

TOPAS

Traffic Open Products and Specifications

An update after four years of operation

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Synopsis

From the outset, TOPAS sought to put in place a system that aims to provide a continuation of a system of specifications which are broadly familiar to both manufacturers and users. The main Highways Agency Standards for traffic control equipment which were in common use, have now been migrated to TOPAS Procurement Specifications and manufacturers with equipment Type Approved to the original Standards have been able to Register their products against the equivalent TOPAS specification.

TOPAS is now engaging in a major program of specification updates and welcome the input of Manufactures and Users, so that TOPAS specifications can continue to provide support for equipment Purchasers for the foreseeable future.

History and Background

TOPAS fills a gap left by the removal of the requirement for traffic control equipment to be Type Approved by the Highways Agency, as was, withdrawing from maintaining the Standards against which road traffic equipment was Type Approved. TOPAS replaces Type Approval with a system of voluntary Registration against procurement specifications that initially mirrored the earlier Standards, allowing a seamless migration of previously Type Approved products to TOPAS. This approach was helpful for both manufacturers and users as it provided a link to the existing approvals and it was easy to see this as a straightforward transition. However the simplicity of the concept masks the fundamental changes required to replace regulation with a voluntary system of Registration.

Type Approval was the formal authorisation to use certain equipment on the highway and was administered by the Highways Agency on behalf of the Department for Transport. The requirement for Type Approval was contained in earlier versions of the Traffic Sign Regulations and General Directions (direction 56), but was removed in the most recent 2016 edition.

Representatives of ARTSM (the Association for Road Traffic Safety and Management) and TSG (the Traffic Systems Group of ADEPT) had already begun to establish closer working with the aim of improving engagement between users and manufacturers, but the group was given new impetus by the proposed changes to Type Approval.

TOPAS was established in July 2014 with the key aim of maintaining and enhancing convergence of specifications so as to reduce the scope for operational problems in the future and is a partnership between the Department for Transport, Transport for Scotland, Welsh Government, Roads Service Northern Ireland, The Association for Road Traffic Safety and Management (ARTSM) and the Traffic Systems Group (TSG) of the Association of Directors of Environment, Economy, Planning & Transport (ADEPT). The initial work of TOPAS included migrating relevant Highways Agency Standards to TOPAS procurement specifications and inviting manufacturers to Register existing Type Approved equipment against these specifications. The new TOPAS procurement specifications included minor updates to superseded references, but no changes of substance to the technical requirements and therefore no required no further testing by manufacturers, who were able to Register their products free of charge to establish this initial register.

The process of decoupling specifications from the regulatory framework was more complicated than originally foreseen, particularly with regard to how manufacturers would demonstrate compliance without overburdening them with costly or unnecessarily bureaucratic procedures. For new equipment and new specifications, TOPAS needed to devise a simple way for manufacturers to demonstrate sufficient testing had been undertaken, identify independent bodies to verify this and give sufficient guidance to those bodies to ensure the verification process was effective.

The Registration Process concept is made more complicated by the scope for some products to partially comply with a specification, where for example, an element of a specification might not apply to the particular technology implementation, or where a product range includes a number of individual products. The TOPAS solution is for manufacturers to declare conformity against each clause of a specification, clearly identifying any deviations and to include this within a Technical File in support of the registration application.

The Technical File is key to the process as it also helps an independent assessor to verify that all the necessary testing has also been undertaken, particularly mandated testing such as EMC and the test certificates for such testing must accompany the application. Each TOPAS specification therefore includes an appendix that lists those items of supporting evidence that must be contained in the Technical File. Where a manufacturer seeks Registration to the core and only some of the optional parts of a specification then the

Technical file content is required to reflect such options and choices. As well providing clarity to manufacturers, this straightforward process also means purchasers can readily confirm products meet their requirements.

Purchasers are now able to specify TOPAS Registered products in their procurement documents in the same way they will previously have required Type Approved products, providing assurance that products meet an appropriate technical specification. This does not remove the need for purchasers to ensure the use of equipment complies with over-arching regulations like the Traffic Sign Regulations and General Directions, but it does allow purchasers to quickly identify whether products meet the relevant manufacturing requirements identified as appropriate through a consensus of industry experts.

From a manufacturer's perspective, purchasers specifying TOPAS registered products ensures any additional cost of manufacturing products to this specification does not leave them at a competitive disadvantage compared with less robust alternatives.

Specification Reviews

Initially, TOPAS was focused on dealing with the transition from Highways Agency specifications to the TOPAS version and establishing the Registration process. Now that this is complete TOPAS has embarked on the major process of specification revision, to reflect suggested amendments, changes in relevant regulations and international standards as well as to correct errors or inconsistencies in the original versions. (A complete list of all TOPAS specifications and their current revision status can be found at the end of this paper).

The revision process is open to anyone who is interested in participating. Typically initial drafts are produced by one or two people with extensive knowledge of the product area covered by the specification, or by a small working group, taking into account comments already received by TOPAS.

Once an initial draft is considered 'ready for review' it is posted on the TOPAS website and all manufactures that already have Products registered against the specification are notified that the review is underway. TOPAS welcomes comments from anyone, manufacturers, users or others. Each comment received is documented and reviewed and usually gives rise to specification amendments. Unless the changes being implemented are very small a specification will typically be posted for review at least one more time to allow any final comments to be received and considered.

A new feature of the revised specifications is the inclusion of a 'change log' which helps readers identify changes to the specification, either of a minor nature or sometimes of a more significant nature, which might give rise to the need for manufacturer's to re-register against the new specification and the specific means to do this. As an example the recent issue of TOPAS 2512 did include some material changes to the requirements, but recognising that most existing products would still actually be compliant with the new specification, manufacturers were simply required to confirm in writing that their Product remained compliant with the amended specification and their registration would then be updated on the TOPAS web site.

The future

Looking to the future, the collaboration between manufacturers and users in the development of new or up-dated specifications will help ensure innovation considers interoperability with other equipment, the wider needs of the community and is consistent with appropriate manufacturing requirements regarding its intended use. In this way, Purchasers of traffic control products can be confident that new TOPAS procurement specifications will be equivalent to the current suit of specifications and can continue to rely on these as a basic product assurance tool.

TOPAS is happy for prospective suppliers of new traffic control products not covered by existing specifications, to propose new specifications. Such a proposal would go through a similar process to a review of an existing specification and would require the prospective suppliers to provide a draft specification for consultation, with a final TOPAS specification incorporating industry and user comments. This would similarly apply to purchasing organisation with new requirements.

From the outset, TOPAS sought to put in place a system that would provide a continuation of the system broadly familiar to both manufacturers and users. The main Highways Agency Standards for traffic control equipment in common use have been migrated to TOPAS, and manufacturers with equipment Type Approved to these Standards have been able to register their products against the equivalent TOPAS specification.

TOPAS provides two documents to assist manufacturers and purchasing organisations understand the registration process:

- TOPAS 0600A: TOPAS Registration Process
- TOPAS 0601A: TOPAS Specification Review Process

These can be downloaded from the TOPAS website at www.topasgroup.org.uk , where additionally there are a number of Frequently Asked Questions and other supporting information.

While TOPAS is intended to be self-funding through registration fees, establishing TOPAS has only been possible with the generous support of the Department for Transport, ARTSM and ADEPT. A Management Board comprising members from the Department for Transport and devolved administrations, the ADEPT Traffic Systems Group (TSG) and ARTSM meet regularly to provide governance for TOPAS. The work of the Management Board and all those who contribute to specification reviews is undertaken on a voluntary basis and without their support TOPAS would not be able to offer its suite of specifications.

But for TOPAS to continue to manage and develop these specifications, purchasers also need to support the initiative through specifying TOPAS registered products in their procurement documents. This will in turn provide purchasers with a straightforward means of verifying manufacturers' compliance with the associated product testing required to register products.

For more information on TOPAS, visit the website: www.topasgroup.org.uk or email enquiries@topasgroup.org.uk . The Management Board may provide limited advice on TOPAS processes, but appropriate, commercial advice should be sought for more detailed, technical enquiries.

Status of TOPAS specifications

Specifications which have been updated and reissued or newly created
Specifications which are under review

Specification Number	Specification Title	Status
TOPAS 0600B	Self-Certification Procedures for Registration Process of Traffic Control Equipment	Status Live
TOPAS 0601A	Specification Review Process	Status Live
TOPAS 2500A	Specification for Traffic Signal Controller	Status Live
TOPAS 2502B	Performance Specification for Portable Traffic Signal Control Equipment for use at Roadworks	Status Live Under Review
TOPAS 2503B	Performance Specification for Pedestrian Facilities at Temporary Standalone Traffic Signals	Status Live Under Review
TOPAS 2504A	Performance Specification for Vehicle Detection Equipment for Vehicle Actuated Portable Traffic Signals	Status Live
TOPAS 2505A	Performance Specification for Above Ground Vehicle Detector Systems for use at Permanent Traffic Signal Installations	Status Live
TOPAS 2506A	Performance Specification for Above Ground On-Crossing Pedestrian detection Systems	Status Live
TOPAS 2507A	Performance Specification for Kerbside Detection Systems for use with Nearside Signals and Demand Units	Status Live
TOPAS 2508B	Performance Specification for Tactile Equipment for use at Pedestrian Crossings	Status Live
TOPAS 2509A	Performance Specification for Audible Equipment for use at Pedestrian Crossings	Status Live
TOPAS 2510A	Performance Specification for Rising Bollards Control Systems	Status Live
TOPAS 2511A	Performance Specification for Nearside Signal and Demand Units	Status Live
TOPAS 2512B	Performance Specification for Below Ground Vehicle Detection Equipment	Status Live
TOPAS 2513A	Performance Specification for Wig Wag Signal Control Equipment	Status Live
TOPAS 2514A	Performance Specification for Light Control of Tramcars	Status Live
TOPAS 2515A	Performance Specification for Equipment to Detect High and Over-height Vehicles at Low Structures	Status Live Under Review
TOPAS 2516B	Performance Specification for Discontinuous Variable Message Signs	Status Live Under Review
TOPAS 2517A	Performance Specification for Electromechanical Variable Message Signs	Status Live Under Review
TOPAS 2520A	Performance Specification for Uni-Directional Logic Equipment	Status Live
TOPAS 2522A	Remote Monitoring and Control of Traffic Control Equipment via a Telecommunications Network	Status Live
TOPAS 2523A	Traffic Control Equipment Interfacing Specification	Status Live Under Review

Specification Number	Specification Title	Status
TOPAS 2537A	Performance Specification for Portable Traffic Signal Control Equipment with Pedestrian Facilities for use at Roadworks	Status Live Under Review
TOPAS 2538A	Performance Specification for Portable Traffic Signal Control Equipment for a Stand-alone Pedestrian Facility	Status Live Under Review
TOPAS 2540A	Portables and Temporary signals (with Hall Routes)	New specification under construction
TOPAS 2581A	Performance Specification for Pedestrian Countdown Units for use at Traffic Signals	Status Live
TOPAS 2130A	Environmental tests for Road Equipment	Status Live