

Interim Report Number 2:

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For: *Cambridgeshire County  
Council*



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# Hilton Non-Motorised User Links - Options Study

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By: **Transport Initiatives LLP**



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*June 2019*

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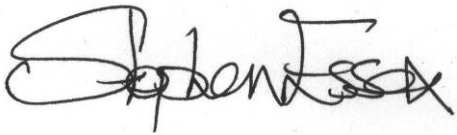

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# Hilton Non-Motorised User Links - Options Study

<b>Checking and sign off</b>	
<b>Job:</b> Hilton Non-Motorised User Links – Options Study	<b>Client:</b> Cambridgeshire County Council
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## Interim report

This is the second interim progress report.

We made a site visit on the afternoon of the inception day and also made visits on the 9<sup>th</sup> and 10<sup>th</sup> April. We drove, walked or cycled all the route options except for a short length of the Potton Road to West End Farm footpath. We measured speeds and flow of traffic on Potton Road in the off-peak and evening peak, and Hilton Road during the morning peak and the off peak. We also travelled to path from Fenstanton to the busway, the cycle route from Fenstanton directly to St Ives, the route from Fenstanton to the busway at Fen Drayton, The route from St Ives to Hemingford Grey and the Mere Way.

We made site visits on the 7<sup>th</sup> and 8<sup>th</sup> May where we measured some more speeds and flows on Potton Road, walked the whole of option 5, the Potton Road to West End Farm footpath, and looked at the Potton Road entry to Hilton, Fenstanton and the A1096/Low Road roundabout in more detail and finally investigated a new option, a path parallel to option 5.



The existing route options.



Plan showing the five starting route options plus the new option 6 and routes extending towards the busway and St Ives.



## Route 1 Potton Road

Potton Road is a largely straight single carriageway rural road with no footway. The carriageway varies between 6.2m and 7.3m. Within Hilton the speed limit is 30mph but away from the village the speed limit is normally 60mph but it is currently subject to a temporary 40mph limit. Until recently the road had no footway between the current A14 and Five Arch Bridge. Between Five Arch Bridge and a point opposite The Paddocks there is a gravelly path on the east side approximately 1.8m wide separated from the carriageway by a 1.0m wide verge. A sign says that the verge has been improved for walkers, cyclists and horse riders. South from The Paddocks is a tarmac footway partly separated by a verge and partially alongside the kerb. This turns into a narrow path leading to Cross Farm Close.



*Gravelled path on east side of Potton Road*



*Footway narrows approaching Cross Farm Close – further narrowed by tree*

As part of the A14 works a new NMU path has been constructed on the west side of Potton Road. It is 3.0m wide and separated from Potton Road by a 1 metre wide verge. Shortly after the northern end of the bridge over the new A14 the 3.0m wide multi user path joins the kerb and narrows to 2.1m ending at the northern limit of the new works at a dropped kerb. There are no good quality transitions between the new NMU path and the existing road and footpaths other than providing a dropped kerb.

One bridleway and two footpaths join Potton Road. Two to the west and one to the east. The most northerly footpath leads to Fenstanton and forms part of option 5. While the footpath itself is in good condition the point where it joins Potton Road has been disturbed by the A14 works. To reach the new NMU path users have to cross Potton Road. Visibility for people crossing from east to west is good (*need to check actual visibility*) but for people crossing from west to east the visibility of traffic coming from St Ives is severely restricted. The visibility is around 50 – 60 metres. Current guidance requires at least 215 metres on a road with a 60mph speed limit. To make this crossing safe either the trees on the west side verge will need to be removed or the crossing moved south and a new path linking to the footpath made on the east side of the road.



*Gravelled path ends at Five Arch Bridge.  
New NMU path starts on the far side of the  
bridge on the opposite side of the road*



*Northern end of NMU path showing poor  
visibility northwards*

The bridle path leads west from Five Arch Bridge. Visibility here is good as the road is straight.

The existing and currently under construction facilities along Potton Road do not make a complete route between St Ives and Hilton. Current guidance suggests that, with the traffic speeds and volumes we measured, a route suitable for encouraging more people to walk cycle or ride needs to be separated from the carriageway. With this in mind the problems with the current layout along Potton Road are:

- Cross Farm Close is a private road
- The path from Cross Farm Close to the footway along Potton Road is narrow
- The footway along Potton Road as far as the Paddocks has an acceptable surface and is usable but is narrow
- The gravelly path along the verge as far as Five Arch Bridge needs a better surface
- There is a gap between the northern end of the gravelly path and the new A14 path, basically across Five Arch Bridge
- The visibilities at the end of the footpath to Fenstanton are seriously substandard. The visibilities also affect cyclists and pedestrians joining and leaving the new path.
- There are no facilities between the footpath and a pedestrian footway/cyclepath at the southern limit of St Ives, a distance of 2.4km. Carriageway widths are narrow.

While the new path alongside Potton Road is high quality and has increased the proportion of the road with some form of off carriageway provision it is extremely regrettable that the multi user path was built on the west side of the road rather than the east.



## Route 2 Hilton Road

Hilton Road is a winding single carriageway rural road with no footway. The carriageway is around 6 metres wide. Within Hilton the speed limit is 40mph, in Fenstanton 30mph but in between it is 60mph

A 3.0m wide path has been built along the east side of Hilton Road at the new bridge over the A14. The north end is at a field gateway. Here southbound cyclists can easily make the transition between carriageway and new path. In the northbound direction they have the space to take up the position they want and visibility is good. At the southern end the path ends at a dropped kerb but immediately north of that is a field gateway which will provide a much better place for cyclists to join and leave the path. Visibilities are substandard for a 60mph speed limit but actual speeds are much lower than this (see later).



*Northern end of NMU path*

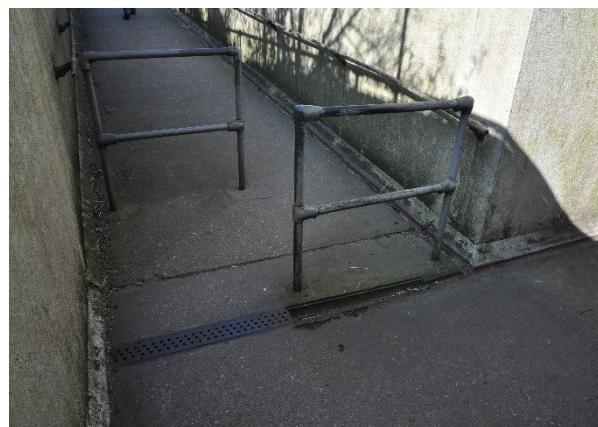


*Southern end of NMU path. Cyclists are more likely to use the field entry to join and leave the path*

Hilton Road was cut by the existing A14 and replaced by a pedestrian subway. This is 3.0 metres wide and 2.4 metres high. Potential conflict at the two corners in it has been reduced by chicane barriers. Ironically while mounting blocks have been provided at either end presumably enabling riders to lead their horses through the subway the chicane barriers exclude horses.



*A14 subway Fenstanton. Northside of A14*



*A14 subway Fenstanton. Southside of A14*

Proposed guidance (expected publication “late spring”) suggests that the traffic volumes and speeds on Hilton Road are low enough that a cycle route could be signed along it. But the



road has some blind corners such as at Alpha Farm. The participants at the inception meeting discussed whether Hilton Road could be closed to through traffic. Clearly this option should have been explored before the new bridge was built over the A14 and would depend on finding a suitable location and would be subject to local consultations.

There is an existing cycle route between Fenstanton and St Ives. This uses the narrow footway along Low Road, crosses the A1096 via the northern splitter island of the A1096/Low Road roundabout and then uses the original London Road into St Ives. The footway along Low Road varies in width but is in the order of 1.5m wide. Cyclists using the route have to give way to vehicles entering or leaving the businesses along the road. The end of the route in Fenstanton is poorly designed so it is not clear what cyclists need to do. The path between the A1096 roundabout and London Road is 0.75m wide at its narrowest. The roundabout is continuously trafficked and speeds, while not measured, can be relatively high. It is not that easy for pedestrians and cyclists to cross. At peak times traffic on the A1096 queues along the road and across the roundabout so that the roundabout itself is not critical to capacity along the A1096. This gives opportunities to improve conditions for cyclists and pedestrians. Conditions for cyclists and pedestrians could be improved by:

- Measures to reduce the speeds of circulating traffic
- Measures to reduce the distance pedestrians and cyclists have to cross
- Widening approach paths
- Providing a formal pedestrian and cycle crossing

Measures to improve the cycle route in the short term include:

- Reconsidering the Fenstanton end, works could involve resigning the existing design or constructing a new end
- Providing priority over accesses
- Cutting the hedges back



*A1096 / Low Road roundabout, St Ives. Where the cycle path crosses the northern arm*

Anecdotal evidence suggests that the Busway is an important destination. We noticed people, both pedestrians and cyclists, using two routes to the Busway. The first was from Chequer Street Fenstanton via Fen Lane and the other was from Fen Drayton to the Fen Drayton stop.

*Cyclist using Fen Lane**Cycle parking at Fen Drayton bus stop*

Route	Distance
Fenstanton subway to St Ives stop via Lower Road	4.2km
Fenstanton subway to St Ives stop via Fen Lane	3.7km
Fenstanton subway to Fen Drayton stop via Fen Lane	3.8km
Fenstanton subway to Fen Drayton stop via Fen Drayton (NCN 24)	4.8km

The routes via Low Road and Fen Drayton are both formal cycle routes or bridlepaths and thus are open for cyclists. Fen Lane is legally only a footpath unless evidence can be found of equestrian use for at least 20 years without let or hindrance.

### Route 3. Path paralleling A14.

This path does not yet exist and no provision has been made in the A14 works to accommodate it. The suggested route is along the south side of the A14 preferably running along the bottom of the A14 embankment. From the west it will require a new ramp down from Potton Road, a bridge over the West Brook and a new path along the A14 to join the old line of Hilton Road. Here it will need to turn south to get to the start of the ramp up to the Hilton Road/A14 bridge, adding around 700m to the Hilton – Fenstanton trip.



*The potential route 3 would run along the bottom of the embankment to the right of the new road.*



## Route 4. Mere Way.



*South end near Graveley Way*

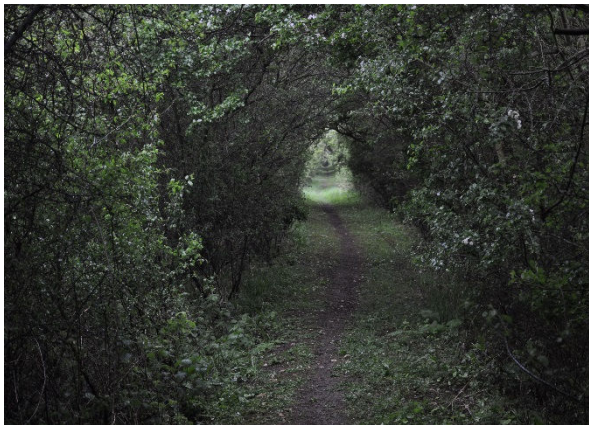


*Area with poor surfacing Lattenbury Farm*

Mere Way is a bridleway or “other route with public access” running from Graveley Way just west of Hilton to Goretree Road south of Hemingford Grey.

Goretree Road is a lightly trafficked single carriageway road. We only visited it during off peak times. Peak traffic may be higher as it has an eastbound only access to/from the A14. Mere Way is metalled to Topfield farm. While there is one plantation providing some shelter it is mostly open and exposed. There is a good quality surface over the new A14 bridge but south of that there is a section with a badly disturbed surface. This could be because of the road works or it could be due to agricultural activities as there was manure stored here. South of the Lattenbury Farm access Mere Way becomes a pleasant track sheltered by trees as far as Brookside. From Brookside the route becomes a grassy path varying between 2.5 and 4.8 metres wide. The junction with the rerouted bridlepath to the A1198 Ermine Way is marked by a new sign indicating public bridleways west to Offord Cluny and south to Hilton and in the northerly direction a cycle route to Hemingford Grey.

## Route 5. Footpath from Potton Road to West End Farm, Fenstanton



*Wooded section of footpath near West End Farm*



*Near Potton Road. Cleared for a width of around 2 metres*

This footpath provides a route between Potton Road and Fenstanton that doesn't use the more trafficked section of Hilton Road. It consists of a 1km long public footpath from Potton Road to West End Farm after which it then uses "other routes with public access" to Hilton Road. The first section to West End Farm is a vehicular track but between the farm and Hilton Road the route is metalled. The western 600m of the path runs through woodland and the remainder along the edge of a field. In the wood the path is on a bank with a flat top between 2.0 and 3.5 metres wide and vegetation has been cut back giving a useable width of around 2 metres. The bank continues along the edge of the field but the top is a narrower 1.5 metres.



*West End Farm field from the east.*



*Field from the west*

The western end has been disturbed by road works and requires some scrambling. The other key issue at the western end is the substandard visibility for people crossing Potton Road west to east.

Superficially the path provides an off-carriageway route between Hilton and Fenstanton for pedestrians with only localised problems. Converting it to a route suitable for cyclists and possibly horse riders would have problems:

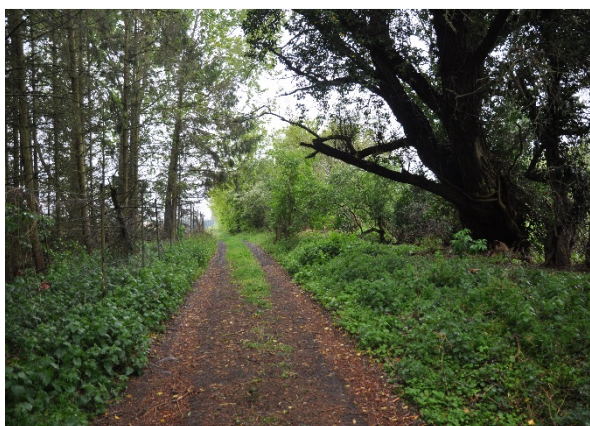
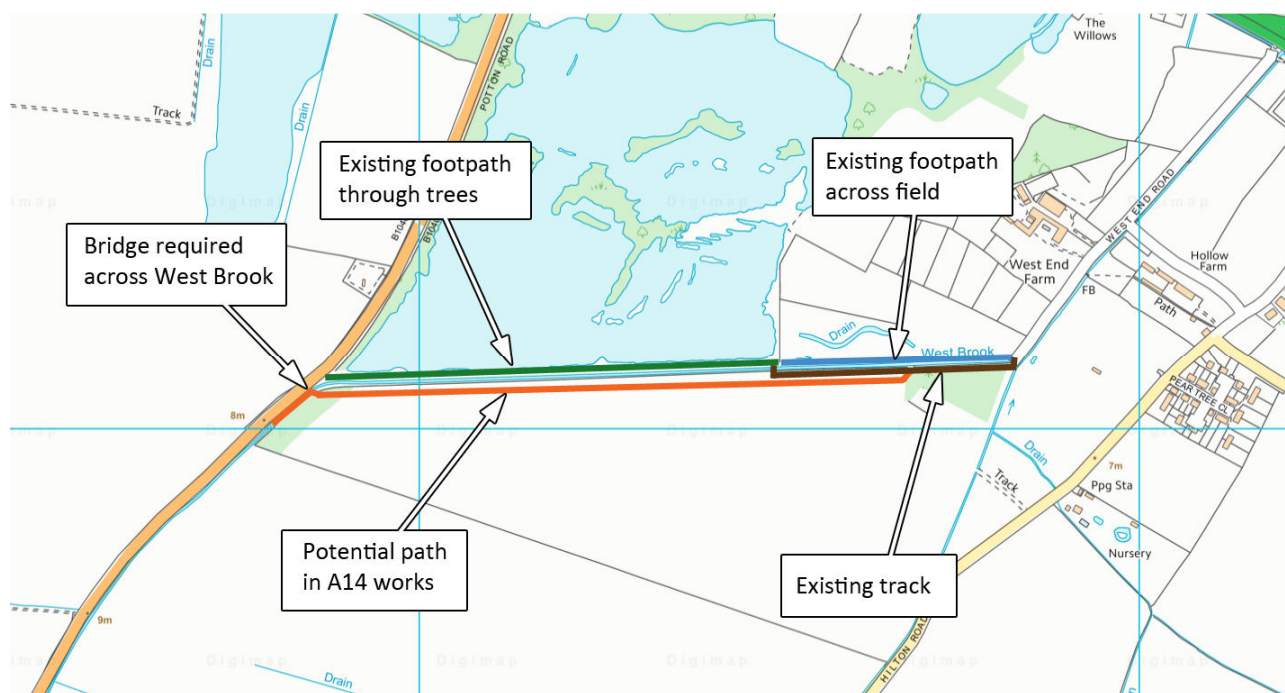
- The bank along the edge of the West End Farm field is too narrow and would need widening
- There might be issues with farm security unless the section through the field was fenced



- Widening the section through the woodland would alter the character of the path and lead to loss of vegetation.

## Route 6. New path between Potton Road and West End Farm

The field section of Route 5 is paralleled by a track on the opposite side of West Brook. Immediately south of this track (except for around 100m through a wood) are works associated with the A14. When the works are finished, or in conjunction with the works, a path could be constructed along the south side of the West Brook as shown on the diagram below. If the whole area between West Brook and the A14 is retained for drainage purposes there is no need for the new path to rigidly follow the West Brook.



*Existing track south of West Brook – section alongside wood shown on plan*



*Existing track south of West Brook showing A14 works on left*



There are a number of advantages with Option 6 over Option 5:

- It doesn't have to cross the field with issues of farm security, or cyclists and horse riders leaving gates open by mistake.
- It could be constructed with a 3.0 metre wide all weather surface without affecting the more rural character of the footpath
- It doesn't have to replace the footpath. It thus enables pedestrians and walkers to use a different route in each direction if they so wish.
- The track links to the footpath just west of the field so pedestrians could be encouraged to use the track to avoid the field.



*Photograph taken at eastern end of wooded section of route 5 showing stile into field ahead, A14 works to the right and linking track.*

There are some problems with the option

- It would be necessary to negotiate access to the eastern part of the existing track – although there may be some trade-off between having fewer walkers in the field if they use the track instead
- Land may need to be purchased. This depends on whether the land used for the A14 works reverts to the previous owner or becomes part of the drainage system for the road.



*Potton Road and West Brook. Option 6 would need a bridge over West Brook here*

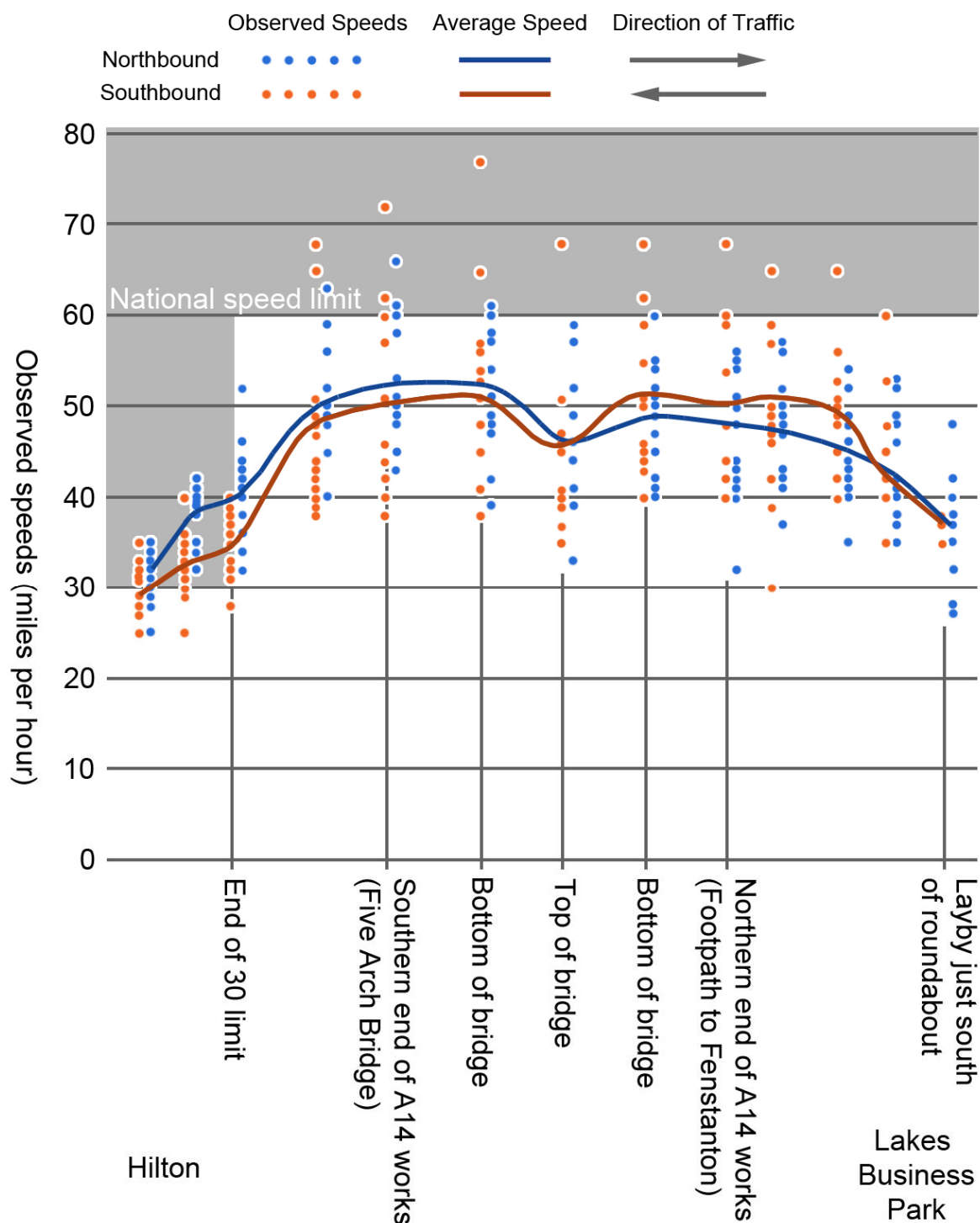


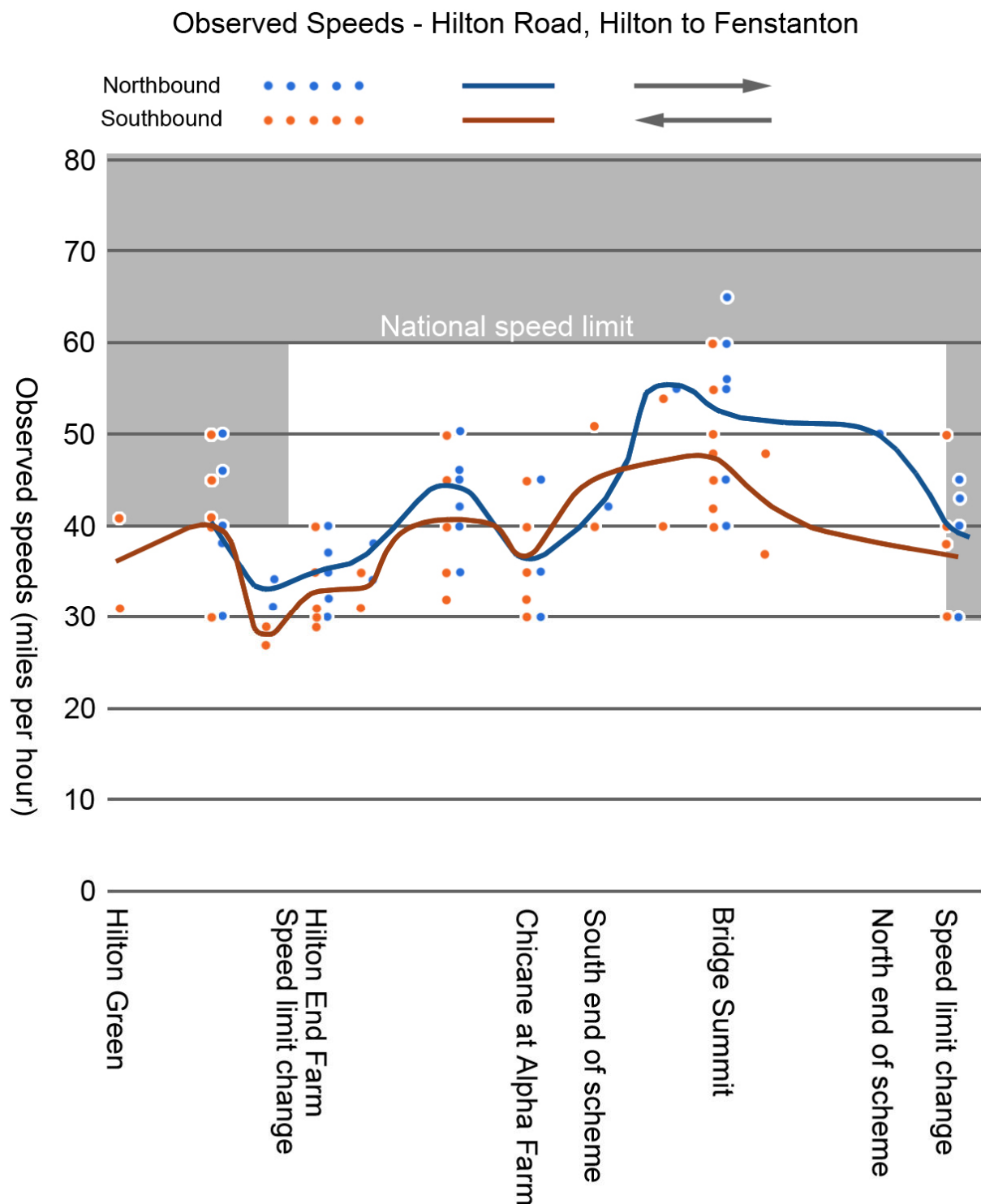
*Where Option 6 would join Potton Road.*

## Speeds

Speeds were measured on both Potton Road and Hilton Road. Potton Road during the off peak and evening peak and Hilton Road during the off peak. A few measurements were made on Hilton Road during the morning peak but only in the southbound direction. We will need to measure speeds during the morning peak on both the roads and on Hilton Road during the evening peak.

Observed Speeds - Potton Road, Hilton to Lakes Business Park





Speeds on Potton Road are much higher than on Hilton Road. On Potton Road the maximum speed recorded was 77mph and the average hovers around 50mph. This is understandable in that the road is straighter and visibility much better. On the other hand, traffic was often observed traveling along the road in platoons with speed constrained by the leading vehicle and so in lighter traffic speeds could be expected to be higher. Very few drivers keep to the advisory 40mph limit through the road works and there is persistent speeding within the Hilton 30mph limit. Speeds on Hilton Road are lower. They are clearly constrained by the bends and speeds are higher over the new bridge with its wider carriageway and sweeping curves.



## Traffic Flows

### Potton Road

Flows were calculated from speed recording runs.

	Northbound					Southbound				
	Cars	LGC	HGV	Other	Total	Cars	LGC	HGV	other	Total
AM Peak										
Off Peak	187	44	8	2	241	191	40	19	4	154
PM Peak	345	41	0	0	384	332	41	16	0	25

Other – northbound 2 motor cycles, southbound 2 motorcycle & 2 pedestrians

### Hilton Road

Flows were counted conventionally during two one hour periods

	Northbound					Southbound				
	Cars	LGC	HGV	Bike	Total	Cars	LGC	HGV	Bike	Total
AM Peak	51	23	1	0	75	21	4	0	0	25
Off Peak	24	9	0	0	33	20	5	0	1	26
PM Peak										

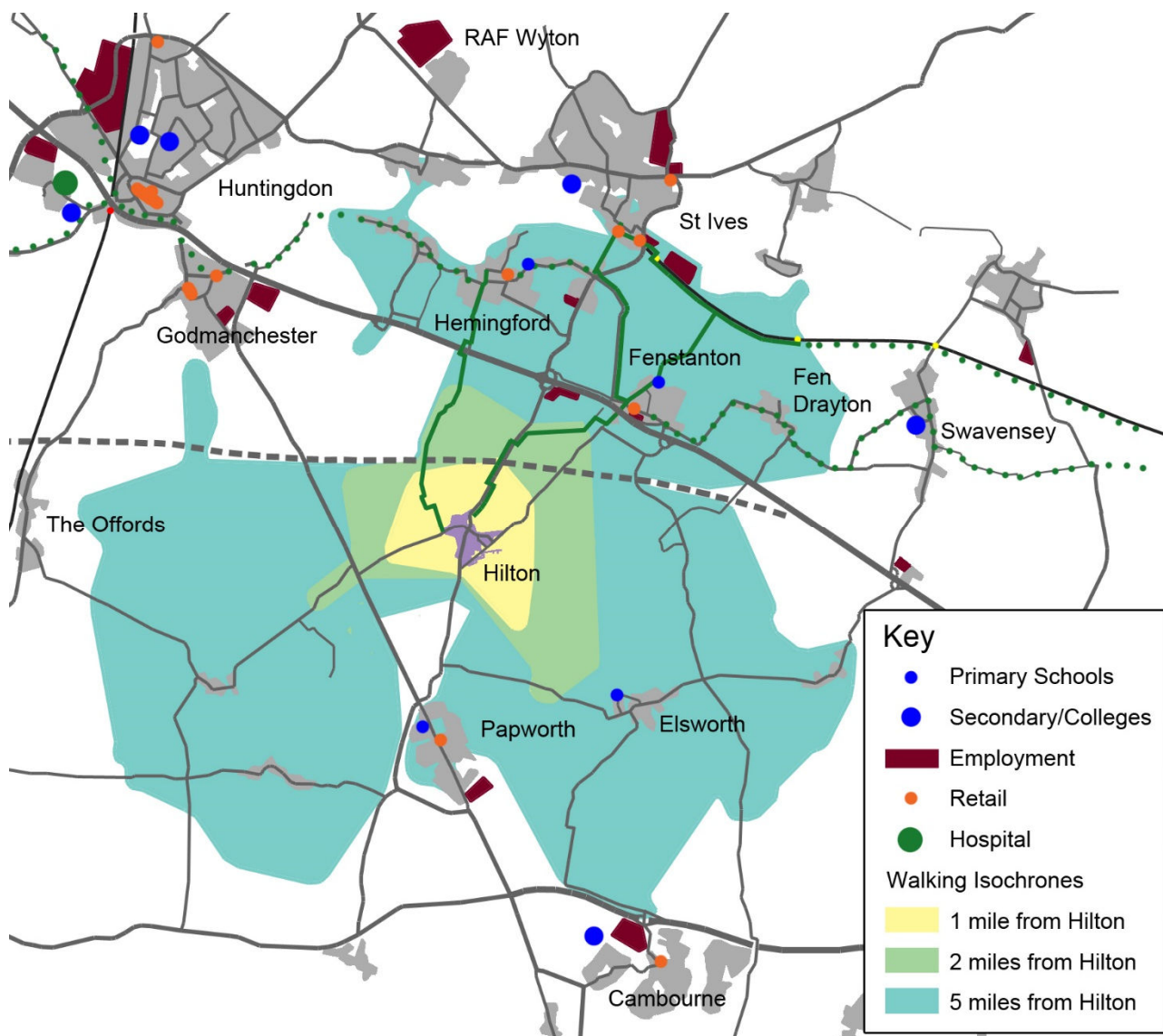
## Comment on speeds and flows

Current and forthcoming guidance suggests that traffic flows and speeds on Potton Road is unsuitable for pedestrians, cyclists and horse riders to use the carriageway safely, but we could consider a cycle route along Hilton Road.

## Potential Use

### Walking

People can walk on all roads, bridleways and footpaths. But roads such as Potton Road are fast and busy so are not safe or pleasant. The changes made with the A14 scheme have filled the gap in pedestrian provision between Five Arch Bridge and the end of the footpath to West End Farm. Thus there is now a pedestrian route between Hilton and Fenstanton that does not use the carriageway any heavily trafficked road. 74% of all utility walking trips are less than one mile in length and 96% are less than two miles. The diagram below shows the walking isochrones from Hilton using all footpaths, bridleways and more lightly trafficked roads. There are no schools, colleges, shops or major employment opportunities within 2 miles so we do not expect much additional utility walking as a consequence of the proposed routes.







Recreational walking might be different. We have only seen two people walking away from the villages; one on Mere Way just north of West Brook and the other on Potton Road just north of Hilton. This isn't enough to determine how important walking is. The new path over the A14 bridge links several footpaths and bridleways together making new potential walks and so may lead to an increase in recreational walking in the area. The linked footpaths and bridleways are shown on the diagram (left).

## Equestrians

If option 6 was chosen to link Potton Road to Fenstanton and made a bridleway this would extend the bridleway alongside West Brook to Fenstanton effectively making a completely new route for equestrians.

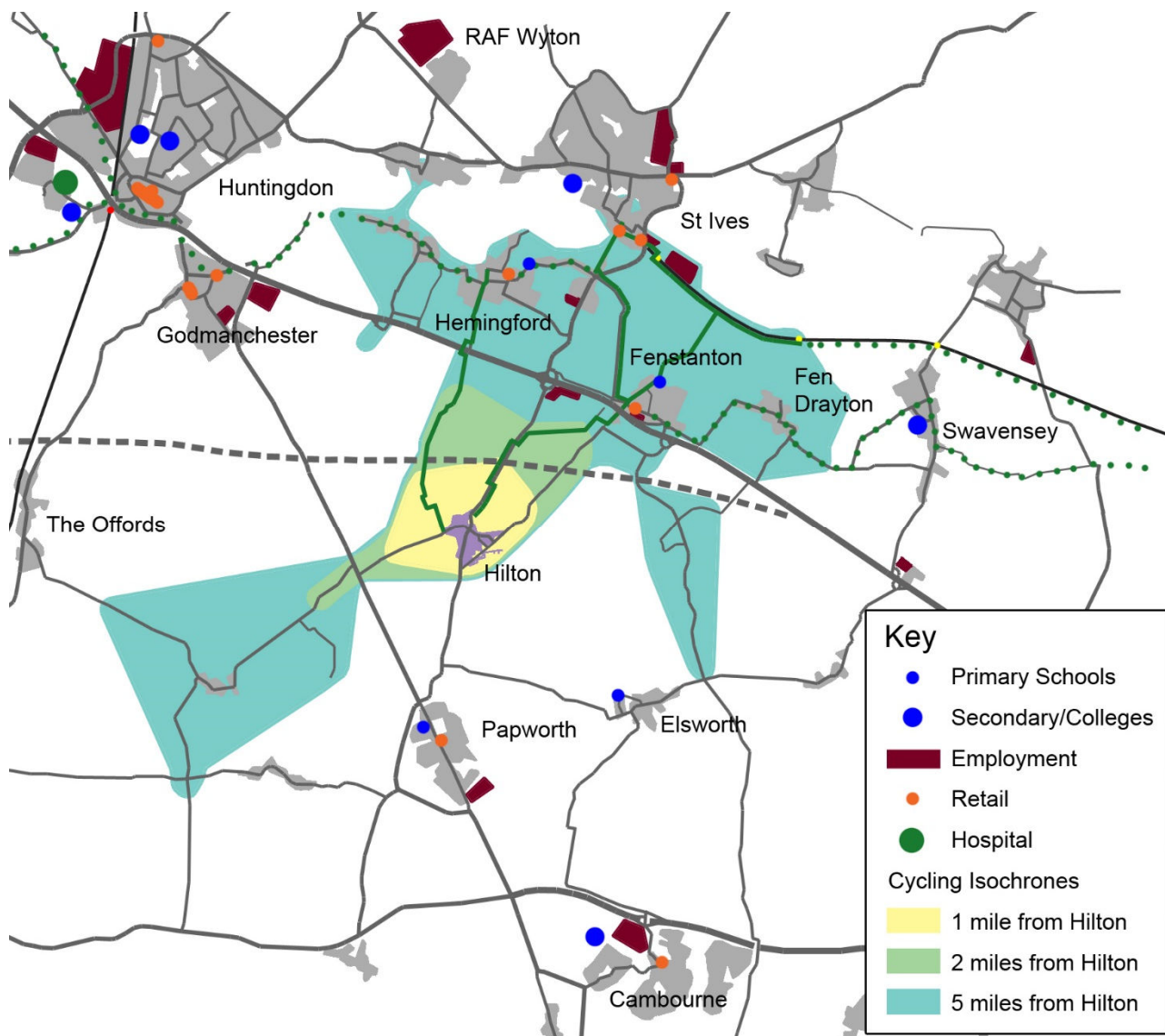
## Cycling

The amount of cycling around Hilton is lower than the national average and much lower than the local average. Around 1.2 -1.5% of journeys to work are made by bike. Nearby Fenstanton sees 1.6% - 3.3% but in some other villages in the area this increases 5.5%. One reason for the low figures for Hilton is that many of the roads around the village are not conducive for cycling. The proposed routes offer a new off-carriageway route to Fenstanton linking to other cycle routes and journey opportunities. Existing cyclists appear to be enthusiasts whereas the proposed route will appeal more to "everyday" cyclists.

Most cycle trips are between 1 and 5 miles long. Two secondary school / colleges are just beyond 5 miles, the centre of St Ives and one major supermarket are just within 5 miles as is the busway and several employment areas.

We do not have data on cycling to school or shopping but if we consider journey to work and add the Potton Road and Hilton Road flows together we would expect to see 11 cycles a day each way based on current journey to work data but this could rise to 40 a day if we use the proportion who cycle in the villages north of the A14. That said there is a significant two way commuter flow between the Papworth area and the St Ives area. The 40 cycles a day would almost certainly depend on constructing a safe route alongside Potton Road to Papworth. This is a two way commute and would still be significant after the hospital closes. The

diagram below shows cycling isochrones from Hilton using the proposed routes, less heavily trafficked 'C' roads and designated cycle routes.









Ref	Location	Measure	Comment
1a	Footpath from Cross Farm Close to Potton Road	Cross Farm Close is private and the footpath is narrow. At least one tree makes an obstruction. Ideally this would be widened to make a route from High Street to Potton Road.	Proposal would probably not be acceptable. Hence we need 1b
1b	Existing metalled footway	Should be widened and provision made for cyclists to join and leave at a safe point along it.	



*Approach to Hilton from north*

The level part of the verge varies between about 3.1 and 3.9 metres. The path varies but is around 1.5 metres at its widest. The path needs widening to around 2.0m and there should be a verge of at least 0.5 metres between it and the carriageway. At the bend there is a lighting column 1.4m away from the carriageway, this needs to be set back. Cyclists can join the path at the entrance to Kings Willow House but there should be a formal place to join.

This should be half way along the straight section south of The Paddocks at the location shown in the photograph above. This conveniently just meets the visibility requirements in both directions. There should also be a place to join and leave the path north of The Paddocks

1c	Gravel path on east verge	This path needs a better surface. We recommend that it converted to a 2.0 metre wide bitmac path with a verge of at least 0.5 metres. There are two pinch points shown below; the one associated with the warning sign should be removed by remounting the sign.
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*This pinch point could remain*



*But this sign should be mounted on two poles spanning the pedestrian / cycle path*



Ref	Location	Measure	Comment
1d	Five Arch Bridge	The gravelled path stops just south of the bridge. The “footway” over the bridge is currently 1.5m wide and needs to be widened. This is probably best done by replacing the parapet by one fixed to the outside of the bridge giving a width of 1.9 – 2.0 metres. Just north of the bridge the verge needs to be widened to around 2.7metres by raising the height of the retaining wall at the back of the verge. This would enable cyclists to turn perpendicularly to the line of the road before crossing to the entry to Brookside	



Five Arch Bridge showing pinch point



Detail of the railings

Ref	Location	Measure	Comment
1e	New cycle/pedestrian path over A14	No change required	
1f	Northern end of new path	The 2.1 metres wide section should be widened to 3.0 metres if cyclists are to use it. At the very end of the path there should be a “protected merge” for northbound cyclists and a safe way of joining the path for southbound cyclists.	The protected merge and safe way for southbound cyclists to join the path are only required if cyclists have to use the carriageway north of here. If they have a new path along Potton Road or use the footpath to Fenstanton (option 5) this is not necessary

Ref	Location	Measure	Comment
1g	Gap to cycle/pedestrian paths in St Ives area	No work has yet been done on filling this gap.	Likely to be expensive. There may not be room at critical points.
1h	Cycle/pedestrian paths on old line of London Road	No change required	
1i	London Road	No change required	Also used by route option 2
2a	Hilton Road, Hilton to A14 bridge	Guidance suggests that a separate cycle/pedestrian path is not essential but the road is narrow and has a blind corner at the egg farm. Initial surveys suggest that there isn't room for a foot/cycle path along the road on highway land.	
2b	New cycle/pedestrian path over A14	No change required	
2c	Hilton Road approaching Fenstanton	The road is narrow but visibility acceptable and speeds could be reduced. A more detailed survey required to see whether there is room for a cycle pedestrian path on the east side.	
2d	Cul de sac part of Hilton Road	No change required	
2e	Subway under A14	The chicane barriers prevent some legitimate users and need to be removed. They should be redesigned to keep users away from the blind corners. Mirrors could be used to improve intervisibility.	

Ref	Location	Measure	Comment
2f	Mini roundabout in Fenstanton	The existing cycle route avoids the mini roundabout and by doing so introduces several new conflict points. The design is also difficult to understand on first viewing. The short length of cycle/pedestrian path to the north east of the roundabout needs removing and the end of the cycle path to St Ives needs to be made much clearer.	



*Mini roundabout, Fenstanton. A design will be produced for this junction*

Ref	Location	Measure	Comment
2g	Long Lane converted footway	This path is really too narrow for a cycle route but seems to be well used. It requires a careful study to search for places where its width can be increased. The measures are likely to include small areas of widening and cutting back vegetation. Accesses (eg to boat yard) need to be altered to give priority to the cycle path.	



Ref	Location	Measure	Comment
2h	A1096 crossing at roundabout	<p>The following measures should help improve the crossing for cyclists and pedestrians:</p> <ul style="list-style-type: none"> <li>• Widen splitter island on north side</li> <li>• “Enlarge” central circle with a setted overrun area to increase deflection and reduce speeds</li> <li>• Provide parallel cycle pedestrian crossings over both halves of the northern crossing</li> </ul>	



*The A1096 Low Road roundabout from the north. A parallel cycle pedestrian crossing should be provided here.*

Ref	Location	Measure	Comment
2i	Converted footway A1096 to London Road	Widen footway from 0.75m. Width may need to be taken from A1096 northbound exit arm of roundabout	



*The narrow footway between the A1096 and London Road,*



*There is both verge space and some space on the carriageway that could be taken to widen the path.*

Ref	Location	Measure	Comment
2j	London Road junction	It is not clear what cyclists are supposed to do here. Redesign signs and markings	
2k	Fen Lane	<ul style="list-style-type: none"> <li>• Convert to bridleway</li> <li>• Provide direction signs</li> <li>• Ultimately resurface</li> </ul>	
2l	Busway to St Ives	No change required	
2m	Crossing in bus station	We noticed that waiting buses obscured drivers' view of pedestrians waiting to cross. Provide zig-zags to make the crossing visually similar to those on the public highway. Consider converting it to a parallel cycle pedestrian crossing	



St Ives Bus Station

Ref	Location	Measure	Comment
2n	Bus station to A1096	Remove obstructions in path	
2o	A1096 crossing	The crossing itself is fine but the transition back to the carriageway west of the A1096 needs redesigning to make it clearer where cyclists have to go.	
2p	A1096 to central St Ives	No change required	
2q	Busway to Fen Drayton	No change required	
3a	Path, Potton road to bridge	A new path will be required on the east side of Potton Road from	
3b	Bridge over drain	Construct bridge.	
3c	Path drain to Hilton Road	A new path will need to be constructed from the bridge to the old line of Hilton Road which pedestrians and cyclists would use to get to the new bridge over the A14	

Ref	Location	Measure	Comment
4a	Grass path north of Graveley Way	No change required for a bridleway but an all-weather surface would be needed for year round pedestrian and cycle use. Suggest a recycled rubber based surface such as Flexipave.	
4b	Track, Brookside to Lattenbury Farm	No change required for bridleway but surface is too rough for hybrid bikes. Will require resurfacing	
4c	Lattenbury Farm to A14 bridge	Will require resurfacing or a smooth all weather surface provided along the western edge	
4d	A14 bridge	No change required	
4e	Track, Topfield Farm to A14	No change required	
4f	Goretree Road	No change required	
5a	Path, Potton road to footpath end	If pedestrians (and cyclists) are going to cross Potton Road alterations need to be made at the north end of the current path including removing a line of trees (5b). A crossing could be made further south where there is already adequate visibility. If this is the case then a new section of path needs to be made from here to the end of the current footpath.	
5b	Potton Road crossing	If cyclists and pedestrians are going to cross at the northern end of the current path all the trees on the western verge north of that point will need to be removed to improve sightlines. If cyclists are going to use the crossing the path on the west side needs to be widened to enable them to turn perpendicularly to the line of the road. Ideally the road would be widened and a 2.5m wide pedestrian refuge provided.	



Ref	Location	Measure	Comment
5c	Footpath Potton Road to West End Farm	Ok for pedestrians but it needs to be converted to a bridleway or have an agreement that cyclists can use it if it is to become part of a cycle route. The short section of track from the end of the footpath to West End Farm would need an all weather surface.	
5d	West End Farm to Hilton Road	No change required	
6a	Potton Road / West Brook	New foot/cycle/equestrian bridge over Westbrook	
6b	Potton Road to West End Farm	New multi-user path south of west brook plus fence on south side	

## Costs

The cost of measures depend very much on the widths of paths and on the quality of the surfacing chosen. Engineering costs also depend on the amount of earthworks required. One cost we have not yet addressed is that of land purchase. The costs are also only indicative because more detailed investigations may reveal additional problems that need resolving.

Path costs vary with width and surface material. Paths constructed from cheap gravel based material might cost in the order of £20/m<sup>2</sup>. These are not necessarily all-weather as the surface dust can become sticky in the rain and cheaper products require more maintenance. A proprietary product such as “Toptrek” made from recycled road planings has better all-weather and wearing qualities and might cost around £30/m<sup>2</sup>. While useable in wet conditions it can wash out if heavy rain or flood water runs over it. Bituminous macadam lasts much longer, upwards of 25 years and costs around £50/m<sup>2</sup>. If machine laid it has a very good surface for walking and cycling. It is not so good for horses and if space exists a wide verge should be provided alongside the path although here that would only be possible on route options 3 & 6. There are other products suitable for where horses and other users have to be accommodated on one path. Flexipave, for instance, has a rubber based surface which is better for horses yet is strong enough to carry vehicles. It is pervious making drainage easier. A recent quoted cost is £67/m<sup>2</sup>.

Costs of path construction can be changed by specifying a different material and width. In general terms guidance suggests that paths should be 3.0 metres wide but in many cases here there is insufficient width. We have assumed that all paths over open land, or where vehicles have to be accommodated, are 3.0 metres wide bitmac paths and all constrained ones 2.0 metres wide. A secondary consideration in the choice of path material is the visual impact on the local surroundings, though this should not take precedence over the usability of the path in all conditions by the widest range of people, including disabled people (including wheelchair users) and those with lower levels of mobility.

Preliminary costs are shown below. The do not include land and some other items have yet to be costed but they give an indication of what prices will be.

Section	Length	Cost
Option 1 Hilton to new line of A14	1.35km	£73,020.00
Option 1 New line of A14 to St Ives off carriageway	4.5km	£326,800.00
Option 2 Hilton Road signing only. Hilton to Fenstanton	3.3km	£1,200.00
Option 2 Hilton Road off carriageway. Hilton to new line of A14	2.1km	£110,600.00
Option 2 Hilton Road off carriageway. New line of A14 to Fenstanton	1.2km	£30,600.00
Option 2 Fenstanton Subway	0.2km	£3,900.00
Option 3 Five Arch Bridge to Hilton Road	1.35km	£243,300.00
Option 4 Hilton to Hemingford Grey	8.4km	£200,670.00
Option 5 Potton Road to Hilton Road	1.33km	£92,400.00
Option 6 Potton Road to Hilton Road	1.33km	£181,800.00
Option 2 Mini roundabout in Fenstanton		£11,460.00
Option 2 Fenstanton to St Ives via Low Road	3km	£89,450.00
Option 2 Fenstanton to Busway via Fen Lane - minimal intervention	4.35km	£4,200.00
Option 2 Fenstanton to Busway via Fen Lane - with surfacing	4.35km	£199,200.00
Option 2 Bus Station and St Ives		£43,500.00



Combinations	Length	Cost	Notes
Option 1 Hilton to St Ives via Potton Road	5.85km	£399,820.00	Plus any land costs, verge widening and tree removal
Option 2 Hilton to St Ives via Hilton Road & Low Road (no works on Hilton Road)	6.5km	£94,550.00	
Option 2 Hilton to St Ives via Hilton Road & Low Road (off carriageway on Hilton Road)	6.5km	£246,010.00	Plus any land costs
Option 2 Hilton to St Ives via Hilton Road and Fen Lane (no works on either)	7.85km	£20,760.00	
Option 2 Hilton to St Ives via Hilton Road and Fen Lane off carriageway on Hilton Road and surface Fen Lane	7.85km	£399,260.00	Plus any land costs
Option 3 Hilton to St Ives via A14 path, Hilton Road off carriageway and Low Road	7.1km	£451,730.00	Plus any land costs
Option 3 Hilton to St Ives via A14 path, Hilton Road off carriageway and Fen Lane (min)	7.1km	£123,180.00	Plus any land costs
Option 3 Hilton to St Ives via A14 path, Hilton Road off carriageway and Fen Lane (max)	7.1km	£361,680.00	Plus any land costs
Option 4 Hilton to St Ives via Mere Way and Hemingford Road	8.4km	£200,670.00	
Option 5 Hilton to St Ives via Potton Road, footpath, Hilton Road and Low Road	5.88km	£270,230.00	
Option 5 Hilton to St Ives via Potton Road, footpath, Hilton Road and Fen Lane (min)	7.23km	£184,980.00	
Option 5 Hilton to St Ives via Potton Road, footpath, Hilton Road and Fen Lane (max)	7.23km	£423,480.00	
Option 6 Hilton to St Ives via Potton Road, new path, Hilton Road and Low Road	5.88km	£270,180.00	Plus any land costs
Option 6 Hilton to St Ives via Potton Road, new path, Hilton Road and Fen Lane (min)	7.23km	£262,920.00	Plus any land costs
Option 6 Hilton to St Ives via Potton Road, new path, Hilton Road and Fen Lane (max)	7.23km	£501,420.00	Plus any land costs

## Preliminary conclusions.

Mere Way should be considered separately from Potton Road and Hilton Road. It can be signed as a bridleway between Hilton and Hemingford Grey now without needing any surface improvements.

Routes that require a large amount of path construction are the most expensive. So extending the A14 bridge path on Potton Road to St Ives is very expensive as is constructing a path alongside Hilton Road and resurfacing Fen Lane.

The cheapest options require minimal construction. The cheapest option is to sign pedestrians via Potton Road, the option 5 footpath, the subway under the current A14 and then Lower Road into St Ives but route cyclists via Hilton Road, the subway and then Lower Road.

The safest option is an off-carriageway route using Potton Road (1b, 1c, 1d & 1e) a crossing of Potton Road at the north end of the new A14 bridge or at 1f with extensive improvements to the crossing (5b, not costed), then option 6 to Hilton Road then 2d, 2e and 2f into Fenstanton. The safest and most pleasant way to St Ives is via Fen Lane. While Fen Lane could be surfaced people quite happily use it in its current form.

## Recommendations

Currently our recommendations are

- Construct the safest option described above using Potton Road, option 6, Fenstanton subway, and Low Road. Sign it as a route between Hilton, Fenstanton and St Ives
- Convert Fen Lane to a bridleway and sign as a route to the busway – both St Ives and Fen Drayton stops
- Sign Mere Way as a bridleway between Hilton and Hemingford Grey

These recommendations could change following discussions with local people

We expect to undertake further work to:

- Complete the speed and flow surveys
- Discuss issues with local people
- Produce draft designs
- Consider routes south to Papworth Everard and west to Gravelley.

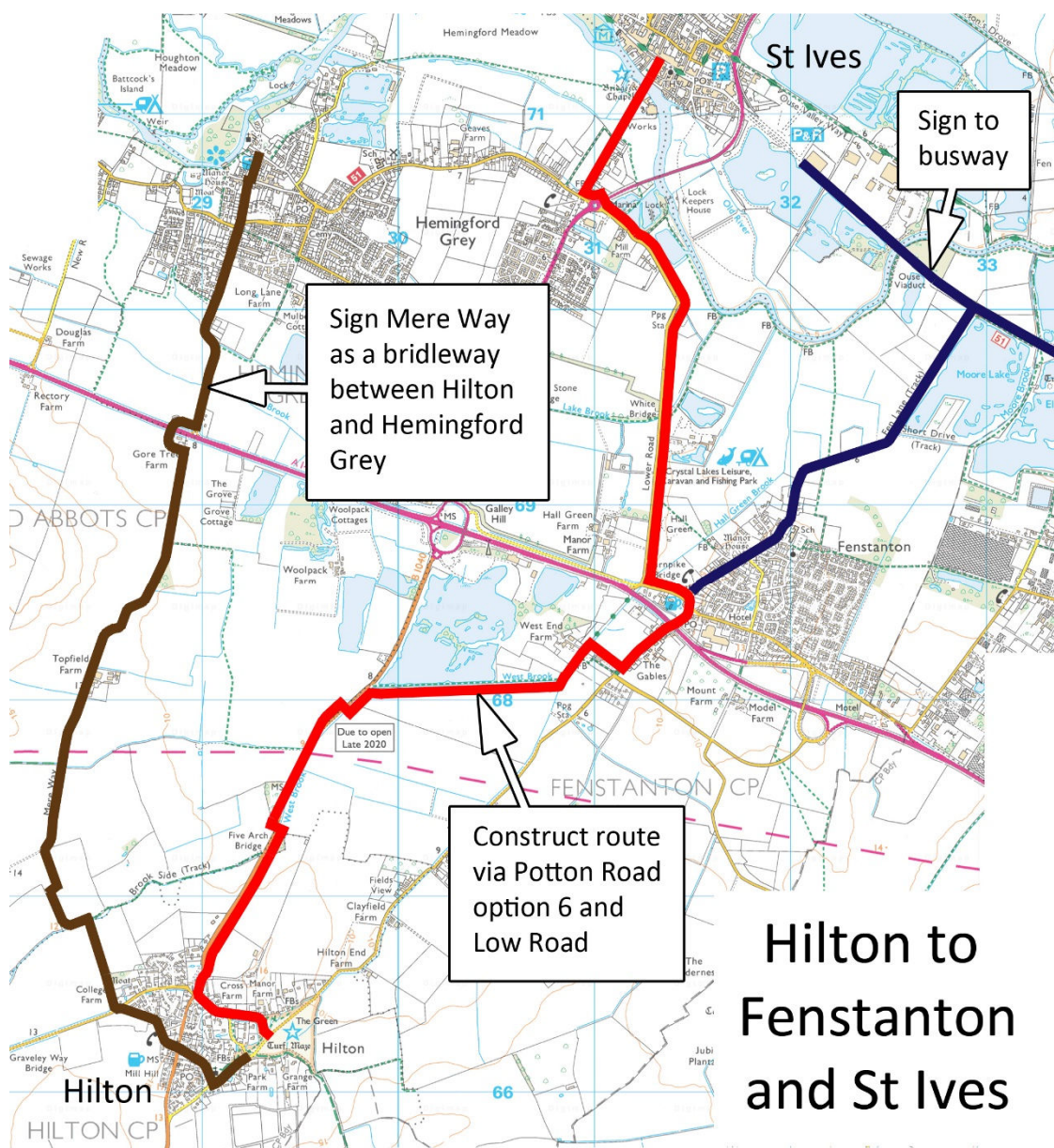


Diagram of main recommendations