

Feasibility study

Ely to Soham

07 December 2023



About Sustrans

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

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Our vision

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

Our mission

We make it easier for people to walk and cycle.

How we work

- **We make the case for walking and cycling** by using robust evidence and showing what can be done.
- **We provide solutions.** We capture imaginations with bold ideas that we can help make happen.
- **We're grounded in communities**, involving local people in the design, delivery and maintenance of solutions.

What we do



Contact us

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1. Executive summary

This report looks at potential new walking and cycling routes between Ely and Soham. Existing links between the communities are dominated by the railway line and by the A142, which is a major road carrying motorised traffic at volumes and speeds that are uncomfortable and unpleasant for anyone considering walking or cycling.

East Cambridgeshire District Council are keen to provide better facilities for residents and visitors and Sustrans is keen to look at ways that Soham can be linked with the National Cycle Network and how the existing National Cycle Network route between Wicken, Barway and Ely can be improved.

The routes would link in with other existing and planned routes including the proposed Soham – Wicken Greenway and a better link between Soham and Fordham that was briefly considered in Sustrans Feasibility Study on routes between Burwell and Fordham.

The report considers several alignments between the A142 and the water courses that link Ely with Barway and Barway with Soham. All the options involve the use of private land and detailed discussions are needed with numerous landowners before any alignment can be finalised. The report looks in some detail at travel within Ely and Soham. Without good provision from people's doorsteps (or all the way to key destinations) some journeys will remain challenging, however good the provision is between Ely and Soham.

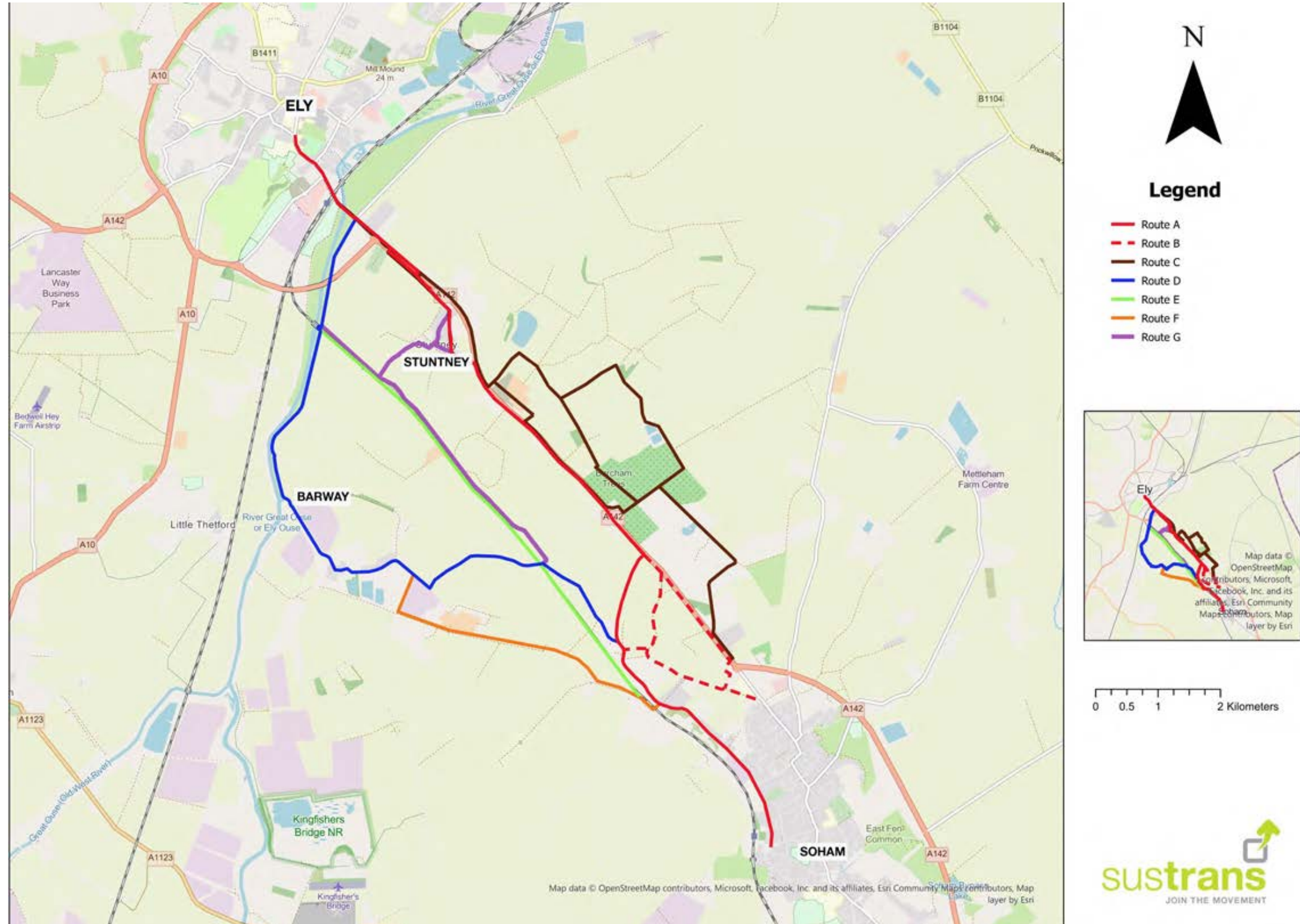


Fig 1. Map showing the options considered.

The routes considered are shown in Fig 1. None of the options is easy and there is a good case for more than one route. There is also a strong case for significant changes within Ely and Soham themselves and a strong case for better equestrian facilities given that the A142 is also a major barrier for equestrians.

It has not been possible to select just one route as a favourite – all the options have some advantages and serve slightly different purposes. The options are summarised considering the whole route Ely-Soham.

- Option A. This serves the A142 corridor and involves one new major crossing of the A142. It would not serve developments north of the A142 such as Ben's Yard.
- Option B. This is a variation on Option A and is likely to be more achievable.
- Option C. This is the favoured alignment along the A142 corridor, but also very costly with 3 major new crossings of that road needed to overcome the barrier that it forms.
- Option D. This is an improvement on the existing route to Barway and would serve Barway well but is an indirect route to Soham. It is perhaps the most achievable route, but still needs the agreement of private landowners.
- Option E. This would be an improvement on Option D if it also included a link to Barway.
- Option F. This would be attractive but difficult and is not recommended.
- Option G. This would need to link with Stuntney and Barway and would be a direct route between Ely and Soham with no major crossings needed for the A142. It is an attractive but difficult option but would not serve the A142 corridor, such as Ben's Yard.

The favoured options to progress would be Option C and Option D and/or G.

Option C would link together quiet roads on both sides of the A142 and would link well with Ben's Yard and Barcham's but needs new links where none exist at present and 3 major new road crossings.

Option G would need to link with Option D and would involve a new path linking Stuntney with another new path following the railway from near the River Great Ouse to Barway Road. It would need an upgraded link with Ely (most likely on field edges to/from Station Road) and would need a new link with Barway following Barway Road but could serve well as an Ely – Soham route while linking with both Stuntney and Barway whilst avoiding all the challenges of being close to the A142.

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 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 Soham and Ely that are needed to make the new facilities accessible and attractive for all. Given that many of the workers in the area are believed to be migrant workers, engaging with them will also be important, but challenging and this has been identified as one of the issues in the Equality Impact Assessment.

The costs of Option C, are very large but all the three major road crossings identified have local as well as longer distance value in terms of connecting Stuntney (and the Ely allotments site) with Ely,

connecting Stuntney with Ben's Yard, Barcham's and properties on the other side of the A142 and in connecting properties on the edge of Soham with Soham itself.

2. Introduction

Sustrans has been asked to look at options for new walking and cycling routes between Ely and Soham, in East Cambridgeshire. This request has come from the 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 Ely and Soham the numbers are much lower than in the Cambridge area and between the two communities cycling levels are low.

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.

Whilst Ely is on the National Cycle Network, Soham is not and a link to the Network 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 Ely and Soham.
- To consider if there are merits in incorporating links with Barway in any new route between Ely and Soham.
- 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.

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

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

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

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



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

Principle 3:

Designed to minimise maintenance.

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

Construction quality should be maximised to minimise future maintenance needs.

New planting should be kept well clear of the path.

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

Routes should be managed in a way that enhances biodiversity.



Figure 3.3: Easily maintained.

Principle 4:

Signed clearly and consistently.

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

Every junction or decision point should be signed.

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

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

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

Signage should help to reinforce responsible behaviour by all users.



Figure 3.4: Clear signing

Principle 5:

Smooth surface that is well drained.

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

Path surfaces should be maintained in a condition that is free of 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 1.2 metres 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 3.6: Convenient access for all legitimate users.

Principle 7:

Feel like a safe place to be.

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

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



Figure 3.7: Safe for all

Principle 8:

Enable all users to 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. Guidance and policies

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.



Fig 4.1 Gear Change cover

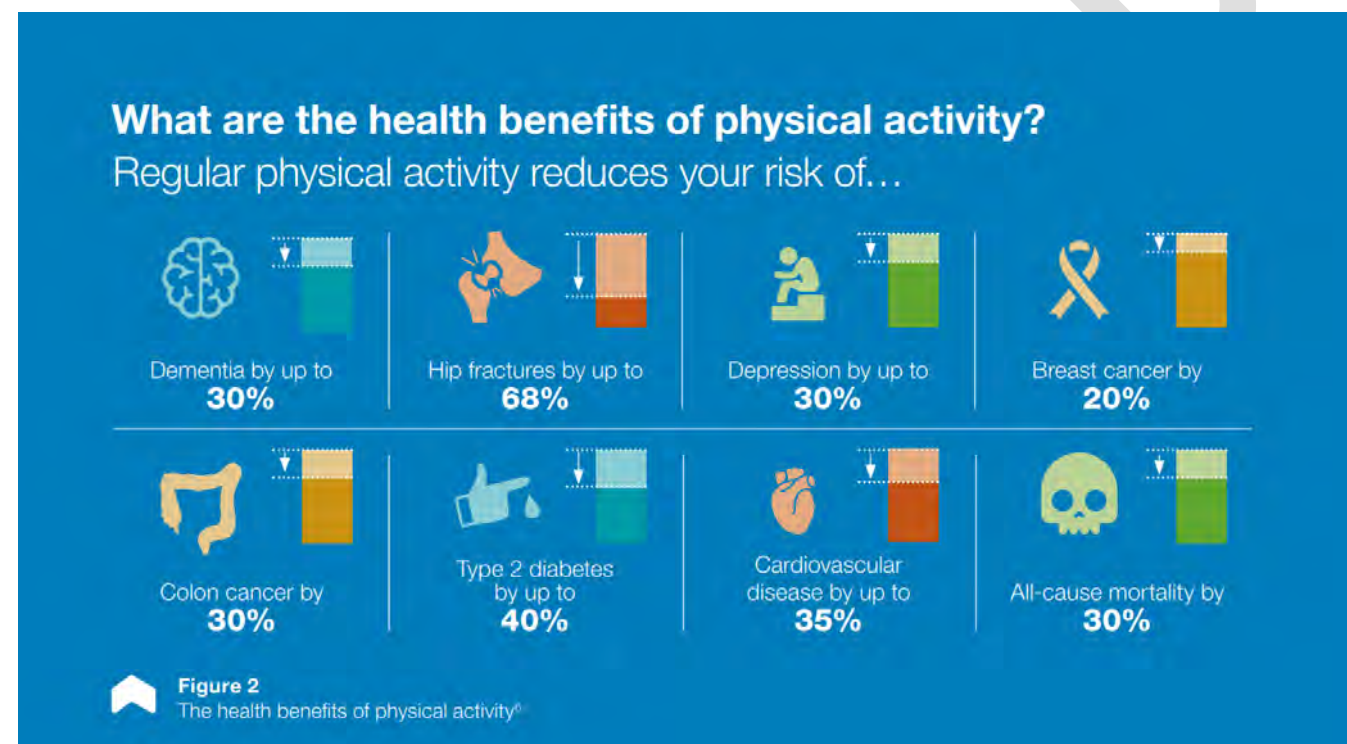


Fig 4.2 Extract from Gear Change

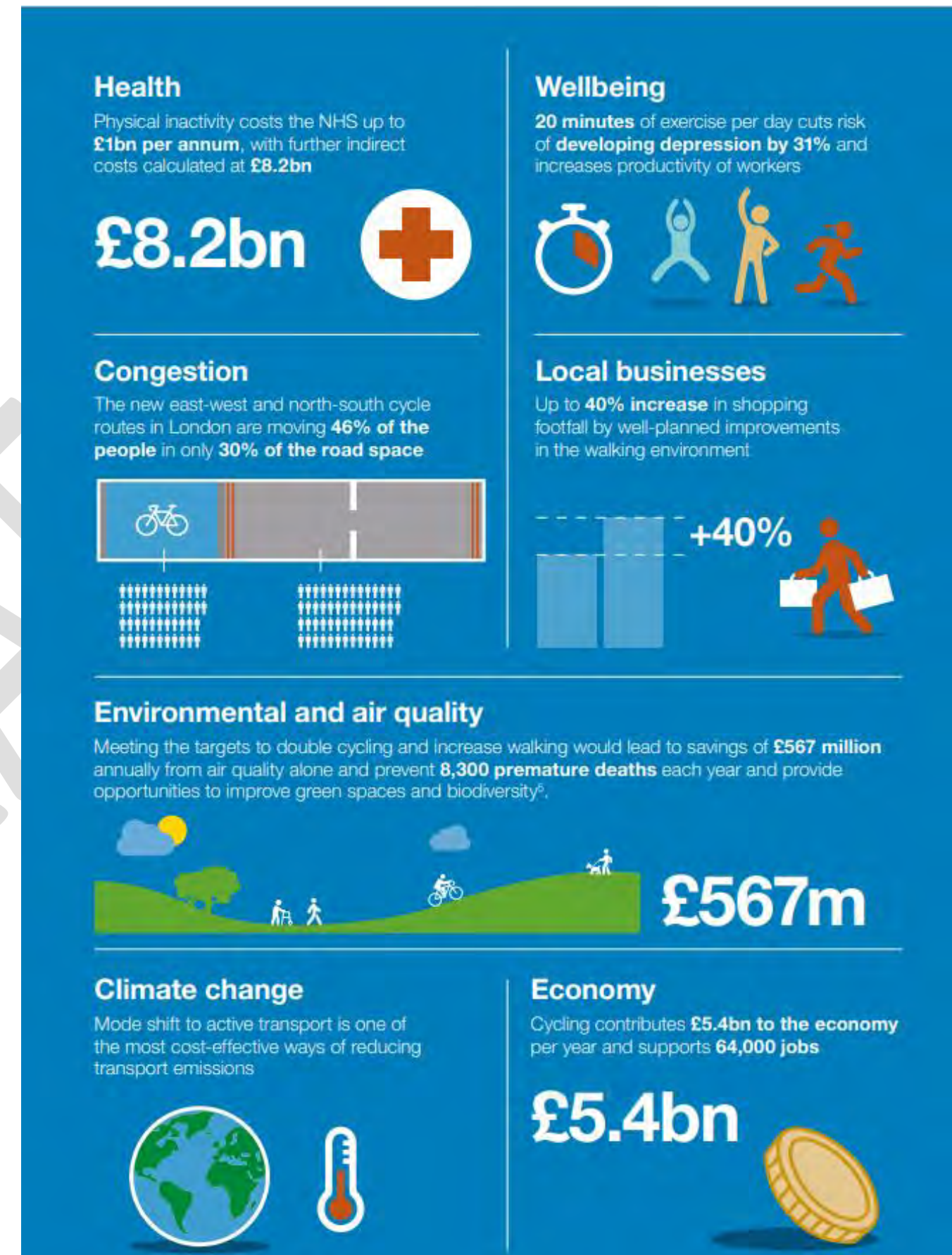


Fig 4.3 Extract from Gear Change

LTN 1/20

LTN 1/20 is more of a technical document, but it is based on core design principles which are like the National Cycle Network Principles.

Fig 4.4 Extract from LTN 1/20 showing Core Design Principles.

Figure 1.1: Core design principles

Accessibility for all				
Coherent	Direct	Safe	Comfortable	Attractive
 <p>DO Cycle networks should be planned and designed to allow people to reach their day to day destinations easily, along routes that connect, are simple to navigate and are of a consistently high quality.</p>	 <p>DO Cycle routes should be at least as direct – and preferably more direct – than those available for private motor vehicles.</p>	 <p>DO Not only must cycle infrastructure be safe, it should also be perceived to be safe so that more people feel able to cycle.</p>	 <p>DO Comfortable conditions for cycling require routes with good quality, well-maintained smooth surfaces, adequate width for the volume of users, minimal stopping and starting and avoiding steep gradients.</p>	 <p>DO Cycle infrastructure should help to deliver public spaces that are well designed and finished in attractive materials and be places that people want to spend time using.</p>
 <p>DON'T Neither cyclists or pedestrians benefit from unintuitive arrangements that put cyclists in unexpected places away from the carriageway.</p>	 <p>DON'T This track requires cyclists to give way at each side road. Routes involving extra distance or lots of stopping and starting will result in some cyclists choosing to ride on the main carriageway instead because it is faster and more direct, even if less safe.</p>	 <p>DON'T Space for cycling is important but a narrow advisory cycle lane next to a narrow general traffic lane and guard rail at a busy junction is not an acceptable offer for cyclists.</p>	 <p>DON'T Uncomfortable transitions between on-and off carriageway facilities are best avoided, particularly at locations where conflict with other road users is more likely.</p>	 <p>DON'T Sometimes well-intentioned signs and markings for cycling are not only difficult and uncomfortable to use, but are also unattractive additions to the street scape.</p>

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/24hpcu) ²	Protected space for Cycling			Cycle Lane (mandatory/advisory)	Mixed Traffic
		Fully Kerbed Cycle Track	Stepped Cycle Track	Light Segregation		
20mph ³	0	Green	Green	Green	Green	Green
	2000	Green	Green	Green	Green	Green
	4000	Green	Green	Green	Green	Green
	6000+	Green	Green	Green	Green	Green
30mph	0	Green	Green	Green	Green	Green
	2000	Green	Green	Green	Green	Green
	4000	Green	Green	Green	Green	Green
	6000+	Green	Green	Green	Green	Green
40mph	Any	Green	Green	Green	Green	Green
50+mph	Any	Green	Green	Green	Green	Green

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:

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

Fig 4.5 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

Fig 4.6 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	Green	Green	Green	Green	Green
40mph and 50mph	>10000	Any	Green	Green	Green	Green	Green
	6000 to 10000	2 or more	Green	Green	Green	Green	Green
	0-6000	2	Green	Green	Green	Green	Green
	0-10000	1	Green	Green	Green	Green	Green
≤ 30mph	>8000	>2	Green	Green	Green	Green	Green
	>8000	2	Green	Green	Green	Green	Green
	4000-8000	2	Green	Green	Green	Green	Green
	0-4000	2	Green	Green	Green	Green	Green
	0-4000	1	Green	Green	Green	Green	Green

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:

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

Fig 4.7 Extract from LTN 1/20 showing the requirements for safe crossings of busy roads.

There are also clear local policies promoting increases in walking, wheeling and cycling. Examples of local policies are considered here:

Local Transport Plan

The Authority for Cambridgeshire and Peterborough, the Combined Authority published the Local Transport Plan in January 2020. Following the election of a new Mayor the Combined Authority Board has agreed to revamp the plan. The current plan in reference to East Cambridgeshire includes the following:

“3.136 New, high-quality infrastructure for pedestrians, cyclists and horse riders – such as high-quality cycleways in Ely and a segregated route to Soham – will also help to make active travel a safer and more attractive option for local journeys within and between our towns and villages. More journeys on foot and by bike will also help to alleviate traffic congestion and improve air quality, whilst allowing those without access to a car – such as teenage children – more independence and opportunity to travel. ...”

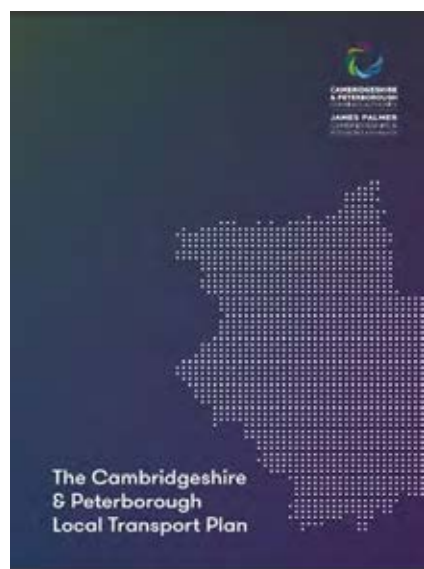


Fig 4.8 Local Transport Plan

East Cambridgeshire local plan

The East Cambridgeshire Local Plan sets out future plans for the District and includes the following

” 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...”

-within section 2.4.1 Spatial Vision:

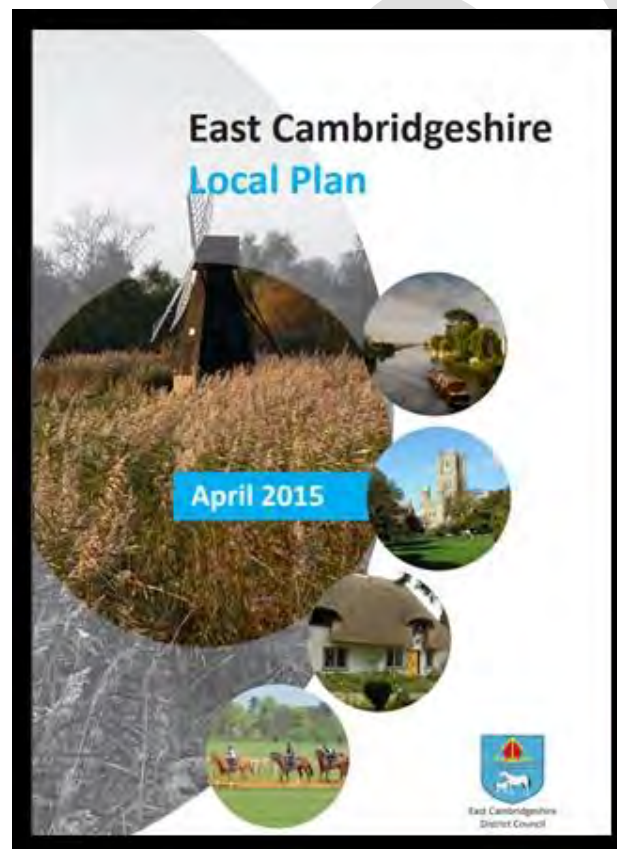


Fig 4.9 East Cambridgeshire Local Plan

The Local Plan identifies one area for significant housing growth in North of Ely and two new potential employment areas:

- Land North of Ely off the A10 of approximately 210ha for 3000 dwellings plus mixed-use facilities
- The former Angel Drove car park of approximately 16ha for employment development.
- The former Station Gateway area of approximately 12.3ha for employment development/mixed use allocation.
- The existing infrastructure within Ely are relevant for the links considered within this study.

The Station Quarter is perhaps most relevant for this study and Policy ELY 7 includes:

“The Station Gateway area will be transformed into a vibrant mixed-use area which provides an attractive gateway to the city. Existing industrial uses will be relocated where possible and the sites comprehensively redeveloped with high quality offices and some apartments framing views of the cathedral. The station will be enhanced to provide transport interchange facilities and complementary small-scale retail units. Sensitively designed multi-storey car parks will provide parking for commuters and visitors. New pedestrian links will draw people to the riverside, Angel Drove and into the rest of the city.”

-Employment-led / mixed-use allocation, Station Gateway Vision.

Soham has very little employment allocation, but major potential housing allocation. Soham has grown a lot over recent years and more land is allocated for housing and employment. Soham also has a new station, which provides a quick service to and from Ely but with only a two-hourly service.

There are two settlements between Ely and Soham – Barway and Stuntney and neither are expected to have significant growth within the local plan period, although several new houses have been built in Barway in recent years.

Barway is home to G’s agricultural produce, which is a major employer, with accommodation provided on site for employees, but no significant changes identified in the local plan.

A142 in the Local Plan but in 2020 a retail village accessed off the A142, near Stuntney was given planning permission and at the time of the study was still being developed.

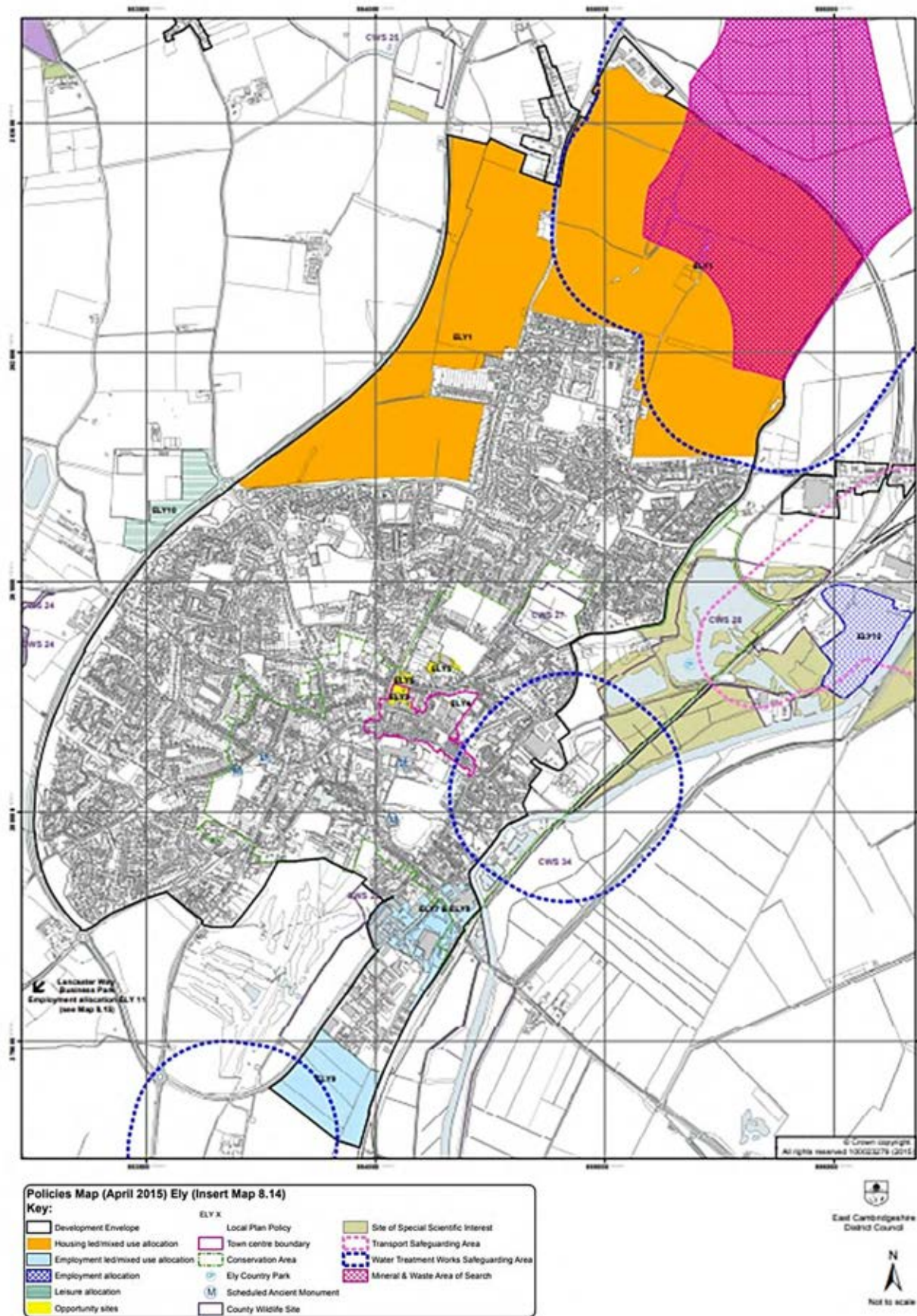


Fig 4.10 Extract from East Cambridgeshire District Council Policies Map 2015 (Ely focused)

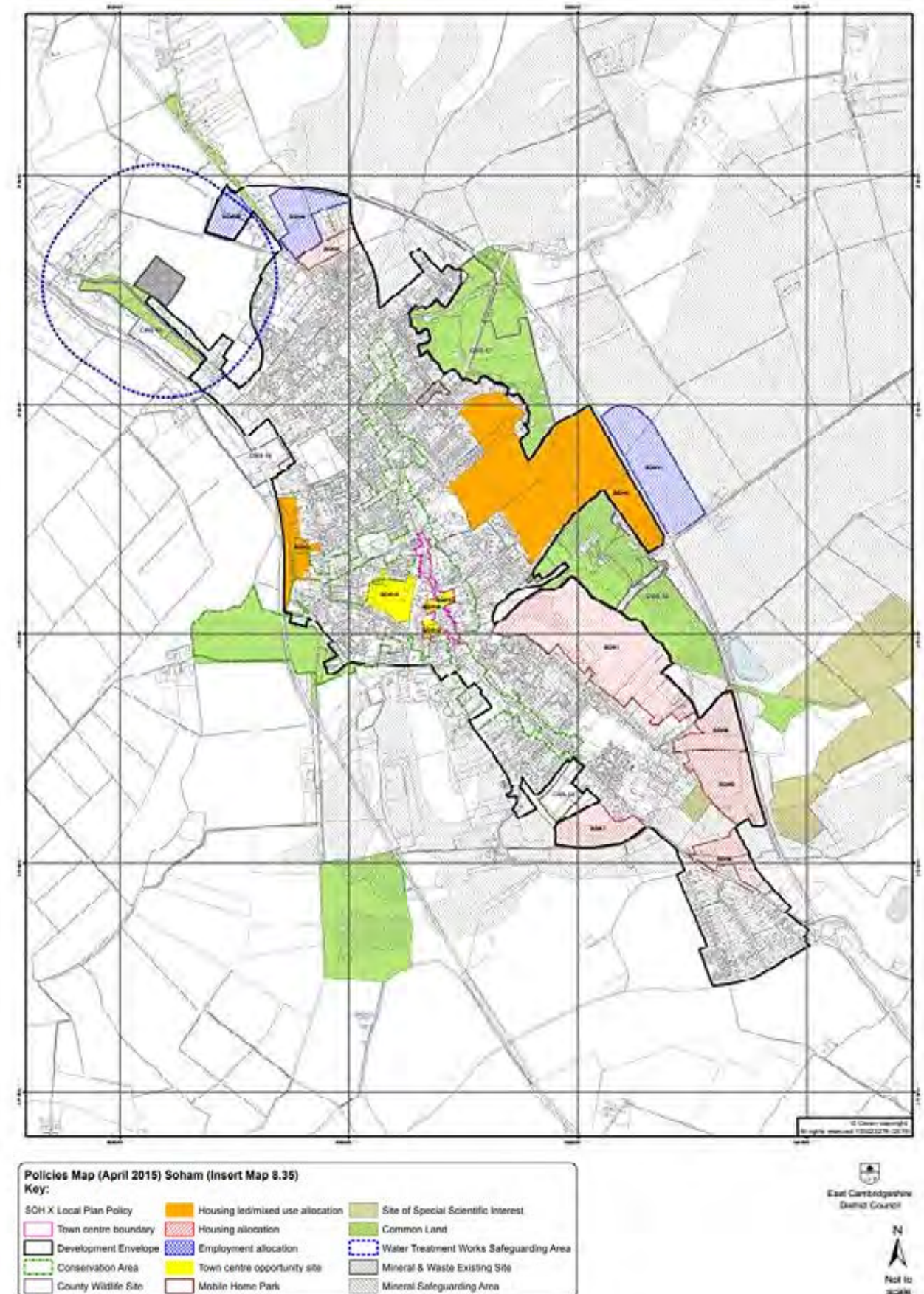


Fig 4.11 Extract from East Cambridgeshire District Council Policies Map 2015 (Soham focused)

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.

The strategy also shows clear interest and demand for a new route between Ely and Soham.



Fig 4.12 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.

Fig 4.13 Introduction to East Cambridgeshire Cycling and Walking Routes Strategy

5. Description of Existing Routes

The existing National Cycle Network does not make a direct connection between Ely and Soham. The National Byway route is indirect - making connections with both Prickwillow and Broad Hill. This uses relatively quiet roads, but road crossings are poor and traffic speeds are a concern, so this will put many people off using such roads. There has been a longstanding aspiration for a direct link between Ely and Soham that follows the A142. Sustrans considered this when looking at options for the National Cycle Network but concluded that a route between Barway and Ely was more attractive and achievable than one following the A142. The route was not intended as a route between Soham and Ely, but it did at least open an option to use minor roads between Soham and Barway and then join the Barway – Ely route. Improvements to this route as well as other alignments have been investigated as part of this study.

Between Ely and Soham there is at present no provision for cycling, apart from a very narrow shared use path between Ely and Stuntney. The direct route along the A142 is too busy and fast to expect anyone apart from the most confident cyclists to use it. 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, these traffic volumes, and the lack of provision for cyclists or walkers explain why the A142 is such an intimidating environment.

Ely itself has some cycling infrastructure, but it is not to current standards. The same applies within Soham itself where there are some lengths of shared use path.

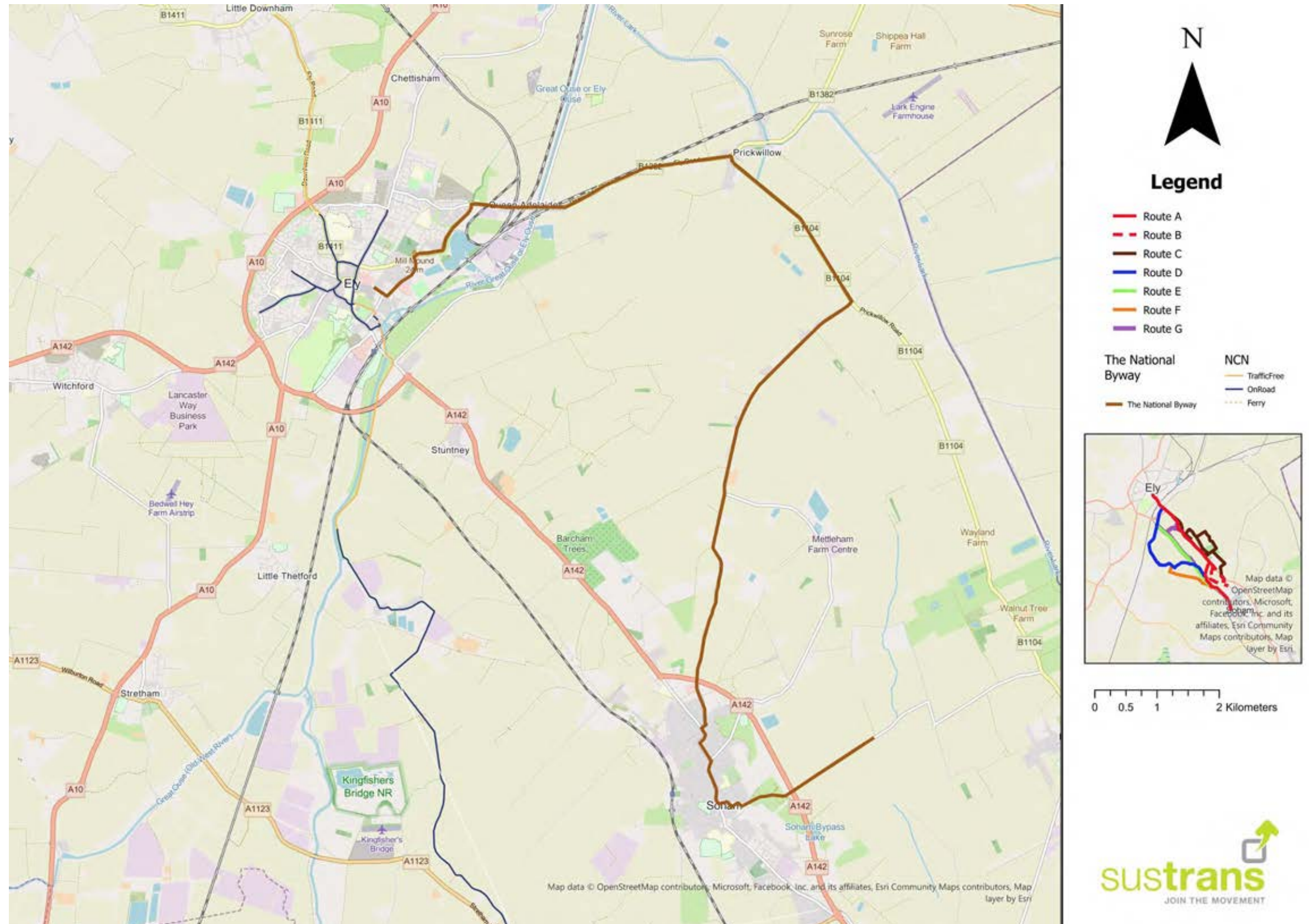


Fig 5.1 Map of Existing NCN and Byway route along with the proposed Wicken-Soham route

There are therefore problems with all existing options either in terms of directness, quality or simply because they are not complete. It is of course important that new facilities are joined up to give continuous high-quality routes and networks.

Most people at present who want to cycle between Ely and Soham will have to use the A142 and an example of the issues faced is shown in the marked-up image adjacent:

Traffic safety and perceptions of safety are major factors in whether people will choose to cycle or not and there are clearly issues in all the settlements and on the A142.

Other factors to consider with the existing routes include:

Points of Interest: There are numerous points of interest found in Ely- a significant destination for local trips, with fewer found in Soham.(See Fig 5.3).

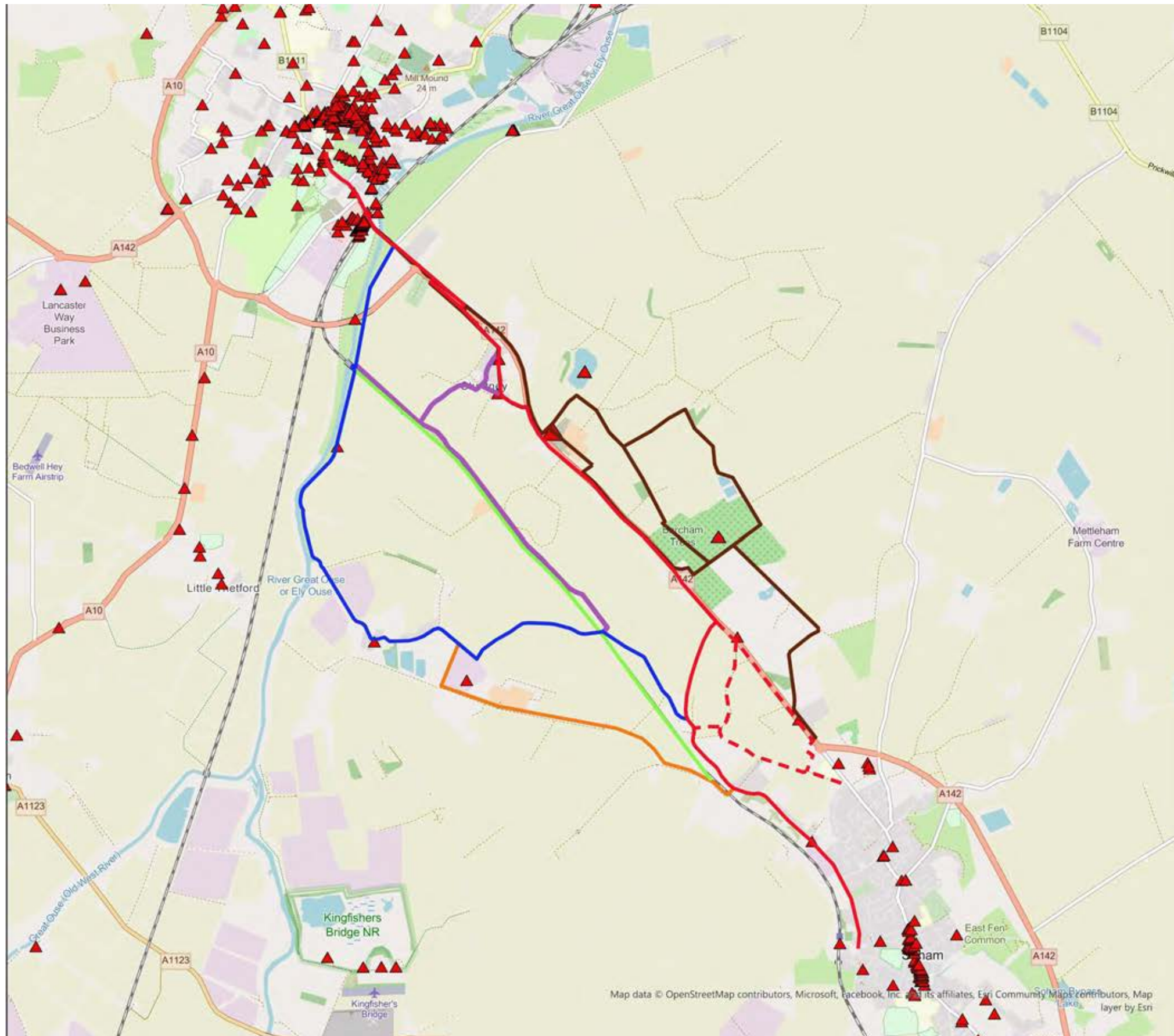
Traffic safety: There are certainly car-related issues in relation to the A142, whilst the centre of both Ely and Soham show significant issues in relation to pedestrians and cyclists. (See Fig 5.4).

Travel time: Whilst it takes 15 minutes via car to travel between Ely and Soham, it would take approximately 30 minutes cycling. It is beneficial to provide other linkages via Stuntney and Barway, thus providing short commutable alternatives for residents via cycling.

Topography: 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.



Fig 5.2 Image highlighting issues along the A142



Legend

- Route A
- - - Route B
- Route C
- Route D
- Route E
- Route F
- Route G
- ▲ Points of interest

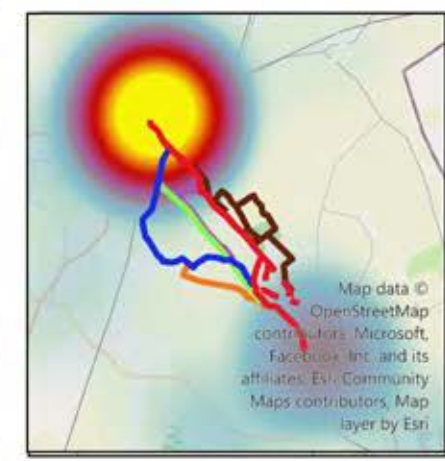


Fig 5.3 Points of interest map

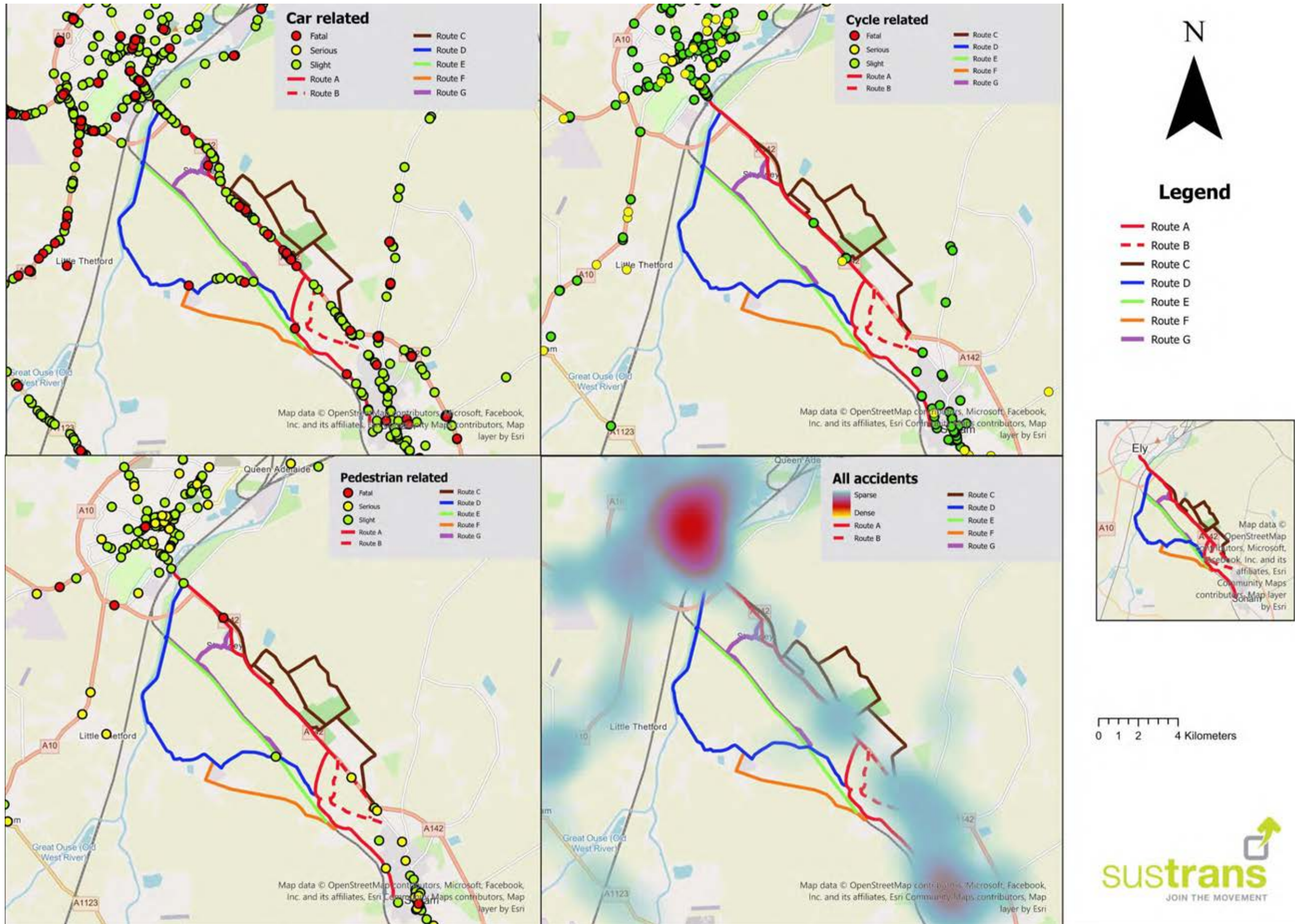


Fig 5.4 Traffic accident map

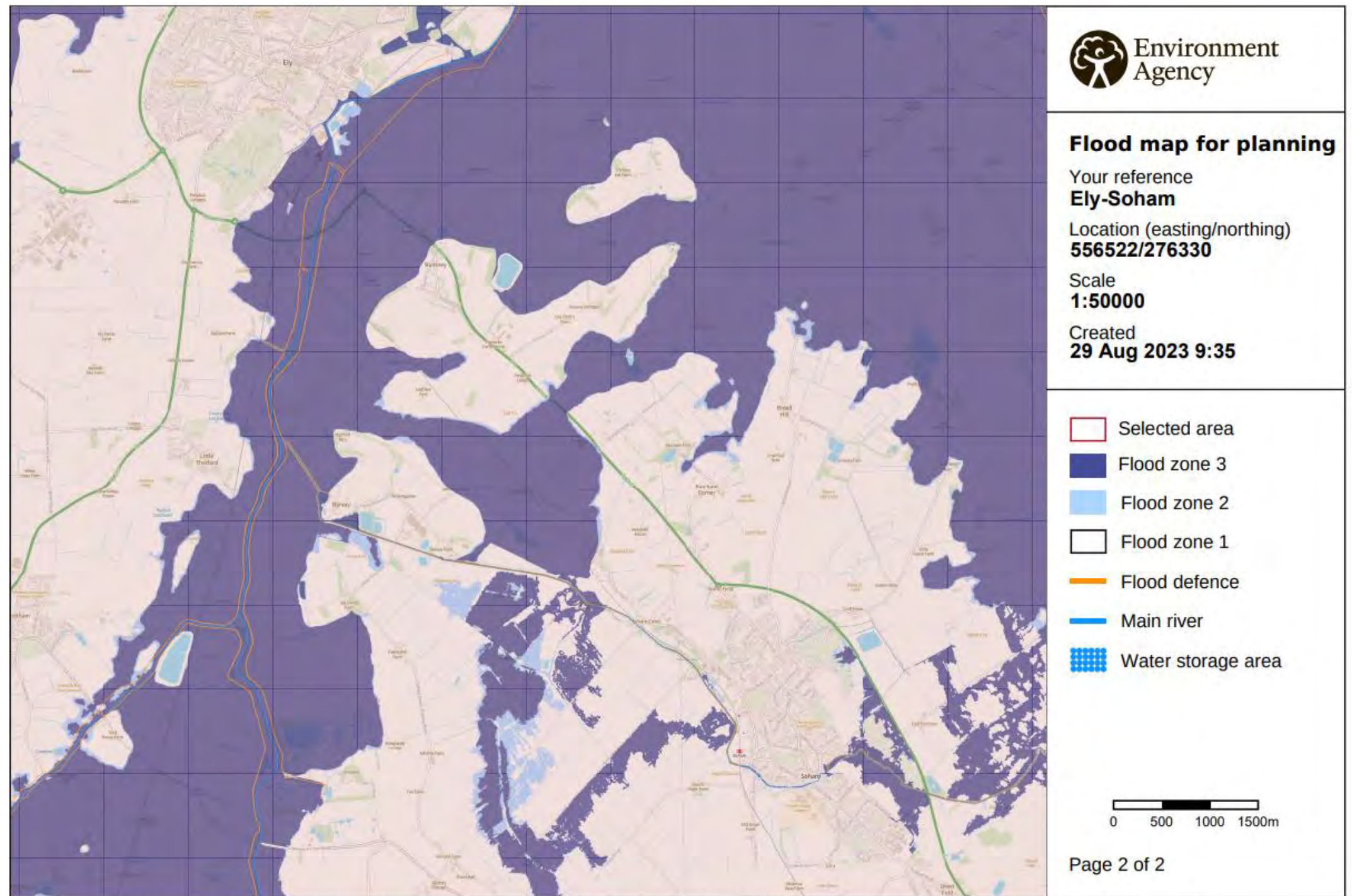
6. Design constraints

6.1 Environment Agency

All route options lie within a flood Zone 3 and it must be anticipated that on occasions some routes will flood. 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.

The flood risk may be a significant factor in terms of achieving consent for works, particularly given that the construction will involve bringing construction materials into the flood plain. It will be necessary to demonstrate to Environment Agency that either the impact of such works will have a negligible impact on flooding or that other works will compensate for this. At this stage thought has been given as to where new ramps and bridges may be needed but not as to what compensation might be needed. This will need to be agreed with Environment Agency and will impact on land requirements.

The flood map for planning shows river and sea flooding data only. This data doesn't include other sources of flooding. It 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.



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Fig 6.1. Extract from Environment Agency Map

6.2 Geology

Figure 6.2.1 and Fig 6.2.2 shows the bedrock geology map which indicates the northern end of our researched area being predominantly Kimmeridge Clay Formation, whilst Barway, located west of our route, is predominantly West Melbury Marly Chalk Formation. The central aspect of our route is predominantly Woburn Sands Formation whilst the Southern end of our area is made up of Gault formation- mudstone. The superficial layer of geology mainly comprises of peat with spots of Diamicton, Sand and gravel deposits in Soham and Alluvium - Clay, silt, sand and gravel found along the river. The map is sourced from <https://www.bgs.ac.uk/geological-data/map-viewers/>



Fig 6.2.1 Bedrock Geology map

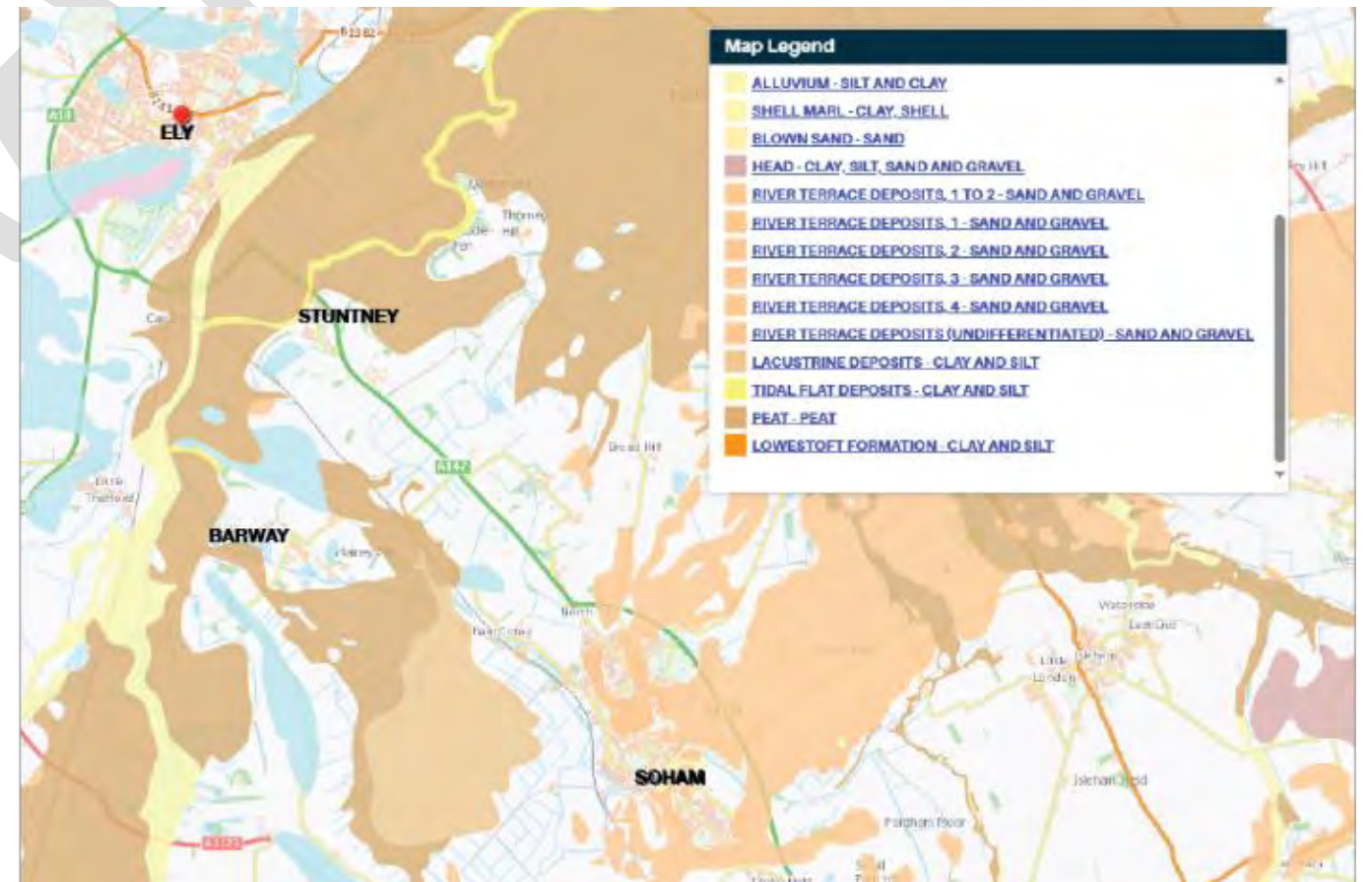


Fig 6.2.2 Superficial deposits Geology map

6.3 Ecological constraints

An assessment of likely ecological impacts is provided in Chapter 9. Known constraints include the presence of designated sites and irreplaceable and priority habitats. Chapter 7 also discusses the likelihood of protected and notable species being present and the constraints they might pose. Maps showing some of the constraints are included here.

Fig 6.3.1 shows the locations of designated sites (Sites of Special Scientific Interest and Local Nature Reserves).

Fig 6.3.2 Irreplaceable habitats (Source <https://magic.defra.gov.uk/MagicMap.aspx>)

Fig 6.3.3 Priority habitats

Whilst ecological constraints have been considered as part of this study further work is likely to be needed on this as schemes progress to planning application and construction phases.

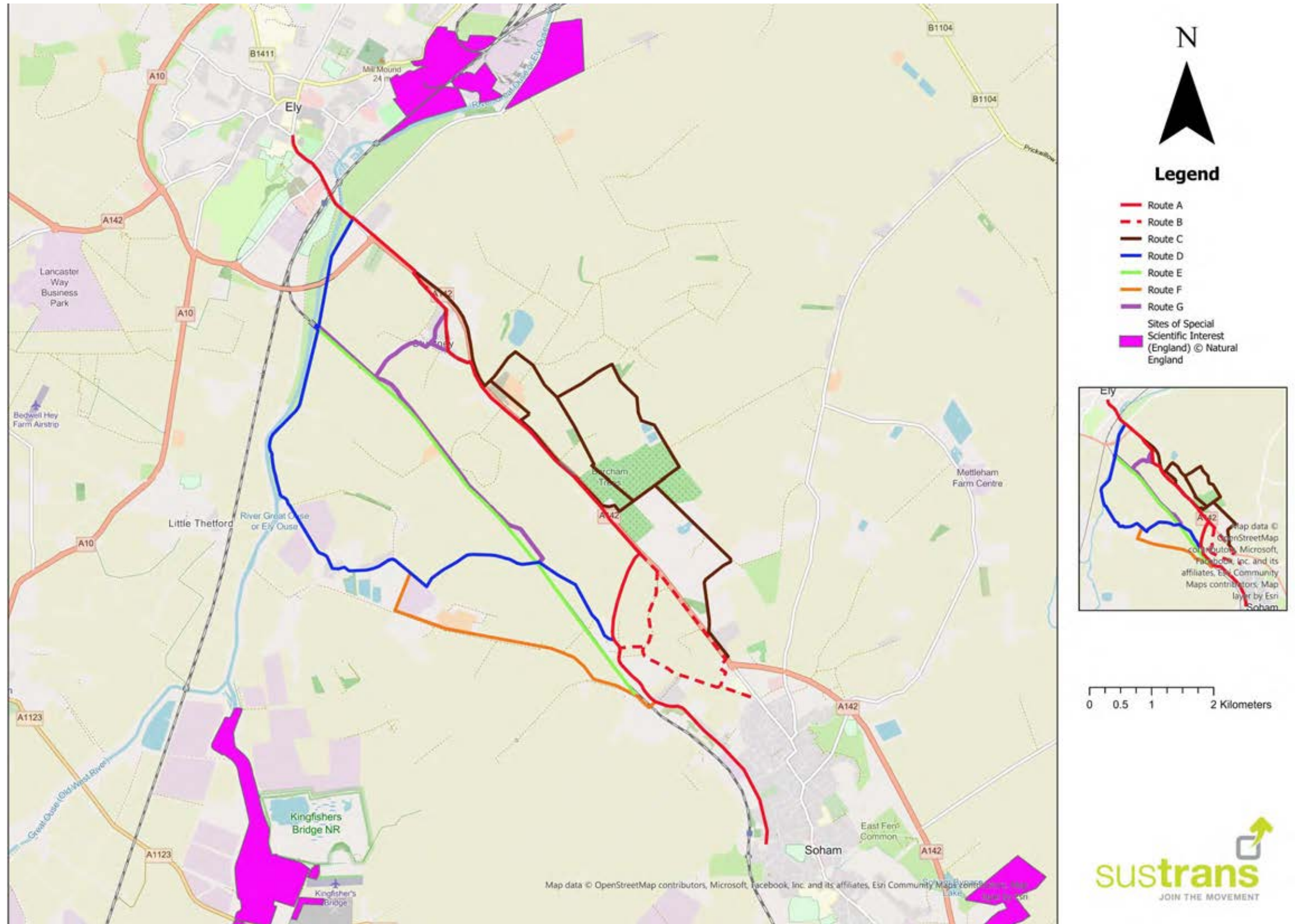
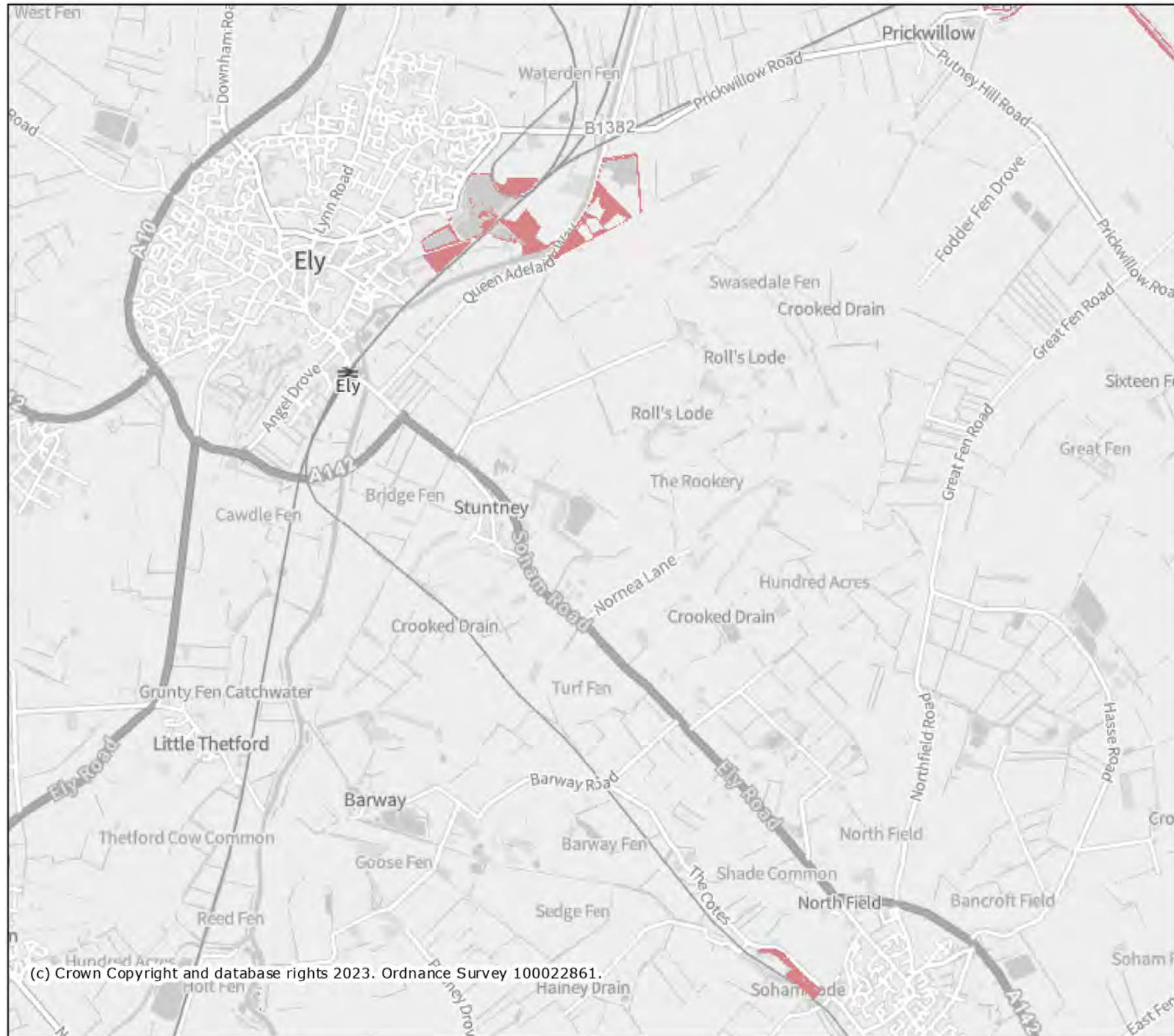


Fig 6.3.1 shows the locations of designated sites (Sites of Special Scientific Interest and Local Nature Reserves).



Legend

- Priority Habitat Inventory - Coastal Saltmarsh (England)
- Priority Habitat Inventory - Coastal Sand Dunes (England)
- Priority Habitat Inventory - Limestone Pavements (England)
- Priority Habitat Inventory - Lowland Fens (England)

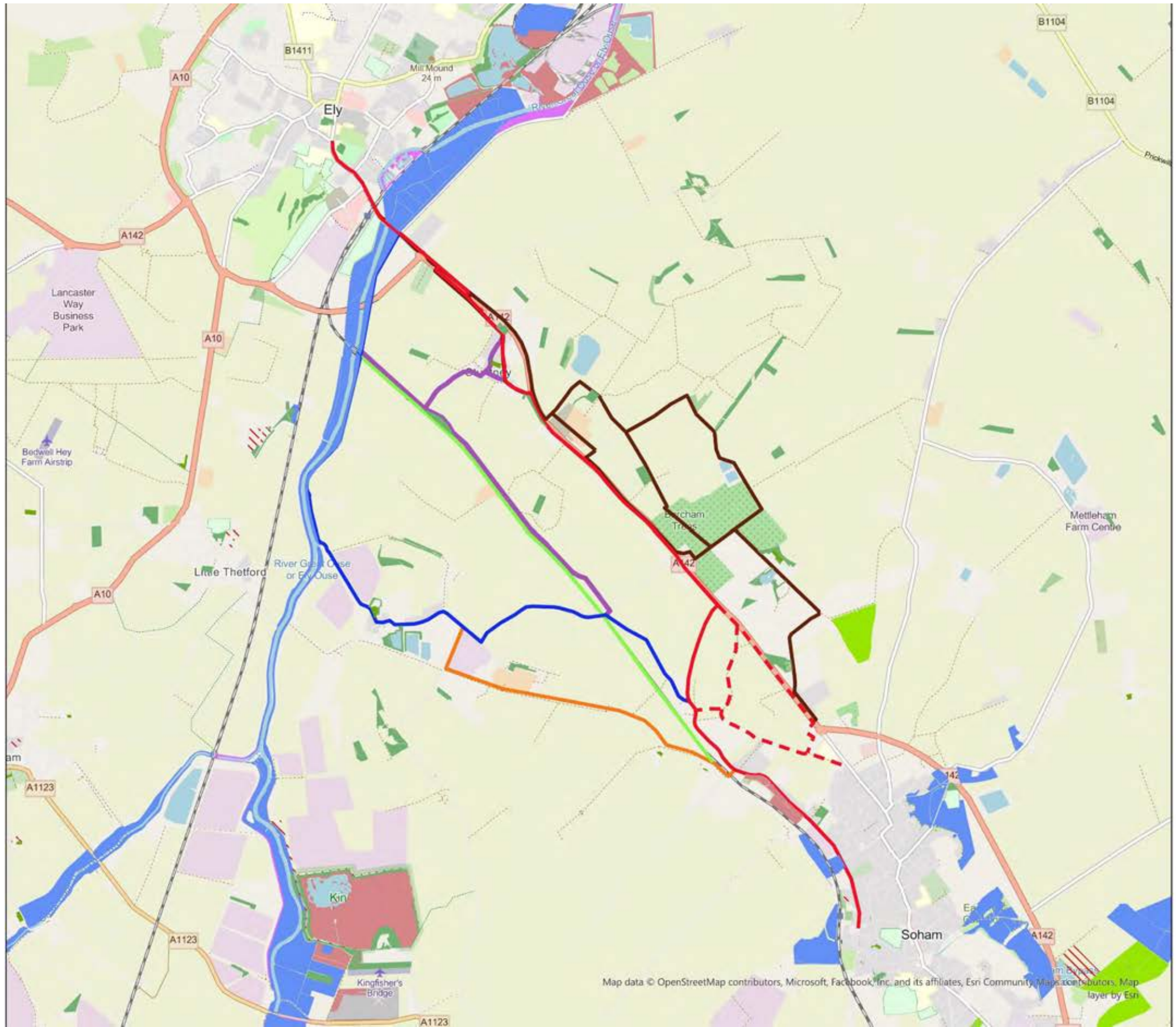
Ancient Woodland (England)

- Ancient and Semi-Natural Woodland
- Ancient Replanted Woodland

Projection = OSGB36
 xmin = 543900
 ymin = 271800
 xmax = 569000
 ymax = 284500

Map produced by MAGIC on 13 June, 2023.
 Copyright resides with the data suppliers and the map must not be reproduced without their permission. Some information in MAGIC is a snapshot of the information that is being maintained or continually updated by the originating organisation. Please refer to the metadata for details as information may be illustrative or representative rather than definitive at this stage.

Fig 6.3.2 Irreplaceable habitats (Source <https://magic.defra.gov.uk/MagicMap.aspx>)



N

Legend

Priority Habitats Inventory (Central) © Natural England	Blanket bog	Calaminarian grassland	Coastal and floodplain grazing marsh	Coastal saltmarsh	Coastal sand dunes	Coastal vegetated shingle	Deciduous woodland	Fragmented heath	Good quality semi-improved grassland	Grass moorland	Limestone pavement	Lowland calcareous grassland	Lowland dry acid grassland	Lowland fens	Lowland heathland	Lowland meadows	Lowland raised bog	Maritime cliff and slope	Mountain heaths and willow scrub	Mudflats	No main habitat but additional habitats present	Purple moor grass and rush pastures	Reedbeds	Saline lagoons	Traditional orchard	Upland calcareous grassland	Upland flushes, fens and swamps	Upland hay meadow	Upland heathland	Route A	Route B	Route C	Route D	Route E	Route F	Route G
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Map data © OpenStreetMap contributors, Microsoft, Facebook, Inc. and its affiliates, Esri Community Maps contributors, Map layer by Esri

Fig 6.3.3 Priority habitats

6.4 Heritage and Historic Environment

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 Fig 6.4 it would be highly unusual for any new path proposal to impact an existing building.

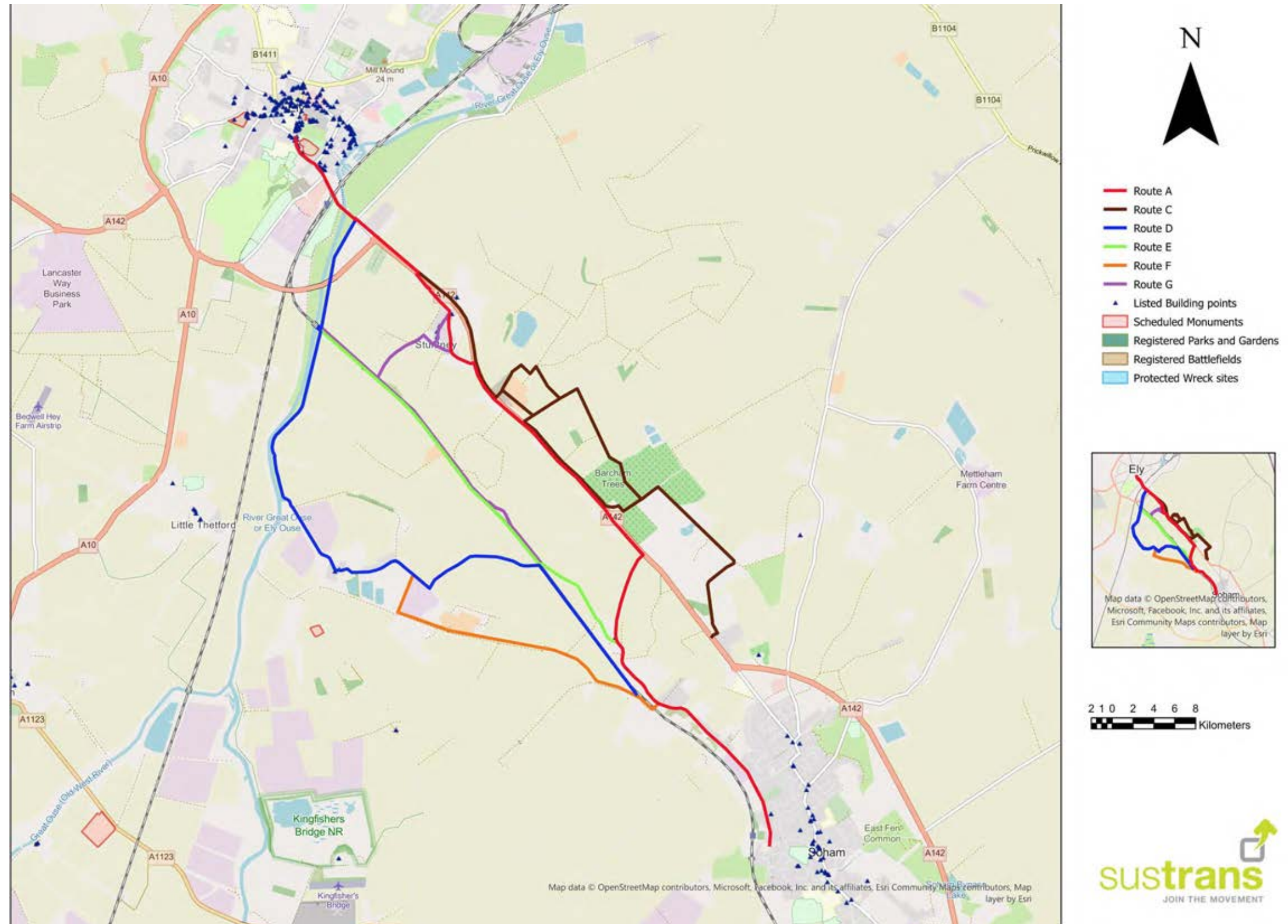


Fig 6.4 Historic monuments and sites

6.5 Common Land

Common land requires additional consents for works. There is no designated Common Land within Ely. However, there are Commons in Soham which cover a significant area. They are an oasis for wildlife, an excellent recreational facility for people in Soham and are therefore protected against loss or re-use. (Source <https://magic.defra.gov.uk/MagicMap.aspx>). The one Common that is most significant is at The Shades on the edge of Soham. The Common has been significantly reduced over the years with part of the A142 built on it and it is hard to argue that it is of the same quality as some of the other Commons in Soham, but it is still protected and if any works are planned it is realistic to allow at least 1 year to obtain consent once an application is submitted.

The rules governing Common land are significant and special consent is needed for any works on Common land, which would include the surfacing of any paths. There are also restrictions on erecting structures which restrict the open access aspect of Common land.

Prior to applying for consent, it is recommended that discussions are held with:

- the owners of the land, in this case the Lord of the Manor in Soham, who will need to be contacted via his agents – Cheffins.
- others with a legal interest, for example tenants and those who access their properties across the Common i.e. anyone who has an easement or other rights and covenants over the land
- any Parish, District, or County Council in the same area as the land i.e. Soham Town

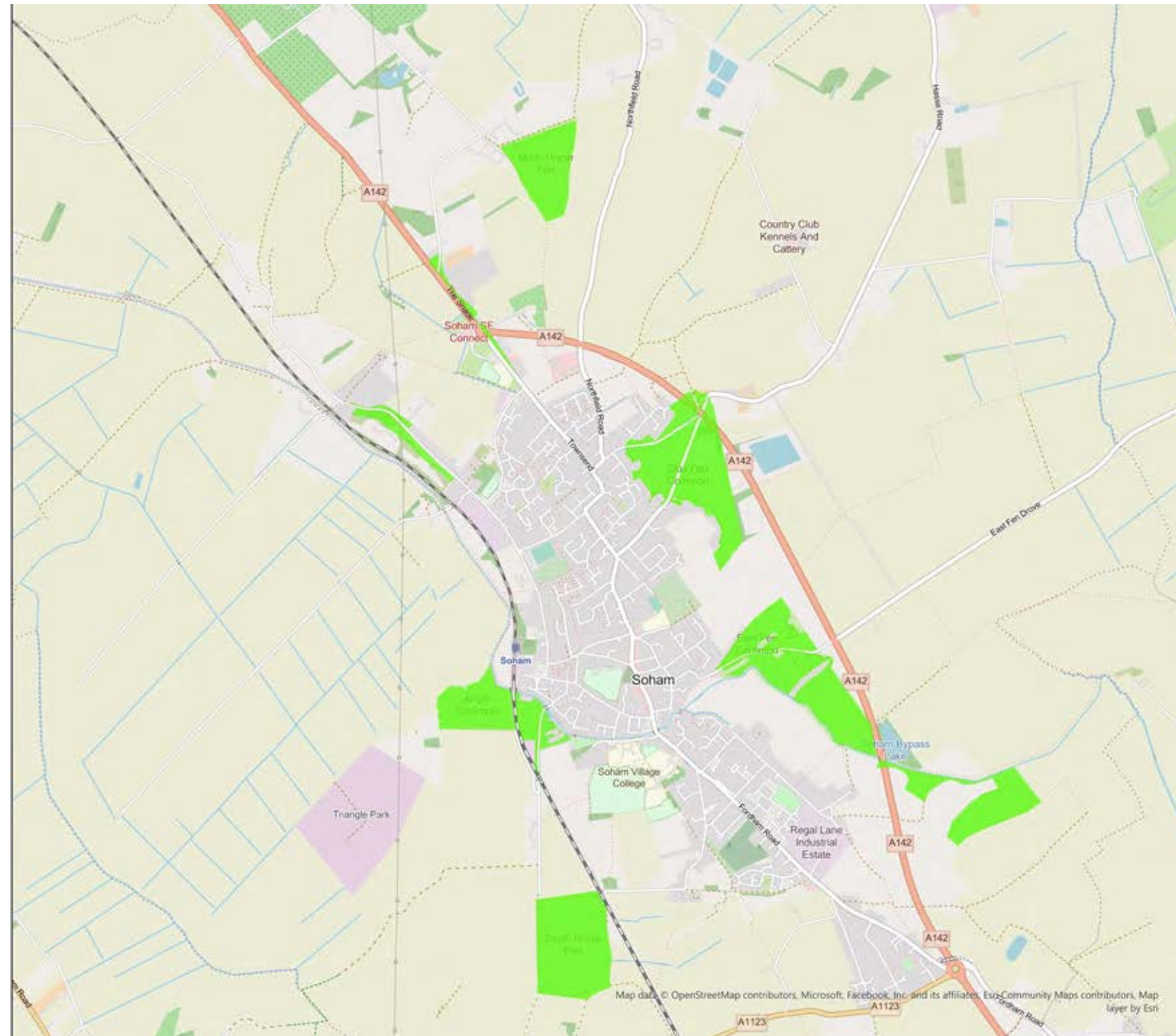


Fig 6.5 Common land

Council, East Cambridgeshire District Council and Cambridgeshire County Council.

- Natural England
- Historic England

- The Open Spaces Society

6.6 Roads, river and rail crossings

The requirements of LTN 1/20 have been considered in Chapter 4. The expectation is that where cyclists are using roads mixed with other traffic, traffic volumes and speeds must be low. This is clearly not the case with the A142, where a segregated solution is needed and the only suitable option for crossing would be a grade separated crossing or signals.

Bridges themselves have limited options, primarily because of the need for lengthy ramps that are suitable for all and because of the need for good access to the bridges. Topography can be a constraint and some preliminary checks have been done using Lidar data. This highlights that for the A142 adjoining land can be well below the level of the road surface meaning that very long ramps will be needed.

Railway crossings are potentially even more challenging than road crossings, but the existing National Cycle Network route already has a grade separated crossing. This is not ideal but at least it does already exist. New at-grade crossings are highly likely to be unacceptable to Network Rail and changes to existing level crossings are also extremely difficult, so this is a factor in route selection, particularly around Barway. Any new bridges will need to be in line with Network Rail requirements and as with road bridges will need long ramps.

For the purposes of this study, it has been important to check that there is sufficient space for ramps. It has been assumed that ramps will need to be at least 120m long and should be in line with the direction of travel to minimise deviation from the most direct route.

Any new bridge should be able to accommodate a 3m path with a minimum of 0.5m to boundaries so should be at least 4m wide. Where horse riders are to be accommodated greater widths may be needed in addition to higher parapets. In general, it has been assumed that 3m shared paths are appropriate in the rural area, but where segregated paths lead to a bridge, there should be space for a segregated route over the bridge and a minimum width of 5.5m would be needed.



Fig 6.6.1 Existing level crossing on Barway Road



Fig 6.6.2 showing the A 142 - a particularly difficult road to cross on foot or bike due to the high speeds and steady flow of traffic.

6.7 Utilities

Utilities searches will need to be carried out as part of any detailed design, but some preliminary searches have been carried out to check whether there is anything major that would influence route choices. Whilst it can be expected that roads in the centre of the villages will have lots of utilities there are also high and/or intermediate gas mains pipes in the area and overhead power lines linked with the substation in Soham. The approximate position of these is shown in the appendices (see appendix B), based on information received from Utility Companies. This information is not complete and further searches will be required as part of detailed design.

There is an intermediate pressure gas main that runs between Ely and Soham along the A142 as well as the fields adjacent to such. Some of the options for routes will need to cross it or run along the alignment. A main water pipe from Anglian Water and telecoms have also been identified along Route A and C. The identification of such will have cost implications and will mean that agreements will be needed with both Cadent, BT Openreach and Anglian Water regarding assets, before any work can be carried out. The High voltage overhead power lines are unlikely to impact on the possible bridge site on the edge of Soham, but it could be impacted upon by local overhead power lines, so this needs to be addressed as part of any further design work and may impact on costings.



Fig 6.7 showing existing main water pipe found along proposed route alignment A and C

7. Route Option Appraisal

Any route between Ely and Soham needs to be useful for as many residents of Ely and Soham as possible, to justify the expenditure and if possible useful for residents and destinations between them.

For routes to be useful for as many residents as possible there needs to be a good cycling and walking network within Ely and within Soham and routes need to be as direct as possible from start to destination, for as many people as possible.

For longer-distance routes the requirement for directness must also be considered alongside the desire to connect with communities along the route. Between Ely and Soham the settlements and destinations that have been considered most relevant are:

- Stuntney (with a population of approximately 220) that is only accessible via the A142, but which is within easy cycling distance of Ely.
- Barway (with a small resident population, but with many workers based there in hostel accommodation). In addition to the residents the G's site is a significant destination for workers travelling to and from the site and for lorries for distribution.
- Ben's Yard – “a rural retail village” with a range of activities and attractions and also an employment site.
- Barcham's Nursery – “Europe's largest tree specialist”. An employer and distributor of trees that has aspirations for a visitor centre.

- Fenland Lodge – a hostel.
- Properties along the Shade and Barcham Road on the edge of Soham, which although they are within Soham are “outside” the bypass.
- Properties along the Cotes and Broadside on the edge of Soham.
- BP Service Station, on the edge of Soham with small retail and café facilities.
- The Old Hall, near Stuntney – a hotel and restaurant.
- Bridge Fen allotments- near the Ely bypass roundabout.

For the purposes of the study and to compare distances it is normal to select one location in each settlement and measure distances from that point.

- A. For Ely, the point begins at the top of Back Hill by the Porta, at an important junction on the edge of the City Centre. (A – Grid Reference =TL 53993 80035)
- B. For Soham Red Lion Square on the High Street is a significant junction in the town centre. (B – Grid Reference =TL 59446 72970)

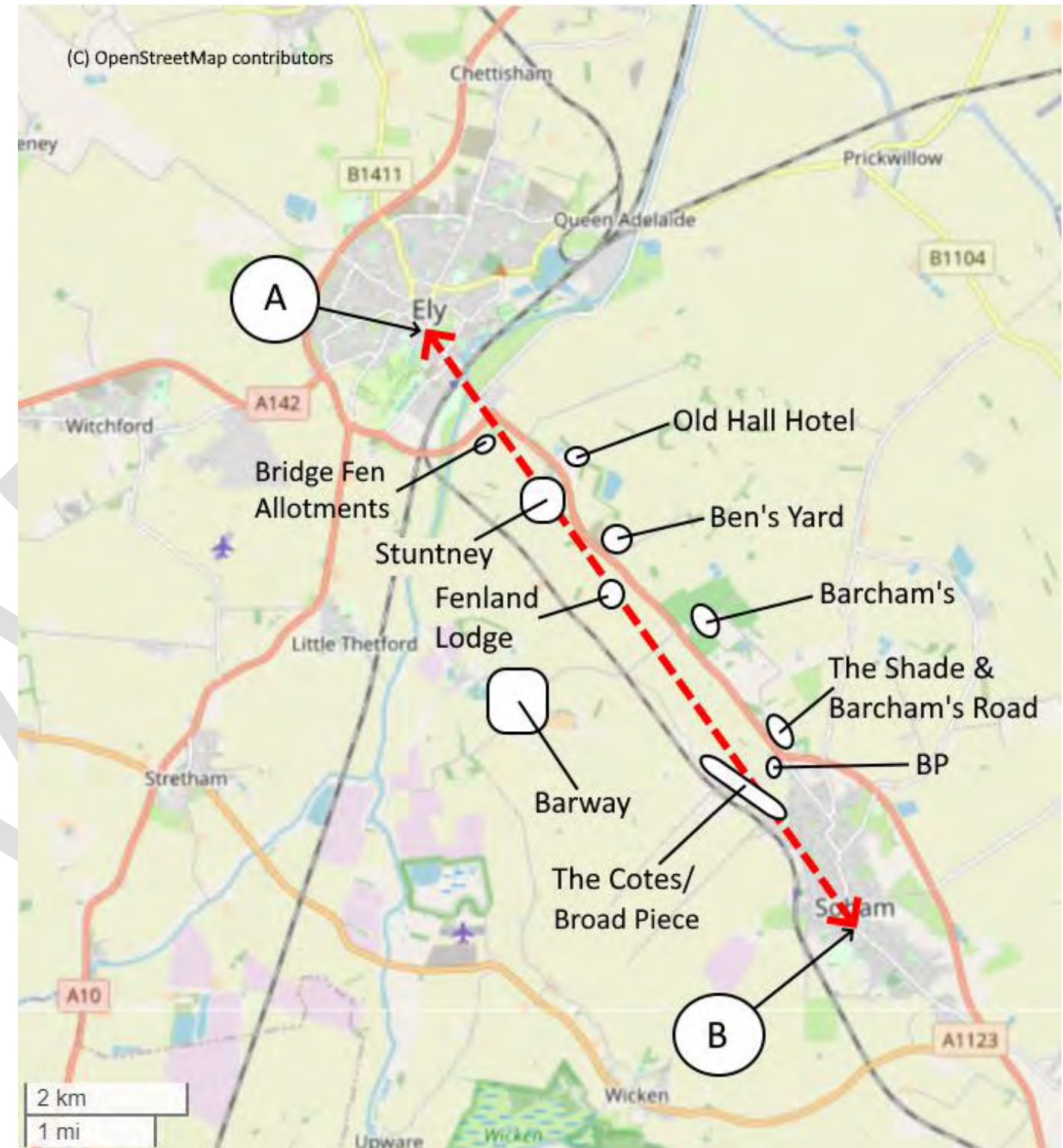


Fig 7.1 Map showing key points for the study, noting that most destinations and journey start points are in Ely or Soham.

Traffic around Ely is dominated by the two major 'A' roads, the A10 (north-south) and A142 (east-west), which connect Ely to the national road network and traffic around Soham is dominated by the A142, but within the communities most traffic will be local and there is potential for change.

This study considers various ways to link the two communities, which should ideally be as close as possible to the direct line between A and B shown in Fig 7.1. All options assume that the entry/exit to/ from Ely is near Ely Station, whereas for Soham options are either close to the railway and The Cotes or closer to the A142 and The Shade.

Within Ely and Soham, access to all properties should be compliant with LTN1/20 guidelines, which is relatively easy for many roads which are lightly trafficked and can be changed to 20mph roads, but it is a challenge for some of the more major roads. In addition, Healthy Streets principles should be adopted, and healthy streets audits at an early stage may help to decide priorities. Fig 4.1 of LTN 1/20 suggests that for more than 6,000 pcu/ 24 hours and a speed limit of 20 mph few people will choose to mix with traffic on cycles. This means that the A142 connecting Ely to Soham, as it is, should be discounted from any cycle routes. This does present a dilemma because LTN1/20 gives a strong focus on the need for direct routes and the A142 is certainly a direct alignment from the Ely bypass to the edge of Soham and there is no expectation that this direct alignment will change between these two points. Some of the options considered do follow the A142 closely, but by necessity any route that went for instance via Barway could not follow that alignment.

The big changes from existing are the introduction of new segregated paths and new road crossings, which will need to meet the quality of provision anticipated in LTN1/20. However, where there are opportunities to follow existing lightly trafficked roads these have been considered carefully, including options to make them more attractive for cycling.



Fig 7.2 The A142 is not suitable for cycling, although some do use it because they have no choice.



Fig 7.3 Image showing a road in Barway where low traffic volumes mean it should be suitable for cycling especially with low speeds as well.

The options considered are shown in Fig 7.4 with colour coded routes for the various Options. The colours and letters are of no significance, and it is of course possible to have routes and links made up of more than one Option. The options are discussed in more detail later in the chapter, but a summary of the routes is included here:

- **Option A:** This is the route that most closely follows the A142 although any new path will have to be nearly entirely on private land near to the road, because there is not adequate highway verge for a good path well separated from traffic. The route would be to the north-east of the A142 between Queen Adelaide Way and the edge of Stuntney, where an option for a grade separated crossing of the road is considered. Between Stuntney and Ely Lane the route would be to the south-west of the A142, where it would have to cross Barway Road. Ely Lane is a right of way that would require surfacing between the A142 and The Cotes, which would be used as the link with Soham for this option.
- **Option B:** This route is a variation on Option A in that it considers different ways to link the provision with Soham either following the A 142 all the way to the BP station on the edge of Soham or via Rosefield Lane and The Cotes in a similar manner to Option A.
- **Option C:** This route links with Option A but is focused more on new provision to the north-east of the A142 either closely following the road or further away using quiet lanes or new paths. Options for linking with Stuntney are considered and the need for a new crossing of the A142 by the BP service station is identified.

- **Option D:** This route follows the River Great Ouse and the National Cycle Network between Stuntney Causeway and Barway. Several options are considered for upgrading the existing path, including constructing new paths close to, but not on the same alignment as existing. Within Barway the route could follow the National Cycle Network through the village but as traffic levels increase this becomes more difficult so options for a new segregated path following Barway Road away from the highway to the existing level crossing are considered. From the level crossing Blockmoor Road and the Cotes would be used as the link with Soham.
- **Option E:** This route joins with Option D at both ends but takes a more direct alignment that follows the south-west of the railway on private land. The link with Soham would be via Mereside. A separate link would be needed with Barway either on the existing alignment or a new one.
- **Option F:** This route would follow the same alignment as Option D between Ely and Barway, but rather than following Barway Road the route would follow one of the banks of Soham Lode or field edge paths or tracks nearby until crossing the same level crossing as Option E and linking in with Soham in the same manner.
- **Option G:** This route looks at options for linking Stuntney with Options D or E, that would provide a route away from the A142 and remove the need to cross the road. The Option considers the possibility of a new bridge over the railway to link with Option E or a new route following the railway to link with the existing railway grade separated crossing by the River Great Ouse. A

continuation of the route along the north-eastern side of the railway is also considered that could link with the level crossing on Barway Road.

All of the options have pros and cons, particularly in terms of attractiveness, directness and destinations served and these are considered in the rest of this chapter. Whilst ecology is considered separately in Chapter 9 it is also discussed in less detail in this chapter.

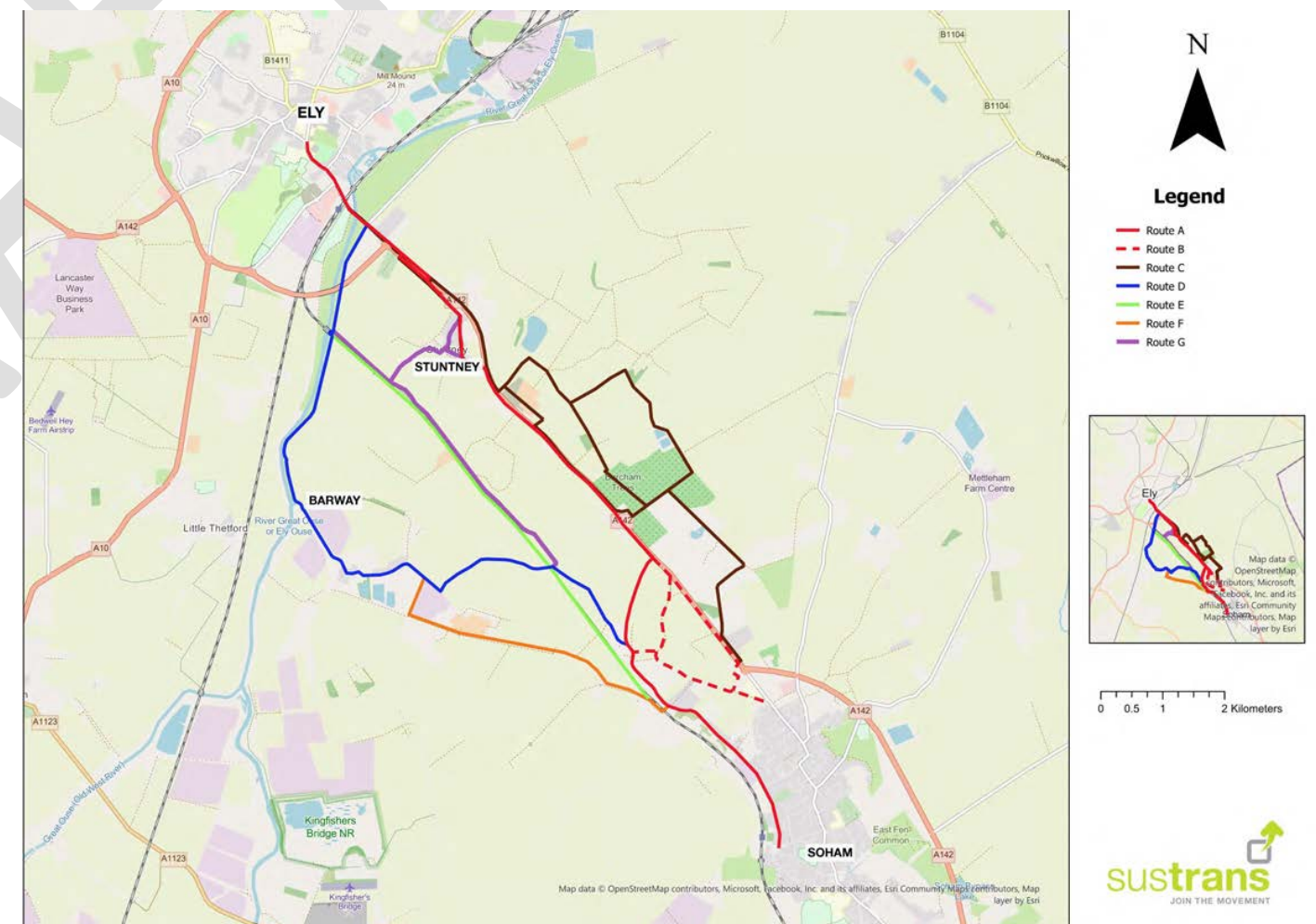


Fig 7.4 showing route options

Option A:

This is the route that most closely follows the A142 although any new path will have to be nearly entirely on private land near to the road, because there is not adequate highway verge for a good path well separated from traffic. The route would be to the north-east of the A142 between Queen Adelaide Way and the edge of Stuntney, where an option for a grade separated crossing of the road is considered. Between Stuntney and Ely Lane the route would be to the south-west of the A142, where it would have to cross Barway Road. Ely Lane is a right of way that would require surfacing between the A142 and the Cotes, which would be used as the link with Soham for this option.

The A142 is a very difficult environment for cycling or walking with little or no provision and high volumes of traffic and significant numbers of HGVs.



Fig 7A.1 View of the A142

The option is described in sections from Ely to Soham noting the challenges of each section, with an overall summary of the option at the end. The sections are numbered as shown in Fig 7A.2

i.

The Porta, near Ely City Centre, has the potential to connect well with most parts of the City, and it is an attractive area with low speeds, but onward cycle access to and from the City centre is made difficult due to one-way streets. It is recommended that one-way streets are reviewed with a view to making them two-way for cycling as should be the norm.



Fig 7A.1.1 View of the Porta and Ely Cathedral with "No Entry" along the most direct route.

From the Porta towards Ely Station the main route is via Back Hill. It is a significant hill and a residential street, but traffic volumes are higher than desirable for mixed use on such a road. The existing carriageway is of a width that means that the lanes could be described as critical width and unacceptable for use as a cycle facility within LTN 1/20.

("Cyclists sharing carriageway – nearside lane in critical range between 3.2m and 3.9m wide and traffic volumes prevent motor vehicles moving easily into opposite lane").

LTN 1/20

Whilst Back Hill is not heavily trafficked the concern is that at busy times traffic volumes could prevent vehicles moving easily into the opposite lane creating a potentially dangerous situation for people

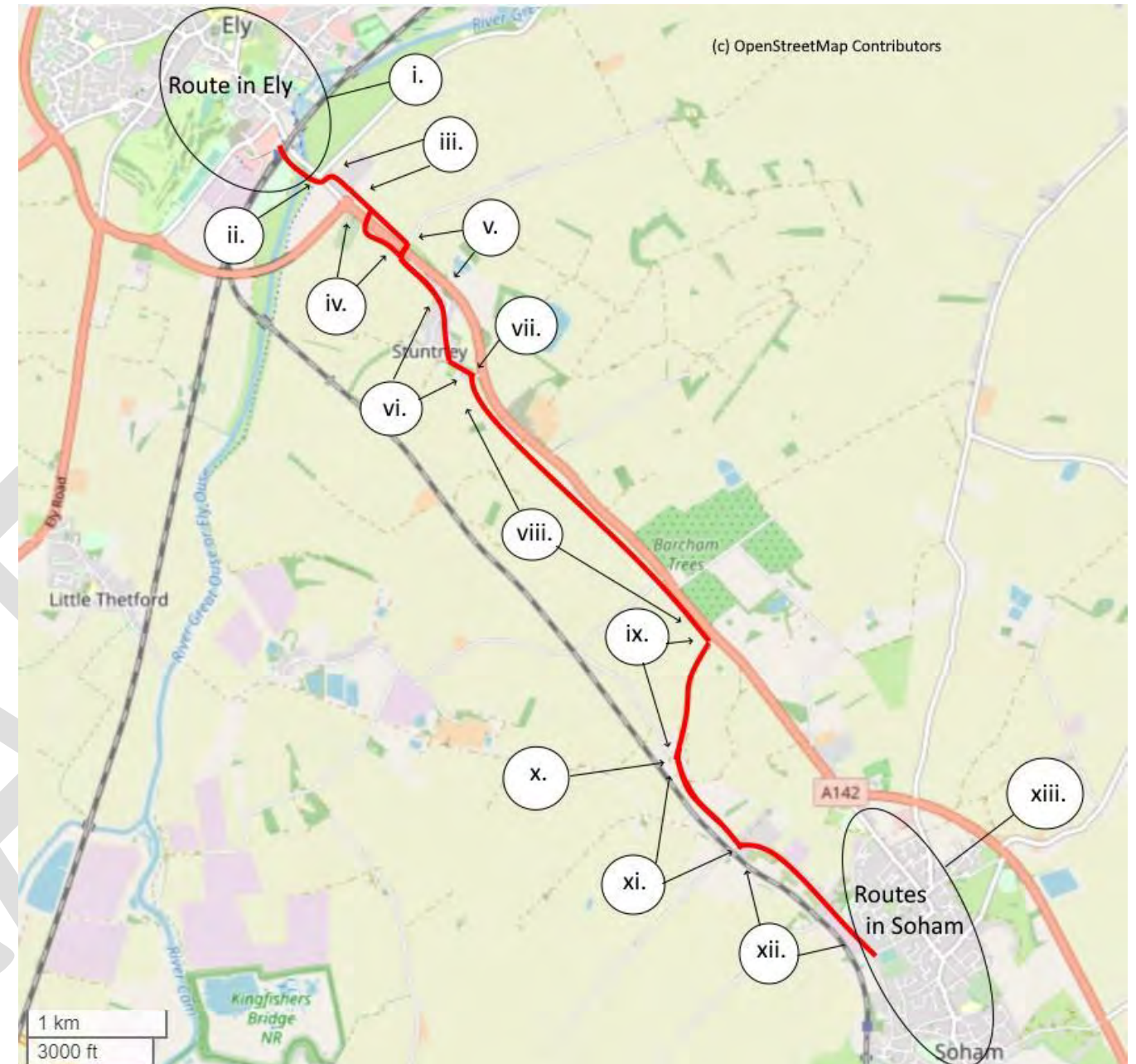


Fig 7A.2 Overview of the option and sections.

on bikes such as children cycling to school or people commuting to or from Ely Station. The way to address this would be by changing the lane width and narrowing the carriageway or reducing traffic volumes so that it would always be easy for drivers to move into another lane. The carriageway width on much of Back Hill is about 7m so it could be reduced, but there is little or no scope to reduce footway widths. (Indeed, it would be desirable to increase widths to at least 2.5m.) Segregated cycleways on Back Hill would be a good option and

shared use of footways would not be appropriate given the gradients. For such a hill with potential for high speeds going down and big variations in speed between people going uphill, cycleways should be of good width and two uni-directional cycleways at least 2.5m wide with a 0.5m buffer. This would mean that almost all of Back Hill would be given over to footways and cycleways with no space for vehicular access, which would clearly be a major issue for residents.

The recommended solution would therefore be to close Back Hill to through traffic, retaining vehicular access to all properties and with a series of bollards at the bottom of the hill (between Dovehouse Close and Potters Lane) or at the top of the hill with a remodelled Barton Square. Arrangements would need to accommodate turning for large vehicles including refuse carts. With traffic volumes reduced on Back Hill no changes to the road would be needed, except for the closure and turning arrangements. As it is, LTN 1/20 guidance is that Back Hill is not currently a suitable cycle route.



Fig 7A.1.2 View towards the Porta at the top of Back Hill.

The East Cambridgeshire Local Plan refers to this area within Ely Strategic Objectives

“ 4. Regenerate the area around the railway station to deliver a vibrant, mixed-use area, and enhance the riverside area of the city.

5. Enable easy access to key destinations with improved walking and cycling routes and public transport services, including a new transport interchange at the railway station and major improvements to the A142 between Angel Drove and Stuntney Causeway to reduce congestion.”

It is hard to see how this can be achieved with the existing traffic volumes. Whilst the station may

remain a significant motorised traffic destination, traffic travelling along the A142 does have an alternative with the Ely bypass and there appears to be significant potential to reduce motorised traffic and greatly enhance the area. Closure of the road under the railway to motorised traffic could help to transform the area as would measures to reallocate road space and change the existing Angel Square roundabout. Suggestions as to how this might be are shown in Fig 7A.1.4. This shows that there is scope to provide high quality routes and maintain vehicular access to the station. Any scheme will need community engagement and a lot more design work.

All of this may seem beyond the scope of an Ely-Soham cycle route but without improvements in Ely the benefits of the route will be limited to those who are currently confident to cycle within existing conditions in Ely. This is of course a small proportion of those who could cycle.



Fig 7A.1.3 View towards the Station showing the Angel Square Roundabout.

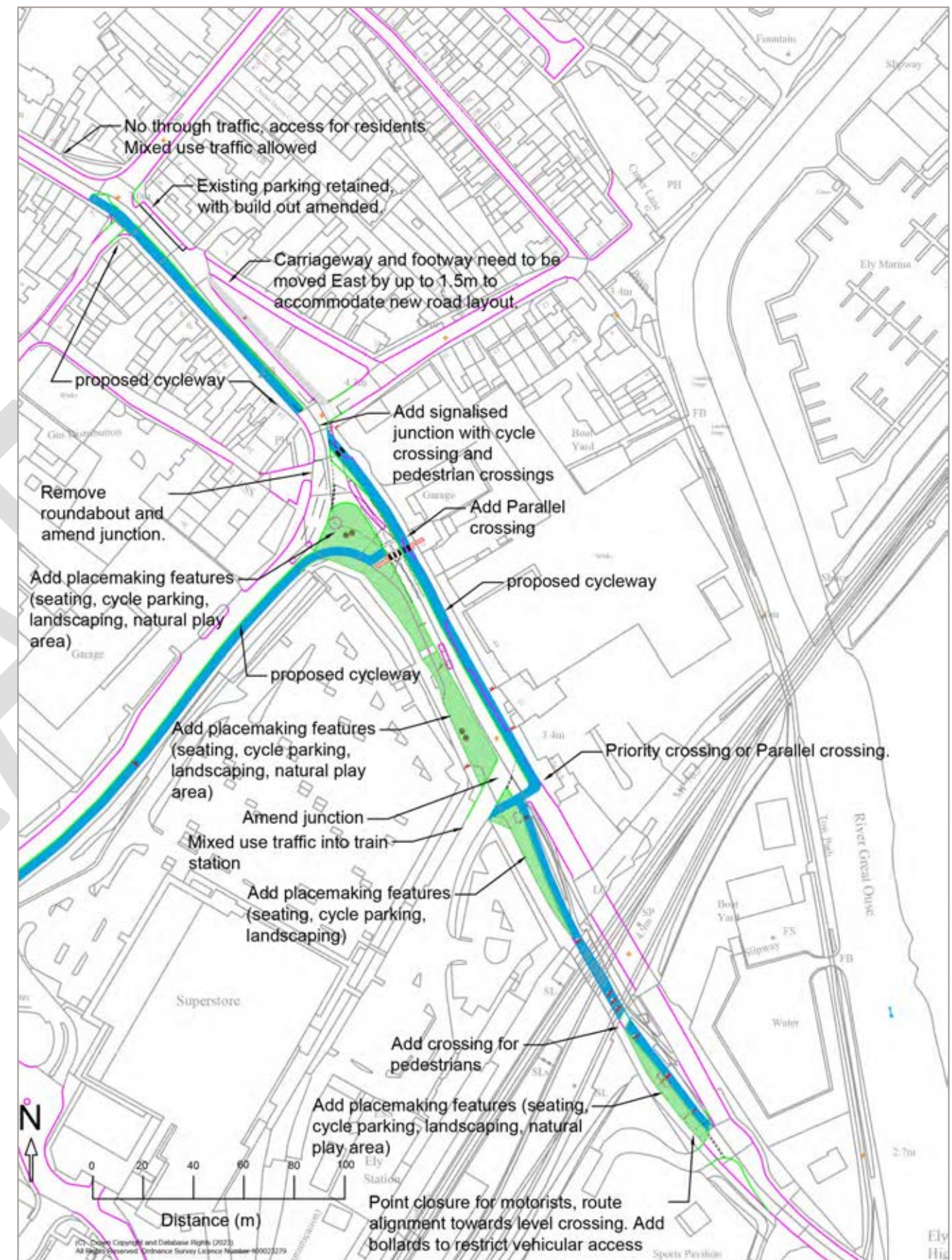


Fig 7A.1.4 Concept Drawing showing the possible transformation of the area.



Fig 7A.1.5 View towards the Angel Square Roundabout from near Ely Station entrance.

The crossing of the railway line from Ely Station towards Stuntney is much improved since road space was reallocated along the road under the railway with a wide footway and motorised traffic signal controlled. However, the arrangement does not comply with LTN 1/20 particularly the path width which should be at least 3m wide with segregation from the traffic and separation from the wall of the railway bridge abutments. The path width is approximately 2.4m compared with the 4m that should be a minimum within LTN 1/20 assuming that shared use is considered suitable in this location. Shared provision will certainly become an issue if the area develops and there is increased pedestrian usage to the river and beyond. The best position for cyclists should be on the road with virtually no motorised traffic on the road.



Fig 7A.1.6 View towards the railway from near Ely Station entrance.

Station Road continues from the railway crossing over the River Great Ouse with vehicular access to the King's School Playing Fields, a residential property and a track that follows the river. All of this access could be maintained from the bypass direction. At present traffic volumes and speeds are unsuitable for cyclists to be mixed with motorised traffic and cyclists are directed to the footway on the north-eastern side. Pedestrian levels are low, but this is not a suitable option and does not comply with LTN 1/20 in terms of width or segregation from traffic or as regards the parapet heights which do not meet the minimum recommended for use by cyclists. The easier and better option is for cyclists to use the road mixed with local traffic at low speed, accessing the local sites only and not through traffic.

The recommended arrangement of cyclists mixing with local traffic at low speed can continue to the Queen Adelaide Way junction. (See Fig 7A.3.1).



Fig 7A.1.7 View towards Soham of Station Road showing the existing shared use provision and low parapets.



Fig 7A.1.8 View of the river from Station Road bridge. If it was a more welcoming environment, the bridge could be a popular and attractive destination.

ii.

To continue Stuntney Way changes are needed to the Queen Adelaide Way junction, with a new signalised arrangement linking with a new segregated cycleway. The changes need to incorporate better path arrangements to link with the existing path to Barway and any new path. (See Option D). See Fig 7A.3.1.



Fig 7A.2.1 View of Station Road looking towards the Queen Adelaide Way junction.

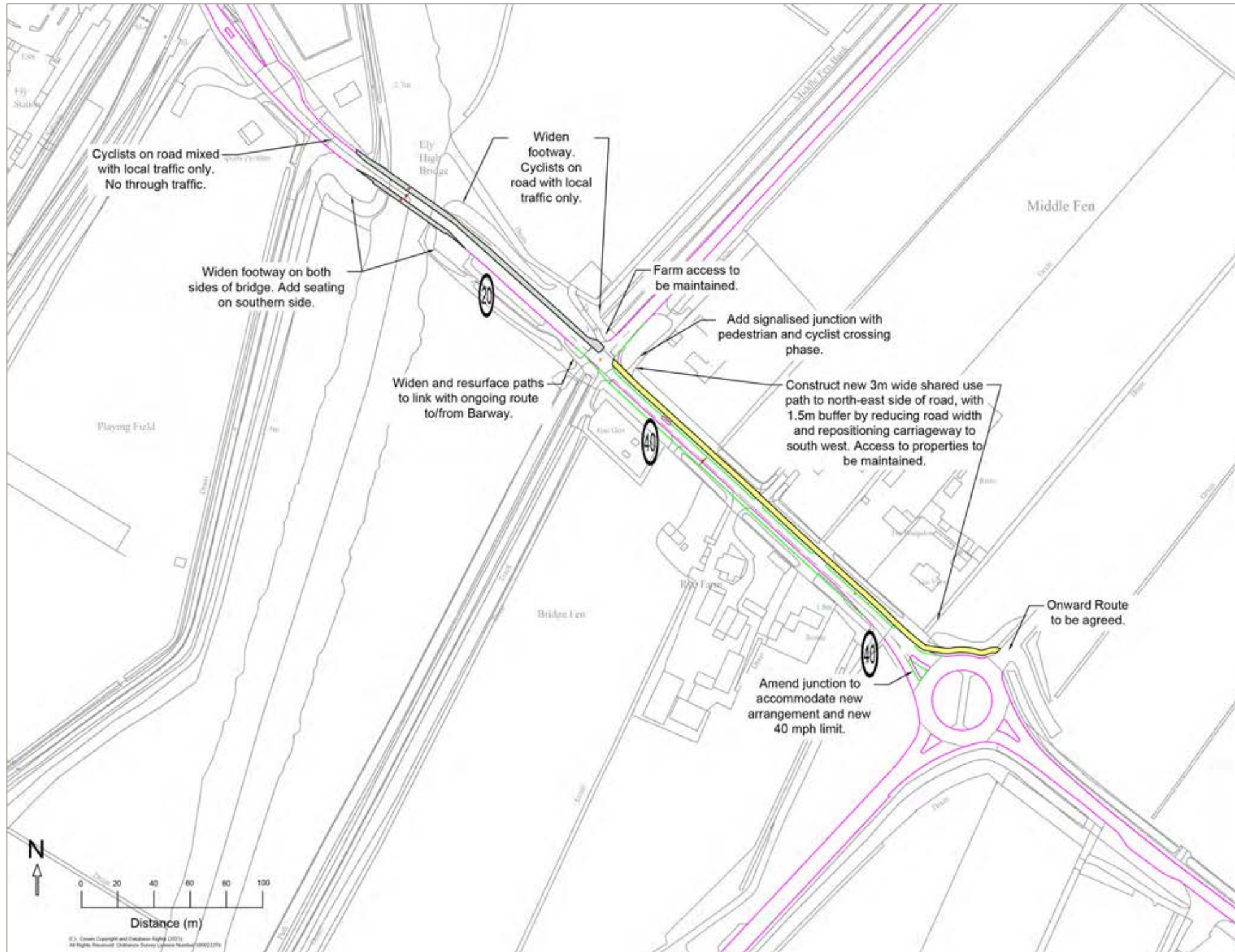


Fig 7A.3.1 Concept Drawings showing the changes needed between the Queen Adelaide Way junction and the Ely bypass roundabout, along Stuntney Way Reserves).

iii.

The continuation of the route along Stuntney Way is challenging with properties on both sides. It is appropriate to reduce traffic speeds to 30mph with the changes. This is also necessary to keep the amount of space needed for a buffer to 0.5m. A higher speed will require more space, which is difficult and would have more impact on properties. The route will require a new segregated cycleway and reallocation of road space as indicated in Fig 7A.3.1.



Fig 7A.3.2 View of Stuntney Way looking towards Ely.

The continuation of the route to Stuntney needs a section of route following the A142 and a crossing of the A142. The existing shared path and crossing do not comply with requirements – the path is too narrow and too close to traffic and the crossing is unprotected. The road has a 50mph limit and as such it should have at least a 2m separation from the carriageway or an absolute minimum of 1.5m (LTN 1/20 Table 6-1). A shared use path of minimum width 3m (LTN 1/20 Table 6-3) is considered appropriate in such a rural setting alongside a main road where pedestrian usage is unlikely to be high. Any crossing of the road will need to be signal controlled, or grade separated to be suitable for most people (LTN 1/20 Table 10-2. This Table would class an uncontrolled crossing such as the existing one as “suitable for few people and will exclude most potential users and/or have safety concerns”.)



Fig 7A.4.1 The existing path

For the path location the obvious location would be at the foot of the embankment that the road is built on. It appears to be possible to do this on highway land, but there may be some technical challenges in ensuring that the embankment is not destabilised, and it may be necessary to try and acquire additional land. It is possible that the path will flood



Fig 7A.4.2 The existing crossing.

and for this reason, it makes sense to retain and not remove the existing path (on higher ground) so that it could be used in times of flood. Usage is likely to be low in flood conditions.

To be certain of the land requirements it is recommended that topographical surveys are carried out of the land away from the road and these are cross-referenced with highway and land boundary records.



Fig 7A.4.3 Marker post showing the highway boundary at one location and the challenges of building a path entirely within that boundary.

For the road crossing the choice is between signals(a) and a grade separated crossing (b).

- A. For signals there are two possible locations that could be considered. These would fall within the 50 mph limit so should be achievable, although it is likely that users may have long waits and safety audits will be needed. The locations would be at or near the Ely bypass roundabout or at or near the Stuntney junction. Both options will need sufficient land for good quality access to the crossings with paths at least 3m wide. At Ely bypass this would have to involve use of the existing allotment access track and that would have to be agreed with allotment holders. Any impact on the allotment may need Secretary of State approval.



Fig 7A.4.4 Possible signalled crossing location by Ely Bypass roundabout.



Fig 7A.4.5 Possible signalled crossing location by Stuntney junction.

B. For a grade separated crossing the location has more flexibility, but again there are two obvious locations. The first location would be a new bridge near the allotments which would give safe access to the allotments. It is recommended that the bridge ramps are formed of earthworks with a relatively short bridge span over the carriageway and this will need land. One of the ramps would block a farm access so a new access will need to be formed as an alternative. This would be a good option, but costly and needs land. The installation of earthwork ramps in this area may be a concern for the Environment Agency and it is possible that they may insist on steelwork ramps or on additional land for compensation. Fig 7A 4.6 is an indication of how a bridge and ramps could look. Some preliminary assessment of levels has been done using Lidar data, but more detailed work is needed.

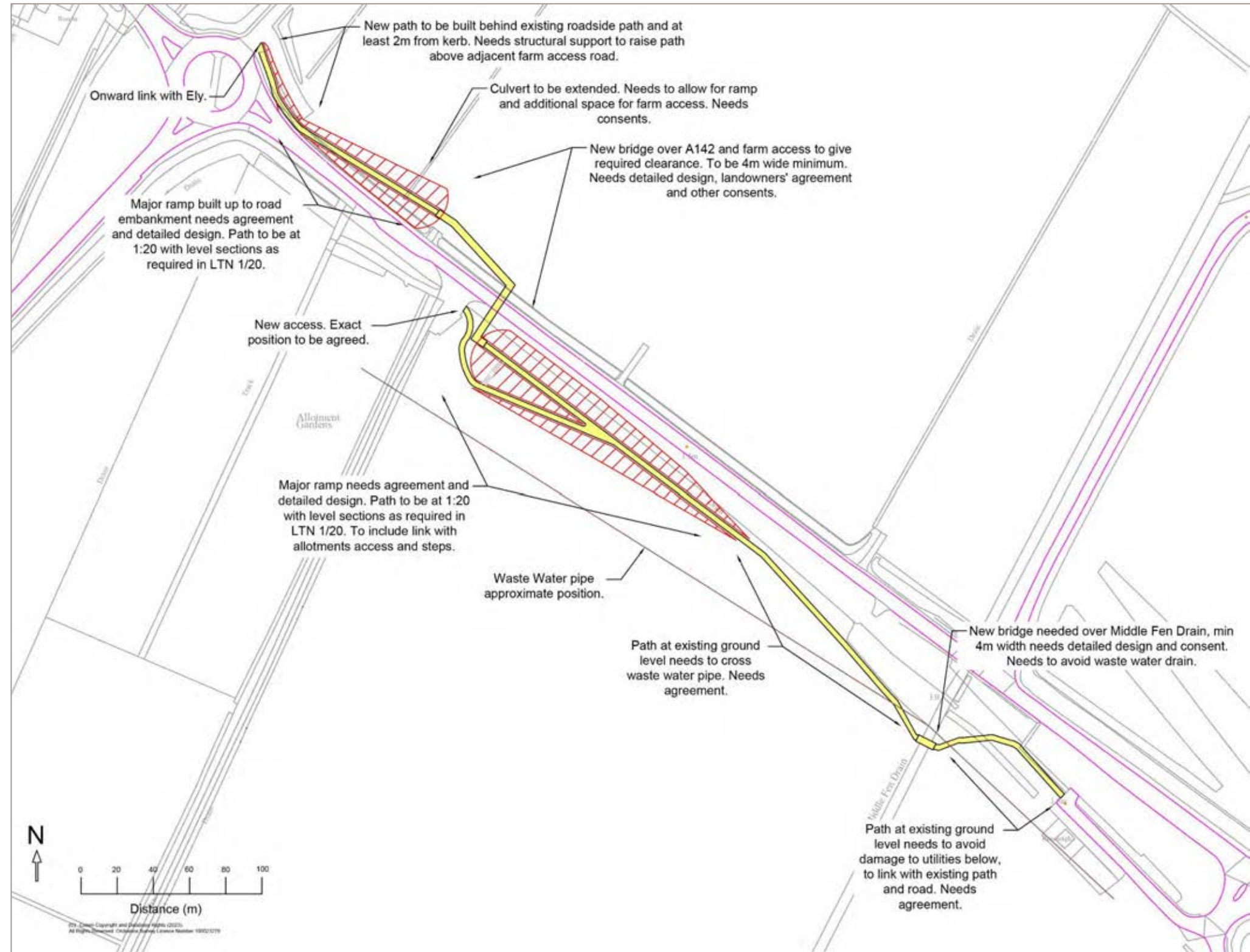


Fig 7A.4.6 Possible bridge near Allotments.

The second obvious location would be to cross under the road beside Middle Fen Drain near Quanea Drove. This is an attractive option because it is already possible to walk under the road, although access is very difficult. The challenges of this option are in creating good access and in maintenance of the route.

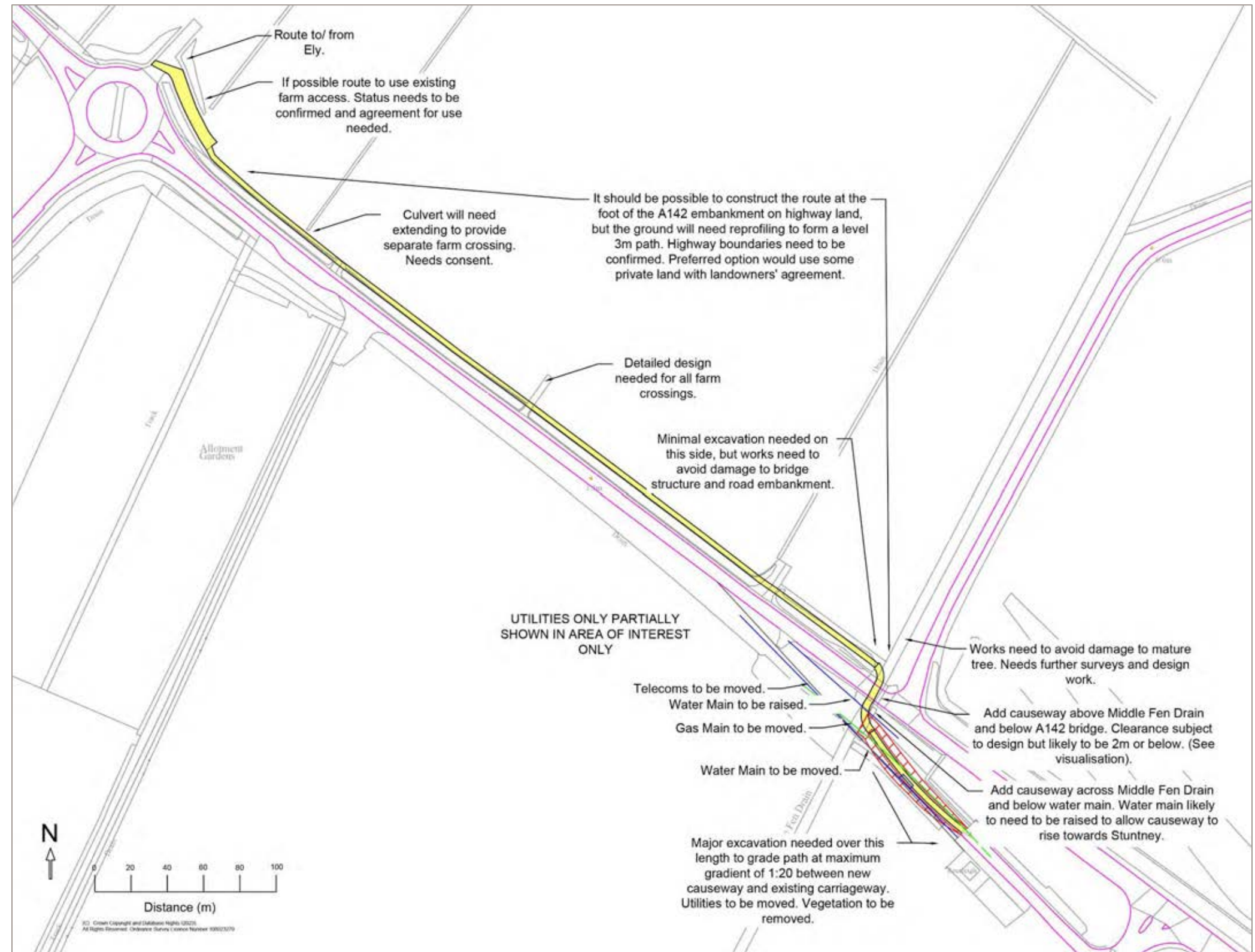


Fig 7A.4.7 Possible route under A 142 near Quanea Drove.

Fig 7A.4.8 shows a view under the road bridge by Middle Fen Drain. The clearance above the edge path and to the underside of the bridge is 2.1m. This is less than required within LTN 1/20 and would be further reduced by adding additional decking, nevertheless it is possible to envisage a causeway under the road as shown in Fig 7A.4.9.

If pursued then a walkway using timber decking presents maintenance concerns, however utilising a deck material such as Duragrip's perforated GRP maintenance is reduced and at times of increased water level the deck does not necessarily act as a barrier.

There are several issues with a route under the A142 like this:

- Any works will need consent, including Environment Agency and the Ely Group of Internal Drainage Boards. A very preliminary discussion was held with Andrew Newton (Engineer at the Boards) and his major initial concern was about flood conditions, but many more discussions would be needed.
- The Drainage Board controls the level of the water in the drain and at times it needs to be raised. This could flood any structure and make the route unusable. It could also impede the flow of water.
- There may be issues of personal security, particularly using the route at night.
- If the route was flooded it would be necessary to use the existing substandard route and crossing.
- Possibly the greater challenges though are in forming an access to any crossing:
- To the north of the A142 access would need to be formed between the road embankment and

a mature tree. There is a risk of damage to both so more detailed surveys and design are needed. (See Fig 7A.4.10, Fig 7A.4.11)

- To the south of the A142 the level differences are greater as the route would need to turn towards Stuntney. In this area the route would follow the old road which used to carry a lot of utilities and it is likely that these utilities will need to be moved, which will be very costly and needs further design work. More detailed surveys and searches are recommended but it seems likely that at least one water main will need moving, one intermediate pressure gas main and telecoms. (See Fig 7A.4.12). In addition to this a lot of vegetation that has grown up on the former carriageway will need to be removed. (See Fig 7A.4.13)



Fig 7A.4.8. View under the A 142 at Middle Fen Drain.



Fig 7A.4.9 Possible causeway arrangement under A 142 for illustrative purposes.



Fig 7A.4.10. View towards bridge and Quanea Drove from Ely direction showing bridge and tree.



Fig 7A.4.12 View showing some of the utilities and vegetation.



Fig 7A.4.11 View from above showing existing narrow edging under bridge.



Fig 7A.4.13 View showing overgrown former carriageway.

v.

In Stuntney part of the former main road is now a no through road and suitable for use. Minor surface repairs are recommended because the surface has deteriorated. (See Fig 7A.4.13)

vi.

The former main road through Stuntney is quiet and speeds do not seem excessive, although no survey has been conducted. In parts it has a 50-mph limit and in the village 30 mph. Ideally the whole route should be 20 mph, although 30 mph with light segregation would be an option under LTN 1/20. It is recommended that central white lines are removed and other visual indicators such as road narrowing or gateways are used. The road is excessively wide in places.



Fig 7A.6.1 View towards Stuntney of 50 mph road.



Fig 7A.6.2 Village entry and 30 mph limit which needs changing to 20 mph.

vii.

As the route leaves Stuntney and approaches the A142 it will be necessary to leave the road, and this should be away from the busy junction where speeds could be fast. (See Fig 7A.7.1). One suitable option would be to use a farm access, which will need landowner's agreement. (See Fig 7A.7.2). If the access point is moved closer to the junction changes may be needed to the junction to slow exit speeds.



Fig 7A.7.1 View of the A142 at the Stuntney South junction



Fig 7A.7.2 Possible link to new path.

viii.

From Stuntney towards Soham there is short length of path designated as shared use and there is a new refuge crossing for access to Ben's Yard. (See Fig 7A.8.1, Fig 7A.8.2 and Fig 7A.8.3 for some views along the route.) These do not comply with LTN 1/20 and will probably only be suitable for confident cyclists. It is therefore recommended that if a new route is to follow this side of the A142 (and therefore avoid the need to cross it) the route should be set behind hedge lines on private land away from the highway. This clearly will impact on farm operations or other activities and will need to be agreed. In places it looks achievable such as Fig 7A.8.4, but since this is private land, it has not been surveyed. Landowners have not been spoken with either. Apart from the need to agree route positions and compensation with several landowners' obvious issues that will need to be addressed include:

- The need to cross the frontage of two private houses near Ben's Yard (see Fig 7A.8.2). Here the existing path is too narrow and is not segregated from the carriageway. It should be possible to widen the path away from the carriageway and remove the central hatching so that the carriageway can be moved across and so that a suitable path can go in front of the properties. This will need safety audit and detailed design and will need to allow for the intermediate pressure gas main in the vicinity.
- The need to cross the frontage of Fenland Lodge, where there is currently no path. It should be possible to construct a path away from the carriageway but that would involve changes to the frontage of the properties, or it would also be possible to divert the path behind the properties.
- The need to cross Barway Road and properties near the junction (see Fig 7A.8.5). Any route is likely to have to be set well back

from the highway here on the Barway side of the properties.



Fig 7A.8.1 View of the A142 from near Stuntney.



Fig 7A.8.2 View of the A142 from near Ben's Yard



Fig 7A.8.3 Most of the A142 has no path.

These issues make this a very difficult section of route to deliver, and it will require lengthy and skillful discussions with landowners to achieve a good route set back from the A142 that is also direct.



Fig 7A.8.4 View towards Ely showing the A142 and fields adjacent.



Fig 7A.8.5 Property and very limited verge space at the Barway Road junction.

ix.

Anyone cycling along the A142 will find it a stressful environment and the first good opportunity to leave it is to turn off to join Ely Lane, which is a Public Byway with rights for walking, cycling, wheeling and horse-riding. It also has rights for driving and this will be an issue that needs to be addressed, because there is a risk that it could be used by cars as a short cut. Another risk is that an intermediate gas main follows the alignment and any works will need to be carefully managed and agreed with Cadent.

Ely Lane is an attractive route that would need surfacing to a high standard so that it can accommodate farm traffic and provide a good smooth surface for all. Given the narrow width this is challenging and will need good engagement with all users. Examples of the existing condition are shown in Fig 7A.9.1-9.5.



Fig 7A.9.1 View of Ely Lane from the A142 junction.



Fig 7A.9.2 View of Ely Lane (1)



Fig 7A.9.5 View of Ely Lane (4)



Fig 7A.9.3 View of Ely Lane (2)



Fig 7A.9.4 View of Ely Lane (3).



Fig 7A.10.1 View of Ely Lane at The Cotes junction.

xi.
The Cotes is a relatively quiet road and has a 30-mph limit. It is recommended that a 20-mph limit is introduced but most importantly it is recommended that careful consideration is given to preventing increased traffic because of growth which might change the nature of the road.



Fig 7A.11.1 View of The Cotes

xii.
The Cotes becomes Broadpiece and then Mereside as you approach Soham and Soham Station. The nature of the road is partly industrial, but mostly residential with parked cars. This is an important route, and it is recommended that it should be designated as 20 mph with a review of junctions and other possible measures to keep speeds low.



Fig 7A.12.1 View of Mereside on the approach to Soham Station.

xiii.

Soham like most historic towns and villages has limited space between buildings and there are many places where it is not possible to reallocate road space to establish segregated cycleways, whilst maintaining two-way traffic flow and space for pedestrians. The reality in Soham is that most cycling will need to be on the roads, but conditions at present are not attractive for this. Measures should be taken to make cycling as safe, convenient, and attractive as possible.



Fig 7A.13.1 The centre of Soham is an important destination but space is limited.

The cycling levels appear to be very low, and it was noticeable at the end of the school day, when visiting, how few pupils were on bikes. Traffic levels can be high and provision for cycling, walking, and wheeling does not match current requirements as set out in LTN 1/20.

Being smaller than Ely, Soham does not have many obvious options for redirecting traffic apart from encouraging as much traffic as possible to use the

bypass rather than driving through the town. The obvious way to do this would be to have a bus gate at the one point where cross-town traffic can cross Soham Lode. At present Cambridgeshire County Council does not have the power to introduce this, but it can be a long-term plan, alongside consideration of other measures that could be used. One option that could be introduced would be a 20-mph zone across much of the built-up area and this is recommended.

A possible arrangement and some key routes are shown in Fig 7A.13.2.

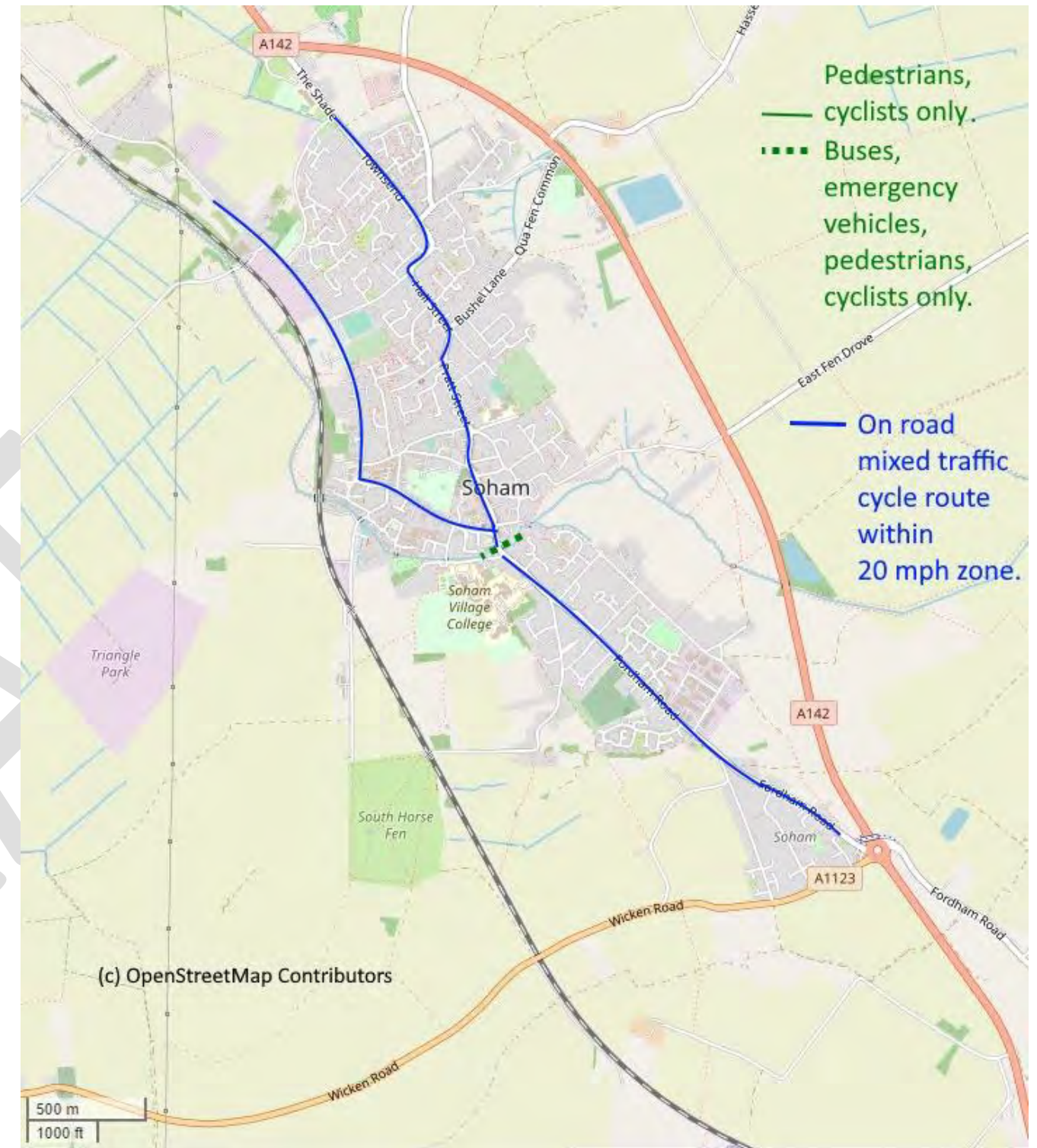


Fig 7A.13.2 Possible arrangement and some key routes in Soham

Option A Summary	7.8 km Net distance from Ely Centre to Soham Centre
<u>Comparative Length (B)</u>	7.97 km (from Ely centre to Soham Centre)
<u>Comparative Length (C)</u>	9.6kmkm (from Ely centre to Soham Centre)
<u>Comparative Length (G)</u>	8.52km (from Ely centre to Soham Centre)
<u>Comparative Length (D)</u>	9.65km (from Ely centre to Soham Centre)
<u>Comparative Length (E)</u>	8.16km (from Ely centre to Soham Centre)
<u>Comparative Length (F)</u>	12.1km (from Ely centre to Soham Centre)
<u>Likely estimated cost</u>	Works in Ely and Soham, 4800m new field edge path, 1x major road crossing, 2 x junction changes. High cost.
<u>Engineering difficulties</u>	Crossing the A142 between Ely and Stuntney either requires a major bridge or challenging works under the A142.
<u>Ecological issues</u>	Mostly existing field edges, or tracks.
<u>Land ownership issues</u>	Needs agreement of landowners for field edge works and includes some challenging sections where properties front on to the A142 and a route will need to either go in front of or behind the properties.
<u>Other issues</u>	The route avoids the need to cross the A142 but in doing so does not provide access to Ben's Yard and destinations on that side of the A142. Ely Lane is an attractive byway but needs major works to accommodate all users. This will be difficult given limited space and a gas main in the vicinity.
<u>Overall</u>	A direct route, but difficult to deliver, especially the A142 crossing and the section between Stuntney and Soham. These issues and the poor connections with destinations on the opposite side of the A142 make this a questionable option.

Table 7A.1 option A summary

Option B

This route is a variation on Option A in that it considers different ways to link the provision with Soham either following the A 142 all the way to the BP station on the edge of Soham or via Rosefield Lane and The Cotes in a similar manner to Option A.

The option is described in sections from Ely to Soham noting the challenges of each section, with an overall summary of the option at the end. The sections are numbered as shown in Fig 7B.1.

i.

The route from Ely to Ely Lane is considered in Option A (Sections i.– viii.) Option A leaves the A142 alignment at Ely Lane and follows Ely Lane to The Cotes. This is the first obvious way to leave the busy A142 corridor, but it might be better to continue further along the corridor.

ii.

Any route continuing along the A142 corridor will need to be on private land set back from the road behind a hedge and has not been surveyed. The route would need landowner's agreement and would have to address matters such as security and farm access across the path as well as the need to break through hedges (see Fig 7B.2.1). All these are similar issues as for Option A from Stuntney and there are no obvious additional barriers in continuing from Ely Lane to the next byway at Rosefield Lane.



Fig 7B.2.1 View from Ely Lane showing where a route would have to continue through a hedge.

iii.

For the route to continue past Rosefield Lane directly towards Soham it will need to pass the frontage of Rosefield House where horse paddocks front the road with fencing well set back from the carriageway. The highway boundary is unclear and will need to be confirmed but it is likely that land will be needed from the property.



Fig 7B.3.1 The fence is likely to need to be moved back slightly here to get sufficient space for a path.

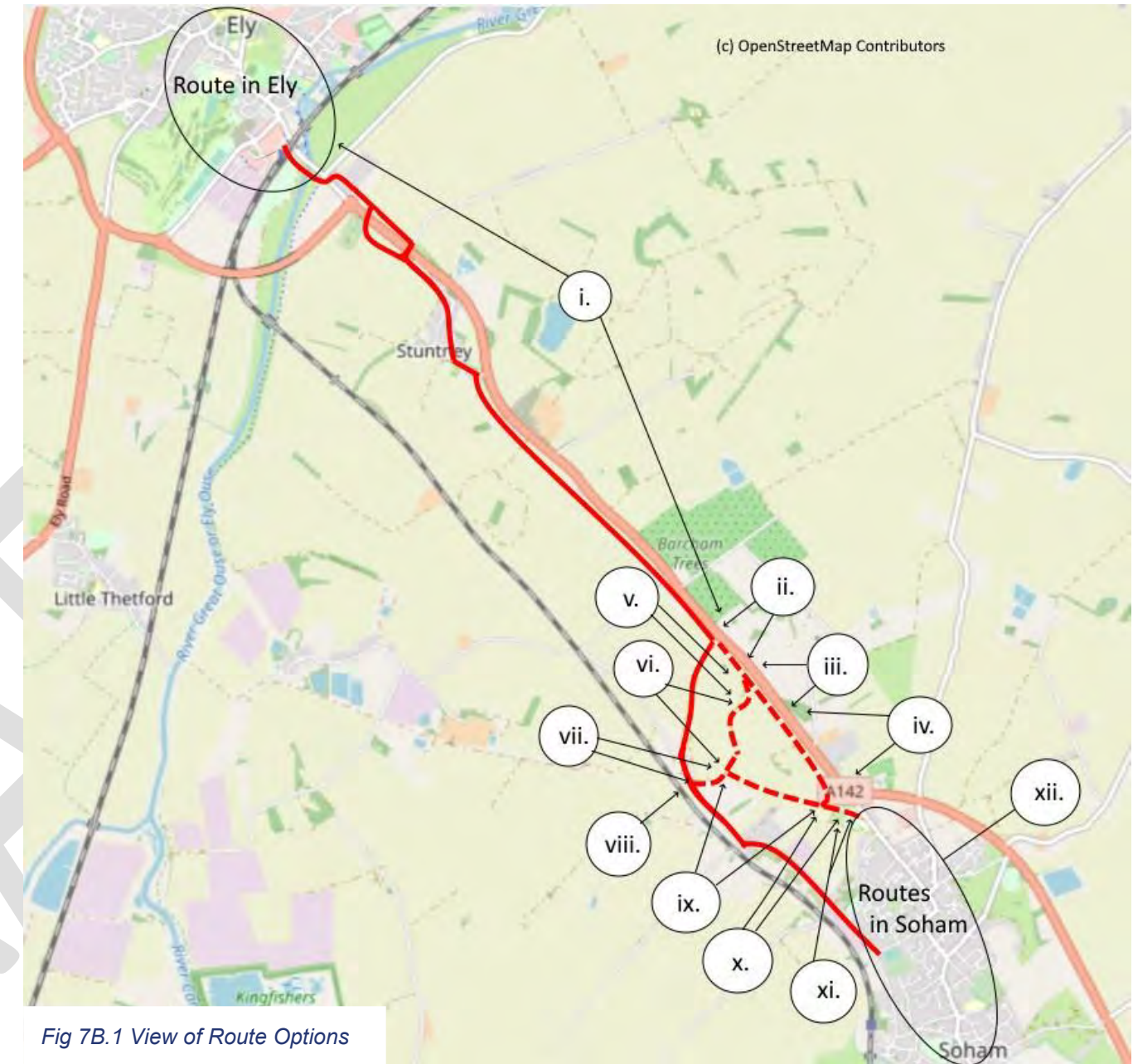


Fig 7B.1 View of Route Options



Fig 7B.3.2 There is more space beyond the access to Rosefield House, but fencing will need changing.

iv.

Any route continuing along the A142 corridor beyond Rosefield House will need to be on private land set back from the road behind a hedge and has not been surveyed, but it appears that there are no major barriers until reaching the BP service station on the edge of Soham. The route would need landowner's agreement and would have to address matters such as security and farm access across the path as well as the need to break through hedges.



Fig 7B.4.1 View across the A142 looking towards Rosefield House from The Shade on the edge of Soham, showing fields on the left where land would be needed for a route.

From the BP Service station, the route would have to turn away from the A142 to join the service road behind the Service Station.



Fig 7B.4.2 View towards the BP service station with the A142 on the left. The route would have to turn left to follow the boundary to join the service road seen in Fig 7B 4.3.



Fig 7B.4.3 View back towards Rosefield House showing the Service Road behind the BP service station where a link with the path in Fig 7.4.2 would be needed.

v.

It is possible to turn away from the A142 at Rosefield Lane. Rosefield Lane is a byway with rights for use by walkers, cyclists, horse-riders, and motor traffic. The first section is, however, very narrow, and difficult for many to use. If it were to be widened out there would be considerable vegetation loss, so a better option may be to continue the route on the same field as section i. (See Fig 7B.5.1) However this would bring it close to a farm building so security would need to be addressed. Surfacing to 3m with a sealed surface is necessary for the route and this will be difficult on this section (see Fig 7B.5.2). It does not appear that Rosefield Lane has the same issues with utilities that Ely Lane has but this will need checking.



Fig 7B.5.1 View of adjacent field from Rosefield Lane.



Fig 7B.5.2 View of this narrow part of Rosefield Lane (with 3m rule just visible on the ground).



Fig 7B.5.3 View of this narrow part of Rosefield Lane.

vi.

After the first section of Rosefield Lane it opens into a very attractive green lane. It has the same byway rights as section v and the same requirements for surfacing. The route passes a property and paddocks. Surfacing is likely to be a sensitive matter and will need good engagement work, to agree a solution.



Fig 7B.6.1 View of Rosefield Lane.



Fig 7B.6.2 View of Rosefield Lane.



Fig 7B.6.3 View of Rosefield Lane.



Fig 7B.6.4 View of Rosefield Lane.



Fig 7B.6.5 View of Rosefield Lane.

vii.

A public footpath leads from Rosefield Lane along a field edge towards The Shade Primary School and the BP service station on the edge of Soham and beyond this point Rosefield Lane becomes narrower and a typical field edge path. Subject to what happens with section viii it may be appropriate for this section to be segregated with a separate 3m bi-directional cycleway and a separate footway and possibly also a separate trotting strip. All of this may require more land than the designated width of the byway and this will need checking with Cambridgeshire County Council Rights of Way team.



Fig 7B.7.1 View of Rosefield Lane.



Fig 7B.7.2 View of Rosefield Lane.

viii.

Rosefield Lane joins the public highway (The Cotes) in a 30-mph zone. Visibility will need checking, but it is better than Ely Lane. The route can continue on the road into Soham as for option A sections xi, xii and xiii - the main recommendation being to change speed limits and consider measures to reduce through traffic.



Fig 7B.8.1 Rosefield Lane junction with The Cotes.

ix.

The public footpath along field edges from Rosefield Lane towards The Shade School on the edge of Soham has potential to make a good off-road link with Soham and link with an area of potential development. In such a location close to the town segregated paths may be appropriate with a new 3m bi-directional cycleway next to the public footpath. This will need landowner's agreement and consents. The route would be useful even without sections v and vi if section vii.



Fig 7B.9.1 View of public footpath and field from Rosefield Lane.



Fig 7B.9.2 View of public footpath and field from opposite end to Fig 7B.9.1 looking towards Rosefield Lane.

x.

A wide path beside the Shade Primary School is fenced off from school grounds. It requires surfacing to at least 3m and ideally with segregated paths. The path was not photographed because at the time of visit the school playground was busy and is close to the path but can be seen in Fig 7B.11.1 behind the gate.



Fig 7B.11.1 View of Covell Corner and the public footpath that runs alongside The Shade Primary School.

xii.

There is potential for a segregated cycleway along some part of The Shade but as it becomes Townsend space is more restricted and the route is likely to need to be on road. Further design work and community engagement is recommended to agree a solution before the Shade. For Soham see Option A, section xiii.



Fig 7B.12.1 View of The Shade with Kingfisher Drive and Covell Corner on the left.

xi.

The route leads to a quiet road at Covell Corner and then joins Kingfisher Drive which leads to The Shade.



Fig 7B.12.2 Space along Townsend is variable.

Option B Summary	
	7.97 km Net distance from Ely Centre to Soham Centre
<u>Comparative Length (A)</u>	7.8 km (from Ely centre to Soham Centre)
<u>Comparative Length (C)</u>	9.6kmkm (from Ely centre to Soham Centre)
<u>Comparative Length (G)</u>	8.52km (from Ely centre to Soham Centre)
<u>Comparative Length (D)</u>	9.65km (from Ely centre to Soham Centre)
<u>Comparative Length (E)</u>	8.16km (from Ely centre to Soham Centre)
<u>Comparative Length (F)</u>	12.1km (from Ely centre to Soham Centre)
<u>Likely estimated cost</u>	Works in Ely and Soham, 5500m new field edge path, 1x major road crossing, 1 x junction changes. Slightly higher cost than Option A.
<u>Engineering difficulties</u>	No major issues identified. The route would be similar to parts of Option A.
<u>Ecological issues</u>	Mostly existing field edges or tracks.
<u>Land ownership issues</u>	Needs agreement of many landowners for field edge works.
<u>Other issues</u>	The use of Rosefield Lane is likely to be sensitive, especially with equestrian use in the area, but it could link well to a new route to/from The Shade on the edge of Soham.
<u>Overall</u>	A route that continues along the A142 and avoids both Ely Lane and Rosefield Lane is likely to be more achievable and simpler than using either of the two byways. This would make a good route and would be cheaper than option C. The disadvantage compared with Option C is that it would serve fewer destinations.

Table 7B.1 option B summary

Option C

This route links with Option A but is focused more on new provision to the north-east of the A142 either closely following the road or further away using quiet lanes or new paths. Options for linking with Stuntney are considered and the need for a new crossing of the A142 by the BP service station is identified.

The option is described in sections from Ely to Soham noting the challenges of each section, with an overall summary of the option at the end. The sections are numbered as shown in Fig 7C.1

i.

Refer to option A for details pertaining to this section of the route.

ii.

Refer to option A for details pertaining to this section of the route.

iii.

Refer to option A for details pertaining to this section of the route.

iv.

The current arrangement for crossing the A142 between Stuntney and Ben's Yard involves the use of a refuge which is not likely to be suitable for all. The only suitable options for all in LTN 1/20 would be a bridge or a signalised crossing. Signals would need to be agreed with Cambridgeshire County Council and given that they have not happened as part of the recent junction changes a bridge seems the more likely option.

A concept design has been prepared based on levels from Lidar data. The concept design proposes the construction of a new 3m path supported on earthworks embankment at 1:20 with resting places. The development of this structure would be subject to landowners' agreements as land would need to be acquired to go into the field. The ramp at 1:20 is slightly longer than 120m to accommodate ground level differences hence it has adopted an S- shape form.

The bridge clearance over the highway and its position of supporting structures on either side would need to be agreed on by Cambridgeshire County Council. The junction will be redesigned to tighten the kerb line and allow for more space for the bridge structure. A safety audit will need to be carried out at this junction to ensure that the visibility splays are achieved, and that accidents will not occur because of motorists making tighter turns from a 50mph road. However, The extra kerb space will also allow for the footway space to remain as is.

The ramp continuing to the other side of the bridge would also need clearance over the farm access, the height of which will need to be decided and will influence the structural detailed design. Road space will also need to be reallocated to allow for the ramp space, thus reducing the road width to as narrow as 4.8m. This will need to be agreed by Cambridgeshire County Council.

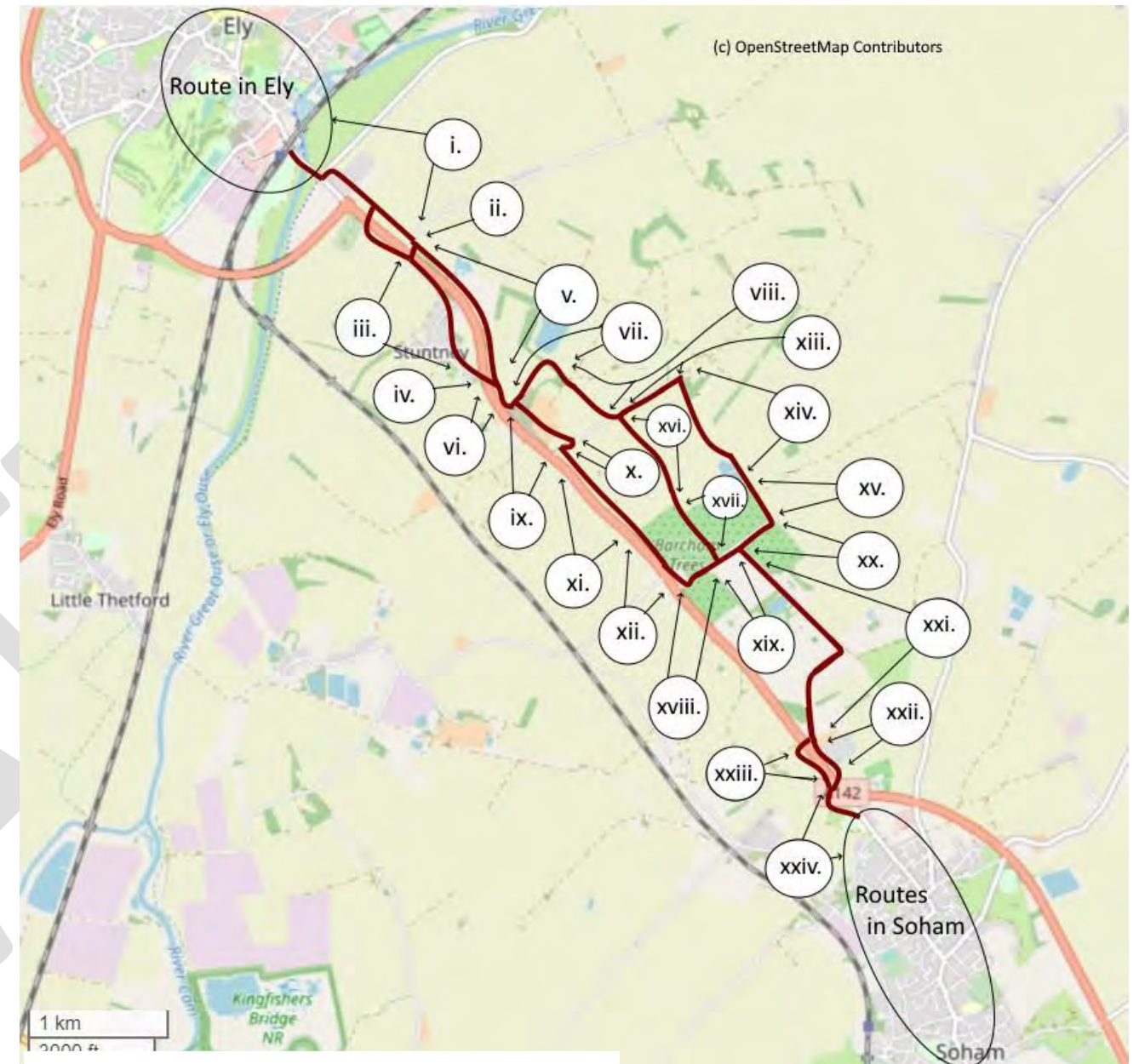


Fig 7C.1 View of Route Options

A further complication for the development of the access ramp would be the identified telegraph pole along the alignment of the ramp. This would need to be moved which will create additional costs. A greater challenge is however the intermediate pressure gas main that runs under the footway (See appendix C). This makes the foundations for the bridge structure very difficult. Options would include relocating the gas main, positioning the ramp in the adjacent field, having a cable stay bridge or offsetting the foundations, which will have an impact on trees. This all needs to be considered as part of detailed design. A shared space is needed at the start of the bridge so the road space would need to be repositioned south.

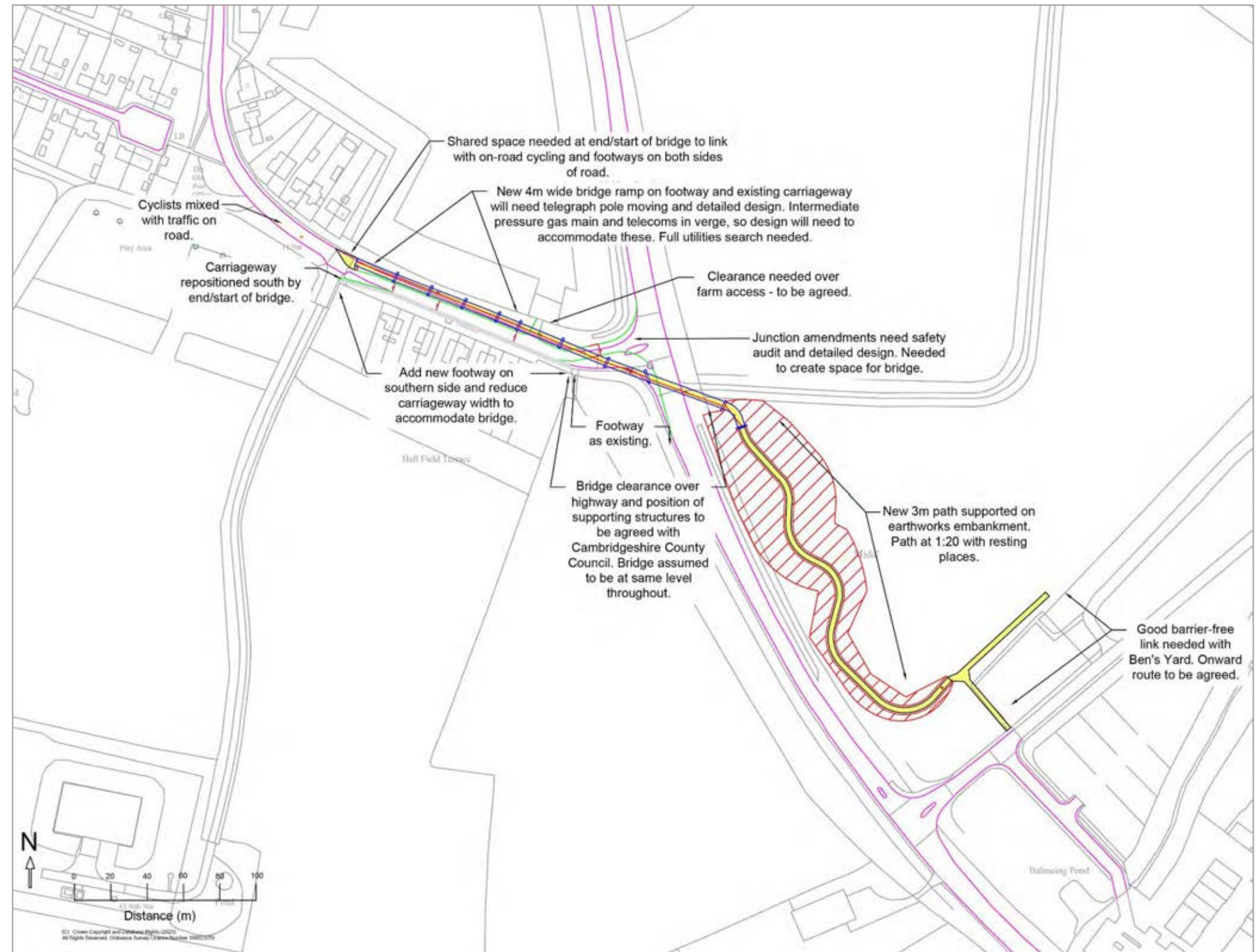


Fig 7C.4.1 image showing the S-bridge near Stuntney.



Fig 7C.4.2 View of the field and potential bridge ramp site from Ben's Yard.



Fig 7C.4.3 View of the field and potential bridge ramp site from Stuntney towards Ben's Yard.



Fig 7C.4.4 View of Soham Road, towards the A142, where the ramp would need to be on the left.



Fig 7C.4.5 View of Soham Road, from the A142, where the ramp would need to cross over the road and then be on the right.

v.

It would be possible to avoid crossing the A142 to access Stuntney, which would bring considerable savings. If that were the case this segment of the route proposes the alignment adjacent to the A142 set back at least 2m from the carriageway. The verge space is variable, and the route would need some land from The Old Hall. The alignment should address the gradient complication by constructing a cycleway, sensitive to the contour of the existing land and will need to avoid trees. In places this looks achievable, but overall, the route seems difficult to achieve without land from The Old Hall and it is of little value for the residents of Stuntney.

Further complications ought to be considered as a potable water pipe intersects the route alignment adjacent to the Old Hall Ely Building and would prove to be costly to remove or carefully protect. (See appendix B

vi.

This segment depends on whether a new bridge is installed or not. If a new bridge and ramps are installed the ramps need to link with Ben's Yard access road. If there is no bridge and section v is developed the route will need to continue at field level to link with Ben's Yard. This segment is also subject to landownership agreement and would require a 3m sealed path.

vii.

This segment would use recently opened permissive paths at Ben's Yard and would need landowner's agreement to formalise usage and widen and surface paths to at least 3m with a sealed surface.

Ben's Yard has provided rural employment opportunities for employment growth with the estimated 30 full-time equivalent jobs created as a result. The route alignment provides a direct cycle linkage from Ely and Soham, making cycling a viable option for workers and visitors. There is cycle parking at the site, but it is very difficult to access by bike and does not comply with LTN 1/20 requirements, so improved access would be highly beneficial.



Fig 7C.7.1 Ben's Yard is attracting lots of visitors, but there were no cycles in the cycle parking at the time of visit.



Fig 7C.7.2 View of Ben Yard's site.



Fig 7C.7.3 The proposed route would widen and surface this existing path to 3m and would widen and surface an existing farm track. (See Fig 7C.8.1).



Fig 7C.7.4 Existing attractive access routes at Ben's Yard. These are not suitable for all users due to the quality of surface.

viii.

Section vii uses routes that are currently permissive paths, but there is no suitable walking or cycle access from Ben's Yard towards Soham. An obvious alignment would be to follow the existing permissive path through a farm gate and then follow field boundaries to Nornea Lane. The alignment would need to fit with farm operations and be agreed with landowners. It would require the development of a new 3m wide path along the field, till it merges with Nornea Lane. The route has not been surveyed.



Fig 7C.8.1 The existing permissive route finishes at this farm gate. If a route could continue on to Nornea Lane this would be a very good alignment.



Fig 7C.8.2 View of potential route along boundary seen from Nornea Lane.

ix.

The development already proposes 40 cycle spaces in efforts to encourage cycling, but with no cycle access from the Soham direction consideration should be given to all possible routes. A route that passes behind the properties that front onto the A142 and that links with Ben's Yard near the new play area may be possible, depending on farm operations. This could then link with the Ben's Yard access road and would serve the development well. This option would be an alternative to vii and viii and other options may be available. All would need to be agreed with landowners and fit with other activities.



Fig 7C.9.1 There is not sufficient space for a route to pass between residential properties and the A142 unless major works were carried out to realign the carriageway. Options on private land set away from the road appear to be better.



Fig 7C.9.2 The aim of options outlined in vii, viii and ix is to find a suitable alternative to this path, which is the best option currently available, and which does not extend to Ben's Yard entrance.

x.

Any agreed alignment for ix will emerge on Nornea Lane and depending on the alignment may need to use a short section of Nornea Lane to continue. This has low traffic volumes and speeds and should ideally be designated as a 20 mph Quiet Lane.



Fig 7C.10.1 View of Nornea Lane.

xi.

Beyond Nornea Lane the route can continue along the A142 as a direct route towards Soham and will require a new 3m shared path set back behind the hedge line to ensure the safety and comfort of cyclists along the busy A142. There are no obvious barriers, but this will need landowner's agreement. It will be essential that the route alignment is set far enough back from the road to avoid impact on the important ecology along one part of this alignment.



Fig 7C.11.1 Any route would have to be behind the hedge on private land.



Fig 7C.11.2 The sensitive ecological area is on the right so any path would have to be on the cropped land.

xii.

At this segment the route aligns with the boundary of Barcham Trees Ltd and would need to continue in a similar manner to section xi but passing through the landscaped frontage of as there is insufficient highway space to construct a segregated cycleway along the verge. There appears to be space on the Barcham's land but how any route would continue to link with Eye Hill Drove is uncertain and the alignment would need to be agreed with the landowners to suit their operations and any future plans to attract visitors. People who appear to be Barchams staff have been seen cycling along the A142 so any route would be of great benefit to their staff.



Fig 7C.12.1 The Barcham frontage.



Fig 7C.12.2 Any route would have to be behind the hedge on private land on the right. (View towards Ely from Eye Hill Drove junction.)

xiii.

The route to the rear of Ben's Yard (viii) would reach Nornea Lane well away from the A142 and there are again two obvious options for continuation, labelled as xiii, xiv and xv or as xvi and xvii. Both aim to connect with the next road Eye Hill Drove.

This segment of the route will continue the alignment along Nornea lane. This segment of Nornea Lane has numerous surface deformations and would therefore require resurfacing works for it to be in suitable condition for cyclists. At the end of this alignment there is private property.



Fig 7C.13.1 Nornea Lane showing cracking and uneven surface.

xiv.

There is no connection between Nornea Lane and Eye Hill Drove apart from going along the A142 or going on private land, so a route has not been surveyed, but there appears to be an obvious alignment following field boundaries and near a reservoir. Any alignment would need to be agreed on with landowners.



Fig 7C.14.1 View from Nornea Lane along field edge towards Eye Hill Drove.

xv.

The route alignment will continue to follow the boundary edge, which now has an existing unsurfaced road, along the edge of Barcham's tree nursery, to accommodate tractors or maintenance vehicles within the property. The route would need surfacing to 3m and would need to be able to accommodate all required traffic. Agreements will need to be made with landowners to validate the feasibility of this option.



Fig 7C.15.1 Image showing gated track.

Barcham Trees development attracts visitors from within and beyond the district. They are currently proposing to build a new arboretum and visitors centre which would subsequently attract more visitors to the area. Therefore, the proposition of a route alignment within the land boundary, following existing paths, would be optimal as it would improve accessibility for users and promote cyclability amongst users in nearby towns such as Stuntney, Ely and Soham as it provides direct linkage to such facilities.

xvi.

This route alignment continues straight on from the assumed alignment of route viii after crossing Nornea Lane. It creates a very direct route to the centre of Barchams that is well away from the A142. Again, land agreements would need to be made. The route would continue to Barcham's boundary where it would need to continue to Eye Hill Drove.



Fig 7C.16.1 View from Nornea Lane showing the suggested alignment along field edge and farm track.

xvii.

The continuation of the route falls within Barcham Trees Ltd boundary, between an array of trees which will create a more scenic and desirable route for users. This alignment would continue to the entrance and parking area. From a safety perspective, it is advantageous for cycle movements, pedestrian/customer movements and access to be in proximity. Clearly there would be significant operational and security issues to resolve for a route that would need to be always available.

Barcham Trees development attracts visitors from within and beyond the district. They are currently proposing to build a new arboretum and visitors centre which would subsequently attract more visitors to the area. Therefore, the proposition of a route alignment within the land boundary, following existing paths, would be optimal as it would improve accessibility for users and promote cyclability amongst users in nearby towns such as Stuntney, Ely and Soham as it provides direct linkage to such facilities.

The various options all converge on Eye Hill Drove using different sections of the road which all have different issues.



Fig 7C.17.1 View from Eye Hill Drove of the Barchams entrance.

xviii.

Eye Hill Drove is an attractive road that links with the A142, and this segment of route is between the A142, and the entrance point of Barcham Trees to the A142. The road is designated as at national speed limit. It is desirable to reduce traffic speeds to 20mph to allow for mixed use traffic and increase the safety of cyclists. The greatest concern with this section of road is that cyclists would need to mix with traffic accessing Barcham's site, which will include lorries and cars. Any increase in traffic would be an issue and may mean that a segregated alternative is needed. For the most part, the road is in good condition with a few potholes along the edge of the road, that would need to be addressed for the safety of cyclists.



Fig 7C.18.1 Eye Hill Drove needs protecting as a Quiet Lane – a great local asset.

xix.

The same measures outlined in section xvii will apply for this segment of the road -beyond the entrance of Barcham Trees, although traffic levels are likely to be less of an issue than section xviii. This segment of the route also provides entrances to multiple property so would be appropriate to assume lower speed limits to improve the safety of road users and residents.

xx.

The road condition along this segment is much worse than the start of the road with the numerous occurrences of potholes which is hazardous for on road cyclists and resurfacing will be required.



Fig 7C.20.1 View of north-eastern part of Eye Hill Drove.

xxi.

This segment of the route follows Barcham Road till it meets the A142. It is both rural and residential in parts. The condition of the existing road along this segment of the proposed route is in relatively good condition for the most part but would require resurfacing works to address surface deformations. Traffic along this route would be low, with main users being those accessing farmland and property and is therefore appropriate for mixed use traffic. The existing road passes an ornamental pond, thus adding to the attractiveness of the route. Like Eye Hill Drove it is recommended that this attractive road is designated as a Quiet Lane with a 20-mph limit.



Fig 7C.21.1 Barcham Road.



Fig 7C.21.2 Barcham Road.

xxii.

Barcham Road joins the A142 at The Shade, where there are houses and businesses near the road. Locals have to use the A142 to access Soham. There is no suitable provision for cyclists at this point and pedestrians have a narrow footway and have to cross the busy road at grade.

The guidance in LTN 1/20 is clear that for such a busy road as the A142 a grade separated crossing, or a signalised crossing are required to be suitable for all. Given that people live in this area a new crossing is important.

An option for a bridge has been considered and a preliminary design prepared. This would involve construction of a shared path through the green space that runs between the A142 and the housing with ramps on part of that green space for a new bridge over the A142.



Fig 7C.22.1 Green space alongside the A142.

Common Land but structures and bridges may be more difficult. In the past the road was built on the Common so changes are possible. Commons consent could take a long time and it is recommended that a year be allowed just for this. This is an unusual, isolated bit of Common and there is a big need for better provision, so it is worth pursuing this option unless a signalised crossing is preferred. A preliminary design idea is shown in Fig 7C.22.3, which shows that a bridge and ramps should be possible, but more detailed design is needed. This will need to also consider whether the overhead power lines in the area need to be moved or whether the ramps can be built without any changes. In any case these power lines will need to be assessed carefully and works well managed.



Fig 7C.22.2 Green space alongside the A142.

The Green space along the A142 would appear to be an excellent space for path and ramps, but it is Common land and there are major challenges. Firstly, the landowner (the Lord of the Manor of Soham) would need to agree with the proposals and secondly Commons Consent would be needed. There is a mechanism for constructing paths on

Stairs will also need to be put in place to allow users who do not need ramp access to cross over the bridge quickly. A new footway is also proposed.

For the highway crossing consultation would need to be had with Cambridgeshire County Council to agree on bridge clearances and the positioning of its supporting structure – no discussions have taken place at this point. The bridge and ramp would then continue on the south-western side of the A142, where the land is designated for future employment development and is not common land. The route can link with the service road behind the BP service.

Although the bridge crossing option better serves the residents with a more direct route into Soham than a signalised crossing, it would be very costly and land agreements to build on common land will be hard. Therefore, the signalised junction option may be more achievable.

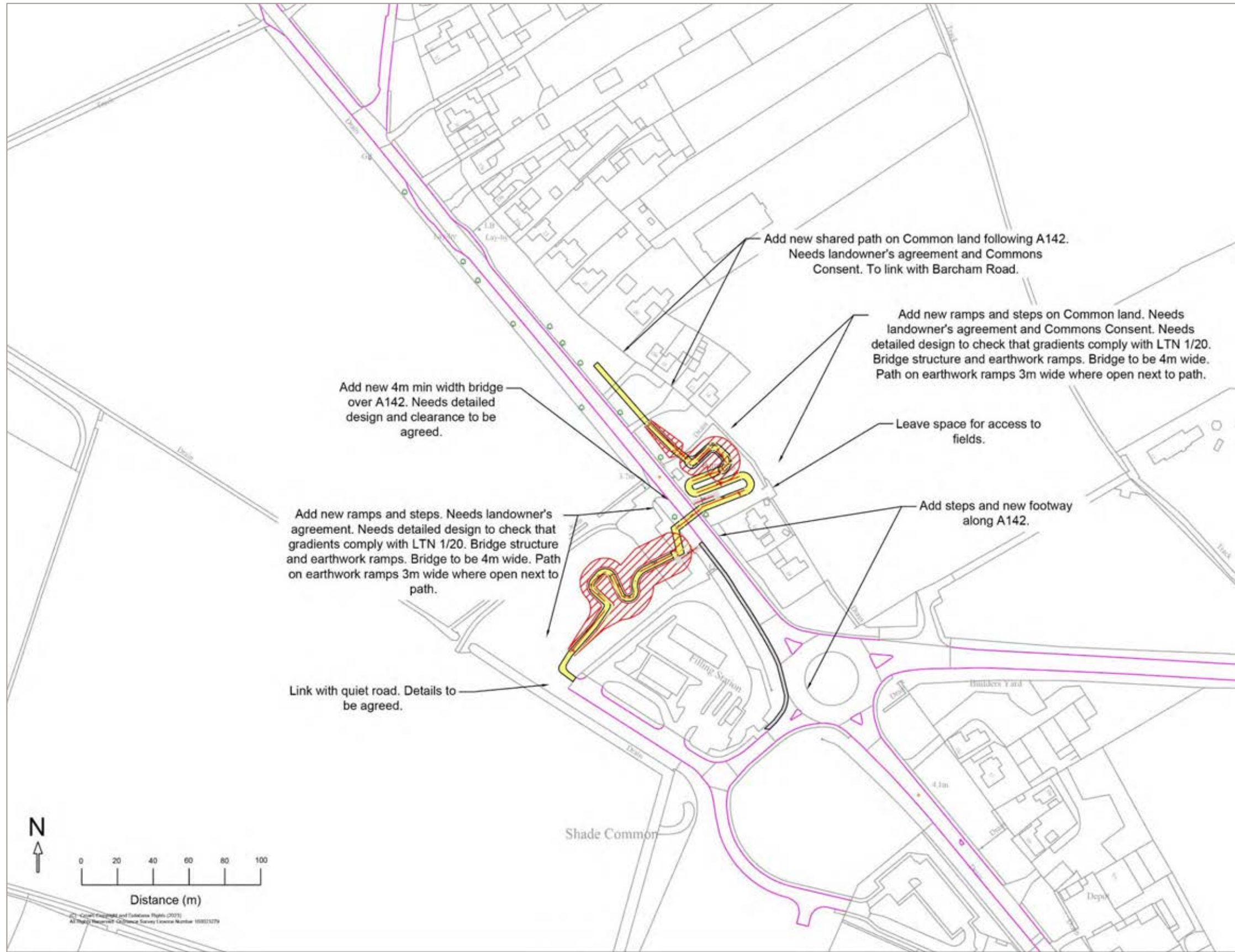


Figure 7C.22.3 Concept design of earthworks ramp and bridge

xxiii.

As an alternative to a bridge a signalised crossing is possible. There is an option to construct a signalised crossing at the Barcham Road junction. This will require road space to be reallocated where kerb lines will be tightened thus creating more footway space. This will ensure all works avoid the Common Land thus avoiding the issue of attaining difficult landownership agreements.

Safety audits will need to be carried out alongside a detailed design to ensure visibility splays are achieved and turning is safe. As there are no signals along the A142 this suggestion may be contested. However, it is appropriate as traffic enters Soham, with residential housing parallel to the A142 along this segment. The crossing allows for both pedestrians and cyclists to cross safely and continue the route alignment.

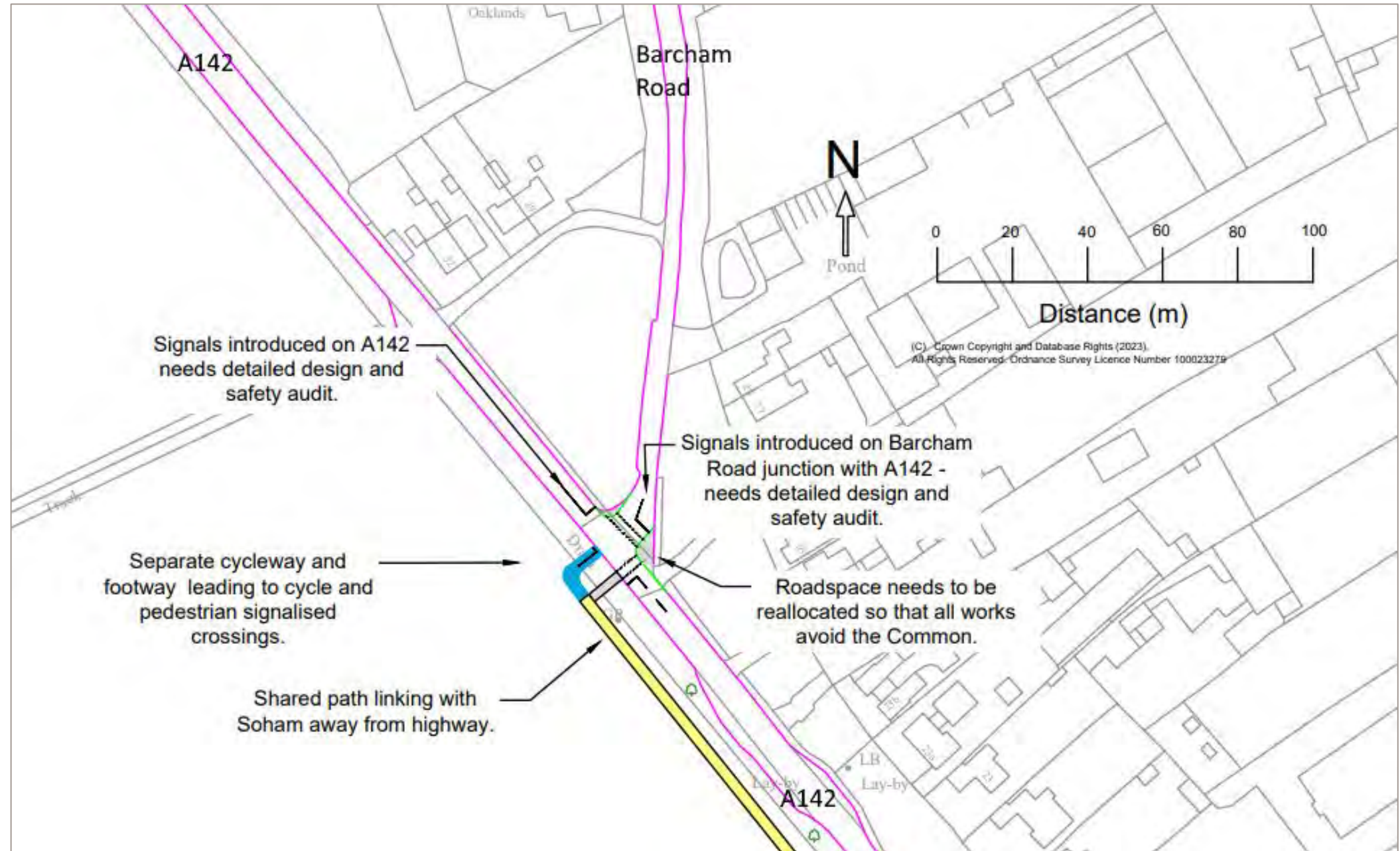


Figure 7C.23.1 Concept design of Signalised junction



Figure 7C.23.2 View from Barcham Road of the junction showing the wide junction which could be tightened up.

To the south-west of the A142 a new path would need to be constructed away from the A142 on land that is potential development land. The path would need to link with the existing service road to the rear of the BP service station.



Figure 7C.23.3 View towards the A142 showing where the linking path would need to be.

xxiv.

The route can use the BP service station access road unless this road becomes very busy with new traffic and would then need to link with the existing path besides the Shade Primary School proposed for Option B. Part of the route could be on road and part on new paths and there are various options subject to local preference. The route leads to a quiet road at Covell Corner and then joins Kingfisher Drive which leads to The Shade. There is potential for a segregated cycleway along some part of The Shade but as it becomes Townsend space is more restricted and the route is likely to need to be on road. Further design work and community engagement is recommended to agree a solution before the Shade. For Soham see Option A, section xiii.



Figure 7C.24.2 View of The Shade Primary School access road. The route can follow the road and would need a new path to the right to link with the existing path along the school boundary that leads to Covell Corner.



Fig 7C.24.4 View of The Shade with Kingfisher Drive and Covell Corner on the left.



Figure 7C.24.1 View of service road. It is a quiet road at present. If the nature changes alternative provision may be needed.



Figure 7C.24.3 As with Option B the route would enter Soham via the track along the school boundary and through Covell Corner.



Fig 7C.24.5 Space along Townsend is variable.

Option C Summary	
	9.6km Net distance from Ely Centre to Soham Centre
<u>Comparative Length (A)</u>	7.8 km (from Ely centre to Soham Centre)
<u>Comparative Length (B)</u>	7.97km (from Ely centre to Soham Centre)
<u>Comparative Length (D)</u>	9.65km (from Ely centre to Soham Centre)
<u>Comparative Length (E)</u>	8.16km (from Ely centre to Soham Centre)
<u>Comparative Length (F)</u>	12.1km (from Ely centre to Soham Centre)
<u>Comparative Length (G)</u>	8.52km (from Ely centre to Soham Centre)
<u>Likely estimated cost</u>	Works in Ely and Soham, 3500m new field edge path, 1000m road resurfacing, 3x major road crossings, Most expensive option due to road crossings.
<u>Engineering difficulties</u>	This option includes 3 crossings of the A142 (including the Stuntney North crossing identified in Option A). All of these crossings are challenging.
<u>Ecological issues</u>	Mostly existing field edges, or tracks and will need to keep away from sensitive habitat near the Barcham's site.
<u>Land ownership issues</u>	Needs agreement of many landowners for field edge works and a route through Ben's Yard. There are a number of choices along the route – and the final alignment will depend on discussions with landowners.
<u>Other issues</u>	Any opportunities to link with development are worth pursuing and this may include Barcham's proposed visitor centre. One of the options for crossing the A142 near Soham would have major impact on Common land so if taken forward this could take a long time to get landowner's agreement and Common's consent.
<u>Overall</u>	This would make a very good route and is worth pursuing. It would be less direct than Option A but would serve more destinations.

Table 7C.1 option C summary

Option D

This route follows the River Great Ouse and the National Cycle Network between Stuntney Causeway and Barway. Several options are considered for upgrading the existing path, including potentially new paths close to, but not on the same alignment as existing. Within Barway the route could follow the National Cycle Network through the village but as traffic levels increase options for a new segregated path following Barway Road away from the highway to the existing level crossing are considered. From the level crossing, Blockmoor Road and the Cotes would be used as the link with Soham.

The option is described in sections from Ely to Soham noting the challenges of each section, with an overall summary of the option at the end. The sections are numbered as shown in Fig 7D.1

- i.
- refer to route A
- ii.
- refer to route A
- iii.
- refer to route A

- iv.
- The obvious route alignment would follow the existing path on the flood bank - the flood defence. The existing path was constructed 1.5m-2m in width however, due to lack of maintenance this width is reduced. According to LTN 1/20, a shared use path should be at a minimum width of 3.0m. This is achievable, subject to agreement with Environment

Agency, where figure 7D.4.2 portrays the possible 3m path alignment along the top of the flood bank. A major concern with this is the need to avoid damage to the flood bank and the risk that the path will be damaged -either by movement of the bank or by heavy equipment running over it particularly at the edges. The construction works would have to be substantial. Another major concern is the flood bank itself. If there were works to reinforce or raise the flood bank the path may be lost. (This has been a risk since the original path was built over 20 years ago and no changes have happened to the bank.)

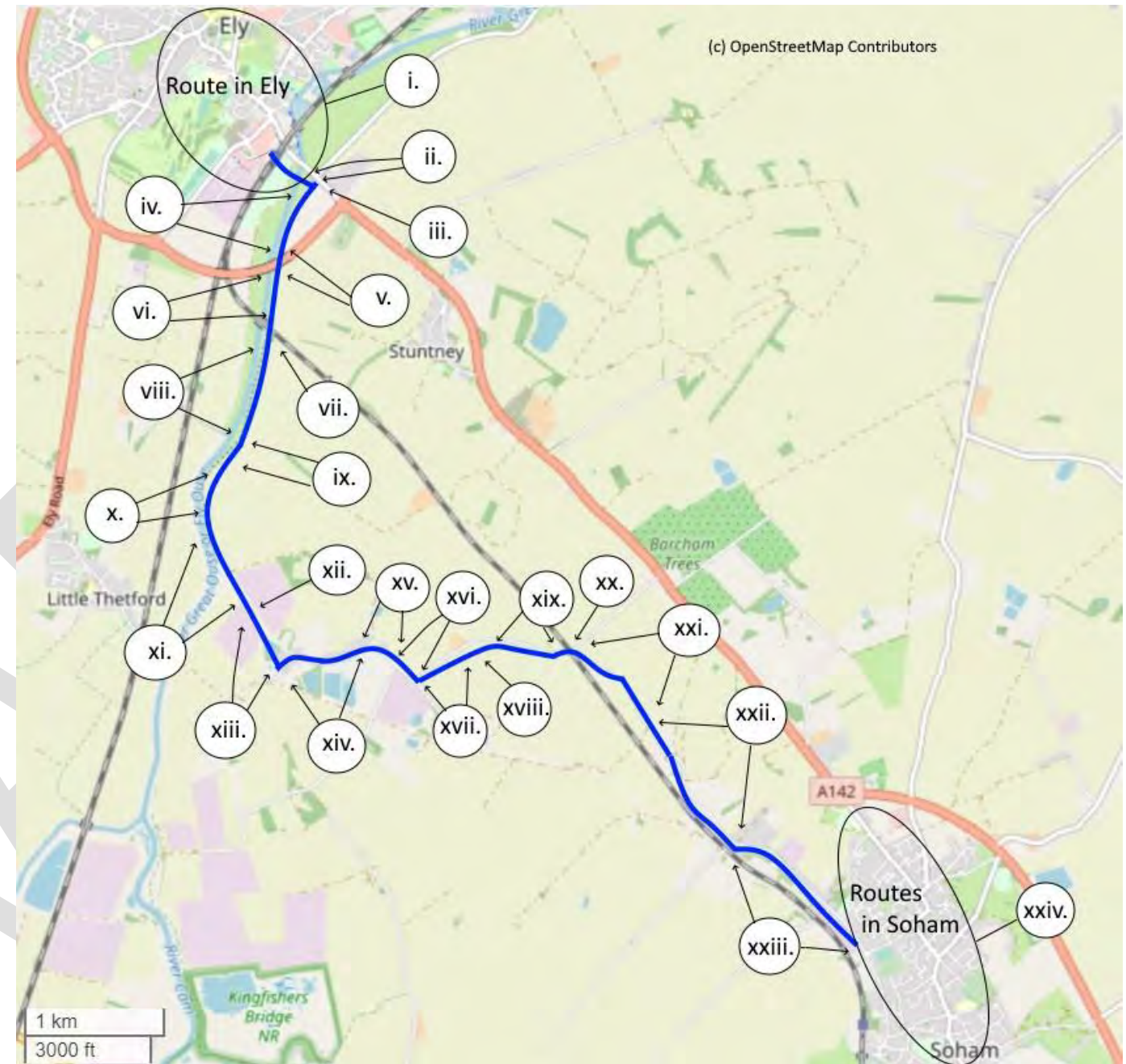


Fig 7D.1 View of Route Options

An alternative alignment for this section of the route would be to follow the alignment of the field verge along the bottom of the embankment. However, there are more risk factors to consider with this option as this would require the removal of extensive vegetation along the verge, which can increase flood risks due to reduced interception and infiltration and would also require compensatory works.

Although surrounded by greenery and scenic views, this option is not as favourable as the first alignment where the view is expansive, with a river in sight.

A further complication is the gas main running beneath the bottom of the flood bank alignment which would prove to be costly to remove or carefully protect. (See appendix C)

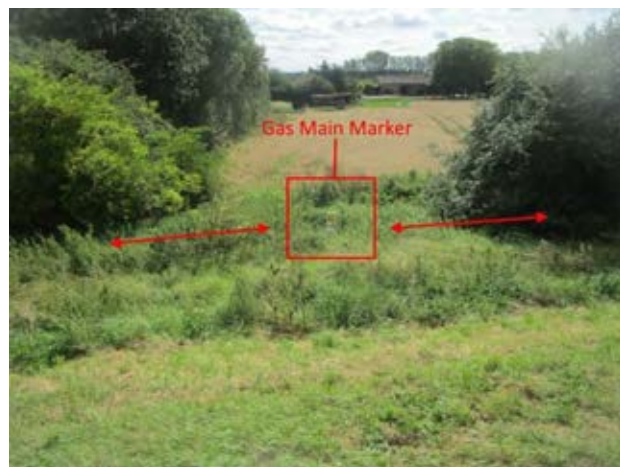


Fig 7D.4.3- image of foot of flood bank with gas main marker and showing approximate route of gas main.



Fig 7D.4.1- image of existing path with a tape showing 3m.

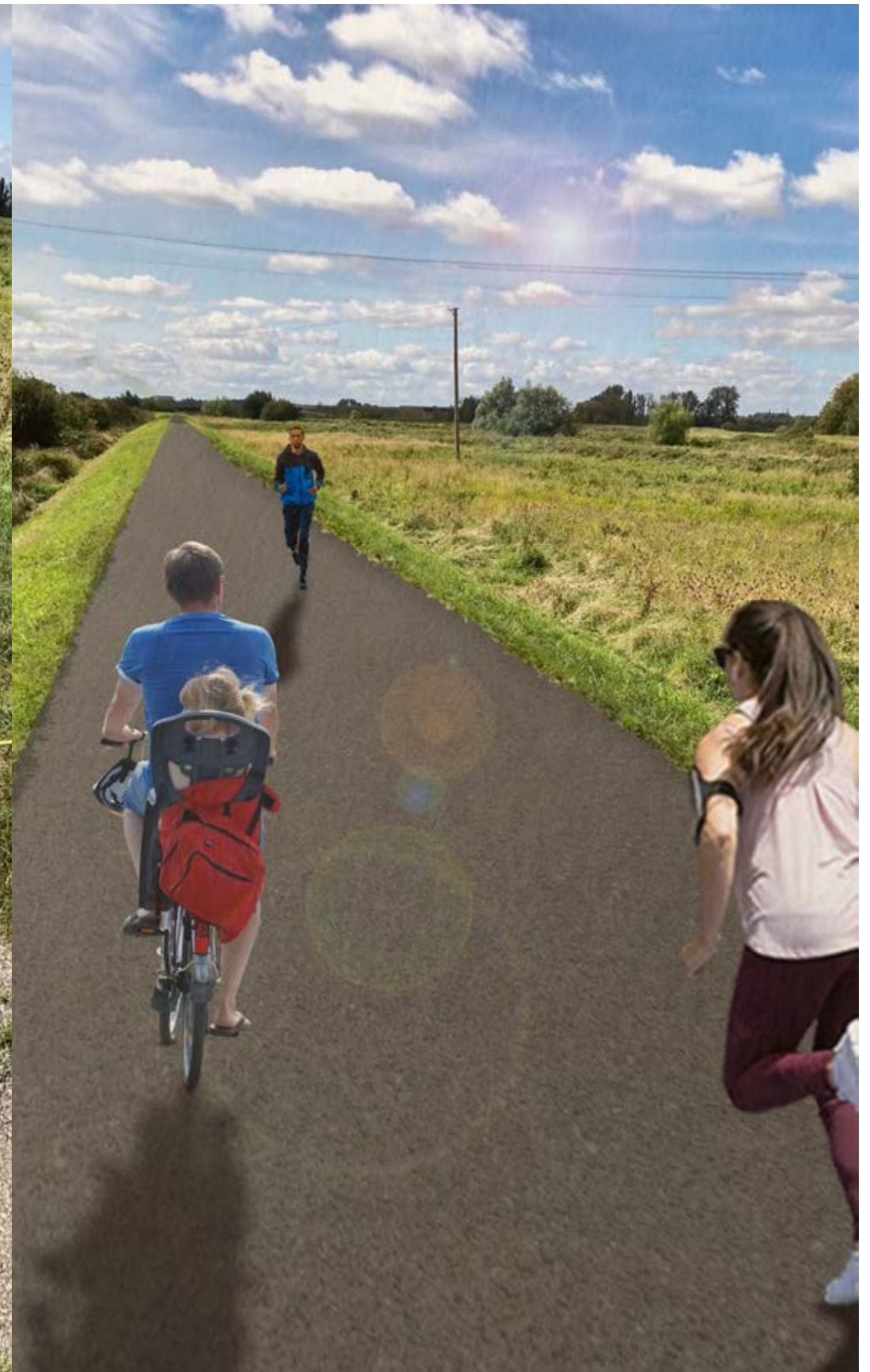


Fig 7D.4.2- image of possible widened path.

Another option for this route segment is to align the route in the field where the topography is mostly flat. The existing flood defence would remain unscathed; however, this option is only achievable subject to land ownership agreement. It is significant to note that the gas main will also intersect this option in the field as it runs parallel to the bank for a short while then veers southeast, parallel to the railway alignment. Therefore, an additional cost will also be in place to remove or carefully protect the existing apparatus. Ecologically this is the most attractive option, and it should be easier to construct and maintain than a path on the flood bank, but agreeing the land will be challenging. This option has not been surveyed from the field; it is private land, but it can be seen from the flood bank and google earth.



Fig 7D.4.4 - view of field from flood bank.

The first section from Stuntney Causeway would have to run at the foot of the embankment to get past the housing, but this section has a track along part of it.



Fig 7D.4.5 - view of foot of flood bank with access track from Stuntney Causeway just visible.

The three options for positioning a path apply for the whole route along the flood bank for sections iv-ix. and are shown in Fig 7D.4.6 and the pros and cons are summarised in the following table:



Fig 7D.4.6 – Options for path positioning.

Path position	Top of Floodbank	Foot of Floodbank	Field Edge
Views	Very good. The best of all.	Confined between bank and hedge.	Open, but no views of river.
Existing path impact	New construction would upgrade existing path.	Would be left, but still needs maintenance, perhaps as part of works. Could be changed to pedestrian only.	Would be left, but still needs maintenance, perhaps as part of works. Could be changed to pedestrian only.
Ecology	Significant impact	Significant impact	Least impact
Engineering issues	Difficult location and difficult to achieve 3m without risk that edge of path will be damaged.	Difficult in places. Ground not level. Next to drain and with gas main.	Easiest, although access may be an issue.
Land ownership	Single owner. Public Body.	Single owner. Public Body.	Private land needs agreement with more than one owner.
Maintenance	Complex because of interaction with Environment Agency maintenance.	Should be simpler than bank top.	Clearly separate issue.
Long Term Future	Entirely depends on future of flood bank.	Could be impacted by changes to floodbank.	Should be secure subject to land agreements.
Flood risk	Virtually nil.	A risk	Greatest risk
Overall	The most attractive, but only proceed if long term agreement can be made with Environment Agency	Little value in pursuing this.	Likely to be best option.

Table 7D.1 – Options for path positioning.

v.

As the route approaches the Ely Southern Bypass, visible improvement is seen pertaining to the surface condition. The reasoning for such correlates to the Ely Southern Bypass being recently constructed in 2018 with the underpass opening in 2019. However, the width of the path is not the desirable 3m according to LTN1/20. There is possibility of achieving this by aligning the path along the bottom of the flood bank. Fig 7D.5.1 shows the space available under the bypass to achieve this suitable width. If the route were to follow the field edge it would continue as before, but space is very constrained by the bypass abutments. An access track does go under the bypass on the field side and the preferred option would be to use this track with the agreement of Cambridgeshire County Council and the landowners. It would also be useful to add a small bridge over the drain at this point to link paths on both sides. There is already an informal crossing here.



Fig 7D.5.1 - image showing path under bypass from Stuntney Causeway side.



Fig 7D.5.2 - image showing bypass and track that goes under bypass beside the drain.



Fig 7D.5.3 – view of track and bypass structure from opposite side of drain to path.



Fig 7D.5.4 – view of bypass structure.



Fig 7D.5.5 - view of path offset from bank top under bypass.

vi.

Between the bypass and the railway there appears to be more space and suitable level ground to construct a path along the foot of the embankment. The gas main only runs along part of this section, so construction would be easier at the foot of the embankment, but the 3 options remain – on top of the flood bank, at the foot of the bank or on the field edge. For the field edge option, a link would be required to the foot of the embankment and the existing route under the railway.



Fig 7D.6.1 - image looking towards railway showing foot of embankment.



Fig 7D.6.2 - image looking from railway showing foot of embankment, the existing path and the field edge. The field edge option would have to join the existing path in this vicinity to pass under the railway.

vii.

There is no suitable level crossing for cyclists to cross the railway line. (The level crossing has been closed to cyclists and pedestrians – see Fig 7D.7.1). Instead, there is a path that goes under the railway. There are cattle grids and gates at each end, but these are in poor condition and need repairing or removing, given that there do not appear to have been cattle on the land for years. Although the path has a suitable tarmac surface, there are maintenance issues needing to be addressed, as plant debris limits the width of the path- currently 2.5m. Under the railway structure itself, the current path width is approximately 2.8m including the stony verge. There is a possibility to extend the path to 3m to achieve desirable minimum width, however, will require the removal of existing vegetation and so compensatory works would be required. The fence would need to be moved and this would need Network Rail agreement. For this short section the priority may be simply to improve the maintenance.



Figure 7D.7.1 Image showing the railway line.



Figure 7D.7.2 Image showing path under railway with stony verge.

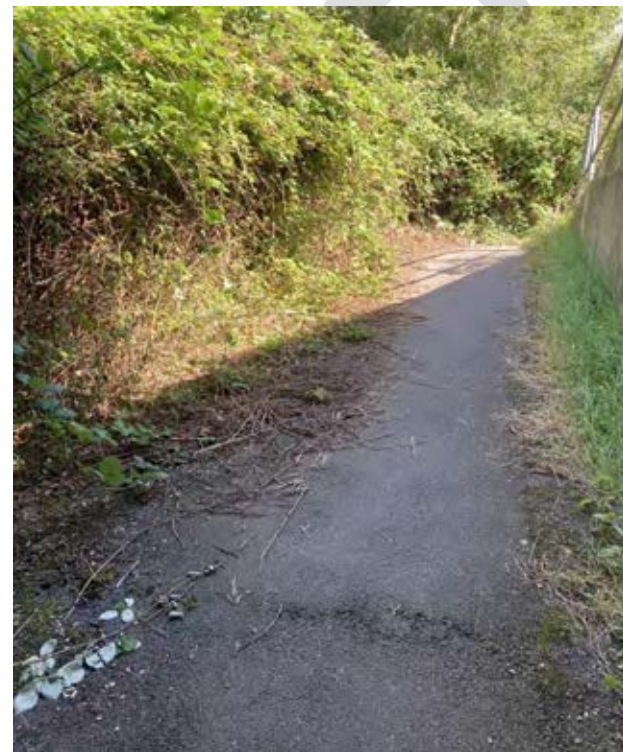


Figure 7D.7.3 Image showing path under railway with maintenance issues.

viii.

South of the level crossing, the width of the flood bank narrows. The quality of the surface is good in places, but poor in places where the level has dropped. There are definite challenges in constructing a path 3m wide and the issues are like those outlined earlier (see section iv.). However, the option along the foot of the flood bank does not have all the same challenges as north of the railway. (The gas main is not along this section). It would be possible to have a different solution to north of the railway, but even here constructing along the foot of the embankment would be difficult.



Figure 7D.8.1 showing flood bank with narrow path and tape indicating 3m width.



Figure 7D.8.2 showing flood bank with foot of flood bank and field edge.

ix.

The existing path continues along the flood bank until it ramps down to join an existing track. The ramp will need widening to 3m and will need regarding to comply with LTN 1/20 requirements, but this would be irrelevant for a field edge path, so details are dependent on this. The path joins the existing track at a cattle grid, and this needs maintenance and reviewing as part of the works.



Figure 7D.9.1 Image showing the existing ramp.



Figure 7D.9.2 Image showing the existing cattle grid.

x.

This section of the route runs along an existing track at the foot of the flood bank. It is in poor condition and needs surfacing to 3m with a smooth sealed surface.



Figure 7D.10.1- showing the existing path.



Figure 7D.10.2- showing the existing path.



Figure 7D.10.3- showing the existing path.

xi.

This section of route was recently damaged because of works being carried out on the flood defences and has been repaired to a better standard than section x. Nevertheless, for a long-term solution a 3m sealed surface is needed.



Figure 7D.11.1 Image of recently rebuilt path.

xii.

As the route approaches Barway there is a locked gate with several locks for the various bodies and individuals who have agreed access to the land. The path adjacent to the gate is narrow and the surface poor. A good smooth, level surface with at least 1.5m clear width is needed to provide a bypass that is suitable for all. It is important that improvements in this area are addressed as part of overall route improvements.



Figure 7D.12.1 Image of gate and bypass from Barway side.

xiii.

Along this segment the route now enters the village of Barway. For a long-term solution, a 3m sealed surface is needed.



Figure 7D.13.1- View of path between gate and village.



Figure 7D.13.2- View of path at approach to Barway village.

xiv.

The route joins Barway Road where the current speed limit in this zone is 30mph. A 20-mph limit is recommended for a mixed traffic route with cyclists on the carriageway. There are low traffic volumes along Barway Road making it safe enough to use as mixed traffic.



Figure 7D.14.1.- Barway Road in the village

xv.

Beyond the houses the road enters the national speed limit zone, however 20mph speeds should be implemented to reduce the speed of vehicles and make it comfortable for cyclists to use. Designation as Quiet Lane would be appropriate.



Figure 7D.15.1 - Image showing national speed limit signage, upon leaving the village.

xvi.

At a T-junction the National Cycle Network route turns south and goes past the worker's accommodation and farm buildings, where there is already a 20-mph limit. To the east of the junction Barway Road becomes busier and whilst traffic volumes are not a major concern there is a chance of some lorry traffic, and an off-carriageway route would be desirable. An on-carriageway route with road markings is also an option, but the best option will depend on sections xvii and xviii to ensure coherence and continuity of route. An off-carriageway route in the field edges to the north of Barway Road would be a good option. This should include a link to the employment site. A 30 or 40 mph limit would be appropriate here.



Figure 7D.16.1 - Image showing this section of Barway Road with lorry loading area to right and potential route on carriageway or off carriageway beyond vegetation on the left.

xvii.

Barway Road becomes much busier with lorry traffic beyond the warehouse entrance shown in Fig 7D.17.1 and this means that a segregated path is needed. If it is necessary to cross the entrance special details will be needed for cyclists' safety, which needs further design work. A shared path would be appropriate and with a speed limit on the carriageway of no more than 40 mph. The path would need to be 3m sealed surface and the best position appears to be to the north of the road, but this also depends on what is agreed on sections xvi. and xviii, so the south side is also an option. However, this is also only achievable subject to land ownership agreement.



Figure 7D.17.1 - Image showing the warehouse entrance junction.



Figure 7D.17.2 - Barway Road with space besides the road for a new path set away from the carriageway.

xviii.

Near to Sandford Farm there are properties adjoining Barway Road on each side and land is needed between the properties and the carriageway. There is also a ditch on the north side to consider. Separation from the carriageway depends on speeds. At national speed limit, there would need to be a 2.5m separation, plus a 3m path. At a 40 mph limit there would need to be a 1m separation and a 3m path. 40 mph is recommended, and it is essential that the speed limit is agreed before attempting to agree required land with landowners.

xix.

Between Sandford Farm and the level crossing there is more space on the southern side than the northern side, but the best option will depend on what is agreed in sections xvi, xvii and xviii and on the arrangements at the level crossing. At some point it is likely that the route will have to join the carriageway for a short while and there are pros and cons of both sides of the road. This needs to be considered as part of the overall design and in conjunction with the landowners.



Figure 7D.19.1 - Image showing the approach to the level crossing from Barway.

xx.

The level crossing at Barway Road carries little motorised traffic, but a high proportion of HGVs and ideally any cycle route would be segregated from that traffic. However, making changes to the level crossing would be very hard, because of the difficulties of agreeing arrangements with Network Rail. Therefore, it is anticipated that cyclists will be on road over the level crossing between the end of an off-carriageway path (xix) and the point where the route turns off Barway Road (xxi.)

There is a requirement in planning legislation for planning authorities to consult the Secretary of State and the operator of the network, where a proposed development materially affects traffic over a level crossing, and it is possible that there could be concerns raised about any new path that joined the carriageway near the level crossing. In that case the option of a route to the north of Barway Road may be preferable since cyclists would have to be on the road for approximately 85m on the Barway side and any new path would be well away from the crossing.



Fig 7D.20.1.- Image showing level crossing.

xxi.

The route then continues along Blockmoor Road, which is a relatively quiet road as motorised traffic is minimal. On either side it is adjacent to farmland, with a drain running parallel to the northern side of the road. It is a relatively straight road with reasonable surface condition and would be appropriate for cyclists to use. Ideally the whole road should be designated as 20 mph and as a Quiet Lane. The greatest concerns are the possibility of occasional speeding vehicles and the possibility of traffic growth if developments happen along the road or in Soham. Any developments should be required to minimise traffic on Blockmoor Road or provide a good alternative route.



Fig 7D.21.1.- Image showing Blockmoor Road looking towards the level crossing with Ely Cathedral just visible.

xxii. to xxiv.

Refer to option A.

Option D Summary	
	9.65km Net distance from Ely Centre to Soham Centre
<u>Comparative Length (A)</u>	7.8 km (from Ely centre to Soham Centre)
<u>Comparative Length (B)</u>	7.97km (from Ely centre to Soham Centre)
<u>Comparative Length (C)</u>	9.6km (from Ely centre to Soham Centre)
<u>Comparative Length (E)</u>	8.16km (from Ely centre to Soham Centre)
<u>Comparative Length (F)</u>	12.1km (from Ely centre to Soham Centre)
<u>Comparative Length (G)</u>	8.52km (from Ely centre to Soham Centre)
<u>Likely estimated cost</u>	Works in Ely and Soham, 5300m new field edge path. Likely to be the least expensive option, due to the lack of major structures.
<u>Engineering difficulties</u>	Any changes to the level crossing will be complex and may be challenging. Construction of a wider path along the flood defence will require ecologically sensitive construction and looks to be very difficult as does construction along the foot of the floodbank.
<u>Ecological issues</u>	Works near the River Great Ouse are potentially difficult and could result in major Biodiversity Net Gain contributions. Using existing field edges or tracks should have less impact.
<u>Land ownership issues</u>	Needs agreement of landowners for field edge works. Challenging land agreement from Environment Agency for possible route alignment along flood defence.
<u>Other issues</u>	This is not a direct alignment for a route between Ely and Soham but it serves Barway well and is an important National Cycle Network link with Wicken Fen. The existing National Cycle Network path is in poor condition and needs improvements.
<u>Overall</u>	This is an achievable route subject to land agreements. Although not a direct route between Ely and Soham as is option A, it provides direct links between Ely and Soham for workers in Barway making it a feasible option to consider. This option is based on an existing route so improving that makes good sense and can be easily understood.

Table 7D.2 option D summary

Option E

Option E: This route joins with Option D at both ends but takes a more direct alignment that follows the south-west of the railway on private land. The link with Soham would be via Mereside. A separate link would be needed with Barway either on the existing alignment or a new one.

The option is described in sections from Ely to Soham noting the challenges of each section, with an overall summary of the option at the end. The sections are numbered as shown in Fig 7E.1

i.

Refer to option D section i- iv for details pertaining to this section of the route.

ii.

The route will have to use the existing crossing under the railway which is not ideal and puts the route at a disadvantage as compared to Option G along the northern side of the railway. As the route now transitions from the top of a floodbank to ground level, it would need a ramp and path to be constructed with suitable gradient following the railway.



iii.

The route proposes an alignment along the south-westerly side of the existing railway line. The route has not been surveyed but much can be seen from the train and google earth. Any route would need to be agreed with landowners and avoid priority habitat as well as not interfering with farm operations, which do not cross the railway, so a lot more work is needed. If there were to be any upgrade of the railway line, it is possible that a new access road would be constructed along one side of the railway or the other. This could be retained for access.



Fig 7E.3.1 At one point the route would pass between a property and the railway. Security arrangements would be needed.

Fig 7E.2.1 The route would have to ramp down to the field on the left as close to the railway as possible. This needs detailed design.

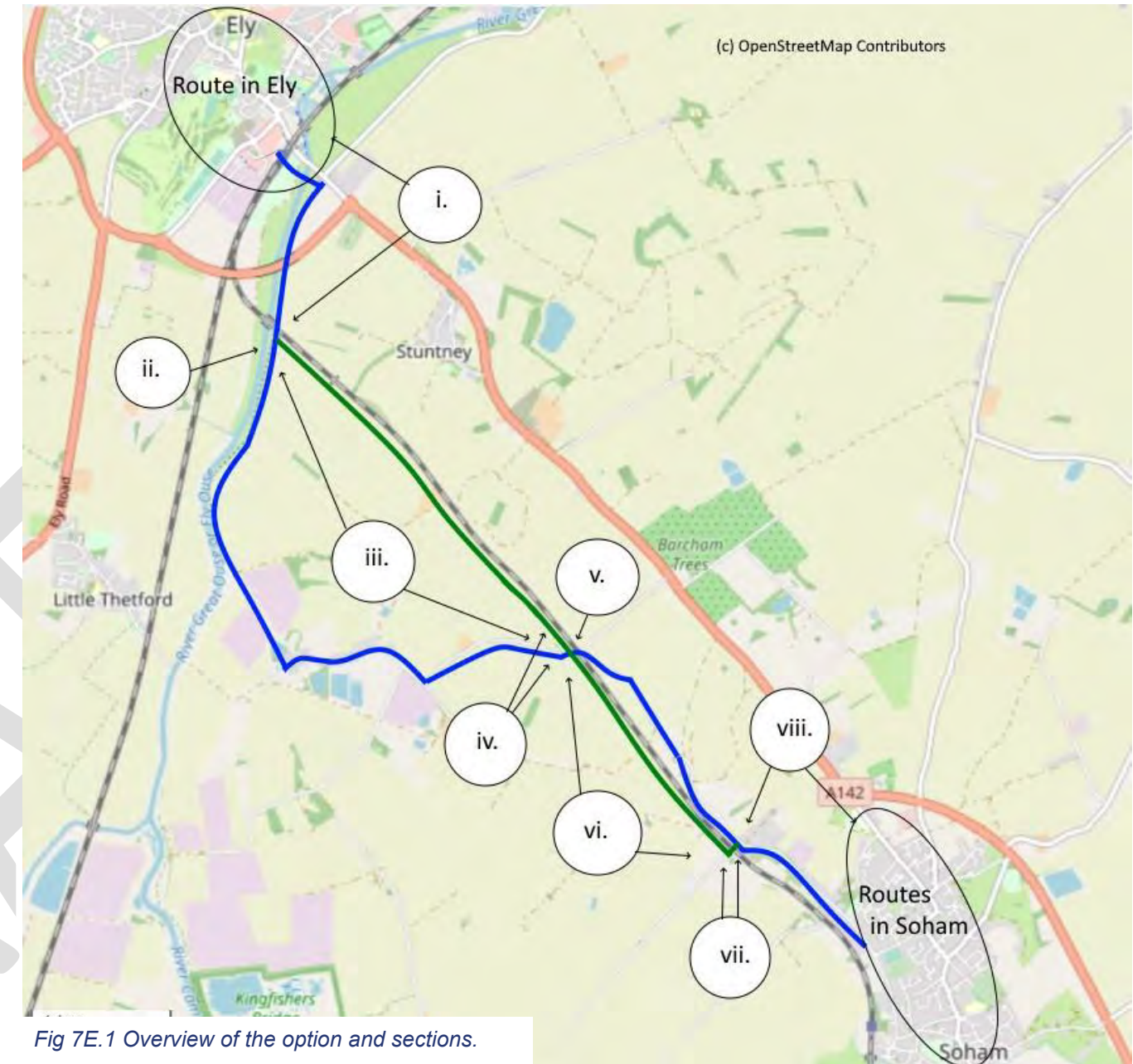


Fig 7E.1 Overview of the option and sections.



Fig 7E.3.2 The alignment would have to avoid important habitats. .



Fig 7E.3.3 At one point a farm track follows the railway. It may be necessary to build a new parallel track.

iv.

A house is close to the railway at this point and any route would have to divert away from the railway along field edges to join Barway Road, where cyclists would then merge on to Barway Road following Option D, or cross directly over Barway Road to continue besides the railway.



Fig 7E.4.1 View from Barway Road towards railway line looking north, with the private house on the right, behind trees, by the level crossing.



Fig 7E.6.1 View towards railway (tree line) from Soham Lode.



Fig 7E.7.1 Existing level crossing. No changes envisaged.



Fig 7E.4.1 View from Barway Road towards railway line looking north, with the private house on the right, behind trees, by the level crossing.

v.

Changes to the level crossing would be very difficult and the option would be to continue the route on road for a short while as in Option D or cross straight over the road for a new path. Access for the paths will need to be well away from the level crossing and will need to be agreed with Network Rail.

If Sections ii.- v. are completed without any upgrade of Option D this would leave a gap in terms of links with Barway and it is recommended that sections xvi.-xix of Option D would also need to be completed.

vi.

This segment of the route continues along the railway line, along the edge of farmland boundary. There appears to be no property or construction obstructing the desired line and so is a feasible option subject to landowner agreement. As the route approaches Soham, it would need to run along the bank of Soham Lode for approximately 200m. (See Fig 7E.6.2). This route would have the advantage over the road alignment suggested for Option D (Blockmoor Road and The Cotes) in that the route would be traffic-free, but it would be a significantly more expensive option to avoid a road that is not very busy, at present.



Fig 7E.6.2 The final section of route would need to follow the bank of Soham Lode.

vii.

At this point the route can use an existing level crossing (Great Drove) to cross the railway line and join route D, entering Soham. The route would then join directly onto The Cotes.

viii.

Refer to option D section xxiii and xxiv for details pertaining to this section of the route.

Option E	8.16km along Option E route alignment from Ely Centre to Soham Centre
Summary	10.56km Net distance from Ely Centre to Soham Centre (including sections xvi.-xix of Option D)
<u>Comparative Length (A)</u>	7.8 km (from Ely centre to Soham Centre)
<u>Comparative Length (B)</u>	7.97km (from Ely centre to Soham Centre)
<u>Comparative Length (C)</u>	9.6 (from Ely centre to Soham Centre)
<u>Comparative Length (D)</u>	9.65km (from Ely centre to Soham Centre)
<u>Comparative Length (F)</u>	12.1km (from Ely centre to Soham Centre)
<u>Comparative Length (G)</u>	8.52km (from Ely centre to Soham Centre)
<u>Likely estimated cost</u>	Works in Ely and Soham, 8300m new field edge path.
<u>Engineering difficulties</u>	The major challenges may be the need to construct in remote locations and the need to get access to this, but farm vehicles do access the whole area. Network Rail may put constraints on work near the railway.
<u>Ecological issues</u>	Mostly existing field edges, flood embankment or tracks.
<u>Land ownership issues</u>	Needs agreement of landowners for field edge works.
<u>Other issues</u>	Any route that avoids Barway needs to include a link into Barway along Barway Road. The route would be very remote and may not appeal to some.
<u>Overall</u>	This is an achievable route with land agreements. It is a direct route if Barway is considered, but it does not provide any improved access for Stuntney.

Table 7E.1 option E summary

Option F

This route would follow the same alignment as Option D between Ely and Barway, but rather than following Barway Road the route would follow one of the banks of Soham Lode or field edge paths or tracks nearby until crossing the same level crossing as Option E and linking in with Soham in the same manner.

The option is described in sections from Ely to Soham noting the challenges of each section, with an overall summary of the option at the end. The sections are numbered as shown in Fig 7F.1

i.

Refer to option D.

ii.

This segment follows the road along Goose Fen Drive which follows the perimeter of an independent producer organisation on one side, and a field along the opposite side. There is currently a 20mph speed limit along this road. It is not ideal in that there may be occasional large vehicles, which come in and out of the complex, transporting workers and goods, but it is an important alignment, and the existing National Cycle Network and changes are not a high priority unless the traffic nature changes significantly.



Fig 7F.2.1 image of road



Fig 7F.2.2 image of road adjacent to complex with workers caravans.



Fig 7F.1 Overview of the option and sections.

iii.

An obvious and attractive alignment for a link with Soham would run parallel to Soham Lode, which has an existing public footpath on the bank top. The condition of the path is grass and would require a 3.0m tarmac surface to improve the quality of route for all users including cyclists. The path is accessible via a gate which would require cyclists to dismount and would need to be addressed to provide continuity for users along the journey. The bank top is wide in places and could accommodate a 3m path but elsewhere is narrow and a suitable path may be difficult to achieve. The northern bank appears to be the best option but both sides of the Lode would be possibilities with adequate width.

Adjacent to the public footpath is a private road used by owners of the land. There is a possibility for the route to follow the existing road, extending its width to 3.0m wide- subject to the agreement of landowners.



Fig 7F.3.1 Public footpath adjacent to private road on southern side of Lode.



Fig 7F.3.2 Public footpath signage on southern side of Lode and existing parapets.



Fig 7.3.3 In this area the north bank has more space than the south bank and could make an attractive route.

iv.

Along this segment the route is more constrained as it passes along the fenced border of a garden within a farmhouse property. It would be desirable to move the garden fence back to get adequate width.



Fig 7F.4.1 View showing where possible route can go besides the fenced boarder.



Fig 7F.4.2 View showing where possible route can go besides the fenced boarder.

v.

At this section the flood bank wide and flat with a gentler gradient towards the Soham Lode Drain compared to initial segments along the path. Adequate space is available to construct a 3.0m wide path. It is evident to see the possible usage of this path by large maintenance/ tractor vehicles due to the tracks remaining on the grassy surface, mitigation should be put in place to restrict non-permitted vehicular access along the public footpath. Alternative options would include using farm tracks that run close to the lode.

Fig 7F.5.1 Image of route segment with wide top and gentle gradient and showing a very narrow bridge that appears to be used by farm workers.

vi.

At this section, the height above ground level once again increases. Constructing a 3.0m wide path is likely to cover the full extent of the bank top and there are places where the bank top narrows and this would be almost impossible. Once again, it is evident to see the possible usage of this path by large maintenance/ tractor vehicles due to the tracks remaining on the grassy surface and any path would have to be very robust.



Fig 7F.6.1 Image of route segment with narrow top.



Fig 7F.6.2 Image of route segment with narrow top and 3m tape laid on ground.

vii.

The route gets close to the railway and merges with Option E, which would also have to use this section of the Lode bank top.



Fig 7F.7.1 Image of route segment with wider bank top near the railway.

viii.

The route joins to Great Drove for a short while before merging with option D towards the Cotes. Great Drove is a tarmac surfaced road on a bridge which crosses over the Soham Lode, and suitable for mixed use traffic. It also requires you to cross a level crossing of the railway line, where the route then continues.



Fig 7F.8.1 Image of level crossing

ix.

Refer to option A

Option F Summary	
	12.1km Net distance from Ely Centre to Soham Centre
<u>Comparative Length (A)</u>	7.8 km (from Ely centre to Soham Centre)
<u>Comparative Length (B)</u>	7.97km (from Ely centre to Soham Centre)
<u>Comparative Length (C)</u>	9.6 (from Ely centre to Soham Centre)
<u>Comparative Length (D)</u>	9.65km (from Ely centre to Soham Centre)
<u>Comparative Length (E)</u>	8.16km (from Ely centre to Soham Centre)
<u>Comparative Length (G)</u>	8.52km (from Ely centre to Soham Centre)
<u>Likely estimated cost</u>	Works in Ely and Soham, 10600m new field edge or Lode bank path.
<u>Engineering difficulties</u>	Construction of a new path adjacent to Lode could be very challenging in places due to narrow width.
<u>Ecological issues</u>	Will impact on habitat along the Lode – mostly grass.
<u>Land ownership issues</u>	Needs agreement of landowners for Lode bank works.
<u>Other issues</u>	Significant health and safety issues working on the bank top next to water. An attractive route.
<u>Overall</u>	This is a difficult route due to the variable width of the bank top. It is the longest route to get to Soham out of all proposed routes and will have numerous ecological factors to consider when desiring to construct a path along the flood embankment. There appear to be few advantages apart from it being an attractive alignment, so do not recommend improving this.

Table 7F.1 option F summary

Option G

This route looks at options for linking Stuntney with Options D or E, that would provide a route away from the A142 and remove the need to cross the road. The Option considers the possibility of a new bridge over the railway to link with Option E or a new route following the railway to link with the existing railway grade separated crossing by the River Great Ouse. A continuation of the route along the north-eastern side of the railway is also considered that could link with the level crossing on Barway Road.

The option is described in sections from Ely to Soham noting the challenges of each section, with an overall summary of the option at the end. The sections are numbered as shown in Fig 7G.1

i.

Refer to option D sections i. – vi. for details pertaining to this section of the route.

ii.

As with option E this route has not been surveyed and is to an extent speculative, but it can be seen in places from the train and from Google Earth. The route proposes an alignment along the northeasterly side of the existing railway line, this is currently farmland, and the development of route would only be possible, subject to landownership agreement.

The start of the route would need to be a link from the proposed path from Stuntney Causeway. If the bank top option were progressed this would need a major ramp. There are several drainage ditches to cross and small bridges would be needed.



Fig 7G.2.1 View along railway embankment from existing path on top of flood bank.



Fig 7G.2.2 View from train showing land adjacent to line. (Poor quality image.)

iii.

This segment provides linkage to Stuntney, for users approaching from either direction, thus providing a route away from the busy A142 that avoids the need for a bridge over that busy road. The alignment continues, following a farmland boundary, adjacent to a line of trees, this alignment assumes that it should not go across the farmland, but follow boundaries although shorter and more direct alignments are worth discussing. The route would continue to join to Lower Road, Stuntney. This is currently gated as it is only for private access and new gate arrangements would be needed.

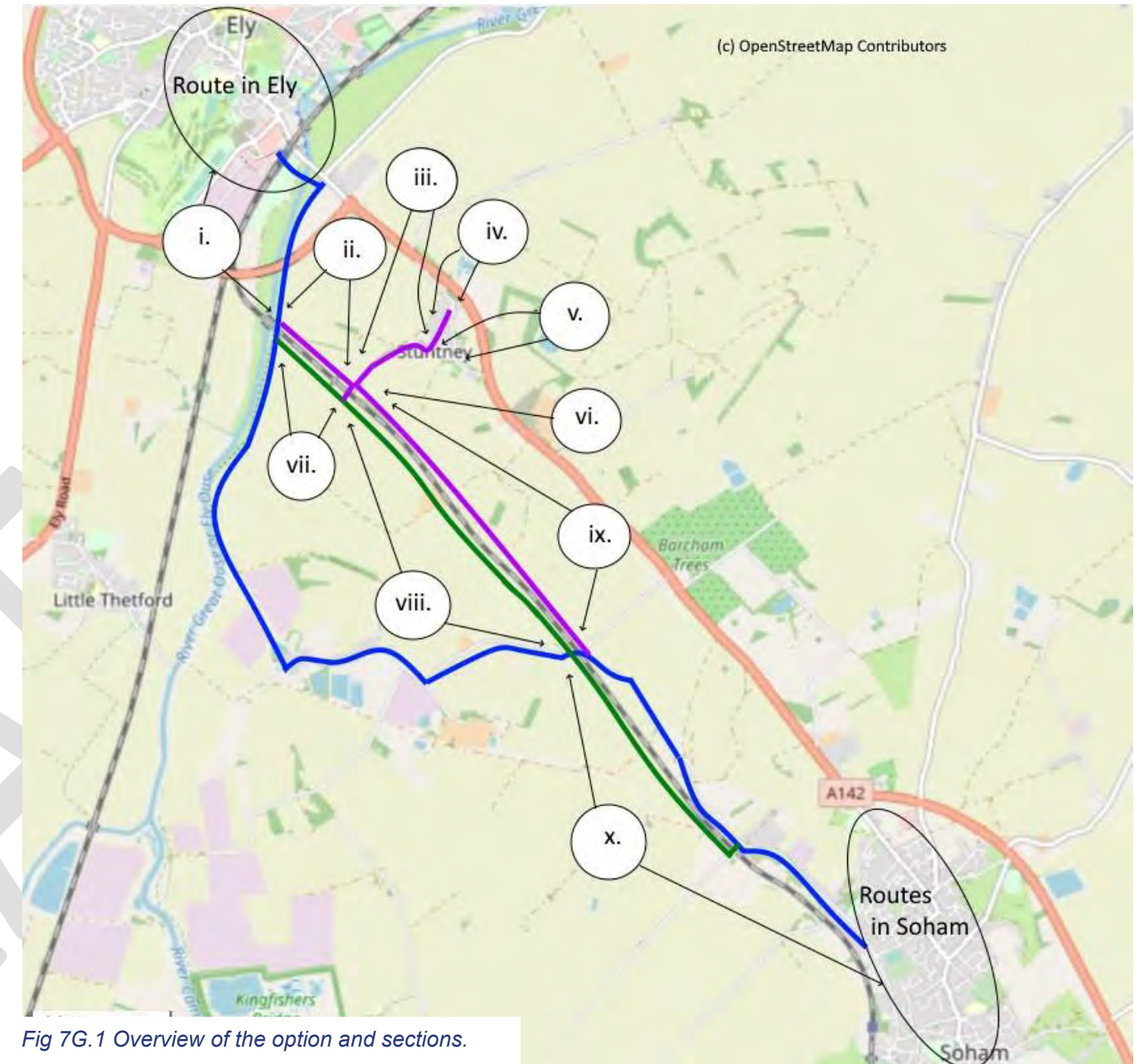


Fig 7G.1 Overview of the option and sections.



Fig 7G.3.1 showing entrance to private land from Lower Road.

Further complication is the intermediate pressure gas main that has been identified at the entrance of the private land and runs parallel to Local High Pressure (LHP) gas main which intersects the boundary which the route alignment follows. Therefore, an additional cost will also be in place to remove or carefully protect the existing apparatus.

iv.

The route then follows one of 2 main roads within Stuntney- Lower Road (See Fig 7G.3.1). This segment links with the Stuntney village and could provide cyclists with a route towards Soham, diverted away from the A142, subject to development of other options.



Fig 7G.4.1 Image showing view of Stuntney Causeway view towards Ely.

v.

An alternative way to link with Stuntney and on to Soham would be to use the existing byway to the south of Steward Close and this could link up with Option A or Option C along Soham Road. There appears little advantage in this compared to Lower Road, so it is not recommended unless it is a village priority.



Fig 7G.5.1 Image showing byway near Steward Close



Fig 7G.5.2 Image showing byway.

vi.

This segment proposes a crossing point to link with the route following option E. The option would be to construct a bridge with a minimum ramp of nearly 180m on either end, allowing all users from Stuntney to join the route alignment. Consideration would have to be given to the potential users of this bridge to provide justification for the implementation of a costly structure. Stuntney village itself is made up of approximately 200 residents, implying a small number of users. A new bridge could only be justified if section ix. cannot be delivered. A new bridge would be a major project and would involve complicated and expensive agreements with Network Rail so it is hard to justify and would be a major commitment.

vii.

If a new bridge were in place, it would make sense to link it with the riverside path outlined in Option D. Refer to option E section iii. for details pertaining to this section of the route.

viii.

If a new bridge were in place the main justification would be that it would help create a complete link with Barway and with Soham. Refer to option E section iii. for details pertaining to this section of the route. It would also be important to deliver the Barway link outlined in Option D sections xvi-xix.

ix.

This segment of the route continues along the northeasterly side of the railway line till it joins with Route D onto Blockmoor Road. It is favourable from the standpoint that there would be no crossing of the A142, or the railway required to enter Soham.

The route would need to veer away from the boundary of priority habitat then continue parallel to the railway line, crossing through some boundaries and hedges. A further complication should be noted as the property at Howard's Farm is located along the desired line of the route. Therefore, the alignment would be likely to have to go around the property (screened and secured in a manner to be agreed), following the field boundary and then merge onto Blockmoor road. All of this route is subject to landowner's agreement and this section may be particularly difficult, but there is no obvious alternative apart from bridging the railway.



Fig 7G.9.1 Image showing view of private house near to the Railway line.



Fig 7G.9.2 Image showing private house at Howard's Farm and the access to it. A route would have to go around it with suitable screening and security arrangements.



Fig 7G.9.3 A suitable crossing of Barway Road would be needed to link with Blockmoor Road.

x.

This section follows Option D which would avoid crossing over the railway. Refer to option D section xxi.- xxiv. which details the route into Soham via Blockmoor Road.



Fig 7G.10.1 Image showing cyclist using Blockmoor Road.

Option G Summary	
	8.52 km Net distance from Ely Centre to Soham Centre
<u>Comparative Length (A)</u>	7.8 km (from Ely centre to Soham Centre)
<u>Comparative Length (B)</u>	7.97km (from Ely centre to Soham Centre)
<u>Comparative Length (C)</u>	9.6 (from Ely centre to Soham Centre)
<u>Comparative Length (D)</u>	9.65km (from Ely centre to Soham Centre)
<u>Comparative Length (E)</u>	8.16km (from Ely centre to Soham Centre)
<u>Comparative Length (F)</u>	12.1KM (from Ely centre to Soham Centre)
<u>Likely estimated cost</u>	Works in Ely and Soham, 5300m field edge path. New bridge over railway would significantly increase costs.
<u>Engineering difficulties</u>	Construction of a bridge across the railway line will be very challenging but can be avoided.
<u>Ecological issues</u>	Mostly existing field edges. Needs to avoid a priority habitat.
<u>Land ownership issues</u>	Needs agreement of landowners for field edge works and consent from Network Rail to construct a bridge over the railway line, if that were to go ahead. Should aim to avoid the need for a new bridge over the railway. Land agreement may be very difficult, particularly if there are requirements for screening and security at Howard's Farm near Barway Road, if these are hard to deliver.
<u>Other issues</u>	Would link up Stuntney without the need for any major bridges but would be much less direct than the A142 alignment. The route needs to include a link into Barway and links into Ely and Soham to be of value.
<u>Overall</u>	This is an achievable route with land agreements, especially if a new bridge over the railway can be avoided. The advantage of this route is that it is able to link Stuntney village with a traffic free route to Ely and a quiet route to Soham. It avoids the crossing of the railway and a bridge over the A142 and should be less costly than other options. It would be a good route between Soham and Ely but would miss out all the destinations along the A142.

Table 7G.1 option G summary

08. Land ownership

The most complicated part of the development of any new route is likely to be the need to get landowners' agreement. Time and funding need to be allocated for this and if necessary, the Local Authorities need to be willing and able to use Statutory Powers to deliver the proposed routes. This should however be a last resort. The aim should be to build good relationships with all landowners. In this case Cambridgeshire County Council and Environment Agency own important land parcels, but there are big gaps that need to be filled.

Fig 8.1 shows the Land Registry map. It highlights the plethora of landowners found along the route. The polygons detail private land ownership agreements, and any parts of the proposed alignment that are not covered in the map below can be assumed to come under the Local Authorities jurisdiction, in this case Cambridgeshire County Council as part of 'Highways maintainable at Public Expense (more information available at this link: <https://www.suffolk.gov.uk/roads-and-transport/highway-maintenance/road-adoption/highways-and-private-roads>). 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.

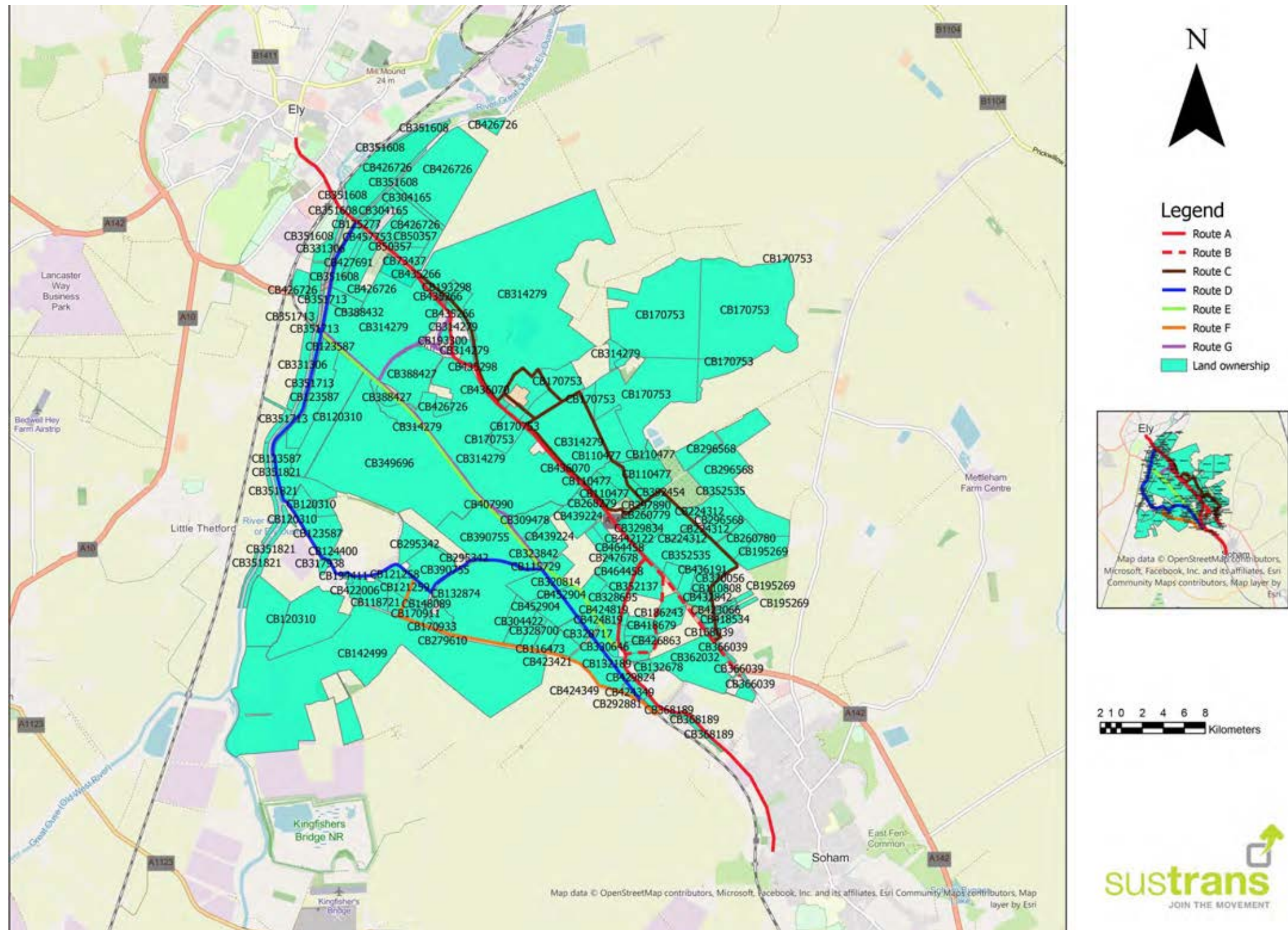


Figure 8.1 showing land ownership polygons

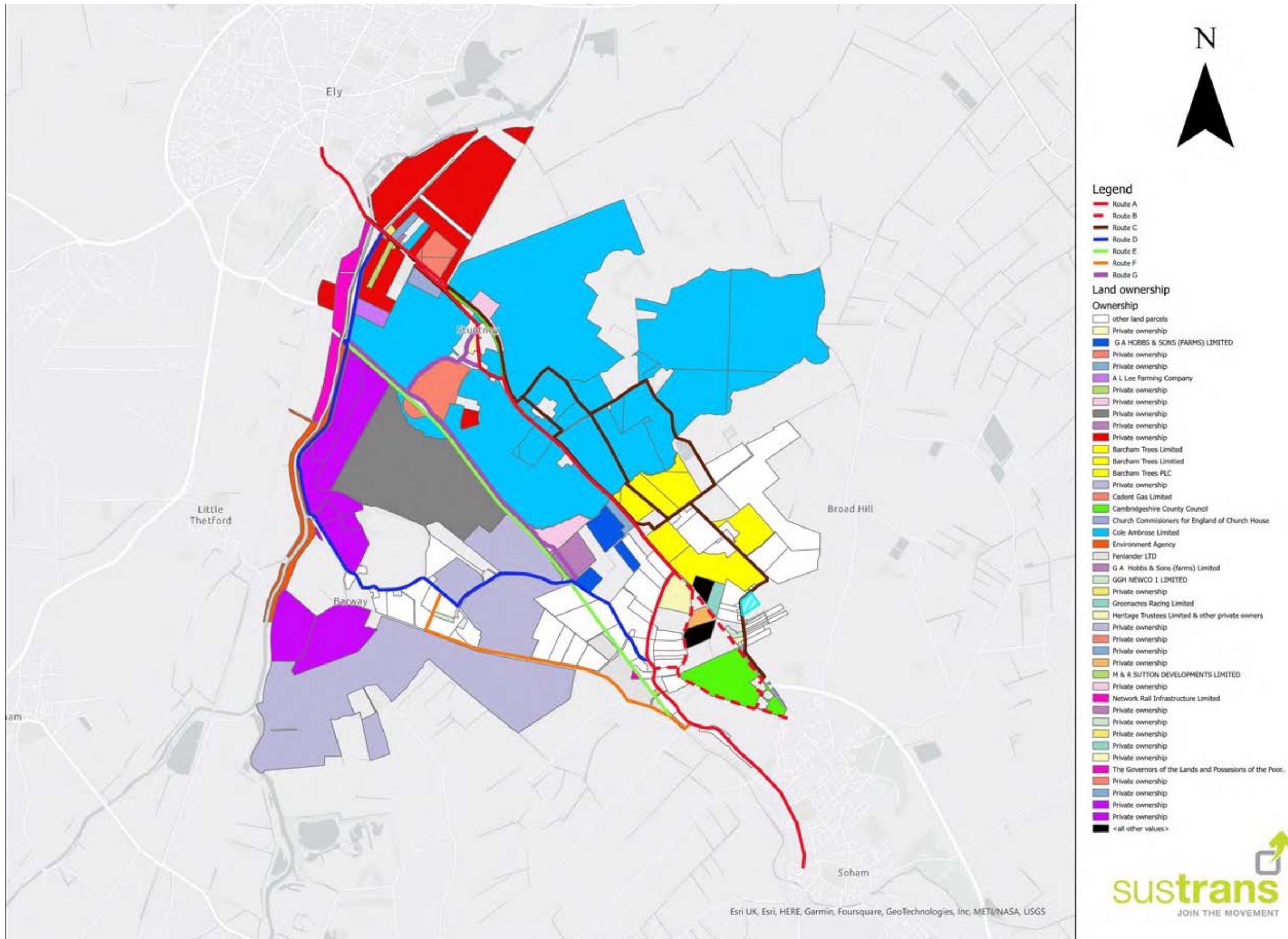


Figure 8.2 Showing land ownership colour coded for authorities and companies.

Option A- This is the route that most closely follows the A142 and any new path adjacent to this public highway will have to be nearly entirely on private land. Cole Ambrose Ltd owns an extensive amount of land along the proposed route alignment.

Option B- There are numerous landowners, including Cambridgeshire County Council found adjacent to these links and will need contacting should works be done in these fields.

Option C- The route proposes to go through land owned by Cole Ambrose Ltd- land where Ben's Yard development is built on. It also goes through BARCHAM TREES PLC land where proposition for a visitors' centre has been considered along this route, so constructing a cycle path may seem favourable, increasing the likelihood of support from the landowners. An area of common land is also found at the southern end of the route, north of Soham. The rules governing Common land are significant and would require agreement from multiple parties (including landowner **Timothy Richard Clark**) to increase the likelihood of application success (see section 6. 5).

Option D- Significant parts of Option D will require agreement from the Environment Agency who owns most of the land that follows the flood bank and the river, but other individuals own land along the adjacent fields, which is likely to be the main route.

Option E- Private landowners own a vast majority of farmland following the southern side of the railway line.

Option F- There is no registered ownership of the path along Soham Lode. It is a right of way, and the Local Authority and adjacent landowners will need to be involved in any discussions.

Option G- Cole Ambrose Ltd owns land following the northern side of the railway line. Discussions and agreements will need to be had with other private owners along this route alongside Network Rail land. The crucial link to Barway Road appears to be particularly challenging with the need to agree an acceptable route with Howard's Farm.

Some important land parcels to note are highlighted in Table 8.1. Early discussions with all landowners are recommended.

Title number	Registered owner	Comments and current disposition (green = supports, amber = unsure, red = opposes)
CB366039	Timothy Richard Clark	Owner of common land
CB329834	Barcham trees PLC	Owner of land along Route C
CB351713	Environment Agency	Owns significant areas land near flood bank
CB314279	Cambridgeshire county council	Public highway and land near railway line
CB407990	Private	Landowner adjacent to railway line
CB14279	Cole Ambrose LTD	Owns extensive area of land in East Cambridgeshire that will directly impact some of the proposed routes. Route G will need their permission to construct a bridge on their land
CB426726	Two Individuals surname Cole.	Owns extensive areas of land adjacent to the A142 in Ely and would need permission to construct segregated cycleway
CB123587	Private	Owns extensive area of land along route D, will require permission if planning to construct path along field edge

Table 8.1 Showing important land ownership information

9. Ecological Assessment

An Ecological Desk Study has been prepared and submitted to East Cambridgeshire District Council as a separate report. The report summary is included below:

Scope and limitations of ecological assessment

Hannah Lewis MCIEEM (Sustrans Ecologist) has undertaken an ecological desk study to assess the likely ecological impacts and constraints for six route options proposed between Ely and Soham, some of which include sub-options. Desk study data was obtained from Cambridgeshire and Peterborough Environmental Records Centre in August 2023 and freely available online datasets (MAGIC, Environment Agency, and Woodland Trust). No site visit has been conducted.

Scheme viability and route comparison

No obvious barriers to route creation have been identified but the ecological impact between routes varies significantly. Route A, potentially in combination with Route B, is likely to have the least ecological impact. Route C, two of the Route D sub-options and Route F have the highest level of potential impact and risk due to the consents required for works, additional survey and mitigation requirements and the higher associated biodiversity net gain costs due to habitat loss. Routes E and G are also dependent on the delivery of part of Route D but are otherwise relatively low risk particularly if

used in combination with the sub option for Route D situated in the field edge.

Designated Sites

One internationally important site (Fenland Special Area of Conservation and Wicken Fen Ramsar Site) is located within 5km of the proposed route. No impacts have been identified as likely to this site.

Two nationally designated sites are situated within 1km of the proposal. Impacts on Ely Pits and Meadows Site of Special Scientific Interest (SSSI) are considered unlikely from the proposal. One of Route C sub-options is situated close to Delph Drain SSSI and impacts on this site could be anticipated during construction and potentially in the long-term from drainage and recreational changes. An assessment would also be required to determine the likelihood of long-term impacts. Construction impacts could likely be avoided through good design and construction practices. This sub-option would require consultation with Natural England.

Nine County Wildlife Sites (CWS) were identified by the data search. Two Route D sub-options are situated in the Great River Ouse CWS. Both will result in some habitat loss. The scale of the impact cannot be fully characterised without a site visit and more detailed proposals. Loss of habitat within a designated site should be avoided wherever possible. Further survey and consultation would be required for these two sub-options. No impacts were considered likely on other CWS.

A biodiversity gain or enhancement scheme should, if possible, focus on strengthening the existing ecological network, for example by buffering and increasing the size of the ecological units associated with the Great River Ouse CWS, Delph Drain SSSI, Broad Piece CWS or Mere Side Grasslands CWS.

Habitats

Irreplaceable habitats identified by the data search included lowland fens in designated sites adjacent to Route A, trees notable for historic and cultural reasons within Ely and the fen ragwort population in Delph Drain SSSI. Of these, impacts are only likely on the Delph Drain site (as discussed above).

The watercourses are important habitats in the landscape, from small field drains to the Great River Ouse. All routes may impact watercourses during construction. It is anticipated impacts can be reduced or avoided through good design and construction methods.

In addition to priority habitat within designated sites; broadleaved woodland and traditional orchards are situated adjacent to proposed routes and all routes cross field boundaries that may comprise hedgerows. It is anticipated on these be avoided except for hedgerows. Further assessment will be required to determine the scale of impact on hedgerows, but it is likely to be minor as only short sections will need to be removed.

Every route option will impact areas of semi-natural habitat. The type and condition of habitats can only be confirmed based on a site visit. Routes C, D and F are likely to result in the greatest degree of habitat loss and may therefore have the greatest biodiversity unit loss, although this depends on the type and condition of habitats lost on these and other routes. Route A is the most direct and situated on road and in arable field edges, so might be anticipated to have the lowest unit loss.

A biodiversity gain or enhancement scheme should, if possible, include measures to enhance retained habitats, creating semi-natural buffers to watercourses, and diversifying and filling gaps in

hedgerows. Opportunities to create ponds and other priority habitats should also be considered.

Protected species

The watercourses along all routes are likely to support otter and water vole and could support white-clawed crayfish. Construction close to these watercourses could impact these species. Further surveys will be required to determine risk to these species. Where construction is close to watercourses or drains for distances over 50m (Routes D, E and F) the impacts on water voles' population may be significant.

Roosting bats may use trees and structures in the landscape. There is potential for contraventions in current legislation to occur where trees and bridges will be removed. This must be informed by further survey work.

Great crested newts, nesting birds, badgers, and reptiles may also be present in suitable habitats in the landscape. Without appropriate controls, disturbance and injury to individual great crested newts, nesting birds, badgers, and reptiles could occur and contravene current legislation. It is anticipated that mitigation measures can be put in place to reduce these impacts. The Route D sub-option at the base of the embankment could also result in the loss of reptile and great crested newt habitat, potentially impacting population levels. Further assessment is required to assess this risk.

Schedule 9 invasive non-native plant species may also be present in the landscape. If invasive nonnative species are present, these could be spread by construction work.

Notable species and assemblages

Species of principal importance likely to be present along the proposed routes include toad, eel, hedgehog, brown hare, pole cat, harvest mouse and various bird, plant and invertebrate species. It is likely that an important farmland bird assemblage is present in the landscape. As no site visit has been conducted the likelihood of the presence of important fungi, plant and invertebrate assemblages cannot be fully assessed, but important plant and invertebrate species could occur on all alignments.

The proposal has potential to impact any notable plant populations occurring along the routes. The Route D sub-option at the base of the embankment could result in the long-term loss of significant breeding habitat for some bird species and foraging habitat for toad. No other population level impacts are anticipated on notable species, although protection measures are recommended for individual animals.

Next steps

This data search will need to be upgraded to a Preliminary Ecological Appraisal for the preferred option to provide a more accurate assessment of impacts. Further surveys or assessments are likely to be required for badger, water vole, otter, and bat roosts for all route options. White-clawed crayfish and reptile surveys may be required for some routes and invasive weed species may be required depending on the time of year at which the PEA field survey was undertaken.

A biodiversity unit assessment will be required to inform a biodiversity gain strategy. The PEA may recommend additional surveys for notable

species/assemblages such as for invertebrates or plants. If the Route D sub-option at the base of the embankment is progressed a breeding bird survey will be required.

Consultation with Natural England will be required for any proposal that may impact Delph Drain SSSI and consultation with the Local Authority will be necessary if impacts cannot be avoided on designated sites.

The detailed design, including the location of temporary access points, storage and works compound should;

- Minimise habitat loss and retain buffers around watercourses and drains, particularly Delph Drain;
- Ensure new bridge design is sympathetic to wildlife and natural habitats;
- Include no-dig design around mature trees;
- To avoid lighting and fencing where possible; and

Include biodiversity enhancements particularly those that strengthen the ecological network and to enable net gain to be achieved.

A biodiversity gain strategy should be prepared. This should, if possible, encompass the following aims;

- Strengthen the existing ecological network, for example by buffering and increasing the size of the ecological units associated with the Great River Ouse, Delph Drain, Broad Piece CWS or Mere Side Grasslands CWS.
- Enhance retained habitats, creating semi-natural buffers to watercourses, and diversifying and filling gaps in hedgerows.

- Diversify the landscape by creating more ponds and other priority habitats.

A Construction Management Plan will be required that includes measures to protect designated sites, retained habitats and protected and notable species. If present and if impacts cannot be avoided, licenses may be required for work relating to badgers, bats, water voles, white-clawed crayfish, and otters. A district level great crested newt license is available for this scheme.

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 Ely to Soham 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 will be a live document that evolves alongside future stages of the Ely to Soham project.

“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 Ely, Soham, and wider impacted communities 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 Fig 8.1.3 Leamington). 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 Fig 10.1.2 Tyburn)
- **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.
- **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 10.1.3 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 is 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.



Fig 10.1.1 Collaborative Design Process

Sustrans Age Friendly Tyburn project was a collaborative design project working with residents to assess the area and develop trials that changed the environment to make active travel age friendly. (see Fig 10.1.2)



Fig 10.1.2 Sustrans Age Friendly Tyburn

Sustrans developed a six-week adapted bikes programme with residents in Belfast. (see Fig 10.1.4) The programme was co-designed and aimed to increase the confidence and ability of riders with disabilities.



Fig 10-1.4 Sustrans bikes programme with residents in Belfast



Fig 10.1.3 Sustrans visualisation for Leamington Spa to communicate design ideas inclusively.

10.2 Audit of Engagement Risk

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

People who use the existing greenspaces and do not want to see any changes.

People who may object to restrictions or limitations on motorised traffic, including people who may engage in social media.

Residents who may object to changes within the villages or on the roads in Ely, Soham, and wider links such as Barway and Stuntney.

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

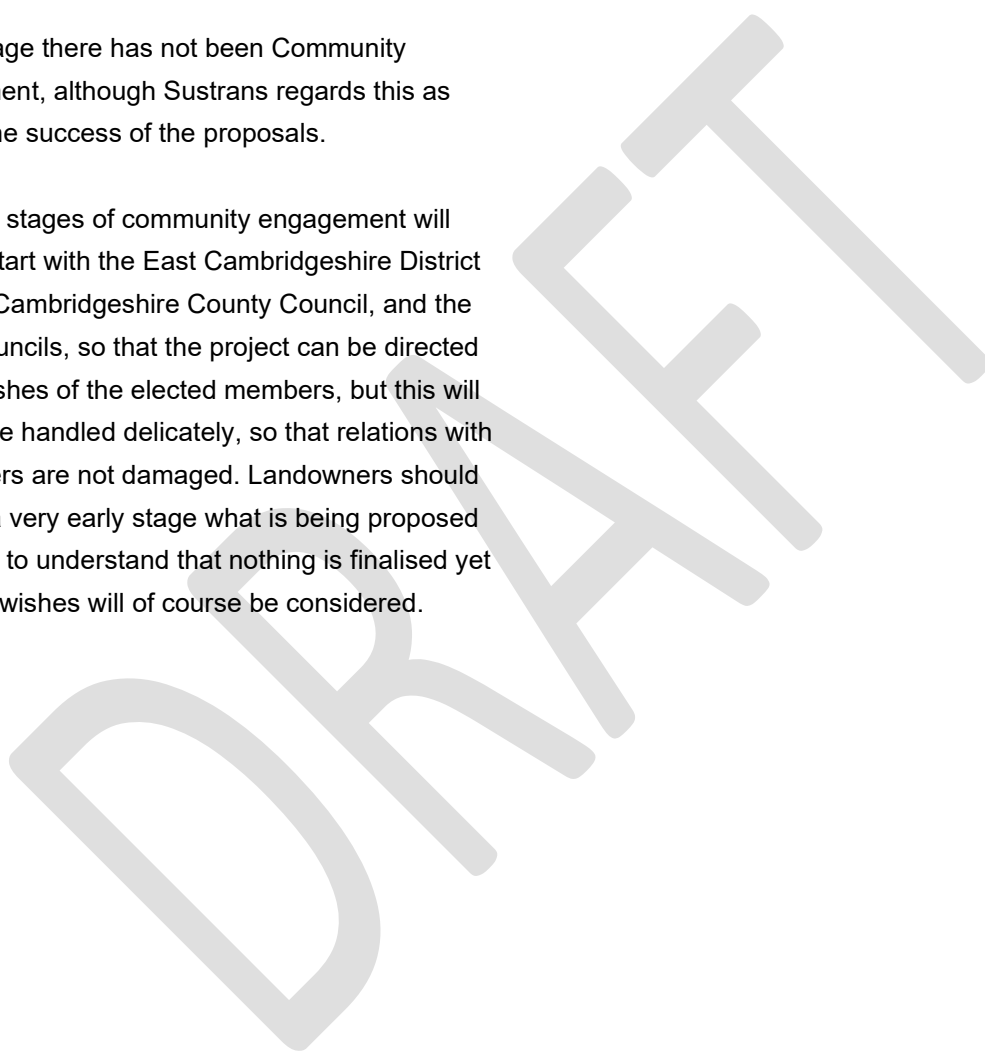
As part of this study initial discussions have been held with representatives from the East Cambridgeshire District Council and Cambridgeshire County Council regarding developments and further engagement is needed. In addition, it will be particularly important to engage

with the residents of Ely and Soham who 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 Town Councils, so that the project can be directed by the wishes of the elected members, but this will need to be handled delicately, so that relations with landowners are not damaged. Landowners should know at a very early stage what is being proposed and need to understand that nothing is finalised yet and their wishes will of course be considered.



11. Equality Impact Assessment Summary

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

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

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

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

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

The EqIA has been guided by best practice guidance including LTN 1/20 and related research. This guidance and research have been linked to what is currently known about the location, Ely and Soham'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 including rural and migrant workers 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.

The project's development will need to consider how its rural context between Soham and Ely impacts safety concerns. The A142, even with improved infrastructure and a 2m buffer will be an intimidating environment for some protected characteristics (a parallel route through adjoining fields is being considered).

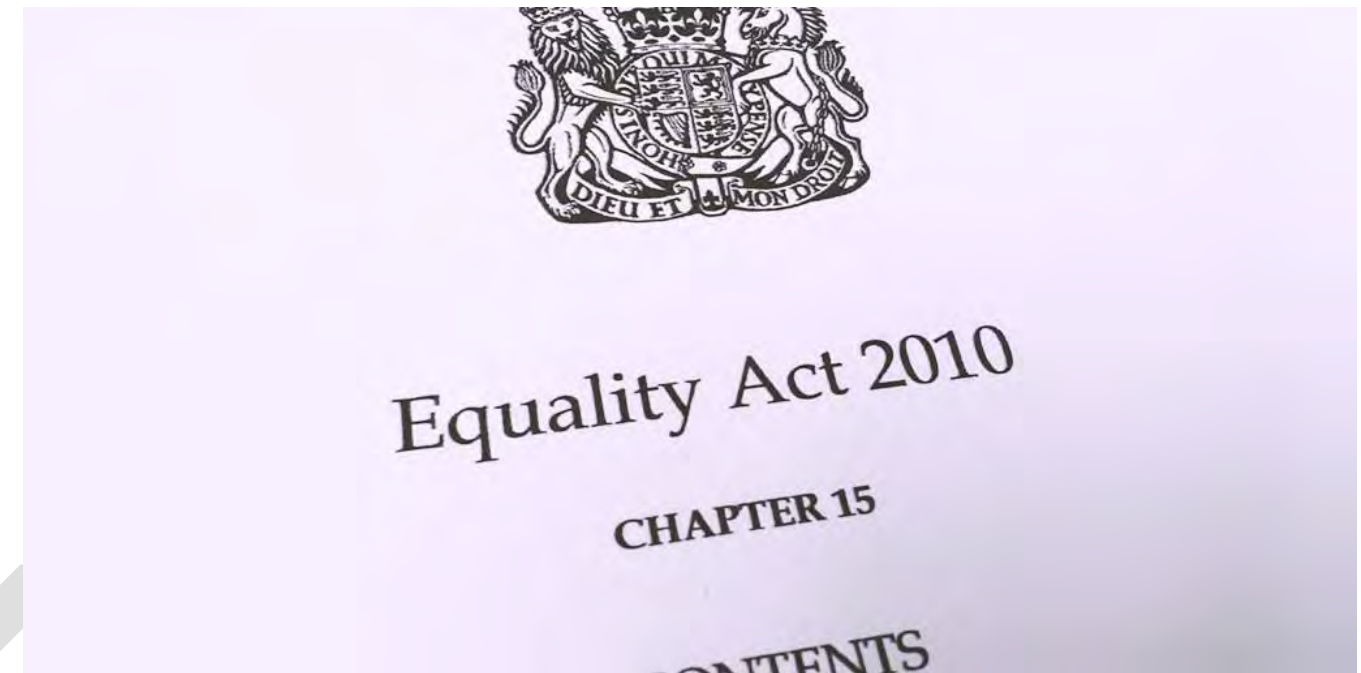


Figure 11.1 – The Equality Act 2010



Figure 11.2 – Images from Sustrans Inclusive Delivery Action Plan

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
- East Cambridgeshire District Council
- Soham Town Council (includes Barway)
- City of Ely Council (includes Stuntney)
- Historic England
- Natural England
- Ben's Yard
- Barcham's
- Combined Authority
- Local businesses
- Local Public Rights of Way Teams in Cambridgeshire
- Local cycle groups
- Ramblers Association
- British Horse Society.
- Cycling UK
- Disability Advice Service
- Representatives of rural workers
- Ely Group of Internal Drainage Boards
- 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.

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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, including the major road crossing changes. Network Rail have their own lengthy procedures which will need to be followed if a new bridge were to be seriously considered.

Given the extent of works in Flood Zone 3 early discussions are recommended with Environment Agency. A major issue would be the need to compensate for any materials brought into the flood zone, which would be most significant for new ramps. If compensation is required, this will mean that additional land is needed.

Where new routes do not follow 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.

Ecological requirements and the need to protect trees may also increase the width required. Special

consent is needed for any works on Common land, which would include the construction of a ramp and bridge outlined in option C. In addition, it is important to consider how a path and other features will be constructed and maintained. Space will need to be allowed for a site compound for construction and access routes and rights will need to be agreed for construction and maintenance vehicles and plant. All of these are matters that a skilled negotiator will need to consider, whilst developing a good understanding with landowners of the issues that are priorities for them.

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

14. Cost Estimates

At this stage costs are very approximate, based on estimated costs/ m or estimated unit costs. The highway works have the highest range of costs, because little is known about the construction of the existing carriageway or the services within the highway. Traffic management can also be a highly variable cost. Bridge costs are also very variable with no detailed design or ground surveys having been undertaken.

The costs of all works in Ely and Soham have not been counted, apart from the links outlined in the report, but good quality provision across both towns will be important to deliver high usage of new facilities. 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. No cost estimates have been made for on road routes along Barway road- Route C, Barcham Road-Route D and along The Cotes-Route A, with the proposed route on carriageway.

Also note- each route begins at the same point in Ely (Back Hill) and ends at the same point in Soham (Mereside). Therefore, item descriptions will be duplicated for each route, where the route options merge entering both Ely and Soham.

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

- Crossing of the A142 between Ely bypass and Stuntney needed for options A, B and C. (See Table 14.1)
- Crossing of the A142 at The Shade near Soham needed for option C. (See Table 14.2)

Item	Item description	Unit	Low cost per unit	High cost per unit	Quantity	Low total cost	High total cost	Notes
A142 Ely-Stuntney crossing Option A								
A1	Bridge deck over A142	m	10,000	16,000	100	1,000,000	1,600,000	Bridge to the North of proposed routes, in Ely. Links both sides of the A142. Needed for options A, B and C. Source of material for ramps to be finalised. Quantity includes bridge decking over Middle Fen Drain. Costing including parapets.
A2	Earthwork regrading to form ramps	m	400	600	395	158,000	237,000	Source of material for ramps to be finalised. Culvert to be included. Costing including parapets.
A3	Culvert Pipe over drain	m	300	700	15	4500	10,500	
						£1,162,500	£1,847,500	Recommended option, so <u>use this high costing</u> , because this appears most achievable and best option for users.
A142 Ely crossing Option B								
B1	Jetty under A142	m	10,000	16,000	40	320,000	640,000	Bridge over drain Costing including parapets.
B2	Earthwork regrading to form ramps	m	400	600	77	30,800	46,200	Source of material for ramps to be finalised. Costing including parapets.
B3	Allowance for moving utilities	item	100,000	400,000	1	100,000	400,000	No estimates. Will be expensive and working over drain, but away from carriageway.
						£450,800	£1,086,200	Could be a cheaper option than Option A, but a lot of uncertainties and may be hard to agree. <u>Use this low costing</u> .

Table 14.1 Estimated costings for new grade-separated crossing of the A142 between Ely bypass and Stuntney.

Item	Item description	Unit	Low cost per unit	High cost per unit	Quantity	Low total cost	High total cost	Notes
A142 Soham The Shade crossing Option A								
S1.A1	Signalised junction	Item	200,000	300,000	1	200,000	300,000	Signalisation of Barcham Road/ A 142 junction with cycle and pedestrian crossings. Crossing needed for option B. New signalised junction on high-speed road will be expensive. Needs Cambridgeshire County Council agreement.
S1.A2	Layout change at Junction	item	100,000	150,000	1	100,000	150,000	Road space needs to be reallocated and kerblines tightened. Difficult traffic management.
Signals						300,000	450,000	<u>Recommended option. Use these costings, but subject to County approval.</u>
A142 Soham The Shade crossing Option B								
S1.B1	Bridge Deck and steelwork ramps in sections	m	8,000	16,000	106	848,000	1,696,000	New bridge over A142 on edge of Soham. Would need to use Common land. Space left to access fields so steel works ramp used in part.
S1.B2	Earthwork regrading to form ramps	m	400	600	380	57,000	110,000	Source of material for ramps to be finalised. Costing including parapets.
S1.B3	Stairs	Item	7,300	10,750	2	14,600	21,500	Steps added as an alternative access to bridge
S1.B4	New footway along A142	m	150	290	120	18,000	34,800	
Bridge						1,087,600	2,102,300	Although option B better serves the residents with a more direct route into Soham than Option A, it would be more costly and land agreements to build on common land may be harder.

Table 14.2 Estimated costings for new signals or bridge crossing of the A142 at The Shade, near Soham.

Item	Item description	Unit	Low cost per unit	High cost per unit	Quantity	Low total cost	High total cost	Notes
Queen Adelaide Way to Back Hill								Closure of rail underpass to car traffic and creation of public space from river to Cathedral.
Ely 1	Signalised junction in Ely	Item	100,000	140,000	1	100,000	140,000	New signalised crossing needed to control traffic from Station Road, Angel Drove and Annesdale.
Ely 2	Junction amendment	Item	50,000	100,000	3	50,000	100,000	Change junction for road entering Ely Station Angel Drove and Back Hill. No allowance for cycleway along Angel Drove at this stage.
Ely 3	Parallel crossing	Item	30,000	50,000	1	30,000	50,000	Reallocation of road space may be needed
Ely 4	Roadspace reallocation	Item	300,000	400,000	1	300,000	400,000	New urban design scheme for train station gateway and Angel Drove roundabout.
Ely 5	Roadspace reallocation	Item	100,000	200,000	1	100,000	200,000	Place making on and around river bridge.
Ely	Ely Works common for all options					580,000	890,000	Relies on closure of rail underpass to car traffic.
Soham 1	Bus gate and 20 mph zone	Item	580,000	890,000	1	580,000	890,000	No design work done, so assume allow the same amount as for Ely at this stage.
Soham	Soham common for all options					580,000	890,000	Cycling almost entirely on road with low speeds and low traffic volumes.

Table 14.3 Estimated costings for Ely and Soham, common for all schemes

Item	Item description	Unit	Low cost per unit	High cost per unit	Quantity	Low total cost	High total cost	Notes
Option A								Route most closely follows the A142 from Ely, then follows Ely Lane, then along the Cotes to Enter Soham.
1	Segregated cycleway	m	150	290	4800	720,000	1,392,000	Needs farmland and Highway land agreements
2	Signalised junction	Item	100,000	140,000	1	100,000	140,000	New signalised junction and crossings Queen Adelaide Way. .
3	Moving carriageway	m	150	290	240	36,000	69,600	Queen Adelaide Way to Ely bypass
4	Ely-Stuntney A142 crossing	Item	450,800	1,847,500		450,800	1,847,500	See Table 14.1
5	Barway Road crossing	Item	30,000	50,000	1	30,000	50,000	Crossing side road.
6	Junction change	Item	30,000	50,000	1	30,000	50,000	Visibility issue at The Cotes junction.
Option A						£1,366,800	£3,549,500	
Ely + Soham works						1,160,000	1,780,000	See Table 14.3
Option A + Ely + Soham works						£2,526,800	£5,329,500	

Table 14.4 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								This route is a variation on Option A in that it considers different ways to link the provision with Soham either following the A 142 all the way to the BP station on the edge of Soham or via Rosefield Lane and the Cotes in a similar manner to Option A.
1	Option A	Item				1,366,800	3,549,500	See Table 14.4
2	Additional segregated cycleway	m	150	290	700	105,000	203,000	Needs farmland and Highway land agreements. Additional length of path needed compared to using Rosefield Lane, which was in Option A.
Option B						£1,471,800	£3,752,500	
Ely + Soham works						1,160,000	1,780,000	See Table 14.3
Option B + Ely + Soham works						£2,631,800	£5,532,500	

Table 14.5 Estimated costings for Option B.

Option C								This route follows the A142 and goes through Stuntney and then runs to the north-east of the A142 mostly using quiet lanes or new paths.
1	Segregated cycleway along Station Road and the A142	m	150	290	2000	300,000	580,000	Needs farmland and Highway land agreements
2	Moving carriageway	m	150	290	240	36,000	69,600	Queen Adelaide Way to Ely bypass
3	Ely-Stuntney A142 crossing	Item	450,800	1,847,500		450,800	1,847,500	See Table 14.1
4	Bridge Deck and steelwork ramps in sections A142 in Stuntney near Ben's Yard.	m	8,000	16,000	230	1,840,000	3,680,000	Subject to land agreements.
5	Earthworks ramp over the A142 at Ben's Yard.	m	400	600	235	94,000	141,000	Needs land agreements. Ramp to go into field to avoid removal of utilities
6	Carriageway realignment to make space for ramp in Stuntney	m	150	290	200	30,000	58,000	Reallocation of road/footway space may be needed
7	Segregated cycle path along field edge	m	150	290	1,470	220,500	426,300	Subject to land agreements
8	Repaving existing Quiet lane- Nornea Lane	m	150	290	1000	150,000	290,000	Lane condition inadequate for cycle users
9	Signalised junction at The Shade.	Item	100,000	140,000	1	100,000	140,000	See Table 14.2
Option C						£3,221,300	£7,232,400	
Ely + Soham works						1,160,000	1,780,000	See Table 14.3
Option C + Ely + Soham works						£4,381,300	£9,012,400	

Table 14.6 Estimated costings for Option C.

Option D								This route follows the River Great Ouse and the National Cycle Network between Stuntney Causeway and Barway
1	Segregated cycle path along field edge	m	150	290	3800	570,000	1,102,000	Stuntney Causeway to Barway village edge.
2	Segregated cycle path along field edge	m	150	290	1500	225,000	435,000	Link with Barway village from level crossing.
Option D						£795,000	£1,537,000	
Ely + Soham works						1,160,000	1,780,000	See Table 14.3
Option D + Ely + Soham works						£1,955,000	£3,317,000	

Table 14.7 Estimated costings for Option D.

Option E								This route joins with Option D at both ends but takes a more direct alignment that follows the south-west of the railway on private land.
1	Segregated cycle path along field edge	m	150	290	4300	645,000	1,247,000	Stuntney Causeway to Barway Road
2	Segregated cycle path along field edge	m	150	290	1500	225,000	435,000	Link with Barway village from level crossing.
3	Segregated cycle path along field edge	m	150	290	1800	270,000	522,000	Barway Road to Great Drove, Soham. Could be omitted if Blockmoor Road used instead.
Option E						£1,140,000	£2,204,000	
Ely + Soham works						1,160,000	1,780,000	See Table 14.3
Option D + Ely + Soham works						£2,300,000	£3,984,000	

Table 14.8 Estimated costings for Option E.

Option F has not been costed because it is not considered a practical option.

Option G								This route joins with Option D at both ends but takes a more direct alignment that follows the north-east of the railway on private land and links with Stuntney.
1	Segregated cycle path along field edge	m	150	290	4300	645,000	1,247,000	Stuntney Causeway to Barway Road. .
2	Segregated cycle path along field edge	m	150	290	650	97,500	188,500	Link with Stuntney village from railway crossing.
3	Segregated cycle path along field edge	m	150	290	1500	225,000	435,000	Link with Barway village from level crossing.
Option G						£967,500	£1,870,500	
Ely + Soham works						1,160,000	1,780,000	See Table 14.3
Option G + Ely + Soham works						£2,127,500	£3,650,500	

Table 14.9 Estimated costings for Option G

A railway bridge has been discussed for this option, but it is not considered realistic and would be very expensive, so has not been costed.

Item description	Low total cost	High total cost	Notes
Ely works	£580,000	£890,000	Common for all schemes. Table 14.3
Soham works	£350,800	£890,000	Common for all schemes. Table 14.3
Route A	£1,366,800	£3,549,500	Table 14.4
Route B	£1,471,800	£3,752,500	Table 14.5
Route C	£3,221,300	£7,232,400	Table 14.6
Route D	£795,000	£1,537,000	Table 14.7
Route E	£1,140,000	£2,204,000	Table 14.8
Route E without Barway Road to Soham	£870,000	£1,682,000	Table 14.8
Route F	-	-	Not costed. Not considered realistic.
Route G	£967,500	£1,870,500	Table 14.9. Bridge over railway not costed.

Table 14.10 Cost for all routes between Ely to Soham

15. Potential Usage and Business Case

There is little data on actual cycle usage between these communities, but some indication can be got from various modelling tools 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 Ely and Soham.

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

- The tool assumes that cyclists between Ely and Soham will cycle along the A142 since this is 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. Neither Option A nor Option B or C are as direct as the A142, so this could reduce potential usage, but a major detour such as Option D is unlikely to be attractive as an Ely-Soham route although it would serve as good routes Ely-Barway and Barway-Soham.

- The tool shows a quieter route option via Blockmoor Road and Barway, similar to Option D, but it proposes using a byway section, which is a right of way, but which can be almost impassable in winter. Option D follows a slightly different and further route.
- The tool shows that the higher ranked faster routes are all within Ely and Soham where in reality most cycling will be. The whole route Ely to Soham 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 of the Ely-Barway route, which is known to have appeal for leisure journeys from Ely, but also for shopping and other journeys from Barway to Ely.

The tool provides separate figures for school and for the Ebikes scenario. The figures obtained from www.pct.bike are collated in Table 15.1:

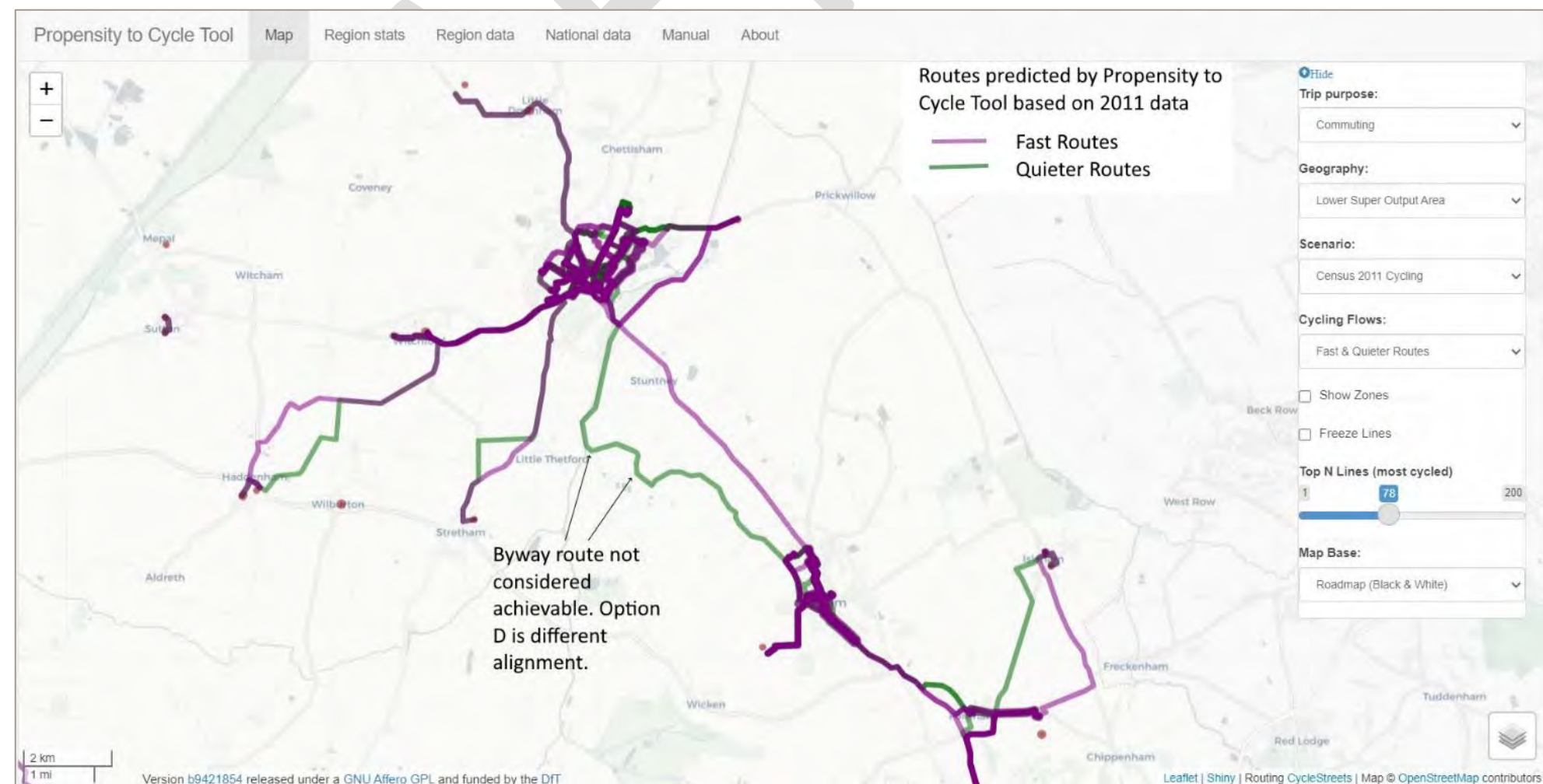


Fig 15.1 Image from Propensity to Cycle Tool 2011 data

It should 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. Nevertheless, the tool shows the potential for increased usage including a big potential increase in school trips, presumably based on cycling to and from school in Soham. It also shows significant potential increases in commuting trips, particularly with the Ebike 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 in Table 15.1.

Scenario	Usage on most direct route between Ely and Soham	Comments
Commuters 2011	5	
Go Dutch Commuters	119	For this Go Dutch has to apply over the whole route – door to door.
Ebikes Commuters	173	As above but also with extended range and speed of Ebikes.
2011 School Trips	5	(Likely to be mostly on the edge of Soham and cycling into Soham)
Go Dutch School trips	150	(Likely to be mostly on the edge of Soham and cycling into Soham and on the edge of Ely and cycling into Ely)

Table 15.1 Scenarios for usage from Propensity Cycle Tool

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 Ely and Soham are generally consistent with issues raised in this study. Nevertheless, it is useful check to ensure that issues raised have been considered in this study.

An extract from Widen My Path is shown in Fig 15.2 with comments added in for ease of viewing:

Another on-line tool that has recently been developed may in future contain more data on the area, but it is limited at present. See <https://www.cyipt.bike/rapid/cambridgeshire-and-peterborough/m.html> It is interesting that this tool raises as a priority a route along the A142 between Barway Road and Ely Lane, near the Barcham's site. This is an area without even a footway and where conditions for cycling are very challenging. It is also an area where during surveys there was some evidence of local cycling. No checks were made but it is possible that staff cycling to and from the Barcham's site may have raised these concerns.

Fig 15.2 Extract from Widen My Path

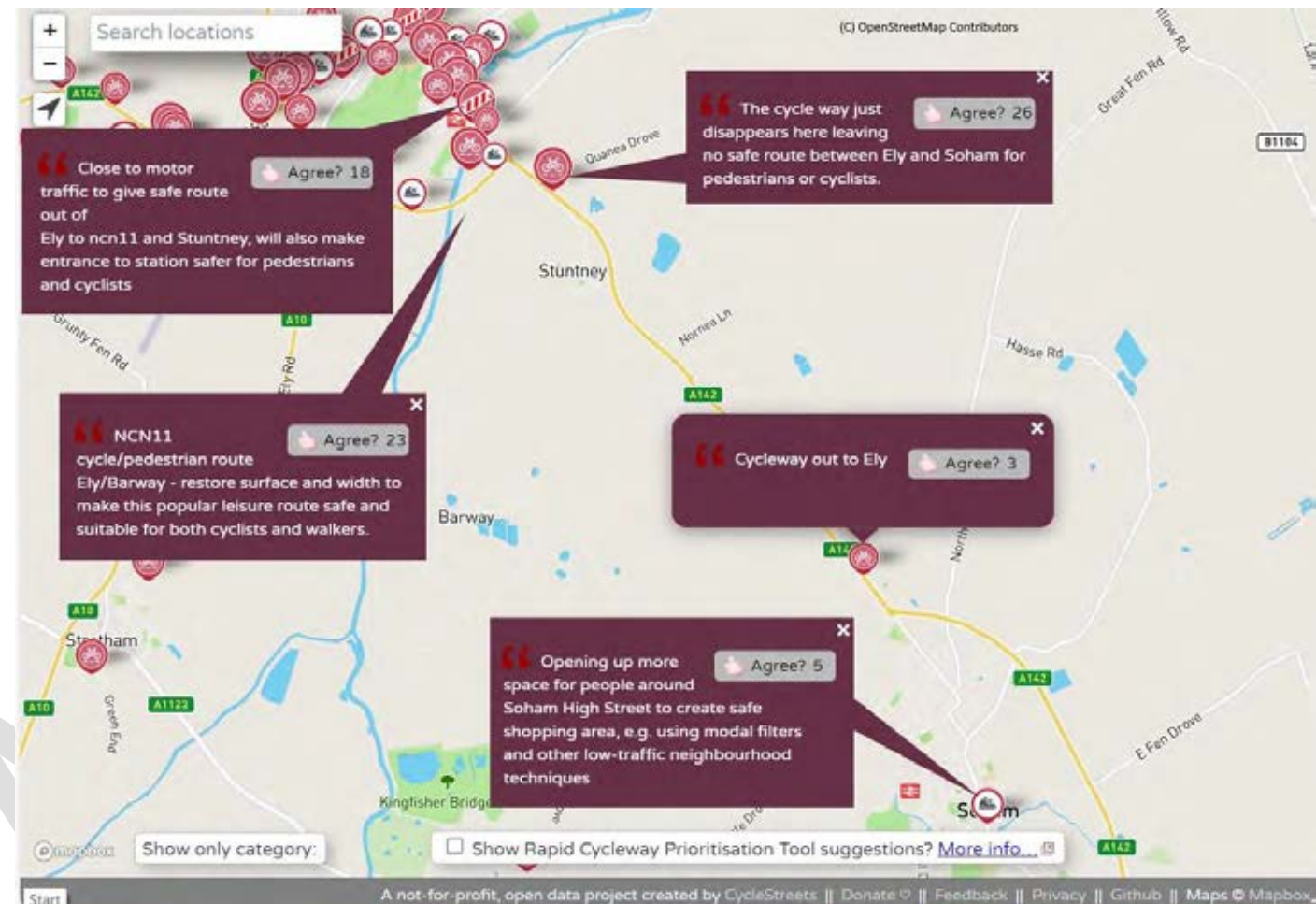
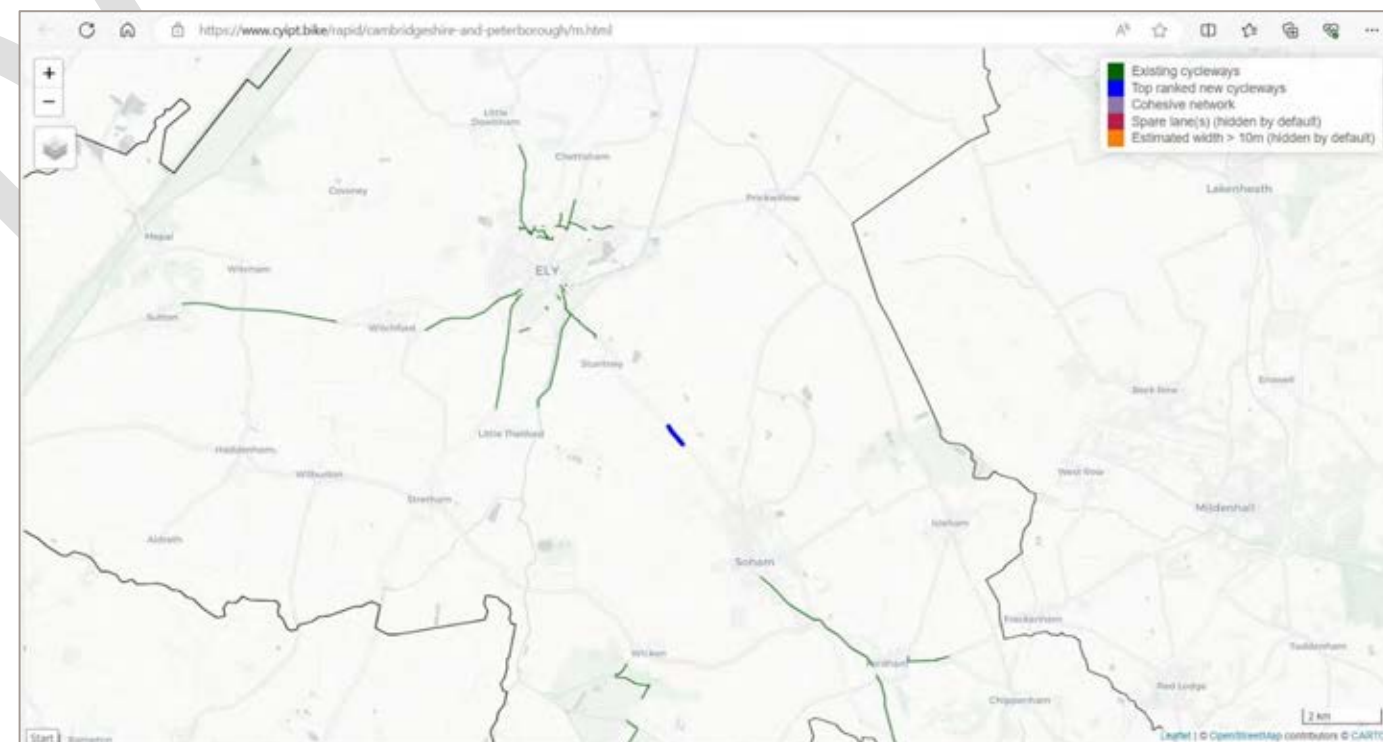


Fig 15.3 Extract from cyipt.bike



As mentioned earlier, East Cambridgeshire District Council has conducted surveys as part of the Cycling and Walking Routes Strategy. This produced a strong response for a new Ely to Soham route. The full report is at

<https://www.eastcambs.gov.uk/sites/default/files/agendas/Cycling%20and%20Walking%20Routes%20Strategy%20webAC.pdf>

In total 309 cycle routes were proposed. There was a lot of demand/ interest in new routes in this vicinity and Ely to Soham with 80 responses was the second highest ranked in the District. There were also 148 responses for an Ely to Newmarket which would be expected to include Ely-Soham as part of the route.

For Ely to Soham Table 15.2 shows the heaviest demand for better connections with sport/ entertainment facilities and with friends/ family. There was also a strong demand for leisure routes. Shopping, sports, entertainment and visiting family/ friends were the most popular journey choices. None of these are picked up by the Propensity to Cycle analysis of journeys to work or school.

Ely to Soham By Journey Purpose	Number of responses
Work	35
College/ Higher Education	16
Doctors/healthcare	22
Shopping	54
Access other public transport	42
Council offices/ public services	25
Sports/ entertainment	55
Visit family/ friends	55

Table 15.2. Number of responses from consultation carried out by East Cambridgeshire District Council on routes.

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 Ely and Soham
- Changes in the number of jobs and people based at G's Fresh, Barway (no data).
- The opening of Ben's Yard.

Ben's Yard appears to be attracting significant visitors and this will vary significantly when events happen. The Ben's Yard Planning Statement said:

In terms of traffic generation, the Statement finds as follows:

- The proposed use would be expected to generate 409 vehicular movements in a day, along with 12 pedestrian and 10 cyclist movements.
- Vehicular generation at peak times is expected to be low and it is not considered that the Proposed Development will have any significant impact upon the wider transport network.
- It is anticipated that staff at the development would generally be locally based; 74.5% are expected to arrive to Site by car. It is anticipated that relatively few customer trips would be made via foot, but the Site does lie within a 5km cycle distance of both Ely and much of Soham.
- In terms of parking numbers, it is estimated that there would be a typical peak demand for between 52 and 64 car parking spaces, plus three spaces for oversized vans and eight disabled spaces. An additional overflow car park will be provided to ensure no parking takes place on the A142 for any seasonal events.

The Proposed Development will act in conjunction with the neighbouring Barcham Trees development to attract visitors from within and beyond the District.

Given the experience of visiting Ben's Yard by bike it might appear that 10 cyclist movements (or 5 cyclists) are optimistic, but it would have to be anticipated that with good infrastructure that could increase significantly perhaps to 10% - 15% of visitors i.e., perhaps 50 cyclist movements.

It was noted at the time of visit that a planning application had been submitted for more activities at the site and with good provision this could result in more cyclist movements than above.

For routes via Barway it is very difficult to gauge usage. Anecdotally it would appear that usage has not increased and probably reduced as the surface and conditions of the route have deteriorated. It is hard to argue that a route via Barway has big potential as a commuter route between Ely and Soham, but with a good quality route it could make an excellent leisure cycling route between Ely and Wicken, especially when combined with the new Soham to Wicken route. For walking there is great potential in increasing walking if the route between Ely Station and the riverbank is improved. It is likely that many walkers may choose to use the bank top path, even if the upgraded route is along the adjacent field edge.

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 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 following tables.

It should be noted that Table 15.3 does not include the costs of works at Ely or at Soham. Further analysis and data is needed to assess Benefit Cost Ratio for these but two key points should be noted:

Without the works in Ely and Soham the BCR of the schemes shown in Table 15.3 will be much reduced because usage will be much reduced by the inability of residents of Ely and Soham to access the new facilities.

The BCR of these works is likely to be very high, but most users will not be using the proposed Ely-Soham facilities, rather they will be likely to be taking trips within Ely or within Soham.

The Business Case has not been analysed for all options. There is not sufficient data to be confident in the analysis. The expectation is that the BCR for options A and B would be stronger than for Option C because costs are lower, but on the downside usage would also be lower.

For Option C the business case is marginal. The costs are high and clearly there is local demand but given the distance between populations and the size of populations usage is never going to be high. The case is so marginal that if costs increase the BCR (Benefit to Cost Ratio) would be below 1 whilst if costs stay low the BCR would be above 1. If more private sector funding can be secured this will also change the BCR strengthening the case.

For Option D the existing and potential usage is very hard to measure and more surveys are recommended to improve this. Nevertheless, the Option is significantly cheaper than Option C and has good potential for leisure usage, so the case looks strong.

The strongest case for works is however within Ely and Soham themselves. This is where the population density is greatest and where most trips are made with the greatest potential for change.

Item	Item description	Capital	Annual maintenance	Usage change	Notes on usage	AMAT BCR
Option C Edge of Soham to edge of Ely	Low Cost with three new crossings of A142.	£3,221,300	£150,000	20 before 319 after	Based on Propensity to cycle 2011 census figures with small allowance for Ben's Yard and other leisure trips. Based on Propensity to Cycle Go Dutch figures with allowance for additional leisure trips	1.7
Option C Edge of Soham to edge of Ely	High Cost with three new crossings of A142.	£7,232,400	£350,000	20 before 319 after	Based on Propensity to cycle 2011 census figures with small allowance for Ben's Yard and other leisure trips. Based on Propensity to Cycle Go Dutch figures with allowance for additional leisure trips	0.75
Option D via Barway	Low Cost	£795,000	£40,000	20 before 250 after	No data for this, so based on usage seen at site visits and estimation of potential. Limited school potential, given the population of Barway, although it has no school.	4.56
Option D via Barway	High Cost	£1,537,000	£75,000	20 before 250 after	No data for this, so based on usage seen at site visits and estimation of potential. Limited school potential, given the population of Barway, although it has no school.	2.38

Table 15.3 showing costs and potential Benefit Cost Ratio using the AMAT tool.

Item	Item description	Capital	Notes on usage	AMAT BCR
Works in Ely	Highway works around Ely Station and Back Hill including closing the railway underpass. Cost with no detailed design.	£580,000 £890,000	Not analysed but existing levels, particularly of walking, are likely to be high. Considered to be big potential for increase.	Needs more data but likely to be high given big potential increases in usage.
Works in Soham	Highway works across Soham including 20 mph. Cost with no detailed design.	£580,000 £890,000	Not analysed but existing levels of cycling seem to be particularly low. Considered to be big potential for increase.	Needs more data but likely to be high given big potential increases in usage.

Table 15.4 showing costs and suggestions on potential Benefit Cost Ratio for Ely and Soham.

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 Ely.

Works around the station area and Angel Drove will need a traffic management plan and a suitable site compound. It should be possible to find a suitable location for a site compound on the public highway, which will need the appropriate orders. Works on Station Road and nearer the river will need similar arrangements but on the opposite side of the railway.

Stuntney Causeway and Queen Adelaide Way junction

These works will need traffic management and would be much easier with the closure of the railway underpass to car traffic. Highway space on Station Road should be suitable for a compound.

Works along the A142

The proposed works are generally away from the carriageway, so the major issue will be ensuring suitable access arrangement for construction vehicles and staff. This will have to be arranged in sections along the A142 and will need to be planned as part of detailed designs and will need to be agreed with landowners as part of the negotiations

for the establishment of new routes. Where bridges are to be installed closure of the A142 will be required and with careful planning it should be possible to arrange for this to be overnight or at a time of relatively low traffic. If the route under the A142 is to progress workplans will need to address the risks of working near and overwater as well as the risks with all the utilities in the area. The proposal for new traffic signals at The Shade near Soham will however impact significantly on traffic and will need careful traffic management while works on the highway are taking place.

Works in Soham

Works in Soham will need detailed planning and will involve traffic management and the need for site compounds around the town.

Works along the River Great Ouse corridor

Any works on the flood bank itself will have limited access which will be challenging, especially with no access across the railway. Any works on field edges can be accessed from the Ely bypass and from farm access routes. Access across the field will though be particularly challenging in bad weather and will need to be carefully considered as part of negotiations with landowners. 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.

Works along the railway corridor and between Stuntney and the railway.

There is limited road access to this section. Where possible works on field edges would best be accessed from farm access routes. Access across fields will be particularly challenging in bad weather and will need to be carefully considered as part of negotiations with landowners. 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 manage and less frequently for surface maintenance and enhancements and this should be part of all discussions pertaining route development.

17. CDM and Risk register

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

Table 17.1 CDM Audit

Designer	Sustrans	
Client	East Cambridgeshire D.C.	
Author	NB (Sustrans)	
Date	12/10/23	
Risk ID number	Description	Response
1	All construction works carry risk. Is work necessary?	Clear need for new facilities, because existing do not comply with standards such as LTN 1/20.
2..	Works near A142 carry risk.	Route must cross this major road. Design needs to minimise works and maintenance near the carriageway. The general approach is for new construction to be away from the carriageway and where this cannot be avoided there will need to be road closures (as when any new bridge over the road is being installed) or traffic management, where new signals or junction changes are happening.
3	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.
4.	Works in rural areas carry risks, including waterways and 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.	Gas mains and electricity supplies are in the area.	Utility search undertaken to check for any issues. This has revealed some issues, but further checks should be done as design progresses.
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 for parts of the A142 where there is no footway.

Table 17.2 Design Risk Register

18. RAG Report

Project title	Ely to Soham Feasibility Study	Date RAG report initiated	30/08/23	Project Manager	MP	
Client	East Cambridgeshire D.C.	Date of current edition	12/10/23	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	12/10/23		Skillful negotiations with landowner or use of statutory powers.	
2	Traffic calming measures with speed limit changes not agreed so route not LTN 1/20 compliant in Ely and/or Soham	ECDC / CCC	12/10/23		High level of community engagement needed to come up with solutions.	
3	Route may use byways, footpaths or bridleways and County Council agreement not obtained for works.	ECDC / CCC	12/10/23		Options use few rights of way.	
4.	Failure to get Network Rail consent for rail crossing.	ECDC	12/10/23		Allocate sufficient money, technical skills and time to this.	
5.	Failure to get agreement from Environment Agency for work on/near floodbanks.	ECDC	12/10/23		Allocate sufficient money, technical skills and time to this.	
6.	Reallocation of road space near Ely Station not agreed.	ECDC / CCC	12/10/23		High level of community engagement needed to come up with solutions.	
7.	Crossings of A142 cannot be agreed.	ECDC/CCC	12/10/23		CCC need to be persuaded of need for scheme.	
8.	Crossing of Queen Adelaide Way cannot be agreed	ECDC/CCC	12/10/23		CCC need to be persuaded of need for scheme.	
9.	Maintenance plan cannot be agreed.	ECDC/CCC	12/10/23		Needs to be agreed and required standards set at an early stage.	
10.	Funding not obtained.	ECDC	12/10/23		Ensure scheme is to LTN 1/20 standards, has good BCR and has all necessary consents, to improve chances of funding.	
11.	Commons consent not obtained.	ECDC	12/10/23		A route using the Common at The Shade is a good option, but getting consent could be difficult. Progress signalled crossing alternative, if consent and/or funding looks unlikely.	
12.	Consent for work in flood plain not obtained.	ECDC	12/10/23		Early discussions with Environment Agency and Drainage Board needed. Need to be able to offer compensation if required.	
13.	Planning consents not obtained.	ECDC	12/10/23		Follow recommendations in Ecology Study and use these to inform design and route selection. Undertake pre-app discussions and ensure all issues addressed.	

Table 18.1 RAG Report

19. Conclusions

The routes considered are shown in Fig 19.1. None of the options is easy and there is a good case for more than one route. There is also a strong case for significant changes within Ely and Soham themselves. Indeed, the Benefit to Cost Ratio of works in Ely and Soham is likely to be much higher than the Benefit to Cost Ratio of any route between the two communities. This is because usage is likely to be much higher in the more urban areas and the cost of some measures in the more urban areas is not as high as some measures needed in the countryside between Ely and Soham.

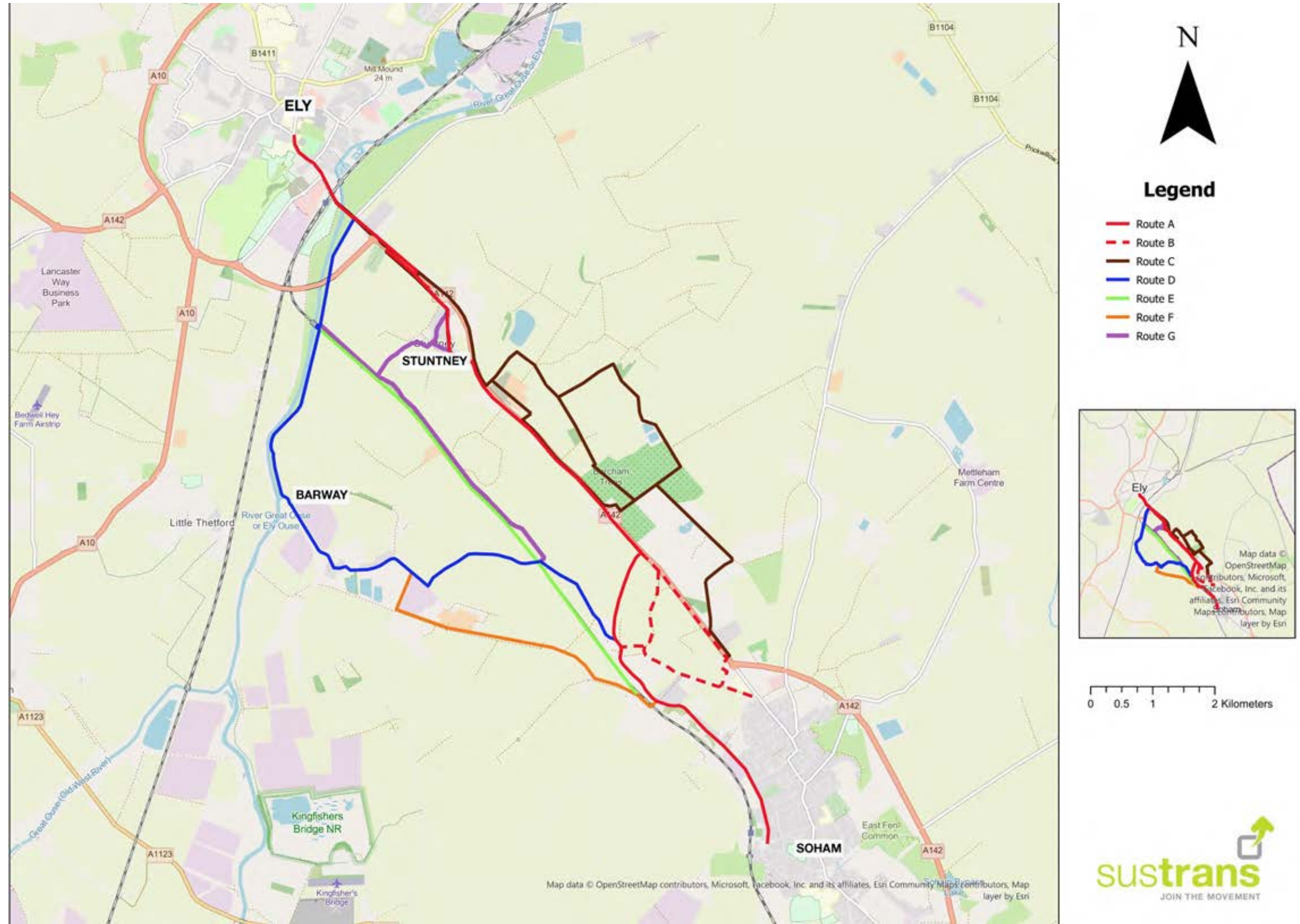


Fig 19.1. Map showing the options considered.

It has not been possible to select just one route as a favourite – all the options have some advantages and serve slightly different purposes. The options are summarised considering the whole route Ely-Soham.

- Option A. This serves the A142 corridor and involves one new major crossing of the A142. It would not serve developments north of the A142 such as Ben's Yard.
- Option B. This is a variation on Option A and is likely to be more achievable.
- Option C. This is the favoured alignment along the A142 corridor, but also very costly with 3 major new crossings of that road needed to overcome the barrier that it forms.
- Option D. This is an improvement on the existing route to Barway and would serve Barway well but is an indirect route to Soham. It is perhaps the most achievable route, but still needs agreement of private landowners.
- Option E. This would be an improvement on Option D, if it also included a link into Barway.
- Option F. This would be attractive but difficult and is not recommended.
- Option G. This would need to link with Stuntney and Barway and would be a direct route between Ely and Soham with no major crossings needed for the A142. It is an attractive but difficult option but would not serve the A142 corridor, such as Ben's Yard.

The favoured options to progress would be Option C and Option D and/or G.

Option C would link together quiet roads on both sides of the A142 and would link well with Ben's Yard and Barcham's but needs new links where none exist at present and 3 major new road crossings.

Option G would need to link with Option D and would involve a new path linking Stuntney with another new path following the railway from near the River Great Ouse to Barway Road. It would need an upgraded link with Ely (most likely on field edges to/from Station Road) and would need a new link with Barway following Barway Road but could serve well as an Ely – Soham route while linking with both Stuntney and Barway whilst avoiding all the challenges of being close to the A142.

It appears that Option D could be the most achievable in terms of delivery and funding. This probably explains why it was chosen as the National Cycle Network alignment (combined with a good onward link with Wicken). Although much of Option D is in place it needs a major upgrade, and this is likely to involve a new alignment and new negotiations with landowners as well as new planning consents.

The costs of Option C are very large, but all the three major road crossings identified have local as well as longer distance value in terms of connecting Stuntney (and the Ely allotments site) with Ely, connecting Stuntney with Ben's Yard, Barcham's and properties on the other side of the A142 and in connecting properties on the edge of Soham with Soham itself.

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 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 regarding the significant changes in Soham and Ely that are needed to make the new facilities accessible and attractive for all, as

well as the need to engage with many landowners and understand their requirements and issues. Given that many of the workers in the area are believed to be migrant workers engaging with them will also be important, but challenging and this has been identified as one of the issues in the Equality Impact Assessment, which 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 there is a serious risk that someone may get killed or seriously injured as they try to navigate their way along the A142 corridor, so doing nothing is not a good option.

20. Appendices

Appendix A



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	Ely to Soham (14628)
EqIA Version & Date	V1: Completed 25-10-23 (Feasibility)
Project Sponsor	Martin Philpott
Project Manager	Martin Philpott
Completed By	Mark Jenks and Jolina Irish
Sustrans Approach	Transforming routes and spaces

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

Sustrans Approach	Product	Examples
Transforming routes and spaces	<ul style="list-style-type: none"> - 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 	<ul style="list-style-type: none"> - 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	<ul style="list-style-type: none"> - Community model shift: children and adolescents - Community model shift: adults - Moving goods. 	<ul style="list-style-type: none"> - 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	<ul style="list-style-type: none"> - 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 	<ul style="list-style-type: none"> - 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 existing National Cycle Network (NCN) does not make a direct connection between Ely and Soham. Whilst Ely is on the National Cycle Network, Soham is not.

Most people at present who want to cycle between Ely and Soham will have to use the A142 corridor, which is too busy and fast to expect anyone apart from the most confident cyclists to use it. Multiple route options and alignments have therefore been considered, with relevant linkages to nearby settlements and destinations such as Stuntney and Barway. All options have their advantages and serve slightly different purposes. There is also a strong case for significant changes within Ely and Soham 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 Ely and Soham and rank the route options in terms of benefits and costs. Links to other villages have been considered to establish the merits of incorporating them into any new route between Ely and Soham.

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	<p><i>Closing the Divide. How to really level</i></p> <p><i>Health Equity in England</i></p> <p><i>Fairer Scotland Duty</i></p>	<p><i>Indicies of Deprivation: combined</i></p> <p><i>Scottish Index of Multiple Deprivation 2020</i></p>	<p><i>Transport poverty research</i></p>	<p>Guidance: •Department for Transport, Travel by car access, household income, household type, NS-SEC and mobility status NTS0702, 2018</p>	<p>(1) Overall, Ely includes neighbourhoods in the country's 40% most deprived category, whilst Soham has neighbourhoods in the 50% least deprived category.</p> <p>(2) In England 25.8% of people did not own a car. This rate is at 19.6% in Ely and 13.1% in Soham.</p> <p>(3) 40% of people from the lowest income have no access to a car</p> <p>(1) Indices of Deprivation 2019 (2) Census 2011 (3) Government Foresight Report</p>	<p>Possible Positive Impact: People in Ely and Soham experiencing higher deprivation are less likely to own a car, and therefore are more reliant on walking, cycling and public transport for their local journeys. Improvements to walking and cycling infrastructure will make these journeys safer.</p> <p>If the cycling infrastructure and safety of cycling improves more people may consider owning and using a bike for journeys they currently do via bus, taxi, and private car. This could be less expensive, give more independence and health benefits.</p> <p>Possible Negative Impact: In both Ely and Soham, 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.</p>
Disability	<p><i>A Guide to Inclusive Cycling</i></p> <p><i>Pave the Way</i></p> <p><i>BS 8300-2:2018 Design of an accessible and inclusive built environment. Buildings - code of practice</i></p>	<p><i>Advice for local authorities considering hosting e-scooter trials</i></p> <p>-</p> <p>-</p>	<p><i>We must take practical steps to support people with mental health conditions to travel</i></p> <p><i>Disability History Month events</i></p> <p><i>Disabled Citizens Enquiry (yet to be published)</i></p>	<p>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</p>	<p>(1) Day-to-day activities are limited for approx. 6% of people in both Ely and Soham, which is less than the national average of 8.3%.</p> <p>The percentage of people with day-to-day activities limited a lot is slightly higher in Soham (2.5%) compared to Ely (2.2%) and less than England average (3.6%) for the age range of 16 to 64.</p> <p>In both Soham and England as a whole, a slightly lower percentage of people (48.5% and 47.2%, respectively) have very good health compared to Ely (50.2%).</p> <p>The percentage of households with one person having a long-term health problem or disability is similar in Ely (22%) and Soham (22.3%) compared to England (25.7%).</p> <p>(2) Disabled people are 5 times more likely to be injured as a pedestrian than non-disabled people.</p> <p>(3) Both Ely and Soham lies in the 50% least deprived neighbourhoods in terms of health and disability</p> <p>(1) Census 2011 (2) Road Safety GB (3) Indices of Deprivation 2019</p>	<p>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.</p> <p>Improvements to the routes which benefit everyone can further support disabled people. For example, barrier removal, the proposed grade separation and controlled crossings on the A142, and improved path width with suitable surfacing can aid people using walking aids and mobility scooters.</p> <p>Potential for reduced noise pollution resulting from being away from traffic if avoiding the A142 corridor can benefit people with cognitive disabilities. This can aid disabled people to independently access local amenities.</p> <p>The safer crossing provisions proposed benefits people with reduced mobility as they take longer to cross.</p> <p>Assessing the needs and experiences of disabled cyclists 2018', found that 75% of disabled people find cycling easier than walking. But inaccessible infrastructure prevents disabled people cycling. Better conditions can empower disabled people to cycle, especially those with balance issues and adapted bikes.</p> <p>Possible Negative Impact: If introduced infrastructure isn't carefully designed, it could result in reduced space and potential barriers for adapted bikes and mobility aids. Accessible access onto the greenway sections could cause nuisance access concerns for local people.</p> <p>Level changes will need careful consideration, to reduce any accessibility impacts. Some of the proposed routes include grade segregation. The grade segregation options could be a barrier if they don't include accessible design elements including appropriate widths, gradients and resting areas.</p> <p>Vulnerable users could be uncomfortable and intimidated by the shared use sections of the routes, especially if cycling volumes increase.</p> <p>Sections of the route will be shared with motor vehicles including farm machinery for example the quiet lane proposals, and this could be intimidating for older and younger people. The design of these sections should consider the viability of segregating motor vehicles from pedestrians and cyclists. The 50mph speed limit along the A142 could still be an intimidating environment, even with the proposed 2m buffer (Alternative routes away from the A142 have been considered).</p> <p>Some of the route options aren't a direct route from Ely to Soham so the time reaching either destination would be longer and may be an issue for vulnerable users.</p>
	<p><i>Cycling & Mobility: We have failed to engage in the conversation about racism</i></p> <p><i>How racism impacts air quality and endangers life</i></p>	<p><i>Race Equality Think Tank</i></p> <p><i>Pedestrian casualties higher among BAME people</i></p>	<p><i>New report shows large unmet demand for cycling from ethnic minority and disadvantaged groups</i></p> <p>-</p>		<p>(1) In terms of the white ethnic group, Ely and Soham has a higher percentage of residents (93.8% and 96.7% respectively) than the England average (85.4%)</p> <p>The percentage of Indian residents in Ely and Soham (0.6% and 0.4% respectively) is significantly lower than the whole of England (2.6%).</p> <p>The percentage of African residents in both Ely and Soham is similar (0.7% and 0.4%) which is lower than the whole of England (1.8%).</p>	

Race	Barriers of physical activity among Black and Minority Ethnic Groups in the UK			Guidance: Sustrans: Unmet Demand for cycling from Ethnic Minority and Disadvantaged Groups	The percentage of Caribbean residents in Ely and Soham is the same (0.2%) which is lower than the whole of England (1.1%) Overall, Ely and Soham has a higher representation of White residents and a lower representation of Indian, African, and Caribbean residents than the whole of England. Ely has a slightly lower representation of White residents compared to Soham and a higher representation of Indian, African, and Caribbean residents compared to Soham. (2) There is evidence that black, Asian and minority ethnic groups (BAME) are more likely to express concerns over safety and security (particularly after dark) than white groups. (1) Census 2011 (2) TFL, Understanding the Travel needs of London's diverse communities	Possible Positive Impact: An accessible and comfortable cycling environment should make cycling a more appealing mode of travel for ethnically diverse people. Ethnically diverse people are underrepresented in cycling for transport and exercise. Possible Negative Impact: There is evidence that black, Asian and minority ethnic groups (BAME) are more likely to express concerns over safety and security (particularly after dark) than white groups. These safety concerns will apply to the route options that have greenway sections with limited surveillance. As a result, these groups may choose to travel by private car and taxi due to safety concerns.
Sex	Inclusive cycling in cities and towns Travelling in a Woman's Shoes Safety in Public Spaces. Women, Girls and Gender Diverse People	- Women's role in 'unpaid work' Sexual harassment in UK public spaces	Are we nearly there yet. Exploring gender and active travel Walking and Cycling through Menopause -	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 (40% for Ely & 50% for Soham) 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. Improved cycling infrastructure and motor vehicle free route sections could encourage more women to cycle. Possible Negative Impact: Women are more likely to be worried about personal safety and experience anti-social behaviour whilst travelling. A recent survey by Plan International UK found 66% of girls aged 14-21 in the UK have experienced unwanted sexual attention whilst in a public place. Sections of the proposed routes have limited surveillance and this could contribute to safety concerns. Sections of the routes will be shared with motor vehicles including farm machinery and could be intimidating for women who are more risk adverse.
Age	"Age Friendly Places Making our community a great "Voice opportunity power. A toolkit to involve young people in the making and managing of their neighbourhoods." The future of transport in an Ageing Society	Loneliness in Later Life research by Age UK Active travel and mid-life: Understanding the barriers and enablers to active travel The Role of Transport in Supporting a Healthy Future for Young People	Designing for Children & Young People Enabling independent travel for young people Ageing better through active travel	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 Ely, Soham, and England are similar. However, Ely has a lower percentage of adults age 20 to 24 and ages 45 to 59 whilst Soham and England percentages remain similar. At age 30 - 44, both Ely and Soham percentages are higher (25.0% and 23.1% respectively) compared to England (20.6). Younger demographics up till 44 Years of age are slightly higher in Soham than in Ely. Ely has a higher percentage of residents aged 65 years and over compared to Soham. The mean age for both Ely and Soham is similar (38.7% and 37% respectively). 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 Ely and Soham is akin to England averages. (2) In the UK the most common cause of non-natural death for 5-14-year-olds is being hit by a vehicle. On minor roads serious injury is twice as likely, and three times more likely to kill a child cyclist. (3) In terms of income deprivation for older people, a small proportion of Soham, concentrated in the south, lies in the 50% most deprived neighbourhoods with other parts lying within the 50% least deprived neighbourhoods in the country. Ely lies amongst the 40% most deprived neighbourhoods with other parts lying within the 40% least deprived margin 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 high 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 off-road greenways, and other sections when on-road have low traffic volumes, reducing exposure to air pollution. <u>Older People:</u> Older people are more likely to have dementia which can be made worse by vehicle noise pollution. Reducing traffic volumes, 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 their physical and mental health. Social isolation is a growing problem faced by older people. The greenway 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. 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 greenway 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, especially if cycling volumes increase. Sections of the route will be shared with motor vehicles including farm machinery and this could be intimidating for older and younger people. The design of these sections should consider the viability of segregating motor vehicles from pedestrians and cyclists. The A142 could still be an intimidating environment, even with a 2m buffer (an alternative route option in the adjoining fields is being considered).
Sexual orientation and gender reassignment	Thinking Cities: LGBTQ+ Urbanism: Reclaiming Space Queering Public Spaces Engaging transgender people	Stonewall data on LGBTQIA+ hate crime across the UK - -	- - -	Guidance: •Arup's 'Queering Public Space' •Sustrans: Communities Carving out a Space in Cycling that is Radical, Inclusive and Fun	(1) Only 51% of people who identified their gender 'in another way' feel welcome and comfortable walking or spending time on the streets of their neighbourhood, compared to 65% of women and 67% of men. (2) Data from the Office for National Statistics (ONS) shows more than one in four trans people (28%) experienced crime in the year ending March 2020, compared with (14%) of people whose gender identity is the same as the sex they were registered at birth. (1) Sustrans Walking and Cycling Index (2) Office for National Statistics	Possible Positive Impact: Arup's 'Queering Public Space' report has identity principles to design public spaces, so they are more comfortable and inclusive for the LGBTQ+ community. There is scope to implement the findings of this report when designing this route and its adjoining spaces including the villages it passes through. The positive impact of implementing the findings of Arup's report will also result in inclusive places that benefit other protected characteristics. Possible Negative Impact: Sustrans Walking and Cycling Index learned that only 51% of people who identified their gender 'in another way' feel welcome and comfortable walking or spending time on the streets of their neighbourhood, compared to 65% of women and 67% of men. The sections of the routes have limited surveillance and this could contribute to safety concerns. Transgender people are more likely to be the victim of crime (28%), compared with people who 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	<p>Possible Positive Impact: Less stressful route sections due to being traffic free and linked with the natural environment can help support a healthy pregnancy. Pregnant people and unborn children can be adversely affected by air pollution.</p> <p>Parents and carers with prams and young children will benefit from an accessible walking and cycling environment.</p> <p>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.</p> <p>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.</p> <p>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 grade segregation, and if widths and gradients aren't designed to Equality Act guidance they will be a barrier,</p> <p>Vulnerable users could be uncomfortable and intimidated by the shared use sections, especially if cycling volumes increase.</p> <p>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.</p>
	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 areas, with England having 59.4%, Ely having 59.5%, and Soham having a slightly higher percentage of 62.3% of its population following Christianity. Other types of religion including Muslim is lower in Ely and Soham when compared to England averages. The percentage of people who do not follow any religion is slightly higher in Ely and Soham, compared to England. (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. (2) Barway (a settlement near Ely that route option D considers) has a small resident population, but with many migrant workers based there in hostel accommodation. (1) Road Safety GB (2) www.geograph.org.uk	The projects development will need to consider the active travel infrastructure requirements of the rural and migrant workers.
	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			

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	<p>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.</p> <p>Residents and migrant workers 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.</p> <p>These impacts will restrict people with impacted characteristics use of the routes cycling infrastructure and the benefits of cycling.</p>	
Characteristics Disproportionately Impacted:	Age (Young/Old), Disabled, Social Economic Status, Pregnancy and Maternity, Race and Ethnicity, Migrant Workers	
Actions to be Explored	Expected Outcome	
Develop a programme to help low income residents, rural and migrant workers with the affordability of purchasing, maintaining, and storing cycles.	Increased numbers of low income residents and migrant workers 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 migrant workers with protected characteristics to learn cycling skills and raise awareness of the route.	Increased numbers of residents and migrant workers with protected characteristics enjoying the benefits of cycling and utilising the routes Infrastructure.	

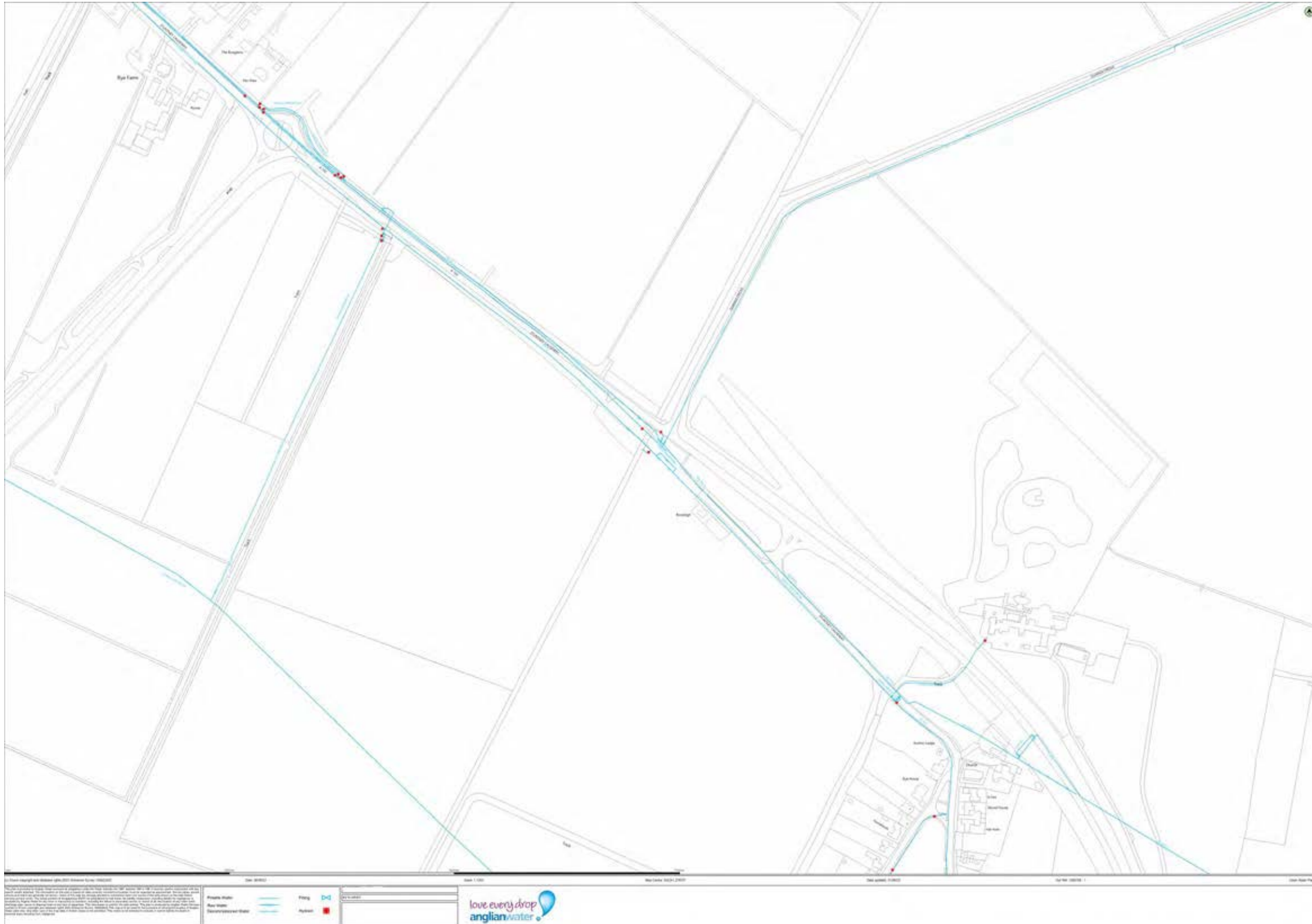
Negative Impact	<p>Safety and Barriers to Using Walking and Cycling infrastructure: Several protected characteristics flagged that walking and cycling accessibility and personal safety concerns are a potential barrier to using infrastructure, resulting in:</p> <ul style="list-style-type: none"> - Being 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 <p>Poorly designed layout and function of walking and cycling infrastructure can be a disproportionate barrier for several protected characteristics.</p>	
Characteristics Disproportionately Impacted:	Age (Young/Old), Disabled, Race and Ethnicity, Pregnancy and Maternity, Gender, Sexual Orientation, Gender Reassignment, Migrant Workers	
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.	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.	
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.	The LTN 1/20 guidance which incorporates Equality Act requirements will need to be applied to the proposed grade segregation, and controlled crossing on the A142 making them inclusive points along the route.	
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).		

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 which 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, rural and migrant workers 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 Shade Primary School), 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, especially where the route passes through villages and provides links to destinations including Ely Train Station.

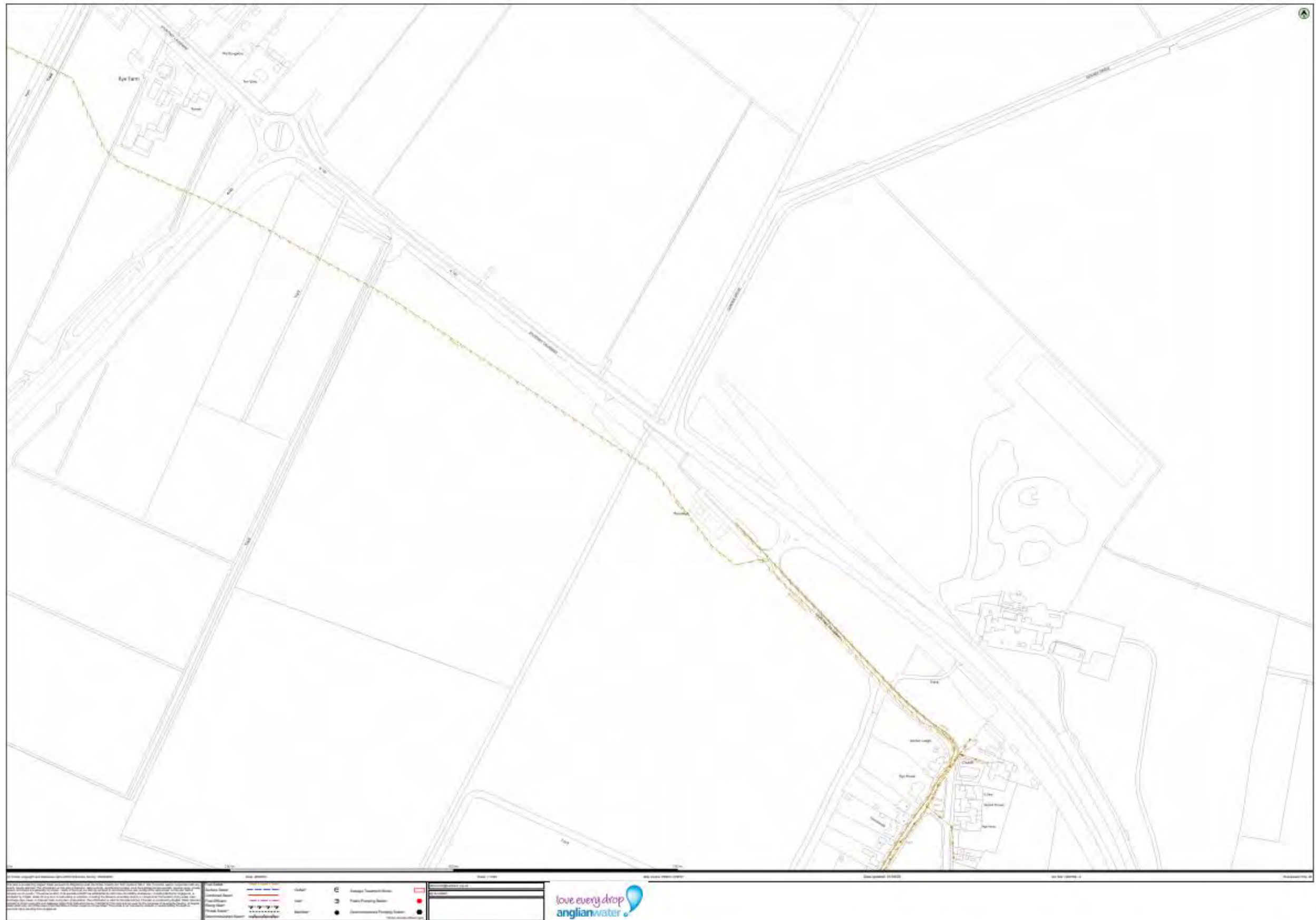
Negative Impact	<p>Public Spaces Not Designed for Everyone: The development of the route will link Soham with Ely and provide access to the natural environment. However, if the resulting route and adjoining environment isn't improved following inclusive design principles, people with protected characteristics are less likely to use it. The negative impacts of this could include:</p> <ul style="list-style-type: none"> •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	
<p>Ensure that the route, its adjoining spaces, and access points are designed inclusively following best practice guidance. Examples of guidance to incorporate:</p> <ul style="list-style-type: none"> - 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 and migrant workers to explore existing barriers, safety concerns and to shape design proposals.		

Further Actions:		
<i>If the negative effects cannot be changed by the removal of barriers and changes to the project, list the reasons why</i>	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.	
<i>If impact is unclear what action is required?</i>	This EqlA 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. The requirements of migrant workers will need careful consideration.	

Appendix B

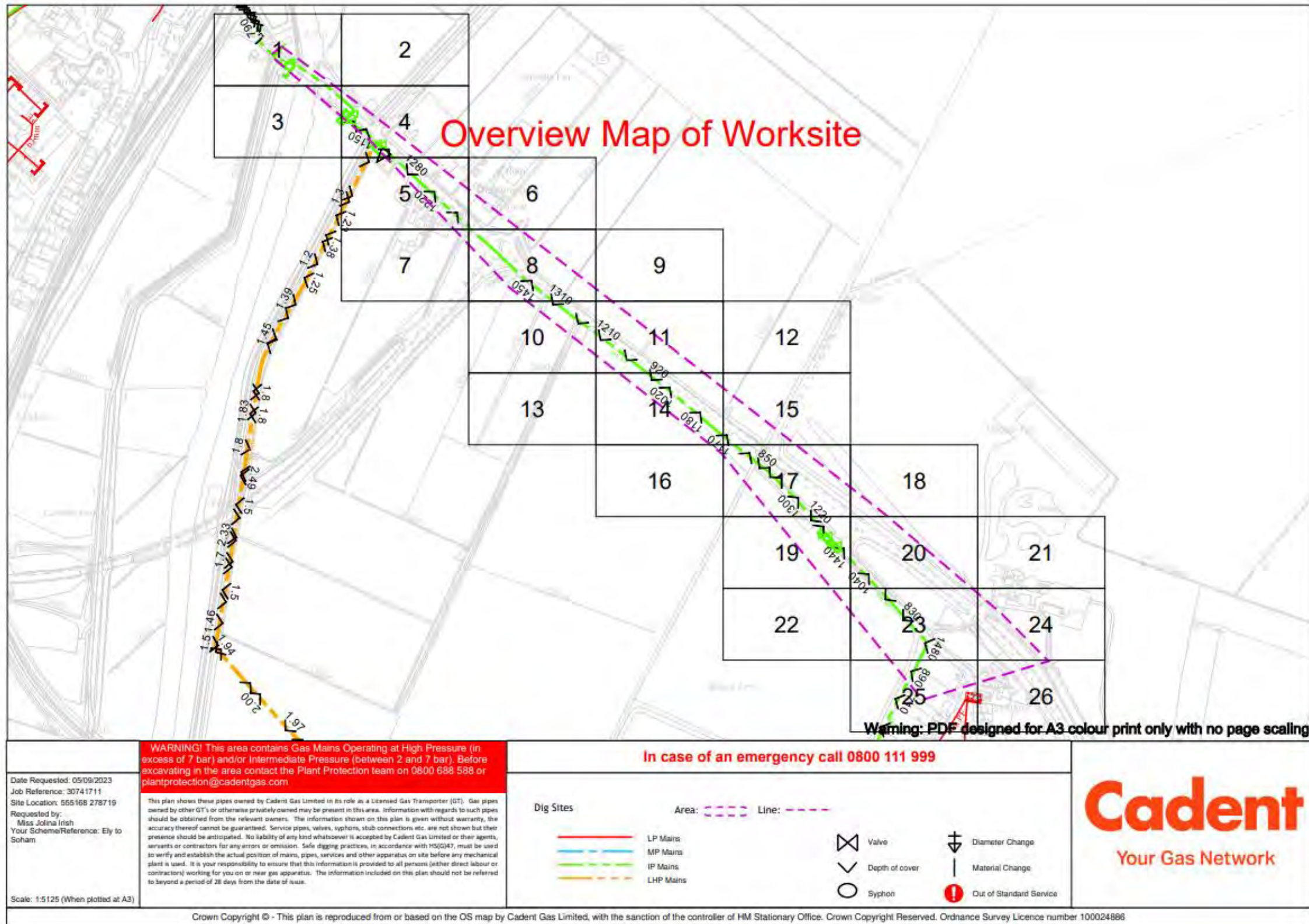


Appendix B Main water utilities from Anglian Water on edge of Stuntney by Quanea Drive.

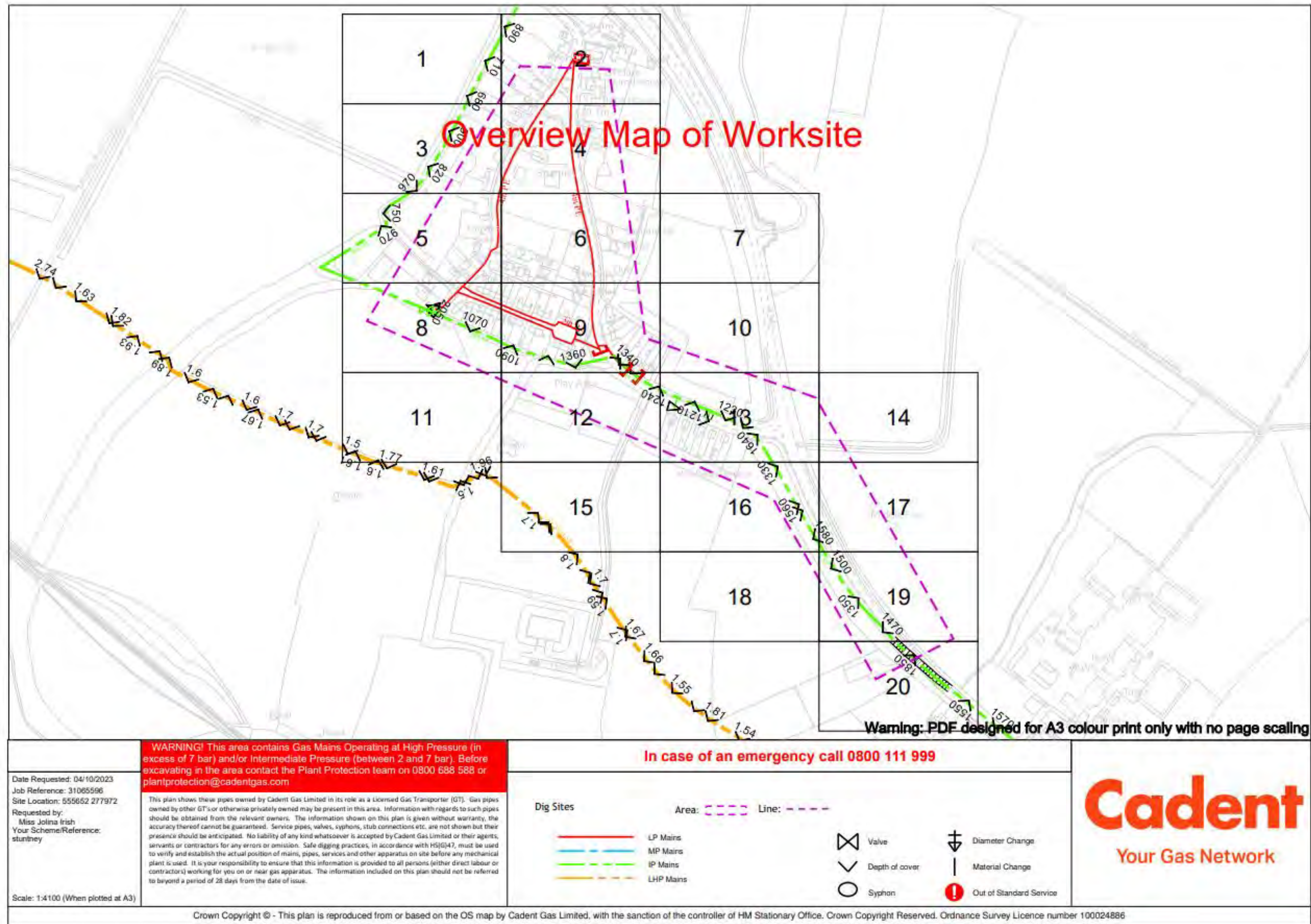


Appendix B Wastewater utilities from Anglian Water on edge of Stuntney by Quanea Drive.

Appendix C



Appendix C Showing gas main along edge of the embankment and the A142.



Appendix C Showing gas main along proposed alignment of Stuntney bridge.