

**Report to:** Environment Panel  
Cabinet

**Date:** 30 July 2008  
7 August 2008

**Subject:** Road Safety Audit Procedures

**Report of:** Executive Director Environmental Services

**Contact officer:** Carmel Foster-Devine 01942 404687

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**Purpose / summary:** To inform Members of new procedures that have been developed to help towards attaining our casualty reduction targets.

**Alternative options considered and reason for selecting the one recommended:** None

**Recommendation / decision:** That the procedures are adopted as policy.

**Key Decision:** This report does not involve a key decision.

The decision made as a result of this report will be published within **48 hours** and cannot be actioned until **seven working days** have elapsed, i.e. before 19 August 2008

**Risks / Implications:**

**Financial:** None – the safety auditing of schemes will be funded through the Capital Programme or by Developers should the scheme be promoted by them.

**Staffing:** None – within existing resources.

**Policy:** The procedures will form an integral part of the Road Safety Strategy.

**Equal Opportunities - Has a Diversity Impact Assessment been conducted?** No – as the procedures relate to highways and traffic management schemes.

**Wards affected:** All

**Property Implications – Does the proposal involve a reduction, addition or change to the Council’s asset base or its occupation?**

No

**If yes, have the property implications been agreed with the Corporate Property Officer?**

**Does this proposal have significant implications for the Council and the local population?**

A diversity impact assessment is not necessary at this stage, however, equality and diversity implications have been considered when producing this report.

**Does this proposal involve a new policy or procedure or significant changes to an existing policy or procedure?**

A diversity impact assessment is not necessary at this stage, however, equality and diversity implications have been considered when producing this report.

Has the Service Director - Borough Solicitor confirmed that the recommendations within this report are lawful and comply with the Council’s Constitution? **Yes**

Has the Service Director - Corporate Services confirmed that any expenditure referred to within this report is consistent with the Council’s budget? **Yes**

Are any of the recommendations within this report contrary to the Policy Framework of the Council? **No**

**For Cabinet reports only :**

Categorisation of the report:	<b>x</b>
Discussion leading to a decision	
Monitoring	
Sharing for corporate understanding	

Discussion	
Decision	<b>x</b>
Information	

**Tracking/Process:**

	Consultation	Ward Members	Partners
Panel	Overview & Scrutiny	Cabinet	Council
30 July 2008		7 August 2008	

There are no background papers.

Proper Officer Martin Kimber

Date 16 July 2008

## **1.0 Background:**

- 1.1 Wigan Council currently undertakes extensive work on reducing the number of road traffic casualties in the Borough through engineering measures. Running in parallel, is a programme of education, training and publicity which complements this work. The engineering work undertaken is predominantly reactive, establishing where there is a problem, treating it and then monitoring it. What we do not do to any great extent is preventative work.
- 1.2 The only preventative engineering tool is Road Safety Audit – the evaluation of highway and traffic management schemes during the design and construction to identify potential safety hazards which may affect any type of road user before the scheme is opened to traffic and to suggest measures to eliminate or mitigate those problems.
- 1.3 Road Safety Audits have been carried out on highway improvement schemes in the UK since the 1980s. Section 39 of the 1988 Road Traffic Act places a statutory duty on local authorities to prevent accidents on new roads; this is generally interpreted as a duty to carry out Road Safety Audits. Road Safety Audits have been mandatory on trunk roads (including motorways) in the UK since the early 1990s. The basis of the process is that safety engineers involved in accident investigation and prevention use their knowledge of common safety issues to ensure that accident causation factors are not repeated in new and altered road layouts.

## **2.0 Proposals:**

- 2.1 As Wigan does not currently have safety audit procedures the national standard applies. This standard is the Highways Agency's Standard HD19/03 which was issued in November 2003. Although this Standard applies to trunk roads (including motorways), it is "*commended to other highway authorities*". This standard places very onerous procedures on Authorities which smaller Authorities such as Wigan find hard to adhere to.
- 2.2 Wigan has therefore, developed it's own procedures which reflect the type and scale of highway and traffic management schemes promoted by the Authority. These procedures apply to all road schemes within Wigan, including development schemes on non-trunk roads in the Borough. The procedures are appended to this report.

## **3.0 Alternative options considered and reason for the recommended option:**

- 3.1 The only alternative option would be to not develop our own safety audit procedures and rely on the Highways Agency Standard HD 19/03. For reasons detailed in 2.1 above this option was discounted.

## **4.0 Conclusions:**

- 4.1 The development and adoption of these procedures was set out in Wigan's Road Safety Strategy 2006-2010 and will ensure that all highway and traffic management schemes operate as safely as practicable.

- 4.2 This will help to achieve are casualty reduction targets set by Government and achieve Goal 6 of the Department's Service Plan.
- 4.3 The overall aim of safety audits is to ensure that the Borough roads operate as safely as possible, for all road users.
- 4.4 It is therefore recommended that Members note the content of the appended procedures and adopt them as Council Policy.

## Appendix



**DEPARTMENT OF ENVIRONMENTAL SERVICES**  
LTP DELIVERY GROUP

## **ROAD SAFETY AUDIT PROCEDURES**

March 2008

**Environment Panel: 30<sup>th</sup> July 2008**  
**Cabinet Approval: 7<sup>th</sup> August 2008**

# Road Safety Audit Procedures

## Wigan Council

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### 1. Background

These procedures describe the process for undertaking and managing Road Safety Audits in Wigan.

Road Safety Audits have been carried out on highway improvement schemes in the UK since the 1980s. Section 39 of the 1988 Road Traffic Act places a statutory duty on local authorities to prevent accidents on new roads; this is generally interpreted as a duty to carry out Road Safety Audits. Road Safety Audits have been mandatory on trunk roads (including motorways) in the UK since the early 1990s. The basis of the process is that safety engineers involved in accident investigation and prevention use their knowledge of common safety issues to ensure that accident causation factors are not repeated in new and altered road layouts.

These procedures are based on the Highways Agency's Standard HD19/03 which was issued in November 2003. Although this Standard applies to trunk roads (including motorways), it is "*commended to other highway authorities*".

These procedures apply to all non-trunk road schemes within Wigan, including development schemes on non-trunk roads in the Borough.

Wigan's Road Safety Strategy 2006-2010 states that :-

*The council will conduct Stage 2 (detailed design), Stage 3 (scheme completion) and Stage 4 (monitoring, 12 months after implementation) audits on all highway schemes. In addition, all major schemes will be subject to a Stage 1 audit (preliminary design).*

Capital funded highway schemes originate within Local Transport Plan Delivery Group in the Council's Highway Services Sector of the Environmental Services Department. Revenue funded traffic schemes originate within the Traffic Group.

#### 1.1 Definitions

**Road Safety Audit:** The evaluation of road schemes during design and at the end of construction to identify potential safety hazards that may affect any road users, and to suggest measures to eliminate or mitigate those problems. This is a formal process resulting in a signed Road Safety Audit Report. Road Safety Audits are carried out at Stages 1 and 2 during scheme design; Stage 3 when the scheme has been constructed; Stage 4 as a monitoring report after construction. Interim Road Safety Audits may be carried out during the design process.

**Highway improvement schemes:** All works that involve the construction of new highways or permanent changes to the existing highway layout or features. This includes changes to road layout,

kerbs, signs and markings, lighting, signalling, drainage, landscaping and installation of roadside equipment.

- Client Organisation:** The organisation with responsibility for commissioning the various phases of scheme design and/or supervision of construction. In most cases, the client will be Wigan Council's Highways Services Sector or the Traffic Group. Occasionally other work on the highway is instigated by others (for example installing advertising boards).
- Client Project Manager:** The person within the Client Organisation responsible for ensuring the progression of the scheme design and construction.
- Design Team:** The organisation commissioned by the client to undertake the various phases of scheme design and construction. In most cases, the Design Team in Wigan will be Engineering Consultancy.
- Design Team Leader:** The person within the Design Team responsible for managing the scheme design.
- Designer's Response:** A report prepared by the Design Team for the Client Project Manager following receipt of the Road Safety Audit Report.
- Road Safety Audit Team:** A Road Safety Audit Team of two people, independent of the Design Team, comprising staff with road safety engineering training and experience, which considers the scheme from a road safety point of view. In most cases, the Road Safety Audit Team in Wigan will be from Local Transport Plan Delivery Group.
- Audit Team Leader:** The person nominated and approved as Audit Team Leader
- Exception Report:** A report prepared in response to the Road Safety Audit Report. The Exception Report should give reasons why any recommendations from the Road Safety Audit Report have not been adopted. The Exception report will be prepared by the Client Project Manager following receipt of the Road Safety Audit Report and the Designer's Response.
- Development Scheme:** Any public or privately funded scheme where planning approval is sought.

## **2. Scope of Road Safety Audit**

### **2.1 Purpose**

The primary purpose of Road Safety Audit is to identify potential road safety hazards within the scheme design. This check should concentrate on making the design as safe as is possible. It should not be seen as an opportunity to re-design the scheme.

A Road Safety Audit should consider only those matters which may have an adverse effect on road safety. A Road Safety Audit is not a check of compliance with design standards and it is not intended to consider structural safety, although this may be commented on if considered relevant.

In carrying out a Road Safety Audit, the Audit Team should consider road safety issues for all road users, under all operating conditions. Road users include pedestrians, cyclists, people with mobility and sight impairment, equestrians, public transport users, as well as drivers, riders and passengers of all classes of motor vehicles.

### **2.2 Type of schemes suitable for Road Safety Audit**

These procedures apply to all highway improvement or traffic management schemes implemented on roads for which Wigan Council is the Highway Authority.

Maintenance schemes where there is no change to kerblines, signs or carriageway markings do not require a Road Safety Audit. Temporary traffic management schemes may be audited if required by the Client Project Manager.

Schemes can only be exempted from Road Safety Audit at the discretion of the Client Project Manager. In those cases where a scheme is exempted, a reason should be stated and documented in the scheme file.

In addition to schemes designed and implemented by the Council, these procedures also apply to schemes designed by external consultants on behalf of Wigan Council (for example on developer-led schemes). These consultants should arrange for independent Road Safety Audits to be carried out by the Council's Road Safety Audit Teams or by an independent Road Safety Audit Team approved by the Client Project Manager.

### **2.5 Date of application of these procedures**

These procedures apply to all schemes with effect from 1st April 2008.

### **3. Road Safety Audit Stages**

Highway improvement and traffic management schemes should be subject to Road Safety Audit at the following stages:

Stage 1: Preliminary design

Stage 2: Detailed design

Stage 3: Pre-opening, upon scheme completion, in both daytime and darkness conditions

Stage 4: When road accident data is available for one and three years after scheme completion.

Stages 1 and 2 can be combined for smaller schemes with the agreement of the Client Project Manager.

It is the responsibility of the Design Team Leader to provide sufficient material appropriate for the Road Safety Audit Team to undertake the Road Safety Audit. This material should be contained within a Safety Audit Brief which should be submitted to the Road Safety Audit Team Leader.

The Client Project Manager may decide that it is useful to have an initial meeting between the Design Team and the Audit Team Leader before the Safety Audit is carried out. This meeting may help to clarify the aims and objectives of the proposed scheme and to describe any particular features of the scheme.

The Client Project Manager may also decide that it is useful to have a meeting between the Design Team and the Audit Team Leader when the Safety Audit has been completed. This meeting may help to explain the problems and recommendations contained in the audit report.

Interim Road Safety Audits can be commissioned by the Client Project Manager. These Interim Audits allow the Road Safety Audit Team to give advice on safety issues during the scheme design process at times between the formal Audit Stages.

## **4. Methodology for undertaking Road Safety Audits**

### **4.1 Stage 1, Stage 2 and Stage 1/2 Road Safety Audits**

In order to carry out a Stage 1, Stage 2 or combined Stage 1/2 Road Safety Audit the Road Safety Audit Team should :-

- visit the site (the whole Audit Team) taking notes and photographs as necessary;
- examine scheme plans and other data supplied;
- record their discussions (on standard forms); and,
- prepare a report and send a copy to the Design Team Leader and the Client Project Manager.

The Client Project Manager may decide to invite the Police to contribute to these design stage Safety Audits.

### **4.2 Stage 3 Road Safety Audits**

In order to carry out a Stage 3 Road Safety Audit the Team should :-

- visit the site (the Audit Team together with the Police and Maintenance representatives) during daylight hours. The Audit team should drive, walk and cycle the scheme as appropriate and should take notes and photographs;
- visit the site during darkness (the whole Audit Team). There may be some schemes where the Client Project Manager or the Audit Team leader consider that a night-time visit is unnecessary. In these circumstances the reasons for the decision should be documented; and,
- prepare a report and send a copy to the Design Team Leader and the Client Project Manager.

It may be appropriate to carry out Stage 3 Road Safety Audits in two parts for major road schemes; 3a - prior to completion and 3b - immediately after opening to traffic.

A representative from the Police and from the appropriate Maintenance Team should be invited to all Stage 3 Road Safety Audits. However, the Police and Maintenance representatives are present as additional experts and do not formally constitute part of the Road Safety Audit Team. The responsibility for production of the Road Safety Audit in these cases remains with the Road Safety Audit Team.

### **4.3 Interim Road Safety Audits**

The Client Project Manager or the Design Team Leader may consider it useful to have advice on road safety issues as the scheme design proceeds. In this case a Road Safety Audit Team can be approached to give interim advice before the more formal Audit stages are reached. The Interim Road Safety Audits are not a replacement for the other stage Audits.

In order to carry out an Interim Road Safety Audit the Audit Team should :-

- discuss particular road safety issues with the Design Team Leader; and,
- prepare a report and send a copy to the Design Team Leader and the Client Project Manager.

#### **4.4 Stage 4 Road Safety Audits**

Stage 4 Road Safety Audits should be carried out when accident data is available for one year and three years after a scheme has been completed. In order to carry out a Stage 4 Road Safety Audit the Team should :-

- examine the accident data since the scheme was completed;
- identify any accidents with similar causes; and,
- prepare a report and send a copy to the Design Team Leader, the Client Project Manager and the Road Safety Audit Team Leader who carried out the Stage 3 Road Safety Audit.

Stage 4 Road Safety Audits will be carried out by the Local Transport Plan Delivery Group as they will have ready access to the relevant road accident data.

#### **4.5 The Road Safety Audit Report**

Reports for Stages 1, 2 and 3 Road Safety Audits should be written in the same format. Interim Audits would normally consist of a note outlining discussions which should be kept on the scheme file.

The Road Safety Audit Report should include an introductory statement setting out the terms of reference and listing the Road Safety Audit Team members. The report should describe when the Road Safety Audit was carried out and refer to any plans and other documents checked by the Road Safety Audit Team.

A report should be produced to include a series of road safety problems and related recommendations for improvement. A copy of the report should be sent to the Client Project Manager and the Design Team Leader.

A sample Road Safety Audit Report is shown in Appendix A.

Once the Road Safety Audit Team has completed the Road Safety Audit, a copy of the report should be sent to the Client Organisation and to the Design Team. A paper copy of the report, together with all the documentation, plans, site notes and photographs should be archived by the Road Safety Audit Team.

## 5. Road Safety Audit Team Requirements

### 5.1 The Road Safety Audit Team

It is essential that all Road Safety Audits are carried out by people who are independent of the road scheme design. The Road Safety Audit Team must consist of at least two members (an Audit Team Leader and an Audit Team Member). The team can be supplemented by up to two Observers who would gain practical experience in carrying out Road Safety Audits.

The training and experience required of the Road Safety Audit Team are listed below:-

#### Audit Team Leader

- A minimum of four years' Accident Investigation or Road Safety Engineering experience.
- Completion of at least five Road Safety Audits as a Team Member in the past 12 months.
- At least ten days' Accident Investigation or Road Safety Engineering training.
- At least two days' CPD in a relevant subject in the past year.

#### Audit Team Member

- A minimum of two years' Accident Investigation or Road Safety Engineering experience.
- Completion of at least five Road Safety Audits in the past two years (as a Team Leader or Observer).
- At least ten days' Accident Investigation or Road Safety Engineering training.
- At least two days' CPD in a relevant subject in the past year.

#### Observer

- A minimum of one year's Accident Investigation or Road Safety Engineering experience.
- At least ten days' Accident Investigation or Road Safety Engineering training.

All Road Safety Audit Teams should comply with the training and experience requirements listed above. In the event of any queries regarding the suitability of Road Safety Auditors, curriculum vitae should be submitted to the Local Transport Plan Delivery Group in the Highway Services Sector.

Additional specialist staff, such as Traffic Signal Engineers, can be added to the Road Safety Audit team as advisors if necessary.

It is recommended that where possible the same Road Safety Audit Team should be used throughout the scheme delivery to ensure a consistent approach.

## **6. Managing Road Safety Audits in Wigan**

### **6.1 Highway improvements designed by Wigan Council**

It is the responsibility of the Client Project Manager to determine the requirement for a Road Safety Audit in accordance with these Procedures.

The Road Safety Audit Team should be from Wigan's Local Transport Plan Delivery Group. If resources are not available to undertake a Road Safety Audit within the required timescale, the Client Project Manager may consider appointing a suitably qualified Road Safety Audit Team from independent consultants.

The Design Team Leader should allow an adequate timed period for the Road Safety Audit to take place and the Road Safety Audit Team Leader should ensure that the Audit is completed on time. Timescales for the Road Safety Audit process is shown below :-

- The Design Team Leader should give the Road Safety Audit Team Leader notice that a Road Safety Audit will be required. Five working days notice should be given before drawings are sent.
- The Road Safety Audit Report should be completed within ten working days of receipt of drawings.

The Client Project Manager may decide to extend the turnaround times for larger schemes.

The Design Team Leader should forward to the Road Safety Audit Team Leader the scheme details necessary for Road Safety Audit, together with a cost code for the scheme against which the time taken to complete the Road Safety Audit can be charged.

The Local Transport Plan Delivery Group will propose a Road Safety Audit Team to the Design Team Leader.

The Audit Team will carry out the Road Safety Audit and will send the Audit Report and Audit Feedback Form to the Design Team.

The Design Team will complete the Audit Feedback Form and will send it to the Audit Team Leader and the Client Project Manager.

The Client Project Manager will instruct the Design Team to make those changes to the design that are agreed as a result of the Road Safety Audit Report. Where these changes are substantial, the road scheme should be re-submitted for Road Safety Audit.

The Client Project Manager should prepare an Exception Report listing all problems raised within the Road Safety Audit Report that remain unresolved. The Exception Report should give reasons why recommendations from the Road Safety Audit Report have not been adopted. In some circumstances the Client Project Manager may ask the Design Team Leader to produce a Designer's Response to the Road Safety Audit Report where the normal Audit Feedback Form is not sufficiently detailed.

The Client Project Manager should forward copies of the Exception Report to the Audit Team Leader and the Design Team Leader.

For those issues raised within the Exception Report, it may be necessary to obtain arbitration, in order to determine whether the outstanding Road Safety Audit recommendations are adopted.

## **6.2 Schemes not subject to Road Safety Audit**

It is the intention that all highway improvement and traffic management schemes in Wigan will be subject to a Road Safety Audit. This will include a range of schemes from major highway improvements to minor traffic management schemes.

However, there will inevitably be some very minor schemes where a full Road Safety Audit may not be necessary. The decision not to carry out a Road Safety Audit can only be made by the Client Project Manager. The Client Project Manager should document the decision.

As an alternative to a formal Road Safety Audit, the Client Project Manager can request a Road Safety Check to be carried out by the Local Transport Plan Delivery Group. Some guidance on the type of scheme that may require a Road Safety Check rather than a Road Safety Audit is shown in Appendix B.

A Road Safety Check consists of an independent check carried out by one member of staff from the Local Transport Plan Delivery Group or the Traffic Group who has training and experience at least up to Road Safety Audit Team Member level. The Road Safety Checks will normally be carried out at Stage 1/2 and Stage 3.

At the design stage (Stage 1/2) the staff member will look through any plans provided and will make a decision whether or not to visit the site. A report will be prepared listing any safety problems identified and recommending ways to reduce or eliminate the problems. The report will be sent to the Design Team.

An example of a Road Safety Check Report is provided in Appendix C.

## **7. Development Schemes**

### **7.1 Schemes requiring a Road Safety Audit**

Developments that have a material impact on the highway network generally require a Transport Assessment to be carried out. All developments in this category should also be subject to a Road Safety Audit. Both private and public development schemes will require the completion of a Road Safety Audit.

### **7.2 Stages of Road Safety Audit for Development Schemes**

For development schemes, Road Safety Audits are required at Stages 1, 2, 3 and 4.

For large developments, it may be appropriate for the developer to discuss road safety issues at the pre-planning application stage so that any potential problems can be considered early in the process. This advice could be obtained from the Local Transport Plan Delivery Group in Highway Services Sector.

Road Safety Audits should be carried out in accordance with the procedures in Section 4 above. The developer will be expected to pay for the Road Safety Audits.

Following each Road Safety Audit the developer should submit evidence of the Road Safety Audit process to the Client Project Manager. This evidence should include the Road Safety Audit Report and any Exception Report produced by the developer.

The Exception Report should clearly state which of the Road Safety Audit Report recommendations have not been adopted, and provide reasons why any recommendations have not been adopted.

### **7.3 The Road Safety Audit Team**

It is important that an independent Road Safety Audit is carried out on any development scheme, and this can be achieved in two ways:

- by a Road Safety Audit Team in the Council; and,
- by a Road Safety Audit Team from an independent organisation.

If the Road Safety Audit is carried out by an independent organisation, the competence of the team members should be checked by the Local Transport Plan Delivery Group.

## **8. Quality of Road Safety Audits**

The Local Transport Plan Delivery Group Manager in the Highway Services Sector will ensure that these Road Safety Audit procedures are being used for all relevant highway improvements in the Borough.

The Local Transport Plan Delivery Group Manager will also check the quality of Road Safety Audits being undertaken. These quality checks will be carried out by examination of a sample of Road Safety Audits completed by the organisations referred to in these procedures. It will be particularly important to check the quality of Road Safety Audits carried out by external consultants.

## APPENDIX A

### Example of Road Safety Audit Report

## **APPENDIX B**

### **Guidance on carrying out Road Safety Audits or Road Safety Checks**

## Guidance on carrying out Road Safety Audits or Road Safety Checks

The Client Project Manager can decide to commission a Road Safety Check rather than a more formal Road Safety Audit where the scheme is of low cost and where there is minimal effect on vulnerable road users.

The following table gives some advice on the combination of scheme type and cost when a Road Safety Check may be more appropriate than a formal Road Safety Audit. The table is for general guidance only and even very low cost schemes may require a Road Safety Audit if there are implications for vulnerable road users.

Scheme type	<£10,000	£10,000 - £50,000	>£50,000
Major improvement scheme	-	-	RSA
Minor improvement scheme	RSC	RSC/RSA	RSA
Traffic management scheme	RSC	RSC/RSA	RSA
Safer route to school	RSC	RSA	RSA
Cycling scheme	RSC/RSA	RSA	RSA
Pedestrian scheme	RSC/RSA	RSA	RSA
Bus scheme	RSC	RSC/RSA	RSA
Local safety scheme	RSC/RSA	RSA	RSA
Development-led scheme	RSC	RSA	RSA

## APPENDIX C

### Example of Road Safety Check Report

**PAUL ROAD PROPOSED ROUNDABOUT  
ROAD SAFETY AUDIT STAGE 2**

**Report No. xxxx**

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**PAUL ROAD PROPOSED ROUNDABOUT**  
**ROAD SAFETY AUDIT STAGE 2**

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**1. INTRODUCTION**

1.1 This report describes a Stage 2 Road Safety Audit carried out on a proposed roundabout at Paul Road, Wigan. The audit was carried out on 13 February 2008.

1.2 The audit team members were as follows:-

XXXXXX, BSc (Hons), IEng, FIHIE;  
Senior Engineer, LTP Delivery Group, Wigan Council

XXXXXX, BSc;  
Assistant Engineer, LTP Delivery Group, Wigan Council

1.3 The audit comprised an examination of the drawings and other information relating to the scheme supplied by the design office in the Highways Services Section (as listed in **Appendix A**). Information on drainage and landscaping was not available to the audit team.

The site was visited by both members of the Audit Team at 10.00 hours on 11 February 2008. The weather was fine and dry. The traffic conditions were light.

1.4 The terms of reference of the audit are as described in Wigan Council's Road Safety Audit Procedure. The team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the design to any other criteria. A Stage 1 audit was carried out by Wigan Council in October 2007 (Report No. XXXX).

1.5 All of the problems described in this report are considered by the audit team to require action in order to improve the safety of the scheme and minimise accident occurrence.

1.6 The scheme consists of a four-arm roundabout at the junction of Paul Road and the A222 in Wigan. The roundabout replaces an existing priority junction, and is being constructed to improve capacity at this junction.

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## 2. ITEMS RESULTING FROM THIS STAGE 2 AUDIT

### 2.1 Problem

*Location : north-west bound approach to the roundabout*

*Summary: risk of overshoot or rear end shunt accidents*

As the north-west bound approach to the roundabout curves to the left, the stopping sight distance to the give way line lies across the nearside verge. The hedge along the verge will obstruct the stopping sight distance, which could result in overshoot or shunt type accidents.

#### **Recommendation**

It is important that the hedge along the nearside verge is removed over the appropriate distance to ensure the stopping sight distance (SSD) is not obstructed.

### 2.2 Problem

*Location : north-west bound approach to the roundabout*

*Summary: risk of overshoot accidents*

The chevron and turn left signs (Diagram 515 and 606) on the north-west bound approach to the roundabout are not in the direct line of sight for approaching drivers. Drivers may not judge the distance to the roundabout correctly resulting in overshoot accidents.

#### **Recommendation**

The signs should be moved three or four metres to the right so that they are visible to approaching drivers. Alternatively, extra chevrons could be added to the sign assembly.

### 2.3 Problem

*Location : Paul Road approaches to the roundabout*

*Summary: risk of skidding accidents*

High approach speeds on Paul Road could lead to skidding accidents particularly on a wet road.

#### **Recommendation**

High-friction surfacing should be provided on both main road approaches.

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## 2.4 Problem

*Location : all approaches to roundabout*

*Summary: risk of late decision making leading to merging and weaving accidents*

The advance direction signs (reference BR.1, 2, 3 and 4) are sited too close to the roundabout at 100m. Drivers approaching at speed may make late decisions and weave across each other on the approach and circulatory area.

### **Recommendation**

The advance direction signs should be positioned further from the roundabout, around 200m from the junction. The signs to Diagram 510 may need to be relocated accordingly.

## 2.5 Problem

*Location: Paul Road approaches to the roundabout*

*Summary: risk of side-swipe accidents on exits*

The two lanes marked as ahead for drivers on both the Paul Road approaches could result in side-swipe type accidents as there is only one lane on the exits. The direction arrows are also too close to the give-way lines to provide suitable guidance for drivers.

### **Recommendation**

There will be little benefit in providing lane arrows for this scheme, as generally, they are only required if there are three or more lanes on an entry to a roundabout. However, if they are to be provided, there should be one lane marked as ahead on the Paul Road approaches, and the arrows should be positioned at least 15m back from the give-way lines.

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## 2.6 Problem

*Location : south-east bound approach to roundabout*

*Summary: risk of loss of control accidents*

As noted in the Stage 1 Audit Report, south-east bound drivers may look along the old line of the road and not see the roundabout. This could lead to loss-of-control accidents where lamp columns 18 and 19 are located. There is a risk of serious occupant injury if a vehicle strikes a lighting column.

### **Recommendation**

Marker posts should be provided to highlight the new kerblines on the south-east bound approach. The columns should be set back at least 2m from the kerb edge.

## 2.7 Problem

*Location : pedestrian crossings*

*Summary: wheelchair users may be in conflict with traffic*

The proposed upstand at the dropped kerbs is stated as being 10mm. However, wheelchair users find it difficult to negotiate upstands greater than 6mm, and may become stranded within the carriageway.

### **Recommendation**

The upstands at the dropped kerbs should be no more than 6mm.

## 2.8 Problem

*Location : lighting columns on footways*

*Summary: pedestrians may step into the road in conflict with traffic. Errant vehicles may strike lamp columns leading to occupant injury.*

It appears that some of the lamp columns may obstruct the footways, forcing pedestrians to step into the carriageway. Some of the lamp columns are positioned close to the edge of carriageway where they could be a hazard to errant vehicles.

### **Recommendation**

Lamp columns should be positioned at the back of footways.

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**3. AUDIT TEAM STATEMENT**

I certify that the terms of reference of the audit are as described in Wigan Council's Road Safety Audit Procedure.

**AUDIT TEAM LEADER:**

XXXXXX, BSc (Hons), IEng, FIHIE;  
Senior Engineer, LTP Delivery Group, Wigan Council

signed.....

date.....

**AUDIT TEAM MEMBER:**

XXXXXX, BSc;  
Assistant Engineer, LTP Delivery Group, Wigan Council

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## APPENDIX A

### List of Drawings Examined:

- ◆ Drawing number 600/R01/01
- ◆ Drawing number 600/R02/04
- ◆ Drawing number 600/R06/06
- ◆ Drawing number 600/R07/07
- ◆ Drawing number 600/R11/08
- ◆ Drawing number 600/R12/09
- ◆ Drawing number 600/R13/10
- ◆ Drawing number 600/R13/11

### Other Information Provided:

- Signs schedule

**PROPOSED PEDESTRIAN REFUGE**  
**THOMAS ROAD, WIGAN**  
**ROAD SAFETY CHECK STAGE 1/2**

**Report No. xxxx**

**PROPOSED PEDESTRIAN REFUGE  
THOMAS ROAD, WIGAN**

**ROAD SAFETY CHECK STAGE 1/2**

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**1. INTRODUCTION**

1.1 This report describes a Stage 1/2 Road Safety Check carried out on a proposed pedestrian refuge in Thomas Road, Wigan. The check was carried out on 17 March 2008.

1.2 The Road Safety Check was carried out by :-

XXXXXX, BSc (Hons), IEng, FIHIE;  
Senior Engineer, LTP Delivery Group, Wigan Council

1.3 The check comprised an examination of the Drawing No. HS1234 relating to the scheme supplied by the design office in the Highways Services Section.

Mr XXXXXX visited the site at 15.00 hours on 17 March 2008. The weather was fine and dry. The traffic conditions were light.

1.4 The terms of reference of the check are as described in Wigan Council's Road Safety Audit Procedure.

1.5 All of the problems described in this report are considered to require action in order to improve the safety of the scheme and minimise accident occurrence.

1.6 The scheme consists of a new pedestrian refuge in Thomas Road, Wigan.

## 2. ITEMS RESULTING FROM THIS STAGE 1/2 ROAD SAFETY CHECK

### 2.1 Problem

*Summary: risk of vehicles striking the refuge*

Visibility to the refuge from the west is limited by the crest. Drivers may not see the refuge and could collide with the refuge.

#### **Recommendation**

A high-mounted keep left sign should be provided on the proposed beacon pole.

### 2.2 Problem

*Summary: risk to people with disabilities*

Although dropped kerbs and tactile paving are proposed at the refuge there is no indication on the plan that they are to be provided at the existing kerbs on both sides of the road.

#### **Recommendation**

Dropped kerbs and tactile paving should be provided on both sides of the road.

## 3. STATEMENT

I certify that the terms of reference of this Road Safety Check are as described in Wigan Council's Road Safety Audit Procedure.

XXXXXX, BSc (Hons), IEng, FIHIE;  
Senior Engineer, LTP Delivery Group, Wigan Council

signed.....

date.....