FOCUS FEATURE SCHEDULE 2021



FOCUS 1

JANUARY / FEBRUARY 2021

INNOTRANS PREVIEW

STATIONS & PASSENGER TECHNOLOGIES

Rail Engineer reports on station construction and redevelopment, using technology to improve the passenger experience while managing access and revenue. New roofs, improved public address, platform extensions, repurposing or improving facilities, better lighting and streamlined passenger flows - it's all covered.

TOPICS:

 Gates and Gatelines Heritage Issues Lifts Lighting 	Passenger Information Systems	 Refurbishment Reporting / Software Signage and Wayfinding Smart Ticksting
		 Smart Ticketing
	Gates and Gatelines Heritage Issues Lifts Lighting Maintenance	Heritage Issues Information Heritage Issues Lifts Lighting Maintenance Platform Screen Dassaces

FOCUS 2

ROLLING STOCK & DEPOTS

With trains and their systems becoming ever more complicated, Rail Engineer's specialist writers cover everything that improves performance, increases efficiency, and keeps passengers happy. New trains, refurbished older ones, improved technology, alternative fuels, emission controls and decarbonisation are all considered.

TOPICS:

1011001			
Comfort	 Inspection 	Entertainment	Train Washing
 Components 	 Interiors 	 Operation 	 Tram-Train
Condition Monit	oring• Lifting	 Passenger 	 Underground Trains
 Depots 	 Light-Rail Vehicles 	Information	 Wheel-Rail Interface
 Driverless Technology 	 Lighting Maintenance 	 Platform-Train Interface 	
 Equipment 	 New designs 	 Refurbishment 	
• Fuel	Onboard	 Safety Initiatives 	



FOCUS 3

SURVEYING & ASSET MANAGEMENT

Surveying a site before work begins and after it has finished are important aspects of any job. Using this data to create and share information through BIM (building information modelling) not only helps asset managers have quicker access to vital information but also brings long-term benefits after handover.

TOPICS:

FOCUS 1

TOPICS:

Bridges

Concrete

Culverts

Drainage

Asset Management

Cable Hangers

Construction

Environmental

Control

Lifting

Painting

Examinations &

Heritage Issues

Modular Systems

New Materials

Inspections

MARCH / APRIL

2021



STRUCTURES & INFRASTRUCTURE

This issue looks at infrastructure projects. Rail Engineer's expert writers look at what's involved in maintaining and renewing the railway's infrastructure and at advances in technology aimed at making it faster, easier and more cost effective.

Plant & Equipment • Surveying

Precast Sections

Refurbishment

Replacement

Rope Access

Scaffolding

Spray Concrete

Scour

Equipment

Techniques

Surveying

Tunnelling

Ventilation

Waterproofing

FOCUS 2

SIGNALLING & TELECOMMUNICATIONS

Three of Rail Engineer's writers specialise in this complex field that keeps the railway running and will provide the key to increased capacity, improved punctuality, quicker journey times and safer running in the future. Reports on the 'digital railway' are balanced with others on more traditional forms of control and communications

TOPICS:			
Barriers	Gantries	Protection Systems	 Warning Systems
Broadband	 Hazard Warnings 	• Radio	• Wi-Fi
CCTV	 IP Networks 	 Resignalling 	
• Displays	 Information 	Schemes	
Driverless Systems	Systems	 Signalling Power 	
Equipment	 Level Crossings 	 Software 	
ETCS / ERTMS	 Loudspeakers 	 Testing 	
• GSM-R	Operating Systems	Training	

FOCUS 3

LEVEL CROSSINGS & TRACKSIDE SAFETY

The main interface between the railway and the public, level crossings need careful management. Technology can help reduce the risks, whether through obstacle detection, non-slip surfaces, reliable barrier machines, closed-circuit television, improved signage or red-light cameras that catch dangerous drivers.

TOPICS:

Barriers	Maintenance
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- CCTV
 Obstacle Detection
- Closure
 Protection Systems
- Control Systems
 Red-light Cameras
- Crossing Surfaces · Safety Levels
- Footbridges
 Signage
- Hazard Warnings Telephones
- Lighting
 User Behaviour



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FOCUS **FEATURE SCHEDULE 2021**



FOCUS 1

MAY / JUNE 2021

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PERMANENT WAY & LINESIDE ASSETS

In this Focus feature, Rail Engineer looks at the elements that make up the permanent way - rails, sleepers, clips, pads, ballast - as well as the embankment on which the track sits, its stability, drainage and condition.

ANS	
	TOPICS:
	• Ballast &

TUPICS:		
 Ballast & Tamping 	 Maintenance 	• Rail Handling
 Excavation 	• Milling	 Repairs
 Fastenings 	• On-track Machines	 Road-Rail Plant
 Geotechnical 	• Piling	• S&C
 Grinding & Welding 	 Plant Hire 	 Site Access
 Installation 	• Plant Maintenance	 Sleepers
 Lifting 	• PPE	 Soil Nailing
 Lighting 	• Rail	 Structures

ROLLING STOCK & DEPOTS

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New trains, refurbished older ones, improved technology, alternative fuels,

Entertainment

Train Washing

Underground Trains

· Wheel-Rail Interface

Tram-Train

FOCUS 2

ELECTRIFICATION & POWER

As the UK rail network is one of the biggest consumers of electricity in the UK, it is always investigating ways to innovate, reduce costs, introduce new power alternatives and cut carbon emissions. Safety is also a major topic, as are ways to take possessions more quickly and to install new electrification more efficiently.

TOPICS:

Cabinets	Networks	Monitoring
Cables	 Earthing 	• OLE
 Catenary 	 Fasteners 	 Pantographs
Components	 Generators 	 Power Supplies
 Connectors 	 Housings 	Security
• Control Equipment	 Insulation 	 Substations
and Systems	 Lamps 	 Transformers
 Distribution 	 Lightning Protection 	

FOCUS 2

STATIONS & PASSENGER TECHNOLOGIES

Rail Engineer reports on station construction and redevelopment, using technology to improve the passenger experience while managing access and revenue. New roofs, improved public address, platform extensions, repurposing or improving facilities, better lighting and streamlined passenger flows - it's all covered.

TOPICS:			
 Accessibility Architecture 	CleaningEscalators	Movement and Flows	 Platforms Refurbishment
• BIM • Barriers	 Gates and Gateline Heritage Issues 	Information	 Reporting / Software
BuildingsCCTV	LiftsLighting	Systems Platform-Train Interface 	 Signage and Wayfinding
Car ParksCatering	MaintenancePassenger	 Platform Screen Doors 	 Smart Ticketing



FOCUS 3

GEOTECHNICS, EARTHWORKS & CONCRETE

The material of choice for many construction jobs, concrete, whether as wet ready-mix or as prestressed and preformed sections, is used both to build stations and line tunnels. It also stabilises earthworks and forms drainage channels, hence the synergy in this Focus feature which highlights some of the forgotten aspects of railway engineering.

TOPICS:

 Cleaning 	 Ground Stabilisation 	on• Rope Access
• Design	Ground Surveys	Soil Nailing
 Excavation 	 Installation 	• Specialist
 Fastenings 	 Maintenance 	Equipment
 Foundations 	 Modular Systems 	Structure
 Geotechnical 	• Piling	
 Geotextiles 	 Pipework 	
 Gratings 	 Precast Sections 	

FOCUS 3

PLANT & EOUIPMENT

As work on the railway becomes increasingly mechanised, due to the pressures of productivity and efficiency, Rail Engineer looks at the latest equipment and techniques that are coming to or have arrived on worksites around the network. This Focus also considers topics such as reliability, safety and automation that are increasingly relevant today.

TOPICS

 Attachments 	 Lifting 	 Surveying
 Automation 	 Maintenance 	 Transportation
 Excavation 	• Piling	 Welding
 Hand tools 	Power Tools	 Welfare
 Handling 	 Product Launches 	
• Hire	 Reliability 	
 Hydraulics 	• Road-Rail	
 Innovation 	 Safety 	





Comfort	Inspection
Components	Interiors
Condition Monitoring	Lifting

TOPICS:

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 Components 	 Interiors 	 Operation
Condition Monitoring	 Lifting 	 Passenger
 Depots 	 Light-Rail Vehicles 	Information
Technology Equipment	 Lighting Maintenance New designs Onboard 	 Platform-Train Interface Refurbishment Safety Initiatives

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FOCUS FEATURE SCHEDULE 2021

control and communications



FOCUS 2

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TOPICS:

Asset Management	Control	 Plant & Equipment 	 Surveying
 Bridges 	 Examinations & 	 Precast Sections 	Equipment
 Cable Hangers 	Inspections	 Refurbishment 	 Surveying
Concrete	 Heritage Issues 	 Replacement 	Techniques
 Construction 	 Lifting 	Rope Access	 Tunnelling
 Culverts 	 Modular Systems 	 Scaffolding 	 Ventilation
 Drainage 	 New Materials 	• Scour	 Waterproofing
 Environmental 	 Painting 	 Spray Concrete 	



FOCUS 3

SUSTAINABILITY & ENVIRONMENT

The environment, in its widest context, is becoming increasingly important to rail projects, whether this be sustainable development, protecting the environment, reducing emissions or global warming. Decarbonisation, with the goal of 'Net Zero' by 2040, is a major ambition that will need a radical change in the way the railway operates.

TOPICS:

Carbon Emissions	 Green Initiatives 	 Vegetation
 Climate Change 	 Planning 	• Waste Disposal
Coastal Protection	 Recycling 	• Wildlife
 Decarbonisation 	 Seasonal Issues 	
 Efficiency 	Surveys	
 Endangered Species 	s• Sustainability	
 Flood Prevention 	 Sustainable 	
 Government Targets 	s Programmes	

FOCUS 1

FOCUS 1

TOPICS:

Barriers

CCTV

Displays

Equipment

• GSM-R

ETCS / ERTMS

Driverless Systems

Broadband

SEPT /

2021

NOV /

2021

DECEMBER

OCTOBER

ELECTRIFICATION & POWER

Gantries

Hazard Warnings

IP Networks

 Information Systems

Level Crossings

Loudspeakers

Operating Systems • Training

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on the 'digital railway' are balanced with others on more traditional forms of

Radio

 Resignalling Schemes

Software

Testing

Signalling Power

• Protection Systems • Warning Systems

• Wi-Fi

punctuality, quicker journey times and safer running in the future. Reports

TOPICS:	TOPICS:			
Cabinets	Networks	 Monitoring 		
• Cables	 Earthing 	• OLE		
 Catenary 	 Fasteners 	 Pantographs 		
Components	Generators	 Power Supplies 		
Connectors	 Housings 	 Security 		
Control Equipment	 Insulation 	 Substations 		
and Systems	 Lamps 	 Transformers 		
 Distribution 	• Lightning Protection	on		

FOCUS 2

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 Fastenings 	• On-track Machines	 Road-Rail Plant 		
 Geotechnical 	• Piling	• S&C		
 Grinding & Welding 	 Plant Hire 	Site Access		
 Installation 	• Plant Maintenance	 Sleepers 		
 Lifting 	• PPE	 Soil Nailing 		
 Lighting 	• Rail	Structures		

FOCUS 3

LIGHT RAIL & METRO

An increasing number of commuters rely on the railway to get to work while tourists and shoppers take trams and trains to get around. This Focus looks at the train in an urban environment and how technology and engineering are increasing capacity, shortening journey times and making short-distance travel more reliable and more comfortable.

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TOP	100.

,	Access	•	Fire Prevention	٠	Signalling
,	Automation	•	Interiors	٠	Specialised Vehicles
,	Capacity	٠	Operating Systems	٠	Trams
	Customer	٠	Passenger Flows	٠	Tram-Trains
	Information	•	Platform Screen	•	Underground
,	Dwell Times		Doors		Railways
,	Electrification	٠	Rail	٠	Ventilation
,	Emergency Systems	٠	Seating		



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