

# A14 Cambridge to Huntingdon Improvement Scheme

## STAGE 1 NMU AUDIT

**Suitability: S2 For Information**

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# 1. Introduction

## Audit System

- 1.1. This Stage 1 Cycle and Accessibility Audit has been conducted predominantly in accordance with the standards presented in:
  - Design Manual for Roads and Bridges (DMRB) HD 42/05<sup>1</sup>;
  - DMRB TA 90/05; and
  - DMRB TA 91/05.
- 1.2. As stated in DMRB HD 42/05, the NMU Audit is "a systematic process applied to Highway Schemes", by which the Design Team (hereinafter referred to as the Highways Team):
  - Identifies scheme objectives for NMUs;
  - Documents the design decisions affecting NMUs; and
  - Reviews designs and construction to assess how well objectives have been achieved.
- 1.3. The fundamental objectives of any NMU Audit, as specified in DMRB HD 42/05, are to:
  - Encourage the Highways Teams to take all reasonable opportunities to improve the service offered to NMUs;
  - Prevent conditions for NMUs being worsened by the introduction of Highway Schemes; and
  - Document design decisions that affect NMUs.
- 1.4. The nominated NMU Auditor is [REDACTED]. The Auditor has been integrated into the Highways Team, and has responsibility for overseeing the NMU Audit process and for liaison with the Highways Team Leaders and the Highways Discipline Lead.
- 1.5. This Stage 1 Audit follows the preparation and submission, in November 2014, of an NMU Context Report by Jacobs U.K. Limited (Jacobs). The purpose of the Context Report, stated therein, was to "provide a simple statement on background information which is deemed relevant to current or potential NMU issues on the A14 Cambridge to Huntingdon improvement scheme". This was to provide the Highways Teams with information in order that they "can make appropriate decisions on the provision of NMU facilities on the scheme, while also taking into consideration how design elements may affect NMUs".

## Scope of Audit

- 1.6. As identified in DMRB HD 42/05, the NMU Audit is to document decisions made at each design stage relevant to NMU needs, and it is important that the design concurs with the objectives identified in the Audit Context Report and complies with current standards and best practice. The geographical scope of this Stage 1 Audit is loosely based on the Development Consent Order (DCO) boundary as highlighted on the drawings provided by the Highways Teams (Appendix A). These extents will also form the geographical scope of subsequent audit stages. The drawings provided include:
  - The J2A Proposed Scheme General Arrangement drawings;
  - The ACJV Public Rights of Way drawings; and
  - The ACJV Kerbs, Footways and Paved Areas drawings.
- 1.7. The audit has also considered reference documents provided by the Highways Teams including:
  - The ACJV Design Input Statement, Highways - A14 and A1 Mainline (December 2015);
  - The ACJV Design Input Statement, Highways - Side Roads, LARs & Huntingdon (December 2015);
  - The ACJV Design Validation Report (October 2015).

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<sup>1</sup> HD 42/05 describes the requirements for NMU Audits for all trunk road schemes including motorways. It describes the stages at which NMU audits must be carried out and the procedures to be followed, and gives guidance on the issues of possible concern to NMUs.

- 1.8. Where objectives or standards have not been satisfied, corresponding with the guidance provided in DMRB HD 42/05, this Audit Report details the nature of the issue and the actions that can be undertaken by the Highways Teams to address it. Issues raised within this Audit are identified as:
- Observations - issues that may have minor or indirect implications within the scope of the Audit study area; and
  - Problems - issues that have significant or direct implications within the scope of the Audit study area.
- 1.9. Issues highlighted with "\*\*\*\* \*\*\*\*" are considered to be of additional significance. For each issue raised, the Auditor has provided a recommendation for action that can be undertaken by the Highways Teams to address the issue.

## Designer's Response

- 1.10. It is a requirement of the guidance that the Audit is submitted to the Project Sponsor for approval. Although not specified in DMRB HD 42/05, it has been determined to provide the Highways Team Leaders the opportunity to provide a response to the Audit prior to submission to the Project Sponsor. This provides the opportunity for the Highways Teams to specify which issues will be actioned, and how, within subsequent stages of the design process. Where an issue cannot be actioned due to constraints e.g. technical or land constraints, the reasons should be documented. It is for the Highways Team Leaders to balance the comments provided in this Audit with the broader needs of the project to determine any amendments required to the design.
- 1.11. Responses, collated, reviewed and agreed by the Highways Discipline Lead, have been incorporated in this Report.

# 2. Context Report Summary

## Scheme Description

- 2.1. The A14 Cambridge to Huntingdon improvement scheme (The Scheme) involves the improvement and upgrading of a 34km length of the strategic highway network between Cambridge and Huntingdon. This includes: the construction of a new Huntingdon Southern Bypass; the widening of a 5.6km section of the A1 between Brampton and Alconbury; and the modification and improvement of the associated local road network in the A14 corridor. More explicitly, and as illustrated on Figure 1, The Scheme comprises:
- **A1 widening between Brampton and Alconbury:** Widening the A1 between Brampton and Alconbury over a length of approximately 3.5 miles, from the existing two lane dual carriageway to a three lane dual carriageway. This would be achieved between Brampton and Brampton Hut by constructing a new road to the west of the existing A1, with the existing A1 road becoming part of the new A14 Huntingdon Southern Bypass.
  - **A New Huntingdon Southern Bypass:** A new Huntingdon Southern Bypass of approximately 12.5 miles, which would provide a two lane dual carriageway between Ellington and the A1 at Brampton, and a three lane dual carriageway between Brampton and Swavesey. This would remove a large proportion of traffic from the section of the existing A14 between Huntingdon and Swavesey as well as Brampton Hut and Spittals interchange. The new bypass would include a raised viaduct section of road running across the river Great Ouse and a bridge over the East Coast Mainline railway. It would include junctions with the A1 at Brampton and with the A1198 at Godmanchester.
  - **Handing the existing A14 trunk road to the local authority:** The Highways Agency currently manage the existing A14. The section between Ellington and Swavesey, as well as between Alconbury and Spittals interchange, will be 'de-trunked'. This means the road will be given county road status and run by the local authority.
  - **Huntingdon Town Centre improvements:** The demolition of the A14 rail viaduct over the East Coast Mainline railway and Brampton Road in Huntingdon. A through route would be maintained broadly along the line of the existing A14 through Huntingdon, making use of the Brampton

Road Bridge to cross the railway line and by constructing a new link road from Brampton Road to connect with the A14 to the west.

- **A14 widening:** Widening of the existing A14 over approximately 5.5 miles to provide three lanes in each direction between Swavesey and Bar Hill, and to four lanes in each direction between Bar Hill and Girton; and widening of a 1.5 mile section of the Cambridge Northern Bypass between Histon and Milton.
- **A14 junction improvements:** Improvement of existing A14 junctions at Swavesey, Bar Hill and Girton to improve the capacity of the road, ensure compatibility with adjacent proposed developments such as Northstowe, and connections for NMUs; and a new local access road, approximately five miles, to be constructed as a dual carriageway between Fen Drayton and Swavesey and as a single carriageway between Swavesey and Girton. The road would provide a route for local traffic between Cambridge and Huntingdon as well as providing access to properties and businesses along the corridor.

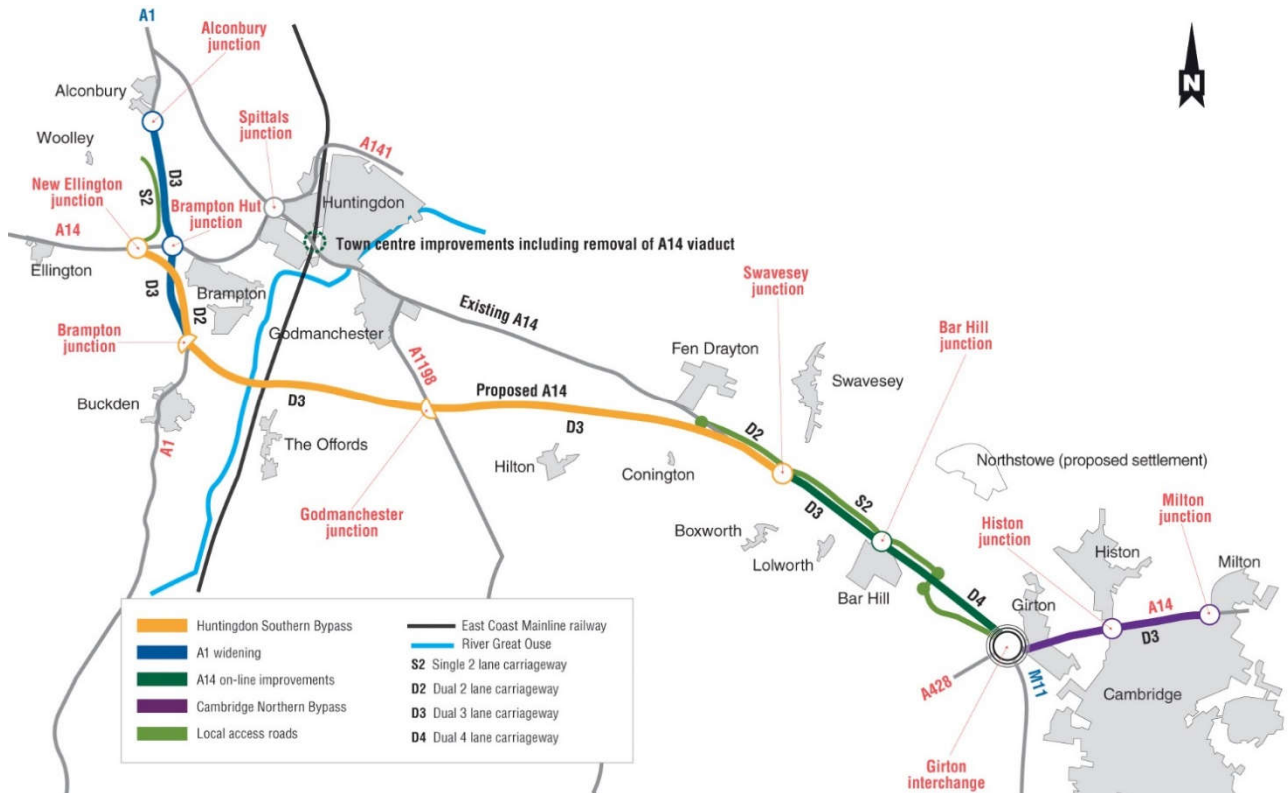


Figure 2-1 Illustrative Plan of the Route

2.2. The Preferred Route travels to the south of Brampton, Huntingdon, Godmanchester, Hemingford Grey and Fenstanton. These are settlements from which residents commute mainly to Cambridge and to a lesser extent Huntingdon

## Background

2.3. The NMU Context Report was prepared by Jacobs in November 2014. It was stated that the Context Report was more complex than would normally be expected due to:

- The overall length and size of The Scheme.
- The number of existing NMU facilities affected by The Scheme.
- The number of consultation responses received during the consultation process.
- The higher than national average number of cyclists in Cambridge and Huntingdon areas.
- The Scheme containing significant elements of the earlier A14 Ellington to Fen Drayton project, for which an NMU Context report had been prepared, consultation carried out, and NMU facilities developed for the project.

- 2.4. At the time of writing the Context Report, sufficient progress had been made with the design of The Scheme, and particular observations were made within the Context Report to the provision of NMU facilities. In the case of the consultation responses these observations are referenced in Table 2.
- 2.5. To help inform the Context Report NMU surveys were carried out during May and June 2014.

## Existing Conditions

### Traffic Flows

- 2.6. The A14 trunk road provides an east-west route which links the Midlands and the north with East Anglia, beginning at Catthorpe near Rugby, where it connects with the M1 and M6 motorways, and continues east for approximately 130 miles to the port town of Felixstowe. The A14 between Cambridge and Huntingdon serves an additional purpose, connecting the A1 to the North of England with the M11 motorway to London and the South-East (see Figure 2).



Figure 2–2 Strategic Context

- 2.7. Up to 85,000 vehicles currently use the A14 between Cambridge and Huntingdon every day. This is significantly above the level of traffic that was expected when the road was built. In addition, up to 26% of this traffic comprises heavy goods vehicles – above the national average of 10% for a road of this type.
- 2.8. The Cambridge to Huntingdon A14 Roads Model (CHARM) has been applied to estimate the impact of The Scheme on traffic flows. The model predicts that the traffic flows through Huntingdon and Godmanchester are predicted to reduce significantly following construction of the proposed Huntingdon Southern Bypass, with the main routes leading into Huntingdon and Godmanchester expected to see a decrease of more than 20% in terms of the predicted motorised traffic flow in the year of opening (2020). This reduction in through traffic flow will lead to a more pleasant environment for the people living in the area while also reducing the risk to NMUs.



## NMU Flows

- 2.9. Surveys of pedestrians, cyclists and equestrians were undertaken at 41 locations at or near the A14. These were undertaken on Wednesday 04 June and Sunday 08 June 2014. The survey locations were selected by:
- Identifying existing and potential walking, cycling and horse-riding routes;
  - Identifying routes intersected by The Scheme;
  - Considering the information from the public consultation and responses from stakeholders received to date; and
  - Taking advice from Cambridgeshire County Council (CCC) on days of the week which would provide representative results.
- 2.10. The survey results are therefore considered to provide a robust illustration of peak usage of NMU facilities. Additional NMU surveys were also carried out in Huntingdon at Views Common and Mill Common. These surveys were undertaken on: Sunday 18 May 2014; Tuesday 20 May 2014; Wednesday 21 May 2014; Saturday 24 May 2014; and Sunday 25 May 2014 (Bank Holiday weekend), enabling an assessment of the usage at these locations during a range of periods. NMU movements for the major junctions located within Huntingdon, which are proposed for signalisation, have also been recorded, comprising:
- Hinchingsbrooke Park Road/Views Common Link junction;
  - Brampton Road/Edison Bell Way/Huntingdon Station junction; and
  - Princes Street/Mill Common/Castle Moat Road junction.
- 2.11. A summary of the NMU survey results are attached as Appendix B.

## Collision Data

- 2.12. NMU collision statistics were acquired from CCC covering a five-year period from January 2009 to December 2013. The areas examined comprise:
- A14 main carriageway from the A14, J20, Ellington to The Scheme boundary east of A14, J33, Milton Junction.
  - A14 Spur from the A14/A14(M) to A14, J23, Spittals Junction.
  - A1 from the A1/A1(M) Alconbury to The Scheme boundary at Brampton Road.
  - A1(M) from the A1/A1(M) Alconbury north to The Scheme boundary.
  - Roads within Huntingdon that will be impacted by The Scheme including, Brampton Road, Hinchingsbrooke Park Road, Mill Common, Princes Street, Castle Moat Road and Walden Road.
  - Collisions which occurred within 50 - 100 m of Junctions with the main A14.
- 2.13. Of the 640 reported collisions that occurred in the areas examined, 21 involved cyclists and 8 involved pedestrians. A summary is provided in Table

**Table 1 Summary of Collision Data**

	Collisions				Environment	
	Total	Fatal	Serious	Slight	Dark	Light
Cyclists	21	0	6	15	0	4
Pedestrians	8	1	3	4	3	5

- 2.14. Of the 21 incidents involving cyclists 20 involved motor vehicles and 1 involved a cyclist falling off their bicycle. The fatality occurred when a pedestrian crossed the main A14 carriageway during the day and was struck by a HGV – it is noted that an underpass is located approximately 120 metres from the location of the incident (Footpath 102/4). Two of the pedestrian collisions resulted from persons exiting their vehicles, either due to breakdown or “road rage”, and being struck by passing motor vehicles.



## Trip Generators/Attractors

2.15. Based on observations made on-site and during the desktop study, the key trip generators and attractors for people walking and cycling include links to/from the following (generally east to west):

### Towns/Villages

- Cambridge;
- Milton;
- Impington;
- Girton;
- Madingley;
- Oakington;
- Dry Drayton;
- Bar Hill;
- Longstanton;
- Lolworth;
- Boxworth;
- Swavesey;
- Conington;
- Fen Drayton;
- Fenstanton;
- Hilton;
- Godmanchester;
- Huntingdon;
- Brampton;
- Brampton Hut;
- Buckden;
- Offord Cluny;
- Offord Darcy;
- Woolley; and
- Alconbury.

### Businesses, facilities and tourist attractions

- Ida Darwin Hospital;
- Addenbrooke Hospital;
- University of Cambridge;
- Cambridge Regional College;
- Girton College;
- Hinchingsbrooke Hospital;
- Equestrian Centres including: Broadway Farm Stables in Lolworth; Monach Farm Riding Stables at Hilton; and Hill Top and Northbrook at Offord Cluny;
- Schools;
- Colleges;
- Industrial parks;
- Public houses;
- Service areas;
- Golf courses;
- Marina;
- Country parks;
- Woods and protected open spaces; and
- Bridleways, cycleways and footways.

### Relevant Development Proposals

2.16. There are also significant developments proposed within or adjacent to The Scheme corridor which are likely to become key trip generators and attractors for people walking and cycling. These include (generally east to west):

- Cambridge East (Wing) - Develop a 64.8 hectare site to the North of Newmarket Road in Cambridge, accommodating up to 1,300 new homes with associated amenities and infrastructure.
- Orchard Park (previously Arbury Park) - Identified in 2004 Cambridgeshire Local Plan for the development of 900 homes with the potential for a further 220 homes. Most of the development has been completed. More recent developments on site have been the addition of 6 retail units, a food store and 28 apartments.
- North West Cambridge - There are three significant proposed developments in this area which relate to SCDC and Cambridge City Councils 'North West Cambridge Area Action Plan'.
  - The University Site which includes proposals for 3,000 dwellings, 2,000 student bed spaces, hotel, indoor sports and outdoor area and commercial properties.
  - Darwin Green 1, consisting of up to 1,593 dwellings, primary school, children's centre and up to 6 small retail units.
  - Darwin Green 2, adjoining Darwin Green 1, identified for residential development.
- Northstowe Development - The development could eventually comprise up to 10,000 new homes and associated amenities.
- RAF Wyton Development - The scale to be determined as it will be incorporated in Huntingdonshire's Local Plan to 2036. The development could include up to 3,750 homes.
- Bearscroft Farm - Residential development of the land located to the southeast of the A1198 junction with the A14, Godmanchester. Intended to provide up to 753 dwellings and a Primary School.
- Spen Hill Developments Ltd - has three approved applications, located to the north of Huntingdon Police Station between Ferrars Road, Edison Bell Way and the ECML, to consist of a care home, 84 dwellings, 2 commercial buildings and associated parking.
- Northbridge, Huntingdon - Outline planning application under consideration by HDC for a residential development (approximately 1,021 units), access, primary school, local centre, community building, footway/cycle bridge, public open space, landscaping and associated works.
- Alconbury Weald Development - The proposed redevelopment of former Alconbury Airfield, for 5,000 new houses, shops, community facilities, schools, sports facilities and open space. Work has commenced on parts of the development.
- RAF Brampton Development - Application for 402 dwellings; community building (425m<sup>2</sup>); retail use (500m<sup>2</sup>); business (B1) floor space (7,125m<sup>2</sup>) and associated highway improvements

## Desire Lines

2.17. There are a number of key NMU desire lines which are impacted upon by the A14 and The Scheme.

### Huntingdon

- 2.18. Castle Moat Road/Walden Road sees significant numbers of NMUs daily with the highest numbers being recorded Monday to Friday. The junction at Castle Moat Road/Mill Common is used by NMUs to access Huntingdon Station, Hinchingsbrooke School and Hospital as well as Huntingdon Town centre. In addition NMUs also connect to the National Cycle Network (NCN) at Edison Bell Way continuing either west to Brampton Woods or north to Alconbury. The B1044, which connects into Castle Moat Road from the south, is also a desire line between Huntingdon and Godmanchester.
- 2.19. Brampton Road, to/from the west of Huntingdon, also sees significant NMU activity during the week. This route also provides access to Huntingdon Station, Hinchingsbrooke School and Hospital and Huntingdon Town centre. NCN Route 12 runs west to east along the north side of Brampton Road turning north on Edison Bell Way towards Alconbury or connecting to the NCN Route 51 south towards Cambridge. NCN Route 12 also crosses the Hinchingsbrooke Park Road junction. A local NMU route continues along Hinchingsbrooke Park Road, past the school and hospital.
- 2.20. There are desire lines from the northern section of Edison Bell Way, through an underpass at the East Coast Main Line (ECML), and across Mill Common towards Hinchingsbrooke.

## Cambridge

- 2.21. Routes in and out of Cambridge are key desire lines both for people travelling to work and also for people accessing existing NMUs routes to the north of Cambridge. Three major cycle routes pass through Cambridge: NCN Route 11; NCN Route 51; and Regional Route 24. NCN Route 51 travels through Cambridge along the Guided Busway to Huntingdon, while Regional Route 24 travels from Cambridge to Fenstanton where it connects into NCN Route 51 for Huntingdon.
- 2.22. Both the B1049 Cambridge Road and Jane Coston NMU Bridge (which lies beyond the eastern limits of The Scheme) see substantial NMU flows, particularly during weekdays.
- 2.23. NMU survey counts at the A1307, Huntingdon Road near Public Right of Way (PROW) 99/4 (a footpath) and Girton Grange Accommodation Bridge suggest a low but constant flow of NMUs seven days a week. However, there are significant developments planned in this area including Cambridge University and Darwin Developments 1 and 2.

## Cambridge to Huntingdon

- 2.24. The route from Cambridge to Huntingdon is already served by NCN Route 51 and Regional Route 24. With the construction of ongoing phases of the new Northstowe development there will be the introduction of additional demand to/from Cambridge, and between Northstowe and Bar Hill. The development will be located on the path of the existing Regional Route 24 providing connections to both Cambridge and Huntingdon.

## Huntingdon Southern Bypass

- 2.25. Existing footpaths and bridleways along the route of the new A14 between Swavesey and Brampton have relatively low NMU flows during the week with an increase during weekends. The desire lines along this route, as indicated by the NMU survey results, are:
- The Pathfinder Long Distance Walk;
  - Hilton Road;
  - Footpath Fenstanton 6; and
  - Footpath 14 near Conington Road

## Bar Hill

- 2.26. The current A14 separates the village, industrial estate and large Tesco store on its southwest side from the village of Longstanton and future development at Northstowe on its northeast side. NMUs are currently required to cross at the grade separated junction and slip roads, and this is undesirable from a safety perspective. There is potential latent NMU demand.

## Swavesey

- 2.27. The A14 separates Cambridge Services and the village of Boxworth on the southwest side with Swavesey village and College, and Bucking Way Business Park on the northeast side of the A14. NMUs are currently required to cross at the grade separated junction and slip roads, and this is undesirable from a safety perspective. There is potential latent NMU demand.

## Brampton

- 2.28. A desire line exists from both Brampton and Huntingdon to Brampton Woods and Brampton Hut services, and is served by the existing NCN Route 12 along Grafham Road. However, two existing PROWs (Brampton Footpath 15 and Brampton Bridleway 19) do not provide links across the A1, the widening of which decades ago severed these links when constructed.

## Brampton Hut/Woolley

- 2.29. The north side of the A14 and the proposed Woolley Road local access road are severed from the potential NMU network from Brampton Hut services to Brampton.

## Barriers

### Conflict Points

- 2.30. Possible conflict points between The Scheme and NMUs include locations where NMU routes are severed or impacted by The Scheme. These conflict points include:
- The junctions within Huntingdon Town Centre where there are currently significant NMU flows i.e. Hinchingsbrooke Park Road/Views Common Link; Brampton Road/Edison Bell Way; and Mill Common/Castle Moat Road.
  - The stopping up of bridleways: Madingley 2; Girton 6; and Bulls Close Underpass at Girton Interchange (very low NMU flows recorded during the week and a peak hourly flow of 8 recorded at the weekend).
  - The B1050 Hattons Road junction with the LAR at Bar Hill Junction, where NMUs will have to cross the LAR to access the new Bar Hill NMU Bridge (currently low NMU flows recorded at this location). The LAR may see an increase in traffic due to the Northstowe Development.
  - The diverted route to the rear of the Hotel located to the southeast of Swavesey Junction, which may seem dark and uninviting to NMUs.
  - The crossing points along the existing section of the A14 between Swavesey and Girton Interchange, which will be affected by construction of new junctions at Swavesey and Bar Hill, as well as the widening of the existing A14 from Bar Hill to Girton Interchange.
  - The locations along the Huntingdon Southern Bypass where NMU routes have been severed by the new alignment.
  - Histon Junction where the B1049 Cambridge Road straddles the A14 where significant numbers of NMUs were recorded.
  - The current A14 separates the village, industrial estate and large Tesco store on its southwest side from the village of Longstanton and future development at Northstowe on its northeast side. NMUs are currently required to cross at the grade separated junction and slip roads, and this is undesirable from a safety perspective. There is potential latent NMU demand.
  - The A14 separates Cambridge services and the village of Boxworth on the southwest side with Swavesey village and College, and Bucking Way Business Park on the northeast side of A14. NMUs are currently required to cross at the grade separated junction and slip roads, and this is undesirable from a safety perspective. There is potential latent NMU demand.

## Consultation

### Process

- 2.31. The A14 public consultation period ran from the 07 April 2014 to the 15 June 2014. The consultation consisted of:
- Public exhibitions at 31 locations along the route of The Scheme;
  - Online and mail in consultation questionnaire; and
  - Provision of public consultation documents.
- 2.32. Statutory consultees included Central Government departments, Government agencies, Local Government political consultees and emergency services. While non-statutory Consultees included local residents, local interests and lobby groups, local businesses including farms, the supplier community and the transport industry.
- 2.33. Additionally, three NMU workshops, attended by a range of groups including those representing pedestrians, cyclist and equestrians were held during development of The Scheme to SGAR3 (preliminary design) in February 2014, May 2014 and October 2014. Additional liaison meetings were held with CCC during the development of The Scheme and two specific meetings were held to discuss and develop NMU facilities, attended by the CCC's officers, including those responsible for cycling and PROW.

## Responses

2.34. Over 400 comments were received regarding the NMU facilities to be provided on The Scheme from both statutory and non-statutory consultees. Taking all of the responses into consideration, the following general concerns were raised during the consultation process, as summarised in The Context Report:

- The reconnection of NMU routes severed or impacted by The Scheme, specifically those located along the new Huntingdon Southern Bypass.
- Provision of connections from villages, towns and cities.
- Provision of high standard, segregated and safe NMU facilities.
- Provision of safe crossing points along the length of the route.
- Consideration of future developments such as Northstowe on The Scheme (Bar Hill Junction) and NMU facilities.

2.35. Shared concerns received, from a combination of Local Authorities and user groups in relation to the NMU facilities proposed, included those summarised in Table . Table also references the observations/ responses from Highways England, as summarised in the Context Report<sup>2</sup>.

**Table 2 Summary of Consultation Responses**

Ref.	Consultation Responses	Highways England Observations/Responses
C1	8 comments were received in relation to the proposals in the area surrounding the existing A1 east of Brampton, from Brampton Hut Junction south to Buckden Road. Specifically the need to provide access to Brampton Hut Services, Grafham Woods and the provision of safe crossing facilities over the new road alignment.	A new bridleway has been recommended on both sides of the new road alignment from Brampton Hut Junction to Brampton Road. On the western side of the new A1 a bridleway would extend from Brampton Hut Services to Grafham Road Bridge and would connect to the existing bridleway Brampton 19. A new bridleway would be provided on the eastern side of the new A14 just south of Brampton Hut Junction extending to Grafham Road Bridge and would connect into existing footpaths Brampton 2 and 15. Crossing points would be provided at the A1/A14 over-bridge and Grafham Road Bridge (shared footway/ cycleway/equestrian facilities). Therefore the NMU facilities around this area would provide safe access for users to Brampton Hut Services and Brampton Woods.
C2	5 comments were received in relation to ensuring safe crossing facilities are provided at the crossing of the A1307 Huntingdon Road, Cambridge. This crossing is widely used and connects the existing footpaths Girton 4 and Girton 5, and Girton Accommodation Bridge.	Traffic signals would be provided at the North West Cambridge development junction with the A1307, Huntingdon Road. CCC is ensuring that a toucan crossing facility is included to cater for the crossing movements. Additionally, CCC plan to convert the footpaths to bridleways to link to the wider facilities being provided north and west of Girton Interchange as part of The Scheme. A shared use link is also planned on the east side of the A1307 to link the toucan crossing to footpath Girton 4 (to become bridleway).
C3	4 comments were received in relation to the provision of NMU facilities over Dry Drayton Bridge.	The existing bridge at Dry Drayton Bridge is planned to be modified to incorporate a shared footway/ cycleway/equestrian facility on the west side.

<sup>2</sup> Note, the A14 Cambridge to Huntingdon improvement scheme Consultation Report was published in December 2014.

Ref.	Consultation Responses	Highways England Observations/Responses
C4	<p>A number of comments were received on the possibility of increasing the width of the structures along the Huntingdon Southern Bypass from Swavesey to Brampton to allow the provision of a NMU facility adjacent to the A14 either now or in the future, and the provision of NMU facilities over the viaduct at River Great Ouse.</p>	<p>The provision of a route adjacent to the new A14 was not supported by CCC. The cost of widening structures and formation over the length is significant. The existing desire lines for travel from the Cambridge area to Brampton or Huntingdon are catered for by NCR51. The existing desire lines for travel from the Cambridge area to Fenstanton/Bar Hill will be catered for by the new NMU corridor planned. Recommendations to provide NMU facilities on the structures crossing HSB, to maintain north/south links for NMUs have been made.</p>
C5	<p>General concern was raised about Histon Junction and ensuring that the safety of NMUs at the junction is not reduced due to widening and that sufficient crossing facilities are provided. Improvement of Histon Junction for Cyclists was also requested.</p>	<p>Retention/maintenance of the signalised crossings of the Histon junction is recommended as part of The Scheme. No other NMU facilities are planned as part of The Scheme in this area.</p>
C6	<p>A number of comments were received from Cambridge Cycling Campaign, Cycling Touring Club, NMU workshop and Histon &amp; Impington Parish Council in regards to the provision of NMU facilities along Cambridge Northern Bypass (CNB). Several routes along the northern side of the CNB from Girton Accommodation Bridge were suggested including connecting to Weavers Field, Woodhouse Accommodation Bridge to the Guided Busway, along to Mere Way and connecting to Milton Junction.</p>	<p>A shared footpath/cycleway is recommended from Girton Accommodation Bridge to Weavers Field in Girton. The section of A14 between Girton and Histon is not part of The Scheme and therefore NMU facilities are not recommended as part of The Scheme along this length. The provision of NMU facilities on the northern side of the Cambridge Northern Bypass (CNB) has been considered by the project team in conjunction with CCC, but on balance, the view taken is that justification cannot be made to extend the land required in the DCO for the project to accommodate this. Existing cycle facilities are provided in this section south of the CNB, via the Jane Coston NMU Bridge (which avoids NMUs requiring to use Milton Interchange), cycle routes on Cowley Road and Milton Road, and the guided busway linking to the north of A14. Any additional facilities in this area would be considered as part of the Darwin Green development proposals.</p>
C7	<p>A number of general comments were received in relation to the provision of NMU facilities in Huntingdon Town, particularly in relation to the provision of safe crossings at the junctions of Hinchingsbrooke School, Huntingdon Station and Mill Common; and the provision NMU paths.</p>	<p>A single stage, NMU optimised toucan crossing is recommended at the southern end of Views Common Link connecting the east and west sides of the road at the Junction with Hinchingsbrooke Park Road. The existing toucan crossing from the north to south side of Hinchingsbrooke Park Road which is located to the west of Views Common Link provides a connection to Hinchingsbrooke School.</p>



## Objectives

2.36. Within the Context Report reference is made to objectives from various sources. These objectives can be associated with the potential provision of NMU facilities as part of The Scheme, and/or the potential impact of The Scheme on existing NMU facilities and users. To be able to determine appropriate objectives for The Scheme, it is first necessary to understand the strategic objectives presented in regional policy documents, such as the Cambridgeshire Local Transport Plan.

### Cambridgeshire Local Transport Plan Objectives

2.37. The Cambridgeshire Local Transport Plan 2011-2031 identifies aims to build on the high levels of walking and cycling in Cambridge and the growing cycle culture in the County. Therein, methods of overcoming barriers to promoting the use of sustainable transport over the private car are examined, with a number of key strategies identified, comprising:

- Making sustainable modes of transport more attractive by developing walking and cycling networks.
- Improving the environment and safety of pedestrians, cyclists and public transport users. Focus on raising awareness of available transport choices, and the health and environmental benefits of cycling and walking.
- Working with planning authorities to co-locate housing and services/facilities to reduce the need to travel long distances, thereby increasing the use of sustainable transport such as cycling and walking.
- In urban areas, increase continuity of routes and permeability by sustainable modes by allowing cyclists and pedestrians to access routes that motorised vehicles cannot. Therefore reducing the journey length and making walking and cycling more attractive.
- Supporting the development of the National Cycle Network and where possible aiming to link into it. National Cycle Network paths running through the County, including routes 11, 12, 51 and 63.

### Strategic Scheme Objectives

2.38. Subsequently it is necessary to refer to the strategic objectives that have been developed for The Scheme, which The Context Report specifies as comprising:

- To combat congestion: making the route between Huntingdon and Cambridge more reliable and providing capacity for future traffic growth.
- To unlock growth: enabling major residential and commercial developments to proceed, leading to increased economic growth, regionally and nationally.
- To connect people: by placing the right traffic on the right roads and freeing up local capacity for all types of road user, including pedestrians, cyclists and equestrians.
- To improve safety: designing The Scheme to modern highway standards, introducing better lane control, and providing adequate capacity for predicted traffic levels.
- To create a positive legacy: recognising the wider benefits of The Scheme for local communities and businesses.

2.39. Additionally, the following NMU-specific Traffic and Environmental issue is listed in the Challenges and Issues section of the Client Scheme Requirements of the project:

2.40. *"The A14 route is used by both strategic and local traffic and is perceived as being dangerous for non-motorised users. Several NMU routes are truncated at their crossing point due to the heavily trafficked dual carriageway. Although the A14 is an all-purpose route its heavy usage and high proportion of HGVs make it unsafe for pedestrians, cyclists and equestrians."*

### NMU Strategic Scheme Objectives

2.41. The Context Report ultimately cites the unique NMU strategic objectives that have been developed for The Scheme, which generally align with, purposefully, the Cambridgeshire Local Transport Plan Objectives outlined above, comprising:

- To provide a corridor and connectivity for NMUs between communities and other traffic generators along the A14 route between Girton and Fenstanton (along the new LAR), and to tie into existing facilities north of Fenstanton and south of Girton.



- To ensure that NMU convenience and safety are not adversely affected by the introduction of The Scheme, with particular emphasis on proposed junctions in Huntingdon (there are three new link roads planned, and these result in five planned signalised crossings where the new roads intersect with existing National Cycle Routes/pedestrian routes).
- To provide connectivity, where practical, between new facilities and with existing footpath and bridleway facilities which are curtailed currently where they intersect with the A14.
- To provide NMU connectivity for communities either side of the A14 route, and to tie into developer's highway proposals where known and where affected by The Scheme (including Northstowe Phase 2).
- To ensure convenience and connectivity of existing NMU routes severed by The Scheme, to keep diversions to a minimum, and to maintain appropriate desire lines where practical.
- To provide appropriate, convenient and safe NMU crossing facilities or alternative routes at junctions proposed as a part of The Scheme.
- To maintain and, where practical, enhance recreational NMU facilities affected by The Scheme.
- To document design decisions that affect NMUs.

2.42. It should be noted that, as specified in DMRB HD 42/05, the NMU Context Report should 'set out the opportunities and objectives to improve conditions for NMUs'. It is not clear from the Context Report if the above NMU objectives were developed as part of the Context Report, or had been developed independently.

## Proposed Design Objectives

2.43. Considering the content of the Context Report, summarised above, it is the opinion of the Cycle and Accessibility Auditor that the objectives currently developed should be amended/supplemented. Revised objectives are provided as follows:

1. To provide an off-road corridor and connectivity for NMUs between communities and other traffic generators along the A14 route between Girton and Fenstanton (along the new LAR), and to tie into existing facilities north of Fenstanton and south of Girton.
2. To ensure that NMU convenience and safety are not adversely affected by the introduction of The Scheme, with particular emphasis on proposed junctions in Huntingdon (there are three new link roads planned, and these result in five planned signalised crossings where the new roads intersect with existing National Cycle Routes/pedestrian routes).
3. To provide connectivity, where practical, between new facilities and with existing footpath and bridleway facilities which are curtailed currently where they intersect with the A14.
4. To provide NMU connectivity for communities either side of the A14 route, and to tie into developer's highway proposals where known and where affected by The Scheme (including Northstowe Phase 2).
5. To ensure convenience and connectivity of existing NMU routes severed by The Scheme, to keep diversions to a minimum, and to maintain appropriate desire lines where practical.
6. To provide a suitable, better, parallel alternative to NMU's using the A14 (given that a prohibition of pedestrians, cyclists, equestrians and horse-drawn vehicles is proposed on the A14 between Girton and New Ellington junctions, for safety reasons and to encourage use of planned NMU facilities).
7. To provide appropriate, convenient and safe NMU crossing facilities, or alternative routes, at junctions proposed as a part of The Scheme.
8. To maintain and, where practical, enhance recreational NMU facilities affected by The Scheme.
9. To provide infrastructure that permits users of all abilities to safely travel between trip generators and attractors that exceeds, as far as possible, the minimum design standards (e.g. widths, surfaces, gradients) providing facilities that are safe, attractive, comfortable, continuous and direct, for use by: cyclists; pedestrians; disabled users; and horse riders.
10. Provide rest places e.g. seat/perch, at intervals in line with guidance, set back from any paths.
11. Avoid features which may pose a hazard to visually impaired users (e.g. bollards, barriers) or restrict access by infirm, disabled or other users (e.g. stiles, gradients).
12. To document design decisions that affect NMUs <sup>3</sup>.

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<sup>3</sup>Note, as referred to in The Introduction to this Report, one of the fundamental objectives of any NMU Audit, as specified in DMRB HD 42/05, is to document design decisions that affect NMUs. Therefore, it is reasonable to determine that the production of the NMU Audits is the means by which this is achieved.

- 2.44. The Highways Team Leaders should ensure that the Design Objectives are incorporated within the design and it is the responsibility of the Highways Teams to consider what the most appropriate solution may be, in the context of the wider design constraints.
- 2.45. It will be the responsibility of the Auditor to review the infrastructure designs associated with the development, as requested by the Highways Team Leaders, in line with good practice and against the Design Objectives.

## 3. Audit Summary

### NMU Parameters Incorporated into Design

- 3.1. Table 13 to Table 19, attached as Appendix C, provide a summary of the design features associated with the proposed NMU facilities, including the width of the facility, prepared for the design submitted for DCO approval Table , from the A14 Design Impact statement, specifies the generic width dimensions, which do not include for edge shyness or spacing from carriageways.

**Table 3 Generic Dimensions**

Type of Facility	Width
Footway	2 metres
Footway/cycleway	3 metres
Footway/cycleway/equestrian track	3 metres
Footpath	2 metres
Bridleway	4.5 metres

### Design Objectives Assessment Summary

- 3.2. It is the responsibility of the Auditor to review the infrastructure designs against the Design Objectives defined in the NMU Context Report, and in line with guidance and good practice. In line with this role, Table provides a summary assessment of the design comparative to the Design Objectives.
- 3.3. It is acknowledged that the level of detail provided is consistent with a design at this stage, and therefore not all information is readily available for audit purposes. Therefore the assessment of the design against the design objectives is illustrative of the information available. It is also acknowledged that the design is likely to have considered some of the observations and problems recorded in Table 5 to Table 11, and that more detail will be accessible at subsequent design stages.

**Table 4 Summary of Objectives Assessment**

Ref.	Objective	Assessment Outcome		
		Not Satisfied	Partly Satisfied	Satisfied
1	To provide an off-road corridor and connectivity for NMUs between communities and other traffic generators along the A14 route between Girton and Fenstanton (along the new LAR), and to tie into existing facilities north of Fenstanton and south of Girton.		✓	
2	To ensure that NMU convenience and safety are not adversely affected by the introduction of The Scheme, with particular emphasis on proposed junctions in Huntingdon (there are three new link roads planned, and these result in five planned signalised crossings where the new roads intersect with existing National Cycle Routes/pedestrian routes).		✓	
3	To provide connectivity, where practical, between new facilities and with existing footpath and bridleway facilities which are curtailed currently where they intersect with the A14.		✓	
4	To provide NMU connectivity for communities either side of the A14 route, and to tie into developer's highway proposals where known and where affected by The Scheme (including Northstowe Phase 2).		✓	
5	To ensure convenience and connectivity of existing NMU routes severed by The Scheme, to keep diversions to a minimum, and to maintain appropriate desire lines where practical.		✓	
6	To provide a suitable, better, parallel alternative to NMU's using the A14 (given that a prohibition of pedestrians, cyclists, equestrians and horse-drawn vehicles is proposed on the A14 between Girton and New Ellington junctions, for safety reasons and to encourage use of planned NMU facilities).			✓
7	To provide appropriate, convenient and safe NMU crossing facilities, or alternative routes, at junctions proposed as a part of The Scheme.	✓		
8	To maintain and, where practical, enhance recreational NMU facilities affected by The Scheme.			✓
9	To provide infrastructure that permits users of all abilities to safely travel between trip generators and attractors that exceeds, as far as possible, the minimum design standards (e.g. widths, surfaces, gradients) providing facilities that are safe, attractive, comfortable, continuous and direct, for use by: cyclists; pedestrians; disabled users; and horse riders.	✓		
10	Provide rest places e.g. seat/perch, at intervals in line with guidance, set back from any paths.	✓		

Ref.	Objective	Assessment Outcome		
		Not Satisfied	Partly Satisfied	Satisfied
11	Avoid features which may pose a hazard to visually impaired users (e.g. bollards, barriers) or restrict access by infirm, disabled or other users (e.g. stiles, gradients).	✓		
12	To document design decisions that affect NMUs.			✓

## Section 1

- 3.4. Section 1 of The Scheme incorporates NMU facilities west of the A1 extending from Brooklands Lane just south of Alconbury to the existing A14 just north of Brampton Hut Service Area. This generally corresponds with the Highways England observations to the consultation responses received (C1) i.e. the provision of facilities that provide access to Brampton Hut Services, Grafham Woods and safe crossing facilities over the new road alignment. As summarised in Table 13, the NMU facilities are split into 3 distinct parts i.e. NMU references 1.1; 1.2; and 1.3<sup>4</sup>.
- 3.5. NMU 1.1 connects Brooklands Lane, south of Alconbury, with Woolley Road. This is proposed to be located to the west of the A1. The width of the facility is proposed as 4.5m with a variable spacing between the carriageway and the NMU facility. It is noted that this facility is a bridleway and will require the erection of a fence screen between it and the A1. This route will provide a link, generally, between Alconbury and Huntingdon Life Sciences, and beyond to Brampton Hut and links thereafter.
- 3.6. NMU 1.2 connects Woolley Road with an area just north of the Brampton Hut Service Area, in the vicinity of where the Local Access Road deviates from the A1 mainline route. This is the continuation of NMU 1.1, and is proposed to be located to the west of the A1. The width of the facility is proposed to be 3.0m with a 1.8m spacing (includes hard strip) between the facility and the adjacent carriageway (local access road) and a 2.5m verge at the rear of the shared facility. It is also noted that this facility will require the erection of a fence screen between it and the A1.
- 3.7. NMU 1.3 is a continuation of NMU 1.2 to Brampton Hut Interchange. This is to be located to the west of the A1 with a width of 4.5m. This is specified in the Design Input Statement as a bridleway.
- 3.8. NMU 1.2 and NMU 1.3 provide links between Brampton Hut and Huntingdon Life Sciences and beyond to Alconbury. To the south this also provides links with the existing public rights of way to the south and west of Brampton Hut, and via new links to existing public rights of way to the east of the A1.
- 3.9. Currently, the road network acts as a barrier to movement by sustainable modes of transport on this section of the A1. The provision of the proposed NMU routes and associated links effectively remove/reduce the existing barriers. With regards to the provision of the new combined footway/cycleway and other active travel routes, it is the auditor's opinion that linkages to local destinations will improve overall.

<sup>4</sup> Note, the NMU references have been applied to Table 13 to Table 19 within Appendix C of this Audit Report for ease of reference, and are not referenced on or within the drawings or reference documents provided by the Highways Teams

**Table 5 Section 1 Summary**

Ref.	Problem/Observation	Recommendation	Related Objective
S1.1	<p><u>Problem:</u> Although NMU 1.1 provides a route towards Alconbury, this terminates at Brooklands Lane and therefore does not connect with NCN Route 12 and other Public Rights of Way in the vicinity. Between Alconbury and The Scheme no improvements are proposed as this is beyond the DCO boundary. However this does present considerable barriers between the proposed new NMU route adjacent to the A1 and other noteworthy routes through Alconbury and the trip generators and attractors thereafter e.g. Huntingdon.</p>	<p>It is recommended that consideration is given to incorporating facilities north of the currently proposed Scheme, consistent with extant standards and guidance, to connect with Alconbury and the existing NMU routes therein. It is acknowledged that this may be beyond the scope of this study and therefore that this may be a consideration for the appropriate planning authorities.</p> <p><b>Designers Response:</b></p> <p>Audit recommendation is outside the DCO. HE to confirm further consideration (perhaps through Legacy). Note to Auditor – NMU route section 1.1 is shared as an access track for HE maintenance vehicles and land owner access.</p>	3; 4; 6; 8; 9
S1.2	<p><u>Problem:</u> NMU 1.2 provides a route between Woolley Road to a location just north of the Brampton Hut Service Area. In the vicinity of Woolley Road there is no indication of a link being provided to the adjacent Huntingdon Life Sciences, via Woolley Road/LAR, a major trip attractor in this area.</p>	<p>It is recommended that consideration is given to connecting Huntingdon Life Sciences with the proposed NMU route, although it is acknowledged that this may be beyond the scope of the study, and that there may be issues regarding access to the site.</p> <p><b>Designers Response:</b></p> <p>Audit recommendation outside the DCO. HE to confirm further consideration. Note, access to the Huntingdon Life Sciences Research Centre could be provided within the limits of the DCO to the site if the site Operator were to provide a new NMU access point closer to the A1, and internal site infrastructure to connect to the external NMU route.</p>	3; 4; 6; 8; 9

Ref.	Problem/Observation	Recommendation	Related Objective
S1.3	<p><u>Observation:</u> NMU 1.1 is referenced in the Design Input Statement as having a width of 4.5m. No justification is provided as to why this width was chosen although it does perhaps reflect the anticipated user types to include pedestrians, cyclists and equestrians. Appendix E of the Design Input Statement (Appendix C of this Report) indicates that this will form part of a bridleway, and the width concurs with the generic dimensions provided in Design Input Statement, summarised in <b>Error! Reference source not found..</b></p> <p>DMRB TA 90/05 provides guidance on the cross-section of an NMU facility including for pedestrian-only; off-carriageway cycle routes; equestrian routes; and shared and adjacent use routes. This expresses a preferred minimum width for an unsegregated shared facility as 3.0m. The Auditor acknowledges that the proposed width exceeds the preferred minimum by 1.5m, perhaps to better facilitate equestrian users.</p>	<p>It is recommended that justification is provided to express why the proposed width has been chosen.</p> <p><b>Designers Response:</b></p> <p>To be confirmed as Statement of Common Ground (SoCG) agreement between HE and CCC.</p>	3; 4; 6; 8; 9
S1.4	<p><u>Observation:</u> NMU 1.1 is referenced in the Design Input Statement as having a variable spacing width between it and the carriageway.</p> <p>The Design Input Statement also states that the verge at rear of the NMU path is "N/A".</p>	<p>As this is a route that is proposed to be used by equestrians, it is recommended that the spacing between the proposed NMU route and the carriageway (the A1) is a minimum of 1.8m, as specified in DMRB TA 90/05 paragraph 7.23. As noted in DMRB TA 90/05, if a hardstrip is provided, this can be considered as part of the separation.</p> <p>It is acknowledged that the verge to the west of the NMU route is not relevant in this instance.</p> <p><b>Designers Response:</b></p> <p>The separation width between the NMU facility and the main line verge is well in excess of 1.8m and is segregated for its full length by a 2.5m high screening fence. To be finalised in Detailed Design.</p>	3; 4; 6; 8; 9

Ref.	Problem/Observation	Recommendation	Related Objective
S1.5	<p><u>Observation:</u> NMU 1.2 is referenced in the Design Input Statement as having a width of 3.0m. No justification is provided as to why this width was chosen although it is inconsistent with NMU 1.1, to Alconbury, and NMU 1.2, south to Brampton Hut. Appendix E of the Design Input Statement (Appendix C of this Report) indicates that this is intended to be a shared footway/ cycle/equestrian track.</p> <p>DMRB TA 90/05 provides guidance on the cross-section of an NMU facility including for pedestrian-only; off-carriageway cycle routes; equestrian routes; and shared and adjacent use routes. This expresses a preferred minimum width for an unsegregated shared facility as 3.0m.</p>	<p>It is recommended that justification is provided to express why the proposed width has been chosen. It is recommended that the width is increased to be consistent with the proposed routes either side, and to recognise the need to facilitate pedestrian, cycle and equestrian users.</p> <p><b>Designers Response:</b></p> <p>To be confirmed as Statement of Common Ground (SoCG) agreement between HE and CCC.</p>	3; 4; 6; 8; 9



Ref.	Problem/Observation	Recommendation	Related Objective
S1.6	<p><u>Observation:</u> NMU 1.1 and NMU 1.2 are noted in the Design Input Statement as requiring the installation of a fence screen between the NMU facilities and the A1 carriageway.</p>	<p>As specified in DMRB TA 90/05, it is recommended that where near continuous screening is provided between the equestrian route and the carriageway, gaps should be avoided, as they may unnerve horses.</p> <p>The British Horse Society provides advice on Dimensions of Width, Area and Height, and this incorporates some advice regarding fencing. As a general guide the following types of fencing are suitable for horses and can be used safely alongside rights of way, in order of preference:</p> <ol style="list-style-type: none"> <li>1) Post and rail wooden fencing</li> <li>2) Posts with impact resistant plastic rails</li> <li>3) Posts with flexi-rails (PVC or rubber-coated webbing)</li> </ol> <p>Wire fencing (both straight and barbed) is less desirable and potentially injurious, and metal palisade security fencing with spikes on top should never be used alongside bridleways as the injuries incurred by a rider falling onto the fence if thrown from a horse could be fatal. Electric fencing should never be used alongside or across bridleways except where proper provision has been made at gates (see BHS Advice on Electric Fencing).</p> <p><b>Designers Response:</b></p> <p>The screening fence is to be a 2.5m high close boarded fence with noise attenuating properties as defined in the DCO. The fence will be at the rear of a 2.5m wide grass verge providing an overall NMU route width of 7.3m. To be finalised in Detailed Design.</p>	8; 9

Ref.	Problem/Observation	Recommendation	Related Objective
S1.7	<p><u>Observation:</u> It is acknowledged that the level of detail on the provided drawings is typical for this stage in the design process and does not incorporate details regarding the provision of suitable transition opportunities.</p> <p>This is relevant where the proposed NMU route(s) ends e.g. at Brooklands Lane just south of Alconbury (NMU 1.1), or on Woolley Road just south-east of Huntingdon Life Sciences (NMU 1.2).</p>	<p>It is recommended that the detailed design drawings provide detail on the transition opportunities to allow the design to be properly audited in the Stage 2 Audit i.e. where off-road routes transition to on-road. It is important to ensure that the transitions are provided in the appropriate locations and meet standards/best practice as outlined in Sustrans Design Manual, TFL's London Cycling Design Standards or Transport Scotland's Cycling by Design e.g. section 6.2.6 of Cycling by Design states:</p> <ol style="list-style-type: none"> <li>1) "Transitions between cycle lanes and cycleways should be safe, comfortable to use and should minimise delay to cyclists. Cyclists should not be required to negotiate tight angles unless there is a safety reason for reduced speed, and dropped kerbs should be designed flush with the carriageway"; and</li> <li>2) "A cycleway should not feed cyclists onto the carriageway at, or close to, road junctions, as this introduces additional conflicts at the junction. Consideration should be given to providing a cycleway transition onto the carriageway clear of the main junction".</li> </ol> <p><b>Designers Response:</b></p> <p>Facilities to aid cyclists to join/leave the segregated NMU route from the main LAR carriageway will be required where the NMU route joins and leaves Woolley Road. These details will be added at the Detailed Design stage.</p>	3; 9

Ref.	Problem/Observation	Recommendation	Related Objective
S1.8	<p><b>Observation:</b> NMU 1.3 is referenced in the Design Input Statement as having a width of 4.5m. No justification is provided as to why this width was chosen although it does perhaps reflect the anticipated user types to include pedestrians, cyclists and equestrians. Appendix E of the Design Input Statement (Appendix C of this Report) indicates that this will form part of a bridleway, and the width concurs with the generic dimensions summarised in <b>Error! Reference source not found..</b></p> <p>DMRB TA 90/05 provides guidance on the cross-section of an NMU facility including for pedestrian-only; off-carriageway cycle routes; equestrian routes; and shared and adjacent use routes. This expresses a preferred minimum width for an unsegregated shared facility as 3.0m. The Auditor acknowledges that the proposed width exceeds the preferred minimum by 1.5m, perhaps to better facilitate equestrian users.</p>	<p>It is recommended that justification is provided to express why the proposed width has been chosen.</p> <p><b>Designers Response:</b></p> <p>To be confirmed as Statement of Common Ground (SoCG) agreement between HE and CCC.</p>	3; 4; 6; 8; 9

Ref.	Problem/Observation	Recommendation	Related Objective
S1.9	<p><u>Observation:</u> The level of detail on the provided drawings is typical for this stage in the design process and does not incorporate details on the types of surface.</p>	<p>Information on the proposed surfaces should be provided to allow the Stage 2 Audit to be undertaken appropriately. Note, DMRB HD 39/01 and 'Inclusive Mobility' recommend the need for smooth, slip resistant footway surfaces and suggest what types of surfaces achieve this aim. Guidance on the suitability of a range of surface types for pedestrians, cyclists and equestrians is contained in DMRB TA 91/05, Table 8/1.</p> <p>The British Horse Society also have guidance regarding surfacing with the grip, or lack thereof, between a metal horseshoe and the surface beneath has always been a cause for concern for users of horses. The guidance advises on applying "grit during construction process" and provides a summary of the grading of quartzite grit that has been found to be effective.</p> <p>It is also recommended that the gradients of the off-carriageway facilities meet the standards as outlined in DMRB TA 90/05.</p> <p><b>Designers Response:</b></p> <p>Pavement Engineering Team to be consulted and to recommend surface finish materials in accordance with the standards and other guidance recommended by the Auditor. Details to be added during the Detailed Design stage.</p>	8; 9
S1.10	<p><u>Observation:</u> It is observed from the drawings and information provided that there is no evidence of the provision of rest places e.g. seat/perch. It is acknowledged that this aspect may have been disregarded at this stage of the design.</p>	<p>It is recommended that consideration is given to the inclusion of rest places at intervals in line with guidance, set back from any paths, as set out in DfT's Inclusive Mobility.</p> <p><b>Designers Response:</b></p> <p>To be considered at the detailed design stage and consultation undertaken with the Local Highway Authority to determine requirements.</p>	10

Ref.	Problem/Observation	Recommendation	Related Objective
S1.11	<p><u>Observation:</u> Following a review of the provided Design drawings it is not evident that any street furniture, such as bollards, will be located such that it is likely to pose a hazard to visually impaired users.</p>	<p>It is recommended that due consideration is given to the location of all street furniture when developing the detailed design i.e. complying with DfT's Inclusive Mobility e.g. the colour of street furniture should contrast with its surroundings.</p> <p><b>Designers Response:</b></p> <p>To be considered at the detailed design stage and consultation undertaken with the Local Highway Authority to determine requirements.</p>	11
S1.12	<p><u>Observation:</u> The Drawings provided did not present information on the signing strategy.</p>	<p>It is recommended that details of signing should be prepared ensuring that signs are clear and conspicuous. Sign poles and other street furniture require to be positioned to meet the minimum clearance distances between cycleways and fixed objects. Note, the colour of street furniture is important for visually impaired users and this should contrast with its surroundings (DfT's Inclusive Mobility).</p> <p>Also, an appropriate signing strategy will have to be developed to direct users to local communities and attractions, as well as confirming where the route ends (including advance warning signs to allow users to exit at the most appropriate point to use the adjacent network).</p> <p><b>Designers Response:</b></p> <p>To be considered at the detailed design stage and consultation undertaken with the Local Highway Authority to determine requirements.</p>	3; 4; 5; 8; 9
S1.13	<p><u>Observation:</u> It is noted that the drawings provided do not contain information on the crossfall of the proposed NMU routes.</p>	<p>DMRB TA 90/05 recommends that the values used for footways, as specified in DMRB HD 39/01, are adopted up to a maximum of 5%, as higher values may create manoeuvring difficulties. DMRB TA 90/05 also notes that a 3% crossfall can create difficulties for cyclists when the surface is icy. Inclusive Mobility instead cites that a figure of 2.5% should be regarded as the maximum acceptable.</p> <p>Therefore it is recommended crossfalls on NMU routes should not exceed 2.5%.</p> <p><b>Designers Response:</b></p> <p>All crossfalls have been designed to a maximum crossfall of 2.5%.</p>	9

## Section 2

- 3.10. Section 2 of The Scheme incorporates NMU facilities either side of the A1 extending from Brampton Hut Service Area to Brampton Road. This generally corresponds with the Highways England observations of the consultation responses received (C1) i.e. the provision of facilities that provide access to Brampton Hut Services, Grafham Woods and safe crossing facilities over the new road alignment. As summarised in Table 14, the NMU facilities are split into 8 distinct parts.
- 3.11. NMU 2.2 provides an NMU route through Brampton Hut Interchange that continues south of Brampton Hut Service Area and over the A1 via a ramp and overbridge (on the new Huntingdon Southern Bypass) to the public rights of way to the east of the A1. This connects the NMU route with Brampton, Buckden, Huntingdon, and Godmanchester etc. The NMU route through Brampton Hut Interchange is proposed to route via the Roundabout central island with two signalised crossings of the circulatory carriageway. The route width varies with 4.5m generally provided, although this reduces to 3.5m on the proposed A14 overbridge and 2.0m width on the provided steps. The route is noted as a bridleway with a fence screen provided where appropriate, including at the proposed A14 overbridge. It is also highlighted that the proposed A14 overbridge requires a 1.8m parapet.
- 3.12. NMU 2.3 provides a separate NMU route south of Brampton Hut Service Area that remains on the western side of the A1 connecting to the existing public rights of way to the south and west including NCN Route 12 on Brampton Road/Grafham Road. The dimensions cited in the Design Input Statement indicate a facility 4.5m wide, reducing to 3.5m as it proceeds under the proposed A14 south of Brampton Hut Service Area. This is assigned as a bridleway in the Design Input Statement that will require a fence screen where appropriate.
- 3.13. NMU 2.4 defines the Grafham Road Bridge link over the A1, north of the Brampton Interchange. This provides a 3.0m wide NMU route north of Grafham Road with a 1.8m spacing between the carriageway and the path, with a 0.5m verge at the rear of the NMU route. A 1.8m parapet is proposed on the north side of the bridge adjacent to the NMU route. This route is on the current on-road route of the NCN Route 12 where up to 200 NMU's were recorded at the weekend during the NMU surveys. NMU 2.5 defines the approached to NMU 2.4 and provide a 3.0m wide path linking to the adjacent bridleways, with 2.0m on the provided steps. These links have a 1.8m spacing between the carriageway and the path, with a 1.5m verge at the rear of the NMU route.
- 3.14. The provision of NMU 2.2 and NMU 2.3 as part of The Scheme provides a more direct connection across the A14/A1, reconnecting two existing PROWs (Brampton footpath 15 and Brampton bridleway 19) that the road widening severed decades ago. This links the Brampton Hut Service Area with the NMU network and provides a circular route for equestrians.
- 3.15. NMU 2.6, 2.7 and 2.8 define the provision of NMU facilities in the vicinity of the proposed A14 Buckden Road Bridge. These three links converge on the proposed Brampton Road/Buckden Road Roundabout providing NMU links south to Buckden and north to Brampton, adjacent to the A1 and B1514 respectively. To the west of the roundabout the proposed route provides a link to the Buckden Byway (Mere Lane) that connects with Grafham Road which forms part of the NCN Route 12, to the west of the Grafham Road Bridge. These NMU facilities are proposed to comprise 3.0m wide paths with a 1.8m spacing between the carriageway and the path, and either a 1.5m (west of the proposed Brampton Road/Buckden Road Roundabout) or 3.0m verge at the rear of the NMU route. NMU 2.8 is noted as having a 1.8m parapet on its east side.

**Table 6 Section 2 Summary**

Ref.	Problem/Observation	Recommendation	Related Objective
S2.1	<p><u>Observation:</u> At the beginning of NMU 2.2 it is proposed to route via the Roundabout central island with two signalised crossings of the circulatory carriageway, although the detail of these have not been developed at this stage in the design process.</p> <p>The Auditor notes that the proposed layout will require all users of the NMU route to use the central island of the roundabout, a situation that may be uncomfortable to more vulnerable or less confident users (including equestrians), and may incur significant delays depending on the operation of the signals.</p>	<p>In order to allow the Stage 2 Audit to be undertaken appropriately it is recommended that sufficient detail is provided on the detailed design drawings indicating the type and arrangements of proposed crossing points, including justification for the chosen layout.</p> <p><b>Designers Response:</b></p> <p>The route through Brampton Hut interchange roundabout is currently being further developed to improve the facility for all NMU users and interact better with the road environment. This proposal will be developed fully during the detailed design stage. This route was adopted in favour of the DCO proposed route following a review which found it unsuitable for equestrian users, route did not follow desire lines, difficult to construct a dual carriageway central reserve crossing/holding point, earthwork widening issues and detrimental embankment works in the river floodplain.</p>	7
S2.2	<p><u>Observation:</u> NMU 2.2 is referenced in the Design Input Statement as having a width of 4.5m. No justification is provided as to why this width was chosen although it does perhaps reflect the anticipated user types to include pedestrians, cyclists and equestrians, and is consistent with other proposed widths of connecting facilities. Appendix E of the Design Input Statement (Appendix C of this Report) indicates that this will form part of a bridleway, and this concurs with the generic dimensions summarised in <b>Error! Reference source not found.</b></p> <p>DMRB TA 90/05 provides guidance on the cross-section of an NMU facility including for pedestrian-only; off-carriageway cycle routes; equestrian routes; and shared and adjacent use routes. This expresses a preferred minimum width for an unsegregated shared facility as 3.0m. The Auditor acknowledges that the proposed width exceeds the preferred minimum by 1.5m, perhaps to better facilitate the use of the route by equestrian users.</p>	<p>It is recommended that justification is provided to express why the proposed width has been chosen.</p> <p><b>Designers Response:</b></p> <p>The 4.5m width is in accordance with the DCO SoCG, refer to Table 3.</p>	3; 4; 6; 8; 9



Ref.	Problem/Observation	Recommendation	Related Objective
S2.3	<p><u>Observation:</u> On the proposed NMU 2.2 ramps are to be provided to provide a route for users to reach the A14 Bridge that carries the NMU route over the A1. It is important that the proposed ramps do not restrict access by infirm, disabled or other users.</p> <p>It is noted that the horizontal alignment of the proposed ramps to/from the A14 Bridge are sinuous, perhaps to comply with standards relating to gradients.</p>	<p>Although no detail of the proposed ramp gradients are available at this stage from the supplied drawings, it will be necessary to ensure that gradients are such that they do not exceed the standards outlined in DfT's Inclusive Mobility. This states that the preferred gradient is 1:20 (5%), with 1:12 (8%) be the absolute maximum acceptable. Also, the supplied drawings do not illustrate provision for landings (rest points), which should be provided at regular intervals to allow people to rest comfortably and safely.</p> <p>It is recommended that the proposed ramps are designed to be as direct as possible to ensure that the facility is seen as a suitable alternative to cycling on-road. The sinuous nature of the proposed ramps will require an additional distance to be travelled for users unable to make use of the proposed steps at these locations, and will require cyclists in particular to reduce their speed to negotiate the ramps.</p> <p><b>Designers Response:</b></p> <p>The proposed ramps are sinuous to ensure that gradients comply with a maximum of 1:20 (5%) and that landings are provided. These standards cannot be achieved without a sinuous design.</p>	4; 5; 8; 9
S2.4	<p><u>Observation:</u> On the proposed NMU 2.2 it is noted that there are a couple of tight bends that have to be negotiated.</p> <p><u>Observation:</u> NMU 2.5 connects Brampton Hut Service Area with the proposed Grafham Road Bridge. This is formed partly by the realigned bridleway that runs generally parallel with the A1, although any impact on desire lines is minimal. However it is noted that there are a couple of tight bends that have to be negotiated.</p> <p><u>Observation:</u> NMU provision is also proposed connecting the A14 Bridge with Brampton Road (east of the Grafham Road Bridge) to the east of the A1. Again, it is noted that there are some tight bends that have to be negotiated.</p>	<p>It is recommended that any tight-bends are eliminated from the design where possible. These will require users, cyclists in particular, to reduce their speed to negotiate. DMRB TA 90/05 advises that "changes in horizontal alignment should normally be via simple circular curves, rather than straight sections with occasional sharp curves". Table 4.1 of DMRB TA 90/05 summarises the preferred minimum radii for cyclists.</p> <p><b>Designers Response:</b></p> <p>The proposed ramps are sinuous including tight radius curves to ensure that gradients comply with a maximum of 1:20 (5%) and that landings are provided. These standards cannot be achieved without a sinuous design. The min radius achieved is x which complies with table 4.1 of DMRB TA 90/05.</p>	9

Ref.	Problem/Observation	Recommendation	Related Objective
S2.5	<p><u>Observation:</u> The Design Input Statement specifies that the spacing between the carriageway and the NMU path is 3.5m over the A14 bridge, which exceeds the minimum of 1.8m specified in DMRB TA 90/05 paragraph 7.23.</p>	<p>-</p> <p><b>Designers Response:</b> The separation between the NMU and A14 BN03 bridge is 3.5m. This allows for provision of a vehicle restraint system as well as a screening fence that is to be provided to accommodate equestrian users.</p>	3; 5; 7; 8; 9
S2.6	<p><u>Observation:</u> The Design Input Statement notes that the A14 Bridge requires a 1.8m parapet, which is in line with guidance provided by the British Horse Society, and expressed in LTN 1/04 – Policy, Planning and Design for Walking and Cycling.</p>	<p>It is recommended that an infill is installed on the parapet i.e. a solid panelling fixed to the parapet railings, to obscure a horse's view of traffic passing beneath the bridge. The British Horse Society guidance advises that the height of the infill should be 1.0m with an uplift of 25mm.</p> <p><b>Designers Response:</b> To be included at detailed design.</p>	9
S2.7	<p><u>Observation:</u> The proposed A14 alignment south of Brampton Hut Service Area is proposed to incorporate an underpass to enable the continuation of the proposed NMU route to the west of the A1 (connecting with public rights of way further south). However, no cross section is provided on the drawings specifying its dimensions.</p>	<p>It is recommended that the headroom requirements for all types of users meets or exceeds the minimum height dimensions as outlined in DMRB TA 90/05, Chapter 8. This states that the desirable headroom for ridden horses is 3.4m, with an absolute minimum headroom for ridden use of 2.8m over short distances. Note, in cases where horses are to be led, mounting blocks should be provided at either side of the discontinuity, together with signs advising riders to dismount.</p> <p>However, the British Horse Society guidance should also be referred to which specifies that where underpasses are constructed to enable riders to cross below a road, the ideal height is 3.7m (minimum 3.4m) and the desirable width is 5.0m (minimum 3.0m). Nevertheless, it is noted that “while the Society seeks the desirable height for underpasses, in exceptional circumstances a lower height may be tolerated. Again, in cases where riders will have to dismount, appropriate mounting blocks provided at either end should be considered.</p> <p><b>Designers Response:</b> Dimensions to be provided by Structures Team.</p>	3; 4; 5; 7; 8; 9

Ref.	Problem/Observation	Recommendation	Related Objective
S2.8	<p><u>Observation:</u> It is acknowledged that the level of detail on the provided drawings is typical for this stage in the design process and does not incorporate details regarding the provision of suitable transition opportunities.</p> <p>This is relevant where the proposed NMU route ends e.g. either side of Grafham Road Bridge (NMU 2.4), where the existing routes are on-road.</p>	<p>It is recommended that the detailed design drawings provide detail on the transition opportunities to allow the design to be properly audited in the Stage 2 Audit i.e. where off-road routes transition to on-road. It is important to ensure that the transitions are provided in the appropriate locations and meet standards/best practice as outlined in Sustrans Design Manual, TFL's London Cycling Design Standards or Transport Scotland's Cycling by Design e.g. section 6.2.6 of Cycling by Design states:</p> <p>3) "Transitions between cycle lanes and cycleways should be safe, comfortable to use and should minimise delay to cyclists. Cyclists should not be required to negotiate tight angles unless there is a safety reason for reduced speed, and dropped kerbs should be designed flush with the carriageway"; and</p> <p>4) "A cycleway should not feed cyclists onto the carriageway at, or close to, road junctions, as this introduces additional conflicts at the junction. Consideration should be given to providing a cycleway transition onto the carriageway clear of the main junction".</p> <p><b>Designers Response:</b></p> <p><b>Noted. To be provided at detailed design stage.</b></p>	3; 9
S2.9	<p><u>Observation:</u> It is acknowledged that the level of detail on the provided drawings is typical for this stage in the design process and does not incorporate details regarding the proposed steps south of Brampton Hut Service Area and to the west of Grafham Road Bridge. Nevertheless, the details from the Design Input Statement specify that the steps are to be 2.0m wide. This exceeds the minimum widths, but does exceed the 1.8m width whereby a central handrail will be needed.</p>	<p>It is recommended that due consideration is given to DfT's Inclusive Mobility Section 8.4. This provides further guidance on aspects such as: number of steps per flight; handrails; resting places; tread depth etc.</p> <p><b>Designers Response:</b></p> <p><b>Dimensions in accordance with DCO and the SoCG. Observation noted.</b></p>	9

Ref.	Problem/Observation	Recommendation	Related Objective
S2.10	<p><u>Observation:</u> It is noted that the design drawings illustrate that users will be required to negotiate tight angles i.e. circa 90 degrees, on approach to the crossing facilities incorporated across the proposed Brampton Road/Buckden Road Roundabout.</p>	<p>It is recommended that all 90 degree angles should be refined to include a 45 degree splay (or suitable radius) to ease movement and avoid conflicts at the crossing points.</p> <p><b>Designers Response:</b>  <b>Noted. To be provided at detailed design stage.</b></p>	9
S2.11	<p><u>Observation:</u> It is noted that the proposed NMU routes cross Brampton Road at the proposed Brampton Road/Buckden Road Roundabout, and the crossing incorporates a splitter island.</p>	<p>It is recommended that the proposed splitter island is designed to be able to accommodate the potential users of the crossing e.g. tandems; parent/prams; cycles towing trailers etc. Consideration should be given to DMRB TA 91/05, paragraph 6.19 which specifies the preferred crossing width for cyclist refuge islands is 3.0m to 4.0m (2.5m minimum at constrained locations). The length of the refuge should be determined by the frequency and type of use, but should not be less than the width of the connecting cycle facility or less than 2.0m. Tactile surfaces should be provided both at the dropped kerb approach to the crossing and within the refuge itself.</p> <p><b>Designers Response:</b>  <b>Noted. To be provided at detailed design stage.</b></p>	7

Ref.	Problem/Observation	Recommendation	Related Objective
S2.12	<p><u>Observation:</u> The Drawings provided do not present information on the provision of tactile surfaces or dropped kerbs at the proposed crossing points.</p>	<p>It is recommended that reference is made to DfT's Inclusive Mobility and Local Transport Notes 1/95 and 2/95, and DfT Traffic Advisory Leaflet 4/98, for details of the design of dropped kerbs and blister tactile paving for disabled people. Blister paving should be provided at all priority crossing points (providing a tonal contrast, excluding red). It should be noted that DfT recently published a document titled 'Interim changes to the Guidance on the use of Tactile Paving Surfaces', which sought views on provisional changes to the guidance on the use of tactile paving surfaces (consultation now complete).</p> <p>It is recommended that any priority crossings to be incorporated should be an absolute minimum of 2.5m or, in most circumstances, at least as wide as the adjoining facility (the design should consider existing and future demand for each crossing point in determining the appropriate width).</p> <p><b>Designers Response:</b>  <b>Noted. To be provided at detailed design stage.</b></p>	7; 9
S2.13	<p><u>Observation:</u> NMU 2.6 – 2.8 are referenced in the Design Input Statement as having a width of 3.0m. This concurs with the preferred minimum width for an unsegregated facility of 3.0m, as expressed in DMRB TA 90/05, paragraph 7.16.</p>	<p>-</p> <p><b>Designers Response:</b>  <b>Dimensions in accordance with DCO and the SoCG.</b></p>	9

Ref.	Problem/Observation	Recommendation	Related Objective
S2.14	<p><u>Observation:</u> The level of detail on the provided drawings is typical for this stage in the design process and does not incorporate details on the types of surface.</p>	<p>Information on the proposed surfaces should be provided to allow the Stage 2 Audit to be undertaken appropriately. Note, DMRB HD 39/01 and 'Inclusive Mobility' recommend the need for smooth, slip resistant footway surfaces and suggest what types of surfaces achieve this aim. Guidance on the suitability of a range of surface types for pedestrians, cyclists and equestrians is contained in DMRB TA 91/05, Table 8/1.</p> <p>The British Horse Society also have guidance regarding surfacing with the grip, or lack thereof, between a metal horseshoe and the surface beneath has always been a cause for concern for users of horses. The guidance advises on applying "grit during construction process" and provides a summary of the grading of quartzite grit that has been found to be effective.</p> <p>It is also recommended that the gradients of the off-carriageway facilities meet the standards as outlined in DMRB TA 90/05.</p> <p><b>Designers Response:</b> <b>Dimensions in accordance with DCO and the SoCG. Observation noted.</b></p>	8; 9
S2.15	<p><u>Observation:</u> It is observed from the drawings and information provided that there is no evidence of the provision of rest places e.g. seat/perch. It is acknowledged that this aspect may have been disregarded at this stage of the design.</p>	<p>It is recommended that consideration is given to the inclusion of rest places at intervals in line with guidance, set back from any paths, as set out in DfT's Inclusive Mobility.</p> <p><b>Designers Response:</b> <b>Noted. To be provided at detailed design stage.</b></p>	10
S2.16	<p><u>Observation:</u> Following a review of the provided Design drawings it is not evident that any street furniture, such as bollards, will be located such that it is likely to pose a hazard to visually impaired users.</p>	<p>It is recommended that due consideration is given to the location of all street furniture when developing the detailed design i.e. complying with DfT's Inclusive Mobility e.g. the colour of street furniture should contrast with its surroundings.</p> <p><b>Designers Response:</b> <b>Noted. To be provided at detailed design stage – no street furniture foreseen.</b></p>	11

Ref.	Problem/Observation	Recommendation	Related Objective
S2.17	<p><u>Observation:</u> The Drawings provided did not present information on the signing strategy.</p>	<p>It is recommended that details of signing should be prepared ensuring that signs are clear and conspicuous. Sign poles and other street furniture require to be positioned to meet the minimum clearance distances between cycleways and fixed objects. Note, the colour of street furniture is important for visually impaired users and this should contrast with its surroundings (DfT's Inclusive Mobility).</p> <p>Also, an appropriate signing strategy will have to be developed to direct users to local communities and attractions, as well as confirming where the route ends (including advance warning signs to allow users to exit at the most appropriate point to use the adjacent network).</p> <p><b>Designers Response:</b>  <b>Noted. To be provided at detailed design stage.</b></p>	3; 4; 5; 8; 9
S2.18	<p><u>Observation:</u> It is noted that the drawings provided do not contain information on the crossfall of the proposed NMU routes.</p>	<p>DMRB TA 90/05 recommends that the values used for footways, as specified in DMRB HD 39/01, are adopted up to a maximum of 5%, as higher values may create manoeuvring difficulties. DMRB TA 90/05 also notes that a 3% crossfall can create difficulties for cyclists when the surface is icy. Inclusive Mobility instead cites that a figure of 2.5% should be regarded as the maximum acceptable.</p> <p>Therefore it is recommended crossfalls on NMU routes should not exceed 2.5%.</p> <p><b>Designers Response:</b>  <b>Noted. To be provided at detailed design stage.</b></p>	9



## Section 3A

- 3.17. Section 3A of The Scheme incorporates NMU facilities across the New Huntingdon Southern Bypass section, extending from the B1043, Offord Road, north of Offord Cluny, to the A1198, Ermine Street, south of Godmanchester. This provision generally corresponds with the Highways England response in the Consultation Report to reconnect existing NMU routes severed by the Huntingdon Southern Bypass i.e. at bridges between Offord Road to New Barns Lane. As summarised in Table 15, the NMU facilities are split into 2 distinct parts i.e. NMU references 3.1 and 3.2.
- 3.18. The B1043, Offord Road Bridge, located east of Offord Cluny, is proposed to re-establish the connection to the severed Offord Road as a result of the new Huntingdon Southern Bypass. The width of the facility (NMU 3.1) is proposed as 3.0m, with a 1.8m spacing between the carriageway and the NMU facility and a variable verge width of between 0.5m and 1.5m (on the approaches) at the rear of the NMU route. A 1.8m parapet is proposed on the east side of the bridge adjacent to the NMU route. The NMU width increases to 4.8m along the bridge with no spacing between the carriageway and the NMU facility.
- 3.19. The A1198, Ermine Street Bridge, located north of Papworth Everard, is proposed to re-establish the connection to the severed A1198 as a result of the new Huntingdon Southern Bypass. The width of the facility (NMU 3.2) is proposed as 3.0m, with a 1.8m spacing between the carriageway and the NMU facility. The verge width varies between 0.5m and 1.5m (on the approaches) at the rear of the NMU route. The NMU route crosses two emergency/maintenance accesses at the roundabouts north and south of the proposed Ermine Street Bridge, utilising priority crossings. A 1.8m parapet is proposed on the east side of the bridge adjacent to the NMU route. The NMU width increases to 4.8m along the bridge with no spacing between the carriageway and the NMU facility.

**Table 7 Section 3A Summary**

Ref.	Problem/Observation	Recommendation	Related Objective
S3.1	<u>Observation:</u> The Design Input Statement notes that 1.8m parapets are proposed on the Offord Road Bridge and the Ermine Street Bridge, which would be suitable for the use of equestrians. Note LTN 2/04 – Adjacent and Shared Use Facilities for Pedestrians and Cyclists, states that the minimum height of a parapet on a bridge carrying cyclists is given as 1.4 metres in BD 52/93, although this document is no longer in use. Note, 1.4m is also given as the minimum recommended parapet height in Transport Scotland’s Cycling by Design.	Confirmation is required to determine if the proposed Offord Road Bridge and Ermine Street Bridge are to be used by equestrians. This will better determine the optimum parapet height for these locations. If the routes are to be used by equestrians it is recommended that an infill is installed on the parapet i.e. a solid panelling fixed to the parapet railings, to obscure a horse’s view of traffic passing beneath the bridge. The British Horse Society guidance advises that the height of the infill should be 1.0m with an uplift of 25mm.  <b>Designers Response:</b> <b>To be included at detailed design.</b>	9
S3.2	<u>Observation:</u> It is noted that the design drawings illustrate that users will be required to negotiate a tight angle i.e. circa 90 degrees, on the southbound approach to the priority crossing facilities incorporated across the emergency/maintenance access at the roundabout north of Ermine Street Bridge.	It is recommended that all 90 degree angles should be refined to include a 45 degree splay (or suitable radius) to ease movement and avoid conflicts at the crossing points.  <b>Designers Response:</b> <b>To be included at detailed design.</b>	9

Ref.	Problem/Observation	Recommendation	Related Objective
S3.3	<p><u>Observation:</u> It is noted that the proposed priority crossing of the emergency/maintenance access at the roundabout north of Ermine Street Bridge incorporates a splitter island.</p>	<p>It is recommended that the proposed splitter island is designed to be able to accommodate the potential users of the crossing e.g. tandems; parent/prams; cycles towing trailers etc. Consideration should be given to DMRB TA 91/05, paragraph 6.19 which specifies the preferred crossing width for cyclist refuge islands is 3.0m to 4.0m (2.5m minimum at constrained locations). The length of the refuge should be determined by the frequency and type of use, but should not be less than the width of the connecting cycle facility or less than 2.0m. Tactile surfaces should be provided at the dropped kerb approach to the crossing and within the refuge itself (as currently illustrated on the provided drawings).</p> <p><b>Designers Response:</b>  <b>To be included at detailed design.</b></p>	7
S3.4	<p><u>Observation:</u> The Drawings provided do not present detailed information on the provision of tactile surfaces or dropped kerbs at the proposed crossing points at the proposed Ermine Street/Access/Ermine Street Bridge/Eastbound Diverge Roundabout.</p>	<p>It is recommended that reference is made to DfT's Inclusive Mobility and Local Transport Notes 1/95 and 2/95, and DfT Traffic Advisory Leaflet 4/98, for details of the design of dropped kerbs and blister tactile paving for disabled people. Blister paving should be provided at all priority crossing points (providing a tonal contrast, excluding red). It should be noted that DfT recently published a document titled 'Interim changes to the Guidance on the use of Tactile Paving Surfaces', which sought views on provisional changes to the guidance on the use of tactile paving surfaces (consultation now complete).</p> <p>It is recommended that any priority crossings to be incorporated should be an absolute minimum of 2.5m or, in most circumstances, at least as wide as the adjoining facility (the design should consider existing and future demand for each crossing point in determining the appropriate width).</p> <p><b>Designers Response:</b>  <b>To be included at detailed design.</b></p>	7; 9

Ref.	Problem/Observation	Recommendation	Related Objective
S3.5	<p><u>Observation:</u> The Drawings provided do not present off-road provision for a re-routed bridleway (102/1) on Silver Street. Drawing HA528983 – ACJV – HKF – S3A_29550 – DR – C – 0051, presents an indication that the existing public right of way is stopped up and re-routed. Nevertheless, reference to CCC’s online mapping resources would suggest that the existing route terminates south of the proposed Scheme extents.</p>	<p>It is recommended that confirmation is provided at the detailed design stage, whether an NMU route is to be provided at this location.</p> <p><b>Designers Response:</b></p> <p>This was addressed in the HE/CCC SoCG which decreed, due to low flows, no separate NMU facility was required.</p>	3; 5; 8

Ref.	Problem/Observation	Recommendation	Related Objective
S3.6	<p><u>Observation:</u> It is acknowledged that the level of detail on the provided drawings is typical for this stage in the design process and does not incorporate details regarding the provision of suitable transition opportunities.</p>	<p>It is recommended that the detailed design drawings provide detail on the transition opportunities to allow the design to be properly audited in the Stage 2 Audit i.e. where off-road routes transition to on-road. It is important to ensure that the transitions are provided in the appropriate locations and meet standards/best practice as outlined in Sustrans Design Manual, TfL's London Cycling Design Standards or Transport Scotland's Cycling by Design e.g. section 6.2.6 of Cycling by Design states:</p> <p>5) "Transitions between cycle lanes and cycleways should be safe, comfortable to use and should minimise delay to cyclists. Cyclists should not be required to negotiate tight angles unless there is a safety reason for reduced speed, and dropped kerbs should be designed flush with the carriageway"; and</p> <p>6) "A cycleway should not feed cyclists onto the carriageway at, or close to, road junctions, as this introduces additional conflicts at the junction. Consideration should be given to providing a cycleway transition onto the carriageway clear of the main junction".</p> <p><b>Designers Response:</b></p> <p>To be included at detailed design. Recommendation that transitions should be designed to smooth cyclists' movement from NMU route to highway noted. However, there are safety concerns of potentially fast moving cyclists re-joining the side road at high speed, failing to take into consideration other road users. It is deemed sensible in these areas to provide a layout which encourages cyclists to stop and check before re-joining side road.</p>	3; 9
S3.7	<p><u>Problem:</u> It is noted that the proposed off-road provision terminates just north and south of The Scheme and therefore does not provide particularly good opportunities to connect with communities either side of the A14 route e.g. Godmanchester and their attractions therein, or with proposed future developments e.g. Bearscroft Farm.</p>	<p>It is proposed to consider extending proposed off-road opportunities for NMU's that link with the significant NMU routes in the area e.g. NCN Route 51 through Godmanchester.</p> <p><b>Designers Response:</b></p> <p>Continuity of routes is outside our jurisdiction but could be addressed through the Legacy element of the project.</p>	4

Ref.	Problem/Observation	Recommendation	Related Objective
S3.8	<u>Observation:</u> NMU 3.1 and 3.2 are referenced in the Design Input Statement as having a width of 3.0m. This concurs with the preferred minimum width for an unsegregated facility of 3.0m, as expressed in DMRB TA 90/05, paragraph 7.16.	-  <b>Designers Response:</b> <b>To be included at detailed design.</b>	9
S3.9	<u>Observation:</u> The level of detail on the provided drawings is typical for this stage in the design process and does not incorporate details on the types of surface.	Information on the proposed surfaces should be provided to allow the Stage 2 Audit to be undertaken appropriately. Note, DMRB HD 39/01 and 'Inclusive Mobility' recommend the need for smooth, slip resistant footway surfaces and suggest what types of surfaces achieve this aim. Guidance on the suitability of a range of surface types for pedestrians, cyclists and equestrians is contained in DMRB TA 91/05, Table 8/1.  The British Horse Society also have guidance regarding surfacing. The grip, or lack thereof, between a metal horseshoe and the surface beneath has always been a cause for concern for users of horses. The guidance advises on applying "grit during construction process" and provides a summary of the grading of quartzite grit that has been found to be effective.  It is also recommended that the gradients of the off-carriageway facilities meet the standards as outlined in DMRB TA 90/05.  <b>Designers Response:</b> <b>To be included at detailed design.</b>	8; 9
S3.10	<u>Observation:</u> It is observed from the drawings and information provided that there is no evidence of the provision of rest places e.g. seat/perch. It is acknowledged that this aspect may have been disregarded at this stage of the design.	It is recommended that consideration is given to the inclusion of rest places at intervals in line with guidance, set back from any paths, as set out in DfT's Inclusive Mobility.  <b>Designers Response:</b> <b>To be included at detailed design.</b>	10
S3.11	<u>Observation:</u> Following a review of the provided Design drawings it is not evident that any street furniture, such as bollards, will be located such that it is likely to pose a hazard to visually impaired users.	It is recommended that due consideration is given to the location of all street furniture when developing the detailed design i.e. complying with DfT's Inclusive Mobility e.g. the colour of street furniture should contrast with its surroundings.  <b>Designers Response:</b> <b>To be included at detailed design.</b>	11

Ref.	Problem/Observation	Recommendation	Related Objective
S3.12	<p><u>Observation:</u> The Drawings provided did not present information on the signing strategy.</p>	<p>It is recommended that details of signing should be prepared ensuring that signs are clear and conspicuous. Sign poles and other street furniture require to be positioned to meet the minimum clearance distances between cycleways and fixed objects. Note, the colour of street furniture is important for visually impaired users and this should contrast with its surroundings (DfT's Inclusive Mobility).</p> <p>Also, an appropriate signing strategy will have to be developed to direct users to local communities and attractions e.g. Godmanchester; Bearscroft Farm New Residential Development etc., as well as confirming where the route ends (including advance warning signs to allow users to exit at the most appropriate point to use the adjacent network e.g. Bridleway 282/4; Bridleway 102/1; Bridleway 102/2; Bridleway 102/7; Bridleway 121/10; etc.)</p> <p><b>Designers Response:</b> <b>To be included at detailed design.</b></p>	3; 4; 5; 8; 9
S3.13	<p><u>Observation:</u> It is noted that the drawings provided do not contain information on the crossfall of the proposed NMU routes.</p>	<p>DMRB TA 90/05 recommends that the values used for footways, as specified in DMRB HD 39/01, are adopted up to a maximum of 5%, as higher values may create manoeuvring difficulties. DMRB TA 90/05 also notes that a 3% crossfall can create difficulties for cyclists when the surface is icy. Inclusive Mobility instead cites that a figure of 2.5% should be regarded as the maximum acceptable.</p> <p>Therefore it is recommended crossfalls on NMU routes should not exceed 2.5%.</p> <p><b>Designers Response:</b> <b>To be included at detailed design.</b></p>	9

## Section 3B

3.20. Section 3B of The Scheme incorporates NMU facilities across the New Huntingdon Southern Bypass section, extending from Mere Way, northwest of Hilton, to New Barns Lane, northeast of Conington. This generally corresponds with the Highways England observation/response to the consultation responses received (C4) i.e. the provision of NMU facilities on the structures crossing the Huntingdon Southern Bypass, to maintain north/south links for NMUs, have been made. As summarised in Table 16, the NMU facilities are split into 8 distinct parts.

- 3.21. The B1040, Potton Road Bridge, located north of Hilton, is proposed to re-establish the connection to the severed Potton Road as a result of the new Huntingdon Southern Bypass. The width of the facility (NMU 4.1) is proposed as 3.0m, with a 1.8m spacing between the carriageway and the NMU facility, and a variable verge width between 0.5m and 1.5m (on the approaches) at the rear of the NMU route. The NMU width is proposed to increase along the bridge with no spacing between the carriageway and the NMU facility.
- 3.22. The proposed Hilton Road Bridge, located northeast of Hilton and south of Fenstanton, is proposed to re-establish the connection to the severed Hilton Road as a result of the new Huntingdon Southern Bypass (note, the context Report implies that Hilton Road is a desire line based on the NMU survey results, with up to 200 NMU's recorded at the weekend). The width of the facility (NMU 4.2) is proposed as 3.0m, with a 1.8m spacing between the carriageway and the NMU facility and a variable verge width between 0.5m and 1.5m (on the approaches) at the rear of the NMU route. A 1.8m parapet is proposed on the east side of the bridge adjacent to the NMU route. The NMU width is proposed to increase along the bridge with no spacing between the carriageway and the NMU facility.
- 3.23. The Conington Road Bridge, located north of Conington and south of Fenstanton, is proposed in order to re-establish the connection to the severed Conington Road as a result of the new Huntingdon Southern Bypass. The width of the facility (NMU 4.3) is proposed as 3.0m, with a 1.8m spacing between the carriageway and the NMU facility, and a variable verge width between 0.5m and 1.5m (on the approaches) at the rear of the NMU route. A 1.8m parapet is proposed on the east side of the bridge adjacent to the NMU route. The NMU width is proposed to increase along the bridge with no spacing between the carriageway and the NMU facility.
- 3.24. According to the Design Input Statement, the width of the NMU facility south of the bridge on Conington Road, NMU 4.4, is proposed to be 2.0m with no provision for spacing between the carriageway and the NMU facility (assigned as a footway/footpath in the Design Input Statement). The verge width is proposed to be 0.5m each side of the path in the field, although this is not clear from the drawings provided.
- 3.25. North of the bridge on Conington Road the Design Input Statement specifies that the width of the NMU facility, NMU 4.5, is proposed as 3.0m with a 1.8m spacing between the carriageway and the NMU facility. The verge width is proposed as 0.5m at the rear of the NMU route, and is assigned as a footway/footpath in the Design Input Statement.
- 3.26. The Design Input Statement also refers to a proposed 3.0m wide footway (NMU 4.6) with a 1.8m spacing between the carriageway and the NMU facility, and a proposed verge width of 0.5m at the rear of the NMU route. The Design Input Statement infers that this connects from Conington Road, at the Conington Road junction with Fenstanton Link Road, to the existing footpath (FP 87/6).
- 3.27. The proposed New Barns Lane Bridge, located northeast of Conington and south of Fen Drayton, is proposed in order to re-establish the connection between the New Barns Lane and the existing A14, with New Barns Lane severed as a result of the new Huntingdon Southern Bypass. The width of the facility (NMU 4.7) is proposed as 3.0m, with a 0.5m spacing between the carriageway and the NMU facility and a variable verge width of between 0.5m and 1.5m (on the approaches) to the rear of the NMU route. A 1.8m parapet is proposed on the east side of the bridge adjacent to the NMU route, while the NMU width is proposed to increase along the bridge with no spacing between the carriageway and the NMU facility.
- 3.28. The Design Input statement refers to the realignment of the existing Bridleway 121/10 which extends between the A1198 and the B1040 bridges. This route will be severed by The Scheme, hence the proposed realignment, which the Design Input statement specifies as having a width of 4.5m (NMU 4.8).



**Table 8 Section 3B Summary**

Ref.	Problem/Observation	Recommendation	Related Objective
S3.14	<u>Observation:</u> It is noted that the associated Section 3B drawings have little information incorporated regarding the proposed NMU facilities widths, with information available solely from the provided Design Input Statement.	It is recommended that information on the proposed widths, and any other important dimensions, should be provided on the detailed design drawings to allow the Stage 2 Audit to be undertaken appropriately.  <b>Designers Response:</b> <b>To be included at detailed design.</b>	-
S3.15	<u>Problem:</u> It is noted that NMU 4.4, the NMU facility south of the proposed Conington Road Bridge, is proposed to have a width of 2.0m. This does not meet with the preferred minimum width for an unsegregated facility of 3.0m, as expressed in DMRB TA 90/05, paragraph 7.16.	It is recommended that the proposed width is widened to meet the preferred minimum width of 3.0m. Alternatively the below standard width will have to be justified.  <b>Designers Response:</b> The existing footway/route dimension is near to 3.0m, The proposed dimensions in the DIS will be confirmed.	9
S3.16	<u>Observation:</u> NMU 4.1, 4.2, 4.3, 4.5, 4.6 and 4.7 are referenced in the Design Input Statement as having a width of 3.0m. This concurs with the preferred minimum width for an unsegregated facility of 3.0m, as expressed in DMRB TA 90/05, paragraph 7.16.	-	9
S3.17	<u>Observation:</u> It is observed that the drawing package provided does not illustrate the proposed realignment of Bridleway 121/10 (NMU 4.8).	It is recommended that sufficient information is provided on the detailed design drawings showing the proposed realignment of Bridleway 121/10 (NMU 4.8). Does the 4.5m wide route, as highlighted in the Design Input statement, extend from the A1198 to the B1040?  <b>Designers Response:</b> <b>To be included at detailed design.</b>	3

Ref.	Problem/Observation	Recommendation	Related Objective
S3.18	<p><u>Observation:</u> It is acknowledged that the level of detail on the provided drawings is typical for this stage in the design process and does not incorporate details regarding the provision of suitable transition opportunities.</p>	<p>It is recommended that the detailed design drawings provide detail on the transition opportunities to allow the design to be properly audited in the Stage 2 Audit i.e. where off-road routes transition to on-road. It is important to ensure that the transitions are provided in the appropriate locations and meet standards/best practice as outlined in Sustrans Design Manual, TFL's London Cycling Design Standards or Transport Scotland's Cycling by Design e.g. section 6.2.6 of Cycling by Design states:</p> <p>7) "Transitions between cycle lanes and cycleways should be safe, comfortable to use and should minimise delay to cyclists. Cyclists should not be required to negotiate tight angles unless there is a safety reason for reduced speed, and dropped kerbs should be designed flush with the carriageway"; and</p> <p>8) "A cycleway should not feed cyclists onto the carriageway at, or close to, road junctions, as this introduces additional conflicts at the junction. Consideration should be given to providing a cycleway transition onto the carriageway clear of the main junction".</p> <p><b>Designers Response:</b>  <b>To be included at detailed design.</b></p>	3; 9
S3.19	<p><u>Problem:</u> It is noted that the proposed off-road provision terminates just north and south of The Scheme and therefore does not provide particularly good opportunities to connect with communities either side of the A14 route e.g. Fenstanton, Hilton and Conington, and their attractions therein.</p>	<p>It is proposed to consider extending proposed off-road opportunities for NMU's that link with the significant NMU routes in the area e.g. Regional Route 24 through Fen Drayton and Fenstanton. This could be achieved through the provision of a link that extends via Conington Road and the existing A14 underpass (Bridleway 87/18) to the High Street in Fenstanton (Regional Route 24), or alternatively via Hilton Road another existing A14 underpass to the High Street in Fenstanton.</p> <p><b>Designers Response:</b>          Audit recommendation is outside the DCO. HE to confirm further consideration.</p>	4; 5

Ref.	Problem/Observation	Recommendation	Related Objective
S3.20	<u>Problem:</u> The proposed New Barns Lane Bridge (NMU 4.7) is proposed to terminate as it intersects with the existing A14. Therefore this does not provide the necessary opportunities to connect with communities either side of the A14 e.g. Conington with Fen Drayton, and their attractions therein. Also, just to the west of the proposed New Barns Lane Bridge, existing Footpaths (FP 53/2 and FP 86/3) are severed by the existing A14.	It is recommended to connect the proposed New Barns Lane Bridge NMU facilities over the A14 as an alternative to the existing severed footpaths (FP 53/2 and FP 86/3). This could be via the provision of an appropriate NMU crossing across the A14 to connect with PRow 86/3, or by providing additional facilities alongside Cambridge Road, and ultimately with Regional Route 24.  <b>Designers Response:</b>  Audit recommendation is outside the DCO. HE to confirm further consideration.	4; 5
S3.21	<u>Observation:</u> Existing footpaths (FP 87/6, FP 87/14 and FP 53/1) north of Conington would be severed as a result of The Scheme.	It is recommended that the severed footpaths be reconnected via the proposed NMU route along Conington Road. This would require an extension to the proposed scheme north and south of the proposed Conington Road Bridge. Note, Footpaths 87/6 and 87/14 are designated in the context Report as desire lines, implied by the NMU survey results.  <b>Designers Response:</b>  Audit recommendation is outside the DCO. HE to confirm further consideration.	3; 5
S3.22	<u>Observation:</u> The Design Input Statement specifies a route (NMU 4.6) that proposes to connect Conington Road, at the Conington Road junction with Fenstanton Link Road, to the existing footpath, FP 87/6. However, it is not clear that this is illustrated on the provided drawing package.	It is recommended that this route is illustrated on the detailed design drawings, which will perhaps fulfil the recommendation to reconnect the severed footpaths (FP 87/6, FP 87/14 and FP 53/1).  <b>Designers Response:</b>  To be addressed at detailed design Stage. HE to confirm further consideration of reconnecting the severed footpaths.	3; 5
S3.23	<u>Observation:</u> It is observed that a 'B1040 Potton Access Road' is proposed north of The Scheme to connect with the redundant section of the existing B1040. It is noted that no reference is made that this might form part of an NMU route, or if this is an access only route.	It is recommended that that the 'B1040 Potton Access Road' forms part of a route that essentially connects FP 122/10 and FP 87/7, either side of Potton Road.  <b>Designers Response:</b>  Audit recommendation is outside the DCO. HE to confirm further consideration.	3; 5

Ref.	Problem/Observation	Recommendation	Related Objective
S3.24	<p><u>Observation:</u> The level of detail on the provided drawings is typical for this stage in the design process and does not incorporate details on the types of surface.</p>	<p>Information on the proposed surfaces should be provided to allow the Stage 2 Audit to be undertaken appropriately. Note, DMRB HD 39/01 and 'Inclusive Mobility' recommend the need for smooth, slip resistant footway surfaces and suggest what types of surfaces achieve this aim. Guidance on the suitability of a range of surface types for pedestrians, cyclists and equestrians is contained in DMRB TA 91/05, Table 8/1.</p> <p>The British Horse Society also have guidance regarding surfacing with the grip, or lack thereof, between a metal horseshoe and the surface beneath has always been a cause for concern for users of horses. The guidance advises on applying "grit during construction process" and provides a summary of the grading of quartzite grit that has been found to be effective.</p> <p>It is also recommended that the gradients of the off-carriageway facilities meet the standards as outlined in DMRB TA 90/05.</p> <p><b>Designers Response:</b>  <b>To be included at detailed design.</b></p>	8; 9
S3.25	<p><u>Observation:</u> It is observed from the drawings and information provided that there is no evidence of the provision of rest places e.g. seat/perch. It is acknowledged that this aspect may have been disregarded at this stage of the design.</p>	<p>It is recommended that consideration is given to the inclusion of rest places at intervals in line with guidance, set back from any paths, as set out in DfT's Inclusive Mobility.</p> <p><b>Designers Response:</b>            Provision of rest places requires additional width in verge side. Action will be addressed at detailed design stage.</p>	10
S3.26	<p><u>Observation:</u> Following a review of the provided Design drawings it is not evident that any street furniture, such as bollards, will be located such that it is likely to pose a hazard to visually impaired users.</p>	<p>It is recommended that due consideration is given to the location of all street furniture when developing the detailed design i.e. complying with DfT's Inclusive Mobility e.g. the colour of street furniture should contrast with its surroundings.</p> <p><b>Designers Response:</b>  <b>To be included at detailed design.</b></p>	11

Ref.	Problem/Observation	Recommendation	Related Objective
S3.27	<u>Observation:</u> The Drawings provided did not present information on the signing strategy.	<p>It is recommended that details of signing should be prepared ensuring that signs are clear and conspicuous. Sign poles and other street furniture require to be positioned to meet the minimum clearance distances between cycleways and fixed objects. Note, the colour of street furniture is important for visually impaired users and this should contrast with its surroundings (DfT's Inclusive Mobility).</p> <p>Also, an appropriate signing strategy will have to be developed to direct users to local communities and attractions, as well as confirming where the route ends (including advance warning signs) and allowing users to exit at the most appropriate point to use the adjacent network e.g. Bridleways 121/9, 121/10, 121/13, and 87/18; footpaths 87/7 and 87/10; and ultimately to Regional Route 24.</p> <p><b>Designers Response:</b> <b>To be included at detailed design.</b></p>	3; 4; 5; 8; 9
S3.28	<u>Observation:</u> It is noted that the drawings provided do not contain information on the crossfall of the proposed NMU routes.	<p>DMRB TA 90/05 recommends that the values used for footways, as specified in DMRB HD 39/01, are adopted up to a maximum of 5%, as higher values may create manoeuvring difficulties. DMRB TA 90/05 also notes that a 3% crossfall can create difficulties for cyclists when the surface is icy. Inclusive Mobility instead cites that a figure of 2.5% should be regarded as the maximum acceptable.</p> <p>Therefore it is recommended crossfalls on NMU routes should not exceed 2.5%.</p> <p><b>Designers Response:</b> <b>To be included at detailed design.</b></p>	9

## Section 4

3.29. Section 4 of The Scheme incorporates NMU facilities along the widening of the existing A14, extending between Swavesey and Bar Hill, with additional provision across the A14 at Swavesey, Bar Hill and Girton. This generally corresponds with the Highways England observations to the consultation responses (C4) that the existing desire lines for travel from the Cambridge area to Fenstanton/Bar Hill will be catered for by the new NMU corridor planned. As summarised in Table 17, the NMU facilities are split into 23 distinct parts.

- 3.30. NMU 5.1 is proposed to provide a shared pedestrian/cycle/equestrian route that is to be 3.0m wide, with a 1.8m spacing between the carriageway and the NMU facility, and a verge width of 2.0m at the rear of the NMU route. According to the Design Input Statement, this route is proposed to extend along the existing A14, Huntingdon Road from Fenstanton to the Swavesey Junction.
- 3.31. NMU 5.2 is proposed to provide a shared pedestrian/cycle/equestrian route that is to be 3.0m wide, with a 1.8m spacing between the carriageway and the NMU facility, and a verge width of 1.8m at the rear of the NMU route. According to the Design Input Statement, this route is proposed to extend along the proposed local Access Road from Swavesey Junction to Dry Drayton.
- 3.32. At the proposed Swavesey Junction it is proposed to provide a dedicated NMU Bridge (NMU 5.3). This is confirmed in the Design Input Statement as being 4.0m wide, including its approaches on either side of The Scheme, to accommodate pedestrians and cyclists only.
- 3.33. The proposed Robins Lane Bridge (NMU 5.4), establishes a NMU connection between Robins Lane and the proposed NMU route north of the A14 (NMU 5.2). The width of the facility is proposed as 3.0m, with a 0.5m spacing between the carriageway and the NMU facility and a verge width of 0.5m at the rear of the NMU route. This connects the NMU Route either side (NMU 5.5) which has a proposed width of 3.0m, with a 1.8m spacing between the carriageway and the NMU facility and a verge width of 1.8m at the rear of the NMU route.
- 3.34. The Design Input Statement refers to a proposed NMU route (NMU 5.6) formed by the existing Footpath 150/5 from Lolworth connecting with the existing Bridleway 16/1. This is proposed to be a 2.0m wide facility with a 0.5m verge either side. Subsequently it is proposed to provide a 4.5m wide route by diverting the existing Bridleway 16/1 (NMU 5.7) to connect with the route at Bar Hill i.e. NMU 5.10.
- 3.35. NMU 5.8 and NMU 5.9 are noted in the Design Input Statement as being NMU routes between the Local Access Road to the B1050, Hattons Road link, on the south side and north side of Hattons Road link respectively. These are proposed to be 3.0m wide with a 0.5m verge either side. These are proposed to link with: the CCC/Northstowe Developer proposal for a B1050 Bar Hill to Northstowe cycle route; and the CCC/Northstowe Developer proposal for a B1050 Bar Hill to Longstanton cycle route.
- 3.36. The proposed Bar Hill NMU Bridge (NMU 5.10), establishes a dedicated NMU connection over The Scheme between Bar Hill and the B1050 towards Longstanton. This is confirmed in the Design Input Statement as being 4.5m wide to accommodate pedestrian, cyclists and equestrians. It is noted that this will provide a link with the future Northstowe Development which will also be providing a similar bridge, to accommodate pedestrians, cyclists and equestrians, over the Northstowe Local Access Road to the development site.
- 3.37. NMU 5.11 is described in the Design Input Statement as a 3.0m wide shared route with a 1.8m spacing between the carriageway and the NMU facility and a verge width of 1.8m at the rear of the NMU route. This is to extend between the Oakington Road (east) Roundabout and Dry Drayton Bridge. Subsequently the proposed Dry Drayton Bridge will accommodate a contiguous NMU route (5.12), which is confirmed in the Design Input Statement as being 3.0m wide to accommodate pedestrians, cyclists and equestrians, with no spacing between the carriageway and the NMU route or verge width at the rear of the NMU route (consistent with the consultation responses (C3) to provide NMU facilities over Dry Drayton Bridge). In turn NMU 5.13 is proposed to provide a 4.0m wide shared route, between Dry Drayton Bridge and the Oakington Road (west) roundabout, with a 1.8m spacing between the carriageway and the NMU facility and a verge width of 2.0m at the rear of the NMU route.
- 3.38. To the south of the proposed Dry Drayton Bridge it is proposed to provide a NMU route (NMU 5.14 and 5.16) that runs contiguous to a Local Access Route that runs generally parallel with the A14. This shared NMU route runs between the Oakington Road (west) Roundabout to Huntingdon Road, generally with a width of 4.0m and a 1.8m spacing between the carriageway and the NMU facility and a verge width of 2.0m at the rear of the NMU route (note, this route will link with the proposed North West Cambridge development to be accessed from Huntingdon Road). Where the route is straddled by the M11 the route narrows slightly (NMU 5.15) to fit within the existing cross section i.e. with a width of 3.7m, a 0.8m spacing between the carriageway and the NMU facility (with no hard strip), and a verge width of 0.5m at the rear of the NMU route.



- 3.39. From the Local Access Road, the Design Input Statement suggests that an NMU route (NMU 5.17) will be provided along a revised access to the Cambridge City Crematorium. This is proposed to be 2.0m wide with a spacing between the carriageway and the NMU facility of 0.5m, for the use of pedestrians and cyclists. This route partly part of the existing Bridleway 66/12.
- 3.40. NMU 5.18 and 5.19 are described in the Design Input Statement as bridleway links to the existing Bridleway 154/2, which will be severed by The Scheme. These are proposed to be 4.5m wide.
- 3.41. A shared bridleway/accommodation track (NMU 5.20) is proposed to link between Oakington Road (east) Roundabout to Girton Accommodation Bridge to the north/east of the A14. This is proposed to be a 3.5m route with a 1.75m verge on either side. This NMU route, in conjunction with the others proposed to the north of the A14 from Girton to Fenstanton, will likely become part of a significant desire line for NMUs in and out of Cambridge, particularly with proposed developments in the area e.g. North West Cambridge.
- 3.42. The existing Footpath (FP 99/4), which links the Madingley Accommodation Bridge with Girton via the Girton Accommodation Bridge, is to be upgraded to a 2.5m wide shared pedestrian/cycle track (NMU 5.21 and 5.23). At the Girton Accommodation Bridge (NMU 5.22), the width is proposed to be 4.5m with a 1.8m parapet and is specified as a bridleway in the Design Input Statement. These will link with NMU 5.20.
- 3.43. The introduction of the new Local Access Road that extend from Girton to Swavesey creates a NMU corridor enabling connections between existing routes in Cambridge, through Girton, and linking into existing bridleways, which are currently curtailed where they join the northeast side of the A14, and existing footpaths. The route provides connections to Madingley, Girton, Bar Hill, Northstowe (linking with a future developer funded link from Bar Hill to Northstowe) and Swavesey (linking with the recently completed Swavesey to A14 cycleway ). The corridor then continues along the de-trunked section of the A14 to Fenstanton (Section 3B), linking with Regional Route 24 which continues to Huntingdon. As stated in the Context Report, it is considered this corridor will unlock latent demand.

**Table 9 Section 4 Summary**

Ref.	Problem/Observation	Recommendation	Related Objective
S4.1	<p><u>Observation:</u> It is noted that the associated Section 4 drawings have little information incorporated regarding the proposed NMU facilities widths, although information was gleaned from the provided Design Input Statement.</p>	<p>It is recommended that information on the proposed widths, and any other important data, should be provided on the detailed design drawings to allow the Stage 2 Audit to be undertaken appropriately.</p> <p><b>Designers Response:</b>  <b>To be addressed at detailed design stage.</b></p>	-



Ref.	Problem/Observation	Recommendation	Related Objective
S4.2	<p><u>Observation:</u> From the drawing package provided, it is observed that the proposed NMU route (NMU 5.1) along the existing A14 from Fenstanton to the Swavesey Junction only extends to a point approximately midway between Bucking Way Road (Swavesey Junction) and Cambridge Road.</p> <p><u>Observation:</u> It is observed that just east of Cambridge Road (approximately 200m east of its junction with the existing A14) there is an existing bus stop with an associated footway.</p> <p><u>Observation:</u> The proposed NMU 5.1 route would potentially pass in the vicinity of the New Barns Lane associated NMU route (NMU 4.7) on the opposite side of the existing A14.</p>	<p>It is recommended that the detailed design drawings confirm the extents of the proposed NMU route (NMU 5.1) and whether this extends to Fenstanton. If so, this will create an opportunity to link with Regional Route 24. This will also provide the opportunity to connect with Footpath 86/3 and Regional Route 24 via Fen Drayton.</p> <p>Additionally, it is recommended to provide a link between NMU 5.1 and NMU 4.7 i.e. via the provision of a suitable crossing facility across the existing A14.</p> <p><b>Designers Response:</b></p> <p>Audit recommendation is outside the DCO. HE to confirm further consideration.</p>	1; 3; 4; 6; 7; 8
S4.3	<p><u>Observation:</u> It is observed that the MSA Link Road and 'West of New Barns Lane' route have the potential to connect Boxworth Roundabout with New Barns Lane.</p>	<p>It is recommended that consideration is given to the provision of an NMU route between Boxworth Roundabout and New Barns Lane south of The Scheme. However, it is acknowledged that a potential alternative exists alongside the existing A14, assuming New Barns Lane connects with any proposed route between Fenstanton and Swavesey Junction to the north of the A14.</p> <p><b>Designers Response:</b></p> <p>Audit recommendation is outside the DCO. HE to confirm further consideration.</p>	3
S4.4	<p><u>Observation:</u> It is observed that an NMU route is illustrated on the western side of Bucking Way Road, extending south from Bucking Way Road Roundabout. There is no apparent destination for this short route.</p>	<p>It is recommended that additional information is provided at the detailed design stage to determine the purpose of this proposed route.</p> <p><b>Designers Response:</b></p> <p><b>To be addressed at detailed design stage.</b></p>	-
S4.5	<p><u>Observation:</u> It is noted that the proposed Swavesey NMU Bridge (NMU 5.3) will be accommodating pedestrian and cyclists only i.e. not equestrians. It is noted that Bridleways 225/14 and 225/15 are located north of the existing A14, and will be linked by the proposed shared NMU routes between Fenstanton-Swavesey-Bar Hill, while Bridleways 27/1 and 150/1 are located to the south through Boxworth.</p>	<p>It is recommended that consideration is given to the linking of the existing bridleways via the proposed NMU Bridge and an additional shared NMU route south alongside the road to Boxworth.</p> <p><b>Designers Response:</b></p> <p><b>To be addressed at detailed design stage.</b></p>	3

Ref.	Problem/Observation	Recommendation	Related Objective
S4.6	<u>Observation:</u> The proposed Swavesey NMU Bridge (NMU 5.3) is proposed to be 4.0m wide and accommodate pedestrians and cyclists only.	It is recommended that the detailed design drawings provide information, using cross sections, on issues such as: parapet heights; clearance distances to the mainspan parapets; clearance distances between handrails etc., in line with extant guidance.  <b>Designers Response:</b>  <b>To be addressed at detailed design stage</b>	9
S4.7	<u>Observation:</u> It is important that the approach ramps on the proposed Swavesey NMU Bridge do not restrict access by infirm, disabled or other users.	Although no detail of the proposed ramp gradients are available at this stage from the supplied drawings, it will be necessary to ensure that gradients are such that they do not exceed the standards outlined in DfT's Inclusive Mobility. This states that the preferred gradient is 1:20 (5%), with 1:12 (8%) be the absolute maximum acceptable. Also, the supplied drawings do not illustrate provision for landings (rest points), which should be provided at regular intervals to allow people to rest comfortably and safely.  <b>Designers Response:</b>  Gradient is within the specified limits. Detail will be provided in Drawings during the detailed design stage.	9
S4.8	<u>Observation:</u> It is noted that various priority crossings are to be provided on arms of the Bucking Way Road Roundabout and that some of the angles approaching these priority crossings are deemed tight.	It is recommended that all angles should be refined to ease movement and avoid conflicts at the crossing points.  <b>Designers Response:</b>  <b>To be addressed at detailed design stage</b>	9
S4.9	<u>Observation:</u> While the proposed Robins Lane NMU Route (5.4 and 5.5) provide links to NMU 5.2, it is noted that the angle for those wishing to continue westbound (or vice versa) will have to negotiate a particularly tight turn (as shown on Drawing HA528983 – ACJV – HKF – S4_41970 – DR – C – 0010).	It is recommended that all angles should be refined to ease movement and avoid conflicts at the crossing points.  <b>Designers Response:</b>  <b>To be addressed at detailed design stage</b>	9

Ref.	Problem/Observation	Recommendation	Related Objective
S4.10	<u>Observation:</u> The Design Input Statement refers to a proposed NMU route (NMU 5.6) formed by the existing Footpath 150/5 from Lolworth connecting with the existing Bridleway 16/1. Subsequently it is proposed to provide a 4.5m wide route by diverting the existing Bridleway 16/1 (NMU 5.7). These routes are not apparent from the package of drawings provided.	It is recommended that these routes are included on the detailed design drawings, which will provide a route between the proposed Robins Lane NMU facilities to the Bar Hill Junction to the south of the A14.  <b>Designers Response:</b> <b>To be addressed at detailed design stage.</b>	3; 5
S4.11	<u>Observation:</u> The proposed Bar Hill NMU Bridge (NMU 5.10) is proposed to be 4.5m wide and accommodate pedestrians, cyclists and equestrians.	It is recommended that the detailed design drawings provide information, using cross sections, on issues such as: parapet heights; clearance distances to the mainspan parapets; clearance distances between handrails; potential infill installed on the parapet to obscure a horse's view of traffic; etc., in line with extant guidance.  <b>Designers Response:</b> <b>To be addressed at detailed design stage.</b>	9
S4.12	<u>Observation:</u> It is important that the approach ramps on the proposed Bar Hill NMU Bridge (NMU 5.10) do not restrict access by infirm, disabled or other users.	Although no detail of the proposed ramp gradients are available at this stage from the supplied drawings, it will be necessary to ensure that gradients are such that they do not exceed the standards outlined in DfT's Inclusive Mobility. This states that the preferred gradient is 1:20 (5%), with 1:12 (8%) be the absolute maximum acceptable. Also, the supplied drawings do not illustrate provision for landings (rest points), which should be provided at regular intervals to allow people to rest comfortably and safely.  <b>Designers Response:</b> <b>To be addressed at detailed design stage.</b>	9
S4.13	<u>Observation:</u> It is noted from the Design Input Statement that NMU 5.8 and 5.9 are 3.0m wide routes to be provided to link with current CCC/Northstowe Developer cycle route proposals. However, from the drawing package provided it is not clear what the route these proposals take and how they tie in with the CCC/Northstowe Developer proposals.	It is recommended that sufficient detail and annotations are provided on the detailed design drawings to enable the Stage 2 Audit to be undertaken.  <b>Designers Response:</b> <b>To be addressed at detailed design stage.</b>	4

Ref.	Problem/Observation	Recommendation	Related Objective
S4.14	<p><u>Observation:</u> Bridleway 151/10 is severed by The Scheme along the Bar Hill Local Access Road, illustrated on the Public Rights of Way drawings.</p>	<p>It is recommended that an appropriate transition opportunity exists between the proposed NMU route contiguous with the Bar Hill Local Access Road and the current Bridleway 151/10 (linking to Longstanton).</p> <p><b>Designers Response:</b></p> <p>To be addressed at detailed design stage.</p>	3
S4.15	<p><u>Observation:</u> As specified in the Design Input Statement, the proposed Dry Drayton Bridge NMU route (5.12) has no spacing between the carriageway and the NMU route, or verge width at the rear of the NMU route. It is acknowledged that this has been removed to fit within the existing bridge constraints and is therefore not possible to be accommodated.</p>	-	9
S4.16	<p><u>Observation:</u> The NMU provision at the Swavesey Junction requires priority crossings on the arms of the Bucking Way Road Roundabout, incorporating splitter islands. The provided drawings do not provide sufficient detail on widths, tactile paving etc.</p> <p><u>Observation:</u> The NMU provision at the Bar Hill Junction requires crossing the link road and the Bar Hill Local Access Road, both incorporating splitter islands. The provided drawings do not provide sufficient detail on widths, tactile paving etc. Note, the Context Report states that Toucan crossings are planned at the B1050 Junction with the Local Access Road and the crossing to the NMU Bridge.</p> <p><u>Observation:</u> The NMU provision around the Oakington Road (east) Roundabout, north of Dry Drayton Bridge, varies in width in the vicinity of the side road arm crossings, which incorporate splitter islands. The provided drawings do not provide sufficient detail on widths, tactile paving etc.</p> <p><u>Observation:</u> The provided drawing showing the crossing provision at the Oakington Road (west) Roundabout, south of Dry Drayton Bridge, does not provide sufficient detail on widths, tactile paving etc.</p>	<p>Consideration should be given to DMRB TA 91/05, paragraph 6.19 which specifies the preferred crossing width for cyclist refuge islands is 3.0m to 4.0m (2.5m minimum at constrained locations). The length of the refuge should be determined by the frequency and type of use, but should not be less than the width of the connecting cycle facility or less than 2.0m. Tactile surfaces should be provided both at the dropped kerb approach to the crossings and within the refuge itself (as currently illustrated on the provided drawings). Appropriate dimensions should be provided on the detailed design drawings.</p> <p>It is recommended that the proposed splitter islands are designed to accommodate the potential users of the crossings e.g. tandems; parent/prams; cycles towing trailers etc.</p> <p><b>Designers Response:</b></p> <p>Design facilities are as per the design guidelines. Suitability of Splitter Island dimensions for tandems; parent/prams; cycles towing trailers etc. will be addressed during the detailed design stage.</p>	7

Ref.	Problem/Observation	Recommendation	Related Objective
S4.17	<p><u>Observation:</u> It is observed that an NMU route (NMU 5.17) will be provided along a revised access to the Cambridge City Crematorium from the Local Access Road. However, no crossing provision is illustrated on the provided drawings between the Local Access Road NMU Route (NMU 5.14) and the Crematorium NMU provision.</p>	<p>In order to allow the Stage 2 Audit to be undertaken appropriately it is recommended that sufficient detail is provided on the detailed design drawings indicating the type and arrangements of proposed crossing points, including justification for the chosen layout.</p> <p>Note this crossing should accommodate equestrian users as this forms part of the realigned Bridleway 66/12.</p> <p><b>Designers Response:</b> To be addressed at detailed design stage.</p>	3; 7
S4.18	<p><u>Observation:</u> Footpath 99/7 is severed by The Scheme along the Girton Local Access Road.</p>	<p>It is recommended that an appropriate transition opportunity exists between the proposed NMU route contiguous with the Girton Local Access Road and the current Footpath 99/7 (linking to Dry Drayton).</p> <p><b>Designers Response:</b> To be addressed at detailed design stage.</p>	3
S4.19	<p><u>Observation:</u> NMU 5.18 and 5.19 are described in the Design Input Statement as bridleway links to the existing Bridleway 154/2, which will be severed by The Scheme.</p>	<p>These routes are not shown on the provided package of drawings, other than on the Public Rights of Way Drawings, and it is therefore recommended that these proposed NMU routes are shown on the detailed design drawings.</p> <p><b>Designers Response:</b> To be addressed at detailed design stage.</p>	3
S4.20	<p><u>Observation:</u> The proposed Girton Accommodation Bridge (NMU 5.22) is proposed to be 4.5m wide with a 1.8m parapet, and is specified as a bridleway in the Design Input Statement.</p>	<p>It is recommended that the detailed design drawings provide information, using cross sections, on issues such as: clearance distances to the mainspan parapets; clearance distances between handrails etc., in line with extant guidance.</p> <p><b>Designers Response:</b> To be addressed at detailed design stage.</p>	9

Ref.	Problem/Observation	Recommendation	Related Objective
S4.21	<p><u>Observation:</u> It is important that the approach ramps to Girton Accommodation Bridge do not restrict access by infirm, disabled or other users.</p>	<p>Although no detail of the proposed ramp gradients are available at this stage from the supplied drawings, it will be necessary to ensure that gradients are such that they do not exceed the standards outlined in DfT's Inclusive Mobility. This states that the preferred gradient is 1:20 (5%), with 1:12 (8%) be the absolute maximum acceptable. Also, the supplied drawings do not illustrate provision for landings (rest points), which should be provided at regular intervals to allow people to rest comfortably and safely.</p> <p><b>Designers Response:</b>  <b>To be addressed at detailed design stage.</b></p>	9
S4.22	<p><u>Observation:</u> The proposed NMU 5.16 that terminates on Huntingdon Road is proposed to link with a toucan crossing facility is to be provided as part of the North West Cambridge development plans (as identified in Consultation Response C2). This crossing will cater for crossing movements in the vicinity linking NMU routes north and south of Huntingdon Road.</p>	<p>It is recommended that the proposed connections with the proposed Toucan Crossing is provided on the detailed design drawings.</p> <p><b>Designers Response:</b>  <b>To be addressed at detailed design stage.</b></p>	7; 9

Ref.	Problem/Observation	Recommendation	Related Objective
S4.23	<p><u>Observation:</u> The Drawings provided do not present detailed information on the provision of tactile surfaces or dropped kerbs at the proposed crossing points e.g. at the Oakington Road (east) Roundabout, or around Bucking Way Road Roundabout.</p> <p><u>Observation:</u> As stated above, the Context Report states that Toucan crossings are planned at the B1050 Junction with the Local Access Road and the crossing to the NMU Bridge.</p>	<p>It is recommended that reference is made to DfT's Inclusive Mobility and Local Transport Notes 1/95 and 2/95, and DfT Traffic Advisory Leaflet 4/98, for details of the design of dropped kerbs and blister tactile paving for disabled people. Blister paving should be provided at all priority crossing points (providing a tonal contrast, excluding red). It should be noted that DfT recently published a document titled 'Interim changes to the Guidance on the use of Tactile Paving Surfaces', which sought views on provisional changes to the guidance on the use of tactile paving surfaces (consultation now complete).</p> <p>It is recommended that any priority crossings to be incorporated should be an absolute minimum of 2.5m or, in most circumstances, at least as wide as the adjoining facility (the design should consider existing and future demand for each crossing point in determining the appropriate width).</p> <p><b>Designers Response:</b>  <b>To be addressed at detailed design stage.</b></p>	7; 9



Ref.	Problem/Observation	Recommendation	Related Objective
S4.24	<p><u>Observation:</u> It is acknowledged that the level of detail on the provided drawings is typical for this stage in the design process and does not incorporate details regarding the provision of suitable transition opportunities e.g. where the proposed NMU route(s) ends on Oakington Road, south of Dry Drayton Bridge, or on the B1050 north of the Bar Hill Junction.</p> <p><u>Observation:</u> It is noted that the new Swavesey to A14 cycleway<sup>5</sup> is now open with some minor works still to be carried out, such as installing solar stud lighting along the foot and cycleway. The provided drawings illustrate that the proposed NMU route will tie into the existing footway on the east side of Bucking Way Road.</p>	<p>It is recommended that the detailed design drawings provide detail on the transition opportunities to allow the design to be properly audited in the Stage 2 Audit i.e. where off-road routes transition to on-road. It is important to ensure that the transitions are provided in the appropriate locations and meet standards/best practice as outlined in Sustrans Design Manual, TFL's London Cycling Design Standards or Transport Scotland's Cycling by Design e.g. section 6.2.6 of Cycling by Design states:</p> <p>9) "Transitions between cycle lanes and cycleways should be safe, comfortable to use and should minimise delay to cyclists. Cyclists should not be required to negotiate tight angles unless there is a safety reason for reduced speed, and dropped kerbs should be designed flush with the carriageway"; and</p> <p>10) "A cycleway should not feed cyclists onto the carriageway at, or close to, road junctions, as this introduces additional conflicts at the junction. Consideration should be given to providing a cycleway transition onto the carriageway clear of the main junction".</p> <p>It is recommended that due consideration is given to the tie-in with the new Swavesey to A14 cycleway.</p> <p><b>Designers Response:</b></p> <p>The transition recommendations will be addressed in detailed design stage. With regard to the tie-in with the new Swavesey to A14 cycleway, HE/CCC to confirm further consideration.</p>	3; 9

<sup>5</sup> [http://www4.cambridgeshire.gov.uk/info/20020/cycling/128/cycling\\_and\\_pedestrian\\_improvements/2](http://www4.cambridgeshire.gov.uk/info/20020/cycling/128/cycling_and_pedestrian_improvements/2)

Ref.	Problem/Observation	Recommendation	Related Objective
S4.25	<p><u>Observation:</u> The level of detail on the provided drawings is typical for this stage in the design process and does not incorporate details on the types of surface.</p> <p><u>Observation:</u> It is noted that the new Swavesey to A14 cycleway<sup>6</sup> is now open with some minor works still to be carried out, such as installing solar stud lighting along the foot and cycleway. This includes a new surface, kerbs and other infrastructure.</p>	<p>Information on the proposed surfaces should be provided to allow the Stage 2 Audit to be undertaken appropriately. Note, DMRB HD 39/01 and 'Inclusive Mobility' recommend the need for smooth, slip resistant footway surfaces and suggest what types of surfaces achieve this aim. Guidance on the suitability of a range of surface types for pedestrians, cyclists and equestrians is contained in DMRB TA 91/05, Table 8/1.</p> <p>The British Horse Society also have guidance regarding surfacing with the grip, or lack thereof, between a metal horseshoe and the surface beneath has always been a cause for concern for users of horses. The guidance advises on applying "grit during construction process" and provides a summary of the grading of quartzite grit that has been found to be effective.</p> <p>It is also recommended that cognisance is given to the recently opened Swavesey to A14 cycleway and the use of surface materials etc.</p> <p><b>Designers Response:</b> To be addressed at detailed design stage.</p>	9
S4.26	<p><u>Observation:</u> It is observed from the drawings and information provided that there is no evidence of the provision of rest places e.g. seat/perch. It is acknowledged that this aspect may have been disregarded at this stage of the design.</p>	<p>It is recommended that consideration is given to the inclusion of rest places at intervals in line with guidance, set back from any paths, as set out in DfT's Inclusive Mobility.</p> <p><b>Designers Response:</b> To be addressed at detailed design stage.</p>	10
S4.27	<p><u>Observation:</u> Following a review of the provided Design drawings it is not evident that any street furniture, such as bollards, will be located such that it is likely to pose a hazard to visually impaired users.</p>	<p>It is recommended that due consideration is given to the location of all street furniture when developing the detailed design i.e. complying with DfT's Inclusive Mobility e.g. the colour of street furniture should contrast with its surroundings.</p> <p><b>Designers Response:</b> To be addressed at detailed design stage.</p>	11

<sup>6</sup> [http://www4.cambridgeshire.gov.uk/info/20020/cycling/128/cycling\\_and\\_pedestrian\\_improvements/2](http://www4.cambridgeshire.gov.uk/info/20020/cycling/128/cycling_and_pedestrian_improvements/2)

Ref.	Problem/Observation	Recommendation	Related Objective
S4.28	<u>Observation:</u> The Drawings provided did not present information on the signing strategy.	<p>It is recommended that details of signing should be prepared ensuring that signs are clear and conspicuous. Sign poles and other street furniture require to be positioned to meet the minimum clearance distances between cycleways and fixed objects. Note, the colour of street furniture is important for visually impaired users and this should contrast with its surroundings (DfT's Inclusive Mobility).</p> <p>Also, an appropriate signing strategy will have to be developed to direct users to local communities and attractions, as well as confirming where the route ends (including advance warning signs to allow users to exit at the most appropriate point to use the adjacent network).</p> <p><b>Designers Response:</b>  <b>To be addressed at detailed design stage.</b></p>	3; 4; 5; 8; 9
S4.29	<u>Observation:</u> It is noted that the drawings provided do not contain information on the crossfall of the proposed NMU routes.	<p>DMRB TA 90/05 recommends that the values used for footways, as specified in DMRB HD 39/01, are adopted up to a maximum of 5%, as higher values may create manoeuvring difficulties. DMRB TA 90/05 also notes that a 3% crossfall can create difficulties for cyclists when the surface is icy. Inclusive Mobility instead cites that a figure of 2.5% should be regarded as the maximum acceptable.</p> <p>Therefore it is recommended crossfalls on NMU routes should not exceed 2.5%.</p> <p><b>Designers Response:</b>  <b>To be addressed at detailed design stage.</b></p>	9

## Section 5

- 3.44. The NMU facilities proposed within Section 5 of The Scheme is the slight realignment of the existing NMU Route (northbound and southbound) on the B1049, Bridge Road approach to the Histon Junction (NMU 6.1).
- 3.45. As summarised in Table 18, it is proposed to provide a 3.0m wide revised NMU Route in lieu of those being removed as part of some proposed changes to the existing slip road layouts. It is proposed to provide a 1.8m spacing between the carriageway and the path, with a 0.8m verge at the rear of the NMU route. These route connect southbound with the network of NMU routes in Cambridge. It is acknowledged that this will partly deal with the consultation responses received (C5) i.e. ensuring that the safety of NMUs at the junction is not reduced due to widening and that sufficient crossing facilities are provided.

**Table 10 Section 5 Summary**

Ref.	Problem/Observation	Recommendation	Related Objective
S5.1	<p><u>Observation:</u> It is noted that the revised NMU Route north of Histon Junction is proposed to connect with the existing slip road crossings.</p> <p><u>Observation:</u> The Drawings provided do not present information on the provision of tactile surfaces or dropped kerbs at the proposed crossing points.</p>	<p>It is recommended that Toucan crossing facilities are provided conforming to current standards i.e. in terms of width; tactile paving, taking cognisance of DfT's Inclusive Mobility, DfT Local Transport Notes 1/95 and 2/95, and DfT Traffic Advisory Leaflet 4/98.</p> <p>This includes for details of the design of dropped kerbs and blister tactile paving for disabled people. It should be noted that DfT recently published a document titled 'Interim changes to the Guidance on the use of Tactile Paving Surfaces', which sought views on provisional changes to the guidance on the use of tactile paving surfaces (consultation now complete).</p> <p>It is anticipated that this route will see significant NMU flows considering the observed flows recorded on the B1049, south of Histon Junction.</p> <p><b>Designers Response:</b>  <b>To be addressed at detailed design stage.</b></p>	3; 4; 7; 8; 9
S5.2	<p><u>Observation:</u> It is proposed to provide a 1.8m spacing between the carriageway and the path, as specified in Appendix E of the Design Input Statement (Appendix C of this Report).</p>	<p>It is recommended that this is reduced to the preferred width of 1.5m as specified in DMRB TA 90/05, paragraph 7.22. The difference can then be yielded to the NMU route. This assumes that the route is not anticipated to be used by equestrians.</p> <p>It is anticipated that this route will see significant NMU flows considering the observed flows recorded on the B1049, south of Histon Junction.</p> <p><b>Designers Response:</b>            Separation of 1.5m acceptable as specified in DMRB TA 90/05, Paragraph 7.22. The proposed dimensions in the DIS will be confirmed.</p>	9

Ref.	Problem/Observation	Recommendation	Related Objective
S5.3	<p><u>Observation:</u> It is proposed to provide a 0.8m verge at the rear of the NMU route, as specified in Appendix E of the Design Input Statement (Appendix C of this Report).</p>	<p>It is recommended that this is reduced to the preferred width of 0.5m as specified in DMRB TA 90/05, paragraph 7.21. The difference can then be yielded to the NMU route.</p> <p>It is anticipated that this route will see significant NMU flows considering the observed flows recorded on the B1049, south of Histon Junction.</p> <p><b>Designers Response:</b></p> <p>The final verge width depends on the road furniture/and other infrastructure requirement. Action to be addressed in detailed design stage.</p>	9

Ref.	Problem/Observation	Recommendation	Related Objective
S5.4	<p><u>Observation:</u> The northbound provision is marked on Drawing HA528983 – ACJV – HKF – S5_55900 – DR – C – 0006 as “tie into existing footway”. Currently the existing off-road route transitions onto an on-road lane to negotiate the subsequent signalised junction.</p>	<p>It is recommended that consideration is given to maintaining the existing arrangement as far as reasonably practicable.</p> <p>Assuming that there is no intention of altering the arrangement at the Bridge Road/Cambridge Road signalised junction, it is recommended that the detailed design drawings provide information on the transition to allow the design to be properly audited in the Stage 2 Audit i.e. where the off-road route transitions to on-road. It is important to ensure that the transition meets current standards/best practice as outlined in Sustrans Design Manual, TFL’s London Cycling Design Standards or Transport Scotland’s Cycling by Design e.g. section 6.2.6 of Cycling by Design states:</p> <p>11) “Transitions between cycle lanes and cycleways should be safe, comfortable to use and should minimise delay to cyclists. Cyclists should not be required to negotiate tight angles unless there is a safety reason for reduced speed, and dropped kerbs should be designed flush with the carriageway”; and</p> <p>12) “A cycleway should not feed cyclists onto the carriageway at, or close to, road junctions, as this introduces additional conflicts at the junction. Consideration should be given to providing a cycleway transition onto the carriageway clear of the main junction”.</p> <p><b>Designers Response:</b>  <b>To be addressed at detailed design stage.</b></p>	3; 9

Ref.	Problem/Observation	Recommendation	Related Objective
S5.5	<p><u>Observation:</u> The Drawings provided did not present information on the signing strategy.</p>	<p>It is recommended that details of signing should be prepared ensuring that signs are clear and conspicuous. Sign poles and other street furniture require to be positioned to meet the minimum clearance distances between cycleways and fixed objects. Note, the colour of street furniture is important for visually impaired users and this should contrast with its surroundings (DfT's Inclusive Mobility).</p> <p>Also, an appropriate signing strategy will have to be developed to direct users to local communities and attractions, as well as confirming where the route ends (including advance warning signs to allow users to exit at the most appropriate point to use the adjacent network).</p> <p><b>Designers Response:</b>  <b>To be addressed at detailed design stage.</b></p>	3; 4; 5; 8; 9
S5.6	<p><u>Observation:</u> The level of detail on the provided drawings is typical for this stage in the design process and does not incorporate details on the types of surface.</p>	<p>Information on the proposed surfaces should be provided to allow the Stage 2 Audit to be undertaken appropriately. Note, DMRB HD 39/01 and 'Inclusive Mobility' recommend the need for smooth, slip resistant footway surfaces and suggest what types of surfaces achieve this aim. Guidance on the suitability of a range of surface types for pedestrians, cyclists and equestrians is contained in DMRB TA 91/05, Table 8/1.</p> <p>The British Horse Society also have guidance regarding surfacing with the grip, or lack thereof, between a metal horseshoe and the surface beneath has always been a cause for concern for users of horses. The guidance advises on applying "grit during construction process" and provides a summary of the grading of quartzite grit that has been found to be effective.</p> <p>It is also recommended that the gradients of the off-carriageway facilities meet the standards as outlined in DMRB TA 90/05.</p> <p><b>Designers Response:</b>  <b>To be addressed at detailed design stage.</b></p>	9



Ref.	Problem/Observation	Recommendation	Related Objective
S5.7	<u>Observation:</u> It is observed from the drawings and information provided that there is no evidence of the provision of rest places e.g. seat/perch. It is acknowledged that this aspect may have been disregarded at this stage of the design.	It is recommended that consideration is given to the inclusion of rest places at intervals in line with guidance, set back from any paths, as set out in DfT's Inclusive Mobility.  <b>Designers Response:</b> <b>To be addressed at detailed design stage</b>	10
S5.8	<u>Observation:</u> Following a review of the provided Design drawings it is not evident that any street furniture, such as bollards, will be located such that it is likely to pose a hazard to visually impaired users.	It is recommended that due consideration is given to the location of all street furniture when developing the detailed design i.e. complying with DfT's Inclusive Mobility e.g. the colour of street furniture should contrast with its surroundings.  <b>Designers Response:</b> <b>To be addressed at detailed design stage.</b>	11
S5.9	<u>Observation:</u> It is noted that the drawings provided do not contain information on the crossfall of the proposed NMU routes.	DMRB TA 90/05 recommends that the values used for footways, as specified in DMRB HD 39/01, are adopted up to a maximum of 5%, as higher values may create manoeuvring difficulties. DMRB TA 90/05 also notes that a 3% crossfall can create difficulties for cyclists when the surface is icy. Inclusive Mobility instead cites that a figure of 2.5% should be regarded as the maximum acceptable.  Therefore it is recommended crossfalls on NMU routes should not exceed 2.5%.  <b>Designers Response:</b> <b>To be addressed at detailed design stage.</b>	9

## Section 6

- 3.46. Section 6 comprises the proposed arrangement within Huntingdon Town Centre, where significant levels of NMU's were recorded during the NMU surveys. The drawings provide details of The Scheme with NMU routes illustrated with lines only (A14-JAC-ZZ-HT-DR-Z-00001 and A14-JAC-ZZ-HT-DR-Z-00002). Appendix E of the Design Input Statement (Appendix C of this Report) provides additional details on the proposed NMU facilities. In part these proposed facilities aim to deal with the consultation responses received (C7). As summarised in Table 19, the NMU facilities are split into 11 distinct parts.
- 3.47. NMU 7.1 of conveys that a shared route is proposed to be provided across Views Common contiguous with the proposed Views Common Link Road. This is proposed to have a width of 3.0m with a 0.5m spacing between the carriageway and the path and a 1.0m verge to the rear of the route. Where this route deviates from the road network it continues northbound (NMU 7.2), with a width of 3.0m, to link with an existing footpath (133/11). This satisfies the suggestion in the context Report that a more direct link from the ECML underpass/Views Common footpath to Hinchingbrooke Park Road would be desirable.

- 3.48. NMU 7.3 is proposed to provide an off-road shared route on both sides of Hinchingsbrooke Park Road and adjacent to the north side of Brampton Road (NMU 7.4), with a proposed width of 3.0m, a 0.5m spacing between the carriageway and the path, and a 1.0m verge to the rear of the route. This is intended to connect with existing NMU routes in the vicinity, including along Hinchingsbrooke Park Road and Brampton Road.
- 3.49. NMU 7.5 is proposed to be a 3.0m wide shared route north of Brampton Road as it straddles the railway line. As part of a recent upgrade of the Brampton Road/Edison Bell Way junction this provision has already been provided, an improvement for the significant numbers of NMU's recorded on this route at the Context Report stage.
- 3.50. NMU 7.6 is proposed to provide a shared route for pedestrians and cyclists from the Brampton Road signalised junction into Huntingdon Railway Station, on the line of the existing car park access. This is proposed to be 3.0m wide with a 0.5m verge either side.
- 3.51. Mill Common Link is a proposed new road link between Brampton Road and Castle Moat Road/Huntingdon Ring Road, generally following the line of the existing A14. It is proposed to provide an associated shared NMU route on both sides between Brampton Road and the proposed new station access junction (NMU 7.7), connecting with NCN 12 at Edison Bell Way which continues west along Brampton Road (to various trip attractors generators including Hinchingsbrooke Hospital and Brampton Woods) or north to Alconbury. Additionally it is proposed to provide a shared NMU route on the north side of the station access (NMU 7.8). Both NMU 7.7 and 7.8 are proposed to be 3.0m wide with a 0.5m spacing between the carriageway and the path, and a 1.0m verge to the rear of the route. To maintain a connection with the existing NMU route through Mill Common (NCN Route 51) it is proposed to provide a 3.0m wide shared route (NMU 7.9) with a 0.5m spacing between the carriageway and the path, where adjacent to the carriageway.
- 3.52. To the east of Mill Common a revised Castle Moat Road/Huntingdon Ring Road/Princes Street junction is proposed to incorporate a revised shared NMU route matching the existing provision (NMU 7.10). To enhance provision through the Mill Common underpass it is proposed to provide a footway to/from the Castle Moat Road junction and the adjacent NMU route along Castle Moat Road (NMU 7.11). This footway is proposed to be 2.5m wide on the eastern side of the road adjacent to the Mill Common car park.

**Table 11 Section 6 Summary**

Ref.	Problem/Observation	Recommendation	Related Objective
S6.1	<p><u>Observation:</u> Signalised junctions with incorporated 'NMU crossings' are proposed at the Hinchingsbrooke Park Road/Views Common Link junction and the Brampton Road/Hinchingsbrooke Park Road junction, as illustrated on Drawing A14-JAC-ZZ-HT-DR-Z-00001.</p> <p><u>Observation:</u> A signalised NMU crossing is identified at the proposed Station Forecourt junction as illustrated on Drawing A14-JAC-ZZ-HT-DR-Z-00002.</p> <p><u>Observation:</u> A signalised junction with associated NMU crossing is identified at the Castle Moat Road/Mill Common Link junction.</p>	<p>In order to allow the Stage 2 Audit to be undertaken appropriately it is recommended that sufficient detail is provided on the detailed design drawings indicating the type and arrangements of the proposed crossing points, including justification for the chosen layout.</p> <p>As recommended in the Context Report it is suggested that NMU optimised, single stage toucan signalised crossings are incorporated within the proposed signalised junctions to maintain NMU convenience and safety.</p> <p><b>Designers Response:</b> <b>To be addressed at detailed design stage.</b></p>	2; 7

Ref.	Problem/Observation	Recommendation	Related Objective
S6.2	<p><u>Observation:</u> It is noted that Drawing A14-JAC-ZZ-HT-DR-Z-00002 illustrates a shared route (NMU 7.6) into Huntingdon Railway Station, following the line of the existing car park access.</p>	<p>It is recommended that consideration is given to the Gradient of the access to the Station.</p> <p><b>Designers Response:</b>  <b>To be addressed at detailed design stage.</b></p>	9
S6.3	<p><u>Observation:</u> On the provided drawings the proposed NMU route gradients are not provided. It is important that gradients do not restrict access by infirm, disabled or other users.</p> <p>Examples include: the proposed access into Huntingdon Railway Station, which follows the line of the existing car park access; and the gradient of the route as it diverges from Mill Common Link into Mill common.</p>	<p>Although no detail of the proposed gradients are available at this stage from the supplied drawings, it will be necessary to ensure that gradients are such that they do not exceed the standards outlined in DMRB TA 90/05, DMRB HD 39/01 and DfT's Inclusive Mobility. These state that the preferred maximum gradient is 3% for cyclists and 5% for pedestrians with the absolute maximum acceptable being 5% for cyclists and 8% for pedestrians. It is recommended therefore that any shared facility should default to the standards for cyclists.</p> <p>Note, where a route does exceed a gradient of 5% this should be designed as a ramp, and will therefore have to consider the associated implications (see Inclusive Mobility, Section 8.4).</p> <p><b>Designers Response:</b>  <b>To be addressed at detailed design stage.</b></p>	9
S6.4	<p><u>Observation:</u> It is noted that an NMU route is provided on the eastern side of the road leading to the Mill Common underpass as it runs adjacent to the Mill Common Car Park.</p>	<p>It is recommended that where this NMU route terminates that a suitable crossing is provided to link with the NMU route as it continues on the opposite side of the road to the underpass. It is recommended that sufficient detail is provided on the detailed design drawings indicating the type and arrangements of the proposed crossing points, including justification for the chosen layout.</p> <p><b>Designers Response:</b>  <b>To be addressed at detailed design stage.</b></p>	2; 7

Ref.	Problem/Observation	Recommendation	Related Objective
S6.5	<p><u>Observation:</u> The Drawings provided did not present information on the signing strategy.</p>	<p>It is recommended that details of signing should be prepared ensuring that signs are clear and conspicuous. Sign poles and other street furniture require to be positioned to meet the minimum clearance distances between cycleways and fixed objects. Note, the colour of street furniture is important for visually impaired users and this should contrast with its surroundings (DfT's Inclusive Mobility).</p> <p>Also, an appropriate signing strategy will have to be developed to direct users to local communities and attractions, as well as confirming where the route ends (including advance warning signs to allow users to exit at the most appropriate point to use the adjacent network).</p> <p><b>Designers Response:</b>  <b>To be addressed at detailed design stage.</b></p>	3; 4; 5; 8; 9
S6.6	<p><u>Observation:</u> The level of detail on the provided drawings is typical for this stage in the design process and does not incorporate details on the types of surface.</p>	<p>Information on the proposed surfaces should be provided to allow the Stage 2 Audit to be undertaken appropriately. Note, DMRB HD 39/01 and 'Inclusive Mobility' recommend the need for smooth, slip resistant footway surfaces and suggest what types of surfaces achieve this aim. Guidance on the suitability of a range of surface types for pedestrians, cyclists and equestrians is contained in DMRB TA 91/05, Table 8/1.</p> <p>The British Horse Society also have guidance regarding surfacing with the grip, or lack thereof, between a metal horseshoe and the surface beneath has always been a cause for concern for users of horses. The guidance advises on applying "grit during construction process" and provides a summary of the grading of quartzite grit that has been found to be effective.</p> <p>It is also recommended that the gradients of the off-carriageway facilities meet the standards as outlined in DMRB TA 90/05.</p> <p><b>Designers Response:</b>  <b>To be addressed at detailed design stage.</b></p>	2; 9

Ref.	Problem/Observation	Recommendation	Related Objective
S6.7	<u>Observation:</u> It is observed from the drawings and information provided that there is no evidence of the provision of rest places e.g. seat/perch. It is acknowledged that this aspect may have been disregarded at this stage of the design.	It is recommended that consideration is given to the inclusion of rest places at intervals in line with guidance, set back from any paths, as set out in DfT's Inclusive Mobility.  <b>Designers Response:</b> <b>To be addressed at detailed design stage.</b>	10
S6.8	<u>Observation:</u> Following a review of the provided Design drawings it is not evident that any street furniture, such as bollards, will be located such that it is likely to pose a hazard to visually impaired users.	It is recommended that due consideration is given to the location of all street furniture when developing the detailed design i.e. complying with DfT's Inclusive Mobility e.g. the colour of street furniture should contrast with its surroundings.  <b>Designers Response:</b> <b>To be addressed at detailed design stage.</b>	11
S6.9	<u>Observation:</u> It is noted that the drawings provided do not contain information on the crossfall of the proposed NMU routes.	DMRB TA 90/05 recommends that the values used for footways, as specified in DMRB HD 39/01, are adopted up to a maximum of 5%, as higher values may create manoeuvring difficulties. DMRB TA 90/05 also notes that a 3% crossfall can create difficulties for cyclists when the surface is icy. Inclusive Mobility instead cites that a figure of 2.5% should be regarded as the maximum acceptable.  Therefore it is recommended crossfalls on NMU routes should not exceed 2.5%.  <b>Designers Response:</b> <b>To be addressed at detailed design stage.</b>	2; 9

## 4. Next Steps

- 4.1. The scope of the Stage 1 Audit is to determine whether the scheme design has sufficiently met the Design Objectives and demonstrate good practice design principles. These values will also extend to Audit Stages 2 and 3. The Highways Team Leaders must provide all relevant drawings and plans to enable the Cycle Auditor to undertake the Stage 2 Audit.
- 4.2. The Stage 2 Audit will be conducted in accordance with DMRB HD 42/05 and Interim Advice Note 143/11, and any other appropriate sources or relevant advice e.g. DfT publications, "Inclusive Mobility" and "Guidance on the Design of Tactile Paving Surfaces".

# Appendix A. Drawings

KERBS, FOOTWAYS AND PAVED AREAS	Revision
– HA528983 - ACJV - HKF - S1_13450 - DR - C - 0007	P01
– HA528983 - ACJV - HKF - S1_13800 - DR - C - 0008	P01
– HA528983 - ACJV - HKF - S1_14150 - DR - C - 0009	P01
– HA528983 - ACJV - HKF - S1_14500 - DR - C - 0010	P01
– HA528983 - ACJV - HKF - S1_14850 - DR - C - 0011	P01
– HA528983 - ACJV - HKF - S1_15200 - DR - C - 0012	P01
– HA528983 - ACJV - HKF - S1_NEW_EL - DR - C - 0004	P01
– HA528983 - ACJV - HKF - S1_NEW_EL - DR - C - 0005	P01
– HA528983 - ACJV - HKF - S1_SIDE_RD - DR - C - 0002	P01
– HA528983 - ACJV - HKF - S1_SIDE_RD - DR - C - 0003	P01
– HA528983 - ACJV - HKF - S2_20300 - DR - C - 0001	P01
– HA528983 - ACJV - HKF - S2_20650 - DR - C - 0002	P01
– HA528983 - ACJV - HKF - S2_20800 - DR - C - 0003	P01
– HA528983 - ACJV - HKF - S2_21000 - DR - C - 0004	P01
– HA528983 - ACJV - HKF - S2_21350 - DR - C - 0005	P01
– HA528983 - ACJV - HKF - S2_21400 - DR - C - 0006	P01
– HA528983 - ACJV - HKF - S2_21700 - DR - C - 0007	P01
– HA528983 - ACJV - HKF - S2_24150 - DR - C - 0018	P01
– HA528983 - ACJV - HKF - S2_24500 - DR - C - 0019	P01
– HA528983 - ACJV - HKF - S2_B1514 - DR - C - 0001	P01
– HA528983 - ACJV - HKF - S2_B1514 - DR - C - 0002	P01
– HA528983 - ACJV - HKF - S2_B1514 - DR - C - 0003	P01
– HA528983 - ACJV - HKF - S2_B1514 - DR - C - 0004	P01
– HA528983 - ACJV - HKF - S2_GRAFHAM - DR - C - 0001	P01
– HA528983 - ACJV - HKF - S2_GRAFHAM - DR - C - 0002	P01
– HA528983 - ACJV - HKF - S2_GRAFHAM - DR - C - 0003	P01
– HA528983 - ACJV - HKF - S3A_A1198 - DR - C - 0003	P01

<b>KERBS, FOOTWAYS AND PAVED AREAS</b>	<b>Revision</b>
– HA528983 - ACJV - HKF - S3A_A1198 - DR - C - 0004	P01
– HA528983 - ACJV - HKF - S3A_A1198 - DR - C - 0005	P01
– HA528983 - ACJV - HKF - S3A_A1198 - DR - C - 0006	P01
– HA528983 - ACJV - HKF - S3A_B1043 - DR - C - 0002	P01
– HA528983 - ACJV - HKF - S3A_B1043 - DR - C - 0003	P01
– HA528983 - ACJV - HKF - S3A_B1043 - DR - C - 0004	P01
– HA528983 - ACJV - HKF - S3A_SR277 - DR - C - 0003	P01
– HA528983 - ACJV - HKF - S3A_SR287 - DR - C - 0001	P01
– HA528983 - ACJV - HKF - S3A_SR287 - DR - C - 0002	P01
– HA528983 - ACJV - HKF - S3B_32510 - DR - C - 0003	P01
– HA528983 - ACJV - HKF - S3B_33950 - DR - C - 0007	P01
– HA528983 - ACJV - HKF - S3B_35000 - DR - C - 0010	P01
– HA528983 - ACJV - HKF - S3B_35700 - DR - C - 0012	P01
– HA528983 - ACJV - HKF - S3B_36050 - DR - C - 0013	P01
– HA528983 - ACJV - HKF - S3B_37450 - DR - C - 0017	P01
– HA528983 - ACJV - HKF - S3B_B1040 - DR - C - 0001	P01
– HA528983 - ACJV - HKF - S3B_B1040 - DR - C - 0002	P01
– HA528983 - ACJV - HKF - S3B_B1040 - DR - C - 0003	P01
– HA528983 - ACJV - HKF - S3B_B1040 - DR - C - 0004	P01
– HA528983 - ACJV - HKF - S3B_SR323 - DR - C - 0001	P01
– HA528983 - ACJV - HKF - S3B_SR323 - DR - C - 0002	P01
– HA528983 - ACJV - HKF - S3B_SR347 - DR - C - 0001	P01
– HA528983 - ACJV - HKF - S3B_SR347 - DR - C - 0002	P01
– HA528983 - ACJV - HKF - S3B_SR347 - DR - C - 0003	P01
– HA528983 - ACJV - HKF - S3B_SR358 - DR - C - 0001	P01
– HA528983 - ACJV - HKF - S3B_SR358 - DR - C - 0002	P01
– HA528983 - ACJV - HKF - S3B_SR358 - DR - C - 0003	P01
– HA528983 - ACJV - HKF - S3B_SR373 - DR - C - 0001	P01
– HA528983 - ACJV - HKF - S3B_SR373 - DR - C - 0002	P01



<b>KERBS, FOOTWAYS AND PAVED AREAS</b>	<b>Revision</b>
– HA528983 - ACJV - HKF - S4_38850 - DR - C - 0001	P01
– HA528983 - ACJV - HKF - S4_39170 - DR - C - 0002	P01
– HA528983 - ACJV - HKF - S4_39500 - DR - C - 0003	P01
– HA528983 - ACJV - HKF - S4_39850 - DR - C - 0004	P01
– HA528983 - ACJV - HKF - S4_40200 - DR - C - 0005	P01
– HA528983 - ACJV - HKF - S4_40550 - DR - C - 0006	P01
– HA528983 - ACJV - HKF - S4_40900 - DR - C - 0007	P01
– HA528983 - ACJV - HKF - S4_41250 - DR - C - 0008	P01
– HA528983 - ACJV - HKF - S4_41600 - DR - C - 0009	P01
– HA528983 - ACJV - HKF - S4_41970 - DR - C - 0010	P01
– HA528983 - ACJV - HKF - S4_42350 - DR - C - 0011	P01
– HA528983 - ACJV - HKF - S4_42700 - DR - C - 0012	P01
– HA528983 - ACJV - HKF - S4_43050 - DR - C - 0013	P01
– HA528983 - ACJV - HKF - S4_43400 - DR - C - 0014	P01
– HA528983 - ACJV - HKF - S4_43750 - DR - C - 0015	P01
– HA528983 - ACJV - HKF - S4_44100 - DR - C - 0016	P01
– HA528983 - ACJV - HKF - S4_44450 - DR - C - 0017	P01
– HA528983 - ACJV - HKF - S4_44800 - DR - C - 0018	P01
– HA528983 - ACJV - HKF - S4_45150 - DR - C - 0019	P01
– HA528983 - ACJV - HKF - S4_45500 - DR - C - 0020	P01
– HA528983 - ACJV - HKF - S4_45850 - DR - C - 0021	P01
– HA528983 - ACJV - HKF - S4_46200 - DR - C - 0022	P01
– HA528983 - ACJV - HKF - S4_46550 - DR - C - 0023	P01
– HA528983 - ACJV - HKF - S4_47750 - DR - C - 0024	P01
– HA528983 - ACJV - HKF - S4_48050 - DR - C - 0025	P01
– HA528983 - ACJV - HKF - S4_48400 - DR - C - 0026	P01
– HA528983 - ACJV - HKF - S4_48750 - DR - C - 0027	P01
– HA528983 - ACJV - HKF - S4_50300 - DR - C - 0029	P01
– HA528983 - ACJV - HKF - S4_52750 - DR - C - 0032	P01

KERBS, FOOTWAYS AND PAVED AREAS	Revision
- HA528983 - ACJV - HKF - S4_53450 - DR - C - 0036	P01
- HA528983 - ACJV - HKF - S4_53800 - DR - C - 0037	P01
- HA528983 - ACJV - HKF - S4_A1307 - DR - C - 0001	P01
- HA528983 - ACJV - HKF - S4_A1307 - DR - C - 0002	P01
- HA528983 - ACJV - HKF - S4_A1307 - DR - C - 0003	P01
- HA528983 - ACJV - HKF - S4_A1307 - DR - C - 0004	P01
- HA528983 - ACJV - HKF - S4_A1307 - DR - C - 0005	P01
- HA528983 - ACJV - HKF - S4_A1307 - DR - C - 0006	P01
- HA528983 - ACJV - HKF - S4_A1307 - DR - C - 0007	P01
- HA528983 - ACJV - HKF - S4_A1307 - DR - C - 0008	P01
- HA528983 - ACJV - HKF - S4_A1307 - DR - C - 0009	P01
- HA528983 - ACJV - HKF - S4_A1307 - DR - C - 0010	P01
- HA528983 - ACJV - HKF - S4_A1307 - DR - C - 0011	P01
- HA528983 - ACJV - HKF - S4_A1307 - DR - C - 0012	P01
- HA528983 - ACJV - HKF - S4_A1307 - DR - C - 0013	P01
- HA528983 - ACJV - HKF - S4_B1050 - DR - C - 0001	P01
- HA528983 - ACJV - HKF - S4_B1050 - DR - C - 0002	P01
- HA528983 - ACJV - HKF - S4_B1050 - DR - C - 0003	P01
- HA528983 - ACJV - HKF - S4_B1050 - DR - C - 0004	P01
- HA528983 - ACJV - HKF - S4_B1050 - DR - C - 0005	P01
- HA528983 - ACJV - HKF - S4_SR397 - DR - C - 0001	P01
- HA528983 - ACJV - HKF - S4_SR397 - DR - C - 0002	P01
- HA528983 - ACJV - HKF - S4_SR397 - DR - C - 0003	P01
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- HA528983 - ACJV - HKF - S4_SR397 - DR - C - 0006	P01
- HA528983 - ACJV - HKF - S4_SR397 - DR - C - 0007	P01
- HA528983 - ACJV - HKF - S4_SR418 - DR - C - 0001	P01
- HA528983 - ACJV - HKF - S4_SR418 - DR - C - 0002	P01

<b>KERBS, FOOTWAYS AND PAVED AREAS</b>	<b>Revision</b>
- HA528983 - ACJV - HKF - S4_SR418 - DR - C - 0003	P01
- HA528983 - ACJV - HKF - S5_55550 - DR - C - 0005	P01
- HA528983 - ACJV - HKF - S5_55900 - DR - C - 0006	P01
- HA528983 - ACJV - HKF - S5_56250 - DR - C - 0007	P01
- HA528983 - ACJV - HKF - S5_56600 - DR - C - 0008	P01
- HA528983 - ACJV - HKF - S5_56950 - DR - C - 0009	P01
- HA528983 - ACJV - HKF - S5_57300 - DR - C - 0010	P01
- HA528983 - ACJV - HKF - S5_57650 - DR - C - 0011	P01
- HA528983 - ACJV - HKF - S5_58000 - DR - C - 0012	P01
- HA528983 - ACJV - HKF - S5_58145 - DR - C - 0013	P01
- HA528983 - ACJV - HKF - S5_58495 - DR - C - 0014	P01

<b>PUBLIC RIGHTS OF WAY</b>	<b>Revision</b>
- HA528983 - ACJV - HKF - S1_14400 - DR - C - 0050	P01
- HA528983 - ACJV - HKF - S2_21500 - DR - C - 0050	P01
- HA528983 - ACJV - HKF - S2_23150 - DR - C - 0051	P01
- HA528983 - ACJV - HKF - S2_24600 - DR - C - 0052	P01
- HA528983 - ACJV - HKF - S2_26250 - DR - C - 0053	P01
- HA528983 - ACJV - HKF - S2_XX - DR - C - 0054	P01
- HA528983 - ACJV - HKF - S2_XX - DR - C - 0055	P01
- HA528983 - ACJV - HKF - S2_XX - DR - C - 0056	P01
- HA528983 - ACJV - HKF - S2_XX - DR - C - 0057	P01
- HA528983 - ACJV - HKF - S2_XX - DR - C - 0058	P01
- HA528983 - ACJV - HKF - S3A_29550 - DR - C - 0051	P01
- HA528983 - ACJV - HKF - S3A_31446 - DR - C - 0052	P01
- HA528983 - ACJV - HKF - S3A_37800 - DR - C - 0053	P01
- HA528983 - ACJV - HKF - S3A_38670 - DR - C - 0054	P01
- HA528983 - ACJV - HKF - S4_39500 - DR - C - 0050	P01
- HA528983 - ACJV - HKF - S4_42900 - DR - C - 0052	P01

<b>PUBLIC RIGHTS OF WAY</b>	<b>Revision</b>
- HA528983 - ACJV - HKF - S4_44550 - DR - C - 0053	P01
- HA528983 - ACJV - HKF - S4_46150 - DR - C - 0054	P01
- HA528983 - ACJV - HKF - S4_48400 - DR - C - 0055	P01
- HA528983 - ACJV - HKF - S4_53800 - DR - C - 0056	P01
- HA528983 - ACJV - HKF - S5_55350 - DR - C - 0050	P01
- HA528983 - ACJV - HKF - S5_58145 - DR - C - 0052	P01

<b>PROPOSED SCHEME GENERAL ARRANGEMENT HUNTINGDON TOWN CENTRE</b>	<b>Revision</b>
- A14-JAC-ZZ-HT-DR-Z-00001 Rev	P04.2
- A14-JAC-ZZ-HT-DR-Z-00002	P04.2

## Appendix B. Drawings

Table 12 NMU Flows Summary

Ref.	Location	Wednesday 04 June 2014		Sunday 08 June 2014	
		07.00 – 19.00	Peak Hour Flow	07.00 – 19.00	Peak Hour Flow
1	Views Common A14 bridge	762 (21 May)	86 (21 May)	491 (18 May)	66 (18 May)
2	Hinchingbrooke Road – north side of Hinchingbrooke School – pelican crossing; north and south footways; carriageway 2 way classified count	739 (pelican); 1333 (N side); 34 (S side).	315 (pelican); 406 (N side); 10 (S side).		
3	Brampton Road – Hinchingbrooke	241 (NCR); 166 (N/S); 63 (Subway).	31 (NCR); 97 (N/S); 26 (Subway).		
4	Brampton Road – west of Scholars Avenue	1630 (N side)	446 (N side)		
5	Brampton Road – refuge just east of Scholars Avenue	682 (S Side); 607 (Crossing).	170 (S Side); 165 (crossing).		
6	Not Allocated				
7	Brampton Road south side west of station approach junction – stairs into Huntingdon station car park	548	157		
8	Brampton Road/Edison Bell Way/Station Approach Junction.	333 (w arm); 370 (s arm); 857 (n arm); 63 (e arm).	63 (w arm); 99 (s arm); 209 (n arm); 9 (e arm).		
9	Huntingdon station arm at Brampton Road signals	641	120		

Ref.	Location	Wednesday 04 June 2014		Sunday 08 June 2014	
		07.00 – 19.00	Peak Hour Flow	07.00 – 19.00	Peak Hour Flow
10	Huntingdon station – entry from Mill Common	904 (21 May)	125 (21 May)	371 (18 May)	60 (18 May)
11	Huntingdon station car park – south east corner entry from Mill Common (pathway)	30	16	38	8
12	Mill Common underpass	220	31	236	31
13	Princes Street/Castle Moat Road/Mill Common – Castle Moat Road arm (to St Marys Road junction)	270	34		
14	Princes Street/Castle Moat Road/Mill Common – Princes Street arm	18	4		
15	Princes Street/Castle Moat Road/Mill Common – gateway into Mill Common	169 (21 May)	32 (21 May)	61 (18 May)	13 (18 May)
16	Walden Road/The Walks North	771	93		
17	A14 just west of A1 Brampton Hut Junction	0	0		
18	Footpath 10 junction with Hansell Road	39	9	43	8
19	Brampton Road/A1 bridge south of A1/A14 Brampton Hut interchange	3 (BW 19); 21 (NCR).	2 (BW 19); 4 (NCR).	18 (BW 19); 189 (NCR).	4 (BW 19); 27 (NCR).
20	B1514 Buckden Road at junction with byway on north side – just west of A1 bridge	15	4	4	2
21	B1514 Brampton Road – east of A1 – footway on south east side near landfill site entrance	32	5		
22	B1043 Offord Road at access track on west side leading to ECML level crossing	0	0		
23	Silver Street – approx. ½ mile north of Lower Debden Farm access track	34	6		
24	A1198 Ermine Street – just south east of Wood Green Animal Shelter and Beacon Field Equine Centre	16	12		

Ref.	Location	Wednesday 04 June 2014		Sunday 08 June 2014	
		07.00 – 19.00	Peak Hour Flow	07.00 – 19.00	Peak Hour Flow
25	Mere Way – just south of junction with A14	5	4	7	2
26	B1040 Potton Road junction with bridleway on west side approx. ½ mile south of A14 junction	0	0	58	21
27	Hilton Road just north of Oxholme Farm	24	6	196	43
28	FP Fenstanton 14 at junction with Unnamed road south of A14 Fenstanton (Travelodge junction)	0 (FP14); 15 (road).	0 (FP14); 4 (road).	4 (FP14); 163 (road).	1 (FP14); 32 (road).
29	New Barns Lane approx. 100 metres north east of Conington Road/New Barns Lane junction at junction with footpath on north west side	0	0	2	1
30	A14 Swavesey junction – bridge over A14 and main carriageway	47 (Bridge); 2 (Main C/way).	13 (Bridge); 1 (Main C/way).		
31	A14 Bar Hill junction – bridge over A14 and main carriageway	4 (Bridge); 0 (Main C/way).	2 (Bridge); 0 (Main C/way).		
32	Saxon Way - Bar Hill – approx. 100 m south west of Viking Way junction – footpath/bridleway entrance on west side of Saxon Way almost opposite bus stop	83	19	83	15
33	Dry Drayton Road – north side of A14 over-bridge south of slip road junction	36	10		
34 <sup>7</sup>	Madingley accommodation bridge across A428, west of Girton Interchange	433	65	577	84
35	Bridleway Madingley 2 – Bulls Close Underpass	4	4	43	8
36	Girton Grange Accommodation Bridge	38	6	49	9
37	A1307 Huntingdon Road junction with FP Girton 4 (approx. 200 metres south east of A14 over bridge – flow on FP Girton 4.	43	12	43	10

<sup>7</sup> A review of the video surveys revealed that the totals recorded were unreliable.



Ref.	Location	Wednesday 04 June 2014		Sunday 08 June 2014	
		07.00 – 19.00	Peak Hour Flow	07.00 – 19.00	Peak Hour Flow
38	B1049 Cambridge Road South between A14 junction (Histon) and Kings Hedges Road junction	570	123		
39	A1309 Milton Road north of Cowley Road junction	6	2		
40	Cowley Road junction with Jane Coston NMU bridge	1641	272		
41	A14 both carriageways under Jane Coston NMU bridge	0	0		

## Appendix C. NMU Parameters Incorporated into Design

Table 13 NMU features prepared for the design submitted for DCO approval (Section 1)

Audit Ref.	DIS Ref. (App C)	Location	Side of Road	Width of NMU path	Spacing-Carriageway to NMU path (Includes hard strip)	Verge at rear of NMU path	Comments
1.1		Brooklands Lane, Alconbury to Woolley Road	West side of A1	4.5m	varies	N/A	FPD item; bridleway; requires fence screen
1.2		Woolley Road	East	3m	1.8m	2.5m	FPD item; Shared footway/ cycle/equestrian track; Requires fence screen
1.3		Woolley Road to existing A14 north side (west of Brampton Hut)	N/A	4.5m	N/A	N/A	Bridleway

**Table 14 NMU features prepared for the design submitted for DCO approval (Section 2)**

Audit Ref.	DIS Ref. (App C)	Location	Side of Road	Width of NMU path	Spacing-Carriageway to NMU path (Includes hard strip)	Verge at rear of NMU path	Comments
2.1		Existing A14, from west of Brampton Hut Interchange to traffic signalled crossing on west arm of junction	North	3m	1.8 m	3m	Shared footway/ cycle/equestrian track
2.2		A1, Brampton Hut Interchange to Brampton Interchange to Grafham Road	West	4.5 m (2m for pedestrian stairs at A14 bridge)	Generally outside boundary (3.5 m over A14 bridge)	N/A	Bridleway; Requires fence screen where appropriate, including at A14 over bridge; requires 1.8 m parapet on A14 bridge;
2.3		A1 Brampton Interchange to West End, to Grafham Road	East	4.5 m	Generally outside boundary (3.5 m under A14 bridge)	N/A	Bridleway; Requires fence screen where appropriate, including at A14 under bridge.
2.4	A2	Grafham Road Bridge	North	3.0m	1.8m	0.5m	1.8 m parapet on north side
2.5	A2	Grafham Road bridge approaches (links bridleways)	North	3.0 m (2m for pedestrian stairs)	1.8m	1.5 m	

Audit Ref.	DIS Ref. (App C)	Location	Side of Road	Width of NMU path	Spacing-Carriageway to NMU path (Includes hard strip)	Verge at rear of NMU path	Comments
2.6	A3	B1514 Buckden Road (west of roundabout)*	North	3.0m	1.8m	1.5 m	A1under-bridge layout remains as existing*
2.7	A4	B1514 Buckden Road (east of roundabout)	South	3.0 m	1.8m	3.0m	NB MX shows incorrectly on north side
2.8	A5	B1514 Brampton Road south of roundabout	East	3.0m	1.8m	3.0m	1.8 M parapet on east side

**Table 15 NMU features prepared for the design submitted for DCO approval (Section 3A)**

Audit Ref.	DIS Ref. (App C)	Location	Side of Road	Width of NMU path	Spacing-Carriageway to NMU path (Includes hard strip)	Verge at rear of NMU path	Comments
3.1	A6	B1043 Offord Road bridge	East	3.0m	1.8m	0.5m (1.5m on approaches)	1.8 M parapet on east side
3.2	A8	A1198 Ermine Street bridge	East	3.0m	1.8 m	0.5m (1.5m on approaches)	1.8 M parapet on east side

**Table 16 NMU features prepared for the design submitted for DCO approval (Section 3B)**

Audit Ref.	DIS Ref. (App C)	Location	Side of Road	Width of NMU path	Spacing-Carriageway to NMU path (Includes hard strip)	Verge at rear of NMU path	Comments
4.1	A10	B1040 Potton Road bridge	West	3.0m	1.8 m	0.5m (1.5m on approaches)	
4.2	A11	Hilton Road bridge	East	3.0m	1.8 m	0.5m (1.5m on approaches)	1.8 M parapet on east side
4.3	A12	Conington Road Bridge	East	3.0m	1.8 m	0.5m (1.5m on approaches)	1.8 M parapet on east side
4.4		Conington Road (south of bridge)	East	2.0m	N/A	0.5 m each side of path in field	Footway/Footpath
4.5		Conington Road (north of bridge)	East	3.0m	1.8 m	0.5m	Footway/Footpath
4.6		Conington Road/Fenstanton Link Road (from Conington Road to existing FP 87/6)	South	3.0m	1.8 m	0.5m	Footway
4.7	A13	New Barns Lane bridge	West	3.0m	0.5 m	0.5m (1.5m on approaches)	1.8 M parapet on east side
4.8		Bridleway 121/10 diversion (A14 HSB, between A1198 and B1040 bridges)	South side of A14	4.5m	Outside A14 main route	N/A	Bridleway

**Table 17 NMU features prepared for the design submitted for DCO approval (Section 4)**

Audit Ref.	DIS Ref. (App C)	Location	Side of Road	Width of NMU path	Spacing-Carriageway to NMU path (Includes hard strip)	Verge at rear of NMU path	Comments
5.1		Existing A14 - Huntingdon Road, Fenstanton (old alignment from Nursery entrance) to Swavesey junction (east side roundabout)	East	3.0m	1.8m	2.0m	Shared pedestrian/cycle /equestrian track
5.2	A14, A15 & A16	Local Access Road - Swavesey Junction to Dry Drayton (east) roundabout	East	3.0m	1.8m	1.8m	Shared pedestrian/cycle /equestrian track
5.3		Swavesey NMU Bridge	NA	4.0m	-	-	Shared pedestrian/cycle
5.4	A26	Robins Lane bridge	North	3.0m	0.5m	0.5m	
5.5	A26	Robins Lane	North	3.0m	1.8m	1.8 m	
5.6		FP150/5 (Lolworth) to BW 16/1 (Bar Hill) link	West side of A14	2m	-	0.5m each side	
5.7		BW 16/1 (Bar Hill) diversion	West side of A15	4.5 m	-		

Audit Ref.	DIS Ref. (App C)	Location	Side of Road	Width of NMU path	Spacing-Carriageway to NMU path (Includes hard strip)	Verge at rear of NMU path	Comments
5.8		Local Access Road to B1050 Hattons Road link	South side of Hattons Road link	3m	At/near foot of embankment	0.5m each side	To link to Cambridgeshire CC/Northstowe developer proposal for B1050 Bar Hill to Northstowe cycle route
5.9		Local Access Road to B1050 Hattons Road link	North side of Hattons Road link	3m	At/near foot of embankment	0.5m each side	Added at further preliminary design -to link to Cambridgeshire CC/Northstowe developer proposal for B1050 Bar Hill to Longstanton cycle route
5.10		Bar Hill NMU bridge	N/A	4.5m	-	-	Shared pedestrian/cycle/equestrian
5.11		Local Access Road - Oakington Road (east) roundabout to Dry Drayton Bridge	North	3.0m	1.8m	1.8 m	Shared pedestrian/cycle/equestrian
5.12	A18	Dry Drayton Bridge	North	3.0m	-	-	Shared pedestrian/cycle/equestrian



Audit Ref.	DIS Ref. (App C)	Location	Side of Road	Width of NMU path	Spacing-Carriageway to NMU path (Includes hard strip)	Verge at rear of NMU path	Comments
5.13	A17	Local Access Road - Dry Drayton Bridge to Oakington Road (west) roundabout	North	4.0m	1.8m	2.0 m	Shared pedestrian/cycle/equestrian
5.14		Local Access Road - Oakington Road (west) roundabout to M11 bridge	West	4.0m	1.8m	2.0 m	Shared pedestrian/cycle/equestrian
5.15		Local Access Road - Oakington Road (west) roundabout to M11 bridge	West	3.7m	0.8m (no hard strip)	0.5	To fit through existing cross section
5.16		Local Access Road - existing M11 bridge to Huntingdon Road -Girton	West	4.0m	1.8 m	2.0m	To tie into existing path.
5.17	A32	Crematorium access road	South	2.0m	0.5m	-	Shared footway/cycle
5.18		Bridleway link - LAR to existing BW 154/2 - west side of Girton east to north A14 link	West of A14 E to N link	4.5 m	-	-	Bridleway

Audit Ref.	DIS Ref. (App C)	Location	Side of Road	Width of NMU path	Spacing-Carriageway to NMU path (Includes hard strip)	Verge at rear of NMU path	Comments
5.19		Bridleway link - existing BW 154/2 at Madingley Accommodation Bridge, south of A428/A14, and west of M11 to link to existing footpath 154/3	South of A428/A14; West of M11	4.5m	-	-	Bridleway
5.20		Shared bridleway/ accommodation track, Oakington Road (east) roundabout to Girton accommodation Bridge	East of A14	3.5m	N/A	1.75m each side	Verge width from FPD layout
5.21		FP99/4 to Weaver's Field, Girton link	N/A	2.5m	-	-	Conversion of existing footpath to shared pedestrian /cycle track
5.22		Girton Accommodation Bridge	N/A	4.5m	-	-	Bridleway; 1.8 m parapets required

Audit Ref.	DIS Ref. (App C)	Location	Side of Road	Width of NMU path	Spacing-Carriageway to NMU path (Includes hard strip)	Verge at rear of NMU path	Comments
5.23		FP 99/4, Weaver's Field Link to Girton Accommodation Bridge	N/A	2.5m	-	-	Conversion of existing footpath to shared pedestrian /cycle track

**Table 18 NMU features prepared for the design submitted for DCO approval (Section 5)**

Audit Ref.	DIS Ref. (App C)	Location	Side of Road	Width of NMU path	Spacing-Carriageway to NMU path (Includes hard strip)	Verge at rear of NMU path	Comments
6.1		Histon Junction slip road crossing points	West	3.0m	1.8m	0.8m	Revised NMU facilities to cross revised slip road layouts (includes toucan crossings); shared footway/ cycleway

**Table 19 NMU features prepared for the design submitted for DCO approval (Section 6)**

Audit Ref.	DIS Ref. (App C)	Location	Side of Road	Width of NMU path	Spacing-Carriageway to NMU path (Includes hard strip)	Verge at rear of NMU path	Comments
7.1	A33	Views Common Link	East	3.0m	0.5m	1.0m	Shared footway/ Link cycleway
7.2		Views Common Link to FP 133/11 NMU link	East of Views Common Roundabout	3.0m	N/A	N/A	Shared footway/ Link cycleway
7.3	A34	Hinchingbrook Park Road	Both	3.0m	0.5m	1.0m	Shared footway/ Link cycleway
7.4		Brampton Road	North	3.0m	0.5m	1.0m	Shared footway/ Link cycleway
7.5	A35	Brampton Road railway bridge	North	3.0m	-	-	Shared footway/ cycleway
7.6		Station access (Brampton Road junction to car park)	-	3.0m	-	0.5 m (both sides)	On line of existing car park entrance/exit; Shared footway/ cycleway
7.7	A36	Mill Common Link (Brampton Road junction to Station Access Road junction)	Both	3.0 m	0.5m	1.0 m	Shared footway/ cycleway
7.8	A39	Station access road	North	3.0m	0.5m	1.0 m	Shared footway/ cycleway

Audit Ref.	DIS Ref. (App C)	Location	Side of Road	Width of NMU path	Spacing-Carriageway to NMU path (Includes hard strip)	Verge at rear of NMU path	Comments
7.9		Station Access Road/Mill Common Link to Mill Common NMU ramp	East	3.0 m	-(widen to 0.5m where adjacent to carriageway)	-	In cutting- no fence to be provided; Shared footway/ cycleway
7.10	A41	Castle Moat Road/Walden Road Ring Road	South and west	As existing	As existing	As existing	Shared footway/ cycleway
7.11	A42	Mill Common (link from existing road to Castle Moat Road)	East	2.5 m	-	-	Footway