



Rail Accident Investigation Branch

# Rail Accident Report



## **Near miss with a member of staff at Rowlands Castle station, Hampshire 19 December 2020**

Report 06/2021  
September 2021

This investigation was carried out in accordance with:

- the Railway Safety Directive 2004/49/EC
- the Railways and Transport Safety Act 2003
- the Railways (Accident Investigation and Reporting) Regulations 2005.

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Any enquiries about this publication should be sent to:

RAIB	Email: <a href="mailto:enquiries@raib.gov.uk">enquiries@raib.gov.uk</a>
The Wharf	Telephone: 01332 253300
Stores Road	Website: <a href="http://www.gov.uk/raib">www.gov.uk/raib</a>
Derby UK	
DE21 4BA	

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## Preface

The purpose of a Rail Accident Investigation Branch (RAIB) investigation is to improve railway safety by preventing future railway accidents or by mitigating their consequences. It is not the purpose of such an investigation to establish blame or liability. Accordingly, it is inappropriate that RAIB reports should be used to assign fault or blame, or determine liability, since neither the investigation nor the reporting process has been undertaken for that purpose.

RAIB's findings are based on its own evaluation of the evidence that was available at the time of the investigation and are intended to explain what happened, and why, in a fair and unbiased manner.

Where RAIB has described a factor as being linked to cause and the term is unqualified, this means that RAIB has satisfied itself that the evidence supports both the presence of the factor and its direct relevance to the causation of the accident or incident that is being investigated. However, where RAIB is less confident about the existence of a factor, or its role in the causation of the accident or incident, RAIB will qualify its findings by use of words such as 'probable' or 'possible', as appropriate. Where there is more than one potential explanation RAIB may describe one factor as being 'more' or 'less' likely than the other.

In some cases factors are described as 'underlying'. Such factors are also relevant to the causation of the accident or incident but are associated with the underlying management arrangements or organisational issues (such as working culture). Where necessary, words such as 'probable' or 'possible' can also be used to qualify 'underlying factor'.

Use of the word 'probable' means that, although it is considered highly likely that the factor applied, some small element of uncertainty remains. Use of the word 'possible' means that, although there is some evidence that supports this factor, there remains a more significant degree of uncertainty.

An 'observation' is a safety issue discovered as part of the investigation that is not considered to be causal or underlying to the accident or incident being investigated, but does deserve scrutiny because of a perceived potential for safety learning.

The above terms are intended to assist readers' interpretation of the report, and to provide suitable explanations where uncertainty remains. The report should therefore be interpreted as the view of RAIB, expressed with the sole purpose of improving railway safety.

Any information about casualties is based on figures provided to RAIB from various sources. Considerations of personal privacy may mean that not all of the actual effects of the event are recorded in the report. RAIB recognises that sudden unexpected events can have both short- and long-term consequences for the physical and/or mental health of people who were involved, both directly and indirectly, in what happened.

RAIB's investigation (including its scope, methods, conclusions and recommendations) is independent of any inquest or fatal accident inquiry, and all other investigations, including those carried out by the safety authority, police or railway industry.

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# Near miss with a member of staff at Rowlands Castle station, Hampshire, 19 December 2020

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## Summary

At about 19:14 hrs on Saturday 19 December 2020, a Network Rail Mobile Operations Manager (MOM) came close to being struck by a passenger train at Rowlands Castle station. The MOM was on the track retrieving a rubbish bag when the train approached at about 60 mph (97 km/h). The MOM climbed back onto the platform and was clear of the line about one second before the train passed.

The incident occurred because the MOM had not arranged protection from train movements before going onto the track, the MOM and the signaller did not have a mutual or accurate understanding about the reality of the situation, and because the MOM was otherwise unaware that the train was approaching. Underlying these causes are factors associated with the MOM's competence, which was not adequately managed to ensure he worked safely on the track, and local management not functioning properly, which probably affected the recruitment, training and ongoing monitoring of the MOM.

Although not causal to the incident, RAIB observed that voice communications were not recorded due to a fault with equipment at the signal box. RAIB also observed that the automatic station announcements were not providing adequate warning to passengers of non-stopping trains at Rowlands Castle.

RAIB has made four recommendations and identified three learning points. Three of the recommendations are addressed to Network Rail and concern the competency framework for MOMs as well as management arrangements for operational response staff, at both local and national level. The fourth recommendation is addressed to South Western Railway and is aimed at ensuring safety-related announcements at stations are made in a timely manner. The learning points highlight the importance of processes associated with safe systems of work and safety-critical communications, as well as addressing the observation on voice communications recording.

# Introduction

## Definitions

- 1 Metric units are used in this report, except when it is normal railway practice to give speeds and locations in imperial units. Where appropriate the equivalent metric value is also given.
- 2 The report contains abbreviations, which are listed in Appendix A. Sources of evidence used in the investigation are listed in Appendix B.



## The incident

### Summary of the incident

- 3 At about 19:14 hrs on Saturday 19 December 2020, a Network Rail Mobile Operations Manager (MOM) came close to being struck by a southbound (down) passenger train at Rowlands Castle station (figure 1). The train was travelling at about 60 mph (97 km/h) when the near miss occurred.
- 4 The MOM was on the track between the two station platforms retrieving a rubbish bag from the line when the train approached (figure 2). He climbed back onto the southbound platform and was clear of the line about one second before the train passed.
- 5 Nobody was injured, although the MOM and the train driver were distressed by the incident.

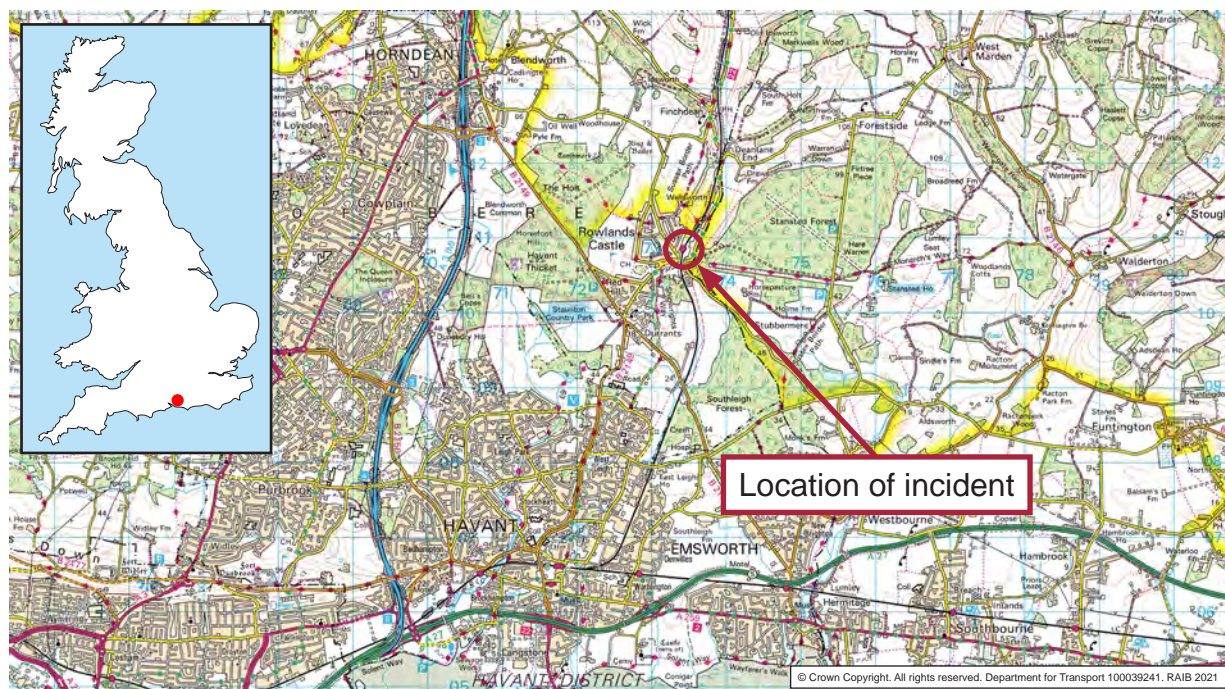


Figure 1: Extract from Ordnance Survey map showing location of incident

## Context

### Location

- 6 Rowlands Castle station is located between Petersfield and Havant stations on the railway line that runs from Guildford to Portsmouth Harbour. It is 63¼ miles (102 km) from London Waterloo. Petersfield station is located 8.3 miles (13.4 km) to the north (towards Guildford), while Havant station is 3.2 miles (5.1 km) further south (towards Portsmouth Harbour).



Figure 2: Aerial view of Rowlands Castle station showing the direction of travel of the train and the approximate location of the MOM immediately before the incident

- 7 Signalling at Rowlands Castle is controlled from workstation 2 at Havant area signalling centre (ASC). Signalling at Petersfield is controlled from Petersfield signal box. The boundary between the two signalling control areas is located about 1.3 miles (2.0 km) south of Petersfield and 7.1 miles (11.4 km) north of Rowlands Castle.
- 8 The railway at Rowlands Castle station has two tracks: the up line (used by trains travelling towards Guildford and London Waterloo) and the down line (towards Portsmouth Harbour). The car park, the station entrance and ticket office are all on the west side of the railway, adjacent to the up line. A footbridge connects the two platforms.
- 9 Rowlands Castle station is situated on a left-hand curve (in the down direction of travel). The maximum permitted speed of passenger trains on the down line is 70 mph (113 km/h). At the location of the incident, which was opposite the station ticket office, fast trains can be seen approaching for approximately four seconds before they arrive (the time elapsed between first sighting a train and its arrival at a particular location is commonly described as the 'warning time') (figure 3).

### Organisations involved

- 10 Network Rail is the owner and maintainer of the infrastructure, and employer of the MOM and signaller involved in the incident. Rowlands Castle and the other areas relevant to this investigation fall within Network Rail's Wessex route, specifically the Wessex Outer delivery unit. On the Guildford to Portsmouth Harbour line, the boundary between the Inner and Outer delivery units is just north of Petersfield. These are referred to as 'Wessex Inner' and 'Wessex Outer' throughout this report.
- 11 South Western Railway is the operator of both the train involved in the incident and of the station at Rowlands Castle.



Figure 3: View from the approximate location of the incident, looking towards approaching trains

- 12 Both Network Rail and South Western Railway freely co-operated with the investigation.

### Train involved

- 13 The train, reporting number 1P57, was the 18:00 hrs South Western Railway passenger service from London Waterloo to Portsmouth Harbour. It was formed of two five-car class 444 electric multiple units.
- 14 Train 1P57 departed from its scheduled stop at Petersfield at 19:05 hrs, one minute late. Its next scheduled stop was at Havant, where it was due to arrive at 19:17 hrs. The train was not scheduled to stop at Rowlands Castle.

### Staff involved

#### Mobile Operations Manager (MOM)

- 15 The MOM joined Network Rail in March 2016 as a relief signaller, covering a number of Wessex Outer signalling locations, including Petersfield signal box (but not Havant ASC). He applied for the role of MOM in the Havant area on 17 November 2018, was interviewed for the post on 23 January 2019, and began work on 15 April 2019. He then underwent a programme of training through July and August 2019 (see paragraph 77), followed by a period of local training in the Havant area (see paragraphs 84 to 89), before taking his place on the MOM roster on 2 November 2019.

- 16 The MOM had been passed as competent to perform several safety critical activities. These included certification for a number of roles specifically related to track safety: Personal Track Safety (PTS), Controller of Site Safety (COSS), and Lookout. His last annual competence review before the incident was on 31 January 2020, which assessed him as competent and documented a number of positive comments about his behaviours.
- 17 Prior to the incident at Rowlands Castle, the MOM had not been involved in any other incidents as a MOM. He was involved in an incident as a signaller on 5 December 2018, the circumstances of which are not relevant to this investigation.

#### Petersfield signaller

- 18 The signaller on duty at Petersfield signal box at the time of the incident had 39 years' experience on the railway and had worked at Petersfield signal box since 2005. He was involved in training the MOM to work Petersfield signal box when the MOM was a signaller (paragraph 15).
- 19 His last competence assessment took place on 23 March 2020, which included a communications monitoring check and a scenario about protecting people working on the infrastructure. A further communications monitoring check was carried out on 29 October 2020. The signaller received positive comments throughout these assessments.

#### External circumstances

- 20 It was dark and dry at the time of the incident. The temperature was about 9°C with a very light wind.
- 21 Other than the fact that it was dark (which affected the visibility of the approaching train; see paragraph 34), external circumstances played no part in the incident.

## The sequence of events

### Events preceding the incident

- 22 Before the day of the incident, the MOM had worked 10 consecutive shifts from 2 to 11 December 2020. He then had a weekend off followed by two early shifts (05:20 to 14:00 hrs) on 14 and 15 December, and four late shifts (14:00 to 22:35 hrs) from 16 to 19 December. The MOM stated that he was woken by his dog at about 07:00 hrs on 18 December and at about 05:00 hrs on 19 December, the day of the incident.
- 23 On the day of the incident, the MOM started work at 13:30 hrs. He was called to deal with an incident at Havant in the afternoon, which he did between about 14:30 and 16:00 hrs. Then, at 16:00 hrs, the Prime Minister announced that Havant (along with several other areas) would be subject to the most restrictive (tier 4) lockdown conditions over Christmas, in response to the coronavirus (COVID-19) pandemic. This caused the MOM considerable distress associated with personal circumstances he was facing at the time, and he spent the next hour or so until about 17:30 hrs exchanging text messages with a line manager about working arrangements over Christmas.
- 24 At 18:54 hrs, Network Rail's incident log recorded a report of a 'bean bag' that had been thrown onto the down line by youths at Rowlands Castle (it seems likely that the verbal report of a 'bin bag' had been misheard as 'bean bag'). In response, Network Rail's incident controller at the Wessex Integrated Control Centre (WICC, located at Basingstoke) advised the signaller on workstation 2 at Havant ASC, who in turn instructed the driver of the next train through the station, the 18:45 hrs service from Portsmouth Harbour to London Waterloo (train reporting number 1P66), to travel at a cautionary speed and check the area.
- 25 At the same time, the WICC incident controller called the MOM by radio to deploy him to Rowlands Castle. The MOM gave an estimated time of arrival of 20-25 minutes.
- 26 The MOM drove from his office at Havant to Rowlands Castle in a van, and initially spent some time in the car park, being wary in case the youths that had been reported were still present. While he was in his van during this period, the MOM completed part of the paperwork that is required when members of staff need to go on or near the line in response to an incident (see paragraph 44). On this paperwork, he incorrectly entered 'Petersfield' as the controlling signal box for the area (paragraph 7 refers).
- 27 At 19:10 hrs, the driver of train 1P66 reported back to the Havant signaller that they had seen nobody at the station and nothing on the track, so normal train working resumed through the station.
- 28 At about the same time, the MOM reported to the WICC by radio that he was on site at Rowlands Castle station. He then used the station footbridge to cross over to the down platform and saw the rubbish bag on the track.
- 29 At 19:12 hrs, the MOM used his mobile phone to call Petersfield signal box. He told the signaller that he was at Rowlands Castle station and wanted to go on the track briefly to retrieve a bag. He asked the signaller what trains were in the area and if the down line was clear.

- 30 The signaller checked his display, and responded that the only train he could see was one that was just approaching Petersfield station (train 2P55, the 17:45 hrs service from London Waterloo to Portsmouth & Southsea), which was due to call at Rowlands Castle at 19:24 hrs. The previous train, 1P57, had already left the signalling area controlled by Petersfield signal box some seven minutes earlier and was no longer shown on the signaller's display.
- 31 At 19:13:47 hrs, the MOM looked at the passenger information display on the platform at Rowlands Castle, which confirmed to him that train 2P55 was the next train due to call at the station.
- 32 The MOM concluded that there was sufficient time to retrieve the rubbish bag, told the signaller that he was going to remove the bag from the line, and agreed that he would call back once he was clear of the line. The phone call ended at 19:14:25 hrs.

### Events during the incident

- 33 Immediately after that phone call, the MOM started climbing down onto the track from the platform. About three seconds later, as train 1P57 approached the station, the MOM became visible in the view recorded by the train's forward-facing CCTV.
- 34 The MOM threw the rubbish bag onto the platform and noticed the headlights of train 1P57 on the curve entering the station. He immediately started climbing back onto the platform and rolled away from the platform edge. The MOM was clear of the platform edge at 19:14:33 hrs and, one second later, the train passed his location (figure 4).



Figure 4: Station CCTV image of the moment the train passed the MOM – train travelling from right to left (image courtesy of South Western Railway)

- 35 On sighting the MOM, the train driver sounded the train's horn while passing through the station. Just before the train passed the MOM, the driver made a full brake application.

#### Events following the incident

- 36 A few seconds after the incident, the MOM phoned the Petersfield signaller to ask what had happened. The signaller responded that he had assumed the MOM would have called the Havant signaller, as Rowlands Castle station was in an area controlled by Havant. The MOM realised that he had called the wrong signaller, and then called the WICC to report the incident.
- 37 The train came to a stand at 19:15:00 hrs, having travelled about 405 metres past the MOM's location. The driver then also reported the incident to the Havant signaller using the train's radio. The Havant signaller responded that no staff should have been in the area and nobody had requested a line blockage, although he did mention the report about the rubbish bag.
- 38 At 19:19:45 hrs, train 1P57 moved off again as far as Havant, where the driver was relieved of duty for welfare reasons. The train resumed its journey from Havant at 19:58 hrs, 41 minutes late.
- 39 The MOM spoke to a line manager by phone and was also relieved of duty. He returned to his office at Havant to collect his belongings and then went home.

## Background information

### Mobile Operations Managers

40 MOMs act as Network Rail's front-line response to any incidents affecting the safe and effective operation of the railway. Such incidents may include equipment failures, trespass and vandalism, animal incursions, or accidents. MOMs may also be required to carry out operational support duties, such as operating signalling or level crossing equipment. Although much of the work carried out by MOMs takes place on or near the line,<sup>1</sup> they fall within the operations business area of Network Rail, whereas most others who work on the tracks are part of maintenance or engineering organisations.

### Processes for working safely on or near the line

- 41 Module 01 of Network Rail standard NR/L2/OHS/019 (module issue 1, effective 3 July 2017) describes the process for planning and working on or near the line during incident response. As such, it is applicable to the work of a MOM, although Module 01 does not specifically mention MOMs. The module only applies to situations which cannot be pre-planned, as other modules of the same standard cover planned work on or near the line. For the purposes of this report, the process for going on or near the line is summarised below as it applies to a MOM.
- 42 Under Module 01, a MOM is wholly responsible for deciding on the response required for the incident, the protection and/or warning arrangements for working on or near the line, and the risk controls for both the site of work and the task to be carried out. This contrasts with planned work, for which a safe system of work will be devised by a competent planner, authorised by a responsible manager, and verified by the person in charge of the work on site.
- 43 Once on site, the MOM contacts the signaller to arrange protection from train movements as required. If this is not possible, the MOM may consider a lower level of protection, such as working on an open line and using a method of warning of approaching trains instead. However, such methods are prohibited for working on the track in certain areas, including between platforms in stations.
- 44 These arrangements are to be documented by the MOM in an Incident Response Pack (IRP), which is the equivalent of a safe work pack used for planned work. Module 01 states that it is the MOM's responsibility to return the IRP to their manager within one week of the work, for assurance purposes.

### Training, assessment and monitoring of MOMs

- 45 Given the nature of the work, the competence requirements for MOMs are many and varied, and essentially fall into two key areas: track safety and operational knowledge.
- 46 A typical training programme for a MOM will entail them first attending a series of courses at one of Network Rail's national training centres, followed by a period of supervised work in their local area. Both these phases include elements of track safety and operational learning.

<sup>1</sup> In railway terms, 'on or near the line' is defined as when a person is either on a line, within 3 metres of a line without a permanent fence or structure between them and the line, or if they are carrying out engineering or technical work on a station platform within 1.25 metres of its edge (GERT8000-G1, issue 8, section 6).



- 47 The training courses cover all the safety and operational competencies required by MOMs. In terms of track safety, these include PTS, the foundation requirement for anyone working on or near the line, and COSS, which enables an individual to set up a safe system of work, either for a group or when working alone. All these courses are generic for other roles on the railway, but are usually grouped together for training a cohort of MOMs over consecutive weeks.
- 48 Each course is formally assessed at the training centre and, if passed, the person concerned is certified as competent to work under supervision. Such supervision takes place during the MOM's local learning phase and, given satisfactory progress and evidence of their experience, their line manager (a Local Operations Manager, or LOM) has the authority to raise their certified competency level and remove the requirement for supervision. There is no set duration for this phase and the LOM is able to decide when supervision is no longer required.
- 49 During the supervised phase, MOMs are expected to gain experience of the track safety processes associated with protection from train movements (the skills acquired on the COSS course) as well as operational knowledge of their local area. This will conclude with an assessment of their local knowledge, which is arranged by their LOM.
- 50 Once a MOM has passed the local assessment and their LOM is satisfied that they are competent at the necessary level, they can start work on the roster without supervision. Subsequently, their competence is managed through an ongoing process of monitoring. This consists of an annual capability conversation to check their experience of the various competencies they hold, which is carried out by their LOM. Furthermore, some of the competencies require additional practice and observations. In particular, the COSS competency should be practised a minimum of four times per year, and the holder should be observed by another COSS twice per year, with feedback provided to an assessor.

## Analysis

### Identification of the immediate cause

#### 51 The MOM was on an open line while a train was approaching.

52 The MOM had climbed down from the platform at Rowlands Castle station to retrieve the rubbish bag without a safe system of work in place, just before train 1P57 approached the station.

### Identification of causal factors

53 The incident occurred due to a combination of the following causal factors:

- a. The MOM had not arranged protection from train movements before going onto the track (paragraph 54)
- b. The MOM and the signaller did not have a mutual or accurate understanding about the reality of the situation (paragraph 61)
- c. The MOM was not aware that a train was approaching (paragraph 70)

Each of these factors is now considered in turn.

#### Safe system of work

#### 54 The MOM had not arranged protection from train movements before going onto the track.

55 The MOM telephoned the signaller at Petersfield to explain that he needed to go onto the track at Rowlands Castle to retrieve the rubbish bag. He did not specifically ask for a line blockage or other method of protection from trains, nor did the signaller explicitly give him permission to access the track.

56 The MOM's stated understanding was that, in this type of situation, he was only required to phone the signaller and check if the line was clear. He believed this was normal practice and stated that this was how the process had been demonstrated to him by other MOMs.

57 There is no direct evidence that other MOMs were routinely working in this way. However, there is some evidence from voice communication recordings to suggest that this was not a unique occurrence, either for this MOM or for other MOMs. Witness evidence suggested that these practices may have been associated with a perception of reluctance on the part of some signallers to grant line blockages.

58 The MOM involved in the incident at Rowlands Castle had applied this practice on a number of previous occasions, working on the track between platforms in station areas without a line blockage. He stated that he had never been challenged on or corrected about this; voice communications associated with one of these occasions shows no evidence that the signaller involved challenged the MOM about the work he was doing.

- 59 The MOM stated that he was unaware that working on or near an open line is prohibited between platforms in stations. Such prohibitions are listed in a railway document called the National Hazard Directory, which is available to MOMs when planning their work. However, other witnesses stated that the prohibition on working between station platforms is well known.
- 60 The MOM also stated that he was unaware of the requirement to complete an IRP (paragraph 44) whenever he needed to go onto the track, as he had not been trained or told to do so. He only completed the first page of the IRP while waiting in the car park at Rowlands Castle to see if the youths were still in the area (paragraph 26); otherwise, he might not have done so. Other witnesses did know that this was a requirement, although there might be occasions when, under the time pressure of an emergency, they would complete the IRP retrospectively. Nevertheless, they stated that this would not be at the expense of arranging proper protection for work on or near the line.

### Communications

#### **61 The MOM and the signaller did not have a mutual or accurate understanding about the reality of the situation.**

- 62 During the telephone conversation between the MOM and the signaller at Petersfield, both parties formed incorrect assumptions about the other's meaning and intentions. Consequently, information was lost in the communication and, crucially, neither realised that train 1P57 was about to pass through Rowlands Castle station.
- 63 There is no recording of this conversation (see paragraph 101). However, based on witness evidence, the RAIB believes that the following summary of what took place is a fair account of the exchange.
- 64 The MOM asked the signaller if there were any trains approaching Rowlands Castle. The signaller responded that the only train in his area at that moment was train 2P55 arriving at Petersfield station. However, the area around Rowlands Castle is controlled by Havant ASC rather than Petersfield signal box (paragraph 7) and is not shown on the signaller's display panel at Petersfield. Train 1P57 had left the area controlled by Petersfield (and, therefore, stopped being displayed on the panel) about seven minutes before the MOM telephoned the signaller. The signaller stated that he did not maintain awareness of trains in the surrounding areas once they had left his panel. There is an additional display screen showing a wider area (known as the CCF screen) in the signal box that did show the approximate location of train 1P57, which at that time was approaching the last signal before Rowlands Castle station, but this screen is not a primary source of information for signallers and the signaller did not look at it.
- 65 The signaller knew that Rowlands Castle was not in his area of control, but stated that he assumed the MOM would also call Havant ASC before going onto the track. He neither explained to the MOM that he was unable to confirm train movements towards Rowlands Castle, nor did he advise the MOM to call Havant ASC. The signaller did not prompt the MOM that he would need a line blockage to carry out the work, but stated that if the MOM had asked for a line blockage, then he would have told the MOM to call the signaller at Havant ASC.

- 66 Module G1 of the railway Rule Book<sup>2</sup> sets out the signaller's responsibility for leading verbal communications. However, the signaller stated that his role was to respond and assist with MOM requests as far as practicable and understood that MOMs had their own procedures to follow in these circumstances.
- 67 It is not clear why the MOM telephoned the wrong signal box, but it is likely that he was simply confused, on that occasion, about the signal box areas. Evidence in support of this conclusion includes the fact that the MOM used to work at Petersfield as a signaller. Although this means that he did know the areas of control (and, in fact, realised immediately after the incident that he had called the wrong signal box), it may also suggest that the MOM reverted to Petersfield as a default location when working in the vicinity. Furthermore, the MOM was experiencing some difficult personal circumstances at the time associated with the COVID-19 lockdown over Christmas. Coupled with his shift work and sleep patterns (paragraph 22), these possibly resulted in the MOM being mentally fatigued on the evening of the incident, which may have influenced his decision-making.
- 68 However, RAIB cannot rule out the possibility that the MOM consciously decided to telephone the Petersfield signaller, despite knowing that it was the wrong signal box. The MOM stated that he thought the Petersfield signaller would have known if there were any trains approaching, as it is the last signal box passed by trains in the down direction before reaching Rowlands Castle.
- 69 In any case, the MOM felt that he had reached a clear understanding with the signaller that he was about to go onto the track at Rowlands Castle to retrieve the bag, and that the line was clear and safe for him to do so. This did not accord with the signaller's perspective or match the reality of the situation. Witness evidence indicated that the conversation was informal; this may have contributed to the assumptions made and the associated loss of information during the phone call.

### Awareness of the train

#### **70 The MOM was not aware that a train was approaching.**

- 71 During the telephone conversation between the MOM and the signaller, the signaller informed the MOM that the only train he was aware of was train 2P55 arriving at Petersfield station, and that this train would call at Rowlands Castle about 11 minutes later (paragraph 30). The MOM checked the passenger information display, which confirmed this.
- 72 Along with other sources of information about timetabled passenger train movements, passenger information displays should never be used to determine whether it is safe to go on or near the line. Nevertheless, these displays typically show messages warning about the approach of non-stopping trains and, although intended solely for the benefit of passenger safety, such a message could have prompted the MOM about the approach of train 1P57.

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<sup>2</sup> GERT8000-G1, General safety responsibilities and personal track safety for non-track workers, issue 7.1, 5 December 2020 (section 5.3 refers).

- 73 At a post-incident visit to Rowlands Castle station as part of this investigation, RAIB observed that the passenger information display on the Down platform temporarily showed such a warning about eight minutes before the non-stopping train's scheduled passing time, and again from about 30 seconds before it arrived until the train had passed through the station. Other than that, the display only showed the next trains that were due to call at the station. Because the MOM checked the passenger information display about 44 seconds before train 1P57 arrived (paragraph 30), he would not have seen any warning about the approach of the train.
- 74 Station announcements are also made about non-stopping trains. As with the messages on passenger information displays, these should never be used to make decisions about going on or near the line as they are intended for passenger safety only. The announcements are recorded voice messages, automatically triggered when the train reaches a defined point on the track. At Rowlands Castle, the trigger point is intended to be about 19 seconds before the train arrives at the station, in line with South Western Railway's practice across its network. However, RAIB observed during its site visit that the announcement was actually made while the train was passing through the station, and consequently difficult to hear over the noise of the train. The MOM stated that he heard no announcement before the incident, and that if he had, then he would not have gone onto the track.

## Identification of underlying factors

### Competence management

**75 The MOM's competence was not adequately managed to ensure he worked safely on the track.**

- 76 The MOM stated that he did not know that working on or near an open line is prohibited between platforms in stations (paragraph 59), or that he needed to complete an IRP whenever going on or near the line (paragraph 60). He believed it was normal practice to check with the signaller if there were any trains in the area, and had never been challenged or corrected on this (paragraphs 56 and 58). RAIB's investigation found that these shortcomings in his track safety knowledge were not identified or addressed through his initial training, his development and assessment at local level, or his ongoing monitoring.

### Initial training

- 77 The MOM attended Network Rail's national training centre in York for several weeks during July and August 2019 to obtain the relevant competencies required to be a MOM, including COSS. Witness evidence suggests that because the COSS course is generic for all those in the industry requiring the competence, it focuses on pre-planned work and does not sufficiently cover the needs of MOMs during incident response.

- 78 RAIB's review of the training and assessment materials for the COSS course found that it does emphasise pre-planned work and has little focus on incident response. However, it also repeatedly mentions the importance of setting up an appropriate safe system of work and the associated paperwork, although it does not specifically refer to IRPs. RAIB concluded that while the COSS course is not tailored to the MOM role, it does make clear the requirements for planning and protection before accessing the track.
- 79 Prior to enrolling on a COSS course, candidates and their LOMs are required to jointly complete a pre-course workbook to determine if the candidate has the appropriate experience and non-technical skills to progress to the COSS course. Non-technical skills are sometimes known as behavioural skills and underpin the application of technical skills for safe performance. With relevance to the current investigation, these include 'planning and decision making', 'communications' and 'conscientiousness'. In the workbook, the manager completes a checklist of the candidate's experience on track, as well as an evaluation of their non-technical skills.
- 80 The MOM's pre-course workbook was completed by a deputy LOM (see paragraph 97). Because the MOM was previously a signaller (paragraph 15) and had no prior experience on track, the experience checklist was left blank, with a written justification that COSS is a core competency requirement for the MOM role. Evidence indicated that it is not unusual for MOMs who are entering the role without track experience to be progressed in this way.
- 81 For the non-technical skills evaluation in the workbook, the MOM passed all elements, with scores (out of five) of four for 'planning and decision making', five for 'communications' and five for 'conscientiousness'. The deputy LOM had not received formal training in assessing non-technical skills, and stated that he believed the purpose of the workbook was to record whether the candidate was considered capable of doing the COSS course.
- 82 During the COSS course itself, candidates also undergo a behavioural assessment which is based on subjective observations by the trainer. The MOM passed this assessment, although RAIB's investigation found that the subjective observations were carried out in a less rigorous way than the formal written assessments.

#### Local development and assessment

- 83 There is little guidance for Network Rail's routes on how to structure the local element of a MOM's training. In Wessex Outer, the process was for new MOMs to undergo a period of mentoring by experienced colleagues, followed by an assessment of their local knowledge which is primarily focused on operational aspects of the MOM role. Evidence indicated that the process differed from that in Wessex Inner, where new MOMs were deliberately given more experience of safety-related aspects such as working on track and completing IRPs.
- 84 There is conflicting evidence regarding the mentoring provided to the MOM involved in the incident at Rowlands Castle. The MOM stated that he was given no mentoring, whereas other witness evidence suggests that he did receive some mentoring by an experienced MOM at Havant, depending on when their rosters coincided.

- 85 On 17 September 2019, the MOM undertook a computer-based assessment for a number of his areas of competence, including COSS duties, administered by a temporary LOM at that time (see paragraph 98). This assessment forms part of the evidence used by the LOM to raise a MOM's competency levels so that they are able to work without supervision (paragraph 48). While the MOM initially failed this assessment, he re-took it and passed six days later. The outcome of these assessments was that the LOM raised his competency levels so that he could work without supervision (paragraphs 48 and 50). Although this is a normal part of the assessment process, the LOM could not explain why he assessed the MOM and raised his competency level at that time, about a month after completing his initial courses at York and some seven weeks before starting work on the MOM roster at Havant.
- 86 The MOM then undertook a local knowledge assessment on 8 and 9 October 2019, administered by a Mobile Incident Officer (MIO; a more senior role which also involves responding to operational incidents) from Wessex Inner. This assessment addressed local geographical knowledge, as well as working through a range of scenarios that could be faced by a MOM.
- 87 One of these scenarios involved retrieving an animal from the track in a station area, which the MOM responded would require a line blockage. Although the assessor found no problems with this element of the assessment, the MOM stated that he had never before seen an IRP, so the MIO demonstrated this to him.
- 88 The MOM failed the local knowledge assessment primarily due to his inadequate geographical knowledge. On learning that the MOM had not been provided with a training plan, nor was there a suitable plan for Havant available, the MIO developed such a plan for the MOM. The MOM spent the next three weeks working through the plan and subsequently passed the local knowledge assessment on 30 October 2019. His first day on the working roster as a Havant MOM was 2 November 2019.
- 89 Network Rail's National Operating Procedure for quality assurance in occupational competence (NOP 2.01, issue 3, 7 December 2019) states that all evidence and assessment documentation shall be retained by the LOM. However, Wessex Outer was unable to provide RAIB with any such documentation for the MOM, apart from comments associated with the local knowledge assessment on 30 October 2019. The same procedure states that assessments for those new to the role should be verified by an independent manager. There is no evidence that the MOM's assessments were verified.

### Ongoing monitoring

- 90 After passing the local knowledge assessment and joining the roster on 2 November 2019, there is no evidence that the MOM was subject to any site visits or other observations for the purposes of ongoing competence management.
- 91 Network Rail's National Operating Procedure for visits to employees at operating locations (NOP 2.15, issue 2, 2 June 2018) sets out requirements for LOMs to visit such locations every other month, but in this case, 'the location' would be the MOM office rather than a site of work on the railway infrastructure. Network Rail standard NR/L2/OHS/019 also specifies that LOMs should monitor their staff through observation at work, and further requires that IRPs are returned and checked every reporting period.

- 92 It is a requirement of maintaining the COSS competency that the holder should be observed carrying out COSS activity four times per year. Network Rail told RAIB that arranging COSS observations for MOMs is difficult due to the reactive nature of the role, and because the majority of their activity is working alone rather than acting as a COSS for a group. Witness evidence suggests that the COVID-19 pandemic may have been another reason that the MOM had not received a COSS observation visit.
- 93 Similarly, an IRP might not necessarily be required for every MOM deployment (if they are not required to go on or near the line), so it is difficult to monitor their completion. Nevertheless, Wessex Outer maintains a spreadsheet of MOM deployments, which is already used for other monitoring purposes; RAIB considers that this spreadsheet could also be used for monitoring IRPs.
- 94 Until November 2020, Network Rail's National Operating Procedure for monitoring the quality of spoken communications (NOP 2.16, issue 2, 2 June 2018) required voice communication recordings to be checked twice per year. However, the monitoring records for the MOM show only one communication monitoring check in the year before the incident at Rowlands Castle. Given that there was evidence from voice communication recordings of the MOM working on track in station areas without a line blockage, this represents a missed opportunity to address this area of his competence.

### Local management

#### **95 Elements of Wessex Outer management were not functioning properly, which probably affected the recruitment, training and ongoing monitoring of the MOM.**

- 96 There was one LOM post for all 26 MOMs across Wessex Outer, covering locations from Basingstoke to Yeovil. However, that post has been vacant since September 2018 amid ongoing human resources issues. During that time, various other members of staff from both Wessex Outer and Wessex Inner have covered the role, both formally and informally.
- 97 When the MOM was recruited into the role in late 2018 and early 2019, he was interviewed by the deputy LOM (another senior MOM in Wessex Outer) and a MIO from Wessex Inner. Network Rail told RAIB that the absence of a substantive managerial presence at the interview was not desirable, but not exceptional either. The interview ostensibly addressed some elements of non-technical skills, which the deputy LOM had not been trained to assess (paragraph 80).
- 98 On 3 August 2019, during the MOM's initial training programme at York, the deputy LOM stepped down from the role due to concerns about excessive workload. Subsequently, the MOM was informally managed at various points by two signalling line managers from Wessex Outer, one of whom was formally seconded into the LOM post in March 2020 for six months. This term ended on 30 September 2020, but was renewed from 17 November 2020 until 31 January 2021. There is evidence that the seconded LOM was not properly supported in that role and may not have fully understood some aspects of the assessment process (paragraph 85).



- 99 Until the secondment was formalised, the substantive LOM remained in post on the organisation chart, which had the effect of preventing others from accessing competence and assessment records for the MOMs. The absence of a substantive LOM, along with other absences at the same management level in Wessex Outer during the same period, also increased the workload on the remaining managers. Witnesses stated that competence management degraded considerably during this time.
- 100 Network Rail's health and safety management system designates LOMs as a 'key safety post', and states that such posts cannot be left uncovered for prolonged periods of time without detriment to Network Rail's ability to discharge its duty holder responsibilities. Key safety posts should have nominated deputies to cover for prolonged periods of absence. RAIB considers it probable that the absence of consistent and continuous management for the MOM over a prolonged period adversely affected his competence management, and may have had similar impacts elsewhere in Wessex Outer. Evidence gathered during this investigation suggested that other safety incidents in Wessex Outer may also have been related to a lack of line management oversight.

## Observations

### Voice communication recordings

#### **101 Voice communications with the Petersfield signaller were not recorded due to a fault with equipment at Petersfield signal box.**

- 102 Network Rail was unable to provide RAIB with a recording of the conversation between the MOM and the Petersfield signaller because the recording equipment at Petersfield signal box was malfunctioning. During the investigation, it transpired that there had been no recordings since 30 November 2020, while Network Rail also found 14 occasions between 2 November 2019 and 7 December 2020 when communications between the MOM and the Petersfield signaller were unavailable due to the fault.
- 103 As well causing the loss of crucial evidence for incident investigations, this type of fault also hinders the monitoring of voice communications for competence management purposes (although there are such records for the Petersfield signaller involved in this incident dated 23 March 2020 and 29 October 2020).

### Station announcements

#### **104 Station announcements were not providing adequate warning to passengers of non-stopping trains at Rowlands Castle.**

- 105 During its site visit to Rowlands Castle station, RAIB observed that a station announcement for a non-stopping train occurred while the train was passing through the station (paragraph 74). As well as the implications for the MOM's awareness of the approaching train on the day of the incident, this has implications for passenger safety, since the announcements are intended to warn passengers to keep clear of the platform edge because of the approaching train.

106 South Western Railway told RAIB that station announcements are triggered when trains occupy a defined signal section on the approach to a station and are intended provide 15-20 seconds warning of the train's arrival. However, this warning time may be affected by the precise locations of track circuits and the speeds of trains; South Western Railway is dependent on manual checks or reports from station staff to determine actual warning times at stations.

## Summary of conclusions

### Immediate cause

107 The MOM was on an open line while a train was approaching (paragraph 51).

### Causal factors

108 The causal factors were:

- a. The MOM had not arranged protection from train movements before going onto the track (paragraph 54, **Learning point 1**).
- b. The MOM and the signaller did not have a mutual or accurate understanding about the reality of the situation (paragraph 61, **Learning point 2**).
- c. The MOM was not aware that a train was approaching (paragraph 70).

### Underlying factors

109 The underlying factors were:

- a. The MOM's competence was not adequately managed to ensure he worked safely on the track (paragraph 75, **Recommendations 1 and 2**).
- b. Elements of Wessex Outer management were not functioning properly, which probably affected the recruitment, training and ongoing monitoring of the MOM (paragraph 95, **Recommendations 2 and 3**).

### Additional observations

110 Although not linked to the incident on 19 December 2020, RAIB observes that:

- a. Voice communications with the Petersfield signaller were not recorded due to a fault with equipment at Petersfield signal box (paragraph 101, see paragraph 118 and **Learning point 3**).
- b. Station announcements were not providing adequate warning to passengers of non-stopping trains at Rowlands Castle (paragraph 104, see paragraph 119 and **Recommendation 4**).

## Previous RAIB recommendation relevant to this investigation

111 The following recommendations, which were made by RAIB as a result of its previous investigations, have relevance to this investigation.

[Class investigation into factors affecting safety-critical human performance in signalling operations on the national network, RAIB report 03/2020, Recommendation 5](#)

112 This recommendation relates to the underlying factor associated with local management identified in this investigation (paragraph 109b). Although the recommendation relates to the management of signallers, MOMs fall under the same management regime as they fall within the operations area of Network Rail's business. Therefore, concerns regarding the capacity, capability and organisational structure of operations managers also affect MOMs. The recommendation reads as follows:

### *Recommendation 5*

*Network Rail should implement measures in its National Operations Programme aimed at revising management arrangements to ensure that those with the responsibility for supervising and managing signallers (such as Shift Managers and Local Operations Managers) have the time, people skills, knowledge and status that are needed to undertake their role effectively. These arrangements should include the capacity, capability and organisational structure to facilitate competence management as well as the personal, professional and career development of signallers.*

113 On 31 March 2021, the Office of Rail and Road reported to RAIB that Network Rail is taking suitable actions to address the recommendation, although a plan for full implementation has not been formulated. A further update is expected in January 2022.

114 Given the further work required to implement this recommendation, as well as the slightly different focus of the underlying factor identified in the current investigation, RAIB has concluded that there is a need to make a separate recommendation with respect to management of MOMs.

[Occupied wheelchair contacting a passing train at Twyford station, 7 April 2016, RAIB report 01/2017, Recommendation 5](#)

115 This recommendation relates to the observation associated with station announcements identified in this investigation (paragraph 110b). The recommendation reads as follows:

### *Recommendation 5*

*Great Western Railway, in conjunction with Network Rail, should review how it warns station users of the approach of passing trains so that such warnings are timely and as effective as possible. This review should also address the issue of potential distractions and desensitisation of station users by unnecessary or inappropriate warnings from other platforms (for example, warning of approaching trains not accessible to the public). Great Western Railway should then implement practicable improvements identified by the review.*

*This recommendation may also apply to other station operators.*

- 116 On 2 December 2020, the Office of Rail and Road reported to RAIB that the recommendation had been implemented. Great Western Railway had carried out a review of the announcements it provides at stations and identified the need to limit them to those regarding issues of safety and mandatory compliance only.
- 117 The situation at Rowlands Castle is more specific in its relation to the timeliness of station announcements. Since the observation also applies to a different station operator (South Western Railway), RAIB has decided to make a new recommendation regarding station announcements in this investigation.

## Actions reported as already taken or in progress relevant to this report

### Actions reported that address factors which otherwise would have resulted in a RAIB recommendation

- 118 Network Rail reported that the fault with the voice communication recording equipment at Petersfield signal box was rectified on 7 February 2021 by the installation of a new recorder.
- 119 South Western Railway has adjusted the trigger point for automatic station announcements for non-stopping trains approaching Rowlands Castle station. Where previously announcements were triggered when a train occupied the last signal section closest to Rowlands Castle, they are now triggered by occupation of the previous signal section, providing approximately 45 seconds additional warning time for trains travelling at maximum permitted speed. South Western Railway has since monitored the effect of this change to ensure that the announcements provide enough warning of non-stopping trains.

### Other reported actions

- 120 Network Rail issued a briefing to all its MOM locations highlighting the importance of following the process for protection from train movements when accessing the infrastructure. All MOMs in Wessex Outer have been individually briefed and assessed to ensure that everyone understands the process.
- 121 Network Rail's Wessex route has developed a process to record every deployment of a MOM and completion of an IRP, so that LOMs can review a sample of these at the end of every reporting period for compliance with NR/L2/OHS/019 assurance processes. Wessex Inner has also developed its own competence framework for MOMs, which was in process prior to the incident at Rowlands Castle, and is due to be rolled out across Wessex Inner and Outer in 2021.
- 122 Network Rail has been developing a new National Operating Procedure for a MOM competence framework, along with new modular training for MOMs. These build on a fundamental review of the MOM role carried out with the National Union of Rail, Maritime and Transport Workers (RMT), which concluded in June 2019 that the role and its training needs should be clarified with respect to, among other aspects, decision-making and non-technical skills. Network Rail has a longer-term aspiration to further develop COSS training, competence management and the track safety standard specifically for MOM work.

## Recommendations and learning points

### Recommendations

123 The following recommendations are made:<sup>3</sup>

- 1 *The intent of this recommendation is to ensure that new and existing MOMs are suitably recruited, trained and managed such that they have the technical and non-technical skills to manage their own and others' safety when on or near railway lines.*

Network Rail should build on its work so far in reviewing the role and competency framework of MOMs and other operational response staff, to develop and implement bespoke programmes for selection, recruitment, training, assessment and monitoring at both local and national levels, commensurate with the particular nature of such work (paragraph 109a).

- 2 *The intent of this recommendation is to support the competence management of MOMs through changes to operations management arrangements, complementing recommendation 1 above as well as extending recommendation 5 of RAIB's class investigation (paragraph 112).*

Network Rail should introduce measures across its routes and regions aimed at ensuring that the management arrangements for operational response staff result in full and correct implementation of the revised competency framework arising from recommendation 1 (paragraphs 109a and 109b). These measures may include, but not be limited to, the capacities and capabilities of operations managers, and/or the organisational structure of line management for operational staff.

<sup>3</sup> Those identified in the recommendations have a general and ongoing obligation to comply with health and safety legislation, and need to take these recommendations into account in ensuring the safety of their employees and others.

Additionally, for the purposes of regulation 12(1) of the Railways (Accident Investigation and Reporting) Regulations 2005, these recommendations are addressed to the Office of Rail and Road to enable it to carry out its duties under regulation 12(2) to:

- (a) ensure that recommendations are duly considered and where appropriate acted upon; and
- (b) report back to RAIB details of any implementation measures, or the reasons why no implementation measures are being taken.

Copies of both the regulations and the accompanying guidance notes (paragraphs 200 to 203) can be found on RAIB's website [www.gov.uk/raib](http://www.gov.uk/raib).

- 3 *The intent of this recommendation is to reduce the probability of further impacts on operational safety caused by shortfalls in safety-related management resources in Network Rail's Wessex route.*

Network Rail's Wessex route should review its operations management function against the company's Health and Safety Management System to ensure that key safety posts are suitably covered to be more resilient to any prolonged staff unavailability, and take steps to implement any improvements identified (paragraph 109b).

- 4 *The intent of this recommendation is to reduce the risk posed to passengers at stations from non-stopping trains by ensuring that warnings of their approach are made in a timely manner.*

South Western Railway should take action to ensure the adequacy of safety-related passenger announcements and passenger information display messages at all of its stations. In particular, warnings of approaching non-stopping trains should be reviewed and, if necessary, adjusted to ensure that they are made neither too early nor too late to be useful. The continued adequacy of such warnings should then be confirmed as part of routine platform risk assessment processes (paragraph 110b).

This recommendation may apply to other station operators and infrastructure managers.

## Learning points

124 RAIB has identified the following learning points:<sup>4</sup>

- 1 It is vital that operational response staff, whether carrying out planned work or responding to incidents, only go on or near the line with a suitable and sufficient safe system of work (paragraph 108a). In particular, staff should never use warning-based safe systems of work in locations or situations where such methods are prohibited.
- 2 This incident reinforces the importance of signallers taking lead responsibility for safety-critical communications with other staff as defined in Rule Book Module G1 (section 5.3) (paragraph 108b).
- 3 It is important that voice communication recording equipment is maintained in working order, both to monitor such communications for competence management purposes as well as to provide crucial evidence for safety investigations such as this one (paragraph 110a).

<sup>4</sup> 'Learning points' are intended to disseminate safety learning that is not covered by a recommendation. They are included in a report when RAIB wishes to reinforce the importance of compliance with existing safety arrangements (where RAIB has not identified management issues that justify a recommendation) and the consequences of failing to do so. They also record good practice and actions already taken by industry bodies that may have a wider application.



## Appendices

### Appendix A - Glossary of abbreviations and acronyms

ASC	Area Signalling Centre
CCF	Control Centre of the Future (a computer-based system showing the position of trains on the railway infrastructure)
CCTV	Closed-Circuit Television
COSS	Controller of Site Safety
IRP	Incident Response Pack
LOM	Local Operations Manager
MIO	Mobile Incident Officer
MOM	Mobile Operations Manager
PTS	Personal Track Safety
RMT	National Union of Rail, Maritime and Transport Workers
WICC	Wessex Integrated Control Centre

## Appendix B - Investigation details

RAIB used the following sources of evidence in this investigation:

- information provided by witnesses
- information taken from the train's on-train data recorder (OTDR)
- closed circuit television (CCTV) recordings taken from the front of train 1P57 and from Rowlands Castle station
- site photographs and measurements
- weather reports and observations at the site
- signalling data and other electronic records associated with train timings and station announcements
- documentary evidence
- training and competence records
- voice communication records
- a review of relevant industry standards, rules and procedures
- a review of previous RAIB investigations that had relevance to this incident.

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Any enquiries about this publication should be sent to:

RAIB	Email: <a href="mailto:enquiries@raib.gov.uk">enquiries@raib.gov.uk</a>
The Wharf	Telephone: 01332 253300
Stores Road	Website: <a href="http://www.gov.uk/raib">www.gov.uk/raib</a>
Derby UK	
DE21 4BA	