



INDEPENDENT TRANSPORT SAFETY REGULATOR

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CHECKLIST FOR LEVEL CROSSING INVESTIGATIONS – VERSION 1.0

PART 1 - GENERAL INFORMATION

1. Incident No. (ID number from PRISM) ITSR use only

PART 2 - TIME AND LOCATION OF OCCURRENCE

2. Date of incident (dd/mm/yyyy)

3. Time of incident (24 hr clock e.g. 13:55)

4. Name of road

5. Type of road:
 1. Public
 2. Private

6. Nearest train station

7. Nearest City/Suburb/Town

8. Crossing location:
 1. Inner city
 2. Suburb
 3. Town
 4. Township
 5. Major road in country area
 6. Minor road in country area

PART 3 - INVOLVED RAIL TRANSPORT OPERATORS

9. Name of reporting railway organisation

10. Name of affected rolling stock operator

11. Name of affected rail infrastructure manager

12. Name of other affected railway organisation (if applicable)

PART 4 - INCIDENT DETAILS

13. Circumstance of impact (select one):
(If unclear, select 'Rolling stock struck road user')
 1. Rolling stock struck road user
 2. Road user struck rolling stock

This information is collected in accordance with the Privacy & Personal Information Protection Act 1998 (NSW) and the Health Records & Information Privacy Act 2002 (NSW) and will be treated confidentially.

14. Total number of level crossing users involved (incl. driver):

- 1. In Road vehicle(s):
 - a) No of passengers (excluding driver): _____
Killed: _____ Serious injury: _____ Minor injury: _____
 - b) driver: Killed Serious injury Minor injury Uninjured
- 2. On Train¹:
 - a) No of passengers: _____
Killed: _____ Serious injury: _____ Minor injury: _____ N/A²
 - b) No of train crew: _____
Killed: _____ Serious injury: _____ Minor injury: _____ N/A³
- 3. Others (specify): _____
Killed: _____ Serious injury: _____ Minor injury: _____ N/A

(Note: The term 'Level crossing users' includes those individuals directly involved at the impact and others at the crossing location who were killed or injured as a result of the accident / incident)

15. Damage (estimated monetary value of damage)

1. To road vehicle \$ _____
2. To rolling stock and rail infrastructure \$ _____

PART 5 - LOCAL CONDITIONS

16. Temperature (°C)

17. Visibility (select one):

- 1. Dawn twilight
- 2. Daylight
- 3. Dusk twilight
- 4. Darkness

18. Weather (multiple selection possible):

- 1. Clear
- 2. Cloudy
- 3. Rain
- 4. Fog/haze
- 5. Hail
- 6. Sleet/snow

19. Was the **crossing surface** slippery at the time of the incident (for example, due to ice, oil, debris or spill)?

- 1. Yes → critical road condition
- 2. No
- 3. Unknown

20. Were the crossing approach/exit **road conditions** slippery at the time of the incident (for example, icy oily or wet)?

- 1. Yes → critical road condition
- 2. No
- 3. Unknown

PART 6 - TRACK DETAILS

21. Track type used by rolling stock involved:

- 1. Running line with public access
- 2. Running line without public access
- 3. Yard/siding with public access
- 4. Yard/siding without public access

¹ include all, passengers & crew
² if no train crew
³ if no passengers

22. Were the track conditions at the crossing substandard? 1. Yes → Details: _____
 2. No

23. Was there a whistle ban in effect at the time of the incident? 1. Yes
 2. No
 3. Unknown

24. What was the line speed over the level crossing? (km/h)
(i.e. permitted line speed for particular rolling stock concerned)

PART 7 - LEVEL CROSSING TRAFFIC

25. How many road vehicles approximately traverse the crossing per day?

26. Was the road traffic density higher than normal at the time of the incident? 1. Yes → Reason: _____
→ Risk taking at level crossings increase during rush hours, at midday and around the beginning and end of the school day.
→ High volumes of commercial traffic may result in increased risk-taking behaviour at level crossings.
 2. No
 3. Unknown

27. Are there a high number of slow moving road vehicles in the region of the crossing? 1. Yes
 2. No
 3. Unknown
→ High volumes of slow vehicles may result in increased risk-taking behaviour at level crossings.

28. How many **freight trains** traverse the crossing per day? → A high frequency of long and slow freight services may influence the risk taking behaviour of drivers.

29. How many **passenger trains** traverse the crossing per day?

30. Was there a train in close proximity to the one involved in the incident? 1. Yes
 2. No
 3. Unknown

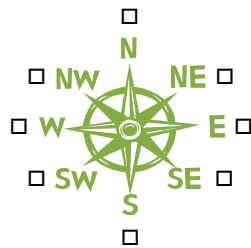
Traffic conditions that might have affected the incident	Comments

PART 8 TRAIN DETAILS

31. Type of rolling stock:
- 1. Freight train
 - 2. Passenger train
 - 3. Locomotive only
 - 4. Track maintenance / inspection vehicle
 - 5. Rolling stock used in yard / shunting
 - 6. Runaway cars
 - 7. Other (*specify*): _____

32. Number of cars/units on train

33. Rolling stock's direction of movement



N/A (*It was not moving at the time of the collision.*)

34. Train was running (*select one*):
- 1. On time
 - 2. Late → Reason: _____
 - 3. Early → Reason: _____
 - 4. Unknown
 - 5. N/A

35. What position in the train was the unit/car that impacted with the road user?

36. Train speed (*km/h*) at time of impact (*Recorded speed, if available*) Recorded Estimated

37. What lighting was operating on the train at the time of the incident?
→ can impact visibility of the train
- 1. Headlights
 - 2. Ditch lights
 - 3. Strobe lights
 - 4. Marker lights
 - 5. Other (*specify*) _____

38. Does the train have a high visibility front end?
(*i.e. bright colour or pattern that makes the train stand out from the background*)
- 1. Yes
 - 2. No → can impact visibility of the train
 - 3. Unknown

PART 9 - TRAIN DRIVER BEHAVIOUR

39. Did the train sound its horn on approach to the level crossing?
- 1. Yes
 - 2. No → lack of audible warning
 - 3. Unknown

40. Was the train driver aware of the upcoming crossing?
- 1. Yes
 - 2. No
 - 3. Unknown

41. Were there signs or other aids to alert the train driver to the upcoming crossing?
1. Yes
 2. No
 3. Unknown

PART 10 - LEVEL CROSSING CHARACTERISTICS

42A. How many running lines does the crossing traverse?

42B. If more than one, what is the spacing in between the running lines? (*measured centreline to centreline in metres*)

43. Gradient of the road **on approach** to the crossing:
(NB. 'Steep' is defined as greater than 15 degrees)
1. Steep uphill → Level crossing (LX) located on the brow of a hill may be clearly noticeable due to "see-through-effect"
 2. Slight uphill
 3. About flat
 4. Slight downhill → increased likelihood of overspeed and "red light running"
 5. Steep downhill → increased likelihood of overspeed and "red light running"
→ LX located in a dip may not be clearly noticeable due to "see-through-effect"

44. Gradient of the road **on exit** from the crossing:
(NB. 'Steep' is defined as greater than 15 degrees)
1. Steep uphill → steep grade on exit may divert drivers attention away from the crossing
→ steep uphill on exit may lead to vehicles stalling
 2. Slight uphill
 3. About flat
 4. Slight downhill
 5. Steep downhill → steep grade on exit may divert drivers attention away from the crossing

45. What is the road width on approach to the level crossing? (*metres*)

→ Narrow roads before and after the LX may result in vehicle drivers slowing or stopping on the crossing (in order to let oncoming vehicles pass)

46. Are the running lines oriented so the road vehicle driver looks head on at an approaching train?
1. Yes → Driver perception of speed and distance of train is especially poor when looking head-on at an approaching train
 2. No

47. Is there a clear decision point at the crossing?
(i.e. a clear marking that indicated where the driver has to stop and look out for trains before deciding to cross)
1. Yes
 2. No → a clear decision point is critical for users at unprotected LXs

48. What is the sighting distance at the decision point? (*metres*)

→ restricted sightlines may lead to users moving past a point of safety
→ very long sighting distances can lead to a users lower perception of risk

49. Is the approach road to the crossing straight for more than 1km before the crossing?
1. Yes → see Question 62 below
 2. No
 3. N/A

50. What is the angle of approach to the crossing measured at the decision point?
(i.e. the angle in degrees between the train line in the direction of approach and the road the driver was approaching the crossing.)
1. < 30 degrees → Straight roads increase the likelihood of vehicle drivers to take risks on approach to the crossing
 2. 31 - 60 degrees
 3. 61- 90 degrees
 4. 91 - 120 degrees
 5. 121 - 150 degrees
 6. 151 - 180 degrees

51. What is the speed limit of the road on approach to the crossing? (km/h)

52. What is the road surface? 1. Bitumen
 2. Gravel
 3. Dirt
 4. Other (specify): _____

→ Loose surfaces may lead to drivers underestimating stopping distances required and may also divert driver's attention away from the crossing.

53. Is the crossing surface uneven, so that it could present a risk to a vehicle? 1. Yes → Details: _____
 2. No

Location Factors:

The location of a crossing can influence:

- the risk taking behaviour of vehicle drivers and other users
- increase traffic/traffic flow
- the number of errors/violations.

54. Is the crossing located on a bend in the road? 1. Yes
 2. No

55. Is the crossing located by a junction with direct access to a major road / freeway / highway? 1. Yes
 2. No

56. Is the crossing located on the access route into / out of a commercial siding? 1. Yes
 2. No

57. Is the crossing located adjacent to a train station? 1. Yes
 2. No

58. Is the crossing located adjacent to a school drop-off / collection point? 1. Yes
 2. No

59. Are there traffic calming systems located in close proximity to the crossing (for example, chicanes, speed bumps)? 1. Yes
 2. No

60. Have there been any recent developments (for example, housing/industrial estate) in close proximity to the crossing that have changed the dynamics of the crossing in the last year (for example, frequency of use)? 1. Yes
 2. No
 3. Unknown

61. Has the road/rail infrastructure changed in the last year? 1. Yes → Details: _____
 2. No
 3. Unknown

Location Factors identified	Comments

62. Is there non-level crossing related roadside signage within the final 250m approach to the level crossing?
(Note: measurements are taken from track)
1. Yes → Superfluous information on approach to a crossing may reduce the user's detection of LX warning signs
→ The quantity of information that can be processed decreases with road speed
2. No

If yes, identify the type of sign and the quantity in brackets, for example, Speed signs (2), Traffic merging sign (1), etc.

63. Are there signal-like lights behind the road crossing warning lights, making them difficult to discern?
1. Yes → might impair detection/visibility of the crossing
 2. No
 3. N/A
-

64. Are there structures behind the crossing signage or equipment making the crossing difficult to discern?
1. Yes → might impair detection/visibility of the crossing
 2. No
-

65. Are there incremental changes in road speed leading up to the crossing (for example, road speed changing from 80km/h to 70km/h to 60km/h immediately before the crossing)?
1. Yes
 2. No
-

66. Is there a higher speed limit sign on the other side of the crossing that is visible from before the crossing?
1. Yes → may lead to driver increasing the speed before the crossing
 2. No
-

PART 11 - LEVEL CROSSING WARNINGS

- 67A. Type of crossing warning:
- 1. Flashing lights and bells
 - 2. Automatic Half-Barriers
 - 3. Stop signs
 - 4. Manual gates
 - 5. Flagged by crew
 - 6. Giveaway signs
 - 7. Railway crossing position board
 - 8. Other (specify): _____
 - 9. None

67B. If crossing types 1 or 2 are identified in Q. 67A, mark the status of the warning devices at the crossing at the time of the incident:

- 1. Provided minimum 20-second warning
- 2. Alleged warning time greater than 60 seconds
- 3. Alleged warning time less than 20 seconds
- 4. Alleged no warning
- 5. Confirmed warning time greater than 60 seconds
- 6. Confirmed warning time less than 20 seconds
- 7. Confirmed no warning

67C. If status type 5, 6, or 7 are identified in Q. 67B, also mark the explanation from the list below:

- A. Insulated rail vehicle
- B. Storm / lightning damage
- C. Vandalism
- D. No power / batteries dead
- E. Devices down for repair
- F. Devices out for service
- G. Warning time greater than 60 seconds attributed to incident-involved train stopping short of the crossing, but within track circuit limits, while warning devices remain continuously active with no other in-motion train present
- H. Warning time greater than 60 seconds attributed to track circuit failure (for example, insulated rail joint or rail bonding failure, track or ballast fouled, etc.)
- I. Warning time greater than 60 seconds attributed to other train / equipment within track circuit limits
- J. Warning time less than 20 seconds attributed to signals timing out before train's arrival at the crossing/island circuit
- K. Warning time less than 20 seconds attributed to train operating counter to track circuit design direction
- L. Warning time less than 20 seconds attributed to train speed in excess of track circuit's design speed
- M. Warning time less than 20 seconds attributed to signal system's failure to detect train approach
- N. Warning time less than 20 seconds attributed to violation of special train operating instructions
- O. No warning attributed to signal system's failure to detect the train
- P. Other cause(s): _____

68. In the direction travelled by the road user, where are the crossing warnings from Q. 67A located?
- 1. Both sides of road
 - 2. Left-hand side of road only
 - 3. Right-hand side of road only
 - 4. N/A (i.e. crossing has no crossing warnings)

69A. What information and signage is present on the approach to and at the level crossing (refer to AS1742.7)
Note. Identify all level-crossing related signage by code (see AS1742.7) and all road markings (for example, stop line, give way line, RAIL X marking, Barrier line – 1 way, Barrier line – 2 way etc, road delineation markers)

69B. Are there adequate visual prompts on approach to the level crossing? 1. Yes 2. No → inadequate warning

70. Are the level crossing lights, bells and barriers in good working order? 1. Yes 2. No → Details: _____
→ inadequate warning 3. N/A

71. Are the level crossing signs and markings well maintained (i.e. legible and clean)? 1. Yes 2. No → Details: _____
→ inadequate warning

72. Is the crossing warning interconnected with road signals? 1. Yes 2. No 3. Unknown 4. N/A

73. Does the crossing have a predictor fitted? 1. Yes 2. No → What is the average wait time? (seconds) _____
 3. Unknown 4. N/A (for passive crossings)

74. Is the crossing illuminated by street lights and/or special lights dedicated to the crossing? 1. Yes 2. No

75. Are the crossing warning lights facing directly towards the approaching road user? 1. Yes 2. No → visibility of warning lights 3. N/A

76. Are the retroreflective warning signs facing directly towards the approaching road user? 1. Yes 2. No → visibility of warning signs 3. N/A

77. Can sunlight shine directly onto the lens of the crossing warning lights? 1. Yes → visibility of warning lights 2. No 3. N/A

78. Does the signage on the approach to and at the level crossing conform to AS1742.7?
Note: Non-compliance issues should be listed for the entire crossing, however, those issues NOT applicable to the approach direction used by the vehicle driver should be marked by "N/A"
 1. Yes 2. No → Which aspects of the signage do not comply? _____
 3. Unknown 4. N/A

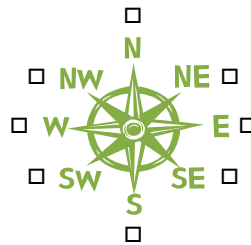
Warning issues identified	Comments

PART 12 – ROAD VEHICLE DETAILS

79. Type of road vehicle:
- A. Automobile
 - B. Van
 - C. Ute
 - D. Truck (non-articulated)
 - E. Semi-trailer
 - F. B-double
 - G. Bus
 - H. School bus
 - I. Motorcycle
 - J. Other motor vehicle
 - K. Bicycle
 - L. Other vehicle type (specify): _____

80. Vehicle make and model

81. Direction in which road user was travelling



(Note: If road user was stopped, identify the intended direction of travel)

82. What speed was the user travelling at on approach to the crossing? (est. km/h)

83. What was the vehicle speed at impact? (est. km/h)

(Note: Enter zero if user was stopped at the crossing)

PART 13 – ROAD USER CHARACTERISTICS

84. Driver's age

85. Driver's gender:
- 1. Male
 - 2. Female
 - 3. Unknown

86. Driving experience (years)

87. Driver's licence type:
- 1. Full licence
 - 2. Provisional licence
 - 3. Learner licence
 - 4. International licence
 - 5. Unlicensed
 - 6. Unknown
 - 7. N/A

88. Number of previous driving offences in the last 5 years (excluding parking)

Unknown

→ Details (if relevant): _____

89. Was the user a foreign visitor?

1. Yes → Foreign visitors or workers may fail to understand the correct crossing procedure, resulting in increased errors at level crossings

2. No

3. Unknown

90. Can the user comprehend written English?

1. Yes

2. No

3. Unknown

91. Did the user have a disability (hearing / visual / mobility impairment) which may have affected their ability to traverse the level crossing?

1. Yes

2. No

3. Unknown

92. Was the user suffering from any medical conditions?

1. Yes → Details: _____

2. No

3. Unknown

93. Was the road user's blood alcohol concentration (BAC) over the prescribed legal limit at the time of the incident?

1. Yes

2. No

3. Unknown

Personal Factors identified	Comments

PART 14 – ROAD USER / DRIVER BEHAVIOUR

94. Driver:

1. Stopped and then proceeded

2. Did not stop

3. Drove around or through the gate

4. Stopped on crossing

5. Other (specify): _____

95. Position of road vehicle at time of impact (select one):

1. Stalled on crossing

2. Stopped on crossing

3. Moving over crossing

4. Trapped

96. Was the road user in the vehicle at the time of impact?

1. Yes

2. No

97. Did the road vehicle collide with a second train?

1. Yes

2. No

3. Unknown

98. Did the driver wait on the crossing to allow an oncoming vehicle to pass due to a narrow road? 1. Yes
 2. No
 3. Unknown
-
99. Was the driver "**short stacking**" across the crossing?
Note: Short stacking refers to a situation where the vehicle hangs over the crossing because there is not enough space ahead (excludes queuing). 1. Yes → Details: _____
 2. No
 3. Unknown
-
100. Was the driver **queuing** across the crossing? 1. Yes → What was causing the queuing? _____
 2. No
 3. Unknown
-
101. Was the driver manoeuvring the vehicle around the half barriers at the time of the incident? (also referred to as "**zigzagging**") 1. Yes
 2. No
 3. Unknown
 4. N/A
-
102. Had the driver, immediately **before the incident**, passed another vehicle that slowed or had stopped short of the crossing? 1. Yes
 2. No
 3. Unknown
-
103. Was the driver attempting to overtake a vehicle **at the time of the incident**? 1. Yes → What type of vehicle was being overtaken? _____
 2. No
 3. Unknown
-
104. Did the driver follow a previous driver onto the crossing? 1. Yes → Details: _____
 2. No
 3. Unknown
-
105. Did the driver cross barrier lines, i.e. unbroken white lines? 1. Yes
 2. No
 3. Unknown
 4. N/A
-
106. Did the driver slow down on approach to the crossing? 1. Yes
 2. No
 3. Unknown
-
107. If so, did the driver speed up again before reaching the crossing? 1. Yes
 2. No
 3. Unknown
 4. N/A
-
108. Had the driver in the past traversed a crossing within 5km of this crossing on the same stretch of road? 1. Yes → might lead to an incorrect "mental model" of how the crossing works
 2. No
 3. Unknown
-

109. Does the driver frequently use a crossing with a different level protection? 1. Yes → might lead to an incorrect “mental model” of how the crossing works
 2. No
 3. Unknown

110. Had the driver just been held at a level crossing with different protection, within 5 km, before attempting to traverse the crossing at which the incident occurred? 1. Yes → might lead to an incorrect “mental model” of how the crossing works
 2. No
 3. Unknown

111. Did the road user look for trains on approach to the crossing? 1. Yes
 2. No
 3. Unknown (select if response cannot be verified)

112. Did the road user underestimate the length of time for the train to arrive, leading them to attempt to traverse the crossing? 1. Yes
 2. No
 3. Unknown

113. Was the driver traversing the level crossing as a shortcut route? 1. Yes → LXs used as shortcuts often result in increased risk-taking behaviour by vehicle drivers
 2. No
 3. Unknown

114. Did the driver consciously decide not to stop at the crossing? (As opposed to misjudgement, saw the crossing too late, microsleap, etc.) 1. Yes → violation
 2. No → error
 3. Unknown

115. Did the driver see the warning lights, but still choose to cross the level crossing? 1. Yes → violation
 2. No → error
 3. Unknown
 4. N/A

Familiarity:

Regular users and those living close to level crossings are more likely to undertake risk taking behaviour when using the crossing.

116. Was the driver aware that there was a level crossing? 1. Yes
 2. No
 3. Unknown

117. Was the driver familiar with the crossing? 1. Yes
 2. No
 3. Unknown

118. Did the driver regularly traverse the crossing? 1. Yes
 2. No
 3. Unknown

119. Did the driver reside within 10km of the crossing? 1. Yes
 2. No
 3. Unknown

120. What was the purpose of the driver's trip?

121. Was the driver familiar with the train timetable?

- 1. Yes
- 2. No
- 3. Unknown

122. Did the driver attempt to cross following a long waiting period? (i.e. longer than 1 min after the crossing is apparently clear)

- 1. Yes
- 2. No
- 3. Unknown

→ The greater the time delay, the more risky the behaviour of level crossing users. (American research suggests vehicle drivers expect trains to arrive within 20 seconds, but they begin to lose patience after 40 seconds at open crossings and after 60 seconds at barrier crossings)

123. Was the driver under time pressure at the time of the incident?

- 1. Yes
- 2. No
- 3. Unknown

→ risk taking behaviour is more likely, increased likelihood of errors and violations

124. Is it likely that driver fatigue has contributed to the incident? (Consider factors such as sleep loss, time of day, and time since a break from driving)

- 1. Yes
- 2. No
- 3. Unknown

→ Details: _____
→ increased likelihood of errors and violations

125. Is there any evidence to suggest that the road vehicle user was attempting suicide?

- 1. Yes
- 2. No
- 3. Unknown

126. Was the driver a train enthusiast who was attempting to view the approaching train?

- 1. Yes
- 2. No
- 3. Unknown

→ Train enthusiasts often undertake risky behaviour at level crossings in order to view trains more closely

Summary - Behavioural factors identified	Comments

PART 15 – VISIBILITY AND OBSTRUCTIONS

127. Were there vehicles parked close to the entry and exit points of the level crossing that prevented the user from clearing the crossing? 1. Yes
 2. No
 3. Unknown

128. Road user's **view of the track / approaching train** was obscured by: *(tick all relevant obstructions)*

<input type="checkbox"/> 1. Permanent structure(s)	<input type="checkbox"/> 2. Topography
<input type="checkbox"/> 3. Standing rolling stock	<input type="checkbox"/> 4. Vegetation / foliage
<input type="checkbox"/> 5. Passing train(s)	<input type="checkbox"/> 6. Scaffolding
<input type="checkbox"/> 7. Moving road vehicle(s)	<input type="checkbox"/> 8. Advertising billboard(s)
<input type="checkbox"/> 9. Parked car(s)	
<input type="checkbox"/> 10. Other <i>(specify)</i> : _____	
<input type="checkbox"/> 11. Not obscured	

129. Road user's **view of the level crossing** was obscured by: *(tick all relevant obstructions)*

<input type="checkbox"/> 1. Permanent structure(s)	<input type="checkbox"/> 2. Topography
<input type="checkbox"/> 3. Standing rolling stock	<input type="checkbox"/> 4. Vegetation / foliage
<input type="checkbox"/> 5. Passing train(s)	<input type="checkbox"/> 6. Scaffolding
<input type="checkbox"/> 7. Moving road vehicle(s)	<input type="checkbox"/> 8. Advertising billboard(s)
<input type="checkbox"/> 9. Parked car(s)	
<input type="checkbox"/> 10. Other <i>(specify)</i> : _____	
<input type="checkbox"/> 11. Not obscured	

130. Road user's **view of the level crossing warning signs and/or lights** was obscured by: *(tick all relevant obstructions)*

<input type="checkbox"/> 1. Permanent structure(s)	<input type="checkbox"/> 2. Topography
<input type="checkbox"/> 3. Standing rolling stock	<input type="checkbox"/> 4. Vegetation / foliage
<input type="checkbox"/> 5. Passing train(s)	<input type="checkbox"/> 6. Scaffolding
<input type="checkbox"/> 7. Moving road vehicle(s)	<input type="checkbox"/> 8. Advertising billboard(s)
<input type="checkbox"/> 9. Parked car(s)	
<input type="checkbox"/> 10. Other <i>(specify)</i> : _____	
<input type="checkbox"/> 11. Not obscured	

131. Are there roadside structures (for example, scaffolding, buildings) within the final 250m on approach to the level crossing? *(Note: measurements are taken from track)*

1. Yes → how many and details?

2. No

132. Did the incident occur during a time of reduced visibility?

1. Yes → what was the cause of the reduced visibility?

<input type="checkbox"/> A. Darkness	<input type="checkbox"/> B. Fog	<input type="checkbox"/> C. Smoke
<input type="checkbox"/> D. Rain	<input type="checkbox"/> E. Haze	<input type="checkbox"/> F. Sun glare
<input type="checkbox"/> G. Hail	<input type="checkbox"/> H. Dust	
<input type="checkbox"/> I. Other <i>(specify)</i> : _____		

2. No
 3. Unknown

133. Where was the sun in relation to the vehicle driver at the time of the incident?

1. Around 0 degrees (near the horizon)
 2. Around 45 degrees
 3. Around 90 degrees (overhead)
 4. Below the horizon

134. Did sunlight shine onto the face (directly or via reflection) of oncoming users **on approach** to the crossing?

- 1. Yes
- 2. No
- 3. Unknown

→ Direct glare from sunlight can blind a driver on approach to a crossing and affect the perceptibility of crossing warning signs and lights

135. Did sunlight shine onto the face of oncoming users (directly or via reflection) **at the crossing**?

- 1. Yes
- 2. No
- 3. Unknown

136. Was the visibility of the road markings at the level crossing poor (i.e. below standard)?

- 1. Yes
- 2. No
- 3. Unknown
- 4. N/A

137. Were there any factors inside the vehicle that obstructed the driver's view of the track, train or crossing?

- 1. Yes → Select the relevant factor(s):
 - A. Vehicle structure (e.g. blind spots)
 - B. In-vehicle stickers
 - C. Dirty windscreen
 - D. Driver's sunglasses
 - E. Driver's corrective lenses (e.g. not properly cleaned, damaged, etc.)
 - F. Other (*specify*): _____
- 2. No
- 3. Unknown
- 4. N/A

Summary - Visibility Factors identified	Comments

PART 16 - DISTRACTIONS

138. Were a large number of users (more than usual) traversing the crossing due to a public event at the time of the incident?

- 1. Yes
- 2. No
- 3. Unknown

139. Were there any potential visual distractions outside the vehicle on approach to the level crossing?

- 1. Yes → Select type of distraction(s):
 - A. Permanent distraction (for example, advertising hoarding / billboard)
 - B. Temporary distraction (for example, fun fair / circus / road works, children, etc.)
- 2. No
- 3. Unknown

140. Were there any environmental distractions (such as "strobing", sunlight, effects in the driver's field of vision)?

- 1. Yes → Details: _____
- 2. No
- 3. Unknown

141. Were there trackside workers / rail staff / emergency services at the crossing at the time of the incident? 1. Yes
 2. No
 3. Unknown

142. Were there noise conditions in the surrounding environment that may have affected the road user's capacity to hear a train horn or distracted the road user otherwise? 1. Yes
 2. No
 3. Unknown

143. Does the ambient noise level at the crossing exceed 80dB (the predicted noise level of an approaching train horn at a distance of 400m from the crossing)? (*traffic noise on a major road, 10m distant represents about 80-90dB*) 1. Yes
 2. No
 3. Unknown

144. What was the status of the vehicle windows at the time of the incident? 1. Fully open
 2. Partly open
 3. Closed
 4. Unknown

145. Were there any conditions or factors inside the road vehicle that might have distracted the driver on approach to the crossing? (*multiple selections are possible*) 1. Yes → Select from list:
 A. Mobile phone
 B. Stereo / radio
 C. Air conditioner / heater
 D. Passengers
 E. Children in car
 F. Pets in car
 G. Other (*specify*): _____
 2. No
 3. Unknown

Summary - Distraction Factors identified	Comments

PART 17 - OTHER

146. Were there any additional conditions that may have contributed to this incident?

147. Narrative description of incident (*Be specific, and continue on a separate sheet if necessary*)
