

Engineering Safety Management

Yellow Book 4

Application Note 7
The Yellow Book, Safety
Management Systems
and the ROGS
Regulations

Issue 1.1

Disclaimer

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I INTRODUCTION

The Yellow Book Steering Group has developed a series of application notes to supplement the Yellow Book [1]. Each application note provides more detailed guidance on a particular aspect of the Yellow Book.

This application note explains:

- how the Yellow Book relates to the requirements of the UK Railways and Other Guided Transport Systems (Safety) Regulations 2006 [2] (ROGS Regulations) and how you can use it to help comply with these Regulations; and
- how the Yellow Book relates to the needs of a Safety Management System (SMS).

We treat these topics in one application note because the ROGS Regulations require certain railway organisations to work within an SMS. They are treated in separate sections because the guidance on SMSs may be useful to users of the Yellow Book who are not covered by the ROGS Regulations.

The guidance in this application note on the ROGS Regulations is written for people who work for organisations that must comply with these Regulations, either because the Regulations apply to them directly, or because these requirements have been contractually passed down a supply chain to them. The Yellow Book can help an organisation to implement the ROGS Regulations effectively. However, this may not be immediately apparent because the structure of the ROGS Regulations and the language used are different from the Yellow Book.

The guidance on SMSs is written for organisations that already have an SMS or are putting one in place.

The Yellow Book has been written to help people who are involved in railway engineering (either changing the railway or maintaining it) control risk and show that it has been controlled. The aspect of the Yellow Book that is likely to be the most useful within the scope of this application note is its guidance on controlling the risk associated with an engineering change to the railway and showing that this has been done. This guidance is comprehensive, mature and immediately applicable.

However, the Yellow Book does not cover all the topics within the scope of ROGS nor does it provide comprehensive guidance on developing a SMS. In particular, issues that do not involve engineering are beyond its scope. We point out in this application note topics where the Yellow Book has relevant guidance. For those areas where it has less to say we suggest other sources of guidance.

We are continually working to improve the Yellow Book and welcome comments. Please contact us at the address below.

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2 THE YELLOW BOOK AND THE ROGS REGULATIONS

2.1 Introduction to the ROGS Regulations

The ROGS Regulations are a part of UK law. They are an interpretation of the European Railway Safety Directive and they put the main requirements of this directive into practice.

The ROGS Regulations have replaced the following legislation:

- the Railways (Safety Case) Regulations 2000;
- the Railways (Safety Critical Work) Regulations 1994; and
- the Railways and Other Transport Systems (Approval of Works, Plant and Equipment) Regulations 1994.

Some of the requirements of the legislation replaced are carried forward into the ROGS Regulations but there is no longer a requirement for any rail organisation to prepare a 'Railway Safety Case' and the arrangements for assuring the safety of changes to the railway are significantly different.

The Regulations place duties on the Office of Rail Regulation (ORR), which is the railway safety regulator in the UK, and other 'duty holders', principally:

- 'Infrastructure Managers' and
- 'Transport Undertakings', a term which covers train operators and other parties that operate vehicles on the railway.

The scope of the Regulations is complicated so you should consult them and the associated guidance to see if they apply to your activities. There are two main reasons why they may not apply:

- Some of the Regulations do not apply to certain *types* of railway, such as heritage railways or to certain *parts* of railways, such as depots and sidings.
- Where a change to the railway network falls under interoperability legislation then it will be scrutinised under that legislation and there is no need for it to go through the ROGS safety verification process as well, although related matters such as testing may go through this process.

Even if the Regulations do not apply to you directly, you may need to take account of them, for instance if they apply to your customers or other organisations that you work with.

There are 34 Regulations (listed in Table 2-1 below) supported by 7 schedules. Some of the Regulations are introductory clauses and some provide powers to the ORR. The principal Regulations which place duties on duty holders are shown highlighted in blue.

PART 1 INTRODUCTION	PART 4 SAFETY CRITICAL WORK
Reg. 1. Citation and commencement	Reg. 23. Interpretation and application of Part 4
Reg. 2. Interpretation and application	Reg. 24. Competence and fitness
PART 2 SAFETY MANAGEMENT, CERTIFICATION AND AUTHORISATION	Reg. 25. Fatigue
Reg. 3. Use of infrastructure on the mainline railway	Reg. 26. Co-operation requirements for safety critical work
Reg. 4. Use of infrastructure on other transport systems	PART 5 MISCELLANEOUS
Reg. 5. Safety management system for the mainline railway	Reg. 27. Appeals
Reg. 6. Safety management system for other transport systems	Reg. 28. Offences
Reg. 7. Safety certificate	Reg. 29. Transitional provisions and savings
Reg. 8. Amended safety certificate	Reg. 30. Exemptions
Reg. 9. Further safety certificate	Reg. 31. Defence of due diligence
Reg. 10. Safety authorisation	Reg. 32. Amendment of ROTS
Reg. 11. Amended safety authorisation	Reg. 33. Consequential amendments
Reg. 12. Further safety authorisation	Reg. 34. Revocation
Reg. 13. Notice of changes by holder of a safety certificate or a safety authorisation	
Reg. 14. Direction to apply for an amended safety certificate or safety authorisation	
Reg. 15. Revocation of safety certificate	
Reg. 16. Revocation of safety authorisation	
Reg. 17. General provisions relating to safety certificates and safety authorisations	
Reg. 18. Notification to the European Railway Agency regarding safety certificates and safety authorisations relating to the mainline railway	
PART 3: GENERAL DUTIES	
Reg. 19. Risk assessment	
Reg. 20. Annual safety reports	
Reg. 21. Sending, issuing, and keeping of documents and making them available for public inspection	
Reg. 22. Co-operation	

Table 2-1 ROGS Clauses

2.2 Vocabulary

The Regulations use a number of phrases which are also used in the Yellow Book. There are no fundamental inconsistencies but, in many cases, the Regulations use terms with a narrower meaning.

As an example, the Yellow Book uses the term ‘risk assessment’ to refer to any activity that makes an assessment of a risk. The ROGS Regulations usage is consistent but the assessment is generally scoped to the entire activities of the Infrastructure Manager or Transport Undertaking.

Recognising these differences can help to avoid miscommunication.

Other potential traps include:

- ROGS Duty Holders may use the term ‘SMS’ to refer to those top-level procedures which align directly with the requirements of the ROGS Regulations. They may have other procedures that they use to manage safety and which, in Yellow Book terminology, would form part of their SMS.
- ‘Safety-critical work’ in ROGS refers to a precise list of activities – there may, however, be other work undertaken that is critical to safety.
- ROGS Regulations use the term ‘safety verification’ for a process with certain mandatory features that fall under the general heading of ‘independent professional review’ in the Yellow Book. It has some parallels with the process of ‘independent safety assessment’ described in the Yellow Book guidance but it would be incorrect to equate the two – they may have the same ends but there are significant differences in the means used to achieve them.

2.3 Mapping the ROGS Regulations to the Yellow Book

If you have duties under the ROGS Regulations, the Yellow Book can help you to discharge them but the Yellow Book and this application note will not provide you with comprehensive guidance across the whole scope of the Regulations. Nonetheless, the Yellow Book provides a reservoir of tried and tested good practice in the engineering aspects of managing safety which you can use to create or review your arrangements.

Table 2-2 explains how to make best use of the Yellow Book. The ORR guidance to the Regulations [3] is organised by the following areas in which duties are placed:

- safety management systems;
- safety verification;
- safety certificates and safety authorisations;
- risk assessments;
- annual reports;
- co-operation; and
- managing safety-critical work.

These types of duty are set out as row headings in Table 2-2. For each type of duty, the table sets out:

- a summary of the duty;
- the ROGS Regulations and Schedules that place this duty;
- the Yellow Book fundamentals relevant to this duty;
- Yellow Book guidance that may be useful in discharging this duty;
- an indication of how relevant the Yellow Book guidance is; and
- in some cases, references to sources of further guidance.

Note. The ORR guidance to the Regulations [3] is generally applicable so is not repeated in the table.

A couple of general remarks are applicable to all aspects:

- The Yellow Book contains guidance which is specific to projects and maintenance and if your activities do not include either then some of this guidance will be inapplicable to you.
- The Yellow Book has an engineering focus. If you are involved in other aspects of the railway, then the Yellow Book fundamentals may not reflect agreed good practice in that aspect but they may be a useful starting point.

Mapping between ROGS duties and the Yellow Book						
Type of Duty	Summary of Duty	ROGS Regulations and Schedules	Relevant YB Fundamentals	Relevant YB Guidance	Relevance of YB to this Duty	Other Sources of Guidance
Safety management systems	To have in place an SMS that meets certain requirements (see section 2.4 below).	Reg 5, 6 Sched 1	See section 2.4 below	See section 2.4 below	See section 2.4 below.	HSE publishes general guidance in HSG65 [4]. OHSAS 18002 [5] provides guidance on implementing an international standard that covers this topic. BS 8800 [6] is a guide to occupational health and safety management systems.
Safety verification	To ensure that risk is controlled on projects that could significantly increase risk or introduce a new significant risk and to have this independently checked.	Reg 5, 6 Sched 4	Defining your work Identifying hazards Assessing risk Reducing risk Safety requirements Evidence of safety Independent professional review	Vol 2, Chapters 13, 14, 15, 17, 18	This is the duty to which the Yellow Book is likely to be most relevant. The process of safety verification relies on those making the change performing a systematic process of activities to control the risk and to demonstrate that it has been controlled. The guidance for the first six Yellow Book fundamentals is mature and comprehensive may be applied to do this. The guidance for the independent professional review fundamental may also be of value in setting up a scheme for safety verification. However the Yellow Book guidance for this fundamental assumes a framework for independent professional review which is different in some significant respects from that assumed for safety verification and the advice on the level of independence required is different from that in the guidance on ROGS. The guidance will therefore require some adaptation before application.	ORR publishes guidance on this topic [7].

Mapping between ROGS duties and the Yellow Book						
Type of Duty	Summary of Duty	ROGS Regulations and Schedules	Relevant YB Fundamentals	Relevant YB Guidance	Relevance of YB to this Duty	Other Sources of Guidance
Safety certificates and safety authorisations	To obtain either a safety certificate (for transport undertakings) or safety authorisation (for infrastructure managers) before starting operations.	Reg 3, 4, 7-17	Evidence of safety Acceptance and approval	None	<p>The process of obtaining a safety certificate or safety authorisation falls under the general scope of the fundamentals listed. However:</p> <ul style="list-style-type: none"> the ROGS processes concern the entire range of activities of an organisation while the Yellow Book processes are generally concerned with a new scheme, system, product or equipment; and the ROGS processes are mandated in some detail in the Regulations and vary in significant detail from the processes suggested in the Yellow Book. <p>These differences mean that the guidance for implementing these fundamentals (in chapter 18 of volume 2) has little relevance to the ROGS duty.</p>	ORR explains their assessment criteria for safety certificates and safety authorisations in [8].

Mapping between ROGS duties and the Yellow Book						
Type of Duty	Summary of Duty	ROGS Regulations and Schedules	Relevant YB Fundamentals	Relevant YB Guidance	Relevance of YB to this Duty	Other Sources of Guidance
Risk assessments	To carry out an ongoing, suitable and sufficient assessment of the safety risks involved in running the transport system.	Reg 19, 21 Sched 3	Defining your work Identifying hazards Assessing risk Monitoring risk	Vol 2, Chapters 13, 14, 15, 16	<p>The fundamentals bear directly upon this aspect of ROGS. However, the Yellow Book guidance is concerned with assessing the risk associated with a single system. On the other hand, the ROGS duty is to assess the risk concerned with all parts of the organisation’s work and the interfaces with other organisations in the context of a railway separate infrastructure managers and transport undertakings.</p> <p>The Yellow Book guidance may be applied directly when assessing the risk associated with a change to the railway.</p> <p>The concepts and framework in the Yellow Book guidance may assist with setting up arrangements for risk assessment at an organisational level but the detailed guidance will require adaptation for this application.</p> <p>The Yellow Book guidance does not cover the legal obligations to consult.</p>	<p>HSE publishes guidance in pamphlet INDG163 [9].</p> <p>Railway Group Guidance Note GE/GN8561 [10] provides guidance on performing risk assessments on the UK national network. It has been withdrawn but its content should be revised and transferred to a new guidance note.</p>
Annual reports	To provide ORR every year with a report which covers safety performance during the previous calendar year.	Reg 20, 21 Sched 3	Monitoring risk	Vol 2, Chapter 16	<p>The guidance may be of value in defining processes for collecting the necessary data to prepare an annual report. The format and content of the annual report is prescribed by the Regulations and not addressed by the Yellow Book.</p>	

Mapping between ROGS duties and the Yellow Book						
Type of Duty	Summary of Duty	ROGS Regulations and Schedules	Relevant YB Fundamentals	Relevant YB Guidance	Relevance of YB to this Duty	Other Sources of Guidance
Co-operation	To co-operate with other parties in order to achieve the safe operation of the overall transport system.	Reg 22, 26	Communicating safety-related information Co-ordination	Vol 2, Chapter 9	<p>The Yellow Book has an engineering focus. The concerns involved in co-operation on engineering and non-engineering matters are similar but issues of co-operation not involving engineering are beyond the scope of the Yellow Book and you may need to adapt the guidance for the listed fundamentals for such issues.</p> <p>The guidance which we have identified as being of relevance to safety verification is also indirectly relevant to duties of co-operation for reasons explained in section 2.5 below.</p> <p>The Yellow Book guidance is generic and does not discuss specific legal prescriptions.</p>	<p>See section 2.5 below.</p> <p>The UK Rail Safety and Standards Board (RSSB) publishes a guidance document [10] on co-operation.</p>
Managing safety-critical work	To make sure employees who perform certain safety-critical tasks are competent and fit to do so, and are not affected by fatigue and to co-operate with others in this area.	Reg 23-26	Competence and training Working with suppliers	Vol 2 Chapters 7, 8	<p>The Yellow Book provides useful guidance on the assessment of competence. The guidance may also assist with assessment of fitness. There is no significant guidance in the Yellow Book on controlling the effects of fatigue and on the supporting co-operation required.</p>	<p>The ORR publishes three relevant guides [12, 13, 14].</p> <p>RSSB publishes a guide on human factors [15].</p>

Table 2-2 Mapping between ROGS duties and the Yellow Book

2.4 Mapping the ROGS requirements on SMSs to the Yellow Book

Schedule 1 of ROGS lists a number of elements that an SMS must have. Table 2-3 is set out in a very similar way to Table 2-2. It contains a summary of each element and, for each element, sets out:

- the SMS element;
- the Yellow Book fundamentals relevant to this element;
- Yellow Book guidance relevant to this element;
- an indication of how relevant the Yellow Book guidance is; and
- in some cases, references to sources of further guidance.

Note. The ORR guidance to the Regulations [3] is generally applicable so is not repeated in the table.

Mapping between SMS elements and the Yellow Book					
Id.	Element	Relevant YB Fundamentals	Relevant YB Guidance	Relevance of YB to this Duty	Other Sources of Guidance
a	A statement of safety policy	Organisational goals	Vol 2 Chapter 6.2.4	The guidance in the Yellow Book is directly aimed at this topic.	HSG65 [4], OHSAS 18002 [5], BS 8800 [6], Taking Safe Decisions [16]
b	Qualitative and quantitative targets for safety and plans and procedures for reaching them	Organisational goals	Vol 2 Section 6.2.1	The guidance in the Yellow Book addresses this element at a high-level.	HSG65 [4], INDG163 [9]. Also RSSB maintains a safety risk model which may provide valuable input.
c	Procedures to meet relevant standards or requirements and to ensure continued compliance	Systematic processes and good practice	Vol 2 Chapter 13	The element of the Yellow Book guidance concerned with safety audits may assist in setting up processes 'to ensure continued compliance'.	HSG65 [4].
d	Procedures and methods for carrying out risk evaluation and implementing risk control measures when there is a significant change	Defining your work Identifying hazards Assessing risk Safety requirements	Vol 2 Chapters 14, 15, 17	The guidance in the Yellow Book is comprehensive and directly aimed at this topic but has an engineering focus and will need to be adapted for situations where risk is principally concerned with operational issues.	Taking Safe Decisions [16] GE/GN8561 [10] provides guidance on performing risk assessments on the UK national network. It has been withdrawn but its content should be revised and transferred to a new guidance note.
e	Training to ensure the competence of personnel	Competence and training	Vol 2 Chapter 7	The guidance in the Yellow Book is directly aimed at this topic but has an engineering focus and will need to be adapted for situations where risk is principally concerned with operational issues.	Publication [17] provides guidance on managing competence relevant to the production of electronic systems. Several professional societies operate continuing professional development and/or licensing schemes,

Mapping between SMS elements and the Yellow Book					
Id.	Element	Relevant YB Fundamentals	Relevant YB Guidance	Relevance of YB to this Duty	Other Sources of Guidance
f	Arrangements for the provision of information relevant to safety	Communicating safety-related information	Vol 2 Chapter 7	The guidance in the Yellow Book is directly aimed at this topic but has an engineering focus and will need to be adapted for situations where risk is principally concerned with operational issues.	
g	Procedures and formats for the documentation of safety information	Records	Vol 2 Chapter 12	The guidance in the Yellow Book addresses this element at a high-level	
h	Procedures to control the lay out of, and changes to, vital safety information	Records	Vol 2 Chapter 12	The guidance in the Yellow Book addresses this element at a high-level.	
i	Procedures to ensure that accidents, incidents, and so on are reported, investigated and analysed and that necessary preventative measures are taken	Monitoring risk	Vol 2 Chapter 16	The guidance in the Yellow Book may help provide some context for the necessary procedures.	HSG65 [4]. HSE and RAIB publish guidance on other legal obligations in this area [12, 18].
j	Provision of plans for action, alerts and information in the case of an emergency	Co-ordination	Vol 2 Section 9.2.9	The guidance in the Yellow Book addresses this element at a high-level.	
k	Provisions for internal auditing of the SMS	Independent Professional Review	Vol 2 Chapter 13	The element of the Yellow Book guidance concerned with safety audits addresses this element.	

Table 2-3 Mapping between SMS elements and the Yellow Book

2.5 Co-operation

Co-operation is crucial to the safe running of an operational railway and this is recognised in law. ROGS Regulations 22 and 26 place duties on parties involved in the running of a railway to co-operate with other parties “*as far as is necessary*” to enable compliance with the Regulations and to “*co-operate, insofar as is reasonable [...] to achieve the safe operation of [the] transport system*”. RSSB publishes a guidance document [10] which provides practical advice on discharging these duties.

But co-operation is not just a matter of complying with the law; effective co-operation generally benefits both parties.

Volume 2, chapter 9 of Yellow Book 4 contains guidance on co-operation and we provide some additional guidance here. We suggest the following approach if you wish to have the comprehensive and effective arrangements for co-operation between your organisation and other organisations that are necessary to ensure safety.

1. Try to identify all the interfaces with other organisations across which you must co-operate. We provide a checklist at Appendix A that may be useful in this regard.
2. Ensure that you have documented arrangements in place to cover all the interfaces.
3. Where information passes across an interface:
 - make sure that your arrangements clearly specify what information is passed to whom;
 - take reasonable steps to ensure that the recipient understands the information. Put yourself in the recipient’s place and make sure that the information is expressed using language and in a form which is intelligible to them;
 - consider structuring the information, for instance with standard document and message formats to make it quicker and easier to understand; and
 - consider putting in place some confirmation of receipt of information.

Where there is significant interaction between people who work in different places, it may be worth considering whether there is scope for moving them into the same location. There are examples where this has improved co-operation and benefited both parties.

It should also be noted that need for co-operation is inherent at several points in the Yellow Book guidance on assessing and controlling risk of the Yellow Book, for instance:

- Yellow Book volume 2, chapter 14 and section 15.2.3 make clear that, to ensure the safety of a system, you must understand how it interacts with its environment. Achieving this understanding will almost always require co-operation with other parties.
- Yellow Book volume 2, section 15.3.1 makes clear that the process of risk assessment also requires co-operation between multiple parties and provides some guidance on the division of work.
- Yellow Book volume 2, section 12.2.3 makes clear that the process of controlling risk will require co-operation between multiple parties in order to resolve assumptions, dependencies and caveats.
- Yellow Book volume 2, section 18.3.15.2 recommends that a Safety Case for a new or changed system should contain a list of the 'safety-related application conditions', that is, the rules, conditions and constraints which should be observed in the operation of the system in order to ensure safety. If such a Safety Case is produced then it can support the co-operation between parties that will be necessary to ensure that the safety-related application conditions are observed. Yellow Book volume 2, chapter 18 acknowledges that it is not appropriate to present the evidence for the safety of all new or changed systems in the form of a Safety Case. However, even if the evidence for the safety of a new or changed system is packaged differently, it still remains good practice to include safety-related application conditions with it.

Some of the Yellow Book sections above are concerned particularly with the situation where one party is introducing a *change* to a railway system (such as a train or a signalling system). The change might be to introduce a new system or to modify an existing system. If the change has the potential to affect anything outside the system then there will be a need to ensure that the new system is compatible with the rest of the railway in order to ensure that the overall railway is safe and viable. Ensuring compatibility will almost certainly require co-operation between several parties and the duties to co-operate in the ROGS Regulations will be relevant.

Railway Group Standard GE/RT8270 [19] defines a process for the assessment of compatibility between infrastructure and rolling stock on the UK national network, which is mandatory when changing either infrastructure and rolling stock.

3 THE YELLOW BOOK AND SAFETY MANAGEMENT SYSTEMS

Note. This section talks about using the Yellow Book to review an existing SMS. If you are writing a new SMS, you can adapt the guidance accordingly.

3.1 What do we mean by a Safety Management System

The Yellow Book defines an SMS as “a systematic and documented approach to managing safety” and “a comprehensive set of procedures for managing risk”. In the UK, the ROGS Regulations require certain organisations to have an SMS. Other organisations, manufacturers or consultants for instance, may have an SMS, for instance in order to meet their obligations under general health and safety legislation, although they are not obliged to do so by the ROGS Regulations. We would expect any organisation whose activities can affect risk on the railway to have a comprehensive set of procedures for managing that risk. These procedures might be packaged as a standalone SMS or integrated into a comprehensive set of procedures for managing all other aspects of the business.

SMSs are commonly organised as a number of tiers (see Figure 3-1). The names and scopes of the tiers may vary from SMS to SMS.

Typically, there will be a top-level tier that sets out high-level safety management requirements and policies. If the SMS is written to comply with the ROGS regulations then this tier will usually be clearly mapped to the legislative requirements.

The top tier will be supported by one or more tiers of more detailed procedures standards and work instructions.

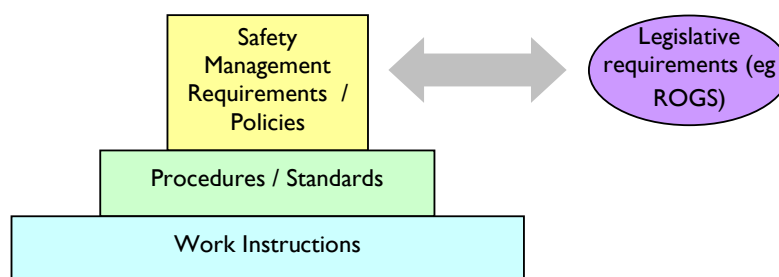


Figure 3-1 A tiered SMS

Some organisations use the term ‘SMS’ to mean only the top tier. However, in this note we shall use the term to describe all tiers. We shall refer to the top tier as the ‘top-level SMS’ and the lower tiers as the ‘supporting procedures’. Figure 3-2 illustrates our usage.

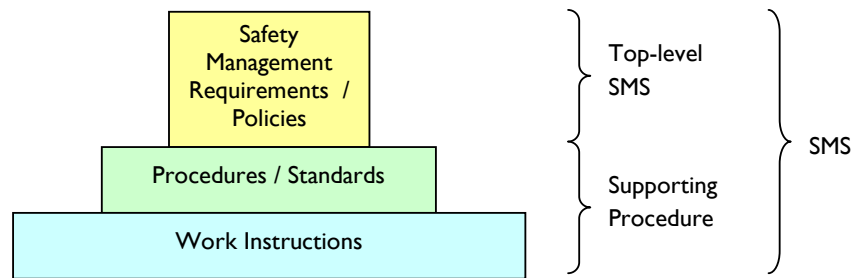


Figure 3-2 Our usage of terminology

3.2 Two methods of applying the Yellow Book

The Yellow Book is generally written to be applied directly to the work at hand – that is to be referred to directly by the people who are providing technical direction to the work (see Figure 3-3).

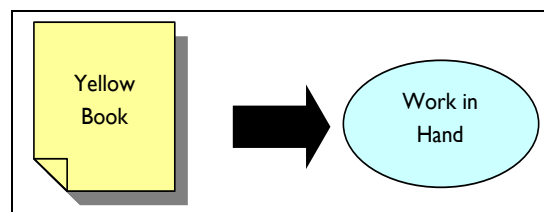


Figure 3-3 Direct application of the Yellow Book

But it can be used in another way (see Figure 3-4): an organisation may write an SMS which implements the fundamentals of the Yellow Book, and those who are providing technical direction to the work refer to the SMS.

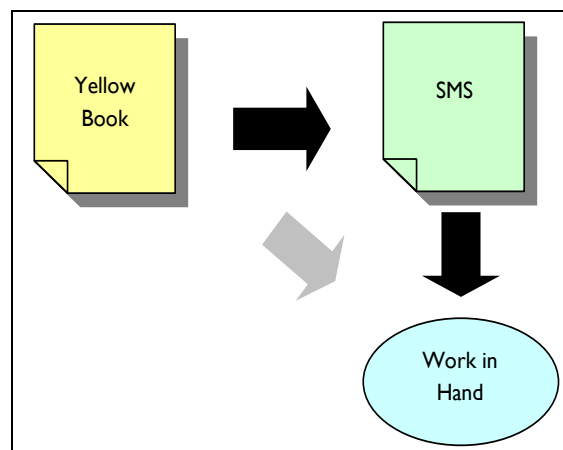


Figure 3-4 Indirect application of the Yellow Book

The grey arrow in Figure 3-4 indicates that the two options are not mutually exclusive: people working to an SMS may also make direct reference to the Yellow Book and even be encouraged to do so by the SMS.

3.3 Using the Yellow Book to review an SMS

Note: If you are reviewing an SMS which is required to comply with the ROGS Regulations then Section 3.3 of this note gives guidance.

We consider that the Yellow Book fundamentals represent good practice in the engineering aspects of safety management and so we would expect an organisation's SMS to implement each fundamental for the engineering aspects of the organisation's activities at least.

In general terms, we recommend an approach which is structured around the Yellow Book fundamentals:

1. Confirm that you are clear about the scope, extent and context of the organisation's work and responsibilities.

*Note. You may find the **Defining your work** fundamental in the Yellow Book helpful here. In particular this exercise should clarify whether the organisation is involved in projects, maintenance or both.*

2. Check the top-level SMS and supporting procedures against each fundamental, taking into account the scope, extent and context.
3. If the SMS does not fully implement the fundamental, taking into account the scope, extent and context, refer to the Yellow Book guidance for assistance on closing the gap (or, if the guidance in the Yellow Book is applicable to your circumstances, add a reference to it in the SMS).

As we have already acknowledged, the Yellow Book does not provide guidance on all the topics that an SMS will need to consider. In particular, issues that do not involve engineering are beyond its scope. So you will need to use other publications as well to carry out a comprehensive review and to provide comprehensive guidance on closing the gaps. You may find documents HSG65 [4], OHSAS 18002 [5] and BS 8800 [6] particularly useful in this regard.

However, there are areas, such as managing the safety of engineering change, where the Yellow Book contains a greater depth of practical guidance than publications and it has a role in any balanced review of an SMS.

Note. It is not necessary for your SMS to be structured according to the fundamentals, it may be better to adopt an alternative structure. However, it is important that it should have a clear structure.

4 REFERENCED DOCUMENTS AND FURTHER READING

The following documents are referred to in the text of this application note.

1. Yellow Book 4 volumes 1 & 2 and website, www.yellowbook-rail.org.uk
2. The Railways and Other Guided Transport Systems (Safety) Regulations 2006 (Statutory Instrument 599), available from <http://www.opsi.gov.uk/si/si2006/20060599.htm>
3. The Railways and Other Guided Transport Systems (Safety) Regulations 2006 (ROGS): A guide to ROGS, Office of Rail Regulation, November 2007, available from www.rail-reg.gov.uk
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19. Railway Group Standard GE/RT8270, Assessment of Compatibility of Rolling Stock and Infrastructure, issue 2, 1 October 2007, available from www.rgsonline.co.uk

The RSSB website, www.rssb.co.uk, the ORR website, www.rail-reg.gov.uk and the HSE website, www.hse.gov.uk, are good places to start if you are seeking further guidance on the topics discussed in this application note.

5 ABBREVIATIONS

CIRAS	Confidential Incident Reporting & Analysis System
HMRI	Her Majesty's Railway Inspectorate
HSE	Health and Safety Executive
ORR	Office of Rail Regulation
ROGS	The UK Railways and Other Guided Transport Systems (Safety) Regulations 2006
RSSB	Rail Safety and Standards Board
SMS	Safety Management System
SPAD	Signal Passed At Danger
YB	Yellow Book

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A APPENDIX: CHECKLIST OF AREAS FOR CO-OPERATION

The checklist below indicates areas where your organisation may need to have arrangements in place for co-operation.

Assess system level risks

- a) Data collection and safety performance reporting
- b) Contributing to and making use of system-wide risk models (such as the RSSB Safety Risk Model)
- c) Co-operative review of risk

Developing Safety Management Systems

- d) Routine updates to SMS
- e) Non-routine changes to SMS

Projects and Modifications

- f) Interfaces with existing equipment and processes
- g) Inter-disciplinary checks
- h) External interfaces e.g. roads, utilities
- i) Safety related application conditions

Planning and Standards

- j) Contributing to and making use of system-wide safety plans (such as the Railway Group Strategic Safety Plan)
- k) Emergency planning
- l) Update to standards
- m) Derogation from standards
- n) Adoption of common standards

Managing Safety

- o) Competence standards
- p) Training
- q) Supplier accreditation and qualification
- r) Real time operations
- s) Engineering operations and possessions
- t) Incident reporting
- u) Spoken safety communications
- v) Confidential incident reporting schemes (such as the Confidential Incident Reporting & Analysis System - CIRAS)

- w) Management of change to vehicles, infrastructure and procedures (and approval of such changes)
- x) Escalation of safety concerns
- y) Regulatory notices

Monitor and Review

- z) Preparation of annual safety reports
- aa) Collection of data on Common Safety Indicators
- bb) Investigation and analysis of incidents (such as Signals Passed At Danger – SPADs)

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