

Response to initial consultation on closure of Long Rock Mexico Inn Crossing

30/4/13

Friends of Long Rock Mexico Crossing

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Conclusion

No case whatsoever for either temporary or permanent closure, has been made on the basis of risks on the crossing or on the basis of a wider view of impacts. The crossing should be opened without delay.

Summary:

Network Rail (NR)'s submission to Cornwall Council (CC) is remarkably weak.

The Mexico Inn Crossing meets the Office of Rail Regulation (ORR) safety standards, and NR does not dispute this. Closure has not been recommended by the ORR, or by the Railway Accident Investigation Branch (RAIB).

NR gives numerical evidence in its request for closure. This, with additional information provided to FOLRMC, *shows that the crossing is safe* and has a lower risk than the target level set by the Rail Safety and Standards Board (RSSB).

NR gives anecdotal evidence in its request for closure. This is so weak that it does not give any substantial support to the conclusions NR seeks to draw from it.

NR's statistical methods throughout are seriously inappropriate and show either incompetence or ulterior motives. NR has tried to hide the favourable result of their own numerical assessment (the crossing is safe) by misusing deaths, near misses, and both relative and collective risk.

NR has deliberately avoided responding to one of CC's list of questions that would reveal the fact that closure displaces users on to alternative routes that are much more dangerous, and that it damages both the economic prosperity of the community and the health and well-being of Long Rock (LR) residents.

Safety improvements are possible, but should not delay re-opening as the crossing is already safe enough to be open. They include: speed restrictions which can produce useful benefit without requiring any change to timetables; changes to the whistle regime, and modern, low-cost, warning-light systems.

NR's policy on crossings shows no respect whatsoever for the rights of users or their safety or other damage to their health and well-being. The very aggressive policy on closures combined with tunnel vision on risks is not consistent with the claimed concern for the 'safety of the public'. It is very apparent that NR's motivation is to shift risk off its patch, regardless of the effect on overall public safety, while reducing running costs and liabilities.



Legal context:

The Highways Act (HA) 1980, section 118A, under which this closure is proposed, says:

Stopping up of footpaths and bridleways crossing railways

(1) This section applies where it appears to a council *expedient in the interests of the safety of members of the public using it or likely to use it* that a footpath or bridleway in their area which crosses a railway, otherwise than by tunnel or bridge, should be stopped up.

... and ...

(4) The Secretary of State shall not confirm a rail crossing extinguishment order, *and a council shall not confirm such an order as an unopposed order, unless he or, as the case may be, they are satisfied that it is expedient to do so having regard to all the circumstances, and in particular to -*

(a) whether it is reasonably practicable to make the crossing safe for use by the public, and

(b) what arrangements have been made for ensuring that, if the order is confirmed, any appropriate barriers and signs are erected and maintained.

We have unsuccessfully sought clarification from CC of its view of the meaning of this section, but it appears from verbal statements that CC holds the view that it does not have to have regard for all the circumstances, but the Secretary of State does, and that 'expedient in the interests of the safety of members of the public using it or likely to use it' refers only to risks experienced by users while on the railway line.

We consider the view that the assessment should be on basis of the risks on the crossing alone to be incorrect because:

- It implies no balance whatsoever. Safety viewed solely as safety at some location can always be improved by banning people from that location, but carries the absurd implication that the intention here in the HA was to enable closures by local authorities regardless of the possibility that the overall risks to the users might be vastly increased. This amounts to the HA mandating non-joined-up thinking at the local level.
- If the HA does not require a balancing of effects on the public and other users of closed versus open, it must require judgment against some absolute level of risk, but no such level is stated or described in

the HA or generally known and accepted i.e. it becomes arbitrary, idiosyncratic and open to abuse by NR or others who may have ulterior motives.

- If there was no requirement to balance risks and costs against benefits the HA could be read as supporting a zero-risk approach, although zero-risk policies are now universally discredited and repudiated by the Health And Safety Executive.
- It implies that the criteria, and information, to be used by the local authority are different from and more limited than those to be used by the Secretary of State, and that the latter is the only agency required to take wider local factors into account. We see no provision for that process.
- It conflicts with the advice given by The Planning Inspectorate in:
Rights of Way Section Advice Note No 9, (first issued March 2001),
General Guidance to Inspectors on Public Rights of Way Matters, Public Path Extinguishment Orders, which says sections
‘118(1) and 118(2), were considered in the Stewart and the Cheshire County Council case s5. The use of the word ‘expedient’ in subsection (2) means that other relevant considerations can be taken into account when deciding whether an order is expedient, in addition to those expressly set out in the subsection.’

We expect the authors of the HA intended the word ‘expedient’ to retain its meaning through the section.

- It is inconsistent with the schedule of information to be collected in relation to an extinguishment (Schedule 1, Form 1, Form Of Request For A Rail Crossing Extinguishment Order, Highways Act 1980, Transport And Works Act 1992) which CC have followed in this case. The schedule includes such information as ‘the effect of the loss of the crossing on users’ that clearly must be considered.
- In a letter (22nd April 2013) from the Rt. Hon. Simon Burns, Minister of State, Department for Transport, to Andrew George, MP, the Minister states ‘In their considerations, they [Cornwall Council] will look into many of the issues that you raise in your letters, for example, the safety of the alternative routes that people will use instead’.

Following our meeting with the ORR they said in an email:

‘You present a well-argued case for re-opening the crossing, and we note the need for someone to take a balanced view of the risks and benefits. We’re looking again at our advice on this, and the risk assessment basis for it.’



Network Rail’s application:

Our response follows the application sequence. It shows that NR’s application falls a long way short of any reasonable case for closure.

- In its application, NR has deliberately *not* used its own numerical estimates of the risk to individuals at this crossing. They clearly show that the risk at the Mexico Inn Crossing is below the target level set by the RSSB, i.e. this is a safe crossing.
- Instead, NR has tried to make a case out of the history of deaths and near-misses. In both cases it has made serious statistical errors in trying to support invalid assertions that exaggerate the risk: it has

failed to address the fact that near-misses as now recorded do not predict risk nationally; it has failed to investigate or even mention local bias in near-miss statistics.

- NR has tried to use the Deputy Assistant Coroner as a superior authority when he manifestly is not. No case has been made on this basis.
- NR has failed to assess the seriously increased risk to former users arising from displacement on to neighbouring roads, demonstrating that its commitment is not to safety but is to moving risk, liabilities and costs off its patch.
- NR has omitted all the material requested on effects on users, which include effects seriously damaging to the safety, health, well-being and economic prosperity of the local community.
- NR has deliberately withheld crucial numerical data.
- We find that in general NR shows a strong and persistent bias towards closure and distorts both facts and arguments to make the case for closure.
- Further, it shows tunnel vision in which NR ignores or fails to see any off-rail effects of closure.

These serious failings result in an application that constantly claims to be for our safety when in reality it reduces our safety and seeks to deprive us of a right of way that existed before the railway and is a greatly valued feature of this village.

In the table below we follow the sequence of NR's submission, and identify relevant or missing evidence. It is consequently repetitive on some topics so a consolidated statement of the safety case follows it.

	Network Rail's application	Relevant evidence
	Appendix A (no page number)	
1	.. used by visitors/holiday makers (many thought to be alighting from the nearby bus stop)	The is no record in 160 years of death or any injury to a non-local person. No numerical evidence is provided. Local users are the large majority.
2	... used by pedestrians who may have no experience of crossing railways ...	No evidence is given that such users are at higher risk. They may well be at lower risk as stepping onto a train track will be a new experience.
3	It is evident that the manner in which it is used is importing an unacceptably high factor of risk and this has resulted in a recent fatality.	No evidence of 'imported risk' is given. Although the word 'import' is popular in rail safety texts we note that risk is not generally a substance that moves intact from place to place. We accept that there may be risk-prone people who move between places, and NR no doubt wishes to avoid 'importing them', but their personal risk is not necessarily improved by closing crossings, even though normal users are penalised. The low fatality rate at the Mexico Inn Crossing (2 in 160 years) gives no evidence that it is a risky place.
4	The Coroner recommended it should be closed	The Cornwall Deputy Assistant Coroner, Barrie van Den Berg, gives no evidence other than reference to deaths and near-misses (see below.)

	<p>He gives seriously incorrect statements of the level of inconvenience and misquotes the distance along the track to the vehicle crossing, and uses that distance as if it was the extra distance imposed on users.</p> <p>The Coroner quotes the Rail Safety Officer in a way that suggests that he was recommending closure, although he did not do so.</p> <p>He suggests that closure is the only way to mitigate the dangers when there are a number of possible safety improvements and closure actually increases risks.</p> <p>The Office of the Coroner in Cornwall has blocked all efforts to reveal any other evidence of risk, and failed to answer any questions on that subject.</p> <p>In view of its manifest errors we have sought to challenge the Coroner's letter but this is not possible because rule 43 letters are considered to be only opinions, and are not required to be substantial documents. The recipient is required only to consider the letter and reply, but is not required to follow any recommendation. Their role is primarily to accumulate possible pointers to national safety issues that may be further investigated.</p>
5	<p>There is insufficient room for even a stepped footbridge.</p> <p>No bridge is required, but room could be made by buying up one or more local houses.</p>
6	<p>Signaling makes the provision of Miniature Stop Lights inappropriate</p> <p>Alternatives such as the WaveTrain system that warn of the actual approach of a train are coming into use and are, or will soon become, appropriate means of providing warning here. They do not require any integration with the signaling system. See http://wavetrain.no/products/wavetrain-lcws/</p>
7	<p>But there is an alternative detour 220m to the west.</p> <p>For the majority of users this adds over 1km to a round trip to the beach or the coastal path to the east, plus unpredictable delays that exceed 20 minutes at times. People wait and wait at the gates and eventually go back home or, if they are on the beach side, walk to The Station House and come into Long Rock via the Marazion road which is extremely dangerous. Since the temporary closure people have been forced to make that journey in darkness due to gate failures.</p>
8	<p>Closure is the only viable option to ensure public safety.</p> <p>A 'viable' option is one that can survive. Keeping the crossing open has survived 160 years during most of which it was across twin tracks with higher levels of use.</p> <p>To suggest it is now not 'viable' is complete nonsense.</p> <p>Public safety is not perfect anywhere and here it is good enough, with NR, the ORR and the RAIB agreeing that the crossing meets safety standards. (see the document from the ORR that forms part of NR's application).</p> <p>Public safety is not confined to safety on the track; a willingness to displace risk to higher risk sites without making any evaluation of that, or ensuring that any other agency will do that, shows no interest whatsoever in ensuring public safety.</p>
9	

<p>Auxiliary Report for Appendix A</p> <p>Reasons for application,</p> <p>1. Background.</p> <p>2.</p> <p>In October 2011 JN was 'accidentally killed' ...</p>	<p>The verdict at the inquest under an Assistant Deputy Coroner was accidental death, but there is substantial evidence that this was not accidental:</p> <p>The train driver was the only witness and reported, not that ■ was crossing but that ■ was standing beside the track inside the gates, and looked at the train at or about the time the driver hooted in response to the presence of ■. ■ did not then take any action but moved in front of the train when it was so close the driver could no longer see ■, and nevertheless was struck by the middle of the train. This information is in the RAIB report on the 'accident'.</p> <p>The ORR confirmed verbally that they are aware of inquest verdicts of accidental death that are actually suicides. The strong bias against verdicts of suicide in Coroners' court verdicts is well known to medical research - in general such a verdict cannot be reached without clear evidence for it, but that evidence will often be absent in suicides, which then acquire open or accidental death verdicts.</p> <p>It is consequently not reasonable, in the absence of confirmatory evidence of accident (e.g. a person apparently unaware of the train and crossing slowly) to view the death of ■ as being an accident, but instead it should be viewed as being of uncertain origin. (as the RAIB states in para 66 of its report 'It can never be established with certainty why Mrs. N moved into the path of train 2C47 as it approached')</p>
<p>10 Second person recorded as fatally injured ..</p>	<p>The family have confirmed to us that JM's dog was not on a lead. Unrestrained dogs do appear to be a risk factor at crossings and advice to dog owners should be considered as a safety measure. No evidence is given that dog-related risk is evidence of general risk.</p>

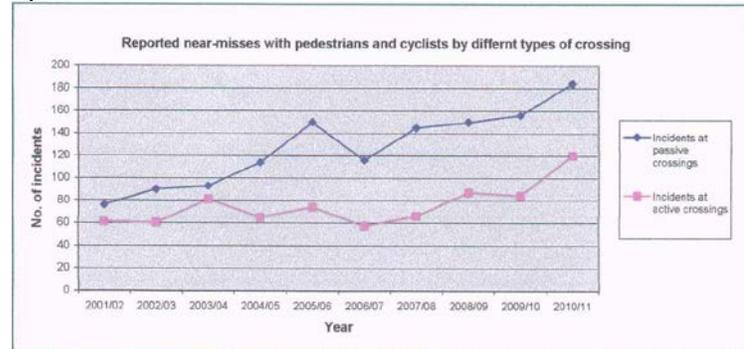
<p>11 The Deputy Coroner's rule 43 letter</p>	<p>This actually came from Assistant Deputy Coroner Barrie van den Berg who has not responded to any letter i.e. he has declined to provide any evidence beyond that in the letter, and he, and the Cornwall Coroner have blocked any access to any part of the information on the inquest held by CC.</p> <p>The letter contains less evidence about ■'s death than the RAIB report and no other primary evidence.</p> <p>The letter states that closure of this right of way will cause 'minimal inconvenience'.</p> <p>It actually causes such major inconvenience that it exposes users to greater risk using a dangerous road bridge, it drops house prices by over £20,000 in parts of the village because of the loss of easy access to an area of great natural beauty, and it has lead to 200 people, representing over 6000 years of Long Rock residency attending a public meeting and voting <i>unanimously</i> in support of a motion including:</p> <p><i>'This meeting considers that this is essentially a safe crossing, and the benefits to the community and local businesses of easy access to a beautiful beach outweigh the low level of risk present at any rail or road crossing.</i></p> <p><i>We call on Cornwall Council to keep the crossing open both during their examination of the issues, and permanently.</i></p> <p>The rule 43 letter appears to suggest that an officer of the Railway Accident Investigation Branch agreed that the crossing should be closed, but the RAIB's investigation report does not say this, and the Director of the RAIB has confirmed that the officer did not say this, either at the inquest or elsewhere.</p> <p>The Deputy Assistant Coroner has no particular expertise in diagnosis, transport, any area of safety or other public policy. The Coroner is quoted by both NR and the ORR as if it is the Coroner who is leading the case for closure, when the Coroner was apparently simply going with the views of the family of the deceased. The Coroner made no proper investigation of the implications of his irresponsible rule 43 letter which displaces crossing users onto more dangerous roads.</p>
<p>12 The application is supported by the ORR.</p>	<p>The ORR Director of Rail Safety has stated, at a meeting in Long Rock, to CC Highway Network Manager and FOLRMC that the ORR <i>does not recommend closure of the Mexico Inn Crossing</i>. It does offer support on general grounds to NR's efforts to improve its safety performance by closing dangerous level crossings, particularly those with derailment risk (where vehicles cross the track).</p>

<p>13 Level crossings are only safe when they are used correctly; young, old and disabled people may be particularly at risk; NR cannot control this; this is what drives our policy to close as many crossings as possible.</p>	<p>All these risk factors apply also to cars, trains, railway stations, beaches, hospitals, alcohol, lawn mowers, dogs etc.</p> <p>Complete closure or banning any one of these would achieve a reduction in accidents arising from it to zero, and could be justified in exactly the way NR seeks to do here e.g. 'using a lawn mower always exposes the user to risk from moving blades'.</p> <p>Clearly this argument does not, in itself, provide any evidence whatsoever for closure of all crossings or it should apply to all the other cases. It does make it obvious that a balanced appraisal of <i>all costs and benefits</i> is essential before depriving citizens of any of these amenities, because the costs of closing or banning them commonly outweigh the safety risk.</p> <p>NR have not even attempted to demonstrate any such wider appraisal, except for a claim (see below) in the last paragraph of their submission.</p> <p>It is a disgrace that NR is using this unbalanced approach to risk as a way of closing valuable rights of way, and we can only conclude that the process is driven by an ulterior motive, that seems most likely to be the reduction in liabilities and running costs post closures, but might simply be bonuses for middle managers.</p>
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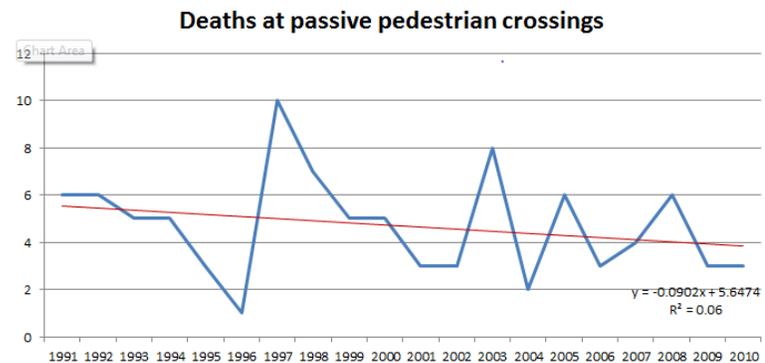
If individual risk remains constant then *both death rates and near-miss rates* at crossings will be expected to *rise as usage rises*. It is not reasonable to use these rates as evidence supporting closure without ‘normalising’ them to assess what they actually mean about individual risk, or this approach will promote closures of crossings purely because they are particularly valuable, as here.

NR’s approach here is, as elsewhere, both statistically invalid and exaggerates their case.

The trend in near-miss rates for pedestrians nationally is strongly upwards,



while the trend in deaths is going the other way,



so clearly near-miss trends *do not predict death trends*.

Do near-misses predict high-risk? NR gives no evidence on this, although it is very likely that local factors are far bigger in determining reporting rates e.g. a crossing near a terminus may have higher reporting rates because incidents are very fresh in the driver’s mind when they leave the cab.

The absence of near miss reports before the period quoted by NR is typical of NR’s distortion of the data – NR is selectively quoting a short period with the highest rate when any longer period would show a lower rate. NR’s approach on this, as elsewhere, is both statistically invalid and exaggerates their case.

Anecdotal evidence from older residents of Long Rock strongly suggests that the *crossing is used much more carefully now than in the past*, when children were in the habit of crawling under stopped freight trains and then crossing the second track.

15	and fatal accidents ...	<p>NR states on page 3 ‘Two members of the public have been killed [here] in the last four decades. (actually it’s five decades)</p> <ol style="list-style-type: none"> 1. Statistically it is entirely wrong to estimate the rate by a period defined at each end by the only two deaths to have happened in 160 years. NR’s approach here, as elsewhere, is both statistically invalid and exaggerates their case. <p>To illustrate this: There was an actual accidental death on the road in Long Rock a few years back. Using the NR’s approach a week later it could be said that ‘road deaths in Long Rock are currently running at 1 per week’.</p> <p>The crossing was twin track for most of its 160 years of existence, and carried much more rail traffic in the days of freight. Long Rock village had far more children in the past and local people who were children in the inter-war period say they ‘lived on the beach’. Despite including this high risk period the best estimate of death rates here is 1 in 160 years if you include dog-related deaths and 1 in 80 years if you include deaths of uncertain cause. Using 2 per 40 years is another example of the consistent bias and distortion in NR’s approach.</p> <ol style="list-style-type: none"> 2. Furthermore the level of risk cannot be accurately assessed from events that are so rare that only 2 or less have occurred in 160 years. At such low rates there is little predictive value in the record of deaths. See Risk Assessment below. 3. Examination of the crossing itself for dangerous features is a far more reliable method. It has been done by NR (using the ALCRM), and the crossing has been shown to be safe, and is known to be compliant with the safety standards. 4. Again, rates of deaths or accidents must be normalized to be meaningful. This is not mentioned in NR’s submission, although it is included in the ALCRM which shows individual risk to be less than 1 death per 11million traverses.
16	shows misuse ...	<p>Suicides are deliberate misuse; accidents may not be. Users acting correctly should not be punished because of deliberate misuse – that would amount to collective punishment, which is illegal even in war.</p>
17	and together with the level of use ...	<p>This amounts to saying that crossings that are highly beneficial to users, and consequently much used, should be targeted for closure because of the ‘level of use’.</p> <p>This deliberate conflation of collective risk with individual risk is another of NR’s distortions and is an anti-social stance, strikingly in contrast to the ‘safety of the public’ motivation that is constantly claimed.</p> <p>The ‘irreducible level of individual risk’ at a crossing is the appropriate measure of safety risk.</p> <p><i>Collective risk</i> is the appropriate measure for deciding how much money can be spent on a crossing.</p>
18	this underpins our case for closure.	<p>The case from NR is here explicitly based on the deaths and near misses because NR knows their own risk assessment is against</p>

them unless they can use this history to over-ride that detailed assessment of individual risk. But the history does not provide that under-pinning because:

Two deaths in 160 years is not above the target individual risk level because of the high level of use of this crossing, even if both were accidents .

The near-miss statistics evidently do not predict trends in death rates, which nationally have been going in opposite directions.

NR fails to show the degree of any predictive local value for near-miss statistics.

The risk assessment based on NR's All Level Crossing Risk Model gives no case for closure (see below).

	2. Mexico Inn Footpath Crossing, page 2	
19	... frequent high speed and local services ...	<p>'Frequent services' means the gates at the vehicle crossing are down a lot, so that displaced crossing users experience long delays. Sometimes the gates do not lift between trains and walkers go back home after standing at the gates for over 25 minutes, and walkers on the seaward side have been forced to make a massive detour and cross a dangerous road bridge in darkness. See (7).</p> <p>To describe such unpredictable delays imposed on both outward and return journeys as 'minimal inconvenience' (Cornwall Coroner) or 'modest increase in time' (NR) is to treat users and their safety with contempt.</p> <p>The services here are actually less frequent than anywhere else on this line... yet another NR exaggeration.</p>
20	The [vehicle] crossing removes all the risk which is associated with the Mexico Inn Crossing.	No. Not only does this ignore displacement on to the road bridge it wrongly assumes zero risk at the vehicle crossing, e.g. in the case of the first death the dog could have run down the track and been followed by the owner. The signman could easily have failed to see that before they were out of camera view. Suicides also could be displaced to other sites or methods.
21	The usage profile has been confirmed by taking census and from dialogue with local residents and the Council.	FOLRMC has not been part of this dialogue despite the fact that we have polled local people and conducted a quantitative survey. NR should have provided details of this exercise. We would like to know who was involved in the dialogue other than the relatives of Mrs. N.
22	... used ... for leisure purposes	The crossing is also used for journeys to school, and to work, in Marazion, for journeys to deploy scientific equipment in the intertidal zone by a local instrument manufacturer, and as a safe route to the cycle path for persons cycling to or from work in Penzance from locations to the east.
23	... use by the elderly and children affects the risk profile [as they are] 'vulnerable users' who are slow or do not have a mature perception ...	<p>The crossing provides a valuable training site for young children where their parents or guardians can teach them how to deal with such risks.</p> <p>Depriving children of exposure to all risk is extremely risky in the longer term.</p> <p>Every child in the village knows what to do at the crossing.</p>
24	Tourists - 'infrequent users' and 'vulnerable users' are factored into the risk assessment	As some of this risk has the safety value stated above, the real level of risk must be lower than that estimated i.e. below 1 death per 11 million traverses.
25	... the first fatal accident ... when JM was apparently trying to pull .. dog out of the trains' path	A minor point, but we understand the dog was not on a lead.
26	Since 2007 there have been a further	The sudden upsurge in the absence of any change in the crossing

	ten serious safety events reported	shows clearly that these statistics do not accurately, if at all, represent true risk of death at the crossing.
27	as well as the fatal accident involving JN	Once more NR deals with this event that has strong features of <i>not</i> being an accident as if it definitely was an accident.
28	One involved a group of ten pedestrians with children in pushchairs	How is it that ten pedestrians with children in pushchairs can be 'nearly missed' without injury? This is because the criteria for a near miss are anything that gives a driver anxiety or causes the driver to take any action. The predictive value of such criteria has not been shown, and evidence above suggests strongly that it does not correspond to what a naïve reader might imagine. See 14.
29	Since 2005 there have been no safety incidents involving pedestrians at the [vehicle] crossing	The number of pedestrians using it has been far lower than at the Mexico Inn Crossing. Near-misses must be normalised to be meaningful.
	3. Risk assessment. page 3.	
30	The letter is the individual risk, the number is the collective risk.	... a useful piece of information.
31	The highest risk crossing are those which score A, B or C for individual risk	<p>Tin fact the highest is A, and the lowest is M. Categories below E are all extremely safe, to the point that category M is meaningless in the case of footpath only crossings, for which the scale is really A-E. see below.</p> <p>C is the third category and includes crossings that are compliant with the ORR's safety standards.</p> <p>The central estimate for Mexico Inn Crossing from the latest assessment was an individual risk of 1 in 11.8 million traverses, putting it at a higher level of safety than that proposed as a target by the RSSB.</p> <p>NR's approach here, as elsewhere, is both statistically invalid and exaggerates their case. The top, middle or any position could be very dangerous or very safe because <i>rankings do not quantify risk</i>, they only quantify the distribution of whatever risk exists among crossings.</p> <p>NR has been asked for numbers that would illuminate these rankings (e.g. what is the <i>average</i> estimated individual risk at footpath only crossings) and this response to their application for closure has been delayed in the hope that NR would provide that information, but none has arrived.</p> <p>This information is not difficult for NR to provide, as they have the ALCRM assessments of all crossings in a spreadsheet. We can only infer that the values requested would be favourable to our case, and are being withheld on that account. If this closure goes to a public inquiry this will be one of many missing pieces of information that we will pursue.</p> <p>NR's classification of individual risk.</p> <p>The risk to a regular user (who makes 500 traverses per year) is</p>

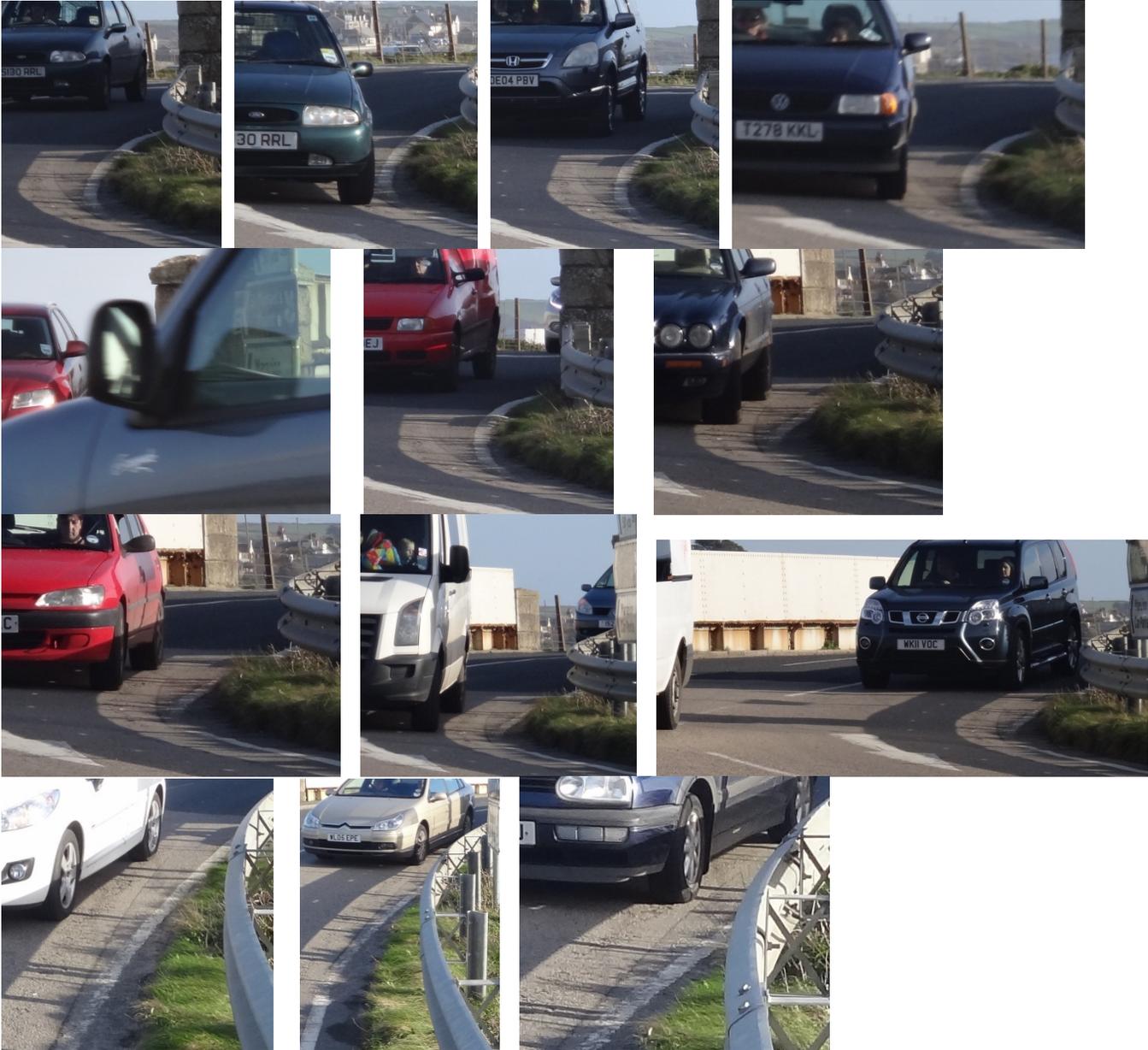
	<p>calculated by NR's All Level Crossing Risk Model:</p> <p>Looking at successively safer levels in the classification we see that before level F is reached the risk level is so low that the whole population of the UK could cross with a risk of only 1 death.</p> <p>But NR has categories G, H, I J, K, L and M that are even safer and extend to incredibly low levels of risk.</p> <p>Despite these gratuitously extreme values the argument '<i>Your crossing is C on scale that goes from A to M, so it is a high risk crossing</i>' is used in dealing with the public, and was used by NR's Regional Safety Improvement Manager at a site meeting at the Mexico Inn Crossing.</p> <p>In this submission NR chooses to use the extreme length of this scale to make it appear reasonable to say 'A,B and C are the highest'. More manipulative use of data by NR!</p> <p>(You may wonder why category 'M' exists: The ultra-low risks represented by these extreme categories is required in the model to allow for collective risk to be broken down by who experiences the risk, so virtually nil risk <i>is</i> experienced by a passenger on a train crossing a little-used footpath only level crossing.)</p>
32 ... and 1,2 or 3 for collective risk.	<p>Again, 3 is the third category and the scale is a logarithmic scale.</p> <p>The latest ALCRM assessment is based on the crossing being used at an average level of 400 traverses per day. This is a heavy level of use and is within the range estimated by FOLRMC (after the crossing had been closed by CC) on the basis of a survey of residents of Long Rock.</p> <p>This collective risk assessment gives (see letter from NR, 14th April) an accidental death rate at the crossing of circa 1 in 81 years.</p>
33 In the Western route there are 21 crossings in the higher risk range out of a total of 743 crossings.	<p>This is a statement about collective risk, but again NR fails to correctly distinguish individual and collective risk.</p> <p>To illustrate: Large district general hospitals in the UK have very high collective risk of death. Their individual risk for many users is lower than those same users would experience if they were sent to a smaller hospital with a lower collective risk. The high collective risk defines how much investment is appropriate, and absolutely not which one should be closed.</p> <p>This persistent distortion by NR in which collective risk is used as if it indicates a need to close the crossing is disgraceful. Such illogical argument is either due to incompetence or serves NR's agenda of shutting all crossings.</p> <p>This is also a statement about rankings, and in that respect it is also inappropriate. There will always be, for example, a top 10% of crossings. If they are all closed this year, there will still be a top 10%, (or 11%) next year, so closure of some set of highly ranked crossings is a way of getting closures that will never be halted however safe crossings are, or become, until all are closed.</p> <p>NR's approach here is, as elsewhere, both statistically invalid and exaggerates their case.</p>

34	<p>Mexico crossing was last assessed in Feb 2013 scoring C2 and it is therefore considered to be high risk.</p>	<p>This is nonsense!</p> <p>1 in 11 million is a risk citizens should absolutely be allowed to take.</p> <p>This appears to be the nanny state in a malignant form, but is more likely to be middle management chasing bonuses while NR seeks to cut liabilities and reduce costs.</p> <p>The use of collective risk entirely denies the value of crossings to users. See 33 above.</p> <p>The crossing had been assessed regularly before the recent death and graded C for individual risk. NR did not initiate safety modifications in response to those gradings because the crossing was, and remains, compliant with the regulations.</p>
35	<p>Crossings in the high risk bands are more likely to make a positive safety cost/benefit business case to fund works to eliminate reduce or mitigate the risk at the crossing.</p>	<p>This shows that NR do know that that high <i>collective</i> risk justifies high investment, if there is any that is needed, not closure.</p> <p>Despite this knowledge NR persistently misuses collective risk to justify closures.</p>
	<p>4. Options for reducing the safety risk at Mexico Inn Crossing page 4</p>	
36	<p>2. Reducing line speed. The expectation of the Government ... is that line speeds should increase, to reduce passenger journey times.</p>	<p>Firstly, we do not believe that the government views passenger time as inherently more valuable than crossing users' time.</p> <p>If a train at full speed reduces its speed at the Mexico Inn Crossing by 20% when going west, and resumes deceleration later to follow its traditional speed trajectory it will take about 10 seconds longer to reach the terminus.</p> <p>At 400 traverses per day, averaging 10 minutes longer than before it requires 24,000 westbound passengers per day to give an equal loss of passenger time. This is far above the level of passenger traffic, so there is no case whatsoever for asserting that the government would support this waste of citizens time.</p> <p>Secondly, we note that the government widely supports the reduction of road vehicle times to improve the safety performance of roads. The government cannot be blamed by NR for this refusal by NR to consider this useful measure. It is NR who, having made an opportunistic request for closure on the back of an incompetent rule 43 letter from a Deputy Assistant Coroner, do not want to consider a valuable safety measure that might set a precedent and would improve public safety.</p> <p>This safety measure should be adopted.</p>
37	<p>3. Provision of local warning for users. There is not suitable technology currently available or in development ...</p>	<p>The WaveTrain warning system is already in use in the UK and requires no integration with signaling systems. It is relatively inexpensive and can be linked to local warning lights.</p> <p>It is clear that such valuable systems are now becoming available and the RSSB is involved in a project that evaluates at least one.</p> <p>This point from NR is misleading – it is reasonable to expect such</p>

		technologies to become available soon, and in the meantime the crossing remains compliant with safety requirements.
38	4. Provision of a bridge...there is not enough room	It would be possible for NR to buy and demolish one or more houses at the Mexico Inn site.
39	6. Extinguishment of the path. The [vehicle] crossings provide a safer alternative ...	<p>You could expect individual risk to fall below the current 1 death per 11 million traverses only if all traverses were at the gated crossing, but they are not.</p> <p>The FOLRMC survey shows that users are displaced onto the far more dangerous road bridge crossing to the east, and some cyclists are displaced onto the more dangerous A30 approach to Penzance.</p> <p>We can provide a full copy of the survey if required.</p> <p>We provide more detailed evidence of this highly significant loss of safety created by closure of the Mexico Inn Crossing. (See 44).</p>
40	... will create a worst-case diversion of up to 550m	<p>This is the worst case, but it is also the commonest case, as more users are going east towards Marazion or the sandy beach accessed by the slipway opposite the Mexico Inn Crossing than are going to the car park or west.</p> <p>Further, the diversion adds an unpredictable delay to both outward and return journeys. At times the gates are down continuously between trains so that users wait for 20 minutes or more, with no indication of when their wait will end. After standing amidst fumes people give up and go home, irritated, and frustrated when they would previously have had an enjoyable and uplifting experience of a beautiful coast.</p> <p>The Inspector at the inquiry into the Mott's Lane crossing closure states <i>'I was also able to experience the long delay that sometimes occurs when more than one train is timetabled to pass the crossing. On one occasion the wait for pedestrians amounted to the best part of five minutes. This is a long time ...'</i></p> <p>We view the assertion by the Coroner and others that use of the gated crossing causes 'minimal inconvenience' as contemptuous of users.</p> <p>We wish to make it clear here that CC should not accept any offer by NR to instruct the staff in control of the crossing to keep the closures shorter, because that person has other jobs to do and will always know that they are at risk of much greater trouble if they make the closures too short rather than too long. Users have no real power to challenge failure to keep to a minimal-time-closed regime.</p>
41	... relocation of bus stops on the main road ...	This penalises the much larger number of people using the bus who are not going to the beach, and will undoubtedly be resisted both by them and the bus company. Again NR is happy to shift problems off their patch and leave others with the mess.
42	... improvements to the car park ...	We note that NR's Regional Safety Improvement Officer stated that NR aims to close <i>all</i> level crossings, and NR's published policy on crossings is consistent with that. As this one serves only a car park, it is likely that NR will be arguing the case for its

	<p>closure before long. NR will use the grounds that:</p> <ul style="list-style-type: none"> • there is always risk where people cross the track • vehicles carry the risk of derailment • two vehicles have tried to jump the gates • one vehicle has damaged the gates • the gates are prone to damage by seawater • etc <p>... so safety can only be assured by closure.</p>
<p>43 MISSING INFORMATION</p> <p>Item (h)(iii) on the CC’s schedule has not been answered. It requires information on:</p> <p><i>‘the effect of the loss of the crossing on users,</i></p>	<p>NR has entirely failed to provide answers to the questions in this section, which is specified in the template provided for consultation on closures (see Legal Context)</p> <p>We provide some of the missing evidence here.</p> <p>Risk of death:</p> <p>The level of use of the crossing used in latest risk assessment by NR is within a factor of 2 of our own estimate, so we use it here.</p> <p>At the level of risk estimated by NR (1 death every 81 years) :</p> <p>In 160 years the Mexico Inn Crossing deaths will have cost maybe 40 years of life (including time at work and asleep) while closure would have cost 400 years of recreational time if 10 minutes was added to all traverses. This is a cost of more than 200 years of recreational time (quality time) for each predicted death.</p> <p>Closure would clearly waste vastly more life than it saves, even without taking into account the fact that the evidence that closure would have prevented both of those deaths is very weak.</p> <p>The consequence of closure is a massive loss of enjoyment, exercise, health and well-being. This approach to risk is exactly what people describe as the ‘nanny state’ - an excessive and simplistic regard for safety that could be used to ban numerous outdoor sports including swimming in the sea, cycling, surfing etc. In each case the claim could be made that <i>‘lives will be saved’</i>.</p> <p>We provide further numerical evidence from a survey of over 200 residents of Long Rock below.</p>
<p>44 <i>in particular whether there are alternative rights of way, the safety of these relative to the existing rail crossing, ...</i></p>	<p>There are alternatives.</p> <p>People wishing to go towards Marazion will not add over 1km to their trip for the pleasure of standing amidst vehicles at the gates. Instead, if they still go, they will use the road bridge by the Old Station House.</p> <p>This is remarkably dangerous, and alone it makes the closure of the Mexico Inn Crossing highly irresponsible. We illustrate this with photographs of the site below.</p>

Station House Rail Bridge - alternative to Long Rock Mexico Inn Crossing.
 5 minutes in winter: an eastbound walker on the sea side of the road meets:



This corner is extremely dangerous and will generate near-misses every day. To make it safe you have to:

- Ensure people don't try to use it, as the danger is not obvious from a distance (unlike the Mexico crossing)
- The alternative is to: Cross the road near the village
- Then cross the wide 6-carriageway junction (right)
- Then cross the bridge on the narrow pavement
- Then cross the road on the other side of the bridge.
- = three pedestrian crossings, all with near-misses.



Westbound walkers who reach the bridge on the sea side of the road come to this very dangerous point at the end of the bridge. They will be facing away from the traffic, and can only really go onwards. Eastbound or north-turning vehicles make it worse.

Safety record on the bridge:

An FOI request to CC has produced only five years of data, covering, by chance, exactly the period in which the Mexico Inn Crossing had a five near-misses recorded. In the same period the road bridge had one actual and serious accident. We know also of one earlier death on the bridge.

The presence of pedestrians will increase the risk of death or injury to vehicle drivers and passengers, as well as to the pedestrians themselves, particularly as vehicles travelling east and approaching a sharp right bend will encounter vehicles traveling west and displaced toward or across the centre of the road by pedestrians.

Since these photographs were taken a vehicle has collided with the north-west corner of the bridge causing extensive damage. This is exactly the type of accident one would predict here.

CC, and the ORR, should face this issue, and recognise the need to re-open the Mexico Inn Crossing without delay. It was irresponsible of the ORR to support a closure without any assessment of the wider effects while assuming that CC would be doing that, when in fact CC shows no sign of doing that, but apparently expects others to champion the local evidence later at a public inquiry.

Following their meeting, CC and NR agreed that they would produce statements of their position for the community, and this would have included their view, or perhaps their lack of view, of the added risks they have imposed on users, but neither has produced any such statement.

45	... alternative rights of way, the safety of these relative to the existing rail crossing, ... continued	Cyclists, including the local MP, use the crossing to avoid the dangers of the A30 when entering or leaving Penzance. If they find the gates closed they will not wait for some uncertain period but will take the risk.
46	and the effect on any connecting rights of way...	A minor point: The right of way is used for access to the sea wall on the seaward side of the railway in storms to install a wooden barrier when there is a flooding risk. This barrier is still needed, as that part of the right of way is not included in the extinguishment order, but access to it will be greatly impeded by closure. The barrier timbers cannot be stored on the seaward side because they are removed by driftwood collectors.
47	and on the network as a whole...	This crossing is a continuation of a path that runs inland.
48	NR ... believes that the inconvenience of this modest increase in time and distance...	NR could have assessed this by attending the public meeting but they did not do so and showed no signs at all of listening at the site meeting. Over 200 people, representing over 6000 years of Long Rock residency, attended the public meeting. Not one person present was in favour of closure, and they included members of the family of the lady who died in 2011.
49	is far outweighed ...	Closure costs 225 years of quality time lost for every death. See(43). It is achieved by exposing users to higher risk elsewhere. To describe this as 'far outweighed' is complete nonsense, and is deeply resented locally.
50	by the elimination of the risk of serious harm or another death at Mexico Inn Crossing.	This typifies the tunnel vision of NR. The idea that reducing risk can be considered at one

location in isolation without regard to the consequences elsewhere is a disgraceful dereliction of responsible safety policy by all involved.



Survey of users

By April 18th 268 users of the crossing had returned a questionnaire provided by FOLRMC. 219 were residents of Long Rock. The respondents had been, in aggregate, using the crossing for 6,638 years, and were frequent users, making 73,527 return trips (= 147054 traverses per year; average 402 traverses per day).

Purpose of journeys:

Journey to work	39
Journey to school or college	4
Access to the beach (swimming, surfing, boating, etc.)	197
Access to the path (for jogging, walking the dog, etc.)	205
Chilling out, admiring the scenery, etc.	13
Particular journeys (to Penzance, Marazion, friends, etc.)	81
Any problems faced?	4

Use of alternative crossings

Vehicle crossing only	71
Road bridge only	22
Both crossings	122
Neither crossing	53

This shows substantial displacement. Displacement onto the dangerous road bridge is particularly significant.

Station House road bridge	
Q.7 - Usage (return trips per year)	7,115
Q.8 - No problems	25
Q.8 - Inconvenience	17
Q.8 - Danger - all dangers	112
Q.8 - Specific danger - overhanging hedge	7
Q.8 - Specific danger - blind spots	12
Q.8 - Too dangerous to use – (i.e. non users only)	76

At the Mexico Inn Crossing *all problems* were reported at less than 1 per 20,000 trips. At the road bridge *danger* is reported at 1 in 63 trips. Danger at this site can be potentially fatal due to the traffic speeds.

Vehicle crossing	
Q.5 - Usage (return trips per year)	18,366
Q.6 - No problems	32
Q.6 - Inconvenience - distance	16
Q.6 - Inconvenience - waiting time	56
Q.6 - Inconvenience - both	64
Q.6 - Danger	121

At the gated vehicle crossing *danger* is reported at 1 in 151 trips. Danger here is less serious than at the road bridge due to the lower vehicle speeds.

Incidence of reports from users:

Vehicle crossing	
Number of individual users	193
Percentage of users who found it inconvenient	33%
Percentage of users who found it dangerous	62%

Road bridge	
Number of individual users	144
Percentage of users who found it inconvenient	12%
Percentage of users who found it dangerous	78%
Non-users who saw it as too dangerous to use	76
Users & non-users who saw it as dangerous	188

Mexico Inn Crossing	
Number of individual users	268
Total usage (return trips per year)	73,527
Average usage (per user)	274
Users who reported problems	4

Safety of Users:

The main findings of the survey are that there is:

- substantial displacement onto the road bridge, which is rated by users as *less inconvenient* than the vehicle crossing but *more dangerous* than either the vehicle crossing or the Mexico Inn Crossing.
- a very large reduction in number of trips. Many visits to the beach and coastal footpath are no longer made, with serious implications for health and well-being. We have not attempted a numerical evaluation of the damage to health arising from this cause, but are confident that, in terms of years of life lost, it is likely to far exceed the years lost by actual deaths on the crossing, whatever their cause.

RISK ASSESSMENT

NR provided numerical information on the risk assessment in a letter of 14th April. The following notes are based on that letter, and the RSSB's document on the development of the ALCRM.

Individual risk:

NR's letter states that the ALCRM risk estimate is 1 in 23,547 traverses and the risk of a fatality is 1 in 81 years. This implies $23547 / (81 * 365)$ traverses per day = an average of 0.8 people crossing per day. This is clearly an error and the error is that the ALCRM risk estimate is actually expressed as years per death for a regular user, who is defined as one who crosses 500 times per year on average, rather than as traverses per death. The calculation then becomes:

$$(23547 * 500) / (81 * 365) \text{ traverses per day} = 398 \text{ traverses per day.}$$

This figure corresponds to the 400/day given by NR to the ORR. It is lower than FOLRMC's survey-based estimate, but not out by some large factor.

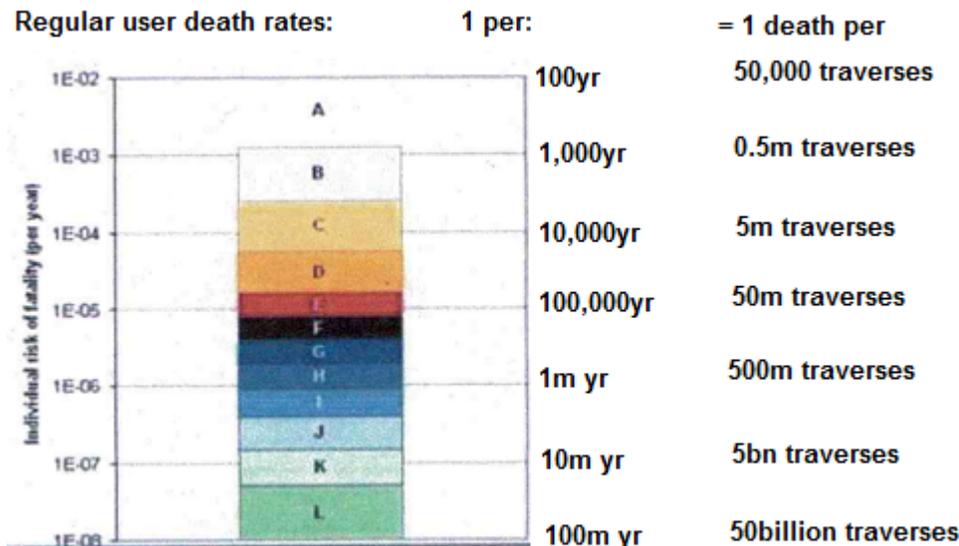
FOLRMC have advised NR of this confusion and will be getting a reply which should confirm this interpretation. However the explanation from NR has not yet arrived so we have concluded this response to NR's application without it. (If the error is not confirmed by NR it will imply that the death rate at the crossing is lower than the NR prediction by a factor of around 500, and that NR is using massively inflated risk figures.)

The corrected individual risk rate: **for an individual the risk of death is 1 in 11.8million traverses.**

This falls below the RSSB's target level of 1 in 10m i.e. the crossing is safer than the target level.

Currently about 7 per million of the population are killed as pedestrians by road vehicles so, based on national averages, persons using the Mexico Inn Crossing less than about 80 times per year have a greater chance of dying as pedestrians on the roads, and that risk itself constitutes less than 1% of their overall risk of dying on the roads. (see RAS41001 in Documents).

The banding of individual risk in the output of the ALCRM is shown in the graph below from NR's letter of 14th April, with added labels of the vertical axis by FOLRMC:



Note: the lowest risk band 'M' was not included by NR – the highest risk in band M is so low that if everyone in Britain crossed in every minute, night and day, less than 1 death per year would be expected.

The scale is credible, but its extension beyond E is essentially meaningless in the context of pedestrian risk for whom the scale should consist of A,B,C,D,E only.

Collective risk

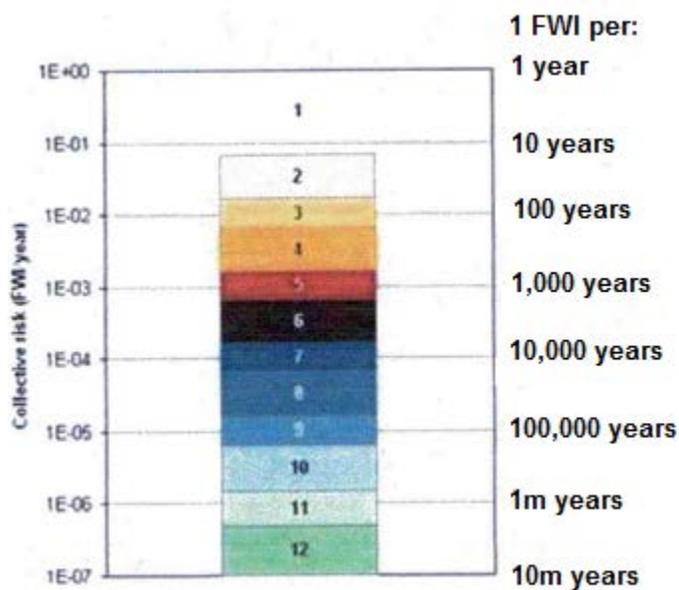
This is consistently misused by NR. As in (33) above:

To illustrate: Large district general hospitals in the UK all have a very high collective risk of death. Their individual risk for many users is much lower than those same users would experience if they were sent to a smaller hospital with a vastly lower collective risk. The high collective risk defines how much investment is appropriate, and absolutely not which one should be closed.

Increasing the collective benefit from a crossing, when more people use it, increases its collective risk rating.

The banding of collective risk is shown in the graph below from NR's letter of 14th April, with added labels of the vertical axis:

FWI = Fatalities and weighted injuries.



This persistent misuse by NR of high collective risk as if it indicates a need to close a footpath only crossing is disgraceful. We can only understand such an illogical argument as serving NR's agenda of shutting crossings to reduce liabilities and long term running costs.

Rankings

NR's persistent misuse of rankings is both statistically invalid and exaggerates their case. The top, middle or any position in rankings of collective or individual could be very dangerous or very safe because rankings do not quantify risk, they only quantify the distribution of risk among crossings however high or low those risks may be.

NR has been asked for numbers that would illuminate these rankings (e.g. what is the *average* estimated individual risk at footpath only crossings) but no reply has arrived yet.

This information is actually not difficult for NR to provide, as they have, for all crossings, ALCRM assessments in a spreadsheet. We can only infer that the values requested would be favourable to our case.

Inferences from small samples

If the real risk at each of a number of crossings was 1 death in 80 years then, over 160 years, an actual number of deaths larger, or smaller, than 2 is expected to occur by chance at 73% of these identical crossings. illustrating that a ranking based on small numbers is not reliable. The way in which NR seeks to use the history of deaths and near-misses shows that NR will be trying to close crossings by exaggerating the significance of such histories.

Public safety

'Public safety' is not something confined to the 10metres of the Mexico Inn Crossing, but NR completely ignores the risk to users displaced on to more dangerous roads crossing the railway. While the term 'importing risk' is commonly used by NR 'exporting risk', is never mentioned. This demonstrates very clearly that NR's claimed concern for 'public safety' is simply a sham – a piece of dishonest propaganda under which NR can get rid of responsibilities and costs it would rather not have, irrespective of the consequences for others.

At no point in this process are we aware of anyone in NR making any proper attempt to evaluate the effect on public safety but NR's application makes a series spurious claims relating to public safety that command no respect whatsoever. NR appears to have developed a deeply manipulative culture exploiting language and ideas of safety to further other ends.

Conclusion on Risk Assessment:

NR has sought to obscure the safety of the Mexico Inn Crossing, that is confirmed by its own risk model, by misusing collective risk, and exaggerated the significance of everything else it could find to support what is obviously a totally inadequate case for closure. Its methods, if applied to the road network, would have long since closed a massive fraction of the road network, and been progressively encroaching on the rest.



Possible safety measures

Such measures should be kept under periodic review, but no case has been made for delaying re-opening until any specific change has been made. Possible measures include:

Speed restriction is, unusually, possible here without changes to timetabling, and with possible benefit. See (36) above.

Warning lights: useful systems that are becoming available. See <http://wavetrain.no/products/wavetrain-lcws/>

Signage: possible improvements have been identified.

Whistle and whistle boards: The whistle boards are low and very faded and some drivers do not sound the horn at all. The boards should be raised and renewed. The two-tone horns used by some trains are very distinctive, and merit further consideration.



Documents

Letter from the Director of the Rail Accident Investigation Branch re no recommendation for closure.

ALCRM. All Level Crossing Risk Model: the principal documentation is on:

http://www.rssb.co.uk/SiteCollectionDocuments/pdf/reports/research/T737_history_final_2010.pdf

The statement on target risk level discussion is on page 12.

Letter from NR re ACLCRM evaluation of Mexico Inn Crossing.

National risk to pedestrians and road users: [RAS41001 - Strategic Framework for Road Safety outcome indicators, Great Britain, annual from 2005](#)



Right of way

The right of way is older than the railway that crosses it. It was in use for access to the beach both for leisure and for the collection of seaweed as agricultural fertilizer before the railway arrived. Fishing was and remains one of many uses that have included defence, scientific research, education etc.



Abbreviations

ALCRM	All Level Crossing Risk Model. Owned and developed by NR.
CC	Cornwall Council
FOLRMC	Friends of Long Rock Mexico Crossing
FWI	Fatalities and weighted injuries
NR	Network Rail
ORR	Office of Rail Regulation
RAIB	Rail Accident Investigation Branch
RSSB	Rail Safety and Standards Board Ltd