Responses to CCS comments on RS525

ID	Page	Section number	Comment	Urgency	Response	Outcome (NC – no change ‘ DC – document changed)
1	6	1.2.2 Block Markers	The blue/yellow sign is called a Stop Marker now – Block Marker is an obsolete term (I think this change was enacted in going from ETCS Baseline 2 to ETCS Baseline 3). See Reference Design (especially Topic AA) and RIS-0733-CCS, sign AB08. This also impacts equivalent statements in RS521. References to Block Marker throughout the document are impacted.	Medium	The Rule Book modules refer to Block Markers therefore the same term will need to be used in this document to avoid confusion.	NC
2	6+	1.2.2	General observation that some elements of this are just repeating the content of section 4 of RS521. Do we really want to maintain this information in two places (and keep them in step – noting that some of my comments on section 1.2.2 suggesting changes are also applicable to RS521)? A solution might be to replace the current content of section 4 of RS521	Low	This has been noted but due to the time scales it has been decided that they will be in both publication for the time being.	NC

			with a statement that ERTMS related signage is covered in RS525.			
3	7	1.2.2 Location Markers	For stylistic consistency with the description of other signs, I would suggest this needs a sentence or two describing the physical appearance of the sign.	Low	Amended	DC
4	8	1.2.2 Shunt Entry Boards	I suggest we need to be a little more nuanced in the description of these as, although employed on Cambrian, the Reference Design does not identify a need for them to be employed in future schemes (though individual schemes might identify a need for them). Suggest second paragraph should read as follows: *Shunt entry boards are provided on the Cambrian lines to mark the entrance to a shunt* route and may also be used on other ERTMS cab signalled lines where lineside signals are not provided. This also impacts equivalent statements in RS521. This is of little consequence to NCL, but incorrect understanding of this point could become problematic for later stages of ECDP.	Medium	Reworded but 'Cambrian lines changed to 'certain ERTMS lines'	DC
5	8+	1.2.3	I don't believe the industry has yet concluded in the Reference Design, or elsewhere, that the	Medium	FRWG believe that as these are in current use on the Cambrian route it would be	NC

			arrangements depicted here are the definitive solution to be adopted in situations where localised indications are required. Topic P and requirement ETrckSS-1366 indicate that there may be acceptable alternative solutions. Section 1.2.3 of RS525 consequently appears to be imposing requirements not stated elsewhere. Given this is probably of little relevance to NCL I wonder whether this section could be left out of issue 1 and introduced as part of updates following the 12-month review when there has been an opportunity to consider the detail further (informed by the progression of design solutions for other parts of ECDP as well as the Reference Design).		inappropriate at this time to omit them. However, your comments are noted and will be taken into consideration during the 12 month review.	
6	11	1.2.4	The way this section is phrased (e.g. the RBC monitors what the interlocking does and has data not contained in the interlocking) appears to perpetuate the view that the RBC and interlocking functions are embodied in separate	Low	Noted, but this is believed to be an accurate description of the system as it is today.	NC

			hardware at the trackside. In practice, there is nothing to prevent the development of trackside products that could combine these functions into common hardware and the IM community wishes to pursue this. I think, therefore, that it would be better to rephrase this section to describe functions without making any statements or inferences about how those functions are realised on the trackside hardware.			
7	15	2.1.1	Suggest this should read as follows: *ERTMS technical functionality is defined by levels. The levels are characterised by how information is transmitted to trains, how a train's position and integrity is determined, and which train protection system is actively supervising the train.* Might also need a sentence to explain what train integrity is about.	High	Amended This is felt to be unnecessary.	DC NC
8	17	2.1.4	First sentence is ambiguous as to what it means by 'normal… on GB railway', and the use of 'mode' when talking about a level is potentially confusing with ETCS modes.		Agreed and replaced	DC

			Also we haven't described the aspect of Level 2 which makes it different to Level 3. Hence suggest adding a further sentence to address this. Combined effect of this could be to redraft paragraph to read as follows: *Level 2 is the normal level of operation in ERTMS areas on the GB railway at present. This level provides speed and distance supervision dependent on the operating mode. In this level ERTMS messages are passed to and from the train by a combination of radio messages from the RBC and track mounted balises. In this level the trackside elements of the ERTMS use trackside train detection systems to make safety decisions about the position and integrity of trains. Depending on the location, the speed information may be displayed in km/h or mph.*			
9	17?	2.1	We need a section to describe Level 3 as well, noting that this is a	Medium	As this document is primarily for the current schemes it is	NC

			feature of the system which NR intends to use in the future and is actively developing. Perhaps along the lines of: *Level 3 is expected to become a normal level of operation in some ERTMS areas in the future. This level provides speed and distance supervision dependent on the operating mode. In this level ERTMS messages are passed to and from the train by a combination of radio messages from the RBC and track mounted balises. In this level the trackside elements of ERTMS use information reported by trains to the RBC to make safety decisions about the position and integrity of trains. Depending on the location, the speed information may be displayed in km/h or mph.* Level 3 also needs adding to all of the mode tables in section 2.2 (I think the Level 3 entry is pretty much always the same as the Level 2 entry).		felt that any reference to Level 3 is out of scope, but will however, be detailed in future versions of this document,	
10	18	2.1.5	Text on page 18 is thinking specifically about AWS/TPWS operation which is narrower than the general description provided on page 17 and excludes operation with other Class B systems.	Medium	Reworded.	DC

			Suggest replacing first sentence on page 18 with: *For AWS/TPWS operation, there are two variants of Level NTC as described below. Trains fitted with other ATP systems may operate in different variants of Level NTC when using those ATP systems.*			
11	18	2.1.5	The description of the naming of the variants of Level NTC do not reflect the latest industry agreement on the labelling of these which is currently being incorporated into the updated ETCS Onboard RIS. The correct descriptions are: 'Able to transition' – TPWS> 'Not able to transition' – TPWS Fixed The references to 'L2 NTC' and 'TPWS' should be replaced accordingly. See also later comments, especially that on section 7.4.1.	High	This has been amended to clearly show that these are variants.	DC
12	18	2.1.5 Level TPWS (not able to transition)	Minor tweak to last sentence – I think the statement 'trains that are not authorised' should read 'drivers that are not authorised'.	Medium	Amended	DC

13	19	2.2.2	This is the first use of the abbreviation EoA but (unlike SvL which also appears in the same sentence) the sentence does not explain what EoA means.	Medium	Amended	DC
14	20	2.2.4	Why, in this one instance, are we replacing the standard European abbreviation for this mode (SN) with an anglicised one (NS)? For consistency with other documentation, we should revert to using SN and change the words from 'National system' to 'System National' if inconsistency between the words and abbreviation is the concern here.	High	Amended	DC
15	21	2.2.5	First paragraph – as the ceiling speed is set by a National Value it could legitimately be different from the value stated here. I suggest either: a) End the sentence after 'ceiling speed' (removing any reference to the value this is set to), or b) Amend the sentence to read *'… ceiling speed which is normally set to 30 km/h (18 mph)*'.		Amended	DC

			I think option b) is more informative and hence preferable.			
16	23	2.2.6	Similar point about the ceiling speed as for section 2.2.5. Suggest rewording as follows: *SR provides limited speed supervision in the form of a ceiling speed which is normally set to 40km/h (25 mph). In some locations the SR ceiling speed can be manually increased by the driver when authorised to do so. Such areas will be defined in the Sectional Appendix.* Note I've removed the reference to having to press override as I think there may be some situations at SoM where this is not needed. It is also irrelevant to the context of the ceiling speed supervision.	Medium	Agreed amended Disagree but the wording has been amended	DC DC
17	23	2.2.6	The description of SH mode explained distance supervision through balise messages so I'm rather surprised that the section on SR does not talk about SiiSR balise messages. Suggest we need an extra paragraph along the lines of: *Balise groups associated with Stop Markers contain a 'Stop if in SR'*	Medium	Agreed amended	DC

			message that will lead to a train being tripped if it passes a Stop Marker without authority (see section 2.4.4).			
18	25	2.2.9	Strictly speaking UN is used where there is no ERTMS trackside equipment and no other train protection system trackside equipment.	Medium	Agreed amended	DC
19	25	2.2.10	The statement about entering PT in the first paragraph is inconsistent with the content of the table which shows that PT is only relevant to Levels 1-3.	Medium	Amended	DC
20	26	2.2.11	The statement about entering PT in the first paragraph is inconsistent with the content of the table which shows that PT is only relevant to Levels 1-3.	Medium	Amended	DC
21	27	2.2.15	2nd paragraph – you are only left with no train protection system if the Class B systems are also rendered ineffective by the operation of the isolation switch, or you are in an area where the Class B system is not provided at the trackside. Think a more nuanced statement would be better, perhaps:	Medium	Agreed amended	DC

			Entering IS Mode is an extreme activity only used when the train cannot enter any other mode and cannot receive any MAs. The selection of IS mode removes all speed supervision and may result in there being no active train protection system.			
22	28	2.2.15	Is the reference to 'recovery in IS' intended to be covering recovery of a failed train in IS or the transition from IS to another mode? If the former, then we probably also need a statement to be added about the latter.	Medium	Reworded	DC
23	29	2.2.16	Step 4 – typo 'RBS' should be 'RBC'	Low	Agreed amended	DC
24	29	2.2.16	Steps 3 and 6 – I would be inclined to reorder the ideas in the step description as: Cab X is ready for mission in L2, RBC connection established, FS MA received. This is because you don't get into FS at SoM without receiving an MA.	Medium	This is really to only illustrate the changing end procedure	NC

25	19+	2.2	I'm struggling to see why the entries in the tables can't be restricted in most cases to just Yes or No with the supplementary information put elsewhere. For example, in sections 2.2.2 and 2.2.3 rather than saying 'Yes' for the levels where FS and OS are relevant the table chooses to focus on how the MA is transmitted to the train (which duplicates information set out in section 2.3.1).	Low	This is the preferred layout as agreed with FRWG	NC
26	30	2.3.2	Text implies that EoAs will normally be marked (and hence unmarked ones will be rare). In reality I suspect it will be the other way around. Perhaps replace 2nd and 3rd paragraphs as follows: *EoAs are marked at the lineside if any of the following conditions are applicable to them:* • *The EoA can be used as an EoA for a movement in SR (these are marked as the location of the EoA is not shown on the DMI when in SR) – these are normally indicated with a Stop Marker*	Medium	Agreed and amended	DC

			• *The driver needs to be aware of the exact EoA position to support a specific operational task (for example where a release speed is provided to enable the train to be drawn up close to the EoA to fully berth a train in a station platform or where there is a regular need to perform Start of Mission) – these are normally indicated with a Location Marker* • *In overlay areas, where the EoA is also applicable to trains not using ERTMS – these are normally indicated with a lineside signal.* *EoAs where none of these conditions apply are normally not marked at the lineside and are referred to as unmarked EoAs. They assist with breaking up what would otherwise be long sections between marked EoAs in normal operation, consequently improving headway.*			
27	32	2.4.2	I think the word 'opposite' is missing from the first sentence –	Medium	Agreed and inserted	DC

			should read '… direction opposite to that selected…'?			
28	33	2.4.4	3rd paragraph – again I think the distances and times quoted here are the subject of National Values and thus could be changed. Perhaps say something like: *… within a fixed distance, usually 60 metres…* *…within a fixed time, usually 255 seconds…*	Medium	Agreed and amended	DC
29	33	2.4.5	3rd paragraph – here too, I think the distances and times quoted are the subject of National Values and thus could be changed. Perhaps say something like: *… within a fixed distance, usually 60 metres…* *…within a fixed time, usually 255 seconds…*	Medium	Agreed and amended	DC
30	37	3.2.1	Why not list all of the data fields which the driver might have to populate? We know what they are, and it is not too long a list.	Low	FRWG believe this is sufficient	NC
31	38	3.3.2	2nd paragraph describes a DMI display including yellow information but none of the three images at the	Medium	Agreed new images inserted	DC

			end of this section include the use of yellow. Do we need a fourth image, amendments to the text or both?			
32	39	3.3.4	Terminology in 1st and 2nd paragraphs is a bit confusing. Suggest the following might be clearer: *If minor odometry error occurs, it will prevent a train from reaching the full extent of its MA and closely approaching the EoA. In some situations, it is important that a train can closely approach the EoA, for example, where the EoA is at the end of a station platform which is only just long enough to accommodate the train. In these instances, the MA permits the use of a Release Speed. The ETCS onboard equipment uses release speed monitoring to supervise this.* *Release speeds are not provided at unmarked EoAs.*	Medium	Agreed and amended	DC
33	40, 41	3.3.5 and 3.3.6	I wonder whether it might flow better to describe OS operation generically before describing permissive working, which is one application of it. In other words,	Low	Agreed sub sections reversed	DC

			consider swapping the order of sections 3.3.5 and 3.3.6.			
34	41	3.3.6	4th and last paragraphs - again the ceiling speed is a National Value so could change. There are also some oddities here (like not referring to the planning area aby its title). Recommend changing wording and order of paragraphs so that the final 3 paragraphs become: *A ceiling speed is applicable in OS and is normally set to 40km/h (25mph) by the ERTMS trackside. The on-board system will monitor the train speed and if necessary, will intervene to bring the train in line with the ceiling speed if exceeded.* *When a train is required to enter OS from FS, the on-board system will treat the start of the OS area as a new EoA. Once the train speed is below the ceiling speed and the train is within the portion of line where the MA is configured to allow the mode transition to occur the on-board system will offer the mode transition to the driver on the DMI. The driver is required to acknowledge the transition to OS.*	Medium	Agreed and amended	DC

			The OS MA is displayed on the DMI in the cab as an icon. In OS, the planning area, with the distance to go and maximum permitted speed information, is not shown to the driver by default. However, the driver can manually select the display of the planning area information if needed.			
35	41	3.3.7	The sentence is very long and unnecessarily repeats itself at the end. Try this instead: *If an emergency stop is required, the signaller can withdraw either an individual moment authority to one train or use the emergency stop facility to stop a number of trains. In either case the distance to go on the driver's DMI will be immediately shortened to a point directly in front of the train and the train will then be tripped.*		Agreed and amended	DC
36	42	3.7	For absolute clarity I think this should read as follows: *The only ERTMS modes used on the GB railway which allow movement in the reverse direction are SB, UN and SH.*		Agreed and amended	DC

			That change should forestall any questions about why RV is not mentioned.			
37	43	3.9	Suggest section heading should be 'Starting from a depot or siding using Level 1 launch' as it may not be necessary to use level 1 launch at some depot exits and we don't want to imply otherwise.		Agreed heading amended	DC
38	45	4.2	Think the wording here needs improvement to provide greater clarity as the text currently implies that a special feature of ETCS which may be used in some cases applies universally. I recommend replacing the first 3 paragraphs with the following text: *When the signaller cancels or shortens a route in the normal way the RBC will send an shortened MA to the train with a new EoA. The on-board ERTMS equipment will recalculate the braking curve needed to stop at the new EoA which may result in an ERTMS brake intervention.* *At certain locations, for example on the approach to a diverging junction, the signaller may also be provided with controls that enable*		Agreed and amended	DC

			them to make a co-operative shortening request. *When the signaller makes a co-operative shortening request, the RBC requests the train to accept a shortened MA with a new EoA.* *The on-board ERTMS equipment will calculate if the train can be stopped at the new EoA without an ERTMS brake intervention. Requests that would result in an ERTMS brake intervention are rejected and those which would not result in an ERTMS brake intervention are accepted.* *If the request is accepted, the updated MA information is presented to the driver on the DMI and the route beyond the new EoA will be released. This may then allow the signaller to set an alternative route for the train.* The last three existing paragraphs can then follow on from this.			
39	46, 47	4.4.1, 4.4.2 and 4.4.3	These sections do not appear to have been updated to align with the SR&I Baseline 4 release of Reference Design Topic J. The escalating sequence of co-operative shortening request,	High	Agreed and amended and sub-headings removed	DC

			conditional emergency stop and unconditional emergency stop is not mandated for future applications and some trackside suppliers products may not support all three of these functions. Suggest replacing all three of these sections with a single section containing the following text: *Where it is necessary to stop trains in an emergency, the signaller will operate the signal group replacement control. The system will then take action to stop train movements within the affected area and prevent further trains from entering the affected area. The system can only take these actions for trains which are operating in FS or OS mode.* *Depending upon where trains are at the time of the signal group replacement control being activated, they may receive a shortened MA, an ERTMS brake intervention or enter Trip mode.* *A text message 'Incident ahead, await signaller' may be displayed on the DMI.*			

40	48	4.5	The references to Level 2 should be to Levels 2 and 3.	Medium	Same comment as 2.1	NC
41	49	5.1	This reads as if the arrangements it describes will be applicable to all controlled crossings, but this is not the case. I am also not sure that it is fully aligned with the SR&I Baseline 4 release of Reference Design Topic JJ. I recommend rewriting this section to clarify as follows: *At some locations, the crossing sequence may be initiated by either an approaching train requesting an MA to pass over the level crossing or by the position reports received from an approaching train. These arrangements are only applicable to trains operating in FS or OS modes. The crossing sequence is initiated by conventional means for trains not communicating with the RBC.* *Trains will not be issued with an MA to pass over a controlled crossing until the crossing is confirmed as clear.*	High	Agreed and amended	DC
42	49	5.2	Similar concerns to section 5.1. Also, not the 1st and 3rd paragraphs are practically identical. I recommend rewriting this section to clarify as follows:	High	Agreed and amended	DC

			At some locations, the crossing sequence may be initiated by position reports received from an approaching train. This arrangement is only applicable to trains operating in FS or OS modes. The crossing sequence is initiated by conventional means for trains not communicating with the RBC. *There are no additional actions for the driver to take when passing over an automatic half barrier crossing (AHBC).*			
43	51	6.1	1st paragraph – see earlier comment on section 2.1.5 about labelling of levels NTC. I recommend removing the 'L2NTC' label and replacing it with the 'TPWS>' one.	High	Amended	DC
44	51	6.1	Suggest some minor tweaking to the wording to improve clarity as follows: 2nd paragraph, amend to read: *In the above diagram, the route is set across the boundary and into the Level 2 area, but the boundary signal is maintained at danger by the system. Until the train is*		Agreed and amended	DC

			communication with the RBC see chat Suggest putting 3rd paragraph before the second diagram and amending it to read: *Balises command the train to contact the RBC. Once the train has connected to the RBC, the RBC sends an MA to the train. Once the train has confirmed to the RBC that it has received the MA, the system can permit the boundary signal to display a proceed aspect as shown in the diagram below.* Suggest then adding a new paragraph immediately after the second diagram which reads as follows (this is the same as the last sentence of the current 3rd paragraph): *The MA is not displayed to the driver until the train enters the Level 2 area.*			
45	54	7.4.1 Failure of the boundary signal	2nd paragraph is not very clear and seems to be rather repetitive. Is it really needed, and can it be simplified?	Low	Paragraph deleted	DC

46	55	7.4.1 No connection to the RBC due to train operating in an incorrect level	As per my previous comments, I don't understand why we are using both old and new labels for the Levels NTC. Suggest simply referring to them as 'TPWS Fixed' and 'TPWS>' and removing references to 'L2 NTC' and 'TPWS'. If there is a reason for using both terms then the document needs to clearly explain why both exist, preferably in section 2.1.5 so that it then makes sense through the rest of the document.	High	Amended	DC
47	56	7.4.3 Driver selects incorrect mode	Reference Design Topic N does not require the inclusion of a Danger for Shunting balise message at this location (to avoid restricting legitimate uses of SH) so the circumstances described are incorrect. See sections 3.2.1.3.4 and 3.2.2.3.1 of SR&I Baseline 4 release of Topic N for further information.	High	Amended	DC
48	59, 60	9	As per my previous comments, I don't understand why we are using both old and new labels for the Levels NTC. Suggest simply referring to them as 'TPWS Fixed' and 'TPWS>' and removing references to 'L2 NTC' and 'TPWS'.	High	Amended	DC

			If there is a reason for using both terms then the document needs to clearly explain why both exist, preferably in section 2.1.5 so that it then makes sense through the rest of the document.			