

## Standards Challenge Applications (December 2024)

ID	Date Received	Standard Challenged	Primary Standards Steering Group	Subject	Simplified Summary of Challenge	Current Process Stage
STDCHAL-000016	19/06/2018	NR/L2/TRK/0133	Track	Wheel Impact Load Detection	Controls applied to trains following measurement of forces at Wheel Impact Load Detection (WILD) sites.	In Progress
STDCHAL-000194	04/01/2022	NR/L3/TRK/002	Track	Various - Standard "out of date"	Update Standard	In Progress
CHL/5						
CHL/7						
CHL/8						
CHL/31						
CHL/35						
CHL/46	11/08/2023	NR/L2/ELP/27715	Electrical Power	Testing of voltage proving devices	A simple specification for test cages added to the document with desirable geographical distances between test cages.	In Progress
CHL/49	06/09/2023	NR/L2/SIG/11201	Signalling	Assessment of infrastructure for climate change	Item added to the requirements in appendix A to review the placing of signalling equipment areas of known flood risk	In Progress
CHL/58	16/10/2023	NR/L1/ELP/27000	Electrical Power	EP-53 - Tensioning Arrangements	Clause to be changed from Amber to Green	In Progress
CHL/61	23/10/2023	NR/L2/TRK/6001	Track	Consideration of climate change and flood risk within problem statements	Section 8.3 list a) item 5 & appendix A "known problems" should be expanded to include flood risk to signalling assets affected by the planned renewals as defined by NR/L1/SIG/50021/04 item 3.4	Accepted to Revise Standard
CHL/71	21/02/2024	NR/L2/ELP/CTM015	Electrical Power	Medical restrictions for colour blindness	A separate module for reading drawings where blue, red and green are used to define the cable for scope of works.	In Progress
CHL/74	11/03/2024	NR/L3/TRK/003	Track	Clearances for Non structure apparatus stored lineside	Appendix 2 should be updated to include required clearances for scrap / stored rails and other apparatus such as tools which are left lineside	Accepted to Revise Standard
CHL/75						
CHL/77	21/03/2024	NR/L3/TRK/003	Track	Use of undefined acronyms in declaration	The current numerous undefined acronyms in declaration are updated with full text or properly written defined acronyms	Accepted to Revise Standard
CHL/85	24/04/2024	NR/L2/SIG/30009	Signalling	Shunt unrestricted has been used with calling-on class route for a lot of the examples.	Change the entry to refer to the correct class of route, Shunt Occupied (SO).	In Progress
CHL/87						
CHL/88						
CHL/94	20/05/2024	NR/L2/ELP/27716	Electrical Power	Sketch could introduce an element of uncertainty due to misalignment with BS EN 50119 (definition of HCW is defined i.e. as measured to datum point in standard but perpendicular to plane in BS EN 50119)	Minor revision to sketch	Accepted to Revise Standard
CHL/95						
CHL/96	29/05/2024	NR/L2/SIG/19812	Signalling	Clause 8.1, Clause 8.3 and Appendix B (Figure 3) is ambiguous	Clear and unambiguous text and correct cross referencing will reduce confusion, enhance understanding and avoid expensive design errors in detailed track designs	In Progress
CHL/97	04/06/2024	NR/L2/SIG/10160	Signalling	Clause 4.2.2	It is proposed to either: - change this clause from amber to green - allow a review with the PRE (similar to those being appointed as Responsible Signal Engineer) - re-write this clause to allow other controls	In Progress
CHL/103	05/07/2024	NR/L3/TRK/3510	Track	Frequency to maintain and inspect and refill the lubrication asset.	To extend the frequency on CAT 1A,1 & 2, from 56 days to 84 days.	Accepted to Revise Standard
CHL/105	11/07/2024	NR/L3/CIV/030	Buildings & Architecture	Clause 4.3	Tactile surfaces are detectable to the visually impaired, the tactile profiles must be above 3mm to be detected. A change in colour or geometry at the 3mm threshold is required to alert maintenance that the tactile surface is unsafe.	Not Proceed
CHL/106	22/07/2024	NR/L2/SIG/11201	Signalling	Number of requirements in Appendix H are also applicable to non SSI installations & so including them in Appendix H may mean the requirements/ guidance is not followed on non SSI schemes.	Review Appendix H & move some content to Appendix A. (note there is an error in section H6, the text for columns 1 and 2 is transposed compared to the example table in Table H.6.1)	In Progress
CHL/113	21/08/2024	NR/L2/TRK/2102	Track	Requirement to provide 2 sleepers of the same material and depth on each side of an ordinary fishplated joint.	Needs to be clear that it is not only insulated fishplates which require 2 sleepers of the same material and depth on each side, and that ordinary fishplated joints also carry this requirement.	Accepted to Revise Standard
CHL/118	09/10/2024	NR/L2/TRK/2102	Track	1) Phrasing of the standard is ambiguous which makes abiding by it difficult. The way the overlap is defined is unclear. 2) Reason given behind the clause is out of date.	1) 'changes in horizontal alignment should not overlap with changes in vertical alignment', should be rephrased as 'horizontal transition elements or horizontal virtual transitions should not overlap with vertical curves'. 2) 'this is to aid with setting out and the implementation of tamping designs', should be rephrased as 'this is related to passenger comfort'. Clause should be expanded to state when an overlap is present the Rate of change of cant & deficiency for the horizontal transition & the change in %g for the vertical curve should be in line with maximum values stated in TRK/2102 & TRK/2049.	Accepted to Revise Standard
CHL/120						
CHL/124	24/10/2024	NR/SP/ELP/21014	Electrical Power	Very Low Frequency (VLF) testing of High Voltage XLPE cables instead of DC testing.	A Technical (TI) or Special Change (LI) to clarify that VLF testing should be carried out instead of DC testing as this can shorten the life span of the cables.	More Information Required
CHL/127	08/11/2024	NR/L2/SIG/14201 - Signalling Risk Assessment Handbook [Issue 5]	Signalling	The SORAT programme.	Propose amending the programme to focus on risk based reassessment rather than time based.	In Progress
CHL/130	18/11/2024	NR/L3/CIV/151 - Application of Standard Designs and Details for Building and Civil Engineering Works [Issue 8]	Buildings & Civils	6.4.3 (Secondary Containment) 6.2 Fuse Connection- Form 6.3 Fuse Load Factors Clause 5.2-Use of Packing Shims 6.4.1 & 6.4.4-Enabling Safer Inspections Section 8- Repair/Maintenance	Various changes proposed. See Challenge for full list.	In Progress
CHL/131	18/11/2024	NR/L3/CIV/006 - Structures, Tunnels and Operational Property Examinations Manual [Issue 12]	Buildings & Civils	CPBs. Particular points of concerns are: -Beam -bracket bolted connections -Grouted anchors -Beam (Where designed as a fuse as per BD65/97 & BD65/14).	Examination Requirements for bridges with CPBs should be reflected in NR/L3/CIV/006/1A, NR/L3/CIV/006/1B and NR/L3/CIV/006/2D- Section 7. .  NR/L3/CIV/076/02 (As a requirement of Rapid Response Exams-CPB primary connections and any 'Structural Fuse' requires at least a visual examination)	Accepted to Revise Standard
CHL/132	19/11/2024	NR/L2/SIG/11201 - Signalling Design Handbook [Issue 20]	Signalling	Confusion around documentation under FED.	Clarification in alignment with Testing and Design Standards, the exact copies required for site to avoid any deviations between different Routes.	In Progress
CHL/133	20/11/2024	NR/L2/RMVP/27035 - Depot Protection Systems [Issue 2]	Rail Mounted Vehicle Plant	Entire depot protection system has to be brought up to compliance with the latest version of standard if any change is made.	Reword the scope so that only the changes made to the system need to comply with the current requirements of the standard. Also review some of the language used for example 'fitted for new'.	In Progress
CHL/134	22/11/2024	NR/L2/ELP/40068 - Principal Supply Point (DNO + DG) Specification [Issue 1]	Electrical Power	The autonomy time of 10mins is excessive and drives additional capital and operational costs for batteries and battery enclosures/rooms.	Reduction in autonomy figure either to a project specific value to be determined on a site by site basis considering the whole system, e.g. the supply and the operational load. Alternatively a revised figure of 5mins.	Accepted to Revise Standard
CHL/135	04/12/2024	NR/L2/SIG/11201 - Signalling Design Handbook [Issue 20]	Signalling	Form A' is a RED clause.	Design Remit Form A' should be removed from the red clause and made amber or green. This allows for proposed alternative forms to be produced.	Accepted to Revise Standard
CHL/136	05/12/2024	NR/L2/TRK/3204 - Gauging Management [Issue 1]	Track	The use of manually propelled track trollies with rotary laser profilers together with bespoke software to be used for gauging structures and platforms.	That the list of survey methods be expanded to include the use of approved track measuring devices (TMDs).	In Progress
CHL/137	09/12/2024	NR/L3/TRK/3510 - Rail Friction Management [Issue 3]	Track	Initial and final inspection frequencies.	Allow lubrication inspection frequencies to be set by risk, assessing the assets based on usage, maintenance history and reservoir capacity. The inspection frequencies can be pushed out from 56 or 91 to a maximum of 182 days when the evidence supports a longer inspection frequency.	Accepted to Revise Standard
CHL/138	09/12/2024	NR/L2/SIG/11201 - Signalling Design Handbook [Issue 20]	Signalling	Clause 10.1.2.	Clause be amended/updated to remove the requirement of 'SIL1 safety related' for the auto lower strike-in function. Or alternatively clear rationale is provided to demonstrate that the function is required to be safety related and at least SIL1.	In Progress
CHL/139	09/12/2024	NR/L2/SIG/11201 - Signalling Design Handbook [Issue 20]	Signalling	Clause 21.5.1 - ASM design.	Clause should be amended/updated to be more generic, specifying the objective of ensuring down detection integrity, reflecting the fact that there are multiple methods of achieving this.	Accepted to Revise Standard
CHL/140	10/12/2024	NR/L3/TRK/2049 - Track Design Handbook [Issue 14]	Track	Current definition of a green clause.	Update to the definition of green guidance.	Not Proceed
CHL/141	12/12/2024	NR/L2/RMVP/0200 - Infrastructure Plant Manual [Issue 13]	Rail Mounted Vehicle Plant	Crane Operator competence training.	An extension to the implementation of this clause to enable time for compliance requirements to be met.	Not Proceed
CHL/142	12/12/2024	NR/L2/TRK/0032 - Joining Of Rails By Aluminothermic Welding [Issue 7]	Track	Aluminothermic welds shall be inspected within 4 weeks of casting by a qualified inspector.	Reduce the requirement for the final weld inspection for ALL cast welds, only 50% of welds cast require a final inspection.	Accepted to Revise Standard

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CHL/143	17/12/2024	NR/L2/SIG/11201 - Signalling Design Handbook [Issue 20]	Signalling	TSR/ESR designs being carried out by NR staff with a central register for UK wide designs. There is a danger that TSRs are issued with a duplicate number.	Standard is overly prescriptive, should state that each TSR and ESR design is given a unique number.	In Progress
CHL/144	17/12/2024	NR/L2/SIG/11201 - Signalling Design Handbook [Issue 20]	Signalling	Nature of the requirements for an equipment table on TSR and ESR designs.	Some flexibility in the requirements for and equipment list that would allow TSR and ESR designs to be relevant to a client's requirements. The layout provides the running order, intent and mileages, so it should be unnecessary to repeat this in the equipment list.	In Progress
CHL/145	17/12/2024	NR/L3/CIV/020 - Design of Bridges [Issue 1]	Buildings & Civils	Contradiction this standard and TRK/2102 re minimum ballast depth.	1) Update CIV/020 to align with minimum ballast depths required in TRK/2102; OR 2) Update TRK/2102 to quote minimum ballast depth required by CIV/020 at new underline structures.	Accepted to Revise Standard
CHL/146	19/12/2024	NR/L2/OHS/003 - Fatigue Risk Management [Issue 9]	Workforce Safety	Use of a calculator as part of fatigue management.	Allow contractors to maintain their own RISQS approved methodology as per the guidance issued by the ORR - the calculator is neither specific to rail nor the individual nature of contractor works (all jobs are different levels of risk, which by law the employer MUST be assessing anyway (this is identified in the new ORR guidance too)	Not Proceed
CHL/148	27/12/2024	NR/L2/ELP/27716 - Electrical and mechanical clearances on overhead electrified railways [Issue 1]	Electrical Power	Unnecessary complexity	Refers to a standard that is not available for general access and the value in question therefrom (3925mm) as quoted is not relevant to standard NR infrastructure. Also, EHQ/ST/O/003 & NR/L2/ELP/2721 could be superseded or merged (as appropriate) into 21088 mod 06.	Not Proceed
CHL/149	03/01/2025	NR/L2/TRK/2500 - Engineering Assurance Arrangements for the Design and Construction of Track [Issue 4]	Track	Acceptance of single option at end of ES3.	NR/L2/TRK/2500 be updated to include a mandatory requirement for Regional Engineer acceptance of the selected option at ES3 and an associated Track Engineer Form (TEF) to record the acceptance.	Accepted to Revise Standard
CHL/150	06/01/2025	NR/L2/OTK/5100 - Boundary Measure Management Manual [Issue 5]	Off Track	Alternative approach - improvement of design by providing an environmentally friendly and reduced manual handling weight option to the current standard concrete foundation.	A hydrophobic polyurethane foam, to be identified as an alternative option to the standard postmix concrete that is currently identified.	In Progress
CHL/151	07/01/2025	NR/L2/OHS/020 - Track Visitor Permits (formerly RT/LS/S/020) [Issue 5]	Workforce Safety	Section 8c) and Section 8b) - live conductor rails.	Section 8c) Minor work in Red Zones states "here shall be no live conductor rails at the site of work;" There may be scenarios within Section 8b) Specialist or Minor work in Green Zones where there is a live DC Floater present within a green zone.  Section 8b should additionally state that no work should take place in and around the live DC Floater where staff are undertaking an activity.	Accepted to Revise Standard
CHL/152	08/01/2025	NR/L2/ELP/27716 - Electrical and mechanical clearances on overhead electrified railways [Issue 1]	Electrical Power	Magnetic field limit of 360uT	Clarify that the 360uT shall be used only in areas where general public has access to. In all other areas, where only occupational exposure is expected the 1000 uT limit (from the RSSB document) should be used.	Accepted to Revise Standard
CHL/153	10/01/2025	NR/L3/ELP/27720 - Test Before Touch for Overhead Line Equipment [Issue 1]	Electrical Power	Change of Method (2) requested (to Method 4) on planned works without consultation with supplier.	Method 4 should either be removed or made more robust and stipulate that it is only to be used in emergencies or if anything has changed on the shift and not for planned work.	In Progress
CHL/154	14/01/2025	NR/L2/SIG/11201 - Signalling Design Handbook [Issue 20]	Signalling	Guidance for designers regarding the provision of dark mode control circuits.	Standard to include guidance as follows: For level crossings with continuous train detection conditions b) and c) are appropriate ie. controls require b) or c). For level crossings without continuous train detection conditions a) and b) are appropriate ie. controls require a) or b).	Accepted to Revise Standard
CHL/155	17/01/2025	NR/L3/SIG/10663 - Signal Maintenance Specifications [Issue 18]	Signalling	Red Clause - Gearbox must be replaced following run through before the HPSA is returned to service.	Consideration is made for trailing points, provided some criteria are met relating to management of related defects, to allow for a time bound return to service ahead of gear box replacement	Accepted to Revise Standard
CHL/156	29/01/2025	NR/L2/RSE/02009 - Engineering Management for Projects [Issue 8]	Systems Engineering	NR Specific forms.	The use of NR Specific forms means duplicating a Contractor form that has the same info as the NR forms. Use the best form for the job from either organisation, with NR countersigning for acceptance if the Contractor Forms are used	Accepted to Revise Standard
CHL/157	04/02/2025	NR/L3/TRK/2049 - Track Design Handbook [Issue 14]	Track	Definition of the Principle of Virtual Transition.	The definition makes reference to "angular velocity". This parameter is not used in Track Design and has no relevance for the variation of the lateral acceleration (and hence of the cant deficiency) around the point of spot curvature change. The definition is misleading and geometrically incorrect.  Replacement of this rule with EN norm equivalent.	In Progress
CHL/158	04/02/2025	NR/GN/CIV/200 - Station Design Manual [Issue 10]	Buildings & Architecture	Guidance contradicts with the requirements of the Persons of Reduced Mobility National Technical Specification Notice (PRM NTSN (2021)).	Grid sizes are mandated by BS EN 12464, not 'recommended' as stated, and the guidance should include that 'if the ratio of the longer to the shorter side is 2 or more then becomes the shorter dimension of the area as stated in BS EN 12464 parts 1 and 2. The implications of this are significant as for a 100 m long platform (4 m wide), then the grid size would be 5 m incorrectly using d = 100 m instead of the maximum grid size being 0.4 m using d = 4 m. The final paragraph of 6.2.3 states: For platforms, it is recommended that illuminance measurements should be taken using a 1.0 m x 1.0 m grid across a platform and along its length. This is contradictory to the earlier NR guidance on grid sizes and is non-compliant with the requirements of the PRM NTSN as the platform width would be required to be at least 10 m wide for a 1.0 m grid size.	In Progress
CHL/159	04/02/2025	NR/L3/TRK/2049 - Track Design Handbook [Issue 14]	Track	Math rules introduced in 2015 from the old handbook No 3, referring to how to manage short segments of elements between curves.	Removal of the entire section of the standard that was copied from Handbook No 3 and were not present in the previous version of TRK2049 - issue 12 - June 2010.	In Progress
CHL/160	04/02/2025	NR/L2/TRK/2102 - Design and Construction of Track [Issue 12]	Track	Section 5.11 Switches and crossings	Cant deficiency. Removal of Note 4.	In Progress
CHL/161	05/02/2025	NR/L3/TRK/2049 - Track Design Handbook [Issue 14]	Track	The Tables that define the Standard Circular Curve turnouts.	Reconsider limits and align with international practice.	In Progress
CHL/162	05/02/2025	NR/L2/TRK/2102 - Design and Construction of Track [Issue 12]	Track	Virtual Transition.	The standard should make a clear difference between the alignment element where the curvature changes - the spot radius change - and the calculation method.	In Progress
CHL/163	06/02/2025	NR/L3/TRK/2049 - Track Design Handbook [Issue 14]	Track	Switches - Effective Radius	Remove the section Switches - Effective Radius from the standard. Remove any reference to calculating a "theoretical cant deficiency" using this method.	In Progress
CHL/164	10/02/2025	NR/L3/TRK/1300 - Re-profiling and Grinding of Running Rails, including Switches and Crossings [Issue 1]	Track	Switches & Crossings have been included in this clause.	Removal of the text "Switches and Crossings" from the clause	In Progress
CHL/165	13/02/2025	NR/L3/SIG/10064 - General Instructions to Staff Working on S&T Equipment [Issue 12]	Signalling	Document requires that structures have to be multiple colours as per section 5.3 but can be a single colour for Newly galvanised surfaces clause 5.5	Reduction in the number of colours which will simplify the painting process to omit black foundation bases, handrails, railings, safety hoops and brackets see clause 5.3 item c Signal structures should be painted in one colour, this is already permitted under clause 5.5 for newly galvanised surfaces	In Progress
CHL/166	13/02/2025	NR/L2/OHS/022 - Working Safely at Height [Issue 2]	Workforce Safety	Use of harnesses in scissor lifts	IPAF (International Powered Access Federation) and other industry standards, advocate for risk-based assessments rather than blanket requirements. A revised risk based approach could enhance both safety and operational efficiency.	In Progress
CHL/167	13/02/2025	NR/L2/SIG/30014 - Signal Works Testing Handbook [Issue 23]	Signalling	Naming convention used for the axle counter strike-in & Strike-out detection units.	D120/TS14-42 (Typical two track Schweizer Electronic Vamos System) is amended to suit the typical layout design presented by the typical Vamos template, used in the SOD design.	In Progress
CHL/168	13/02/2025	NR/L2/XNG/30020 - Level Crossings Design Handbook [Issue 4]	Level Crossings	This document is now being produced by Designers/ Project delivery teams outside of NR. As such the producer, and audience (Reviewers etc.) has changed.	G22/F01 and G22/F02 reviewed and amended considering the changes in the documents use.	In Progress

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CHL/169	13/02/2025	NR/L2/XNG/30020 - Level Crossings Design Handbook [Issue 4]	Level Crossings	Standards (30020/R03 & 11201_X40) are in direct conflict with each other. R03 states - "Where MSLs are provided on the approach side then the decision point from which the MSL is visible to users before they decide to pass it" X40 states - "When positioned on the approach side of the crossing, the position of the MSL visual indicator is the decision point".	The standards are reviewed, and a consistent approach should be agreed with the correct document being amended to suit.	In Progress
CHL/170	18/02/2025	NR/L3/SCO/311 - Supply Chain Operations, T&RS and OTM Engineering and Management Manual [Issue 5]	Supply Chain Operations	Clause 6 prescribes "The Asset Engineer shall establish and regularly review and update a risk record covering all risks associated with the fleets Operation and Maintenance".	This is unachievable. The ownership of risk identification, risk management and risk mitigation needs to be more intelligently thought through, allocated and applied between the business, engineering and production services community and assigned to posts that hold the relevant competence and authority changing the organisation structure as and where may be necessary.	In Progress