| | | Comments from Network Rail on LX: A guide for managers, designers and operators |
|---|---|---|
| **PAGE** | **REFERENCE** | **COMMENT** |
| Generally | | I think it would be helpful if each new Section of the Guide started on a new page, and also if an indication of which Section you were in was shown in the header on each page. |
| 5 | 2nd Para. | Great to see reference to replacing level crossings with bridges. |
| 5 | 3rd Para, | Content of this paragraph noted. But would greatly value far greater emphasis on active support and funding from highways authorities and property developers. Improvements are not practical at level crossings unless there is funding for work. It is perhaps unreasonable for railway authorities to bear all costs of upgrading level crossings due primarily to increases in road traffic. Traffic increases may be gradual over a time or sudden due to local road or building developments. It is suggested that this Para be reworded to place more obligation on highways authorities and local property developers to provide at least some of the funding of crossing upgrades due directly to increases in crossing user numbers. |
| 7 | 3rd Para and bullet points | It is suggested the bullet point on "other crossing users" is too short and could be enlarged to point out all crossing users have a duty to use the crossing safely. Duties required by legislation in regard to dangerous driving, driving under the influence, or trespass are not mentioned in this section and could be referred to. Employers must have in place a safe system of work which should include measures about level crossings for their employees. It is suggested this part of the document could be usefully improved by covering these items |
| 8 | In Industry standards | GIRT7012 has already been abolished and replaced by the much smaller GKRT0192. It is suggested the 2nd & 3rd paras in this section require some rewording. |
| 9 | 1st Para. | Again, great to see reference to consideration for joint long-term strategy between highway authorities and level crossing operators for closure of crossings. |
| 9 | 2nd Para | It is suggested the wording should say that the railway operator should always be consulted. At the moment it is unnecessary if the secretary of state is consulted. It is further suggested the term of "railway operator" is clarified as the "railway Infrastructure owner and any train operators using the crossing" |
| 9 | Work to simplify the law | This paragraph should not be part of the Guide, as reference to the review will be irrelevant once it has been completed. In any case, it has already been mentioned in the Background section on Page 1 (which will presumably be omitted from the final version of the Guide) so the comments on Page 9 could be incorporated into the first Para. on Page 1. |
| 11 | 3 | The paragraph number referred to in the last line should be 6 not 7. |
| 12 | 7 | As worded in this paragraph, this document will only apply to new crossings in exceptional circumstances. It is suggested you meant to say that we will only create new level crossings in exceptional circumstances, but when we do, this document will apply to them? Suggest it be reworded. |
| 12 | 8 | Suggest that ‘using a level crossing…’ be replaced by ‘affected by a level crossing…’ as people on trains and general neighbours may also be at risk |
| 12 | 10 | NR surveys crossings at 3 year intervals, unless circumstances change in the interim. If changes have occurred, then any proposed alteration as a result has to be practical. It is felt there should be more emphasis in this documentation for support and funding from the highways authority where the changes at the crossing are from external factors. |
| 13 | after 10(b) | It is suggested the paragraph following 10(b), may be expanded to give some guidance on what risks are acceptable, what are intolerable and what measures are considered practical. This may also affect 11, the section immediately following. |

| | | |
|---|---|---|
| 13 | 11 | It is suggested there should be some guidance for existing crossings where local roadwork's or a special event causes a temporary but large increase of crossing users. It is suggested a clause could go in about here offering guidance on practical measures to adopt to manage the situation. Since this work would be driven by an external event or organisation, there should be some obligation placed on the external organisation concerned to provide support and funding. |
| 16 | Types of crossing - Figure 1 | You may consider adding additional categories: Non-Vehicular Crossing types, "FOOTPATH/CYCLEWAY" between Footpath and Bridleway Crossings. Vehicular Protected Crossing should include MSL Crossings (on private roads). Non-Vehicular Crossings could be split between Unprotected (Footpaths and Bridleways without phones) and Protected (Bridleways with phones and Footpath / Cycle ways and Bridleways with MSL's). Also, is it correct to classify a UWC with telephones as "unprotected"? |
| 17 | 20, Table 1, section 5a | The wording here precludes the use of two barrier crossings with only one barrier either side. There is only a four barrier type in existence at the moment but there is already discussion within NR that a two barrier variant would be suitable on small lightly used roads if appropriate means is available to check the crossing area is clear before the barriers start to descend. We believe an obstacle detector system will be available to do this in the near future. It is suggested the wording here should be altered to not rule out two barrier operation where there is a means of checking the crossing is clear before the barriers start to descend. |
| 18 | 20,Table 1, section 7 | There are the same requirements about grounding in here as for AHB's. But the method of working of this type of crossing prevents a train running into a grounded vehicle. It is suggested the reference to grounding is incorrect. If kept it would preclude the use of this crossing type significantly. It is often used instead of an AHB where grounding could be an issue. It would prevent updating of AOCL's to ABCL's if this was required in the future. See clause 199, which supports my argument. |
| 18 | 20, table 1, Section 9 | 2nd Para, "that" should be "than" |
| 18 | 20, Table 1, section 9 | This entry has examples of speeds in mph and kph. The railway still mainly uses mph for speeds. It is suggested mph should be the primary speed shown, perhaps with the km/h following in brackets. Not providing both values leaves the conversion to interpretation. In this block, 15kph is really 9.3mph, - so interpreting that as 10mph for a train's speedometer results in minor over speeding. Saying "10mph(15km/h)" clarifies it. Same comment regarding speeds applies for the rest of the document. Also later in the document there are two interpretations of 50mph as 88 or 90Kph. |
| 18 | 20, Table 1, section 9 | The conversion of 35 mph to 60 km/h is different from that in page 83, Table 12 where 35 mph converts to 56 km/h. Please edit as necessary to be consistent |
| 18 | 20, Table 1, section 10,11 | This is just the first instance of some information on how sighting/warning/safe crossing times are determined for footpaths, bridleways and UWC's. The decision points to use are defined somewhere towards the back of the document and the walking speeds are somewhere in the middle, but nowhere is there an explanation of how they are put together and used. Considering that about 5000 of our 7000 crossings are these types they need more coverage. The main values and how they are used ought to be brought together in a short section somewhere explaining how sighting/warning/safe crossing times are derived. It is very strongly suggested such a section be created. It may then be easily expanded to give any additional rules where MSL's are fitted? |

| | | |
|---|---|---|
| 20 | 26 | Noted this now includes MSL crossings. Unlike auto crossings, these are not generally provided with back up power supplies at present and it could be costly to do so as a new 110V battery will be needed at all sites. I suggest battery back-up is not needed at an MSL. In the event of a power failure or a failure of the control system it is believed sufficiently covered by the associated Diagram 107 &108 signs at MSL's directing users at existing crossings to telephone or otherwise beware of trains. For any new crossings internal standard 30018 insists on a phone being provided and sign 107. Apart from backing up the light unit itself it would be necessary to back up all parts of the strike-in, which on a 40 seconds warning 125mph line is 1 1/3 miles on each approach. This would be extremely costly including battery backing any other signalling equipment within the strike-in to ensure correct operation. It is suggested the existing arrangements at MSL crossings are already ALARP and we would like the idea of alternate supplies at MSL's reconsidered. See clause 273 plus note, suggesting back-up not required. Please consider removing MSL's from this clause. N |
| 20 | 27 | it is felt the present wording including the first sentence suggests we shall always provide illumination at any crossings where we run a 24 hour railway. But we only consider providing illumination where there is already a source of illumination on the approach road. It is suggested the first sentence can be deleted. |
| 22 | 38 | Clause 40, covers Train crew Operated Gates (TOG), but we have some crossings worked by NR signallers that are fitted with stop boards as well. Stop boards cannot be interlocked with gates. I suggest re-wording here to make it clear it applies to crossings with worked signals? - or offer exemption to crossings fitted with stop boards. |
| 22 | 41 | Most barriers are maintained normally up, but some are normally down today and a new variant of an MCB is being considered for lightly used lines where there are less vehicles than trains where maintaining barriers normally down would be less work for the signaller. This clause would preclude the new type presently under consideration. Suggest re-word to say that on lightly used lines, in agreement with ORR, the barriers may be normally down until required to be raised for a user to cross. |
| 23 | 43 | Grammar error:  Remove "at" in 2nd sentence. |
| 23 &24 | 46(a), (c) | 46(a) allows for 5 second amber for higher speed roads. Can we have some guidance on what is a higher speed road?  - 85%ile speed? Also unless (c) is modified down to 3 secs, then the strike-in for such crossings will need moving out and will increase closure time. Can this aspect be considered please |
| 24 | 46(c) | The wording here is fine for normal two way roads, but does not cover one way roads or the individual carriageways of dual carriageways. It is suggested a note be added explaining the arrangements for barrier lowering are suitably modified for one way roads so the "entrance" barriers lower before the "exit" ones. |
| 24 | 46(c) | At most barrier crossings signallers do not monitor the lowering sequence. It is only required at crossings with heavy usage or a very high pedestrian user. It is suggested that this part of the clause be reworded to include the term or words "where necessary" or |
| 24 | 47 (b) | Sites fitted with RLEE cameras have given problems with the red lights waiting till 45 degrees to turn off. Most road users regard the barriers rising out of the way of the bonnet as the invitation to start and can pass the red lights before the barriers have risen past 45 degrees, getting their photograph taken in the process. Dispensation is suggested at sites fitted with RLEE and similar where this is a problem to alter to cut out red lights at lower values to prevent unnecessary activation of RLEE. It is suggested some additional wording in here would be appropriate. |

| | | |
|---|---|---|
| 24 & 25 | 48, 50 | Noted this is the same wording as clauses 50 & 52 in the previous edition. It is suggested the wording of these two clauses are unclear and the present interpretation is extremely costly resulting in providing all MCB's with LCU's. Clause 48 specifically refers to situations with auto lowering and requires at least one red light be lit before the barriers descend. It does not require a red light be working if its a manual lower operation. But clause 50 is separate and for it to make sense it assumes that all lowering operations (manual or auto), need to prove a red alight before the barriers can descend. The interpretation set by ORR over the last 5 years is that the latter applies. This results in the extra wiring and LCU else the principle could be achieved with less cost by instruction. to the signallers if a red light is out. At a minimum, clause 48 and 50 require re-wording to remove confusion. View here is that manual lower operations do not require a red light be proved alight. The signaller has an indication if a red lights are not working properly and can take extra care. This would save NR considerable costs on renewals. |
| 25 | 51 | Grammar error: Remove "must be" from 2nd sentence |
| 25 | 53 | The term shall "flash red immediately " was used in the earlier clause 39, instead of "show an intermittent red light" here. Clause 39 seems better worded? |
| 25 | 54 | Our internal standards for a TOB, would provide a DCI and similar proving circuitry to a ABCL to prove the crossing had lowered correctly. (Else how would a train driver know if the RTL's were working correctly for instance?) Its "nearly but not quite interlocking". Its needed to ensure correct monitoring and no hidden failures. No problems from us if you leave as worded, - but its suggested you might want to reconsider and include some words over suitable monitoring of the crossing operation to indicate failures etc. |
| 25 | 56 | As per page 17, 20, Table 5a. Suggest you might reword to allow a 2 barrier variant in future on lightly used lines with appropriate detection that the crossing area is clear before the barriers are allowed to lower. |
| 26 | 60 | Is there any guidance on what constitutes a high pedestrian user? - also what does "problematic" mean? |
| 26 | 60 | It is suggested the final sentence is unnecessary. Its probably been included because this is a new type of crossing and we might not understand all the implications of having it. But all crossings are checked at intervals for suitability and this type will be no different. |
| 26 | 61(a) | Similar comment to 46(a) (c) about 5 second ambers please. |
| 27 | 61(c) | Wording noted, - but a comment is that at this type of crossing the obstacle detector will automatically delay the exit barrier lowering if something is slow to clear the crossing. |
| 27 | 63(b) | Same as comment against 47(b) regarding where RLEE's provided |
| 29 | 71 | Also clause 88 and 118. Suggest review wording of all the three clauses to use the same wording. Noted "not" missing from 71 & 88 |
| 29 | 71 | Grammar error: Requires a "not" before "be achieved" on first line of page. |
| 29 | 75 | Add a "be" after "should" in 3rd line. |
| 30 | 76(a) | Same but much stronger comment as 46(a) (c) about 5 second ambers. To keep trains at 27 secs strike-in, will need either red period reducing or accepting barriers start lowering 2 secs later. And what is decided here should not be done without considering implications for ABCL's where we prove the barriers have begun lowering before the DWL illuminates. I think NR's recommendation for AHB & ABCL would be reduce Red light period to 3 seconds where there is a 5 sec amber. |
| 30 | 76(c) | AHB's do not have exit barriers. But this sentence is believed to be about providing a delay time between the entrance and exit barriers at long crossings. So the second sentence is not correct. If you are referring to increasing the warning time at the crossing, this is already in clause 75. It is suggested the second sentence be deleted |

| | | |
|---|---|---|
| 30 | 77 | As worded this requires the audible warning change to the ATC tone when the front of the train arrives at the crossing. Unfortunately this is when the "roar" of the train arriving drowns out the change in tone so most crossing users wont hear it. While this was in the present edition, there has been much discussion of it within NR signal engineers and we would prefer the wording was altered so as to allow the change of tone to be when the train is departing the crossing when the barriers would be due to raise if the second train was not approaching. At this point the noise level will have reduced. We believe this simple change would make the audible warning change more effective. I note also this wording is sufficient to allow a voice warning to replace or supplement the standard ATC warble tone unlike a the similar clause 93,. I would like this wording in 77 retained. |
| 30 | 78 | The red lights go out when the barriers start to rise in this clause. Not when rising through 45 degrees. This is fine by me for future sites, but it is suggested that the time/place these lights extinguish ought to be consistent with manned barriers and ABCL's. Suggest review and make same for all. Preference on future sites and when renewed would be to extinguish when barriers start to rise as worded in this clause for all barrier sites as it avoids snags with RLEE cameras and avoids confusion over when minimum road open timer starts. Road users at barriers use the barrier rising out of the way of the bonnet as the signal to start and do not look at the lights. |
| 30 | 80 | The last sentence requires bi-directional controls where there are two lines and by implication means we don't need them where it's a single line! Suggest re-word to say Normally provide Bi-directional controls on all lines. No need to refer to numbers of lines. |
| 31 | 81 | Same as comment in clause 53 about wording of red lights, - Clause 39 use of "flash red" seems better worded? |
| 31 | 82 (c) Note | The note is not either correct or at least not understood. Clause 64 is covering the ALSR timer. We often do regulate a signal to avoid a train arriving in under 27 seconds. The note may be meant to refer to this different timer. I will then qualify this by saying that if the train was very close to the crossing and at a stand, then there is no safety need to regulate the signal to maintain 27 secs arrival time! The train driver would be able to see if there was an obstruction and would simply not proceed if the crossing was obstructed. An alternative where the train is close to and with good sighting of the crossing would be to prove the crossing was operating and the barriers down before the signal is allowed to clear. It is suggested the note be removed and a new clause added saying that if a train is at or approaching a signal at red that then becomes ready to clear, that arrangements are put in place to prevent a train arriving at the crossing in under the minimum warning time unless the crossing is proved to be working and other inherent features such as a low speed approach and ability of the train to stop short of an obstruction provide adequate safety. The ne |
| 32 | 88 | Grammar error: Insert "not" before "be achieved" in first sentence. |
| 32 | 88 | Same comment as 77, about ATC tone. Would prefer to change to ATC tone when the first train is departing the crossing and ambient sound levels have reduced. |
| 32 | 90 (c) | I require more information from you on what would satisfy this clause before I can even comment properly. I think we would have difficulty at existing crossings fulfilling this as worded. One interpretation is that it requires protecting signals close to the crossing be provided, - which we don't often have at this sort of crossing. So can you give examples of what would fulfil this requirement? What did you had in mind when you wrote it? - Else suggest delete it as it may rule out use of ABCL's on cost grounds. |

| | | |
|---|---|---|
| 33 | 92 | There is no safety requirement for a train to give minimum warning of 27 seconds at this type of crossing. Safety is achieved via the DCI proving the crossing has worked and the driver observing the crossing is clear. Arrival time has little bearing on safety. Arrival times for slow to medium speed ABCL's could be typically 22-24 seconds while still allowing sufficient time for crossing operation to clear the DCI before the train arrives at the SSRB. The SSRB itself is at crossing speed braking distance. So having to design for 27 secs can artificially push out the strike-in increasing crossing closed times without achieving anything useful. For 50-55mph crossings, agreed we require more than 27 seconds anyway because of braking distance. The crossing length is not really a factor requiring increased warning times either as the train driver can see if anything is still blocking it. I suggest the requirement for a minimum warning time of 27 secs can be removed for ABCL (and AOCL's). I request this be reconsidered and the minimum warning time removed so that arrival time at the crossing can be minimised while still illuminating the DCI before the train arrives at the SSRB. |
| 33 | 93(a) (c) | Similar comment as 46(a) (c) about 5 second ambers. But note another comment that 27 secs minimum strike-in is not necessary for safety at an ABCL. To apply 5 sec ambers implies either a reduction of the red light period to 3 secs or the strike-in pushing out another two seconds so the DCI can light before the train arrives at the SSRB. Bearing in mind that that we probably wont be creating many new ABCL crossings and most work will be renewal of existing crossings with existing strike-ins, dropping red period to 3 secs will be the cheaper option. It is suggested that the effect to the red period resulting from increasing the amber period should be documented. And should also take account of the same comment in the AHB section. |
| 33 | 94 | Same comment as 77, about ATC tone. Would prefer to change to ATC when the train is departing and sound levels reducing. Also this clause used completely different wording to clause 77. This wording does not allow for voice message warning in future. |
| 33 | 95 | This clause requires the barriers to have risen to 45 degrees before the light extinguish, which is not the same as the equivalent wording in the AHB clause. I suggest you ought to review and make them similar. While we are unlikely to install RLEE cameras at many ABCL's, I would like the facility to do so retaining by provision to extinguish lower than 45 degrees where RLEE or similar are fitted. Or see comment in AHB section re extinquishing when barriers rise. |
| 34 | 98 | The circuitry for an AOCL or ABCL does not fully reset once its timed out. At a newer crossing it opens to road. Then the next train arrives and stops at the DCI which will be flashing red. The driver presses the emergency plunger and the crossing will reset at this point if there is no hard failure. The crossing will then operate allowing the train to proceed. The driver reports the incident to the signaller subsequently. At older crossings where no emergency plunger, the train driver will have to pass the crossing after checking the road is clear without benefit of the crossing operating. After reporting the incident, the signalling technicians investigate and reset the system. This is so all problems are reported otherwise intermittent problems would be missed. Suggest you can say that once this condition has occurred there must be a process of resetting the crossing to normal operation that requires a report of the incident to the supervising signal box. This may involve the next train being stopped at the crossing and its subsequent actions including a report to the signal box at the next practical point. The signal box may then take action if necessary to reset the crossing. A |
| 34 | 99, 100 | We usually battery back these crossings for 12 hours, so short blips of the mains power would not affect the crossing operation. However this clause implies we would cancel the DWL immediately the mains power blips. In practice the "mains power off" indication on modern battery chargers is delayed a nominal time of around a minute. This is so short power blips do not cause unnecessary alarms to signallers, or in this case involving ABCL's, to the train driver. I suggest it would be appropriate to condition this clause to say a short time delay is acceptable before giving an indication to the driver to order to cover for very short power outages where such indication would be unnecessary (and a waste of everybody's time.) Both 99 and 100 require this dealing with |

| | | |
|---|---|---|
| 34 | 102 | Same comment as for 80, about bi-directional controls |
| 34 | 105 | The AWB is required at service braking distance from the crossing and not the SSRB. It is suggested you put this right and then say that where this would place the AWB within 100m of the position of the SSRB, then it is moved back to maintain a minimum spacing or 100m from the SSRB. |
| 35 | 106 | In the case of a stop board, the AWB is usually replaced by a fixed distant or reflectorised distant board. It is suggested the wording allow for either |
| 35 | 106(a) | Para 81 does not say anything about times? My best guess about what you are on about here was arrival times at the crossing? - were you thinking 50% in less than 50 secs etc? Please bear in mind with the response here and the comment against 106(b) note following shortly and the comment against the entry for clause 92, - that there is no safety requirement a train must arrive in greater than 27 secs at these crossings, as the driver will not proceed if the crossing is obstructed. If he is at a stand its even more likely he wont drive off into an obstruction. Therefore I suggest we can say in this clause the crossing can be timed to start operation when the train has completed station duties. |
| 35 | 106(b) note | There are no timings in 81 and after reading the comments on clause 82(c) and as no 106(a) just above, I suggest you remove the note completely as no regulation is necessary to ensure safety. The Drivers White Light (DWL) will light up when the crossing is operating giving the driver permission to proceed. |
| 36 | 107 (a) (b) | The only way to segregate stopping and non-stopping trains safely is via stopping/non stopping controls as in (a). I suggest (b) be deleted completely. That probably means you incorporate (a) into the wording of 107 instead. And just say a signal and stopping/non stopping controls must be provided. There are lots of complications depending on the distances between crossing, platform and signal, crossing sighting distance etc, but we cover them in internal standard 30018. I did think or trying to put some of them in this comment but gave up as its too difficult and would need a couple of pages just for this feature! |
| 37 | 112 | The wording about the audible warning ATC tone is different again. Suggest see comments against ATC tone wording and when it should begin in 77 & 94, and use the same wording for all. |
| 36 | 112 | We have not provided active flashing ATC signs for some time now. Instead there is a fixed sign which is also being installed in place of the active signs whenever a crossing is being renewed or extensively rewired. (See clause 296, diagram 777 referred to in there). This sign is already considered ALARP. (Note there is work continuing on a audible warning with voice message which is supported by work at RSSB, which may be a better solution than any fixed or flashing sign.) It is suggested the requirement for an active flashing sign be removed and the wording about audible alarms changed to allow for use of voice warnings in future. |
| 36 | 112 | This is the first use of "Minimum Road Open time". It is suggested this wants a better definition. Perhaps by a new entry in the "Common Terms" section. Note also other comments on when MROT starts at different types of crossing. |
| 36 | 114 | Completely different wording to the ABCL section. See comment on clause 90(c) about communication to the train driver. Once answer to that available suggest reword both clauses to similar wording. |

| | | |
|---|---|---|
| 37 | 116 | Similar comments as clause 92 re arrival times. There is no safety requirement for a train to give a 27 sec warning time at this type of crossing. Safety is achieved via the DCI proving the crossing has worked and the driver observing the crossing is clear. Arrival time has little bearing on safety. Arrival times for slow to medium speed AOCL's could be under 20 secs and still allow sufficient time for crossing operation to clear the DCI before the train arrives at the SSRB, which itself is at crossing braking distance. Having to design for 27 secs artificially pushes out the strike-in and increases crossing closed times without achieving anything useful. For 50-55mph crossings, agreed we are at or more than 27 seconds anyway for crossing operation and braking distance. The crossing length is not really a factor requiring increased warning times either as the train driver can see if anything is still blocking it. I suggest the requirement for a minimum warning time of 27 secs can be removed for AOCL (and ABCL's). I request this be reconsidered and the minimum warning time removed so that arrival time at the crossing can be minimised while still illuminating the DCI before the trai |
| 37 | 117(a) | Similar comments to 46 and 76 about amber light length and effect on rest of crossing timings where it's a 5 sec amber. For existing AOCL's its not an issue as if they are designed for 27 secs now, they will have plenty to absorb another 2 secs without any effect on the strike-in. |
| 37 | 119 | Similar to 77, 94 & 112 comment on ATC operation. Also see comment on 112 that we have not provided active flashing signs for some years. Suggest reword as appropriate for the other clauses. Reference to section 18 not understood. |
| 37 | 120 | It is suggested the wording of 98 should be used which includes the 30 seconds ALSR timer requirement. Also note clause 98 about resetting. |
| 37 | 121, 122 | See comment on 99, 100, about time delays on mains power failures to avoid totally unnecessary short warnings to train drivers. Please use same wording here. |
| 38 | 124 | This paragraph would not be required if on page 18, table 1, row 8, in "conditions for suitability" were to be altered to preclude more than one track. At present it only says that there shall not normally be more than one track. |
| 38 | 124 | See comments on 80 & 102 about Bidirectional controls. Use same wording here |
| 38 | 127 | See comments in 105 about AWB position and use same revised wording |
| 38 | 128 | See comments about 106, and use same revised wording |
| 38 | 128(a) | See comments about 106 (a) Suggest use same revised wording. |
| 38 | 129 | See comment on 107(a)(b). suggest use same words as agreed there |
| 39 | 130 | I have no idea what this clause is doing? I believe with a platform close enough to the crossing to prevent normal strike-in being sufficient, we have plenty of ways to make it workable without this clause. If the platform is close to the crossing, then a timer as per clause 128(a) will be sufficient. If its further back then perhaps we would impose a PSR in the area sufficient to bring the strike-in between the platform and the crossing. Its site specific, but we don't need this clause. Suggest delete it |
| 39 | 132 | There are a surprising number of open crossings that have been given RTL's controlled from a local control unit by railway staff and its virtually always train crew. In the LNE area they outnumber the "ordinary open crossings". They are usually on freight lines and often for connections to private freight sidings etc. Where there are RTL's, then stop boards and if not very low speed, fixed distants are provided. Since this type of open crossing does have RTL's, it contradicts this clause. I suggest you add that the basic protection of the open crossing may be supplemented as necessary to suit individual site conditions. An example is to provide locally controlled RTL's with suitable changes to signage. |
| 40 | 138 | Similar to 105 and 127 about AWB braking distance and position. Use same revised wording |

| | | |
|---|---|---|
| 40 | 139 | The reduced distance of 25m is interesting. We generally design for stop boards nominally at 50m, but can come lower if a risk assessment justifies the situation. That is similar to other types of crossings although with completely different wording. A nominal 50m would perhaps be more standard with other crossing types, but with allowance to come closer should the risk be judged acceptable. |
| 40 | 139 | Similar to 106, A fixed distant is usually used approaching a stop board. Suggest use similar wording to 106. |
| 41 | Section 10 | The existing Guidance makes no reference to "field-to-field" UWC's. Would it be appropriate to include such reference in this new Guide? |
| 42 | 144 (b) (iii) | I realise its difficult to ask - But what constitutes prevalent fog? - Say how many days a year on average does visibility drop below sighting distance at that particular site? And where would we get any fog figures so localised? As worded this bullet point is virtually useless. We do  try to take into account local conditions, perhaps taking into account chance of fog where its at the side of an estuary for instance, when we assess a crossing, but is difficult to assess the impact. |
| 42 | 144(c) | MSL's are in section 18 and not 17 stated. Also noted no requirement in 144 to provide on lines above 100mph? |
| 42 | 146 | This clause forces a user to use the phone if one is provided. This is not necessary if there is a MSL. The wording needs altering to make that clear |
| 42 | 147 | Fine that for new MSL's a telephone will normally be provided with Diagram 108 sign.  but there will be lots of existing sites with no phone and Diagram 107 sign. However see comment against clause 263, which is about the same signs and argues that no 108 sign is now needed. Suggest move contents of 147 to 263 and re word accordingly? |
| 42 | 147 | This comment is as a result of 147. We have lots of Barrow and white light crossings used in depots and similar just by railway staff. We may wish to replace the white light with an MSL head at some point in the future. I do not believe it would be appropriate to always fit telephones at these. So I suggest this clause be altered to allow for crossings used solely by railway staff to not require telephones. I would argue railway staff can be expected to have their own means of contacting the signaller or control point if required. Note comments on clause 263 re telephones and signs as well please. |
| 43 | 149 | It is noted this Para includes head coverings which is missing from page 5 of the crossing user guide. It is suggested that page 5 of the guide should be altered to include them. Then there is really no need to include it here with the other material aimed at users as this document is aimed at designers of crossings. |
| 43 | 152 | I am not an expert about horses. But if I was I do not think I would fancy sitting on a horse after passing through the gate and waiting at the decision point 3m from the line for a fast and noisy train to go past its nose. If the horse gets frightened and gets out of control, it risks killing both itself and its rider? I suggest that at a Bridleway, the gate normally becomes the decision point and NR should site the gate as close to the 3m decision point as practical. I realise that the space was also probably designed to get the horse clear of the track if a train was seen approaching while on the crossing, but at least the exit gate opens outwards. This seems the better risk to me to move the gate close and make it the decision point. However if after considering this issue you decide we keep the space between the gate and the line for a horse, - then should we insist riders dismount to cross to reduce the risk to riders? It is further suggested that all the rules for decision points, calculating warning and sighting times should be all together in one section. |
| 44 | 160 | It is suggested that this paragraph should have a caveat "where practical and cost effective". Since crossings are assessed using ALCRAM, it may say it is not worth spending money on a crossing to gain extra protection. All is subject to risk assessment rather than absolute values. |
| 44 | 160(c) | MSL's are in section 18 and not 17 stated. |
| 45 | 160-162 | It is suggested that all the material regarding Whistle Boards should be centralised into one clause rather than spread over three. |

| | | |
|---|---|---|
| 45 | 163 | The revision to the wording of this section implies that telephones may be provided at more Footpath Crossings in future, rather than mainly only Bridleways in the current Guidance. There could be considerable extra signaller workload if this is widely adopted. |
| 45 | 167 | Suggest you enlarge to say where there is no recognised footpath or footway on either side of the approach roads that the crossing surface and decking still be provided for a footpath either side but where there is a only a recognised footway on one side of the approach roads, that the crossing need only allow for a footpath on that side of the road. |
| 46 | 170 | It is suggested this be reworded to say a pedestrian stop line be provided to show the safe place for pedestrians to stand rather than saying a safe place shall be provided. Also note that this is a repeat of clause 319, using different words. It is suggested one or other of the clauses could be deleted. |
| 46 | Audible warnings | Nowhere in here or in the previous edition is the audible warning sound specified. If it was to be specified it might avoid use of the same tones nearby properties for other purposes. The standard tone is used is 800Hz alternating with 1000Hz twice a second. The devices used are capable of greater than 80dB measured at 2m on axis but are operated at a much lower level to avoid noise nuisance and an even lower level during the night. Night has default times of 2300 to 0700. Night timings and sound levels are altered as necessary at local discretion in reaction to complaints about noise nuisance. Under ATC conditions, the two tones retain the same frequencies but alternate at four times a second instead of two. It is suggested you include a new clause in this section giving the basic audible warning sound arrangements outlined above. You should say the basic sound warning may be supplemented by appropriate voice messages in future. Note there is clause 173, and then clauses 77,94 & 112, covering the ATC condition, which might then benefit from re wording slightly. |
| 46 | 173 | See comments against ATC tone wording and when it should begin in 77, 94 & 112, and use the same wording for all. Note comment against Audible Warnings about the basic audible warning sound. |
| 47 | 175 | Is there any better guidance on what constitutes a high number of pedestrians as if the figure was high, the crossing would not be suitable as an automatic crossing. Note this "high" would be different to the value in clause 60. |
| 47 | 175, 176 | The major use of Diagram 4006, Standing Red men, is on Automatic crossings on a skew, where there is no barrier to indicate the position pedestrians should wait for the train to pass. They are also used on MCB crossings and variants where there is high pedestrian user to back up the main RTL's. They are also used on MCB's on one direction roads on the exit side instead of standard RTL's. I suggest this clause and 176 need extensive re wording? It may be appropriate to refer to figure 9 for the skew crossing ones. It is suggested that all clauses and figures affecting Red men be centralised. This includes clause 280, 321 and figure 9. |
| 47 | 177 | Note this clause does not agree with the requirements for tactile t6hresholds in table 3, page 49. Suggest review wording. Possibly say refer to table 3? |
| 47 | 177 | Grammar error; change "road" to "roads"? Also consider combining 177 & 178 on tactile strips? |
| 47 | 178 | Nothing covering manned crossings. We presently put these 400mm in advance of the road stop line at controlled crossings, - but this is a really silly place for them as pedestrians will always move forward past the stop line up to the line of the barrier. Are they realy needed? If you still think so, - It is suggested the sensible place for them is 400mm from the barrier line. It is believed this may need alteration of other DFT documents. Please review the situation re if needed and where they should go and effects on other DFT documents.. |
| 47 | 178 | This is OK for auto crossings, but there is no pedestrian stop markings at an MCB. Current practice at an MCB is to put them 400mm on the approach side of the road stop line. However if they really are needed, there is a opinion they should be closer to the barrier. It is proposed that we should site them close to the barrier at future sites. Need to do matching change in DFT guidelines. |
| 48 | 182 | Appendix C is supporting documentation for orders, not a method of calculating TPV. Needs correction |

| | | |
|---|---|---|
| 49 | table 3, footway widths | these do not agree with figures in DDA documents. Please review situation. |
| 49 | 184, table 3, Pedestrian signals | May also be used at MCB's and similar where high pedestrian user to back up the RTL's, or at the exit side of one way roads instead of RTL's. |
| 49 | 184, table 3, Bottom row | Grammar error: change "wit" to "with" in 3rd Para in bottom row of table |
| 49 | Section 13, Station Barrow Crossings | Grammar error: Remove "A" and capitalise "S" in station in the heading |
| 49 | 188 & 189 | It is a surprise the minimum time is 40 seconds as previously it was 30 secs for a station crossing in RSP&G2B. This will be a considerable cost increase for us at future sites. Can you confirm it is not a mistake and it should be 30 secs please? Also please see major comments on UWC and MSL timings. It is suggested station crossing design and timings be combined with those |
| 50 | 189 | Providing ATC tone change is expensive on this type of crossing as the MSL circuitry does not naturally include the functions to derive it. We are developing a proposal that the ATC audible warning function at an MSL can be covered by a voice warning interspersed with the standard warble tone. e.g. "warning - more than one train may be approaching" at intervals around 4-6 seconds. There is support for this in RSSB research work. |
| 50 | 194 | Grammar error; Two "effectives" |
| 50 | 195 | OK as worded for a square crossing. But skew crossings will have a jagged edge to the crossing deck due to using panels that are square to the railway line. Suggest re word to remove reference to measuring at right angles and say 2.6m is minimum distance from any point on the crossing deck. |
| 51 | 196(b) | Suggest add or reword to say the fence must run the full length of the cattle - cum - trespass guards to make them effective |
| 52 | 201 | Given the proposed change of RSPG2E from a document “Intended to give guidance and advice to those involved in the design and construction of new and altered works capable of affecting the safety of railways” to one that “provides general guidance on the safe management, operation, modification and use of Britain’s 9,000 level crossings” the 75mm limit stated in the present document and which is a design parameter we use to ensure we are within the overall limit of 150mm which is the present agreed absolute limit for vertical profile ( hog ). Background for this is the Department of Transport document “Constructional and Operational Requirements, Level Crossings” of 1981, see Sections 14.3, 14.6 and 14.8. Hog is 150mm absolute, and 75mm design. Failure to alter this clause would make a lot of existing crossings non-compliant unnecessarily. |

| | | |
|---|---|---|
| 52 | 201 | The figure of 75mm as written here is an absolute limit. 75mm has been a design limit we work to on new/renewed crossings. The absolute limit for Hog is 150mm. The thinking at the time 75mm was fixed in the 80's was that 75mm was half the ground clearance of a low loader of the time which was 150mm. A lot of existing crossings that have not been renewed may approach 150mm on hog. See "Constructional and operational requirements, Level Crossings 1981", clause 14.6, for details. Also note ground clearance on typical vehicles is now far greater than 150mm at that same wheelbase used in the 80's so perhaps the 75mm and 150mm absolute figure can be reviewed. "Autotrack" shows all vehicles with wheelbases over 10m have clearances above 300mm. The lowest found was a wheelbase of 7m with 185mm clearance. It costs money to flatten out hog and it is suggested the design figure of 75mm is now too conservative. There is a view of that the design limit can be 150mm measured over 15.3m with no need for separate Cat 1, 2 & 3 values. Please review this section on hog. |
| 52 | 201 | All older crossings are 150mm max as per earlier edition of "RSP&G blue book guidance". It could be extremely costly if retrospectively we had to get these within 75mm. Please consider absol;ute level to be 150mm. |
| 52 | 203 | Road category is decided solely by number of vehicles using it. This clause as worded requires grounding signs be provided at all cat 2 & 3 roads even if they satisfy cat 1 criteria. Why is it necessary to provide risk of grounding signs if there is no risk? Suggested you alter to only require grounding signs where the road does not satisfy cat 1 criteria. If you really intend grounding signs be at all Cat 2,3 then make it very clear by perhaps adding at end of last sentence, "Signs shall be provided even if the crossing meets category 1 profile." |
| 55 | 219 | Suggested that wording should say "actual daily road vehicle user", instead of "daily road vehicle use", - to match the correct definition |
| 55 | 220 | Following a level crossing incident, there are proposals in development for retrofitting half barriers to existing AOCL crossings. Some of these sites will have road widths less than 5.1m. Where this occurs the proposal may well include shortened barrier arms to maintain a certain exit clearance of around 3m. The proposals are at an early stage at the moment but to preclude the work being prevented by this clause, it is suggested an extra sentence is added like "Smaller road widths may be allowed in certain circumstances provided an appropriate exit clearance is maintained." See clause 246, which allows for small roads and probably has this application in mind. Make both clauses agree please. |
| 56 | 225, 227 | In plain English, - does this mean the crossing and its immediate approaches should be a straight line with no bends and preferably at around 90 degrees to the railway? If so I suggest it could be reworded along those lines. noted this may allow 227 to be deleted |
| 56 | 226 | It is suggested that the organisation that the "Rights of way officer" belongs to should be explained. |
| 56 | 227 | It is assumed this will not be retrospective, but please provide guidance on how far back on the approach to a crossing should be straight. |
| 56 | 227 | Please provide some guidance on what sort of light at a level crossing would perhaps cause confusion with Lineside signals? Within the railway this would be covered in practice by a train driver or a TOC bringing it to our attention and it would be dealt with by signal sighting engineers from ourselves and the TOC's involving external authorities as required. the light does not need to be at a crossing. More likely it could be from a parallel road, a building close by, a light on a bridge etc. The situation is covered so unless you had a specific light in mind suggest delete reference to confusing lights as they are not really a crossing issue and they are covered by another process. |
| 56 | 231 | I would expect provision of Red Roundels is always appropriate. What difference if a red light is provided or not. If so, last sentence needs rewording to always have them. |
| 57 | 233 | Gate widths seem to conflict with 228? I suggest the wording is reviewed. |

| | | |
|---|---|---|
| 57 | 233 | The common gravity fall barriers do park between 5 and 10 degrees from the vertical, but "drive up/drive down" types can park vertically. This may be appropriate where there is a tight left hand corner just after a crossing. It is suggested that the clause be relaxed to allow barriers to be inclined from vertical up to an angle of 10 degrees from the vertical. |
| 57 | 235 | This clause concerns the height of the barriers above the road. Because of the road camber, the height is usually different measured in the centre of the road compared to the edge of the road. Noted the 900mm measurement is specified in the centre of the road, but the 1000mm under barrier value is not similarly specified. We have been thinking of providing some barriers deliberately higher to discourage pedestrians climbing over. It is suggested the 1000mm reference value be specified in the centre of the road and supplemented by "..... should not exceed 1000mm unless a skirt is fitted". Its suggested that provision of a skirt can allow the basic gap under the barrier boom to be increased safely as the skirt fills in the gap. |
| 57 | 235 | It is suggested this clause be expanded or a new clause added covering skirts. Saying that where provided, that the clearance between the bottom of the skirt and the road surface should not exceed 100mm measured in the centre of the road. Alternately see comment about clause 242, regarding the same thing. |
| 58 | 239 | This is fine for a half barrier or where two half barriers combine to fully close a road, but is inappropriate where there is a single barrier completely closing a road. There it is suggested that lamps should be spaced 1/3 & 2/3 on barriers less than 6m and 1/4, 1/2 & 3/4 on longer barriers? |
| 58 | 240 | Note this clause applies only to AHB's & ABCL's. It is suggested the wording be amended to make this clear and if this is done, the heading above "Barriers at skew Crossings" may be removed. |
| 58 | 242 | This clause says that the skirts shall fence in the space between the barriers and the road surface but does not give a tolerance. In practice due to road camber, there will always be a gap along part or all of the length of the barrier due to an uneven or sloping road surface. It is suggested a gap of up to 100mm is acceptable measured in the centre of the road. Also see comment about clause 235 regarding skirts. |
| 58 | 242 | This clause is under "Barrier Crossings worked by train staff", but it also mentions user worked barriers and half barriers. This is inappropriate. It is suggested that reference to user worked barriers and half barriers is deleted from this clause and instead appropriate sentences or complete new clauses be added to the user worked barrier section and the half barrier section which follow on, regarding the fitting of skirts. |
| 58 | 243 | Existing user worked barriers are hand operated, but since no more equipment of this type is available, future new or renewed systems are intended to be power worked based on standard MCB barriers. Suggest re word to allow for new or renewed types to be based around standard MCB barriers, power worked with appropriate controls to operate them. Note that since power will be readily available, we would also expect to provide boom lights as per MCB practice.. |
| 59 | 247 | Where a barrier is not metallic, you may want to specify the metallic strip shall be large enough in cross section to take the expected traction fault current without damage. (I know we would not use bako foil in this application, but it would fulfil the present wording.) |
| 59 | Sect 17, telephones and telephone signs | It is suggested that at the start of section 17, there should be an new additional clause stating that voice recording facilities should be provided on all phones at level crossings and as a direct consequence, users should be aware that they will be recorded. |
| 59 | 248 | This requires the telephone be fitted in a cabinet. It is suggested a weatherproof telephone with handset inside an integral door, which is what is normally provided, does not require mounting inside another cabinet. It is suggested the clause be reworded to allow for weatherproof telephones. |

| | | |
|---|---|---|
| 59 | 249 | This presently requires the power supply for the phones be independent of the crossing equipment. But it would be ridiculous to have a separate REC supply to the crossing just for the phones and if the crossing equipment already had a battery back-up - it should not matter that the telephone uses the same battery. A failure of a common battery supply would be safe as the failure would affect the crossing operation and prevent any trains approaching. It is suggested the wording should be changed to say suitable back-up arrangements should be provided to cover for mains power supply outages. |
| 59 | 250 | The 788 sign is rarely used as we try hard to place phones with good sighting, but this wording can be read to suggest its commonly used. It is suggested the paragraph be altered to make it clear its only provided in rare occasions where the phone is not clearly visible. |
| 60 | 252 | This requires the grid reference be displayed. RSSB project T818 determined that the grid reference on the information label led to over complication and reduced user comprehension in an emergency situation. Neither do the emergency services use the grid reference as a location identifier. It is suggested the grid reference is not required and the requirement should be deleted from the clause. |
| 60 | 254, note | Alternate text is offered for the recorded announcement or notice:- "The railway is normally open but may be closed during (followed by appropriate times), If calling during these times, you may cross if there is ringing but no reply after two minutes" |
| 60 | 256 | this clause is partially contradicted by clause 43 which requires a telephone be provided at an MCB that has auto lowering. Also ABCL is missed out of the heading immediately above clause 256. Suggest reword heading to include ABCL and clarify wording to avoid conflict with clause 43. |
| 60 | 257 | Diagram "785" should be "785.1" |
| 61 | 258 | Suggested re wording to " Telephones, where provided, should be positioned adjacent to the gates or barriers on each side of the crossing at heights appropriate to the users of the crossing." |
| 61 | 258 - 261 | Consideration should be given to the provision of dual-height telephones at Bridleway crossings, to avoid the need for equestrians to dismount to use the telephone. |
| 61 | 258 | See comment against 248 about telephones in cabinets. Same comment applies. Please re word as necessary. |
| 61 | 261 | This requires the grid reference be displayed. RSSB project T818 determined that the grid reference on the information label led to over complication and reduced user comprehension in an emergency situation. Neither do the emergency services use the grid reference as a location identifier. It is suggested the grid reference is not required and the requirement should be deleted from the clause. |
| 61 | 262 | I would prefer that the reference to "miniature warning Lights" be altered. It is an old term and while it is true that they are often referred to in this way, in doing so it conveys the impression that the lights are a warning only. It is suggested the reference be changed to MSL. The name was changed to remove the perception that the red light was just a warning when it is a firm instruction to stop. |
| 61 | 262 note | I believe that the requirements for cattle and long vehicles are already dealt with by signs requiring the user to phone up for permission to cross. The note does not appear to be helpful as in this case the MSL's would still apply to pedestrians and "normal" vehicles. It is suggested it be deleted. |

| | | |
|---|---|---|
| 61 | 263 | It is suggested that this be re worded to move the reference to diagram 108 to the sentence "at crossings not equipped with a phone" to maintain the style of the first sentence covering Diagram 107. Agreed this arrangement with no phone should be provided very much by exception, with either providing a physical phone or a phone number plate considered first. Also noted that Figure 8 on page 79 says a telephone sign 107 can be provided without actually providing a telephone if a telephone number plate is provided separately. So there is no reason to ever provide sign 108 in future?. Was that the intention? See comment against clause 147 as well when re wording. |
| 62 | 264 | There are a number of sites where providing the MSL's heads at the far side makes sound good sense. Station crossings often lead off platform ramps where the user makes a sharp 90 degree turn at the crossing threshold/decision point. These provide good examples where a MSL on the far side is a better arrangement. If a MSL was sited on the near side facing users walking down the ramp, it would be seen by approaching train drivers in that direction who may mistake it for a running signal. It is suggested the use of the MSL at the near side is preferred, but may be sited at the far side where it offers a tangible advantage. |
| 62 | 265 | The present unit is LED based, but your wording here might rule out any future technology? - It is suggested you re word to say the existing approved unit is LED based. Future technologies offering equivalent brightness/performance are not ruled out. |
| 62 | 266 | Should this clause reference the "Private crossings (signs & barriers) regulations 1966"? |
| 62 | 266 | ERR - Figure 8 is not in section 18. (Clause 266 is itself in section 18!) Suggest correct reference. |
| 62 | 269, table 6 | It is suggested you should put station crossings in the table. But please review comment on clause 188 & 189 about minimum timings please and please consider comment against the timings of 40 secs in general below. |
| 62 | 269, table 6, 40 sec warning types | It is not believed there any evidence supporting 40 seconds is an appropriate min warning time. A reduction should be considered. At 40 sec MSL's on 125mph lines, the strike-ins are 1 1/3 miles away. This makes MSL's very expensive because of the signalling complications in that area. A predictor can't be used as it can't reach out that far. It is believed the main rule for warning should be to allow sufficient time for a pedestrian to cross at 1.2m per sec as per clause 159, or a 18.75m vehicle at say 5mph and for both vehicle and pedestrian be in a position of safety with 5 secs to spare (as in clause 270). A value worked out from this at most crossings will be under 20 secs. I propose the min warning time be reduced to 30 secs. The same minimum to apply to station |
| 63 | 270 | See comments on 40 sec warning times. Suggest better to centralise design rules and calculations for warning times clearly in one clause with main rule for calculating crossing times, time in position of safety subject to minimum warning times for footpath and other types. This clause will be involved. |
| 63 | 277 | With reference to providing additional lights for side approaches, - the present wording may be read to suggest we can only provide a maximum of one additional light. But if we had more side roads, then we provide as many as necessary. It is suggested that the wording be altered to say that "one or more" additional lights shall be provided as necessary to cover any side approach. |
| 64 | 279, 280 | It is suggested that these clauses give definitions for acute and obtuse skew crossing and refer to Figure 9, [page 80] as an example of an obtuse type rather than relying on the reader finding the reference on page 91 & page 92. Also see comment about putting all items about pedestrian signals in one place. Involves clauses 175, 176 & 321. |
| 64 | 280 | See comment on clause 175 & 176 re standing red man application. Suggest re word to include and avoid contradictions or different interpretations. |
| 64 | 282 | “Capsizing” is a nautical term. I do not believe it an appropriate term here. A few extra words describing what exactly is meant would be more helpful. Suggest just say that any signs mounted over the carriageway on electrified lines must be made of metal or have a continuous metal strip. No need to suggest it could come within 150mm as depending on what sort of accident or failure occurs, how would you calculate the resulting gap? |

| | | |
|---|---|---|
| 64 | 282 | See comment on clause 247 about cross section of metallic strip. Suggest re word to include similar requirement. |
| 64 | 284 | 810mm should be 830mm |
| 65 | 288 | Calling them "Fat Men" is probably not politically correct for a percentage of our population? We call the sign a "Standing Red Man", often shortened to "Red Man". |
| 65 | 288 | Suggest provide a new clause here as there is no guidance in any existing document over height these signs should be fitted. Since it is for pedestrians it is suggested signs be fitted with centre of light at 1.8m, subject to variation to avoid providing an obstruction or risk of injury from walking into it. |
| 66 | 292 | If a 784 sign is provided, then a 783 is often provided with 782 between 784 and the crossing. See figure 4 as an example. Clause 292 says there may need to be an additional 783 board on the approach to the 784 sign. If so, please suggest a distance or place. Also it may be inappropriate to provide more than one 783 sign?. So if there is poor visibility of a 784, then If a 783/782 is needed before it, then there perhaps need not be another nearer the crossing?. Suggest revise figure 4 as necessary as a result of what you decide. |
| 66 | 294 | Diagram 775 signs are provided in different sizes intended to be read at different distances or for different approach speeds. Can you add here that these signs are only for short range/low speed, which will allow us to use the smaller size. It is suggested that if there is a blockage on or just after the crossing, its safe to assume the road traffic is approaching slowly. |
| 66 | 296 | As for comment against 294 about size of signs, but for 777 signs. |
| 66 | 297 | Noted this clause as worded only applies where its double track and the normal ATC controls are not provided, - But we do always apply the normal ATC controls and provide 10 secs min warning time at multiple track AOCL's! - so it will not apply anywhere. Also see comment on clause 247 about the flashing sign. It is not used now and in future an altered audible warning may provide a better ATC option. Suggest delete. |
| 67 | 300 | It is suggested "2002 Regulations` or `TSRGD 2002" be added before ""Direction 37.1" |
| 67 | 300 | This conflicts with other DFT documentation that requires the 790 sign providing "if any change to signage occurs" and not just if "the form of protection" changes. Its suggested the 790 is only required where there has been a real change to the protection and is "over the top" for a lot of signage changes, - but please review and see if both documents can say the same. |
| 67 | 303 note | Grammar error; 5th line, full stop in wrong position |
| 68 | 311 | Grammar error; Suggest last sentence, 3rd word from end, replace "on" by "at". |
| 70 | 321 | How obtuse does a crossing have to be before we go to the expense of a pedestrian signal? - For instance - If it was only 1 degree obtuse it is suggested we do not need to provide any? It is suggested we should provide pedestrian stop lines anyway but need only provide a pedestrian signal if it is more than 30 degrees obtuse. |
| 71 | Table 9 | This table does not correspond with the guidance in TRAFFIC SIGNS MANUAL Chapter 5. these documents should be aligned |
| 71 | Table 9 | This table is unusable. While the traffic signs manual says this document can override it, it you use the figures from this table you fall foul of the requirements for spacing centre line markings. Suggest review with traffic signs manual and decide on a common set of figures. |

| | | |
|---|---|---|
| 72 | 332 | This is fine to provide at new crossings, but is also an example of practicality and funding for existing crossings. If circumstances change at an existing crossing, like higher traffic levels, or new road junctions etc, and a yellow box is considered an adequate mitigation, then actually providing the yellow paint markings is only a very small fraction of the cost. The section order wants amending and that will take at least six months for ORR to progress. Plus the crossing ground plan wants alteration etc. The bureaucracy is 99% of the cost. If the change is due to external factors, then funding from external sources should be available. This is not the Para to put that in, but please consider elsewhere support or legislation for funding by external developers and highways authorities. |
| 73-78 | figures 2 - 7 | Text on signs should be centre justified. |
| 73, 74 | Figures 2, 3 | Diagram 784.1 – lower sign has pre 2002 information and should be altered to reflect the 2002 Regulations i.e. 61’62 (18.75m) long or 9’62 (2.9m) wide or 44 tonnes. |
| 73, 75, 76 | Fig 2,4,5 | 780A, 784 signs shown are old type without modern metric values. |
| 76 | Fig 5, Diagram' 776 sign | See comments on clauses 247 & 297. As a result suggest delete 776 sign. |
| 76, 77 | figure 5,6 | Diagram 785.1 – signs not to `2002 Regulations |
| 77 | new figures | It is suggested you include new figures for MCB-OD, User Worked Barriers & POGO's? |
| 78 | figure 7 | It is believed true to say that both ORR and NR believe the signs used at private crossings could be significantly improved. This is demonstrated by the extra signs that have been permitted by ORR at various crossings. Examples being "Keep dogs on Lead" or "Private Level Crossing Authorised Users Only". If this is not a good time to do a proper review of "Private Crossings (signs & barriers) regulations", then it is suggested a clause allowing slightly altered wording of standard signs or new signs where they improve correct use of crossings should be inserted. Perhaps a note on this figure or elsewhere in the text. |
| 79 | Diagrams | Underlining on text on signs is wrongly positioned. |
| 82 | Appendix A | Network Rail have the basic Stott equations behind the figures in the table built into the ALCRAM tool for risk assessments at AOCL crossings. So the appendix is not required for us and it may be deleted. (But we appreciate that it may be required and kept for other parties?) |
| 82 | Table 11 | the value of 900 against 5000 is almost certainly wrong. It is suggested it needs to be around 990 based on the equation in the Stott report. Noted its wrong in the current edition of the RSP&G as well. Its suggested it was probably transcribed wrongly when the earlier edition was published. |
| 83 | table 12, "88 kph" | Max speed for AOCL here is 88kph. But page 18, table 1, row 8 states 90kph. I know this is due to different mph to kph conversion and rounding up, and I have seen the note under the table - but they should be the same figure!!. See comment on table 1 about mph and kph conversions. Re word as necessary to be consistent or consider just deleting the kph columns in here to avoid confusion. |
| 86 | Appendix C, 2 | It is suggested this paragraph is expanded to avoid the times of special events or roadwork's which would materially affect the census figures. |
| 86 | Appendix C | It is noted that page 120, Para 7, has far more detail of the census requirements than in here. It is suggested Appendix C be expanded to include the auto lowering requirements and then perhaps Para 7 can be reduced? |
| 87 | Railway terms "Railway" | I suggest item (b) and perhaps the equivalent tramway section underneath need a look at again? (I can't understand (b)?) |

| | | |
|---|---|---|
| 91 | "Automatic crossing" | Noted this definition as worded includes MSL and white light/barrow crossings. That is different to the previous edition and is fine with me. But suggest you could add wording here to specifically include MSL's and similar to make it even clearer. |
| 91 | "Decision Point" | See clauses re timings of MSL crossings and centralise calculations See comments on clauses 269, 270 and comments over sections 10 & 11. Suggest centralise all definitions, rules and calculations of sighting/warning time for foot paths, Bridleways & user worked crossings. This to include this definition of decision points from which timings are calculated. Also note where there is an MSL, the position of the MSL becomes the decision point. Also at a bridleway, see comment on clause 152, as the gate often is the decision point. as well as decision point, there ought to be the definition of reaching a place of safety after crossing over. I suggest this is always 2m for a footpath, or 3m otherwise, even where the decision point when approaching from that side is further away. |
| 92 | "Retro reflecting material" | At present we seem to work to a different standard to some road authorities. It results in road signs provided by road authorities on the approach to crossings being more reflective than the signs and barriers provided by NR at the crossing itself. It is suggested that this clause be amended to state the standard so both road and rail. Suggest review BS EN12899-1-2007 and specify type RA1 or RA2? RA2 is most reflective and is what seems to be on most new road signs near me. If you choose RA2, then NR will have some work to change some of our signs and products like the barriers, but it seems sensible to make all road signs and barriers reflect the same at night. |
| 92 | "Road open time" | This definition is noted, and applies for AOCL's, - but in practice where its a crossing with barriers its incorrect. Where there are barriers the MROT timing is taken from the barriers being called to rise till the amber lights illuminate again. The red lights extinguishing are not used to start the MROT timing as they are tied to the barriers reaching a certain position during the barrier raise process which is variable. Suggest you may consider re wording? Also note the comment about clause 78, where you propose in this draft the red lights extinguish as soon as the barriers start to rise. the red lights should go off at the same time on all types of barrier crossing. |
| 96 | Clause 2.1 | Good to see this! |
| 96 | 2.1 | Suggest review use of "practical" and "reasonably practical" in this paragraph. Practical is used three times and reasonably once. Suggest you can re word it better. |
| 98 | 3rd Para, | There is a reference in here to "Railway Safety Publication 7". Is this the new title for RSP&G2E as it infers? Noted that this reference first appeared in the draft crossing user guide Jan 2010, but does not appear in the final version. |
| 103 | Final Para. | The personal name of the contact for responses / objections should be omitted, as this will undoubtedly change over time. |
| 104 | 2nd Para. | The personal name of the contact for correspondence should be omitted, as this will undoubtedly change over time. |
| 106 | Consultation | Grammar error; 3rd line, remove full stop after "so" |
| 107 | 2nd Para | Noted that NR often has difficulties submitting changes to section orders on time, - but It is suggested that the last sentence in this Para is unnecessary and would be better if it was deleted. |
| 107 | Section 5 | Very pleased to see the reference to Highway Authorities' **existing** responsibilities for traffic signs on road approaches to level crossings. |
| 108 | Planning Decisions | It should be made clear that this paragraph applies to **all** categories of level crossing, not just Public roads. In particular, it would be very helpful if it could be made clear that users of private level crossings are not entitled to substantially increase the burden (to the railway) by altering or enlarging it or changing its character, nature or extent beyond that which could be reasonably anticipated at the time the railway was built. Comprehensive case law exists to support this position. Network Rail's consent is required for any such change of use that may result from a proposed development of land served by a private level crossing. Planning Authorities need to be made aware of this. |
| 111 | figure 1 | A reminder would be useful at the top of the chart that renewal in an existing form should be a "last resort" after considering closure or down grading |

| | | |
|---|---|---|
| 111 | figure 1 | Suggest the box "Local Authority" should be "highway Authority or Planning Authority" |
| 113 | Appendix A | This information will become obsolete over time. |
| 119 | 4) | Grammar error; remove "should". |
| 120 | 7) | See comment regarding Appendix C re census. Also Grammar; remove comma by full stop in 4th line. |
| | | |