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Level 2 Risk Assessment and Briefing of Timetable Change

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User information

This Network Rail standard contains colour-coding according to the following Red–Amber–Green classification.

Red requirements – *No variations, could stop the railway*

- **Red requirements shall** always be complied with and achieved.
- Red requirements shall be presented in a red box **with the word “shall” or expressed as a direct instruction**.
- Accountability for the efficacy of red requirements lies with the Professional Head/Standard Owner.
- Red requirements are monitored for compliance.
- Corrective actions shall be enforced if variations are discovered through functional checks (e.g. engineering verification visits, audit or Operations Self-Assurance).

Amber requirements – *Controlled variations, approved risk analysis and mitigation*

- **Amber requirements shall** be complied with unless variation has been approved in advance.
- Amber requirements shall be presented with an amber sidebar **and with the word “shall” or expressed as a direct instruction**.
- Accountability for the efficacy of these requirements lies with the Professional Head/Standard Owner, or their nominated Delegated Authority.
- Amber requirements are monitored for compliance.
- Variations **may** be permitted. Variations are approved by the Standard Owner or through existing Delegated Authority arrangements.
- Corrective actions shall be enforced if **non-approved** variations are discovered through functional checks (e.g. engineering verification visits, audit or Operations Self-Assurance).

Green – *Guidance*

- Guidance is based on good practice. Guidance represents supporting information to help achieve **Red** and **Amber** requirements.
- Guidance shall be presented with a dotted green sidebar **and with the word “should” (usually in notes) or as a direct instruction**.
- Guidance is **not mandatory** and is not monitored for compliance.
- Alternative solutions may be used. Alternative solutions do not need to be formally approved.
- Decisions made by a competent person to use alternative solutions should be backed up by appropriate evidence or documentation.

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Issue record

Issue	Date	Comments
1	October 2000	Original issue
2	April 2004	Amended to take account of organisational change
3	June 2005	Amended to mandate changes to the process including the establishment of a single national TCAG
4	June 2006	Amended to take account of the changes to roles and responsibilities brought about by the SAF5 reorganisation
5	August 2008	Phase 2A / Engineering reorganisation responsibility change
6	August 2008	Amended to take account of a review of the process including an enhancement of the role of Maintenance within it
7	September 2009	Amended to take account of users' comments following experience in application of the process, also post and title changes
8	March 2011	Amended to reflect organisational change. Change of standard ownership from OPS to OCS
9	September 2014	Amended to allow the TRCRAG process to risk assess against robust TT requirements. NR/GN/OPS/030 Risk Assessment of Timetable Change – Guidance standard has been merged into this issue.

Compliance

This Network Rail standard is mandatory and shall be complied with by Network Rail and its contractors if applicable from 06 September 2014.

When this standard is implemented, it is permissible for all projects that have formally completed GRIP Stage 3 (Option Selection) to continue to comply with the issue of any relevant Network Rail standards current when GRIP Stage 3 was completed and not to comply with requirements contained herein, unless stipulated otherwise in the scope of this standard.

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Reference documentation

GE/RT8270	Assessment of Compatibility of Rolling Stock and Infrastructure
GK/RT0044	Permissive Working
NR/L2/OCS/085	Permissive Platform Working
NR/L2/SIG/30021	Alterations to Authorised Line Speeds
NR/L2/RSK/00001	Integrated Risk Management
NR/L2/OHS/019	Safety of People Working On or Near the Line
NR/L2/TRK/001	Inspection and Maintenance of Permanent Way
NR/GN/CIV/00012	Road Vehicle Incursions: Risk Assessment of Bridge and Neighbouring Sites
Network Code – Part D	Timetable Change

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1 Purpose

The timetable change process is a process to review that any applicable timetable change is operationally acceptable.

The standard supports the operator applications to operational planning and reviews criteria to a common process to identify, assess and control any operational, maintenance and performance risks that any significant timetable change may create.

The outputs of the timetable change process support any operator applications for significant timetable change, and support the production of the Timetable Change Brief.

2 Scope

This standard describes the risk review and briefing of timetable change process and applies where any significant timetable change is being proposed.

The standard encompasses significant changes associated with the introduction of the new agreed timetable or service specification. It applies to both passenger, ECS, Open Access, Charter and freight services.

It also specifies the responsibilities for the production of the Timetable Change Brief, as well as its format and contents.

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3 Definitions

Significant Timetable Change	See sections 9.2 and Appendix B for the types of reasons that would quantify significant timetable change.
Event Steering Group (ESG)	A group comprised of representatives from Network Rail, relevant funders and any timetable participants that are likely to be affected by an event which is likely to require significant changes to a future Working Timetable.
Calendar of Events (CoE)	The issued list of events which is likely to require significant changes to a future Working Timetable.
Timetable Change Risk Assessment Group (TCRAG)	A Route based group composed of competent individuals to assess the effects of proposed significant timetable changes and determine any mitigation measures to be applied.
Timetable Change Assurance Group (TCAG)	A national group composed of competent individuals who carry out assurance checks on the outputs from TCRAGs.
Train Operating Company (TOC) / Freight Operating Company (FOC) / Open Access Operator	Railway undertakings affected by the TCRAG / TCAG process.
Signal Overrun Risk Assessment Tool (SORAT)	The SORAT tool is the next phase in the assessment of signal overrun risk. The tool has been developed to allow better understanding of the risk at signals, and how effective any proposed mitigation will be.

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4 Requirements

Network Rail shall assess timetable changes to identify any changes to risk levels, and to implement suitable and sufficient controls to mitigate those risks for which it is responsible.

This process involves all affected functions with particular emphasis on system safety, the timetable's operability and its effect on asset maintenance and sustainability.

These are summarised in the process map in Appendix A.

5 Process

The process shall include a detailed review and assessment of forthcoming changes to the timetable introduced in December and May each year. It shall also consider the effects of past changes including feedback on actions and look ahead to the implications of change aspirations proposed to take place beyond the next timetable.

The TCRAAG chair shall review all timetable changes for their significance and determine the appropriate level of assessment to be carried out based on local knowledge and information.

TCAG shall carry out a high-level assurance check to monitor the activities of TCRAAGs and shall also review aspirations for change beyond the next timetable.

TCRAAG may also be required to assess major engineering works (e.g. blockades) and key business change activities in advance of any prescribed timetable being available. TCRAAGs of this type may be held a significant period before such a change may take place and may use service specifications forecasts to allow the assessment to be undertaken. This may include service specifications developed by ESG.

TCRAAG chairpersons shall review the CoE and the associated list of ESGs which detail where timetables are or may be changing.

6 Decisions and Mitigations

The decisions from TCRAAG and TCAG shall inform the Operational Planning function and TOCs, FOCs and Open Access Operators about timetable changes that would not be acceptable from a risk perspective and they shall determine whether any alterations require to be made and the timescales for their implementation.

The TCRAAG chairperson shall identify owners and timescales to implement identified mitigation measures, which shall be recorded and monitored at regular intervals in a plan. In the event that mitigation cannot be delivered in line with the plan, the Route Managing Director (RMD) shall review the tolerability of the arrangements in place to confirm whether or not the timetable change can be made.

7 Outputs

The information in the Timetable Change Brief, together with the risk information gained as an output from the processes detailed in this procedure, shall be provided to train and station operators (TOCs / FOCs).

This will enable them to assess and implement suitable controls. This is in addition to its circulation within Network Rail.

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8 Contact With Other Routes

In addition, the TCRAG shall consider whether other Routes are likely to be affected by the timetable change, due to the impact on train services that utilise multiple Routes, as the other Route(s) may need to organise a TCRAG review. Contact would need to be made by the TCRAG chairperson to the appropriate other Route's TCRAG chairperson. The joint output(s) of the discussions / review shall be notified to the Operational Planning Managers.

9 TCRAG

9.1 Timetable Change Information – TOC / FOC Aspirations

The Operational Planning Managers shall collate all TOC / FOC aspirations for the applicable timetable and shall issue this to TCRAG chairpersons at D-55 weeks.

NOTE: For timeline dates please see Appendix A

9.2 TCRAG Chairperson Initial Review

The TCRAG chairperson shall review all the proposed TOC / FOC aspirations within or affecting their geographical area and review the level of assessment to be carried out.

The TCRAG chairperson shall document this initial review and document the reasons if a TCRAG is not deemed necessary. This review may require discussion with other TCRAG members.

TCRAG shall be undertaken if an aspiration is deemed as a significant timetable change. A significant timetable change is where the change in any of the following is considered large enough to warrant specific consideration of risk:

- number / frequency of train services;
- traffic patterns (e.g. earlier trains, later trains, intervals between trains, stopping patterns, departure / arrival times, junction moves, attachments and detachments, instances of platform sharing, services over level crossings);
- type, length or formation of trains, or changes in the proportions of different types of train which could change Signal Passed At Danger (SPAD) risk and Train Protection Warning System (TPWS) effectiveness;

NOTE: Assessment of compatibility of rolling stock and infrastructure to have been undertaken through the process defined in [GE/RT8270](#) - Assessment of Compatibility of Rolling Stock and Infrastructure, the former Network Rail Route Acceptance process or pre-existing 'grandfather' rights);

- alterations to speeds.

NOTE: Changes to the authorised speed of the infrastructure should have been undertaken through the process defined in [NR/L2/SIG/30021](#) - Alterations to Authorised Line Speeds).

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9.3 TCRAG Information – Operations Risk Advisor (ORA) / Route Level Crossing Manager

Following the TCRAG chairperson's initial review, if there is an element(s) of timetable change that is deemed significant and a TCRAG review is required then the following supporting information shall be obtained from the Operations Risk Advisor (ORA). This information should be requested six weeks prior (D-43) and available to the TCRAG chairperson two weeks prior (D-39) to the TCRAG date (D-37). The minimum information required is:

- recent SPAD signals;
- multi-SPAD signals;
- permissive working locations;
- areas of bi-directional operation;
- areas of concern about signal design headway;
- level crossings, including station foot and barrow crossings;
- vehicle incursions sites.

9.4 TCRAG Information – Incremental Changes Over Time

The Operational Planning Managers shall provide information to enable TCRAGs to review the timetable at potentially sensitive locations on a rolling three-yearly basis by line of Route.

This is to identify whether there has been a number of small incremental changes over time sufficient to increase potential risk levels to significant.

The TCRAG chairperson shall advise the locations where data is required.

9.5 TCRAG Composition

The composition of each TCRAG shall be as shown in Table 1:

Post	Role
RMD (or representative)	Chairperson. Oversees the risk assessment process. The TCRAG chairperson shall have in depth knowledge of the Route and its train operations and be appointed by the RMD.
Operation Risk Advisor / Route Level Crossing Manager	These roles between them have detailed knowledge of train movements impacting on level crossing operations and other safety related issues.
Operational Planning Managers (or representative)	Detailed knowledge of the timetable proposals and constraints including the impact of Section 4 blocks included in the Engineering Access Statement (EAS). Provides full information on the proposed timetable changes and amends the timetable as necessary to assist mitigation.

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Post	Role
Route Asset Managers (RAM) (Track / Signalling / E&P / Civils) (or representative)	Confirmation of asset capabilities and capacities (including the adequacy and condition of the power supply). Provides input on impact of the changes on the asset.
Route Infrastructure Maintenance Director (RIMD) or Area Director (AD) (or representative)	Confirmation of impact on asset maintenance and sustainability including the effects of timetable change on the EAS.
TOC / FOC representative (e.g. Driver Standards Manager)	Knowledge of drivers' signalling concerns, typical aspects observed etc., also station management issues.
Current Operations Manager (COM) / Operations Manager (OM) (or representative)	Local knowledge of the Route concerned. Provides information on routing, current risk areas, signallers' workload and SPAD information.
Customer Relationship Executive (CRE) (or representative)	Advice on commercial issues, costs, access agreements etc.
Senior Route Freight Manager (or representative)	Knowledge of freight workings and possible freight changes.
Route Safety Improvement Manager (RSIM) (or representative)	Expertise in risk control in signalling and other risk areas. Facilitate the risk assessment process.
Secretary	Appointed by Chairperson.

Table 1 – Composition of TCRAG

The TCRAG chairperson shall carry out a preliminary review of the matters to be discussed and where there are no implications upon a post / role, may agree to that post / role not being represented at all or for part of the TCRAG meeting.

Post / roles that are agreed not to be represented may be requested by the TCRAG chairperson to provide information as required.

Other functional experts shall be called upon to assist the TCRAG as necessary.

9.6 Timetable Change Information – Priority Date

Network Rail's Operational Planning Team shall collate all TOC / FOC priority date information for the applicable timetable and shall issue this to TCRAG chairpersons at D-39 weeks.

When the detail of a major timetable change continues to be developed after the normal timescales, the Operational Planning Managers should continue to work with the Operations Manager to avoid the introduction of risks on an incremental basis as a result of the spot bid process. The TCRAG chairperson should also be advised and consulted. Consideration should be given to supplementing the timetable change brief at specific locations.

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9.7 TCRAG Agenda

TCRAGs shall review all proposed priority date changes to the next timetable (D-37) and shall carry out assessments on the changes listed by the Operational Planning Project Managers / Leaders and otherwise as they consider appropriate.

TCRAGs shall work to a core agenda of the timetable review criteria and Initial Risk Scoring Tool that shall include the following aspects of past and future timetable changes:

- changes in the timetable over the previous three years, to identify incremental risks – review incremental change;
- aspirations declared for changes planned over the next three years – review Calendar of Events.

9.8 TCRAG Review Criteria

If a TCRAG review is required this shall be diaried to meet not later than D-37.

Table 2 provides a list of issues for review. This list is not exhaustive, but illustrates the most significant factors that can be affected by timetable change.

The criteria in Table 2 should be reviewed and documented by the TCRAG. In the event that the issue cannot be effectively assessed by the TCRAG then a further more detailed assessment should be considered as per the detail in the Detailed Assessment column of Table 2.

The Detailed Assessment column in Table 2 suggests tools that are available to assist the assessment. Where a tool is available, it may be used by anyone with suitable competence, with the results being presented to the TCRAG for review, and to determine what can be done to mitigate the risk. In some cases where a tool already exists, it is quite likely that the situation with the current timetable has already been assessed (e.g. level crossings, vehicle incursion sites). In these cases, an option could be to look at the existing assessments and only reassess those sites which give a result just below the score where further action is needed (i.e. those where the timetable change is enough to push them over the action boundary).

If there are issues that are wider than the short-term safety issues, these can have implications for the longer-term safe management of the infrastructure. These can be addressed using the concepts described in the Integrated Risk Management Process found in [NR/L2/RSK/00001](#) – Integrated Risk Management using the Extended Risk Matrix which is available via the advice and support links on Connect.

Where no specific tools are available for an issue, then other generic techniques should be used, particularly that of HAZID workshops. For more detail on these generic techniques, contact the National Operations Safety Manager.