

TRANSPORT for NSW (TfNSW)

QA SPECIFICATION TS201

APPROVAL OF ITS FIELD EQUIPMENT

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REVISION REGISTER

Ed/Rev Number	Clause Number	Description of Revision	Authorised By	Date
Ed 1/Rev 0		First Release.	A Mehaffey	12 Mar 15
Ed 2/Rev 0	Multiple	Approval Authority changed to General Manager ITS or delegate, following role and title changes in RMS. Refer project applicants to TS202. Refer evaluators to TSI-PR-006 when no RMS spec exists.	S Shaw	21 Jun 17
Ed 3/Rev 0	Multiple	References to RMS changed to TfNSW. Approval Authority changed to Director Intelligent Transport Systems or delegate, following title changes.	J Gordon	30 Sep 20
Ed 4/Rev 0	Multiple	Director Intelligent Transport Systems changed to Director ITS Engineering following organisational changes in TfNSW.	N Patras	9 Feb 21



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FOREWORD

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When this document forms part of a contract

This document should be read with all the documents forming the Contract.

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This copy is not a controlled document. Observe the Notice that appears on the first page of the copy controlled by TfNSW. A full copy of the latest version of the document is available on the TfNSW Internet website: <https://www.rms.nsw.gov.au/business-industry/partners-suppliers/specifications/index.html>

REVISIONS TO PREVIOUS VERSION

All revisions to the previous version (other than minor editorial changes) are indicated by a vertical line in the margin as shown here, except when it is a new edition and the text has been extensively rewritten.

PROJECT SPECIFIC CHANGES

Project Specific changes are **not allowed** to this document.

This document shall only be changed by TfNSW (Director ITS Engineering or delegate).

Projects seeking to use ITS Field Equipment not already approved by this process shall follow process TS202.

Requests for clarifications, re-issue, or other questions regarding this document should be directed to the ITS Help desk: ITSHelpDesk@rms.nsw.gov.au

TfNSW QA SPECIFICATION TS201

APPROVAL OF ITS FIELD EQUIPMENT

1 GENERAL

1.1 SCOPE

Transport for New South Wales (TfNSW) has deployed a large variety of ITS Field Equipment throughout the NSW road network to enable the operation of Intelligent Transport Systems (ITS).

Approval of ITS Field Equipment is required prior to deployment, and the approval authority is the TfNSW Director ITS Engineering or delegate.

This specification is intended to assist suppliers and manufacturers to apply for approval of their field equipment by specifying the process used to determine suitable technology and devices via the interface provided via the ITS Help Desk.

This process evaluates suitability for generic usage across multiple installations and projects, rather than being limited to a smaller set of requirements for a particular defined project.

For definitions of types/levels of approval categories that may potentially be granted, and the list of items already approved by TfNSW, refer to TS200.

This document TS201 is not intended for direct use by a project applicant, as it is aimed at suppliers and manufacturers. Projects may either use approved items on the TS200 ITS Register, under the conditions given there, or apply for project based approval of alternate field equipment, using TS202.

1.2 STRUCTURE OF THE SPECIFICATION

This Specification includes a series of annexures that summarise reference information.

1.2.1 Project Specific Requirements

Project Specific changes to this specification for approval are **not allowed**.

1.2.2 (Not Used)

1.2.3 Schedule of HOLD POINTS

The schedule in Annexure TS201/C lists the **HOLD POINTS** that must be observed. Refer to Specification TfNSW Q for definition of **HOLD POINTS**.

1.2.4 Reference Documents

Standards, specifications and test methods are referred to in abbreviated form (e.g. TS200). For convenience, the full titles are given in Annexure TS201/M.

1.3 DEFINITIONS AND ABBREVIATIONS

1.3.1 Definitions

The terms “you”, and “your”, mean “the Contractor” and “the Contractor’s” respectively.

The following definitions are applicable to this Specification:

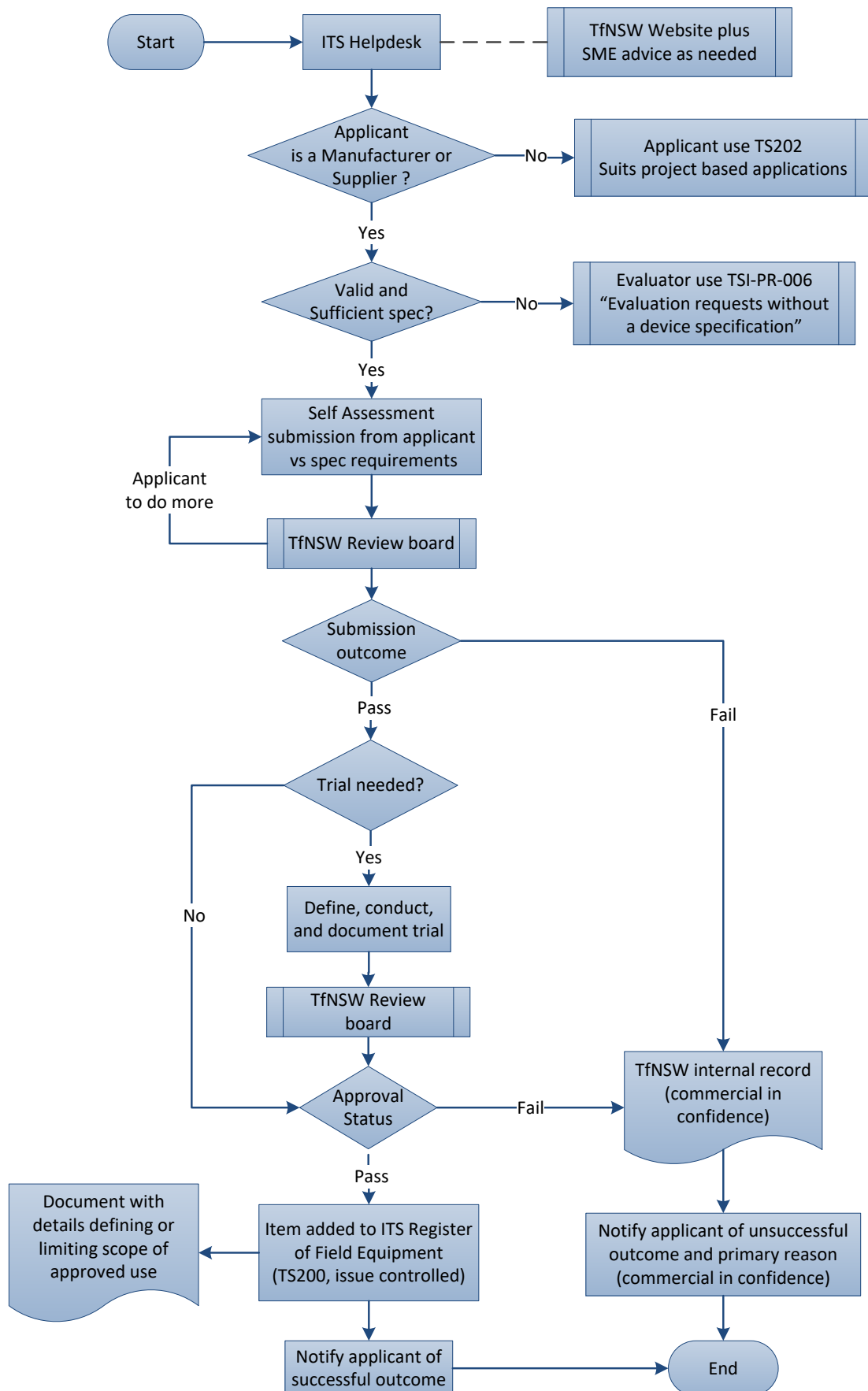
Intelligent Transport System (ITS)	An integrated technology solution using computer-based control systems which communicate with field devices (at one or more sites) to provide a functional outcome designed to improve journeys through the transport network.
ITS Field Equipment	Equipment needed to support the operation of Field Devices at an ITS Field Site (e.g. housing, off grid power supply, power conversion unit, cabling etc.).
ITS Field Device	An electronic device that provides a function at an ITS Field Site (e.g. camera, electronic sign, TSC communication module etc.)
ITS Field Site	Roadside location for ITS equipment.
Director ITS Engineering	Central TfNSW authority responsible for TfNSW ITS design approval, including approval/acceptance for supply of ITS Field Devices and Equipment and for ITS solutions..
TfNSW Review Board	Group of persons within TfNSW supporting the Director ITS Engineering, to evaluate applications for ITS solutions, Field Equipment and Devices approval/acceptance.
ITS Register	The listing of ITS Field Equipment and Devices and the current classes of their suitability for supply to TfNSW by internal and external projects. This document is available to suppliers via the internet as TS200.
Applicant	The individual submitting the application to TfNSW requesting approval (or enhanced approval) of an ITS Field Device, acting as the point of contact with TfNSW for the purpose of the submission.

1.3.2 Abbreviations

The following abbreviations apply to this Specification:

ITS	Intelligent Transport Systems
RMS	Roads and Maritime Services, a former agency within the cluster of Transport for New South Wales, now is a part of Transport for New South Wales
TfNSW	Transport for New South Wales
SME	Subject Matter Expert

2 WORKFLOW FLOWCHART



3 DEFINITION OF APPROVAL ELEMENTS

The following items are provided to explain key aspects of the Approval Workflow.

3.1 THE APPLICANT

The Applicant for TS201 approval may be:

An equipment manufacturer

An agent for an equipment manufacturer

A supplier of equipment

The applicant shall be the primary point of contact with TfNSW for the purpose of the approval process. Joint applicants are not acceptable.

If approval is granted, the approval applies to the ITS Field Device itself as provided by the applicant.

If the applicant is a project, the appropriate process to be followed is defined in TS202.

3.2 ITS HELP DESK

The applicant, or potential applicant, shall initially contact the ITS helpdesk to determine which specifications and requirements apply, and how to access the applicable documents, commence and progress an application.

The ITS helpdesk is at the following email address: ITSHelpDesk@rms.nsw.gov.au

3.3 VALID SPECIFICATION

This specification currently identifies the process for approval of ITS Field Devices (and associated equipment) where TfNSW considers that a suitable specification, or a set of specifications, exists that sufficiently define the evaluation requirements.

Where no valid specification exists for the proposed ITS Device, the TfNSW internal procedure TSI-PR-006 "*Evaluation Requests without a Device Specification*" shall be used by TfNSW assessors to help evaluate the business value of the proposed ITS Device and determine the manner in which TfNSW shall respond to the applicant.

It should be noted by applicants that assessment of ITS Devices without a valid specification typically requires re-direction of TfNSW resources from their existing business priorities, and as a result TfNSW is not obliged to proceed with an ITS Device evaluation.

In addition, TfNSW primarily specifies and approves ITS Devices to ensure that they operate correctly with their associated TfNSW ITS control systems.

3.4 SELF-ASSESSMENT

The applicant shall provide a Submission document that details the applicant's assessment of why the equipment being considered meets the specification, with substantiation as appropriate. If the equipment does not meet a part of the specification, the applicant shall detail on the basis of underlying functional needs why they consider this may be admissible, with limitations and substantiation, as appropriate.

The table below lists items expected to be included in such a submission:

Statement of compliance	<p>This shall be at a minimum of clause by clause.</p> <p>Where the specification(s) have more than one requirement per clause, then a separate statement shall be made for each requirement.</p> <p>Level of compliance declaration: - Yes, No, Partial;</p> <ul style="list-style-type: none"> • Yes – fully compliant to the letter of the clause; • No – non compliant, reasoning if it is believed that the non-compliance is not relevant; • Partial – compliance is achieved through a means which is different to that required by the clause, or where the clause specifies a feature that does not completely apply to a novel method of achieving the clause, etc. <p>Reference to the evidence which demonstrates that compliance is achieved.</p> <p>Where the equipment deviates from the specifications, those must be listed clause-by-clause in the statement of compliance.</p>
Evidence	<p>Example of evidence can be:</p> <ul style="list-style-type: none"> • Accredited test house report or certification. • Self-testing/demonstration where the quality system of the tester is sufficiently accredited. • Visual, audio or combined files. • Drawings. • Calculations with annotations/working. <p>Testimonials do not count as evidence but may be used to support partial compliance</p>
Configuration Statement	<p>Lists the primary item, and spare/replaceable parts of the device (those that TfNSW can purchase from the applicant), and their applicable model and version number, including version(s) of software/firmware installed on the part/item.</p>
Technical manual	<p>Required.</p>
Maintenance manual	<p>Required.</p>
Quality Plan	<p>This shall include main tests and controls from the manufacturer, and details of any additional controls conducted by the applicant, if separate, in supply of the items.</p>

All documentary submissions shall be treated as Commercial in Confidence between the applicant and TfNSW.

3.5 RECEIPT OF SUBMISSION

On TfNSW receipt of a documentary submission, an acknowledgement will be sent to the applicant.

3.6 CLARIFICATION REQUEST

The applicant shall assume that TfNSW will assess the submission “as is”. Accordingly the applicant shall provide a full and complete submission to minimise the risk of early rejection.

TfNSW may at their discretion seek a clarification on the submission document from the applicant, during the course of their review. This may include requests to conduct tests to provide supporting evidence. This provides the opportunity for the applicant to submit further evidence in support of a claim. However, applicants shall note that TfNSW is under no obligation to provide this opportunity.

3.7 EARLY TERMINATION OF REVIEW

TfNSW may at their discretion, either elect to review a submission in full, or only review a submission to the point that a failure outcome is obtained.

The following are examples of scenarios which may result in the termination of a TfNSW assessment:

- A compliance statement is found to be inadequate or false (applicant has incorrectly stated either “Compliant” or “Partially Compliant”).
- Systemic lack of sufficient evidence/justification in the submission to determine compliance.
- Non-compliance, without sufficient and credible reasoning supplied to explain why such non-compliance could potentially be acceptable to TfNSW.

3.8 SUPPLEMENTARY TESTING

Once the documentary submission is received and evaluated, a need may be identified for supplementary tests/trials. A test plan is to be documented (nominally by the applicant) to demonstrate the capability in question, and the plan must be acceptable to TfNSW.

All supplementary testing shall nominally be conducted, and funded, by the applicant.

Some tests/trials may be required that cannot be wholly conducted by the applicant, needing some degree of TfNSW involvement. An example would be to test for integration where the applicant’s equipment is required to communicate, or otherwise integrate, with TfNSW’ legacy systems.

3.9 SAMPLES

The applicant shall supply a sample of the Field Device/Equipment (or more if required) for TfNSW evaluation, if requested to do so, as needed to permit the defined evaluation plan to be conducted.

3.10 APPROVAL AUTHORITY

TfNSW Approval is granted by the Director ITS Engineering or delegate.

3.11 APPROVAL REGISTER

If TfNSW approval is granted, the approved ITS Device will be listed in the Approval Table contained within the TfNSW Register of ITS Field Equipment (TS200), together with the associated applicant. Several classes of approval exist.

TS200 is publically available via the TfNSW website.

3.12 APPROVED DEVICE CONFIGURATION

TfNSW Approval applies to the hardware/software version of the field device that has been evaluated, as identified in the ITS Device's Configuration Statement.

The applicant is required to notify TfNSW of any changes to the hardware/software version of the ITS Device after TfNSW Approval has been granted. The applicant is required to advise TfNSW of the nature of any changes, and their expected impacts to the ITS Device.

Any notification of ITS Device changes should be sent via email to TfNSW via the ITS helpdesk.

3.13 UNSUCCESSFUL APPLICATIONS

If an application for approval is unsuccessful, the applicant will be notified.

The TfNSW notification will identify at least one key item which initiated the rejection, but TfNSW does not undertake to identify all shortcomings potentially present in the application. This particularly applies in the case of an early rejection, where parts of the application information may not have been reviewed.

Information about unsuccessful applications are not made publicly available, however internal TfNSW records are kept of the failed application. The TfNSW records of prior applications will be consulted by TfNSW reviewers in the case of subsequent applications being made for the same device.

3.14 APPEALS

An applicant may appeal a failed approval if they believe that due process has not been followed, or that an error has made during evaluation. The process involved for the applicant is to detail the grounds for the appeal, and send the appeal to the ITS helpdesk.

Applicants should note that the TfNSW approval decision is based on the original submission made by the applicant. Presentation of new information omitted from the original application is nominally not accepted by TfNSW as a reason to reconsider a failed application.

3.15 RESUBMISSION OF APPLICATION

If an applicant has previously failed to be granted approval, they may re-submit a new improved application.

Applicants should note that re-submitted applications are added to the TfNSW "evaluation queue" that exists at that time, and may experience significant delay prior to a re-evaluation by TfNSW.

3.16 MANAGEMENT OF CHANGES TO APPROVED DEVICES

Change to approved devices may sometimes be necessary.

If a change to an approved field device is planned the applicant shall promptly notify TfNSW of the proposed change, and submit information to help TfNSW verify that the change will not adversely impact the TfNSW use of the approved ITS Device.

TfNSW must also be notified if an unplanned change is found to have occurred.

A changed field device is classed as unapproved until TfNSW has conducted an evaluation of the change and determined that it is acceptable.

However, minor changes where well supported by an appropriate level of submission will typically only require brief evaluation, followed by approval of the changed device.

Depending on the nature of changes, and traceability aspects, an approval may be managed either by confirming the original approval continues to be valid post-change, or in the case of a change to the model number of the field device, by separately approving the new model.

3.17 ALTERNATE SUPPLIERS OF APPROVED DEVICES

An approval relates to the field device, rather than the applicant. However, the original applicant will be listed in the approval table as “original”, against that device.

A project may seek to use a different supplier for a device that has already been approved, or an alternate supplier may seek such approval.

In such cases an application shall be made to the ITS helpdesk, either by the alternate supplier, or by the project.

This application shall contain information that shows that the device being supplied from the alternate source is the same as the approved device, and detailing quality controls and process relating to the supply, so it can be established whether the ITS Device is sufficient/equivalent compared to that of the original applicant.

The application will be handled in workflow under the same process as an original application, and if successful, the alternate supplier will be listed in the approval table.

If a company/supplier on the approval list changes name, an application is to be submitted by the renamed entity, as for the alternate supplier process.

4 SUPPLY REQUIREMENTS

4.1 SUPPLY OF ITS FIELD EQUIPMENT

Any ITS Field Equipment proposed for supply to TfNSW must be approved as being suitable by TfNSW.

HOLD POINT

Process Held:	Supply of ITS Equipment for maintenance or project works.
Submission Details:	Confirmation that proposed ITS Devices have been approved, via use of ITS Devices previously accepted by TfNSW (TS200), or by project based approval (TS202).
Release of Hold Point:	The Director ITS Engineering or delegate will validate the information provided, prior to authorising the release of this Hold Point.

ANNEXURES TS201/A TO TS201/B – (NOT USED)

ANNEXURE TS201/C – SCHEDULE OF HOLD POINTS

Refer to Clause 4.1.

C1 SCHEDULE OF HOLD POINTS

Clause	Type	Description
4.1	Hold	Supply of ITS Equipment for maintenance or project works

ANNEXURES TS201/D TO TS201/L – (NOT USED)

ANNEXURE TS201/M – REFERENCE DOCUMENTS

M1 TfNSW SPECIFICATIONS

TfNSW Q	Quality Management System (formerly RMS Q)
IC-QA-TS200	Register of ITS Field Equipment
IC-QA- TS202	Approval of ITS Solutions for Projects
TSI-PR-006	Evaluation Requests without a Device Specification