AREA 8 TRUNK ROADS & MOTORWAYS

A45 Blacky More - Wootton Pedestrian Overbridge

PUBLIC CONSULTATION REPORT

November 2008
Project Title: A45 Blacky More - Wootton NMU Overbridge

Works Order No: 94326

Client: Highways Agency, Woodlands, Manton Lane, Bedford MK41 7LW

Issued By: CarillionWSP, Pytchley Maintenance Compound, Pegasus Court, Kettering South Business Park, Kettering, Northamptonshire, NN15 6XS

Document: Public Consultation Report

<table>
<thead>
<tr>
<th>ISSUE No. : 2</th>
<th>NAME</th>
<th>SIGNATURE</th>
<th>DATE</th>
<th>POSITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prepared by</td>
<td>Mark Rennison</td>
<td></td>
<td></td>
<td>Project Engineer</td>
</tr>
<tr>
<td>Checked by</td>
<td>Andrew Perry</td>
<td></td>
<td></td>
<td>Project Engineer</td>
</tr>
<tr>
<td>Approved by</td>
<td>Philip Welborn</td>
<td></td>
<td></td>
<td>Technical Director</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Issue No.</th>
<th>Date</th>
<th>Details of Revisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2/11/08</td>
<td>Issue to Highways Agency</td>
</tr>
<tr>
<td>2</td>
<td>20/11/08</td>
<td>Final Issue</td>
</tr>
</tbody>
</table>
CONTENTS

Executive Summary

1. INTRODUCTION ...................................................................................................... 5
   1.1. General ........................................................................................................... 5
   1.2. Proposed Scheme ....................................................................................... 6
   1.3. NMU Surveys .............................................................................................. 7
   1.4. Public Consultation ................................................................................... 7
       1.4.1. Purpose of Public Consultation ......................................................... 7
       1.4.2. Letter & Leaflet Drops, Press Release .............................................. 8
       1.4.3. Public Exhibitions ............................................................................ 8
   1.5. Location ....................................................................................................... 8
   1.6. Summary of Previous Studies ................................................................... 10
       1.6.1 General Justification: .......................................................................... 10
       1.6.2 Site layout constraints: ........................................................................ 12
       1.6.3 Social constraints: ............................................................................... 13
       1.6.4 Technical constraints: ......................................................................... 14
       1.6.5 Financial constraints: ........................................................................ 15

2. PUBLIC EXHIBITIONS ....................................................................................... 17
   2.1. Exhibits ....................................................................................................... 17
   2.2. Number of attendees .................................................................................. 18
   2.3. Feedback from exhibitions ....................................................................... 18
   2.4. Feedback from Councils and other Statutory Bodies ............................... 19

3. QUESTIONNAIRE RESULTS & RESPONSES BY LETTER ................................... 20
   3.1. Summary of Responses ............................................................................ 20
   3.2. Discussion of Questionnaire & Letter Responses ...................................... 23
   3.3. Delivery of Questionnaires & Letters ....................................................... 24
   3.4. Meetings with Residents .......................................................................... 24

4. RESPONSES TO PUBLIC CONSULTATION ........................................................ 24
   4.1. Advance publicity – distribution of leaflets/notice of proposals ............... 24
   4.2. Bridge parapets and visual screening ...................................................... 24
   4.3. Local Environment ................................................................................... 25
       4.3.1 Lighting ............................................................................................... 25
       4.3.2 Visual Impact – Planting Proposals ................................................... 26
       4.3.3 Local Schools ..................................................................................... 27
       4.3.4 Anti-social behaviour ...................................................................... 27
       4.3.5 Existing footpaths and approach routes ......................................... 27
   4.4. Compensation ........................................................................................... 28

5. ALTERNATIVE SUGGESTIONS RECEIVED TO FOOTBRIDGE ............................ 28
   5.1. Discouraging at-grade crossings by use of barrier ................................... 28
   5.2. Combination of barrier & improvements to existing footways .............. 28

6. OTHER OPTIONS ARISING FROM CONSULTATION ALREADY CONSIDERED BUT DISMISSED ................................................................. 29

7. NEXT STEP ...................................................................................................... 29
EXECUTIVE SUMMARY

CarillionWSP was commissioned by the Highways Agency (HA) to carry out a Public Consultation to assess the views of local residents regarding the provision of a new footbridge across the A45 dual carriageway approximately 1.4km south of the Queen Eleanor Roundabout between Blacky More and Wootton. A footbridge was the preferred option and considered to be the most effective way of providing a safe crossing of the A45 at this location which would cater for pedestrians, cyclists and visually or mobility impaired people. The Non-Motorised User Crossing Provision Feasibility Study Report identified the demand and need for the provision of an NMU crossing at this junction in line with the Government’s policy on promoting sustainable modes of transport. There are a number of schools in the vicinity of the proposed bridge, which could potentially generate a significant amount of pedestrian traffic.

The nearest existing bridge is located 550m to the south of the proposed footbridge. Although Wootton Fields Bridge is used by pedestrians, it falls below desirable standards because of the substandard footway and the need for pedestrians to cross busy slip roads. Some pedestrians prefer to cross the carriageway at the most convenient point and would rather accept the risk of crossing at-grade rather than diverting to Wootton Fields Bridge.

The proposed superstructure is a single span footbridge with ramps and steps at each approach and consists of a steel warren truss girder. The proposed width of the footway is 2.5m between parapets. The bridge would be lit, have screens fitted to prevent users from looking into neighbouring properties and there would be trees planted to help screen the bridge from those living nearby. The location of the bridge is constrained by the location of the existing footpaths and bridleways in the area, the width of the verge and length of approach ramps required to satisfy allowable gradients.

There are residential properties close to the highway boundary on both sides of the carriageway. Consideration was given to the view of the bridge from local properties and whether the users of the bridge would be able to significantly overlook the properties. A landscaping scheme was proposed to mitigate the environmental impact of the structure and address privacy and visual intrusion concerns from nearby residents. Proposals involve tree planting on Highways Agency land, tree planting on private land, and the use of visual screens on the higher sections of approach ramp.

A 1-day survey (from 7.00am to 10.00pm) carried out on a typical weekday in March 2008 to ascertain the number of Non-Motorised Users (NMU's) crossing the A45 in this location found that there were 184 crossings over the Wootton Fields Bridge and 27 crossings of the A45 dual carriageway at-grade over the 15 hour period.

Public Exhibitions were held in June 2008 to give residents an opportunity to view detailed plans of the proposals, provide feedback and discuss the scheme with representatives from the Highways Agency, Carillion-WSP and The Landscape Partnership. Many residents who attended the exhibitions were opposed to the proposal for a footbridge and thought a crossing was unnecessary. A number of people said they had a problem with vandalism and anti-social behaviour and thought that providing a footbridge would make the situation worse. They also queried whether providing a footbridge would actually stop people crossing the A45 carriageway at grade. A large number of residents expressed a preference for a scheme which discouraged crossings of the A45 at grade by use of a barrier in the central
reserve and improvements to the existing footway/cycleway routes over the Wootton Fields Bridge.

The Highways Agency received a total of 318 responses, of which 293 were questionnaires and 25 were letters or e-mails. 65% of respondents thought there was a need for the footbridge.

The feedback obtained from the public exhibitions and questionnaires revealed much useful local information. Following the Public Consultation and careful consideration of all the comments and representations received, the Highways Agency have concluded that there may be insufficient demand to justify the provision of a footbridge in this location. The main reasons for this decision were:

(a) Opposition to the proposal from a large number of residents of Wootton and Blacky More.
(b) Lack of support for the proposal from Wootton and East Hunsbury Parish Council, Northamptonshire County Council and Northampton Borough Council.
(c) Justification for a footbridge is weak based on projected usage.

As a result of this the Highways Agency in conjunction with CarillionWSP will consider the following options as possible alternatives to the proposed pedestrian footbridge:

- Discouraging at-grade crossings by use of barrier; and
- Combination of barrier and improvements to existing footways leading to the existing Wootton Fields bridge

prior to any decision being made on the preferred way forward.
Introduction

1.1. General
The section of the A45 between the Queen Eleanor Roundabout and Junction 15 of the M1 Motorway was constructed as a dual carriageway in 1984 with limited provisions for pedestrians and cyclists. This section was designated a Trunk Road in September 2001 and renumbered from A508 to A45 in early 2004.

The need for some form of pedestrian crossing across the A45 between Blacky More and Wootton was first identified following the Highways Agency's (HA's) Vulnerable User Crossing Improvement Programme carried out in 2002. The site was identified as one of the top priority sites in the HA's East and East Midland Area. This investigation was prompted by a pedestrian fatality at the site in the same year, coupled with a high number of risk issues identified with the site.

A Stage 1 Road Safety Audit and Non-Motorised User Crossing Provision Feasibility Study undertaken by Carillion-URS (now CarillionWSP) in January 2004 concluded that the number of pedestrians crossing the A45 dual carriageway at-grade was a safety issue. The location of a footway, bus stop, bridleway, garage and public house all encourage such crossings. There are also a number of schools in the vicinity, a primary school located approximately 700m from the crossing on either side of the carriageway and a large secondary school located approximately 1000m east of the A45.

Following the recommendations made by Carillion-URS in the Options Study Report in August 2007 for the provision of a Non-Motorised Users (NMU) Overbridge over the A45 Trunk Road between Blacky More and Wootton, a footbridge was the preferred option and considered to be the most effective way of providing a safe crossing of the A45 at this location which would cater for pedestrians, cyclists and visually or mobility impaired people. The bridge would create a valuable facility for Non-Motorised Users (NMUs), allowing them to cross the A45 safely. It would be a useful amenity for the area and should encourage more journeys to school by bike or walking.

The main reasons why a footbridge was chosen over other options were as follows:

- minimal traffic disruption during construction.
- cost of a bridge was less than a subway.
- no additional land required.

A pedestrian crossing count from a recent survey indicated that there are pedestrians who choose to cross the dual carriageway at-grade between the northbound London Road on slip-road and Stratford Drive and this would be the location for the proposed footbridge.

The nearest existing bridge (Wootton Fields Bridge) is located approximately 550m to the south of the proposed footbridge. Although this bridge is used by pedestrians, it falls below desirable standards because of the substandard pavement and the need for pedestrians to cross busy slip roads.

The data obtained relating to school catchment areas also suggests that provision of a safe crossing may encourage more parents and children to switch from car to walking or cycling. There is also new housing planned in Wootton and Grange Park, which will affect the catchment area to local schools. The aim is to provide a cost effective...
structure for pedestrians and cyclists, with minimal disruption to traffic during construction and fit within existing highway land.

Wootton Parish Council wrote to Northants County Council in April 2003 to enquire about proposals to address safety at this location. Although accident records for the period from 1 May 2004 to 31 May 2007 indicated that there were no recorded accidents involving NMUs, the numerous access points and gaps in the central reserve between the Wootton Fields Bridge and the location of the proposed footbridge encourage pedestrians to attempt to cross the A45 at-grade. Some pedestrians prefer to cross the carriageway at the most convenient point and would rather accept the risk of crossing at-grade rather than diverting to Wootton Fields Bridge.

The purpose of this Report is to review the feedback and views of local residents obtained from the Public Consultation exercise carried out during the summer of 2008 and evaluate the most appropriate way forward for the Scheme.

1.2. Proposed Scheme
The proposed scheme comprises a new NMU Overbridge to be located across the A45 dual carriageway approximately 1.4km south of the Queen Eleanor Roundabout at a point between London Road on slip-road and Stratford Drive (see Figures 1 and 2). The A45 Trunk Road is constructed to dual-carriageway standard between the existing Queen Eleanor Grade Separated Junction and Junction 15 of the M1 Motorway.

The proposed bridge will provide a footpath link for pedestrians and cyclists and those of limited mobility between the Blacky More residential area and Wootton Village, linking the current footway and bridleway on the west side of the A45 Trunk Road to the footways located on the eastern side. There is currently no dedicated cycle route in the immediate vicinity and the bridleway terminates on the west side of the A45. The provision of a footbridge over the A45 in this vicinity will allow all users to safely cross the A45. The structure would therefore be on the desire line for NMUs. As the bridleway does not continue on the east side of the dual carriageway, there is no intention to provide access to the bridge for horseriders.

The proposed superstructure is a single span footbridge with ramps and steps at each approach. The main superstructure span proposed consists of a variable depth warren truss girder, formed out of steel hollow sections with welded joints. The proposed width of the footway is 2.5m between parapets. The deck of the structure is to be steel plates supported on steel hollow section transoms. The main superstructure will be supported on steel trestles formed from RHS sections, which will be founded on reinforced concrete spread footing foundations with integral plinths. The bridge would have screens fitted to prevent users from looking into neighbouring properties and there would be trees planted to help screen the bridge from those living nearby. The bridge would be lit.

The estimated cost of the scheme in late 2007 was £1.58m. As part of preliminary design work, early contractor involvement was sought to obtain input into the buildability of the bridge from Interserve (Main Contractor) and Nusteel (steelwork fabricator).
Traffic Management during construction would require an overnight road closure (weekend off-peak) of the A45 in order to lift in the main span, possibly with lane closures & 40mph speed restrictions in the vicinity of bridge during construction.

Steelwork fabrication usually takes around 16 weeks, with a construction period of about 20 weeks (4 weeks mobilisation, 12 weeks substructure and 4 weeks superstructure and finishes). The superstructure steelwork will be prefabricated off site.

The Local Authority responsible for the existing footways is Northamptonshire County Council (NCC), but the proposed bridge structure would be constructed and maintained on behalf of the Highways Agency by the Area 8 Managing Agent. NCC would eventually adopt only the finished surface of the proposed bridge structure.

1.3. NMU Surveys

A 1-day survey (from 7.00am to 10.00pm) was carried out on Tuesday 18 March 2008 to ascertain the number of Non-Motorised Users (NMUs) crossing the A45 in this location. Over the 15 hour period, there were 184 crossings over the Wootton Fields Bridge and 27 crossings of the A45 dual carriageway at-grade (of which 19 were at the general location of the proposed bridge).

The ages of the people crossing the dual carriageway were not obtained in the survey, although it was noted that 10 of the 27 crossings were made by male youths. 7 of the crossings were return crossings. Feedback from the Public Consultation suggests that most NMU crossings at-grade are made by young adults.

From the survey data, it was not possible to ascertain the proportion of pedestrians and cyclists currently crossing at Wootton Fields Bridge who would choose to transfer to the proposed footbridge. However, the questionnaire responses give some indication of where people are traveling to and from. The data has been used to plot typical origin and destination crossing movements of the A45 between Wootton and Blacky More and between Blacky More and Wootton.

The status of the existing footways and bridleways in the vicinity of the proposed structure were confirmed with Northamptonshire County Council and site visits. Provision of a crossing may generate foot and cycle traffic, which would otherwise have used a longer route via the Wootton Fields Bridge 550m to the south.

1.4. Public Consultation

1.4.1. Purpose of Public Consultation

A Public Consultation exercise was undertaken in the Summer of 2008 to obtain feedback from local residents, Parish Councils and other interested parties. Consultation included the local schools, county, district & parish councils, cyclist groups, local ramblers association and Police.

The Public Consultation involved the production of a Publicity Leaflet (including questionnaire) by the Highways Agency. This single page leaflet was circulated with a covering letter to the Parish Councils, police, community police officers, Northampton
Borough Council, Northamptonshire County Council, the local MP, local schools and other associations.

The consultation phase (consultation with local residents) involved the following:
- Letter drop to those houses immediately affected.
- Written consultation to Statutory and Non-Statutory Consultees.
- Leaflet drop to those further afield.
- Electronic version of leaflet posted on the Highways Agency website.
- Local Public Exhibitions were held over two evenings in early June 2008.

1.4.2. Letter & Leaflet Drops, Press Release

A letter drop was undertaken to those houses most directly affected by the proposals.

A leaflet drop was carried out to those further afield. Prior to the Public Exhibitions, approximately 5400 leaflets containing details of the scheme, an invitation to attend the exhibitions, as well as a questionnaire were put through the letterbox of every house in the surrounding area. The leaflet drop started on 20 May 2008 and took about a week to complete.

All Councils and other Statutory Bodies who might have been affected by the proposal were sent a public consultation letter on 20 May 2008.

A Press Release was also issued and details of the Public Exhibitions uploaded to the Highways Agency website. An electronic version of the leaflet was also posted on the Highways Agency website. Advertisements for the exhibitions were placed in the Northampton Chronicle & Echo and the Northants Herald & Post.

1.4.3. Public Exhibitions

Public Exhibitions were held to give residents an opportunity to view detailed plans of the proposals, provide feedback and discuss the scheme with representatives from the Highways Agency, Carillion-URS and The Landscape Partnership.

Exhibition Venues & Times:
- Wootton Community and Sports Centre 3rd June 2008 (4pm – 9pm)
- Blacky More Community Centre 4th June 2008 (4pm – 9pm)

1.5. Location

The site for the proposed NMU Overbridge is located on the southern boundary of Northampton, where the urban area has expanded south to join the former villages of Wootton, Hardingstone, and Blacky More (see Figures 1 and 2). The A45 Trunk Road connects Northampton to Junction 15 of the M1 Motorway.
Residential properties are located on both sides of the carriageway. A footway and bridleway are located in the west verge of the highway boundary, each terminating at the on-slip of the Wootton Fields Junction. A footway located in the east verge provides access to Wootton High Street.

The A45 between the Queen Eleanor Junction and the M1 Motorway was constructed as a dual carriageway in 1984 with limited provisions for vulnerable users.

The A45 is abutted by housing, filling stations and public houses, with a single overbridge (Wootton Fields Bridge) – Wooldale Road – located 550 metres south of the site being the only place for NMUs to cross the A45 other than at-grade. The A45 is currently lit by lamp columns located in the verges and 6m wide central reserve. The National Speed Limit of 70mph currently applies. The 2004 annual average daily traffic (AADT) two-way flow between the M1 Junction 15 and Queen Eleanor Interchange was approximately 52000 vehicles. The projected 2013 AADT traffic demand is 56000 vehicles.
1.6. Summary of Previous Studies

1.6.1 General Justification:

Two previous studies relating to the provision of crossing facilities at the location of the proposed bridge were carried out. These studies were the “Stage 1 Road Safety Audit” and the “Non-Motorised User Crossing Provision Feasibility Study Report”, both by Carillion-URS and undertaken in January 2004.

The Non-Motorised User Crossing Provision Feasibility Study Report identified the demand and need for the provision of an NMU crossing at this junction in line with the Government’s policy on promoting sustainable modes of transport. The preferred option identified in the conclusions of the Report was for the provision of a footbridge crossing. The benefits and disbenefits of the various schemes are listed in Table1. Accident records for the period from 1 May 2004 to 31 May 2007 indicated that there were no recorded accidents involving NMUs.

The main problems with the current situation are:

1. Location of bus stop/point of emergence from bridleway – extra distance and time taken to cross the A45 safely at nearest overbridge. Pedestrians using the bridleway or bus users trying to cross the A45 from the slip road are faced with a choice of crossing...
the sliproad and A45 (total distance 60m) or walking a total of 950m over the adjacent Wootton Fields overbridge to cross to the opposing side of the A45.

2. Various gaps and entrances alongside the A45 give NMUs the opportunity to attempt the high risk crossing at grade. There are numerous access points for NMUs to openly cross the A45 at grade between the Wootton Fields Bridge and the northbound sliproad tie-in/Wootton High Street.

The Feasibility Stage Road Safety Audit Report considered various options for providing a safe route for NMUs across the A45.

**Do Nothing Option:**
- Relocate the bus stop further south along the sliproad adjacent to the filling station exit/footpath over existing bridge.
- Install traffic calming measures on the sliproad.
- Improve signing and install pedestrian fencing alongside the A45 to deter at-grade crossing and encourage use of footpath over the overbridge. This includes upgrading the footpath with a surfaced route, the provision of street lighting (increased personal security during darkness), increased landscape maintenance and generally making the route more user friendly.
- Provide a section of environmental fence/anti-pedestrian fencing along the centre section of the central reserve extending from south of Wootton Fields overbridge to a point north where any forward visibility requirements may be compromised to A45 traffic (protected within the central area of safety fencing). North of this point, continue to provide and maintain a ‘low level’ environmental barrier/planting with dense hedging along the centreline of the central reserve, also within any safety fence protection.

**Do Minimum Option:**
- Closing off the footpaths or bridleways just at ‘the boundary’ to the Trunk Road may not prove effective in preventing NMU crossings of the A45 in the long term. Personal security of NMU’s still able to use the footpath/bridleway routes is likely to decrease and there is also likely to be an increased risk of burglary, nuisance and fly-tipping to premises bounding on the routes. To avoid this scenario, it would be necessary to physically close off the footpath/bridleway routes and hand the land back to any abutting properties/landowners. The routes will then revert back to privately owned back gardens. Any unnecessary lengths of footway which encouraged NMU crossing movements would have to be removed.

**At-grade crossing:**
- An at-grade crossing was considered, in conjunction with anti-skid coloured surfacing. This solution is not ideal from a safety viewpoint, as the gradient of the A45 in this location is longitudinally in excess of 4 degrees. The increased momentum of southbound vehicles will increase the risk of southbound vehicles failing to stop before the crossing area. If an at-grade pedestrian crossing were adopted, the risk of road traffic accidents involving drivers having to brake suddenly would be increased. A 40mph speed limit applies at the A45 junction with the M1 Junction 15. Therefore, reduction of the speed limit from the current de-restricted limit would introduce blocks of speeding up and slowing down traffic which are likely to increase the risk of shunt type accidents.
Provision of a pedestrian and cyclist bridge:

- On the basis of the above, a new NMU overbridge was considered the best option to improve safety of NMUs at this location.

The main reasons for considering a footbridge at this location were:

- The need for a new pedestrian bridge was identified during the process of validating the Non-Motorised User network in 2002. The site has been identified as one of the top priority sites in Area 8 in terms of the Vulnerable User Crossing Improvement Program.
- Prevention of crossings at grade. A pedestrian fatality occurred at the site in 2002; provision of a crossing should prevent future accidents.
- A crossing at this location will provide a safe route for pedestrians and cyclists between the Blacky More residential area and Wootton Village. The aim is to provide a cost effective structure for pedestrians and cyclists, with minimal disruption to traffic during construction and fit within existing highway land. The nearest bridge (Wootton Fields Bridge) is not currently desirable for use by pedestrians because it is used by vehicles and carries associated vehicular hazards; NMUs have to deviate up to 1250m from their intended route.
- Pedestrian crossing count from a recent survey indicated that the proposed location of the bridge is optimal with respect to desire line.
- Crossings of the A45 at this location were studied over a 15 hour period (on Tuesday 18th March 2008 between 07:00 and 22:00) and 211 movements took place. The data obtained relating to school catchment areas also suggests that provision of a safe crossing may encourage more sustainable transport. It will be a useful amenity for the area and should encourage more journeys to school by bike or walking. There is also provision of new housing planned in Wootton and Grange Park, which will affect the catchment area.
- Letter from Wootton Parish Council from 2003 asking for an update on what was being done to provide an additional footbridge at this location.

1.6.2 Site layout constraints:

The carriageway falls to the south at this location with longitudinal gradients of up to 4% to pass beneath the Wootton Fields Overbridge. The overall distance that NMUs are required to traverse the A45 exceeds 50m, including north and southbound verges, the northbound merge lanes, the central reserve and the southbound diverge lane. The transverse topography at the proposed footbridge site is generally level.

The location of the bridge is constrained by the location of the existing footpaths and bridleways in the area, the width of the verge and length of approach ramps required to satisfy allowable gradients. Due to the narrowing of the west verges to the north and of the east verge to the south, it is not feasible to place the bridge deck at any other point whilst keeping within the existing highway boundary. Also, the proximity of the houses on the west side dictate that this is the optimum location for a crossing point. The main span is located at a point which should maximise the screening from existing vegetation.
The verge width on the west side of the A45 at the proposed location (approximately 10m at its narrowest point) is just wide enough to be able to accommodate the main span foundations and some tree planting to act as a screen. Moving north, the verge width gets narrower. If the bridge were located further south, there would be difficulty in fitting in the required length of approach ramp between the main span and the existing bridleway. On the east verge an existing gas main constrains how far the structure is located away from the carriageway. Services for lighting columns are located in the central reservation and verges.

Moving the scheme even further to the south would be impracticable due to the position of the northbound onslip from the A45, where the hotel and petrol filling station are located. Moving the scheme further to the north is also impracticable due to the size and lack of pedestrian access to the western verge.

Land constraints require the western supports of the footbridge to be constructed within 4.5m of the carriageway edge, thereby requiring the supports to be designed to resist collision loading in accordance with BD 37/01 (Loads for Highway Bridges) and BD 60/04 (The Design of Highway Bridges for Vehicle Collision Loads). A vehicle restraint system comprising a higher vertical concrete barrier (HVCB) and foundation plinths 1.5m above carriageway level were proposed to resist the primary impact load, with the steelwork supports designed to resist the residual impact load. Supports should be positioned so as to exclude interference with driver's sight lines in accordance with TD 9/93.

1.6.3 Social constraints:

There are residential properties close to the highway boundary on both sides of the carriageway. Consideration was given to the view of the bridge from local properties and whether the users of the bridge would be able to significantly overlook the properties.

Primary schools are located approximately 700m away from the crossing, on either side of the carriageway and there is a large secondary school 1km away on the east side. These schools could potentially generate a significant amount of pedestrian traffic, as illustrated by the plans showing school catchment areas.

Based on feedback from the Public Consultation, users will include pedestrians and cyclists of all ages; therefore the crossing will have to cater for all of their needs. In accordance with current guidelines, we shall also consider the needs of disabled users.

The bridge should be designed so that potential users prefer to utilise the crossing rather than continuing to cross the carriageway at-grade. To this end the bridge should be situated so that there are minimal diversions of pedestrians from the “most desirable route” which is usually the shortest distance between their origin and destination. In this case, the desire line is from the end of the bridleway on the west side of the A45 to Stratford Drive on the east side of the trunk road.
1.6.4 Technical constraints:

A geotechnical investigation was undertaken in December 2007 to allow for the detailed design of foundations (boreholes, window sampling and trial pits). Borehole data indicated that the area proposed for the bridge comprises sand and gravel formations on underlying clay. No problems were anticipated with using spread footings for foundations, based on the allowable bearing pressure. Spread footings approximately 2m deep were proposed for the main span and 1.5m for the ramp foundations. Trial pits were also dug to confirm the location of statutory undertakers’ apparatus.

In accordance with Highways Agency standards, there are certain geometrical constraints imposed on a new NMU overbridge. There are also good practice guidelines; i.e. the use of a single span footbridge to avoid a support in the central reserve should be employed on the basis of safety, appearance and economics. This will avoid the risk of vehicular collision, ease maintenance operations and not present sight line problems. This will also offer a financial saving, although the bridge deck construction depth will have to be greater in order to span the extra distance. A single span structure would have the advantage that it could be fabricated off site, transported onto site, and lifted into position. There are associated reductions in traffic management costs and delays. A single span is limited to about 48 metres that could be lifted into place using one crane due to dynamic effects on the bridge. Given that the proposed span is 35.2 metres, installation should be straightforward.

This type of bridge construction would enable the majority of the structure to be fabricated off-site. The maximum length for road delivery without restrictions is typically 27.0m and therefore, the truss could be delivered to the site in two sections and assembled off-site prior to its installation during a nighttime closure. The steel-framed piers could also be prefabricated off-site and installed under lane closures.

The ramps leading onto the bridge and the bridge deck should allow a 2 metre minimum width for an unsegregated facility as stated in BD29/03. The preference by Northamptonshire County Council and the Highways Agency is for a 2.5m wide structure and ramps, which will accommodate any future increases in NMU’s using the facility. Ramp gradients of 1 in 20.5 are proposed (exceeding the maximum ramp gradients of 1 in 20), so that intermediate landings do not have to be provided in accordance with BD 29/03. A turn of 180 degrees in the ramp at each landing will be provided with a gap (0.5m approx.) between the ramps to allow for maintenance of support columns and parapets.

The west side ramps have been positioned in a 3-ramp configuration, with the bottom ramp being positioned directly below the top ramp to reduce the overall footprint of the structure. This ramp configuration would require trestle supports for some sections of the approach ramp, which is slightly more expensive than single column supports. This layout allows the ramps to be located as far away from the existing properties as possible, providing space for planting additional trees as a screen. On the east side it is proposed that the access will be provided via two ramps with one landing incorporating a 180 degree turn.

It is proposed to provide raised earthwork ramps with flexible paving retained with low brickwork walls on the ramp approaches to reduce the visual impact of the structure, reduce structural costs, minimize the quantity of materials to be removed from the site.
and enhance ease of access for maintenance. Staircases have been provided to encourage use of the bridge, by providing a shorter route for pedestrians not wishing to use the ramps.

A proprietary system would be used for the surfacing of steel decks, which would form both the waterproofing membrane for the deck and the wearing course over the bridge. This surfacing would also meet the non-slip requirements of the design specifications.

The clearance headroom provided for vehicles passing beneath the bridge should be a minimum of 5.7 metres above the carriageway (TD 27/05). Northamptonshire County Council and Northamptonshire Police have been consulted regarding headroom and have confirmed that this road is not required as a high load route. The nearest bridge to the south has a minimum clearance of 5.62 metres and to the north 5.46 metres. Therefore provision of 5.8m is appropriate for this bridge to allow for future resurfacing of the A45. It is proposed to have a deck that reflects the gradient of the road, i.e. it is sloped upwards from west to east. This will allow a reduction in the length of ramp required on the west side of the bridge.

Sightlines – There is a speed limit of 70mph on the A45 between Wootton and Queen Eleanor Interchanges. On the left hand curve the forward visibility is between 160m and 215m. This is between the minimum desirable stopping sight distance for 100kph and one step down (TD 9/93). Visibility on the A45 northbound carriageway in front of the existing central reserve safety barrier has been determined as being between 295m and 235m which is between the Desirable Minimum Stopping Sight Distance for 120kph and one step below.

1.6.5 Financial constraints:

The option of an over bridge was considered to be the most viable option in the study report. The alternative option of an underpass was ruled out due to the additional cost of installing the crossing (deep excavation, pumped drainage and in situ construction) with related traffic management. There is also a larger ongoing maintenance cost arising from drainage, lighting and graffiti removal. The underpass approach ramps would have been excessively long and space constraints, particularly on the west side, would have resulted in a costly structure. Personal security would have been compromised, with users feeling insecure about using an underpass that may be dimly lit and out of view of passers by. Due to these problems an overbridge was considered to be the most appropriate solution in this location.
### Table 1: Advantages and Disadvantages of NMU Crossing Options

<table>
<thead>
<tr>
<th>Option</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Do Nothing</strong></td>
<td>No cost</td>
<td>NMU safety risk</td>
</tr>
<tr>
<td></td>
<td>No traffic disruption</td>
<td>Safety risk to traffic</td>
</tr>
<tr>
<td></td>
<td>No approvals required</td>
<td>Public disquiet over accident risks</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Community severance</td>
</tr>
<tr>
<td><strong>Do Minimum Action:</strong> Close or restrict all NMU access points and install central reserve vehicular safety fencing and other diversionary measures</td>
<td>Reduces crossing risk</td>
<td>Public disquiet over NMU diversions</td>
</tr>
<tr>
<td></td>
<td>Limited environmental impact</td>
<td>Increase in community severance</td>
</tr>
<tr>
<td></td>
<td>Quick implementation</td>
<td>TROs (Traffic Regulation Orders) required to close/divert</td>
</tr>
<tr>
<td><strong>Option 1:</strong> Install warning signs, road markings and speed limit in addition to the Minimum Action option above</td>
<td>Quick implementation</td>
<td>Residual NMU safety risk</td>
</tr>
<tr>
<td></td>
<td>Limited environmental impact</td>
<td>Residual traffic safety risk</td>
</tr>
<tr>
<td></td>
<td>Low cost (under £100k)</td>
<td>TROs required</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Traffic delays due to speed limit</td>
</tr>
<tr>
<td><strong>Option 2:</strong> Install an at-grade controlled pedestrian and cycle crossing and speed limit in addition to the Minimum Action option above</td>
<td>Implementation in under 24 months</td>
<td>Moderate cost (£100-200k)</td>
</tr>
<tr>
<td></td>
<td>Limited environmental impact</td>
<td>Vehicle only accidents likely to increase</td>
</tr>
<tr>
<td></td>
<td>NMU accident severity reduced</td>
<td>Traffic delays due to speed limit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TROs required</td>
</tr>
</tbody>
</table>
### Option 3:
**Construct a shared use Foot/Cycle Bridge in addition to the Minimum Action option above**
- Low traffic accident potential
- Safe NMU route should encourage usage, particularly by school children crossing the A45 from the nearby schools
- Removes community severance
- Encourages healthier travel
- Safe vehicular route
- Major capital cost (in excess of £1m)
- Cannot guarantee the prevention of all NMU crossings
- Some nearby residents may object to a new crossing on the grounds of visual intrusion and loss of privacy.
- Medium environmental impact

### Option 4:
**Construct a shared use Subway in addition to the Minimum Action option above**
- Low traffic accident potential
- Safe NMU route
- Removes community severance
- Encourages healthier travel
- Safe vehicular route
- Low environmental impact
- Major capital cost (in excess of £2m)
- Implementation greater than 24 months
- Land acquisitions might be required
- Cannot guarantee the prevention of all NMU crossings
- Major traffic impact during construction
- Additional maintenance costs
- Security/crime disbenefits

## 2. PUBLIC EXHIBITIONS

### 2.1 Exhibits
Exhibits included:
- Drg No 94326/745/9/002 Site Location Plan 1:50000 (A2)
- Location Plan showing proposed location of A45 Blacky More to Wootton Footbridge NTS – showing street names & enabling properties, schools, petrol stations etc to be identified (A1)
- Drg No 94326/745/9/002B Site Plan (A2) – showing existing trees & buried services
- Drg No 94326/745/9/001B General Arrangement Drawing (Plan 1:500, Elevation & Sections 1:100)(A0)
- Drg No 94326/I/HM/0101 Pedestrian Crossing Count (A1) (plan showing pedestrian crossing movements from recent survey)
- Photomontage – existing situation at proposed footbridge location (A2)
- Photomontage – proposed footbridge showing the proposed structure superimposed on the landscape (A2)
- Drg No 07041.07B Proposed Scheme – Existing Vegetation (A1)
- Drg No 07041.08A Mitigation Measures – Proposed Planting (A1)
- Drg No 07041.09 Photographs (A1)
- Plans showing school catchment areas (A3) – 9No (give an indication of potential number of crossings by pedestrians and cyclists of A45 if a footbridge were to be provided)
- Drg No 94326/P/EL/1302 Existing Lighting Design Light Spill Contours – showing lighting levels in Lux before (A2)
- Drg No 94326/P/EL/1303 Preliminary Lighting Design Light Spill Contours – showing lighting levels in Lux with additional lighting (A2)
2.2. **Number of attendees**

A register of attendees at the Public Exhibitions was kept and numbers of people attending were as follows:

- Wootton Community Centre (3/6/08) 40 households (49 total)
- Blacky More Community Centre (4/6/08) 61 households (85 total)

2.3. **Feedback from exhibitions**

134 people attended the 2 Exhibitions. A proportion of the residents who attended the exhibitions were opposed to the proposal for a footbridge and thought a crossing was unnecessary. The key issues raised were as follows:

- Many residents claimed they had a problem with vandalism, anti-social behaviour etc and thought that providing a footbridge would make the situation worse. There were also concerns for the safety of people crossing the bridge if gangs of youths used it as a place to congregate.
- Most residents of Stratford Drive did not want their road to be used as the link between the footbridge and Wootton High Street. They were opposed to the proposed gap in the existing hedgerow into Stratford Drive. If the footpath link was removed and a fence erected along the highway boundary with Stratford Drive, the bridge would be more acceptable to some residents.
- There are dispersal orders in force for East Hunsbury (west side of A45) due to vandalism and antisocial behaviour. Many of the residents who attended the Public Exhibition said that there was an ongoing problem in the area from groups of youths congregating in the bridleway and Brashland Drive, causing property damage and disturbing residents. The existing bridleway is unlit and in its present condition will not encourage use of a bridge.
- Some residents queried why a 24 hour NMU count had not been undertaken, as many had observed a number of people crossing the carriageway late at night.
- Some residents were concerned that objects might be thrown from the bridge.
- Some residents were concerned that the bridge might be used by motocross bikes.
- Some residents were concerned about being overlooked by users of the bridge.
- The justification for a footbridge to link Wootton and Blacky More was questioned by a large number of residents. They saw little reason for providing a footbridge, as the two areas are in many respects separate communities, with their own amenities, shops and schools. One of the residents commented that the only thing that has united the communities of Blacky More and Wootton is to oppose the scheme.
- A number of people questioned whether there was a need for a crossing and whether a bridge would be used. The low number of pedestrians crossing at-grade do not justify the cost of a bridge. The bridge would be poor use of taxpayers money based on projected usage. There is an alternative bridge 550m to the south. There have been no pedestrian fatalities on the A45 since 2002.
- Traffic noise was also raised as an issue by a number of residents, as traffic volumes have increased by a large amount over the last few decades. Lowering the speed limit to 60mph, quieter surfacing to mitigate noise, addressing defects in the existing surfacing, better lighting with less glare, and better maintenance/improvements of the existing assets would be better use of resources.
If a footbridge were to be provided, improving the standard of the approach routes to the bridge would be essential to encourage its use, particularly the existing bridleway on the west side (resurfacing, cutting back vegetation, provision of lighting with time cut-off facility etc). According to residents the existing bridleway has not been maintained for several years. Some residents would like to see the bridleway fenced off at either end to stop it being used.

A number of people queried whether providing a footbridge would actually stop people crossing the A45 carriageway at grade. Some people may still risk the quicker and more direct crossing of the carriageway at grade, rather than the much more indirect route over the bridge via steps or ramps. According to some residents, a large proportion of the at-grade crossings at present are youths crossing the A45 to visit the garage shop or the pizza take away. Regardless of whether a bridge is provided, fencing would therefore be required to deter at-grade crossings.

Some of the residents of Brashland Drive expressed concern about the planting proposals. They were generally not keen to have planting on their own land, as this would lead to shading of their gardens and could lead to subsidence problems of boundary walls. They were also concerned about the length of time the trees would take to form an effective screen and also their effectiveness in the winter.

A large number of residents were opposed to a footbridge and expressed a preference for a scheme which discouraged crossings of the A45 at grade by use of a divisional barrier in the central reserve and improvements to the existing footway/cycleway routes over the road bridge to the south. A large number of residents thought that people should be forced to use the existing road bridge by preventing crossings at grade. Improvements to the existing footways leading to the road bridge, additional pedestrian crossings and better signing would encourage use of this route.

Some residents were supportive of the proposal and said that they would use a bridge if provided, but they generally lived further away from the A45 and therefore were unlikely to be directly affected. Some people would use the bridge to cycle or walk to work, as it would offer a safer more direct crossing point than the existing road bridge.

It was suggested that the bridge had the potential to act as one of the main gateway features into Northampton. The colour of the bridge could be changed to reflect the Northampton Rugby team’s colours (green, black and gold), with the ramps remaining a light grey. The Saints Rugby team has a large following in Northampton and would thus help to make the bridge a popular and distinctive gateway feature.

2.4. Feedback from Councils and other Statutory Bodies

Little feedback was obtained from other Statutory Bodies. The feedback is summarized below.

Northamptonshire County Council. Meeting 6/11/07. They were supportive of the scheme.

Wootton and East Hunsbury Parish Council; Northamptonshire Borough Council; East Hunsbury Parish Council; Northamptonshire County Council. Meeting 26/7/08. The Parish, Borough and County Councils were opposed to the scheme but they recognize the necessity of improving the safety of pedestrians and others crossing the A45. The proposed footbridge has received widespread objections, and in their view the numbers
of people crossing the A45 do not provide a strong justification for a footbridge. They also note that many residents are concerned that a bridge could lead to increased anti-social behaviour near their properties, devalue their properties and result in a loss of privacy. Concerns were raised by residents on a number of issues such as loss of privacy and increased anti-social behaviour.

The MP for Northampton South Constituency. Whilst not opposing or supporting the project, he had received a sizeable number of objections from local residents in his constituency.

East Midlands Regional Assembly. Noted details of scheme, but no specific comments.

Cyclists’ Touring Club. Supportive of the proposal.

English Heritage. Concluded that, with mitigation, the overall visual effect of a footbridge on The Old Windmill (Grade II listed building on Stratford Drive) would be low.

Newspaper article – Northampton Chronicle & Echo (11/6/08). This presented the case for and the case against provision of a footbridge.

There have been no pedestrian fatalities on the A45 since 2002, but there may have been a number of near misses (cars swerving to avoid pedestrians crossing at grade, for instance), which are not recorded. Although there is no data to confirm whether this is the case, anecdotal evidence and feedback from the public consultation suggest that crossings at grade could influence the safety of motorists on the A45 as well as that of NMUs.

3. QUESTIONNAIRE RESULTS & RESPONSES BY LETTER

3.1. Summary of Responses

Gender:

- M – 123
- F – 139
- M&F – 24
- No Answer (NA) - 32

There were no obvious trends in the data relating to gender (slightly higher response rate from women than men – 43% vs 39%).

Age Group:

- < 16 - 0
- 16 to 34 - 55
- 35 to 54 - 132
- 55 to 64 - 59
- > 65 – 39
- No Answer (NA) – 33
The questionnaires were predominantly returned by the 35 to 54 age group (42%) – see Section 4.4.

Have you crossed the A45 in the past year?

YES - 193
NO – 97
No Answer (NA) - 28

At grade crossing of A45? (Q1)
YES – 95
NO – 119
No Answer (NA) - 104

Crossing A45 via Queen Eleanor Roundabout? (Q2)
YES – 67
NO – 125
No Answer (NA) - 126

Crossing A45 via London Road Bridge? (Q3)
YES – 157
NO - 69
No Answer (NA) - 92

Crossing A45 via M1 Junction 15? (Q4)
YES – 27
NO – 165
No Answer (NA) – 126

60% of respondents said they had crossed the A45 in the past year, with a surprisingly large number (95) saying that they had crossed the A45 at grade. However, the data showed that the largest number of crossings of the A45 were via Wootton Fields Bridge (157). As expected, the number of crossings at points further away from the obvious desire line between Blacky More and Wootton, such as via the Queen Eleanor Roundabout (67 crossings) and via M1 Junction 15 (27 crossings) were much lower.

Were you crossing the A45 by car/motorbike because there was no safe alternative?

YES - 81
NO – 126
No Answer (NA) – 111

Only 25% of respondents indicated that they crossed the A45 by car/motorbike because there was no safe alternative. This possibly highlights the fact that the majority of people choose to commute by car for reasons other than perceived lack of safety of walking/cycling – convenience and speed for instance.
Where were you traveling to when you were crossing the A45?

School / College (S/C) - 21
Wootton Village / Town Centre (WV/TC) - 25
Doctor / Dentist Surgery (D/DS) - 9
Shopping (S) – 42
General Leisure / Social Activities (GL/SA) – 80
Bus Stop (BS) – 2
Work (W) – 15
No Answer (NA) – 124

Travel destinations were varied and a large proportion of the respondents (124) did not answer this question. The majority of crossing movements of the A45 appear to be as a result of leisure activities, such as visiting friends, visiting the pub and garden centre etc (80 responses). Shopping was the next largest reason (42 responses). Other reasons for crossing the A45 included travel to Wootton Village and Town Centre (25 responses), school/college (21 responses), work (15 responses) and visits to doctor/dentist (9 responses).

Do you think there is a need for this bridge across the A45?

YES - 207
NO – 97
No Answer (NA) – 14

Do you approve of the design of this bridge?

YES - 187
NO – 69
No Answer (NA) – 62

Would you use a bridge if it were built?

YES - 194
NO – 89
No Answer (NA) – 35

How often would you use the bridge?

>3 times a week (>3) – 41
<3 times a week (≤3) – 67
Monthly (M) – 12
Yearly (Y) – 10
No Answer (NA) – 175
Only a low proportion (13%/41No) of people who said they would use the bridge said they would use it more than three times a week. 22% said they would use it less than three times a week. The majority of respondents (58%) did not answer this question, possibly an indication that they might not use a bridge.

Will the bridge be visible from where you live?

**YES** - 59
**NO** – 230
*No Answer (NA)* – 29

If this bridge is visible will this be a problem?

**YES** – 41
**NO** – 27
*No Answer (NA)* – 250

Of the 59 respondents (19%) who stated that the bridge would be visible, 41 of those thought it would be a problem (loss of privacy).

**3.2. Discussion of Questionnaire & Letter Responses**

The Highways Agency received a total of 318 responses, of which 293 were questionnaires and 25 were letters or e-mails.

65% of respondents thought there was a need for the footbridge. These results were plotted on the coverage area, with green dots indicating a ‘YES’ and red dots indicating a ‘NO’. No clear trends were detected, although as expected there were probably slightly more people who live closer to the proposed bridge against the proposal.

Of the 25 letters & e-mails (generally from households close to the A45 such as those on Stratford Drive and Brashland Drive) the response in favour of the bridge across the A45 was **YES**: 5, **NO**: 16, no answer: 4. These results were plotted on the coverage area with green dots indicating a ‘YES’ and red dots indicating a ‘NO’. Of the 16 letters received from within the coverage area, most of these were from locations close to the proposed bridge.

Most people crossing the A45 on foot/cycle use the Wootton Fields Bridge – which is borne out by the NMU survey showing 184 crossing movements via the bridge over a 14 hour period versus only 27 crossing movements at grade.

Travel destinations were varied, with the majority of crossing movements of the A45 appearing to be as a result of leisure activities.
Over half of respondents approved of the design of the bridge and said they would use the bridge if it were built. Based on the questionnaire responses, usage of a footbridge is projected to be low.

3.3. Delivery of Questionnaires & Letters
Approximately 5400 questionnaires were delivered to Wootton and Blacky More by Carillion-URS personnel. The brochure drop started on 20 May 2008 and took about a week to complete.

A letter drop was undertaken to those houses immediately affected by the proposals (28 No properties). Letters were distributed by Carillion-URS employees approximately three weeks before the Public Exhibitions. A signature to confirm receipt was obtained where possible. Where no one was present to sign for the packs, the Carillion-URS employee signed to confirm that the letter had been delivered. These letters included a General Arrangement Drawing of the proposed bridge together with a detailed landscaping plan showing how the structure would affect their property.

3.4. Meetings with Residents
A site meeting between a resident of Brashland Drive, the Highways Agency and The Landscape Partnership was held to discuss the impact of the proposed footbridge (noise & visual intrusion issues, compensation)(13/6/08).

A site meeting between a resident of Stratford Drive, the Highways Agency and Carillion-URS was held to discuss the impact of proposed footbridge (noise & visual intrusion issues)(6/8/08).

4. RESPONSES TO PUBLIC CONSULTATION
4.1. Advance publicity – distribution of leaflets/notification of proposals
A few complaints were received by residents who claimed not to have received a letter and drawing, or that the publicity material had been indistinguishable from junk mail. In these cases letters and drawings were re-sent to the relevant addresses or to residents who requested further information.

Wootton Parish Council would have preferred more than two weeks notice of the exhibitions and would have preferred to have received a more detailed information pack a few days earlier than residents to have allowed them more time to effectively deal with queries from residents.

4.2. Bridge parapets and visual screening
A number of residents expressed concern that the height of the proposed footbridge and approach ramps could reduce their privacy. At present, some privacy is provided by vegetation and timber boundary fences. It was agreed that the existing trees would not provide sufficient screening to the properties nearest the proposed bridge, hence the consideration given to providing a visual screen fixed to the landings and ramps (in addition to planting proposals covered in Section 4.3.2).
Options for a screen fixed to the ramp parapets (highest sections nearest the housing) include mesh of various grades, perforated metal plate or solid GRP panels. The aim of a screen would be to provide a semi-translucent visual screen, which will transmit some light but be durable and reasonably vandal resistant. Pedestrians and cyclists would not be able to look over the screen and it would be difficult to see through it, therefore protecting the privacy of residents living close to the bridge. The preferred proposal was for a perforated steel plate 3mm thick with 5mm diameter holes at 7mm centres. The screen panels of 0.9m height would extend from handrail height (0.9m) and be welded into frames and fixed to the handrails with angle brackets (with the top of the screening at 1.8m height above footway level). Solid infill was rejected, as it would have created a heavy appearance to the structure and possibly a darker, less inviting route for users.

The parapets proposed for the bridge are 1.4m high steel guardrails, with the parapets on the main span to have steel mesh infill up to 0.9m (handrail height) to prevent objects being kicked off the bridge by pedestrians. Handrails are proposed for both the main span and approach ramps.

4.3. Local Environment

4.3.1 Lighting

Although there is no clear guidance on whether the footbridge is required to be lit, it was considered appropriate to provide lighting to an overbridge in this location based on the preferences of Northamptonshire County Council (from previous discussions), and Wootton Parish Council. If the bridge is adequately lit, it should encourage more people to use the crossing.

Lighting addresses safety issues (steps particularly need to be adequately lit) and personal security issues demand the structure be lit. There will be some lighting of the main span and approach ramps provided by the existing lighting along the A45, but calculations indicate that additional lighting would be required to satisfy the requirements specified in BS 5489-1:2003. On footbridges, care should be taken to install the lighting units in such a manner as to complement the structure but with due consideration given to future maintenance.

Provision of lighting must ensure adequate lighting of the bridge, ramps and carriageway below the footbridge (to ensure that there are no dark spots or shadows created that would impede the safety of the motorist or users of the bridge). Lighting needs to be concentrated at the entrances to the ramps and at changes in direction of the ramps. The proposed ramp arrangement on the west side involving the top ramp being directly above the bottom ramp would result in shadowing effects, so a few 5m high lighting columns are proposed. Any additional lighting is considered to have little adverse impact on local residents as the new lighting would be more controlled and directional than the existing situation, with more shielding and less overspill of lighting.

Column-based lanterns fixed to the structure wherever possible is proposed. Light contour drawings have been produced (levels in lux before and after) to demonstrate that there would be a negligible increase in light levels on the houses nearest the proposed bridge.
At present the approach along the bridleway from the west is not well lit. Extending the bridge lighting to encompass this route is outside the scope of this scheme, but the Local Authority may be amenable to lighting this route if a bridge were to be provided.

Lighting was only raised as an issue by some of the residents on Stratford Drive and Brashland Drive who live close to the proposed footbridge. They were concerned about increased glare and the light levels from additional lighting.

4.3.2 Visual Impact – Planting Proposals

Environmental considerations (visual impact and loss of privacy) were an important issue for those affected by this scheme. The concerns expressed by residents close to the proposed bridge (notably Brashland Drive and Stratford Drive) were not unexpected, therefore early in the preliminary design process an Environmental Checklist was produced by The Landscape Partnership (TLP). No adverse environmental effects were identified and it was agreed that there was no need to consult English Heritage, English Nature or the Environment Agency on the scheme.

Following this, a Townscape & Visual Impact Assessment Report was completed by TLP in February 2008. A landscaping scheme was proposed to mitigate the environmental impact of the structure and address privacy and visual intrusion concerns from nearby residents. The Report included proposals for screening the ramps on both sides of the A45 from nearby residents. Proposals involve tree planting on Highways Agency land, tree planting on private land (but only with the agreement of the landowner), and the use of screens on the higher sections of approach ramp (already covered in Section 4.2). Consideration was given to the view of the bridge from neighbouring properties and on the appearance of the structure for road users. Consideration was also given as to whether users of the bridge could significantly overlook adjacent properties. The proposed planting scheme retains existing vegetation wherever possible in order to provide screening to properties in the vicinity of the structure.

The surrounding topography means there is little opportunity to achieve the required headroom clearances over the carriageway without the structure being highly visible. The precise location of the bridge will have little effect on the degree of visual intrusion, and, as already discussed, the bridge location is highly constrained.

The minimum width between the structure and the land boundary is only about 1.5m. It would therefore be difficult to accommodate a line of trees/hedging if some allowance is made for maintenance. TLP suggested using Hornbeam in some areas, due to its columnar habit, the fact that when mature it will attain an adequate height to screen the structure, and despite being deciduous retains its leaves well into the winter. As it would not be possible for this planting to entirely screen the bridge from nearby properties, it was suggested offering landowners the option of planting additional trees on their own land to increase screening. This would be entirely voluntary.
4.3.3 Local Schools

During the preliminary consultation, local schools were contacted to obtain details of their catchment areas and their view as to whether a footbridge would assist in promoting their proposals for Safe Routes to Schools. The head of Caroline Chisholm Secondary School thought that the bridge would provide safety benefits for pupils from the west of the A45, and that the bridge ought to be lit to aid child safety and deter antisocial behaviour. All schools were contacted by letter as part of the written consultation but no replies were received during the consultation period. Likewise the School Travel Plan Officer at NCC was contacted but no reply was received.

There are a number of nearby schools in Wootton, East Hunsbury and Blacky More and the data collected indicates that a number of school pupils need to cross the A45 to attend their school. While many would probably continue to travel by car or use the existing London Road Bridge, the proposed footbridge would provide more choice for parents and pupils when planning their journeys and might encourage more school children to travel to school using more sustainable modes of transport.

4.3.4 Anti-social behaviour

The extent of anti-social behaviour in the area was one of the main issues raised by residents of both Blacky More and Wootton. Meetings with NCC and Northamptonshire Police prior to the Public Consultation had not raised this as a significant issue relating to the provision of a footbridge, but many local residents had concerns that a footbridge would lead to increased anti-social behaviour (see Section 2.3 Feedback from Exhibitions).

Some residents raised the concern that some users of the bridge may throw items onto the carriageway below or into nearby gardens. The possibility of people causing danger to motorists passing below the bridge applies to all bridges in the country and these are matters dealt with by the police. By providing adequate lighting to the footbridge and approach ramps, this risk should be minimized.

Noise caused by pedestrians using the structure was raised by a few residents, but the combined waterproofing/surfacing materials generally used should act to reduce footfall noise. Also, footfall noise is unlikely to be significant relative to the background noise levels from traffic on the A45. The existing roadside noise levels of 83.3Db(A) between Wootton and Queen Eleanor Interchanges (November 2004) are high.

Unauthorised use of the footbridge by motorcycles was raised as a potential problem by some residents. Use of bollards is proposed to control access and discourage access by motorised vehicles (bollards are positioned to allow unhindered access for disabled users). In this situation where cyclists are also expected to use the bridge, it was proposed to install them a few metres from the ends of the ramps.

4.3.5 Existing footpaths and approach routes

The purpose of the bridge is to facilitate and encourage walking and cycling whilst ensuring the safety of all road users. Access by stairs alone is only to be considered in exceptional circumstances. Persons with disabilities are also considered when
designing any highway features. The gradients of the ramps are dictated by the required
design standards for use by people with limited mobility as well as by cyclists.

The cut-through proposed on the east side of the A45 through the hedge linking the
existing footpath with Stratford Drive on the east side of the A45 was suggested by
Northamptonshire County Council, but residents of Stratford Drive did not support this
proposal. Many suggested provision of a fence along the existing line of trees to
segregate Stratford Drive from the A45 to prevent pedestrians cutting through along
Stratford Drive towards Wootton High Street.

Were a footbridge to be provided, some sections of existing footway network would
need to be upgraded after consultation with NCC. It would be preferable to provide
adequate widths (2.5m) for combined cycleway & footway. Some existing routes such
as the existing bridleway on the west side are in a poor state of repair, with overhanging
vegetation and no lighting. To encourage use of a bridge, these would require remedial
works and maintenance to ensure safe and user-friendly approach routes.

4.4. Compensation
The Government does not offer compensation for visual intrusion, but compensation
might be available under Part 1 of the Land Compensation Act 1973 for any reduction in
the value of property caused by the additional street lighting.

5. ALTERNATIVE SUGGESTIONS RECEIVED TO FOOTBRIDGE

5.1. Discouraging at-grade crossings by use of barrier
The feedback obtained from the public exhibitions and questionnaires revealed much
useful local information. One of the most popular alternative suggestions put forward by
residents and councils following the public consultation was the provision of a divisional
barrier along the central reservation of the A45 to discourage/prevent crossings at
grade. This had been considered briefly in January 2004 as part of the Feasibility Stage
Road Safety Audit Report.

Further investigation into the feasibility of this option is required, such as the impact on
sightlines, maintenance of the barrier and central reserve, its behaviour were it to be
impacted by an errant vehicle etc. The height of such a barrier is likely to be in the
region of 1.8m and options might include chainlink fencing with precast concrete posts,
timber environmental barrier fixed to steel posts, or a concrete barrier. The possible
installation of environmental fencing/anti-pedestrian fencing along the centre section of
the central reserve extending from a point south of the London Road Bridge to a point
about 200m north of the bridleway terminal on the west side (total length of about 800m)
would therefore be investigated.

5.2. Combination of barrier & improvements to existing footways
The other main suggestion was to improve the approach routes for pedestrians and
cylists leading to the existing Wootton Fields Bridge in conjunction with provision of a
divisional barrier (see above). We do not consider improvements in isolation would stop
people crossing the dual carriageway at grade. Such improvements would need to be discussed and developed with the local highway authority.

Improvements to the approach routes would probably involve the provision of some additional pedestrian crossings and short sections of dropped kerb to provide a better link between existing sections of footway, some vegetation clearance and additional general maintenance.

6. OTHER OPTIONS ARISING FROM CONSULTATION ALREADY CONSIDERED BUT DISMISSED

Provision of a subway. This was rejected on the grounds of cost (more expensive than a footbridge), and personal safety issues associated with the very long ramps required. There would also be increased land take (in excess of that required for a footbridge), limited safety benefits and there would be a major traffic impact during construction.

Reduction in the speed limit of 70mph on the A45 between Wootton and Queen Eleanor Interchanges. This was not considered feasible due to capacity concerns resulting from the high traffic flows between M1 Junction 15 and Queen Eleanor Interchange, increased journey time for road users, compounded capacity problems at the M1 and Queen Eleanor Interchange and limited safety benefits.

Provision of a signalised crossing on the A45. This was not considered feasible due to increased journey time for road users, compounded capacity problems at the M1 and Queen Eleanor Interchange and increased potential for shunt type accidents. This solution is not ideal from a safety viewpoint, as the gradient of the A45 carriageway at the location of the proposed bridge is longitudinally in excess of 4 degrees. The increased momentum of southbound vehicles will increase the risk of vehicles failing to stop before the crossing area.

7. NEXT STEP

Following the Public Consultation and careful consideration of all the comments and representations received, the Highways Agency have concluded that there may be insufficient demand to justify the provision of a footbridge in this location. The main reasons for this decision were:

(a) Opposition to the proposal from a large number of residents of Wootton and Blacky More.

(b) Lack of support for the proposal from Wootton and East Hunsbury Parish Council, Northamptonshire County Council and Northampton Borough Council.

(c) Justification for a footbridge is weak based on projected usage.

Therefore, prior to any decision being made on the preferred way forward, the Highways Agency in conjunction with CarillionWSP will consider the following options as possible alternatives to the proposed pedestrian footbridge;

- Discouraging at-grade crossings by use of barrier; and
- Combination of barrier and improvements to existing footways leading to the existing Wootton Fields bridge