

INTERIM ADVICE NOTE 62 / 05

**STRUCTURES: MANAGEMENT
OF HIGHWAY STRUCTURES
HANDOVER AND RELATED
INSPECTIONS**

INTERIM ADVICE

This advice concerns the procedures to be adopted for the handover and acceptance of structures at the completion of contracts and the management to the end of the Defects Liability (or Maintenance) Period.

The following Standards are amended by this IAN. BD 63/94 "Inspection of Highway Structures" and BA 63/94 "Inspection of Highway Structures"

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1. Introduction

1.1 The development of new methods of procurement, in particular Design and Build and Early Contractor Involvement, have introduced a number of changes in handover inspection requirements. These forms of contract may include various maintenance or defects liability periods which are not included in BD and BA 63/94.

1.2 The following Standards are amended by this IAN

- DMRB Vol. 3 Pt 4 BD 63/94 "Inspection of Highway Structures" and
- DMRB Vol. 3 Pt 5 BA 63/94 "Inspection of Highway Structures"

1.3 This interim advice note does not change the status of

- Interim Advice Note IAN 7 "Inspection of Highway Structures." or
- Interim Advice Note IAN 45/02 "Structures Management Information System (SMIS) inventory Inspection Data."

1.4 Major revisions of BD 63/94 and BA 63/94 are planned and the revisions below will be incorporated into the proposed documents

2. Implementation

2.1 This IAN applies to the Department's Agents or Representatives overseeing TPI schemes and Maintaining Agents operating under Agency Agreements for Trunk Roads and Motorways in England, and shall be implemented forthwith for all projects involving the construction of new structures or significant modifications to existing structures.

2.2 This IAN does not amend the requirement of extant contracts in relation to handover documentation

3. Enquires

3.1 For General enquires relating to this IAN contact: Brian Hill, SSR Room 106 Heron House, Bedford

3.2 For Enquires relating to SMIS Contact SMIS Administrator at SMIS@highways.gsi.gov.uk

4. Scope

4.1 The scope of this IAN is as defined at Clause 1.7 of BD 63/94.

4.2 Where structures are marginally outside the dimensions given at Clause 1.7 of BD 63/94 but special circumstances arise (such cases may be where the works are subject to hydraulic action, involve the use of new or innovative materials or design concepts or where the works are subject to movement during design life) the Overseeing organisation may decide to classify the works as a structure for the purposes of BD 63/94 and regarded as within the scope of this IAN.

5. **Maintenance Inspections.**

5.1 The four main categories of inspection defined in BD 63/94 shall remain unchanged by this IAN.

6. **Acceptance Inspections.**

6.1 This IAN introduces three new classifications that are particular to the handover of structures. These are:

1. **Pre Road Opening Inspection (PROI).**
2. **Pre Opening Principal Inspection (POPI)**
3. **End of Defects Liability Period Inspection (DLI).**

These are explained below in this section of the document.

6.2 The precise terms used to describe the documentation to be completed by the parties to allow the structure to be available for use by the travelling public will vary from scheme to scheme.

6.3 The responsibility for completing and accepting works at any structure will depend upon the form of contract and the wording included therein. Under normal contractual arrangements and existing standards, it is the responsibility of the contractor and/or designer to carry out inspections during construction and a **Pre Road Opening Inspection** upon completion of the works, that will facilitate the issue of the appropriate completion documentation. These allow the Project Leader (PL) or his/her representative to issue approval for public use.

6.4 Upon receipt of the Contractor's notification that works are complete a **Pre Opening Principal Inspection (POPI)** of the new structure or structures shall be carried out. The inspection shall be carried out by the Maintaining Agent/ Managing Agent Contractor (MA/MAC), about a month before the issue of the Certificate of Completion (or equivalent depending upon the form of procurement) or the opening of the structure to the public. Responsibility for arranging a POPI lies with the TPI Project Leader or their representative (i.e. the Employers Agent-EA) and shall include issuing invitations of attendance to the Contractor and other interested parties (see Table 1). It will also be necessary to obtain the contractor's approval before undertaking the inspection as they retain responsibility for the site until the completion of handover. In exceptional cases representatives of the Technical Approval Authority (TAA) may attend the inspection on the request of the Project Leader. Where possible use should be made of existing traffic management and access arrangements. This inspection will record any defects or work outstanding under the contract and any works that must be completed prior to the Maintaining Agent taking responsibility for the maintenance of the structure. The Project Leader or their representative (EA) shall inform the contractor of all outstanding works and agree the works that need to be completed prior to road opening.

6.5 Following the POPI, the MA/MAC will produce a Pre Opening Principal Inspection report informing the TOD Area Manager and MPD Project Sponsor of all defects identified during the Inspection. All defects identified shall also be communicated to the Contractor in the way laid down in the contract. Unless agreed by the TOD Area Manager, all defects shall be rectified prior to road opening. The PL or their representative shall inform the Contractor and obtain assurance that all defects have been rectified. The POPI and subsequent report should not be seen as a replacement for the Pre Road Opening Inspection to be carried out by the contractor or others under the contract.

- 6.6 It is essential that any permanent access provisions and features affecting general safety and security be discussed in the greatest possible detail at handover. The MA/MAC shall ensure that he has all the necessary records, and maintenance and operating manuals before accepting responsibility for the maintenance of the structure. Any outstanding responsibilities that the Contractor retains at transfer of the Works shall be made clear to both the MA and Contractor; copies of Monitoring, Inspection and Management plans shall be supplied to the MA/MAC. Where necessary contingency plans should be drawn up and agreed with the MA/MAC.
- 6.7 Table 1 describes the inspections associated with the handover of structures. Table 2 illustrates a schedule of these inspections including those required following the **Defects Liability Period (DLP)**, as described in BD 63/94. Generally, a Principal Inspection (PI) shall be programmed in the year prior to the expiry of the DLP to ensure that all defects are detected before the expiry of contractual obligations. The timing of this should be sufficient to allow enforcement of contractual obligations. The MA/MAC shall satisfy themselves that all defects have been rectified and confirm this to the PL and AM.
- 6.8 The PL and AM must agree transfer of responsibilities from Contractor/Employers Agent (C/EA) to (MA/MAC). The Project Leader or their representative shall ensure that all necessary certification has been supplied prior to issue of the Completion Certificate. Once the PL, in agreement with the AM, has accepted that the scheme can be handed over, they should arrange for Maintaining Agents and Local Authorities to be formally informed.
- 6.9 Where the Defects Liability Period is significantly less than 5 years, it will be up to the AM and PL to decide if there would be any benefit in carrying out a PI in the year prior to the end of the defects liability period.
- 6.10 The PL or their representative shall also carry out inspections jointly with the Contractor to ensure that any defects identified at the inspections detailed at 6.3 and 6.4 above are corrected in accordance with the contract. If these inspections are to take place following the MA/MAC taking over maintenance responsibility then the Project Manager or their representative should arrange for the MA/MAC to be informed and allow the MA/MAC the option to attend. Traffic management and other safety related issues must be agreed with the MA/MAC.
- 6.11 Details of the Highways Agency anticipated inspection regime for the structures on the scheme should be agreed with the contractor during the execution of the works. The Contractor should be asked to provide any special inspection requirements as part of the design data and in the Maintenance Manual. The Contractor should also provide a programme for the completion of the works. This should be passed on to the MA/MAC as early as possible so that inspections can be programmed. Consideration should be given to providing the Contractor with copies of reports on inspections carried out in the Defects Liability Period and giving him an opportunity to respond to issues that arise.
- 6.12 The inspection and routine maintenance cycle for structural modifications and the original structure should be aligned as soon as practicable. The exact procedure to be adopted will depend on the extent of the additions or modifications but should generally accord with the following:
- i) Minor modification when the structure has had a PI in the 3 years prior to the Completion Certificate – PI substituted at the first programmed GI for either structure.
 - ii) When the works involve a significant change to the existing structure - POPI should include both existing and new works.

- 6.13 Due to the varied nature of Contractor's proposals, some structures will require special inspections. The principles of such inspections will have been identified in the Approval In Principle agreed prior to construction. Details of timing and extent of any special inspections should be agreed between the Contractor and structures' Designer and the EA in consultation with the MA/MAC. The format, time periods and outcomes of inspections will vary from structure to structure and the details given in Table 1 may not be appropriate. Such inspections shall be regarded as "Special Inspections" in accordance with Section 2 of BD 63/94.

Table 1 : Inspections to the end of Defect Liability Period

Event	Carried out by	Invitees	Outcomes	Time
Pre Road Opening Inspection (PROI)	Contractors designer and Employers Agent	HA Maintaining Agent or MAC, and/or Local Highway Authority/ Network Rail/BWB etc as appropriate	Completion Certificate and Snagging/Defects list	Carried out during the period up to issue of Completion Certificate (Year 0)
Pre Opening Principal Inspection (POPI)	HA Maintaining Agent or MAC	Contractor, Employers Agent and/or Local Highway Authority/ Network Rail/BWB etc as appropriate	Principal Inspection Report including any additions to Defects List	Just prior to issue of Completion Certificate (Year 0)
General Inspection	HA Maintaining Agent or MAC	Contractor, Employers Agent and/or Local Highway Authority/ Network Rail/BWB etc as appropriate	General Inspection Report	See Table 2
Principal Inspection	HA Maintaining Agent or MAC	Contractor, Employers Agent and/or Local Highway Authority/ Network Rail/BWB etc as appropriate.	Principal Inspection Report (identify any defects and inform Contractor before year 5)	During the year prior to expiry of Defects Liability Period (see 6.6 and Table 2)
End of Defects Liability Period Inspection DLI	Contractor and Employers Agent	HA Maintaining Agent, MAC, and/or Local Highway Authority/ Network Rail/BWB etc as appropriate	Confirmation of all defects rectified.	End of Defects Liability Period

Note: Inspections in accordance with BD 63/94 to resume at end of Defects Liability Period

For exact definition of Defects Liability Period etc refer to Contract specific documents.

The Contractor should be asked to attend all inspections prior to end of Maintenance or Defects Liability period

With the agreement of all parties, the PROI and POPI may be combined.

Table 2. Pattern of inspections to the end of Defects Liability Period

Length of DLP (yrs)	Time →											
	H'over	Yr 1	2	3	4	5	6	7	8	9	10	11
1	PRO/POPI	DLI		GI		GI		PI		GI		GI
2	PRO/POPI		PI/DLI		GI		GI		PI		GI	
3	PRO/POPI			PI/DLI		GI		GI		PI		GI
4	PRO/POPI		GI		PI/DLI		GI		GI		PI	
5	PRO/POPI			GI		PI/DLI		GI		GI		PI

Note:

- PRO = **Pre-Road Opening Inspection**. This is not recorded in SMIS.
- DLP = **Defect Liability Period**
- POPI = **Pre Opening Principal Inspection**
- DLI = **End of Defects Liability Inspection**
- GI = **General Inspection**
- PI = **Principal Inspection**
- Major inspections (POPI & PI) are shown in bold
- Years in the Defect Liability Period are shaded in green

The rules for scheduling these inspections are:

- The Pre Opening Principal Inspection (POPI) is scheduled for one month before the completion certificates are to be issued.
- The “End of Defects Liability Period Inspection” (DLI) is scheduled for the end of the Defects Liability Period.
- A Principal Inspection is scheduled for twelve months before the DLI. For illustration, the PI and DLI are shown in the same year, with the PI occurring at the start and the DLI and the end of a twelve-month period. For contractual reasons, this should not be rescheduled to a later date. This inspection is taken as the start point for the regular GI/PI cycle of inspections applied to structures.
- The PI before the DLI sets the beginning of the regular GI and PI cycle of inspections, in this case shown to the usual 6 yearly PI frequency.