

# IRSE

Institution of Railway Signal Engineers



## **IRSE Professional Examination**

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### **READING LIST**

#### **AUTHORISATION AND REVISIONS**

Version 3 issued 14 February 2003

Version 4 issued 27 March 2008

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## HOW TO USE THIS READING LIST

The following reading list is intended as a guide only. It is not a definitive listing and the student is expected to select from it as appropriate and carry out their own additional reading to ensure they have covered all areas of the module syllabus satisfactorily.

Generally speaking, the more reading you do, the better informed you will be and the more likely you are to give a professional answer in the exam.

***(Please note that the IRSE is currently carrying out a review of its library provision and will publish details of the outcome when completed)***

The Reading List has been divided into the following sections in order to help you:

### CORE READING

This list includes the IRSE Text Books. Publications included in this listing will be relevant to many areas of the syllabus and should be treated in the same way as a college text book.

### BACKGROUND, GENERAL, AND FURTHER READING

There are currently no text books that cover the entire syllabus of any one module. However, there are a large number of publications that provide either background, general, or further reading for the examinations. Whilst not specifically covering any one area of the syllabus the student is encouraged to select from them and add to their reading in order to get a broad understanding of the subject in general.

Students should also read the IRSE's bi-monthly publication - IRSE News. This carries articles that may be relevant to the examinations, including book reviews.

### RELEVANT READING

Publications that are of particular relevance to an individual module, are indicated by an 'R' under the appropriate module heading.

### TELECOMMUNICATIONS READING

There is a plethora of books on general telecommunications covering transmission, switching, data, radio cabling etc that can be found in any public library. Books can also be found on Public Address and Information Systems. IRSE papers only have been listed. In addition, the EIRENE (GSM-R) newsletter is recommended for Modules 4 and 6.

## IRSE PUBLICATIONS

The following publications are available to IRSE members at a discounted price from the London Office.

### Introductory Reading

Title	ISBN	Publisher	Editor
Introduction to Signalling 1999	0902390139	IRSE	Kerr&Rowbotham

## Core Reading

Student Resource Packs contain comprehensive information for Modules 1, 3, 5 and 7 and are available in CD format. A reading pack containing technical papers from 1961 to 1999 and ASPECT conference papers for years 1991, 1995 and 1999 is also available in CD format. This CD identifies the modules to which the particular papers apply. For reference, the Modules are listed below. *(Note: A DVD combining details of all modules will be introduced in 2008 and will be included in the exam fee)*

Module 1: Safety of Railway Signalling and Communications (compulsory module)

Module 2: Signalling the Layout

Module 3: Signalling Principles

Module 4: Communications Principles

Module 5: Signalling and Control Equipment, Applications Engineering

Module 6: Communications Equipment, Applications Engineering

Module 7: Systems, Management and Engineering

Railway Signalling and Railway Control Systems are considered to be essential reading for Modules 3 and 5. However, they do not go into sufficient detail to be considered as stand alone text books.

Title	ISBN	Publisher	Editor
Railway Signalling 1980	0713627247	A&C Black	O.S. Nock
Railway Control Systems 1991	0713634200	A&C Black	Maurice Leach

## Further Reading

Title	ISBN	Publisher	Editor
European Railway Signalling 1995	0713641673	A&C Black	Colin Bailey

## IRSE TECHNICAL REPORTS & BRIEFS

The IRSE publishes new Technical Reports and Briefs from time to time. Students should ensure that they keep up to date with the latest reports and briefs as they become available and pay particular attention to those that are of relevance to the examination modules.

No	Title	Module						
		1	2	3	4	5	6	7
	IRSE Signalling Philosophy Review April 2001	R						R
	Testing and Commissioning IRSE 1995	R		R				R
	IRSE Body of Knowledge	R	R	R	R	R	R	R
1	Safety System Validation with Regard to Cross Acceptance of Signalling Systems by the Railways. IRSE 14 January 1992.	R						R
2	The Operational Availability of Railway Control Systems. December 1993	R		R				R
3	The Influence of Human factors on the Performance of Railway Systems May 96	R		R				R

4	Implications of Applying Transmission Based Signalling. April 1998.					R		R
5	The Contribution of Signalling to the future of Rail Traffic Management and the Economics of Rail Transportation November 2000							

## IRSE GREEN BOOKLETS

The Green Booklets should be read as general background reading only, as all the booklets, with the possible exception of No 29 are 'out of date' in some or all respects. Most of the booklets are based on British Railways practice unless specifically stated otherwise and may be useful to UK candidates who have to maintain obsolete equipment. Those marked \* relate mainly to headway matters, which come up every year and are generally poorly answered.

Booklet No	Title	Module						
		1	2	3	4	5	6	7
Nos 1,2, 3 & 10	Reprinted as part of combined volume: BR Signalling Practice – Mechanical: <ul style="list-style-type: none"> <li>Principles of the Layout of Signals</li> <li>Principles of Interlocking</li> <li>Mechanical &amp; Electrical Interlocking</li> <li>Mechanical Signalling Equipment</li> </ul>	R	R	R		R		
Nos 4, 12 & 13	Reprinted as part of combined volume: BR Signalling Practice – Signalling Instruments: <ul style="list-style-type: none"> <li>Single Line Control</li> <li>Block Instruments</li> <li>Train Describers</li> </ul>	R	R	R		R		R
No 5	Power Points					R		
No 6	Signalling Relays					R		
Nos 7, 9 & 11	Reprinted as part of combined volume: BR Signalling Practice – Electrical <ul style="list-style-type: none"> <li>Signal Control Circuits</li> <li>Track Circuits</li> <li>Railway Signalling Power Supplies</li> </ul>					R		
No 8	Typical Selection Circuits					R		
No14	Multiple Aspect Signalling		R*	R*				
No15	Circuits for Colour Light Signalling					R		
No16	Route Holding	R		R				
No17	Signalling for a/c Elec Areas	R				R		R
No18	Principles of Relay Interlocking & Control Panels	R		R		R		
No19	LTE Route Control Systems			R		R		R
No20	Route Relay Interlocking - Westinghouse System			R		R		
No21	Route Relay Interlocking - AEI AEI-GRS System			R		R		
No22	Route Relay Interlocking - SGE System			R		R		
No24	AWS / ATC (1964)	R				R		
No25	Level Crossings	R				R		R

No26	Remote Control					R		R
No27	Signalling the Layout ( British Practice)	R	R*	R*				
No28	Route Control Systems (LT Practice)	R		R		R		R
No29	Solid State Interlocking	R		R		R		R

Note: Green Booklet No 23 was never published

## IRSE TECHNICAL PAPERS

An index of all the known IRSE Technical papers is published on the IRSE website [www.irse.org](http://www.irse.org). Papers from this listing that are known to be of particular relevance for a specific module have been included here. Students are advised to make best use of the technical papers by doing their own research and keeping up to date with the London Technical Papers as they are published.

Proceedings Year	Page	Title	Module						
			1	2	3	4	5	6	7
1961/2	74	Hadaway HW, LT Methods for Control of Locking Junctions			R				R
1966/7	160	Hadaway HW, Fail Safe	R	R	R				R
1974/5	52	Goddard EO, Computer Controlled Signalling Systems & Regulation on LT	R		R				
1978/9	50	Fews JF, International Signalling Projects							R
1979/80	43	Andrews Dr M, Human Factors in Train Operation							R
1979/80	80	Short RC, Design of Fail Safe Processor Systems	R						R
1980/1	23	Stanley PW, Design for Signalling System Performance							R
1980/1	42	Barnard REB, Safety Analysis of Signalling Electronics	R						R
1982/3	94	Leach ME, Problems of Hearing and Acoustics in relation to PA Systems							R
1984/5	48	Birkin MR, Low Cost Signalling by Radio.					R		R
1984/5	68	Mills JD, Processor Based Safety Systems.	R						R
1984/5	111	Brown CR, A Review of Jointless Track Circuits	R						
1984/5	132	Allsop R / Savage M, Accidents - How do they Relate to Signalling and Traffic?	R						R
1985/6	85	White CR / Corrie JD, Neasden Depot Application of Computers to Interlocking	R						
1985/6	125	Hodgson KE, Signalling Practices and Costs Appropriate to the Railway Business	R						R
1986/7	21	Wobig KH / Shook CG, Microprocessors in Fail-Safe Systems	R						R

1986/7	114	Barnard REB, Learning to Live with Microelectronic Signalling							R
1987/8	29	Ware RK / Wyles RR, Signalling and Control Systems for the Docklands Light Railway	R	R	R				
1987/8	166	Wilson GR, ATCS-A Modular Train Control System	R						
1988/9	20	Gaffney P / Harris FW, Signalling for Mass Transit Railway-The Hong Kong Experience.	R						
1988/9	41	Howker AC, Have we forgotten the driver?	R	R	R				R
1991/2	43	Corrie JD, Testing and Commissioning	R		R		R		
1991/2	106	Kessell C, Telecommunications on the Operating Railway				R		R	
1991/2,	154	Goddard EO / Zufferey CH, Report by the Technical Committee - Cross-acceptance of Vital Signalling Systems	R						R
1992/3	21	Thomas JM / Coenrad WJ, ETCS: The European Train Control System	R						
1992/3	52	van Deth F, The SNCF Approach - New Track Circuits	R						
1992/3	128	Holgate D / Walters JD, British Railways Automatic Train Protection Specification	R		R				R
1993/4	32	Stanley PW, Operational Availability of Railway Control Systems							R
1993/4	38	Plato M / Guest A / Worth A, Communications Systems in the Modern Railway Environment	R			R		R	
1993/4	69	Francis JD, From the Signal Box Window	R						R
1993/4	72	Turner KR / Cross PJ, The Role of the Supplier,	R						R
1993/4	80	Perkins B, Engineering Quality into Signal Equipment					R		R
1993/4	86	Poré J, Integrated Maintenance on RATP ( Paris Underground)							R
1993/4	100	Demenghem JP, Maintenance Support Systems Used in Signalling							R
1993/4	108	Cotton JH, The Post Office Underground Railway Centralised Train Control Systems							R
1994/5	66	Wilson G, Modern Train Control in North America	R						
1994/5	25	Ford R, Can Traction and Signalling Coexist?							R

1994/5	39	Humphreys A / Brown C, / Crisp J / Dodsworth K, Central Line Resignalling							R
1994/5	49	Perry T, Centralising Control of the Central Line – State Railway of Thailand							R
1994/5	66	Wilson G, Modern Train Control in North America							R
1994/5	80	Lamb D / Davis R, Are Microprocessors and Signal Engineers Incompatible ?							R
1995/6	48	Allen J / Williams J, The Fundamentals of Systems Engineering in Major Railway Projects							R
1995/6	65	Doherty A, Systems Engineering on the Central Line and Northern Projects – A Practical Approach							R
1995/6	83	Turner P / Holmes C, Control Centre Systems in the railway & Water Industries							R
1995/6	101	Railway Engineers Forum, Proof of Safety –What is it?	R						R
1995/6	104	Stanley PW, The Influence of Human Factors on the Performance of Railway Systems	R						R
1996/7	36	Mellitt B, Signals for the Future							R
1996/7	44	Poré J, European Standards	R						R
1996/7	61	Price N / Williams T, Human and Social Aspects of Change in a Project Organisation							R
1996/7	69	Clarke GE / Bowie M / Brownbridge D / Ingleby M, Approaches to Interlocking Specification	R		R		R		
1996/7	90	Snook C, Restructuring for Quality? The Impact of Privatisation on the Railway Telecommunications Industry in Britain				R		R	
1997/8	24	Klose Dr C, Radio Based Signalling for Secondary Lines					R		R
1997/8	39	Thorogood R, Railway Engineers Forum- London Underground Central Line – Operational Experience	R				R		R
1997/8	47	Howker AC, Inter-operability			R				R
1997/8	54	Tillin J, The Development of Systems & People for Signalling Testing							R
1997/8	66	O'Connor J, The Advancement of Telecomms in the Privatised Railway				R		R	

1998/9	29	White C/Millard Dr D, Metro Signalling and Operations		R					R
1998/9	45	Jones R/ Crickett J, Conflict Resolution in Timetabling and Operations: Turning an Art into Science							R
1998/9	55	Law T / Benson JN / Passau V Improving Capacity – The KCRC Solution	R	R	R				R
1998/9	77	De Vilder F, The Implications of Applying Transmission Based Signalling	R					R	R
1998/9	85	Waboso D, Managing the Interface – System Delivery and the Challenges Facing the Signalling and Railway Industry							R
1998/9	108	Lee S / Lam LY, Project Safety Case for MTRC ATC	R						R
1998/9	114	Skilton JT, Tranz Rail's National Control Centre					R		R
1999-2000		Signalling Secondary Routes – C H Porter	R	R			R		
1999-2000		EIRENE and ERTMS – Michael Watkins				R		R	
1999-2000		Channel Tunnel Rail Link Signalling and Communications – Richard Stokes and François van Deth		R		R		R	
1999-2000		The Jubilee Line Extension – George Clark and Phil Threlfall		R			R		
2000-2001		Interoperability "That's another fine mess you've got me into!" – Quentin Macdonald and Dr Robert Davis	R						
2000-2001		Level Crossings on Rural Railways – John Tilly	R				R		
2000-2001		Developing the Philosophy of Signalling – D McKeown	R				R		
2000-2001		GSM-R, the platform for mobile communication of the railways, ie status of the project – Albert Bidinger				R		R	R
2000-2001		Modernisation of Main Lines During Operation – S Wendel	R				R	R	R
2000-2001		The Introduction of New Risks to an Operational Railway – Daniel Woodland	R					R	R
2001-2002		A Train Protection Strategy for the UK – Roderick I Mutram	R				R		
2001-2002		Implications for Signalling of the Ladbroke Grove Enquiry	R	R			R	R	R

2001-2002		ATP – The Train Operator's	R	R			R		
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		Perspective – Nick Wright and Andy Hamilton							
2001-2002		Australian Signalling – Peter Symons		R					
2002-2003		Eurocab and the Driver MMI – an introduction to the technology – Christian Frerichs							R
2002-2003		Signalling Control Centres Today and Tomorrow – I H Mitchell	R				R		R
2002-2003		Migration to ERTMS on Existing Lines – Jacques Poré					R		
2002-2003		CTRL Signalling and Communications – Gilbert Moens and Richard Stokes		R		R		R	
2003-2004		Communication-Based Train Control – W J Scheerer and J K Baker		R		R		R	
2003-2004		An Overview of Network Rail Signalling Policy – Andrew Simmons					R		
2003-2004		LUL Connect – Radio and Transmission Networks Telecommunications – The Heart of the Signalling System – Paul Jenkins				R		R	
2003-2004		Dorset Cost Resignalling – Mike Stubbs					R		
2003-2004		Railways in Ireland – A Signalling Perspective – Peter Cuffe		R			R		
2003-2004		Train Position Detection – Jeanette Aitken (Sydney)					R		
2003-2004		Implementing a Compatible Automatic Train Protection Control System in the Hong Kong MTR – L Y Lam (Hong Kong)					R		
2004-2005		Railway Control Philosophy – Daniel Woodland	R	R			R		R
2004-2005		Railway Signalling Philosophy, Principles and Practice – Francis How	R				R		
2004-2005		Points and Point Machines – Antony Kornas					R		
2004-2005		Block Working, Route Holding and Train Detection – J D Francis	R	R			R		
2004-2005		Interlocking Developments – Ian Shannon and Roger Short					R		
2004-2005		LED Cluster Technology in Railway Signalling Applications – Hugh Barton					R		

2005-2006		Fulfilling the Real Needs of Customers – An Urgent Challenge	R						R
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		for Railway Technology – Christophe Keseljevic							
2005-2006		Fail-safe Satellite Positioning – Jean-Pierre Franckart and Michel Rousseau	R						
2005-2006		London Underground Signalling Renewal – E Goddard					R		
2005-2006		Training to a Specification or How to Ruin a Good Training Course – Wayne McDonald	R						R
2006-2007		Have we forgotten the Driver? The Sequel – Tony Howker		R					
2007-2008		GSM-R in The Netherlands – Ch Spaans				R		R	
2007-2008		Using Systems Engineering to develop the future railway and to deliver an effective and affordable railway – A Doherty and I Harman	R		R				R
2007-2008		Jubilee & Northern Upgrade Project—The Challenges of Applying a Proven Product to an Existing Metro Railway – A Bourne and G Clark			R				R
2007-2008		Integrated Communications & Security Systems—A Global Perspective – Claire Porter				R		R	
2007-2008		Next Generation Train Detection (Younger Members' Forum Paper) – A Pellerano			R				R

## IRSE ASPECT CONFERENCES

Every four years, the IRSE holds an International Conference and publishes the papers. The conferences explore the current signalling demands of the international market and look at the wide variations in operational performance. Conference papers are written by leading international professionals. Students are expected to keep up to date by carrying out their own selective reading from the published papers. However, the following papers are of particular relevance to the modules indicated.

Aspect	Paper	Modules						
		1	2	3	4	5	6	7
91	Barnard R / Sheppard P, The Evolution of Validation Methods for Microprocessor Based Safety Systems	R						R
91	Stoll K, Problems of Interference in Signalling Systems on Old lines of the CSD							R
91	Kohler EJ, Noise Immunity - How to make Electronic Equipment in Railway Installations Noise - Immune							R

91	Richards CS, The Station Operations Room of the Future							R
95	Knight AC, Axle Counters - Self correction Methods	R						
95	Short RC, The Legislative Framework for Railway Signalling & Control	R	R	R				
95	Short RC, Probability and the Railway Signal Engineer	R						R
99	Wood RA, Train Detection by Track Circuit – The Effect of the Wheel/Rail Interface	R				R		
99	Fenner Dc, The Development of an Affordable Train Protection System	R						R
99	Davis PR, The Introduction of American Signalling Systems to the UK	R						R
99	Wong P, ATC Transmission for Mass Transit Railway – The Hong Kong MTRC Experience	R				R		R
99	Booth PD, Development of an ERTMS Moving Block Interlocking for Railtrack's West Coast Mainline					R		R
99	Williams R / Corrie JD Simplifying the Safety Case for New Signalling	R						R
99	Bourne A, System Engineering and London Underground – Lessons Learnt and Future Strategies							R
03	Cross-Acceptance of Signalling Systems – J Corrie	R				R		R
03	The Challenges of Adapting Technology – A Stringer	R				R		R
03	End-User Friendly Signalling – J Clark	R						
03	Induced Longitudinal Voltage into Lineside Cables for WCRM – Dr R White, Dr Z Zhang, D Armstrong, J Cox and S Price				R		R	
03	A Train Localisation Technique for Moving Block, Signalling Systems – A Mirabadi and M Sandidzadeh		R					
03	The New UK Railway Group Standard on Electromagnetic Compatibility between Railway Infrastructure and Trains – J Allan, D Bulgin and A Blakeney					R		R
03	An Insight into Integrated Control Systems for the Modern Railway Environment - V Abbott							R
03	Simplifying the Signalling Interfaces – S Wills					R		
03	Fault Detection and Diagnosis of Railway Track Circuits – J Chen and C Roberts					R		

03	Protection of Engineering Work – Q Macdonald	R						
03	Asset Management: Latest Thinking	R						R

	- J Woodhouse							
03	Can it last another year? – D Billin	R						
03	The Capacity of Railways and their Control Systems – D Woodland and F Schmid		R					R
03	A Simulation Tool to Evaluate the Capacity of a Metro Line – G Astengo, G Cosulich, F Gillardoni and E Verardo							R
03	The Capabilities of Capability – A New Approach to Procuring Railway Capacity – A Love							R
03	Human Reliability, Software Integrity – R Short					R		R
03	Why Human Factors Integration – P Traub							R
03	Human Factors and Safety-Critical Systems – A Bourne	R				R		R
03	New Directions in Project Assurance for Complex Projects – K Fraser and A Jones							R
03	Main Streams of Railway Telecommunication and Signalling Development in Hungary – L Mosóczy and P Tóth				R		R	
03	North Staffs Resignalling – Safety Assessment Study – P Sheppard and J Martin	R						R
03	Adding Value to a Project through Independent Safety Assessment	R						R
03	Shortening the Validation Process by Using Simulation in Combination with VDM – J Kalle, M Lathouwers and Dr M van der Vliet	R						R
03	Migration for Existing Signalling to ERTMS – J Poré					R		
03	Development of Train Control System Based on Radio Communications – S Hiraguri, N Nishibori, T Sasaki, Y Hirao, T Kasai, Y Hidaka and T Muto							R
03	Signal Interface Standards – Opportunities and Obstacles – I Mitchell							R
03	An Industry Member's View on Reliability Requirements – K Earnshaw							R

## GENERAL

The following provide general background reading and are essential for Module 1

Title	Module						
	1	2	3	4	5	6	7
Rule Book of your Railway	R	R	R				
Signalling Regulations of Your Railway	R	R	R				
A Working Timetable of your Railway (to understand the needs and use of a timetable with its relevance to control & safety).	R	R	R				
Trackside Safety - Instructions for working on railway infrastructure	R						
User manuals for equipment with which you are familiar	R		R		R		

## STANDARDS AND GUIDELINES

Students are expected to keep up to date with standards and guidelines that are relevant to signal engineering. You should be aware of the intentions of the standards or guidelines and be able to apply them as appropriate, but you are not expected to be able to quote from them.

### INTERNATIONAL STANDARDS

Title	ISBN	Module						
		1	2	3	4	5	6	7
INT. DEF STAN 00-55 The Procurement of Safety Critical Software in Defence Equipment.	Parts 1&2	R						R
INT DEF STAN 00-56/1 Hazard Analysis and Safety Classification of the Computer and Programmable Electronic System Elements of Defence Equipment	-	R						R
IEC 1025 Fault Tree Analysis	-	R						R
IEC 61508 Functional Safety of Electrical / Electronic / Programmable Electronic Safety Related Systems	-	R						R
MIL Handbook 217 Reliability Prediction of Electronic Equipment	025823	R						R
MIL Handbook 882 System Safety Programme Requirements: Software for Railway Control and Protection Systems	-	R						R
ISO 9001 Quality Systems	-	R						

### EUROPEAN STANDARDS

Title	ISBN	Module						
		1	2	3	4	5	6	7
EN 50121 Railway Applications- Electromagnetic Compatibility	-	R						R
EN50126 Railway Applications - Railway Applications - The Specification and	-	R						R

Demonstration of Reliability, Availability, Maintainability and Safety								
EN 50128 Railway Application – Communications, Signalling and Process Systems	-	R						R
EN50129 Railway Applications - Safety Related Electronic Systems	-	R						R

## ACCIDENT REPORTS

The basic knowledge and techniques described by the following accident reports is available elsewhere, therefore it is not essential that the student studies each one. Reading accident reports will, however, enable students to appreciate the reasoning behind some of the developments in S&T philosophy. All of the reports listed are relevant to Module 1, however Huddersfield is of particular interest.

The Office of Rail Regulation provides a source of information which is relevant to all areas of the syllabus, and is of particular relevance to Modules 1 and 7.

Title	Module						
	1	2	3	4	5	6	7
Ais Gill 31.01.95 HMSO				R		R	
Bellgrove Junction 06.03.89 HMSO 1990.	R	R	R				
Battersea Park Station. 31.05.87 HMSO. 1987	R						
Bushbury Junction 13.08.79 HMSO					R		
Buttevant 01.08.80 HMSO	R		R				
Clapham Junction 12.12.88 Hidden, A. HMSO 1989	R				R		R
Clayton Bridge LC 26.06.92 HMSO			R				
Chester 09.06.81 HMSO					R		R
Chinley 09.03.86 HMSO	R						
Colwich 19.09.86 HMSO	R	R	R				R
Cowden: 15.10.94 Sudbury: HSE Books 1996	R		R			R	
Great Heck							
Harrow North Junction (LTE) 07.09.61 HMSO					R		
Holborn (LTE) 09.07.80 HMSO		R	R				
Holton Heath 20.04.89 HMSO		R	R				
Hyde North Junction 22.08.90 HMSO			R				
Huddersfield 06.11.89 HMRI HMSO	R						R
Ladbroke Grove 05.10.99 Cullen Report	R	R	R				
Lockington 26.07.86 HMSO			R				
Morpeth 24.06.84 HMSO			R				
Naas PLC 01.03.79 HMSO			R				
Newton Junction 21.07.91 HMSO, 1992		R	R				R
Paddington 23.11.83 HMSO			R				
Paisley (Gilmour Street) 16.08.79 HMSO			R				
Potters Bar 10.05.02	R				R		R
Seer Green 11.12.81 HMSO	R		R				
Severn Tunnel: 07.12.91 HMSO 1994.	R				R		R
Southall 24.11.02	R						
Stafford 04.08.90 HMSO		R	R				

Summit Tunnel Derailment and Fire 20.12.84 HMSO, 1986					R		
Watford 08.08.96 HMSO	R	R	R				
Wembley Central 11.10.84 HMSO			R				
Wrawby Junction 09.12.83 HMSO	R				R		R

## OTHER PUBLICATIONS

The following publications include general reading, background and specialist further reading which may not be covered elsewhere. Students are advised to select from it and add as appropriate.

Title	ISBN	Module						
		1	2	3	4	5	6	7
Corrie JD, "Human Reliability For Railway Signalling Trackside Installation Work IBC Conference - Task Analysis for Industry London 06/12/94.	-	R						R
Corrie JD / Phillips DR, Management of EMC on Railways. Proc. IEE Masterclass in Systems Engineering, London, 5 Feb 1993	-	R						R
Humphreys P (ed.), Human Reliability Assessors Guide. SRD RTS 88/95Q.	-	R						R
Nock OS, Fifty Years of Railway Signalling: ed O.S. Nock. reprinted by Peter Kay 1999	1 899890 300		R	R				
Platts J / St Aubyn J (eds.) Uninterruptable Power supplies. Peter Peregrinus Ltd and IEE 1992. Power series volume 14.	0863412637					R		
Ransley P, Task Analysis: an Integrated Approach to the Identification of Hazards arising from Human, Management and Plant Interactions. IBC Conference - Task Analysis for Industry London 06/12/1994.	-	R						R
Smith DJ, Reliability, Maintainability and Risk. 4th ed. Butterworth-Heinemann Ltd 93	0750608544					R		R
Whalley SP / Carey MS, Human Factors in Rail Passenger Transport. In Transit 2020: Planning, Financing, Design and Operation of Railways World-wide. Proc IMechE, October 1990. pp. 69-76	-	R						R
Kitchenside GM / Williams A, Two Centuries of Railway Signalling pub Ian Allan	0860935418	R		R				
Mellitt B, Rolling Stock Approval by the Infrastructure Owner in a Commercial Environment IRSE International Forum: Traction / Signalling Compatibility 24/04/97	-	R						R
Wilson HR, Power Railway Signalling: Power Frames and Power Resignalling. reprint P. Kay 1995	1899890009					R		
Railway and Communications Systems: Advancement and Integration of Comms Systems: ERA report 98-0111 1998	0700806598				R		R	

Fenner D, Track Circuits, leaves and TCAID's IRSE News No 30 (Sept. 1993)	-	R						
Safety Related Systems - Guidance for Engineers. Hazards Forum- March 1995	0952510308							R
Corrie JD, Functional Spec. of Rlwy Control Room Systems in Proc. Safe & Reliable Control Room Operations IBC Sept '98	-	R						R
Engineering Safety Management Issue 3. Yellow Book 3, Railtrack (www.yellowbook-rail.org.uk)	-	R						R
Wittamore DJ, Installation & Testing of the Signalling System, IEE Power Division Sixth Vacation School on Railway Signalling & Control Systems, 1996	-					R		R
Dickinson R, Maintaining the S&T Infrastructure, IEE Power Division Sixth Vacation School on Railway Signalling & Control Systems 1996	-					R		R
Goddard E, Supervision and Operation of Mass Transit Systems, IEE Power Division Sixth Vacation School on Railway Signalling & Control Systems 1996	-					R		R
Davies D, Automatic Train Protection for the Railway Network in Britain – A study, The Royal Academy of Engineering, 2000	-	R				R		
Uebel H, ATP/ATC Intermittent and Continuous Systems, IEE Power Division Sixth Vacation School on Railway Signalling and Control Systems 1996	-					R		
J Corrie, The Principles of Train Detection, IEE Power Division Sixth Vacation School on Railway Signalling & Control Systems 1996	-					R		
Burrage K Risk Management in Safety Critical Areas, IEE Power Division Sixth Vacation School on Railway Signalling & Control Sytems, IEE 1996	-	R						
ABC Railway Accidents Ian Allan Stanley Hall ISBN 07110-2549-5	-		R	R				
Hall, Stanley. "Railway Disasters: Cause and Effect" Promotional Reprint Company 1992 Originally Pub By Ian Allan in 2 volumes as Danger Signals and Danger on the Line	-	R	R	R	R	R	R	R
Rolt, L.T.C Red for Danger Nov 98 Sutton Books ISBN 0750920475	-	R	R	R	R	R	R	R

## BRITISH PRACTICE

Students practising in the UK or on UK systems are additionally expected to be aware of the nature and content of the following publications, and their relevance to each exam module.

## STANDARDS AND GUIDELINES

Title	ISBN	Module						
		1	2	3	4	5	6	7
BS 4778 Quality Vocabulary [three parts]	-	R						R
BS 5760 Reliability of Systems, Equipment and Components [ten parts]	-	R						R

## HSE/HMSO PUBLICATIONS

Title	ISBN	Module						
		1	2	3	4	5	6	7
HMRI Railway Safety Principles & Guidance • Part 1 (top level safety principles). HSE Books, 1996 HS(G)153/1	0717607127	R	R	R				R
• Part 2A. Guidance on the infrastructure. HSE Books 1996. (HS(G)153/2	0717609499	R	R	R				R
• Part 2B. Guidance on the stations. HSE Books 1996 HS(G)153/3	0717607135	R						R
• Part 2C. Guidance on electric traction systems. HSE Books 1996 HS(G)153/4	0717607119	R	R	R				R
• Part 2D. Guidance on signalling. HSE Books 1996 HS(G)153/5	0717609537	R	R	R				R
• Part 2E. Guidance on level crossings. HSE Books 1996 HS(G)153/6	0717609529	R	R	R				R
• Part 2F. Guidance on trains. HSE Books 1996 HS(G)153/7	0717608689	R	R	R				R
• Part 2G Tramways	0717609510	R						
• Part 2H Heritage Railways (to be published)	0717609502							
• Part 3A Developing and Maintaining Staff Competence.	0-7176-1732-7	R						
Railways (Safety Case) Regulations 2000 – Guidance on Regulations. HSE	0717606996	R						R
Railways (Safety Critical Work) Regulations 1994 – Guidance on Regulations. HSE	0717612600	R						
Health & Safety at Work Act	0105437743	R						
Railways Act 1993 – Chapter 43	0-10-5444393-x	R						
Transport and Works Act 1992	0105442925	R						
Fire Precautions (Sub-surface Railways Stations) Regulations Amend 91	0110132599							
Control of Substances Hazardous to Health (COSHH) Regulations 1999 COP	0717616703	R						
HSE Manual Handling Guidance on Regulations L23 HMSO 1992.	0717624153	R						

Successful Health & Safety Management, HSE 1997. HG(65)	0717612767	R						R
HSE Annual Reports	-	R	R	R	R	R	R	R

## AUSTRALASIAN PRACTICE

Students practising in Australasia or on Australasian systems are additionally expected to be aware of the nature and content, and the relevance to each exam module, of relevant publications from the following lists. Students should select publications that are relevant to the railway practice that they intend to use in response to the exam questions. Requirements will be dependent on the specific railway worked for (applicable for both railway employees and contractors).

### GENERAL (AUSTRALIA)

Title	Module						
	1	2	3	4	5	6	7
Signalling Safe Working practices of Your Railway	R	R	R				
Signalling Principles for Your Railway	R	R	R				
Your Railway Quality System and procedures	R				R		R
Rail Safety Legislation Act eg NSW Rail Safety Act	R						

### STANDARDS AND GUIDELINES (AUSTRALIA)

Title	ISBN	Module						
		1	2	3	4	5	6	7
ISO9001- 2000 Quality Management Systems - Requirements	0 7337 3705 6	R						
AS4292.1-1995 Rail Safety Management General and Interstate Requirements	0 7262 9833 6	R						
AS4292.4-1997 Rail Safety Management Signalling & Telecommunications Systems and Equipment	0 7337 1069 7	R						
AS4360-1999 Risk Management	0 7337 2647 X	R						
AS4292.5-1997 Rail Safety Management Operational Systems		R						
AS5022-2001 Guidelines for Railway Safety Investigation		R						
AS3960-1990 Guide to Reliability and maintainability program management		R				R		R
AS1742.7-1993 Manual of Uniform traffic control devices – Railway Crossings						R		
Rail Safety and Licensing Guidelines	047820664X	R				R		R

AROU Codes of Practice are applicable to the Defined Interstate Network

Title	ISBN	Module						
		1	2	3	4	5	6	7
Vol 1 General Requirements and Interface Management		R						
Vol 2 Glossary		R						

Vol 3 Operations and Safeworking		R						
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Read in Conjunction with AS4292 requirements

### IRSE TECHNICAL PAPERS (AUSTRALASIAN SECTION)

Year	Title	Module						
		1	2	3	4	5	6	7
1993	Cerebus Level Crossing Monitor G Hockings 16/7/93					R		
1994	Constant Warning Systems P Venneman 18/11/94					R		
1997	Track Vacancy Detection using Axle Counters H B Luber 22/7/97					R		
1998	Today's Interlocking : A World of Applications W McDonald 10/7/98					R		
1998	Tools of the Profession – "Westrace Tools" - Chadwick Stojkovski 13/11/98					R		R
1999	Wheel Impact Detectors - A Blakely Smith & P Webb 16/7/99					R		
2001	LED Signals" Riding the Tiger" P Szacsvey 20/7/01					R		
2001/2002	Australasian Signalling P R Symons 13/3/02		R	R				R
2006/2007	Common Law Safety Cases – Richard M Robinson (Melbourne, Aus)							
2006/2007	The In Cab Activated Points System Enhancement to Trans Australia Railway – Paul Furniss (Adelaide, Aus)							

Past Papers available on CD-ROM from the Secretary of the IRSE Australasian Section

### INFORMATION FROM THE INTERNET

In the previous version of this Reading List we included a number of website addresses relating to the Australasian rail industry from which information such as accident reports could be accessed. As these often become out of date, rather than publish details which could potentially only be current for a short time, it was agreed not to include any web addresses in this version. Hopefully this information will be accessible with the help of internet search engines

*Please take care to visit reliable sites when downloading information from the internet.*