

# A14 Cambridge to Huntingdon Improvement Scheme

## POST CONSTRUCTION AUDIT - AUGUST 2020

### Suitability: S0 Work in Progress

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# 1. Introduction

## Audit System

- 1.1. This post construction Cycle and Accessibility Audit has been conducted predominantly in accordance with the standards and guidance presented in:
- Design Manual for Roads and Bridges (DMRB) *HD 42/05*<sup>1</sup>;
  - DMRB *TA 90/05* and its successor *CD 143*;
  - DMRB *TA 91/05* and its successor *CD 143*; and
  - *Interim Advice Note 195/16*<sup>2</sup> and its successor *CD 195*.
- 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 if 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 post construction Audit follows the preparation and submission of an NMU Context Report by Jacobs U.K. Limited (Jacobs) completed in November 2014, and an Audit completed in May 2016.

## 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 standards and best practice. The scope of this post construction Audit is informed by the Development Consent Order (DCO) boundary as highlighted on the drawings provided by the Highways Teams in previous Audit stages.
- 1.7. Where objectives or standards have not been satisfied this Audit 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.
- 1.8. For each issue raised, the Auditor has provided a recommendation for action that can be undertaken by the Highways Teams to address the issue.

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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. It is acknowledged that *HD 42/05* has been superseded by *CD 143 Walking, Cycling & Horse-Riding Assessment and Review*. However, given previous stages have been completed using the *HD 42/05* requirements, it has been requested that the *HD 42/05* process be used for this post construction Audit.

<sup>2</sup> This document contains the requirements for cycle traffic on the trunk road and motorway network.

## Designer's Response

- 1.9. 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. Where an issue cannot be actioned due to 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.
- 1.10. Responses, collated, reviewed and agreed by the Highways Discipline Lead, have been incorporated in this Report.

## Scheme Description

- 1.11. 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 1–1, 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.



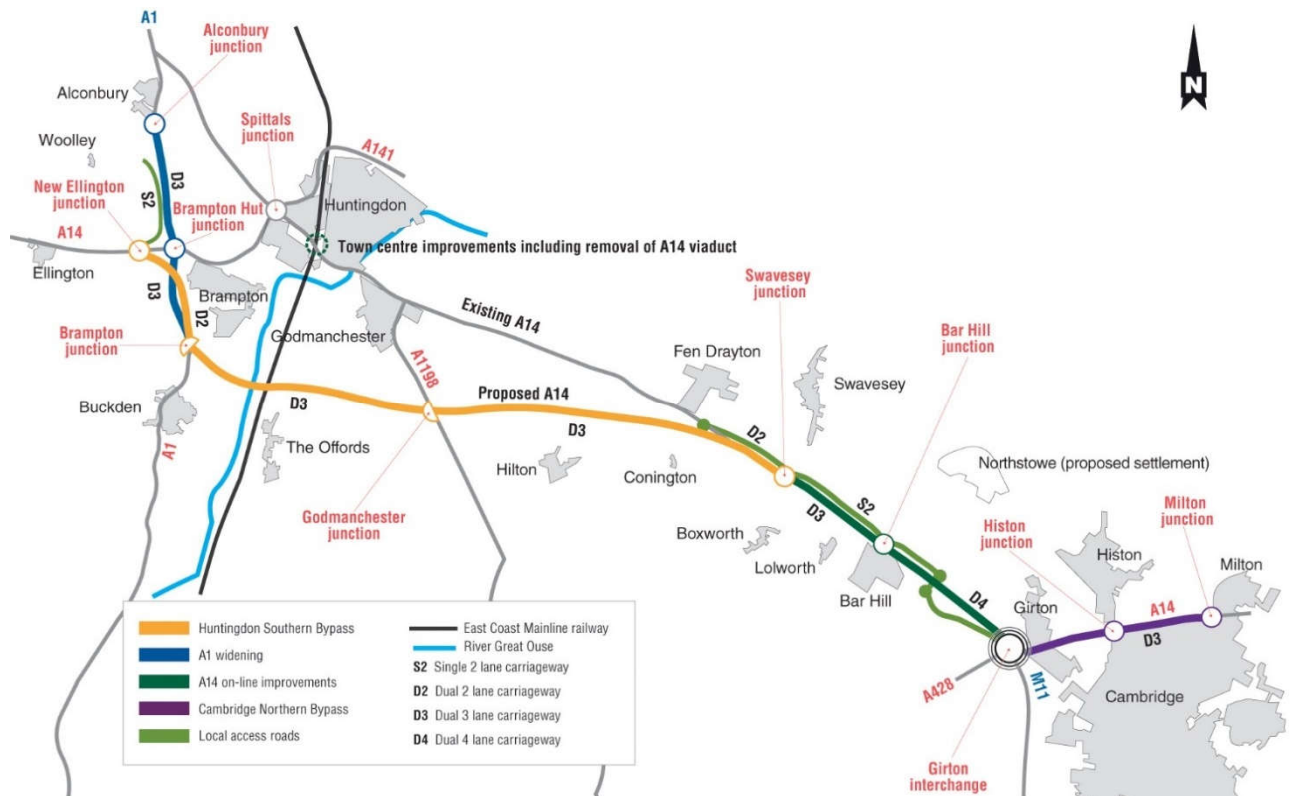


Figure 1-1 Illustrative Plan of the Route

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

## 2. Summary of Prior Audit Stages

### Context Report

2.1. The NMU Context Report was prepared by Jacobs in November 2014 (document ref: A14-JAC-ZZ-XX-RP-C-00001/P01). 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.

2.2. At the time of writing the Context Report, enough progress had been made with the design of The Scheme, and observations were made within the Context Report to the provision of NMU facilities. To help inform the Context Report NMU surveys were carried out during May and June 2014.

2.3. 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".

- 2.4. A broader summary of the Context Report is provided in the 2016 NMU Audit Report (document ref: HA528983-ACJV-GEN-SG\_NMU-RP-C-001).

## 2016 Audit Report

- 2.5. The scope of the 2016 Audit Report focussed on assessing the design against the design objectives, with problems/observations presented to the design teams with appropriate recommendations. The responses from the Highways Discipline Leads were also recorded in the 2016 Audit Report. The main recommendations from the 2016 assessment focussed on the following:
- Connections beyond the DCO;
  - Justification of the proposed width of facilities;
  - Type of fencing and parapet infill;
  - Parapet heights;
  - Need for detailed cross section drawings e.g. to determine headroom, clearance distances etc.;
  - Tight angles;
  - Crossing layouts and widths;
  - Gradients;
  - The layout of transitions between the proposed facilities and the existing carriageway;
  - The composition of the proposed surfaces;
  - The potential requirement for provision of rest places;
  - Due consideration of the proposed location of any street furniture;
  - The need for an appropriate signing strategy; and
  - The recommendation that crossfalls should not exceed 2.5%.

# 3. Objectives

## Design Objectives

- 3.1. Considering the content of the Context Report, the 2016 Report outlined objectives 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. The objectives are provided in Table 2 in Section 4, which also summarises the objectives assessment outcome.
- 3.2. It has been the responsibility of the Highways Team Leaders to ensure that the Design Objectives are incorporated within the design and the responsibility of the Highways Teams to consider what the most appropriate solution, in the context of the wider design constraints.
- 3.3. It is the responsibility of the Auditor to review the infrastructure provided in line with good practice and against the Design Objectives.

# 4. Audit Summary

## NMU Parameters Incorporated into Design

- 4.1. Table 9 to Table 14, attached as Appendix A, 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 1, from the A14 Design Impact Statement (document ref: HA528983-ACJV-HGN-SG-DIS-MS-C-0002), specifies the generic width dimensions, which do not include for edge shyness or spacing from carriageways.

**Table 1 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

- 4.2. It is the responsibility of the Auditor to review the infrastructure designs against the Design Objectives, and in line with guidance and good practice. In line with this role, Table 2 provides a summary assessment of the design comparative to the Design Objectives.
- 4.3. The assessment of the design against the design objectives is illustrative of the observations made during the audit site visits and other information made available by the design team.

**Table 2 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.			✓

Ref.	Objective	Assessment Outcome		
		Not Satisfied	Partly Satisfied	Satisfied
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.			✓

Issues and recommendations are provided in the following sections of this Chapter. The resolution of the recommendations would assist in meeting the related Design Objective(s). Any 'snagging' items e.g. uneven surface, poorly installed service covers, incomplete guardrail etc. have been excluded. It is recommended that the Stage 3 RSA report(s) be referenced in conjunction with this Audit report.


## Section 1


- 4.4. 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. As summarised in Table 9, the NMU facilities are split into 3 distinct parts i.e. NMU references 1.1; 1.2; and 1.3<sup>3</sup>.
- 4.5. NMU 1.1 connects Brooklands Lane, south of Alconbury, with Woolley Road. This is proposed to be located to the west of the A1, providing a link, generally, between Alconbury and Huntingdon Life Sciences, and beyond to Brampton Hut and links thereafter.
- 4.6. NMU 1.2 connects Woolley Road with an area just north of the Brampton Hut Service Area, near where the Local Access Road deviates from the A1 mainline route. This is the continuation of NMU 1.1, located to the west of the A1.
- 4.7. NMU 1.3 is a continuation of NMU 1.2 to Brampton Hut Interchange, located to the west of the A1.
- 4.8. Section 1 also provides links with Section 2 to the south which comprises 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.
- 4.9. 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 NMU routes and associated links effectively removes/reduces these 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 have improved overall.

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<sup>3</sup> Note, the NMU references have been applied to Table 9 to Table 14 within Appendix A 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 3 Section 1 Summary**



Ref.	Photo	Problem/Observation	Recommendation
S1.1		<p><u>Observation:</u> As stated in the 2016 Audit, NMU 1.1 provides a route towards Alconbury, although the design terminates at Brooklands Lane and does not connect with NCN Route 12 and other public rights of way in the vicinity.</p> <p>It is acknowledged that the designer's response to the 2016 Audit confirmed that this is outside the DCO. The termination at Brooklands Lane does present a barrier for users of 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 HE give the provision of a route north to Alconbury consideration, perhaps through Legacy as stated in the designer's response in the 2016 Audit.</p> <p><b>Designer's Response:</b></p>

Ref.	Photo	Problem/Observation	Recommendation
S1.2		<p><u>Observation:</u> It is observed that a public bridleway sign to guide users of the route to Huntingdon and Brampton is provided for the benefit of southbound users and orientated to serve southbound users of the carriageway.</p> <p><u>Problem:</u> It is noted that no tactile paving has been provided at the termination of the route at Brooklands Lane, nor is there any signage advising users of their need to rejoin the carriageway. There does not appear to be onward provision suitable for pedestrians.</p>	<p>It is recommended that appropriate tactile paving and markings (TSRGD Diagram 1023B, 1003B and 1009B) are provided at the appropriate transitions.</p> <p>It is recommended that direction signage and signage advising cycle users to rejoin the carriageway (Diagram 966) is provided where the route connects with Brookland Lane.</p> <p>It is also recommended that warning signs in advance to allow users to exit at the most appropriate point to use the adjacent network, and what users should do at this location.</p> <p><b>Designers Response:</b></p>






Ref.	Photo	Problem/Observation	Recommendation
S1.3		<p><u>Observation:</u> NMU 1.1 is specified as a bridleway. As referenced in Table 1, a bridleway is to have a width of 4.5 m. It was recorded on-site that NMU 1.1 has a width of approximately 3.5 m (first photo) and widening where the route is shared with Highways England maintenance vehicles (second photo). This does not relate to the generic dimensions from the Design Impact Statement.</p> <p>Nevertheless, guidance on the cross-section of a shared NMU facility specifies a preferred minimum width for an unsegregated shared facility as 3.0m.</p>	<p>It is recommended that justification is provided why the proposed width differs from that specified in Table 1, although it is accepted that the proposed width could be deemed appropriate based on guidance.</p> <p><b>Designer's Response:</b></p>
S1.4		<p><u>Observation:</u> It is noted that there is a variable spacing width between NMU 1.1 and the carriageway and is separated by a 1.8 m high close boarded fence.</p>	<p>No recommendation.</p> <p><b>Designers Response:</b></p>

Ref.	Photo	Problem/Observation	Recommendation
S1.5		<p><u>Observation:</u> It is observed that NMU 1.1 is formed partly by a shared route with Highways England maintenance vehicles, extending north from Woolley Road.</p> <p>It is noted that signs to <i>TSRGD</i> Diagram 886 indicating a road ahead where motorists, cyclists and pedestrians should expect to share the same space have been provided at either end of the shared section (see first photo). These signs are reinforced by signs to <i>TSRGD</i> Diagram 956.1, although it is noted that these signs indicate a route for use by pedal cycles, horses and pedestrians only. Therefore, drivers and other users may be confused when encountering each other. Also, Diagram 886 does not include horses.</p> <p>It is noted that direction signs are provided where NMU 1.1 becomes 1.2 (at the connection with Woolley Road) that direct users north to Alconbury and south to Brampton and Huntingdon.</p> <p>It is noted that either end of the shared section of NMU 1.1 is either gated (see first photo) or progress for motor vehicles is prohibited using a bollard and associated sign stating 'no vehicular access'.</p>	<p>It is recommended that consideration is given to designating this a 'quiet lane' and utilising <i>TSRGD</i> Diagram 884 and 885 – designated under section 268 of the Transport Act 2000.</p> <p>Additionally, it is recommended that consideration is given to the best means of reiterating that this section of the route is shared space.</p> <p><b>Designers Response:</b></p>

Ref.	Photo	Problem/Observation	Recommendation
S1.6		<p><u>Observation:</u> It is noted that there is no link provided to the adjacent Huntingdon Life Sciences, via Woolley Road/LAR, which is a trip attractor in this area.</p> <p>If users do cycle on-road and want to connect with the new NMU route (at the connection between NMU 1.1 and 1.2 – see photo), there is no obvious opening to allow users to do this, unless the gate is open.</p>	<p>It is recommended that consideration to providing a comfortable 'transition' between Woolley Road and the NMU route, or consultation undertaken with Huntingdon Life Sciences to establish the feasibility of a direct connection between to the proposed NMU route.</p> <p><b>Designer's Response:</b></p>
S1.7		<p><u>Observation:</u> NMU 1.2 is referenced as a shared footway/cycleway/equestrian track in the drawings and documents provided by the Highways Teams. As specified in Table 1, a shared footway/cycleway/equestrian track is proposed to have a width of 3.0 m. It was recorded on site that the route has a width of approximately 3.5 m, with a verge of approximately 1.6 m between the route and Woolley Road (the spacing between NMU 1.2 and the A14 is significantly wider and separated by a 1.8 m high close boarded fence). The Auditor acknowledges that the route width exceeds the preferred minimum by 0.5 m, with equestrians perhaps served by using the adjacent verge, and is consistent with the widths of adjacent facilities (NMU 1.1 and NMU 1.3).</p> <p>Motor vehicles access to NMU 1.2 is prohibited using a bollard and associated 'no vehicular access' sign.</p>	<p>No recommendation.</p> <p><b>Designers Response:</b></p>



Ref.	Photo	Problem/Observation	Recommendation
S1.8		<p><u>Observation:</u> It is noted that signs to <i>TSRGD</i> Diagram 956.1 are located adjacent to NMU 1.2 indicating a route for use by pedal cycles, horses and pedestrians only.</p>	<p>No recommendation.  <b>Designers Response:</b></p>
S1.9		<p><u>Observation:</u> NMU 1.3 is specified as a bridleway. As referenced in Table 1, a bridleway is to have a width of 4.5 m. It was recorded on-site that NMU 1.3 has a width of approximately 3.5 m (see photos) although the route does narrow over the bridge. The width does not relate to the generic dimensions from the Design Impact Statement.</p> <p>Nevertheless, guidance on the cross-section of a shared NMU facility specifies a preferred minimum width for an unsegregated shared facility as 3.0m., and the width is consistent with the preceding widths of NMU 1.1 and 1.2.</p>	<p>No recommendation.  <b>Designer's Response:</b></p>

Ref.	Photo	Problem/Observation	Recommendation
S1.10		<p><u>Problem:</u> As noted above NMU 1.3 narrows at the bridge over Ellington Brook to approximately 1.5 m. Given the adjacent parapets (height 1.5 m) this reduces the effective width of the route over the bridge to approximately 0.5 m.</p> <p>Further to the narrowing, there is a bollard on the north side of the bridge which could limit access to users of non-standard cycles e.g. tricycles, inclusive cycles, tandems, trailers and trailer bikes, and may also restrict use by equestrians.</p>	<p>It is recommended that the bollard is removed and that signs are added that require users to 'share with care'.</p> <p>Ideally, the bridge should be sufficiently wide, with additional clearance to the parapets, to maintain the effective width of 3.5 m over Ellington Brook.</p> <p><b>Designer's Response:</b></p>
S1.11		<p><u>Observation:</u> NMU 1.3 connects with Section 2 at Brampton Hut Junction.</p>	<p>No recommendation.</p> <p><b>Designer's Response:</b></p>




## Section 2


- 4.10. Section 2 of The Scheme incorporates NMU facilities either side of the A1 extending from Brampton Hut Service Area to Brampton Road. As summarised in Table 10, the NMU facilities are split into 8 distinct parts.
- 4.11. 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 routes via the Roundabout central island with two signal-controlled crossings of the circulatory carriageway. The route is specified as a bridleway with a fence screen provided where appropriate, including at the proposed A14 overbridge.
- 4.12. 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. This is assigned as a bridleway in the Design Input Statement that will require a fence screen where appropriate.
- 4.13. 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 public rights of way (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.
- 4.14. NMU 2.4 defines the Grafham Road Bridge link over the A1, north of the Brampton Interchange. This provides a route north of Grafham Road. 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 is the approach to NMU 2.4 and provides a path linking to the adjacent bridleways.
- 4.15. NMU 2.6, 2.7 and 2.8 define the provision of NMU facilities near 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 and forms part of the NCN Route 12, to the west of the Grafham Road Bridge.




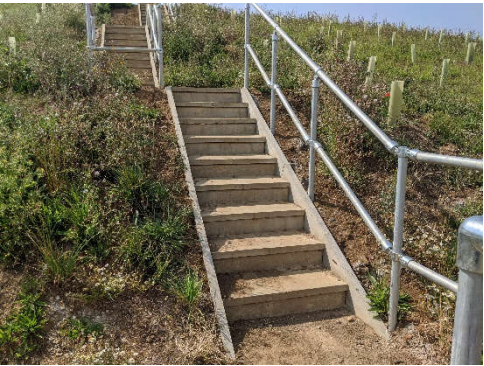
**Table 4 Section 2 Summary**


Ref.	Photo	Problem/Observation	Recommendation
S2.1		<p><u>Observation:</u> It was observed that there are two signal-controlled crossings of the circulatory carriageway, where NMU 2.2 routes via the Roundabout central island, with equestrians separated from pedestrians and cyclists at a parallel equestrian crossing.</p> <p>While it is noted that there is separate crossing provision for equestrians, DMRB states this should be a fenced, grassed holding area of 10.0 m wide by 5.0 m long.</p> <p>It is noted that no high friction surfacing is currently provided on the carriageway to prevent horses from slipping, although it is also noted that the crossings are not currently available for use.</p>	<p>It is recommended, as per DMRB, that the holding area for equestrians should be a fenced, grassed area of 10.0 m wide by 5.0 m long.</p> <p>It is recommended, as per DMRB, that a 10.0m band of high friction surfacing should be provided on the carriageway to prevent horses from slipping, and, where possible, this should be of the same colour as the carriageway.</p> <p>The British Horse Society (BHS) acknowledge that there may be circumstances where a variation from the standard design is appropriate.</p> <p><b>Designers Response:</b></p>
S2.2		<p><u>Problem:</u> It was observed that the dropped kerb upstand at the crossing for pedestrians and cyclists (northern crossing) exceed the permissible tolerance of 6 mm (at approximately 12 mm).</p>	<p>It is recommended that the dropped kerb is checked and altered to be no more than the permissible 6 mm.</p> <p><b>Designers Response:</b></p>



Ref.	Photo	Problem/Observation	Recommendation
S2.3		<p><u>Observation:</u> NMU 2.2 is specified as a bridleway and on-site observations note a route width of approximately 4.5-5.0 m. As referenced in Table 1, a bridleway is proposed to have a width of 4.5 m.</p> <p>It is noted that a wooden post and rail fence is provided across the route with a gap of approximately 1.5-1.6 m (see first photo), assuming to act as a barrier to motor vehicles. This should be sufficiently wide for most cycle vehicle types and should be enough for horse-riders.</p>	<p>No recommendation.</p> <p><b>Designers Response:</b></p>



Ref.	Photo	Problem/Observation	Recommendation
S2.4	 <p>The first photo shows a gravel ramp curving to the right on the western side. The second photo shows a gravel ramp curving to the left on the eastern side, with a black tarp-covered structure in the background. The third photo shows a gravel ramp curving to the right on the eastern side, with a residential area in the background.</p>	<p><u>Observation:</u> As observed in the 2016 Audit, ramps are provided on NMU 2.2 to provide a route for users to reach the A14 Bridge that carries the NMU route over the A1 manline. As noted in the designer's response to the 2016 Audit, the ramps are sinuous to ensure that gradients comply with a maximum of 1:20 (5%).</p> <p>The first and second photos show the route approaching the bridge on the western side, and the third photo shows the route from the bridge on the eastern side.</p>	<p>No recommendation.</p> <p><b>Designers Response:</b></p>



Ref.	Photo	Problem/Observation	Recommendation
S2.5		<p><u>Observation:</u> It was recorded that the route over the bridge was sufficiently wide and is consistent with the route either side of the bridge i.e. approximately 5.0 m. Nevertheless, the parapet and screening fence will reduce the effective width by approximately 0.5 m either side.</p> <p>The fence blocks measurement of spacing between NMU route and carriageway. The Design Input Statement specified a spacing of 3.5 m, exceeding the minimum of 1.8 m specified in guidance. Nevertheless, the 2.0 m high screening fence provides additional protection for equestrian users.</p> <p>A 1.8m parapet is provided on the northern side of the bridge and incorporates an appropriate 1.0 m high infill on the parapet to obscure the horses view of traffic on the carriageway below.</p>	<p>No recommendation.</p> <p><b>Designers Response:</b></p>
S2.6		<p><u>Observation:</u> The steps on the east side of the A1 mainline consists of four flights made up of one flight of 11 steps and three flights of nine steps i.e. never more than the maximum of 12.</p> <p>The steps were recorded as being 900 mm wide, with a tread depth of 360 mm, which exceeds the preferred depth but is greater than the minimum of 250 mm, and a 180 mm riser height, which does marginally exceed the maximum stated in Inclusive Mobility of 170 mm.</p>	<p>It is recommended that due consideration is given to DfT's <i>Inclusive Mobility</i> 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>


Ref.	Photo	Problem/Observation	Recommendation
S2.7		<p><u>Observation:</u> It is observed that public bridleway signs to guide users to Brampton, Brampton Hut, Alconbury and Grafham are provided.</p>	<p>No recommendation.</p> <p><b>Designers Response:</b></p>



Ref.	Photo	Problem/Observation	Recommendation
S2.8	 <p>The top photograph shows a gravel path leading up a grassy embankment towards a road sign. The bottom photograph shows a dirt path running alongside a wooden fence and a road.</p>	<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).</p> <p>However, the underpass and access beyond was closed during the time of the site visit.</p>	<p>It was confirmed previously that the underpass will be 4.0m wide with a headroom height of 3.7m, which would meet current standards and guidance.</p> <p>NMU 2.3 is proposed to be a bridleway, and as referenced in Table 1, a bridleway is proposed to have a width of 4.5 m.</p> <p>It is recommended that confirmation is provided on the underpass and height.</p> <p>It is recommended that confirmation is provided on the width of the route between the underpass and Grafham Road.</p> <p><b>Designers Response:</b></p>
S2.9	 <p>The photograph shows a newly constructed concrete bridleway path running parallel to a road, with a gravel shoulder and a fence on the right side.</p>	<p><u>Observation:</u> It is noted that the the new bridleway provided on the eastern side of the new A14 just south of Brampton Hut Junction extends to Grafham Road Bridge, with signs to guide users.</p>	<p>No recommendation.</p> <p><b>Designers Response:</b></p>


Ref.	Photo	Problem/Observation	Recommendation
S2.10		<p><u>Observation:</u> It is noted that the the new bridleway provided on the western side of the new A14 just south of Brampton Hut Junction extends to Grafham Road Bridge, with signs to guide users.</p>	<p>No recommendation.  <b>Designers Response:</b></p>
S2.11		<p><u>Observation:</u> It was observed that NMU 2.4/2.5 is 3.0 m wide with a 1.8 m separation.</p>	<p>No recommendation.  <b>Designers Response:</b></p>




Ref.	Photo	Problem/Observation	Recommendation
S2.12		<p><u>Problem:</u> It was observed that the parapet on NMU 2.4 is at an appropriate height of 1.8 m.</p> <p>However, it was observed that the parapet did not include the appropriate infill on the parapet to obscure a horse's view of traffic passing beneath the bridge.</p>	<p>It is recommended that an infill is installed on the parapet i.e. a solid panelling fixed to the parapet railings. The British Horse Society guidance advises that the height of the infill should be 1.0 m with an uplift of 25 mm.</p> <p><b>Designers Response:</b></p>
S2.13		<p><u>Problem:</u> It is noted that dropped kerbs are provided where the off-road route (NMU 2.4/2.5) ends either side of Grafham Road Bridge. It is noted that the termination of the off-road route either end of NMU 2.4/2.5 presents a barrier for some users (photo 1 and photo 2 show the western and eastern extents respectively).</p> <p>It is important to ensure that the transitions provided are safe, comfortable to use and minimise delay to cyclists.</p> <p>It is noted that the transition on the western extent of the route is located directly on a junction to a private access. Note current standards and best practice recommend that a cycleway should not feed cyclists onto the carriageway at, or close to, road junctions, as this introduces additional conflicts at the junction.</p>	<p>It is recommended that appropriate tactile paving and markings (TSRGD Diagram 1023B, 1003B and 1009B) are provided at the appropriate transitions.</p> <p>This will likely include the need to warn pedestrians with visual impairments using tactile paving i.e. so they do not continue into oncoming traffic, on the eastern extent of the route.</p> <p>It is recommended that signs advising cycle users to rejoin the carriageway (Diagram 966) are provided as appropriate, with signs to <i>TSRGD</i> Diagram 956.1 on the reverse to advise cyclists transitioning from the carriageway.</p> <p>If the off-road route is to extend beyond the private access junction, appropriate tactile paving shall be provided.</p> <p>It is recommended that an off-road connection is provided between NMU 2.4/2.5 and NMU 2.3.</p> <p><b>Designers Response:</b></p>

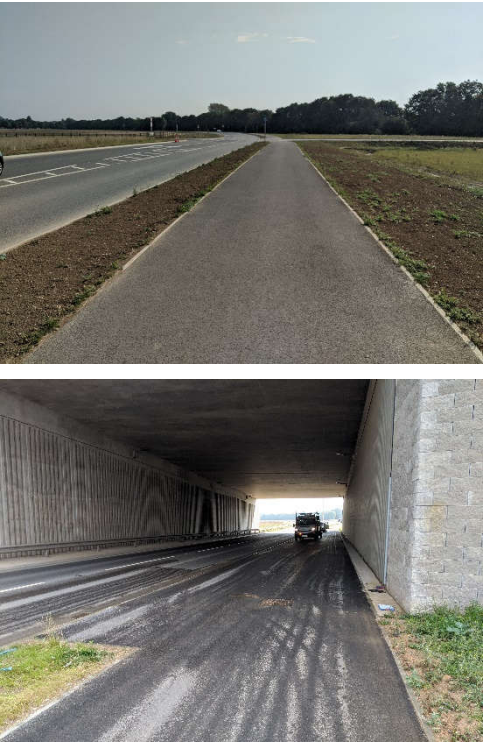

Ref.	Photo	Problem/Observation	Recommendation
S2.14		<p><u>Problem:</u> It is noted that signs to <i>TSRGD</i> Diagram 956.1 are located adjacent to NMU 2.4/2.5 indicating a route for use by pedal cycles, horses and pedestrians only.</p> <p>It is noted that tactile paving has not been provided at the junction shown in the photo.</p>	<p>It is recommended that appropriate tactile paving and markings (<i>TSRGD</i> Diagram 1023B, 1003B and 1009B) are provided.</p> <p><b>Designers Response:</b></p>
S2.15	-	<p><u>Observation:</u> It was noted in the 2016 Audit that steps were proposed to the west of Grafham Road Bridge connecting NMU 2.4/2.5 with NM 2.3. It is noted that these were not constructed as part of the final scheme.</p>	<p>It is recommended that confirmation is if steps were no longer deemed necessary.</p> <p><b>Designers Response:</b></p>
S2.16		<p><u>Observation:</u> On-site observations confirm that NMU 2.6 is 3.0 m wide, which concurs with the preferred minimum width for an unsegregated facility of 3.0 m as expressed in guidance, and a 1.8 m separation, in line with the preferred width in guidance.</p>	<p>No recommendation.</p> <p><b>Designers Response:</b></p>


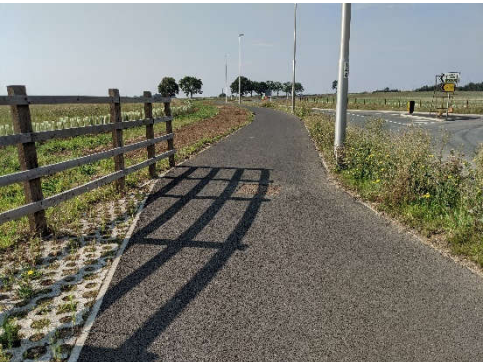
Ref.	Photo	Problem/Observation	Recommendation
S2.17		<p><u>Problem:</u> It is noted that tactile paving has not been provided at the junction shown in the photo.</p>	<p>It is recommended that appropriate tactile paving markings (TSRGD Diagram 1023B, 1003B and 1009B) are provided.</p> <p><b>Designers Response:</b></p>
S2.18		<p><u>Problem:</u> It is noted that a sign advising cycle users to rejoin the carriageway (Diagram 966) and a sign to <i>TSRGD</i> Diagram 956.1 on the reverse are provided as appropriate.</p> <p>However, the on-site audit identified that the transition between the route and the carriageway is still to be completed.</p>	<p>It is recommended that appropriate tactile paving and markings (TSRGD Diagram 1023B, 1003B and 1009B) are provided at the transition.</p> <p>This will likely include the need to warn pedestrians with visual impairments using tactile paving i.e. so they do not continue into oncoming traffic.</p> <p><b>Designers Response:</b></p>

Ref.	Photo	Problem/Observation	Recommendation
S2.19		<p><u>Observation:</u> It is observed that tactile paving and markings have been provided for pedestrian and cycle users crossing the eastern arm of the roundabout.</p> <p>It is noted that the splitter island varies in width, at the crossing, from 2.4 m to 4.2 m. Although at its narrowest it is below the 2.5 m minimum for constrained location, the crossing should be able to accommodate the potential users of the crossing e.g. tandems; parent/prams; cycles towing trailers etc.</p> <p><u>Problem:</u> It was observed that one of the dropped kerb upstands at the crossing for pedestrians and cyclists exceeds the permissible tolerance of 6 mm (at approximately 12 mm).</p>	<p>It is recommended that the dropped kerb upstands are checked and altered to be no more than the permissible 6 mm.</p> <p><b>Designers Response:</b></p>




Ref.	Photo	Problem/Observation	Recommendation
S2.20		<p><u>Observation:</u> It is noted that there is separate crossing provision for equestrians. DMRB states that this should be a fenced, grassed holding area of 10.0 m wide by 5.0 m long.</p>	<p>It is recommended, as per DMRB, that the holding areas for equestrians should be a fenced, grassed area of 10.0 m wide by 5.0 m long.</p> <p>It is recommended, as per DMRB, that a 10.0m band of high friction surfacing should be provided on the carriageway to prevent horses from slipping, and, where possible, this should be of the same colour as the carriageway.</p> <p>The BHS acknowledge that there may be circumstances where a variation from the standard design is appropriate.</p> <p><b>Designers Response:</b></p>

Ref.	Photo	Problem/Observation	Recommendation
S2.21		<p><u>Observation:</u> On-site observations confirm that NMU 2.7 is 3.0 m wide, which concurs with the preferred minimum width for an unsegregated facility of 3.0 m as expressed in guidance, and a 1.8 m separation, in line with the preferred width provided in guidance.</p>	<p>No recommendation.</p> <p><b>Designers Response:</b></p>
S2.22		<p><u>Observation:</u> It is noted that tactile paving has been provided at the junction shown in the photo (access to Station Farm).</p>	<p>It is recommended that appropriate markings (TSRGD Diagram 1023B, 1003B and 1009B) are provided.</p> <p><b>Designers Response:</b></p>

Ref.	Photo	Problem/Observation	Recommendation
S2.23		<p><u>Observation:</u> It is noted that direction signs are provided that direct users to Brampton, Huntingdon, Buckden, The Offords and Brampton Wood.</p> <p>It is noted that signs to <i>TSRGD</i> Diagram 956.1 are located adjacent to NMU 2.7 indicating a route for use by pedal cycles, horses and pedestrians only.</p>	<p>No recommendation.</p> <p><b>Designers Response:</b></p>
S2.24		<p><u>Observation:</u> On-site observations confirm that NMU 2.8 is 3.0 m wide, which concurs with the preferred minimum width for an unsegregated facility of 3.0 m as expressed in guidance, and a 1.8 m separation, in line with the preferred width specified in guidance.</p>	<p>No recommendation.</p> <p><b>Designers Response:</b></p>


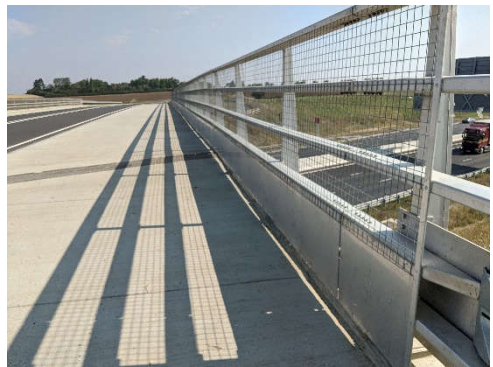


Ref.	Photo	Problem/Observation	Recommendation
S2.25		<p><u>Observation:</u> It is noted that signs to <i>TSRGD</i> Diagram 956.1 are located adjacent to NMU 2.7 indicating a route for use by pedal cycles, horses and pedestrians only.</p> <p>It is noted that tactile paving has been provided at the junction shown in the photo (access to/from emergency/maintenance access from A14).</p> <p>The route extends to connect with existing facilities to Buckden and The Offords.</p>	<p>It is recommended that appropriate markings (<i>TSRGD</i> Diagram 1023B, 1003B and 1009B) are provided.</p> <p><b>Designers Response:</b></p>
S2.26	-	<p><u>Observation:</u> As observed during the 2016 Audit, users are required to negotiate tight angles i.e. circa 90 degrees, at various locations.</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 between users.</p> <p><b>Designers Response:</b></p>


## Section 3A

- 4.16. 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. As summarised in Table 11, the NMU facilities are split into two distinct parts i.e. NMU references 3.1 and 3.2.
- 4.17. The B1043, Offord Road Bridge, located east of Offord Cluny, is proposed to re-establish the connection to the severed Offord Road because of the new Huntingdon Southern Bypass.
- 4.18. The A1198, Ermine Street Bridge, located north of Papworth Everard, is proposed to re-establish the connection to the severed A1198 because of the new Huntingdon Southern Bypass. The NMU route crosses two emergency/maintenance accesses at the roundabouts north and south of the proposed Ermine Street Bridge, utilising priority crossings.


**Table 5 Section 3A Summary**


Ref.	Photo	Problem/Observation	Recommendation
S3.1		<p><u>Observation:</u> On-site observations confirm that NMU 3.1 is 3.0 m wide, which concurs with the preferred minimum width for an unsegregated facility of 3.0 m as expressed in guidance, and a 1.8 m separation, in line with the preferred width specified in guidance.</p>	<p>No recommendation.</p> <p><b>Designers Response:</b></p>
S3.2		<p><u>Problem:</u> It was observed that the parapet on NMU 3.1 is at an appropriate height of 1.8 m.</p> <p>However, it was observed that the parapet did not include the appropriate infill on the parapet to obscure a horse's view of traffic passing beneath the bridge.</p>	<p>It is recommended that an infill is installed on the parapet i.e. a solid panelling fixed to the parapet railings. The British Horse Society guidance advises that the height of the infill should be 1.0 m with an uplift of 25 mm.</p> <p><b>Designers Response:</b></p>



Ref.	Photo	Problem/Observation	Recommendation
S3.3		<p><u>Problem:</u> It is noted that signs to <i>TSRGD</i> Diagram 956.1 are located adjacent to NMU 3.1 indicating a route for use by pedal cycles, horses and pedestrians only.</p> <p>It is noted that tactile paving has not been provided at the junction shown in the photo.</p>	<p>It is recommended that appropriate tactile paving and markings (<i>TSRGD</i> Diagram 1023B, 1003B and 1009B) are provided.</p> <p>It is recommended that the dropped kerb upstands are checked and altered to be no more than the permissible 6 mm.</p> <p><b>Designers Response:</b></p>
S3.4		<p><u>Problem:</u> It is noted that dropped kerbs are provided where the off-road route ends either side of Offord Road Bridge. It is noted that the termination of the off-road route either end presents a barrier for some users.</p> <p>It is important to ensure that the transitions provided are safe, comfortable to use and minimise delay to cyclists.</p>	<p>It is recommended that appropriate tactile paving and markings (<i>TSRGD</i> Diagram 1023B, 1003B and 1009B) are provided at the appropriate transitions.</p> <p>This will likely include the need to warn pedestrians with visual impairments using tactile paving i.e. so they do not continue into oncoming traffic.</p> <p>It is recommended that signs advising cycle users to rejoin the carriageway (Diagram 966) are provided as appropriate, on the reverse of the signs to <i>TSRGD</i> Diagram 956.1 that have been provided to advise cyclists transitioning from the carriageway.</p> <p><b>Designers Response:</b></p>

Ref.	Photo	Problem/Observation	Recommendation
S3.5		<p><u>Observation:</u> On-site observations confirm that NMU 3.2 is 3.0 m wide, which concurs with the preferred minimum width for an unsegregated facility of 3.0 m as expressed in guidance, and a 1.8 m separation, in line with the preferred width specified in guidance.</p>	<p>No recommendation.</p> <p><b>Designers Response:</b></p>



Ref.	Photo	Problem/Observation	Recommendation
S3.6		<p><u>Problem:</u> It was observed that the parapet on NMU 3.2 is at an appropriate height of 1.8 m.</p> <p>However, it was observed that the parapet did not include the appropriate infill on the parapet to obscure a horse's view of traffic passing beneath the bridge.</p>	<p>It is recommended that an infill is installed on the parapet i.e. a solid panelling fixed to the parapet railings. The British Horse Society guidance advises that the height of the infill should be 1.0 m with an uplift of 25 mm.</p> <p><b>Designers Response:</b></p>

Ref.	Photo	Problem/Observation	Recommendation
S3.7		<p><u>Problem:</u> It is noted that tactile paving has not been provided at the junction of the emergency/maintenance accesses from A14 with the A1198, Ermine Street, or at the private access south of the Ermine Street Bridge.</p> <p><u>Problem:</u> It was observed that dropped kerb upstands exceed the permissible tolerance of 6 mm (at approximately 12 mm).</p>	<p>It is recommended that appropriate tactile paving and markings (TSRGD Diagram 1023B, 1003B and 1009B) are provided.</p> <p>It is recommended that the dropped kerb upstands are checked and altered to be no more than the permissible 6 mm.</p> <p><b>Designers Response:</b></p>

Ref.	Photo	Problem/Observation	Recommendation
S3.8		<p><u>Problem:</u> It is noted that signs to <i>TSRGD</i> Diagram 956.1 are located adjacent to NMU 3.1 indicating a route for use by pedal cycles, horses and pedestrians only.</p> <p><u>Observation:</u> It is noted that dropped kerbs are provided where the off-road route ends either side of Ermine Street Bridge. It is noted that the termination of the off-road route either end presents a barrier for some users.</p> <p>It is important to ensure that the transitions provided are safe, comfortable to use and minimise delay to cyclists.</p>	<p>It is recommended that appropriate tactile paving and markings (<i>TSRGD</i> Diagram 1023B, 1003B and 1009B) are provided.</p> <p>This will likely include the need to warn pedestrians with visual impairments using tactile paving i.e. so they do not continue into oncoming traffic.</p> <p>It is recommended that signs advising cycle users to rejoin the carriageway (<i>Diagram 966</i>) are provided as appropriate, on the reverse of the signs to <i>TSRGD</i> Diagram 956.1 that have been provided to advise cyclists transitioning from the carriageway.</p> <p><b>Designers Response:</b></p>
S3.9		<p><u>Observation:</u> It is noted that NMU 3.2 terminates south of Ermine Street Bridge with users having to rejoin the carriageway (A1198) south, or users are signed eastbound to bridleway 121/10 – signed for Hilton.</p> <p>It is not clear if improvements are intended on bridleway 121/10.</p>	<p>It is recommended that confirmation is provided on the intentions for bridleway 121/10, if anything.</p> <p><b>Designers Response:</b></p>



Ref.	Photo	Problem/Observation	Recommendation
S3.10	-	<u>Observation:</u> As observed during the 2016 Audit, users are required to negotiate tight angles i.e. circa 90 degrees, at various locations.	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 between users.  <b>Designers Response:</b>


## Section 3B


- 4.19. 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. As summarised in Table 12, the NMU facilities are split into 8 distinct parts.
- 4.20. The B1040, Potton Road Bridge, located north of Hilton, is proposed to re-establish the connection to the severed St Ives Road because of the new Huntingdon Southern Bypass.
- 4.21. 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 because of the new Huntingdon Southern Bypass (note, based on the NMU survey results summarised in the context Report, up to 200 NMU's were recorded at the weekend on Hilton Road).
- 4.22. The Conington Road Bridge, located north of Conington and south of Fenstanton, is proposed to re-establish the connection to the severed Conington Road because of the new Huntingdon Southern Bypass, with a connecting NMU route to the south on Conington Road, NMU 4.4, and a connecting NMU route to the north on Conington Road, NMU 4.5.
- 4.23. NMU 4.6 is a proposed footway connecting from Conington Road, at the Conington Road junction with Fenstanton Link Road, to the existing footpath (FP 87/6).
- 4.24. The proposed New Barns Lane Bridge (NMU 4.7), located northeast of Conington and south of Fen Drayton, is proposed to re-establish the connection between the New Barns Lane and the existing A14, with New Barns Lane severed because of the new Huntingdon Southern Bypass.
- 4.25. NMU 4.8 is the proposed realignment of the existing Bridleway 121/10 that extends between the A1198 and the B1040 bridges. This route is severed by The Scheme, hence the realignment.




**Table 6 Section 3B Summary**


Ref.	Photos	Problem/Observation	Recommendation
S3.11		<p><u>Observation:</u> On-site observations confirm that NMU 4.1 is 3.0 m wide, which concurs with the preferred minimum width for an unsegregated facility of 3.0 m as expressed in guidance, and a 1.8 m separation, in line with the preferred width specified in guidance.</p>	<p>No recommendation.</p> <p><b>Designers Response:</b></p>
S3.12		<p><u>Problem:</u> It was observed that the parapet on NMU 4.1 is at an appropriate height of 1.8 m.</p> <p>However, it was observed that the parapet did not include the appropriate infill on the parapet to obscure a horse's view of traffic passing beneath the bridge.</p>	<p>It is recommended that an infill is installed on the parapet i.e. a solid panelling fixed to the parapet railings. The British Horse Society guidance advises that the height of the infill should be 1.0 m with an uplift of 25 mm.</p> <p><b>Designers Response:</b></p>

Ref.	Photos	Problem/Observation	Recommendation
S3.13		<p><u>Observation:</u> It is noted that signs to TSRGD Diagram 956.1 are located adjacent to NMU 4.1 indicating a route for use by pedal cycles, horses and pedestrians only.</p> <p><u>Problem:</u> It is noted that tactile paving has not been provided at the side road accesses/junctions, north and south of the B1040, Potton Road Bridge.</p>	<p>It is recommended that appropriate tactile paving and markings (TSRGD Diagram 1023B, 1003B and 1009B) are provided.</p> <p>It is recommended that the dropped kerb upstands are checked and altered, if necessary, to be no more than the permissible 6 mm.</p> <p><b>Designers Response:</b></p>


Ref.	Photos	Problem/Observation	Recommendation
S3.14		<p><u>Problem:</u> It is noted that dropped kerbs are provided where the off-road route ends either side of Potton Road Bridge. It is noted that the termination of the off-road route either end presents a barrier for some users i.e. those uncomfortable with cycling on-road.</p> <p>It is important to ensure that the transitions provided are safe, comfortable to use and minimise delay to cyclists.</p> <p><u>Observation:</u> It is noted that no bridleway signs are provided to direct users to Bridleway 122/14.</p>	<p>It is recommended that appropriate tactile paving and markings (TSRGD Diagram 1023B, 1003B and 1009B) are provided at the appropriate transitions.</p> <p>This will likely include the need to warn pedestrians with visual impairments using tactile paving i.e. so they do not continue into oncoming traffic.</p> <p>It is recommended that signs advising cycle users to rejoin the carriageway (Diagram 966) are provided as appropriate, with signs to <i>TSRGD</i> Diagram 956.1 provided to advise cyclists transitioning from the carriageway.</p> <p>It is recommended that signs directing users to Bridleway 122/14.</p> <p><b>Designers Response:</b></p>



Ref.	Photos	Problem/Observation	Recommendation
S3.15		<p><u>Observation:</u> It is acknowledged that provision has been made to connect the B1040 Potton Access Road to connect with FP 122/10 and FP 87/7, either side of St Ives Road north of Potton Road Bridge.</p> <p><u>Problem:</u> It is noted that tactile paving has not been provided at the uncontrolled crossing of the B1040, St Ives Road that connects FP 122/10 and FP 87/7.</p> <p><u>Observation:</u> It is noted that the surface of the route connecting FP 122/10 and FP 87/7 on the eastern side of the B1040, St Ives Road is unbound.</p>	<p>It is recommended that appropriate tactile paving is provided at the uncontrolled crossing.</p> <p>It is recommended that confirmation be provided as to the chosen surface for the footway connection on the eastern side of the B1040, St Ives Road. It is anticipated that this is to correspond with the surface of the route that continues north.</p> <p><b>Designers Response:</b></p>




Ref.	Photos	Problem/Observation	Recommendation
S3.16		<p><u>Observation:</u> On-site observations confirm that NMU 4.2 is 3.0 m wide, which concurs with the preferred minimum width for an unsegregated facility of 3.0 m as expressed in guidance, and a 1.8 m separation, in line with the preferred width specified in guidance.</p>	<p>No recommendation.</p> <p><b>Designers Response:</b></p>
S3.17		<p><u>Problem:</u> It was observed that the parapet on NMU 4.2 is at an appropriate height of 1.8 m.</p> <p>However, it was observed that the parapet did not include the appropriate infill on the parapet to obscure a horse's view of traffic passing beneath the bridge.</p>	<p>It is recommended that an infill is installed on the parapet i.e. a solid panelling fixed to the parapet railings. The British Horse Society guidance advises that the height of the infill should be 1.0 m with an uplift of 25 mm.</p> <p><b>Designers Response:</b></p>
S3.18		<p><u>Observation:</u> It is noted that signs to TSRGD Diagram 956.1 are located adjacent to NMU 4.1 indicating a route for use by pedal cycles, horses and pedestrians only.</p>	<p>No recommendation.</p> <p><b>Designers Response:</b></p>




Ref.	Photos	Problem/Observation	Recommendation
S3.19		<p><u>Problem:</u> It is noted that tactile paving has not been provided at the side road accesses/junctions, north and south of the Hilton Road Bridge.</p>	<p>It is recommended that appropriate tactile paving and markings (TSRGD Diagram 1023B, 1003B and 1009B) are provided at the appropriate transitions.</p> <p><b>Designers Response:</b></p>

Ref.	Photos	Problem/Observation	Recommendation
S3.20		<p><u>Problem:</u> It is noted that dropped kerbs are provided where the off-road route ends either side of Hilton Road Bridge. It is noted that the termination of the off-road route either end presents a barrier for some users i.e. those uncomfortable with cycling on-road.</p> <p>It is important to ensure that the transitions provided are safe, comfortable to use and minimise delay to cyclists.</p>	<p>It is recommended that appropriate tactile paving and markings (TSRGD Diagram 1023B, 1003B and 1009B) are provided at the appropriate transitions.</p> <p>This will likely include the need to warn pedestrians with visual impairments using tactile paving i.e. so they do not continue into oncoming traffic.</p> <p>It is recommended that signs advising cycle users to rejoin the carriageway (Diagram 966) are provided as appropriate, with signs to <i>TSRGD</i> Diagram 956.1 provided to advise cyclists transitioning from the carriageway.</p> <p><b>Designers Response:</b></p>
S3.21		<p><u>Observation:</u> On-site observations confirm that NMU 4.3 is 3.0 m wide, which concurs with the preferred minimum width for an unsegregated facility of 3.0 m as expressed in guidance, and a 1.8 m separation, in line with the preferred width specified in guidance.</p>	<p>No recommendation.</p> <p><b>Designers Response:</b></p>


Ref.	Photos	Problem/Observation	Recommendation
S3.22		<p><u>Problem:</u> It was observed that the parapet on NMU 4.3 is at an appropriate height of 1.8 m.</p> <p>However, it was observed that the parapet did not include the appropriate infill on the parapet to obscure a horse's view of traffic passing beneath the bridge.</p>	<p>It is recommended that an infill is installed on the parapet i.e. a solid panelling fixed to the parapet railings. The British Horse Society guidance advises that the height of the infill should be 1.0 m with an uplift of 25 mm.</p> <p><b>Designers Response:</b></p>
S3.23		<p><u>Observation:</u> A hardstanding area is observed on NMU 4.3, north of Conington Road Bridge, assumed to be for vehicles.</p>	<p>It is recommended that confirmation is provided as to the purpose of this hardstanding, and, if to be used by vehicles, to provide clarity how this may impact pedestrians, cyclists and equestrians.</p> <p><b>Designers Response:</b></p>
S3.24		<p><u>Observation:</u> On-site observations confirm that NMU 4.4 is 3.0 m wide, which concurs with the preferred minimum width for an unsegregated facility of 3.0 m as expressed in guidance, and a 1.8 m separation, in line with the preferred width specified in guidance.</p>	<p>No recommendation.</p> <p><b>Designers Response:</b></p>


Ref.	Photos	Problem/Observation	Recommendation
S3.25		<p><u>Observation:</u> It is noted that signs to TSRGD Diagram 956.1 are located adjacent to NMU 4.4 indicating a route for use by pedal cycles, horses and pedestrians only.</p> <p><u>Problem:</u> It is noted that tactile paving has not been provided at the side road accesses/junctions south of Conington Road Bridge.</p>	<p>It is recommended that appropriate tactile paving and markings (TSRGD Diagram 1023B, 1003B and 1009B) are provided.</p> <p><b>Designers Response:</b></p>




Ref.	Photos	Problem/Observation	Recommendation
S3.26		<p><u>Problem:</u> It is noted that a dropped kerb is provided where the off-road route ends south of Conington Road Bridge. It is noted that the termination of the off-road route presents a barrier for some users i.e. those uncomfortable with cycling on-road.</p> <p>It is important to ensure that the transition provided is safe, comfortable to use and minimises delay to cyclists.</p>	<p>It is recommended that appropriate tactile paving and markings (TSRGD Diagram 1023B, 1003B and 1009B) are provided at the appropriate transitions.</p> <p>This will likely include the need to warn pedestrians with visual impairments using tactile paving i.e. so they do not continue into oncoming traffic.</p> <p>It is recommended that signs advising cycle users to rejoin the carriageway (Diagram 966) are provided as appropriate, with signs to <i>TSRGD</i> Diagram 956.1 provided to advise cyclists transitioning from the carriageway.</p> <p><b>Designers Response:</b></p>



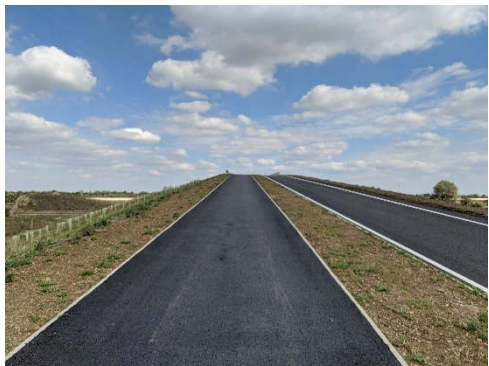


Ref.	Photos	Problem/Observation	Recommendation
S3.27		<p><u>Observation:</u> It is noted that the route connects with a bridleway (to Conington) that continues east of Conington Road at the same location that NMU 4.4 rejoins the carriageway.</p> <p>Appropriate signage is provided.</p>	<p>No recommendation.</p> <p><b>Designers Response:</b></p>

Ref.	Photos	Problem/Observation	Recommendation
S3.28		<p><u>Problem:</u> Similarly, it is noted that the route is signed opposite the emergency/maintenance exit and access from the A14 (authorised vehicles only) on the western side of Conington Road, in combination with signs that connect a permissive footpath to the west of Conington Road and the bridleway to Conington.</p> <p>However, it is noted that no crossing has been provided for users to cross Conington Road at this location.</p>	<p>It is recommended that an appropriate crossing is provided conforming to the appropriate standards that can accommodate all users.</p> <p>Appropriate signage should be provided that warns motor vehicles using the emergency/maintenance exit and access that they are sharing this route with pedestrians, cyclists and equestrians.</p> <p><b>Designers Response:</b></p>


Ref.	Photos	Problem/Observation	Recommendation
S3.29		<p><u>Observation:</u> On-site observations confirm that NMU 4.5 is 3.0 m wide, which concurs with the preferred minimum width for an unsegregated facility of 3.0 m as expressed in in guidance, and a 1.8 m separation, in line with the preferred width specified in guidance.</p>	<p>No recommendation.</p> <p><b>Designers Response:</b></p>
S3.30		<p><u>Observation:</u> It is noted that signs to TSRGD Diagram 956.1 are located adjacent to NMU 4.5 indicating a route for use by pedal cycles, horses and pedestrians only.</p> <p><u>Problem:</u> It is noted that tactile paving has not been provided at the side road accesses/junctions north of Conington Road Bridge.</p>	<p>It is recommended that appropriate tactile paving and markings (TSRGD Diagram 1023B, 1003B and 1009B) are provided.</p> <p><b>Designers Response:</b></p>

Ref.	Photos	Problem/Observation	Recommendation
S3.31		<p><u>Problem:</u> It is noted that a dropped kerb is provided where the off-road route ends north of Conington Road Bridge. It is noted that the termination of the off-road route presents a barrier for some users i.e. those uncomfortable with cycling on-road.</p> <p>It is important to ensure that the transition provided is safe, comfortable to use and minimises delay to cyclists.</p> <p>Note current standards and best practice recommend that “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 appropriate tactile paving and markings (TSRGD Diagram 1023B, 1003B and 1009B) are provided at the appropriate transition.</p> <p>This will likely include the need to warn pedestrians with visual impairments using tactile paving i.e. so they do not continue into oncoming traffic.</p> <p>It is recommended that signs advising cycle users to rejoin the carriageway (Diagram 966) are provided as appropriate, with signs to <i>TSRGD</i> Diagram 956.1 provided to advise cyclists transitioning from the carriageway.</p> <p><b>Designers Response:</b></p>
S3.32	-	<p><u>Problem:</u> No link is provided (NMU 4.6) connecting Conington Road, at the Conington Road junction with Fenstanton Link Road, to the existing footpath FP 87/6.</p> <p>This was proposed to be a 3.0 m wide route with a 1.8 m separation providing the clearance between the NMU route and the carriageway.</p>	<p>It is recommended that this route is provided rather than transitioning users to/from the carriageway directly at the Conington Road junction with Fenstanton Link Road.</p> <p><b>Designers Response:</b></p>



Ref.	Photos	Problem/Observation	Recommendation
S3.33		<p><u>Observation:</u> On-site observations confirm that NMU 4.7 is 3.0 m wide, which concurs with the preferred minimum width for an unsegregated facility of 3.0 m as expressed in guidance, and a separation that exceeds the 0.5 m specified in the design.</p>	<p>No recommendation.</p> <p><b>Designers Response:</b></p>
S3.34		<p><u>Problem:</u> It was observed that the parapet on NMU 4.7 is at an appropriate height of 1.8 m.</p> <p>However, it was observed that the parapet did not include the appropriate infill to obscure a horse's view of traffic passing beneath the bridge.</p>	<p>It is recommended that an infill is installed on the parapet i.e. a solid panelling fixed to the parapet railings. The British Horse Society guidance advises that the height of the infill should be 1.0 m with an uplift of 25 mm.</p> <p><b>Designers Response:</b></p>
S3.35		<p><u>Problem:</u> It is noted that tactile paving has not been provided at the side road accesses/junctions north of Conington Road Bridge.</p>	<p>It is recommended that appropriate tactile paving and markings (TSRGD Diagram 1023B, 1003B and 1009B) are provided.</p> <p><b>Designers Response:</b></p>



Ref.	Photos	Problem/Observation	Recommendation
S3.36		<p><u>Problem:</u> It is noted that a dropped kerb is provided where the off-road route ends north and south of New Barns Lane Bridge. It is noted that the termination of the off-road route may present a barrier for some users i.e. those uncomfortable with cycling on-road.</p> <p>It is important to ensure that the transition provided is safe, comfortable to use and minimises delay to cyclists.</p> <p><u>Observation:</u> It is noted that signs to TSRGD Diagram 956.1 are located adjacent to NMU 4.7 indicating a route for use by pedal cycles, horses and pedestrians only.</p> <p><u>Problem:</u> It is observed that NMU 4.7 connects with a narrow 1.2 m wide footway that continues along the A1307 (A14 de-trunked). As stated in the earlier audit, this does not provide the opportunity for all users to connect with communities either side of the A1307 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.</p>	<p>It is recommended that appropriate tactile paving and markings (TSRGD Diagram 1023B, 1003B and 1009B) are provided at the appropriate transitions.</p> <p>This will likely include the need to warn pedestrians with visual impairments using tactile paving i.e. so they do not continue into oncoming traffic.</p> <p>It is recommended that signs advising cycle users to rejoin the carriageway (Diagram 966) are provided as appropriate.</p> <p>It is recommended that an appropriate connection is considered that connects New Barns Lane Bridge NMU facilities over the A1307. This could be via the provision of an appropriate NMU crossing to connect with PRoW 86/3. The designer's response to the earlier audit did note that this was outside the DCO, and that HE were to confirm further consideration.</p> <p><b>Designers Response:</b></p>

Ref.	Photos	Problem/Observation	Recommendation
S3.37	-	<p><u>Observation:</u> NMU 4.8 is the realignment of the existing Bridleway 121/10 between the A1198 and the B1040 bridges (between Ermine Street and Mere Way). The existing route is severed by The Scheme, hence the proposed realignment. This is specified in the Design Input statement as 4.5 m wide.</p> <p>It is not clear if improvements are intended on bridleway 121/10.</p>	<p>It is recommended that confirmation is provided on the intentions for bridleway 121/10, if anything.</p> <p><b>Designers Response:</b></p>
S3.38	-	<p><u>Observation:</u> As observed during the 2016 Audit, users are required to negotiate tight angles i.e. circa 90 degrees, at various locations.</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 between users.</p> <p><b>Designers Response:</b></p>

## Section 4



- 4.26. 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. As summarised in Table 13, the NMU facilities are split into 23 distinct parts.
- 4.27. NMU 5.1 is proposed to provide a shared pedestrian/cycle/equestrian route extending along the existing A14, Huntingdon Road from Fenstanton to the Swavesey Junction.
- 4.28. NMU 5.2 is proposed to provide a shared pedestrian/cycle/equestrian route extending along the proposed local Access Road from Swavesey Junction to Dry Drayton.
- 4.29. At the proposed Swavesey Junction it is proposed to provide a dedicated NMU Bridge (NMU 5.3) to accommodate pedestrians and cyclists only.
- 4.30. 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). This is connected with side by side NMU Route 5.5.
- 4.31. NMU 5.6 is formed by the existing Footpath 150/5 from Lolworth connecting with the existing Bridleway 16/1 which is diverted (NMU 5.7) to connect with the route at Bar Hill (NMU 5.10).
- 4.32. NMU 5.8 and NMU 5.9 are routes between the Local Access Road to the B1050, Hattons Road link, on the west side and east side of Hattons Road link respectively. These are proposed to link with the CCC/Northstowe Developer proposal for a B1050 Bar Hill to Northstowe cycle route and a B1050 Bar Hill to Longstanton cycle route respectively.
- 4.33. 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 accommodates pedestrian, cyclists and equestrians and provides 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.
- 4.34. NMU 5.11 is a shared route extending between the Oakington Road (east) Roundabout and Dry Drayton Bridge. Subsequently the proposed Dry Drayton Bridge accommodates a contiguous NMU route (5.12) that accommodates pedestrians, cyclists and equestrians. In turn NMU 5.13 provides a shared route between Dry Drayton Bridge and the Oakington Road (west) roundabout.
- 4.35. To the south of the Dry Drayton Bridge NMU route (NMU 5.14, 5.15 and 5.16) 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 (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.
- 4.36. NMU 5.17 provides a revised access to the Cambridge City Crematorium. This route is part of the existing Bridleway 66/12.
- 4.37. NMU 5.18 and 5.19 are bridleway links to the existing Bridleway 154/2, which is severed by The Scheme.
- 4.38. A shared bridleway/accommodation track (NMU 5.20) links the Oakington Road (east) Roundabout to Girton Accommodation Bridge to the north/east of the A14. This NMU route, in conjunction with the others proposed to the north of the A14 from Girton to Fenstanton, is likely to be 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.
- 4.39. NMU 5.21 and 5.23, an existing Footpath (FP 99/4), link the Madingley Accommodation Bridge with Girton via the Girton Accommodation Bridge (NMU 5.22). These link with NMU 5.20.



- 4.40. The introduction of the new Local Access Road that extends 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). As stated in the Context Report, it is considered this corridor will unlock latent demand.


**Table 7 Section 4 Summary**

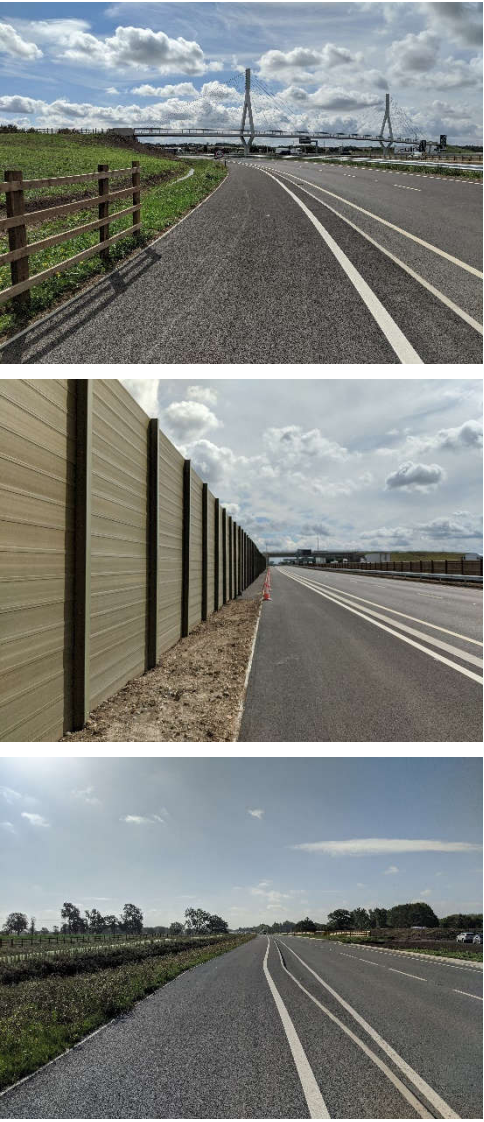
Ref.	Photos	Problem/Observation	Recommendation
S4.1		<p><u>Problem:</u> It is noted that no dropped kerb is provided where the off-road route (NMU 5.1) begins/terminates on the de-trunked A14, east of New Barns Lane Bridge and west of the Swavesey Junction. It is noted that the termination of the off-road route presents a barrier for some users i.e. those uncomfortable with cycling on-road.</p> <p>It is important to ensure that the transition provided is safe, comfortable to use and minimises delay to cyclists.</p> <p>It was understood that this route was to extend along the existing A14, Huntingdon Road from Fenstanton to the Swavesey Junction. However, on site observations show that the route terminates between New Barns Lane Bridge and the Swavesey Junction.</p>	<p>It is recommended that a dropped kerb is provided to enable users to transition from the road.</p> <p>It is recommended that appropriate tactile paving and markings (TSRGD Diagram 1023B, 1003B and 1009B) are provided at the appropriate transitions. This will likely include the need to warn pedestrians with visual impairments using tactile paving i.e. so they do not continue into oncoming traffic.</p> <p>It is recommended that signs advising cycle users to rejoin the carriageway (Diagram 966) are provided as appropriate, with signs to <i>TSRGD</i> Diagram 956.1 provided to advise cyclists transitioning from the carriageway.</p> <p>The 2016 Audit recommended opportunities to link NMU 5.1 with: Regional Route 24; Footpath 86/3; and Regional Route 24, via Fen Drayton, as well as providing a link between NMU 5.1 and NMU 4.7 i.e. via the provision of a suitable crossing facility across the existing A14. It is recommended that confirmation is provided as to the omission of these links, particularly the extension of the route to link with New Barns Lane Bridge.</p> <p><b>Designers Response:</b></p>




Ref.	Photos	Problem/Observation	Recommendation
S4.2		<p><u>Observation:</u> On-site observations confirm that NMU 5.1 is 3.0 m wide, which concurs with the preferred minimum width for an unsegregated facility of 3.0 m as expressed in guidance, and a 1.8 m separation (including hardstrip), in line with the preferred width specified in guidance.</p>	<p>No recommendation.</p> <p><b>Designers Response:</b></p>
S4.3		<p><u>Observation:</u> It is noted that signs to TSRGD Diagram 956.1 are located adjacent to NMU 5.1 indicating a route for use by pedal cycles, horses and pedestrians only.</p> <p><u>Problem:</u> It is noted that tactile paving has not been provided at the side road access.</p>	<p>It is recommended that appropriate tactile paving and markings (TSRGD Diagram 1023B, 1003B and 1009B) are provided.</p> <p>It is recommended that the dropped kerb upstands are checked and altered, if necessary, to be no more than the permissible 6 mm.</p> <p><b>Designers Response:</b></p>

Ref.	Photos	Problem/Observation	Recommendation
S4.4		<p><u>Observation:</u> It is observed that tactile paving has been provided for pedestrian and cycle users crossing arms of the roundabout between NMU route 5.1 and 5.2 at the Swavesey Junction.</p>	<p>It is recommended that the dropped kerb upstands are checked and altered to be no more than the permissible 6 mm.</p> <p><b>Designers Response:</b></p>
S4.5		<p><u>Observation:</u> It is noted that the appropriate markings for pedestrian and cycle users has not been provided across the Bucking Way Road, Anderson Road or Local Access Road arms of the roundabout.</p>	<p>It is recommended that the appropriate markings are provided at the dropped kerb crossings intended for use by pedestrian and cycle users.</p> <p><b>Designers Response:</b></p>



Ref.	Photos	Problem/Observation	Recommendation
S4.6		<p><u>Observation:</u> It is observed that the NMU route illustrated on the western side of Bucking Way Road, extending south from Bucking Way Road Roundabout leads to a bus stop. However, this potentially can mislead cyclists to cross at the roundabout approach arm.</p>	<p>It is recommended that additional information is provided to cyclists, potentially via signage.</p> <p><b>Designers Response:</b></p>


Ref.	Photos	Problem/Observation	Recommendation
S4.7		<p><u>Observation:</u> On-site observations confirm that NMU 5.2 is 3.0 m wide, which concurs with the preferred minimum width for an unsegregated facility of 3.0 m as expressed in guidance, and a 1.8 m separation (including hardstrip), in line with the preferred width specified in guidance.</p>	<p>No recommendation.</p> <p><b>Designers Response:</b></p>




Ref.	Photos	Problem/Observation	Recommendation
S4.8	 <p>The first photograph shows a road junction with a signpost on the left. The second and third photographs show similar junctions from different angles, highlighting the lack of tactile paving on the side road surfaces.</p>	<p><u>Problem:</u> It is noted that tactile paving has not been provided at the various side road accesses/junctions on NMU 5.2 between Swavesey Junction and Dry Drayton.</p>	<p>It is recommended that appropriate tactile paving and markings (TSRGD Diagram 1023B, 1003B and 1009B) are provided.</p> <p>It is recommended that the dropped kerb upstands are checked and altered, if necessary, to be no more than the permissible 6 mm.</p> <p><b>Designers Response:</b></p>

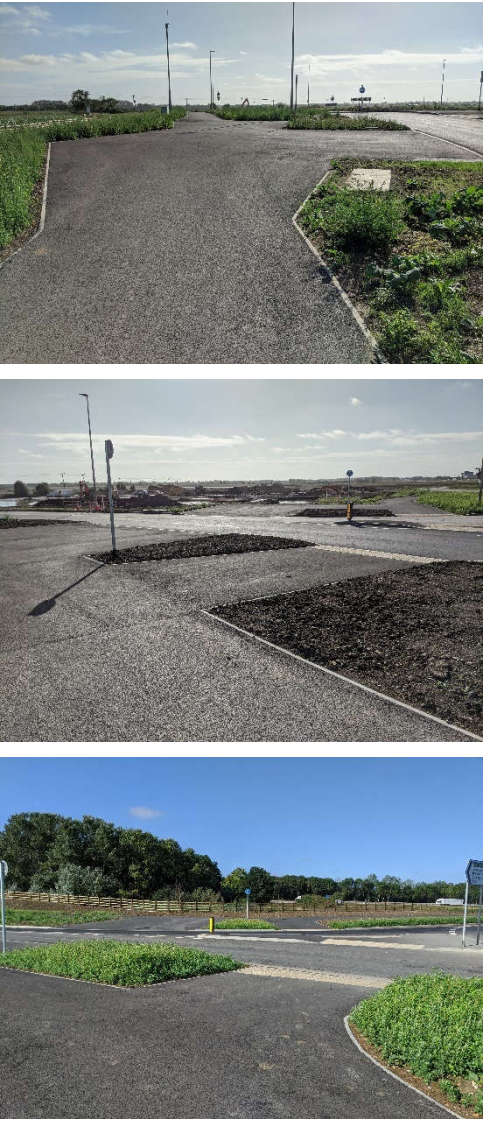




Ref.	Photos	Problem/Observation	Recommendation
S4.9		<p><u>Observation:</u> It is acknowledged that Swavesey NMU Bridge (NMU 5.3) is not to accommodate equestrians. As noted in the 2016 Audit, Bridleways 225/14 (just west of Swavesey Junction and 225/15 (see photo) are located north of the existing A14 and are linked by the NMU 5.1 and 5.2.</p>	<p>No recommendation.  <b>Designers Response:</b></p>
S4.10		<p><u>Observation:</u> It is noted that signs to TSRGD Diagram 956.1 are located adjacent to NMU 5.2 indicating a route for use by pedal cycles, horses and pedestrians only.</p>	<p>No recommendation.  <b>Designers Response:</b></p>

Ref.	Photos	Problem/Observation	Recommendation
S4.11		<p><u>Problem:</u> It is observed that there is a signal-controlled crossing where NMU 5.2 intersects the link road between the A1307 and the B1050, Hattons Road at Bar Hill Junction, with equestrians separated from pedestrians and cyclists at a parallel equestrian crossing.</p> <p>While it is noted that there is separate crossing provision for equestrians, DMRB states this should be a fenced, grassed holding area of 10.0 m wide by 5.0 m long.</p> <p>It is noted that no high friction surfacing is currently provided on the carriageway to prevent horses from slipping, although it is also noted that the crossings are not currently available for use.</p>	<p>It is recommended, as per DMRB, that the holding area for equestrians should be a fenced, grassed area of 10.0 m wide by 5.0 m long.</p> <p>It is recommended, as per DMRB, that a 10.0m band of high friction surfacing should be provided on the carriageway to prevent horses from slipping, and, where possible, this should be of the same colour as the carriageway.</p> <p>The BHS acknowledge that there may be circumstances where a variation from the standard design is appropriate.</p> <p><b>Designers Response:</b></p>


Ref.	Photos	Problem/Observation	Recommendation
S4.12	 <p>The photos show three different views of road junctions. The top photo shows a side road junction with a dropped kerb and no tactile paving. The middle photo shows a similar junction with a white van and a 'Caution Wet Pavement' sign. The bottom photo shows another side road junction with a dropped kerb and no tactile paving.</p>	<p><u>Problem:</u> As noted previously, tactile paving has not been provided at the various side road accesses/junctions on NMU 5.2 between Swavesey Junction and Dry Drayton.</p>	<p>It is recommended that appropriate tactile paving and markings (TSRGD Diagram 1023B, 1003B and 1009B) are provided.</p> <p>It is recommended that the dropped kerb upstands are checked and altered, if necessary, to be no more than the permissible 6 mm.</p> <p><b>Designers Response:</b></p>





Ref.	Photos	Problem/Observation	Recommendation
S4.13		<p><u>Observation:</u> It is observed that tactile paving has been provided for pedestrian and cycle users crossing the arms of Dry Drayton Road Roundabout.</p> <p><u>Observation:</u> It is noted that the appropriate markings for pedestrian and cycle users has not been provided across the Bucking Way Road, Anderson Road or Local Access Road arms of the roundabout.</p> <p><u>Problem:</u> It is noted that there is separate crossing provision for equestrians. DMRB states that this should be a fenced, grassed holding area of 10.0 m wide by 5.0 m long.</p>	<p>It is recommended that the dropped kerb upstands are checked and altered to be no more than the permissible 6 mm.</p> <p>It is recommended that the appropriate markings are provided (TSRGD Diagram 1023B, 1003B and 1009B) at the dropped kerb crossings intended for use by pedestrian and cycle users.</p> <p>It is recommended, as per DMRB, that the holding areas for equestrians should be a fenced, grassed area of 10.0 m wide by 5.0 m long.</p> <p>It is recommended, as per DMRB, that a 10.0m band of high friction surfacing should be provided on the carriageway to prevent horses from slipping, and, where possible, this should be of the same colour as the carriageway.</p> <p>The BHS acknowledge that there may be circumstances where a variation from the standard design is appropriate.</p> <p><b>Designers Response:</b></p>


Ref.	Photos	Problem/Observation	Recommendation
S4.14		<p><u>Problem:</u> It is not clear that users will be appropriately directed to the Swavesey NMU Bridge (NMU 5.3).</p>	<p>It is recommended that appropriate signage is included to direct users at the connection between NMU 5.2 and NMU 5.3.</p> <p><b>Designers Response:</b></p>
S4.15		<p><u>Observation:</u> On-site observations confirm that NMU 5.3 is 4.0 m wide, which exceeds the preferred minimum width for an unsegregated facility (3.0 m) as expressed in guidance. It is noted that the adjacent wooden post and rail fence will mean the effective width is reduced by up to 0.5 m either side.</p>	<p>No recommendation.</p> <p><b>Designers Response:</b></p>




Ref.	Photos	Problem/Observation	Recommendation
S4.16		<p><u>Observation:</u> On-site observations confirm that NMU 5.3 is 4.0 m wide, which exceeds the preferred minimum width for an unsegregated facility (3.0 m) as expressed in guidance. It is noted that the adjacent bridge parapets mean the effective width is reduced by up to 0.5 m either side.</p> <p>It is noted that Swavesey NMU Bridge is to accommodate pedestrians and cyclists only.</p> <p><u>Observation:</u> It is observed that the parapet heights are 1.4 m high, the desirable minimum parapet height where no equestrians are to be accommodated.</p> <p><u>Observation:</u> It is observed that no handrails are incorporated into the Swavesey NMU Bridge.</p>	<p>It is recommended that handrails are provided on the proposed bridge, although the impact this may have on the effective width should be considered. Note, the colour of any handrail should contrast with its surroundings, noting that <i>Inclusive Mobility</i> states that “colour/tonal contrasted handrails are essential to assist partially sighted users”.</p> <p><b>Designers Response:</b></p>

Ref.	Photos	Problem/Observation	Recommendation
S4.17		<p><u>Observation:</u> It is noted that NMU 5.3 links with an existing shared cycleway at the roundabout access to adjacent Services and a route south to Boxworth.</p> <p><u>Problem:</u> It is noted that the crossing facilities across Boxworth Road need upgrading.</p>	<p>It is recommended that appropriate tactile paving and markings (TSRGD Diagram 1023B, 1003B and 1009B) are provided at the dropped kerb crossings intended for use by pedestrian and cycle users.</p> <p>It is recommended that the dropped kerb upstands are checked and altered to be no more than the permissible 6 mm.</p> <p><b>Designers Response:</b></p>


Ref.	Photos	Problem/Observation	Recommendation
S4.18		<p><u>Observation:</u> NMU 5.4, Robins Lane Bridge, carries a shared route over the A14, connecting NMU 5.2 south towards Lolworth. On-site observations confirm a width of 4.8 m (concrete) with 0.7 m hardstrip (effectively a 3.0 m wide route and a 1.5 m separation).</p> <p><u>Problem:</u> It was observed that the parapet on NMU 5.4 is at an appropriate height of 1.8 m.</p> <p>However, it was observed that the parapet did not include the appropriate infill on the parapet to obscure a horse's view of traffic passing beneath the bridge.</p> <p>NMU 5.4 is connected either side by NMU 5.5.</p>	<p>It is recommended that an infill is installed on the parapet i.e. a solid panelling fixed to the parapet railings. The British Horse Society guidance advises that the height of the infill should be 1.0 m with an uplift of 25 mm.</p> <p><b>Designers Response:</b></p>

Ref.	Photos	Problem/Observation	Recommendation
S4.19		<p><u>Observation:</u> NMU 5.5 connects NMU 5.2 with NMU 5.4 (Robins Lane Bridge) and connects south towards Lolworth.</p> <p>It was observed on-site that the route is 3.0 m wide with appropriate signs to TSRGD Diagram 956.1 indicating a route for use by pedal cycles, horses and pedestrians only.</p> <p>Spacing between the route and the road was confirmed as approximately 1.8 m, including the hardstrip.</p>	<p>No recommendation.</p> <p><b>Designers Response:</b></p>





Ref.	Photos	Problem/Observation	Recommendation
S4.20		<p><u>Problem:</u> It is noted that a dropped kerb is provided where the off-road route (NMU 5.5) ends south of Robins Lane Bridge (onto Robin's Lane). It is noted that the termination of the off-road route will present a barrier to some users.</p> <p>It is important to ensure that transitions are safe, comfortable to use and minimise delay to cyclists.</p> <p>It is also noted that the transition is located directly on a junction to Clare College farm. Note current standards and best practice recommend that a cycleway should not feed cyclists onto the carriageway at, or close to, road junctions, as this introduces additional conflicts at the junction.</p>	<p>It is recommended that appropriate tactile paving and markings (TSRGD Diagram 1023B, 1003B and 1009B) are provided at the appropriate transitions.</p> <p>This will likely include the need to warn pedestrians with visual impairments using tactile paving i.e. so they do not continue into oncoming traffic.</p> <p>It is recommended that signs advising cycle users to rejoin the carriageway (Diagram 966) are provided as appropriate, on the reverse of the sign to TSRGD Diagram 956.1.</p> <p><b>Designers Response:</b></p>
S4.21	-	<p><u>Observation:</u> NMU 5.6 is to be formed by the existing Footpath 150/5 from Lolworth and connecting with the existing Bridleway 16/1.</p> <p>NMU 5.6 is proposed to be a 2.0 m wide facility with a 0.5 m verge either side.</p>	<p>It is recommended that confirmation is provided on the intentions for Footpath 150/5 (NMU 5.6).</p> <p><b>Designers Response:</b></p>




Ref.	Photos	Problem/Observation	Recommendation
S4.22		<p><u>Observation:</u> NMU 5.7 is proposed to provide a 4.5 m wide route, diverting the existing Bridleway 16/1 (NMU 5.7) to connect with the route at Bar Hill i.e. NMU 5.10.</p> <p>Connects with Swavesey NMU Bridge and ultimately NMU 5.2 north of the A14.</p> <p>The on-site audit identified that much of the works on NMU 5.7 are still to be completed.</p>	<p>No recommendation.</p> <p><b>Designers Response:</b></p>


Ref.	Photos	Problem/Observation	Recommendation
S4.23	-	<u>Observation:</u> NMU 5.8 was proposed to be a shared route between the Local Access Road (A1307) to the B1050, Hattons Road on its west side.	It is recommended that clarification is provided whether NMU 5.8 is to be provided. <b>Designers Response:</b>


Ref.	Photos	Problem/Observation	Recommendation
S4.24		<p><u>Observation:</u> NMU 5.9 was recorded on-site as being 2.4 m wide and signed as a shared use route with signs to TSRGD Diagram 956.1 indicating a route for use by pedal cycles, horses and pedestrians only. It is noted that these were proposed to be 3.0 m wide.</p> <p>Work is currently ongoing, and it is not clear how the route links with CCC/ Northstowe Developer cycle route proposals.</p>	<p>It is recommended that clarification is provided on the width of the route.</p> <p>It is recommended that the designer confirms the proposed routes and the intended tie-in with the CCC/Northstowe Developer proposals.</p> <p><b>Designers Response:</b></p>



Ref.	Photos	Problem/Observation	Recommendation
S4.24		<p><u>Problem:</u> It is observed that there is a signal-controlled crossing where NMU 5.2 links across the A1307 to Bar Hill NMU Bridge (NMU 5.10), with equestrians separated from pedestrians and cyclists at a parallel equestrian crossing.</p> <p>While it is noted that there is separate crossing provision for equestrians, DMRB states this should be a fenced, grassed holding area of 10.0 m wide by 5.0 m long.</p> <p>It is noted that no high friction surfacing is currently provided on the carriageway to prevent horses from slipping, although it is also noted that the crossings are not currently available for use.</p>	<p>It is recommended, as per DMRB, that the holding area for equestrians should be a fenced, grassed area of 10.0 m wide by 5.0 m long.</p> <p>It is recommended, as per DMRB, that a 10.0m band of high friction surfacing should be provided on the carriageway to prevent horses from slipping, and, where possible, this should be of the same colour as the carriageway.</p> <p>The BHS acknowledge that there may be circumstances where a variation from the standard design is appropriate.</p> <p><b>Designers Response:</b></p>


Ref.	Photos	Problem/Observation	Recommendation
S4.25		<p><u>Observation:</u> On-site observations confirm that NMU 5.10, approached to Bar Hill NMU Bridge, is 4.5 m wide, which exceeds the preferred minimum width for an unsegregated facility, and is in line with the proposed 4.5 m. It is noted that the adjacent wooden post and rail fence may mean a slight reduction in the effective width.</p>	<p>No recommendation.</p> <p><b>Designers Response:</b></p>




Ref.	Photos	Problem/Observation	Recommendation
S4.26		<p><u>Observation:</u> On-site observations confirm that NMU 5.10 is 4.5 m wide to accommodate pedestrian, cyclists and equestrians. It is noted that the adjacent bridge parapets mean the effective width is reduced by up to 0.5 m either side.</p> <p><u>Observation:</u> It is observed that the parapet heights are 1.8 m high, the desirable minimum parapet height where equestrians are to be accommodated.</p> <p>It was observed that the parapet did not include infill on the parapet to obscure a horse's view of traffic passing beneath the bridge. However, it is understood that the architectural design of the bridge means that a horse's view is obscured.</p> <p><u>Observation:</u> It is observed that no handrails are incorporated into the Bar Hill NMU Bridge.</p>	<p>It is recommended that confirmation is provided on the design of the bridge parapet and how this affects a horse's view of traffic passing beneath the bridge.</p> <p>It is recommended that handrails are provided on the proposed bridge, although the impact this may have on the effective width should be considered. Note, the colour of any handrail should contrast with its surroundings, noting that <i>Inclusive Mobility</i> states that "colour/tonal contrasted handrails are essential to assist partially sighted users".</p> <p><b>Designers Response:</b></p>


Ref.	Photos	Problem/Observation	Recommendation
S4.27		<p><u>Observation:</u> NMU 5.10 continues south of Bar Hill NMU Bridge and connects with NMU 5.7.</p> <p><u>Observation:</u> It is observed that tactile paving has been provided for all users crossing the arms of the roundabout.</p> <p><u>Observation:</u> It is noted that the appropriate markings for pedestrian and cycle users has not been provided.</p> <p><u>Problem:</u> It is noted that there is no separate crossing provision for equestrians.</p>	<p>It is recommended that the dropped kerb upstands are checked and altered to be no more than the permissible 6 mm.</p> <p>It is recommended that the appropriate markings (TSRGD Diagram 1023B, 1003B and 1009B) are provided at the dropped kerb crossings intended for use by pedestrian and cycle users.</p> <p>It is recommended that clarification is provided on the reasons why separate crossing provision has not been provided for equestrians. The BHS acknowledge that there may be circumstances where a variation from the standard design is appropriate, and that waiting pens are not always necessary and may be considered by site.</p> <p><b>Designers Response:</b></p>


Ref.	Photos	Problem/Observation	Recommendation
S4.28		<p><u>Observation:</u> NMU 5.11, between the Oakington Road (east) Roundabout and Dry Drayton Bridge, was recorded on-site as 3.0 m wide with a 1.0 m spacing between the carriageway and the NMU route (hardstrip) and a varying verge width.</p>	<p>No recommendation.</p> <p><b>Designers Response:</b></p>
S4.29		<p><u>Observation:</u> Subsequently, at the Dry Drayton Bridge the route is 3.3 m wide but the spacing between the carriageway and the NMU route reduces to approximately 0.3 m.</p> <p><u>Problem:</u> It is observed that the parapet heights are 1.8 m high, the desirable minimum parapet height where equestrians are to be accommodated.</p> <p>However, it was observed that the parapet did not include the appropriate infill on the parapet to obscure a horse's view of traffic passing beneath the bridge.</p>	<p>It is recommended that an infill is installed on the parapet i.e. a solid panelling fixed to the parapet railings. The British Horse Society guidance advises that the height of the infill should be 1.0 m with an uplift of 25 mm.</p> <p><b>Designers Response:</b></p>

Ref.	Photos	Problem/Observation	Recommendation
S4.30		<p><u>Observation:</u> In turn NMU 5.13 provides a 4.0 m wide shared route, between Dry Drayton Bridge and the Oakington Road (west) roundabout, with a 0.8 m spacing between the carriageway and the NMU facility (hardstrip) and a varying verge width at the rear of the NMU route.</p>	<p>No recommendation. <b>Designers Response:</b></p>




Ref.	Photos	Problem/Observation	Recommendation
S4.31		<p><u>Observation:</u> NMU 5.13 continues south and connects with NMU 5.14.</p> <p><u>Observation:</u> It is observed that tactile paving has been provided for all users cross the arm of Oakington Road Roundabout that provides maintenance access.</p> <p>It is noted that there is no separate crossing provision for equestrians at this location.</p> <p><u>Problem:</u> It is noted that there is separate crossing provision for equestrians on the Oakington Road arm of the roundabout. DMRB states that this should be a fenced, grassed holding area of 10.0 m wide by 5.0 m long.</p> <p><u>Observation:</u> It is noted that the appropriate markings for pedestrian and cycle users have not been provided.</p>	<p>It is recommended that the dropped kerb upstands are checked and altered to be no more than the permissible 6 mm.</p> <p>It is recommended that the appropriate markings (TSRGD Diagram 1023B, 1003B and 1009B) are provided at the dropped kerb crossings intended for use by pedestrian and cycle users.</p> <p>It is recommended, as per DMRB, that the holding areas for equestrians on the Oakington Road arm of the roundabout should be a fenced, grassed area of 10.0 m wide by 5.0 m long.</p> <p>It is recommended, as per DMRB, that a 10.0m band of high friction surfacing should be provided on the carriageway to prevent horses from slipping, and, where possible, this should be of the same colour as the carriageway.</p> <p>The BHS acknowledge that there may be circumstances where a variation from the standard design is appropriate, and that waiting pens are not always necessary and may be considered by site.</p> <p><b>Designers Response:</b></p>


Ref.	Photos	Problem/Observation	Recommendation
S4.32		<p><u>Observation:</u> On-site observations confirm that NMU 5.14 is 4.0 m wide, and a 1.8 m separation (including a 1.0 m hardstrip), in line with guidance.</p>	<p>No recommendation.</p> <p><b>Designers Response:</b></p>


Ref.	Photos	Problem/Observation	Recommendation
S4.33		<p><u>Problem:</u> It is noted that tactile paving has not been provided at all the various side road accesses/junctions on NMU 5.14.</p>	<p>It is recommended that appropriate tactile paving and markings (TSRGD Diagram 1023B, 1003B and 1009B) are provided.</p> <p>It is recommended that the dropped kerb upstands are checked and altered, if necessary, to be no more than the permissible 6 mm.</p> <p><b>Designers Response:</b></p>


Ref.	Photos	Problem/Observation	Recommendation
S4.34		<p><u>Observation:</u> NMU 5.14 was observed as signed as a shared use route with signs to TSRGD Diagram 956.1 indicating a route for use by pedal cycles, horses and pedestrians only.</p>	<p>No recommendation.</p> <p><b>Designers Response:</b></p>
S4.35		<p><u>Observation:</u> It is observed that tactile paving has been provided for all users crossing the arms of the roundabout.</p> <p><u>Observation:</u> It is noted that the appropriate markings for pedestrian and cycle users has not been provided.</p> <p><u>Problem:</u> It is noted that there is no separate crossing provision for equestrians.</p>	<p>It is recommended that the dropped kerb upstands are checked and altered to be no more than the permissible 6 mm.</p> <p>It is recommended that the appropriate markings (TSRGD Diagram 1023B, 1003B and 1009B) are provided at the dropped kerb crossings intended for use by pedestrian and cycle users.</p> <p>It is recommended that clarification is provided on the reasons why separate crossing provision has not been provided for equestrians.</p> <p><b>Designers Response:</b></p>




Ref.	Photos	Problem/Observation	Recommendation
S4.36		<p><u>Observation:</u> NMU 5.15, a continuation of NMU 5.14, narrows slightly where the route is straddled by the M11 to fit within the existing cross section. It is not anticipated that this will have an effect over this short distance.</p>	<p>No recommendation.</p> <p><b>Designers Response:</b></p>


Ref.	Photos	Problem/Observation	Recommendation
S4.37		<p><u>Observation:</u> On-site observations confirm that NMU 5.16 is 4.0 m wide, and a varying separation (including a 1.0 m hardstrip).</p>	<p>No recommendation.  <b>Designers Response:</b></p>


Ref.	Photos	Problem/Observation	Recommendation
S4.38		<p><u>Problem:</u> On-site observations confirm that the proposed connections to Footpath Girton 99/4 and 99/5 have not yet been constructed/completed.</p> <p>This should incorporate a Toucan crossing of the A1307, Huntingdon Road that would connect all three routes, although it is acknowledged that this is to be provided as part of the North-West Cambridge development plans.</p>	<p>It is recommended that connections with the proposed Toucan Crossing should be completed, and confirmation provided when and how this is to be achieved.</p> <p><b>Designers Response:</b></p>


Ref.	Photos	Problem/Observation	Recommendation
S4.39		<p><u>Observation:</u> NMU route 5.17 provides a revised access to the Cambridge City Crematorium from the Local Access Road (NMU 5.14).</p> <p><u>Observation:</u> It is observed that tactile paving has been provided for users to cross between NMU 5.14 and NMU 5.17.</p> <p><u>Observation:</u> It is noted that the appropriate markings for pedestrian and cycle users has not been provided.</p>	<p>It is recommended that the dropped kerb upstands are checked and altered to be no more than the permissible 6 mm.</p> <p>It is recommended that the appropriate markings (TSRGD Diagram 1023B, 1003B and 1009B) are provided at the dropped kerb crossings intended for use by pedestrian and cycle users.</p> <p><b>Designers Response:</b></p>




Ref.	Photos	Problem/Observation	Recommendation
S4.40		<p><u>Observation:</u> On-site observations confirm that NMU 5.17 is 2.2 m wide, with a 0.8 m separation.</p> <p>It is noted that NMU 5.17 was always intended to be a 2.0 m wide shared footway/cycleway, although it is noted that this does not conform to current standards.</p> <p><u>Problem:</u> NMU 5.17 was not observed as being signed.</p>	<p>It is recommended that appropriate signs are erected that advise that this is a route for use by pedal cycles and pedestrians only (TSRGD Diagram 956).</p> <p>It is also recommended that appropriate signage is erected directing users to the Crematorium, and similarly directing users coming from the Crematorium.</p> <p>It is recommended that appropriate tactile paving, markings (TSRGD Diagram 1023B, 1003B and 1009B) and signage are provided for users at the termination of the shared path where it intersects with the Crematorium access road.</p> <p><b>Designers Response:</b></p>


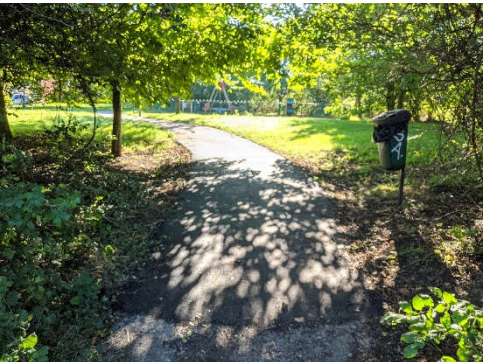
Ref.	Photos	Problem/Observation	Recommendation
S4.41		<p><u>Observation:</u> It is observed that tactile paving has been provided for users to cross between NMU 5.17 and the eastbound bus stop, and between the eastbound bus stop and NMU 5.14.</p> <p><u>Observation:</u> It is noted that the appropriate markings for pedestrian and cycle users has not been provided.</p>	<p>It is recommended that the dropped kerb upstands are checked and altered to be no more than the permissible 6 mm.</p> <p>It is recommended that the appropriate markings (TSRGD Diagram 1023B, 1003B and 1009B) are provided at the dropped kerb crossings intended for use by pedestrian and cycle users.</p> <p><b>Designers Response:</b></p>


Ref.	Photos	Problem/Observation	Recommendation
S4.42		<p><u>Observation:</u> It was not possible to make the appropriate observations for NMU 5.18 as the route had not been completed.</p> <p>It is noted that this is to be a 4.5 m wide bridleway.</p>	<p>No recommendation.</p> <p><b>Designers Response:</b></p>


Ref.	Photos	Problem/Observation	Recommendation
S4.43		<p><u>Observation:</u> It was not possible to make the appropriate observations for NMU 5.19 as the route had not been constructed. Currently just fields.</p> <p>It is noted that this is to be a 4.5 m wide bridleway.</p>	<p>No recommendation.</p> <p><b>Designers Response:</b></p>



Ref.	Photos	Problem/Observation	Recommendation
S4.44	 The top photograph shows a gravel path curving to the right, bordered by a white line on the left and green vegetation on the right. The bottom photograph shows a similar gravel path curving to the right, with a grassy area on the left and a field in the background.	<p><u>Observation:</u> On-site observations confirm that NMU 5.20 is 3.2 m to 3.7 m wide and is a shared bridleway/ accommodation track.</p>	<p>No recommendation.</p> <p><b>Designers Response:</b></p>

Ref.	Photos	Problem/Observation	Recommendation
S4.45		<p><u>Observation:</u> NMU 5.20 was observed as signed as a public bridleway at the Girton Accommodatrion Bridge side, but no signage observed at Oakington Road Roundabout.</p> <p>Drivers and other users may be confused when encountering each other.</p>	<p>It is recommended that consideration is given to designating this a 'quiet lane' and utilising <i>TSRGD</i> Diagram 884 and 885 – designated under section 268 of the Transport Act 2000.</p> <p>Additionally, it is recommended that consideration is given to the best means of reiterating that this section of the route is shared space.</p> <p><b>Designers Response:</b></p>
S4.46		<p><u>Observation:</u> It was observed that there has been no change to the existing path. It is noted that this is to convert the existing footpath to a shared pedestrian/ cycle track 2.5 m wide.</p>	<p>Confirmation is required on what changes are still to be made.</p> <p><b>Designers Response:</b></p>

Ref.	Photos	Problem/Observation	Recommendation
S4.47		<p><u>Observation:</u> It was observed that the width of NMU 5.22 is 3.5 m between kerbs.</p> <p><u>Observation:</u> It is observed that the parapet heights are 1.8 m high, the desirable minimum parapet height where equestrians are to be accommodated.</p> <p>However, it was observed that the parapet did not include the appropriate infill on the parapet to obscure a horse's view of traffic passing beneath the bridge.</p>	<p>The proposed Girton Accommodation Bridge was proposed to be 4.5 m wide with a 1.8 m parapet and is specified as a bridleway in the Design Input Statement.</p> <p>It is recommended that an infill is installed on the parapets i.e. a solid panelling fixed to the parapet railings. The British Horse Society guidance advises that the height of the infill should be 1.0 m with an uplift of 25 mm.</p> <p><b>Designers Response:</b></p>

Ref.	Photos	Problem/Observation	Recommendation
S4.48	 <p>The first photo shows a narrow dirt path through dense green foliage, with a blue and red metal barrier on the left. The second photo shows a concrete wall with a path leading to it. The third photo shows a path with a wooden fence on the left and dense vegetation on the right.</p>	<p><u>Observation:</u> It was observed that there has been no change to the existing path. It is noted that this is to convert the existing footpath to a shared pedestrian/ cycle track 2.5 m wide.</p>	<p>Confirmation is required on what changes are still to be made.</p> <p><b>Designers Response:</b></p>




Ref.	Photos	Problem/Observation	Recommendation
S4.49	-	<u>Observation:</u> As observed during the 2016 Audit, users are required to negotiate tight angles i.e. circa 90 degrees, at various locations.	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 between users.  <b>Designers Response:</b>

## Section 5

- 4.41. The NMU facilities within Section 5 of The Scheme are slight realignments of the existing NMU Route (northbound and southbound) on the B1049, Bridge Road approach to the Histon Junction (NMU 6.1).
- 4.42. These routes connect southbound with the network of NMU routes in Cambridge. It is acknowledged that consultation responses stated that safety of NMUs at the junction should not be reduced due to road widening, and that appropriate crossing facilities should be provided.

**Table 8 Section 5 Summary**

Ref.	Photos	Problem/Observation	Recommendation
S5.1		<p><u>Problem:</u> On-site observations confirm that the width of NMU 6.1 on the western side of Histon Junction has not increased beyond the 'existing' width, with no separation.</p> <p>It is anticipated that this route could experience significant NMU flows based on the recorded flows on the B1049, south of Histon Junction.</p>	<p>It is recommended that confirmation is provided on the reasons that the width of this route could not be increased to the expected 3.0 m width with the appropriate separation between the route and the carriageway (1.5 m for a 40mph road as recommended in guidance).</p> <p><b>Designers Response:</b></p>

Ref.	Photos	Problem/Observation	Recommendation
S5.2		<p><u>Observation:</u> On-site observations confirm that the width of NMU 6.1 on the eastern side of Histon Junction is 3.0 m wide, with no separation.</p> <p>It is anticipated that this route could experience significant NMU flows based on the recorded flows on the B1049, south of Histon Junction.</p>	<p>It is recommended that confirmation is provided on the reasons that the required separation could not be provided between the route and the carriageway (1.5 m for a 40mph road as recommended in guidance).</p> <p><b>Designers Response:</b></p>



Ref.	Photos	Problem/Observation	Recommendation
S5.3	-	<u>Observation:</u> It is noted that a crossing has been incorporated into the signal-controlled junction between the B1049, Bridge Road and Cambridge Road.	No recommendation. <b>Designers Response:</b>
S5.4	-	<u>Observation:</u> As observed during the 2016 Audit, users are required to negotiate tight angles i.e. circa 90 degrees, at various locations.	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 between users. <b>Designers Response:</b>

## 5. Next Steps

- 5.1. This report is submitted to the Design Team for comment. The Design Team will agree with the Project Sponsor any design amendments to be made because of the comments/recommendations provided in this audit and documented in the tables above.

# Appendix A. NMU Parameters Incorporated into Design

Table 9 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 10 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 (3.5m 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	1.8m 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	A1 under-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	1.8m parapet on east side

**Table 11 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)	1.8m parapet on east side
3.2	A8	A1198 Ermine Street bridge	East	3.0m	1.8 m	0.5m (1.5m on approaches)	1.8m parapet on east side

**Table 12 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)	1.8m parapet on east side
4.3	A12	Conington Road Bridge	East	3.0m	1.8 m	0.5m (1.5m on approaches)	1.8m 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)	1.8m 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 13 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	1.8m	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	2.0m	Shared pedestrian/cycle/equestrian
5.14		Local Access Road - Oakington Road (west) roundabout to M11 bridge	West	4.0m	1.8m	2.0m	Shared pedestrian/cycle/equestrian
5.15		Local Access Road - Oakington Road (west) roundabout to M11 bridge	West	3.7m	0.8m (no hard strip)	0.5m	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; 1.8m 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 14 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

