Feasibility Study Mepal to Witchford

29 May 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 loveable 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 explores the potential for new cycling and walking routes connecting the communities of Mepal and Witchford. Currently, these communities rely heavily on the A142, a major road characterised by high volumes of motorised traffic, posing discomfort and inconvenience for pedestrians and cyclists alike.

East Cambridgeshire's flat landscape makes it a perfect locale for cycling, whether it's for commuting or recreational purposes. Furthermore, the distance between Witchford and Mepal is less than 8 kms, making it a suitable distance to commute on a bike. The high volumes and speeds of traffic can be intimidating and one unfortunate experience with a speeding car can put people off from cycling for life. For walking or horse riding there are a number of attractive rights of way, but many of these are very difficult to use in winter when they can easily become muddy and almost impassable.

This report explores various alignment options on both sides of the A142, with one of the major issues in the report being consideration of how best to cross this major road. In order to provide a route suitable for all users all crossings of the A142 will need to either use a bridge or a signalised crossing, so this will be a major investment.

This report delves into the intricacies of local travel within Witchford, Sutton and Mepal. It underscores the significance of ensuring that people have access to these routes either directly from their doorsteps or all the way to key destinations. Without such provision, certain journeys will continue to pose challenges, regardless of the quality of the routes between Mepal and Witchford.

None of the options are easy. However, it is important that the selected route or routes are developed to a high standard, that is suitable for all potential users and one that can be easily maintained to a good standard for many years.

For the purposes of the study a number of different routes were considered, but it would be possible to use parts of different options to form a final route. There are certainly different issues to address in the Mepal/ Sutton/ Witcham area that have little impact on the Witchford area and vice-versa and the report concludes that it is reasonable and appropriate to consider these separately.

The routes considered are shown in Figure 1.1. It has not been possible to select just one route as a favourite – all the options have some advantages and serve slightly different purposes. Options C and D are considered to be most likely to be of direct benefit for routes to and from Sutton and are therefore expected to have higher usage than Options A and B. The options are summarised considering the whole route Mepal – Witchford.

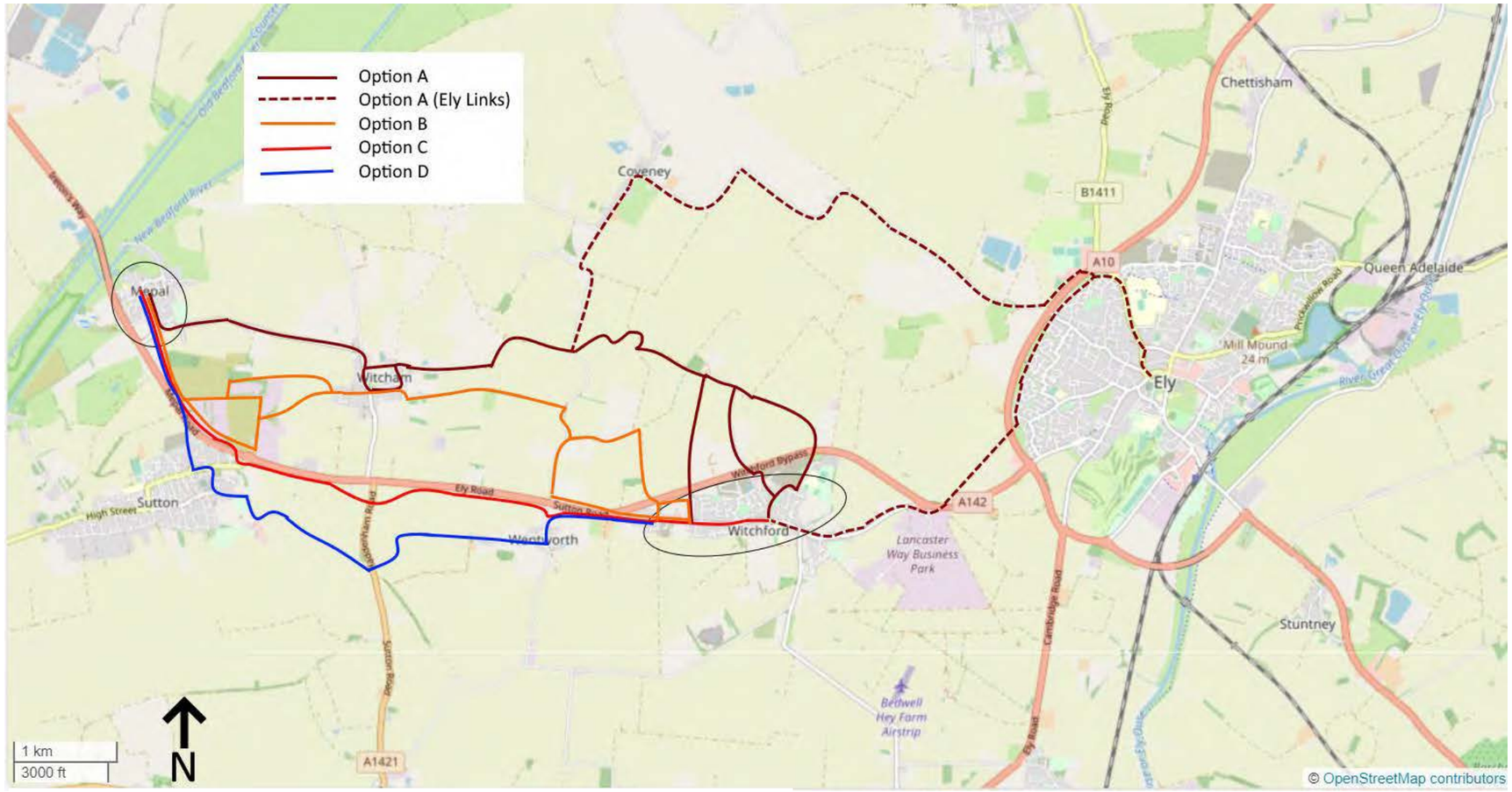

Figure 1.1 Route Options considered.

Option A: This route uses existing roads (which will need some changes) between Mepal and Witcham and then uses existing byways and a new link between byways to arrive at the A142 near Witchford. Three possible locations for bridges to cross the A142 are considered, each requiring different access. The favoured option would link the two parts of Common Road, thereby improving access between Witchford and employment sites north of the busy A142.

Option A (Ely Links): Building upon Option A, this proposal is considered because it potentially provides the best link between Mepal and Ely and is therefore relevant in considering the pros and cons of Option A. It uses quiet roads and builds on existing facilities in the Ely area and links with proposals in the Ely – Little Downham and Ely – Littleport studies. A new link with the A10 underpass is proposed and some consideration is given to Ely-Witchford links.

Option B: Similar to Option A this route utilises Public Byways, but also seeks to establish a new link for Mepal and Witcham with the Elean Business Park, near Sutton, which can currently only be accessed via the A142. As with Option A the route links with the A142 near Witchford. Possible locations for bridges to cross the A142 are considered, each requiring different access. The favoured option would link the Long Causeway to the west of Witchford.

Option C: This option would build on the existing route between Mepal and Sutton providing a new safe crossing of the A142 and with new provision through Sutton. The route would then run to the south of the A142, set further back from the road than the existing path and with significant changes at the side road junctions, until it linked with Witchford in a similar manner to the existing A142 path.

Option D: In a similar way to Option C this route would link Mepal with Sutton and then continue on to Witchford south of the A142. In this case though the alignment would be further south following attractive rights of way and new links going through Wentworth village before following a similar route to Option C into Witchford.

All options have significant risks in terms of the need to acquire private land. Ultimately it may be necessary to use Compulsory Purchase Powers to deliver routes. Ecology is a risk that has been considered in route selection and there will be Biodiversity Net Gain implications. Many works are within areas that may flood, and the Environment Agency consent is also a risk. The biggest technical challenges are likely to be in the major crossings of the A142 that are needed. The biggest engagement challenges are likely to be in the significant changes in Sutton and Witchford that are needed to make the new facilities accessible and attractive for all.

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2. Introduction

Sustrans has been asked to look at options for new walking and cycling routes between Mepal to Witchford, in East Cambridgeshire. 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, but although people do cycle in and around Mepal and Witchford the numbers are much lower than in the Cambridge area and between the two communities cycling levels are low.

In order 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.

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.

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.

None of Witchford or Mepal have direct link to the Network, but the integration of new high quality provision with the network at Ely would raise the profile of the link and cycling locally.

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 Mepal and Witchford.

— To consider if there are merits in incorporating links with Sutton.

— To consider ways to improve links within all 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.

The 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 At grade crossing of side road with separation for traffic, 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 undulation, 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 barrier 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 3.6a Accessible for all

Figure 3.6b Corridors that provide continuity, that create short-cuts and are away from traffic, in attractive environments.

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 cross roads 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

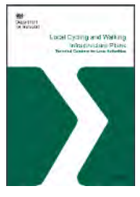
4. Guidelines and Standards

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.

4.1 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).**





Low Traffic Neighbourhoods

- Sustrans introductory guide to low-traffic neighbourhood design
- Manual for Streets
- Slow Streets Sourcebook (Urban Design London)
- Streetscape Guidance (Transport for London)
- Achieving lower speeds: the toolkit (TfL).

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

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). The document sets out key design principles, which are the basis for the updated national guidance for highway authorities and designers, given in LTN1/20.

Figure 4.1 Key Design Principles

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)

LTN 1/20 has therefore 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.

LTN 1/20 sets out design speeds for cycles and dimensions of cycles, to aid designers. It sets out the need for good smooth, durable surfaces and gives exceptional circumstances where shared use may be appropriate. In this case it gives a minimum

width of 3m, which is used in this study, for rural routes. The document defines the type of provision for cyclists by traffic volume and speed and the type of users to be catered for. For the purposes of this study the aim is to cater for all.

The need for cyclists to be segregated from pedestrians (except in exceptional circumstances) and from motorised traffic is emphasised and this is related to traffic speed. This is particularly important for any route besides the A142 where speeds are high.

For side roads LTN 1/20 gives examples of priority crossings for cyclists and for main road crossings LTN 1/20 sets out the requirements and relates this to traffic speeds. This is again very significant for the A142.

The guidance is clear that there needs to be a step change in terms of the quality of provision for cycling and that provision is not aimed so much at those who cycle already but rather at those who are not confident to cycle at present.

Speed Limit[1]	Motor Traffic Flow (pcu/24hpur)[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
20mph[3]	0					
	2000					
	4000					
	6000+					
30mph	0					
	2000					
	4000					
	6000+					
40mph	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 llmlt 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

Figure 4.2 Extract from LTN 1/20 showing the type of provision required.

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

Figure 4.3 Extract from LTN 1/20 showing the required separation from the carriageway as speeds vary.

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					
40mph and 50mph	>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 traffic flow is no more then 10% of the 24 hour flow.

Figure 4.4 Extract from LTN 1/20 showing the requirements for safe crossings of busy roads.

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).

Figure 4.5. LTN 1/20 Core Design Principles.

Gear Change

There are policies at very local and at national level to encourage walking and cycling. National guidance is most recently set out in Gear Change and LTN 1/20.

Gear Change sets out ambitious targets for big increases in cycling and walking in our towns and cities by 2030. It also sets out the benefits of active travel.

Figure 4.6 Gear Change cover

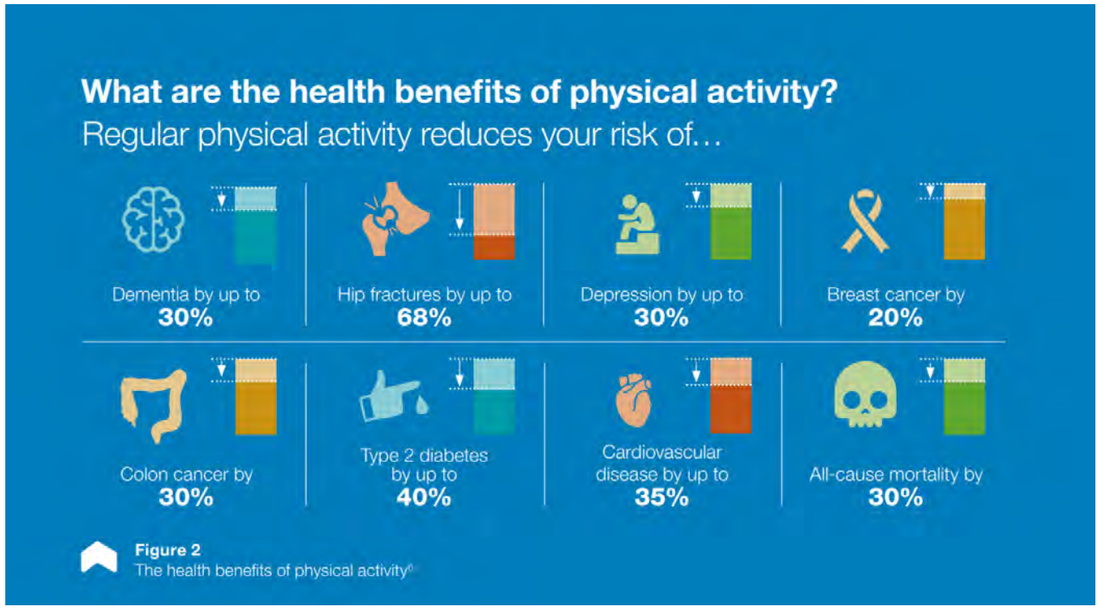


Figure 4.7 Extract from Gear Change

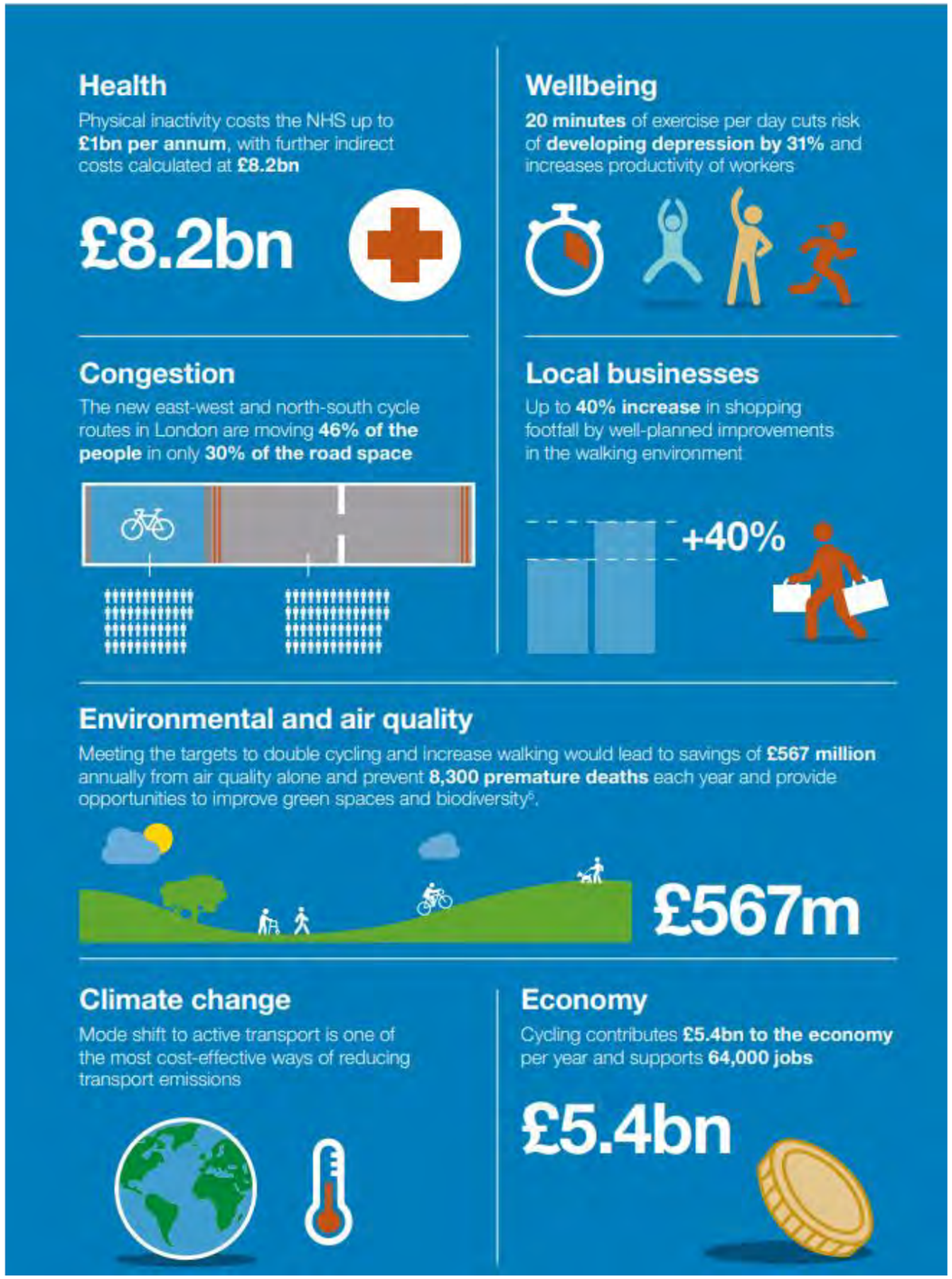


Figure 4.8 Extract from Gear Change

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.

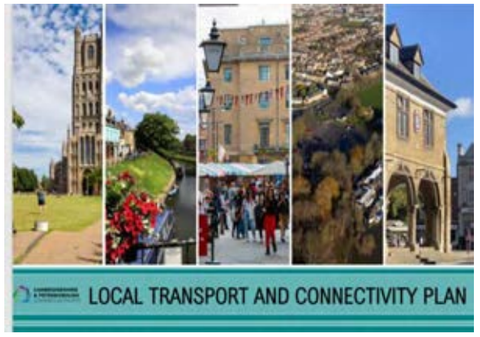


Figure 4.2.1 - Local Transport and Connectivity Plan

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 and Connectivity 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 also works with local communities to help deliver improvements to their highways and streets. Traffic calming, parking restrictions, speed limit changes and footway and pedestrian crossing improvements are some of the most common improvements and these are all relevant for active travel. A significant fund is the annual 20 mph fund.

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 – 20 mph speed limit

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……

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

Figure 4.2.3 - East Cambridgeshire Local Plan.

The plan includes provision for very changes in Mepal, but significant growth in Witchford.

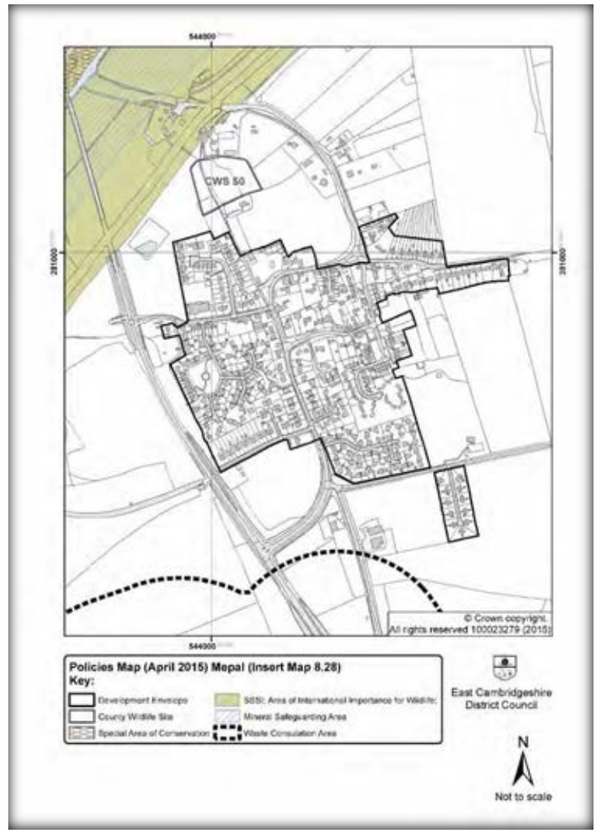


Figure 4.2.4 Extract from Local Plan for Mepal (Insert Map 8.28).

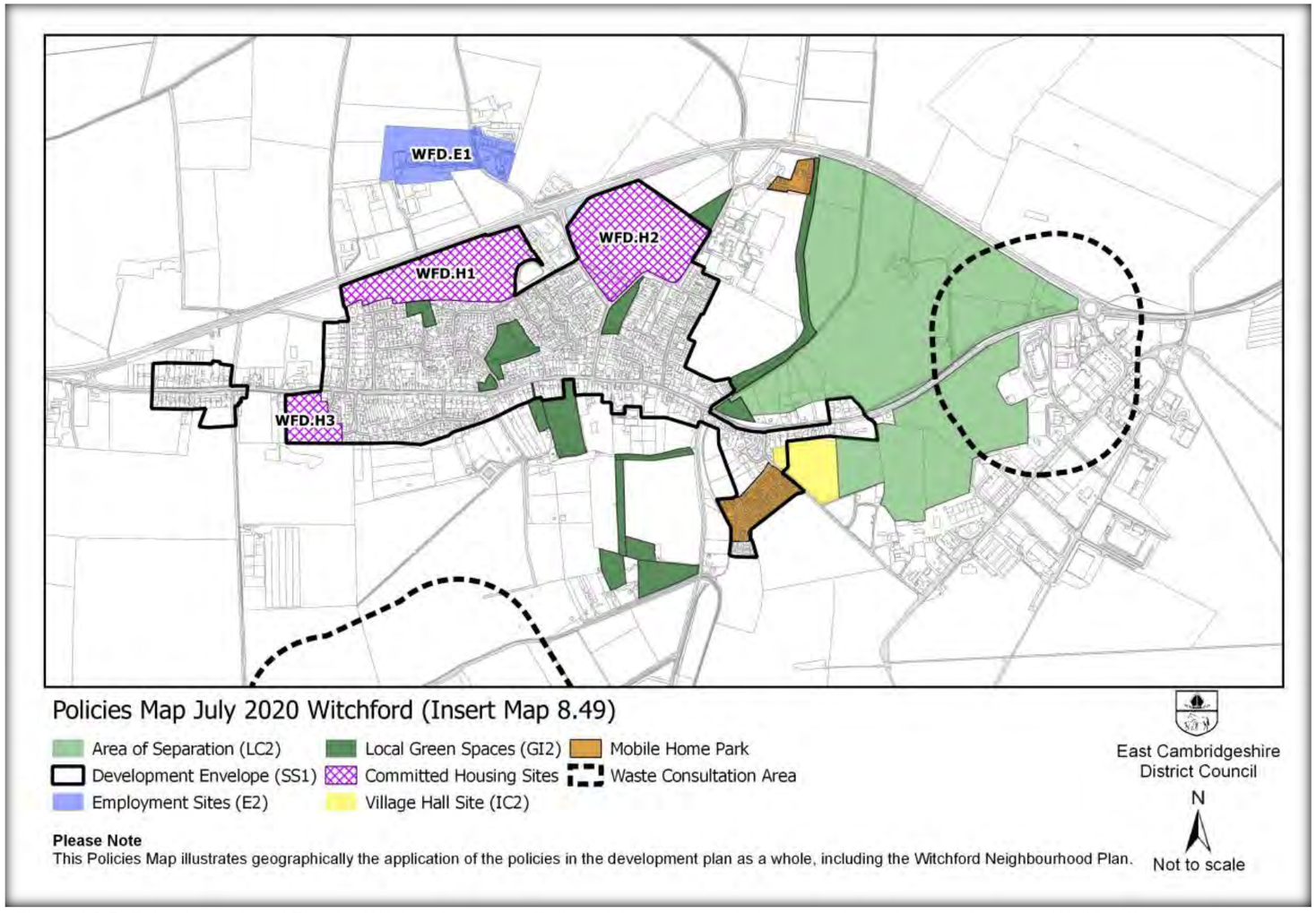


Figure 4.2.5. Extract from Local Plan for Witchford (Insert Map 8.49)

Both Mepal and Witchford Parishes have developed Neighbourhood plans.

There is an extremely limited bus service that runs once daily from Mepal to Witchford, better greenway links between the communities would have a tangible benefit for longer journeys than wheeling or walking alone would accommodate.

Both parishes express their support for active travel, particularly outlined in Policy WNP T1 – Getting around the village.

"Development proposals which help to create a more walkable neighbourhood in the village will be supported. There should be good permeability through housing areas ensuring they are well connected via walking and cycling routes to neighbouring plots, key services including Witchford Village College, Witchford Primary School and shops and services located on Main Street…

In all Major Development where necessary to achieve a good quality and accessible walking and cycling environment to meet the needs of the users of the development and where directly, fairly and reasonably related in scale and kind to the development, contributions towards these initiatives will be sought… "

Walking Strategy

The Walking Strategy element included within the LTP is still relevant today, especially with regards to the number of short trips under 1 mile completed on foot, and the reliance on the car for trips of 2 miles or less.

Public perception of the walking environment is perhaps more acute, and the problems / barriers faced more "in focus". What is missing though is the acknowledgement that noise, clean air and proximity to moving traffic are now regarded as being fundamental to encouraging this as a mode of transport.

The relocation of the health centre to outside of the village, and the poor-quality link for pedestrian access ensures that trips are made by car. The development of the railway as a multiuser greenway would overcome this barrier.

Cycling Strategy

The County's first Cycling Strategy in 1995 has certainly evolved and the County Council is an Authority that is forward-thinking and keen to adapt, however the study area remains a challenge that is yet to be fixed.

Many of the guidance documents noted within the LTP are old, outdated or no longer relevant – and a reliance on these to determine solutions should be cautioned against.

All of the 10 policies identified in the LTP remain relevant today – but the significant changes in infrastructure design and delivery mean that ambition, design, political and public support are more inter-twined through the publication of Gear Change and Local Transport Note LTN1:20

Figure 4.2.6 – Mepal and Witchford Neighbourhood plans

4.3 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 fig 4.13.

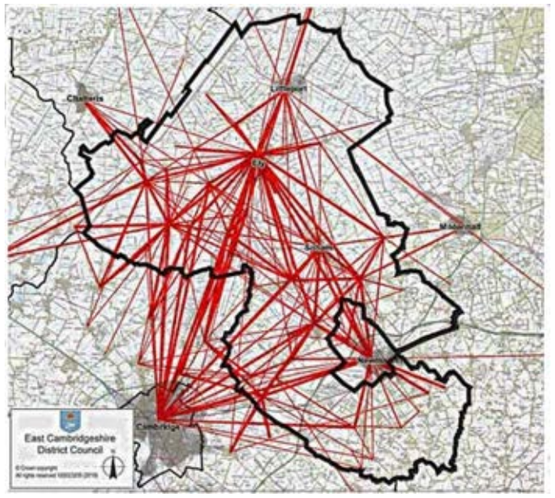
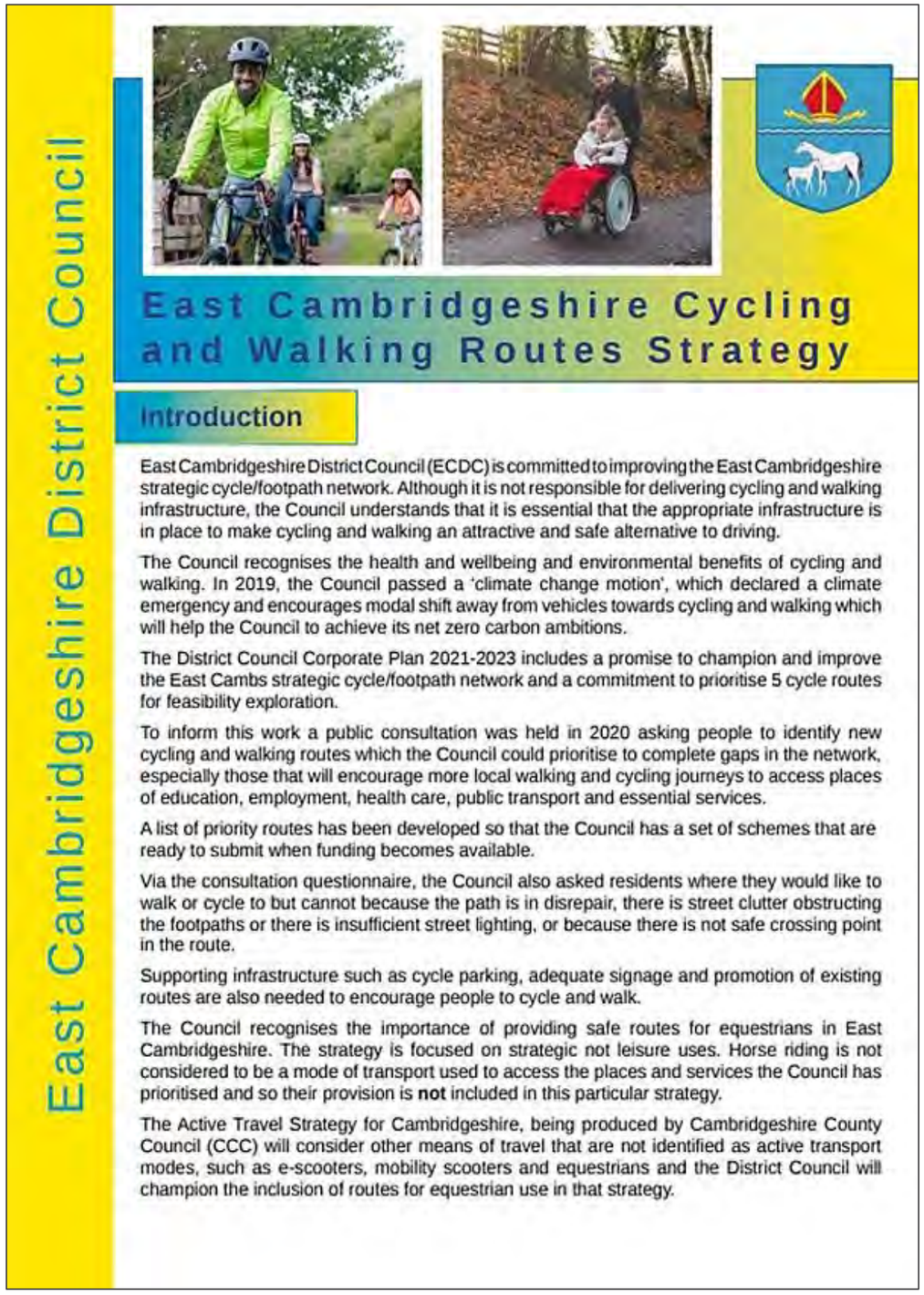


Figure 4.3.1 Cycle Route options from East Cambridgeshire Cycling and Walking Routes Strategy


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.

East Cambridgeshire

Figure 4.3.1 Introduction to East Cambridgeshire Cycling and Walking Routes Strategy

5. Description of Existing Routes

The existing National Cycle Network does not connect with Mepal or Witchford, but locally there has been a longstanding aspiration for improved cycling connections along the A142 between Mepal and Ely. Currently there is some provision between Ely and Sutton and there is a closed road between Sutton and Mepal which can be used by those wheeling or walking, but existing provision lacks continuity and much of it does not comply with LTN 1/20 and is therefore unlikely to be suitable for all, apart from the most confident.

There is already a route that uses relatively quiet roads between Ely and Mepal via Coveney and Wardy Hill (shown on the adjacent map), but the major weakness in the route is a very difficult and intimidating crossing of the A10 on the edge of Ely. This is typical of routes along the Mepal/ Witchford corridor where the major roads present real challenges. The A142 is the most significant major road and is the route that motor traffic would use travelling between Mepal and Witchford, but crossing the A10 is a major issue in terms of links with Ely and crossing the A1421 is also significant for any routes south of the A142.

The direct route along the A142 is an obvious alignment, but poses significant challenges for cycling. The road is characterised by high traffic volume, large vehicles and notable speeds, making it intimidating and potentially unsafe for a broad spectrum of cyclists and other vulnerable road users. Traffic data from https://roadtraffic.dft.gov.uk shows annual average daily traffic flow of 18,107 vehicles per day in a manual count in 2022. With high speeds and these traffic volumes it is obvious why the A142 has been a focus of attention for cycling for many years.

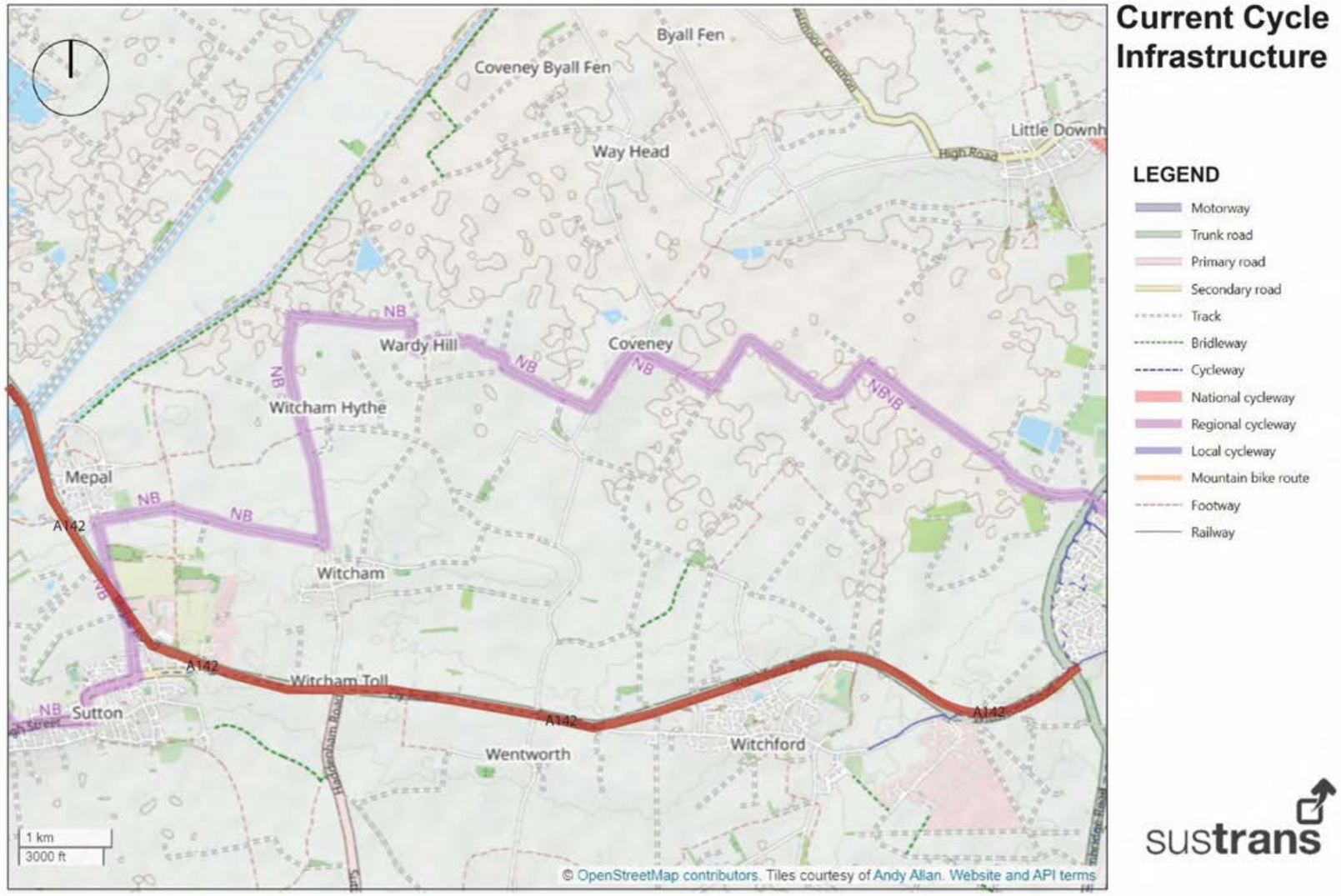


Figure 5.1 Route description of existing routes

The Elean Business Park, positioned between Mepal and Witcham, stands out as a crucial destination for the local workforce, but it has no dedicated cycling provision or access. This former airfield already includes a number of employment sites and clearly has potential to grow, bringing increased demands for better access for the workforce and potentially also putting extra demand on the local roads.

Witchford itself has some cycling infrastructure, but it is not to current standards. In a similar way there is existing provision along the A142 itself, but this is not to current standards. (See next section).

5.1 Issues with existing route that follows the A142.

There is an existing route that follows the A142 between Sutton, Witchford and Ely. (See map).

The major issues with the route are:

1. The shared use path width only complies with LTN 1/20 in certain places. It should be 3m throughout but is much narrower in places.

2. The separation from the carriageway of the path is inadequate and does not comply with Table 6-1 of LTN 1/20. This makes for an intimidating environment particularly when close to fast moving lorries.

3. Almost none of the junctions comply with LTN 1/20. The crossing of side roads is a major issue. The most intimidating crossing is the A10 crossing, which is now being prioritised for changes, but this is just one of many problem crossings.

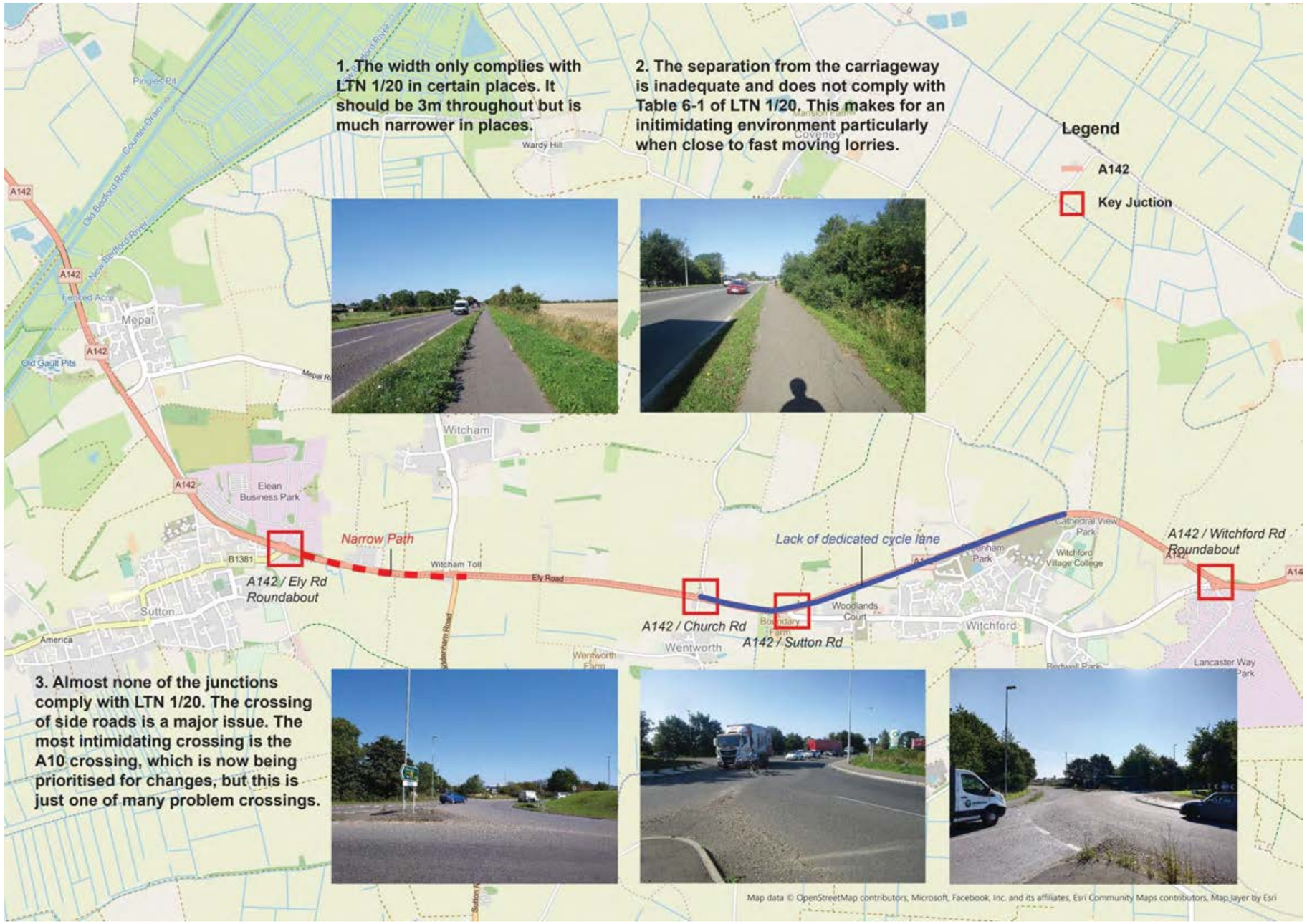


Figure 5.2 Route description of existing route along the A142

5.2. Other issues.

The issues encompass various aspects of infrastructure, safety, and accessibility, and understanding these challenges is crucial for effective planning and improvements.

5.2.1 Cycling Infrastructure

There is little or no dedicated provision in Mepal, Sutton, Witcham, Wentworth or Witchford, meaning that local people have to use the local roads at some point of any journey. Whilst traffic levels on many of the local roads are not a major concern, measures to reduce traffic volumes and speeds are to be encouraged.

5.2.2 School Accessibility

There are Primary Schools in Witchford, Sutton and Mepal and Witchford Village College lacks adequate cycling facilities to ensure easy access for students residing in Witchford and nearby areas. Access to schools is an obvious priority and Witchford Village College is an obvious focus.

5.2.3 Local Public Byways

The extensive and important local Public Byways offer potential walking, horse-riding and wheeling routes but require surfacing to make them usable. In winter many byways are impassable for most people.

5.2.4. Road Crossings and Bridges

There are no suitable road crossings of major roads within the study area. The A142 crossing near Lancaster Way business park is the type of crossing that would be needed, but it should be noted that access to that crossing is not suitable for all, due to the need to cross arms of a roundabout with no provision.

5.2.5 Road Surface and Safety

While the road surfaces are generally well-maintained, improvements in cycling provisions are necessary for enhanced safety and feasibility and cyclists are particularly vulnerable to poor road surfaces.

5.2.6 Topography and wind

This can be significant for cycling however, topography is not a major factor in this part of Cambridgeshire. Wind can be a significant factor in more exposed locations.

5.3 Distances and Travel Time

Google maps gives travel times as shown in Table 5.5, based on the centres of Communities as defined in Chapter 7 and based on existing provision. This shows that journeys are quick by car and this is clearly the dominant mode at present. Car journey time will be impacted significantly by congestion, whereas travel by bike or foot is likely to be more consistent time-wise. Travel times by bike are short and all journeys are within easy cycling distance, but walking is a less attractive option time-wise because of the distances involved (as well as the facilities).

Origin	Destination	Mode	Journey Time
Mepal	Witchford	Car	9 mins
Mepal	Witchford	Bike	24 mins
Mepal	Witchford	Foot	1 hour 42 mins
Mepal	Witcham	Car	5 mins
Mepal	Witcham	Bike	8 mins
Mepal	Witcham	Foot	37 mins
Witchford	Wentworth	Car	5 mins
Witchford	Wentworth	Bike	10 mins
Witchford	Wentworth	Foot	43 mins

Table 5.3 Travel time between Mepal and Witchford

6. Design constraints

6.1 Environment Agency

The overall route is predominantly unaffected by flood zones, presenting a favourable landscape for cycling infrastructure. However, it is crucial to highlight areas of concern specifically related to the link to Ely within Route A, as these segments are situated within flood zone 2. It is essential therefore that paths are built to withstand potential flooding and that thought is given to what would happen if the routes were flooded. Clearly where possible it makes sense to construct routes on higher ground, which is less prone to flooding, but this may not always be an option. Development of a sealed surface path would be appropriate in order to avoid maintenance costs and damage associated with flood events.

The flood map for planning shows river and sea flooding data only. This data doesn't include other sources of flooding and it is notable that many of the byways considered in the study got very wet during the winter.

The flood map is for use in development planning and flood risk assessments. This information relates to the selected location and is not specific to any property within it. Flood risk data is covered by the Open Government License which sets out the terms and conditions for using government data.

Figure 6.1 Flood Risk Map

6.2 Ground and Geology

https://webapps.bgs.ac.uk/data/maps

Underlying Geology

Figure 6.2.1 depicts the bedrock geology map, highlighting that Witchford, Witcham, Sutton, and Wentworth are primarily characterised by the Kimmeridge Clay Formation. In contrast, Mepal is predominantly associated with the West Melbury Marly Chalk Formation.

The superficial layer of geology predominantly consists of peat with occurrences of Diamicton. In specific locations such as Witchford, Wentworth, and Witcham, exhibit Diamicton deposits, while areas along Sutton feature sand and gravel deposits.

https://www.bgs.ac.uk/geological-data/map-viewers

Coal Mining

British Coal records suggest that no mine works are recorded and therefore the routes are not regarded as high risk from mining related subsidence.

https://mapapps2.bgs.ac.uk/coalauthority/

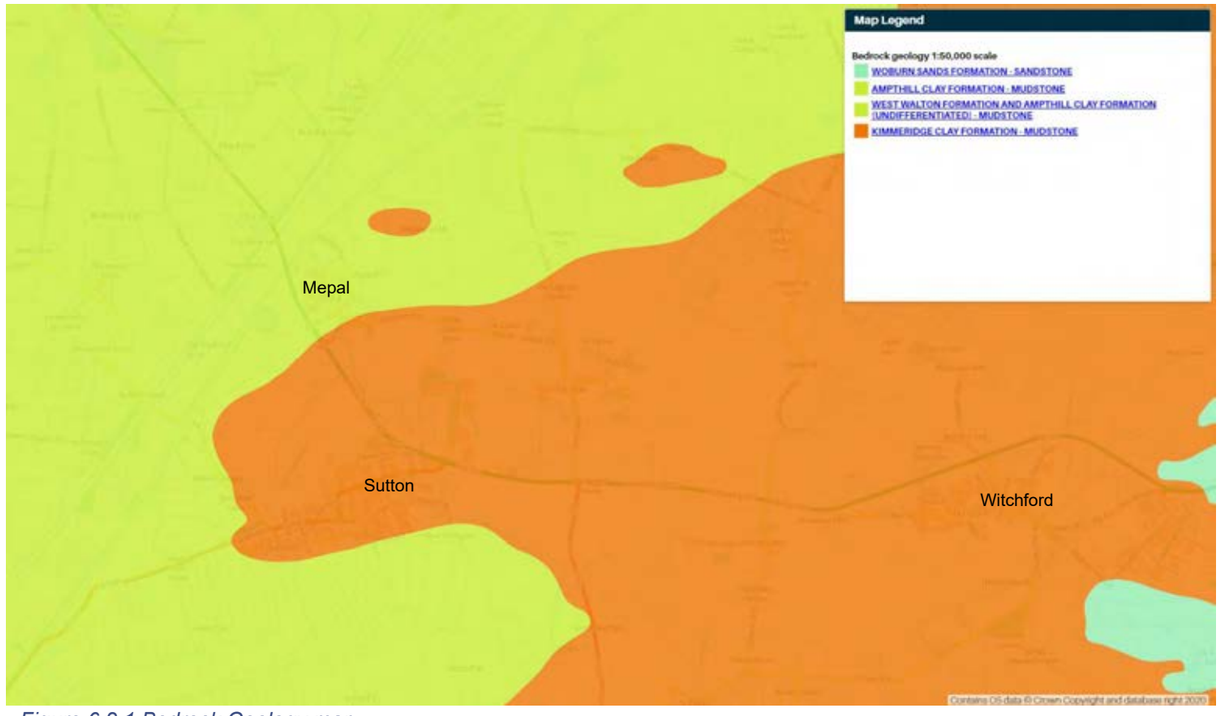


Figure 6.2.1 Bedrock Geology map

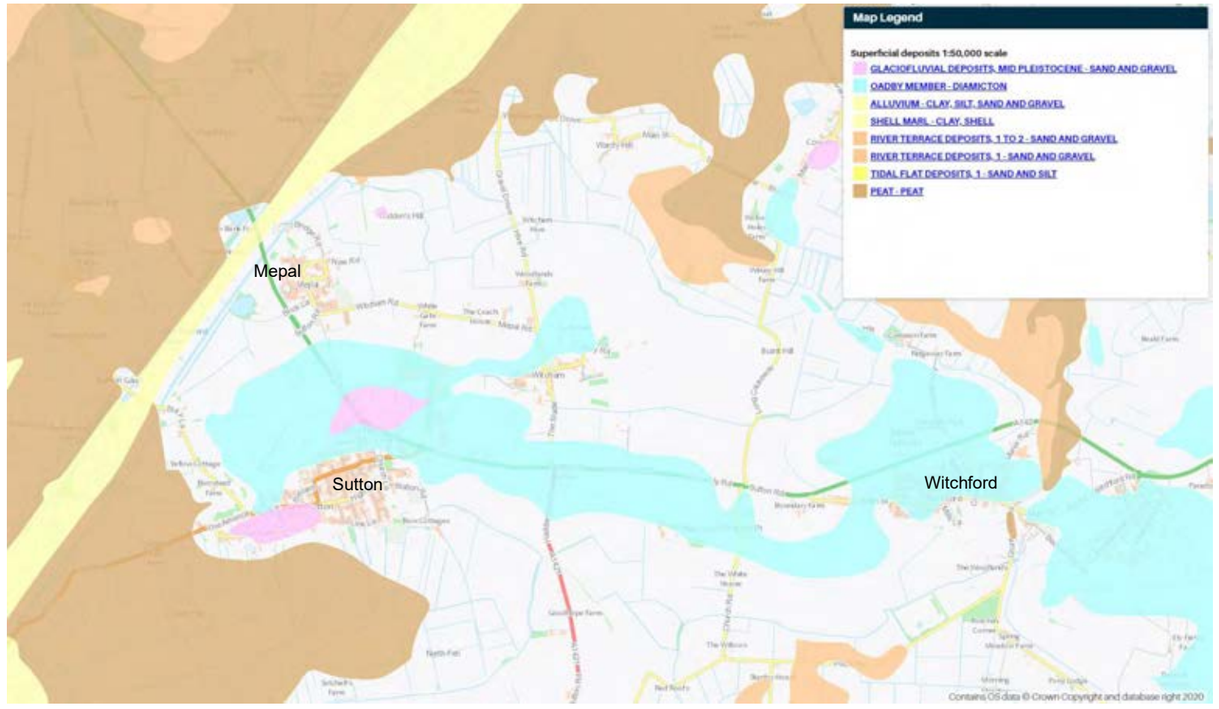


Figure 6.2.2 Superficial deposits Geology map

6.3 Utilities

One major challenge in this study, particularly with the various sub-options, revolves around determining how and where to cross the A142. The preferred solution, as outlined in the same chapter, involves the construction of bridges to ensure safe crossing of the A142. (details available in Chapter 7). A search has revealed utilities passing beneath the junctions being considered, including an Intermediate Pressure gas main running along the A142 corridor. These would complicate any major construction or re-alignment works. Cadent, landowners and other relevant stakeholders will of course need to be engaged in further planning and design work.

6.3.1 A142 / Witchford bypass

Figure 6.3.1 A142 / Witchford bypass

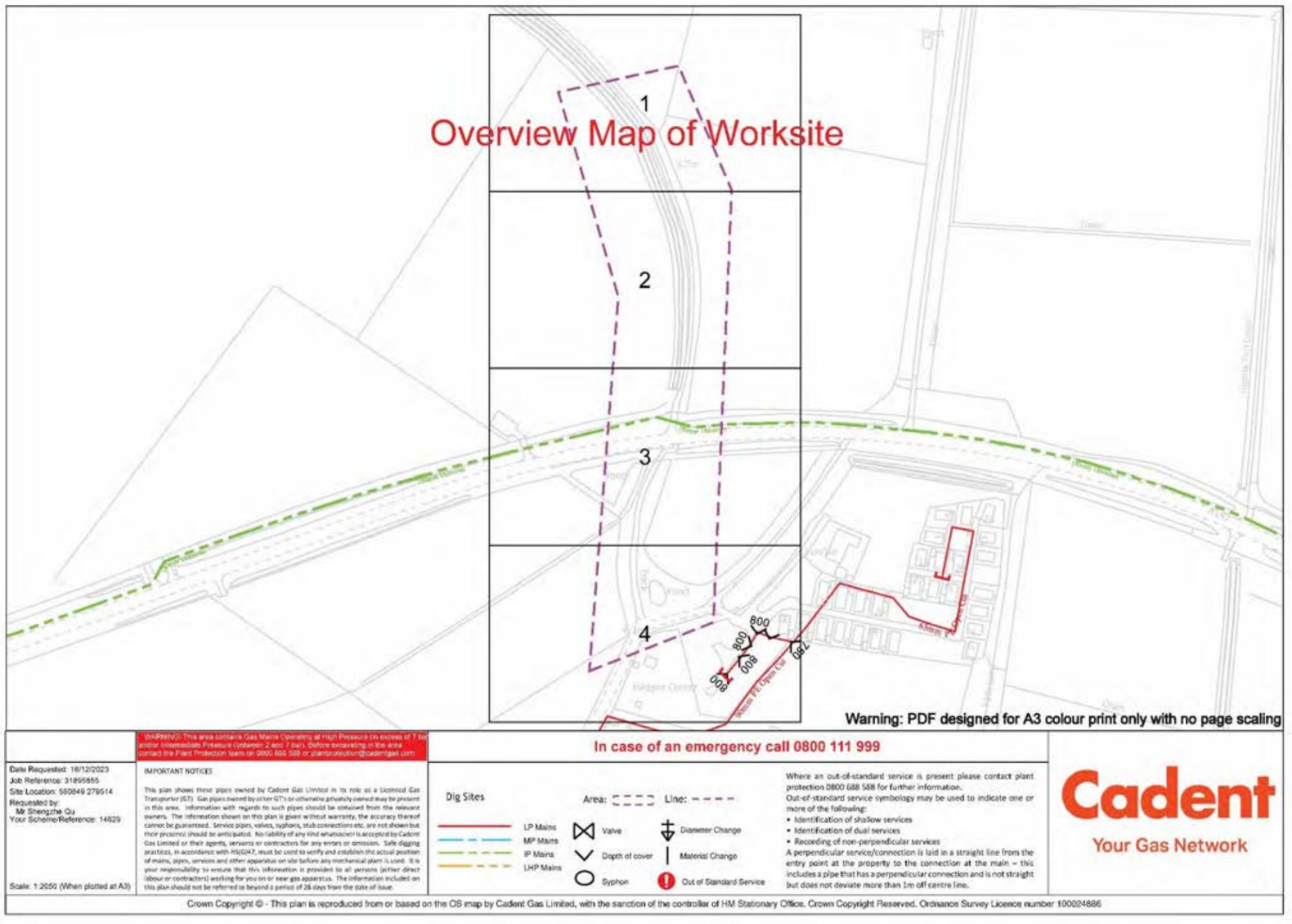


Figure 6.3.1.1 Gas Network of A142 / Witchford bypass

6.3.2 A142 / Common Rd

Figure 6.3.2 A142 / Common Rd

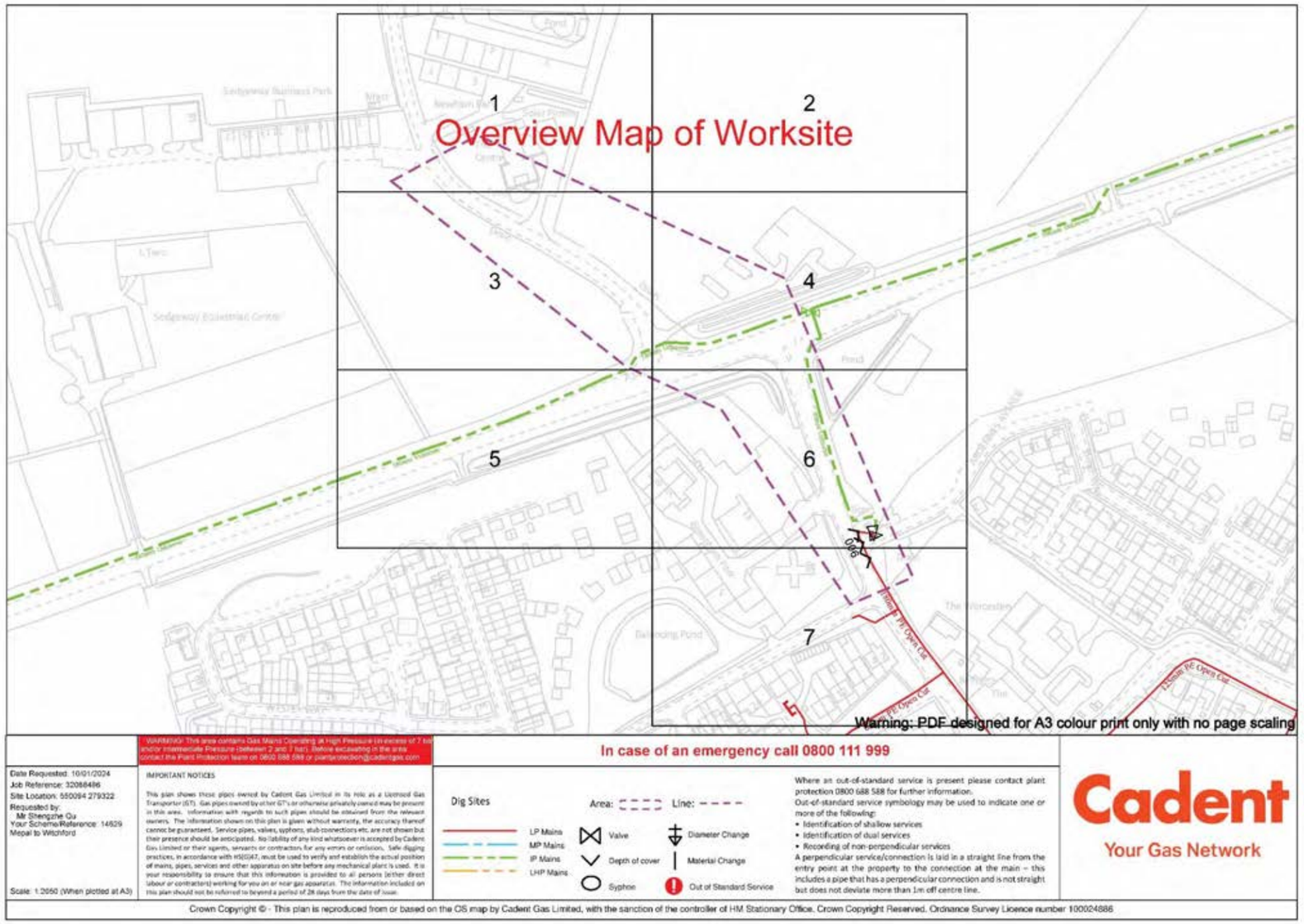


Figure 6.3.2.1 Gas Network of A142 / Common Rd

6.3.3 A142 / Common Farm / Witchford bypass.

Figure 6.3.3 A142 / Common Farm / Witchford bypass

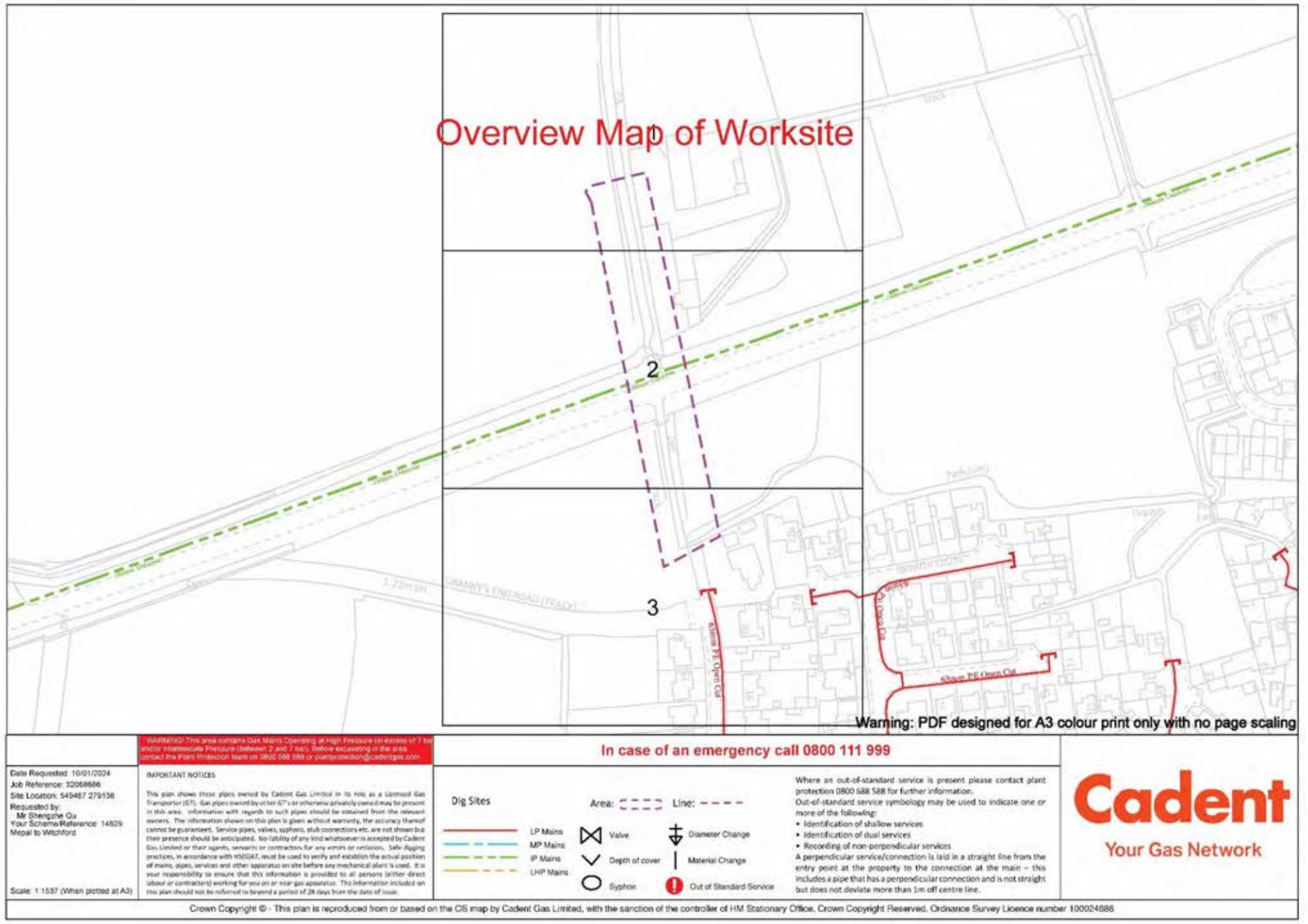


Figure 6.3.3.1 Gas Network of A142 / Common Farm / Witchford bypass

6.3.4 A142 / Scotts Farm / Witchford bypass.

Figure 6.3.4 A142 / Scotts Farm / Witchford

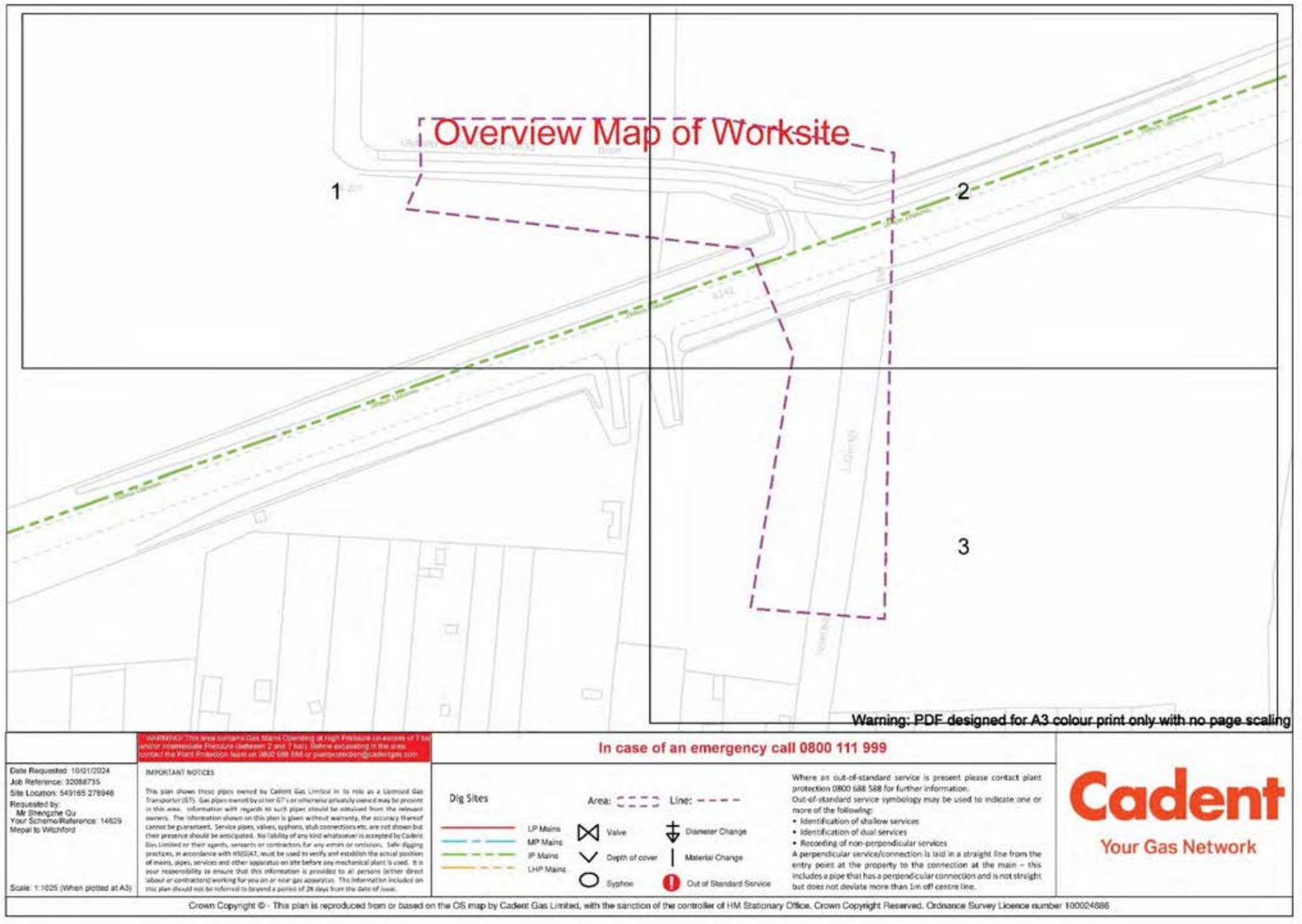


Figure 6.3.4.1 Gas Network of A142 / Scotts Farm / Witchford

6.4 Heritage and Historic Environment

https://historicengland.org.uk/listing/the-list/map-search

Historic England data records include scheduled monuments, parks and gardens, battlefields and protected wrecks. Important heritage sites can be a significant constraint on route choices, with the need to avoid any negative impact on these. In general, there are no affected areas or records near the research area. Whilst there are numerous listed buildings identified in Figure 6.4 it would be highly unusual for any new path proposal to impact an existing building.

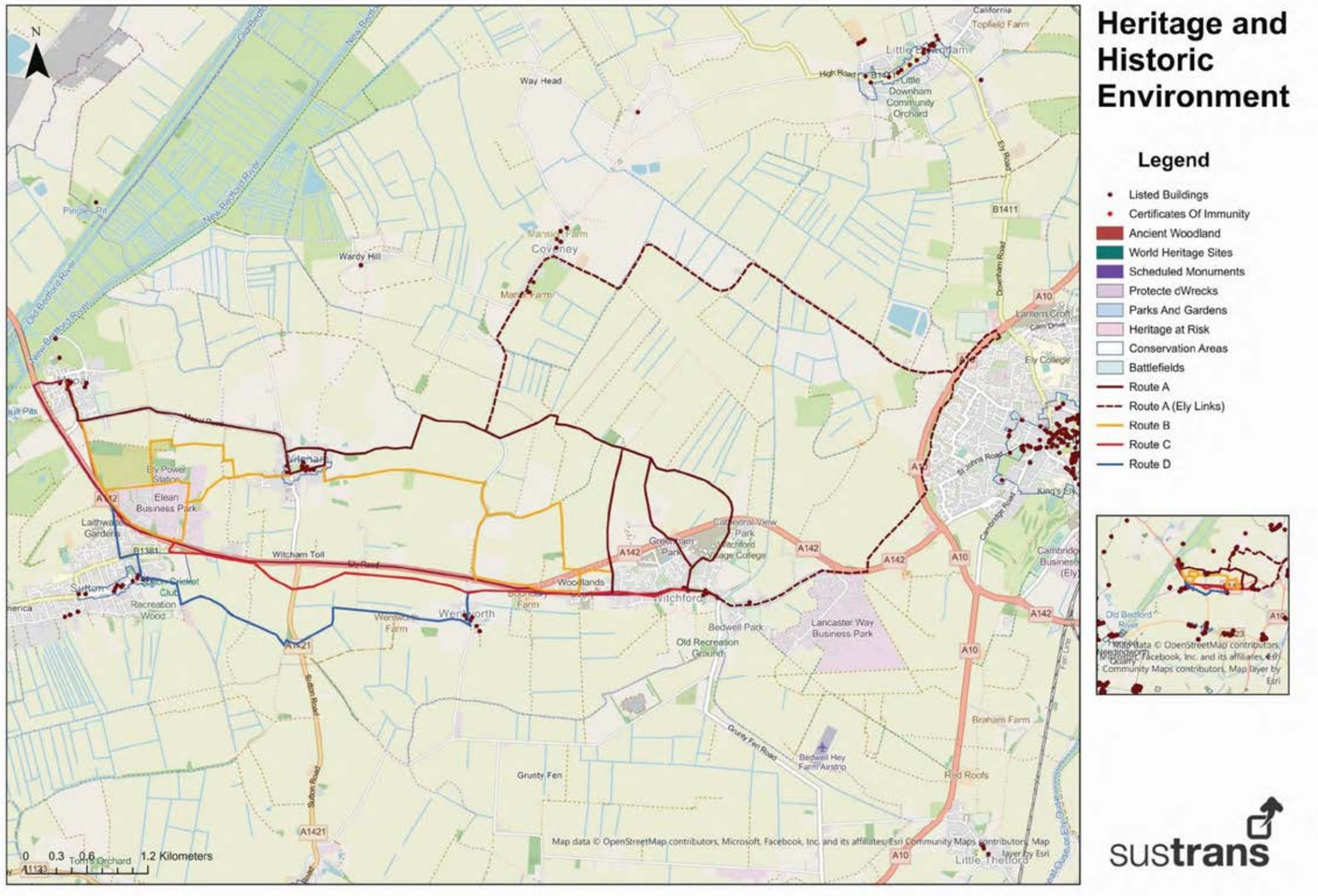


Figure 6.4 Map of Heritage and Historic Environment

6.5 Public Rights of Way

There is an unusually extensive network of Byways in the area to the north of the A142. The rights of way in the area can be very attractive and tranquil in comparison with the busy A142 corridor. However, the experience of using the routes in winter was that they can get very muddy and wet and very difficult for many people to use.

Option A predominantly uses byways between Mepal and Witchford. In contrast, Option A (Ely Links) makes use of mostly quiet roads and existing paths to the A10 at Ely before entering Ely Centre.

Option B, similar to Option A, includes byways and seeks to link them together to form a coherent useful route.

Options C and D follow the former road between the edge of Mepal and the A142 near Sutton. This is a gated public highway and appears to be a popular walking route.

Option D utilises a bridleway corridor to the southeast of Sutton and a public footpath corridor to the west of Wentworth and seeks to link these together with a new route.

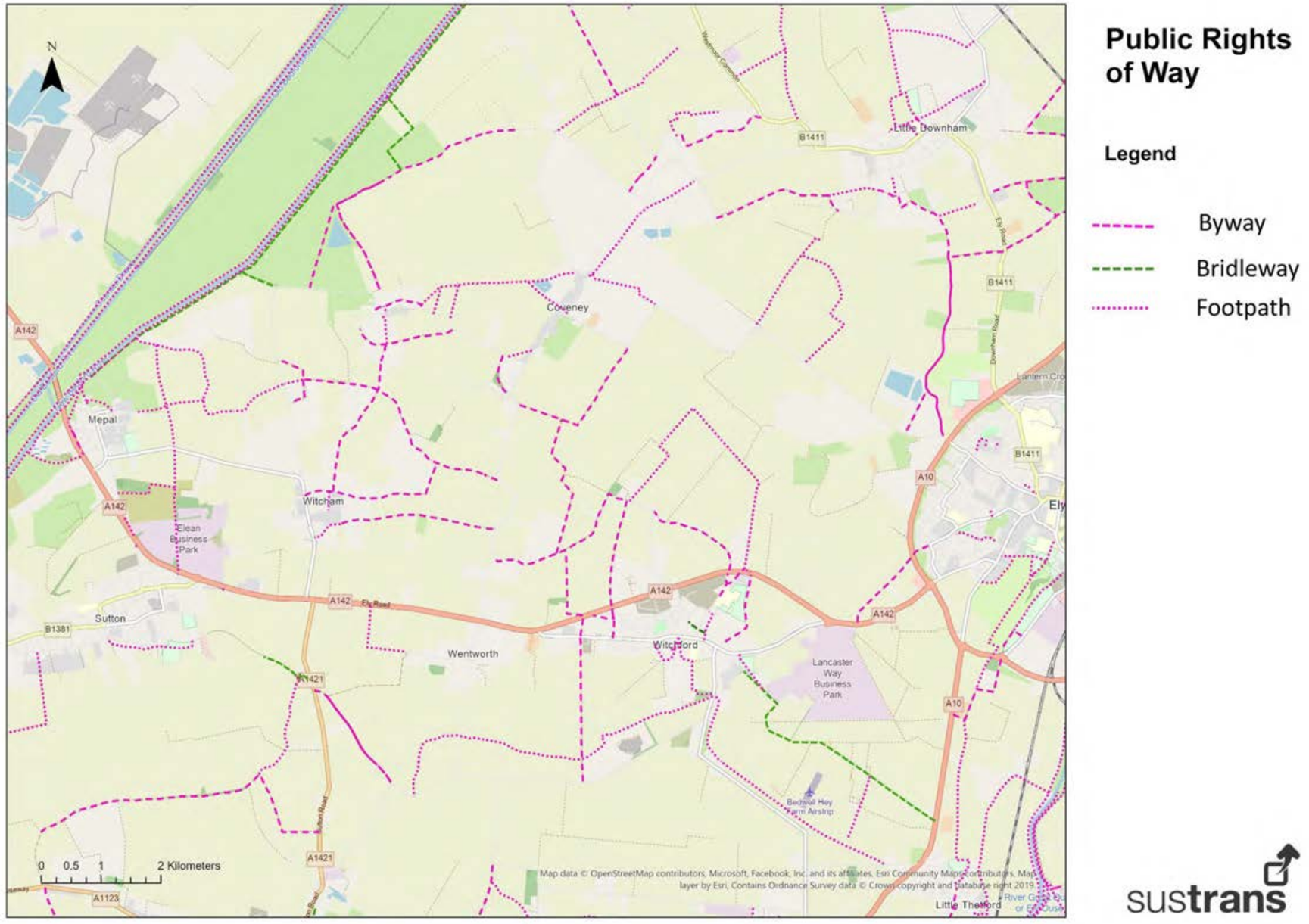


Figure 6.5 Public Rights of Way map between Mepal and Witchford

6.6 Local Points of Interest and destinations

https://historicengland.org.uk/listing/the-list/map-search

Ely stands out with its numerous attractions, making it a prominent destination for local trips. There are Primary schools at Mepal, Sutton and Witchford, which also serve communities around and a Village College at Witchford, which serves a wide area.

There are significant employment sites at Lancaster Way Business Park and at Elean Business Park and smaller sites such as Sedgeway Business Park north of Witchford, as well as within the communities themselves. The area is intensively farmed with agricultural activities across the area.

The major retail centre is Ely but there is provision in Witchford, Sutton and Mepal and along the A142 itself.

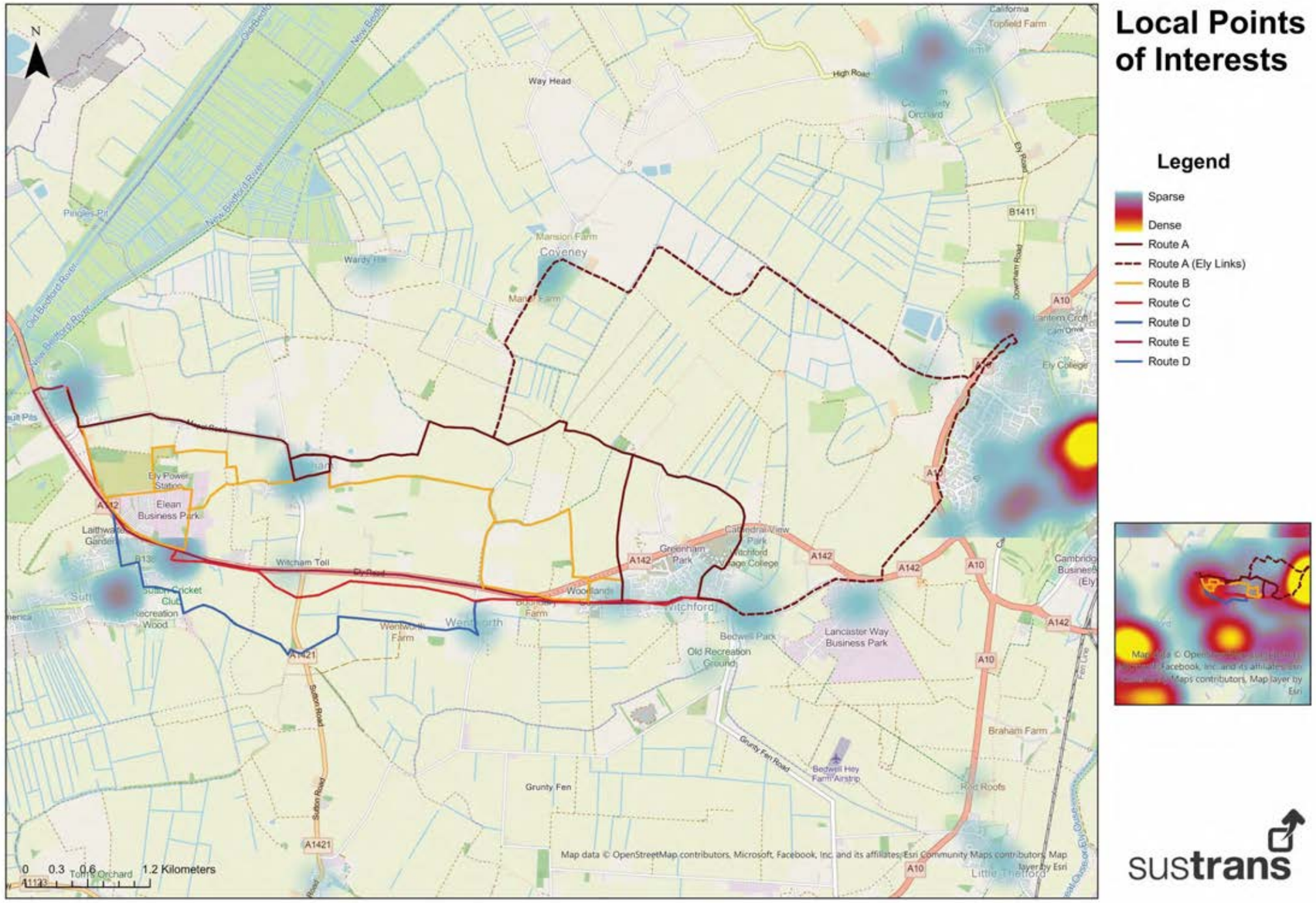


Figure 6.6 Points of Interests Heat Map

6.7 Traffic Incidents

Incident data can highlight some concerns. Numbers of Incidents are low in general and this could be attributed to the overall low population density and limited cycling activity in the area. Notably, a fatal incident involving a pedestrian occurred on Witcham Rd between Mepal to Witcham. Furthermore, numerous serious incidents involving pedestrians and cyclists were reported in association with A142, particularly at the A142/Ely Rd roundabout and A142/Common Rd crossing. This suggests that significant safety modifications should be contemplated for crossing the A142. Additionally, a fatal incident involving a cyclist occurred south of Wentworth.

Figure 6.7 Traffic Incident Map

7. Route Appraisal and design considerations

Routes have been selected on the basis that they should follow existing rights of way or highways or obvious boundaries such as field edges. The area does include a number of byways, which people walking, wheeling or on horseback have the right to use. Whilst the use of rights of way or field edges is an obvious aim it does not guarantee that routes can be delivered and there will need to be negotiations with landowners, key stakeholders and community engagement even before formal consents are sought.

Given that the routes are intended for all as defined within LTN 1/20 they need to be as direct as possible and built to a good standard and width. The route options take into account the importance of ensuring safe routes for children commuting to school and for individuals travelling to their workplaces.

The options considered vary in how direct they are in terms of linking Mepal with Witchford and which communities they link with, leaving difficult choices if one route is to be selected.

In general, the options aim to minimise the need to cross the A142, because that is likely to be extremely expensive, but all options need at least one crossing of this busy road and choosing the best location for any crossings has been a key focus of this study. Two of the options are mostly to the north of the A142 and two are mostly to the south.

The existing route within the A142 verge has been discounted as it does not comply with LTN 1/20.

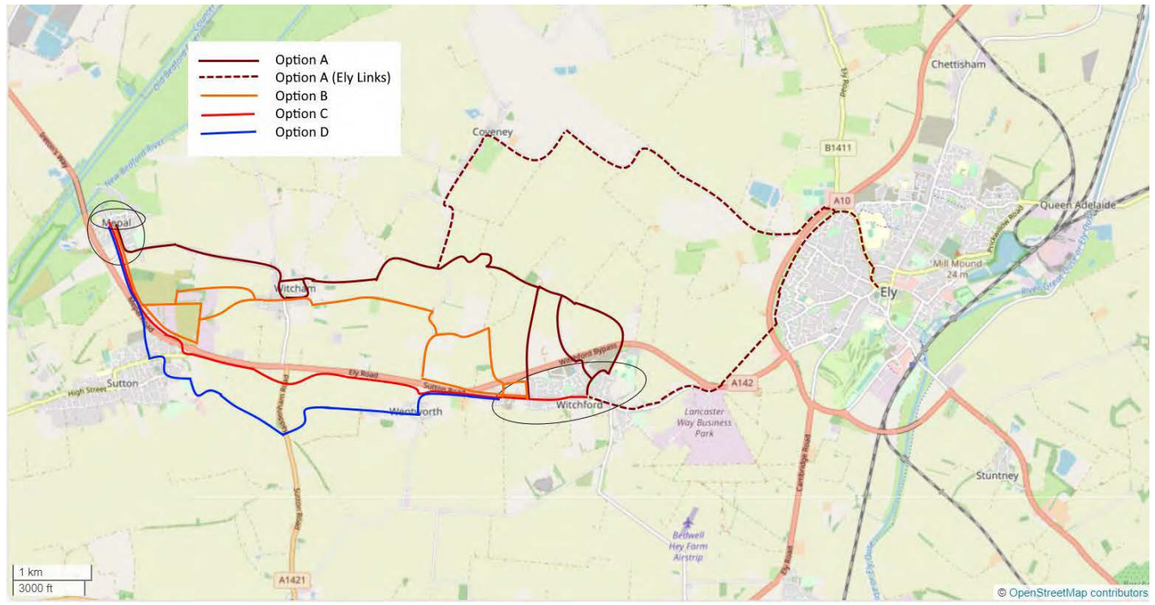


Figure 7.1 Route option overview

Issues in relation to this route are discussed in Chapter 5.

For fair comparison all routes start at the Brangehill Lane/ Sutton Road junction in Mepal and finish at the Common Road/ Main Street junction in Witchford, which are considered to be central locations in each community. By road the distance between the two is 4.5 miles, which is within a reasonable cycling distance.

A brief summary of the options is:

Option A:

This route uses existing roads (which will need some changes) between Mepal and Witcham and then uses existing byways and a new link between byways to arrive at the A142 near Witchford. Three possible locations for bridges to cross the A142 are considered, each requiring different access. The favoured option would link the two parts of Common Road, thereby improving access between Witchford and employment sites north of the busy A142.

Option A (Ely Links):

Building upon Option A, this proposal is considered because it potentially provides the best link between Mepal and Ely and is therefore relevant in considering the pros and cons of Option A. It uses quiet roads and builds on existing facilities in the Ely area and links with proposals in the Ely – Little Downham and Ely – Littleport studies. A new link with the A10 underpass is proposed and some consideration is given to Ely-Witchford links.

Option B:

Similar to Option A this route utilises Public Byways, but also seeks to establish a new link for Mepal and Witcham with the Elean Business Park, near Sutton, which can currently only be accessed via the A142. As with Option A the route links with the A142 near Witchford. Possible locations for bridges to cross the A142 are considered, each requiring different access. The favoured option would link the Long Causeway to the west of Witchford.

Option C:

This option would build on the existing route between Mepal and Sutton providing a new safe crossing of the A142 and with new provision through Sutton. The route would then run to the south of the A142, set further back from the road than the existing path and with significant changes at the side road junctions, until it linked with Witchford in a similar manner to the existing A142 path.

Option D:

In a similar way to Option C this route would link Mepal with Sutton and then continue on to Witchford south of the A142. In this case though the alignment would be further south following attractive rights of way and new links going through Wentworth village before following a similar route to Option C into Witchford.

It is important to note that the implementation of this route requires securing access to private land for the connection between the Bridleway along New Cut Drain and Wentworth Main Street. This will need to be thoughtfully negotiated with landowners and gain the necessary planning approvals.

Option A

This route uses existing roads (which will need some changes) between Mepal and Witcham and then uses existing byways and a new link between byways to arrive at the A142 near Witchford. Three possible locations for bridges to cross the A142 are considered, each requiring different access. The favoured option would link the two parts of Common Road, thereby improving access between Witchford and employment sites north of the busy A142.

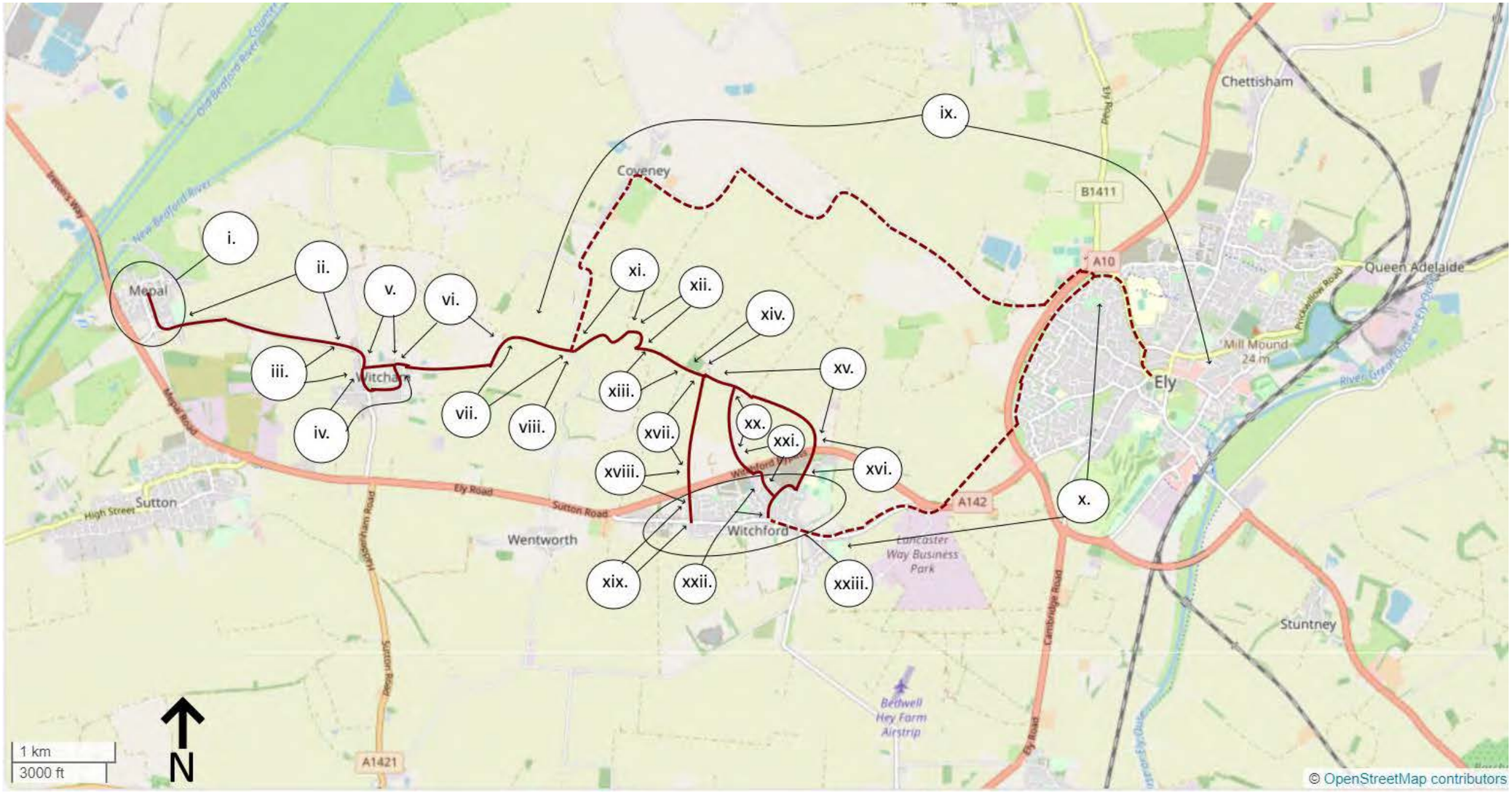


Figure 7A.1 Option A

i.

Mepal is a community that benefits considerably from having no through traffic. It is generally a low traffic area with the only vehicular traffic being people living in the community or accessing the community.

As such it is considered that it should be appropriate for cyclists to mix with traffic on the local roads as long as speeds are low. A 20-mph limit is recommended with some measures to reinforce this, such as tightening junctions, a gateway feature and improved crossings for pedestrians.

The Witcham Road/ Sutton Road junction is important for all routes, and it is recommended that it is modified to tighten the junction, slow speeds and improve safety at the junction. (See Figure 7A1.5).

Figure 7A.1.1 School Lane - Mepal Centre

Figure 7A.1.2 Brangehill Lane and the Primary School

Figure 7A.1.3 Witcham Road/ Sutton Road junction that needs modifying.

Figure 7A.1.4 Witcham Road/ Sutton Road junction that needs modifying.

Figure 7A.1.5 Visualisation of Witcham Road/ Sutton Road junction showing potential arrangement.

ii.

The only route at present from Mepal to Witcham follows Witcham Rd/ Mepal Road—bordered by agricultural fields and featuring a slight incline. This is the route that children from Witcham will have to take to get to school in Mepal.

The current speed limit ranges from 30 to 40 mph. Visibility is generally good along most stretches. Traffic volumes did not seem excessive during the site visit, but to be useful this has to be a road that children and families are comfortable using. Considering the current lack of space there appears to be no opportunity for new segregated provision within the highway boundary, but any measures to slow traffic would be beneficial. Reducing the speed limit to 20 mph would align the road with the safety standards outlined in LTN 1/20, but it is suggested that some calming features would be needed such as gateways and short stretches of single -way working with give way. Advisory cycle lanes marked on the road along with the removal of centre-lines is an option, but with a carriageway width of approximately 5.5m and cycle lanes on each side of 2m that would look unusual.

An alternative suitable option would be to designate it as a Quiet Lane, enforcing a 20 mph limit. However, the process of designating it as a Quiet Lane involves extensive community engagement and must follow procedures outlined in relevant legislation.

Figure 7A.2.1 Mepal Road. The centre lines suggest high speeds may be appropriate.

iii.

Mepal Road as it enters Witcham becomes Martins Lane and there is a footway. Being within the village envelope a 20 mph limit with traffic calming features would be appropriate. This could be achieved by tightening junctions and the addition of some pedestrian crossings such as zebra crossings or raised crossings. During the site visit, traffic conditions were moderate.

Figure 7A.3.1 Martins Lane

iv.

Martins Lane joins Witcham High Street just south of the Village Hall and Green. This junction would be very suitable for tightening to reduce speeds and improve crossing movements. Any changes will need to allow for buses and for access to the bus shelter, but there are good opportunities to improve this area. The High Street itself is even quieter than Martins Lane and needs little work apart from establishing a 20 mph limit in the village.

Figure 7A.4.1 Martins Lane/ High Street junction with bus shelter.

Options A and B look at the feasibility of using a number of byways for the routes. Each byway needs different solutions depending on available widths, users and ground conditions and this will need further design work and consultation. Where possible the intention would be to provide a separate route for equestrians, but this may not always be possible. Possible options are shown below:

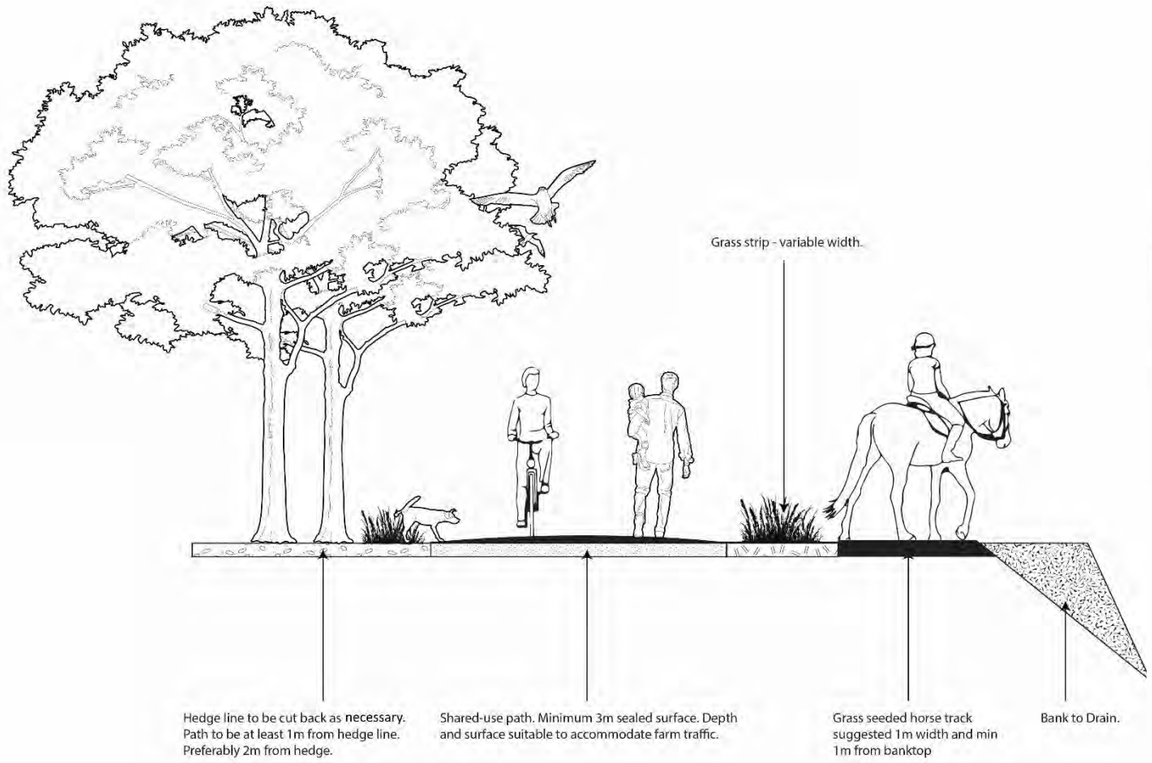


Figure 7A.5.1 Cross Section showing the potential arrangement for wider byways.

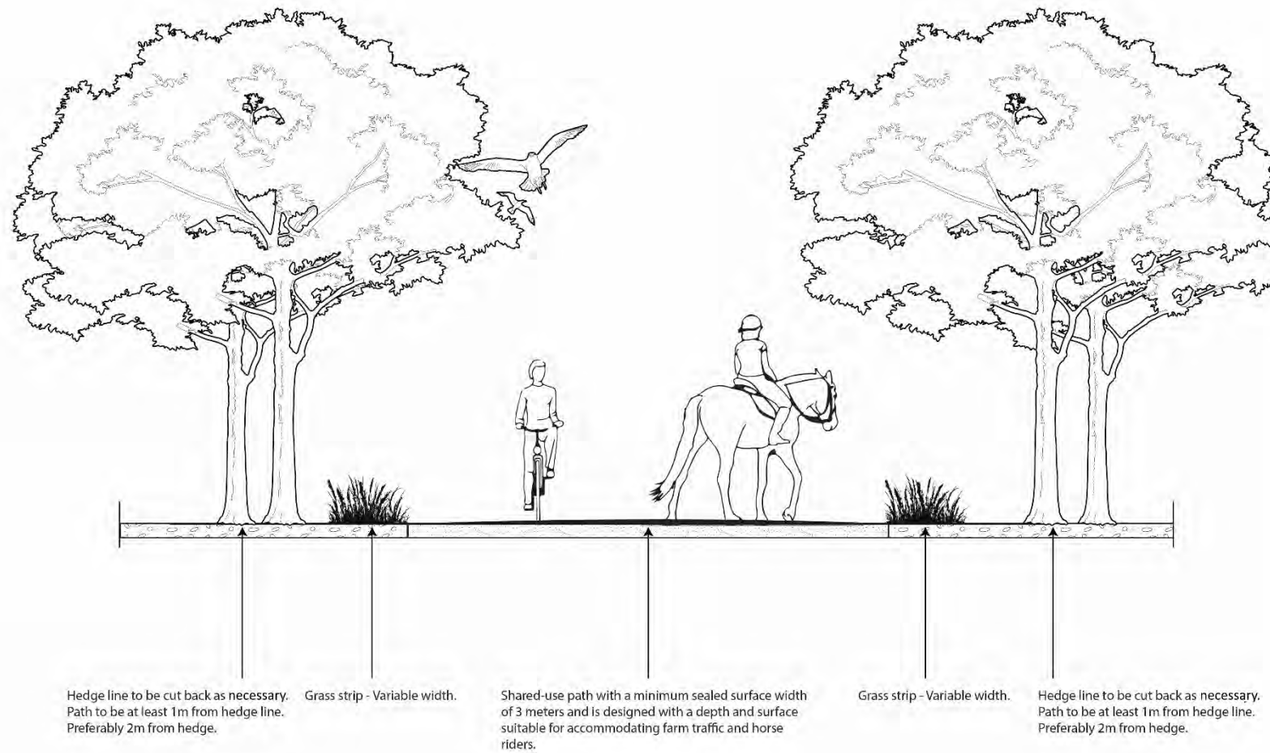


Figure 7A.5.2 Cross Section showing the potential arrangement for narrower byways.

v.

An existing byway (Back Lane) provides a short cut to using Martins Lane, High Street and Headley's Lane and it would be beneficial to use this to establish a direct route. The byway has restrictions on motorised traffic use in winter to protect the surface. The current surface is not suitable for use, especially in wet conditions. It is recommended to surface the path to a width of 3m with at least 1m on each side clear of any hedging. The surfacing works should be robust enough to accommodate farm traffic. The existing gate is not suitable for all users and should be replaced, preferably with bollards to improve accessibility. Collaboration with relevant stakeholders, including walkers, horse-riders and anyone who uses the byway for access will be essential in navigating and securing the necessary approvals for this portion of the route.

Figure 7A 5.3 View of byway and gate from Martins Lane.

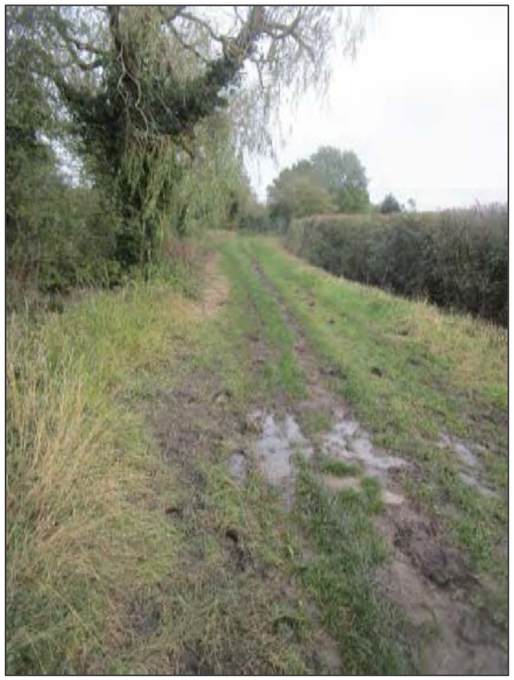


Figure 7A 5.4 View of byway.

Figure 7A 5.5 View of byway and gate from Back Lane.

vi.

The byway joins Back Lane a surfaced road, which is used for access to properties and has a more robust surface. Initially the byway is in reasonable condition and may just need surfacing but it needs more work to the east of Headley's Lane, as it changes from smooth surface to potholed unsealed surface and then to grass track (Bury Lane). Bury Lane has restrictions on motorised traffic usage in winter and there is evidence of damage from vehicles so any works will need to be robust enough to accommodate farm traffic and also allow for equestrians. A 3m sealed path is needed for the route.

Figure 7A.6.1 View of Back Lane.

Figure 7A.6.2 View of the start of Bury Lane.

Figure 7A.6.3 Gates at the start of Bury Lane.

Figure 7A.6.4. The byway is in variable condition.

Figure 7A.6.5. A detailed survey will be needed to assess widths and the impact on vegetation of a 3m minimum path.

vii.

Bury Lane (the byway) joins another byway that runs alongside a watercourse (Catchwater) This byway also has restrictions on motorised traffic usage in winter. The route then continues along this byway adjacent to Catchwater until it reaches the road network at Long Causeway. This section, similar to the previous one, is currently gated to restrict winter access. The construction of the route should be robust enough to withstand tractor use, ensuring its sustainability and functionality over time and needs to allow for equestrian usage. A 3m sealed path is needed for the route.

Figure 7A.7.1. The junction of the byways in wet conditions.

Figure 7A.7.2 the byway with watercourse adjacent.

Figure 7A.7.1. The byway joins Long Causeway with a gated access (seen behind the parked car.)

viii.

For the route to continue on towards Witchford a new crossing is needed of Long Causeway. The exact crossing position will depend on onward links, but there is likely to be a visibility issue that needs addressing. Long Causeway is a relatively quiet road, but crossing from east to west is difficult, so it is likely that some roadside vegetation will need removing. A detailed assessment is needed of the crossing for the route to progress.

Figure 7A.8.1. Vegetation obstructing the view.

Figure 7A.8.2. Vegetation obstructing the view.

ix.

An onward route to Ely has been briefly considered and is discussed in more detail later in this chapter. This proposal is being considered as it holds the potential to offer the most direct link between Mepal and Ely. As such it strengthens the case for Option A, so whilst beyond the scope of a Witchford-Ely study the route has been considered, especially given that it has been ridden and surveyed whilst cycling between Ely and the study area. Additionally, it aligns with proposals in the Ely – Little Downham and Ely – Littleport studies.

x.

For completeness the route considers a link between Ely and Witchford and this is again discussed in more detail later in the chapter. More work is needed on this important route. It is acknowledged though that to travel between Mepal and Witchford via Ely is unrealistic.

Figure 7A.11.1. Map showing byways at "missing links" between byways.

xi.

This section has been inspected from both ends and checked on Google Earth and there are at least two potential alignments using field edges. The shortest route possible is the preference but there will need to be discussions with landowners before any route can be agreed. Fencing and compensation will need to be agreed and the preference is for a route that keeps away from farm activities on boundaries. A 3m wide sealed path is needed.

Figure 7A.11.2. View of possible alignment from Long Causeway at viii.

Figure 7A.11.2. View of possible alignment from byway at xii.

xii.

In this section the route can use a short section of byway which would need to be surfaced to 3m. The exact section of the byway will depend on the onward connections xi and xiii.

Figure 7A.12.1. View of byway in this area.

xiii.

In this section a new field edge link is proposed between two byways to form a route that usefully links with Witchford. Open Street Maps shows the alignment as a byway and it is an obvious link but County Council records do not show it as a byway and landowner's agreement will be needed. As one of the more exposed sections this section is likely to need additional surveys due to potential bird disturbance. (See Chapter 9 – Ecology).

Figure 7A.13.1. View of possible alignment from byway at xii.

Figure 7A.13.2. View of possible alignment from byway at xiv.

xiv.

Unsurfaced section of byway needs surfacing to 3m.

Figure 7A.14.1. The byway with gates open in summer.

xv.

A short stretch of very quiet surfaced road by Common Farm leads to another byway, which leads all the way to the A142 on the edge of Witchford. In places there are clear signs of farm traffic, elsewhere the surface appears untouched by heavy vehicles. As the route is a byway it will need surfacing to a very high standard to accommodate farm usage and equestrian usage, If sections can be closed to vehicular traffic that would be beneficial. The route is of variable width and quality and will need a full survey before a final design can be prepared, but there appears to be space for a 3m sealed path.

Figure 7A.15.1. Road by Common Farm.

Figure 7A.15.2 Byway/ farm access.

Figure 7A.15.3 Byway.

Figure 7A.15.4 Byway.

Figure 7A.15.5 Byway.

Figure 7A.15.6 Byway.

Figure 7A.15.6 Byway.

(Note that photos are generally taken heading away from Witchford).

xvi.

The biggest issue with this option and the various sub-options is how and where to cross the A142. This will be the most significant financial investment in the route and is likely to be the most technically challenging. A signalised crossing will be difficult where speeds are high and it is assumed that a bridge would be needed to cross the A142 on the Witchford bypass. The main factors in choosing a bridge location are the quality, cost and usefulness of the links on both sides and the space and technical challenges of installing a bridge.

At this location there is potential for a new bridge to be installed. The adjoining land appears to be at approximately the same level as the carriageway and it is assumed that the bridge deck will need to be about 6m above carriageway so ramps would need to be in excess of 120m. There is only approximately 110m on the Witchford side before Manor Road so either the bridge ramps will need to deviate from straight (potentially on to private land) or the ramps will need to be steeper than 1:20 which would exclude some potential users. A clear advantage of this route is its proximity to Witchford Village College. The ramp would link with a quiet part of Manor Road where it would be appropriate for cyclists to cycle on road mixed with traffic to the school entrance and to join facilities beyond that.

On the opposite side of the road there is a farm access so the bridge will have to extend beyond the highway boundary before ramping down on to the byway.

In conclusion a bridge is possible in this area, but it is not certain that one can be built to the best standard. This needs further design work including topographical surveys and utility checks.

Figure 7A.16.1 Byway on north side with A142 behind

Figure 7A.16.2 Byway and farm access from A142 looking north..

Figure 7A.16.3 A142 crossing looking north..

Figure 7A.16.4 Byway on south side from Manor Road.

Figure 7A.16.5 Byway from Manor Road. The ramp would need to extend as close to the road as possible, but there is local access, which needs to be provided for and trees in the area so this would need careful design and a good solution may be difficult to find.

xvii.

A byway known as Marroway Lane leads from Common Farm to the Witchford bypass and the A142.

The byway has similarities to the byway in section xvi. It is mostly between hedges and is used by some farm traffic. There are signs of equestrian usage, but again it is difficult to use in winter and is gated with vehicular restrictions over winter.

Works to construct a 3m sealed path would take up much of the width and a topographical survey would be needed to prepare detailed designs. In winter the byway was much muddier and wet at its lowest points and notably easier to use on the higher ground.

Figure 7A.17.1 Byway in winter.

Figure 7A.16.3 Byway in winter on higher ground.

xviii.

As with xvi. the biggest issue with this option and the various sub-options is how and where to cross the A142.

At this location there is potential for a new bridge to be installed, but lack of space appears to be a bigger challenge than for xvi. Private land will be needed. The adjoining land appears to be at approximately the same level as the carriageway and it is assumed that the bridge deck will need to be about 6m above carriageway so ramps would need to be in excess of 120m. There is only approximately 80m on the Witchford side before Manor Road so the bridge ramps will need to deviate from straight on to land on one side of the byway or other on to private land, with the western side being the obvious one. There is good potential to connect with Witchford, but not the direct connection with the Village College that some other locations provide. (See xix.)

On the opposite side of the road there is a farm access so the bridge will have to extend beyond the highway boundary before ramping down on to the byway. There is also limited space between trees, so it would be difficult to install 4m wide ramps in such a location without impacting on the trees. A better position for the ramp would be on field edge to the left of the trees as seen in Figure 7A.18.1.

In conclusion a bridge is possible in this area, but it needs private land on both sides of the A142 and it is not certain that one can be built to the best standard. This needs further design work including topographical surveys and utility checks.

Figure 7A.18.1 Byway on north side with A142 behind. Fitting a 4m ramp on the byway would clearly impact on trees.

Figure 7A.18.2 The A142 crossing.

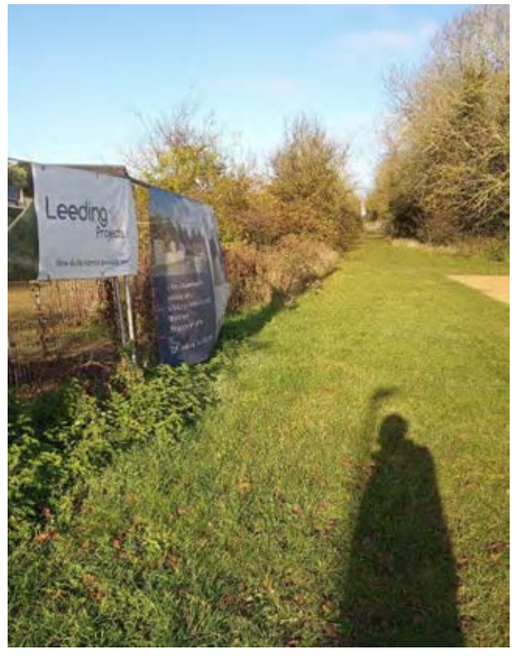


Figure 7A.18.1 Byway on south side of A142 looking towards A142. As Witchford develops finding space for a ramp here is challenging.

xix.

Marroway Lane is a quiet residential road that links with Witchford at the western end of Witchford therefore providing good connections with most of Witchford.

xx.

Common Farm is connected with the A142 along a quiet road (Sedge Way). Once the road gets beyond Sedge Way business park it only serves Common Farm, so will have some farm traffic, but could be designated as a Quiet Lane with a 20 mph limit, but given the anticipated very low usage changing to a Quiet Lane may not be a priority. This would need detailed consultation and most importantly it will be important to engage with the users of Common Farm about this and onward routes. The surface is damaged in places and repairs are recommended for the road.

In the vicinity of Sedgeway Business Park it will be necessary for cyclists to share the road with local traffic which is expected to be within the limits of LTN 1/20 but low speeds and appropriate signage are important. Some traffic calming and a 20 mph limit are worth considering, but it is anticipated that speeds will be low anyway due to the nature of the road. If there is major growth in the area it will important that new segregated provision is made for cyclists and pedestrians between all employment sites and Witchford.

Figure 7A.20.1 Sedge Way by Common Farm.

Figure 7A.20.1 Common Road/ Sedge Way by the business park with Common Farm ahead.

xxi.

Sedgeway becomes Common Road near the business park and Common Road is severed by the A142 with no suitable connection for cyclists and pedestrians. This is the most obvious location on the Witchford bypass where local employment is cut off from local housing by the A142 and there is therefore a strong case for seeking to overcome this barrier.

As with xvi. and xviii. the biggest issue with this option and the various sub-options is how and where to cross the A142.

At this location there is potential for a new bridge to be installed. Land boundaries need checking but on the southern side it could be built almost entirely on highway land, but on the northern side private land will be needed. The adjoining land appears to be at approximately the same level as the carriageway and it is assumed that the bridge deck will need to be about 6m above carriageway so ramps would need to be in excess of 120m. There is space for this if the land can be agreed, but there will be some impact on roadside car parking on the Witchford side and potentially an impact on a ditch and trees which has ecological implication. There is good potential to connect with Witchford and easy connections can be made through recent developments with the Village College.

On the opposite side of the road the recommended position for a ramp would be on a field edge next to Common Road (to the west). There are possibilities on the east side but the ramp could not be straight and there are complications with farm access and trees. Even on the western side it is suggested that the farm access from Common Road onto fields may need moving, so this will need detailed discussions and landowner support and compensation.

In conclusion a bridge is possible in this area and it could be a valuable local facility, but it needs private land on the north side of the A142 and is not easy on the south side. This needs further design work including topographical surveys and utility checks. A gas main is known to be in the area.

Figure 7A.21.1 Common Road seen from the A142 junction. The preferred ramp position would be next to the road in the field on the left. Note the farm access.

Figure 7A.21.2 Common Road/ A142 junction. The preferred ramp position would be next to the road passing on the far side of the tree, but the other side of the junction may be possible.

Figure 7A.21.3 View along A 142 verge, where a 4m ramp would need to be. It would need to be set back from the road so would impact on trees and a ditch to the left.

Figure 7A.21.4 Common Road on the Witchford side of the bypass. A ramp would need to be formed where the cars are with roadspace reallocated parking removed and some impact on trees and verge.

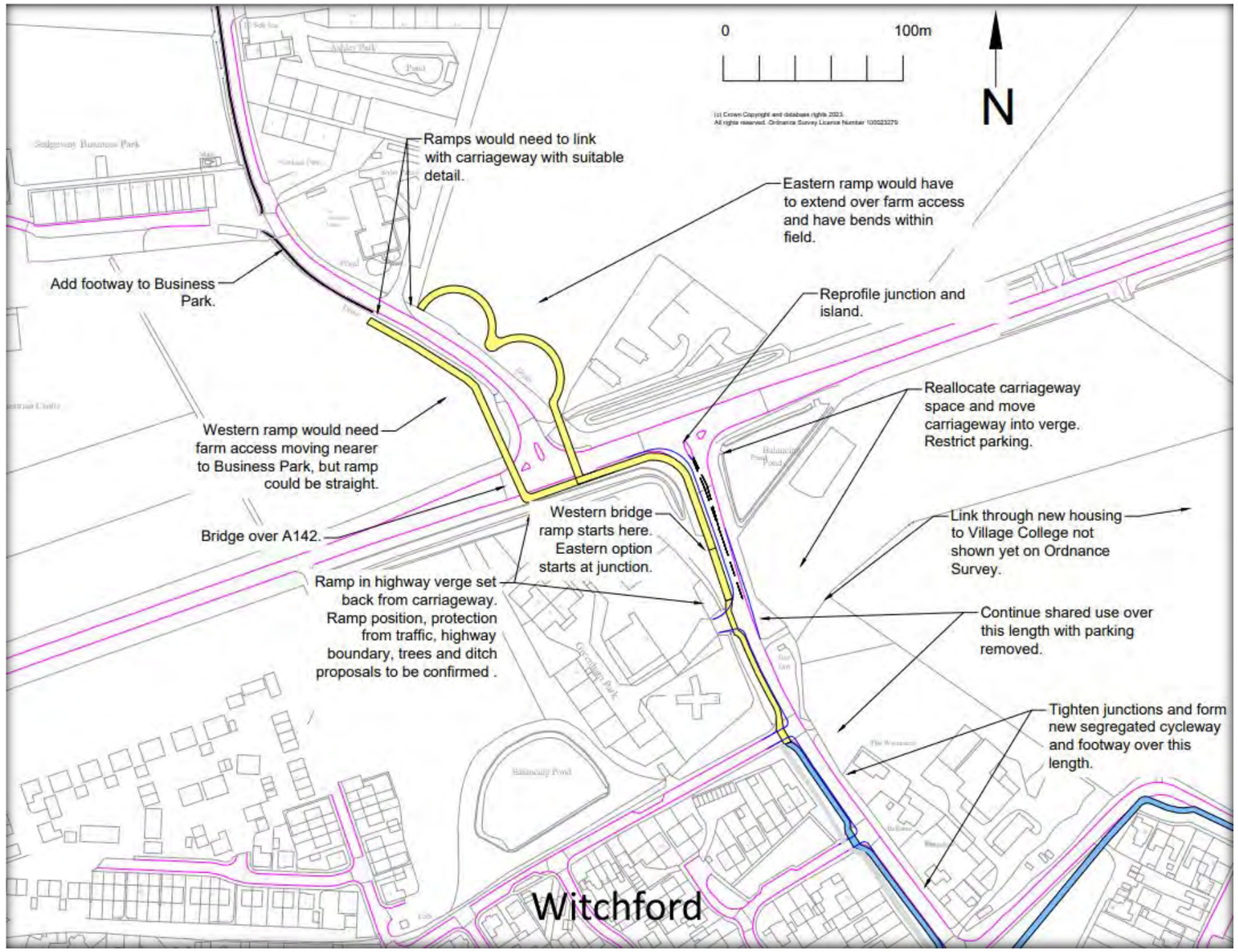


Figure 7A.21.5 Preliminary Drawing showing possible layout for the two possible bridge positions.

xxii.

If there is to be major investment in a bridge over the A 142 it needs to link well with Witchford and changes to Common Road are essential. Parking will have to be moved from the west side. Discussions will be needed about where it can go. A new route is needed along Common Road and suggestions are shown on the adjacent plan.

Figure 7A.22.1 View of Common Road.

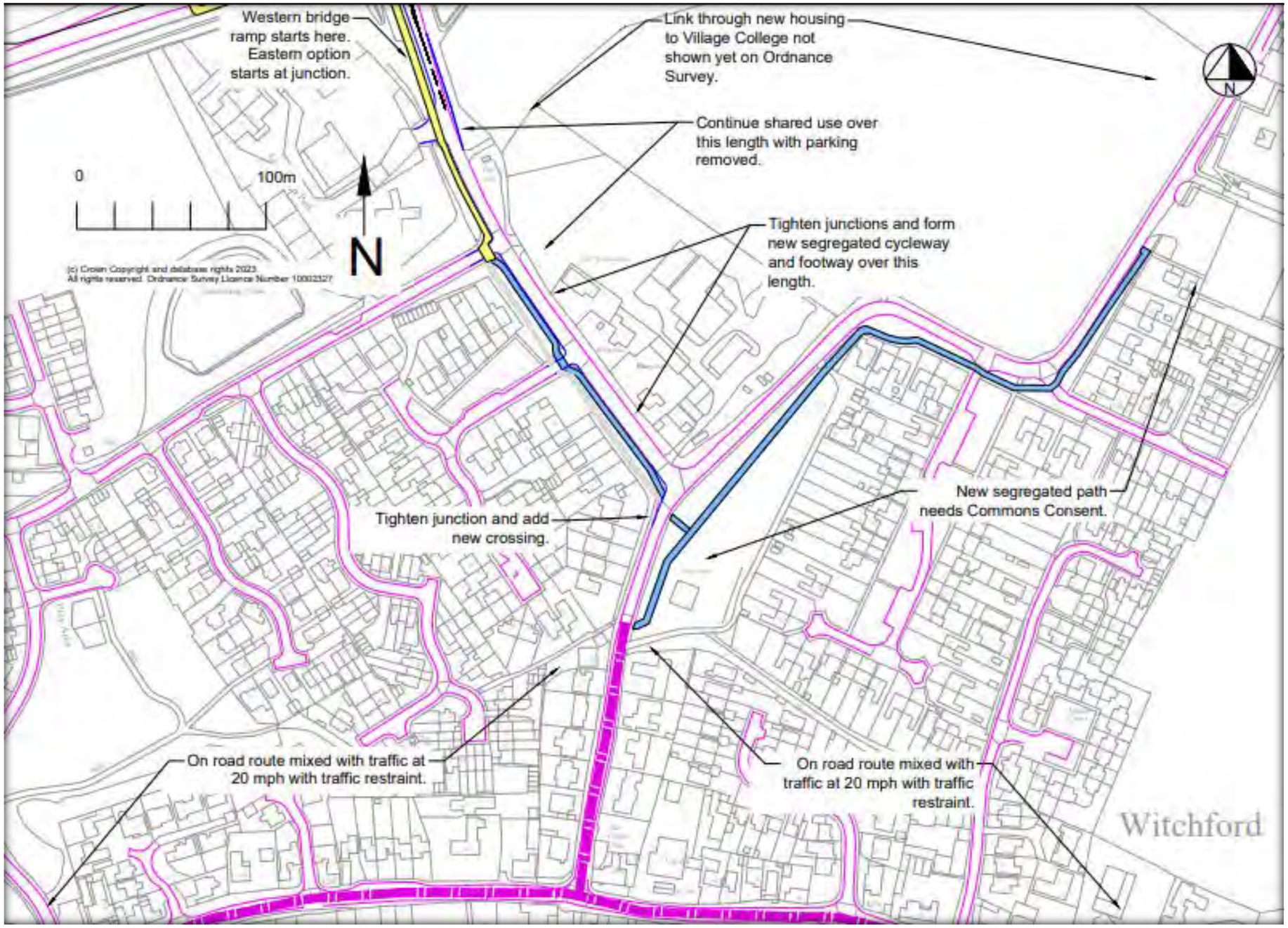


Figure 7A.22.2 Preliminary Drawing showing proposed link along Common Road.

xxiii.

Witchford has been considered in the Haddenham to A142 Feasibility Study where the importance of all residents being able to access new facilities was emphasised. The village has been bypassed and it should be possible to make all of Witchford compliant with LTN 1/20 but this will need significant changes.

Three options are proposed for Witchford. All three assume a 20mph limit across the whole community in order to comply with LTN1/20 and to create a suitable environment for all to cycle mixed with traffic.

In addition all options propose a new segregated cycleway from Common Road to the Village College. This will have to be on Common land so will need special consent and consultation.

Other options relate to potential road closures. Where a road closure is essential depends on traffic data for Main Street and that will need to be checked against LTN 1/20 criteria, but in any case one or more closures would bring considerable benefits in terms of maintaining access whilst limiting through traffic and giving clear benefits to walking, cycling and buses.

For the installation of bus gates Cambridgeshire County Council will need to take out the same powers that they have in Cambridge so that the advantages of bus gates are not just limited to the City.

The options are shown on the following pages..

Figure 7A.23.1 Witchford Village College appears to have no dedicated cycle provision, but it should be accessible by bike using a coherent, direct, safe, comfortable and attractive route for all pupils who live in Witchford and other communities within cycling distance. Changes at the school and in Witchford would be the best place to start.

Figure 7A.23.2-4 Images of Main Street in Witchford, which still looks rather like the major A road it was. Big changes are needed to change the nature of the road and establish it as a 20mph limit with limited through traffic. Details will need to be agreed through community engagement.

Option A for Witchford showing:

- A point closure on Victoria Green which would allow the Green to be extended across the road with a cycleway and footway retained.
- A bus gate on Main Street near the Village Inn.
- A bus gate on Common Road at the junction with Main Street if a bus gate is needed for school bus access. Otherwise a point closure.

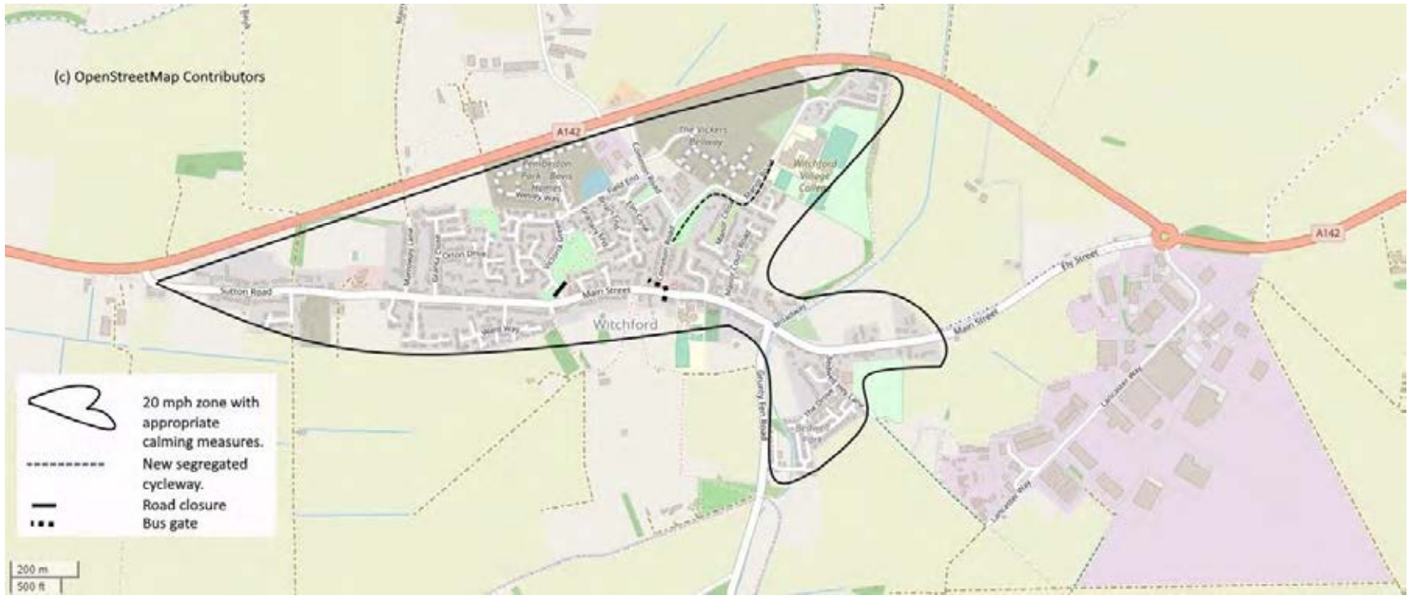


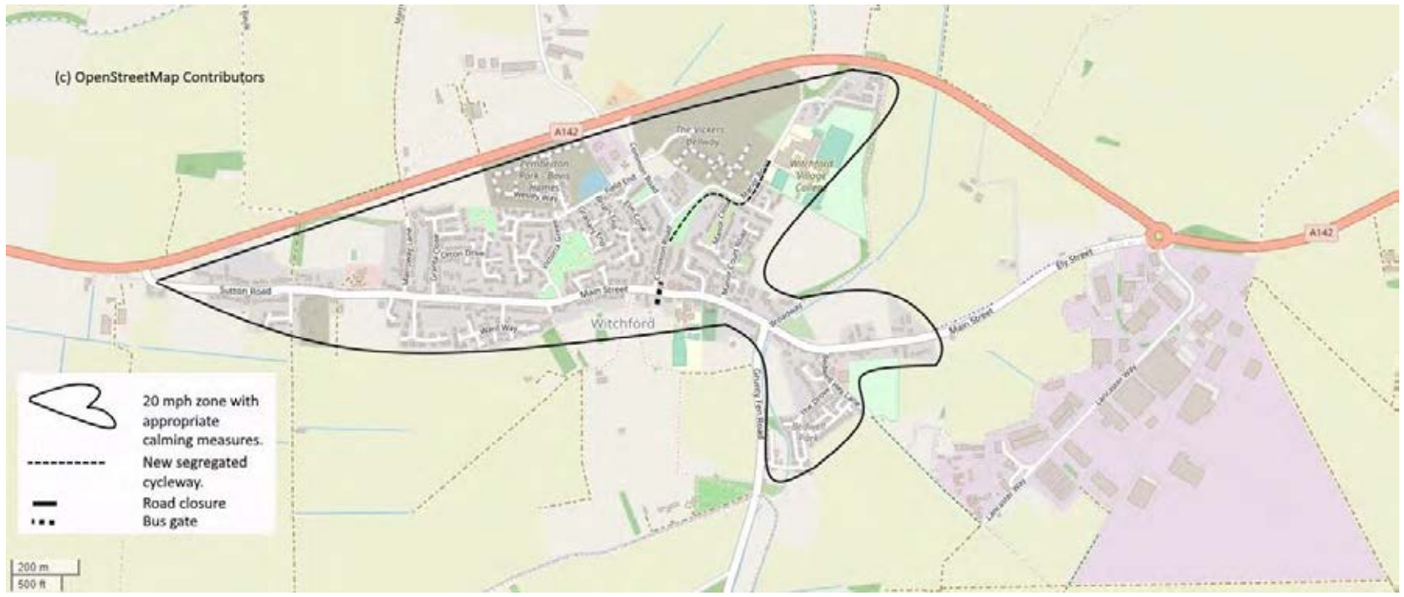
Figure 7A.23.5. Option A.

Figure 7A.23.6. Visualisation showing how possible bus gate could look.

Option B for Witchford showing:

- A bus gate on Main Street near the Village Inn.

This option only works if traffic flows on Common Road are not excessive, because this is the main route to school. If traffic flows are too high for LTN 1/20 a closure as in Option 1 will be needed.



Option C for Witchford showing no changes to existing traffic options apart from the 20 mph zone.

The success of this option will depend on traffic calming and confidence that traffic flows will remain low, because there is nothing to lock in the benefits of having a bypass.

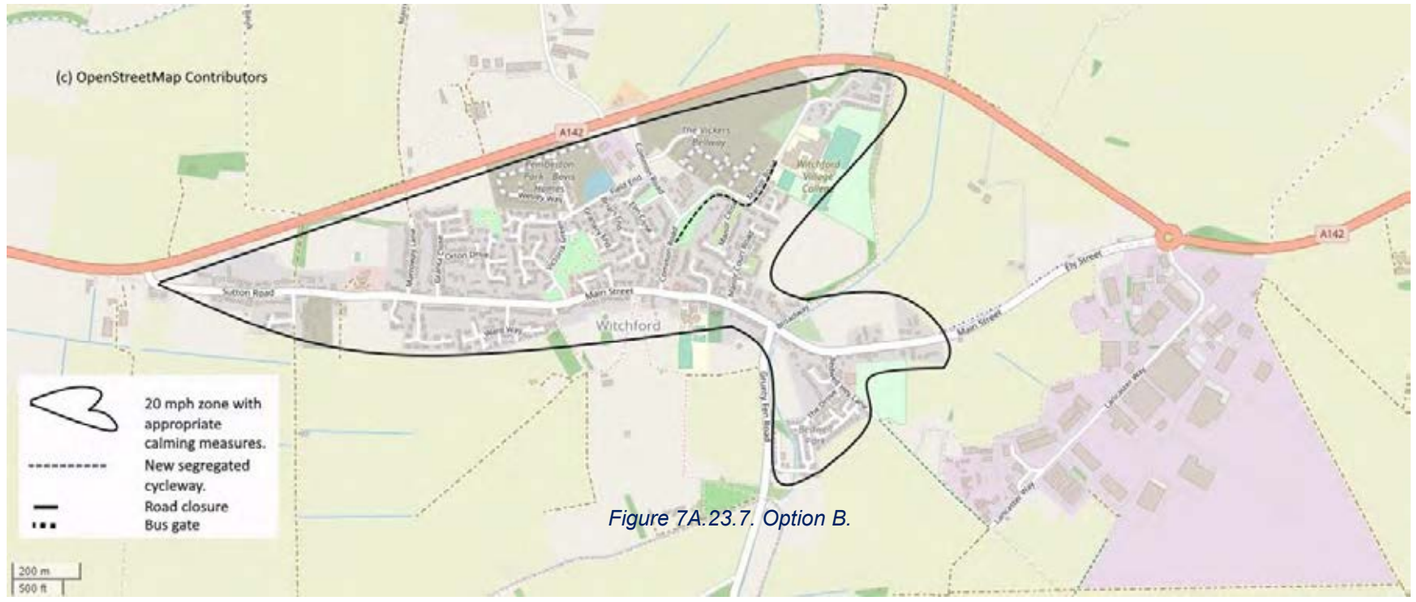


Figure 7A.23.7. Option B.

Option A Summary	
Comparative Length	8.2km (compared to 7.2km shortest route by road). As a route between Witchford and Sutton this would be even more indirect, but as a route that links on to Ely this would be a direct route.
Likely estimated cost	• Works in Mepal • Works in Witchford • Mepal Road/ Witcham Road traffic calming measures 1.9km. • Works in Witcham • 3.9km byway or new field edge path. • New ramps and bridge over A142 • New segregated path on Common Road, Witchford 200m.
Engineering difficulties	A new bridge over the A142 is challenging and highway space is limited for a Common Road crossing. Construction of good quality paths on byways is challenging, especially given farm traffic.
Ecological issues	Nothing major raised. Loss of field edge or some loss of verge depending on options.
Land ownership issues	Needs agreement of landowners for field edge works
Other issues	Loss of car parking spaces in Common Road, Witchford. Limited space on some of the byways to accommodate separate equestrian provision.
Overall	Potentially a good route that could link with Ely, via Coveney. Common Road is a good location for a bridge because of the severance issues that are caused by the A142.

Option A (Ely Links)

Expanding on Option A, this proposal is being considered as it holds the potential to offer the most direct link between Mepal and Ely. As such it strengthens the case for Option A, so whilst the suggestions are beyond the scope of a Witchford-Ely study they have been considered, especially since the route has been ridden and surveyed whilst cycling between Ely and the study area. Additionally, it aligns with proposals in the Ely – Little Downham and Ely – Littleport studies. The plan includes a new link with the A10 underpass and proposes a connection between this and Witchford. This integrated approach aims to enhance connectivity and accessibility for cyclists, fostering a comprehensive network that addresses the specific needs and goals outlined in the broader studies. Realistically though it is acknowledged that a route from Mepal to Witchford is too much of a deviation as to be realistic.

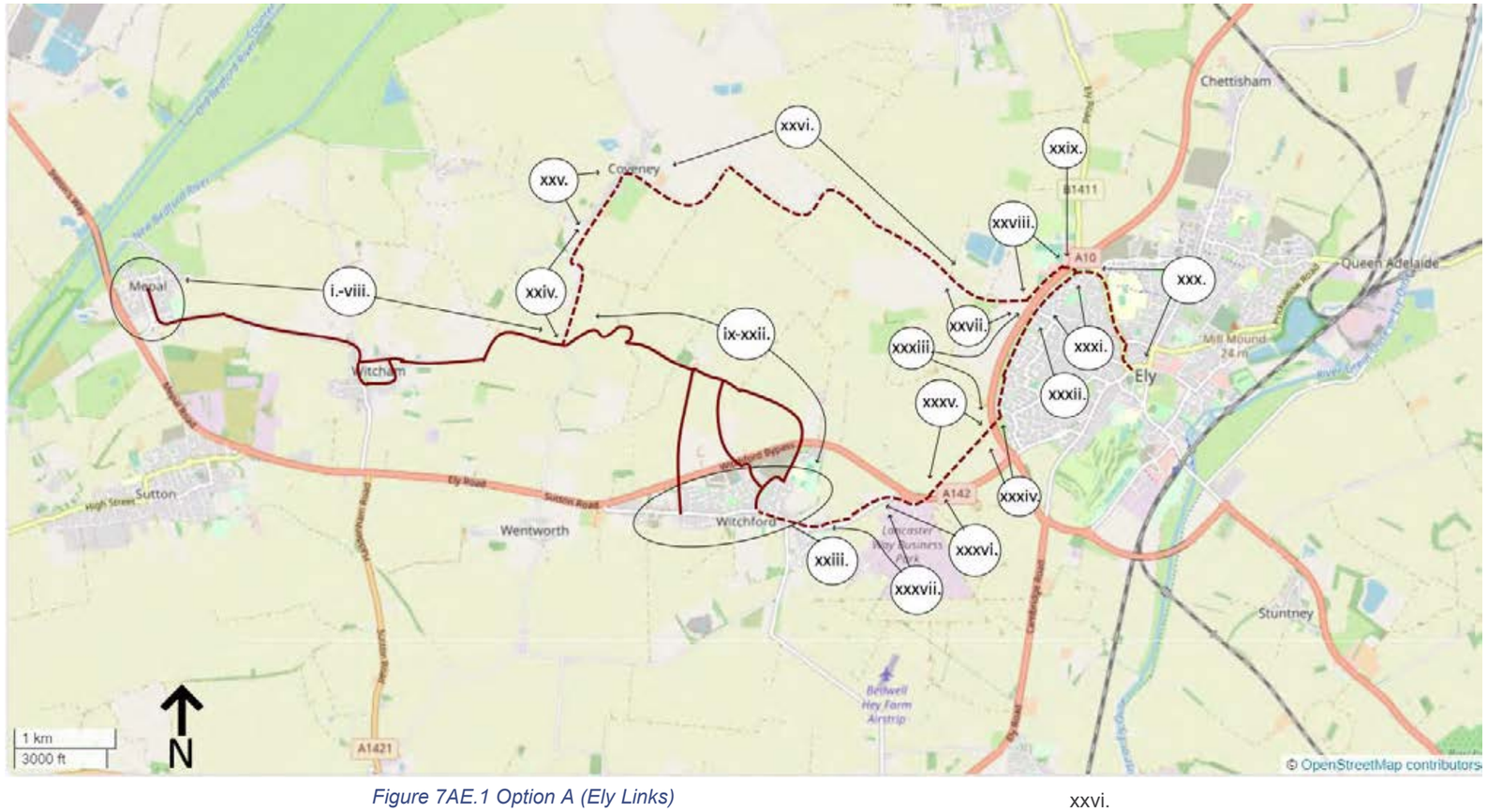


Figure 7AE.1 Option A (Ely Links)

i.-viii.

See previous pages.

xxiv. Long Causeway and Long Lane

The initial assessment is that this section of road is relatively quiet and speeds are not excessive given the bends and nature of the road, which climbs gradually to Coveney.

xxv. Park Close and Main Street

Continuing along Park Close into Coveney, the route would continue through the village centre on road mixed with traffic at low volumes and low speeds. The road offers good views and would benefit from changing the 30 mph limit to 20 mph.

Figure 7AE 24.1 Long Lane/ Park Close, , Coveney.

Figure 7AE 25.1 Main Street, Coveney.

xxvi.

After passing through Coveney, the route continues along Green Drove and W Fen Rd, which is identified as a quiet and attractive road that could be left as is and fit within the proposed route. A better option would be to designate it as a Quiet Lane and give it a 20mph limit.

The process of designating it as a Quiet Lane involves extensive community engagement and has to follow procedures laid down in the relevant legislation. This approach aligns with the goal of creating a safer and more pedestrian and cyclist-friendly environment, whilst recognizing the needs of local farmers and others and promoting community involvement in the decision-making process.

xxvii.

As the route approaches Ely it gets busier and more urban and no longer feels like a quiet lane. It would still be appropriate to have a low speed limit, but the greatest concern is that the growth of local businesses results in more and more traffic until cycling on road mixed with traffic is not appropriate, so there may be a need for a new off highway path. The segment continues until it reaches the A10 at a very difficult crossing.

xxviii.

Ideally the route would continue straight across the A10 from one part of West Fen Road to another, but this would require signals or a bridge. A more realistic option would be to link with the new subway under the A10 on an alignment already considered in the Ely- Little Downham study.

This alignment will require a new access to be formed from West Fen Road to the Leisure Centre, which would need farm land and is obviously subject to agreement with the landowner. Between the Leisure Centre and the A10 underpass new segregated paths are recommended, improving access to the facilities as well as benefiting longer links such as this option via Coveney.

A drawing prepared for the Ely-Little Downham study is reproduced in Figure 7AE.25.1.

xxix.

The underpass under the A10 is a tremendous asset but further work is needed to better connect it with origins and destinations on both sides of the A10.

Figure 7AE 29.1 The existing A10 underpass seen from the Ely side.

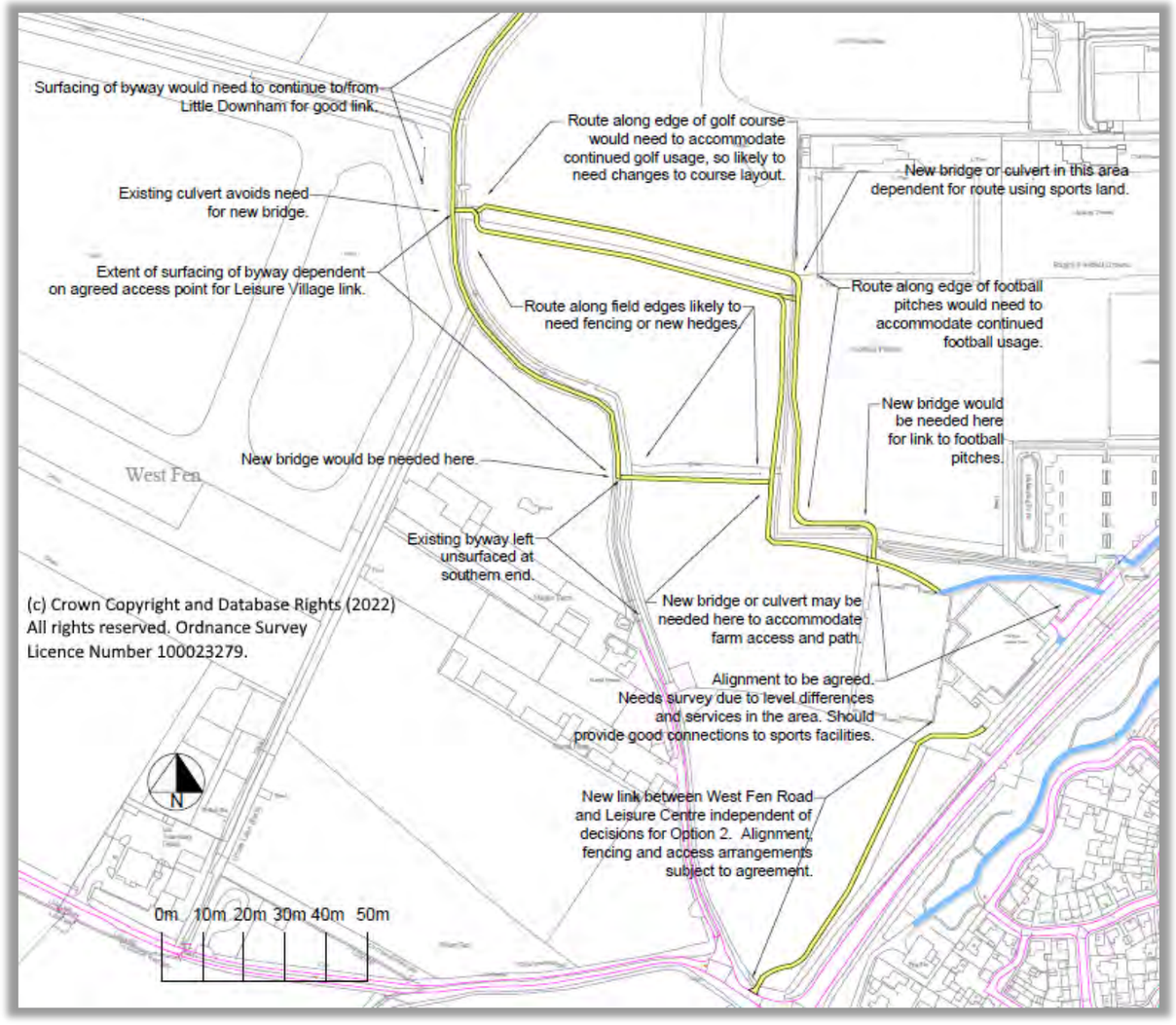


Figure 7AE 28.1 Extract from Ely-Little Downham report showing suggested link between West Fen Road and the A10 underpass.

xxx. Downham Road

Downham Road has been identified in the Ely-Little Downham and Ely-Littleport studies as the key strategic link with Ely City Centre. It would also serve as a Coveney/ Mepal link. In addition it is also identified as national cycle network, but traffic volumes and speeds are too high to comply with LTN 1/20. In such a location segregated cycleways are needed, but as in much of Ely space is very tight, particularly as Downham Road gets nearer to the City Centre.

The previous reports make recommendations for Downham Road including major changes to the Downham Road/ Cam Drive roundabout and re-allocating roadspace on Downham Road to form a segregated bi-directional cycleway. This can all be achieved but will need changes to traffic flows, with a one-way system for motorised traffic being suggested. This needs to operate with Lynn Road thus also providing solutions for Lynn Road.

Figure 7AE 30.1 View of Downham Road at the approach to the College.

Figure 7AE 30.2 A Dutch -style roundabout is suggested for the Downham Road/ Cam Drive junction.

xxxi.

The alignment further south of Ely along the A10, which is part of a housing development, provides enough space for shared use, but consideration now needs to be given to upgrading this to segregated provision as has been done at the A10 subway.

Figure 7AE 31.1 Existing segregated path near underpass that leads into unsegregated paths.

Figure 7AE 31.2 There is space for segregated provision along most of the route following the A10.

xxxii.

There is some good quality provision along a greenway corridor that separates Ely and the A10 but it is segmented and the biggest barriers to continuity are road crossings. The crossing of West Fen Road near the A10 is particularly challenging and this will need further design work but a signalled crossing or parallel zebra crossing set back from the A10 is needed.

Figure 7AE 32.1 Current crossing provision does not comply with LTN 1/20 and is not suitable for all.

xxxiii.

The good quality provision continues along the green corridor but would benefit from the addition of segregation and route clarity at Murfitt Close.

Figure 7AE 33.1 There is space for segregated provision along most of the route following the A10.

xxxiv.

There is an existing very difficult crossing of the A10 at Witchford Road but there are also major challenges for the routes linking to that crossing. Funding has been allocated for improving the crossing of the A10 in this area, with this alignment being one of the options to be studied. It is essential that the A10 crossing is considered as part of the whole route between Ely and Witchford and a crossing on or near to the St John's Road alignment is definitely worth considering in this regard.

The St John's Road alignment would appear to be a good location for a bridge, but there are many factors to consider including utilities, ecology, neighbours, farm access etc., so this needs detailed study, which should be happening soon, so the issues are not described in detail.

The route is currently a byway so equestrian usage needs to be allowed for. The route drops down to the busy A10 which is in a cutting at this location which is favourable in terms of reducing the need for long ramps.

Figure 7AE 34.1 View along the Byway and across the A10. A bridge on this alignment could work well. It would need to allow for farm access on the Witchford side from the A10.

xxxv.

The route continues as a byway to Witchford Road and is a good direct alignment that avoids the problems associated with the existing path besides the A142 namely – width, separation from the carriageway and very difficult crossings of the A10 and the access roads to the service station. Surfacing of the byway to give a minimum 3m sealed surface will be necessary and this will not be easy given the use by farm traffic, equestrians and others, but there appears to be adequate space.

Figure 7AE 35.1 St John's byway seen in winter.

Figure 7AE 35.2 St John's byway seen in winter.

Figure 7AE 35.3 St John's byway seen in winter.

xxxvi.

St John's byway joins the A142 near the Lancaster Way roundabout. There are existing shared use paths and an existing toucan crossing. The paths and the toucan are not to standard, but generally traffic speeds are lower than elsewhere so changes are not a priority. The greater challenge is in crossing Lancaster Way itself, which is of course an important employment destination.

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Figure 7AE 36.1 St John's Byway (on the right) joins the existing A142 shared path near the A 142 signalled crossing and even this short link besides the road is not to standard in terms of path width and segregation. At present it has been assumed that for this short distance changes are not a priority. Widening would have implications for ecology.

xxxvii.

This section of route and the route into Witchford is discussed in more detail in the Haddenham to the A142 Feasibility Study. There is an existing path and an existing signalled crossing of the A142, but the path is not to LTN 1/20 standards and the crossing of the roundabout arms by Lancaster Way is not to standard. Whilst the crossing of the A10 is the major obvious deterrent to usage between Ely and Witchford there are many other matters that need addressing, some major some less significant.

xxiii.

See Option A Witchford.

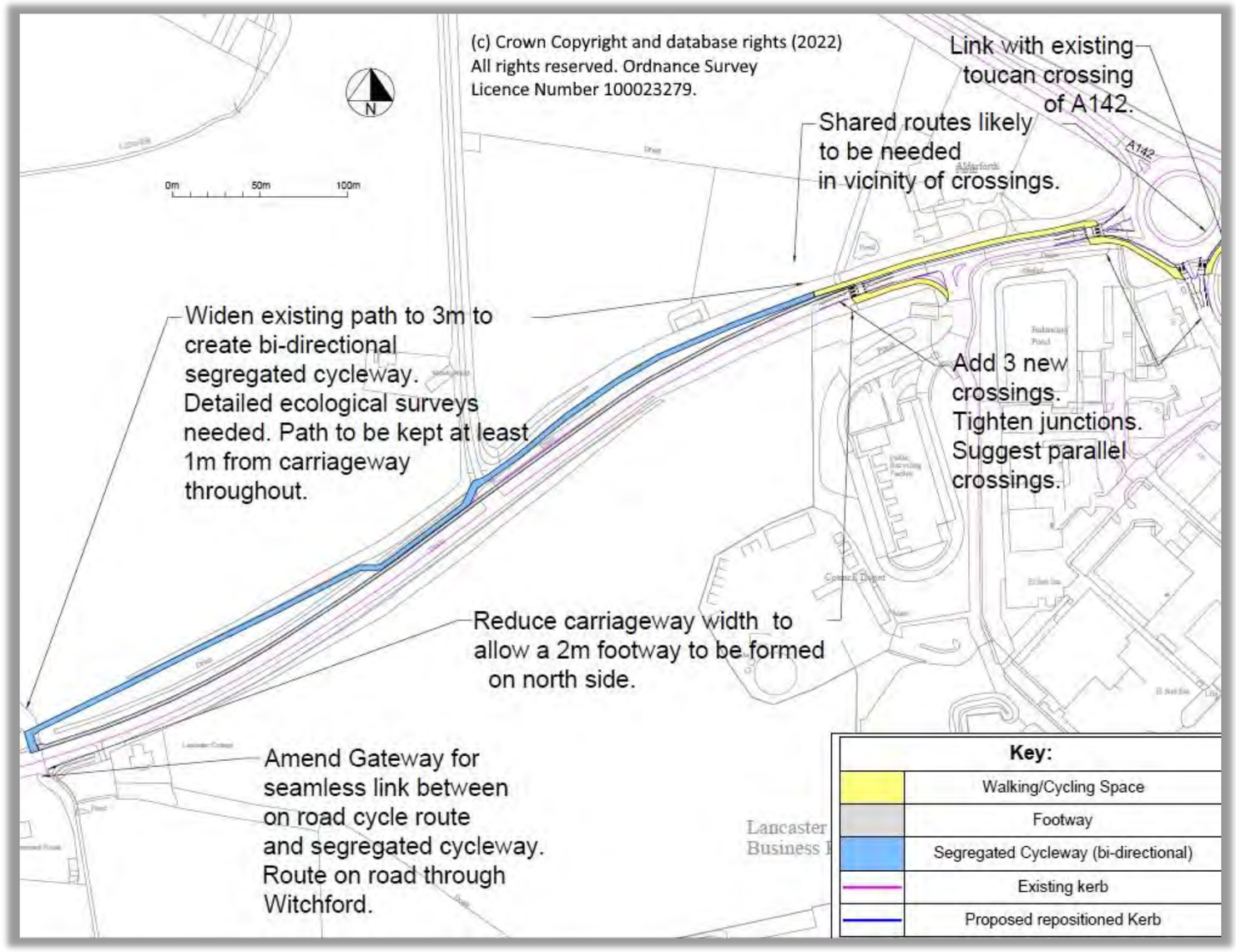

Figure 7AE 37.1. Drawing taken from Haddenham to the A142 route showing what might be possible between Witchford and Lancaster Way to bring the route up to LTN 1/20 standards. Similar provision needs to continue to Ely.

Option B

Similar to Option A, this proposed route incorporates Public Byways, aiming to establish a new connection between Mepal, Witcham, and the Elean Business Park near Sutton. Currently accessible only via the A142, the business park's linkage to this route enhances connectivity. Similar to Option A, the route intersects with the A142 near Witchford. Various potential bridge locations for crossing the A142 are explored, each necessitating distinct access considerations. The preferred option aligns with Long Causeway to the west of Witchford.

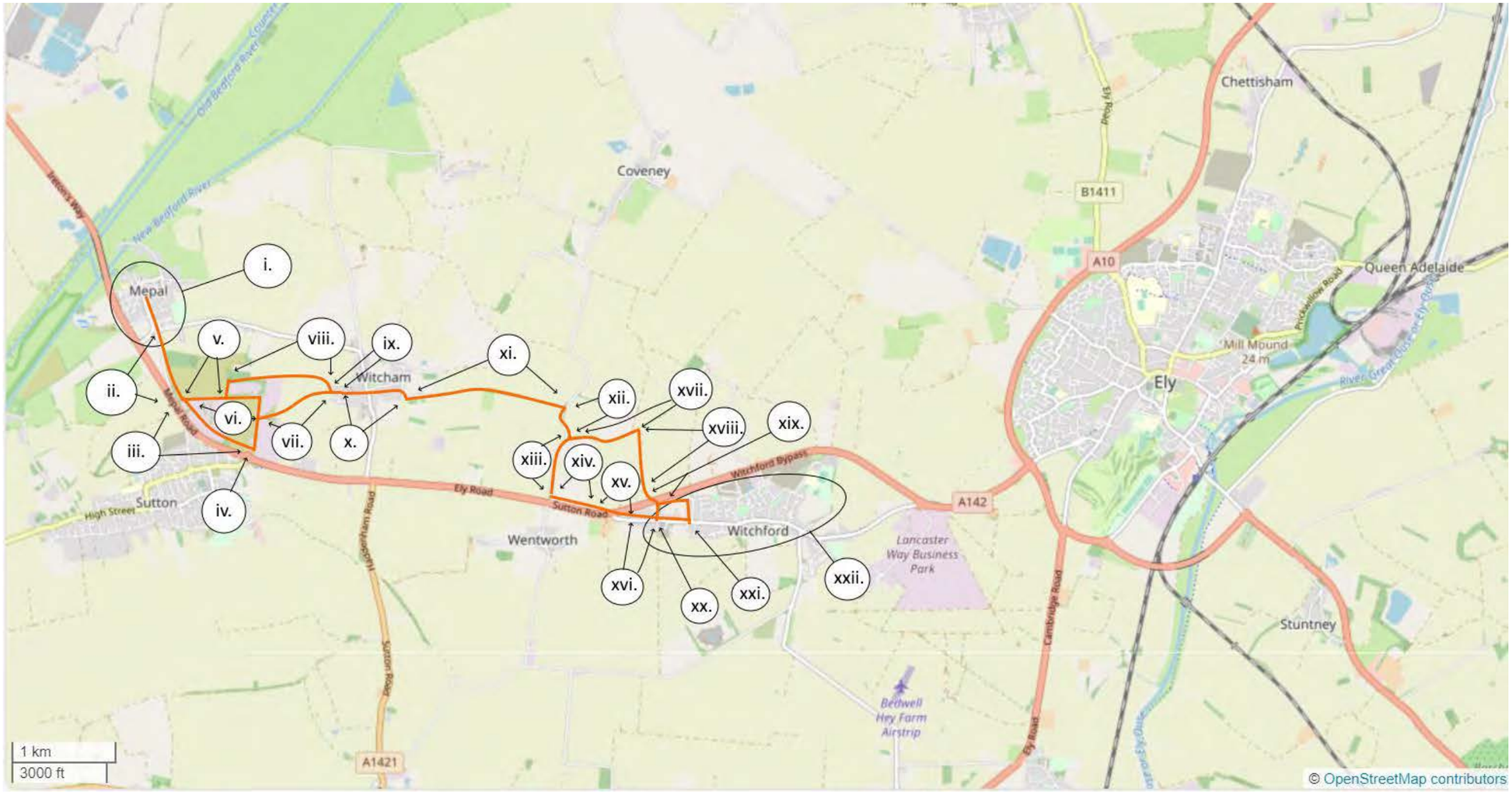

Figure 7B 1 Option B

i.

See Option A.

Figure 7B 1.1 View of Sutton Road, Mepal

Figure 7B 1.1 Mepal and Witcham Primary School is in Mepal.

ii.

The chosen alignment follows the closed road parallel to Mepal Rd/A142. The entrance is currently gated and lacks provisions for wheel users. To address this, the installation of bollards instead of the gate is recommended. The road is wide enough for shared use by pedestrians and cyclists, with the major issues being access, maintenance of the surface and maintenance of vegetation. This is an excellent local asset that needs developing and promoting.

Figure 7B 2.1 showing the wide junction at the entrance to the closed road. This needs amending – see Option A.

Figure 7B 2.2 showing the entrance to the closed road, which is inaccessible for those with mobility issues.

Figure 7B 2.3 The closed road is spacious, but does need vegetation and surface management.

Figure 7B 2.4 The closed road becomes a narrow path as it approaches the A142 with woodland on the left.

iii.

The closed road joins the current A142 on the edge of Sutton where users currently have the choice of making a difficult crossing of the main road or using an unsurfaced narrow path through woodland that adjoins the A142. The path is narrow and bounded by trees. It is not a right of way but is used by local people and has potential for widening and surfacing to 3m although this would have a significant impact on vegetation and would need agreement with landowners, because only parts of the woodland are within the highway boundary. The path runs adjacent to Cambridge Machinery Sales and has potential for good links with employment sites. If a route were to be built on this alignment it would need a topographical survey and arboricultural and ecology studies to guide the design. A major issue would be lighting and concern about isolation. Any route would need to be as open as possible with good visibility, but some are likely to be uncomfortable using it at some times.

Figure 7B 3.1 The start of the woodland path is not obvious.

Figure 7B 3.2 The woodland path is narrow at its start, from the Mepal direction.

Figure 7B 3.3 The woodland path.

Figure 7B 3.4 The woodland path.

Figure 7B 3.5 Highway boundary markers show that highway land extends into the woodland, but agreement will also be needed with landowners

iv.

Elean Business Park is separated from Sutton by the A142. A crossing of the A142 is needed for links between Mepal and Sutton and between Sutton and its principal employment site at Elean Business Park. (A crossing in this area is considered further in Option C). Given the traffic volumes a signalised or grade separated crossing is needed for all to be able to cross safely and comfortably. Speeds near the A142/ Elean Business Park/ Ely Road junction are not high and appear to be well below the national speed limit, so a new 40 mph speed limit and a new signalised crossing with linking paths should be possible, similar to the crossing east of Witchford (at the Lancaster Way roundabout). This will need speed surveys, topographical surveys and detailed design.

Figure 7B 4.1 A signalised crossing in this vicinity is possible.

Figure 7B 4.2 The existing crossing in a similar location by Lancaster Way .

v.

There are existing paths that link the closed road at iii. with open space and Elean business park. This is private land and has not been surveyed but can be seen from Google Maps. It looks like the route could be a better and more direct link with the Business Park than iii., but it has not been surveyed. Engaging with landowners and securing the necessary permissions are key steps in making this route accessible and usable for a good link between Mepal and the business park.

vi.

Elean Business Park is a spacious site that is partially occupied and partially developed. According to Wikipedia "*the site is home to the world's only straw burning power station and a few manufacturing and warehousing operations".* The Sutton-in-the Isle Neighbourhood Plan Policy NP10 states *" Further development of the Elean Business Park for employment uses will be supported where they include small business start-up units and make provision for safe pedestrian and cycling routes between the Business Park and the main part of the village."* Cycle access to and through the site is very difficult at present and there is no specific provision. There are clear advantages in ensuring that any new cycling and walking provision links well with the site, so access to and through the site should form an important part of Mepal to Witchford provision either as an integral part of the route (as for this option) or as a spur off the route for other options. The site is large and there is plenty of scope for provision, which needs to fit in with a Masterplan for the site that needs to include links with Mepal, Sutton and Witcham. At this stage it is difficult to be clear on the best route without a clear understanding of how the site will develop, but there appears to be good potential for a route along the north of the site linking v. with the employment sites at the Power Station and Fortnum and Masons and continuing towards Witcham. There is also potential for a route linking more closely with the A142 and iii. and running through the site to link with Witcham and potentially Mepal.

Figure 7B 6.1 The existing road infrastructure in Elean Business Park does not include cycling provision crossing, which needs adding with segregated cycleways and segregated footways.

vii.

There is currently no link between Elean Business Park and the nearest housing, which is in Witcham. There are two obvious options (vii. and viii.) from looking at maps and Google Earth and from looking at the ends of the possible routes, but routes would be on private land and have not been surveyed. The sub-option vii would run south of Cambridge Glassblowing to connect the business park to farm tracks on the edge of Witcham.

There appears to be a suitable strip of land between fences at the business park end that leads on to farm tracks, so any route would need to function well with farm operations and would need landowner's agreement. This is a good direct alignment and it seems to follow what may have been a former road but has challenges. It is possible that there was a road on this alignment, that might have been closed when the airfield was built, but this would need further research.

Figure 7B 7.1 The link could be accessed through the overgrown area in the centre of the photo (see Figure 7B7.2), but the route through the business park will need detailed design and significant changes due to hgv usage in the area.

Figure 7B 7.2 The link could be accessed through this overgrown area, which has not been surveyed. (See Figure 7B7.1).

Figure 7B 7.3 The link would join residential roads in Witcham at this farm access, so would need to be agreed with those farming the land.

viii.

A more northern link with Witcham is possible and could use field edges and may be more acceptable to landowners than vii. The link with the business park could be through or adjacent to land occupied either by Fortnum and Mason or the Power Station. The link with Witcham could be via the farm track referenced for section vii. (See Figure 7B.2).

However, similar to the previous option, gaining access through these alignments requires careful consideration and engagement with relevant landowners and stakeholders.

Figure 7B 8.1 The entrance to the Fortnum and Mason's site.

ix.

Both options vii and viii could connect with Witcham using open space next to housing off Westway Place. This is likely to be preferable in terms of farm operations but would need to consider the needs of local residents.

Figure 7B 9.1 The view from Westway Place towards the business park. A new path could be built here, in a position to be agreed.

x.

The route can continue on road along Silver Street, High Street, Headley's Lane and Market Way, crossing straight over The Slade/ Martins Lane. The roads are well surfaced and are deemed suitable for mixed use with a recommended 20 mph speed limit. This approach aligns with creating a safer and more accommodating environment in the whole village as outlined for Option A.

This could be achieved by tightening junctions and the addition of some pedestrian crossings such as zebra crossings or raised crossings, across the village.

The Silver Street/ High Street/ The Slade/ Martins Lane junction would be very suitable for tightening to reduce speeds and improve crossing movements. Any changes will need to allow for buses and for access to the bus shelter, but there are good opportunities to improve this area.

Figure 7B 10.1 Silver Street.

Figure 7B 10.2 Silver Street looking towards the High Street.

xi.

Market Way joins a public byway, which is unsurfaced and would require surfacing to a width of 3m. Any surfacing works must be robust enough to accommodate farm traffic, ensuring the durability and functionality of the route. Equestrian usage and ecology will also need careful consideration, but there are existing rights of usage and the highway authority has rights to surface the byway, so the use of byways is attractive. The byway varies in width and surface condition is variable. In places it has been surfaced. In winter usage will be very difficult at present for all users. Prior to any works a topographical survey would be needed and an ecological survey would be needed.

Figure 7B 11.1 Start of the byway at Market Way.

Figure 7B 11.2 View along byway in summer towards Market Way and Witcham.

Figure 7B 11.3 Narrower section of byway looking towards Witcham.

Figure 7B 11.4 Rutted section of byway looking towards Witham.

Figure 7B 11.5 Wider section of byway looking towards Witcham.

Figure 7B 11.6 Eastern end of byway looking towards Witcham from road in summer.

Figure 7B 11.7 Eastern end of byway looking towards Witcham from road in autumn.

xii.

The byway joins Long Causeway, which is a relatively quiet road that links the A142 with Coveney. No traffic counts have been done but on visit it appeared suitable for use by cyclists mixed with traffic, preferably accompanied by a reduced speed limit, ideally to 20 mph. An alternative (which is not a priority at this stage) would be to construct a new path on field edge adjacent to a watercourse (Catchwater). This would require a new bridge over Catchwater and is worthy of further consultation but would also need landowner's agreement.

Figure 7B 12.1 The choice is between an on road route or a new path on field edge to the left.

xiii.

If the route is to continue along Long Causeway the same choice exists for this section as for Section xii – on road mixed with traffic or a new path following the road on field edges and requiring landowner's agreement. At present an on-road option seems appropriate, but further consultation would be useful.

xiv.

Long Causeway joins the A142 at a wide and intimidating junction and the route needs to avoid this junction and follow the A142 on field edges to the north of the road before crossing at a suitable location.

There is no obvious location for a crossing, but it is likely to have to be either roughly half way between Long Causeway and Scott's Farm Shop or much closer to Witchford near the road junction. (See Figures 7B 15. 2 and 15.3). The path and ramps will need landowners' agreement, with a new bridge to be agreed with the County Council. The fields are below road level and in order to achieve gradients that comply with LTN 1/20 long ramps will be needed that should be parallel with the road, so they will need to be approximately 150m long. Earthwork ramps are preferred and a source for the material will need to be found. The land take for ramps will be considerable.

A bridge would need to be minimum of 4m wide and parapets may need to accommodate equestrian usage if required. A bridge will need detailed design and topographical surveys.

Figure 7B 14.1 The Long Causeway/ A 142 junction looking towards Witchford. A new path would need to be on field edges to the left.

xv.

The route will need to enter Witchford on the southern side of the A142 and requires a new bridge. If this bridge is to the west of Scott's Farm shop it should be able to join the existing path between the Farm Shop and the A142, where it is well back from the A142. If the bridge is to the east of Scott's Farm Shop it would have to land on the triangle of land between the A142 and the farm shop. This would need topographical and ecological surveys. If the bridge lands on the triangle of land as in Figure 7B 15.3 there would need to be a long and costly steel ramp within the landscaped area, but this would have the advantage of being within highway land (subject to confirmation of this from Cambridgeshire County Council).

Figure 7B 15.1 The route could either use the existing path to the left or a new ramp and bridge linking to the land on the right.

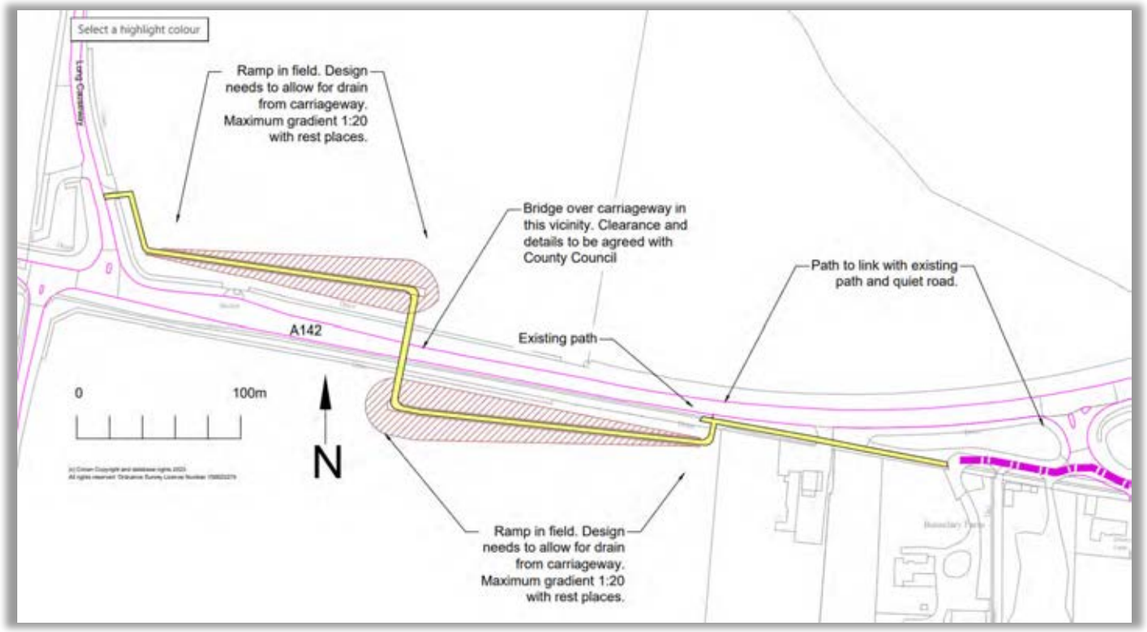

Figure 7B 15.2 The route could cross the A142 approximately midway between Long Causeway and the Farm Shop as here.

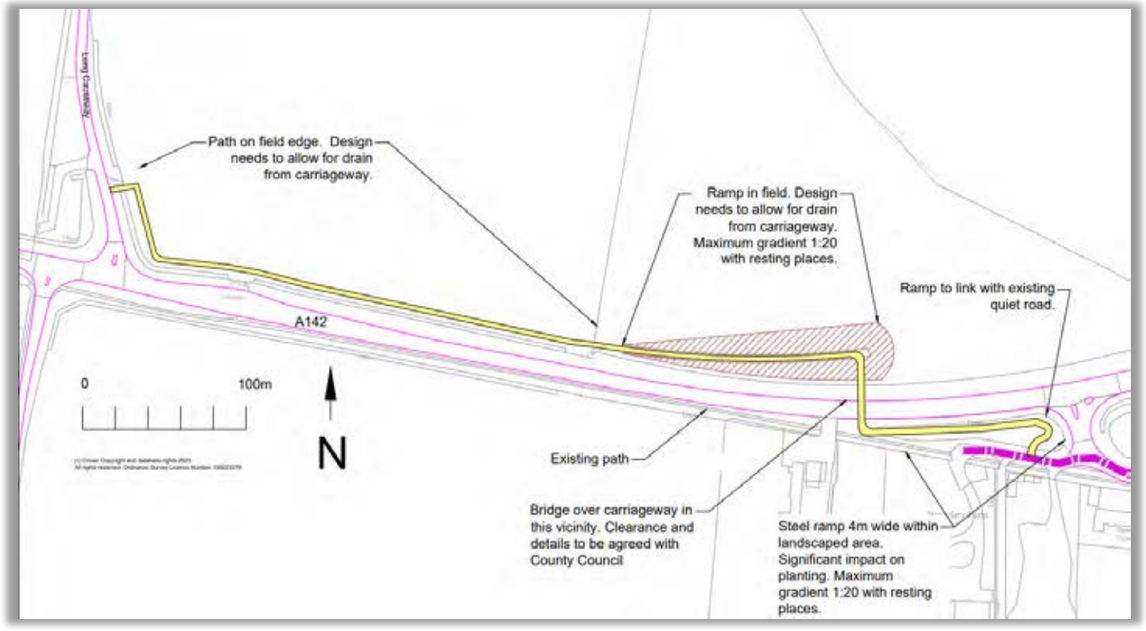

Figure 7B 15.3 The route could cross the A142 near the A142/ Sutton Road junction as here.

xvi.

The first section of Sutton Road from the bypass is a national speed limit road and it is recommended that the speed limit is changed to 30 or 20 mph depending on the provision for cyclists. A Witchford Gateway could be provided near the road junction and the design of the area needs changing to accommodate cycling provision. A possible solution would be to continue shared use provision to the existing village gateway where the existing speed limit change is. It should be possible to fit a 3m path into the existing verge, as long as the kerb-line is moved to give at least 0.5m separation between path and carriageway (assuming a 30 mph limit over this section of carriageway).

Figure 7B 16.1 This section of road on the edge of Witchford either needs to be 20 mph with carriageway changes for cyclists to mix with traffic or a widened and extended shared use path is needed on the right with carriageway narrowing and a 30mph limit.

xvii.

As an alternative to using Long Causeway it would be possible to follow byways all the way to Witchford and cross the bypass in a different location to xiv. or xv. The use of byways has clear advantages in terms of rights of access and the right to carry out surfacing, but this is not an easy option and would not be such a good route as xiii – xvi. Nevertheless the byways have to be considered because they may be more deliverable than other options.

The first section of byway Is an attractive route following a watercourse (Catchwater). It has hedges on one side and is open on the watercourse side. The surface is better than some, but still difficult in winter. A 3m surfaced path would be required and this will need to accommodate farm traffic. Provision also needs to be made for equestrians.

Figure 7B 17.1 Entrance to the byway from Long Causeway, in winter.

Figure 7B 17.2 View along byway towards Long Causeway, in summer.

Figure 7B 17.3 View along byway towards Long Causeway, in summer.

xviii. The suggested route would turn away from Catchwater and follow another field edge byway towards Witchford. This section of byway appears to be heavily used by farm traffic and varies from hedge-lined to open, so may need additional ecology work (see Chapter 9). .A 3m surfaced path would be required and this will need to accommodate farm traffic. Provision also needs to be made for equestrians.

Figure 7B 18.1 Start of byway in winter conditions.

Figure 7B 18.2 Byway in winter conditions with Witchford behind.

Figure 7B 18.3 Open section of byway/ farm track, with Witchford behind. This may need additional ecology studies in relation to bird disturbance.

Figure 7B 18.4 Byway/ farm track, with Witchford behind.

xix.

In order to cross the A142 a new bridge will be needed, due to the high traffic volumes and speeds. In some ways this is a good location to cross, because the road is in a slight cutting, which reduces the length of ramp required. There are however some difficulties in the form of overhead power lines that will need to be moved and possibly replaced by underground cables and also in terms of accommodation farm access from the A142. Moving power lines will be costly and could take a long time but should be possible, but accommodating farm access and a 4m wide bridge within the byway looks very difficult so additional land is likely to be needed.

Topographical surveys and discussions with the landowner are needed if a bridge design is to progress. The bridge should accommodate equestrians.

Figure 7B 19.1 A142 with byway/ farm access on the right and overhead lines just visible.

Figure 7B 19.2 Byway/ farm track, with Witchford bypass ahead.

xx.

There are two public byways leading from the potential bridge site at xix. A wide tree-lined byway leads from the A142 to Main Street, Wichford. This is generally in good condition but needs surfacing to 3m. Any surfacing needs to allow for equestrian usage. The byway meets Main Street, Witchford opposite to New Road, which leads on to a byway that has been identified as a potential route to/ from Wilburton and Haddenham. A raised table across the junctions in this location is recommended.

Figure 7B 20.1 View of byway..

Figure 7B 20.2 View of byway from Main Street.

xxi.

A second potential route leads to Marroway Lane which is a quiet residential road that links with Main Street. As Witchford develops it is possible and desirable that there could be an onward route to Witchford Village College, which would give this route an advantage over xx. However the route is narrower, particularly near the potential bridge site so is more complicated. The route needs surfacing to 3m and is likely to need additional land.

xxii.

Witchford has been considered in the Haddenham to A142 Feasibility Study where the importance of all residents being able to access new facilities was emphasised. The village has been bypassed and it should be possible to make all of Witchford compliant with LTN 1/20 but this will need significant changes. See Option A for further details.

Option B Summary	
Comparative Length	8.3 km (compared to 7.2km shortest route by road). As a route between Witchford and Sutton this would work better than Option A and could also work as a route that links Mepal to Ely.
Likely estimated cost	• Works in Mepal • Works in Witchford • Mepal Road/ Witcham Road traffic calming measures 1.9km. • Works in Witcham • 3.4km byway or new field edge path. • New ramps and bridge over A142 • Extra cost if byway used instead of Long Causeway. 1.5km. • A142 signalised crossing for link between Elean Business Park and Sutton needed but not strictly part of the route.
Engineering difficulties	A new bridge over the A142 is challenging and with the field level below the A142 long ramps will be needed. Construction of good quality paths on byways is challenging, especially given farm traffic.
Ecological issues	Nothing major raised, but using a byway instead of the Long Causeway route likely to need additional surveys.. Loss of field edge or some loss of verge depending on options.
Land ownership issues	Needs agreement of landowners for field edge works
Other issues	Limited space on some of the byways to accommodate separate equestrian provision. Needs to link with Sutton-in-the Isle to be more useful.
Overall	Potentially a good route that would provide valuable links to Elean Business Park, but this should also include links with Sutton as well as links with Mepal and Witcham.

Option C

This option would build on the existing route between Mepal and Sutton providing a new safe crossing of the A142 and with new provision through Sutton. The route would then run to the south of the A142, set further back from the road than the existing path and with significant changes at the side road junctions, until it linked with Witchford in a similar manner to the existing A142 path.

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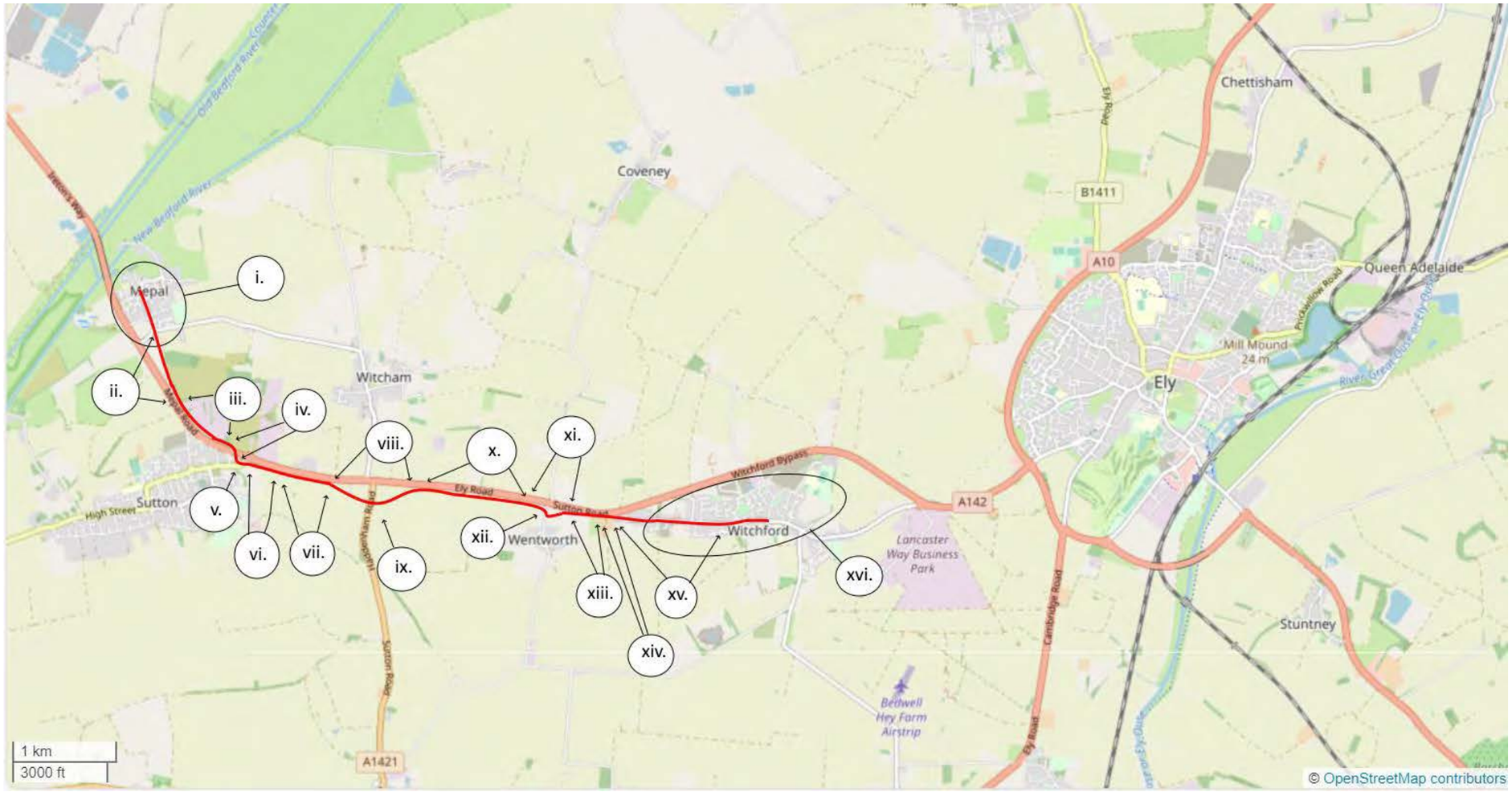


Figure 7C 1 Option C..

i.

On road route in Mepal mixed with local traffic. See Option A.

ii.

Attractive closed road needs improved access. See Option B.

Figure 7C 2.1 The existing closed road – an excellent local facility.

iii.

An existing path through woodland following the A142 would make a useful route, but there are difficulties and there are also alternatives. See Option B.

Figure 7C 3.1 The existing woodland path. .

iv.

Elean Business Park is separated from Sutton by the A142. A crossing of the A142 is needed for links between Mepal and Sutton and between Sutton and its principal employment site at Elean Business Park. (A crossing in this area is considered further in Option B). Given the traffic volumes a signalised or grade separated crossing is needed for all to be able to cross safely and comfortably. Speeds near the A142/ Elean Business Park/ Ely Road junction are not high and appear to be well below the national speed limit, so a new 40 mph speed limit and a new signalised crossing should be possible (similar to the crossing east of Witchford at the Lancaster Way roundabout). This will need speed surveys and detailed design, which will need to include good quality segregated paths leading to the crossing, of adequate widths and set away from the carriageway.

A segregated path needs extending to a suitable crossing point near the Coop store and continuing into Sutton.

Figure 7C 4.1 Existing crossing provision is inadequate.

Figure 7C 4.2 The existing access path needs widening with new paths on both sides of the A142..

Figure 7C 4.3 The existing Lancaster Way crossing of the A142.

v.

There is an existing refuge crossing of Ely Road. It is recommended that this is replaced by a parallel zebra crossing as close to the access as possible.

Figure 7C 5.1 Existing shared path leading to crossing. The route needs to be brought up to LTN 1/20 standards.

vi.

An existing good quality route uses the Coop access road and joins a path that runs from the Coop store car park entrance towards the A142. No changes are needed.

vii.

An existing shared use path runs besides the A142 and is very close to the existing high speed carriageway. A new 3m path is needed on field edges behind the hedge to the south to avoid this. This will need landowners' agreement.

Figure 7C 7.1 The existing segregation from high speed traffic is inadequate.

viii.

The existing shared use path crosses the A1421 in a very difficult location. In order to avoid narrow sections of the path, difficult frontages and to get a good crossing of the A1421 a new swept path is needed behind properties. The path needs to be at least 3m wide and needs to avoid right angles and address any landowner concerns. A considerable land take will be needed and agreement with landowners.

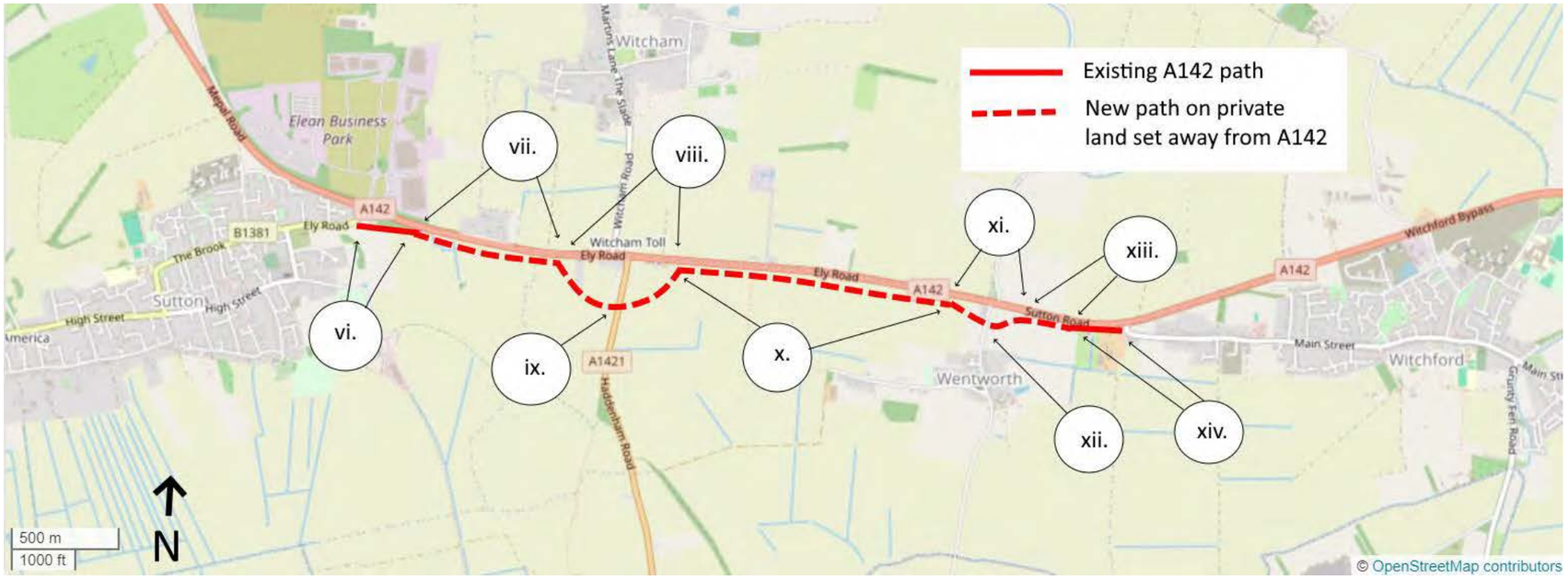


Figure 7C 6.1 Map showing sections along the A142 between Sutton and Witchford. Note that the proposed path is on private land and has not been surveyed and there are few photos. Where possible the route has been looked at from public highways. It can be seen from Google Earth too.

ix.

The speed limit of the A1421 needs to be reduced for some distance from the A142 junction to 40 mph or 50 mph to allow a signalised crossing to be provided. Visibility will need to be checked and some hedgerow will need to be removed. This needs detailed design.

x.

An existing shared use path runs besides the A142 and is very close to the existing high speed carriageway. A new 3m path is needed on field edges behind the hedge to the south to avoid this. This will need landowners' agreement.

xi.

The existing shared use path crosses Church Road in a very difficult location. As with viii. in order to avoid narrow sections of the path, difficult frontages and to get a good crossing of Church Road a new swept path is needed behind properties. The path needs to be at least 3m wide and needs to avoid right angles and address any landowner concerns. A considerable land take will be needed and agreement with landowners.

xii.

The speed limit on Church Road needs to be reduced for some distance from the A142 junction to 20 mph or 30 mph to allow a parallel zebra crossing and village gateway to be provided. Visibility will need to be checked and some hedgerow will need to be removed. This needs detailed design.

xiii.

An existing shared use path runs besides the A142 and is very close to the existing high speed carriageway. A new 3m path is needed on field edges behind the hedge to the south to avoid this. This will need landowners' agreement. The path can link with the existing A142 path next to The Scott's Farm Shop.

xiv.

In this location the existing shared path and quiet road can be used.

xv.

The first section of Sutton Road from the bypass is a national speed limit road and it is recommended that the speed limit is changed to 30 or 20 mph depending on the provision for cyclists. A Witchford Gateway could be provided near the road junction and the design of the area needs changing to accommodate cycling provision. A possible solution would be to continue shared use provision to the existing village gateway where the existing speed limit change is. It should be possible to fit a 3m path into the existing verge, as long as the kerb-line is moved to give at least 0.5m separation between path and carriageway (assuming a 30 mph limit over this section of carriageway).

The route can then join the carriageway to fit in with the proposals for Witchford.

Figure 7C 15.1 This section of road on the edge of Witchford either needs to be 20 mph with carriageway changes for cyclists to mix with traffic or a widened and extended shared use path is needed on the right with carriageway narrowing and a 30mph limit.

xvi.

Witchford has been considered in the Haddenham to A142 Feasibility Study where the importance of all residents being able to access new facilities was emphasised. The village has been bypassed and it should be possible to make all of Witchford compliant with LTN 1/20, but this will need significant changes. See Option A for further details.

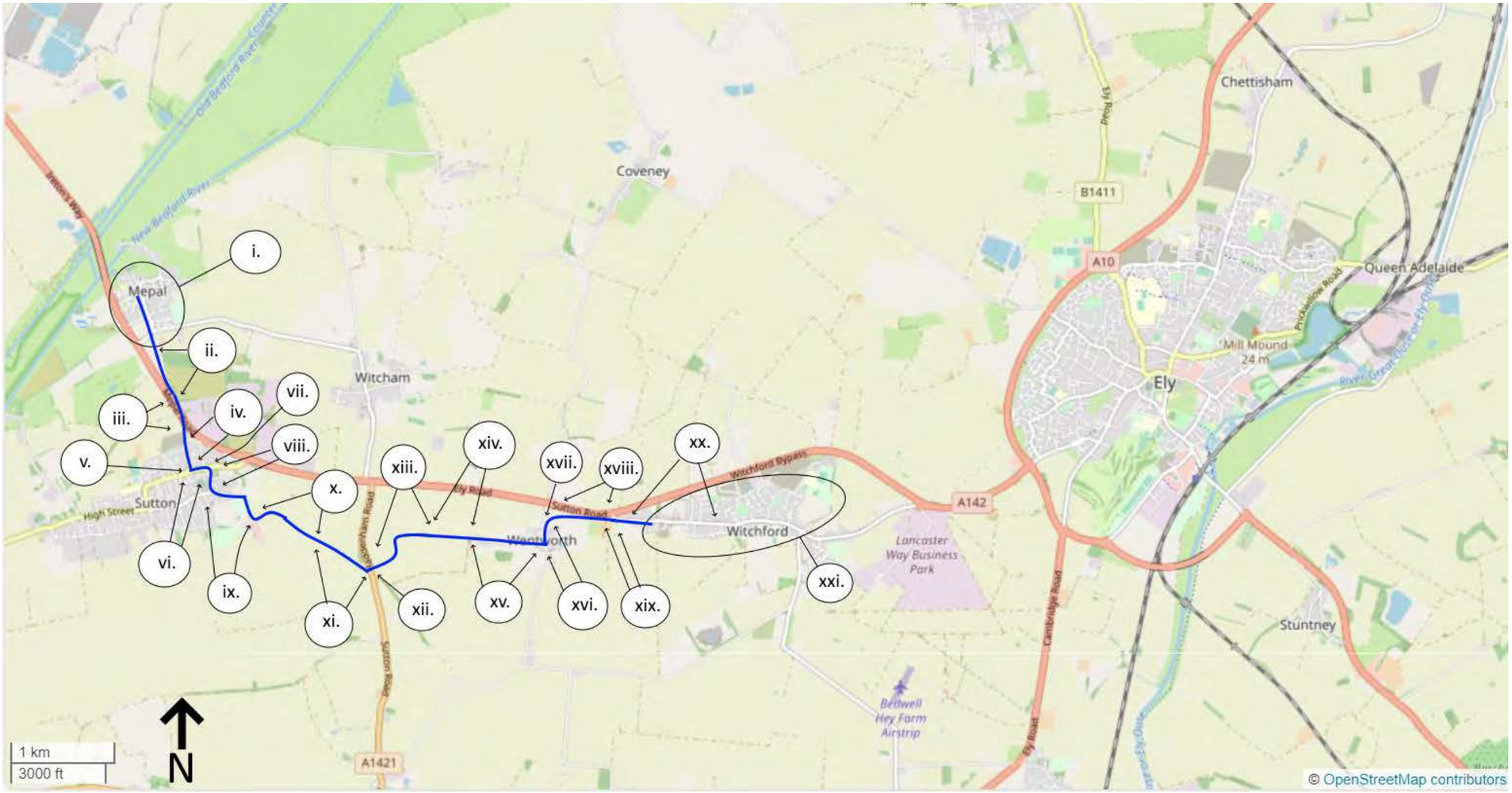
Figure 7C 16.1 Witchford.

Option C Summary	
Comparative Length	7.2km (compared to 7.2km shortest route by road). The most direct route that links well with Sutton and Elean Business Park. Does not serve Witcham.
Likely estimated cost	• Works in Mepal • Works in Witchford • Church Road Parallel Crossing • A 1421 signalised crossing • A 142 signalised crossing by Elean Business Park. • New field edge path set behind and away from A 142.
Engineering difficulties	New signalised crossings will require speed limit changes and removal of vegetation for visibility, but no major difficulties anticipated.
Ecological issues	Nothing major raised. Loss of field edge.
Land ownership issues	Needs agreement of landowners for field edge works and looks very challenging to agree good route at A1421 crossing and at Church Road crossing.
Other issues	There is an existing route nearby, so the value of a parallel route is likely to be questioned. It is possible also that some may prefer the existing route as it would be slightly shorter and less isolated. The existing route is not considered suitable for all, as detailed in Chapter 5.
Overall	Potentially a significant improvement on the existing route if the land can be acquired.

Option D

In a similar way to Option C this route would link Mepal with Sutton and then continue on to Witchford south of the A142. In this case though the alignment would be further south following attractive rights of way and new links going through Wentworth village before following a similar route to Option C into Witchford.

It's important to note that the implementation of this route requires securing access to private land for the connection between the Bridleway along New Cut Drain and Wentworth Main Street. This will need to be thoughtfully negotiated with landowners and gain the necessary planning approvals.



i.

On road route in Mepal mixed with local traffic. See Option A.

ii.

Attractive closed road needs improved access. See Option B

iii.

The former Mepal – Sutton road is now dissected by the A142. This provides two isolated lengths of quiet road with no satisfactory crossing between them. Due to the volume and speed of traffic on the A142 a bridge or signalised crossing is needed and in this location a bridge would be the most appropriate. There is space for a 4m wide bridge and ramps on highway land and this would be a valuable link especially for Mepal residents accessing the facilities in Sutton.

The bridge and ramps will need detailed design, utility searches and topographical surveys and are likely to have to be mostly steelwork structures.

Figure 7D 3.2 A new ramp for a bridge could be positioned on the alignment of this path on the Sutton side of the A142 for a new bridge over the A142.

Figure 7D 3.1 A new ramp for a bridge could be positioned on the alignment of this path on the Mepal side of the A142 for a new bridge over the A142.

Figure 7D 3.3 In this area the path (as seen in Figure 7D 3.2) diverges from the A142 alignment and there appears to be plenty of space for a ramp.

iv.

Mepal Road in Sutton is closed to through traffic at the northern end with an earth pile across part of the road. The space left to go around the earth pile is inadequate and it is recommended that a more suitable gateway/ barrier is provided using bollards and retaining some of the earthwork.

At the southern end Mepal Road provides access to housing and would be appropriate as a 20 mph road with cyclists mixed with traffic.

Figure 7D 4.1 Mepal Road closed to motorised traffic.

Figure 7D 4.2 Mepal Road showing earth piled across the road.

v.

The Mepal Road/ B 1381 roundabout is one of the most important locations in Sutton, because of the challenges faced by those walking or wheeling in its vicinity. There is currently very limited provision and wide open spaces. It is suggested that the roundabout may best be replaced by a T-junction with good provision for those walking and wheeling. This will need detailed design and community engagement. (See Figure 7D 6.1 for a suggested arrangement).

Figure 7D 5.1 Mepal Road approach to the roundabout. All potential movements need to be catered for to comply with LTN 1/20, so major changes are needed.

vi.

Ely Road is one of the busier roads in Sutton and as such the best arrangement would be to segregate cyclists from both motor traffic and pedestrians. Due to limited space this is very difficult. A potential arrangement is shown in Figure 7D 6.1. This needs detailed design and community engagement and needs to be considered as part of a whole Sutton-in-the Isle approach.

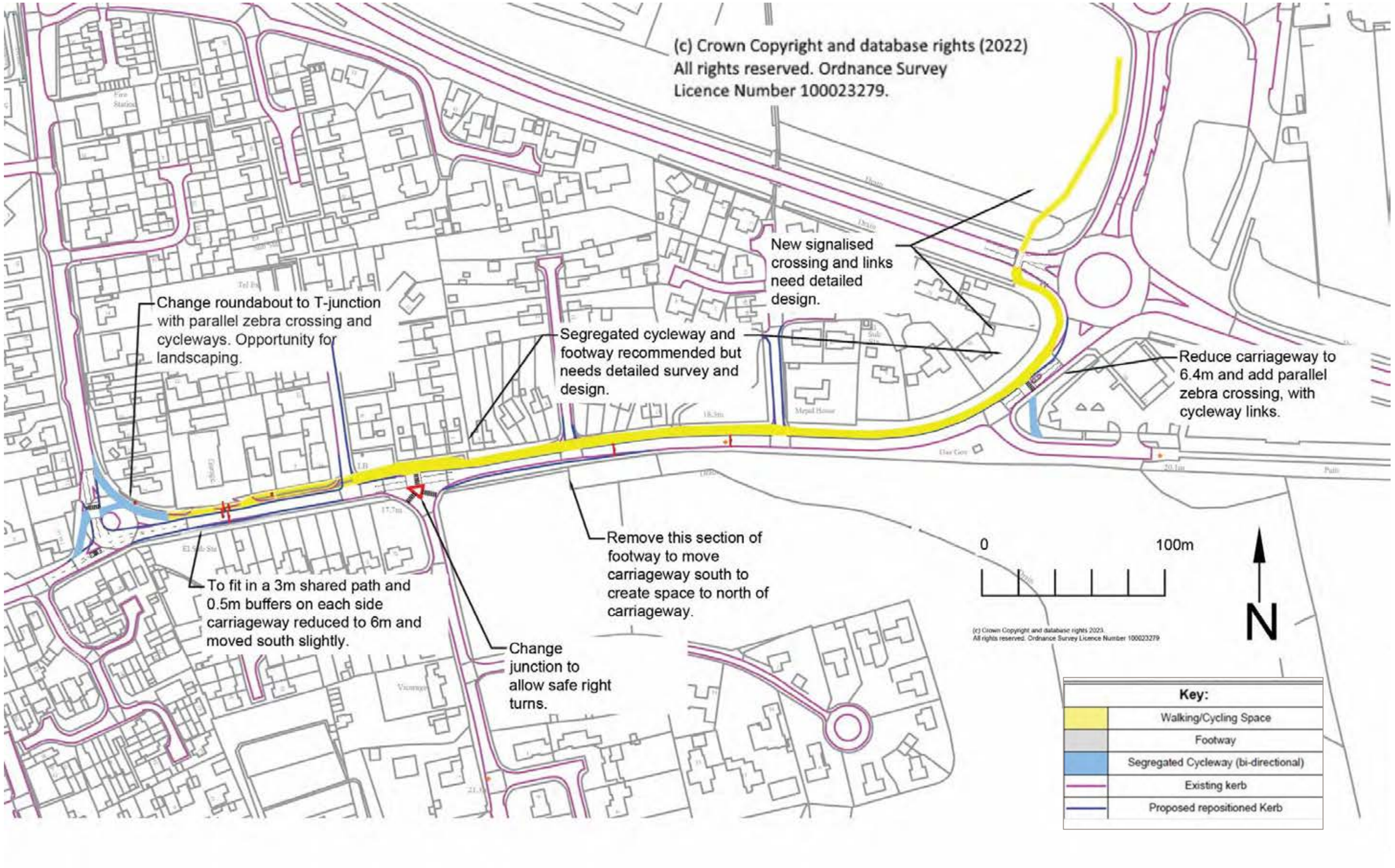


Figure 7D6.1 Drawing showing potential changes along Ely Road in Sutton, with a link to Elean Business Park to bring the road up to LTN 1/20 standards.

vii.

Church Lane junction is a significant junction that needs to provide for all cycling and walking movements with the right turn from Ely Road into Church Road being the most challenging. A crossing that included a parallel zebra crossing would be preferred but a signalised junction may be necessary. This needs detailed design and community engagement and needs to be considered as part of a whole Sutton-in-the Isle approach. (See Figure 7D 6.1).

viii.

Church Lane is a 20 mph road. The street space in is constrained. It is predominantly a low-traffic area, with vehicles mainly comprising residents or those accessing the community. Consequently, it is deemed suitable for cyclists to share the road with traffic, given that speeds remain low. Any measures to reduce speeds and reduce through traffic would be beneficial building on the speed limit of 20 mph. This should include measures such as junction tightening of the Station Road junction, a gateway feature, and enhanced pedestrian provision where possible. This needs detailed design and community engagement and needs to be considered as part of a whole Sutton-in-the Isle approach.

Figure 7D 8.1 Church Lane.

ix.

Station Road is a quiet road suitable for cyclists to mix with local traffic. Part of the road is 20 mph and it is recommended that this is extended over the whole length.

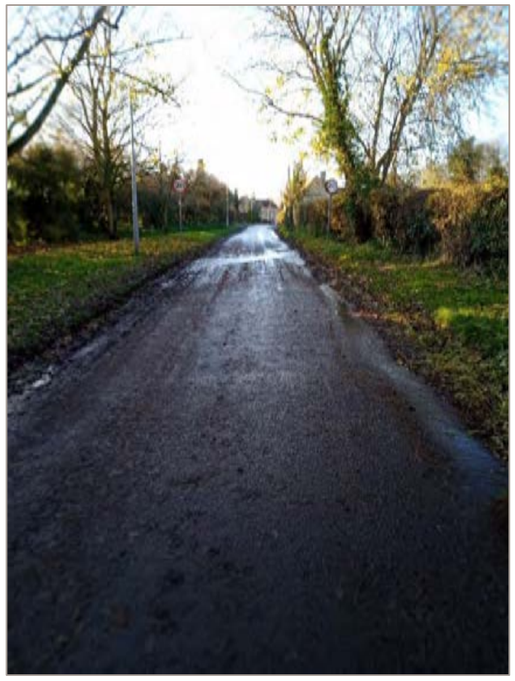


Figure 7D 9.1 Station Road looking towards Church Lane showing the start of the 20 mph limit.

x..

Station Road leads to Crown Lane and a very attractive bridleway that follows New Cut Drain. The first section has vehicular rights and an uneven surface, so would need surfacing to 3m. An alternative would be to construct a bridge and a 3m path on the other side of New Cut Drain. (To the left in Figure 7D 10.1).

Figure 7D 10.1 Approach to bridleway at Crown Lane.

xi.

The bridleway has rights for equestrians, cyclists and pedestrians and could be surfaced to 3m, but space is limited and this is likely to be sensitive. In places it will be necessary to remove small trees and planting. An alternative to the bridleway would be to construct a new 3m path on private land adjoining New Cut Drain, although this would need landowners' agreement and would be more prone to flooding. This would be an attractive route that links well with Sutton and it would benefit from being extended to Wentworth, but there are lots of issues to consider. The route will need a topographical survey to clarify exactly how much space is available and what can be accommodated. The images give an idea of where space is most constrained.

Figure 7D 11.1. Narrow part of bridleway looking towards Sutton.

Figure 7D 11.2. Part of bridleway looking towards Sutton.

Figure 7D 11.3. Part of bridleway looking towards Sutton.

Figure 7D 11.4. Part of bridleway looking towards Sutton.

Figure 7D 11.5 At the A1421 end the bridleway follows a short stretch of surfaced road, which would need minimal works.

xii.

One of the biggest challenges of this route is the crossing of the A1421, Haddenham Road. The road is not nearly as busy as the A142, but speeds are high and to provide a crossing that would be suitable for all a signalised crossing or grade separated crossing would be needed. A signalised crossing would be preferred but visibility is poor and speeds can be high so this would need additional surveys and detailed design and a suitable solution cannot be guaranteed. A bridge would be feasible, but this is a relatively remote location for such a major investment. This crossing needs to be resolved for the route to progress and if the route is prioritised it will need further design work and engagement.

Figure 7D 12.1 View of the potential crossing point along the A1421 with the bridleway starting where the car is parked on the left and the road bending to the right beyond.

xiii.

The bridleway stops at the A1421 and although there is a byway that continues on towards Haddenham there is no right of way towards Wentworth. Both Wentworth and Sutton would benefit from a continuous route between the two and if this included equestrian rights there would be benefits for equestrians and all users in upgrading the bridleway surface. There is one obvious field edge alignment which could be on either side of hedges/ field boundaries, so should have minimal impact on farm operations. This will need landowners' agreement and will need to include and be considered as part of arrangements for the road crossing at xii. The aim would be to link the Sutton bridleway xii. with the Wentworth public footpath at xiv. Both of these are effectively dead-end routes given that they start/ finish at A roads.

Routes can be seen from adjoining land and from Google Earth but have not been surveyed on the ground.

Figure 7D 13.1 View of potential route on field edge seen from public footpath at Wentworth. This is not a right of way and was not surveyed.

xiv.

A public footpath leads to Main Street, Wentworth. It is open and has potential to be surfaced to give a 3m wide path, but surfacing, usage and measures to protect adjoining land would need to be agreed with the landowner.

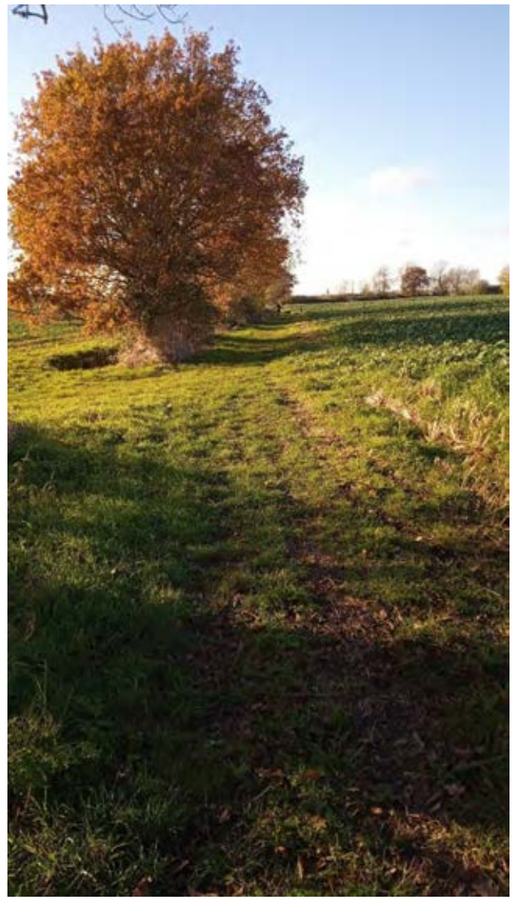


Figure 7D 14.1 View of public footpath running along field edge viewed towards Sutton.

Figure 7D 14.2 Start of public footpath at Main Street viewed towards Sutton.

xv.

Main Street, Wentworth, is an attractive quiet street with low traffic volume and suitable for mixed use cyclists with motorised traffic. It is suggested that the whole of Wentworth would benefit from a 20 mph limit.

Figure 7D 15.1 Main Street view towards Sutton.

xvi.

Church Road, Wentworth is an attractive quiet road with low traffic volume and suitable for mixed use cyclists with motorised traffic. It is suggested that the whole of Wentworth would benefit from a 20 mph limit and village gateways on Church Road.

Figure 7D 16.1 Main Street/ Church Road junction.

xvii.

From Church Road, Wentworth to Witchford Option D is almost the same as option C, although the crossing position of Church Road could be changed if there is no onward route following the A142 to Sutton. The speed limit on Church Road needs to be reduced for some distance from the A142 junction to 20 mph or 30 mph to allow a parallel zebra crossing and village gateway to be provided. Visibility will need to be checked and some hedgerow will need to be removed. This needs detailed design and the position would have more flexibility than for Option C.

xviii.

A new path is needed from the Church Road crossing/ gateway at xvii. The path needs to be at least 3m wide and needs to avoid right angles and address any landowner concerns. The path will then need to run parallel with the A142 but to the south of it set behind a hedge until it joins the existing A142 path near Witchford. A considerable land take will be needed and agreement with landowners. An existing shared use path runs besides the A142 and is very close to the existing high-speed carriageway and the new 3m path is needed on field edges behind the hedge to the south to avoid this. The path can link with the existing A142 path next to The Scott's Farm Shop.

xix.

In this location the existing shared path and quiet road can be used.

xx.

The first section of Sutton Road from the bypass is a national speed limit road and it is recommended that the speed limit is changed to 30 or 20 mph depending on the provision for cyclists. A Witchford Gateway could be provided near the road junction and the design of the area needs changing to accommodate cycling provision. A possible solution would be to continue shared use provision to the existing village gateway where the existing speed limit change is. It should be possible to fit a 3m path into the existing verge, as long as the kerbline is moved to give at least 0.5m separation between path and carriageway (assuming a 30 mph limit over this section of carriageway).

The route can then join the carriageway to fit in with the proposals for Witchford.

xxi.

Witchford has been considered in the Haddenham to A142 Feasibility Study where the importance of all residents being able to access new facilities was emphasised. The village has been bypassed and it should be possible to make all of Witchford compliant with LTN 1/20 but this will need significant changes. See Option A for further details.

Figure 7D 21.1 Main Street, Witchford.

Option D Summary	
Comparative Length	8.2km (compared to 7.2km shortest route by road). Does not serve Witcham.
Likely estimated cost	• Works in Mepal • Works in Witchford • Church Road Parallel Crossing • Works in Wentworth • New bridge and ramps over A 1421. • New field edge path or bridleway 2.9km. • 1 no Signalised junction Sutton • New bridge and ramps for A142 crossing on Mepal Road alignment Sutton. • New link to Elean Business Park from closed Mepal Road 750m.
Engineering difficulties	A new bridge over the A142 is challenging but should be possible on highway land. A crossing of the A1421 is difficult and may need a new bridge in a remote area.
Ecological issues	Nothing major raised. Loss of field edge or some loss of verge depending on options.
Land ownership issues	Needs agreement of landowners for field edge works.
Other issues	Surfacing of the bridleway near Sutton and the footpath near Wentworth may be sensitive, but there are considerable potential benefits by linking them up.
Overall	Potentially of greatest benefit to Sutton and Wentworth residents.

8. Land Registry Information

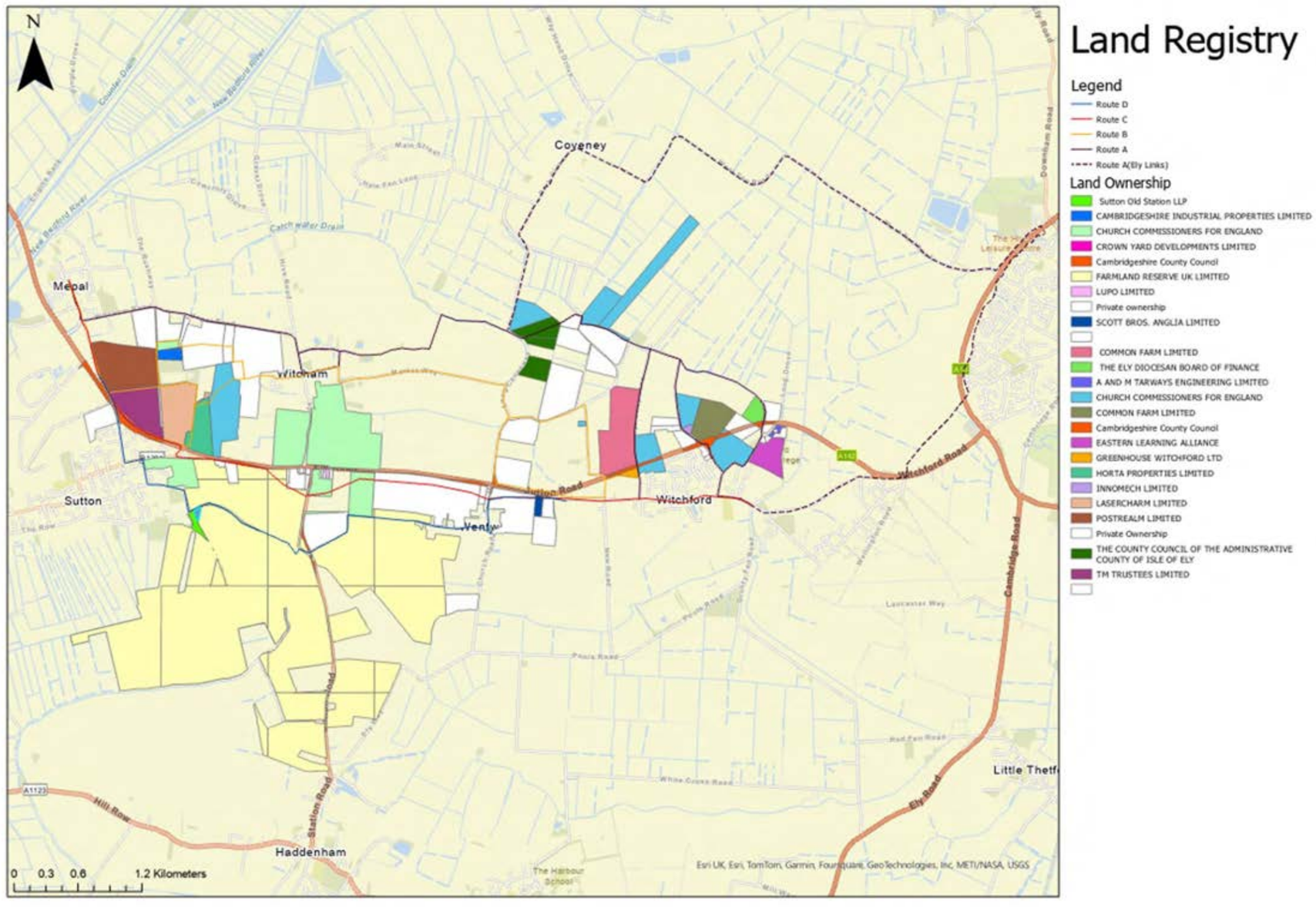
The most complicated part of the development of any new route is likely to be the need to get landowners' agreement. Time and funding need to be allocated for this and if necessary, the Local Authorities need to be willing and able to use Statutory Powers to deliver the proposed routes. This should however be a last resort. The aim should be to build good relationships with all landowners. In this case Cambridgeshire County Council has many rights in relation to byways, but there appear to be a lot of relatively small landowners who may need to be engaged. 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.

Figure 8.1 shows the Land Registry map. It highlights the plethora of landowners found along the route. One major challenge in this study, particularly with the various sub-options, revolves around determining how and where to cross the A142. The preferred solution involves the construction of bridges to ensure safe crossing of the A142. (details available in Chapter 7). Awaiting additional confirmation of data availability until further works have been confirmed, it is essential to engage landowners and other pertinent stakeholders for the upcoming stages of planning and design work.

The Polygons detail private land ownership agreements, 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.

Figure 8.1: Land Registry map



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 five main route options and multiple sub-options proposed between Mepal and Witchford and also linking to Ely. This is a high level assessment only, based on data obtained from Cambridgeshire and Peterborough Environmental Records Centre in November 2023 and freely available online datasets[1] in December 2023. No site visit has been conducted and a full report has not been prepared.

Scheme viability and route comparison

Options A-D all include sections of new construction adjacent to fields within 5km of the Ouse Washes Special Protection Area. This adds a high level of uncertainty to the feasibility assessment as some of these fields could be important to the breeding and wintering bird populations associated with this site, and disturbance to them would contravene current legislation. The current level of ecological assessment cannot determine which of the routes would carry the highest risk. If insufficient data exists to rule out impacts, then multiple years of bird survey data may be required in order for permission to be granted for construction. This would add expense, uncertainty and delays to the project. A scoping assessment and consultation with Natural England are recommended at the earliest opportunity to help quantify risk and identify preferred options.

Options A, B and D will include sections of new construction alongside watercourses or field drains. This is not a barrier to construction but increases costs for biodiversity net gain and risk in relation to environmental protection and protected species. If these paths cannot be situated 5m or more from adjacent watercourses the presence of water voles could pose a significant challenge for the project due to the impact on these populations and required mitigation.

A level of uncertainty also exists in relation to the byways, present on all route options. The verges of these could include important habitats and notable species which may be difficult to avoid, and may form important connectivity features in the landscape. As these are not designated and are not mapped on priority habitat inventories, the risk to project feasibility is likely low, but this must be verified by a site visit.

Designated Sites

The Ouse Washes is an internationally important site located within 5km of the proposed route (Figure 9.1). This is designated as a Special Area of Conservation (SAC), Special Protection Area (SPA), Ramsar site and Site of Special Scientific Interest (SSSI). The routes are 350m from this site at its closest point with limited habitat connectivity at that point. There is a very low risk of impacts on the SAC due to pollution events upstream where routes cross watercourses. The likelihood of such incidents can be significantly reduced by best practice in design and construction and the distance to the SAC makes residual impacts unlikely.

Further assessment will be required in relation to the SPA. Options A-D all include sections of new construction adjacent to fields within 5km of the SPA. These fields could be used by the breeding and wintering bird populations associated with this site and disturbance to them would contravene current legislation. The routes are situated outside the Ouse Washes goose and swan functional land Impact Risk Zone identified by Natural England but could be important to other species such as widgeon. A scoping assessment will be required to determine the level of risk. This will take into account the existing disturbance, screening, distance from the SPA and bird usage data. If a risk is identified, then a full Habitat Regulations Assessment will be needed. Surveys over multiple years may be required to determine usage of the fields by wintering and breeding birds. This is relevant to all off-road sections of the routes and these will be dependent on the level of natural screening from vegetation. Many of the byways are situated between double hedges, which would form natural screening from the adjacent fields and avoid disturbance to birds using them.

No other statutory designated sites are present within 1km of the proposed routes. Five locally important County Wildlife Sites (CWS) were identified in this area including two sites adjacent to proposed routes. The northern link to Ely is on-road beside Beald Drove Pollard Willows CWS with no construction proposed, and so impacts are considered unlikely on this site.

Route A is situated alongside Bury Meadow CWS for 110m. No impacts are anticipated on the unimproved grassland for which it is designated, but construction could impact the mature trees along the southern boundary of the site, between the meadow and the byway. The byway is understood to be wide enough in this location so that these trees could be retained and protected.

Habitats

The only irreplaceable habitat (as defined by the NPPF[2]) mapped within 500m of the proposal was a veteran ash tree on the Bury Road track by Option A (Figure 9.2). A notable elm tree was also situated nearby. It is anticipated that these trees can be retained and protected.

No main rivers are present between Mepal and Witchford but all routes cross or are situated close to ordinary watercourses and field drains. Impacts can likely be avoided through good design and construction. Options A, B and D will include more significant distances of construction adjacent to watercourses. If sufficient buffer zones can be maintained, impacts can be readily avoided, however, where space is restricted, construction must be carefully controlled to avoid impacts.

Mapped priority habitats within 500m of the route options include floodplain grazing marsh, deciduous woodland and traditional orchards (Figures 9.2 and 9.3). Additional areas of woodland appear to be present on aerial mapping alongside the A142 and A10 that are not included on the priority habitat inventory. Hedgerows are also present along many, but not all, field boundaries. All routes include sections by the A142 that may directly impact small areas of woodland. Routes B and C are situated through 200m of mapped priority woodland. This is a negative impact of the proposal that must be compensated for and will add to Biodiversity Net Gain (BNG) costs. In other locations routes pass close to woodland and traditional orchards and tree protection measures may be necessary.

Hedgerows and scattered trees could be impacted by the proposal. It is anticipated that the detailed design can mostly avoid and minimise impacts on

[1] Multi-Agency Geographic Information Centre (Website accessed December 2023) Magic Map Application (defra.gov.uk) Woodland Trust (Website accessed December 2023) Ancient tree inventory https://ati.woodlandtrust.org.uk/tree-search DEFRA (website Access December 2023) Main rivers map https://environment.maps.arcgis.com/ 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

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

these habitats, although Options C and D will require hedgerow removal to allow sight-lines at road crossings. Other potentially significant habitats present include the verges of byways and field edges. These are likely to vary significantly in character, but some could include important habitats.

From aerial imagery, fields appear to include crops, grasslands including pastures and some less intensively managed fields. Cropland is likely to have low ecological importance although margins could support notable species. The grasslands and less intensively managed land could vary significantly. Whilst routes do not pass through grassland mapped on national inventories, they may still be important.

BNG will be a requirement of planning applications from January 2024. A BNG assessment will be required and sections within 10m of watercourses will also require a river metric calculation. Every option impacts semi-natural habitat, the type and condition of which are unknown. Routes primarily using surfaced roads and cropland will have the lowest biodiversity unit loss. As such the Northern Ely Link will likely have the lowest BNG burden of the proposed routes. Significant portions of Options A and D are on road, but the off-road sections are on byways with a high level of uncertainty. The BNG burden depends on the character of the byway verges.

Route C east of Sutton-on-the-Mile is direct and likely to avoid important habitats, although some un-surveyed grasslands are present. This section is likely to have a relatively low unit loss. However, west of Sutton-on-the-Mile this option includes 200m of priority woodland, resulting in a high unit loss.

Route B includes the greatest area of off-road route construction, passes through priority woodland and fields that may be less intensively managed and uses byways. The BNG unit loss for this route could be comparatively higher, although this cannot be readily predicted without a site visit.

The biodiversity gain plan or enhancement scheme should include measures to enhance retained habitats such as enhancing semi-natural buffers to watercourses and improving existing hedgerows. Opportunities to plant trees and hedgerow and create ponds and other priority habitats should be considered. Habitat interventions should strengthen the local ecological network, buffering and linking designated sites, watercourses and field drains.

Protected species

Great crested newts, nesting birds (including Schedule 1 species) and reptiles are present in the landscape and impacts on individuals are likely. Impacts on populations are less likely but must be assessed. Disturbance to nesting birds can be readily avoided through timing of works and risk to individual amphibians and reptiles can likely be reduced or avoided by methods of work. Further assessment will be required to quantify the likely impact.

The rivers are likely to contain otters and may support white-clawed crayfish and water vole. Impacts could be anticipated on these species for new crossings and where construction is close to watercourses, therefore further survey and assessment will be required for these species. If otter holts are present close to areas of new public access, design and construction must avoid risk of disturbance, including from future path users. For water voles, impacts can likely be mitigated under licence for new crossings relatively easily. Where longer stretches of path construction are within 5m of watercourses (Options A, B and D) and cannot be re-aligned outside this zone, the impacts and mitigation requirements will be greater and may be a significant project constraint.

Badger will likely be present in the landscape. Where the route crosses setts 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, particularly watercourses and double hedgerows along the byways. No lighting is proposed. Hedgerow loss (greater than 5m) is only anticipated on Options A and D to improve sight lines at junctions. Surfacing the byways may reduce the quality of these features for foraging bats depending on existing habitats present. The likelihood of population level impacts is 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.

Notable species and assemblages

A notable farmland bird assemblage may be present in the landscape. Path construction will not result in significant habitat loss although Options A and D will require some additional hedgerow clearance. There is potential to compensate for this with hedgerow planting and improvement.

Notable plant and invertebrate species may be present in field drains, arable field edges and the byway verges. An assessment of invertebrate habitat and risk, and a plant survey are recommended once preferred route options are identified. No records of notable fungi or lichen species are provided but ancient pastures and unimproved grasslands may support notable fungal assemblages. The presence of such grasslands along the route is unknown and should be assessed in the Preliminary Ecological Appraisal (PEA).

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.

Next steps

The preferred options will require a PEA with a site survey for a more accurate assessment of impacts. A scoping assessment in relation to impacts on the bird populations associated with the SPA will be required. If impacts are likely, an appropriate assessment will be required in line with Habitats Regulations Assessment guidelines. This may require up to two years' worth of bird survey data from adjacent fields. As such it is recommended that this scoping assessment is undertaken at an early stage to determine the feasibility of different route options.

Further species surveys likely to be required for statutory compliance include;

- Badger;
- Otter, water vole and white-clawed crayfish where watercourses or field drains are impacted;
- Bat roost assessments where 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 Licence is used.

An arboricultural assessment and tree protection plan are recommended and will be required for a planning application, as will additional surveys for notable species. This may include bird, plant, invertebrate and fungi assessments. The PEA, SPA assessment and all species assessments will need to be compiled into an Ecological Impact Assessment at this stage.

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.

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, hedgerows and trees;
- Avoid important habitats and wildlife populations where possible;
- Allow continued wildlife movement along watercourses;
- 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, licences 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 Licence if planning permission is required.

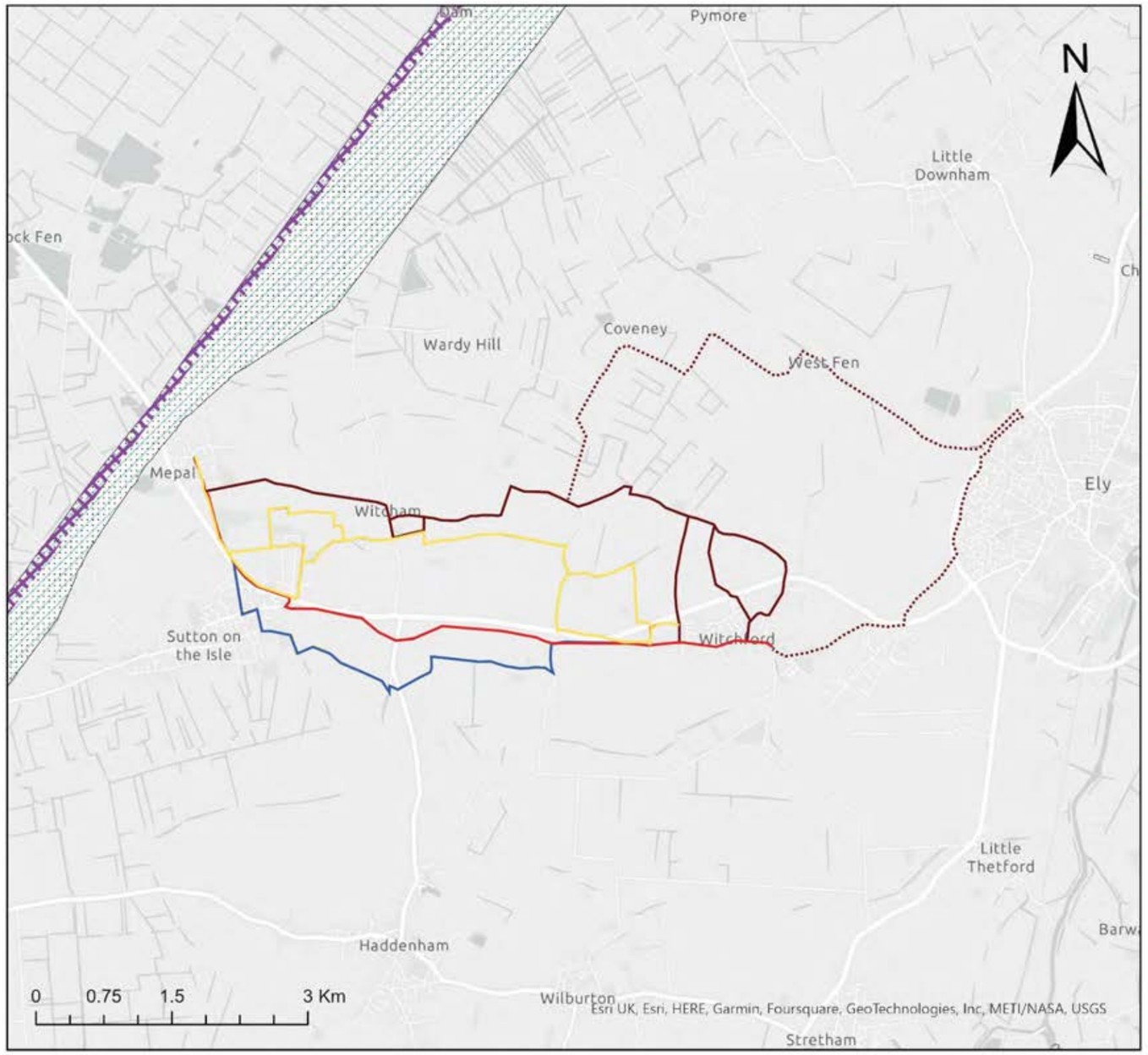


Figure 9.1: Statutory Designated Sites

Legend

- Route A
- Route A (Ely Links)
- Route B
- Route C
- Route D
- Special Areas of Conservation (England) © Natural England
- Sites of Special Scientific Interest (England) © Natural England
- Special Protection Areas (England) © Natural England

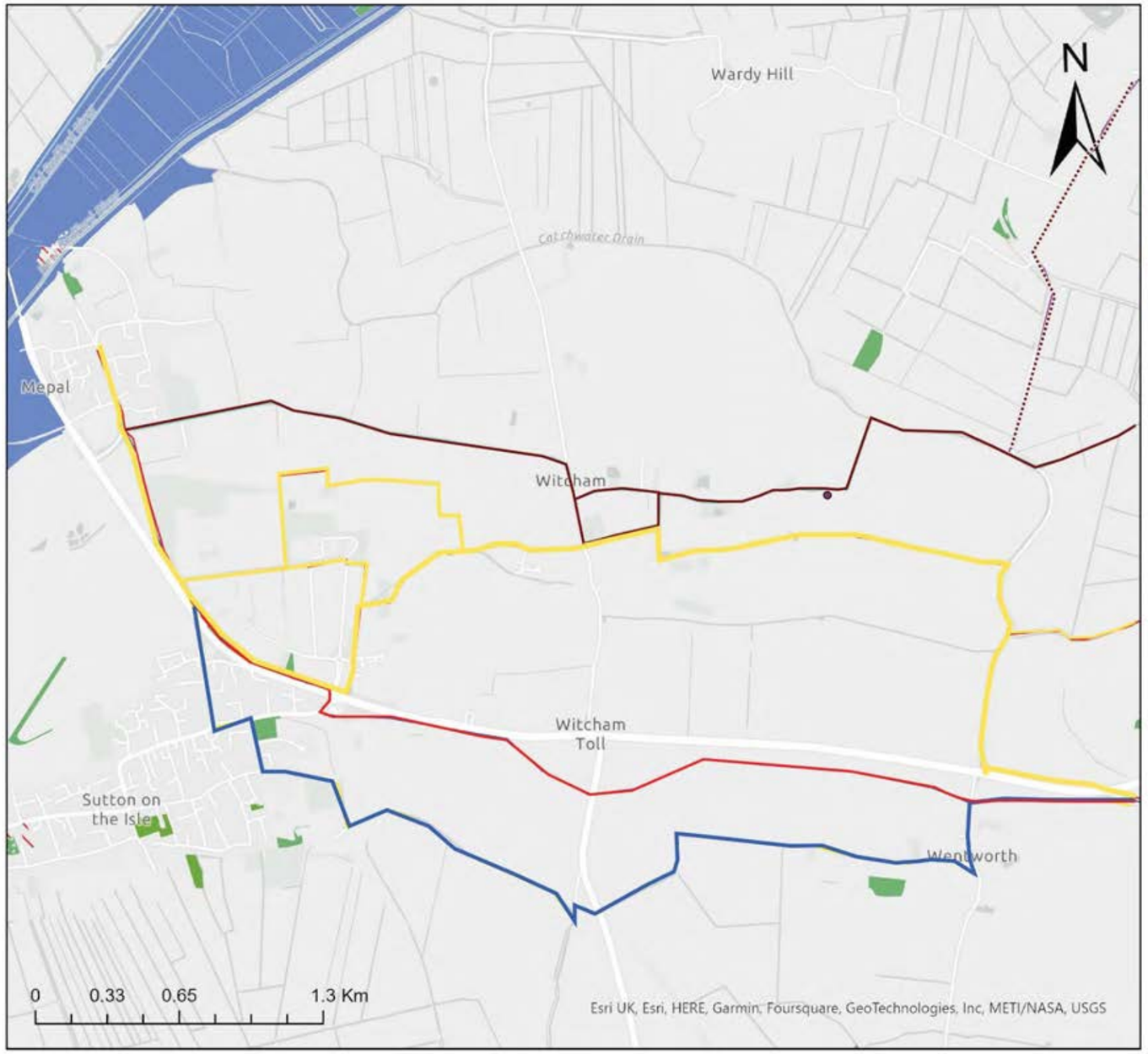


Figure 9.2: Important Habitats (west)

Legend

- AncientTreeInventoryATI
- Route A
- Route A (Ely Links)
- Route B
- Route C
- Route D

Priority Habitats Inventory (Central) © Natural England

- Coastal and floodplain grazing marsh
- Deciduous woodland
- No main habitat but additional habitats present
- Traditional orchard
- Statutory_Main_River_Map

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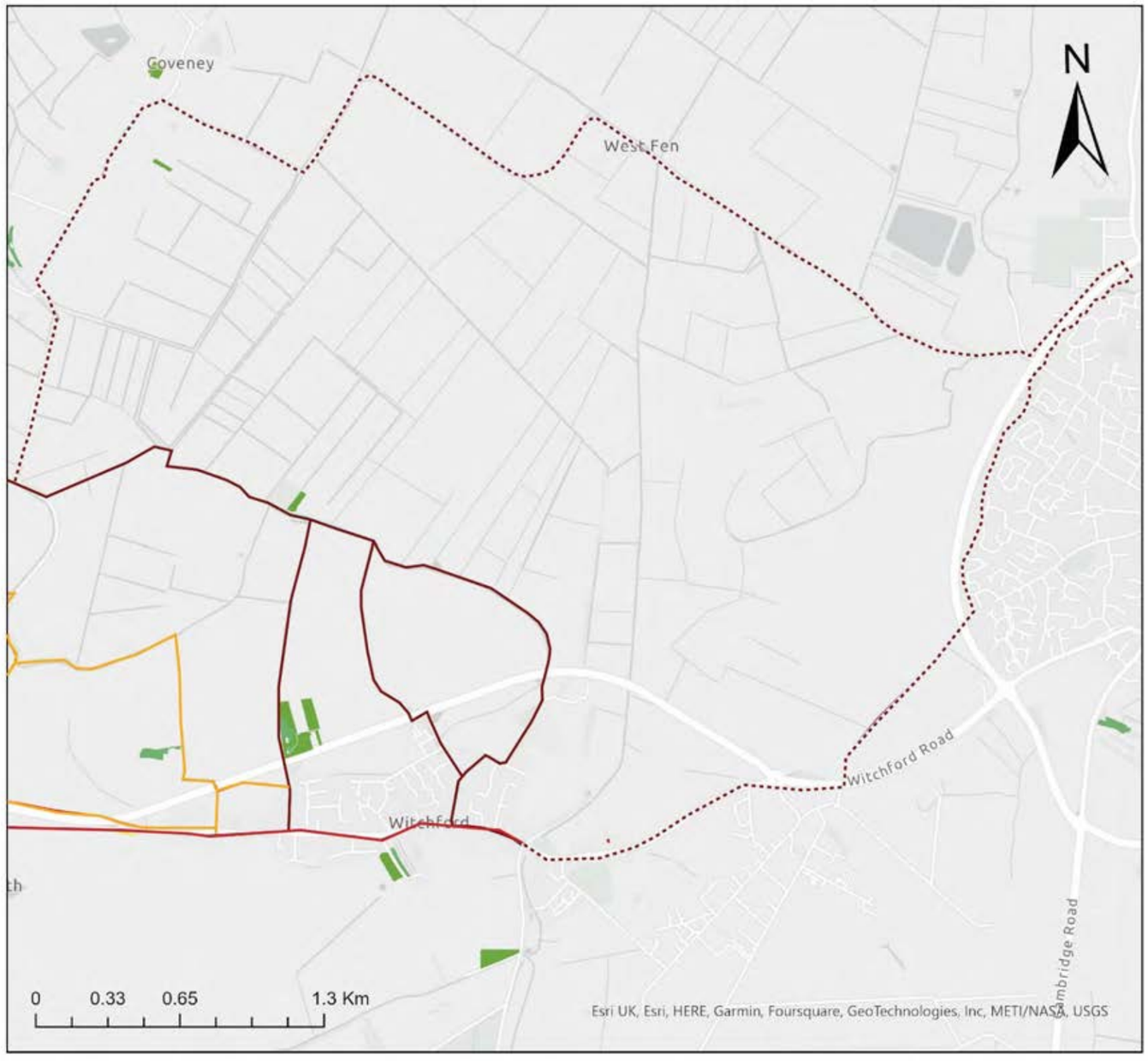

Figure 9.3: Important Habitats (east)

Legend

- Route A
- Route A (Ely Links)
- Route B
- Route C
- Route D

Priority Habitats Inventory (Central) © Natural England

- Deciduous woodland
- Traditional orchard

10. Inclusive engagement

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 Mepal to Witchford 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 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 Mepal to Witchford project.

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

"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 Mepal to Witchford and wider impacted communities including Witcham, Sutton, Wentworth and employment sites 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 10.1.1) The programme was co-designed and aimed to increase the confidence and ability of riders with disabilities.

Figure 10.1.1 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 of Mepal, Witcham, Sutton, Wentworth and Witchford.
- 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 Mepal, Witcham, Sutton, Wentworth and Witchford 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 the East Cambridgeshire District Council, Cambridgeshire County Council, and the Parish 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 know about the location, Mepal and Witchford's community, 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 change 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.

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
- Witchford Parish Council
- Mepal Parish Council
- Witcham Parish Council
- Sutton Parish Council
- Historic England
- Natural England
- Combined Authority Peterborough and Cambridgeshire
- Local businesses
- Local Public Rights of Way Teams in Cambridgeshire
- Local cycle groups
- The Ramblers
- British Horse Society
- The Royal Society for the Protection of Birds (RSPB)
- Elean Business Park
- Cycling UK
- Disability Advice Service
- The Trails Trust
- East Cambridgeshire Access Group
- Cambridgeshire Local Access Forum
- 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 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.

Byways and bridleways

There are an unusually large number of byways in this area, and it is possible that a complete route could be established using existing roads and byways. Whilst the County Council has the rights to undertake surfacing works on rights of way and bridleways and byways have right of access on foot, cycle or for equestrians there will still need to be consultation on proposals, with users and with those who use the route for access, such as local farmers.

Planning Permission

The following planning considerations should be explored further prior to the next phase of design. It is important to determine whether planning permission is required for any route sections as early as possible, to avoid delays due to the planning process at later stages.

• Route sections using existing highways infrastructure (within the highway boundary) are less likely to require planning permission as the Highway Authority has permitted development powers for works on, or adjacent to the highway. This is dependent on the Local Highway Authority (or in some cases, Sustrans on behalf of the Local Highway Authority) delivering these works. This should be assessed again at outline design stage once delivery mechanisms are known.

• Resurfacing, widening or other alterations to an existing path may require planning permission depending on factors including the status of the path (PRoW, permissive path etc.), the extent of works proposed, land ownership and who is carrying out the work. For example, if the local authority is carrying out the work, they may be able to rely on the permitted development rights afforded to them as a local authority, and therefore not require an application for planning permission. However, if Sustrans wish to widen a privately owned path, this would likely require planning permission. This can only be confirmed once further details of the proposed development and delivery mechanisms are known and should be assessed again at outline stage.

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.

For Option B and the possible link with Elean business park there are key issues to resolve which are dependent on whether land allocated for potential development is brought forward for development. It will be important that the proposed route through the allocated sites is included in master planning for the area.

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, 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 and bridge 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 Mepal and Witchford 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 in places these are itemised separately, with an explanation as to which cost is used in the overall costings. The sub options are mainly in relation to where and how the A142 is crossed.

Item	Item description	Unit	Low cost per unit	High cost per unit	Quantity	Low total cost	High total cost	Notes
	A142 crossing Option A (Common Road)							
1	Bridge deck over A142	m	£10.000	£16.000	50	£500,000	£800,000	Source of material for ramps to be finalised. Costing including parapets.
2	Earthwork regrading to form ramps	m	£400	£600	100	£40,000	£60,000	Byway on north side with A142 behind.
3	Steelwork ramps	m	£8,000	£16,000	130	£1,040,000	£2,080,000	Witchford side.
4	Carriageway realignment to make space for ramp	m	£150	£290	30	£4500	£8700	move carriageway into verge, restrict parking
	A142 crossing Option A (Common Road)					£1,584,500	£2,948,700	Recommended option. Use these costings, but subject to County approval.

Table 14.1: Estimated costings for A142 bridge crossing (Common Road)

Item	Item description	Unit	Low cost per unit	High cost per unit	Quantity	Low total cost	High total cost	Notes
	A142 crossing Option A (Manor Road)							
1	Bridge deck over A142	m	£10.000	£16.000	30	£300,000	£480,000	Source of material for ramps to be finalised. Costing including parapets.
2	Earthwork regrading to form ramps	m	£400	£600	120	£48,000	£72,000	Byway on north side with A142 behind.
3	Steelwork ramps	m	£8,000	£16,000	110	£880,000	£1,760,000	On south side from Manor Road. Ramps will need to be steeper than 1:20 due to space constraints which would exclude some potential users. .
	A142 crossing Option A (Manor Road)					£1,228,000	£2,312,000	It is not certain that this can be built to the best standard. This needs further design work including topographical surveys and utility checks

Table 14.2: Estimated costings for A142 bridge crossing (Manor Road)

Item	Item description	Unit	Low cost per unit	High cost per unit	Quantity	Low total cost	High total cost	Notes
	A142 crossing Option A (Marroway Lane) and A1421 bridge							
1	Bridge deck over A142	m	£10.000	£16.000	40	£400,000	£640,000	Source of material for ramps to be finalised. Costing including parapets.
2	Earthwork regrading to form ramps	m	£400	£600	250	£100,000	£150,000	Dependent on enough land being available.
	A142 crossing Option A (Marroway Lane) and A1421 bridge					£500,000	£790,000	It is not certain that this can be built to the best standard. This needs further design work and a lot of land.

Table 14.3: Estimated costings for A142 bridge crossing (Marroway Lane) and A1421 bridge.

Item	Item description	Unit	Low cost per unit	High cost per unit	Quantity	Low total cost	High total cost	Notes
	A142 crossing bridge (Mepal-Sutton)							
1	Bridge deck over A142	m	£10.000	£16.000	65	£650,000	£1,040,000	Source of material for ramps to be finalised. Costing including parapets.
2	Earthwork regrading to form ramps	m	£400	£600	280	£112,000	£168,000	
3	Steelwork regrading to form ramps	m	£8,000	£16,000	90	£720,000	£1,440,000	A small section of steelwork is necessary on north side due to space constraints (less than 3 m).
	A142 crossing bridge (Mepal - Sutton)					£1,482,000	£2,648,000	

Table 14.4: Estimated costings for A142 bridge crossing (Mepal-Sutton)

Item	Item description	Unit	Low cost per unit	High cost per unit	Quantity	Low total cost	High total cost	Notes
	A142 crossing from Long Causeway)							
1	Bridge deck over A142	m	£10.000	£16.000	40	£650,000	£1,040,000	Source of material for ramps to be finalised. Costing including parapets.
2	Earthwork regrading to form ramps	m	£400	£600	280	£112,000	£168,000	Earthwork ramps on both sides of road for central crossing.
3	Steelwork to form ramps	m	£8,000	£16,000	120	£720,000	£1,440,000	Street ramp on Witchford side if crossing closer to edge of Witchford.
	A142 crossing Option B (Mepal)					£1,482,000	£2,648,000	

Table 14.5: Estimated costings for A142 bridge crossing Long Causeway-Witchford.

Item	Item description	Unit	Low cost per unit	High cost per unit	Quantity	Low total cost	High total cost	Notes
	Works in Witcham or Wentworth							Assume same for both villages at this stage.
1	Tightening junctions	Item	£10,000	£25,000	3	£30,000	£75,000	
2	Crossing Improvements	Item	£15,000	£30,000	5	£75,000	£150,000	Raised tables or similar.
	Works in Witcham or Wentworth					£105,000	£225,000	

Table 14.6: Estimated costings for works in Witcham or Wentworth.

Item	Item description	Unit	Low cost per unit	High cost per unit	Quantity	Low total cost	High total cost	Notes
Mepal 1	Tightening junctions	Item	£10,000	£25,0000	6	£100,000	£150,000	Tighten junction of Witcham Road/ Sutton Road junction that needs modifying.
Mepal 2	Crossing Improvements	Item	£15,000	£30,000	10	£150,000	£300,000	Raised tables or similar, Assumed one per 100m over 3km. Needs detailed design.
Witchford 1	Crossing improvements	Item	£15,000	£30,000	30	£450,000	£900,000	
Witchford 2	Bus gate and road closures	Item	£60,000	£120,000	1	£60,000	£120,000	
Witchford 3	Village College Cycleway	linear m	£170	£290	400	£68,000	£116,000	
Witchford 4	Common Road junction	Item	15.000	£50,000	1	£15.000	£50,000	A bus gate on Common Road at the junction with Main Street if a bus gate is needed for school bus access.
	Works in Witchford and Mepal					£843,000	£1,636,000	Needed for all options
Sutton 1	Tightening junctions	Item	£10,000	£25,000	20	£200,000	£400,000	Raised tables or similar, Assumed one per 100m over 3km. Needs detailed design.
Sutton 2	Major junctions	Item	£100,000	£150,000	2	£200,000	£300,000	Bury Lane and Ely Road roundabout
Sutton 3	Improved crossings	Item	£15,000	£30,000	40	£600,000	£1,200,000	Raised tables, zebras etc.
Sutton 4	Ely Road cycleway and roadspace reallocation	Linear m	£250	£500	560	£140,000	£280,000	Needs detailed design
	Works in Sutton					£1,140,000	£2,180,000	Needed for Options C & D

Table 14.7: Estimated costings for works in Witchford, Mepal and Sutton

Item	Item description	Unit	Low cost per unit	High cost per unit	Quantity	Low total cost	High total cost	Notes
	Option A							
1	Byway or new field edge path	m	£150	£290	3900	£585,000	£1,131,000	
2	Bollards or other traffic management and signing.	Item	£50,000	£100,000	1	£50,000	£100,000	Mepal Road / Witcham Road traffic calming measurement 1.9 km. number might be bigger because details unknown.
3	Segregated path on Common Road, Witchford	m	£150	£290	200	£30,000	£58,000	New segregated path on Common Road, Witchford.
4	**Mepal and Witchford Works**					£843,000	£1,636,000	See Table 14.7
5	**Works in Witcham**					£105,000	£225,000	See Table 14.6
	Option A					£1,613,000	£3,150,000	
6C	New ramp and bridge over A142 (Common Road)					£1,584,500	£2,940,000	See Table 14.1
7C	Tightening junctions	Item	£10.000	£25.000	1	£10.000	£25.000	
6M	New ramp and bridge over A142 (Manor Road)					£1,228,000	£2,312,000	See Table 14.2
7M	Tightening junctions	Item	£10.000	£25.000	1	£10.000	£25.000	
	Option A Total + (Common Road bridge)					£4,261,000	£6,115,000	
	Option A Total + (Manor Road bridge)					£2,851,000	£5,487,000	

Table 14.8: 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	Byway or new field edge path	m	£150	£290	3900	£585,500	£797,500	
4	Extra cost if byway used instead of Long Causeway	m	£150	£290	1500	£375,000	£435,000	Extra cost if byway used instead of Long Causeway 1.5km.
5	A142 signalised crossing	Item	£200,000	£500,000	1	£200,000	£500,000	A142 signalised crossing for link between Elean Business Park and Sutton needed but not strictly part of the route. No design very approximate costs. subject to further design.
6	New ramp and bridge over A142 (Marroway Lane) Total					£500,000	£790,000	See Table 14.3
	Option B					£1,660,500	£2,522,500	
	Works in Witcham					£105,000	£225,000	See Table 14.6
	Mepal and Witchford Works					£843,000	£1,636,000	See Table 14.7
	Option B Total + (Marroway Lane bridge)					£2,608,500	£4,383,500	Includes A142 crossing to Sutton.

Table 14.9: 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	Church Road Parallel Crossing	Item	£30,000	£50,000	1	£30,000	£50,000	
2	Signalised crossing	Item	£200,000	£500,000	2	£400,000	£1,000,000	A142 signalised crossing for link between Elean Business Park and Sutton and A1421 signalised crossing. No design very approximate costs. subject to further design.
3	Wentworth Works	Item	£105,000	£225,000	1	£105,000	£225,000	Need to traffic calm area for crossing. See Table 14.6
4	New field edge path	m	£150	£290	4000	£600,000	£1,160,000	New field edge path set behind and away from A 142.
	Option C					£1,135,000	£2,435,000	
	Mepal and Witchford Works					£843,000	£1,636,000	See Table 14.7
	Sutton Works					£1,140,000	£2,180,000	See Table 14.7
	Option C Total					£3,118,000	£6,251,000	

Table 14.10: 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	Church Road Parallel Crossing	Item	£30,000	£50,000	1	£30,000	£50,000	Needs farmland and nature reserve access road.
2	New field edge path or bridleway 2.9km	m	£150	£290	2900	£435,000	£841,000	New field edge path or bridleway 2.9km.
3	New bridge and ramps for A142 crossing on Mepal Road alignment Sutton	Item	£500,000	£790,000	1	£500,000	£790,000	See Table 14.3
4	New link to Elean Business Park from closed Mepal Road	m	£150	£290	750	£112,500	£217,500	New link to Elean Business Park from closed Mepal Road.
	Option D					£1,077,500	£1,898,500	
	Mepal and Witchford Works					£843,000	£1,636,000	See Table 14.7
	Works in Wentworth					£105,000	£225,000	See Table 14.6
8	**Works in Sutton**					£1,140,000	£2,180,000	See Table 14.7
	Option D Total					£3,165,500	£5,939,500	

Table 14.11: Estimated costings for Option D

Item description	Low total cost	High total cost	Notes
OPTION A	£2,851,000	£6,115,000	Table 14.8. Big variation dependent on scheme choice.
OPTION B	£2,608,500	£4,383,500	Table 14.9
OPTION C	£3,118,000	£6,251,000	Table 14.10
OPTION D	£3,165,500	£5,939,500	Table 14.11

Table 14.12: Cost for all routes between Mepal to Witchford. Each option includes the same values for Mepal and Witchford themselves.

The total costs are significant, but an important part of those costs are within Mepal, Sutton and Witchford, so would have far wider benefits than the routes between the communities.

The biggest costs are in the crossings of major roads, which vary between signalised crossings and major bridges, with earthwork ramps or steel ramps.

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

Option C low-cost option is clearly the cheapest option because this involves the simplest road crossings, but as the study points out getting the land for this may be very difficult.

Direct comparisons are difficult because Options A & B serve Witcham, but not Wentworth and Options C and D serve Wentworth, but not Witcham. Option C and D also serve Sutton so have greater costs for that reason but serve a larger population.

15. Propensity to Cycle tool

There is little data on actual cycle usage between these communities, but some indication can be got from various modelling tools and from traffic predictions for various sites along the route. 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 local modal shares of journeys to work and school by bike and uses mapping data to get information about trip distances and geography. The tool is focused on journeys to work and school, because this is the data that is collected, so it does not allow for leisure and other activities.

The tool uses various scenarios such as “Go Dutch” whereby it assumes that the infrastructure and modal share are like a Dutch case, adding in factors for hilliness, which will deter usage. For East Cambridgeshire’s case there is no reason to see why Dutch levels of cycling could not be achieved.

The tool also uses an “Ebike” scenario, which assumes that the use of Ebikes and Dutch style infrastructure will significantly increase the range and number of cycle trips. Ebikes may be particularly relevant here given the distance between Mepal and Witchford.

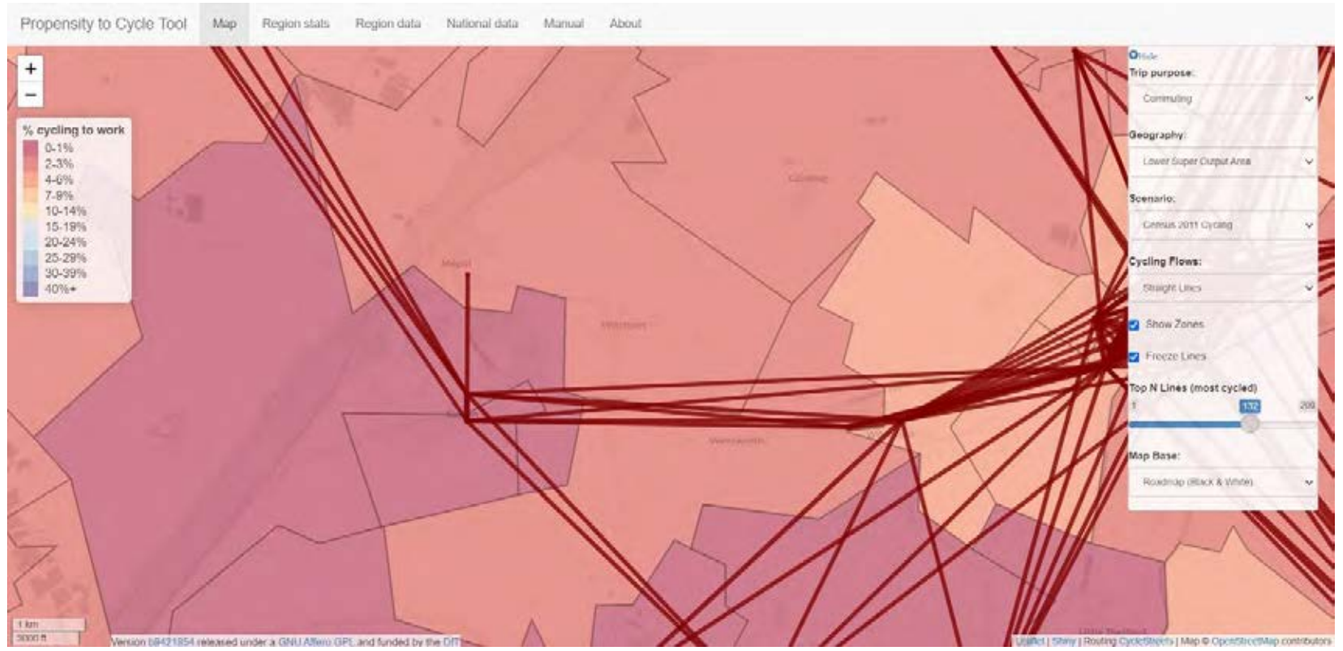

Figure 15.1 – PCT GoDutch potential usage

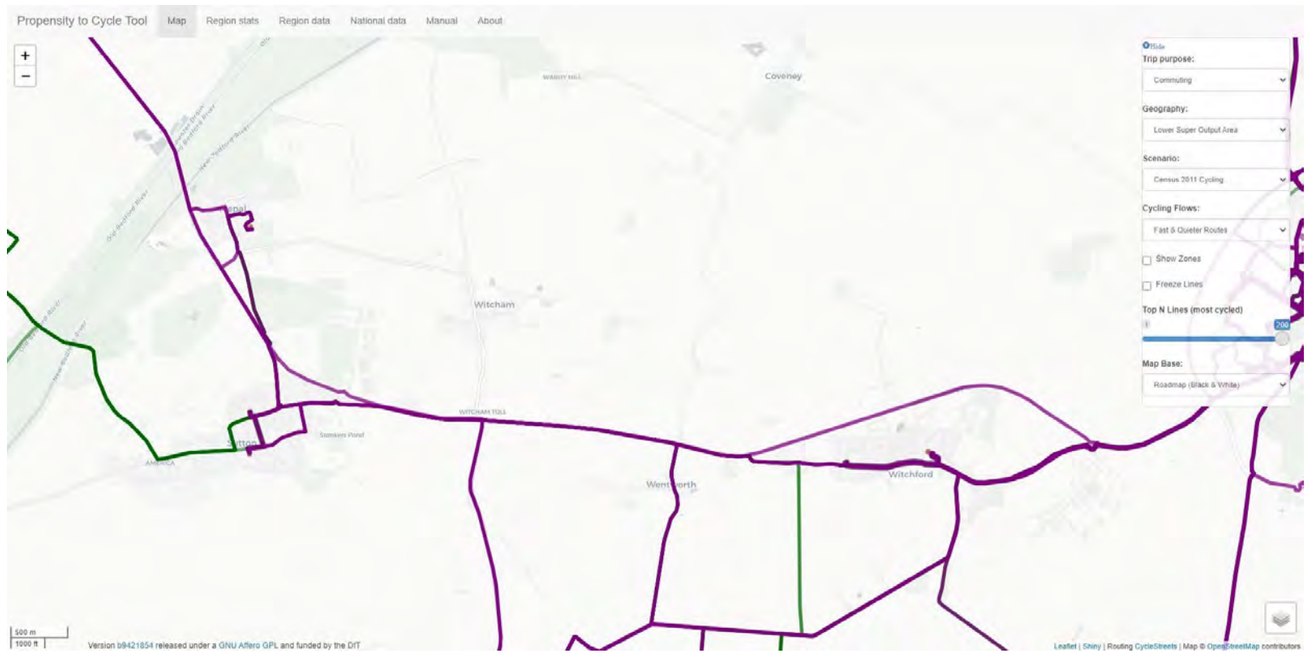

Figure 15.2 – PCT GoDutch potential usage

Under the “Go Dutch” scenario the tool highlights several interesting issues:

— The tool assumes that cyclists traveling directly between Mepal and Witchford will choose the A142 to Sutton, considering it as the most direct route, and the tool assumes people will choose the most direct route. The tool assumes that the route will be brought up to “Dutch” standards throughout.

— Due to low rates of cycling and low populations, the current cyclist count is very low. Both Mepal & Witcham Primary School and Witchford Village College had a current cycling count of 1 to 5. The change would see an uplift to 6.1% and 9.3% respectively, and the latter to 83. Similarly, around 2% to 4% of commuters between Mepal and Witchford are travelling by bike. This would rise to 18%, or to 23% under the Ebikes scenario. The numbers are low, but the proportional shift away from motor transport is high, in part relating to the proximity of the two villages.

— Neither Option A nor Option B offers the same level of directness as the A142, potentially reducing overall usage. However, the most direct option, Option C, may not be as appealing to the Witcham and Wentworth communities compared to the other choices, even though it serves as a good route between Mepal and Witchford.

— The tool shows that the higher ranked faster routes are all within Mepal and Witchford where in reality most cycling will be. The whole route Mepal to Witchford as a route is not ranked highly in terms of popularity.

— The tool only shows commuting trips, so would exclude trips to leisure destinations and many of the uses for instance Witchford Heritage Trail and Mepal Circular Route, known for their appeal to locals for leisure journeys, as well as trips for shopping, may not be adequately represented in the data.

It can therefore be concluded that usage would vary significantly based on the route option chosen. A direct link between Mepal and Witchford would represent good value for money albeit with relatively low numbers, but with a potentially low-cost scheme, while routes passing closer to Witcham / Wentworth would be more expensive but represent greater opportunity for a shift towards walking, wheeling, and cycling.

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. Leisure trips would presumably represent a large proportion of increased usage due to the highly attractive history heritage and rural landscape between the two villages. The tool provides separate figures for school and for the Ebikes scenario.

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 Propensity to Cycle Tool uses 2011 census data but there has been significant change in the area since then, notably:

— Population increases in both Mepal and Witchford.

— The opening and expanding of Elean Business Park and changes in the number of jobs (no data).

In general, for routes between Mepal and Witchford it is very difficult to gauge usage. But with a good quality route it could make an excellent cycling route covering the entire distance between Mepal and Witchford. Alternatively, it could serve as a valuable option for those wishing to use specific sections, such as Mepal – Witcham – Witchford or Witchford – Wentworth – Sutton – Mepal. For walking there is great potential to increase walking if the route in Mepal and Witchford could be improved.

To assess the 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 and best estimates of existing and predicted usage have been made.

The Propensity to Cycle Tool shows a much greater demand between Ely and Witchford than between Mepal and Witchford which is not surprising given the populations, destinations and distances involved. It also shows much more significant demand between Sutton and Witchford than between Mepal and Witchford, so whether to include Sutton in predicted changes is significant. For Sutton to be included there need to be big changes across the whole of Sutton (with additional costs) and the routes need to be suitable. It has been assumed that Options C and D are relevant and useful for Sutton and Options A and B are not. Given the low numbers some big assumptions have been made:

Scenario	Usage on most direct route between Mepal and Witchford	Comments
Commuters 2011	3	
Go Dutch Commuters	33	For this Go Dutch has to apply over the whole route – door to door.
Ebikes Commuters	62	As above but also with extended range and speed of Ebikes.
2011 School Trips	0	
Go Dutch School trips	46	Mostly to and from Witchford Village College presumably.

Table 15.1 Propensity to School Tool data for Mepal to Witchford.

Scenario	Usage on most direct route between Sutton and Witchford	Comments
Commuters 2011	4	
Go Dutch Commuters	97	For this Go Dutch has to apply over the whole route – door to door.
Ebikes Commuters	148	As above but also with extended range and speed of Ebikes.
2011 School Trips	0	
Go Dutch School trips	131	Mostly to and from Witchford Village College presumably.

Table 15.2 Propensity to School Tool data for Sutton to Witchford.

Option	Existing cycling	Proposed cycling	Comments
A	6	178	Double commuter + Double school + add 20 for new bridge near Witchford.
B	6	178	Double commuter + Double school + add 20 for new bridge near Witchford.
C	14	614	Double commuter + Double school + add Sutton.
D	14	614	Double commuter + Double school + add Sutton.

Table 15.3 Existing and predicted cycling usage for GoDutch scenario from Propensity to School Tool and assuming Dutch style provision throughout.

Option	Existing walking	Proposed walking	Comments
A	50	200	No evidence
B	50	200	No evidence
C	20	30	No evidence, but likely to be low because of proximity of A142
D	50	200	No evidence.

Table 15.4 Existing and predicted walking usage for better surfaces.

Other ways of assessing potential demand include on-line tools such as Widen My Path, however the number of entries on this in this area is low. There are many comments in Ely and the comments between Mepal and Witchford are generally consistent with issues raised in this study. Nevertheless, it is useful to check to ensure that issues raised have been considered in this study.

An extract from Widen My Path is shown in Figure 15.3, The comments highlight significant considerations, specifically the expressed demand for the A142 cycleway and safety concerns associated with the A142 crossing. These align with the route option appraisals.

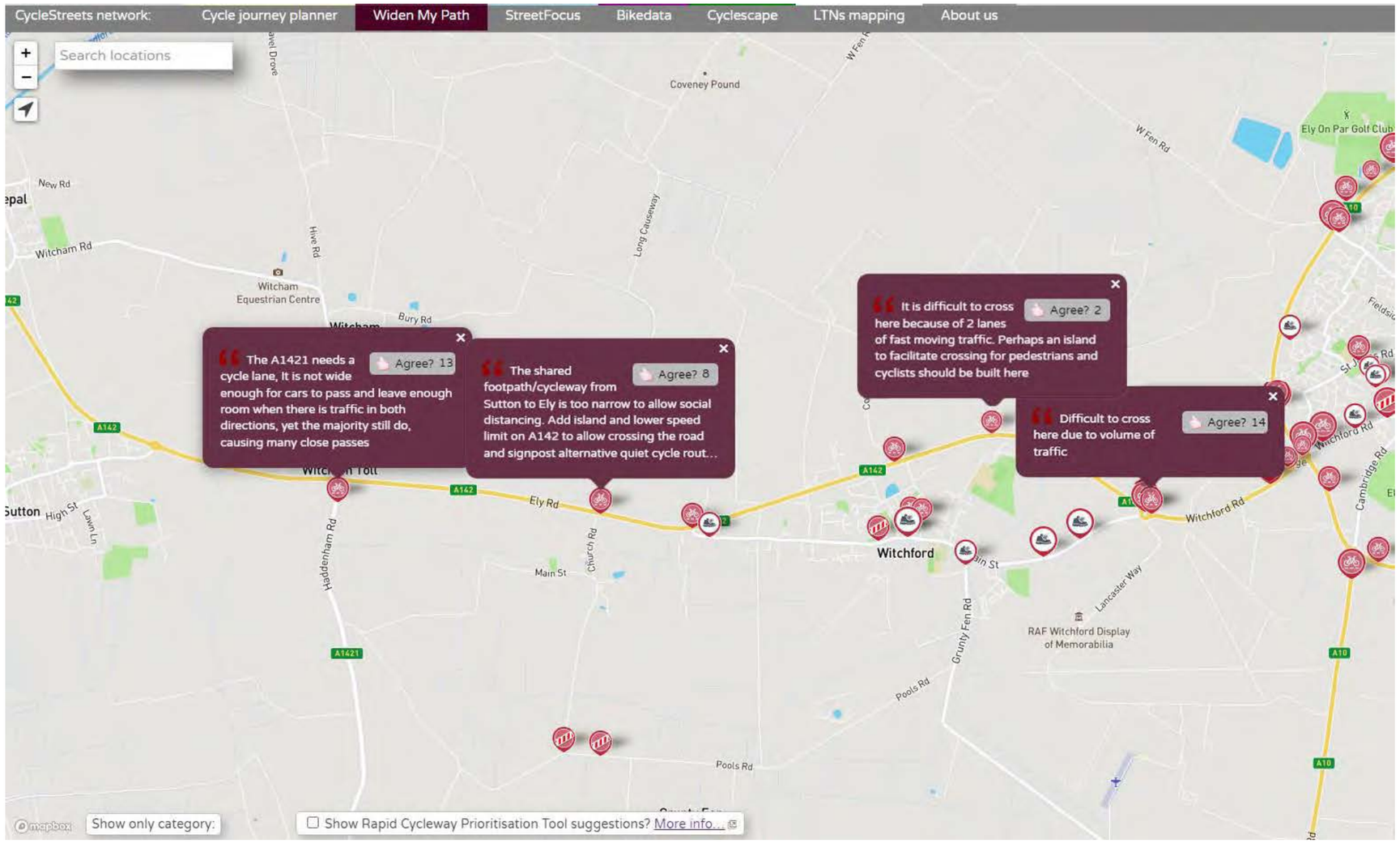

Figure 15.3 Widen My Path extract.

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 and best estimates of existing and predicted usage have been made. Assumptions are based on data from the Propensity to Cycle Tool and assumptions about 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, but assumptions are set out in the following tables.

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. The results are in the adjacent table. Further analysis and data are needed to be more confident with these figures, but three key points should be noted:

1. Options C and D have higher BCRs because they are assumed to be directly and conveniently accessible for trips to and from Sutton, which has a larger population than Mepal.

2. The Business Case for Options A and B is not strong, but there are clear benefits in having a new crossing of the A142 in the Witchford area even without the onward link with Mepal.

3. The strongest case for works is however within Mepal, Sutton and Witchford themselves. This is where the population density is greatest and where most trips are made with the greatest potential for change.

Figure 15.4 BCR calculations for each route option assuming major changes

Item	Item description	Capital	Annual maintenance	Usage change	Notes on usage	AMAT BCR
Option A	**Low cost**	£2,851,000	£143,000	6 before 178 after	Cycling Table 15.3 Walking Table 15.4	**0.87**
Option A	High cost	£6,115,000	£305,000	6 before 178 after	Cycling Table 15.3 Walking Table 15.4	**0.41**
Option B	**Low cost**	£2,608,500	£130,000	6 before 178 after	Cycling Table 15.3 Walking Table 15.4	**0.95**
Option B	**High cost**	£4,383,500	£219,000	6 before 178 after	Cycling Table 15.3 Walking Table 15.4	**0.57**
Option C	**Low cost**	£1,978,000	£99,000	14 before 614 after	Cycling Table 15.3 Walking Table 15.4	**2.93**
Option C	**High cost**	£4,071,000	£204,000	14 before 614 after	Cycling Table 15.3 Walking Table 15.4	**1.42**
Option D	**Low cost**	£3,165,500	£158,000	14 before 614 after	Cycling Table 15.3 Walking Table 15.4	**2.00**
Option D	**High cost**	£5,939,500	£297,000	14 before 614 after	Cycling Table 15.3 Walking Table 15.4	**1.06**
Mepal Works	**Low cost**	£330,000			Most usage likely to be very local, but hard to determine. AMAT BCR likely to be high., but not calculated.	BCR scores above only apply if these works are also done. They are included in costs.
Mepal Works	**High cost**	£600,000			Most usage likely to be very local, but hard to determine. AMAT BCR likely to be high., but not calculated.	BCR scores above only apply if these works are also done. They are included in costs.
Witchford Works	**Low cost**	£465,000			Most usage likely to be very local, but hard to determine. AMAT BCR likely to be high., but not calculated.	BCR scores above only apply if these works are also done. They are included in costs.
Witchford Works	**High cost**	£950,000			Most usage likely to be very local, but hard to determine. AMAT BCR likely to be high., but not calculated.	BCR scores above only apply if these works are also done. They are included in costs.
Sutton Works	**Low cost**	£1,140,000			Most usage likely to be very local, but hard to determine. AMAT BCR likely to be high., but not calculated.	BCR scores above only apply if these works are also done. They are included in costs for Options C & D.
Sutton Works	**High cost**	£2,180,000			Most usage likely to be very local, but hard to determine. AMAT BCR likely to be high., but not calculated.	BCR scores above only apply if these works are also done. They are included in costs for Options C & D.

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:

Works in Witchford.

Works in Witchford will need detailed planning and will involve traffic management and the need for site compounds around the town. The biggest issue for Witchford in terms of construction would be a new bridge over the A142 and this would need site facilities on both sides of the busy road.

Works in Mepal

Works in Mepal are likely to be relatively minor, but will involve traffic management and the need for small site compounds.

Works in Sutton

Works in Sutton along the B 1381 Ely Road will need detailed planning and traffic management. During one of the visits for this study Anglian Water were undertaking works and traffic management was underway and this would require similar arrangements as roadspace is reallocated.

Works along the A142

The proposed works are generally away from the carriageway or involve new crossings of the A142, so the major issue will be ensuring suitable access arrangements for construction vehicles and staff. This will have to be planned as part of detailed designs and will need to be agreed with landowners as part of the negotiations.

For a new signalised junction at Elean Business Park there would have to be a lot of work in the highway and this will need careful planning.

For any new bridges the major construction works should be set back from the highway (although this is more difficult for the Common Road, Witchford option.) The installation of a new bridge will necessitate the closure of the A142 and traffic diversions so this will need planning well in advance and is likely to be best done at night.

Figure 16.1 Anglian Water traffic management in Sutton.

Works on Public Byways, fields or Rights of Way.

Any works outside the towns and villages will need to be accessed from local roads and where possible using existing farm access routes if that can be agreed with landowners. Access fields and along rights of way will though be particularly challenging in bad weather and will need to be carefully considered in terms of timing. Construction should ideally take place in drier summer weather. Temporary access routes may need to be built as part of scheme delivery. Working in remote areas will also be a potential risk for staff, so this will need to be carefully planned.

Maintenance access can easily be forgotten but regular access will be needed along routes for sweeping and vegetation management and less frequently for surface maintenance and enhancements and this should be part of all discussions pertaining route development.

17. CDM and Design Risk

17.1
Construction Design Management

Construction Design Management (CDM) forms part of the Health and Safety on construction sites and starts much earlier in the process than people understand.

Under CDM 2015 regulations East Cambridgeshire District Council is acting in the Client role at this stage and as such they have obligations to fulfil. role. Sustrans is currently acting as the Principal Designer and as the project is progressed the Client will need to confirm who the Principal Designer is. (See Table 17.1)

The duties are highlighted in CDM documentation under Regulation 4 and are listed below for clarity.

PART 2 Client duties

(1) A client must make suitable arrangements for managing a project, including the allocation of sufficient time and other resources.

(2) Arrangements are suitable if they ensure that—

(a) the construction work can be carried out, so far as is reasonably practicable, without risks to the health or safety of any person affected by the project; and

(b) the facilities required by Schedule 2 are provided in respect of any person carrying out construction work.

(3) A client must ensure that these arrangements are maintained and reviewed throughout the project.

(4) A client must provide pre-construction information as soon as is practicable to every designer and contractor appointed, or being considered for appointment, to the project.

(5) A client must ensure that—

(a) before the construction phase begins, a construction phase plan is drawn up by the contractor if there is only one contractor, or by the principal contractor; and

(b) the principal designer prepares a health and safety file for the project, which— (i) complies with the requirements of regulation 12(5);

(ii) is revised from time to time as appropriate to incorporate any relevant new information; and

(iii) is made available for inspection by any person who may need it to comply with the relevant legal requirements.

(6) A client must take reasonable steps to ensure that—

(a) the principal designer complies with any other principal designer duties in regulations 11 and 12; and

(b) the principal contractor complies with any other principal contractor duties in regulations 12 to 14;

(7) If a client disposes of the client's interest in the structure, the client complies with the duty in paragraph (5)(b)(iii) by providing the health and safety file to the person who acquires the client's interest in the structure and ensuring that that person is aware of the nature and purpose of the file.

(8) Where there is more than one client in relation to a project—

(a) one or more of the clients may agree in writing to be treated for the purposes of these Regulations as the only client or clients; and

(b) except for the duties specified in sub-paragraph

(c) only the client or clients agreed in paragraph (a) are subject to the duties owed by a client under these Regulations;

(c) the duties in the following provisions are owed by all clients— (i) regulation 8(4); and

(ii) paragraph (4) and regulation 8(6) to the extent that those duties relate to information in the possession of the client.

This project is currently set to develop a feasibility study, and therefore many of the requirements of Regulation 4 may not necessarily apply in full at this stage.

A Design Risk Register is included over leaf for reference at this stage in the project development.

17.2 Design Risk Register

Please refer to Table 17.2, the Design Risk Register for a comprehensive overview of design-related risks. Any works on the highway will need traffic management and will need suitable facilities for construction or maintenance staff including a site compound for equipment and materials storage. Works away from the highway will require suitable site compounds and access from the road network.

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 CQ (Sustrans)
	Date	07/01/24
Risk ID number	**Description**	**Response**
1	**All construction works carry risk. Is work necessary?**	**Need for new provision and new ways to safely cross the A142, 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 minor roads, so this should be given serious consideration.**
2..	**Works near roads carry risks.**	**Road closures and traffic management will be needed and cannot be avoided so should be carefully considered throughout design process.**
3	**Works near the A142 carry risks.**	**Any new signalised crossing to link Elean Business Park with Sutton will involve work near high volumes of traffic so careful planning and management will be needed. Crossing the A142 is a major issue for local people so needs to be addressed.**
4.	**Works in byways carry risks, including farm activities.**	**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.	**Securing access to private land for the construction and access to construction sites.**	**Land Ownership search undertaken to identify landowners, but discussions needed with landowners.**
6.	**Inadequate provision made for site compounds and facilities.**	**This needs to be a key task as part of land negotiations.**
7.	**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.**
8.	**Community Engagement Risks**	**Risk Assessments will need to be completed and acted upon for events and activities.**
9.	**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	Mepal to Witchford Feasibility Study	**Date RAG report initiated**		**03/01/24**	**Project Manager**	**MP**
	Client	East Cambridgeshire D.C.	**Date of current edition**		**03/01/24**	**RAG Author**	**NB**
Risk ID number	**Description**		**Assigned to:**	**Date assigned:**	**Current situation (RAG)**	**Potential mitigation**	**Mitigation risk (RAG**
1	Route uses private land and agreement cannot be reached with all landowners in time to deliver project.		**ECDC**	**02/01/24**		**Some options are entirely deliverable on highway land including byways, so political input may be beneficial. Skillful negotiations with landowners should help and use of statutory powers is also possible.**	
2	Traffic changes not agreed in Witchford, so route not LTN 1/20 compliant and access to/from Witchford is restricted.		**ECDC / CCC**	**02/01/24**		**High level of community engagement needed to come up with solutions.**	
3	Reallocation of roadspace not agreed in Sutton, so route not LTN 1/20 compliant and access to/from Sutton is restricted.		**ECDC / CCC**	**02/01/24**		**High level of community engagement, including with businesses needed to come up with solutions.**	
4.	Crossing, land and speed limit changes not agreed for signalised crossing of A142 by Elean Business Park so some people will be deterred from using new provision.		**ECDC**	**02/01/24**		**High level of community engagement and discussions with County Council needed to come up with solutions.**	
5.	Route may use rights of way and County Council agreement not obtained for works.		**ECDC / CCC**	**02/01/24**		**Early discussions with Rights of Way team. Many options use byways, particularly to the north of the A142, but only some byways are needed.**	
6.	Use of field edges not agreed due to ecological or other concerns.		**ECDC / CCC**	**02/01/24**		**Further surveys may be needed particularly for exposed routes as identified in Chapter 9. This could be hard to mitigate.**	
7.	Use of byways not agreed due to ecological or access concerns.		**ECDC/CCC**	**02/01/24**		**Early discussions needed with farmers, users and County Council and further ecological surveys needed once route preferences are clearer.**	
8.	New bridge designs cannot be agreed.		**ECDC/CCC**	**02/01/24**		**Early discussions needed with County Council to clarify their requirements.**	
9.	Changes to traffic flows on minor roads cannot be agreed, ruling out these options.		**ECDC/CCC**	**02/01/24**		**CCC need to be persuaded of need for scheme and high level of community engagement needed.**	
10.	Elean Business Park plans already agreed and there is no will to accommodate cycling and walking provision.		**ECDC/CCC**	**02/01/24**		**Need to engage with Business Park.**	
11.	Maintenance plan cannot be agreed.		**ECDC/CCC**	**02/01/24**		**Needs to be agreed and required standards set at an early stage.**	
12.	Funding not obtained.		**ECDC**	**02/01/24**		**Ensure scheme is to LTN 1/20 standards, has good BCR and has all necessary consents, to improve chances of funding.**	
13.	Planning consents not obtained.		**ECDC**	**02/01/24**		**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 Figure 19.1. None of the options is easy and there is a good case for more than one route. Traffic conditions between Mepal to Witchford are enough to put off all but the most confident cyclist and walker. The two communities are however close together and should be an achievable cycling distance apart.

For all options it is clear that good links within both Mepal to Witchford are needed if the investment in links between the communities is to be justified. Good links within Sutton are also considered necessary for the success of routes – particularly options C and D. For Mepal it is important that there are good links with the Elean Business Park to the north of Sutton and the report includes recommendations for this.

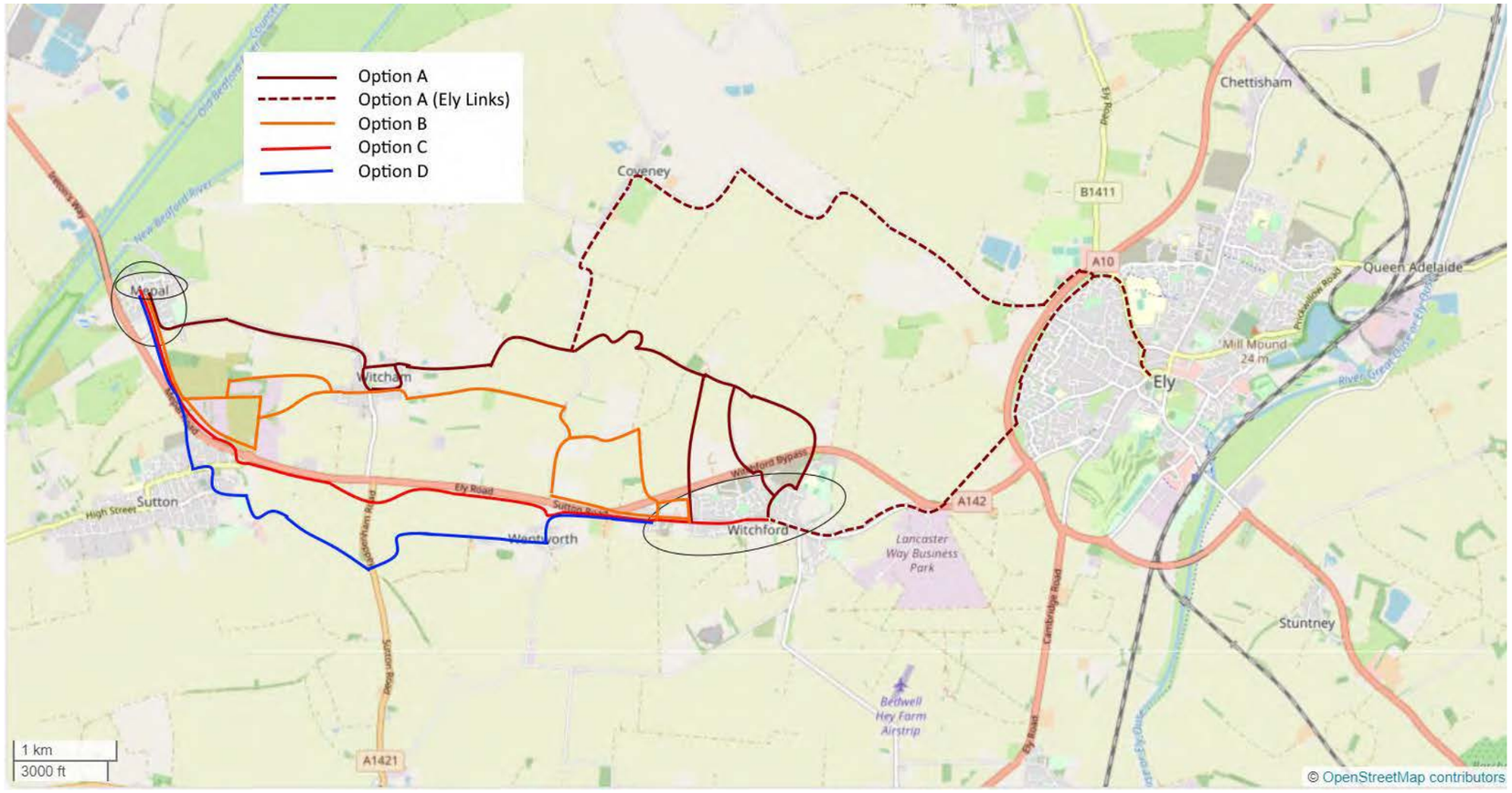

Figure 19.1 Map showing the options considered.

Points to note about the options:

Option A:

This route uses existing roads (which will need some changes) between Mepal and Witcham and then uses existing byways and a new link between byways to arrive at the A142 near Witchford. Three possible locations for bridges to cross the A142 are considered, each requiring different access. The favoured option would link the two parts of Common Road, thereby improving access between Witchford and employment sites north of the busy A142.

Option A (Ely Links):

Building upon Option A, this proposal is considered because it potentially provides the best link between Mepal and Ely and is therefore relevant in considering the pros and cons of Option A. It uses quiet roads and builds on existing facilities in the Ely area and links with proposals in the Ely – Little Downham and Ely – Littleport studies. A new link with the A10 underpass is proposed and some consideration is given to Ely-Witchford links.

Option B:

Similar to Option A this route utilises Public Byways, but also seeks to establish a new link for Mepal and Witcham with the Elean Business Park, near Sutton, which can currently only be accessed via the A142. As with Option A the route links with the A142 near Witchford. Possible locations for bridges to cross the A142 are considered, each requiring different access. The favoured option would link with Long Causeway to the west of Witchford.

Option C:

This option would build on the existing route between Mepal and Sutton providing a new safe crossing of the A142 and with new provision through Sutton. The route would then run to the south of the A142, set further back from the road than the existing path and with significant changes at the side road junctions, until it linked with Witchford in a similar manner to the existing A142 path.

Option D:

In a similar way to Option C this route would link Mepal with Sutton and then continue on to Witchford south of the A142. In this case though the alignment would be further south following attractive rights of way and new links going through Wentworth village before following a similar route to Option C into Witchford.

It is important to note that the implementation of this route requires securing access to private land for the connection between the bridleway along New Cut Drain and Wentworth Main Street. This will need to be thoughtfully negotiated with landowners and gain the necessary planning approvals.

All options have significant risks in terms of the need to acquire private land. Ultimately it may be necessary to use Compulsory Purchase Powers to deliver routes. Many of the proposed works particularly in option A are situated in byways susceptible to farming activities. It is essential to have a durable surface that can withstand the weight and impact of tractors and lorries. The construction should be robust enough to ensure the longevity and functionality of the pathways in agricultural environments. The biggest technical challenges are likely to be in the major crossings of the A142 that are needed. The biggest engagement challenges are likely to be regarding the significant changes in Witchford that are needed.

The new facilities need to be accessible and attractive for all and it will also be essential to engage with many landowners and understand their requirements and issues. The Equality Impact Assessment also raises issues about the use of roads shared with agricultural traffic which needs to be considered further. Despite the risks and challenges identified in this study there is a clear need for change and it seems clear that the existing provision or lack of provision is deterring people from walking or cycling, so doing nothing is not a good option.

For the purposes of the study a number of different routes were considered, but it would be possible to use parts of different options to form a final route. There are certainly different issues to address in the Mepal/ Sutton/ Witcham area that have little impact on the Witchford area and vice versa. The biggest issue with all routes is how best to cross the major roads in the area and the most useful locations are considered to be:

- A new bridge over the A142 on the alignment of the closed Mepal Road, as long as this includes a good link with Elean Business Park on the northern side.
- A signalised crossing of the A142 near the Elean Business Park roundabout as long as this includes good links with Sutton, the business park and the closed Mepal Road.
- A new bridge over the A142 on the Common Road alignment near Witchford.
- A signalised crossing of the A1421 south of the A142 junction or a new bridge, if very difficult land negotiations are successful.

If the severance between Sutton and the Elean Business Park and between Sutton and Mepal is to be addressed at least one new crossing is needed in that area. If Sutton and Mepal are to link with Witchford a new bridge over the A142 is needed at Witchford or a new crossing of the A1421 is needed.

At least two new major road crossings are therefore needed to link Mepal, Sutton and Witchford and given that these crossings are going to be expensive and challenging it makes sense to focus initially on the crossings. The report shows that links between the crossing points are possible and there are a number of options, which have their own challenges. It is reasonable and appropriate that the initial obvious priority be the crossings, but the links must not be forgotten, especially given that without good links the whole route will fail.

It may seem surprising that the conclusion of the study is that the small details at each end of the route are perhaps more important than the overall route, but that is also an indication that the whole route has potential for significant local benefits and that the report has not at this stage highlighted any insurmountable issues.

20. Appendix

Appendix A. Equality Impact Assessment

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Equality Impact Assessment Tool

Purpose

This tool is to help colleagues to deliver inclusive projects.

It does this by:
- **Focussing attention** by providing a series of prompt questions and areas for consideration. These are tailored to the type of project you are working on.
- Providing a library of **resources and data** relevant to different characteristics. This will guide project teams to develop responses that are informed by best practice and existing research.
- Listing practical examples of inclusive **community engagement** and what **responsive solutions** might look like.

This tool is designed to encourage new ways of working, rather than to assess projects that have already been developed. It encourages an approach that balances both desk-based research and targeted engagement.

When?

The tool should be **used at the initial stages of a project's development** to shape the scope of work.

It should guide the development of solutions from the outset, and be **re-visited** as the project develops.

Importantly, it must also be **reviewed at the end of the project** to learn lessons to inform future work.

Who?

The tool should be completed by the Project Manager and reviewed by the Project Sponsor.

The tool should also reflect community engagement undertaken by the project, amplifying voices of those with lived experience of the topics explored.

Why?

It will support teams to take inclusivity into account at the outset of a project. It will also provide evidence to stakeholders on how the project team has considered different characteristics in a project's development.

This Equality Impact Assessment process is focused on ensuring all projects and services are created and completed in line with the Equality Duty.

As a charity, while our Equality Duty responsibilities are not the same as those for public sector organisations, **we often receive public funding or work in public spaces, and we have committed to delivering inclusive projects**.

Important considerations

When completing the tool, it is critical that an **intersectional** approach is taken. That is understanding that people often experience amplified and particular disadvantages by experiencing **multiple characteristics simultaneously.**

It can be helpful to consider how:
- Particular groups with multiple characteristics are likely to be impacted by the project
- Some impacts may affect multiple characteristics, or affect different characteristics in different ways
- Some solutions may provide benefits for multiple characteristics

For **particularly small projects**, it may not be appropriate to complete all the sections, or develop in depth community engagement.

As a minimum, you should complete the **Focussing Attention** tab and consider how to **amplify under-represented voices** in your work.

All projects should **monitor their impact** on those with protected and other characteristics. Project monitoring should be developed using standard approaches to demographic data collection as developed by RMU.

Project Information

Project Name	Witchford to Mepal (14629)
EqIA Version & Date	V1: Completed 05-01-24 (Feasibility)
Project Sponsor	Martin Philpott
Project Manager	Martin Philpott
Completed By	Jolina Irish and Chiu Qu
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 Witchford, Mepal, nor the neighbouring Sutton.

Most people at present who want to cycle between Mepal and Witchford will have to use the A142, which has a moderate volume and speed of traffic and no pedestrian facilities. These conditions aren't apprporiate for anyone apart from the most confident cyclists. Multiple route options and alignments have therefore been considered, some involving reccomendations for the construction of a bridge over the A142. Others present linkages to nearby settlements and destinations such as Sutton, Witcham and Wentworth. All options have their advantages and serve slightly different purposes. There is a strong case for significant changes within Mepal and Witchford 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 Mepal and Witchford and rank the route options in terms of benefits and costs. Links to Sutton, Witcham and Wentworth have been considered to establish the merits of incorporating them into any new route between Mepal and Witchford.

Focussing Attention

This tab provides prompt questions and areas for consideration that are intended to focus attention on inclusivity at the outset of a project. The information is informed by research on each characteristic based on the project type selected.
It is not exhaustive, 100% universal, or context-specific. It is important to consider how people with multiple characteristics often face amplified disadvantages.

Characteristic or Protected Characteristic	Prompt Questions (Populated based on project type)	Areas for Consideration (Populated based on project type)	Potential Impact (Summarise potential project impacts in response to the prompt questions and areas for consideration)
People experiencing (and/or at risk of) high deprivation	*Does the project area include areas of deprivation as mapped on the SIMD/IMD? How does the project ensure that people living in areas of deprivation are direct beneficiaries?*	*Location of interventions, trip generators, perceptions of safety, access to essential services, transport poverty*	Please refer to the Resources and Data tab which details the impacts of this project.
Disability	*How will the route be accessible and navigable by disabled people? Will it help them travel independently, and with greater dignity including features such as tactile paving, dropped kerbs, and accessible public toilets?*	*Access barriers, surfaces, level changes, perceptions of safety, navigation, resting opportunities, public toilet facilities, calm, legible environments, distances between likely trip generators, public transport accessibility, taxi/car access, pavement widths, dropped kerbs, tactile paving, signage/wayfinding*	
Race	*How can the project be culturally relevant to migrants and people of colour who live or work in the local area? How will the project respond to the needs of migrants and people of colour? How will the route feel by those who experience racism, especially after dark?*	*Perceptions of safety, histories of race-related crime, welcoming public spaces reflecting diverse communities, likely trip generators, demographics of area, venues and public spaces that reflect diverse communities*	
Sex	*Does the project support an area-wide approach for those who are making multi-stop journeys (more likely taken by women), rather than just A-B routes? Will the route feel safe for women or non-binary people, especially after dark? Is it well-overlooked and well-lit?*	*Perceptions of safety, infrastructure that supports trip chaining or multi-stop journeys*	
Age	*Will the public spaces support play and/or regular seating and resting opportunities? How will the project support the needs of people across age groups, especially those ages most overlooked in transport planning - children, teenagers and older people?*	*Distances between likely trip generators, resting and play opportunities, navigation, public toilet facilities, perceptions of safety, level changes*	
Sexual orientation and gender reassignment	*Have LGBTQIA+ related hate crimes been reported in the area? How do LGBTQIA+ people feel about their safety on the route? How have the area's public spaces been designed to feel safe and welcoming to LGBTQIA+ communities?*	*Locations of LGBTQIA+ venues, histories of LGBTQIA+-related hate crime, celebrating queer heritage and identity, welcoming public spaces reflecting diverse communities*	
Pregnancy and maternity	*Is the area welcoming to parents with babies or young families (e.g. does the area provide frequent opportunities for changing and feeding a baby)?*	*Resting opportunties, level changes, surfaces, access barriers, perceptions of safety, public toilet/changing facilities, dropped kerbs, surfaces, pavement widths*	
Religion or belief	*How can the project be culturally relevant to diverse religous groups or communities in the area? For instance, how will the project improve connectivity for places of worship or religious communities in the local area?*	*Perceptions of safety, location and access requirements of cultural and religious venues*	
Other marginalised groups	*How can this project benefit other marginalised communities (for example, homeless people, asylum seekers, current and ex-offenders)? Areas of consideration might include access to key services (e.g. GPs, Citizens Advice, libraries, food banks, warm banks)*		
Marriage and civil partnership	There is little evidence about marital/civil partnership status or relationship status and associations with wider active travel patterns.		

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 really level* *Health Equity in England* *Fairer Scotland Duty*	*Indicies of Deprivation: combined* *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) Witchford includes neighbourhoods in the country's 20% least deprived category, and Mepal has neighbourhoods in the 40% least deprived category. (2) In England 25.8% of people did not own a car. This rate is at 8.4% in Witchford and 7.7% in Mepal. (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:** 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. People in and between Witchford and Mepal experiencing low levels of deprivation are more likely to own a car while living in a car dominant area. These people are less reliant on walking and cycling for their journeys.
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 trials* - -	*We must take practical steps to support people with mental health conditions to travel* *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 5.6% of people in Witchford , which is less than the national average of 8.3%. Contrastingly, Mepal has a significantly higher percentage of 9.6%. The percentage of people in Witchford whose activities are affected a little (8.6%), is closer to the national average of 9.3%. However Mepal percentage is much higher at 13.6% The percentage of people aged between 16-64 with day-to-day activities limited a lot is higher in Mepal (4.3%) compared to Witchford (2.1%) and the England average (3.6%). In Witchford, a slightly higher percentage of people (48.2%) have very good health compared to England as a whole (47.2%) whereas Mepal has a sligtly lower percentage of very good health (39.%) which may correlate to the higher percentage of day-to-day activities limited. The percentage of households with one person having a long-term health problem or disability is lower in Witchford (21.3%) than Mepal (27.6%) which is higher than England's average of 25.7%. (2) Disabled people are 5 times more likely to be injured as a pedestrian than non-disabled people. (3) Witchford is in the 20% whilst Mepal is in the 30% least deprived neighbourhoods in terms of health and disability, although the LSOA adjoining the towns is in the 10% least deprived. (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 Byway of Back Lane, Marroway Lane and Martin's Lane,and a bridge crossing over the busy A142 would provide accessibility for people using Route A who use walking aids and mobility scooters. Potential for reduced noise pollution resulting from being away from traffic along the A142 and by avoiding or changing the existing nature of Witcham/Mepal Road with traffic calming features can benefit people with cognitive disabilities. This can aid disabled people to independently access local amenities as it becomes a safer route to use. 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 infrastrucure 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. Inaccessible access onto the 'closed road' sections (as shown in Figure 7B.2.2 of the report) could cause nuisance access concerns for local people and users with mobility issues. Level changes will need careful consideration, to reduce any accessibility impacts. This includes the designing of ramps for bridge along the A142. 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 horses and farm machinery for example the byways (option A) and quiet lane proposals in (option A Ely links), 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 50mph speed limit along the A142 as well as the heavy traffic could still be an intimidating environment, even with the proposed 3m buffer (Alternative routes away from A142 Road have been considered). Some of the route options aren't a direct route from Witchford to Mepal 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* *How racism impacts air quality and endangers life*	*Race Equality Think Tank* *Pedestrian casualties higher among BAME people*	*New report shows large unmet demand for cycling from ethnic minority and disadvantaged groups* -	Guidance: Sustrans: Unmet Demand for cycling from Ethnic Minority and	(1) In terms of the white ethnic group, Witchford and Mepal have significantly higher percentages of residents (97.2% and 97.1% respectively) than the England average (85.4%) The percentage of Indian residents in Witchford and Mepal (0.3% and 0.4% respectively) is significantly lower than the whole of England (2.8%). The percentage of Black/African/Caribbean/Black British residents in both Witchford and Mepal is similar (0.4% and 0.3%) which is lower than the whole of England (3.5%). Overall, Witchford and Mepal have a higher representation of White residents and a lower representation of Indian, African, and Caribbean residents than the whole of	**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.

	Barriers of physical activity among Black and Minority Ethnic Groups in the UK	-	-	Disadvantaged Groups	England. Witchford has a slightly lower representation of White and Indian residents compared to Mepal and a slightly higher representation of African, and Caribbean residents compared to Mepal. Ultimately, Witchford has a more varied ethnic population in comparison to Mepal. (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 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.
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 (30% for Mepal and 20% for Wicthford) in these areas is an indication of a more safe neighbourhood for everyone. (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. There is a higher percentage of women in Witchford so improved cycling infrastructure and motor vehicle free route sections could encourage more women to cycle and increase the population of cyclists in Witchford as a whole. **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 disproportiantely 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*			
	Safely in Public Spaces: Women, Girls and Gender Diverse People	*Sexual harassment in UK public spaces*	-			
Age	*"Age Friendly Places Making our community a great*	*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 Witchford, Mepal and England are similar. However, Witchford and Mepal has a lower percentage of adults age 20 to 24 acompared to England's Average (3.4%, 3.7% and 6.8% respectively). Between age 30 - 84, largely, both Witchford and Mepal percentages are higher compared to England. However, there is an exception in the 30-44 category for Mepal as their percentage of 18.3% sits below Engaind's average of 20.6%. Between ages 65 to 74, Mepal's percentage (12.4%) is slightly higher than Witchford and England which both have lower percentages (10.5% and 8.6% respectively. Younger demographics up to 44 Years of age are slightly higher in Witchford than in Mepal. Constrastingly, Mepal has a higher percentage of residents aged 65 years and over compared to Wichford. The average age for both Witchford and Mepal is between 30 to 44 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 Witchford and Mepal 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,both Witchford and Mepal lies within the 40% least deprived neighbourhhod 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. The proposed routes (i.e changes to existing routes along Witcham/Mepal Rd) can encourge more local children to walk and cycle to Witchford Village College and Primary Schools within Mepal, Sutton and Witchford. The route options take into account the importance of ensuring safe routes for children who commute. The proposed route will also encrouage greater active travel amongst workers in the Elean Business park as Option B establishes a new link to it from Mepal and Witcham. <u>Older People:</u> Older people are more likely to have dementia which can be made worse by vehicle noise pollution. Reducing traffic volumes 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 safer crossing provision proposed on the A142 benefits older and young people as they take longer to cross. 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 trafic volumes and making it safer for all ages 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 equestrian users 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 A142 in option A (although direct) 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*			
	Thinking Cities: LGBTQ+ Urbanism Reclaiming Space	*Stonewall data on LGBTQIA+ hate crime across the UK*	-		(1) Only 51% of people who identified their gender 'in another way' feel welcome and	**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.
	Queering Public Spaces	-	-			

Sexual orientation and gender reassignment	*Engaging transgender people*	-	-	Guidance: •Arup's 'Queering Public Space' •Sustrans. Communities Carving out a Space in Cycling that is Radical, Inclusive and Fun	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	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 identify 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.
Pregnancy and maternity	*Bumps and bicycles: Women's experience of cycle-commuting during pregnancy*	*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 route following field edges 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 or one-way systems.
	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%, and Witchford and Mepal having slightly higher percentages of its population following Christianity (66% and 63.5%). Other types of religion such as Muslim is significantly lower in Witchford and Mepal when compared to England averages, with Mepal having 0% Sikh and Witchford having 0% Hindu and Sikh population. The percentage of people who do not follow any religion in bothe Witchford and Mepal are slighty higher than the England averages. (25.4%, 27.6% 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 people*	-	*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.					
Cross-cutting inclusivity resources			*Walking for Everyone*			
			Cycling for Everyone			
			Walking and Cycling			

Community Engagement

This tab allows community engagement to be planned so that people with seldom-heard voices can be involved in a project's development. Not all characteristics need to be engaged for every project, and this should be proportionate to the scale of the project and the impact being explored. People with protected characteristics or experiencing deprivation should be reimbursed for their time and expertise. Targeted community engagement should be used to find local insights and fill gaps where you have not found answers in the evidence and resources. Ideally, the engagement team itself should also be diverse and reflect the groups you are seeking to engage with. It is important to take an intersectional perspective, by considering in particular, those experiencing multiple characteristics simultaneously.

Characteristic or Protected Characteristic	**Inclusive Community Engagement Examples** (Common to all project types)	**Community Engagement Plan** (What targeted engagement activities will you run? Activities may target multiple characteristics simultaneously)	**Budget and Resources** (What budget and resources are needed for those activities?)	**Confirmed Impact** (What has been learnt from the engagement activities about the positive and negative impacts of the project?)
People experiencing (and/or at risk of) high deprivation	*For example, seek to host a wide range of engagement types to suit those with more limited time and resources to attend*	The examples provided in this section will be used as a starting point when developing a detailed engagement plan in future phases of project development.		
Disability	*For example, organise a walk, wheel, or cycle with a local pan-disability group exploring the project, its potential and any existing barriers*			
Race	*For example, meet with Black Cyclists Network to discuss route and any specific barriers they may face in the area*			
Sex	*For example, hosting a walk specifically for women and non-binary people, to discuss the project in more detail*			
Age	*For example, organise a targeted engagement event at a local youth club, exploring design ideas with children and young people*			
Sexual orientation and gender reassignment	*For example, developing engagement materials and visuals to be inclusive and ensuring venue is welcoming to all*			
Pregnancy and maternity	*For example, ensure that engagement drop in events include facilities for babies to allow carers to meaningfully contribute*			
Religion or belief	*For example, ensure that engagement events take place in venues and during times that are welcoming to all religions*			
Other marginalised groups				
Marriage and civil partnership	There is little evidence about marital/civil partnership status or relationship status and associations with wider active travel patterns.			

Planned involvement:
When the project progresses local people with protected characteristics will be engaged in the development and delivery of the project. This will require the implementation of the inclusive design principles and collaborative design process detailed in the feasibility report.

Stakeholder management group:
Representatives from a range of local groups will be invited to form a stakeholder management group. Stakeholder mapping will need to be done with community representatives that will be invited to participate, along with organisations who advocate for people with protected characteristics. The group will be engaged to co-define engagement principles and throughout the project as designs are refined and delivered. The table above includes examples of how local people could be engaged, and these ideas will be investigated further as the project progresses.

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 the routes Infrastructure.

Negative Impact	**Safety and Barriers to Using Walking and Cycling infrastructure:** Several protected characteristics flagged that walking and cycling accessibility and personal safety concerns are a potential barrier to using infrastructure, resulting in: - 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 appropriate 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 (For example Witchford Village College), 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 Witchford and Mepal, 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.	

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 a feasibility 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.

Monitoring, Updates & Sign Off

In this section summarise how you will monitor project impacts, including the performance of responsive solutions, and provide details of any changes and additions to your projects inclusivity.

Project Sponsors: Review and sign off this EqIA including changes which impact protected characteristics.

Monitoring	
Summarise how you will monitor the inclusive impact of the project	A monitoring plan for the project will need to be developed and implemented in response to the following requirements: - To establish that the projects development is inclusive. This will need to include monitoring of attendance and how design decisions are responding to feedback. If data reveals that activities and design development is not being shaped by a specific protected characteristic, the engagement approach will need to be changed. - Baseline monitoring to understand current journeys which can be used to guide design development and understand the impacts of any trials. - Perception surveys to understand existing concerns and aspirations. Also used to gain feedback on design proposals and behaviour change activities. - Monitoring at all stages of the collaborative design process including the projects legacy and long term impacts on everyone including those with protected characteristics.
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.

Provide details of any changes and additions to your projects inclusivity	**Date of update:**

EqIA Outcome: Project Sponsor Decision	
No major change ☐	*If this is selected, you are confirming that the EQIA demonstrates the proposal is robust and there is no possible adverse impact on this characteristic. You must demonstrate in the justification that all opportunities to promote equality have already been taken.*
Continue the project ☐	*If this is selected, you are confirming that the EqIA identifies possible adverse protected characteristic impact or missed opportunities, but the scheme can be justified. If this is selected, you must set out the justifications for continuing with the scheme in terms of proportionality and relevance.*
Adjust the Project ☐	*If this is selected, you are confirming that the EqIA identifies possible adverse protected characteristic impact or missed opportunities which suggest the scheme needs to be adjusted. If this is selected, you must set out the reasons why an adjusted scheme is required. For example, to remove unjustifiable barriers or address opportunities that cannot be missed on the balance of proportionality and relevance.*
Stop the Project ☐	*The scheme shows actual or possible unlawful protected characteristic discrimination. It must be halted or significantly changed. If this is selected, you must set out the reasons for halting the scheme or significantly changing it to avoid unlawful discrimination.*
Project Sponsor Justification/Comments (Including Updates)	

Learning and Reflection

This tab documents the lessons learned from this project and reflections more widely. For example, did the project fill gaps in knowledge through its community engagement that were not available from existing resources and data? Were there any unforeseen negative impacts? How could collective knowledge be improved by further research? How have groups with multiple chracteristics been considered?

Characteristic or Protected Characteristic	Learning (Summarise the lessons learned from this project)	Reflection (Summarise any areas that require further research not specific to this project)
People experiencing (and/or at risk of) high deprivation		
Disability		
Race		
Sex		
Age		
Sexual orientation and gender reassignment		
Pregnancy and maternity		
Religion or belief		
Other marginalised groups		
Marriage and civil partnership	There is little evidence about marital/civil partnership status or relationship status and associations with wider active travel patterns.	