



Control & Communications Technology
Appraisal

TA 101

Traffic signalling systems

(formerly TA 12/07, TA 16/07, TA 56/87, TA 82/99, TA 84/06, TD 07/07, TD 24/97, TD 35/06)

Version 0.0.1

Summary

This document contains appraisal requirements for traffic signalling systems.

Feedback and Enquiries

Users of this document are encouraged to raise any enquiries and/or provide feedback on the content and usage of this document to the dedicated National Highways team. The email address for all enquiries and feedback is: Standards_Enquiries@highwaysengland.co.uk

This is a controlled document.

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Latest release notes

Document code	Version number	Date of publication of relevant change	Changes made to	Type of change
TA 101	0.0.1	August 2022	Core document	Incremental change to notes and editorial updates
National Highways brand change. TSRGD references updated.				

Previous versions

Document code	Version number	Date of publication of relevant change	Changes made to	Type of change
TA 101	0	June 2019		

Foreword

Publishing information

This document is published by National Highways.

This document supersedes TA 12/07, TA 16/07, TA 56/87, TA 82/99, TA 84/06, TD 07/07, TD 24/97, TD 35/06, which are withdrawn.

Contractual and legal considerations

This document forms part of the works specification. It does not purport to include all the necessary provisions of a contract. Users are responsible for applying all appropriate documents applicable to their contract.

Introduction

Background

This document contains appraisal requirements for traffic signalling installations.

Assumptions made in the preparation of the document

The assumptions made in GG 101 [Ref 1.N] apply to this document.

Abbreviations

Abbreviation	Definition
VMS	Variable message signs

Terms and definitions

Term	Definition
Appraisal report	A detailed evaluation on the outcomes of the whole scheme and its options including benefits and impacts.
Appraisal team	A group of specialist leads covering all aspects of the scheme.
Design file	A file of basic information and certification for a scheme produced during the design process to provide a record of the development of the scheme, the decisions made and the safety considerations.
Technical note	A short document which records, when deemed necessary, the detailed technical issues linked to the recommendations made within the appraisal report.
Traffic control equipment	Equipment used in connection with the signals (including the content of all instructions stored in, or executable by, that equipment). NOTE: Examples of associated equipment can include communication devices.
Traffic signalling installations	Permanent traffic signalling equipment at prescribed locations as defined in the Traffic Signs Regulations and General Directions SI 2016/362 (TSRGD) [Ref 2.N] for England, Wales and Scotland on all-purpose trunk roads, and Traffic Signs Regulations (Northern Ireland) 1997, SRNI 1997/386 [Ref 3.N] for Northern Ireland. NOTE: Examples of locations include junctions, emergency vehicle stations, level crossings, airports, tunnels, swing/movable bridges and signalised crossings.
Traffic signalling systems	The combination of traffic signalling equipment and/or traffic control equipment, associated software, hardware and data.

1. Scope

Aspects covered

- 1.1 This document outlines traffic signalling installation appraisal requirements that shall be implemented on new or modifications to traffic signalling installations.

Implementation

- 1.2 This document shall be implemented forthwith on all schemes involving traffic signalling installations on the Overseeing Organisations' motorway and all-purpose trunk roads according to the implementation requirements of GG 101 [Ref 1.N].

Use of GG 101

- 1.3 The requirements contained in GG 101 [Ref 1.N] shall be followed in respect of activities covered by this document.

2. Appraisal

Appraisal report

- 2.1 An appraisal report shall be produced prior to the commencement of the preferred traffic signalling installation design(s).
- 2.1.1 An experienced person with traffic signalling knowledge should be included within the appraisal team and a decision for their inclusion recorded in the appraisal report.
- NOTE The level of experience and knowledge of the experienced person with traffic signalling knowledge has no definition, but the level of competency can be assessed through previous experience and CV.*
- 2.1.2 The appraisal team should comprise of those with relevant knowledge on other elements of the traffic signalling installation(s) and a decision for their inclusion recorded in the appraisal report.
- NOTE Relevant knowledge depends on the scope of the traffic signalling installation(s) and can include transport planning/modelling elements of the installation(s).*
- 2.1.3 Where technical aspects of the traffic signalling installation(s) require clarification, a technical note should be produced to support the appraisal report.

Data collection

- 2.2 The design file shall include site-specific data relevant to the traffic signalling installation(s).
- 2.2.1 Site-specific data relevant to traffic signalling installation(s) may include speed data, statutory undertakers searches, accident data, traffic and walking, cycling and horse-riding demand flows, inspection reports, and incident reports (near misses and known health and safety issues).
- NOTE The list of site-specific data for traffic signalling installation(s) is not exhaustive and other relevant data can be used to obtain appropriate information.*
- 2.2.2 The site-specific data obtained for the traffic signalling installation(s) should be used to inform the design stage.
- NOTE Existing traffic signalling installation configuration data can be a source of site-specific data if modification is part of the work to be carried out.*

Site conditions

- 2.3 Site conditions shall be assessed prior to commencement of traffic signalling installation design and recorded in the design file.
- 2.3.1 Site conditions may be assessed by desktop study (reviewing previous reports), video surveys, site visit, ecological surveys, interview surveys, walking, cycling & horse-riding assessment and review, traffic counts and speed surveys.
- 2.3.2 An assessment of the surrounding environment should be performed to ensure the sensitivity of the landscape, heritage and local community are not detrimentally affected by the traffic signalling installation design.
- NOTE 1 An assessment of the surrounding environment can be achieved through a desktop study of the area and a risk assessment.*
- NOTE 2 A video survey to review traffic and other user behaviours is an example of an assessment of the surrounding environment.*
- 2.3.3 The compatibility of traffic control equipment with existing traffic signal installations that are being modified should be determined.
- NOTE Associated traffic signals equipment can include bus priority systems, CCTV and variable message signs (VMS).*

- 2.3.4 For design modifications to existing traffic signalling installations, records of junction history, previous assessments and any known issues should be reviewed.

3. Normative references

The following documents, in whole or in part, are normative references for this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

Ref.	Document
Ref 1.N	National Highways. GG 101, 'Introduction to the Design Manual for Roads and Bridges'
Ref 2.N	The National Archives. legislation.gov.uk. SI 2016/362 (TSRGD), 'The Traffic Signs Regulations and General Directions 2016'
Ref 3.N	The National Archives. legislation.gov.uk. SRNI 1997/386, 'Traffic Signs Regulations (Northern Ireland) 1997'

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