SAFETY JUSTIFICATION **ISSUE: 1**

DOCUMENT INFORMATION

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Submitted by: **Standards Project Manager**	E Fleming		Date: 21/02/2000
Reviewed by: **Controller, Safety, Strategy and Planning**			Date:14/03/2000
Approved by: **Controller, Railway Group Standards**			Date: 15/03/2000

PART 1 – SCOPE OF SAFETY JUSTIFICATION

This Safety Justification describes the rationale behind the controls relating to Signalling Design Production as specified in Railway Group Standard GK/RT0207 Issue 1 .
The Standard represents an amalgamation of the fundamental requirements for signalling design from GK/RT0201consolidated with the key requirements from GK/RT0004, GK/RT0110, GK/RT0115, GK/RT0116 , GK/RT0202 and GK/RT0205.
GK/RT0207 Issue 1 sets out the mandatory requirements for the processes whereby designs for signalling systems are produced, to ensure that such designs are safe and fit for purpose.

PART 2 – RISKS BEING CONTROLLED

The controls in this standard contribute to the mitigation of the risk that a signalling system may be brought into service with inherent flaws such that it is not intrinsically safe nor fit for purpose.

A high integrity signalling system is key to controlling major railway risks such as:

- Train collisions
- Train derailments
- Trains colliding with obstructions at level crossings
- Workforce struck by moving trains
- Collisions with buffers

PART 3 - SUMMARY OF CONTROLS

The standard specifies controls in the following areas to cover the design process:

- Design management – including procedures and management systems, ensuring competency of personnel
- Design development - including conceptual design undertaken, technical specifications prepared to develop conceptual design into detailed design, detailed design production, presentational standards
- Design verification – independant verification of all design documentation –
- Design approval - Approval in Principle and Technical Approval of design details for construction purposes
- Modifications to designs - including assessment that the modification to be made addresses the problem that led to the need for modification initially, records to be kept of all modification requests and proposals
- Control of design documents and software/data – including application of a system of version control, control over the issue of design documents
- Assessment and demonstration of safety- including safety analysis to be carried out as necessary, records of this to be kept, reviewed and endorsed
- Use of design support tools - includes that any design support tools are to be assessed in order to demonstrate that they meet the required integrity requirements, design support tools to be selected, used and maintained as appropriate to the safety criticality of their application
- Special cases of design production - includes requirements for when a design is to be commissioned in separate phases or stages, where the design is for work of a temporary nature; changes to the order of design activities

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PART 4 – COSTS AND BENEFITS

The development of GK/RT0207 represents a consolidation of existing Railway Group Standards such that the core requirements of risk control are retained, unnecessary prescriptive elements devolved to Railtrack Line, and out of scope requirements removed. As a result, the documentation relating to signalling design is better balanced and more robust.

The only significant new control measure requires the signalling to be considered in conjunction with the track layout and proposed operational use, to ensure that the overall level of safety achieved is acceptable, reflecting established good practice. Elsewhere the overall level of risk control remains unchanged, as a result of which there are no additional costs to the industry.

PART 5- CONCLUSIONS

The issue of the new Railway Group Standard retains the core requirements for risk control whilst removing unnecessary prescription. It contributes to an improvement in the structure of signalling design documentation without imposing undue costs on the industry. On this basis it is concluded that the issue of the Railway Group Standard is justified.