



THE HIGHWAYS AGENCY

HD 19/94



THE SCOTTISH OFFICE DEVELOPMENT DEPARTMENT



THE WELSH OFFICE
Y SWYDDFA GYMREIG



THE DEPARTMENT OF THE ENVIRONMENT FOR
NORTHERN IRELAND

Road Safety Audits

Summary: This Standard updates requirements for Road Safety Audits which are mandatory for all trunk road schemes including motorways unless granted specific exemption by the Overseeing Organisation. It describes the stages at which audits shall be carried out, the procedures to be followed and the monitoring of schemes after opening.

REGISTRATION OF AMENDMENTS

Amend No	Page No	Signature & Date of incorporation of amendments	Amend No	Page No	Signature & Date of incorporation of amendments

SUPERSEDED

Registration of Amendments

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VOLUME 5 ASSESSMENT AND
PREPARATION OF
ROAD SCHEMES
SECTION 2 PREPARATION AND
IMPLEMENTATION

PART 2

HD 19/94

ROAD SAFETY AUDITS

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1. INTRODUCTION

General

1.1 The objective of this Standard is to ensure that the road safety implications of all schemes are fully considered for all users of the highway and others affected by the scheme.

Definitions

1.2 *Road Safety Audit:* The evaluation of highway schemes during 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 *Design Organisation:* The organisation(s) commissioned to undertake the various phases of scheme preparation and supervision of construction.

1.4 *Design Team:* The group within the Design Organisation undertaking the various phases of scheme preparation and supervision of construction.

1.5 *Audit Team:* A team independent of the Design Team comprising staff with appropriate levels of road safety engineering work and accident investigation and prevention experience, which considers the scheme design at specific stages to identify road safety problems. The team may be drawn from within the Design Organisation and/or from another body.

1.6 *Director:* The Director in the Overseeing Organisation with overall responsibility for the scheme. In Northern Ireland, the term "Director" shall mean the appropriate Divisional Roads Manager or Assistant Chief Engineer. In Scotland, the term "Director" shall mean the Deputy Chief Engineer (R-ST). In Wales, the term "Director" shall mean the Head of Division.

1.7 *Project Manager (PM):* The person within the Overseeing Organisation responsible for ensuring the progression of a scheme in accordance with policy and procedures.

1.8 *Exception Report:* A report from the Project Manager to the Director on each recommendation in

the Audit Report which the PM proposes should not be implemented. The report will give reasons and where necessary propose alternative means of addressing the underlying safety problem identified by the Audit.

1.9 During the course of scheme preparation and construction the Design Organisation may change as may the personnel within the Design Team and Audit Team.

Scope

1.10 The Advice Note HA 42 (DMRB 5.2.3), which should be read in conjunction with this Standard, gives detailed advice on the factors to be considered when undertaking Road Safety Audits.

1.11 This Standard sets out the procedures required to implement Road Safety Audits on trunk road schemes. It defines the relevant schemes and stages in the design and construction at which audits shall be undertaken and sets out the requirements for post-implementation accident monitoring.

1.12 The Standard is commended to other Highway Authorities for use in the preparation of their own highway schemes.

Superseded Documents

1.13 This Standard supersedes HD 19/90 and Scottish Technical Memorandum SH 3/92.

Implementation

1.14 This Standard shall be used for schemes currently being prepared (unless granted specific exemption - see 2.4 below) provided that, in the opinion of the Overseeing Organisation, this would not result in significant additional preparation cost or delay progress.

2. ROAD SAFETY AUDIT

Schemes to be Audited

2.1 Except as noted at 2.4 and 2.5, this Standard will apply to all schemes on trunk roads including motorways which involve permanent change to the existing highway layout. This includes work carried out under agreement with the Overseeing Organisation resulting from developments alongside or affecting the trunk road.

Application to Temporary Traffic Management Schemes

2.2 Except as noted at 2.4, in Scotland and Wales, this Standard will also apply to temporary traffic management schemes. In England and Northern Ireland, application of this Standard to temporary traffic management schemes is at the discretion of the Project Manager.

Application to Design and Build Contracts

2.3 Except as noted at 2.4, this Standard also applies to design and build contracts. The Design Organisation shall confirm with the Overseeing Organisation the timing of the audit stages set out in paragraph 2.9 below.

Exemption

2.4 Schemes may be given exemption from auditing requirements by the Director where their effect on the network is minimal or where specialist consideration has already been given to safety issues and a formal audit would merely duplicate that work.

Application in Northern Ireland

2.5 This Standard will apply to those roads designated by the Overseeing Organisation.

Scope of the Audit

2.6 The audit shall only consider matters which have an adverse bearing on road safety. It will consider safety under all operating conditions.

2.7 The primary purpose of a Road Safety Audit is to identify potential safety hazards within the scheme design. The audit shall not be concerned with structural safety.

2.8 Formulation of recommendations for dealing with the identified hazards should make allowance for the fact that strategic decisions on matters such as route choice, junction type, standard of provision and departures from standard should already reflect the best balance of a number of factors including safety. Recommendations requiring major changes in these areas are unlikely to be acceptable when balanced with other aspects of the scheme and Audit Teams should not make such proposals.

Stages of Audit

2.9 Audits and subsequent action shall be completed prior to three specific stages in the preparation of the scheme. These stages are:

- | | |
|----------|---|
| Stage 1: | Completion of preliminary design (Order Publication Report Stage) before publication of draft orders. |
| Stage 2: | Completion of detailed design (Works Commitment Stage) before invitation to tender. |
| Stage 3: | Completion of construction (prior to opening of the scheme to traffic wherever possible). |

2.10 In general all schemes, except as noted at paragraph 2.4, shall be audited at Stages 1, 2 and 3. In certain circumstances, Stages 1 and 2 may be combined at Stage 2 (for example, where orders are not required). For temporary traffic management schemes, only Stage 2 and Stage 3 audits will be required.

2.11 Where no separate Stage 1 audit has been undertaken then those factors which would normally be considered at Stage 1 shall be included in Stage 2 as necessary.

2.12 On conventional admeasurement contracts, tenders shall not be invited until the Stage 2 audit has been completed and appropriate amendments incorporated into the design.

Audit Team - proposal and approval

2.13 The Design Organisation must propose an Audit Team to the PM for approval. The PM will not accept a team if he/she feels that it lacks the necessary experience or where its independence from the design is in doubt. In such cases, the Design Organisation will be requested to submit alternatives. The Audit Team must have had no previous connection with the design of the scheme.

2.14 Except as noted at 2.15 the Design Organisation will appoint the approved Audit Team.

Application in Scotland

2.15 The Overseeing Organisation will appoint the Audit Team.

Project Management

2.16 The PM will provide the link between the Audit and Design Teams for dealing with queries or requests for additional information. This will help to preserve the independence between them.

2.17 The PM will liaise with the Design Team and initiate the audit process at the appropriate stages ensuring that sufficient programme time is available to complete the full audit procedure. This should include an allowance for the incorporation of design changes.

2.18 The PM will ensure that the Audit Team is given due notice of when the scheme will be ready for audit and the date by which the report will be required.

2.19 The PM is responsible for ensuring that representatives of the police and those responsible for network management are invited to take part in the Stage 3 audit.

Audit Brief

2.20 The Design Team is responsible for preparing the audit brief. A copy of the brief should be forwarded to the PM in advance of the audit. The PM may instruct the Design Team to delete unnecessary items or to include additional material as he/she sees fit.

The Report and Subsequent Actions

2.21 At each stage, the Audit Team shall prepare a written report which will be forwarded directly to the Project Manager. The report must clearly identify the scheme, the audit stage and the team membership including the names of others contributing at Stage 3 site visits. The body of the report should be kept brief and should contain descriptions of the specific road safety problems that the team believe would be created. It should include background reasoning in support of their findings together with the team's recommendations to eliminate or mitigate the hazards identified. The report should indicate the relative importance of each problem.

2.22 The reports must contain a signed statement by the Audit Team leader confirming team membership and independence from the Design Team. A proforma statement is at Annex A.

2.23 The PM will consider the audit findings and where necessary prepare an Exception Report.

2.24 The PM will instruct the Design Team in respect of any changes required during the preparation, design and construction of the scheme resulting from audit.

2.25 Copies of all reports and decisions shall be retained by the Overseeing Organisation.

Accident Monitoring

2.26 Staff in the Overseeing Organisation who are responsible for network management will arrange for accident monitoring of audited schemes to be undertaken.

2.27 A record of all the accidents which have occurred on the scheme since opening shall be obtained at 1 year and 3 years after opening in order to monitor the effectiveness of road safety audits. This will supplement routine monitoring.

2.28 The accident records shall be analysed in detail to identify such factors as:

- a) locations at which accidents have occurred;
- b) accidents which appear to arise from similar causes or show common factors; and

- c) the accident rate and severity ratio after 3 years compared with the average rates for either the type of road or the road before improvement.

SUPERSEDED

3. REFERENCES

1. Design Manual for Roads and Bridges (HMSO)

Volume 5: Assessment and Preparation of Road Schemes

HA 42 Road Safety Audits: (DMRB 5.2.3)

SUPERSEDED

4. ENQUIRIES

All technical enquiries or comments on this Standard should be sent in writing as appropriate to:-

Chief Highway Engineer
The Highways Agency
St Christopher House
Southwark Street
London SE1 0TE

T A ROCHESTER
Chief Highway Engineer

The Deputy Chief Engineer
The Scottish Office Industry Department
Roads Directorate
New St Andrew's House
Edinburgh EH1 3TG

J INNES
Deputy Chief Engineer

The Director of Highways
Welsh Office
Y Swyddfa Gymreig
Government Buildings
Ty Glas Road
Llanishen
Cardiff CF4 5PL

K J THOMAS
Director of Highways

Chief Engineer - Roads Service
Department of the Environment for
Northern Ireland
Roads Service Headquarters
Clarence Court
10-18 Adelaide Street
Belfast BT2 8GB

W J McCOUBREY
Chief Engineer - Roads Service

AUDIT TEAM STATEMENT

We certify that we have examined the drawings and documents listed in the Appendices to this report. The examination has been carried out with the sole purpose of identifying any features of the design that could be removed or modified in order to improve the safety of the scheme. The problems identified have been noted in this report together with associated safety improvement suggestions which we recommend should be studied for implementation. No one on the Audit Team has been involved with the scheme design.

AUDIT TEAM LEADER:

name: _____ signed: _____
position: _____ date: _____
organisation: _____
address: _____

AUDIT TEAM MEMBERS

name: _____	name: _____
position: _____	position: _____
organisation: _____	organisation: _____
address: _____	address: _____

OTHERS INVOLVED
(eg police, network management representative)