburton is a difficult destination and starting point because of the difficult conditions on the A1123. This road is too busy and has too many HGVs to be useful as a route, so the aim is to try to cross it safely and link with residential streets north of the A1123. This can be done by linking Millfield Lane with Station Road. The Millfield Lane junction with the A1123 is difficult and currently fails the LTN 1/20 Junction Assessment Tool. This could be changed if the junction were to be signalised with protected approaches to the junction on the A1123. An alternative would be to turn left from Millfield Lane onto a new roadside shared use path and cross the A1123 closer to Millfield Lane. The junction needs further survey and detailed design.

Figure 7C16.1 Millfield Lane/ A1123 junction.

xvii.

Further work is needed to improve routes through Wilburton. It would be possible to use the verge of the A1123 for a short length and then to build a path in the Recreation Ground to link with Station Road. The crossing of the A1123 needs to be fixed as part of this – either at a signalised junction at Millfield Lane or with a parallel zebra crossing closer to Station Road. Detailed surveys and designs are needed, although a concept drawing is provided in Figure 7C16.5

Figure 7C16.2 Millfield Lane/ A1123 junction showing verge on the left and Recreation Ground on the right.

Figure 7C16.3 A1123 verge on left and Recreation Ground behind fence on right. A crossing in this area would improve access to the Recreation Ground if well designed.

Figure 7C16.4. A1123 on left. View in Recreation Ground towards Station Road. Careful design and community engagement would be needed here.

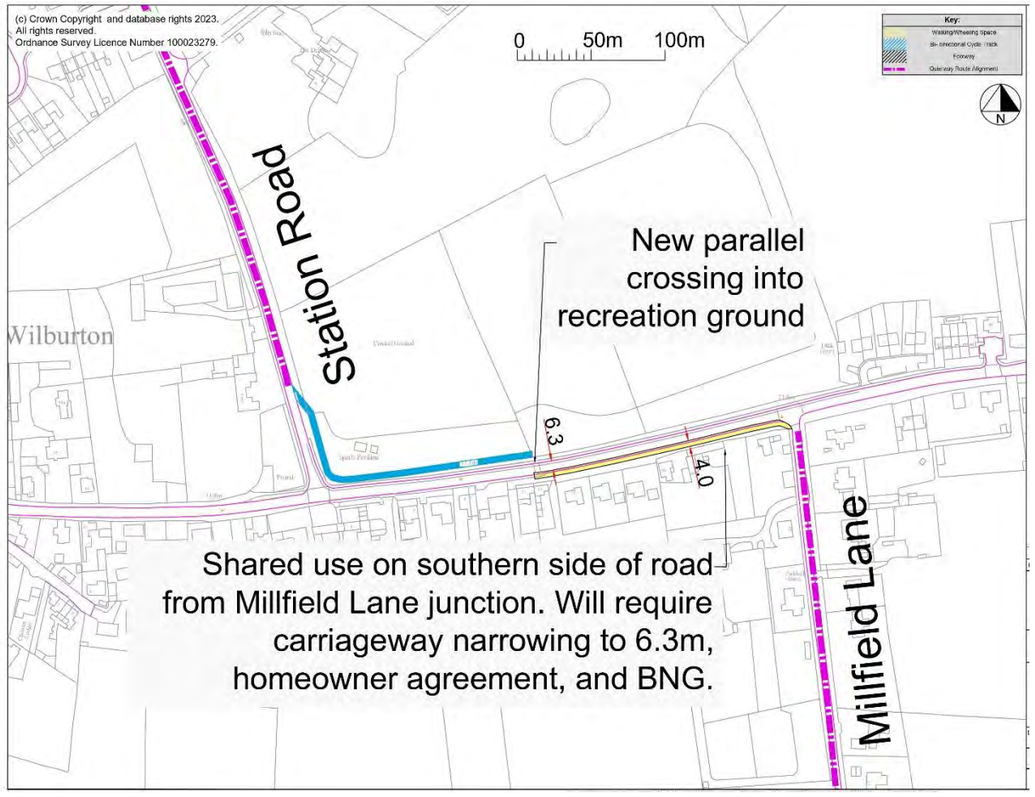


Figure 7C16.5. Drawing of potential solution at Millfield Lane junction to access Station Road.

xviii.

Station Road is a relatively quiet road that would benefit from a 20mph limit. It links with other quiet residential roads in Wilburton.

xix.

The obvious alternative to the detour via Millfield Lane is to continue along Twenty Pence Road, past the garden centre and into Wilburton. There is however no obvious way (given the lack of space) to create a segregated path and the volume of traffic is too high for most people to be comfortable mixing with traffic. Traffic speeds could be reduced with a 30 or 20 mph limit, and this would then become a viable route. The route is definitely the most direct one. Attention will be needed to the link with the off-road path (xiii.) to ensure that visibility is adequate. There are also issues with the A1123 junction which would fail the LTN 1/20 Junction Assessment Tool.

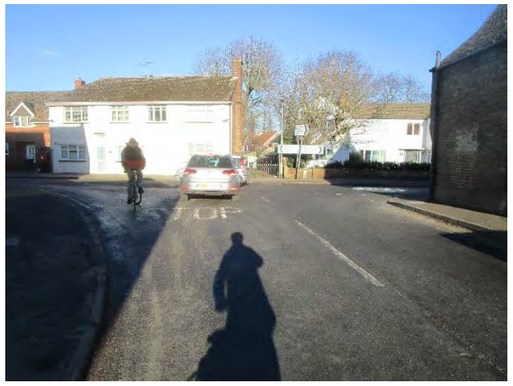


Figure 7C19.1. Approach to Wilburton on Twenty Pence Road. Traffic volumes are a concern.

Figure 7C19.2. A1123 junction.

Option C Summary	
Comparative Length	Shortest distance by road Wilburton - Cottenham = 9.1km, Distance using this option Wilburton -- Cottenham = 10.9 km.
Likely estimated cost	Works in Cottenham Bridge over Cottenham Lode 4m wide x 15m span + 80m earthwork ramp Road, field edge path and byway resurfacing = 10.3km. Bridge over river 4m wide x 90 m span + 80m earthwork ramps 1 x signalised crossing A1123 Works in Wilburton
Engineering difficulties	Constructing major bridge will be challenging. Ground conditions were very wet near Cottenham Lode in winter. Works along the A1123 in Wilburton will need traffic management. Likely to be utilities so survey work is needed.
Ecological issues	River crossing sensitive.
Land ownership issues	Almost entire route needs private land, so this looks challenging. Due to Biodiversity Net Gain requirements a 10m buffer strip is required between the path and the floodbanks so a lot of land will be needed, along Cottenham Lode. Fencing requirements are likely to be large particularly along Cottenham Lode, with equestrian use in neighbouring fields.
Other issues	Flooding is an issue in low lying fields along Cottenham Lode. Ideally the path would be raised but this will need Environment Agency consent. Keeping speeds low enough for a signalised crossing will need changes to speed limits.
Overall	Could be a very attractive route and is direct, apart from the entry to/ exit from Wilburton, but land and ecology challenges are significant. If Twenty Pence Road bridge is used this would be a major advantage over building a brand-new bridge. The entry into Wilburton is a major weakness and means that this is not a good option.

Option D

This option uses the existing B1049 and assumes that the road will be closed to through traffic, as it was in winter 2023/24 for a lengthy period. This simple measure would establish a good route and would allow access to all properties along the road. It has been shown to work, even during a period when there were other roadworks and road closures in the area. The route enters/ exits Wilburton past the Garden Centre and requires some works along a short stretch of the A1123 to make a suitable connection with Wilburton.

The route is considered in detail in the following pages and is described in sections as in Figure 7D.1.

i.

See Option A. This will be easier with the closure of the B1049 to through traffic as is recommended for this option.

ii.

It is recommended that a 20 mph limit is introduced over this section of road, with a detailed review of possible traffic calming and other interventions for an on-road route mixed with traffic.

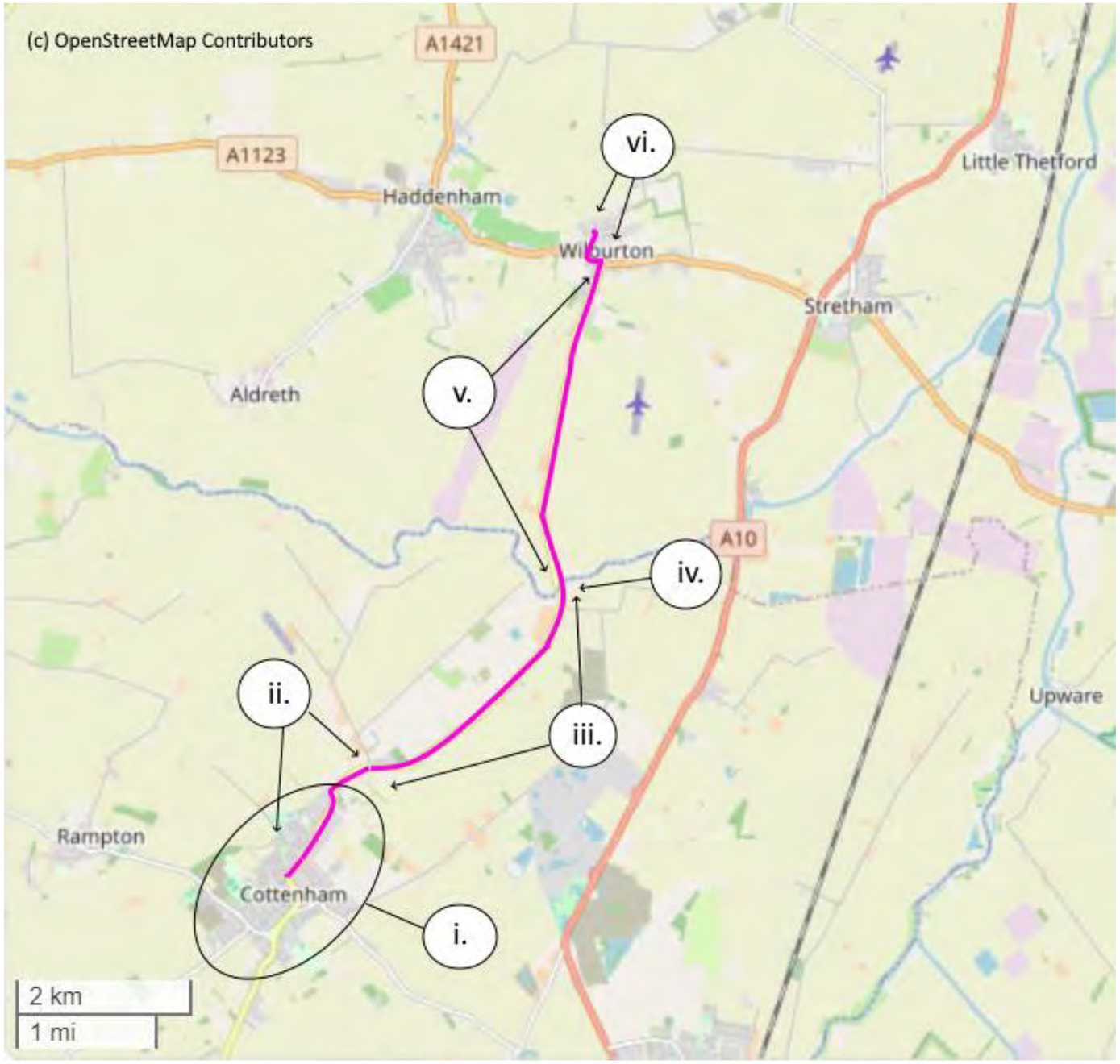


Figure 7D.1 Option D

iii.

Twenty Pence Road is an attractive road and would be suitable for use with reduced traffic as would be the case if it were closed to through traffic. The only works required would be the change of speed limit, preferably to 20 mph.

iv.

Any closure of Twenty Pence Road to through traffic can be achieved by the use of bollards or by using an ANPR system that, for instance allowed buses through. This would require powers that Cambridgeshire County Council will need to seek, so could take time. The location could be anywhere along the road and will need to be agreed following consultation with interested parties, especially farmers. An obvious location for closure would be at the road bridge over the River Great Ouse, but in winter 2023/24 the road was closed for 6 weeks just to the south of Wilburton for water utility works.

Although closure would have been an inconvenience for some drivers there were clear benefits in Cottenham, which was quiet during the closure with very clear benefits on Twenty Pence Road which was quiet and attractive for all users. During the closure traffic will have had to divert via the A10 as indicated adjacent. It was interesting that there were also roadworks on the diversion route at the same time and lengths of road with temporary signals and single way working. The route was ridden in peak morning and at peak afternoon times and there was no evidence of excessive queuing so it seems clear that local roads could cope with the closure.

Twenty Pence Nursery in Wilburton was also visited during the closure, and it was busy. It is possible that the closure impacted on business, and it should be possible to check that from accounts. It should also be noted that there was no signed route for cyclists along Twenty Pence Road during the closure so an increase in cycle visitors would have been unlikely.

Clearly any closure will need to be the subject of a lot of consultation, but the closure of winter 2023/24 shows that it could work well and it would certainly deliver a good route for cycling at minimal cost. Sustrans has not done any survey of attitudes to the closure, but a brief search of social media in the Cottenham area did not highlight any comments at all on the closure, whereas closures due to flooding elsewhere were the matter of some debate. For most people a diversion via the A10 may not have been a particular hardship, but more evidence would clearly be beneficial.

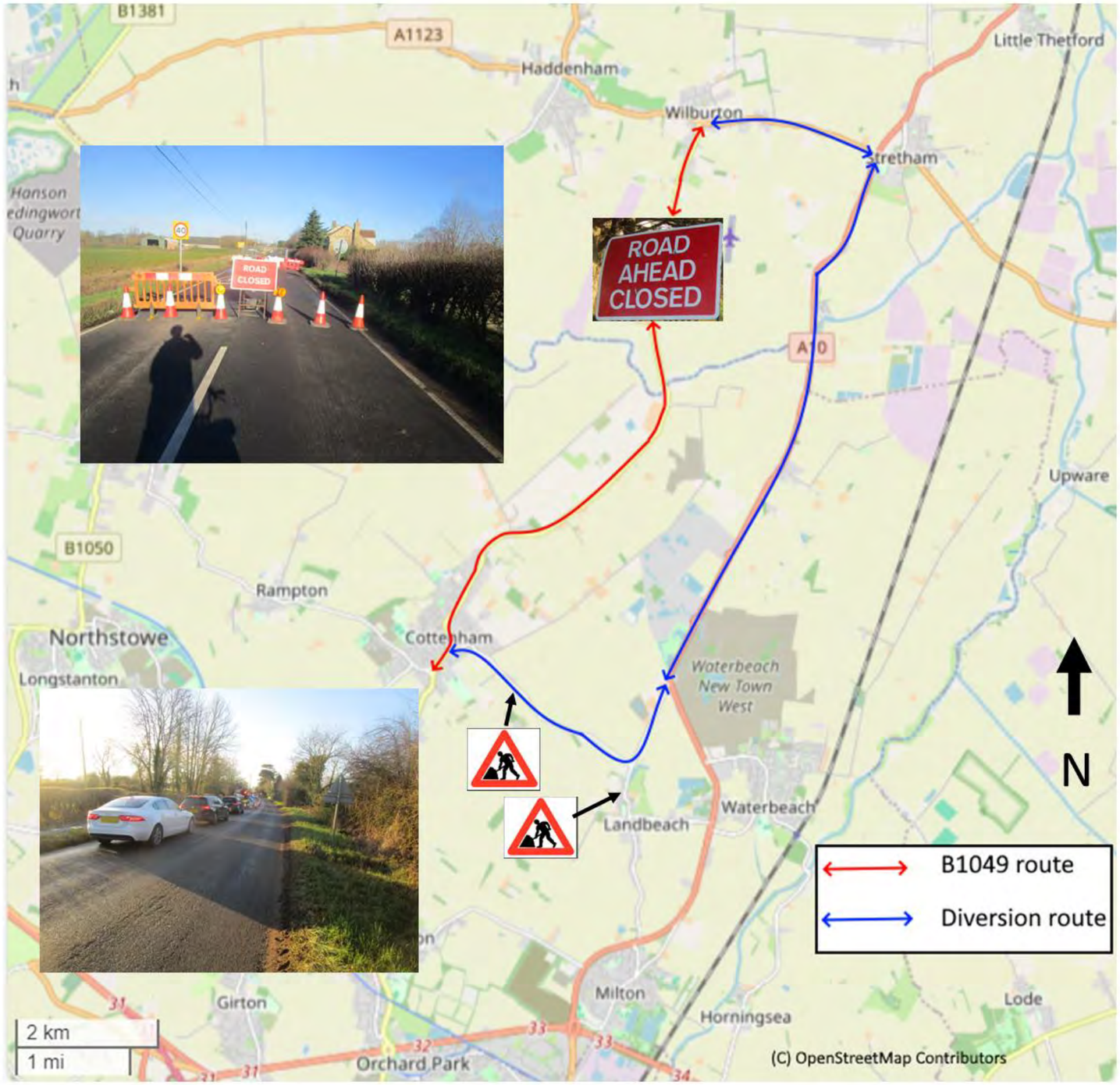


Figure 7D4.1 Road closure during winter 2023/24.

v.

As Twenty Pence Road approaches Wilburton it climbs and passes Twenty Pence Garden Centre and (even with the road closure) traffic will be expected to increase. It should however be within acceptable limits but will need to be within a 20 mph limit. The bigger issue is the junction with the High Street/ A1123.

Figure 7D5.1 The approach to Wilburton. A 20 mph limit is proposed.

vi.

The A1123 is a busy road and the route needs to run parallel with the road and cross over it to reach Clarke's Lane and link with the quieter residential roads in Wilburton. This is a challenging detail and needs further design work and a detailed survey. There is an existing signalised crossing near Carpond Lane, but additional crossings are recommended on all arms of the Twenty Pence Road junction as it would be impossible to adapt the southern side of the A1123 for walking and wheeling. There is not sufficient width for segregated paths and some shared use is likely to be necessary, so a high-quality route appears almost impossible.

Figure 7D6.1 The Twenty Pence Road junction (on left) and view along the High Street towards Clarke's Lane.

Figure 7D6.2 The Clarke's Lane junction (in foreground) and view along the High Street towards Twenty Pence Road.

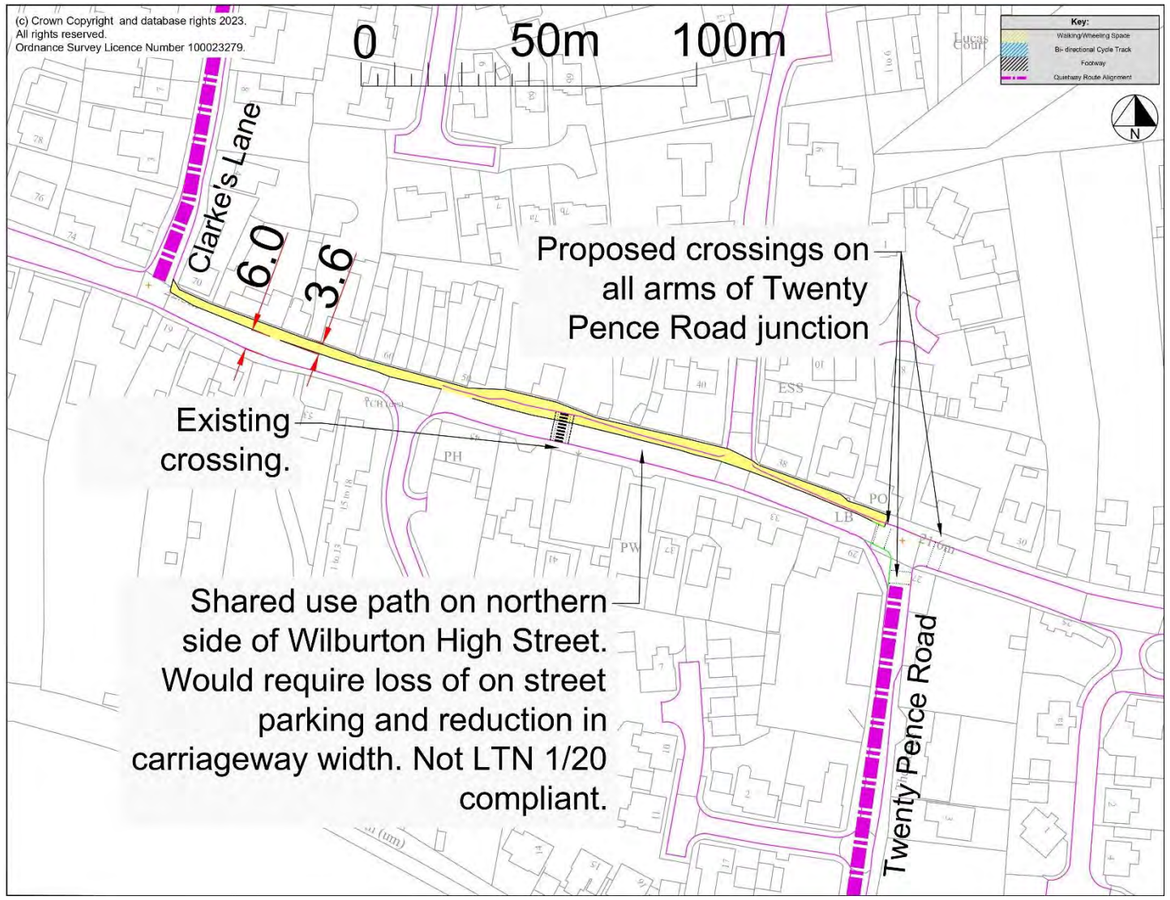


Figure 7D6.3 Potential option for crossing the A1123 to access Clarke's Lane in Wilburton

Option D **Summary**	
Comparative Length	Shortest distance by road Wilburton - Cottenham = 15.8km (via A10) Distance using this option Wilburton - Cottenham = 9.1km
Likely estimated cost	Works in Cottenham Measures to close road (bollards or ANPR system). Changes to existing signalised crossing in Wilburton Signalised junction in Wilburton. 230m shared use path Wilburton. Works in Wilburton
Engineering difficulties	Works along the A1123 in Wilburton will need traffic management. Likely to be utilities so survey work is needed. If ANPR required power supply may be an issue.
Ecological issues	None.
Land ownership issues	None.
Other issues	This is a cheap scheme that could transform journeys, but it needs community support, so has political implications. Needs community engagement. Keeping speeds low on the road maybe difficult and high speeds would deter usage.
Overall	An obvious and convenient route that was given an unexpected trial in winter 2023/24, so there is evidence that it could work. The best value for money by a long way.

Option E

This option uses an existing minor road and a field edge alignment to link up with the same right of way entry to/ exit from Wilburton as for Option C. The route has not been surveyed over the whole length because it is private land but can be seen from Google Earth and part of the alignment is designated for potential mineral extraction, which may provide opportunities. This option requires a new bridge over the River Great Ouse.

The route is considered in detail in the following pages and is described in sections as in Figure 7E.1.

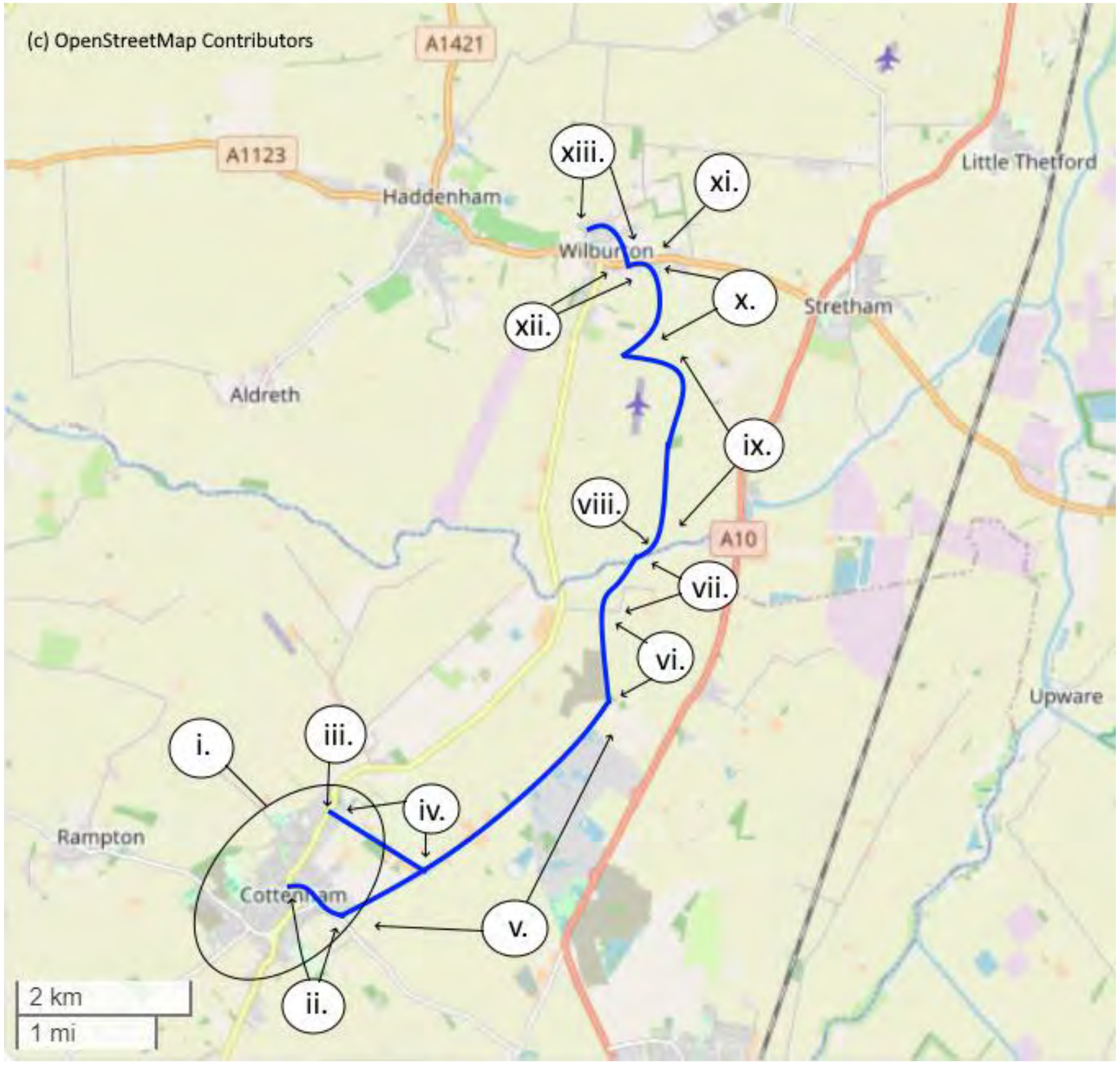


Figure 7E.1 Option E

i.

See Option A.

ii.

Telegraph Street is a residential street signed as “unsuitable for Heavy Goods Vehicles”. It leads into Denmark Street and Beach Road and then Long Drove. Junction changes and a 20 mph limit are recommended with cyclists expected to mix with other traffic on the road.

iii.

For those living in the north of Cottenham, Church Lane is the obvious way to access Option E. Changes to the mini roundabout at the Church Lane/ B1049 junction are recommended and this needs detailed design.

iv.

The status of Church Lane is unclear, and clarification needs to be sought with Cambridgeshire County Council. It has the appearance of a byway and is open to all traffic. At the B1049 end it is a public road for a short length. The major issue with Church Lane apart from confirmation of rights to use it is the surface. It is in poor condition and needs major works.

Figure 7E4.1 Church Lane starts off as a public road near to All Saints Church.

Figure 7E4.2 Church Lane is in very poor condition in places.

Figure 7E4.3 Church Lane view towards Cottenham from Long Drove in summer.

v.

Long Drove is at first appearance an attractive option for a route – it is lightly trafficked and runs parallel with the B1040. However, the narrow width means that a car cannot pass a cyclist easily and there are few passing places, which will have some ecological implications. This could be rectified by adding more passing places, but the long straight road with good visibility means that cars can be seen and heard from a long way away, which will be intimidating to some. The surface is poor to ride on and it appears that the road has been built on top of concrete slabs with gaps at the joints. Filling the gaps and resurfacing is an option but in this area the ground is likely to move, and a more major solution may be needed. This is therefore not an easy option, but it is possible.

Figure 7E5.1 Long Drove has some passing spaces, but more may be needed.

Figure 7E5.2. Long Drove showing an extreme example of cracking.

vi.

As Long Drove turns towards Wilburton the nature changes with quarrying on adjacent land. A quarry access route crosses the road, and the surfacing deteriorates. Quarry traffic is kept separate from the road, so the issues are similar to v., although there are fewer opportunities for passing places.

Figure 7E6.1 Long Drove crosses a quarry access road.

Figure 7E6.2 The uncomfortable nature of the surfacing is evident.

vii.

Land between Long Drove and towards the River Great Ouse is currently farmland but is classified as Mineral Development Area (see 4.2.) and may be quarried in future. If the land is quarried or when it is reinstated afterwards there should be an opportunity for a new path across the current fields towards Wilburton. This option is therefore dependent on development and needs to be addressed through the planning system.

Figure 7E7.1 View across fields towards the River Great Ouse. Any new path would have to be a long-term project.

viii.

For the route to continue it would need to cross the River Great Ouse – crossing from one flood bank to another. The site has not been visited and the bridge location is uncertain and would need a detailed survey to determine the best crossing point, which minimised the distance of any required bridge and fitted in with the land use at vii, local farming and other activities and complied with Environment Agency requirements. A simple estimate from Google Earth suggests a bridge span of some 70m would be needed with earthwork ramps from field level to flood bank level. Access for construction would be a major issue. The bridge would need to be 4m width minimum and if it is to accommodate equestrian usage would require 1.8m parapets or otherwise 1.4m parapets.

ix.

The onward route to Wilburton has not been surveyed and there appear to be a number of options given the layout of fields and drains that all run approximately north-south. The intention would be to agree a route that linked the new bridge at viii. with the bridleway at Millfield Lane. This could include a length of farm track that is known as New Cut or Cut Bank. This route will need to be agreed with landowners and include fencing if required.

Figure 7E9.1 View showing one of the field boundaries that could be a possible route. Any new path would have to be agreed with landowners.

x.-xiii.

The route along Millfield Lane, along and across the A1123 and into Wilburton would be the same as for Option C. It would need major surfacing works, junction changes and a new crossing of the A1123. See Option C xv. – xx.

Figure 7E10.1 Millfield Lane on the edge of Wilburton.

Option E **Summary**	
Comparative Length	Shortest distance by road Wilburton - Cottenham = 9.1km, Distance using this option Wilburton - Cottenham = 11.1 km
Likely estimated cost	Works in Cottenham Road, field edge path and byway resurfacing = 9.8km Bridge over river 4m wide x 70 m span + 80m earthwork ramps 1 x signalised crossing A1123 Works in Wilburton
Engineering difficulties	Constructing major bridge will be challenging. Works along the A1123 in Wilburton will need traffic management. Likely to be utilities so survey work is needed.
Ecological issues	River crossing sensitive. Changes to Long Drove may be sensitive.
Land ownership issues	Route follows roads and rights of way and also needs private land, so this looks challenging. The biggest issue may be in agreeing access to the river crossing from the south, but this could be secured as part of any future development of that land.
Other issues	The use of Long Drove is a concern. It is a quiet road but with little space for parking, so it is assumed that significant changes are needed. There would be significant benefits if this option were linked with development of land south of the river for quarrying.
Overall	Could be a very attractive route and if linked with development that would be a significant benefit, but concerns about Long Drove.

Option F

This option is a very indirect alignment that would not serve well as a route between Wilburton and Cottenham, but it picks up a number of potentially useful short trips that have no provision at present including:

- Cottenham to Cambridge Research Park (Waterbeach) and Waterbeach New Town West development.
- Cambridge Research Park to Stretham Ferry Marina area.
- Stretham Ferry Marina to Stretham,
- Stretham to Broad Baulk/ Grunty Fen Road.
- Grunty Fen Road/Broad Baulk to Wilburton.

Some of these links could form part of the A10 Ely to A14 improvements which are currently being progressed by Cambridgeshire County Council supported by Cambridgeshire and Peterborough Combined Authority as project sponsor, but Sustrans has not seen details of these proposals, at this stage.

The route proposed in this study uses field edge paths, routes besides major roads, an existing bridge over the River Great Ouse and two new crossings of the A10, so has merits for local trips that are worth considering. It enters Wilburton from the north.

The route is considered in detail in the following pages and is described in sections as in Figure 7F.1.

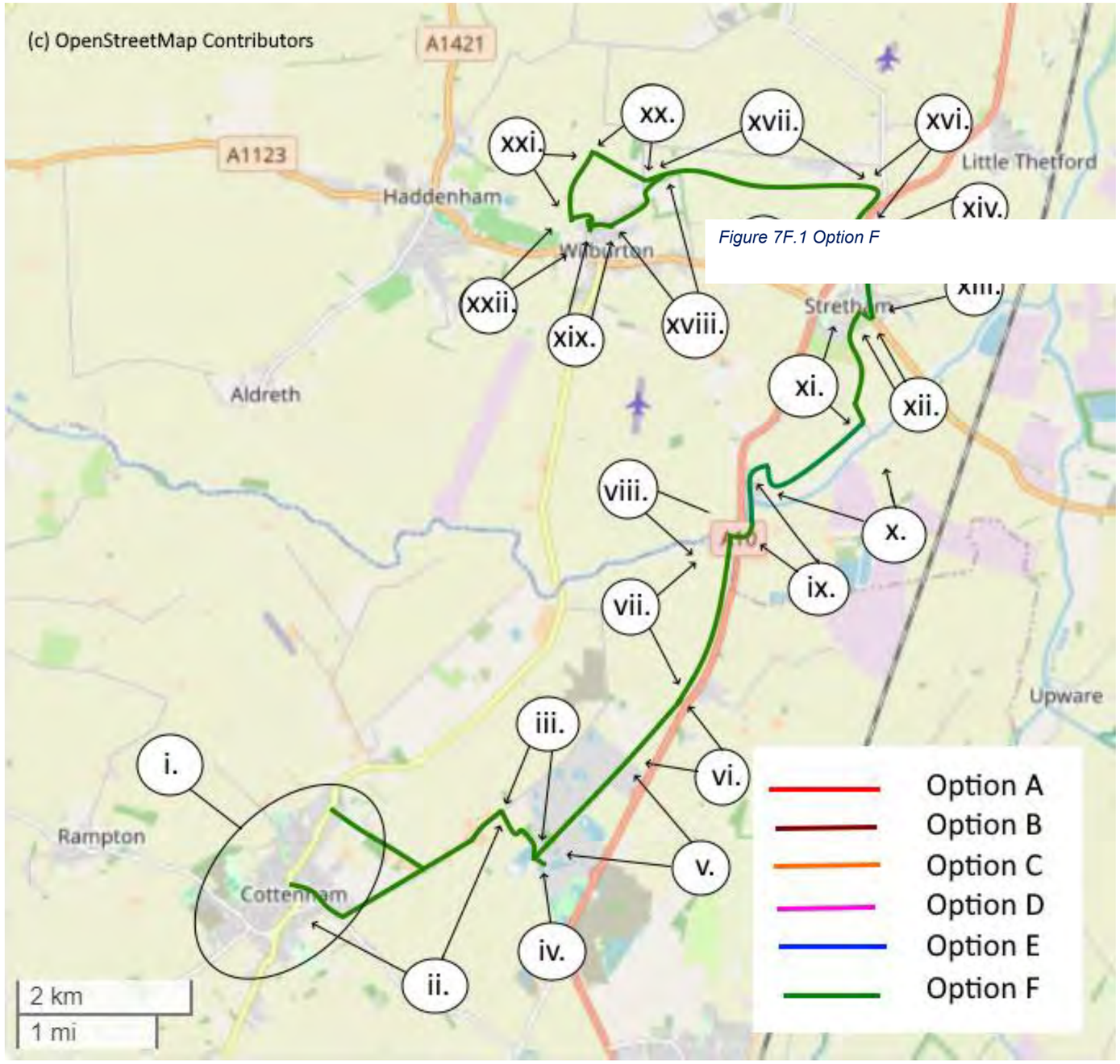


Figure 7F.1 Option F

i.

See Option A.

ii.

See Option E i.-v. for references to roads in Cottenham, Church Lane and Long Drove. Given that this option uses a shorter length of Long Drove than Option E passing places may not be such an issue, but that needs assessing.

iii.

Cambridge Research Park is very close to Long Drove, and it would be expected that there would already be good walking and cycling links between the two particularly for residents of Cottenham who work at the Research Park. The lack of links may be due to funding or because a route cannot be agreed with landowners or because of ecological or other constraints. For these latter reasons there needs to be flexibility in route choice and a route suggested here may not be the most appropriate. Indeed, the route has not been surveyed since it is on private land and no detailed study has been carried out of the ecology because the alignment is unclear. The ecology is however sensitive with watercourses, a lake and woodland habitats and this will need careful consideration.

Figure 7F3.1 An existing track runs close to the house and hedge line and would be an obvious route. It could continue of field edges. It would need surfacing.

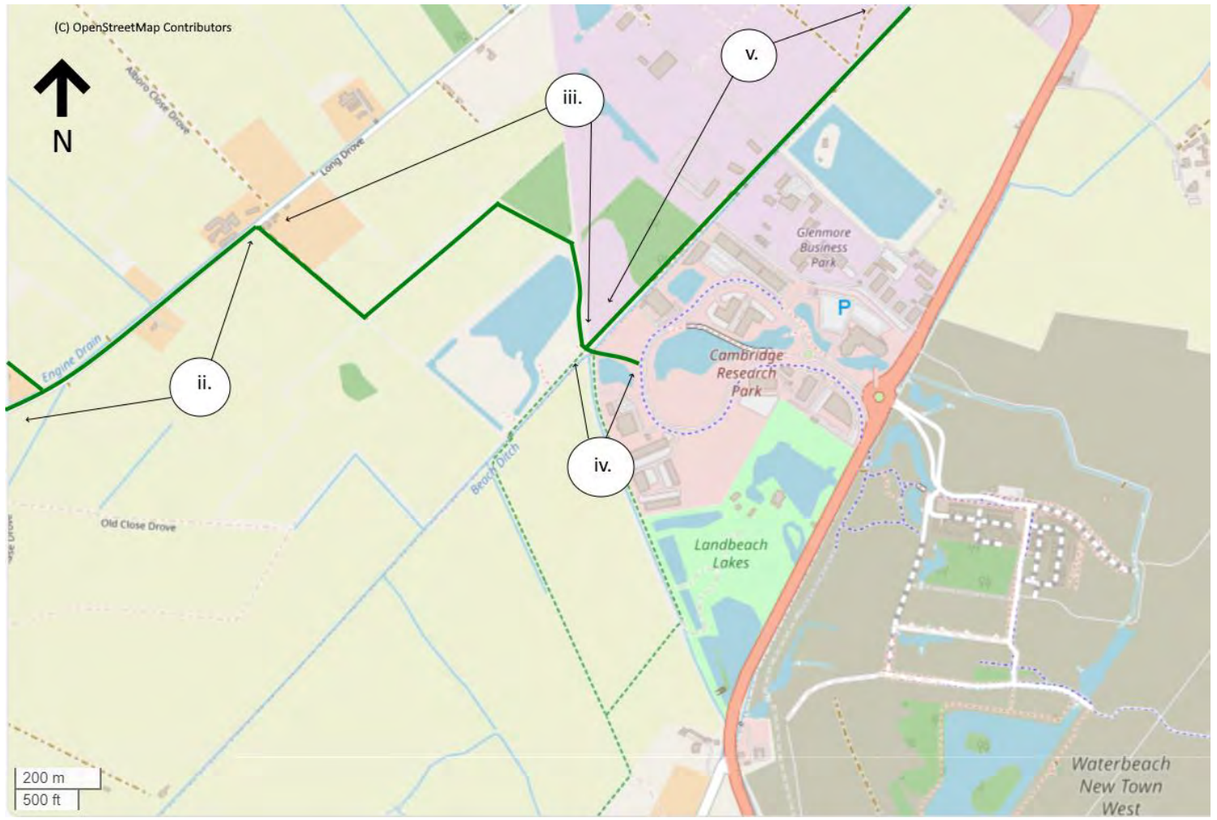


Figure 7F3.2 The options in this area appear possible from Google Earth and what can be seen from accessible locations but need further studying and discussions.

iv.

There is an existing link to a nature area near to Cambridge Research Park and this could be surfaced as part of a Cottenham- Business Park link. This needs further design work but connecting with existing facilities appears possible. There are existing paths within the Business Park and the roads appear relatively quiet, so an on-road or off-road route is possible. It will be important to link up with the employment sites, with cycle parking and ultimately with Waterbeach New Town for Waterbeach Station. This is beyond the scope of this study but is highlighted because it is a major benefit of this option which other options do not have.

The existing facilities at the Business Park should be brought up to LTN 1/20 standard.

Figure 7F4.1 An existing track links the Business Park with the nature area near Beach Ditch. View towards Cottenham.

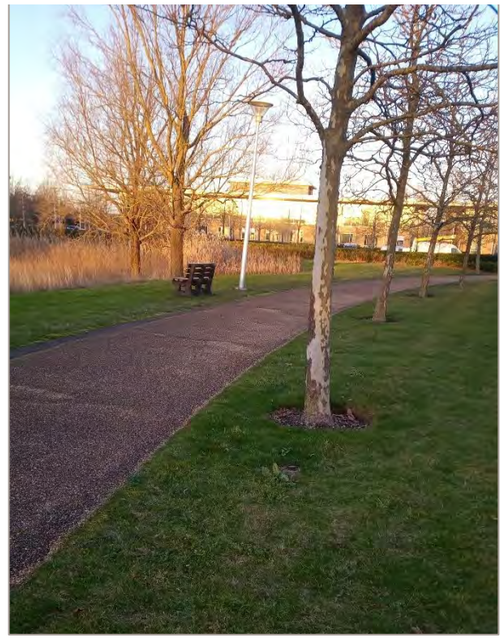


Figure 7F4.2 An existing path at the Business Park.

v.

Beach Ditch runs as a green corridor to the rear of Cambridge Research Park. It is an attractive corridor that appears to be fairly open for access near the Research Park but is not open for access within the Thalia Waste Management site. It was not possible to see the route and the site has security guards at the entrance. There is currently no walking or cycling access for staff to site, so they would benefit from access but clearly any new access would have to fit with the operations on the site and it may be that a different alignment is needed or even that an additional access to Long Drove and Cottenham is needed. An alternative might be an access route closer to the A10. Any route would have to address potential conflict with heavy vehicles on the site. At this point it is hard to be clear on a route, but it needs to be an aspiration and potentially linked to future planning applications.

Figure 7F5.1 View along Beach Ditch towards Thalia Waste Management site.

vi.

Beyond the Thalia Waste Management Site Beach Ditch becomes rural in nature and gradually merges with the edge of the A10 with the A10 following the ditch to the River Great Ouse. A 3m sealed path following the ditch would be required, although the alignment will depend on v. and landowners' requirements. For ecology the path should be set as far from the ditch as possible.

Figure 7F6.1 View of Beach Ditch from the A10 roadside.

viii.

The obvious alignment for any route would be to follow the A10 and the ditch (known as Clear Lode) to the River Great Ouse on the west side. In order to get the separation from the carriageway required under LTN 1/20 and to make a more pleasant route a 3m sealed path will need to be constructed on field edges over most of this length on the far side of the Lode from the busy and fast A10. Ecological surveys will be needed but it is likely that the path will need to be 10m from the Lode to avoid impact on the ecology so there are significant land requirements. In two locations the path will have to cross back and forth across the Lode, with bridges to run along the highway verge between properties and the A10 (so 4 bridges in total):

1. At the Fruit Farm it may also be necessary to remove the central hatching and move the carriageway slightly away from the ditch to get the necessary spacing. It will not be possible to get 10m separation from the ditch here, which would result in significant Biodiversity Net Gain costs.

2. At Willow Grange Farm the verge appears much wider and the path can be well set back from the A10.

In both cases confirmation is needed of the highway boundary and in any case, negotiations will be needed with landowners to agree routes and compensation.

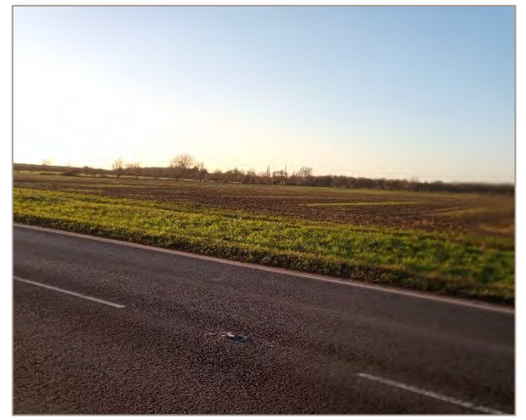


Figure 7F7.1 Over most of the route the recommended path position is on field edges on the far side of the Lode away from the A10.

Figure 7F7.2 At the Fruit Farm the route will have to be closer to the A10 and further design work is needed.

Figure 7F7.3 Wide verge at Willow Grange Farm on the far side of the A10.

viii.

As the proposed route approaches the River Great Ouse it has not been possible to see the route or to access it. At the time of the visit water levels were very high and parts of the area were flooded. It is also very difficult to access the area because of the nature of the A!0. It appears that a route is possible that runs beside the A10 and passes under the A10 next to the River Great Ouse but that needs confirmation. Clearly it is an essential part of any route and one of the attractions of this alignment so further surveys are needed. Any route will need to be agreed with landowners and will need to address security, flooding and ecology concerns. The space for a path under the A10 again appears very constrained and this will have to be a significant pinch point. It appears that there should be at least 2m available. The suggested route would pass under the A10 and then across an area of scrub, which was flooded at the time of visit to link up with the former A10.

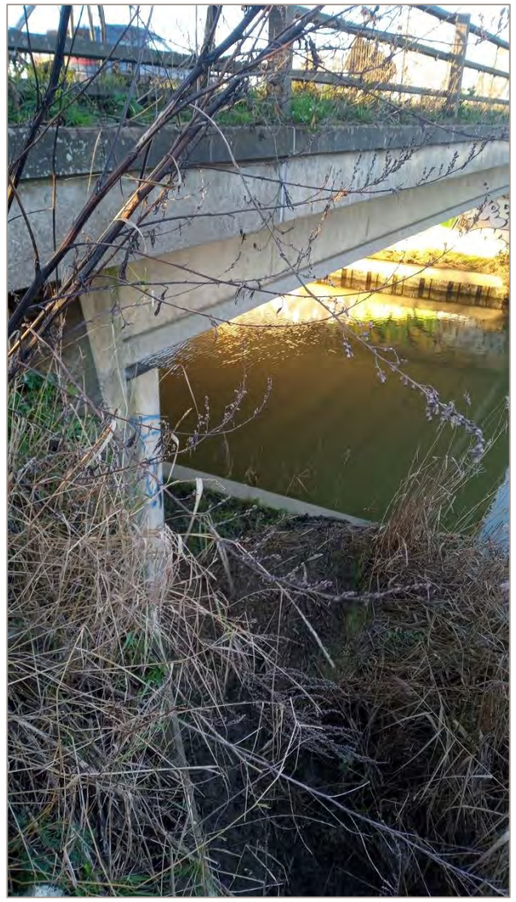


Figure 7F8.1 View showing route under A10.

Figure 7F8.2 View from former A10 across flooded area towards current A10.

ix.

The former A10 is a relatively quiet road that crosses the River Great Ouse on an existing bridge. Given that the cost of new bridges over the A10 is a significant factor, this is an important plus for this route. The other significant bonus of the route in this area is that it would provide access to employment, leisure and residential facilities that are accessed off the former A10. These facilities have no access apart from by road along the A10. Negative factors of the route are that the surface is not very good and that there are always going to be a number of HGVs in the area given the factories and the easy access off the A10. Nevertheless, the benefits are important.

The proposed route can continue on the former A10 until it nearly meets the A10 where it can access the verge on the eastern side.

Figure 7F9.1 View along former A10 with Marina and the bridge over the River Great Ouse visible.

x.

There are public footpaths along both banks of the River Great Ouse but neither appear suitable to accommodate cycling provision, due to access or width. The best route to link Stretham Ferry Marina with Green End and Stretham appears to be to follow field edges and drains to the north of the River Great Ouse as indicated adjacent. The route can be seen at the ends but is private land and has not been surveyed. It appears possible from Google Earth, but it should be noted that flooding might be an issue so the route will need to be carefully selected particularly at the west end where there was flooding near the A10 at the time of visit. The route will need to skirt around the Marina site and will need to use some of the A10 verge before forming a new access route eastward. Clearly the whole route will need the landowner's consent. Again, this does not look an easy route but there are clear benefits in linking the area with Stretham and the school and facilities there.

Figure 7F10.2 Route options between Stretham Ferry Marina and Green End.

Figure 7F10.1 View along field edge from Green End towards Stretham Ferry Marina.

Figure 7F10.2 View along public footpath on north bank through Stretham Ferry Marina.

Figure 7F10.3 View along south bank showing narrow bank top. The access road adjacent is not continuous and is in poor condition. The existing river bridge is not suitable for all.

xi.

Green End is an attractive quiet road that links Stretham with the river at Stretham Old Engine. It is relatively quiet and would be appropriate as a Quiet Lane with a 20 mph limit.

Figure 7F11.1 Green End view towards river.

xii.

The A1123 runs through Stretham. It does not appear to be as busy as the A1123 in Wilburton, but traffic volumes mean that a segregated facility or some special provision is required including a safe crossing of the road. There is allotment land to the south of the A1123 and it may be possible to agree to use a strip of land on the edge of the allotments, along with signalisation of the Read's Street/ A1123 junction. Alternatively, it might be possible to signalise both the Green End and the Chapel Street junctions with cyclists on the road for a short length between the junctions, this part of the route needs detailed design with the aim of link Green End with Chapel Street or Read's Street.

Figure 7F12.1 A1123 view towards Green End.

Figure 7F12.2 A1123 view towards Green End from Read's Street junction.

xiii.

The roads in Stretham away from the A1123 and the A10 are mostly relatively quiet and suitable for cyclists to mix with traffic at 20 mph. The exact route through Stretham will depend on the details agreed for xii. and xiv. but will need to include Read's Street and should link with the High Street.

Figure 7F13.1 Read's Street should be suitable for cyclists to use the road.

xiv.

It would be possible to use the High Street and Ely Road to create a new path besides the A10 north of Stretham, but space is tight in front of properties and there may be parking issues, so a better option would appear to be to create a new link north of Stretham from Berry Close. A field edge path around the edge of Stretham could then link with field edge path set back from the A10. This will clearly need the landowners' agreement.

Figure 7F14.1 Berry Close. View towards fields, A10 and Ely.

Figure 7F14.2 View from the edge of Stretham along the A10 towards Ely. Any new path would need to be in field edges set back from the A10 and would need landowner's agreement.

xv.

Stretham sits near the junction of the A1123 and the A10 and has no easy crossings of these roads. It is therefore isolated from surrounding areas by foot and wheeling. Little Thetford and Wilburton are the closest communities with Witchford and Ely not too far away. A new safe crossing of the A10 has the possibility of improving a number of these links, especially if positioned north of Stretham. This works well for links with Witchford, where there are strong aspirations to make a good walking and cycling link with Ely. A crossing north of Stretham does not work well for links with Wilburton because the A1123 is the natural route for that link, but it is hard to see how a good route could be formed along the A1123 without the purchasing of gardens that are close to that road. A more northerly route looks more achievable (See xvii.)

Any bridge would be a major structure and a significant cost, but it could be argued that a bridge over the A10 would attract more usage than a bridge over the River Great Ouse in a remote location. Costs would be similar. Any bridge would need to have good clearance over the A10 – to be agreed with the County Council and would need long ramps which should be in-line with the route. For these ramps to have a gentle gradient they would need to be at least 150m long. They could be earthwork ramps, although this will need a considerable amount of land that will need to be agreed with landowners. A crossing position approximately halfway between Stretham and Broad Baulk could work but this will need detailed designs and surveys including checking for utilities.

If the bridge links with Broad Baulk the road could be used as an on road link with Witchford, although traffic volumes and speeds are a concern, so this would need more investigation.

Figure 7F15.1 The approximate bridge position. The A10 is a difficult road to cross.

xvi.

A field edge path around the edge of the A10 and Broad Baulk would need to link with Broad Baulk and Grunty Fen Catchwater. This will clearly need landowners' agreement for a 3m sealed path set well away from the roads.

Figure 7F16.1 View towards A10 from Grunty Fen Catchwater. A field edge path would need to follow Broad Baulk.

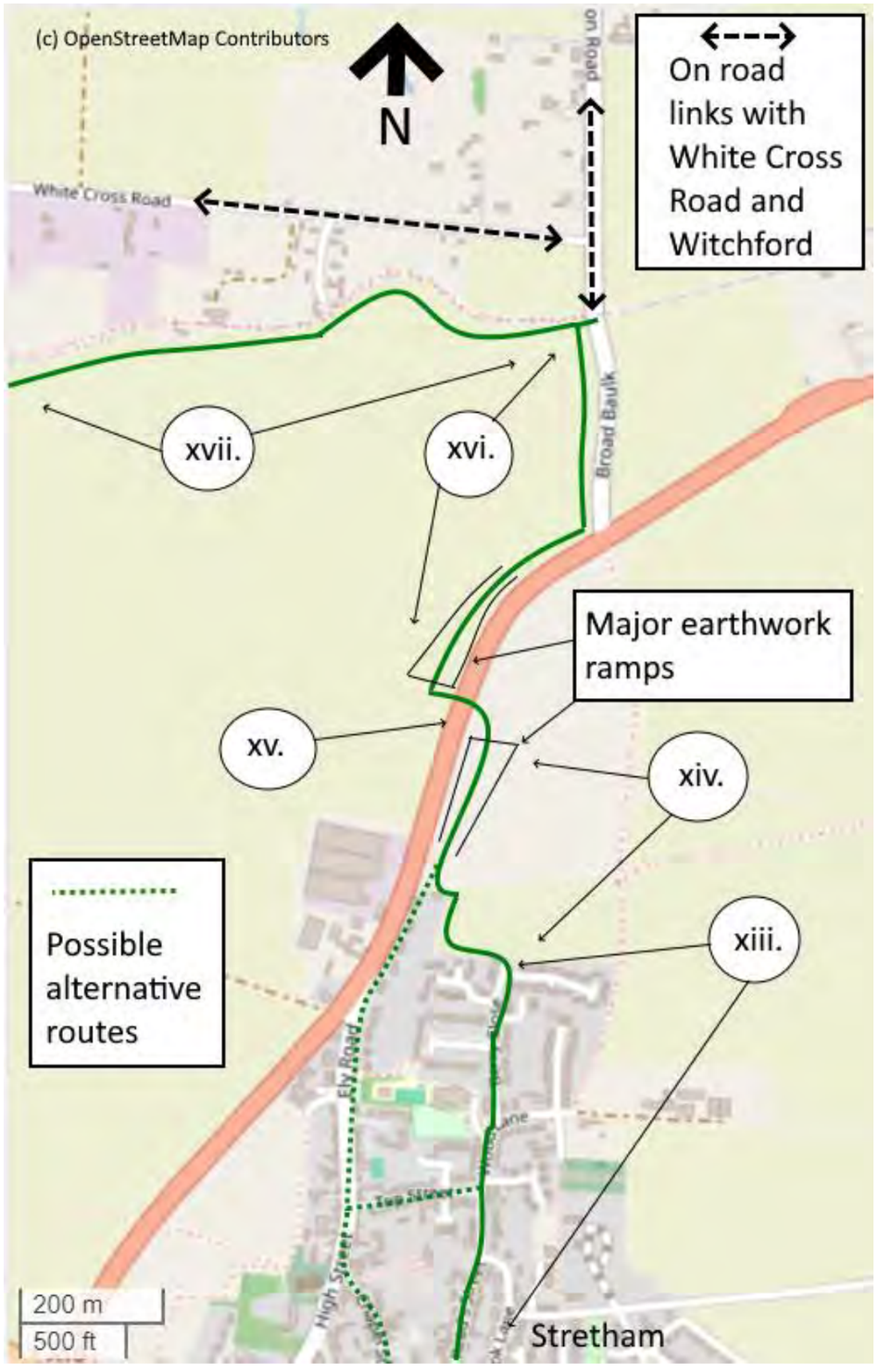


Figure 7F15.2 Overview of area showing the approximate bridge position, if agreed and subject to detailed design.

xvii.

There is a public footpath along the north bank of Grunty Fen Catchwater. This is an attractive route in places but is very constrained elsewhere and it is hard to see how it could be upgraded to a suitable standard. Similarly White Cross Road could be a suitable route, but traffic speeds on the narrow road make this intimidating. The best option would be a new path to the south of Grunty Fen Catchwater, following the Catchwater but set far enough away to avoid the biodiversity net gain complications of a path close to a watercourse. This appears possible from Google Earth but will need landowner's agreement and suitable fencing if required. It has not been inspected. A 3m sealed path would be needed between Broad Baulk and Station Road, Wilburton.

Figure 7F17.1 View towards Broad Baulk along public footpath. This alignment is not recommended.

Figure 7F17.2 View from Broad Baulk along the south side of Grunty Fen Catchwater which follows the tree line. A path would need to be on the camera side of the trees.

Figure 7F17.1 View towards Broad Baulk along public footpath on left. A path to the south (right) of the Catchwater would be a good option. It has not been surveyed.

xviii.

At the approach to Station Road the route would have to turn away from Grunty Fen Catchwater to run alongside the sewage works boundary and to meet up with Station Road. Visibility will need to be checked for a safe access. The route could continue on road, but this will need further assessment. A more attractive option would be to continue the route on road on the edge of school grounds following Station Road. There would need to be appropriate fencing and secure access for the school, if this can be agreed. The route would then link with Station Road through trees and opposite Broadway. Again visibility will need checking.

Figure 7F17.1 View away from Wilburton of Station Road, where the route could possibly be on road or behind trees to the right and off-road.

Figure 7F17.2 View through trees from Station Road for possible field edge path.

xix.

Broadway is a quiet road and suitable for cycling on the road. A 20 mph limit is recommended. See Option A for comments on Wilburton.

xx.

An alternative to the route following Station Road would be to continue along Grunty Fen Catchwater following the public footpath and to link up with Hinton Way. Hinton Way has already been identified as a potential link route with Witchford and also Haddenham, so it has value. If all the routes identified in Figure 7F20.3 were delivered this would create a circular route. The costings for this option assume that only one is delivered.

To continue along Grunty Fen Catchwater a small bridge will be needed to cross from south to north. The route will then need a safe crossing of Station Road (with visibility checks) and can continue along the Catchwater preferably set away from the bank by at least 10m.This route has not been surveyed but appears possible, however it looks unrealistic to get the 10m offset over the whole length so there will be biodiversity net gain implications. A 3m sealed path is needed throughout.

Figure 7F20.2 View from Station Road along Grunty Fen Catchwater west of Station Road.

xxi.

Hinton Way has already been identified as important in the Haddenham to A142 study. It is a public byway and hence surfacing needs to address the needs of multiple users including equestrians and surfacing needs to be robust enough to deal with farm traffic. Detailed surveys and consultation are needed to establish a sealed path at least 3m wide.

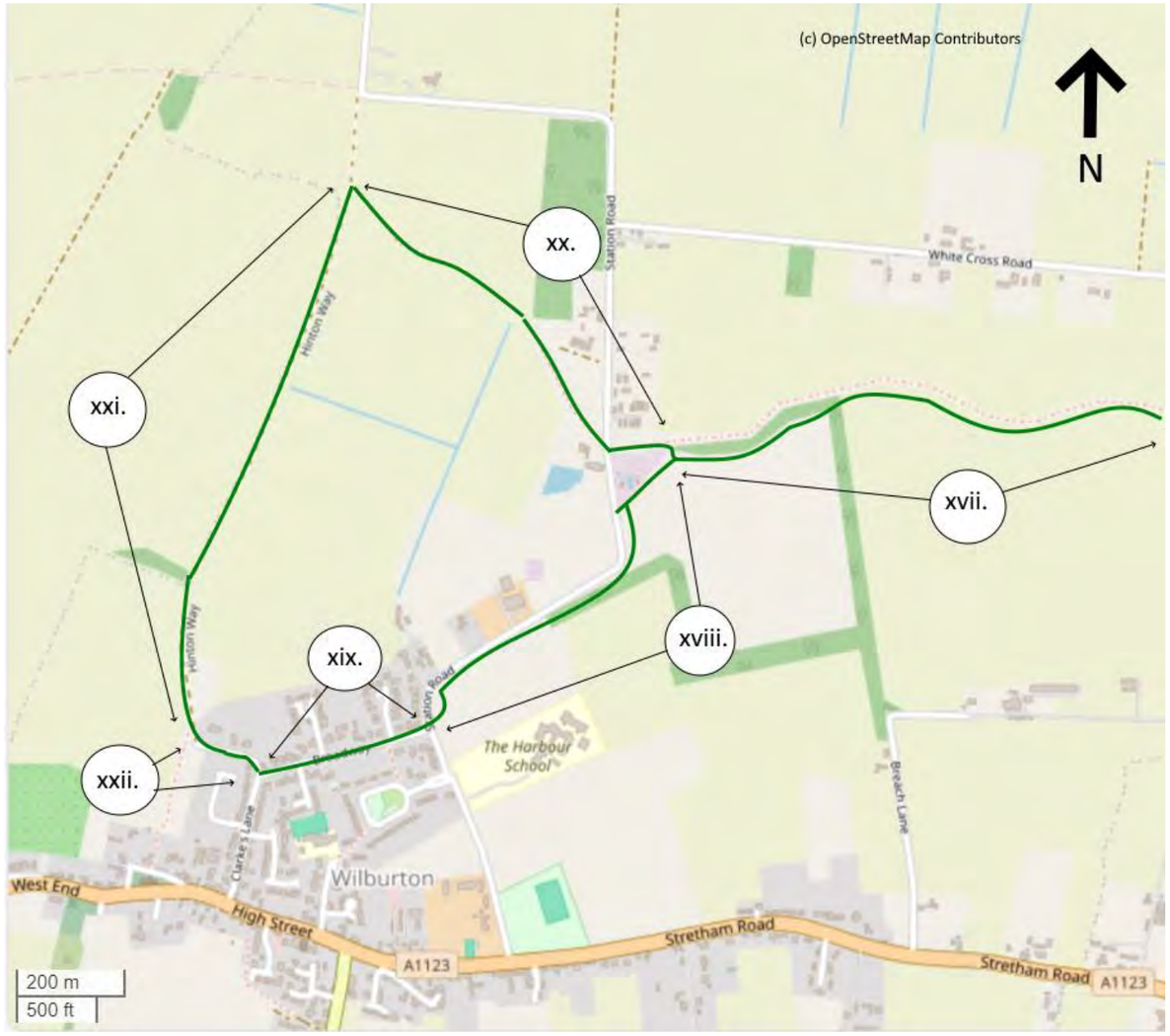


Figure 7F20.3 Overview of area.

Figure 7F20.1 View from Station Road along Grunty Fen Catchwater east of Station Road.

Figure 7F21.1 Hinton Way varies in width and needs a detailed survey and further design work. Image from Haddenham to A142 report.

xxii.

Hinton Way becomes a partially surfaced residential road, but needs surfacing improvements. See Option A.

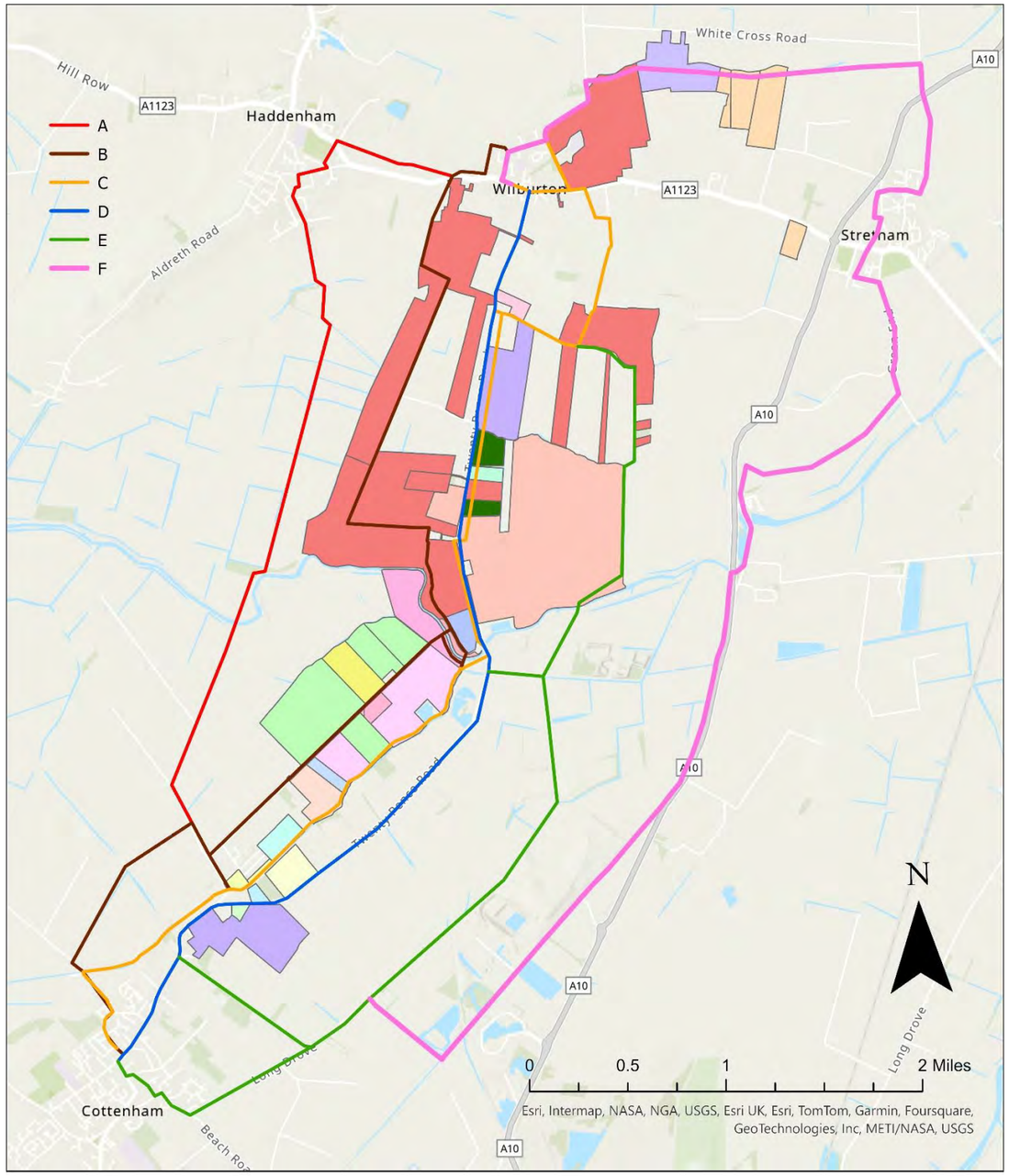
Option F **Summary**	
Comparative Length	Shortest distance by road Wilburton - Cottenham = 9.1km, Distance using this option Wilburton - Cottenham = 17.3 km As a route between to Cambridge Business Park and Stretham this is direct, but as a route between Wilburton and Cottenham is very indirect.
Likely estimated cost	Works in Cottenham Road, field edge path surfacing Cottenham – A10 layby = 7.3km (including crossing under A10). Field edge path A10 – Stretham Green End = 1.9km + 5 small bridges. A1123 path Stretham allotments = 150m 1 x Parallel crossing A1123 Stretham Field edge path Stretham – Wilburton via Grunty Fen Catchwater = 4.0 km. New bridge over A10 4m wide. 35m span + 300m earthwork ramps. Works in Wilburton
Engineering difficulties	The route under the A10 looks difficult. It has not been surveyed. Constructing major bridge over A10 will be challenging. Works along the A1123 in Stretham will need traffic management. Likely to be utilities so survey work is needed.
Ecological issues	The route follows watercourses, and this will be sensitive and may have high Biodiversity Net Gain costs. Sensitive woodland near Research Park.
Land ownership issues	Almost entire route needs private land, so this looks challenging. Due to Biodiversity Net Gain requirements a 10m buffer strip is required between the path and the watercourses so a lot of land will be needed. The Thalia Waste Management Site is currently inaccessible on foot or bike and has security measures, so new access may be difficult.
Other issues	The route connects with a number of places that currently have no walking or cycling access.
Overall	Could have the most usage of all the options, because it could serve a number of short journeys, but unlikely to appeal as a route between Wilburton and Cottenham. Land and ecology challenges are significant.

8. Land ownership

The most complicated part of the development of any new route is likely to be the need to get landowners' agreement. Time and funding need to be allocated for this and if necessary, the Local Authorities need to be willing and able to use Statutory Powers to deliver the proposed routes. This should however be a last resort. The aim should be to build good relationships with all landowners. It will also be important to secure enough land to allow for required path width and adequate clearance alongside the path. If equestrian usage is part of the proposal there will need to be additional land to allow for a different surface and space for equestrians if they are not to share the surfaced path.

Fig 8.1 shows the Land Registry map. The area has expansive farmland, so it is unsurprising that many land parcels in the area are large and that single landowners own multiple parcels, as signified on the map the right by multiple parcels of the same colour. The map does not reveal the identities of individuals, but does show that public bodies own significant areas or land along various potential routes; namely Cambridgeshire County Council and the Homes and Communities Agency. Roads can be assumed to come under the Local Authority's jurisdiction, but highway boundaries do need to be checked in this case with Cambridgeshire County Council as part of 'Highways maintainable at Public Expense. The prefix 'CB' in all the Title Numbers listed below also refers to Cambridgeshire.

Data has been obtained from the HM Land Registry website, a non-ministerial government department (https://www.gov.uk/government/organisations/land-registry), which was uploaded into ArcGIS Pro to produce the map. Sustrans has more detailed information on each polygon, and this will need to be the basis for further work which will involve contacting landowners and liaising with them to understand their needs and implications of new works.



Proprietor

- Cambridgeshire County Council Shire Hall, Castle Hill, Cambridge CB3 0AP
- HOMES AND COMMUNITIES AGENCY 4th Floor, One Friargate, Coventry CV1 2GN
- Ivanovic And Company Limited Staveley House, Staveley Road, London W4 3HU
- Malary Limited Malary House, Brookfields Business Centre, Twentypence Road, Cottenham, Cambridge CB24 8PS
- THE COUNTY COUNCIL OF THE ADMINISTRATIVE COUNTY OF CAMBRIDGE Shire Hall, Castle Hill, Cambridge

Figure 8.1 Showing land ownership colour coded by parcel. (Note that where the ownership is private Sustrans has details, but the individual owners are not listed in the Proprietor Key.)

9. Ecological Assessment

Scope and limitations of ecological assessment

Hannah Lewis MCIEEM (Sustrans Ecologist) has undertaken a desk-based assessment of the likely ecological impacts and constraints for six main route options between Wilburton and Cottenham in East Cambridgeshire. This is a high-level assessment only, based on data obtained from Cambridgeshire and Peterborough Environmental Records Centre in February 2024 and freely available online datasets[1] in February 2024. No site visit has been conducted and a full report has not been prepared.

Scheme viability and route comparison

Option D is situated on a road with no construction required and will therefore have no negative ecological impacts and would likely require no additional ecological survey or assessment. From an ecological perspective this is the preferred route option. A, B and E will require new bridges over the Great River Ouse and will impact on priority habitat and associated species in these locations. They are also situated close to ditches, which will increase the biodiversity gain burden for the scheme.

Options C and F include significant distances of new construction in close proximity to rivers and ditches making the Biodiversity Net Gain likely to be prohibitively or disproportionately costly unless the routes can be realigned away from the bank top, preferably by 10m. These are also at risk of having high impacts on water voles if present and could require substantial and costly mitigation strategies unless a 5m buffer from the watercourse can be maintained.

Designated Sites

Wicken Fen and The Ouse Washes are internationally important sites situated 4.5 and 5.5km from the proposal (Figure 9.1). Wicken Fen is part of the Fenland Special Area of Conservation (SAC), Ramsar Site and is a Site of Special Scientific Interest (SSSI). The Ouse washes are designated as a SAC, Special Protection Area (SPA), Ramsar site and SSSI. Wicken Fen designated for its internationally important Molinia meadows and calcareous fens. The fenland habitats and associated flora and fauna are nationally important and unique in Cambridgeshire. Given the distance and lack of habitat connectivity no impacts are likely on this site. The Ouse Washes are designated for its internationally important population of spined loach and important overwintering bird populations and its nationally important breeding bird populations. The project is over 5km from the Ouse Washes and is situated outside the Natural England Goose and Swan Impact Risk Zone[2]. As such, impacts on the nature conservation interest of this site are considered unlikely.

No statutory nature conservation sites are situated within 1km of the site. Eight County Wildlife Sites (CWS), sites of county importance protected through the planning process, are situated within 1km of the routes. Guppy's Pond and Hinton Hedges CWS is over 400m from the proposal and impacts are considered unlikely. Cottenham Moat CWS, Landbeach Pits Willow Wood CWS, Twenty Pence Pit CWS and Fen Side Pollard Willows CWS are all situated adjacent to route proposals. Protection measures may be required during construction to prevent damage, but impacts are considered unlikely.

All routes cross the River Great Ouse CWS and Options A, B and E will require the construction of new bridges. These must be sensitively designed to prevent impacts on water quality, flooding or wildlife movements. Measures will be required to protect the watercourse and its wildlife during construction.

Option F is situated along Beach Ditch and Engine Drain CWS for approximately 4.8km. This site is designated for its aquatic flora, but also is noted to support a diverse invertebrate assemblage and grasslands of interest on the banks. A detailed assessment will be required to determine the likely impacts on this designated site, which will consider habitat loss, encroachment in the riparian zone, potential impacts from increased future access and construction phase impacts. Option E is situated alongside it for 450m but using an existing track, so impacts are likely to be minor. Options B, C, D and E also cross this site using existing crossing points. Any impacts from the proposal will need to be avoided, if possible, minimised and fully compensated.

Option F is situated close to, or potentially within Landbeach Pits Willow Wood CWS, the exact route being uncertain. This site contains a mix of habitats including woodland, wet grassland and scrub and an important invertebrate population. It is recommended that the route avoids this site if possible. The ecological impacts of any path through the site would need to be fully assessed, mitigated and compensated.

Haddenham Engine/Adventurer's Head Drainage System CWS is situated 600m from the nearest route option. There is direct aquatic connectivity to Option A 600m away, then all other Options at increasing distances from the CWS. Impacts are considered unlikely if construction is appropriately controlled to avoid pollution events.

Habitats

The only irreplaceable habitat (as defined by the NPPF[3]) mapped within 500m of the proposal were two areas of lowland fens (Illustrated in Figure 9.4). These were situated at Twenty Pence Pit CWS and Landbeach Pits Willow Wood CWS. Routes C and D are close to Twenty Pence Pit but are on the opposing side of the river or on road with no construction proposed. Construction for Option F may be situated in close proximity to the lowland fen in Landbeach Pits Willow Wood CWS, although the exact route is undefined. Any construction in close proximity to lowland fen would need to be designed to avoid any loss of the habitat or degradation during construction and future use from drainage, access by dogs and littering.

Rivers and drains are a significant consideration in this landscape. The Great River Ouse, Cottenham

[1] Multi-Agency Geographic Information Centre (Website accessed February 2024) Magic Map Application (*defra.gov.uk*)
Woodland Trust (Website accessed January 2024) Ancient tree inventory *https://ati.woodlandtrust.org.uk/tree-search*
DEFRA (website Access January 2024) Main rivers map *https://environment.maps.arcgis.com/*
Buglife (Website Accessed January 2024) Important Invertebrate Areas map *https://www.buglife.org.uk/ourwork/Important-Invertebrate-Areas/*

[2] East Cambridgeshire District Council (2018) East Cambridgeshire Local Plan 2016 – 2036 Local Plan Examination Stage Interim Statement of Common Ground between: East Cambridgeshire District Council Natural England In relation to Matter 1, Q8-10

[3] Ministry of Housing, Community and Local Government (2023) National Planning Policy Framework

Lode and New Cut are statutory main rivers (Figure 9.2) but are not designated as priority rivers by Natural England. Impacts on the Great River Ouse have been discussed in the previous section as this is a CWS. Route C is situated alongside New Cut and Cottenham Lode for over 4km, depending on the proximity of the path to the watercourse, the Biodiversity Net Gain (BNG) costs could be disproportionate to the overall cost of the path and prohibitively expensive. Option F is situated along Beach Ditch and Engine Drain CWS for approximately 4.8km, Grunty Fen for 2.9km and Common Drain for 1.5km. Option F similarly has potential for BNG costs to be prohibitively high dependent on the proximity of the paths to the watercourses and ditches. All routes will be situated in close proximity to other drains throughout the landscape and will also incur watercourse BNG costs, but these are more likely to be in proportion to the overall scale of the project. In each case, impacts must be assessed, minimised and compensated.

Routes are most likely to impact priority habitats in close proximity to the Great River Ouse due to the presence of associated coastal and floodplain gazing marsh and, for Option F, an area of broadleaved woodland and good quality semi-improved grassland to the east of the A10 (Figures 9.3 and 9.4). Impacts on these should be avoided or minimised. Coastal and floodplain gazing marsh, traditional orchards, broadleaved woodland, good quality semi-improved grassland and lowland fens are all mapped in close proximity to routes elsewhere. However, it is anticipated that impacts on these habitats can likely be avoided or minimised. Hedgerows, also a priority habitat, will be present throughout the landscape. All routes could be situated beside or cross hedgerows. It is anticipated that hedgerow removal can be kept to a minimum, with sections less than 5m to be removed only with the exception of Option B where more significant hedgerow removal will be required at the A1123 crossing.

A Biodiversity Gain Plan will be required for all routes except Option D, which does not require construction. Options C and F include significant distances of new construction in close proximity to rivers and ditches making the Biodiversity Net Gain likely to be prohibitively or disproportionately costly unless the routes can be realigned away from the bank top, preferably by 10m. A, B and E will impact on priority habitat and have sections situated close to ditches or watercourses, which will increase the biodiversity gain burden for the scheme. Whether this would be disproportionately high for the scheme will depend on the exact nature of the habitats within the works footprint and the levels of construction required near the watercourses, which cannot be assessed without a site visit. Where possible the Biodiversity Gain Plan should focus on buffering and improving linkages between County Wildlife Sites.

Protected species

Great crested newts, nesting birds (including Schedule 1 species such as hobby, barn owl and kingfisher) and reptiles are present in the landscape and impacts on individuals are possible, depending on the route option selected. The likelihood of impacts on populations should be assessed based on a site survey. The sections of route using existing roads, tracks and situated through cropland only are likely to have the lowest impact on these species.

The watercourses are likely to contain otters, are known to have supported water voles within the last ten years and may support white-clawed crayfish. Impacts could be anticipated on these species for new crossings and where construction is close to watercourses, therefore further survey and assessment may be required for these species. For water voles, impacts can likely be mitigated under license for new crossings relatively easily. Where longer stretches of path construction are within 5m of watercourses and ditches and cannot be re-aligned outside this zone, the impacts and mitigation requirements may be a significant project constraint. This is particularly relevant to Options C and F.

Badger will likely be present in the landscape. Where the route crosses seats and cannot be diverted, mitigation will be required to avoid breaches in legislation. The cost and other implications of this for project feasibility depend on the sett type.

No trees or structures which may support bat roosts are likely to be removed but this is subject to detailed design. Bats may forage and commute along field boundaries and watercourses. Hedgerow loss (greater than 5m) is considered unlikely. Population level impacts on bat activity would only be anticipated if lighting were to be introduced. Lighting should be avoided due to impacts on bats and other sensitive wildlife at this location. The likelihood of population level impacts is otherwise low, but this requires confirmation based on site surveys.

Schedule 9 invasive non-native plant species may also be present in the landscape and could be spread by construction work. The risk of this impact must be assessed and avoided or mitigated.

Other notable species and assemblages

The Ouse Washes and Wicken Fen are part of the Fens Important Invertebrate Area. The designated sites are known to support notable plant and invertebrate assemblages, particularly in association with ditches, but also other semi-natural habitats. Notable plant species are also associated with arable field edges. An assessment of invertebrate habitat and risk, and a plant survey are recommended once preferred route options are identified. Lighting may have a significant risk to aquatic invertebrates and should be avoided in this location.

Toads and notable mammals such as polecat, hedgehog, brown hare and harvest mouse are likely to be present in field margins and other semi-natural habitats. Impacts on individuals may occur but impacts on populations are unlikely. Mitigation measures should be included to protect these species. Notable fish species are likely to be present in watercourses and drains and populations will need to be protected through best practice design and construction methods.

A notable farmland bird population may be present in this landscape. An enhancement plan, which may for part of the biodiversity gain plan, could include measures to increase and enhance hedgerows and field margin habitats for birds including turtle dove, corn bunting, grey partridge and barn owl.

Next steps

Consultation with the Environment Agency and Local Authority should be undertaken to determine which of these options may be viable. The preferred options will also require a full Preliminary Ecological Appraisal (PEA) with a site survey for a more accurate assessment of impacts on other habitats and species. Further species surveys likely to be required for statutory compliance include;

- Badger;
- Otter, water vole and white-clawed crayfish where construction is near watercourses or field drains;
- Bat roost assessments if trees or structures are impacted; and,
- Reptile and bat surveys where habitat loss is identified as significant.

Nb: Great crested newt surveys will not be required if the District Level License is used.

An arboricultural impact assessment and tree protection plan will be required for the planning application where routes are situated by woodland, orchards or other trees. Surveys for notable species including plant, invertebrate and breeding bird assessments dependent on the preferred route alignment and findings of the PEA.

A biodiversity gain strategy will be required for planning permission to be granted. Early consultation is recommended with the Local Authority regarding measures proposed for the biodiversity net gain strategy. The biodiversity gain strategy should, where possible, strengthen the existing ecological network, enhance retained habitats and diversify the landscape. It is likely that watercourse, hedgerow and habitat units will be required. Measures to buffer field drains and enhance hedgerows and field boundaries would likely be beneficial.

To protect the nature conservation interest at the site, the detailed design (including temporary works areas) should;

- Maintain a sufficient buffer to protect adjacent watercourses, ditches, wetlands, hedgerows and woodland;
- Avoid important habitats and wildlife populations where possible;
- Allow continued wildlife movement along watercourses and avoid impacts on watercourse flow and scour;
- Avoid lighting and fencing; and,
- Include biodiversity enhancements.

A Construction Management Plan will be required that includes measures to protect designated sites, retained habitats and protected and notable species. If present and if impacts cannot be avoided, licenses may be required for work relating to badgers, bats, water voles, white-clawed crayfish and otters. The routes are all within green and amber risk zones for great crested newts and therefore the scheme can apply for inclusion within the District Level License if planning permission is required.

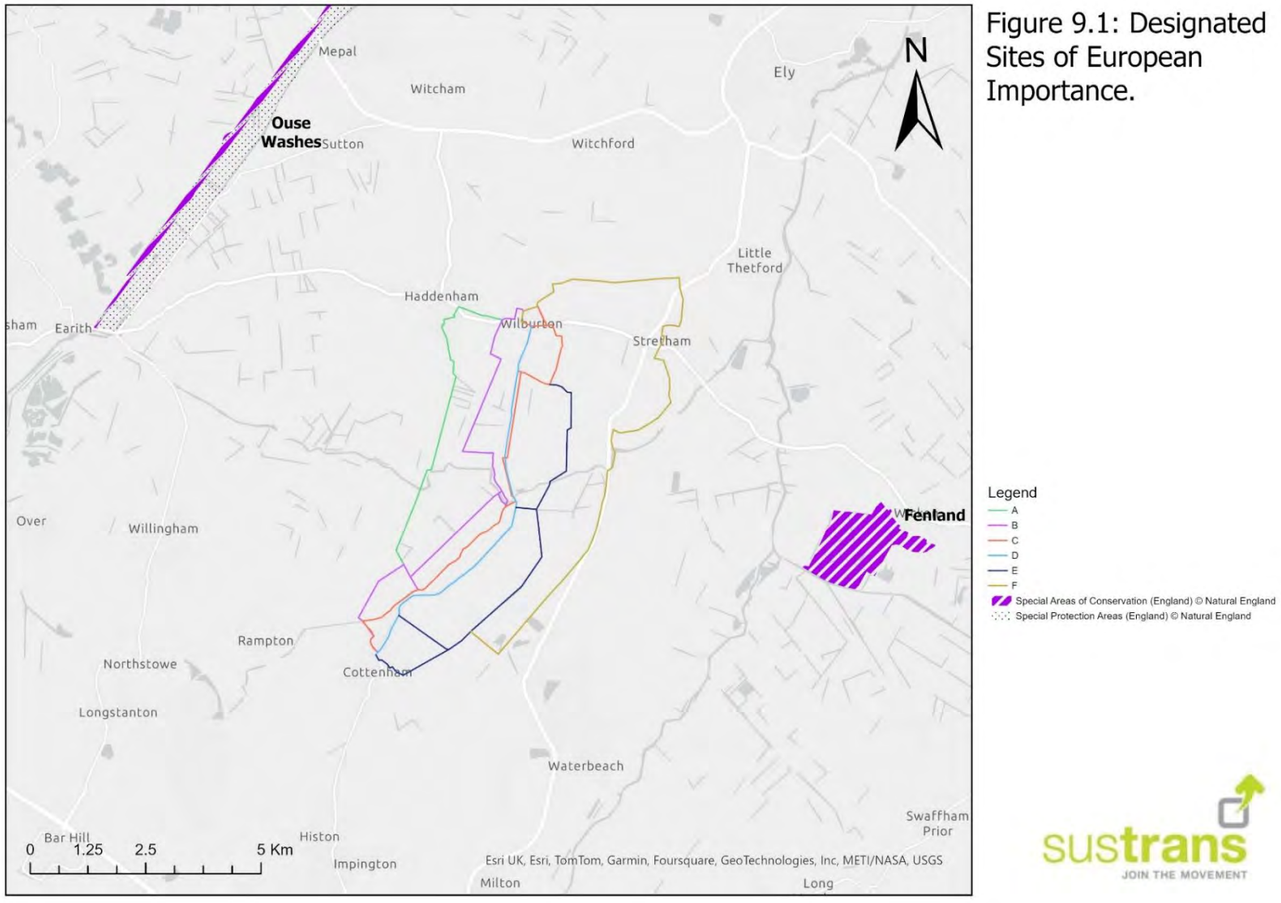


Figure 9.1: Designated Sites of European Importance.

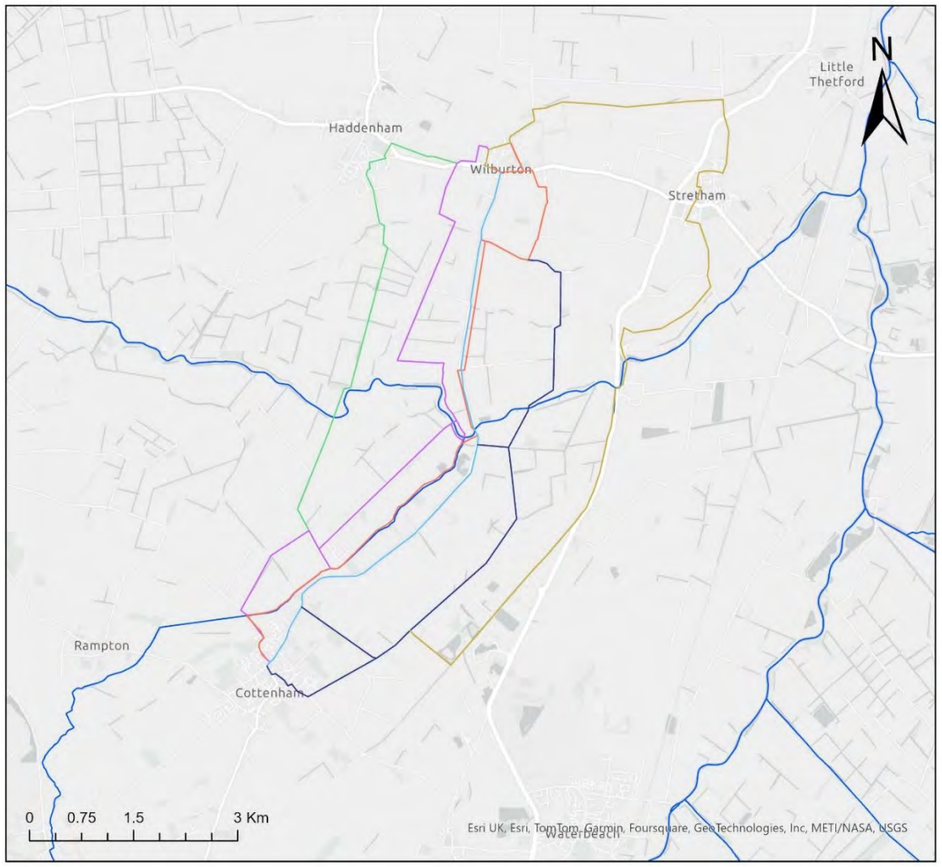


Figure 9.2: Statutory Main River Map

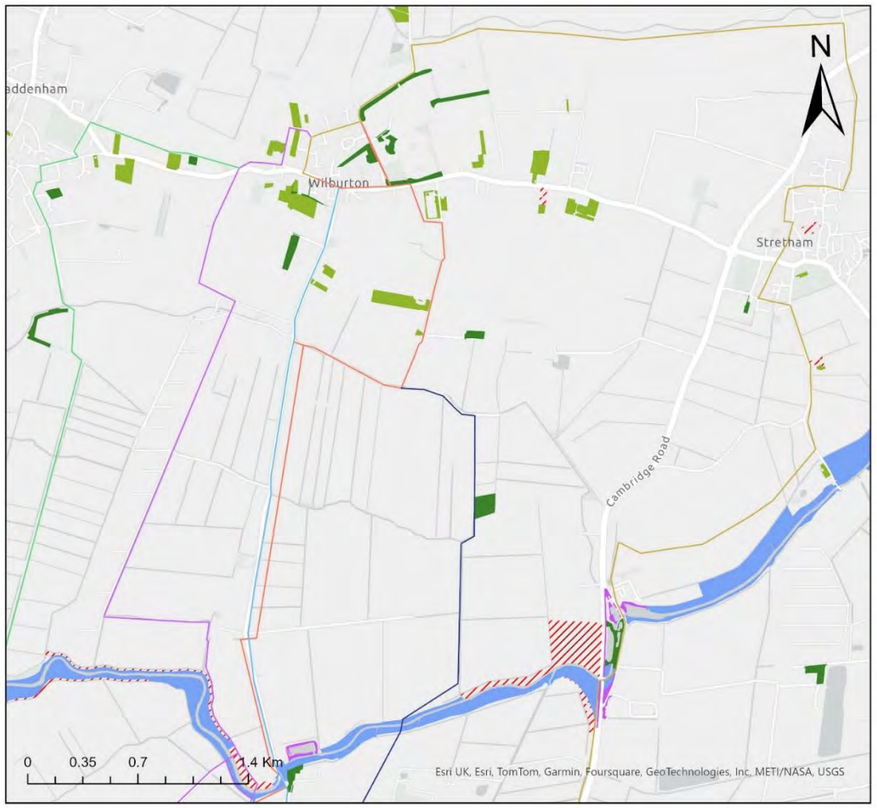


Figure 9.3: Priority Habitats (North)

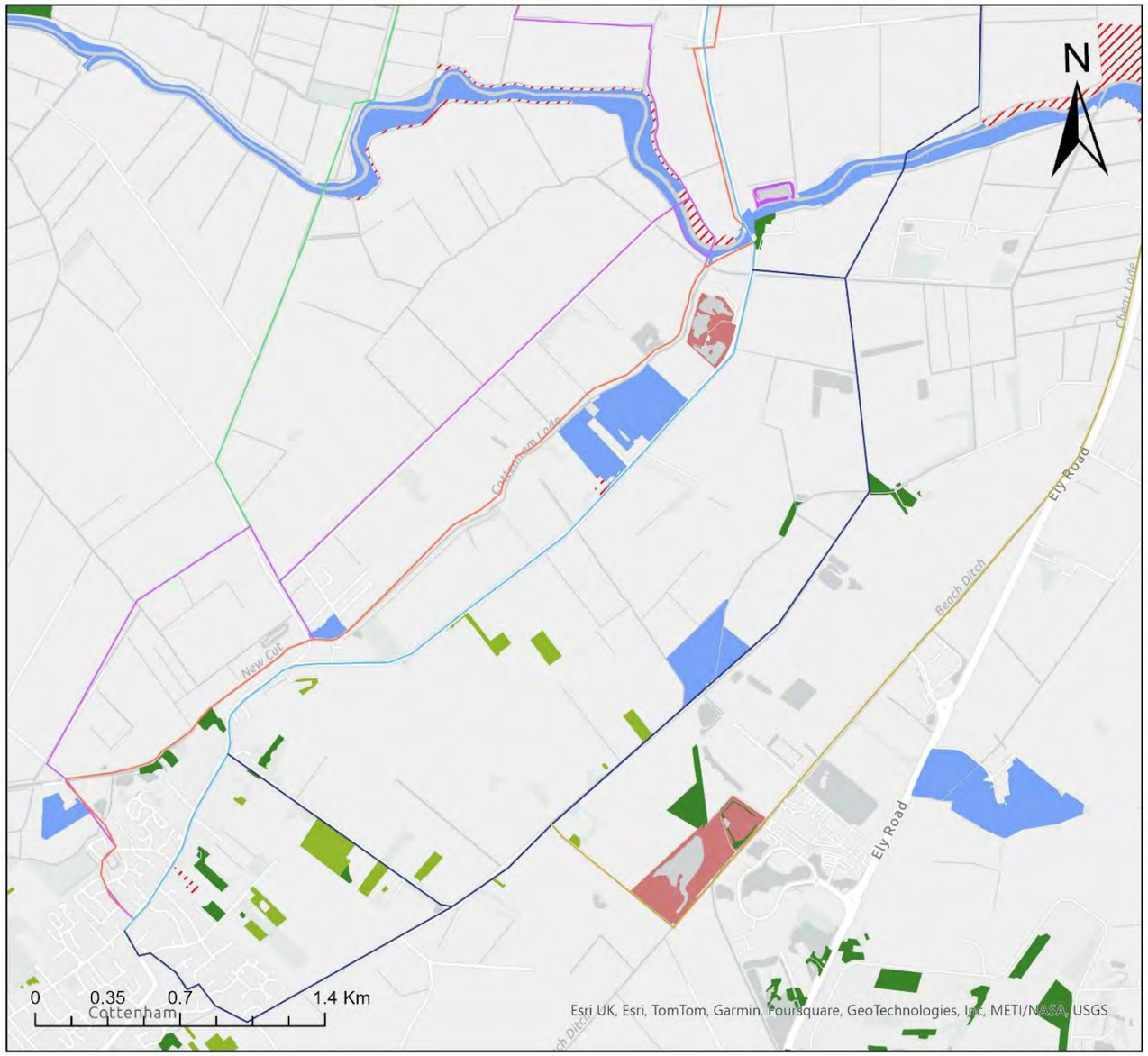


Figure 9.4: Priority Habitats (South)

10. Inclusive engagement

Inclusive engagement and communication are a creative process that starts with listening to a diversity of lived experiences and uses this understanding to develop more equitable projects and places that are healthier and happier for everyone. This process is not just about the built environment but applies to all aspects of the Wilburton to Cottenham project, from behaviour change, to research, systems, and communication. It starts with engagement, and consciously amplifies seldom-heard voices to inform a project's development. Fundamentally, it recognises that not everyone has the same opportunities in our society.

Figure 10.1 Sustrans visualisation which can be a tool for inclusive engagement.

and seeks to prioritise concerns raised by marginalised groups. Inclusive design opens new ways of thinking about places and projects, creating projects that are ultimately more interesting and engaging for everyone.

This project has the potential to have a significant impact on people's everyday lives. This comes with a responsibility to be inclusive and ensure it creates healthier and happier places for everyone. This means work must be done to identify and prioritise the needs of people who are regularly excluded to ensure their needs and requirements are met. The feasibility stage Equality Impact Assessment (EqIA) has started the process of identifying the potential impacts of the project on people with protected characteristics. The EqIA (refer to appendix A) will be a live document that evolves alongside future stages of the Wilburton to Cottenham.

"All urban design, including cycling, is not neutral, it either perpetuates or reduces social inequity."
Cycling for Everyone

The following principles will ensure that the Wilburton, Cottenham and wider impacted communities including Haddenham are informed and involved in the project at all stages. Information will need to be shared and distributed in formats which consider the needs and preferences of different people (refer to Figure 10.1). There will be a focus on those who might have significant disadvantages, such as living on a low income or socially excluded as well as people with a protected characteristic. In recognition of the importance of listening to the diversity of lived experiences, when the project progresses, these principles will be refined in discussion with key stakeholders.

Across Sustrans, all our projects are guided by these inclusive principles.

A process led by **engagement**, where solutions are shaped by those impacted by the project. (see Figure 10.2)

Be flexible in approach – tailoring engagement activity and content to match the needs of the people taking part.

Proactively engage and involve people with different lived experiences at the start of the project to help shape all key elements of the programme from design to delivery.

Reflecting the diversity of lived experiences by developing **diverse, evolving, and responsive solutions,** and ensuring project delivery teams are diverse and representative, bringing in external support where necessary.

Running workshops in **community settings**, at convenient times to help inform people about the project. Where possible using venues which have step free access, disabled parking spaces, accessible toilets and are comfortable for everyone.

Figure 10.2 It is important to provide appropriate settings and opportunities for people to engage.

Communication materials and content will include imagery which reflects local populations, including disabled cyclists, older people, people using a variety of different cycles (refer to figure 10.3 Leamington).

An ongoing process of **learning, listening and reflection,** monitoring people's experience of projects, collating detailed evidence, and proactively seeking feedback to inform future work or changes to previous works.

When running an event in-person or online, as standard, we ask attendees in advance if there are any **additional support,** they require to help them take part. Reviewing the demographics to highlight any community groups whose feedback has not been captured yet.

Monitoring to review whether communication and engagement activity has reached a diverse audience and identify any community groups whose feedback hasn't been captured or considered.

The creative activity of developing new ways of working to provide not just equitable access, but **dignity and joy for everyone**.

As the project progresses running events with specific **lived experience groups**: children, young girls, visually impaired users. Dedicated materials to ensure they can meaningfully participate (use Lego with young people, tactile models for visually impaired users).

Lived experienced site visits for people in the community with lesser heard voices including wheelchair users, people who use a pram and older people.

Develop an **independent stakeholder group**, to review impact.

10.1 Evidence of Support

Sustrans has not undertaken community engagement as part of this study, but this is vital to developing and ultimately delivering a successful project.

A community engagement plan guided by the inclusive engagement principles could include:

- On-line consultation and poster, leaflet campaign.
- Consultation meetings across the project area.
- Presenting at Council meetings etc.
- The completion of Healthy Streets Audits for the villages. This can help engagement in the wider issues.
- In-depth discussion with landowners.

A Collaborative design process should be used to structure the engagement plan. This will help unpack overall route considerations in parallel with specific impacts and opportunities at different points along its length. Sustrans Age Friendly Tyburn project was a collaborative design project working with local residents to assess the area and develop trials that changed the environment to make active travel age friendly. (see Figure 10.2)

Sustrans developed a six-week adapted bikes programme with residents in Belfast. (see Figure 10.3) The programme was co-designed and aimed to increase the confidence and ability of riders with disabilities.

Fig 10.3 Sustrans bikes programme with residents in Belfast

10.2 Audit of Engagement Risk

At present we envisage that the major risks are likely to be:

- People who may object to restrictions or limitations on motorised traffic, including people who may engage in social media.
- People who use the existing Nature Reserve and other greenspaces and do not want to see any changes.
- Residents who may object to changes within the villages or on the roads in Wilburton and Cottenham.
- Landowners who do not want paths on their land because of security, financial or other concerns.
- Developers who may not want to deliver the quality of facility that is required.
- Any who may object to the ecological aspects of any work.
- Members of the local community, local businesses and other stakeholders who may be opposed to anything that might be seen as facilitating developments (if they are opposed to the developments).

10.3 Audit of Engagement Opportunity

As part of this study initial discussions have been held with representatives from the East Cambridgeshire District Council and Cambridgeshire County Council regarding developments and further engagement is needed. In addition, it will be particularly important to engage with the residents of Cottenham, Wilburton and the other villages that could be involved, who are the ones are most impacted by the proposed options. It will be vital to engage with all impacted guided by the inclusive engagement principles.

10.4 Community Engagement Plan

At this stage there has not been Community Engagement, although Sustrans regards this as vital for the success of the proposals.

The early stages of community engagement will need to start with East Cambridgeshire District Council, South Cambridgeshire District Council, Cambridgeshire County Council, and the Town Councils, so that the project can be directed by the wishes of the elected members, but this will need to be handled delicately, so that relations with landowners are not damaged. Landowners should know at a very early stage what is being proposed and need to understand that nothing is finalised yet and their wishes will of course be considered.

11.Equality Impact Assessment Summary

Sustrans is implementing an Equality Impact Assessment (EqIA) process which starts at a project's inception. It is focused on ensuring all projects and services are created and completed in line with The Equality Act 2010 and Equality Duty. As a charity, while our Equality Duty responsibilities are not the same as those for public sector organisations, we aspire to take a lead in delivering best-practice inclusive projects. This links directly to Sustrans 'For Everyone' vision and NCN Principles.

The Equality Duty explains that having due regard for advancing equality involves:

Removing or minimising disadvantages suffered by people due to their protected characteristics.

Taking steps to meet the needs of people from protected groups where these are different from the needs of other people.

Encouraging people from protected groups to participate in public life or in other activities where their participation is disproportionately low.

The EqIA has been guided by best practice guidance including LTN 1/20 and related research. This guidance and research have been linked to what is currently known about the location, Wilburton and Cottenham's communities, and the findings of this feasibility study. The Feasibility stage EqIA (refer to appendix A) is an initial step which will need to be regularly updated and refined as the project develops. The EqIA will help shape and be shaped by Sustrans Inclusive projects principles.

The following points are emerging from the feasibility stage EqIA as key considerations:

Inclusive engagement including collaborative design will help all sections of the community to unpack and shape the routes development, especially people with protected characteristics and seldom heard voices.

Behaviour changes activities that support people with the cost of cycling and ability will be needed. This will enable all sections of the local community, including those with protected characteristics to fully benefit from the proposed route and its link to local destinations.

Sections of the route will be shared with motor vehicles including farm machinery and could be intimidating for people with protected characteristics. The design of these sections should consider the viability of segregating motor vehicles from pedestrians and cyclists, and alternative routes through adjoining fields. If these options aren't viable, traffic speed and volume will need to be managed with 20mph speed limits, and changes to the carriageway (for example priority working, buildouts, psychological traffic calming).

Route design and linked public spaces will need to respond to engagement feedback, monitoring, and best practice guidance. This is to ensure the route including its controlled crossings, grade segregation and adjoining public spaces are coherent, safe, comfortable, and attractive for everyone.

The project's development will need to consider how its rural context between Wilburton and Cottenham impacts safety concerns. Twenty Pence Road even with reduced traffic will be an intimidating environment for some protected characteristics. As such, it is recommended that multiple route options are chosen in parallel.

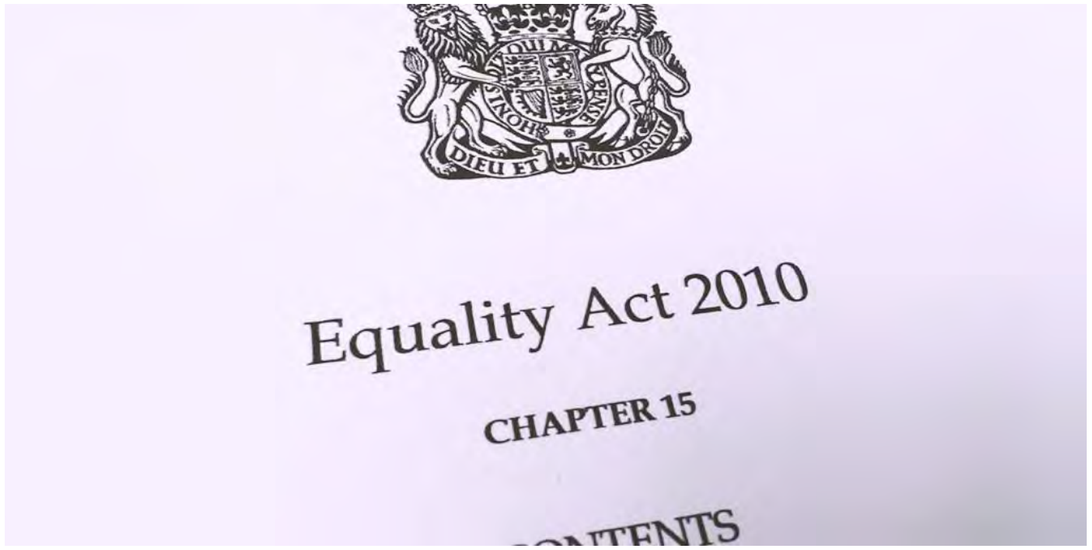


Figure 11.1 – The Equality Act 2010

Figure 11.2 – Equality for those with protected characteristics

12. Key Stakeholder Engagement

The following organisations have been identified as stakeholders to develop the route options at the next stage. The list is not exhaustive. Where landowners are individuals, these have not been named.

- Cambridgeshire County Council
- Cambridgeshire County Council Rural Estate
- East Cambridgeshire District Council
- South Cambridgeshire District Council
- Cottenham Parish Council
- Wilburton Parish Council
- Stretham Parish Council
- Haddenham Parish Council
- Historic England
- Natural England
- Combined Authority Peterborough and Cambridgeshire
- Local businesses
- Cambridge Research Park
- Thalia Waste Management
- Twenty Pence Garden Centre
- Local Public Rights of Way Teams in Cambridgeshire
- Local cycle groups
- Camcycle
- The Ramblers
- British Horse Society
- Cycling UK
- The Trails Trust
- East Cambridgeshire Access Group
- Cambridgeshire Local Access Forum
- Disability Advice Service
- All landowners along the preferred route alignments

Informal discussions with all stakeholders can give an indication of likely acceptance of the scheme and likely issues that will need to be examined more carefully at Detailed Design.

13. Planning application and other approvals

All the options will need planning approval for the off-highway construction works and will need highways approval and the appropriate orders for highway works.

Where new routes are not following appropriate rights of way or public highway legal agreements are likely to be needed with the landowners. These will need to grant rights for users and allow for construction and maintenance of new paths. The signatory for the legal agreements will need to be agreed at an early stage, but it is likely to have to be Cambridgeshire County Council, South Cambridgeshire District Council or East Cambridgeshire District Council- budgets will need to be provided for this. There will also need to be consideration as to when and how statutory powers might be used if there is no progress in negotiations with landowners, but the aim should be to avoid this if possible. It is not possible to say at this stage exactly how much land will be needed or where exactly paths should be positioned. They will need to be positioned to suit landowners' requirements and community requirements. One option for routes could be the creation of bridleways, which would benefit equestrians. If this is the case adequate space needs to be allowed for all users.

Ecology requirements and the need to keep away from watercourses and riverbanks will increase the amount of land required for some options (particularly Options C and E) and there would need to be a lot of discussion about mitigation measures and Biodiversity Net Gain. In addition, it is important to consider how a path and other features will be constructed and maintained. Space will need to be allowed for a site compound for construction and access routes and rights will need to be agreed for construction and maintenance vehicles and plant. All of these are matters that a skilled negotiator will need to consider, whilst developing a good understanding with landowners of the issues that are priorities for them.

Until discussions with landowners have progressed it is too early to be discussing planning details with the planning authority, but at the appropriate time pre-app discussions should be undertaken with some key stakeholders such as East Cambridgeshire District Council, South Cambridgeshire District Council and Cambridgeshire County Council to understand the issues that might come with an application and to inform the work likely to be needed at the Detailed Design stage.

14. Cost Estimates

At this stage costs are very approximate, based on estimated costs/ m or estimated unit costs. The highway works have the highest range of costs, because little is known about the construction of the existing carriageway or the services within the highway. Traffic management can also be a highly variable cost. Option A also has a wide range of costs because closing the road to through traffic would be relatively cheap and constructing a new path on private land besides the road would be relatively expensive.

The costs of all works in both Wilburton and Cottenham have been estimated, but without detailed design, because these works are important for the success of other works. These works would be a valuable investment in the local communities and are needed even without the link between the two towns.

Costings are calculated for off-road sections for each route.

In places there are sub options, and these are itemised separately, with an explanation as to which cost is used in the overall costings. The sub options are:

- Option A has 3 sub-options depending on what traffic changes are implemented, if any.
- Option B has sub-options depending on whether the nature reserve is used or not and the impact that this has on biodiversity net gain.

Item	Item description	Unit	Low cost per unit	High cost per unit	Quantity	Low total cost	High total cost	Notes
Junction treatments	Tightening junctions	Item	10,000	25,000	9	90,000	225,000	New radius 1m –3m.
Raised tables	Crossing improvements	Item	15,000	30,000	18	270,000	540,000	
Cottenham one way	Segregated cycleway on existing road. Bolt downs high quality.	Linear m	500	1000	2000	1,000,000	2,000,000	High quality finishes likely to be needed.
Cottenham	**Combined**	**Total**				**£1,360,000**	**£2,765,000**	**Needs detailed design to get more accurate costing.**

Table 14.1 Estimated costings for Cottenham

Item	Item description	Unit	Low cost per unit	High cost per unit	Quantity	Low total cost	High total cost	Notes
Junction treatments	Tightening junctions	Item	10,000	25,000	4	40,000	100,000	New radius 1m –3m.
Raised tables	Crossing improvements	Item	15,000	30,000	8	120,000	240,000	
Wilburton	**Combined**	**Total**				**£160,000**	**£340,000**	**Needs detailed design to get more accurate costing.**

Table 14.2 Estimated costings for Wilburton

Item	Item description	Unit	Low cost per unit	High cost per unit	Quantity	Low total cost	High total cost	Notes
	Option A							
1	Works	Linear m	500	1000	1,500	750,000	1,500,000	Along High Street and B1049 north.
2	Road, track and byway resurfacing	Linear m	150	290	4700	705,000	1,363,000	Following the design. See Section 7.
3	Bridge over river	Area m2	10,000	16,000	200	2,000,000	3,200,000	Subject to land agreements.
4	Earthwork ramps	Linear m	400	600	80	32,000	48,000	Needs land agreements. Ramp to consider removal of utilities.
5	Junction changes	Item	100,000	150,000	4	400,000	600,000	Haddenham
6	Road humps	Item	15,000	30,000	8	120,000	240,000	Haddenham
7	Parallel crossing	Item	30,000	50,000	1	30,000	50,000	Haddenham
8	Path and field edge surfacing	Linear m	150	290	1,600	240,000	464,000	Following the design. See Section 7.
9	Byway surfacing	Linear m	150	290	180	27,000	52,200	Wilburton
	Option A					**£4,304,000**	**£7,517,200**	
	Cottenham works					**£1,360,000**	**£2,765,000**	See Table 14.1
	Wilburton Works					**£160,000**	**£340,000**	See Table 14.2
	Option A + Cottenham + Wilburton works					**£5,824,000**	**£10,622,000**	

Table 14.3 Estimated costings for Option A

Item	Item description	Unit	Low cost per unit	High cost per unit	Quantity	Low total cost	High total cost	Notes
	Option B							
1	Road, field edge path and byway resurfacing	Linear m	150	290	10,100	1,515,000	2,929,000	Following the design. See Section 7.
2	Bridge over river	Area m2	10,000	16,000	360	3,600,000	5,760,000	Subject to land agreements.
3	Earthwork ramps	Linear m	400	600	80	32,000	48,000	Needs land agreements. Ramp to consider removal of utilities.
4	Signalised crossing	Item	200,000	300,000	1	200,000	300,000	At A1123.
	Option B					**£5,347,000**	**£9,037,000**	
	Cottenham works					**£1,360,000**	**£2,765,000**	See Table 14.1
	Wilburton Works					**£160,000**	**£340,000**	See Table 14.2
	Option B Cottenham + Wilburton works					**£6,867,000**	**£12,142,000**	

Table 14.4 Estimated costings for Option B

Item	Item description	Unit	Low cost per unit	High cost per unit	Quantity	Low total cost	High total cost	Notes
	Option C							
1	Road, field edge path and byway resurfacing	Linear	150	290	10,300	1,545,000	2,987,000	Following the design. See Section 7.
2	Bridge over Cottenham Lode	Area m2	10,000	16,000	60	600,000	960,000	Subject to consent. Assume minimal clearance.
4	Earthwork ramp	Item	400	600	80	32,000	48,000	Need one ramp.
4	Bridge over river	Area m2	10,000	16,000	360	3,600,000	5,760,000	Subject to land agreements.
5	Earthwork ramps	Item	400	600	80	32,000	48,000	Needs land agreements. Ramp to consider utilities.
6	Signalised crossing	Item	200,000	300,000	1	200,000	300,000	At A1123.
	Option C					**£5,977,000**	**£10,103,000**	
	Cottenham works					**£1,360,000**	**£2,765,000**	See Table 14.1
	Wilburton Works					**£160,000**	**£340,000**	See Table 14.2
	Option C + Cottenham + Wilburton works					**£7,497,000**	**£13,208,000**	

Table 14.5 Estimated costings for Option C

Item	Item description	Unit	Low cost per unit	High cost per unit	Quantity	Low total cost	High total cost	Notes
	Option D							
1	Measures to close road	Item	30,000	200,000	1	30,000	200,000	Bollards or Automatic Number Plate Recognition (ANPR) system.
2	Changes to existing signalised crossing	Item	15,000	30,000	1	15,000	30,000	In Wilburton.
3	Shared use path	Linear m	150	290	230	34,500	66,700	In Wilburton.
4.	Signalised junction	Item	200,000	300,000	1	200,000	300,000	Twenty Pence Road/ A1123. May be possible to omit this.
	Option D					**£279,500**	**£596,700**	
	Cottenham works					**£1,360,000**	**£2,765,000**	See Table 14.1
	Wilburton Works					**£160,000**	**£340,000**	See Table 14.2
	Option D + Cottenham + Wilburton works					**£1,799,500**	**£3,701,700**	

Table 14.6 Estimated costings for Option D

Table 14.7 Estimated costings for Option E

Item	Item description	Unit	Low cost per unit	High cost per unit	Quantity	Low total cost	High total cost	Notes
	Option E							
1	Road, field edge path and byway resurfacing	Linear m	150	290	9800	1,470,000	2,842,000	Following the design. See Section 7.
2	Bridge over river	Area m2	10,000	16,000	280	2,800,000	4,480,000	Subject to land agreements.
3	Earthwork ramps	Linear m	400	600	80	32,000	48,000	Needs land agreements. Ramp to consider removal of utilities.
4	Signalised crossing	Item	100,000	140,000	1	100,000	140,000	At A1123.
	Option E					**£4,402,200**	**£7,510,000**	
	Cottenham works					**£1,360,000**	**2,765,000**	See Table 14.1
	Wilburton Works					**£160,000**	**£340,000**	See Table 14.2
	Option E + Cottenham + Wilburton works					**£5,922,000**	**£10,525,000**	

Item	Item description	Unit	Low cost per unit	High cost per unit	Quantity	Low total cost	High total cost	Notes
	Option F							
1	Road, field edge path surfacing	Linear m	150	290	7300	1,095,000	2,117,000	Cottenham – A10 layby (including crossing under A10)
2	Small bridges to cross drains	Item	20,000	40,000	5			Besides A10
2	Field edge path	Linear m	150	290	1900	100,000 285,000	200,000 551,000	A10 – Stretham Green End
3	Path works	Linear m	150	290	150	22,500	43,500	A1123 path Stretham allotments
4	Parallel crossing	Item	30,000	50,000	1	30,000	50,000	A1123 Stretham
5	Field edge path	Linear m	150	290	4000	600,000	1,160,000	Stretham – Wilburton via Grunty Fen Catchwater
6	New bridge	Area m2	10,000	16,000	140	1,400,000	2,240,000	Over A10.
7	Earthwork ramps	Linear m	400	600	300	120,000	180,000	Needs land agreements. Ramp to consider removal of utilities.
	Option F					**£3,652,500**	**£6,541,500**	
	Cottenham works					**£1,360,000**	**£2,765,000**	See Table 14.1
	Wilburton Works					**£160,000**	**£340,000**	See Table 14.2
	Option F + Cottenham + Wilburton works					**£5,172,500**	**£9,646,500**	

Table 14.8 Estimated costings for Option F

Total Costs for all routes between Wilburton and Cottenham.

These figures have been used in the business case to consider the cost benefit ratio of the various options.

Option A serves Haddenham and Option F serves various locations including Stretham so these options cannot be easily compared with Options A-E.

Item description	Low total cost	High total cost	Notes
Cottenham works	**£1,360,000**	**£2,765,000**	See Table 14.1. Common for all schemes.
Wilburton works	**£160,000**	**£340,000**	See Table 14.2. Common for all schemes
OPTION A	**£5,824,000**	**£10,622,000**	Table 14.3.
OPTION B	**£6,867,000**	**£12,142,000**	Table 14.4
OPTION C	**£7,729,000**	**£13,528,000**	Table 14.5
OPTION D	**£1,799,500**	**£3,701,700**	Table 14.6
OPTION E	**£5,922,000**	**£10,525,000**	Table 14.7
OPTIONS F	**£5,172,500**	**£9,646,500**	Table 14.8

Table 14.9 Estimated costings for all Options.

15. Potential Usage and Business Case

There is little data on actual cycle usage between these communities, but some indication can be got from various modelling tools. The Propensity to Cycle Tool has been used to get an idea of potential usage. The tool was designed to assist transport planners and policy makers to prioritise investments and interventions to promote cycling. It answers the question: "where is cycling currently common and where does cycling have the greatest potential to grow?", but it has to be used with care.

The tool uses 2011 census data to get information on local populations and modal shares of journeys to work and school by bike and uses mapping data to get information about trip distances and geography. The tool only collects commuting data, and therefore doesn't represent journeys to local amenities or leisure activities. It has to be noted that there have been population changes since 2011 and work patterns have changed, so these are further shortcomings, but the tool is the best option available at present.

The tool predicts shifts in modal share, following various future scenarios such as "Go Dutch" whereby it is assumed that local infrastructure is to a Dutch standard. By balancing this against factors which would deter usage, such as hilliness, the tool can provide guidance on where improvement would be most effective.

For East Cambridgeshire's case, there is no reason to see why Dutch levels of cycling could not be achieved, especially if the standard of quality recommended in this report is followed.

Under the "Go Dutch" scenario, shown on Figure 15.1, the tool highlights a number of interesting issues:

- Due to low rates of cycling and low populations, the current cyclist count is very low. Both Wilburton C of E Primary School and The Harbour School had a very low count of 1 and 2 cyclists. In comparison Cottenham area has better figures with up to 20 cyclist school trips to Cottenham Primary School. Using Go Dutch scenario could up lift bike trips for both school trips and commuters. The former would see an uplift to 74 school trips for Wilburton area and 88 school trips for Cottenham. Similarly, Wilburton data shows increasing from 8 to 74 work commuters travelling by bike. For Cottenham the figures are higher from 60 to 154 work commuters travelling by bike. However these figures relate to travel within Cottenham and within Wilburton mostly. The census data from 2011 shows no evidence of children from Wilburton going to school in Cottenham and vice-versa and virtually no commuting between the settlements. With few intermediate destinations and the large distance between settlements it is hard to see that cycling usage could be high even in the best-case scenario. Similarly walking over the whole distance between settlements would be likely to be very low due to the distances but short circular walks could be attractive.

With no clear data usage estimates have been based on little evidence and it has been assumed that usage will be the same for Options A-E. Option F is considered to have much more potential usage because of the short trips that it could provide for, but again there is no evidence and with so much having changed since 2011 that data is unlikely to be accurate. Again, an estimate has been made of usage.

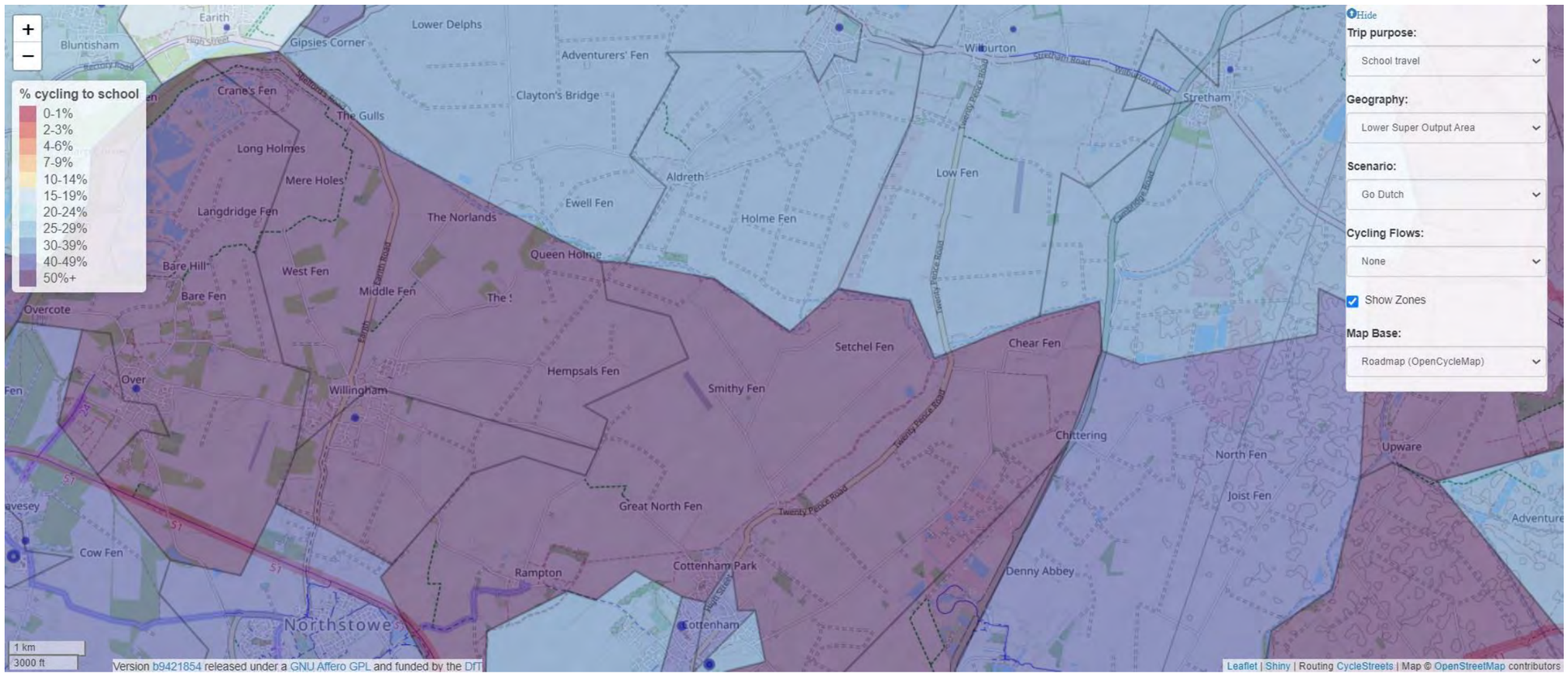


Figure 15.1 – PCT School travel GoDutch potential usage

It should also be noted that commuting trips are a low proportion of all trips and commuting patterns have changed since the start of the Covid-19 pandemic, so commuting is unlikely to be as significant as other trip purposes between Wilburton and Cottenham.

Whilst the tool does not allow for attractiveness it is likely that if a very attractive and direct “Dutch” style route is developed (perhaps linking with other routes) it will attract significant leisure users and walkers in addition to the figures predicted by the Propensity to Cycle Tool. The most attractive option may well be Option B following Cottenham Lode, but difficulties with delivering this have already been noted.

Other ways of assessing potential demand include on-line tools such as Widen My Path, as shown on Figure 15.3 and 15.4, an online tool where comments can be made suggesting improvements to local infrastructure.

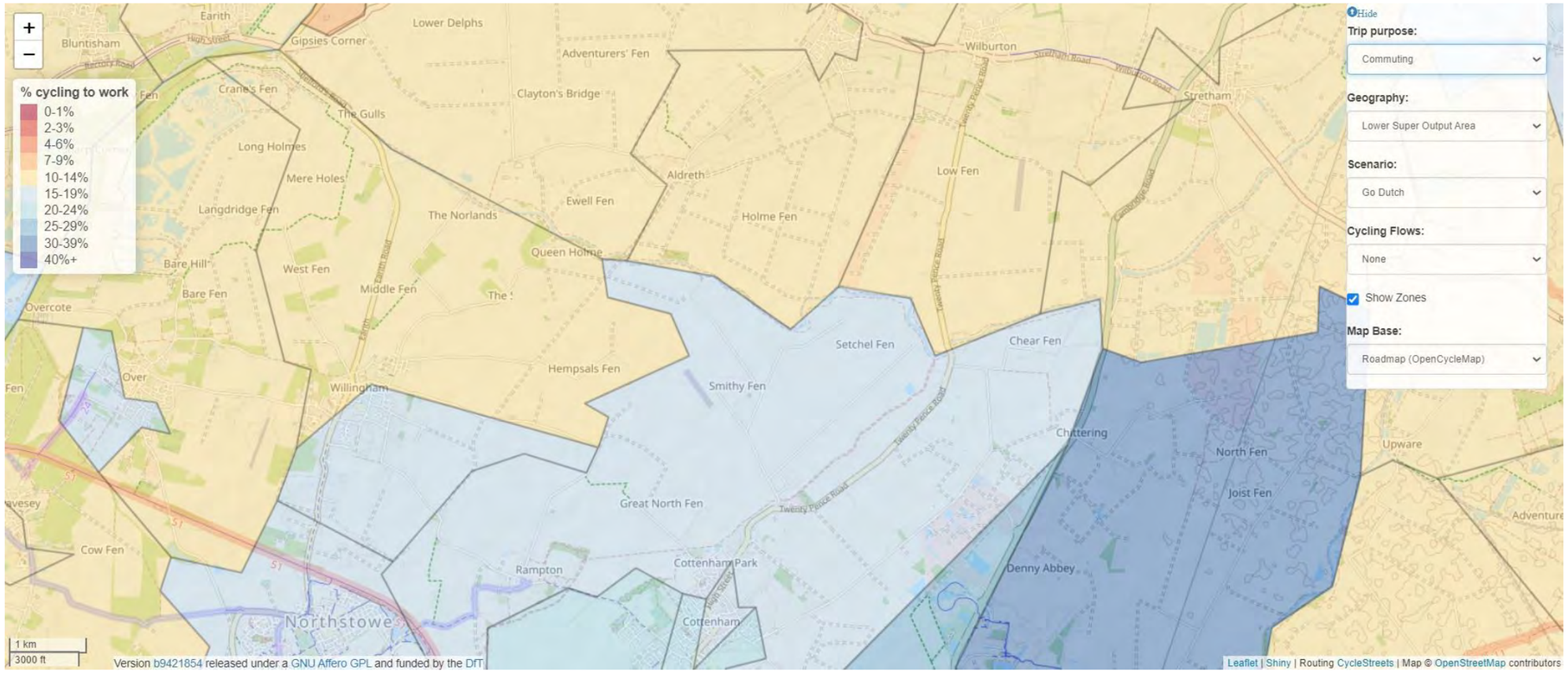


Figure 15.2 – PCT Commuting GoDutch potential usage.

Figure 15.3 – Widen My Path Wilburton comments.

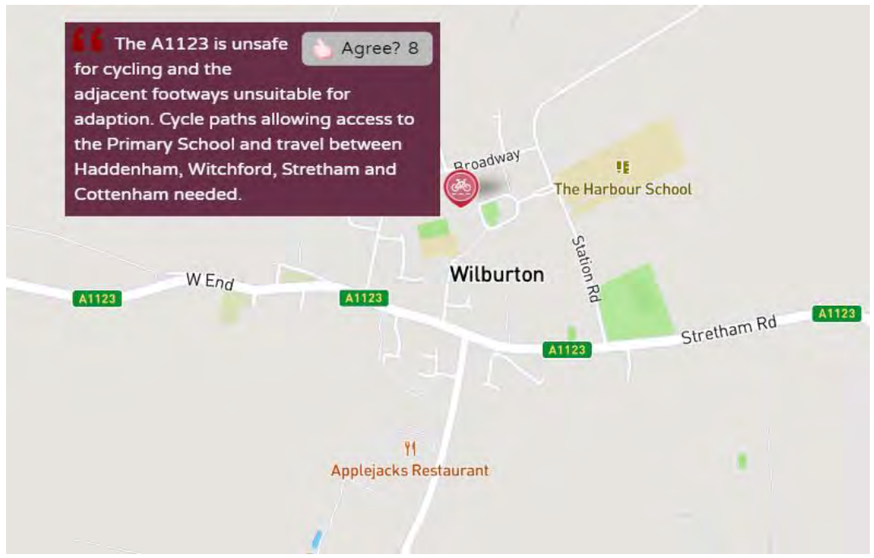


Figure 15.4 – Widen My Path Wilburton comments.

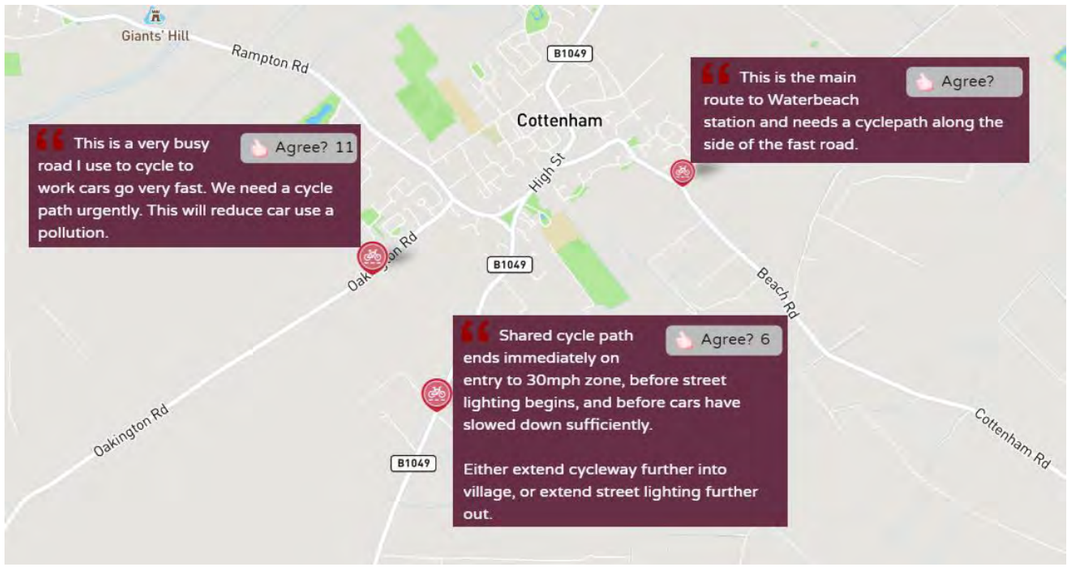


Figure 15.5 – Widen My Path A10 between Wilburton and Cottenham comments.

Figure 15.5 shows comments from Widen My Path which are related to a new active travel route between Wilburton and Cottenham, as well as Cambridge to Ely.

East Cambridgeshire District Council has conducted surveys as part of the Cycling and Walking Routes Strategy. This produced a significant response for a new Wilburton and Cottenham route.

The full report is at:
https://www.eastcambs.gov.uk/sites/default/files/agendas/Cycling%20and%20Walking%20Routes%20Strategy%20webAC.pdf

Figure 15.5 – East Cambridgeshire Cycling and Walking Strategy

In total, 309 cycle routes were proposed. The report shows that demand is largely unlinked to commuting or school travel with the existing network. It can therefore be assumed that most of the demand for improved walking and wheeling infrastructure isn't picked up by the Propensity to Cycle analysis of journeys and there are many concerns about road safety, gaps in existing paths and lack of provision.

Business Case

In order to assess value for money of the various options it is necessary to compare option costs with changes in usage, with increases in active travel being given cost benefits in terms of health benefits, congestion etc. Option costs have been estimated in Chapter 14; these costs have a wide range at this early stage of scheme development. For usage there is no clear background data, as has been discussed earlier and best estimates of existing and predicted usage have been made. Assumptions are based on trips that are not work or school related as well as developments in the area. These assumptions are open to challenge and the analysis will benefit from more data.

The Benefit Cost Ratio (BCR) has been determined using the AMAT tool from the Department for Transport. An AMAT (Active Mode Appraisal Toolkit May 2023 version). Analysis has been done using various scenarios and data as referenced earlier.

Although there are clear policies in support of the new provision it is also important to consider the business case especially where Government/ taxpayer's money will be needed. The tool calculates the following types of impacts: physical activity benefits, absenteeism benefits, journey quality benefits, environmental impacts, indirect tax impacts and congestion impacts. This is measured against the financial costs involved in implementing the scheme. Results are shown in Table 15.1.

The AMAT is of course a tool that needs good data and both usage and costs are estimated. As the scheme details develop these will need to be re-assessed but at present it is reasonable to progress on the basis of broad estimates.

The Business Case has been analysed for all options A-F. In reality there is not sufficient data to be confident in the analysis. The expectation is that the BCR for Option D would be the strongest because this is by far the cheapest option and this has proved to be the case, but the BCR for all options is low, which makes it hard to justify any option.

The assumed usage data and the costs from Chapter 14 were entered into the Active Modal Appraisal Tool (AMAT May 2023) with the assumption that the area was rural. The tool showed a Benefit Cost Ratio between 0.04-0.22, which is poor. The BCR of works in Wilburton and Cottenham have not been calculated but it is assumed that usage will be much higher here and the BCR much stronger. If the works in Wilburton and Cottenham are already completed, then the BCR for Option D would be much stronger and this could push it above 1. Similarly for Option F if parts of the route are built and funded by developers this would strengthen the BCR.

Item	Item description	Capital	Annual maintenance	Usage change	Notes on usage	AMAT BCR
Works in Cottenham					No data at this stage – needs more analysis	**Assumed to be high due to big increase in walking and cycling in Cottenham.**
Option A	**Low cost**	£5,824,000	£291	2 before 20 after	2011 Census data compared to PCT GoDutch commuting, assuming commuting is 20% of journeys	**0.1**
Option A	High cost	£10,622,000	£531	2 before 20 after	2011 Census data compared to PCT GoDutch commuting, assuming commuting is 20% of journeys	**0.04**
Option B	**Low cost**	£6,867,000	£343	2 before 20 after	2011 Census data compared to PCT GoDutch commuting, assuming commuting is 20% of journeys	**0.1**
Option B	**High cost**	£12,142,000	£607	2 before 20 after	2011 Census data compared to PCT GoDutch commuting, assuming commuting is 20% of journeys	**0.04**
Option C	**Low cost**	£7,729,000	£386	2 before 20 after	2011 Census data compared to PCT GoDutch commuting, assuming commuting is 20% of journeys	**0.1**
Option C	**High cost**	£13,528,000	£676	2 before 20 after	2011 Census data compared to PCT GoDutch commuting, assuming commuting is 20% of journeys	**0.03**
Option D	**Low cost**	£1,796,000	£90	2 before 20 after	2011 Census data compared to PCT GoDutch commuting, assuming commuting is 20% of journeys	**0.22**
Option D	**High cost**	£3,702,000	£25,375	2 before 20 after	2011 Census data compared to PCT GoDutch commuting, assuming commuting is 20% of journeys.	**0.1**
Option E	**Low cost**	£5,922,000	£296	2 before 20 after	2011 Census data compared to PCT GoDutch commuting, assuming commuting is 20% of journeys	**0.1**
Option E	**High cost**	£10,525,000	£526	2 before 20 after	2011 Census data compared to PCT GoDutch commuting and school “Route Network” layers. assuming commuting is 20% of journeys	**0.04**
Option F	**Low cost**	£5,073,000	£254	4 before 60 after	No evidence because most of the movements will relate to new developments since 2011 such as the Research Park, Waterbeach developments and at present most involve the A10. Small existing usage expected around Stretham.	**0.27**
Option F	**High cost**	£9,467,000	£473	4 before 60 after	No evidence because most of the movements will relate to new developments since 2011 such as the Research Park, Waterbeach developments and at present most involve the A10. Small existing usage expected around Stretham.	**0.15**

Table 15.1 BCR estimates for the Route Options.

16. Construction and Maintenance

Any works on the highway will need traffic management and will need suitable facilities for construction or maintenance staff and a site compound for equipment and materials storage.

Construction and maintenance considerations:

1. Works in Cottenham

Works on the roads in Cottenham will need a traffic management plan and suitable site compounds within the village. It should be possible to find suitable locations for a site compound on the public highway, which will need the appropriate orders. Works near the Village College and the Primary School may need to be programmed for school holidays and any works in term time are likely to have time restrictions relating to the beginning and end of the school day.

2. Works in rural areas

Many of the options are in remote locations and some use narrow existing routes. These may need to allow for farm access and liaison with local farmers will be important so that their access can be maintained. The remote locations will present serious challenges in terms of getting materials to site and in providing welfare facilities and this would be made much easier for the options that are closer to Twenty Pence Road.

3. New river bridge construction.

Where new bridges over the River Great Ouse are proposed these will be very large structures and getting the bridges to site will be difficult. It is recommended that early discussions are held with bridge manufacturers and contractors to determine the best way to arrange access and installation in a convenient, safe manner.

4. Works along the A10.

Traffic volumes and traffic speeds are a serious issue along the A10 and any works close to the carriageway are likely to require traffic management so this will need to be carefully planned. Where works are on field edges near the A10 access will still need to be via the A10 and again this will need careful planning, particularly given that there is a watercourse between the road and the fields. There are likely to need to be a number of site compounds and welfare sites along the A10. For the route under the A10 works will need to be carried out near water and this has additional health & safety risks that need to be considered although there is the potential advantage of access and welfare facilities being able to use the old A10.

The major bridge proposed over the A10 will need a road closure for it to be lifted into place and it is important that the major ramps and bridge footings are built away from the A10 on surrounding land.

5. Works along A1132

Works in Stretham and Wilburton will need traffic management to allow junctions to be changed and crossings and new paths to be built. One site compound in each location should be suitable.

6. Works near watercourses.

A number of options follow watercourses and these bring with them health and safety concerns as well as ecological concerns. All works will need to be carefully managed in accordance with an agreed ecology plan.

17. CDM and Risk register

Ref	Area	Observation	Action required?
1	Who are the CDM duty holders?	Client- East Cambridgeshire District Council Designer- Sustrans	
2	Has this been recorded?	In Teams	
3	If Sustrans is the client has the principal designer been appointed?	N/A	
4	If Sustrans is the client has the principal contractor been appointed?	N/A	
5	If Sustrans is not the client, are we satisfied that the client is aware of their duties?	Not entirely certain	Advise client about their duties
6	Have you checked that the project team have the necessary skills, knowledge and experience?	Partially, Sustrans has the skills, but we are unsure about the client's skills	Advise client about their duties
7	Has pre-construction information been produced?	Not yet	
8	Has the pre-construction information been issued to the appropriate parties?	N/A	
9	Has a design risk assessment been completed?	Yes, but will need updating as the project progresses.	Update risk assessment
10	Is the design risk assessment appropriate?	At this stage, yes	Update risk assessment
11	How have residual risks been communicated?	They will be referred to in the study	
12	Has the construction phase plan been produced?	N/A	
13	Are adequate welfare facilities provided on site?	N/A	
14	Has the health and safety file been produced?	N/A	

	Designer	Sustrans
	Client	East Cambridgeshire D.C.
	Author	NB (Sustrans)
	Date	13/03/24
Risk ID number	**Description**	**Response**
1	**All construction works carry risk. Is work necessary?**	**Need for new provision, because existing routes do not comply with standards such as LTN 1/20, but works could be avoided with reductions in traffic volumes and speeds on Twenty Pence Road, so this should be given serious consideration.**
2..	**Works in remote locations carry risks.**	**Plans will need to be made for staff to be quickly taken to medical facilities in the event of an urgent need. This should favour options closer to the major roads..**
3	**Works near the A10 carry risks.**	**It Is not essential for a Cottenham – Wilburton route to go close to the A10, but this Option addresses so major severance associated with the A10, which will have to be addressed at some point.**
4.	**Works in rural areas carry risks, including farm activities and winter flooding.**	**Sufficient land needs to be agreed for safe working and maintenance and contractor to be alerted to all potential risks, by designer as project progresses. Time of year will be important for rural works and this needs to be considered early so that there is a suitable timetable.**
5.	**Works near Watercourses carry risks.**	**A major feature of this study is the need to cross the River Great Ouse. The only option that requires minimal works near this river is Option D, so this is another major benefit of this option.**
6.	**Utilities are in the area.**	**Utility searches need to be undertaken to check for any issues.**
7.	**Inadequate provision made for site compounds and facilities.**	**This needs to be a key task as part of land negotiations.**
8.	**CDM needs to be considered in choosing preferred options.**	**CDM has been a significant factor but will need to be considered further as options are reviewed.**
9.	**Community Engagement Risks**	**Risk Assessments will need to be completed and acted upon for events and activities.**
10.	**Design and surveying risks**	**Risk Assessments will need to be completed and acted upon for site visits, surveys and design work. This is a particular concern where there is no footway.**

18. RAG Report

	Project title	Wilburton to Cottenham Feasibility Study	**Date RAG report initiated**		**13/03/24**	**Project Manager**	**MP**
	Client	East Cambridgeshire D.C.	**Date of current edition**		**13/03/24**	**RAG Author**	**NB**

Risk ID number	Description	Assigned to:	Date assigned:	Current situation (RAG)	Potential mitigation	Mitigation risk (RAG
1	Most options use private land and agreement cannot be reached with all landowners in time to deliver preferred option.	**ECDC**	**13/03/24**		**Skilled negotiation needed with landowners who need to be compensated and have their wishes addressed. Compulsory Purchase is an option available to the Local Authorities. Option D is entirely deliverable on highway land.**	
2	One-way changes not agreed in Cottenham so route not LTN 1/20 compliant in Cottenham and local people cannot access new route.	**SCDC / CCC**	**13/03/24**		**High level of community engagement needed to come up with solutions.**	
3	Point closure of Twenty Pence Road not agreed so Option D is not deliverable.	**ECDC / CCC**	**13/03/24**		**High level of community engagement, including with Garden Centre needed to come up with solutions. There is already evidence from the previous closure.**	
4.	Junction and speed limit changes not agreed in WWilburton and Cottenham so some people will be deterred from using new provision.	**ECDC/ SCDC/ CCC**	**13/03/24**		**High level of community engagement needed to come up with solutions.**	
5.	Some options may use rights of way and County Council agreement not obtained for works.	**ECDC / CCC**	**13/03/24**		**Early discussions with Rights of Way team. Options use few rights of way if kept well away from river banks.**	
6.	Route past Thalia Waste Management site not agreed due to security concerns.	**SCDC / CCC**	**13/03/24**		**Alternative routes around the site to be considered. This may need to be a long term plan and there may be solutions as the site develops.**	
7.	Major bridges in remote locations prove technically too challenging.	**ECDC/CCC**	**13/03/24**		**Early discussions with manufacturers recommended. If this rules out some options there should be alternatives.**	
8.	Changes to concrete fen roads cannot be agreed with County Council and smooth surface not possible.	**ECDC/CCC**	**13/03/24**		**CCC need to be persuaded of need for scheme, but it may rule out some options.**	
9.	Maintenance plan cannot be agreed.	**ECDC/CCC**	**13/03/24**		**Needs to be agreed and required standards set at an early stage.**	
10.	Funding not obtained.	**ECDC**	**13/03/24**		**Ensure scheme is to LTN 1/20 standards, has good BCR and has all necessary consents, to improve chances of funding.**	
11.	Planning consents not obtained.	**ECDC**	**13/03/24**		**Follow recommendations in Ecology Study and use these to inform design and route selection. Undertake pre-app discussions and ensure all issues addressed. On highway options would not need planning permission so give these serious consideration.**	

19. Conclusions

The routes considered are shown in Fig 19.2. Option D is in many ways an easy and obvious option and would be the best value for money. It is the best option by almost any measure, but it requires community buy-in to closure of Twenty Pence Road to through traffic. This has already happened for a period during the study and Sustrans has found no evidence of serious negative impact or evidence of any detailed research into what happened during that period. Experience on the ground was that there were significant benefits in Cottenham and on Twenty Pence Road itself, but no doubt some will disagree.

Wilburton and Cottenham are some distance apart and as the crow flies Haddenham and Stretham are similar distances from Cottenham, so they have been considered also.

Option F takes in Stretham and many places along the A10 that are currently isolated. It or similar routes are clearly needed irrespective of which of the other options is progressed. It can be developed in sections and may take many years to complete, whereas Option D could be delivered quickly.

Fig 19.1. Road closure during the study period.

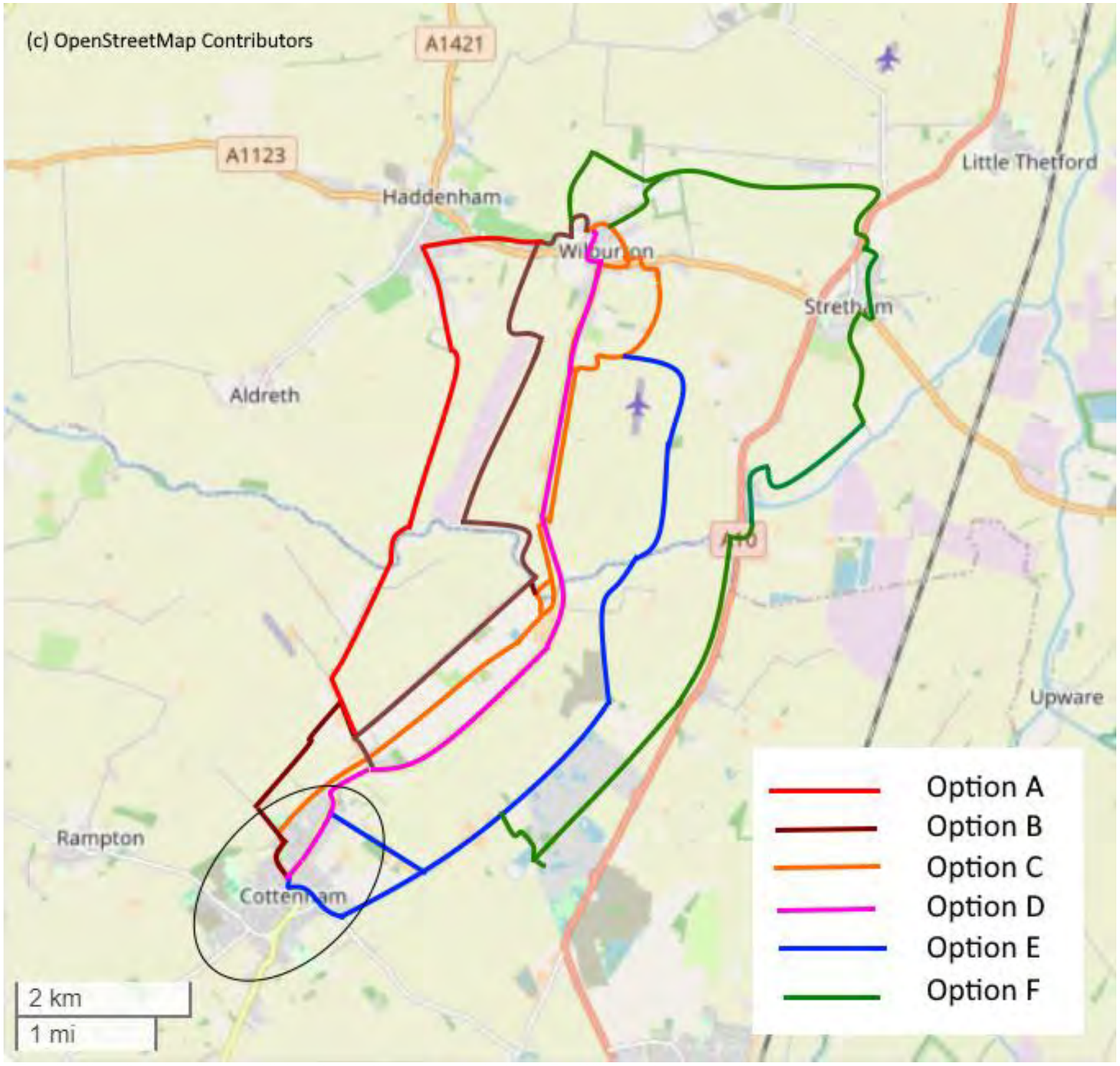


Fig 19.2. Map showing the options considered.

For all options it is clear that good links within both Wilburton and Cottenham are needed if the investment in links between the communities is to be justified. For Wilburton this means that any route must include at least one safe crossing of the A1123 and a link with residential areas north of this.

The study considers six possible alignments for new provision and looks at the pros and cons of each. All routes have to cross the River Great Ouse, and this is a major factor in route selection and analysis, because of the cost of a new bridge. Ecology is also a significant factor because of the potential biodiversity net gain costs of routes following watercourses. The options vary in how direct they are and how they enter and leave Wilburton and Cottenham.

The six options are shown in Figure 19.2. Points to note about the options:

- **Option A** takes the route via Haddenham. This is not an obvious alignment, because there are no current direct links between the communities but the road layout on either side of the River Great Ouse suggests that there was a historic route between the two, possibly with a ferry crossing of the river. From a map it appears that if there were a new bridge over the River Great Ouse it would be relatively simple to create a new route between Haddenham and Cottenham, which could then be linked with Wilburton. There are however many difficulties with this option.

- **Option B** uses Broad Fen/ Great Fen Drove and Setchel Drove, from Cottenham, with a new link between them. These are quiet roads but still need major works. The route then follows an obvious field edge alignment along the edge of a solar farm. This again requires a new bridge and links over the River Great Ouse. Making a good route into/ exit from Wilburton is challenging, because of the nature of the A1123.

- **Option C** closely follows the existing road between Wilburton and Cottenham, (the B1049). There is not sufficient highway verge for a highway verge route so private land will be needed to allow a new path to be built. The Option considers two ways to cross the River Great Ouse – either a new bridge or changes to the traffic flows over the existing road bridge to allow for walking and wheeling. For the approach to/ exit from Wilburton the option proposes a new route that enters/ exits Wilburton via rights of way on the eastern side of Wilburton.

- **Option D** uses the existing B1049 and assumes that the road will be closed to through traffic, as it was in winter 2023/24 for a lengthy period. This simple measure would establish a good route and would allow access to all properties along the road. It has been shown to work, even during a period when there were other roadworks and road closures in the area. The route enters/ exits Wilburton past the Garden Centre and requires some works along a short stretch of the A1123 to make a suitable connection with Wilburton.

- **Option E** uses an existing minor road and a field edge alignment to link up with the same right of way entry to Wilburton as for Option C. The route has not been surveyed over the whole length because it is private land but can be seen from Google Earth and part of the alignment is designated for potential mineral extraction, which may provide opportunities. This again requires a new bridge over the River Great Ouse.

- **Option F** is a very indirect alignment that would not serve well as a route between Wilburton and Cottenham, but it picks up a number of potentially useful short trips that have no provision at present including:
    - Cottenham to Cambridge Research Park (Waterbeach) and Waterbeach New Town West development.
    - Cambridge Research Park to Stretham Ferry Marina area.
    - Stretham Ferry Marina to Stretham,
    - Stretham to Grunty Fen Road.
    - Grunty Fen Road to Wilburton.

Some of these links could form part of the A10 Ely to A14 improvements which are currently being progressed by Cambridgeshire County Council supported by Cambridgeshire and Peterborough Combined Authority as project sponsor, but Sustrans has not seen details of these proposals, at this stage.

The route proposed in this study uses field edge paths, routes besides major roads, an existing bridge over the River Great Ouse and two new crossings of the A10, so has merits for local trips that are worth considering. It enters Wilburton from the north.

Some options are likely to be very difficult to deliver and there are major challenges in using some rights of way and minor roads, due to the quality of these, but the biggest issues relate to crossing the River Great Ouse and ecology.

Option F does not make sense as a route between Wilburton and Cottenham, but it has the potential to attract the greatest usage and to address a number of separate local issues and form part of a longer A10 route..

Option D is clearly the best value for money of the direct options and the simplest option, and it has been shown to be deliverable during the lengthy closure of the road to through traffic in winter 2023/24, but there will need to be a lot of community engagement to progress this.

Option F as mentioned earlier should be a long term aspiration. Delivered in sections, if necessary.

Even Option D has a poor benefit to cost ratio and it is hard to justify any of the options when compared with other routes in East Cambridgeshire that have better ratios.

Longer Distance opportunities

Whilst this study has not concentrated on longer distance routes it should be noted that:

- there are plans for a high quality connection/ greenway between Cambridge and Cottenham
- the Haddenham to A142 study identified a potential good route between Wilburton and Witchford
- there are plans to improve the route between Witchford and Ely
- there are plans for a route along the A10 between Ely and the A14

Therefore completing a link between Wilburton and Cottenham could be strategically important and could have potential to fill a gap in the National Cycle Network between Cambridge and Ely.

20. Appendix

Appendix A. Equality Impact Assessment

Project Information

Project Name	Wilburton to Cottenham (14632)
EqIA Version & Date	V1: Completed 25-11-23 (Feasibility)
Project Sponsor	Martin Philpott
Project Manager	Martin Philpott
Completed By	Thom Haslam, and Jolina Irish
Sustrans Approach	**Transforming routes and spaces**

The project type selected will populate the tool with information relevant to that area of work.

Sustrans Approach	Product	Examples
Transforming routes and spaces	- Neighbourhood traffic reduction - Low traffic and protected routes - Safe, appealing streets and public spaces - Timed traffic-free streets - Integration with public transport and micro-mobility - Traffic-free routes	- Improving NCN routes - Expanding NCN routes - Improving access to the NCN - Active travel strategies - Area-wide through traffic exclusion interventions - Area-wide improvement interventions
Building active travel habits and practices	- Community model shift: children and adolescents - Community model shift: adults - Moving goods.	- Schools walking, wheeling, and cycling skills interventions - Workplace walking, wheeling and cycling interventions - Integrating walking and cycling with rail - Big walk and wheel - Active travel challenges - Led walks and rides - Social prescribing - Bike maintenance skills - Cycle hubs - Hire and pool bike schemes
Supporting professionals and decision makers	- National, regional, and local strategies to achieve modal shift - Data and insight on attitudes, behaviours, and infrastructure - Resources and advice for delivery projects - Professional training	- Professional training and upskilling - Standard setting and quality assurance

Brief Project Description:

This project has been commissioned by East Cambridgeshire District Council who are looking to improve local facilities and want to progress plans for cycling and walking routes, so that when opportunities becomes available, they can bid for funding. The National Cycle Network (NCN) does not pass through Wilburton or Cottenham.

Most people at present who want to cycle between Cottenham and Wilburton will have to use the Twenty Pence Road, which has a moderate volume and speed of traffic and limited pedestrian facilities. These conditions aren't apprporiate for anyone apart from the most confident cyclists. Multiple route options and alignments have therefore been considered alongside. Some present linkages to nearby settlements and destinations such as Stretham. All options have their advantages and serve slightly different purposes. There is a strong case for significant changes within Wilburton and Cottenham themselves.

Project Objective:

The aim of the project is to identify and describe current problems and propensity to walk and cycle in the area, identify at least one high quality route that can be delivered between Wilburton and Cottenham and rank the route options in terms of benefits and costs.

Resources and Data

This tab provides a library of resources and data relevant to the project type selected. This is to enable colleagues to identify what active travel barriers are experienced by people with different characteristics, or to identify particular demographics of an area such as a large young Sikh population. There are many relevant guidance documents already published across the industry. We all have a responsibility to be aware of resources and data to inform our project delivery.

Characteristic or Protected Characteristic	Guidance (Examples with hyperlinks common to all project types)	Data (Examples with hyperlinks common to all project types)	Sustrans Knowledge (Examples with hyperlinks common to all project types)	Area or Project-Specific Guidance (Enter links to area or project-specific guidance)	Area or Project-Specific Data (Enter links to area or project-specific data)	Evidenced Impact (Summarise potential project impacts informed by the resources and data)
People experiencing (and/or at risk of) high deprivation	*Closing the Divide: How to Health Equity in England* *Fairer Scotland Duty*	*Indicies of Deprivation* *Scottish Index of Multiple Deprivation 2020*	*Transport poverty research*	Guidance: ▪Department for Transport, Travel by car access, household income, household type, NS-SEC and mobility status NTS0702, 2018	(1) The Lower Super Output Areas (LSOAs) containing Cottenham is among the 10% least deprived in the country, and Wilburton is in the 40% least deprived. This shows a discrepancy between the two villages. The LSOA between the two, additionally, sits among the 50% most deprived in the country. Deprivation in this LSOA is particularly related to income poverty affecting both young and old people, barriers to housing, and income deprivation affecting children. These latter two factors place this LSOA amongst the 10% most deprived in the country.. (2) In England 25.8% of people did not own a car. This rate is at 7.5% in Wilburton and 12.2% in Cottenham. (3) 40% of people from the lowest income have no access to a car (1) Indices of Depravation 2019 (2) Census 2011 (3) Government Foresight Report	**Possible Positive Impact:** People in and between Cottenham and Wilburton experiencing higher deprivation are less likely to own a car while living in a car dominant area. These people are more reliant on walking and cycling for their journeys. Improvements to walking and cycling infrastructure will make these journeys safer. If the cycling infrastructure and safety of cycling improves more people may consider owning and using a bike for journeys they currently do via taxi and private car. This could be less expensive, give more independence and health benefits. **Possible Negative Impact:** People with reduced incomes may not have access to a bike, and therefore may not be able to utilise the cycling elements of the proposed routes. Deprived residents of rural areas reliant on a car may also encounter longer journeys which are more expensive.
Disability	*A Guide to Inclusive Cycling* *Pave the Way* *BS 8300-2:2018 Design of an accessible and inclusive built environment Buildings - code of practice*	*Advice for local authorities considering hosting e-scooter* - -	*We must take practical steps to support people with mental health* *Disability History Month events* *Disabled Citizens Enquiry (yet to be published)*	Guidance: ▪Transport for All: Pave the Way ▪Wheels for Wellbeing: A Guide to Inclusive Cycling ▪Assessing the needs and experiences of disabled cyclists 2018" ▪Living Streets: Safer Crossings ▪Buildings Code of Practice BS 8300-2:2018 Design of an accessible and inclusive built environment ▪Sustrans: We must take practical steps to support people with mental health conditions	(1) Day-to-day activities are limited a lot for approx. 8.3% and 6.4% of people in Wilburton and Cottenham respectively, which is similar to the national average of 8.3%. The percentage of people who's actives are affected a little are also similar to the national average of 9.3%, with10.9% in Wilburton and 9.6% in Cottenham. The percentage of people aged between 16-64 with day-to-day activities limited a little is higher than the national average of 4.6% in Wilburton at 5.1%. In Cottenham, it is lower at 3.8%. Similarly, the percentage of people in very good health is higher in Cottenham (51.6%) than in Wilburton (46.6%) and across England (47.2%). The opposite is true often good health category. With a national average of 34.2%, Wilburton has 37% and Cottenham has 33% The percentage of households with one person having a long-term health problem or disability is similar in Wilburton (25.5%) and across England as a whole (25.7%). Both of these are higher than the same figure for Cottenham, at 23.4% (2) Disabled people are 5 times more likely to be injured as a pedestrian than non-disabled people. (3) Both Cottenham and Wilburton are in the 20% least deprived neighbourhoods in terms of health and disability. (1) Census 2011 (2) Road Safety GB (3) Indices of Deprivation 2019	**Possible Positive Impact:** Accessible routes can result in easier local journeys and recreational opportunities for disabled people. This can lead to more independence including improved mental and physical health. Improvements to the routes which benefit everyone can further support disabled people. For example surfacing and widening the footpath of Cottenham Lode would provide access to the natural environment to people using walking aids and mobility scooters. Potential for reduced noise pollution resulting from being away from traffic by avoiding or changing the existing Twenty Pence Road can benefit people with cognitive disabilities. This can aid disabled people to independently access local amenities. The safer crossing provisions proposed benefits people with reduced mobility as they take longer to cross. Assessing the needs and experiences of disabled cyclists 2018", found that 75% of disabled people find cycling easier than walking. But inaccessible infrastructure prevents disabled people cycling. Better conditions can empower disabled people to cycle, especially those with balance issues and adapted bikes. **Possible Negative Impact:** If introduced infrastructure isn't carefully designed, it could result in reduced space and potential barriers for adapted bikes and mobility aids. Accessible access onto the greenway sections could cause nuisance access concerns for local people. Level changes will need careful consideration, to reduce any accessibility impacts. Some of the proposed on road routes may include grade segregation. The grade segregation options could be a barrier if they don't include accessible design elements such as dropped kerbs. Vulnerable users could be uncomfortable and intimidated by the shared use sections of the routes, especially if cycling volumes increase. Sections of the route will be shared with motor vehicles including farm machinery for example the quiet lane proposals, and this could be intimidating for older and younger people. The design of these sections should consider the viability of segregating motor vehicles from pedestrians and cyclists. The moderate traffic on Twenty Pence Road could still be an intimidating environment, even with the proposed 2m buffer (Alternative routes away from Twenty Pence Road have been considered). Some of the route options aren't a direct route from Cottenham to Wilburton so the time reaching either destination would be longer and could be an issue for vulnerable users.

Race	*Cycling & Mobility: We have failed to engage in the conversation about racism*	*Race Equality Think Tank*	*New report shows large unmet demand for cycling from ethnic minority and disadvantaged groups*	Guidance: Sustrans: Unmet Demond for cycling from Ethnic Minority and Disadvantaged Groups	(1) In terms of the white ethnic group, Cottenham and Wilburton have significantly higher percentages of residents (95% and 96.7% respectively) than the England average (85.4%) The percentage of Indian residents in Cottenham and Wilburton (0.8% and 0.4% respectively) is significantly lower than the whole of England (2.6%). The percentage of Black/African/Caribbean/Black British residents in both Cottenham and Wilburton is similar (0.8% and 0.6%) which is lower than the whole of England (3.5%). Overall, Cottenham and Wilburton have a higher representation of White residents and a lower representation of Indian, African, and Caribbean residents than the whole of England. (2) There is evidence that black, Asian and minority ethnic groups (BAME) are more likely to express concerns over safety and security (particularly after dark) than white groups. (1) Census 2011 (2) TFL, Understanding the Travel needs of London's diverse communities	**Possible Positive Impact:** An accessible and comfortable cycling environment should make cycling a more appealing mode of travel for ethnically diverse people. Ethnically diverse people are underrepresented in cycling for transport and exercise. **Possible Negative Impact:** There is evidence that black, Asian and minority ethnic groups (BAME) are more likely to express concerns over safety and security (particularly after dark) than white groups. These safety concerns will apply to the route options that have greenway sections with limited surveillance. As a result, these groups may choose to travel by private car and taxi due to safety concerns.
	How racism impacts air quality and endangers life	*Pedestrian casualities higher among BAME people*	-			
	Barriers of physical activity among Black and Minority Ethnic Groups in the UK	-	-			
Sex	*Inclusive cycling in cities and towns*	-	*Are we nearly there yet: Exploring gender and active travel*	Guidance: •Plan International UK: For Children & Equality for Girls •Sustrans Walking & Cycling Index	(1) Personal safety after dark is a concern for women (more so than for men) but during the day, these concerns are in line with those of men (2) Low level of crime deprivation in Cottenham (40% least deprived) is an indication of a more safe neighbourhood for everyone. Whilst Wilburton has higher crime deprivation of 50% most deprived neighbourhoods in the country. (1) TFL, Understanding the Travel needs of London's diverse communities (2) Indices of deprivation 2019	**Possible Positive Impact:** Segregation from motorised vehicles and an accessible improved walking and cycling environment could particularly benefit women, who are more likely to be walking with young children and prams. Women are less represented than men in cycling and this is partly because women are impacted by a more risk adverse attitude to mixing with traffic. Improved cycling infrastructure and motor vehicle free route sections could encourage more women to cycle. **Possible Negative Impact:** Women are more likely to be worried about personal safety and experience anti-social behaviour whilst travelling. A recent survey by Plan International UK found 66% of girls aged 14-21 in the UK have experienced unwanted sexual attention whilst in a public place. Sections of the proposed routes have limited surveillance and this could contribute to safety concerns. Women may therefore be disproportionately affected by longer, less convenient car journey due to their reliance on them. Sections of the routes will be shared with motor vehicles including farm machinery and could be intimidating for women who are more risk adverse.
	Travelling in a Woman's Shoes	*Women's role in 'unpaid work'*	*Walking and Cycling through Menopause*			
	Safety in Public Spaces: Women, Girls and Gender Diverse People	*Sexual harassment in UK public spaces*	-			
Age	*"Age Friendly Places Making our*	*Loneliness in Later Life research by Age UK*	*Designing for Children & Young People*	Guidance: •World Health Organisation: Global Age-Friendly Cities •Age UK: Age-Friendly Places •National Library of Medicine: Ambient Air Pollution, Noise, & Late-Life Cognitive Decline & Dementia Risk •Sustrans: Enabling Independent Travel for Young People •Asthma+Lung UK: Why you should #DropOffSwitchOff at the school gates	(1) The age distribution of residents in Wilburton, Cottenham, and England are similar. However, Wilburton and Cottenham has a lower percentage of adults age 20 to 24 as a compared to England's Average (4.4%, 3.9% and 6.8% respectively). At age 30 - 44, both Wilburton, Cottenham and England percentages are similar (20%, 22% and 20.6% respectively). Between ages 60 to 64, Wilburton's percentage (9.9%) is slightly higher than Cottenham and England which both have similar percentages (6.5% and 6% respectively). Younger demographics up to 44 Years of age are slightly higher in Cottenham than in Wilburton. Contrastingly, Wilburton has a higher percentage of residents aged 60 years and over compared to Cottenham. The average age for Wilburton is between 45 to 59 age group whereas for Cottenham it is between 30 to 34 age group. The age distribution is an important demographic factor that can be used to analyse the needs and demands of the population in different locations. The age demographic for Fordham and Isleham is akin to England averages. (2) In the UK the most common cause of non-natural death for 5–14-year-olds is being hit by a vehicle. On minor roads serious injury is twice as likely, and three times more likely to kill a child cyclist. (3) In terms of income deprivation for older people, a large proportion of Cottenham Parish, lies in the 10% most deprived neighbourhoods whilst the central built up area concentration lies within the 10% least deprived neighbourhoods in the country. Wilburton lies amongst the 50% least deprived neighbourhoods in the country. (1) Census 2011 (2) Sustainable Development Commission: Fairness in a Car-dependant Society & ICE Virtual Library (3) Indices of Deprivation 2019	**Possible Positive Impact:** <u>Children & Young People:</u> An increase in activity, including walking and cycling benefits children in reducing childhood obesity. Reduced danger from motorised vehicles should support independent active travel for young people. Due to their height and developing lungs air pollution from vehicles has a significant impact on young people. Research has found that exposure to air pollution in early life can lead to later life health problems and a reduced quality of life. Sections of this route are along off-road field edges, and other sections when on-road have low traffic volumes, reducing exposure to air pollution. <u>Older People:</u> Older people are more likely to have dementia which can be made worse by vehicle noise pollution. Reducing traffic volumes especially along route D, through proposition of point closures of roads to through traffic, reduction of speeds and associated road danger proposed by this feasibility study will also benefit older people with disabling conditions, including mobility issues and sensory impairments. Older people become less active which can impact there physical and mental health. Social isolation is a growing problem faced by older people. The off road sections have the potential to encourage older people to travel actively and result in more regular social interactions. <u>Older & Younger People:</u> Accessible routes can improve conditions for walking and cycling, especially for those that need to use an adapted bike. Also, the new bridge crossing provision proposed over the Great River Ouse benefits older and young people as they will be avoiding traffic flows from motorist along the existing road bridge. If the cycling infrastructure and safety of cycling improves more people may consider owning and using a bike for journeys they currently do via taxi and private car thus reducing traffic volumes and making it safer for all ages to walk and cycle. The proposed route F is along a number of business which can encourage more local workers and residents to walk and cycle. **Possible Negative Impact:** If introduced infrastructure isn't carefully designed, it could result in reduced space and potential barriers for pushchairs, mobility aids and larger adapted bikes including family cargo bikes. Accessible access onto the off-road routes for everyone including adapted bikes, pushchairs, and people with mobility issues, could cause nuisance access concerns for local people. Level changes will need careful consideration, to reduce any accessibility impacts. Vulnerable users could be uncomfortable and intimidated by the shared use sections, or mixed use traffic especially if cycling volumes increase. Sections of the route will be shared with motor vehicles including farm machinery and this could be intimidating for older and younger people. The design of these sections should consider the viability of segregating motor vehicles from pedestrians and cyclists. Option C along the B1049 could still be an intimidating environment, even with a segregated cycle route (an alternative route option in the adjoining fields is being considered). Older and younger people reliant on a private car or taxi for transport may face less convenient and more expensive journeys.
	"Voice opportunity power. A toolkit to involve young people in the making and managing of their neighbourhoods."	*Active travel and mid-life: Understanding the barriers and enablers to active travel*	*Enabling independent travel for young people*			
	The future of transport in an Ageing Society	*The Role of Transport in Supporting a Healthy Future for Young People*	*Ageing better through active travel*			

Sexual orientation and gender reassignment	*Thinking Cities: LGBTQ+ Urbanism: Reclaiming Space*	*Stonewall data on LGBTQIA+ hate crime across the UK*	-	Guidance: •Arup's 'Queering Public Space' •Sustrans: Communities Carving out a Space in Cycling that is Radical, Inclusive and Fun	(1) Only 51% of people who identified their gender 'in another way' feel welcome and comfortable walking or spending time on the streets of their neighbourhood, compared to 65% of women and 67% of men. (2) Data from the Office for National Statistics (ONS) shows more than one in four trans people (28%) experienced crime in the year ending March 2020, compared with (14%) of people whose gender identity is the same as the sex they were registered at birth. (1) Sustrans Walking and Cycling Index (2) Office for National Statistics	**Possible Positive Impact:** Arup's 'Queering Public Space' report has identity principles to design public spaces, so they are more comfortable and inclusive for the LGBTQ+ community. There is scope to implement the findings of this report when designing this route and its adjoining spaces including the villages it passes through. The positive impact of implementing the findings of Arup's report will also result in inclusive places that benefit other protected characteristics. **Possible Negative Impact:** Sustrans Walking and Cycling Index learned that only 51% of people who identified their gender 'in another way' feel welcome and comfortable walking or spending time on the streets of their neighbourhood, compared to 65% of women and 67% of men. The sections of the routes have limited surveillance and this could contribute to safety concerns. Transgender people are more likely to be the victim of crime (28%), compared with people who identity as the same sex they were registered with at birth (14%). People who identify as LGBTQ+ may choose to travel by private car and taxi due to safety concerns. These journeys may become less convenient due to the proposed speed and volume reduction interventions.
	Queering Public Spaces	-	-			
	Engaging transgender people	-	-			
Pregnancy and maternity	*Bumps and bicycles: Women's experience of cycle-commuting*	*Behavioural analysis of postnatal physical activity in the UK*	*Tips for cycling during pregnancy*	Guidance: •RCOG: Position Statement-Outdoor air pollution and pregnancy in the UK •Sustrans: Tips for Cycling During Pregnancy •Sustrans: Bumps and Bicycles-Women's Experience of Cycle-Commuting During Pregnancy	(1) At least one in three babies are growing up in areas of the UK with unsafe levels of particulate matter, the most dangerous pollutant for our health. (2) The NHS says that keeping active can make you less likely to experience problems later in your pregnancy and when you're in labour. (1) UNICEF, A breath of toxic air: UK children in danger (2018) (2) NHS Exercise in Pregnancy	**Possible Positive Impact:** Less stressful route sections due to being traffic free and linked with the natural environment i.e. routes along field edges and Public Rights of Way can help support a healthy pregnancy. Pregnant people and unborn children can be adversely affected by air pollution. Parents and carers with prams and young children will benefit from an accessible walking and cycling environment. Parents and carers using cycles and cargo bikes for family journeys will benefit from an accessible route. A safer walking and cycling environment could encourage more families to walk and cycle for local journeys. **Possible Negative Impact:** If introduced infrastructure isn't carefully designed, it could result in reduced space and potential barriers for pushchairs and larger bikes including family cargo bikes. Accessible and inclusive access onto the greenway sections for everyone including adapted bikes, pushchairs, and people with mobility issues, could cause nuisance access concerns for local people. Level changes will need careful consideration, to reduce any accessibility impacts. The route proposals also include segregated cycleways, and if widths and gradients aren't designed to Equality Act guidance they will be a barrier, Vulnerable users could be uncomfortable and intimidated by the shared use sections, especially if cycling volumes increase. Sections of the route will be shared with motor vehicles including farm machinery and this could be intimidating for pregnant women. The design of these sections should consider the viability of segregating motor vehicles from pedestrians and cyclists. Pregnant people and carers of young children who need a car may face increased traffic and less convenient journeys with the implementation of point closures.
	Cycling Cities for Infants, Toddlers, and Caregivers	-	-			
	-	-	-			
Religion or belief	*Inspiring and enabling Muslim women to cycle*				(1) Christianity is the most widely practised religion, with England having 59.4%, Wilburton having 63.1%, and Cottenham having a lower percentage of 58.6% of its population following Christianity. Other types of religion such as Muslim is significantly lower in Wilburton and Cottenham when compared to England averages, with both Wilburton having 0% Hindu and Cottenham having 0% Sikh population. The percentage of people who do not follow any religion in Cottenham is the highest (32.1%) compared to Wilburton which is similar to England percentages (24.8% and 24.7% respectively). (1) Census 2011	No specific impacts have been identified at this stage of the project.
Other marginalised groups	*Car parking for care experienced*	-	*Sustrans in Rural Scotland - Overview*	DFT are currently developing the Future of Transport: rural strategy, when released this strategy could help shape the future development of this project.	(1) Overall, 89 of the 141 cyclists killed in 2020 died on rural roads (63%). This compares to 60% in 2019, and 54% on average between 2015 and 2019. (1) Road Safety GB	The projects development will need to consider the active travel infrastructure requirements of rural communities.
	Cycling for homeless people case study					
Marriage and civil partnership	There is little evidence about marital/civil partnership status or relationship status and associations with wider active travel patterns.					

Responsive Solutions

After examining the resources and data, and if possible speaking to those with lived experience, you will be in a good position to develop responsive solutions. While the impact on all characteristics should be considered, it is also sometimes appropriate to primarily focus the project response on particular characteristics only. Consider how solutions may apply to different characteristics simultaneously, or particularly support those with multiple characteristics.

Negative Impact	**Cost of Cycling and Ability:** Although purchasing and maintaining a bike is less expensive than a motor vehicle, and can be cheaper than public transport, people with less income may struggle to own and maintain a bike. Residents with protected characteristics living near the route may experience a lack of cycling confidence and ability. The routes proposals include sections where cyclists will mix with vehicles including farm machinery, this could increase levels of anxiety preventing some vulnerable people using it. These impacts will restrict people with impacted characteristics use of the routes cycling infrastructure and the benefits of cycling.
Characteristics Disproportionately Impacted:	Age (Young/Old), Disabled, Social Economic Status, Pregnancy and Maternity, Race and Ethnicity

Actions to be Explored	Expected Outcome
Develop a programme to help low income rural residents with the affordability of purchasing, maintaining, and storing cycles.	Increased numbers of low income residents enjoying the benefits of cycling and utilising the routes Infrastructure.
Develop and promote programmes which help disabled residents to purchase, maintain and store adapted or electric bikes.	Increased numbers of disabled residents enjoying the benefits of cycling and utilising the routes Infrastructure.
Develop and promote programmes which provide a safe and comfortable environment for residents and with protected characteristics to learn cycling skills and raise awareness of the route.	Increased numbers of residents with protected characteristics enjoying the benefits of cycling and utilising thenroutes Infrastructure.

Negative Impact	- Being disadvantaged if they still prefer to make these journeys by motor vehicles due to safety concerns when the route is implemented - Using walking and cycling infrastructure they feel uncomfortable and unsafe using Poorly designed layout and function of walking and cycling infrastructure can be a disproportionate barrier for several protected characteristics.
Characteristics Disproportionately Impacted:	Age (Young/Old), Disabled, Race and Ethnicity, Pregnancy and Maternity, Gender, Sexual Orientation, Gender Reassignment

Actions to be Explored	Expected Outcome
Ensure that walking and cycling infrastructure follows current best practice guidance including LTN 1/20, and where applicable responds to Healthy Street audit indicators. Where the route will be shared with motor vehicles including farm machinery, this could be intimidating for people with protected characteristics. The design of these sections should consider the viability of segregating motor vehicles from pedestrians and cyclists, and where possible consider routes through adjoining fields. If these options aren't viable, traffic speed and volume will need to be managed with 20mph speed limits, and changes to the carriageway (for example priority working, build-outs, psychological traffic calming).	A safe and inclusive walking and cycling environment which benefits all potential users. Especially those that can be disproportionately impacted by barriers including mixing with motor vehicles, limited path widths, clutter, restricted access, and inadequate crossing provision. The LTN 1/20 guidance which incorporates Equality Act requirements will need to be applied to the proposed grade segregation, and controlled crossing on the A142 making them inclusive points along the route.
Ensure walking and cycling infrastructure incorporates required elements for safety including maximising informal surveillance, appropriate lighting, and inclusive wayfinding signage. Signage should also include warnings of unavoidable restrictions which affect people with protected characteristics. Including sections of the route which have steep gradients. Also details of local amenities should be included on wayfinding signage.	Residents with protected characteristics with highlighted personal safety concerns being comfortable to walk and cycle. A reduction in taxi and private car journeys which are a result of safety concerns.
Inclusive engagement with residents to explore existing barriers, safety concerns and to shape design proposals.	An improved route with more people able to access local destinations by walking and cycling.
In response to monitoring and engagement ensure that the walking and cycling infrastructure has capacity for any active travel volume spikes, and manages cycling speeds and plans for future demand.	A walking and cycling infrastructure which has capacity for spikes in active travel volumes and manages cycle speeds. This will help maintain a public realm environment which is safe and inclusive, in alignemnt with LTN 1/20. This includes minimising the amount of shared use paths.

Negative Impact	**Public Spaces Not Designed for Everyone:** The development of the route will link Wilburton and Cottenham, providing access to the natural environment. However, if the resulting route and adjoining environment isn't improved following inclusive design principles, people with protected characteristics are less likely to use it. The negative impacts of this could include: •Social isolation •Less likely to use walking and cycling infrastructure •Feeling uncomfortable and unsafe in public spaces •Less likely to benefit from the mental and physical health benefits of green spaces and active travel
Characteristics Disproportionately Impacted:	Gender, Gender Reassignment, Sexual Orientation, Race and Ethnicity, Disability, Age (Young/Old)

Actions to be Explored	**Expected Outcome**
Ensure that the route, its adjoining spaces, and access points are designed inclusively following best practice guidance. Examples of guidance to incorporate: - Arup: Queering Public Space - World Health Organisation: Global Age-Friendly Cities - Age UK: Age-Friendly Places - Transport for All: Pave the Way - The Equality Act 2010 - LTN 1/20 - Buildings Code of Practice BS 8300-2:2018 Design of an accessible and inclusive built environment - Sustrans: We must take practical steps to support people with mental health conditions - Healthy Street Assessments	A safe and inclusive environment, that is welcoming for all people, so they can benefit from and enjoy the physical and mental health benefits of outdoor spaces and active travel.
Inclusive engagement with local people to explore existing barriers, safety concerns and to shape design proposals.	

Negative Impact	**Longer, less convenient, and more expensive journeys by private car:** The development of the scheme may involve a point closure -traffic reduction on Twenty Pence Road. The implementation of these solutions would see an increase in journey time by private car. The implication of this is more expensive and less direct trips for doctors, careers and others supporting people with protected characteristics, as well as those unsafe walking or wheeling.
Characteristics Disproportionately Impacted:	Gender, Health and Disability, Age, Pregnancy and Maternity, People experiencing high deprivation

Actions to be Explored	**Expected Outcome**
Ensure that the route is accessible to as many people as possilble through changes across Wilburton and Cottenham, maximising modal shift and therefore minimising the amount of people affected less convenient journeys. Consider route lighting where appropriate to make routes feel safe for all users.	Equitable access to cycling and walking routes and destinations across Wilburton, Cottenham, and neighbouring communities. Mitigated impact on traffic volume and journey times by motor vehicles through broader modal shift away from them. Subsidised travel for those that need it decreases disproportionate imact on protected characterisitcs, while reducing reliance on private cars
Subsidised travel for licensed taxi and private hire vehicles, available to residents with serious mobility impairments and severe sight loss. The same subsidised travel made available to careers and others supporting people with protected characteristics. Subsidised travel will need to be promoted to beneficiaries and made user friendly to access and use.	

Further Actions:	
If the negative effects cannot be changed by the removal of barriers and changes to the project, list the reasons why	The project is currently at an outline stage, and the mitigation described will help address the negative impacts on protected characteristics. The mitigation and impacts have been identified from researching other schemes and related best practice guidance.
If impact is unclear what action is required?	This EqIA will need to be revisited as the project develops, as new impacts may emerge, and the projects inclusivity will need to respond to future engagement and monitoring results.