

AMBRIDGE PHASE 2 STAGE 2

A critique of the traditional approach to Road Safety Audits

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WORKSHOP THEME -

To review the manner and means by which road safety audits are managed, carried out and reviewed and to assess the mood of practitioners as to –

- the applicability of the guidance given in HD19/03**
- what a road safety audit is and what should be audited**
- the manner in which HD19/03 is applied**
- how audit reports should be prepared and reviewed**

HD 19/03 –

- **The guidance given was revised in 2003 adopting a philosophy similar to the 1994 edition**
- **Standard follows the principal of the DMRB and is applicable to motorways and trunk roads only**
- **Standard includes black box mandatory sections with the remainder defined as being advisory and explanatory sections**
- **NRA issued revised HD 19/09 which follows a similar format**

Manner in which HD 19/03 is applied –

- **Rigid application is frequently imposed irrespective of circumstances**
- **Flexible interpretation is deemed a non-compliance**
- **Sections in a black box are deemed mandatory**
- **Sections not in a black box are imposed as if mandatory in many instances**
- **Standard is sometimes unclear and does not cover all project-specific circumstances, contract arrangements or construction eventualities**

GUIDANCE GIVEN

Guidance Given –

- **Definitions are not in a black box**
- **Use of the word ‘shall’ has a legal interpretation of mandatory imposition**
- **The definition of an Audit Team is not in a black box but is in Para 2.50**
- **Definitions do not address all forms of contract or audit stages**
- **The current document therefore has the potential to create a considerable degree of uncertainty and variations in interpretations**

Guidance Given Q1 –

- Should the scope of the definitions be extended and if so, what additional definitions should be included?
- Should definitions be identified only once?
- Is the use of “black boxes” appropriate?
- Should “shall” (mandatory), “should” (best practice) and “may” (discretionary) terms be defined and used to identify the hierarchy of the importance of implementation of the clause?
- Would such a process simplify or complicate the interpretation of the standard?

Guidance Given –

Para 1.16 introduces Interim Audits during the preliminary and design stages

- Does not include the provision for Interim Audits during the construction stage although these are frequently required in large or phased schemes**
- Difficulties can arise in determining what requires to be considered during an Interim Construction Audit**
- Some elements will be final and some will be interim or temporary with different requirements, standards and timescales for amendment applicable**

Guidance Given Q2 –

- Should Interim Construction Audits be included?
- Should the scope of the definition of Interim Audits be enhanced to identify what constitutes an Interim Audit?
- If so, what guidance should be included?

Guidance Given –

- **Para 1.21 identifies that the Audit Team may be from the Design Organisation but independent of the Design Team**
- **The degree of independence could be compromised by ownership and financial issues**
- **Para 1.26 defines the role of the Project Sponsor**
- **The role is frequently carried out by the Employer's Representative in D&B and PPP schemes**

Guidance Given Q3 –

- **Is the independence of an in-house Audit Team a concern?**
- **If so, how should the degree of independence of an in-house Audit Team be verified?**
- **Should details of the role and responsibilities of the Client and Employer’s Representative under other forms of contract be included?**
- **If so, what aspects and issues should be considered?**

Guidance Given –

- **Audit Briefs are frequently prepared by the Design Organisation not the Project Sponsor**
- **Interim Audits are frequently requested by the Contractor in D&B and PPP schemes (Para 1.30)**
- **Audit correspondence and reports tend to be submitted to the Designer or the Contractor in a D&B, PPP and Section 278 scheme**

Guidance Given Q4 –

- **Is the general process of Project Sponsors issuing Audit Briefs managed and operated effectively or could other processes be more effective?**
- **If so, what changes would be beneficial?**
- **Should the manner in which Audit Briefs are prepared under other forms of contract be included?**
- **If so, what issues should be considered?**
- **Could the Audit File more appropriately be maintained by the Designer or Contractor?**

Guidance Given –

- **An accident investigation may arise after the occurrence of a single, usually fatal, accident and not only accidents over a period of time (Para 1.32)**
- **Para 1.33 requires the approval of a Specialist Advisor by the Project Sponsor**
- **Surely the Audit Team are best placed to assess the need for and competence of a Specialist Advisor and the cost would presumably be included in the fee proposal**

Guidance Given Q5 –

- Should the definition of an Accident Investigation be extended to include single incidents?
- Should the approval of the Project Sponsor be required prior to appointing a Specialist Advisor?
- If so, what approval process, verification of need, experience and qualifications of the Specialist Advisor should be provided?

Guidance Given –

- **Para 2.2 excludes refurbishment schemes from the audit process**
- **Refurbishment of a lighting scheme may require revised means of access and the introduction of safety fencing**
- **A refurbished landscape planting scheme may require new accesses, fencing and safety fencing**

Guidance Given Q6 –

- Should refurbishment schemes be subject to the audit process where applicable?
- Should elements such as the safety fencing and accesses in the examples be subject to audit?
- What other issues should be considered in determining whether a refurbishment scheme should be audited?

Guidance Given –

- **Para 2.5 (not in black box) states that the standard is not generally required for TTM schemes**
- **Audits should be applied for ‘exceptional’ schemes**
- **The interpretation of the extent of schemes considered ‘exceptional’ varies considerably**
- **No guidance is given as to which party has the authority to determine which schemes should be audited**

Guidance Given –

- **The reference document “Guidance for Safer Traffic Management” includes only a single paragraph referring to road safety audits**
- **The paragraph simply refers the reader back to HD19/03 so the reference is meaningless**
- **The introduction of TTM schemes changes the road layout and places plant in the carriageway and operatives and road users at risk**
- **Auditing of TTM schemes would reduce accidents by improving the standard of TTM schemes**

Guidance Given Q7 –

- **Should TTM schemes be subject to the audit process?**
- **If so, should the definition of the extent of scheme to be audited be extended?**
- **If so, what schemes should be audited?**
- **Should the independent Audit Team determine which TTM schemes should be audited?**

Guidance Given –

- **Para 2.8 states that audits do not cover H&S legislation issues concerning the construction, maintenance and use of the road**
- **Para 2.18 states that the Audit should consider all road users, including those working on the highway**
- **The Highways Act requires that a Highway Authority maintain roads**
- **The Roads (Scotland) Act requires that a Roads Authority manage and maintain roads**

Guidance Given –

- **A Highway Authority can be held liable if a highway feature is deemed to be a causation factor in either a road traffic accident or a personal injury accident in which a road user suffers loss or injury**
- **Similarly, Designers and Contractors can be held liable under the CDM Regulations**
- **A common law duty to exercise a reasonable and practicable level of care is applicable**
- **The DDA requires that consideration be given to the safety of disabled road users**

Guidance Given –

- **H&S at Work duties are applicable for construction and maintenance staff**
- **The Act introduces a legal requirement to exercise a reasonable and practicable duty of care with the possibility of criminal liability for failure**
- **Audits of TTM schemes require consideration of the safety of both road users and construction staff**

Guidance Given –

- **Aspects such as the following are related to Health and Safety and should be considered -**
- **Provision of fencing at the top of slopes/drops above which maintenance staff will take access**
- **Provision of walkways/steps/handrails to access communications equipment/emergency telephones**
- **Means by which lanterns on lighting columns below overhead power lines can be maintained**

Guidance Given Q8 –

- Should consideration be given to Health and Safety legislation issues?
- Should audits of the permanent works consider the safety of road users, construction and maintenance staff?
- If so, what should be the extent of that consideration?

Guidance Given –

Audits currently considered include –

- **Road Safety Audits**
- **Cycle Audits**
- **NMU Audits**
- **Disabled Access Audits**
- **Para 2.11 (in a black box) states that road safety audits shall only consider road safety matters**
- **What constitutes a road safety matter?**

Guidance Given Q9 –

- **Given the availability of the previous audits, what constitutes a road safety matter requiring to be considered in a road safety audit?**
- **Should the road safety audit consider the needs of all road users?**
- **If so, and excluding the Quality Audit, are the other audits necessary in terms of audits under DMRB?**

Guidance Given –

- **Para 2.12 (not in a black box) states that the audit is not a check on standards**
- **The check lists identify that the safety implications of identified departures require to be considered**
- **What if not all departures have been identified?**

Guidance Given –

- **Departures from Standard are the first element for consideration in each checklist**
- **The Stage 1 audit is undertaken prior to the CPO and TRO publication process**
- **Essential that all departures are identified and approved prior to publication**

Guidance Given –

- **Any additional land required to design-out departures if not approved must be identified**
- **Particularly important in D&B and PPP schemes where the time delay arising from a possible PLI to obtain additional land by CPO after the contract has been awarded could not be entertained**
- **Imperative that the Stage 1 audit contributes to the process of ensuring that all departures are identified and any safety issues arising are addressed**

Guidance Given Q10 –

- **Should the Audit Team review the design to ensure that all departures have been identified?**
- **If so, what would be the appropriate procedure to allow the Audit Team to respond with any additional departures identified?**

Guidance Given –

- **Paras 2.23 & 2.26 (in black boxes) state that site inspections shall be undertaken by all Audit Team Members at every audit stage**
- **Satellite and ‘Street View’ images in Google Earth are now available which significantly assist in the appreciation of the layout of sites**

Guidance Given Q11 –

- **Is it necessary for every Team Member, particularly specialists, to attend at every audit stage?**
- **What is the status of an audit if a Team Member is unavailable or if invitees do not turn up?**

Guidance Given –

- **Para 2.27 states that Stage 3 audits should be undertaken when the scheme is substantial complete, preferably before opening to traffic or within one month of the scheme being opened otherwise**
- **The Substantial Completion Certificate may not be issued until completion of the whole of the works**
- **Traffic may be running on a section for a considerable time before substantial completion of the scheme**

Guidance Given –

- **Stage 3 Audits should consider road user safety of the combined operational elements in phased completion**
- **May require a revisit of previous phases during the Stage 3 audit of the final section**

Guidance Given Q12 –

- **When is a scheme substantially complete?**
- **Should a definition be included?**
- **How should audits of schemes with sectional completion, particularly if an element of TTM remains in place, be considered?**
- **Are they final or interim Stage 3 audits?**

Guidance Given Q13 –

- **Should a composite Stage 3 report for the whole of the works be compiled?**
- **If so, who should compile that report?**
- **How is the post-audit co-ordination between the several sections considered at Stage 3 and who has the duty to carry out the co-ordination?**
- **What triggers the date for the post-construction audits; the Interim (at sectional completion) or Final (on completion of the Works) Stage 3 audits?**

Guidance Given –

- **Para 2.31 suggests Stage 3 alterations should be discussed with the Project Sponsor**
- **Project Sponsor may not be involved where Employer's Representatives may have the role in D&B and PPP schemes**
- **Audit Reports are submitted to the Designer or Contractor in D&B, PPP and Section 278 schemes**

Guidance Given –

- **Para 2.31 suggests Stage 3 modifications should be carried out before opening**
- **Does not consider the timescale requirements of the Consult and Comply process for D&B or PPP schemes**
- **In sectional completion, it may not be possible to implement recommendations until completion of the scheme**

Guidance Given –

- **Para 2.44 (in a black box) identifies that an Audit Team shall not contact the Designer without the written approval of the Project Sponsor**
- **The procedures and processes involved are tortuous and time consuming**
- **Para 2.46 (in a black box) sets out the process for Interim Audits**
- **Interim Audits (or reviews) assist in the early identification of road safety issues**

Guidance Given Q14 –

- **How can the Audit Team be sure that reports are forwarded in the original form to the Client or Employer’s Representative?**
- **Is additional guidance required to address the processes involved in D&B and PPP schemes?**
- **If so, what form should the guidance take?**
- **Should the information exchange processes and procedures be simplified to afford quicker and direct dialogue between the Designers and Auditors?**

Guidance Given –

- **Para 2.50 (in a black box) identifies that an Audit Team shall comprise two or more members**
- **The extent of schemes can vary significantly**
- **Para 2.66 (in a black box) identifies the parties to be invited to the Stage 3 audit**

Guidance Given Q15 –

- **Is a single experienced Auditor acceptable for very simple schemes?**
- **What is the status of an audit undertaken by only the Audit Team if no one else turns up?**

Guidance Given –

- **Para 2.50 (in a black box) limits observers to a maximum of two**
- **Large Audit Groups create a control and information exchange problem**
- **Large groups increase the risks arising during the audit**
- **Splinter groups can form**
- **Para 2.60 identifies that Specialist Advisors are not members of the Audit Team**

Guidance Given Q16 –

- **Who is considered to be an observer?**
- **Are representatives of the client, designer, contractor, maintaining agent, local roads authority, specialist advisors and the police considered to be observers?**
- **If so, how can the Audit Team comply with Para 2.50 (in a black box) to limit observers to two, particularly in a large scheme?**

Guidance Given –

- **Para 2.61 (in a black box) identifies the procedures for the issue of Audit Briefs**
- **Para 2.62 identifies what should be provided**
- **Rarely is a meaningful Audit Brief received**
- **Very rarely is a good Audit Brief received**

Guidance Given Q17 –

- **Does the Audit Team have the authority to reject a poor Brief and request a more competent document?**
- **If so, what process should be adopted in making the request?**

Guidance Given –

- **Para 2.73 (in a black box) identifies the post-audit process in which the Audit Team are made aware of the extent to which the audit recommendations are accepted**
- **That process is not universally implemented, particularly in D&B, PPP and Section 278 schemes**
- **The Audit Team are not always involved in the review process**
- **The Audit Team may not be involved post the Stage 3 audit phase**

Future Development Q18 –

- Should the Audit Team be more involved in the discussions arising from the audit reports?

Future Development Q19 –

- **Does the format of HD19/03 make the processes and protocols over-prescriptive and cumbersome?**
- **Should the revised standard be more or less prescriptive?**
- **Should the Audit Team have more authority to direct, control and monitor the process?**
- **Are different standards required for different Forms of Contract, scale and type of project?**

HOW AUDIT REPORTS ARE PREPARED AND REVIEWED

Audit Reports –

- Check lists are included in the annexes**
- The check lists are not comprehensive**
- The check lists include a degree of duplication which creates uncertainty as to where issues should be included**

Audit Reports Q20 –

- Given the required experience and training of the Audit Team, should checklists be included?
- Would a set of “Section Headings” for consideration be more appropriate?

Audit Reports –

- **The text in the Audit Team Statement is –**
‘I certify that this audit has been carried out in accordance with HD 19/03’
- **‘Certify’ has a very definitive legal definition**
- **Rarely is the audit process undertaken fully in accordance with the standard**
- **If court or arbitration proceedings arise for any reason, the credibility of the Audit Team and the report can be undermined by making such a statement if incorrect**

Audit Reports Q21 -

- Should the Audit Team Leader have the authority to amend the terms of the Audit Team Statement if necessary to reflect any non-compliance issues?
- Should the Audit Team Statement be amended to afford the Audit Team Leader the wherewithal to identify any deviations from the requirements of the standard?

Audit Reports -

- **HD19/03 makes clear that the report is that of the Lead Auditor**
- **Whilst comments from all attendees should be recorded, only the Team Leader signs reports**
- **The Auditor should record and consider any views expressed by Observers during the Stage 3 audit**

Audit Reports Q22 –

- **How should the integrity of the audit report be viewed if signed by only one person?**
- **Should all attendees sign the report?**
- **If so, what liability would the signatories carry and would their employer be willing to accept the liabilities that may arise?**
- **What impact would such a process have on the program for completion of the report?**

Audit Reports –

- **The example ‘Ambridge Bypass’ audit reports refer to ‘Problems’ and ‘Recommendations’**
- **I prefer to use ‘Comment’ and ‘Recommendation’**
- **‘Comment’ is less emotive than ‘Problem’**
- **Para 2.72 (not in a black box) describes the reports in the Annexes as illustrative**

Audit Reports Q23 –

- Should the Audit Team Leader have the latitude to amend the format and terms used in reports?

Audit Reports –

- **Accident causation control data is not available for all accident and causation types**
- **Related aspects will not be universal in all similar incidents**
- **It is difficult to identify all potential causation influences in a ‘Summary’**

Audit Reports Q24 –

- Is it necessary to include a separate ‘Summary’ of the problems likely to arise?**
- Is the inclusion of an explanation of the accident types necessary?**
- Can the matters for consideration be more appropriately incorporated in an expanded format in the text of the ‘Comment’?**

Audit Reports –

- **Risk assessments and grading of problems are not referred to in the standard but are frequently raised**
- **The approach to risk assessments is inconsistent**
- **Stage 1 and 2 Audit Reports should include comment on any identified safety issue (low cost)**
- **At Stage 3 the Audit Team should carry out risk assessments in determining which recommendations should be include in the Audit Report (High cost)**
- **Only those recommendations deemed necessary for incorporation should be included in the report**

Audit Reports Q25 –

- Should risk assessments be undertaken and if so, at what stages?**
- Should the risk assessments be include in the Audit Report?**
- Should the Audit Report include any prioritisation of recommendations?**
- Should all recommendations included in audit reports be given the same weight?**