

MAY 2018

FINAL REPORT

GREATER CAMBRIDGE GREENWAYS

PRODUCED BY 5TH STUDIO FOR CAMBRIDGESHIRE COUNTY COUNCIL

BARTON + HASLINGFIELD



CONTENTS

- 4 INTRODUCTION/ PROJECT BRIEF
- 10 SUMMARY OF FINDINGS FROM PREVIOUS CONSULTATION
- 12 THE ROUTES - OVERVIEW
- 16 THE ROUTES - SELECTED
- 18 BARTON
- 32 HASLINGFIELD
- 50 SIGNAGE
- 52 PRELIMINARY COSTINGS

Greenways plan



The twelve indicative Greenways routes, to be finalised after public consultation.

INTRODUCTION

£480,000 of City Deal funding was awarded to the project, which started in April 2017. It is allocated over two years to complete the public engagement and consultation phase of all 12 schemes.

The team, comprising 5th Studio, with support from JCLA (landscaping) and Allan Tyler (cost), has been appointed by Greater Cambridge Partnership to prepare outline concept drawings for public consultation in June 2018.

The Greater Cambridge Partnership is looking to establish a high quality Greenway network of cycling routes from Local villages into Cambridge. Some of these routes already exist in part or require improvements. Other sections are new, and are subject to agreement with landowners.

This study follows earlier consultation carried out by the Greater Cambridge

Partnership, and a series of reports completed in October 2016. These recognised that:

'Cambridge has the highest level of cycling in the UK and without this it is hard to see how the city could function efficiently and maintain its high quality of life. A successful Greenways Network around Cambridge is likely to be a key part of the future success of the Greater Cambridge area.'

There are 12 Greenways planned in total:

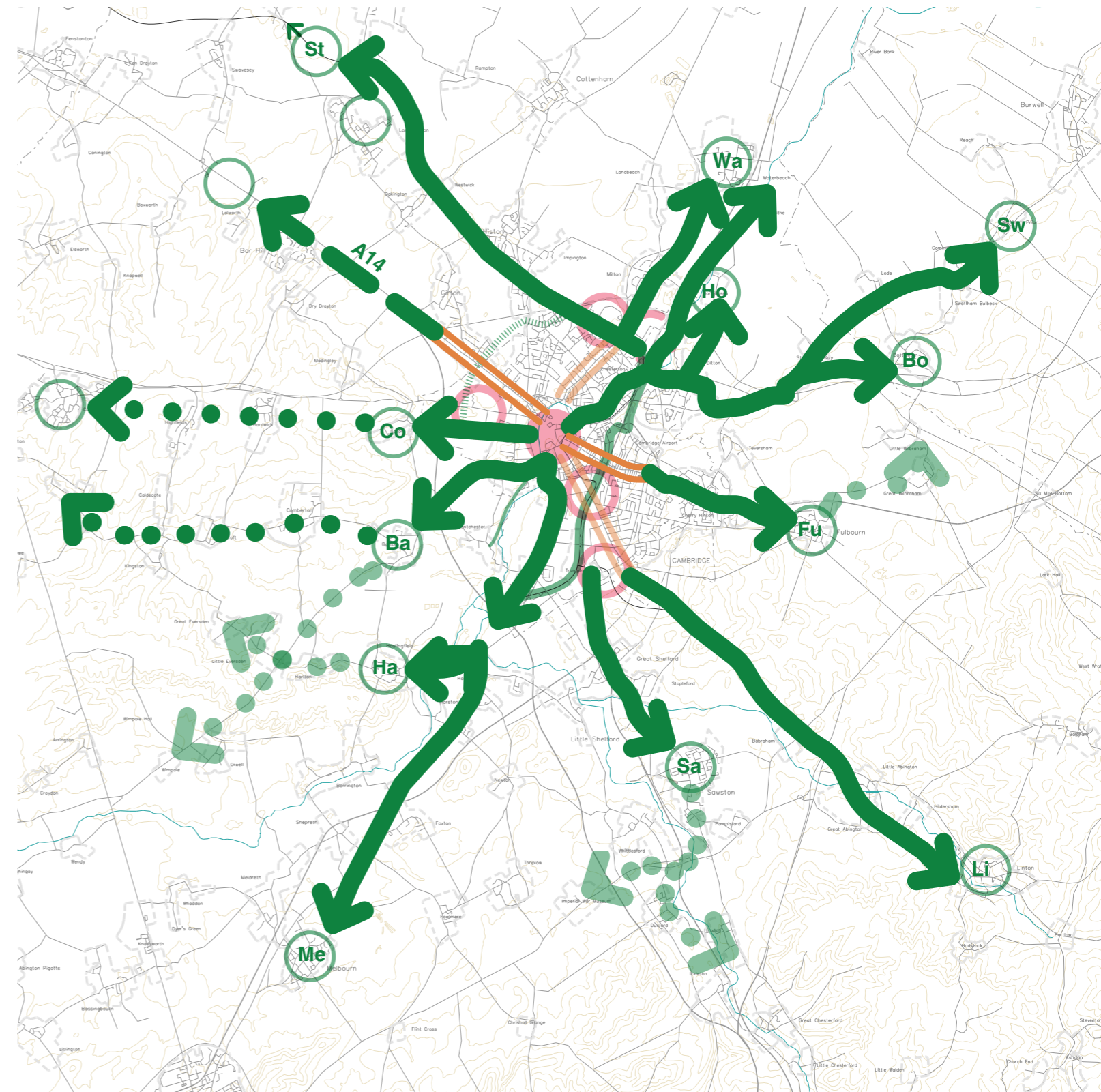
- Waterbeach Greenway
- Horningsea Greenway
- Swaffham Greenway
- Bottisham Greenway
- Fulbourn Greenway
- Linton Greenway
- Sawston Greenway
- Melbourn Greenway
- Haslingfield Greenway
- Barton Greenway
- Comberton Greenway
- St Ives Greenway

The approach illustrated in this document, starts with a thorough understanding of the routes gained by the team cycling the routes and supplemented by our detailed knowledge of designing cycling infrastructure.

A targeted approach has been used to develop initial concept designs. We have concentrated on:

1. Key locations - crossings, moments of orientation/redirection,
2. A variety of common linear conditions through exploring a range of representative cross sections,
3. The definition of a series of high-level landscape approaches for different sections of the broad route corridors.

This report summarises our work on the Barton and Haslingfield routes, and where this overlaps with the Melbourn route.





Above: a 3m wide cycle lane,

Right: 2m wide cycle lane,

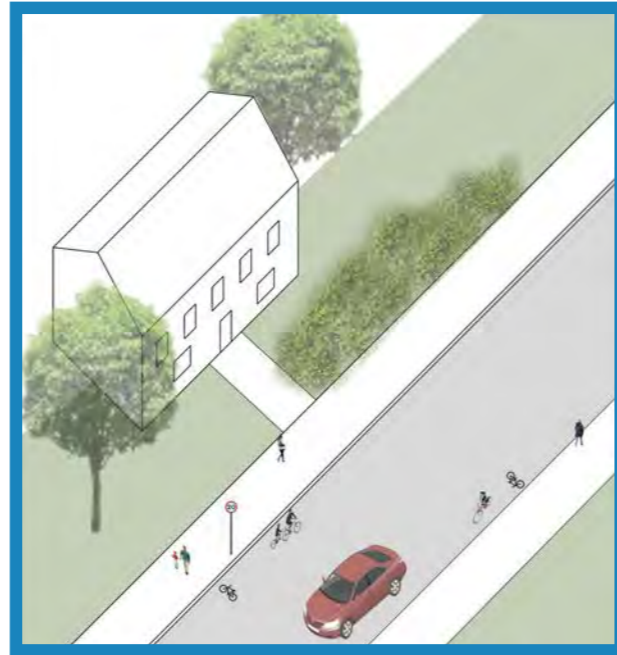
Right below: 4m wide cycle lane,



What is a Greenway?

- A high-quality, direct, continuous and legible route connecting local villages with the city.
- In this project the proposed Greenways provide facilities likely to increase cycle commuting and thereby encourage modal shift out of the motor vehicle for journeys in their respective corridors, but should also provide good facilities for pedestrians, wheelchair and mobility scooter users and, where appropriate, horseriders – and cater for both leisure and utility users.
- While there is necessarily a limit to the scope what can be delivered as part of this specific project, which is focussed on delivering a series of radial Greenway routes connecting the city and outlying villages, the ultimate goal is to create a seamless network of high quality routes (including orbital routes around Cambridge, extensions of routes to villages and other destinations further afield (e.g. Wimpole Hall) and a denser network of high quality routes within the city) and potential of this wider network should be considered when developing the initial Greenway proposals.
- An all weather, hard surface (generally tarmac) of width of at least two metres, but wider where possible.
- Generally the routes should be free from vehicular traffic - either entirely away from roads, or segregated from them.
- Where the routes utilise existing roads these should preferably have less than 2,000 motor vehicle movements per day, and preferably be subject to 20mph speed limits.
- Where busy roads are crossed, there should be a suitably safe means of crossing the road.

3 TYPES OF ROUTE



There are three path types that are to be consistently used along the Greenway routes. Both the shared and segregated cycle paths are to have a smooth, machine laid hot-rolled, asphalt surface. The colour of this surface may be varied from black to buff in the city centre.

There may be small sections of path where it is not possible to meet these standards, i.e. over bridges, and the boardwalk over Paradise Nature Reserve. Here bespoke solutions that aim to meet the standards above are to be applied.

Signage is to be consistent along the Greenway route, with signs to be located at junctions, and at regular intervals.

Other elements are to be proposed on a location specific basis and need not be common to the Greenways route. These include lighting, seating, local signage, trees, planted verges.

Quiet road

Cycle route on carriageway with speed limit reduced to 20mph. White painted signage on carriageway.

Sign marker posts at key junctions.

Shared cycle path

Two-way cycle path, shared with pedestrians. Preferred width is 3m (2m may be acceptable on quiet rural stretches, and 4m may be required in busy areas). Shared path to have a machine laid hot-rolled black asphalt surface.

Where the path is located along an existing bridleway route, the bridleway is to run parallel on grass. Where the path runs alongside the carriageway a separating planted verge is recommended, to be as wide as possible.

Sign marker posts at regular intervals and at junctions.

Segregated cycle path

Two-way segregated cycle path (i.e. for cycles only) parallel to the carriageway with, where possible, a planted verge between. The planted verge is to be made as wide as possible.

Preferred width for cycle path is 3.5m (with footpath alongside at 3.5m). An acceptable min for cycle path 2.5m (with 2.5m footpath). Machine laid hot-rolled asphalt surface.

Sign marker posts at regular intervals and at junctions.

SUMMARY OF FINDINGS FROM THE PREVIOUS CONSULTATION

In 2016, the Greater Cambridge Partnership commissioned Nigel Brigham to review the twelve Greenway routes. This report, along with the detailed appendices is publicly available on the Cambridgeshire Council website. It recommends the following routes be progressed as a priority:

- A route to Haslingfield via the Trumpington Road corridor for the Haslingfield Greenway
- Two routes, one via Barton Road and one via Grantchester, for the Barton Greenway
- A route via the Trumpington Road corridor, then cross-country to the NW of Harston, parallel with the main road, before rejoining the A10 at the junction near the Queen's Head in Harston. Then to Foxton and Melbourne, for the Melbourne Greenway, with two other 'alternatives' shown via the (now recently upgraded) route alongside the main road through Hauxton, and further to the east beside the railway line.

This report did not therefore include a route to Haslingfield via Grantchester, as the Greenways Overview schematic does - presumably based on the expectation, as voiced in the report, that a route via Cantelupe Farm may be difficult to achieve.



Above: Cambridge Greenways community engagement timetable

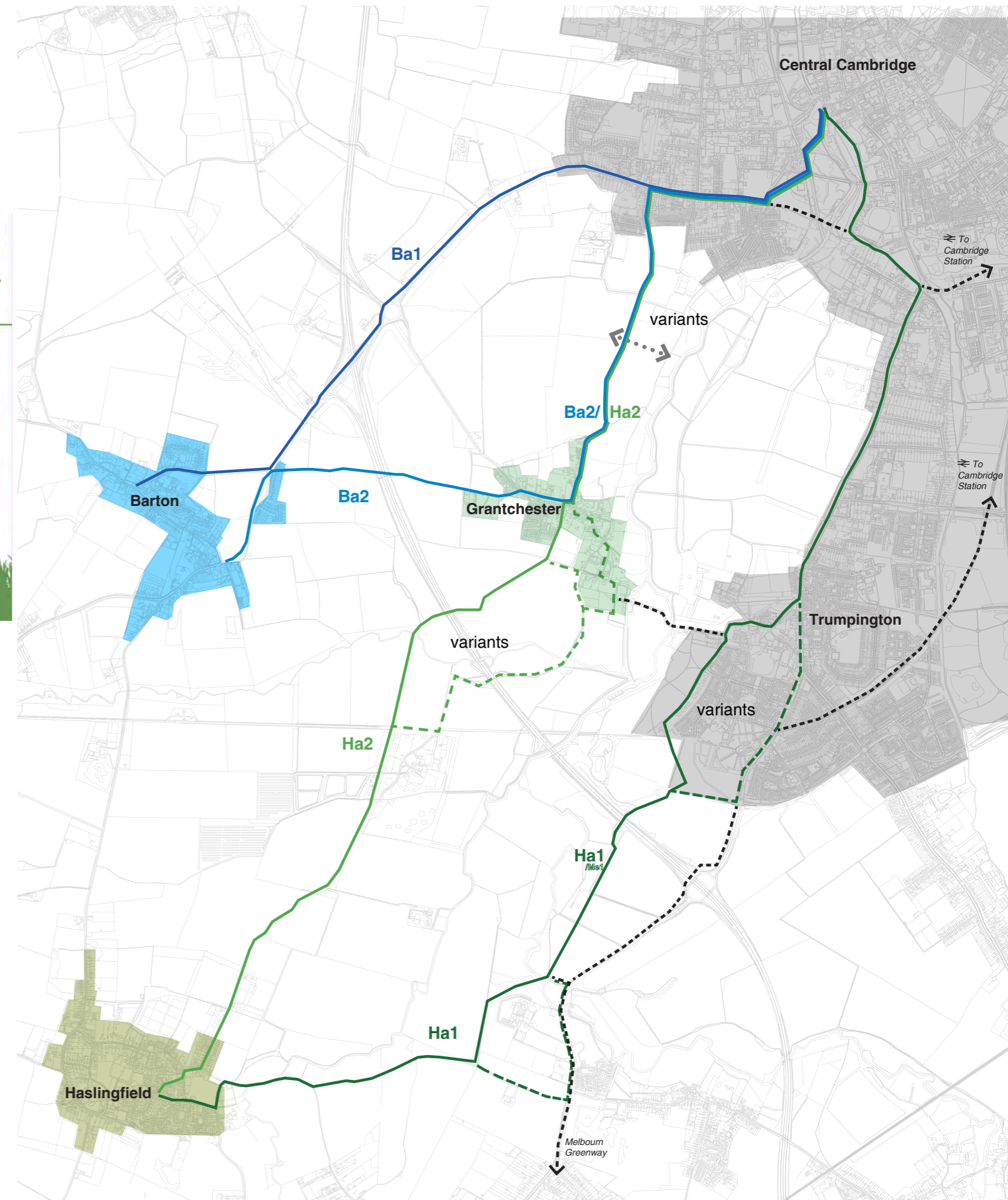
Consultation Feedback

Barton -
choice between via Barton Road (13) and via Grantchester (14, once the two Grantchester route options are aggregated) are evenly balanced. The sample is small but no clear public preference, based on the information to date.

Haslingfield -
Choice between via Trumpington (11, with when two options are aggregated) and via Cantelupe Road / Grantchester (14, possibly 16 when non-overlapping 'link to Grantchester' answers are added), is similarly evenly balanced. Again, the sample is small but no clear public preference, based on the information to date.

Aside from the question of which route consultees preferred there was a series of topics/issues that received far more comments than any others, namely:

- Safety at M11 junction 12 (Barton consultation)
- Need for/ existing lack of segregation
- Need for width/existing narrowness of path (particularly Barton consultation)
- Lighting
- Need for smooth path / unevenness of existing (particularly Barton consultation)
- Maintenance

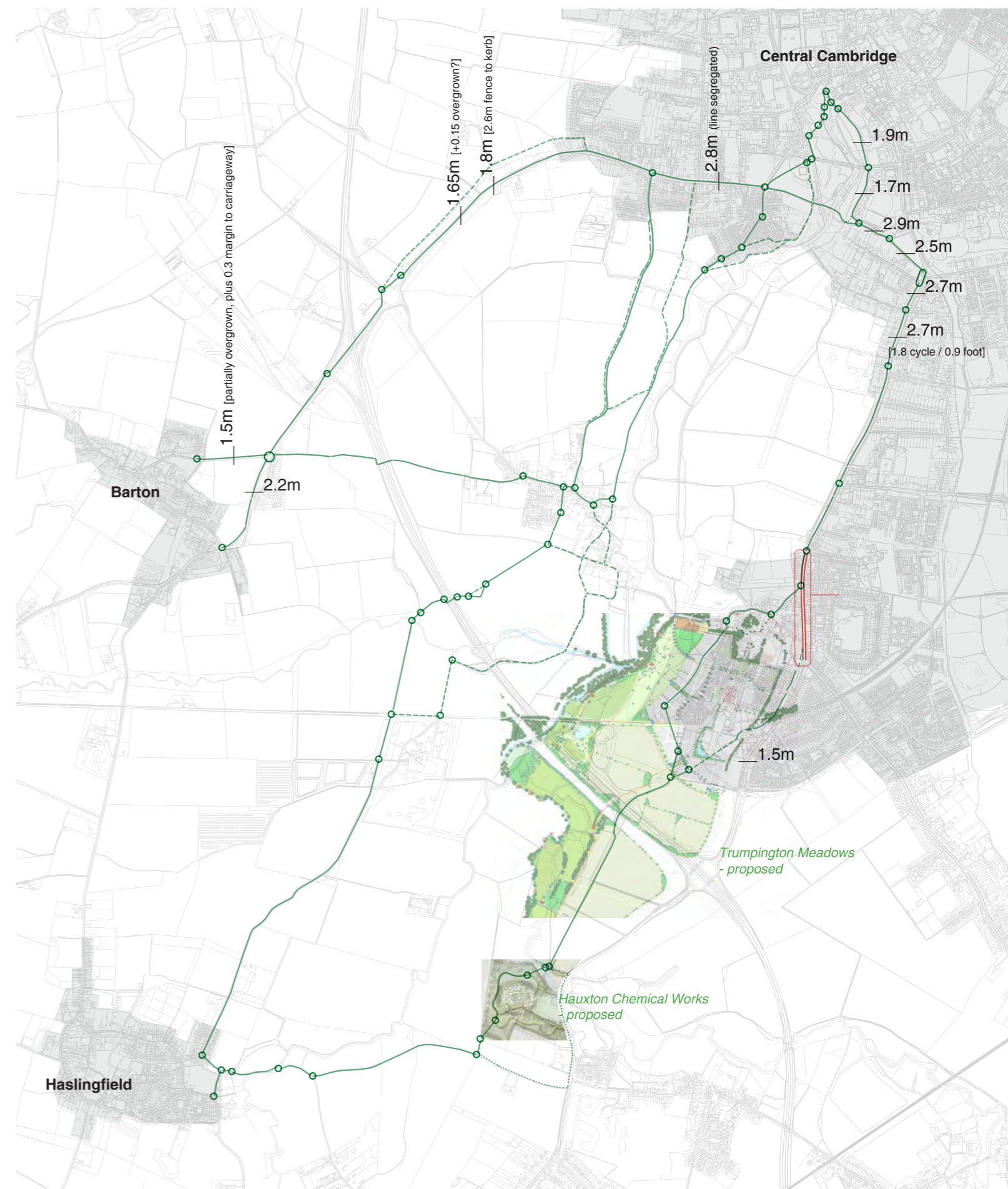
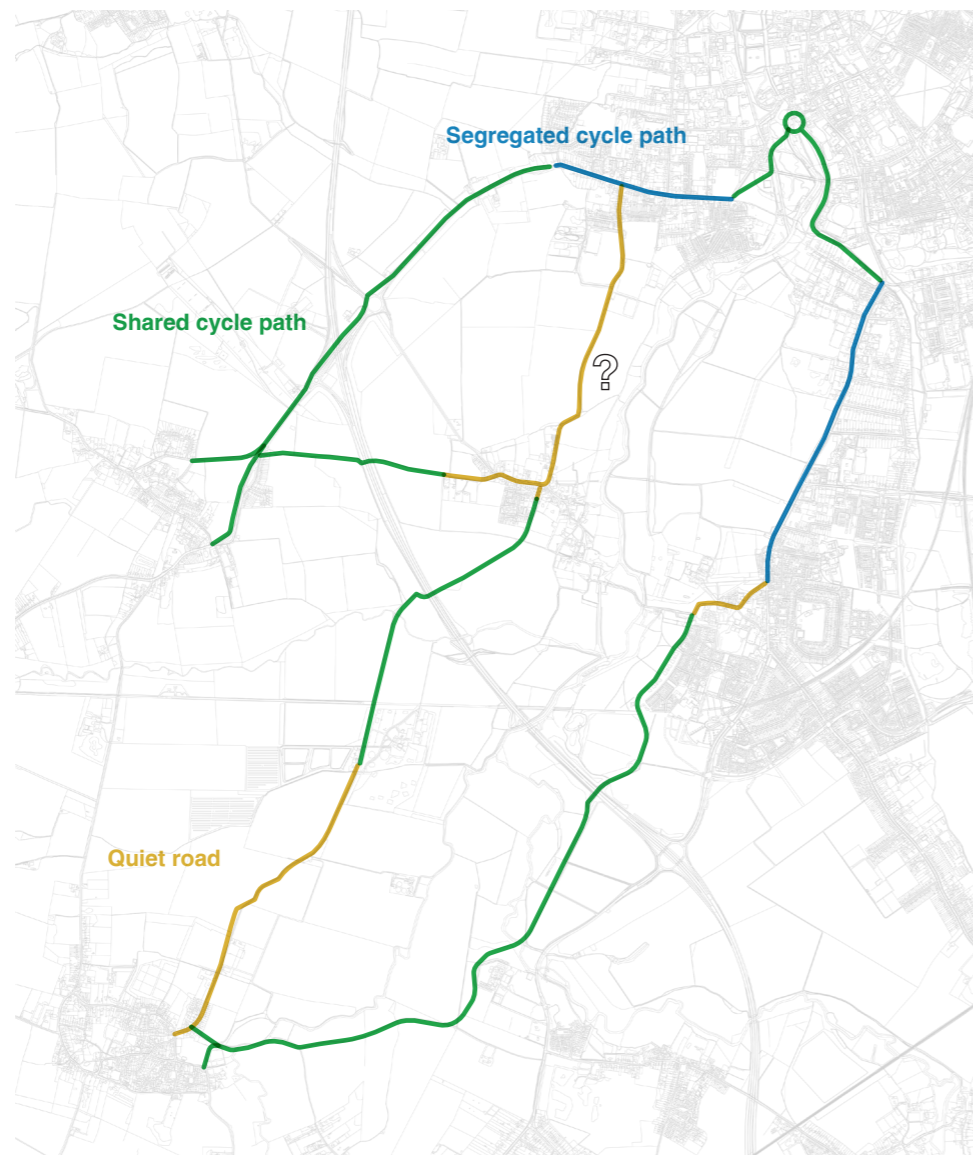


Above: the routes in context

THE ROUTES - OVERVIEW

Our design process began with the team travelling the routes and documenting the condition of the existing footways and cycle ways (where these existed). The plan drawing shown here records the widths of existing cycle paths.

We went on to explore the alternatives presented in the Nigel Bringham report, as well as other emerging alternatives. These findings are presented on the following pages, and were discussed at length with the client team before deciding upon the routes to present for public consultation in summer 2018.





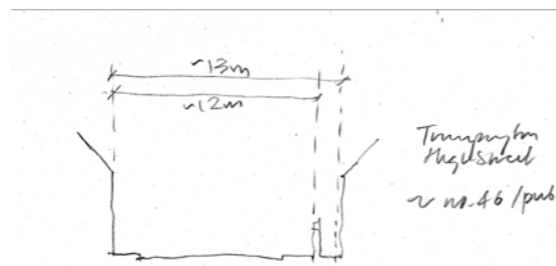
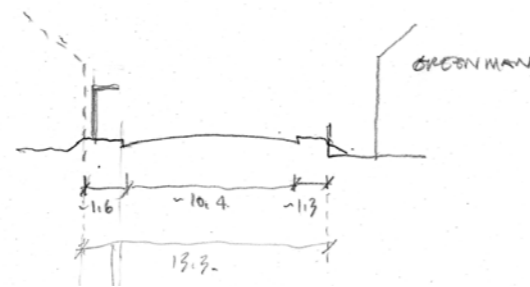
Shared footway/cycle path along Barton Road - outside the City



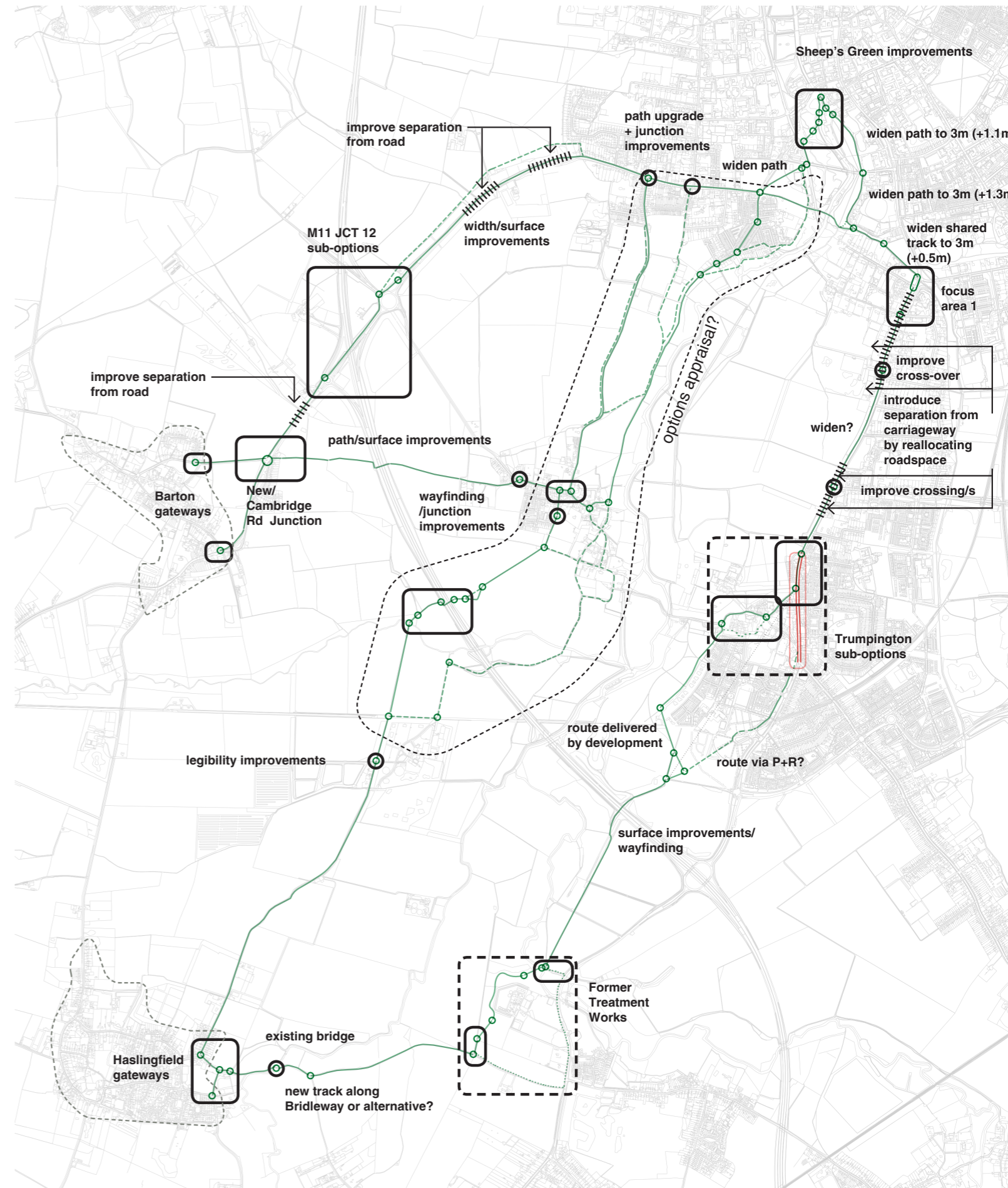
Existing track along Trumpington Meadows Country Park north and south of the M11

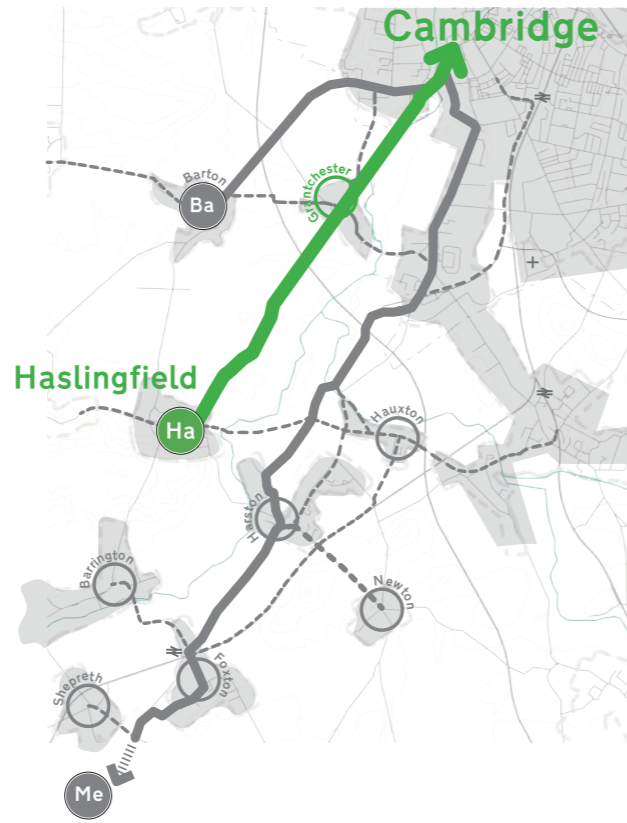
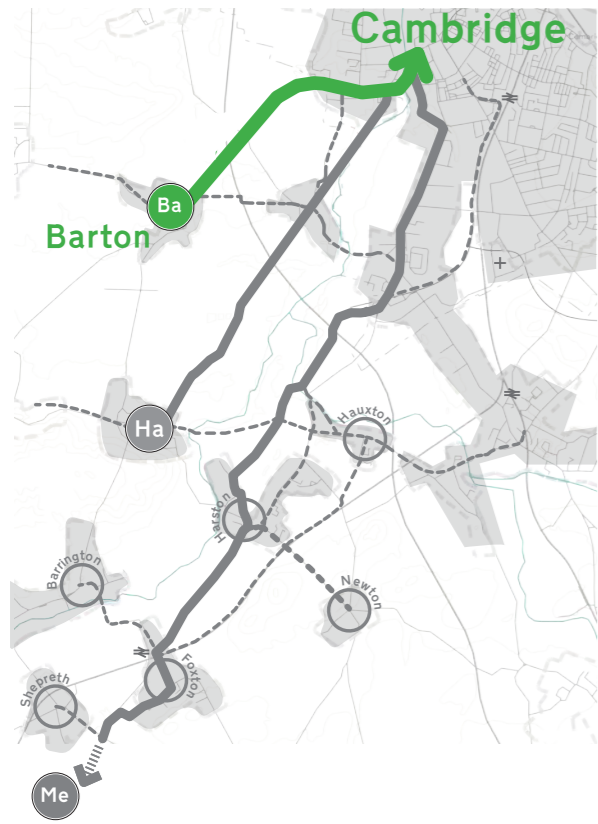


Haslingfield High Street



Above: Sections along Trumpington Road





THE ROUTES - SELECTED

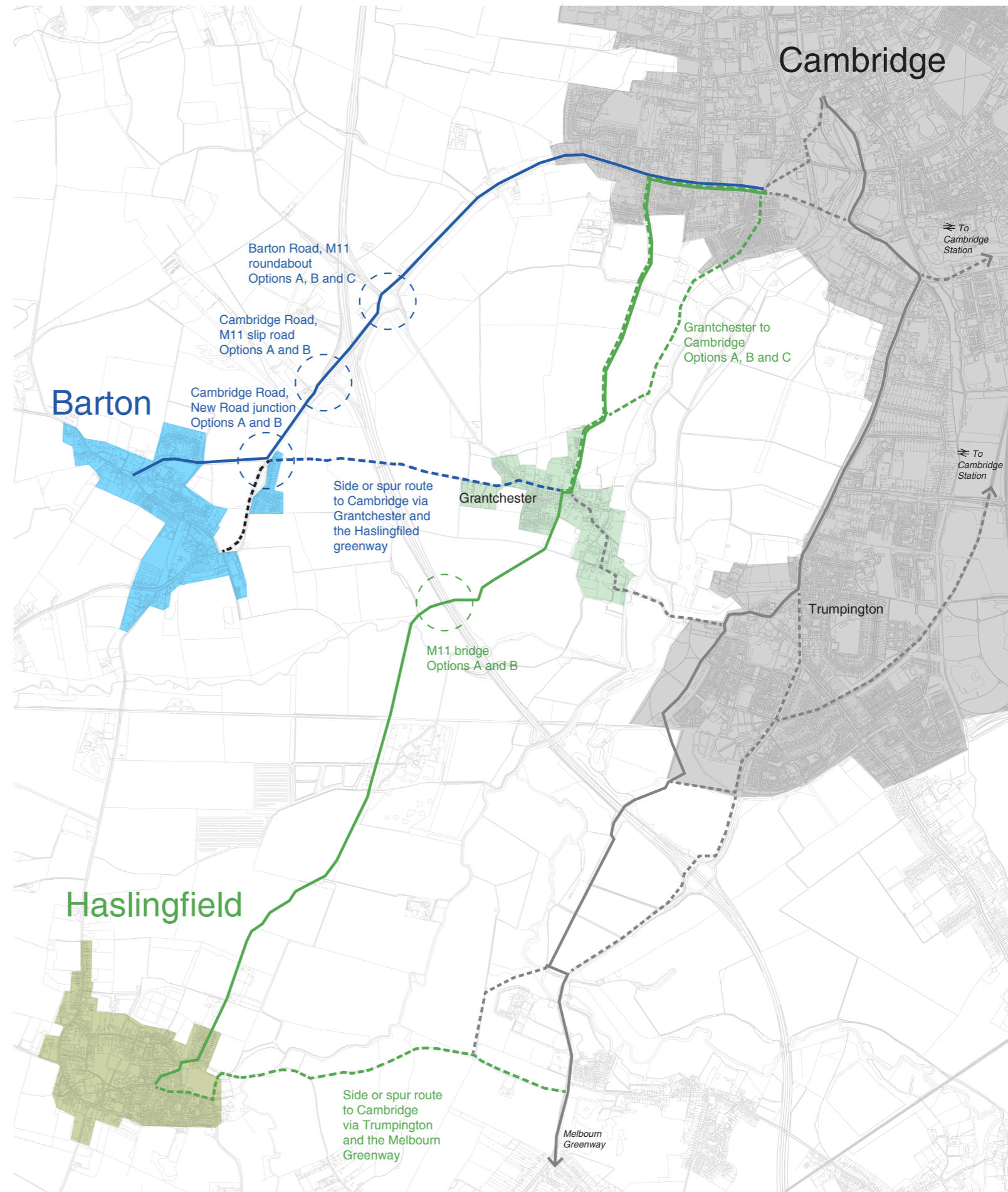
The routes to Cambridge from Barton, and from Haslingfield shown here were selected for inclusion in the public consultation documents.

Barton

It was decided that the Barton Greenway route, alongside Barton Road, would be shown with improvements to the existing shared cycle path, and improvements at key junctions. The alternate route via Grantchester has been included as a connection to the proposed Haslingfield Greenway route.

Haslingfield

The Haslingfield Greenway route goes to Haslingfield via Grantchester, and over the existing M11 footbridge. It was agreed that the alternative route to Haslingfield, via Trumpington, is to be included as part of the Melbourn Greenway consultation. However, a connection to this route has been included here.



BARTON

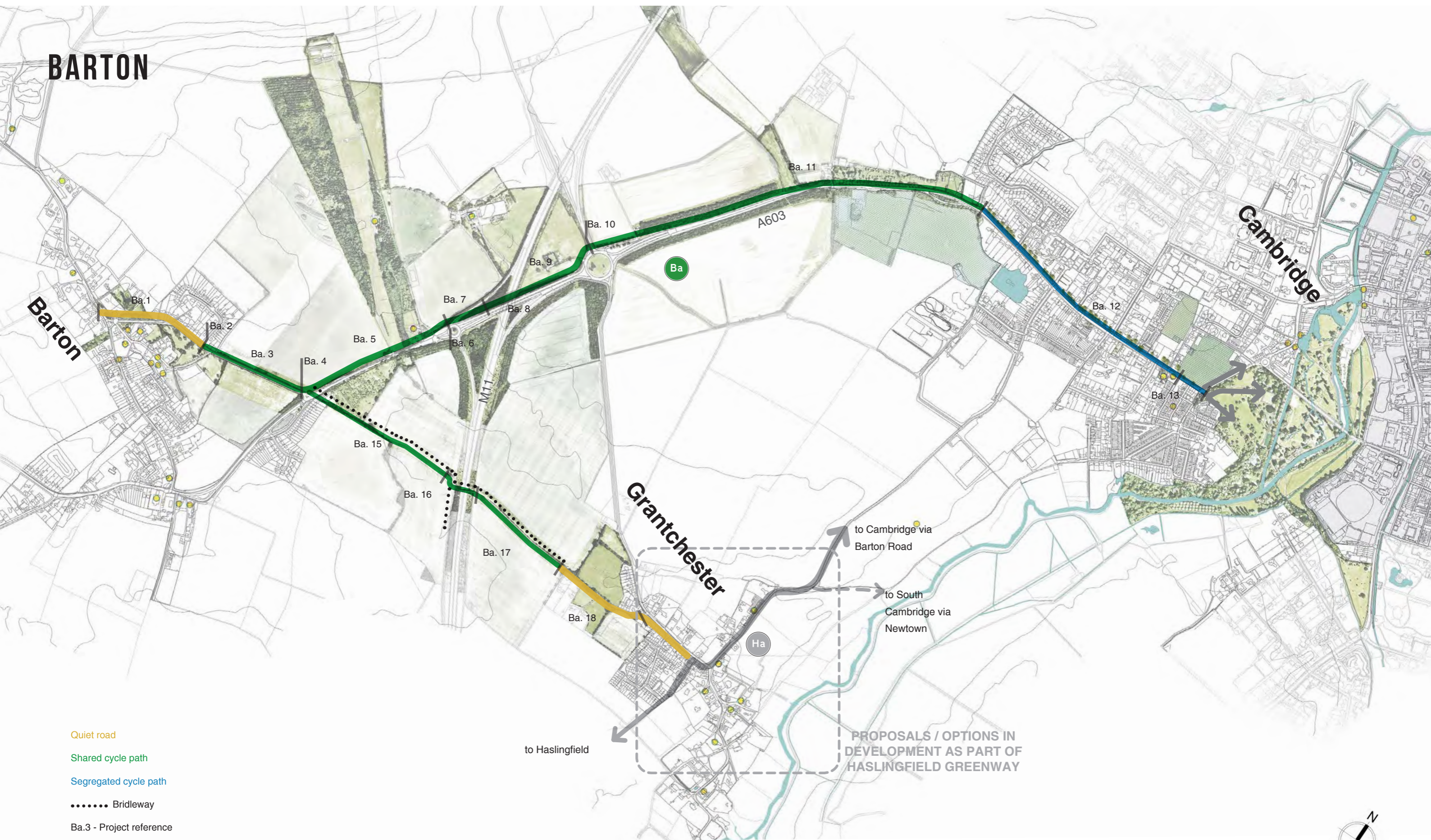
Barton

Cambridge

Grantchester

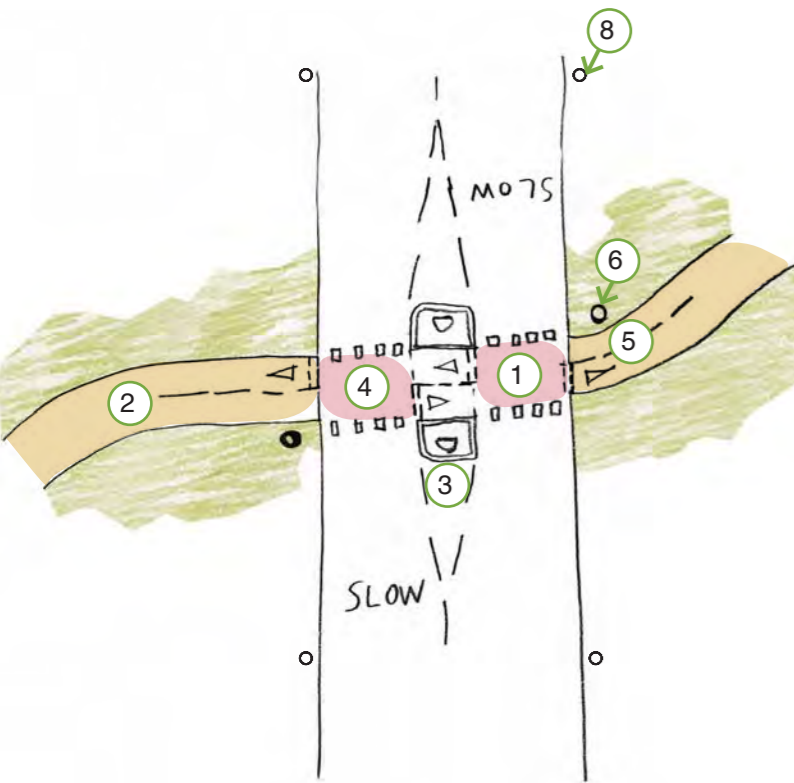
- Quiet road
- Shared cycle path
- Segregated cycle path
- Bridleway
- Ba.3 - Project reference

PROPOSALS / OPTIONS IN DEVELOPMENT AS PART OF HASLINGFIELD GREENWAY

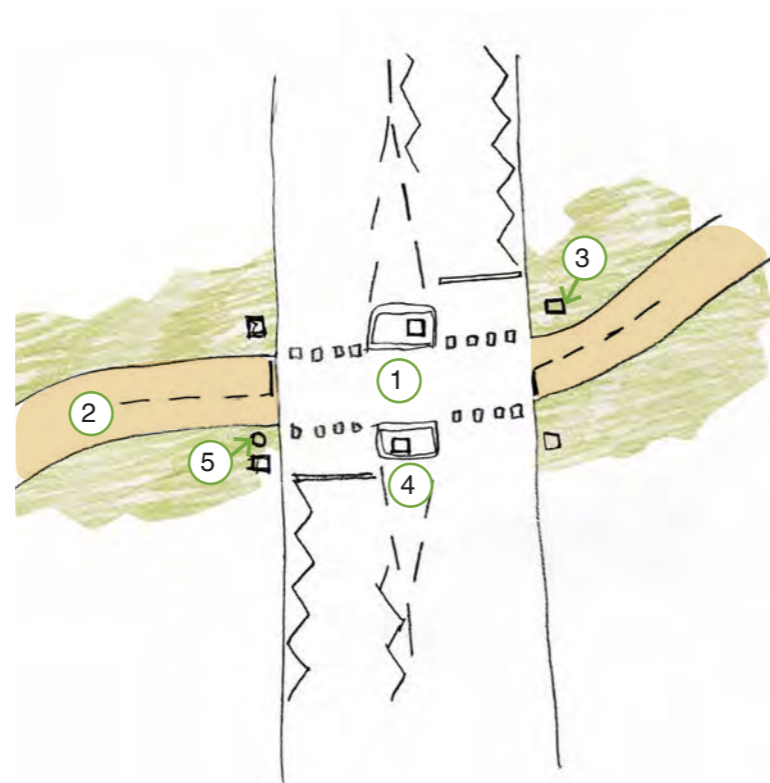


CROSSING TYPES

Uncontrolled Crossing



Controlled/ Signalled Toucan Crossing

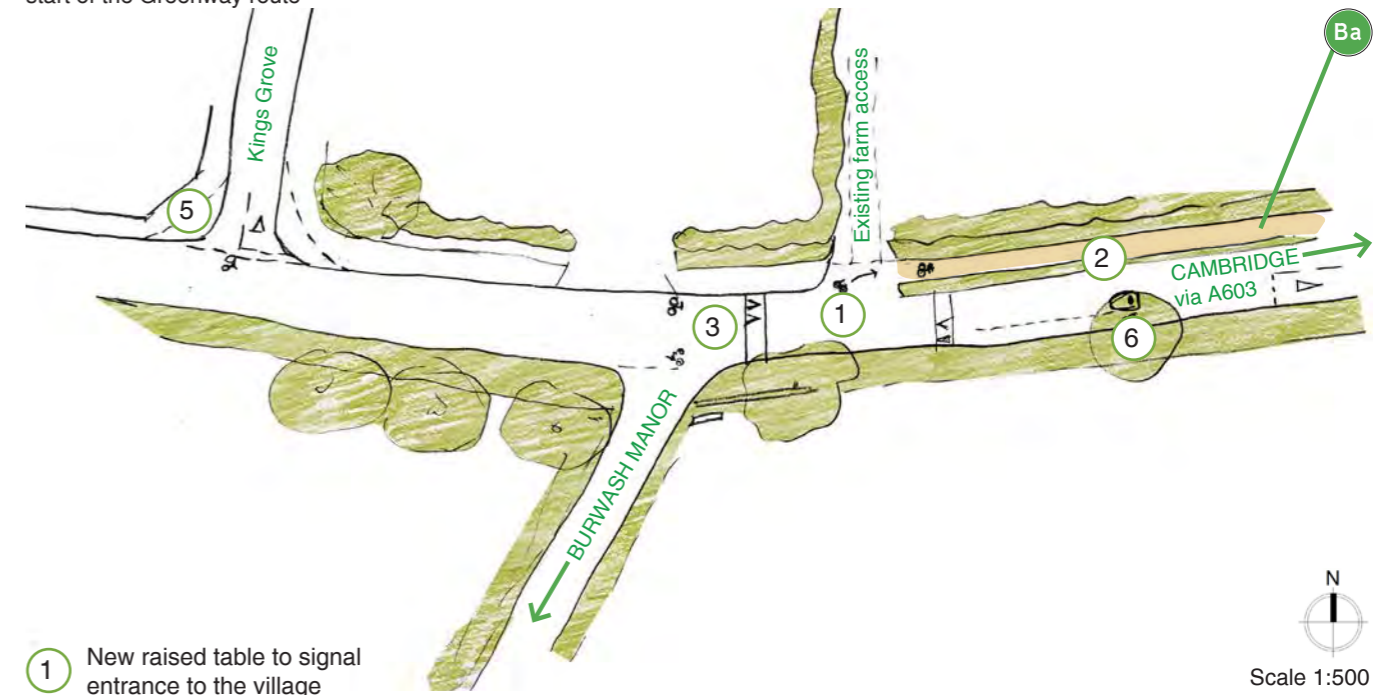


- 1 Uncontrolled crossing set back 5m (one car length) from give way line at roundabout
- 2 Shared cycle lane
- 3 Central refuge in road at least 2.5m wide if road is two way/ busy
- 4 Coloured surface - i.e. red
- 5 Face-on approach to crossing to maximise visibility for cyclists
- 6 Wayfinding bollards with shared use symbols
- 7 Sign material on reflective backing boards to alert motorists
- 8 Warning sign 'cycles crossing XXX yards'

- 1 Controlled (toucan) crossing 20m from give-way line at roundabout
- 2 Shared cycle lane
- 3 Traffic light signals
- 4 Central refuge - minimum 2.5m wide
- 5 Wayfinding bollards with shared use symbol

Ba. 2 - Barton Village

Signage/marker posts highlighting the start of the Greenway route



- 1 New raised table to signal entrance to the village
- 2 New planted area to separate cycle lane/ shared path
- 3 Existing shared use track - maintained to increase usable width
- 4 Traffic calming - give way to oncoming traffic
- 5 Tightened corner geometry
- 6 New tree

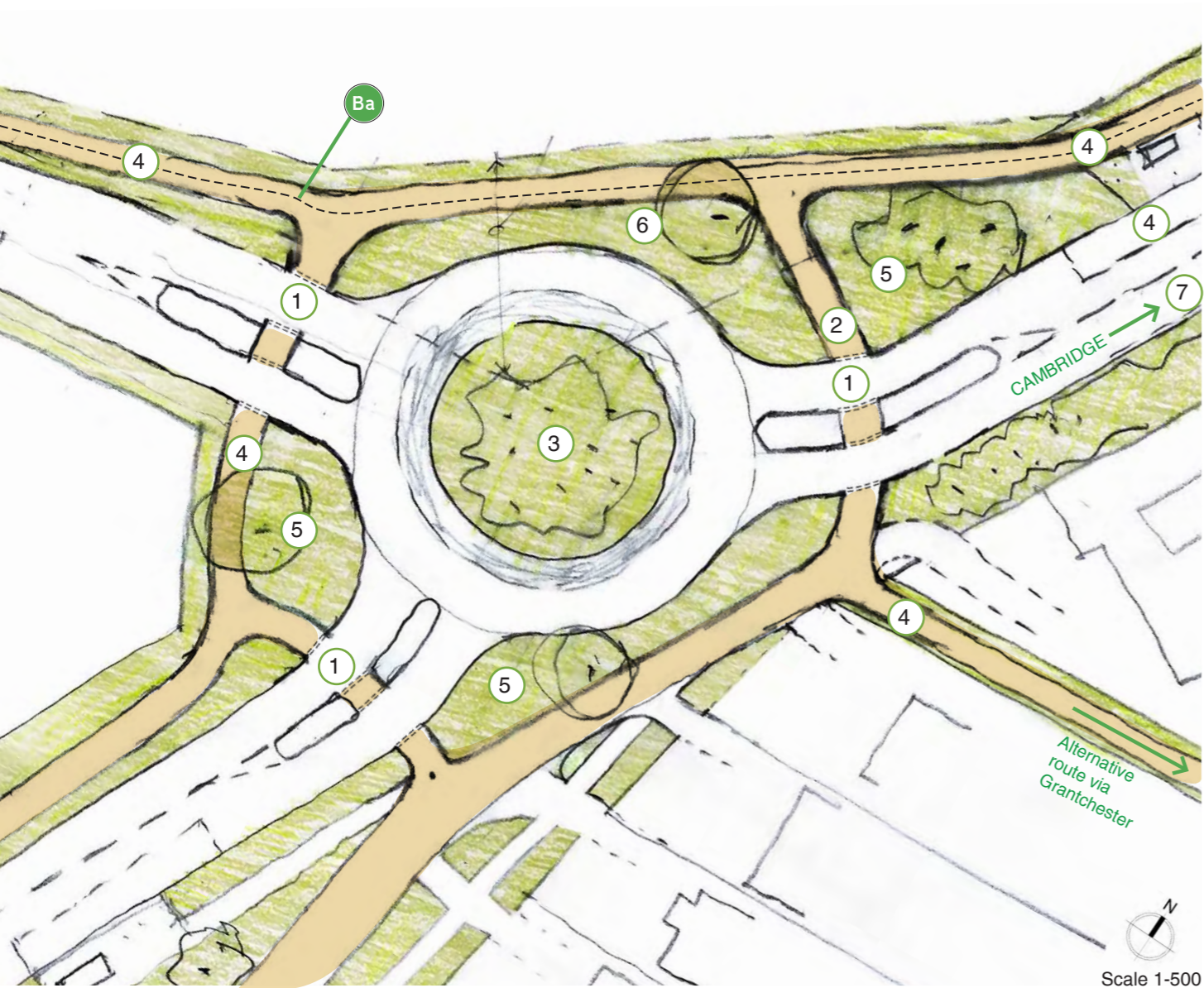


Existing aerial photograph of the Burwash Manor entrance



Existing photograph of the Burwash Manor entrance





Ba.4.A - Cambridge Road, New Road junction, Option A

New roundabout at junction to slow traffic and make crossing Cambridge Road safer for cyclists. Signage to signal Greenway route. Requires land acquisition.

- 1 Uncontrolled crossing set back 5m (one car length) from give way line;
- 2 Crossings at right angles to maximise visibility for cyclists;
- 3 New roundabout, with trees in centre
- 4 Shared cycle path - 3m wide
- 5 New planting and trees - grass and low maintenance mix
- 6 Land to be acquired
- 7 Relocate existing bus stops on Cambridge Road north

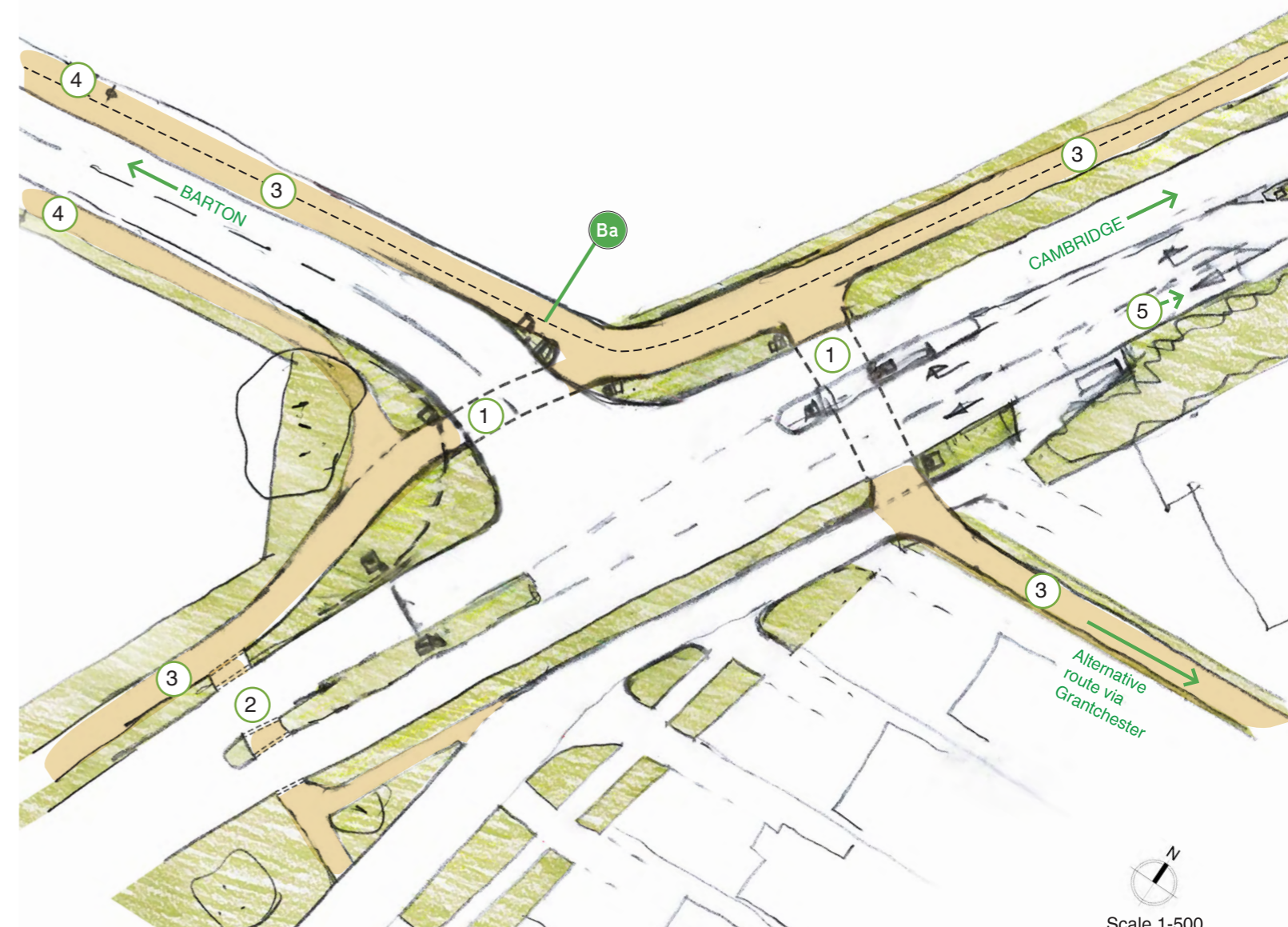


Existing aerial photograph of Cambridge Road, New Road junction

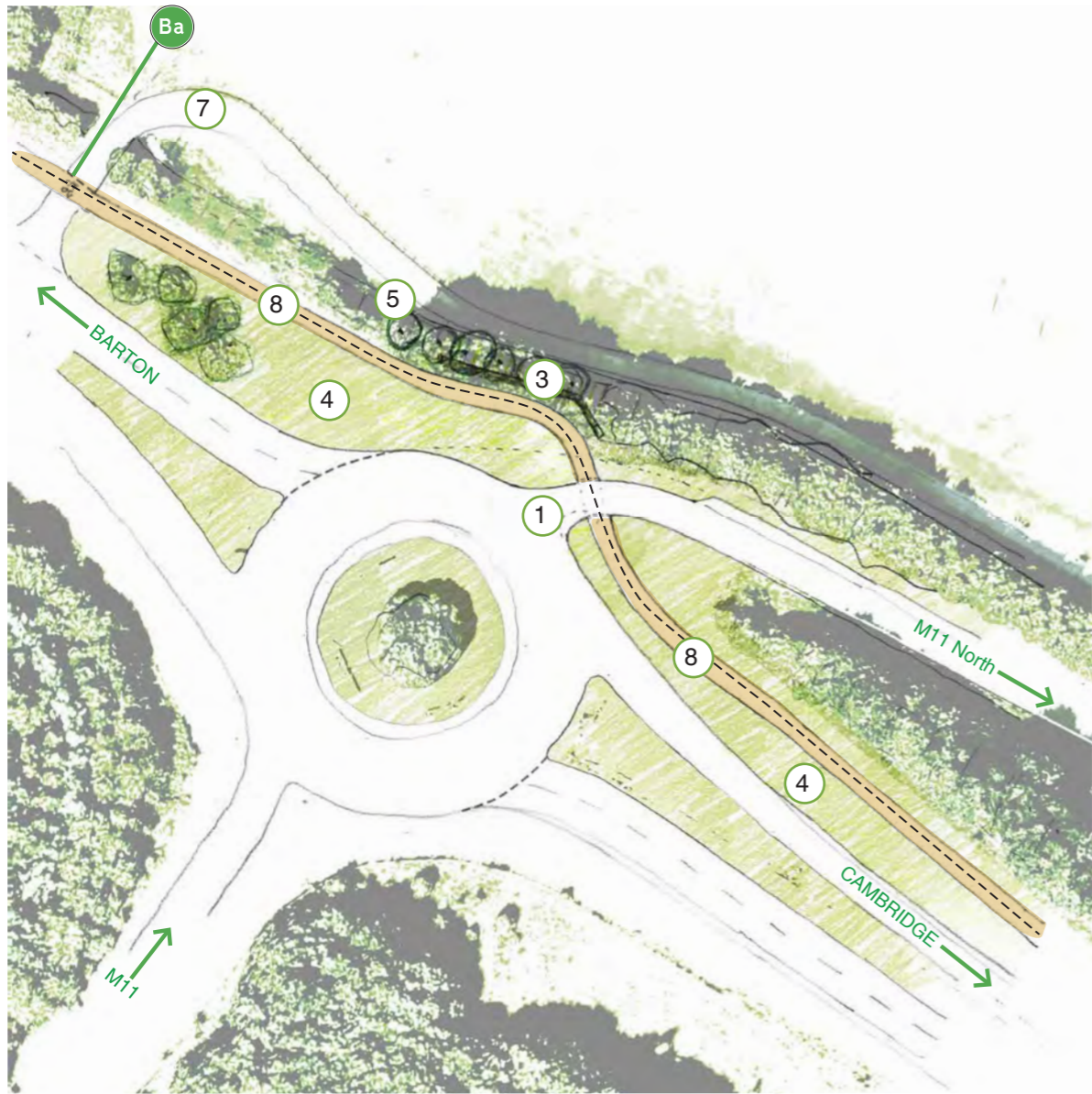
Ba.4.B - Cambridge Road, New Road junction Option B

New traffic lights at junction with New Road and Cambridge Road. Signage to signal Greenway route.

- 1 New toucan crossings on reconfigured junction
- 2 Uncontrolled crossing retained
- 3 Shared cycle path - 3m wide
- 4 Existing bus stop
- 5 Relocate existing bus stop on Cambridge Road north



Existing aerial photograph of Cambridge Road, New Road junction



Scale 1-1000

Ba.6.B- Cambridge Road, M11 Slip Road
Option B
New subway for cycle path to pass under existing motorway slip road. Re-align private track to Haggis Farm.

- 1 New subway for shared cycle path under M11 slip road
- 2 Concrete subway/ wingwall
- 3 Re-aligned farm track to Haggis Farm
- 4 Road geometry as existing
- 5 New trees and grass- low maintenance meadow mix
- 6 New shared cycle path - 3m wide



Existing aerial photograph of Cambridge Road, M11 Slip Road



Existing aerial photograph of Cambridge Road, M11 Slip Road

Ba.6.A - Cambridge Road, M11 Slip Road, Option A.

Reconfiguration of roundabout geometry to slow traffic leaving the roundabout. Reconfiguration of existing cycle path route to create a 'square-on' crossing at slip road.

- 1 Tighter geometry of M11 slip road with uncontrolled crossings
- 2 Localised verge widened (highways land) to allow for shared path geometry to be removed to allow for better visibility
- 3 Localised retaining structure
- 4 Grass - low maintenance meadow mix
- 5 New trees
- 6 Existing slip road alignment
- 7 Existing farm track - Haggis Farm
- 8 New shared cycle path - 3m wide



Scale 1-1000



Ba.10.A - Barton Road, Grantchester Road and Coton Road roundabout - smaller roundabout and subway

Shared cycle path - subway at reconfigured roundabout. Adjust carriageway layout and create a smaller roundabout. New subway for cyclists under Grantchester Road.

- 1 Relocated roundabout
- 2 New subway
- 3 New planting, trees and grass-low maintenance meadow mix
- 4 Shared cycle path - 3m wide
- 5 Farm access



Scale 1:2000



Existing aerial photograph of Barton Road, Grantchester Road and Coton Road roundabout



Existing photograph of Barton Road - bridge over M11

Ba.8 - Barton Road - bridge over M11

Shared cycle path. Reduced width of traffic lanes (towards Cambridge). Widen cycle path by moving out kerb line. New planted verge between cycle lane and carriageway.





Ba.10.C - Barton Road, Grantchester Road and Coton Road roundabout - reconfigure cycle path

Shared cycle path - crossing at existing roundabout. Reconfiguration of existing cycle path route to create a 'square-on' crossing at slip-road. New planting in verges between cycle path and carriageway.

- 1 Uncontrolled crossing with perpendicular approach to improve visibility for cyclists at junction
- 2 Farm access
- 3 Planting - grass and low maintenance meadow mix
- 4 Adjusted, tightened geometry of Coton Road existing exit to slow traffic
- 5 Existing slip road alignment



Existing aerial photograph of Barton Road, Grantchester Road and Coton Road roundabout



Ba.10.B - Barton Road, Grantchester Road and Coton Road roundabout - smaller roundabout and crossing

Shared cycle path - crossing at reconfigured roundabout. Adjust carriageway layout and create a smaller roundabout. Reconfiguration of existing cycle path route to create a 'square-on' crossing at Grantchester Road.

- 1 Reconfigured roundabout
- 2 New toucan crossing
- 3 Planting, trees and grass - low maintenance meadow mix
- 4 Shared cycle path - 3m wide
- 5 Farm access





Ba.12 - Barton Road, within city

Segregated cycle path. Widen existing cycle path to create segregated path with new surfaces. Where required reduce width of planted verge. Reconfiguration to tighten junction radius's and widen verges to create safer crossings for cyclists. Signage to signal Greenway route out of the city.

- 1 Narrowed carriageway to 6m
- 2 Segregated cycle path - 3.5m wide
- 3 Footpath
- 4 Existing signalled crossing
- 5 New grass verge
- 6 Crossing of side roads set back 4-8m, cycle track has priority, on raised table
- 7 Reduced junction radii



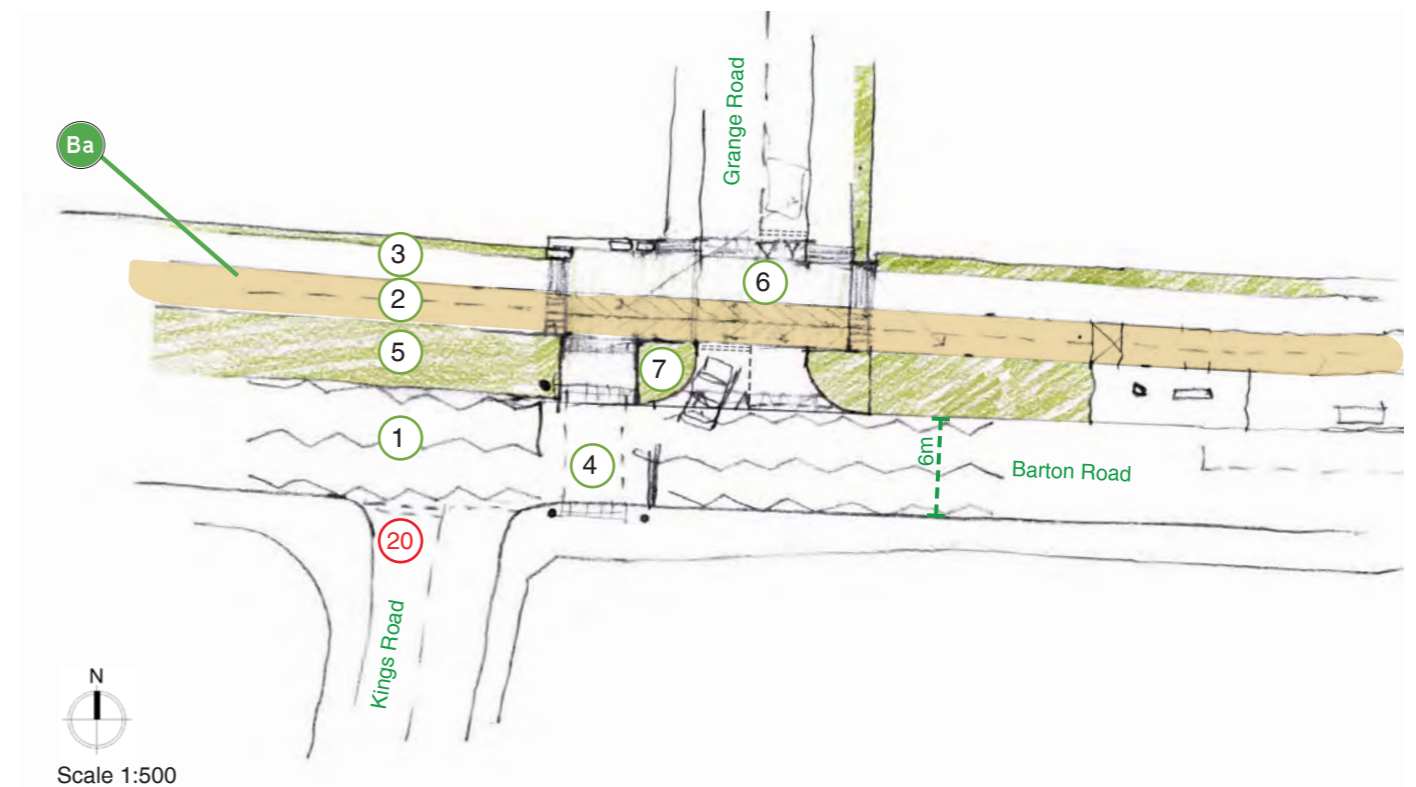
Existing aerial photograph of Barton Road, within city



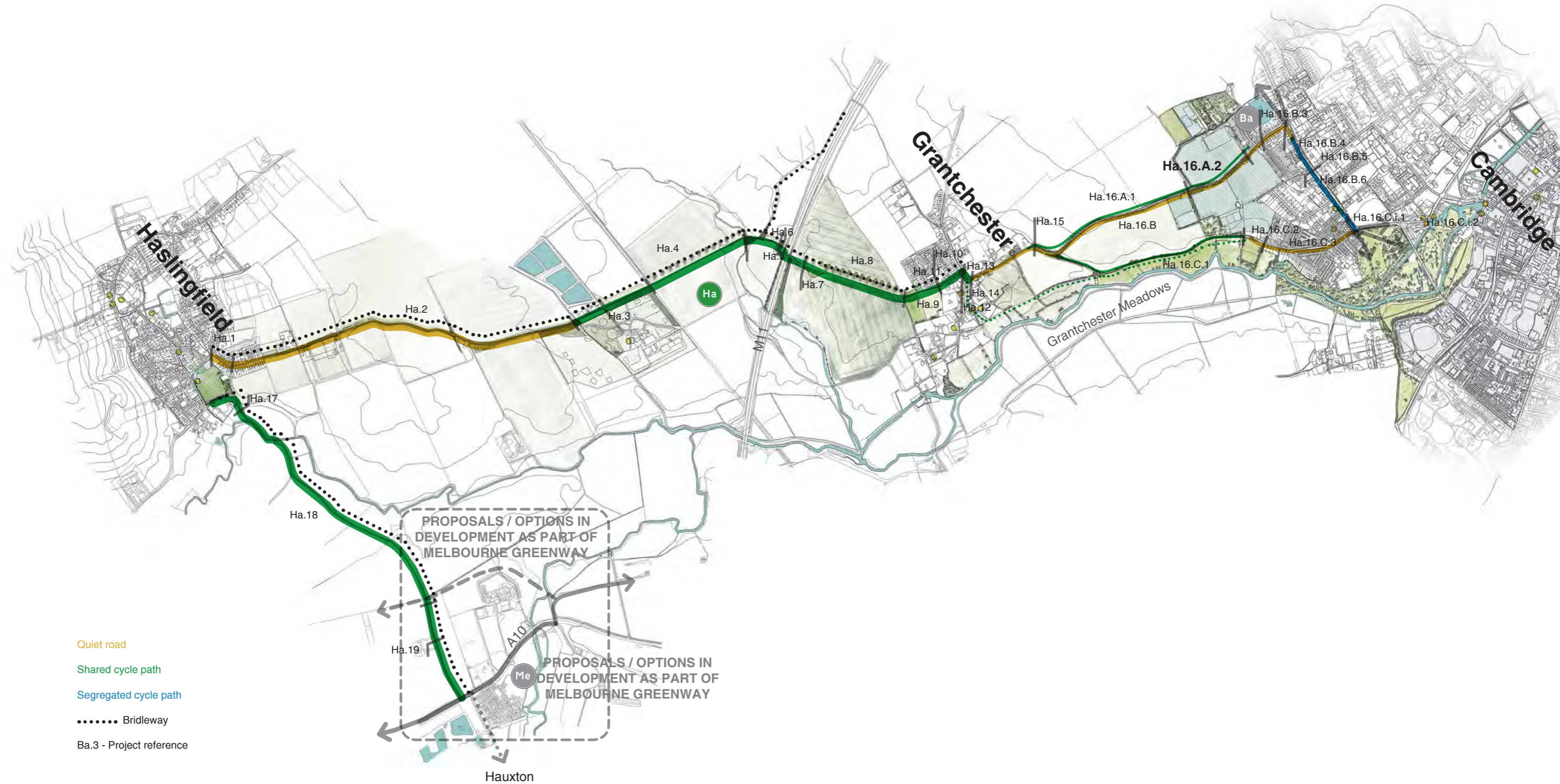
Ba.11 - Barton Road, out of city

Shared cycle path. Adjust kerb edge to narrow carriageway to allow for planted verge between carriageway and widened cycle path. Planted verge to be as wide as possible. New surface to shared path.

Existing photograph of Barton Road, out of city



HASLINGFIELD





Ha.4 - Cantelope Farm - new shared cycle path

Shared cycle path. Replace existing grass path across field with a new shared use path beside the public bridleway at the field edge.



Existing photograph of Cantelope Farm

Ha.5 - Crossing Bourn Brook

Shared cycle path over bridge. Widen existing bridge over brook. Shared path to combine with bridleway for short stretch. Signage at bridge to indicate Greenways route and bridleway paths.



Existing photograph of the bridge crossing Bourn Brook





Ha.7.A - Cantelope Farm - M11 bridge

Shared cycle path over bridge. Adaptation of the existing stepped ramps to provide a wider, fully accessible approach with a shallower gradient, and associated landscaping works and planting.



Cantelope Farm - M11 bridge

Ha.7.B - Cantelope Farm - M11 bridge

Shared cycle path over bridge. Refurbishment and addition of ramped surface over the existing stepped ramp across some of the width of the ramp, to allow bikes to be wheeled over the ramp more easily.



Existing photograph of Cantelope Farm - M11 bridge





**Ha.10.A - Entrance to Burnt Close -
Wide path**

Shared cycle path. Demolish wall to create widened access to greenways path. New surface to existing path and driveway. Sign to indicate Greenway route. Requires land to be acquired.



Existing photograph of Burnt Close

**Ha.10.B - Entrance to Burnt Close -
Existing wall**

Shared cycle path. New signage to sign shared path, to help mitigate conflict between pedestrians and cyclists at this pinch point. Retain existing wall. New surface to existing path.



Existing photograph of Burnt Close





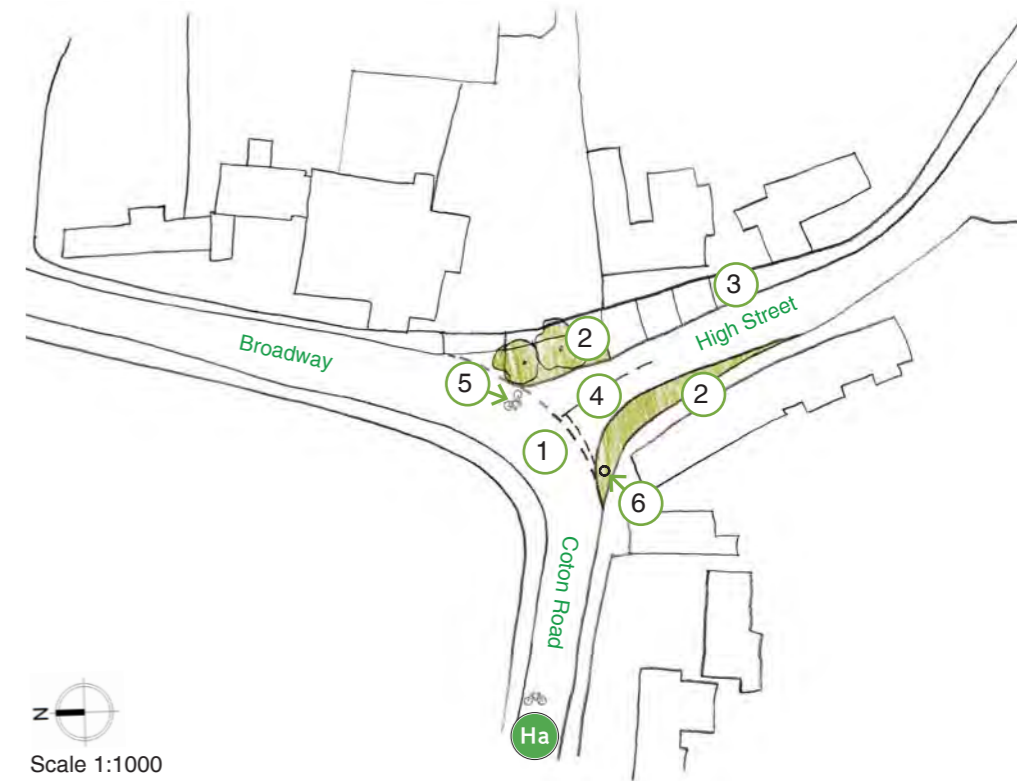
Ha.14 - Cotton Road, Broadway/ High St junction

Junction on quiet road. Existing quiet road. Narrow the carriageway, introduce new planting and surface treatments, and provide signage indicating the Greenway route.

- 1 Change junction priority to allow cyclists to turn safely from Cotton Road to Broadway
- 2 New planting/ trees
- 3 Car parking spaces - suggest to landowners agreement
- 4 Tightened junction geometry to encourage slow speeds
- 5 Cycle route symbols painted on carriageway
- 6 Greenways route signage post



Existing aerial photograph of Cotton Road, Broadway junction



Existing photograph of Cotton Road, Broadway junction

Scale 1:1000



Existing photograph of Burnt Close, Cotton Road junction

Ha.12 - Burnt Close, Cotton Road junction

Junction on quiet road. Existing junction. New raised table at junction with Burnt Close, with new planted areas alongside and signage indicating the Greenway route.





Ha.16.A.1 - Behind the hedge, Grantchester Road

Shared path. New walking/cycling path behind the hedge along Grantchester Rd. Signage indicating the Greenway route where path meets Broadway.

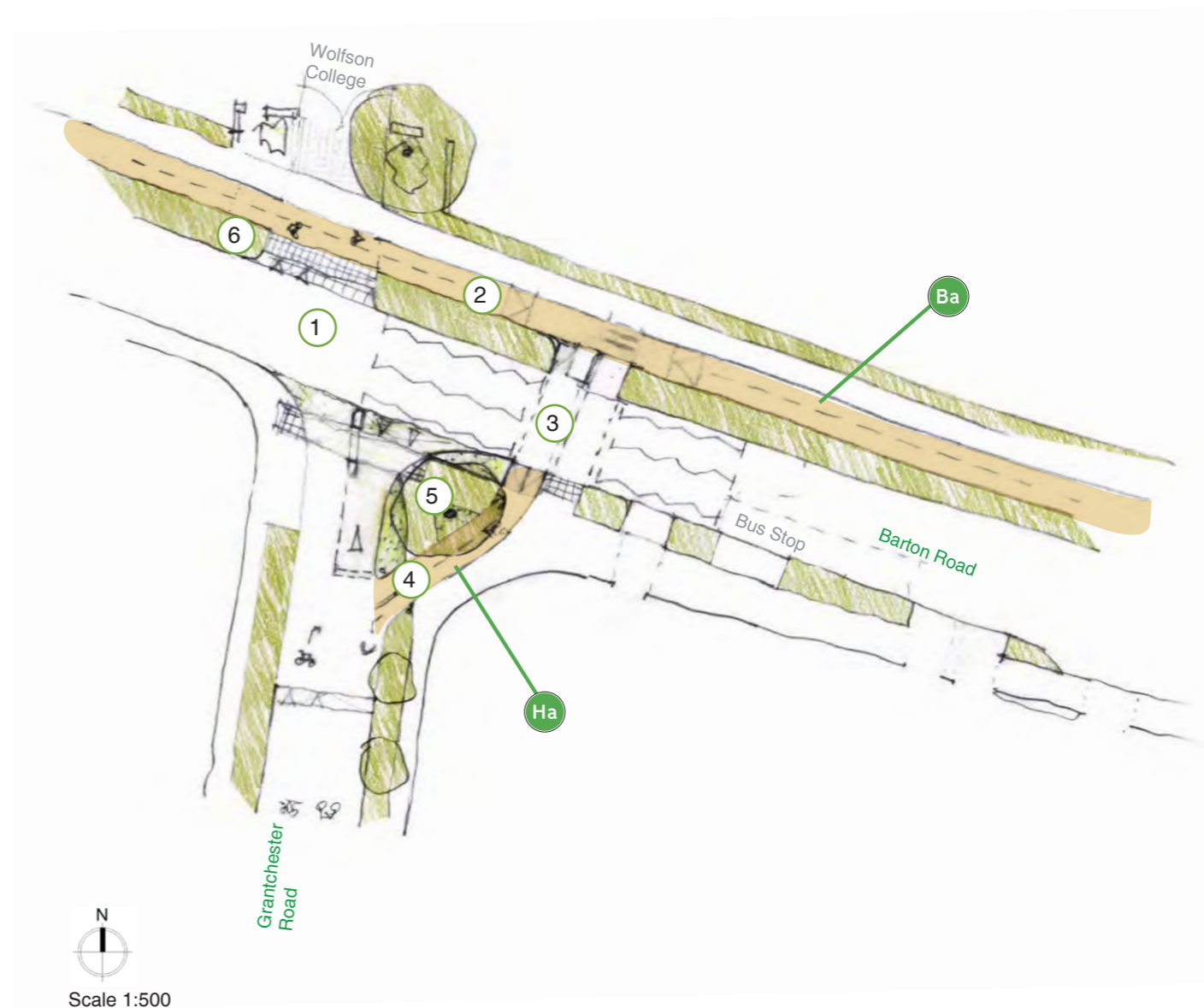


Existing photograph of Behind the hedge, Grantchester Road

Ha.16.A.4 - Grantchester Road, Barton Road junction

Junction. Existing road junction. New raised table at Grantchester Road with new planting and surface treatments. Move existing Toucan crossing.

- 1 Narrowed carriageway to allow for wider segregated cycle path with planted separating strip
- 2 Segregated cycle path - 3.5m
- 3 Relocated toucan crossing
- 4 Relocated junction to allow for cycle access to toucan crossing
- 5 New trees and planting
- 6 Geometry of junction tightened to slow traffic





Ha.16.C.2 - Carpark at Grantchester Meadows (road).

Quiet Road. Resurface carpark at Grantchester Meadows (road).
 New cattle grid to cycle path and new gate to existing path at entrance.
 Signage to indicate cycle route and path.



Existing photograph of Carpark at Grantchester Meadows (road).



Existing photograph of Grantchester to Cambridge

Ha.16.B.1 - Grantchester to Cambridge

Quiet road. Existing road. Traffic calming Grantchester Road - to make it one way only for vehicular traffic. No works to carriageway surface.





**Ha.16.C.i.1 - Grantchester Street,
Barton Road junction**

Junction with segregated cycle path.
Improvements at junction of Barton Road,
Newnham Road and Grantchester Road
by making Grantchester Road one-way
for motor vehicles between Newnham
Croft Road and Barton Road and
reallocating the space for landscaping
and a segregated cycling and walking
route bypassing the junction.

- 1 Reconstructed junction to make one way (exit only) so as to allow for road width to be reduced to accommodate cycle track and landscaping
- 2 No entry except cycles
- 3 Two way cycle track with cycle symbols to highlight it
- 4 Potential shared path across Lammas Land parallel to Driftway



Existing photograph of Grantchester Street, Barton Road junction



Existing photograph of Grantchester Street, Barton Road junction



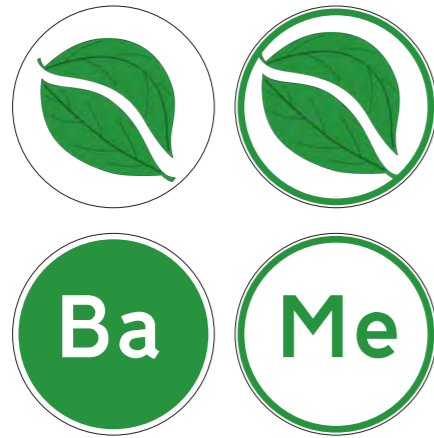
Ha.18 - Haslingfield to Harston

Shared cycle path. Replace existing grass path along the edge of the field with a new shared use path. Access for farm vehicles to be retained on grass track along side cycle path.



Existing photograph of Haslingfield to Harston

SIGNAGE



All twelve currently proposed Greenway routes could be signified with a two letter contraction of the full Greenway origin village name.

Could the naming of key junctions within the emerging network - in the manner of a 'knooppunt' (trans: button node) signage/ network map - be based on village names rather than the dutch practice of allocated each node a number?

Ba	Barton
Bo	Bottisham
Co	Comberton
Fu	Fulbourn
Ha	Haslingfield
Ho	Horningsea
Li	Linton
Me	Melbourne
Sa	Sawston
St	St Ives
Sw	Swaffhams
Wa	Waterbeach



Timber Posts

- Natural material - appropriate to mostly rural setting.
- Subtly distinctive. Round profile - related to logo shape - distinguishes it from the usual square profile timber posts.
- If sign-face also curved, the sign is visible for longer as one passes by, suitable for passing by at greater speed - i.e. on a bike.
- Standard product - cost effective - easily replaced.
- Can be fitted with recess/reflective strip at top.



Above: Broxap BX17 <https://www.broxap.com/bx17-flat-round.html>

PRELIMINARY COSTINGS

The costs listed here are high level costs, based on the pre-stage two concept designs, which should enable the council to establish initial project budgets. We recommend that these costings are reviewed following the concept design work after public consultation.

Please also note that the costs included here do not include the following:

Professional Fees, Contingency, including any major works to re-route utilities, or VAT.

Barton

Overall Construction Cost Including 1st Options - excluding Section on Barton Road to Mill through Lammas Land = £5,206,200

Professional Fees	12%	624,744
Contingency	10%	520,620

£6,351,564

VAT	20%	1,270,313
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**Total including VAT as above
£7,621,877**

Haslingfield

Overall Construction Cost Including 1st Options - excluding Section on Barton Road to Mill through Lammas Land= £1,772,563

Professional Fees	12%	212,708
Contingency	10%	177,256

£2,162,526

VAT	20%	432,505
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**Total including VAT as above
£2,595,032**

Ba Max £5.2million , Min £0.7million

Ha Max £1.8million , Min £0.9million

