



Product Acceptance Service

Guidance Note - How to decide what needs product acceptance

Purpose

The purpose of this document is to provide guidance on categories of typically approved items and also those items that do not require approval. These lists of items are non-exhaustive and additional guidance may be required from the Network Rail Product Acceptance Team or relevant Engineering function if items are not included.

The Network Technical Head of each Engineering function or delegate is responsible for deciding on the criticality of items within their asset ownership. If it is perceived that there is potential additional risk associated with a product or its use, an uncontrolled categorisation assigned within this document may be inappropriate. In these circumstances the Engineering function will determine the acceptance route and assessment criteria.

This document is intended to be read in conjunction with **NR/L2/RSE/100/05 – Product Acceptance and change to Network Rail operational infrastructure.**

All new items and changes to approved products or systems are required to be submitted via the Product Acceptance application form and will be assessed on receipt to determine their criticality, alignment against Engineering and Commercial strategy and/ or acceptance route.

Definitions

“**Operational**” means any product / plant / equipment used to directly control, monitor, support and power the railway. In case of uncertainty the Product Acceptance team or relevant Network Rail Technical Authority or Network Rail Telecommunications (NRT) Engineering function shall be consulted.

“**Controlled**” means catalogue numbers for which Network Rail Engineering asserts control. For any items falling into this category, it is mandatory that the product acceptance process is followed as explained in **NR/L2/RSE/100/05** and this document.

“**Uncontrolled**” means catalogue numbers for which Network Rail Engineering asserts no control. Products in this category are low risk items that **do not** require acceptance or the submission of a Product Acceptance application. The issuing of uncontrolled numbers is managed by the Network Rail Catalogue Management Team within Route Services.

“**Controlled - Limited Criticality**” means that the item may be approved without further assessment on the basis that it is of low safety criticality proven to meet national standards (BSI's etc). These may be COTS products that are not going to be used in a way that differs from their originally intended use. It is mandatory that the product acceptance process is followed as explained in NR/L2/RSE/100/05 as these items require controlled catalogue numbers and may require certification if the asset owning function determines the need (i.e. for setting conditions of use in operational infrastructure environments).

This category is for products are used to support or provide low safety criticality services. Where these products are COTS, the Lead Reviewers will check their

British or International standards which these products have declared compliant with to attain their CE or UKCA certifications, to make sure they align with Network Rail's intended use and deployment locations. Where these products are built to Network Rail's specifications, the Lead Reviewers will check compliance with the applicable Network Rail specification.

“DFR” means Design For Reliability (refer to standard NR/L2/RSE/0005 for further details).



Table of products to ascertain whether acceptance is required or not

Product Group	Asset Owning Discipline	Examples				Affected Engineering disciplines or other Business Functions									SQA & DFR		Comments		
			Controlled	Uncontrolled	Controlled limited criticality	Signalling	Electrification	Plant	Telecoms	Track	S&C	EMC	Ergonomics	Occupational Safety	SQA Rating	DFR Review			
1. Infrastructure components railway specific or for which there are no British or European Standards applicable	SIGNALLING & LEVEL CROSSINGS	▪ Train Detection system																	
		- Track circuits (including Level crossings)	✓									✓			1	✓			
		- Axle counters	✓									✓			1	✓			
		- Treadles	✓									✓			1	✓			
		▪ Lineside Signals, Indicators & Signs																	
		- Colour Light signals	✓									✓			1	✓			
		- Point indicators/Junction indicators/Route/ Speed indicators	✓									✓			1	✓			
		▪ Point Operating Equipment	✓								✓	✓			1	✓			
		▪ Electronic & Mechanical Interlocking systems	✓									✓			1	✓			
		▪ Signal Control Systems																	
		- Signal Control Panel	✓									✓			3	✓			
		- IECC Signal Control & Indication equipment	✓									✓			3	✓			
		- Traffic Management Systems	✓									✓			3	✓			
		▪ Train Describers, including Mechanical and Electronic	✓									✓			2	✓			
- Transformers	✓					✓				✓				✓					

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			Controlled	Uncontrolled	Controlled limited criticality	Signalling	Electrification	Plant	Telecoms	Track	S&C	EMC	Ergonomics	Occupational Safety	SQA Rating		DFR Review			
		- UPS's	✓				✓						✓				✓			
		- TJ's (Transformer Rectifiers)	✓				✓						✓					✓		
		• Train Protection systems																		
		- AWS & TPWS	✓										✓				2	✓		
		▪ Event Logging & Condition Monitoring																		
		- Loggers	✓										✓				3	✓		
		- Sensors	✓										✓				3	✓		
		- Routers/ Switches	✓							✓			✓				3	✓		
		▪ Location Cases																		
		- DIS Boxes	✓										✓				4	✓		
		- Confined spaces/ restricted access cases.	✓														4	✓		
		▪ Infrastructure specific relays																		
		- Miniature e.g. 930, 941, 966 F10	✓														1	✓		
- Large Plug-in B-Style	✓														1	✓				
- BR930	✓														1	✓				
- Sub Miniature cradle relays & PO 3000 relays for indications	✓														1	✓				
- Shelf Type relays	✓														1	✓				
- DCPI	✓														1	✓				

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		<ul style="list-style-type: none"> ▪ Signs (As per specification of Group Standard) 		✓													
		<ul style="list-style-type: none"> ▪ VDU's and Ancillaries 															
		<ul style="list-style-type: none"> - Commercial off the shelf products that meet specification 		✓													
		<ul style="list-style-type: none"> ▪ Signalling Cables 															
		<ul style="list-style-type: none"> - Lineside Cabling 	✓									✓					✓
		<ul style="list-style-type: none"> - Internal Cabling <ul style="list-style-type: none"> - Fibre Optic - Underground (zero smoke/ low halogen). 	✓														✓
		<ul style="list-style-type: none"> - Ducting 	✓														✓
		<ul style="list-style-type: none"> ▪ Level Crossing Equipment 															
		<ul style="list-style-type: none"> - Barriers & Booms. 	✓									✓			1	✓	
		<ul style="list-style-type: none"> - Track Circuits 	✓									✓			1	✓	
		<ul style="list-style-type: none"> - Train Detection Systems 	✓									✓			1	✓	
		<ul style="list-style-type: none"> - Overlays 	✓									✓			1	✓	
		<ul style="list-style-type: none"> - Cameras 	✓									✓			1	✓	
		<ul style="list-style-type: none"> - Obstacle Detection Devices 	✓									✓			1	✓	
		<ul style="list-style-type: none"> - Railway Specific Signs 	✓												3	✓	SQA rating may depend on the function of the sign (e.g. fixed distant semaphore board vs. a pedestrian sign).

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			Controlled	Uncontrolled	Controlled limited criticality	Signalling	Electrification	Plant	Telecoms	Track	S&C	EMC	Ergonomics	Occupational Safety	SQA Rating		DFR Review		
	TRACK	<ul style="list-style-type: none"> ▪ Track components - Rail (all types) - Sleepers/ Bearers (all types) - Ballast - Fastening Systems <ul style="list-style-type: none"> - bolts - clips - Baseplates - Pads - Insulators - Joints <ul style="list-style-type: none"> - Mechanical - welded - Buffer stops - Non Standard Track <ul style="list-style-type: none"> -slab track, -Longitudinal sleepers. ▪ Monitoring And Measuring Equipment - Inspection systems - Intelligent Infrastructure - Sensor Equipment - Measurement Tools <ul style="list-style-type: none"> - Laser - Amber recorder -Temperature recording 																	
			✓														1	✓	
			✓														3	✓	
			✓														3	✓	
			✓									✓					3	✓	
			✓														3	✓	
			✓														2	✓	
			✓														2	✓	
			✓									✓						✓	
			✓									✓						✓	
			✓									✓	✓					✓	

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			Controlled	Uncontrolled	Controlled limited criticality	Signalling	Electrification	Plant	Telecoms	Track	S&C	EMC	Ergonomics	Occupational Safety	SQA Rating		DFR Review
		<ul style="list-style-type: none"> ▪ Off Track 															
		- Fencing		✓									✓				
		- Access		✓									✓				
		- Crossing systems (i.e road panels)		✓									✓				
		<ul style="list-style-type: none"> ▪ Miscellaneous 															
		- Petrol's			✓									✓			
		- Oils			✓									✓			
		- Lubricants	✓										✓		✓		
		- De-icers	✓										✓		✓		
		- Degreasers	✓										✓		✓		
		- Defoliant's	✓										✓		✓		
		<ul style="list-style-type: none"> ▪ Track Drainage 															
		- Pipes		✓												✓	
		- Connectors		✓												✓	
		- Catchpits		✓												✓	
																	Drainage products are assessed as per the requirements of NR Civil Engineering Std's

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		<ul style="list-style-type: none"> ▪ Welding 															
		- Thermic welding	✓									✓		✓	2	✓	
		- Alumino-thermic welding	✓									✓		✓	2	✓	
		- Arc welding	✓									✓		✓	2	✓	
		- SkV-E Welding	✓									✓		✓	2	✓	
		- Flash Butt Welding equipment	✓									✓		✓	2	✓	
		▪ Under-track Crossings (UTX)	✓													✓	
	S&C (Switches & Crossings)	▪ S&C Systems															
		▪ Bearers															
		- Concrete	✓												3	✓	
		- Timber	✓												3	✓	
		- Steel Hollow	✓												3	✓	
		- Bearer Joint Systems	✓												3	✓	
		- Under Bearer Pads.	✓												3	✓	
		▪ Switches															
		- Alternative Rail Steels	✓													✓	
		- Stretcher Bars	✓												1	✓	
		- Soleplates	✓												3	✓	

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			Controlled	Uncontrolled	Controlled limited criticality	Signalling	Electrification	Plant	Telecoms	Track	S&C	EMC	Ergonomics	Occupational Safety	SQA Rating		DFR Review		
		<ul style="list-style-type: none"> ▪ Crossings - Cast Crossings (inc FBW) - Part Fabricated Crossings - Fabricated Crossings ▪ Fastenings & Rail Support - Pads, Insulators & Clips - Baseplates - Slide Baseplates - Slab Track Systems ▪ POE - Primary Drives - Supplementary Drives - Supplementary Detectors - Drive & Connection Rods - Support Plates for Above ▪ Rail (Other) - Alternative Rail Steels - Rail Joints (inc Inslated) - Other Machined Rails 																	
			✓															✓	
			✓															✓	
			✓															✓	
			✓														3	✓	
			✓														3	✓	
			✓														3	✓	
			✓														3	✓	
			✓															✓	
			✓															✓	
			✓															✓	

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			Controlled	Uncontrolled	Controlled limited criticality	Signalling	Electrification	Plant	Telecoms	Track	S&C	EMC	Ergonomics	Occupational Safety	SQA Rating		DFR Review
		- Transition Rails	✓													✓	
		- Twist Rails	✓													✓	
		▪ Miscellaneous															
		- De-railer Assemblies	✓													✓	
		- Blanking Plates	✓													✓	
		- Drive Lugs	✓													✓	
		- S&C Gauges	✓													✓	
	TELECOMS	▪ Operational Telecoms															
		- Trackside (on or near the line) telephones			✓	✓						✓	✓		3		
		- Lineside equipment room telephones		✓		✓						✓	✓		3		
		- Crossing telephones	✓			✓						✓	✓		3	✓	
		- PETS/KETS	✓									✓			3	✓	
		- Concentrators for signallers and ECR applications	✓			✓						✓	✓		3	✓	
		- Voice Systems/Platforms/Solutions			✓	✓						✓	✓		3		
		- Voice Media Gateway	✓									✓			3	✓	
		- Voice Recording equipment	✓									✓	✓		3	✓	
		- Other operational telephones			✓							✓			3		

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			Controlled	Uncontrolled	Controlled limited criticality	Signalling	Electrification	Plant	Telecoms	Track	S&C	EMC	Ergonomics	Occupational Safety	SQA Rating		DFR Review
		- Telephony switches for route control (ICC)	✓			✓	✓					✓			3	✓	
		- Transmission Networks, including network managers and associated with operational railway services (including SDH/PDH multiplexers, IP/MPLS Routers, Protocol Converters, SFP, xDS/DWDM/Modem equipment).	✓			✓	✓					✓			3	✓	
		- Synchronisation Equipment for Frequency and Phase synchronisation (including SSU, PRC, PRTC, T-GM)	✓			✓	✓					✓			3	✓	
		- Synchronisation Equipment for Time of Day synchronisation (including NTP servers)		✓		✓	✓					✓			3		
		- Synchronized Ops floor Clocks			✓	✓	✓								3		
		▪ Telecoms Power															
		- UPS (excludes associated battery) and DC Power Systems (AC or DC output, all products that are below 10kVA, single phase type)	✓									✓			3	✓	
		- Battery (for controlled UPS systems)			✓			✓				✓			3		
		- UPS small stand-alone			✓			✓				✓			3		

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		<ul style="list-style-type: none"> ▪ Radio components 																
		- GSM-R	✓			✓							✓			3	✓	
		- GSM-R Dispatcher Terminal	✓			✓							✓	✓		3	✓	
		- Antenna Systems (including: feeders, splitters, attenuators, filters, attenuators, connectors, arrestors, Telecoms eLoran and GNSS antennas)			✓								✓			3		
		- Station Radios		✓									✓			3		Not used for operational communications.
		- Marine Radios		✓									✓			3		Not used for operational communications.
		- Wireless services (Wi-Fi, 4G/5G, microwave, excluding corporate Wi-Fi & 4G/5G networks)	✓										✓			3	✓	
		- RETB	✓			✓							✓			3	✓	
		- Radio Masts (monopoles, lattice towers, columns, antenna bracketry, Fall arrest system)		✓										✓		3		
		▪ Operational CCTV system and components																
		▪ DOO Cameras	✓			✓							✓			3	✓	
		- DOO Monitors	✓			✓							✓			3	✓	

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		- Non-operational non-station CCTV		✓													Non-operational equipment.
		▪ Telecoms Infrastructure															
		- External Telecommunications cables (fibre, jumper wire and copper) terminations and ancillaries.	✓												3	✓	
		- Internal Telecommunications cables (fibre and copper) terminations and ancillaries, excluding copper jumper cables.		✓		✓									3		
		- Copper jumper wires			✓	✓									3		
		- Troughing	✓			✓	✓								3	✓	
		- Internal Cable containment products		✓		✓	✓								3		
		- Equipment housings, structures and enclosures			✓	✓	✓					✓			3		
		▪ Telecoms logical security															
		- Firewall	✓									✓			3	✓	
		- Data Diodes	✓									✓			3	✓	
		- Telecoms REB access control locking systems (physical security)			✓										3		Needs to comply with physical security requirements.
		▪ Non-Operational Telecoms / SISS															

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		<ul style="list-style-type: none"> ▪ PA speakers (excludes sub-surface station use) 		✓											3		
		<ul style="list-style-type: none"> ▪ PA control system 		✓								✓			3		
		- Platform Clocks		✓											3		
		- Network equipment for SISS applications		✓											3		
		- CIS HMI		✓								✓			3		
		- CIS Displays		✓								✓	✓		3		
		- CIS HMI		✓								✓			3		
		- CCTV (VSS) system including cameras (excludes sub-surface station use)		✓								✓			3		
		- CCTV (VSS) Cameras (sub-surface station use)			✓							✓			3		
		- PA Speakers for Sub- Surface Station use.			✓										3		
		- PAVA Systems including for Sub- Surface Station use.			✓										3		
		- CCTV (VSS) system – all components except cameras, for Sub- Surface Station use.			✓										3		
		<ul style="list-style-type: none"> ▪ Station Management System for telecom applications 		✓								✓			3		
		- Help points		✓								✓			3		
		- Small Part Steelwork including Bolt, Adaptor Plate, Washer,		✓											3		

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		Studs, Tie Rod, Spacer, Fixing clip, Nut, Clamping Plate, Retaining Cap																
	ELECTRIFICATION	25kV AC:																
		25kV Switchgear																
		- SMOS Assemblies	✓									✓					✓	
		- GIS Assemblies	✓									✓					✓	
		- Containerised AIS Assemblies	✓									✓					✓	
		- Traditional AIS Assemblies	✓									✓					✓	
		- 25kV Circuit Breakers	✓									✓					✓	
		- 25kV Disconnectors	✓									✓					✓	
		- Earth Switches	✓									✓					✓	
		- Motorised & Manual Switch	✓									✓					✓	
		- Mechanisms	✓														✓	
		- Critical Sensors (position feedback, gas pressures)	✓									✓					✓	
		- 25kV fuses	✓														✓	
		- Surge Arrestors	✓									✓					✓	
		25kV Auxiliary Equipment																
	- Harmonic Filters & Passive Components (inductors, capacitors)	✓									✓					✓		

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			Controlled	Uncontrolled	Controlled limited criticality	Signalling	Electrification	Plant	Telecoms	Track	S&C	EMC	Ergonomics	Occupational Safety	SQA Rating		DFR Review
		- Power Quality Equipment (SVC's, SFC's etc)	✓									✓				✓	
		- Auto-tap Changers	✓													✓	
		25kV Instrumentation															
		- Protection Class Current	✓									✓				✓	
		- Transformers	✓									✓				✓	
		- Protection Class Voltage Transformers	✓									✓				✓	
		- Other Instrument Transformers	✓									✓				✓	
		Single Phase 25kV Transformers															
		- Power Transformers	✓									✓				✓	
		- Auxiliary Transformers	✓									✓				✓	
		- Booster Transformers	✓									✓				✓	
		- Auto Transformers	✓									✓				✓	
		25kV Power Distribution															
		- 25kV Bushbars	✓									✓				✓	
		- 25kV Termination Assemblies (bushings, plugs & sockets)	✓													✓	
		- 25kV Cable	✓									✓				✓	
		- 25kv Cable Joints and Terminations	✓									✓				✓	

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		- 25kV Sealing Ends	✓									✓				✓	
		- 25kV Cable Route Accessories (cleats, straps, hangers, trough, conduits etc)	✓													✓	
		- Red Bonds	✓									✓				✓	
		- Traction Return Current Bushbars	✓									✓				✓	
		- Return Screening Conductor & Associated Accessories	✓									✓				✓	
		- General Purpose Earth Cabling	✓									✓				✓	
		Procedural Equipment															
		- Live Line Testers	✓									✓				✓	
		- Safety Signage	✓													✓	
		- Portable Earth & Poles	✓									✓				✓	
		Overhead Line															
		- Contact Wire	✓												1	✓	
		- Catenary Wire	✓												1	✓	
		- Droppers & Jumpers	✓									✓			1	✓	
		- Insulators	✓									✓			1	✓	
		- Railway Specific OLE Wires	✓												1	✓	
		- Neutral Sections	✓									✓				✓	

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		- Insulated Overlaps	✓									✓				✓	
		- Section Insulators	✓									✓				✓	
		- Sealing Ends	✓									✓				✓	
		- Secondary Insulation	✓									✓				✓	
		- Tensioning Equipment	✓									✓		1	✓		
		- Support & Registration Equipment	✓									✓		1	✓		
		- Conductor Beams & Associated Equipment	✓									✓		1	✓		
		- APC Magnets & Equipment	✓									✓		1	✓		
		▪ DC TRACTION POWER:															
		DC Switchgear															
		- Traditional AIS Assemblies	✓									✓				✓	
		- Solid Insulated Switchgear Assemblies	✓									✓				✓	
		- Circuit Breakers	✓									✓				✓	
		- Disconnectors	✓									✓				✓	
		- Short Circuiting Devices	✓									✓				✓	
		- Motorised & Manual Switch Mechanisms	✓									✓				✓	
		- Controlled Track Isolators	✓									✓				✓	

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			Controlled	Uncontrolled	Controlled limited criticality	Signalling	Electrification	Plant	Telecoms	Track	S&C	EMC	Ergonomics	Occupational Safety	SQA Rating		DFR Review
		- Critical Sensors (position feedback, gas pressures)	✓									✓				✓	
		- Fuses	✓													✓	
		- Surge Arrestors	✓													✓	
		DC Auxiliary Equipment															
		- Impedance Bonds	✓									✓				✓	
		- Track Current Relays	✓									✓				✓	
		DC Instrumentation															
		- Protection Class Current Transformers	✓									✓				✓	
		- Protection Class Voltage Transformers	✓									✓				✓	
		- Other Instrument Transformers	✓									✓				✓	
		Transformers & Rectifiers															
		- Power Transformers & Rectifiers	✓									✓				✓	
		- Auxiliary Transformers	✓									✓				✓	
		DC Power Distribution															
		- DC Bushbars	✓									+				✓	
		- DC Cable (inc rectifier return cables)	✓									✓				✓	
		- DC Cable Joints & Terminations	✓									✓				✓	

Product Group	Asset Owning Discipline	Examples				Affected Engineering disciplines or other Business Functions								SQA & DFR		Comments	
			Controlled	Uncontrolled	Controlled limited criticality	Signalling	Electrification	Plant	Telecoms	Track	S&C	EMC	Ergonomics	Occupational Safety	SQA Rating		DFR Review
		- DC Cable Sealing Ends	✓									✓				✓	
		- DC Cable Route Accessories (cleats, trough, conduit etc)	✓													✓	
		- Red Bonds	✓									✓				✓	
		- General Purpose Earth Cabling	✓									✓				✓	
		Procedural Equipment															
		- Live Line Testers	✓									✓				✓	
		- Safety Signage	✓									✓				✓	
		- Conductor Rail Shields	✓									✓				✓	
		- Portable Earthing & Straps	✓									✓				✓	
		Conductor Rail															
		- Conductor Rail Connectors, Cable Terminations, Fishplates, Base Plates, Anchors	✓												1	✓	
		- Insulators	✓									✓			1	✓	
		- Baseplates	✓											1	✓		
		AC/DC INTERFACE & SPECIFIC EQUIPMENT:															
		Interface Hardware															
		- Isolation Transformers	✓									✓				✓	
		- Isolation Transformers Return Current Switches	✓									✓				✓	

Product Group	Asset Owning Discipline	Examples				Affected Engineering disciplines or other Business Functions								SQA & DFR		Comments	
			Controlled	Uncontrolled	Controlled limited criticality	Signalling	Electrification	Plant	Telecoms	Track	S&C	EMC	Ergonomics	Occupational Safety	SQA Rating		DFR Review
		- Voltage Limiting Devices	✓									✓				✓	
		- Switch Contactor Suites	✓									✓				✓	
		- Non Linear Resistors	✓													✓	
		▪ 3 PHASE HIGH VOLTAGE (>1kV) AC:															
		Traction Power Switchgear															
		- SMOS Assemblies	✓									✓				✓	
		- GIS Assemblies	✓									✓				✓	
		- Containerised AIS Assemblies	✓									✓				✓	
		- Traditional AIS Assemblies	✓									✓				✓	
		- Circuit Breakers	✓									✓				✓	
		- Disconnectors	✓													✓	
		- Earth Switches	✓													✓	
		- Motorised & Manual Switch Mechanisms	✓													✓	
		- Critical Sensors (position feedback, gas pressures)	✓													✓	
		- Fuses	✓													✓	
		- Surge Arrestors	✓													✓	
		Non-Traction Power Switchgear															
		- SMOS Assemblies	✓									✓				✓	

Product Group	Asset Owning Discipline	Examples	Affected Engineering disciplines or other Business Functions											SQA & DFR		Comments	
			Controlled	Uncontrolled	Controlled limited criticality	Signalling	Electrification	Plant	Telecoms	Track	S&C	EMC	Ergonomics	Occupational Safety	SQA Rating		DFR Review
		- GIS Assemblies	✓									✓				✓	
		- Containerised AIS Assemblies	✓									✓				✓	
		- Traditional AIS Assemblies	✓									✓				✓	
		- Circuit Breakers	✓									✓				✓	
		- Disconnectors	✓													✓	
		- Earth Switches	✓													✓	
		- Motorised & Manual Switch Mechanisms	✓													✓	
		- Critical Sensors (position feedback, gas pressures)	✓													✓	
		- Fuses	✓													✓	
		- Surge Arrestors	✓													✓	
		Auxiliary Equipment															
		- Harmonic Filters & Passive Components (inductors, capacitors)	✓									✓				✓	
		- Power Quality Equipment	✓									✓				✓	
		- Auto-tap Changers	✓									✓				✓	
		Instrumentation															
		- Protective Class Current Transformers	✓									✓				✓	
		- Protection Class Voltage Transformers	✓									✓				✓	

Product Group	Asset Owning Discipline	Examples				Affected Engineering disciplines or other Business Functions								SQA & DFR		Comments	
			Controlled	Uncontrolled	Controlled limited criticality	Signalling	Electrification	Plant	Telecoms	Track	S&C	EMC	Ergonomics	Occupational Safety	SQA Rating		DFR Review
		- Other Instrument Transformers	✓									✓				✓	
		Transformers															
		- Power Transformers	✓									✓				✓	
		- Auxiliary Transformers	✓									✓				✓	
		Power Distribution															
		- Busbars	✓													✓	
		- Termination Assemblies (bushings, plugs & sockets e.g. pfisterer type, cable boxes)	✓													✓	
		- Cable	✓													✓	
		- Cable Joints & Cable Terminations	✓													✓	
		- Cable Sealing Ends	✓													✓	
		- Cable Route Accessories (cleats, straps, hangers, trough, conduit etc)	✓													✓	
		- General Purpose Earthing Equipment	✓									✓				✓	
		▪ PROTECTION CONTROL & AUXILIARIES:															
		Protection Control & Auxiliary Equipment															
		- Protection Relay/ Intelligent Electronic Devices (inc but not limited to distance/ impedance,	✓									✓				✓	

Product Group	Asset Owning Discipline	Examples				Affected Engineering disciplines or other Business Functions								SQA & DFR		Comments	
			Controlled	Uncontrolled	Controlled limited criticality	Signalling	Electrification	Plant	Telecoms	Track	S&C	EMC	Ergonomics	Occupational Safety	SQA Rating		DFR Review
		bay control, feeder, unit, transformer differential) for 3 Phase Applications															
		- Protection Relay/ Intelligent Electronic Devices (inc but not limited to distance/ impedance, bay control, feeder, unit, transformer differential, frame leakage) For DC or 25kV Single Phase Applications	✓									✓					✓
		- Phasor Measurement Units (PMUs)	✓									✓					✓
		- Remote Terminal Units (RTUs)	✓									✓					✓
		- SCADA Cabinets & Assemblies, Racks, Screens/ Monitors, System Routers, System VOIP elements	✓						✓			✓					✓
		- Processors & Firmware	✓														✓
		- Analog & Digital IO Modules	✓														✓
		- Switchgear Control Modules	✓														✓
		- Power Supply Equipment	✓									✓					✓
		- HMI Displays	✓														✓
		- GPS Clocks & Associated Equipment	✓														✓
		- Communications Modules (e.g. ethernet cards)	✓						✓								✓

Product Group	Asset Owning Discipline	Examples				Affected Engineering disciplines or other Business Functions									SQA & DFR		Comments
			Controlled	Uncontrolled	Controlled limited criticality	Signalling	Electrification	Plant	Telecoms	Track	S&C	EMC	Ergonomics	Occupational Safety	SQA Rating	DFR Review	
		- Modems	✓						✓							✓	
		- Elements	✓													✓	
		- Point to Point Controllers	✓													✓	
		- Remote Condition Monitoring Equipment	✓								✓					✓	
		- Asset Management Equipment (e.g. cable theft monitors)	✓								✓					✓	
		- Master Station Equipment	✓								✓					✓	
		- Workstations	✓													✓	
		- Control/ Operating System Software	✓													✓	
		- Configuration Software	✓													✓	
		- Configuration Management Tools	✓													✓	
		- Insulation Monitors	✓													✓	
		- Auto-reconfiguration Systems	✓													✓	
		- Fault Locators	✓													✓	
		- Equipment Interfacing to Intelligent Infrastructure	✓													✓	
		- Uninterruptible Power Supplies	✓													✓	
		- Batteries & Battery Chargers	✓													✓	
		- Building Services Equipment (LVAC, air conditioners, heating, ventilation etc)	✓								✓					✓	

Product Group	Asset Owning Discipline	Examples				Affected Engineering disciplines or other Business Functions								SQA & DFR		Comments	
			Controlled	Uncontrolled	Controlled limited criticality	Signalling	Electrification	Plant	Telecoms	Track	S&C	EMC	Ergonomics	Occupational Safety	SQA Rating		DFR Review
		<ul style="list-style-type: none"> ▪ SIGNALLING POWER SUPPLIES: 															
		Switchgear															
		- FSP 01, 02, 03 or 04 Assemblies	✓									✓				✓	
		- 650V Switchgear for Class 1 Assemblies	✓									✓				✓	
		- 650V Switchgear for Class 2 Assemblies	✓									✓				✓	
		- 230 & 400V Three Phase Switchgear	✓									✓				✓	
		- LV AC Changeover Panels (e.g. for PSPs)	✓									✓				✓	
		- Power Pedestals	✓									✓				✓	
		- Cabinets & Enclosures of Insulating Construction or for Outdoor use	✓									✓				✓	
		- General Purpose Cabinets, Enclosures & Cubicles for Indoor use	✓									✓				✓	
		- Distribution Feeder Soft-Start Equipment	✓									✓				✓	
		- Fixed-Charismatic Protective Devices	✓									✓				✓	
		- Transient Voltage and Surge Suppressors	✓									✓				✓	

Product Group	Asset Owning Discipline	Examples				Affected Engineering disciplines or other Business Functions								SQA & DFR		Comments	
			Controlled	Uncontrolled	Controlled limited criticality	Signalling	Electrification	Plant	Telecoms	Track	S&C	EMC	Ergonomics	Occupational Safety	SQA Rating		DFR Review
		Signalling Power Transformers & Transformer Rectifiers															
		- Transformers up to 10kVA for Signalling Loads	✓									✓				✓	
		- Transformers over 10kVA for Signalling Loads	✓									✓				✓	
		- Transformers for non-critical Applications	✓									✓				✓	
		- Transformer Rectifiers for Signalling Loads	✓									✓				✓	
		- Distribution Interface Transformer Assemblies	✓									✓				✓	
		Signalling Power Cabling															
		- Enhanced Unarmoured Cables	✓									✓				✓	
		- Cable Joints & Terminations for Enhanced Unarmoured Cables	✓													✓	
		- Conduit & Glands constituting part of the Insulation for Enhanced Unarmoured Cables	✓													✓	
		- Cable & Route Accessories (cleats, Trough etc)	✓													✓	
		- Bimetallic Cable Connectors, Crimps, Lugs	✓													✓	
		- Other 600/1000V Cables & Accessories	✓									✓				✓	

Product Group	Asset Owning Discipline	Examples				Affected Engineering disciplines or other Business Functions								SQA & DFR		Comments	
			Controlled	Uncontrolled	Controlled limited criticality	Signalling	Electrification	Plant	Telecoms	Track	S&C	EMC	Ergonomics	Occupational Safety	SQA Rating		DFR Review
		Other Signalling Power Components															
		- Standby & Emergency Diesel Generator sets for Principal Supply Points	✓									✓				✓	
		- Mobile Generators for Emergency Repairs	✓									✓				✓	
		- Earth Electrodes & Associated Components	✓									✓				✓	
		- Earth Busbars	✓													✓	
		▪ RAIL HEATING:															
		DNO Supplies															
		- Isolation Transformers	✓													✓	
		- Switchgear	✓													✓	
		- Enclosures	✓													✓	
		Conductor Rail Heating & Points Heating															
		- Cables	✓									✓				✓	
		- Heating Strips	✓									✓				✓	
		- Controllers	✓									✓				✓	
		- Transformers	✓									✓				✓	
		- Enclosures	✓									✓				✓	

Product Group	Asset Owning Discipline	Examples				Affected Engineering disciplines or other Business Functions								SQA & DFR		Comments			
			Controlled	Uncontrolled	Controlled limited criticality	Signalling	Electrification	Plant	Telecoms	Track	S&C	EMC	Ergonomics	Occupational Safety	SQA Rating		DFR Review		
		<ul style="list-style-type: none"> ▪ OTHER LV POWER SUPPLIES: Switchgear - 230/400V Components - Equipment & Assemblies CE Marked to the LV Directive & Conforming to BS EN 61439 General LV use - Fuses - Over-voltage Devices - Enclosures ▪ ELECTRICAL POWER - OTHER: - Small Part Steelwork (SPS) including Bolt, Adaptor Plate, Washer, Studs, Tie Rod, Spacer, Fixing clip, Nut, Clamping Plate, Retaining Cap - Operational Lighting 																	
2 a	Non-railway specific infrastructure components conforming to British or European	SIGNALLING - Signalling equipment not covered by Group 1 - UPS (TPWS applications)	✓														✓	Operational applications within the scope of the relevant British or European Standards and where in	
		TRACK - Railway ballast	✓														✓		
		TELECOMS - Equipment to be used in sub-surface stations	✓														✓		

Product Group	Asset Owning Discipline	Examples				Affected Engineering disciplines or other Business Functions								SQA & DFR		Comments	
			Controlled	Uncontrolled	Controlled limited criticality	Signalling	Electrification	Plant	Telecoms	Track	S&C	EMC	Ergonomics	Occupational Safety	SQA Rating		DFR Review
Standards	ELECTRIFICATION	- HV Cables, Non-railway specific Earthing & Bonding components (e.g. cable terminations, red bond boxes)	✓													✓	addition there are railway specific requirements or risks not covered by the British or European Standard.
		- Electrification signage	✓													✓	
		- Battery Chargers and Batteries (including DC distribution and non-traction applications)	✓													✓	
		- Low Voltage (LV) -AC Panels	✓													✓	
		- 3-phase HV cabling, joints and terminations	✓													✓	
		- Cable route materials for Electrical power use i.e. Troughing	✓													✓	
		- UPS power supply conditioning equipment	✓													✓	
		- DNO cubicles	✓													✓	
		- UPS (above 10kVA rated)	✓									✓				✓	
		- Electronic Protection Relays (EPR) for principle Supply Point (PSP) applications	✓													✓	
		- Insulation Monitors	✓													✓	
		- Non-railway specific overhead line conductors & wires	✓									✓				✓	
		- Pilot Cables	✓													✓	
		- Generators	✓													✓	

Product Group	Asset Owning Discipline	Examples				Affected Engineering disciplines or other Business Functions								SQA & DFR		Comments			
			Controlled	Uncontrolled	Controlled limited criticality	Signalling	Electrification	Plant	Telecoms	Track	S&C	EMC	Ergonomics	Occupational Safety	SQA Rating		DFR Review		
		PLANT	- Raise/lower Lighting columns			✓													
			- CCTV winches			✓													
2 b	Operational applications within scope of the relevant British or European Standards <i>(Excludes: Equipment to be used in a sub-surface station and telecoms operational cables, HV (>1kV) and DC traction feeder cables, signalling power supply transformers)</i>	SIGNALLING	- Mileposts		✓														
		ELECTRIFICATION	- OLE Structure plates		✓														
			- Eyebolt for lifting Impedance Bond		✓														
			- Cable Identification sleeves		✓														
			- Low Voltage (LV) Signalling Power Supply cables		✓														
			- Power Distribution systems		✓								✓						
			- Transformer Specific relays		✓														
			- Cable types to BS5467 and BS6724 (Cu or Al) either with additional marking or without		✓														
			- 400V & 230V LV cabling		✓								✓						
			- Earth cabling (below 1kV applications)		✓								✓						
- Lighting control kiosk and switchgear		✓																	
3 a	Non-railway specific standard building materials conforming to	TRACK	- Sealing Ring for Track Drainage		✓														
		S&C SYSTEMS	- A standard Bolt to replace a missing bolt in a point Assembly	✓													✓		
			- Washer for use on RT60 S&C	✓													✓		

Product Group		Asset Owning Discipline	Examples	Affected Engineering disciplines or other Business Functions											SQA & DFR		Comments				
				Controlled	Uncontrolled	Controlled limited criticality	Signalling	Electrification	Plant	Telecoms	Track	S&C	EMC	Ergonomics	Occupational Safety	SQA Rating	DFR Review				
3 b	recognised British or European Standards	ELECTRIFICATION	- Fuses	✓													✓	product			
		VARIOUS	- Screws, nails, cement, bricks, shovel, pliers, studs		✓														Any application not covered by 3a		
4 a	Powered tools and equipment		- TI21 frequency selective meters	✓									✓				✓	Intended to be used on a Group 1 or 2a product that could be adversely affected if the tool or equipment is not fit for purpose			
			- Simulators	✓															✓		
			- Rail drills	✓					✓		✓				✓					✓	
			- CAT scanning equipment	✓				✓		✓				✓						✓	
			- Rail stressing equipment	✓						✓		✓			✓					✓	
			- Test equipment			✓								✓							
			- Diagnostic tools			✓															
			- Design tools			✓															
			- Data loggers and Condition monitoring equipment			✓															
			- Drop shunt boxes	✓																✓	
			- Measuring Probe			✓															
			- Thermometers			✓															
			- Multimeters			✓															
			- Insulation testers			✓				✓											
	- Protection relay injection test sets	✓															✓				

Product Group		Asset Owning Discipline	Examples	Affected Engineering disciplines or other Business Functions											SQA & DFR		Comments			
				Controlled	Uncontrolled	Controlled limited criticality	Signalling	Electrification	Plant	Telecoms	Track	S&C	EMC	Ergonomics	Occupational Safety	SQA Rating	DFR Review			
4 b			- Pressure test sets for cable/switchgear testing + accessories	✓				✓									✓			
			- Trip coil testers and TPWS meter	✓			✓											✓		
		PLANT	- Grinders (hand tool type & pedestal)		✓							✓								Proprietary equipment which is not railway specific or not covered by Group 4a
			- Static Lamp		✓															
			- Total Station instruments (Theodolites)		✓															
			- Laser Scanners (scanning or mapping)		✓															
		VARIOUS	- Thermometers, Multimeters and Insulation testers not intended for use on a Group 1 or 2a product		✓															
5 a	Non-powered tools and equipment	SIGNALLING	- AWS S&P indicator	✓													✓	Intended to be used on a Group 1 or 2a product that could be adversely affected if the tool is not fit for purpose		
		TRACK	- Track gauge	✓													✓			
		ELECTRIFICATION	- OLE Live Line indicator/testers/gauges/tools	✓															✓	
			- OLE Height & Stagger Gauges	✓															✓	
		PLANT	- lifting accessories when used on Group 1 or 2 products	✓											✓	✓			✓	
			- Non-proprietary insulated tools	✓											✓	✓			✓	
			- Tensionmeter	✓					✓							✓			✓	
- OLE Height sticks	✓						✓							✓		✓				

Product Group	Asset Owning Discipline	Examples				Affected Engineering disciplines or other Business Functions								SQA & DFR		Comments	
			Controlled	Uncontrolled	Controlled limited criticality	Signalling	Electrification	Plant	Telecoms	Track	S&C	EMC	Ergonomics	Occupational Safety	SQA Rating		DFR Review
		- Insulated tools for use on or in the vicinity of DC Conductor Rail, Ladders used near live OLE	✓				✓							✓	✓		
5 b		- DC Ramper		✓													
		- Ratchet Podger Tools		✓													
		- Hand Tools (Hammers, screwdrivers, spanners, shovels).		✓													
		- Proprietary Laser Distance Measuring device		✓													
		- Measuring Wheels		✓													
		- Proprietary Lifting accessories e.g. Hooks, Chains Slings		✓													
		- Insulated tools		✓													
		- Torque wrench			✓												
		- Temporary pulleys		✓													
		- Ladders not being used near live OLE		✓													
		- Depot only Tools (mechanical & electrical)		✓													
		VARIOUS	- Personal Protective equipment (PPE)		✓												
		- Fencing		✓													

Any application not covered by Group 5a

Generally, these do not require acceptance however section 5a will apply in cases where their use/application will directly affect the performance of the railway.

Product Group	Asset Owning Discipline	Examples	Affected Engineering disciplines or other Business Functions											SQA & DFR		Comments				
			Controlled	Uncontrolled	Controlled limited criticality	Signalling	Electrification	Plant	Telecoms	Track	S&C	EMC	Ergonomics	Occupational Safety	SQA Rating		DFR Review			
6 a	On Track Plant (OTP) - Road Rail Vehicles (RRV) and Rail Mounted Maintenance Machines (RMMM) and associated attachments	PLANT	▪ OTP (On Track Plant)																	
			- Sleeper Laying Machine	✓									✓	✓	✓		✓			
			- S&C unit lifting equipment	✓									✓	✓	✓		✓			
			- Mobile Flash butt Welder	✓							✓	✓	✓	✓	✓		✓			
			- Sleeper Adjuster	✓							✓		✓	✓	✓		✓			
			- Clipping Machine	✓							✓		✓	✓	✓		✓			
			- Rail Lifter	✓							✓		✓	✓	✓		✓			
			- RRV Attachments (Augers, Profile Blades, Ballast Excavator, Ballast Ploughs, Bowsers, Buckets, Ballast Plough, Cable Drum Carriers, Chains & Slings, Compactor Plates, Flails, Grabs, Hydraulic Breakers, Knuckle Boom Cranes, Piling Hammers & Heads, Quick Hitch, Ripper Tooth, Rotators, Scarifiers, Hand Tampers, Thimbles, Tilt Rotators, Trailers, Tree Cutting Head, Vacuum Lifter, Vacuum Excavator, Wood Chipper)	✓										✓	✓	✓		✓		
			- MEWP Attachments	✓										✓	✓			✓		
- Tilting Wagons	✓										✓	✓			✓		Transporting or			

Product Group	Asset Owning Discipline	Examples				Affected Engineering disciplines or other Business Functions								SQA & DFR		Comments		
			Controlled	Uncontrolled	Controlled limited criticality	Signalling	Electrification	Plant	Telecoms	Track	S&C	EMC	Ergonomics	Occupational Safety	SQA Rating		DFR Review	
6 b		- Rail Head Scrubbing Machine	✓								✓			✓	✓			moving people or other equipment, or other application not covered by Group 6a
		- Mobile Elevated Work Platforms (MEWP)	✓				✓						✓	✓				
		- Powered trolleys	✓										✓	✓				
		- RRV fitted with a flail (note: the flail is a Group 4b product)	✓							✓			✓	✓				
		- Portable Road Rail Access Platform	✓							✓			✓	✓				
		- Track Access System	✓							✓			✓	✓				
7	On Track Machines (OTM) and associated attachments.	▪ OTM (On Track Machines)																Automated installation, maintenance, inspection or monitoring of a Group 1 or 2a product
		- Ballast Cleaners	✓							✓			✓	✓				
		- Tampers	✓							✓			✓	✓				
		- Rail Cutting Machine	✓							✓			✓	✓				
		- Excavation Machine	✓							✓			✓	✓				
		- Maintenance Machines (MMT)	✓							✓			✓	✓				
8	Manually propelled powered Equipment	• Manually propelled powered Equipment																Intended to be used on a Group 1 or 2a product that could be adversely affected if the tool is not fit for purpose
		- Rail grinders	✓							✓		✓	✓	✓				
		- Cutters	✓							✓		✓	✓	✓				
		- Profile grinder	✓							✓		✓	✓	✓				
		- Rail Head Cleaner	✓							✓			✓	✓				
		- Track Jack	✓							✓			✓	✓				

Product Group		Asset Owning Discipline	Examples	Affected Engineering disciplines or other Business Functions											SQA & DFR		Comments	
				Controlled	Uncontrolled	Controlled limited criticality	Signalling	Electrification	Plant	Telecoms	Track	S&C	EMC	Ergonomics	Occupational Safety	SQA Rating	DFR Review	
			- Rail Stressing equipment	✓							✓			✓	✓		✓	
			- Rail Clip remover	✓							✓		✓	✓	✓		✓	
			- Sleeper Replacer	✓							✓		✓	✓	✓		✓	
			- Rail Welding Machine	✓							✓		✓	✓	✓		✓	
9	Manually propelled non powered Equipment		<ul style="list-style-type: none"> Manually propelled powered Equipment 	✓													✓	
			- Hand trolleys	✓										✓	✓		✓	
			- iron man trolley	✓										✓	✓		✓	
			- rail skates etc	✓										✓	✓		✓	
10	Non rail mounted plant or machinery		<ul style="list-style-type: none"> Non Rail Mounted Plant or Machinery 															
			- Chippers			✓												
			- Dozers			✓												
			- Cranes			✓												
			- Scaffold towers			✓								✓				
			- Mower			✓												
11	Equipment fitted to a Group 10 product.		<ul style="list-style-type: none"> Equipment fitted to a Non Rail Mounted Plant or Machinery 															
			- Lifting Beam	✓											✓		✓	
			- Crane Fork	✓											✓		✓	

Abbreviations

AWS = Advanced Warning system
CAT = Cable Avoidance tool
DC = Direct current
AC = Alternating current
CCTV = Closed Circuit television
CIS = Customer Information system
DCPI = DC Polar Moving Iron
DFR = Design For Reliability (refer to standard NR/L2/RSE/0005 for further details).
DNO = Distribution Network operator
DOO = Driver-only operation
FTN = Fixed Telecoms network
FPL = Facing Point Lock
GSM-R = Global system for Mobile railway
HV = High voltage
IC = Interoperable Constituent
IECC = Integrated Electronic Control centre
ISDN = Integrated Services Digital network
kV = Kilo volts
LV = Low voltage
OLE = Overhead Line equipment
OTM = On Track Machine
OTP = On Track Plant
PA = Public Address
PETS = Public Emergency Telephone system (PETS)
SCADA = Supervisory Control and Data acquisition
SkV-E = Welding process
S&C = Switches & Crossings
SISS = Station Information & Security Systems
SQA = Supplier Quality Assurance
TA = Technical Authority
TI21 = Type of track circuit
TPWS = Train Protection Warning system
VDU = Video Display unit
UPS = Uninterruptible Power supply (UPS)
VOIP = Voice Over Internet protocol
DWDM = Dense wavelength division multiplexing
SFP = Small Form-factor Pluggable (optical transceiver module)
DSL = Digital Subscriber Line
MODEM = Modulator-Demodulator