
Guidance No: DAB47

Attribution of Responsibility for delays caused by a GSM-R REC activation from a train

1. Introduction

The Delay Attribution Board (the Board) received a Request for Guidance in connection with the attribution of TRUST incidents 207972 and 212608 involving delays caused by a GSM-R REC activation.

1.1. The Board received the Joint Request for Guidance from GB Railfreight (GBRf) and Network Rail Infrastructure Limited (Network Rail) on the 13th March 2018.

1.2. Summary of the submission:

1.2.1. Guidance from the Board is sought for the resolution of an issue which despite discussion at the required levels of escalation a solution has not been agreed.

1.2.2. To provide guidance from the Board in relation to delays caused by a GSM-R REC activation.

1.2.3. To provide guidance on whether the responsibility for the incidents should be allocated to Network Rail or to GBRf..

2 Factual Background to the Incidents

- 2.1 The request for guidance applies to the following TINs arising from a GSM-R REC activation from a GBRf locomotive:

TRUST Incident 207972 on 18 February 2015
TRUST Incident 212608 on 20 February 2015

The REC incident of 18 February 2015 caused in the region of 54 cancellations and closed down the WCML and other routes around Crewe for circa 2.5 hours in the evening peak. The responsible loco (92033) was positioned in Crewe station at the time.

- 2.2 A Network Rail report was provided with the submission paper (not replicated within this Guidance Note). This report explained the factual detail of the REC incidents on 18 and 20 February 2015. However, an overview of events is covered below which provides commentary on the REC event.
- 2.3 In the days before the REC of 18 February 2015, GBRf requested the assistance of a Network Rail GSM-R Engineer to investigate a problem with GSM-R equipment on GBRf loco 92033 at Brush, Loughborough. The loco was undergoing refurbishment at Brush and, as part of these works, it was acknowledged that there were problems with the radio. On 23 February 2015, the Network Rail GSM-R Engineer arrived at Brush, Loughborough, to find the loco had left the Brush site and was now at Crewe station.
- 2.4 At the point of requesting Network Rail's assistance, the radio was known to be faulty, to the extent that the provisioning process for the radio aboard 92033 had not been completed with Stoke NMC. The radio was therefore not in a fit state to be used on the network without a high risk of potential mis-operation.
- 2.5 In a meeting on 2 November 2015, it was confirmed by the Head of Engineering, at GBRf that the loco had knowingly left the Brush site with GSM-R fault issues, however it was necessary for GBRf to expedite the loco north.
- 2.6 On 16 February 2015, 0Z33 (formed of a Class 66/7 and loco 92033) departed Loughborough at 1303. Network Rail Route Control established that loco 92033 was de-registered in the Rolling Stock Library (which feeds into TOPS) – loco 92033 was subsequently removed from the consist of 0Z33 at Lichfield Trent Valley (and stabled in a loop), awaiting GBRf to register the vehicle sufficiently in order for the loco to continue north. As explained, the radio on board loco 92033 had not been provisioned by GBRf (which would have thus assigned it to GBRf loco 92033).
- 2.7 In the meeting on 2 November 2015, it was acknowledged by GBRf's Head of Engineering that the vehicle had not been registered on the Rolling Stock Library (therefore would not appear on TOPS) – GBRf's Head of Engineering explained that

this had been an oversight by GBRf. The Head of Engineering also explained that GBRf had initiated the provisioning process for the radio some days before and believed that the process had been negotiated.

- 2.8 It is the case that the provisioning process includes a test call – in this particular case there was no record of a test call for 92033 at the time of the REC event on 18 February, and there was also no record of GBRf loco 92033 being on the Network Rail Telecoms database at the time of the REC event either.
- 2.9 On 17 February 2015, GBRf recovered loco 92033 from Lichfield Trent Valley using loco 66704, hauling the loco to Crewe station.
- 2.10 On 18 February 2015, the first REC was initiated by GBRf loco 92033 at approx. 1725. It has not been established that someone was on board the loco at the time. The loco was 'on network' at Crewe station.
- 2.11 As the radio initiating the REC had not been provisioned on the network (thus assigning it to GBRf loco 92033), Network Rail Route Control could not identify the source of the REC meaning the REC could not be immediately or easily closed down.
- 2.12 At one time during the first REC incident (18 February), Network Rail Route Control had believed the REC was initiated by DRS loco 68010 because a DRS fitter had made contact with Network Rail Route Control on the matter, however this eventually turned out to be a 'red herring'.
- 2.13 In trying to deal with the REC from an unidentified vehicle on 18 February 2015, Network Rail Signallers left the REC believing that, after their conversation with the DRS fitter on board DRS loco 68010, the source of the call had been established – however the REC had not been closed down.
- 2.14 Network Rail Signallers are required to close a REC – not being able to close the REC on 18 February 2015 led to delays until Network Rail Telecoms ended the REC by closing down a number of telecom base stations which were transmitting the REC.
- 2.15 Further RECs made by the same GBRf loco on 20 February and 23 February 2015 also caused a small amount of delay. The TIN related to the GBRf REC of 23 February 2015 has been accepted by GBRf, with GBRf citing its own infrastructure.
- 2.16 In the meeting on 2 November 2015, GBRf responded to Network Rail that there was nobody present on loco 92033 at the time that the REC was initiated on 18 February 2015 – this was queried by the Network Rail Investigation Report.

Further relevant information relating to the further REC incident on 23 February 2015

2.17 A Network Rail GSM-R Engineer attended GBRf loco 92033 for the first time on 23 February 2015, where he reported:

"The radio that was installed on the vehicle [loco] was 06169992.

The DCPs [Driver Control Panels] that were installed on the radio were 06168996 & 06168997.

After an initial failed test the radio was replaced.

We [NR and GBRf] also took off the DCPs and tested the new radio with one new spare DCP.

The test was successful, however we still needed a DCP for No.2 cab, so we tested no.1 end with one of the two DCPs that had failed the first test.

During this test every button pressed resulted in a no. 2 character being displayed on the DCP screen, on fully populating the screen with no. 2s the radio made a Railway Emergency Call.

I have since been informed by Network Rail Stoke Tec that this radio is suspected to be the one that made an Emergency Call in Crewe on Wednesday 18th February.

After replacing the radio and DCPs it was decided that they should be returned to Siemens together for further testing, rather than risking another REC call being made.

Another radio and two DCPs were tested at Wabtec's test facility at Loughborough on Monday 23rd February. This equipment was originally fitted to vehicle 92033.

Radio 06169994 initialised correctly but during an echo test the loudspeaker did not sound and there was no audio sounding on the call.

DCPs 06168435 & 06169238 were tested with a known good radio and both DCPs showed a blank display."

Neither Network Rail nor GBRf contest the content of the above testimony – all points made by the Network Rail GSM-R Engineer are agreed to be factually correct.

2.18 A GBRf Train Manager (driver) was alongside the Network Rail GSM-R Engineer on GBRf loco 92033 on 23 February 2015 and reported:

"Just to pre-empt anything raised from logs tomorrow AM.

Just spoke with Andy in control re a spurious emergency call in the Crewe area.

At the time, Network Rail GSMR engineer and Brush lads were dealing with faulty GSMR cab interface panels on 92033 with me in attendance in the cab.

Network Rail engineer was demonstrating to Brush fitters that key pad would only display character '2' no matter what other number was pressed when Emergency Call started.

Conversation was between 6T45 and Gresty box, driver confirming he had not pressed same. 92033 did not have a headcode entered as facia had only just been changed and found to be defective.

Signaller quickly confirmed with 6T45 driver that no emergency present and broadcast cleared down.

As I was observing what was going on in cab, can confirm did not observe Emergency Red button pressed on 92033 GSMR cab interface."

Neither Network Rail nor GBRf contest the content of the above testimony – all points made by the GBRf Train Manager are agreed to be factually correct.

2.19 The Head of Engineering at GBRf has confirmed that the cab radio involved on the 23 February 2015 was MS-ISDN 864698, Serial No 06169992. The Network Rail Investigation Report confirms MS-ISDN 864698 was the offending radio on 18 February 2015. GBRf's Head of Engineering has confirmed that this radio was removed from GBRf loco 92033 on 23 February by the GSM-R fitment project team along with the Driver Control Panels (DCPs, as abbreviated above) from the two cabs, and subsequently transported back to Siemens for investigation using the RMA procedure.

2.20 GBRf's Head of Engineering provided evidence in the form of Siemens Radio Report 92033 confirming that the aforementioned equipment numbers were in need of repair by Siemens (i.e. the kit was faulty).

2.21 In short, the two personal accounts above (one from Network Rail, one from GBRf) detail that faults with GSM-R equipment aboard GBRf loco 92033 identified on 23 February 2018 meant that a REC could be triggered when using various buttons on the DCP that did not include the REC button. Furthermore, the same equipment had been present on the loco on the days previous (i.e. on 18 and 20 February 2015 when the previous RECs had been initiated).

3. Requirement of the Board

3.1 The parties have discussed the issues relevant to this matter, in accordance with the agreed procedures for obtaining agreement in relation to a disputed attribution.

3.2 The Delay Attribution Board is asked to give guidance on:

3.2.1 A Railway Emergency Call (REC) initiated by GBRf loco 92033 on 18 February 2015 and 20th February and the responsibility for the resultant delay minutes related to these REC incidents.

3.2.2 There are two TINs related to the GBRf RECs of 18 and 20 February 2015 which need guidance from the Board.

3.3 GBRf and Network Rail request the Board to provide guidance as to whether the responsibility of the incidents should be attributed to GBRf or to Network Rail.

4. GBRf's View

- 4.1 GBRf does not see that any of the delay minutes arising from the RECs on 18 February or 20 February 2015 should be the responsibility of GBRf. The reasons for this position, in response to those facts presented in Part 3 (references shown in *italic bold*), are as follows:
- 4.2 Ref 3.4: GBRf was not aware of any restriction placed on 92033 from entering the network either as part of the provisioning process or from an earlier Network Rail visit to Loughborough. As 92033 was hauled dead (as non-working load) in tow and was not the hauling loco it was basically a wagon in consist until it got to Crewe for reinstatement where Network Rail technicians had agreed to visit and try again to set up the GSM-R.
- 4.3 Ref 3.4: GBRf is also of the understanding that post incident the GSM-R provisioning process was tightened up, presumably due to lessons learnt from this incident.
- 4.4 Ref 3.6: 0233 was bid to Network Rail via Capacity Planning as part of the Day A for C planning process, thus GBRf contends that Network Rail would have been aware of the requirement to move this locomotive on the 16 February 2015.
- 4.5 Ref 3.7: It had been attended to by Network Rail who had advised they would further attend at Crewe. At the time of the GSM-R REC call being triggered, locomotive 92033 had been registered on TOPS.
- 4.6 Ref 3.15: GBRf contends that the REC call made 20 February 2015 was post incident investigation and all GSM-R activity on 92033 that day was made by Network Rail staff and as such should be attributable to Network Rail.
- 4.7 Ref 3.15: GBRf acknowledges the failure to dispute the incident dated 23 February 2015 and accept this as an internal process issue. This in no way acts as an admission of liability to the TINs dated 18 and 20 February 2015.
- 4.8 Ref 3.17 and 3.18: Both confirm that a REC call was generated despite nobody physically pressing the REC call button. This is a scenario Network Rail was fully aware could occur as it was identified during the GSM-R design review. Network Rail chose not to pursue a design change largely based on cost (estimated to be £2.5m - £3m). The DAG (as was) allows Network Rail to pass on Schedule 8 costs associated with this type of failure (that the operator has no control over) to the operator as it is seen as a hardware failure. GBRf feels the DAPR (as now is) and / or GSM-R IFM document should be changed to reflect attribution to Network Rail when such known hardware faults occur (as the IFM document make provisions for with software).
- 4.9 Ref 3.19: The radio was found to be faulty - it had an internal failure that sent the emergency signal.
- 4.10 Ref 3.21: Both the Network Rail and GBRf staff reports from 23 February confirm the initiation of the GSM-R REC call despite nobody pressing the GSM-R REC call button. This

confirms the presence of a pre-existing and known hardware issue that GBRf has no control over.

- 4.11 In order to continue operating post NRN shut down, GBRf had to fit GSM-R to its locomotive fleet. This equipment comes from a sole supplier that GBRf has no control over. GBRf does not maintain any GSM-R equipment, it is supplied as a “sealed unit”. GBRf contends that the equipment was supplied “faulty” from the supplier and that there was nothing GBRf could do about this. Network Rail had the option to address this issue in the development stage but chose not to citing cost as the primary reason. In essence this enables Network Rail to place the liability for a known hardware issue, that they chose on cost grounds not to address, in the hands of the operator – “here’s some equipment you must fit to your locomotive, we know it’s got a fault and when it goes wrong we will deem you liable for the associated Schedule 8 costs” in effect.
- 4.12 GBRf also believes that delays were far from mitigated as Network Rail Signallers “walked away” the REC call (acknowledged in 5.4.9 below), this action greatly increased the overall time of the live REC call and caused unnecessary further direct and reactionary delays (far more than the initial 10% offered by Network Rail in 5.4.12 below).

5. Network Rail's View

5.1 Network Rail believes the delays and responsibility of these incidents have been attributed correctly to a REC originating from a train (i.e. an Operator cause). As such, none of the delay minutes from the February 2015 RECs should be Network Rail's responsibility.

5.2 It is Network Rail's view that how the GSM-R equipment came to be faulty and how the REC was initiated is irrelevant to the attribution of delay relating to these RECs. The facts of the matter are GBRf were responsible for the GSM-R equipment in question and the equipment was on board a GBRf locomotive at the time of the REC.

5.3 In delay attribution terms (as shown below), GBRf are therefore responsible for the delay. It is Network Rail's view that the Prime Cause of the associated delays should be attributed, as per the Delay Attribution Guide, to:

DAG 4.41.1d Operational GSM-R Railway Emergency Call (RECs)

No.	Circumstance	Delay Code	Incident Attribution
d)	A REC is initiated in error from a train cab that is on the Network by a member of operational staff authorised to be there, or where it has not been possible to identify the person initiating REC	TG/FC/TH/TZ	Operator of train involved (T##* / F##*)

Or, even in the event of the GSM-R equipment being the cause (which we do not believe it is), the following cause and attribution would be applicable:

DAG 4.42.2b Operational GSM-R Systems – Faults or Failures

No.	Circumstance	Delay Code	Incident Attribution
b)	GSM-R hardware fault is reported on a train and cause identified including, <ul style="list-style-type: none"> • Cab radio will not switch on or boot up • Cab radio locks up or freezes and cannot be used –normally accompanied by a fault message and code such as 'Radio failure 0x' where 'x' is a number between 1 and 7. Or 'Cab Radio fault' and 'Control Panel Failure' • Calls cannot be made as the cab radio aerial is defective 	M0 (zero)	Operator of train involved (M##*)

5.4 In response to the points put forward by GBRf, the Network Rail position is as follows:

- 5.4.1 Network Rail contests the GBRf view that GBRf is not responsible for the GSM-R equipment that it is provided with. Title ownership and responsibility for managing the use of the GSM-R equipment in question passed to GBRf on delivery from Network Rail (i.e. it became GBRf's equipment) – this is agreed in the commercial NCN5 terms between both companies relating to GSM-R equipment.
- 5.4.2 Network Rail does not contest that the GSM-R equipment returned to Siemens was faulty/damaged – how it came to be faulty is, however, open to question.
- 5.4.3 Network Rail notes that the GSM-R equipment labelled “faulty” by GBRf included a radio unit and DCP units – these separate items of equipment came from different production lines and Siemens Quality Assurance process is very robust. Network Rail believes that GBRf's assertion that the equipment was faulty on arrival is unlikely.
- 5.4.4 Network Rail notes that the GSM-R equipment on board GBRf loco 92033 was ‘on’ at Crewe station – the REC event of 18 February could quite easily have been mitigated by the equipment being ‘off’ which was within GBRf's gift. This point is made to illustrate that the Prime Cause of the incident (i.e. the REC being initiated) was within the responsibility of GBRf.
- 5.4.5 Network Rail notes that as well as initiating a REC, loco 92033 also recorded three separate “Press to Talk” requests from the on board radio to the network on 18 February 2015. This happens when the PTT button on the handset is pressed to allow the driver to speak to the signaller. These three instances would suggest that, in all probability, somebody was present on the loco at the time of the REC being initiated on 18 February 2015. Network Rail believes someone was aboard the loco in Crewe and that buttons were pushed, causing a REC to be initiated. GBRf assert that there was nobody aboard the unit when the REC was made, which would mean that a known faulty radio had been left switched on, unattended. In any case, the security of the loco is GBRf's responsibility.
- 5.4.6 Network Rail notes that the responsibility for completing the provisioning process is on the party completing the fitment – in this case GBRf and its contractor (Wabtec). This process was not completed by GBRf and no evidence has been supplied by GBRf demonstrating that the provisioning process was followed. If the provisioning process had been undertaken by GBRf and the radio was subsequently found to be faulty, then the loco details would have been found on the Network Rail Telecoms database – in the event, these details were not present on the Network Rail Telecoms database. Furthermore, Network Rail understands from GBRf that it did not understand the lead times to provision a radio – subsequently, placing fault on “NR processes” is not an adequate defence in Network Rail's view.

- 5.4.7 As the provisioning process was not completed by GBRf, Network Rail signallers responding to the REC on 18 February 2015 could not see either the headcode or unit number of the radio/loco initiating the REC call – this placed Network Rail Signallers in the very difficult position of not being able to shut the REC down because they could not identify which radio/loco was initiating the REC.
- 5.4.8 It was an unfortunate circumstance that another loco's staff (aboard DRS loco 68010) thought they had made the REC – quite understandably, in the absence of any other affirmative information as to the source of the REC, Network Rail Signallers followed up this line of enquiry by the DRS fitter. Only after leaving the REC with the DRS fitter, believing that the REC had been closed down, did it become apparent that DRS loco 68010 was not involved in making the REC. This series of events would have contributed to the delays of 18 February 2015, but the delays were primarily caused by not being able to identify the true source of the REC.
- 5.4.9 Network Rail accepts that its Signallers and Route Control Manager did need to shut the REC down and this did not happen, however the prevailing circumstances meant that no quick solution to the issue (comparable to the amount of time it would have taken to close down a REC initiated by a clearly provisioned/named loco) was possible. More substantially, though, the facts of the matter are that the REC continued because the source of the call could not be identified and for Network Rail Signallers to have closed the REC down they would have needed to be assured that there was no 'Safety of the Line' incident taking place and that trains were not in danger. This would have taken time and, in that time, trains would have continued to be delayed.
- 5.4.10 Network Rail does ultimately have the ability to close down its base stations in order to close down a REC but this is most certainly a last resort, as it came to be during the events of 18 February 2015.
- 5.4.11 The large number of delays which were incurred between the REC being initiated and then closed (following the shutdown of a number of telecom base stations) are in Network Rail's view a rational outcome of working through the potential causes and the potential impact on the safe operation of trains, resultant from receiving a REC from an unidentified source.
- 5.4.12 In recognition that its Signallers and Route Control Manager should not have left the REC without closing it, and in recognition that Network Rail had a role in limiting the size of any associated delay by potentially acting earlier to shut down its base stations, Network Rail was previously willing to accept a purely nominal 10% of the delays arising from the events of 18 February 2015 only. It must be recognised, though, that this offer was outside of the obligations and responsibilities required of Network Rail, as outlined by the DAG. The offer was made as a means of trying to reach a reasonable settlement on the incident.

5.4.13 Network Rail has never seen any reason why it should accept any of the delay minutes associated with the REC of 20 February 2015 – this incident was handled swiftly upon its occurrence and, as previously stated, Network Rail does not accept that it has responsibility for managing the use of the GSM-R equipment responsible for the REC which was provided to, and signed for, by GBRf.

5.5 In compiling this DAB paper for submission and in view of various information / materials that Network Rail has shared with GBRf, GBRf raised five queries concerning the disputed REC incidents. These queries are quoted and answered below:

5.5.1 *“Radio serial number 06169992’s repair note states “Repair Notes: Audio card blown – replaced Logic PCB repaired (IC28) Upgraded to 3.5”*

If the basis of NR’s rationale is that this is a GBRf attributable TIN as the hardware has been faulted, then GBRf say they need to have an explanation as to how a “blown audio card” can create a REC call. Without this being demonstrated, NR’s conclusion that GBRf are responsible per DAG 4.41.1d will not be accepted.”

Network Rail has not suggested that a faulty audio card caused the REC to be initiated. Both the radio unit and two Driver Control Panels (DCPs) from either cab of the loco were returned faulty post incident. It is our assertion that the DCPs were faulty and could cause an unintentional REC to be made. This was confirmed when Network Rail’s GSM-R Engineer (Phil Betesta) attended the loco in the days after the incident.

5.5.2 *“What is a “Logic PCB”, obviously a printed circuit board – is it pre-installed software?”*

The Logic PCB provides an interface to the processor via a PC104 standard bus. It handles the audio input and output switching, level adjustments, and routing between the various interfaces of the radio. It also provides the serial data interfaces. In simple words: it is an interface board that connects the various other parts of the radio together. It does not contain the processor / software. Failure of this board is a hardware failure.

5.5.3 *“Have there been any historic incidents of this exact nature, if so, how were they resolved previously?”*

Experience from early deployment of GSM-R showed that the Railway Emergency Call facility was unintentionally activated under a number of circumstances. This included when cleaning cabs and undertaking general maintenance activities, as well as accidental operation by train crew. Those delays which resulted were allocated to the Train Operator, in accordance with DAG.

Advice on avoiding accidental or “spurious” RECs, and what to do if they happen, has been included in various GSM-R Bulletins issued to industry going back to 2011.

Specifically:

- Bulletin 01 – Railway Emergency Calls
- Bulletin 08 – Spurious RECs during vehicle maintenance. This includes the detail: “If a REC is initiated, speak to the Signaller and follow his/her instructions”
- Bulletin 09 – DCP REC button warning label application
- Bulletin 35 - Red and yellow button testing on Driver Control Panel (DCP)

All bulletins are available at:

<https://www.networkrail.co.uk/running-the-railway/gsm-r/drivers-signallers/>

5.5.4 *“With regard to the Actions and Recommendations in your investigation report*

Item 14 referred to an FMS case being retrospectively raised. GBRf would like to see the conclusion of this report.”

FMS is the Fault Management System used to track incidents in the Network Rail Routes. Route Controls are supposed to log a fault ticket in FMS before contacting Network Rail Telecoms. An FMS record was not created at the time by the Route Control for this fault but was subsequently.

5.5.5 *“On the 23 February 2015 during the joint investigation at Crewe into the incident, each time a button was pressed a number “2” character appeared on the DCP, when the DCP was fully populated the radio made a REC call (without the REC button being pressed). Can you please explain how this generates a REC call, what triggered the call being sent? (Hardware or Software)”*

The Driver Control Panel (DCP) uses a matrix of diodes to translate button presses across the keys included in the panel into signals that are then sent to the main radio unit as commends, including a REC call set up. *Hardware* failure of these components led to the wrong commends being sent from the DCP to the radio.

5.5.6 *“An email you sent to me (Richard Holmes) on 25/05/17 15:22 advised that this fault had been seen a small number of times before but given the estimated cost of £2.5 - £3m to rectify a fix was not pursued.”*

The fault with the DCP was a hardware issue. This has been seen in only a small number of instances. The ongoing Mean Time Between Failures (MTBF) in the DCPs across the fleet (~8500 installations) is currently >2,000,000hrs. The unit is therefore considered a highly reliable component of the train installation.

6. Locus of the Board

- 6.1 The Board reviewed its locus in respect of providing guidance on this issue. The Board's locus to provide guidance is set out in the Network Code Conditions B2.4.3 and B6.1.3.
- 6.2 The Board noted that while it could offer guidance to the Party regarding how incidents of this nature should be attributed, this guidance was not binding on either Party. If either of the Access Parties were dissatisfied with the guidance provided they could refer the matter to Access Dispute Adjudication (ADA).
- 6.3 If the issue was referred to ADA, then an Access Dispute Adjudication Panel (ADA Panel) would be formed to consider the dispute. In doing so, the ADA Panel would take account of the guidance provided by the Board but would not be bound by it. The ADA Panel would then make a determination that was binding on the Parties concerned. This document is therefore being prepared as the vehicle for providing the guidance and the reasons for how the Board arrived at its position both to the Parties and, if necessary, to the relevant ADA Panel.
- 6.4 The Board agreed that it should seek to provide guidance that meets with the delay attribution vision:

“For all parties to work together to achieve the prime objective of delay attribution – to accurately identify the prime cause of delay to train services for improvement purposes”.
- 6.5 The Board would need to consider if, in providing guidance, an amendment to the Delay Attribution Principles and Rules should be proposed to improve clarity.

7 Consideration of the Issues

- 7.1 The Board at its meeting on 10th April 2018 considered the Request for Guidance and took account of the following:
 - 7.1.1 The facts provided by GBRf and Network Rail in connection with the incidents disputed between the Parties and the Request for Guidance submission paper.
 - 7.1.2 The additional information provided by GBRf and Network Rail in response to questions raised by the Board (Set out in Appendix A).
 - 7.1.3 The guidance provided within the Delay Attribution Guide (as was in place at the time of the incidents) and any other related DAB Guidance.
- 7.2 The Board regarded the following points as particularly relevant during discussion of the incidents:
 - 7.2.1 DAG 4.41.1d setting out responsibility for erroneous RECs from a train.
 - 7.2.2 DAG 4.42.2b setting out responsibility for GSM-R hardware faults.
 - 7.2.3 That it cannot be proved or disproved if the REC activation was due to persons unknown pressing the radio buttons.
 - 7.2.4 That the REC was believed to have been initiated due to a hardware fault on the locomotive.
 - 7.2.5 That the GSM-R radio on the locomotive was unregistered at the time of activation

8 Guidance of the Board

- 8.1 Based on the information presented, the Board agreed by a majority vote (11 in favour, 0 against, 1 abstention) the following:-
 - 8.1.1 That GBRf are responsible for the incidents relating to the REC activation as set out within the submission.
 - 8.1.2 That DAG (as was) 4.41.1d applies in this scenario setting out allocation of responsibility to the Operator of the train.
- 8.2 In reaching its conclusion the Board also noted the following:
 - 8.2.1 That GBRf challenged the seeming disparity between responsibility for software faults and hardware faults (Network Rail being responsible for the former)
 - 8.2.2 That whilst there was mention of a Failure to Mitigate challenge in the submission paper this was not mentioned specifically as part of the actual specific guidance requests of the Board.

This guidance was approved by the Delay Attribution Board on 8 th May 2018	Richard Morris (Chairman)
Signature:	

APPENDIX A

Additional information provided by GBRf and Network Rail during questioning by Board members at the 10th April hearing.

Q – Why was the radio fitted to 92033 not tested when the other radios for later fitment were?

GBRf / NR – The other radios were tested as a result of the radio fault on 92033 causing the REC.

Q – Pressing any button on the radio would have activated the REC – was there any evidence that this did occur?

NR – Yes, the GSM-R log shows a network received call was initiated.

Q – Can that only be registered as a result of a physical pressing of the button?

NR – Expressing a professional opinion – Yes. In fact 3 requests were received from that particular radio but it cannot be categorically proven.

Q – Can you confirm that the loco left Loughborough with both an unregistered locomotive and unregistered radio?

NR - That is the case.

Q – Can you confirm that Network Rail asked for the locomotive to be taken to and to be seen at Crewe?

GBRf – Yes

NR –No, it was requested to be seen at Loughborough but had left before the engineer got there.

Q – To confirm understanding, the locomotive left Loughborough on the 16th as OZ33 when the paperwork was done to register the loco but wasn't uploaded into TOPS. The first REC was two days later on the 18th so why wasn't it registered in those two days?

GBRf – the locomotive was registered once it was realised the paperwork hadn't been uploaded so was a quick fix. The issue was that the radio had not been registered with Stoke TEC and so wasn't provisioned on the system by the 18th.

Q – Was the GSM-R radio turned off during transit from Loughborough to Crewe?

GBRf – It was a ‘dead’ locomotive being hauled akin to being a wagon.

Q – What happened on the 18th to liven the radio?

NR – When the locomotive was powered up the radio went live and connected to the GSM-R network.

Q – During the enquiry into the incident, which GBRf didn’t attend, it was cited that no test call / pre service checks had been made from this locomotive – isn’t that a Rule Book requirement?

NR – The Rule Book now allows a train to continue in traffic but not believed to be the case at this time.

Q – is there any confirmation that Network Rail agreed for that locomotive to run to Crewe.

GBRf – It was probably agreed by phone so cannot substantiate.

Q – Have there been any other spurious RECs of this exact nature – i.e. relating to this hardware fault?

NR – There has only been a handful of spurious calls over the years but don’t have an exact number. In the scheme of things it is a tiny percentage given the millions of activations that have occurred.