

REPORT OF THE INVESTIGATION

into

THE ACCIDENT ON THE CIE RAILWAY

at

BUTTEVANT, CO. CORK,

on

1st AUGUST, 1980.

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REPORT OF THE INVESTIGATION INTO THE RAILWAY ACCIDENT
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INTRODUCTION

1. The Minister for Transport directed, by Order, that J.V. Feehan, BE, MIEI, assisted by Declan Budd, MA, LL.B, Barrister-at-law, hold a formal investigation under Section 7 of the Regulation of Railways Act, 1871 into the causes and circumstances of the railway accident which occurred at Buttevant, Co. Cork, on 1st August, 1980 and as a result of which sixteen passengers and two members of the train crew died and about seventy-five persons received injuries of varying severity. The Order is reproduced at Appendix I. We have the honour to report as follows:-

HEARINGS

2. The Investigation was opened in the Hibernian Hotel, Mallow, Co. Cork, on 17th September, 1980. The legal and trade union representation is listed at Appendix II. All persons present at the opening session were invited to join in an inspection of the accident site at Buttevant later that day. The hearings, which were held in public, continued until 3rd October, a total of 13 days. The 56 witnesses listed at Appendix III gave evidence under oath administered pursuant to powers in the Regulation of Railways Act, 1871. Witnesses who had been summoned were first examined by the Court. Subsequently, their own representatives and representatives of other parties were given an opportunity of cross-examination.

DESCRIPTION OF SCENE AND CIRCUMSTANCES

3.1 Buttevant Station is 137½ miles from Dublin (Heuston Station) on the mainline railway to Cork. The total distance from Dublin to Cork (Kent Station) is 165½ miles. Buttevant is a Block Post between Rathluirc (Charleville) on the Up side (129½ miles from Dublin) and Mallow on the Down side (144½ miles from Dublin) and has not been a stopping place for scheduled passenger trains for some years. There is a double railway line through the Station with sidings connected to both running lines. The sidings are now mainly used by ballast trains and by permanent way machines. There are platforms for both running lines. The Signal Cabin is located near the Rathluirc end of the Up platform. There is a gated public road level crossing adjoining the Signal Cabin. A diagram of Buttevant Station is at Appendix IV. Running signals for both Up and Down movements consist of two-aspect colour-light Distant signals and semaphore Home, Starting and Advance Starting signals. All running signals are controlled from the Signal Cabin. Both Home signals and the Up Starting signal are interlocked with the level crossing gates.

3.2 Rail development work had been in progress at Buttevant for several months prior to the accident. Facing points leading to the Down siding and a crossover between the two main lines had been installed but were not connected to the Signal Cabin. A subsidiary Signal Cabin had been taken out of service. A crossover on the Rathluirc side of the level crossing which was due for removal as part of the rail development work was still connected to the Signal Cabin.

3.3 On the day of the accident train speeds were restricted to 25 m.p.h. on the section of Down line between 133 $\frac{1}{4}$ and 134 miles from Dublin because of track maintenance work. There was no restriction on the 75 m.p.h. maximum speed permitted on the section of line through the Station. The accident occurred in daylight. Weather conditions at the time were good.

3.4 The train involved in the accident was the daily 10.00 hours Dublin to Cork passenger train which had a "super express" sectional running classification in the current CIE Working Timetable. The train consisted of an 071 type locomotive hauling twelve coaches. The tare weight of the train was estimated at 461 tonnes. A description of the train and of the damage sustained in the accident is given in Appendix V.

SUMMARY OF EVIDENCE

4. Driver Denis Hogan was familiar with the railway through Buttevant Station since about 1962. He knew that the new facing points were not connected to the Signal Cabin. He described how he had driven a ballast train from Buttevant to Killarney about a week before the accident. When he returned he was stopped at the Up Home signal. He subsequently proceeded to beyond the crossover on the Rathluirc (Charleville) side of the level crossing and returned along the Down line to the unconnected facing points at the turnout to the Down siding. These points were hand operated by a flagman. He had driven other trains over them and agreed that the procedure for movements into the Down siding sometimes required a train to halt at the nose of the points while waiting for the flagman to move them. The signalman always instructed the guard before any crossing movement commenced. He had noticed nothing unusual when driving an Up fertiliser train through the Station about half an hour before the accident.

5. Driver John Fanning has been driving on the Dublin/Cork line for about 20 years. When driving the 08.50 ex Dublin Down passenger train through Buttevant at 70 m.p.h. about one and a half hours before the accident he noticed nothing unusual. He was unaware that the new facing points leading to the Down siding were being hand-operated. If the points were to be hand operated he would have expected that trains running through the Station would be slowed-down by signals and then led over them by a flagman. He would also have expected a notification that the points were being hand operated. If he had known that the facing points were being hand-operated he would have stopped his train before passing over them. He gets and signs for the CIE Weekly Circular at Inchicore.

6.1 Signalman John O'Callaghan has been in Buttevant for about two years. He was off-duty at the time of the accident. He explained that the three signalmen at the Station were generally rostered for 8-hour shifts 7 days per week and that they reported to the Station Master at Mallow. He was familiar with the rail development work in progress at Buttevant. The signalman's duties include opening and closing the adjoining level crossing gates. Signalmen sometimes asked other CIE personnel who might be passing the gates to open them. Mr. O'Callaghan was not certain whether he had first read the Regulation dealing with the securing of points, entitled "Laying in New Points and Disconnection of Redundant Points" and reproduced in Appendix VI, before or after the accident. He assumed the decision to retain keys for points clip padlocks in the Buttevant Signal Cabin was an additional safety factor (the Regulation states that keys are to be retained by the Permanent Way Inspector). Each Buttevant signalman receives a copy of the Weekly Circular, by post, from Mallow.

6.2 While the Station diagram, dated 1958, in the Signal Cabin had not yet been revised to take account of rail development work and other alterations carried out during the months prior to the accident, this posed no difficulty to him. He confirmed that the trailing points which previously gave access to the Down siding and which were shown on the diagram had been removed sometime before the accident.

6.3 Mr. O'Callaghan said that the new facing points at the turnout to the Down siding were installed about the end of March and were first used at the beginning of June. He did not know who authorised the use of these points which were not yet connected to the Signal Cabin. The points were always hand operated by the same pointsman after he had collected the keys from the Cabin and had been instructed by the signalman. Keys were always returned to the Cabin when each movement over the points was completed and the points had been re-secured for the passage of through trains.

6.4 Procedures for movements over these points were that a ballast train approaching from Rathluirc (Charleville) and intending to enter the Down siding would be accepted under signalling regulations and brought to a halt at the Down Home signal. It would then be allowed into the Station, be stopped again at the nose of the points which would be operated with a bar, following which the train would be hand-signalled into the siding by the pointsman. At least two movements had taken place over these facing points while he was on duty.

7.1 Signalman Edward Roche has been at Buttevant for about 17 years. He had finished a tour of duty at 08.30 on the morning of the accident. In addition to the normal 8-hour shift seven days per week he sometimes works 12-hour shifts to cover for a colleague on either annual or sick leave. He explained that, prior to April, trains arriving from the Rathluirc direction were reversed into the Down siding over trailing points on the Down main line. The present layout allowed them to run directly into the siding over the new hand operated facing points.

7.2 Mr. Roche was aware that arrangements had been made for permanent way maintenance work to be carried out on the Down line in the Rathluirc/Buttevant Section during his period of duty before the accident. He knew this work had not been carried out. Sometime after 07.00 Mr. Condon, the pointsman, told him that the ballast train would be going out early that day. They did not discuss the ballast train's movements.

7.3 The procedure for taking a light engine from the Up line into the Down siding was that the engine would be slowed or blocked at the Up Home signal and then brought slowly to the platform. The Up and Down Home signal levers would be collared with the signals at Danger. Mr. Roche would agree the proposed movement first with the pointsman, Mr. Condon, and then with the engine's driver and guard. The pointsman would take the padlock keys from the Cabin and the engine would cross from the Up to the Down lines by the old crossover beyond the level crossing. This crossover was still connected to the Cabin. The engine would travel along the Down line to the nose of the new facing points at the turnout to the Down siding where it would stand for 7 or 8 minutes while the pointsman, using a bar and key hammer, made-over the points. When this operation was completed the locomotive would be flagged into the siding by the pointsman. If the engine were remaining in the siding for a considerable length of time the points would be restored and secured for main line traffic, the collars removed from the signal levers and the padlock keys returned to the Cabin. Since 1st June there had been five or six ballast train movements over the new facing points while he was on duty. Mr. Condon was the pointsman for all these movements.

7.4 witness knew that, while the Regulation dealing with the securing of points. (Appendix VI) stated that padlock keys were to be held by the Permanent Way Inspector, the keys of the clip padlocks had been held in the Signal Cabin for about four months prior to the accident. He, like Mr. O'Callaghan, regarded this as an additional safety precaution. He had seen the Area Rail Manager's instruction dated 3rd April, 1980 (Appendix VII) stating that all keys for the new crossover clip padlocks were to be held in the Signal Cabin. In his view that instruction covered keys for all clip padlocks including those on the new facing points at the turnout to the Down siding.

7.5 Mr. Roche always gets but does not sign for the Weekly Circular. He did not know of any other Station with two main running lines where the Signaller had to leave his Cabin to open and close level crossing gates.

8.1 Driver James Mullins has been a CIE train driver for about 20 years. At about 03.15 on 31st July, 1980 he had driven a light engine from Mallow to Buttevant to pick up a ballast train. His movements into the Down siding were generally in accordance with the procedure outlined in Signaller Roche's evidence. Having been hooked-up to the ballast train he departed to the works site in the Rathluirc/Buttevant Section at about 06.00 and subsequently returned to Buttevant where he was unhooked from the empty ballast train and he arrived back in Mallow where he booked off at about 10.15.

He was accompanied by two guards. He had first driven over the facing points at the turnout to the Down siding earlier that week. He knew that these points were not connected to the Signal Cabin and that the clip padlock keys were normally held in the Cabin. His understanding was that no movements would be allowed through the Station until the facing points had been secured and the padlock keys returned to the Cabin.

8.2 On the day of the accident he had left Mallow in a light engine at about 12.30 with Guards Tynan and Kelly. Approaching Buttevant the Up Distant signal was at Caution and the Up Home signal at Danger. While stopped at the Up Home signal he noticed someone opening the level crossing gates. He then noticed that the Down Home signal had been lowered to the Clear position. When the Up Home signal was lowered he moved the engine towards the Up platform and saw a man, whom he now thinks was William Condon, walking and then running along the line in the Mallow direction. At about 12.45 he halted his engine near the Up Starting signal which was at Danger. Guard Tynan dismounted, the signalman shouted "go ahead" and he drove the engine over the level crossing. At about the same time Mr. Mullins saw a train approaching on the Down line. When the train was about 20 yards from the Down Home signal and 40 to 50 yards from the light engine the signal went to the Danger position. After the train had passed, he stopped his engine beyond the crossover and looked back in the Mallow direction where he saw a cloud of dust and as it began to disperse he saw a coach in the Down siding. Having secured his engine he went to the accident site and shut off the motor of the locomotive on the derailed train. He did not notice the position of the locomotive's throttle or brake controls.

8.3 Mr. Mullins was in no doubt but that he was to remain on the Up line until he got the disc signal to cross over to the Down line. He did not expect to get this signal until after the approaching Down train had passed through the Station. While agreeing that hand operation of points might be necessary for short periods for maintenance work he considered the position at Buttevant unusual and he had no previous experience of points being hand operated in similar circumstances. Mr. Mullins is attached to Thurles where he gets and signs for the Weekly Circular.

9.1 Guard Thomas Tynan was in the front cab of the light engine with Driver Mullins when it arrived at Buttevant shortly before the accident. Mr. Tynan was to act as Guard-in-Charge of the ballast train. He confirmed that the Up Distant signal was at Caution and the Up Home signal at Danger when they arrived.

He dismounted at the Up platform and went to the Signal Cabin to speak to Mr. O'Sullivan, the signalman on duty. As he had not made an arrangement with the signalman for crossing the light engine to the Down line ahead of the arrival of the 10.00 ex Dublin passenger train Guard Tynan decided to examine his ballast train which was in the Down siding. Thirty minutes was allowed for this examination. While on the footbridge over the railway he noticed a man on the Down line near the facing points leading into the siding and at about the same time he heard the Down passenger train approaching and saw the Down Home and Starting signals in the Clear positions. He returned to the Signal Cabin and told the signalman that there was a man standing on the line. The signalman looked down the line, shouted "Points, points" and threw back three or four signal levers. Witness had gone back to the footbridge as the passenger train passed at speed.

9.2 Mr. Tynan had received a copy of the Divisional Engineer's Stone Ballast Programme, ex Buttevant, for the week ended 1st August and in which a light engine was scheduled to depart Mallow at 03.30 and a ballast train to leave Buttevant at 04.00 on each of the three days, 30th July to 1st August. Mr. Tynan said that on 31st July Divisional Chief Permanent Way Inspector Armstrong told him, in the dormitory at Mallow, that as a ballast cleaning machine had broken down the departure of the ballast train from Buttevant on 1st August would be postponed until 08.00. Mr. Tynan then decided that as he and his driver and assistant guard had been away from their home depot, Thurles, since Tuesday they would return to Thurles to collect their wages, spend the night in their homes and be back in Mallow by the first available train which was due to arrive at about 11.20. He did not advise Mr. Armstrong, Acting Permanent Way Inspector Hanrahan or anyone else in authority that he would not be back in Mallow in time to take the ballast train from Buttevant at 08.00 on Friday. He agreed that ballast in a length of track had already been prepared by the cleaning machine and that new ballast could have been placed if he had departed from Buttevant at 08.00.

9.3 Mr. Tynan's copy of the Weekly Circular is one of a number despatched by rail to Thurles by the Chief Civil Engineer's Office. He does not sign for it.

10.1 Guard James Kelly who was to act as assistant guard on the ballast train was in the rear cab of the light engine when it arrived in Buttevant. He did not look out for signals until they reached the Up Home signal which was at Danger. He did not notice any other signals. He stayed on the engine until after the accident.

10.2 Mr. Kelly described how at about 03.30 on the previous morning his engine had arrived at Buttevant from Mallow and had been shunted into the Down siding generally in accordance with procedures detailed in evidence by Signaller Roche. He thought his engine had been stopped for 5 to 6 minutes at the nose of the facing points at the turnout into the Down siding while the points were being made-over by the pointsman, Mr. Condon. He did not recollect that he had ever gone into the siding without being halted at these points.

10.3 On the morning before the accident Guard Kelly was in the dormitory at Mallow when Divisional Chief Permanent Way Inspector Armstrong instructed the light engine's crew that, as the ballast cleaning machine was broken-down and would not be on the line, they were to postpone their departure on the following morning to 08.00 and were to discharge extra stones on a strip that had already been covered with a first run. They then decided, without reference to anyone in authority, to go to Thurles, spend the night at their homes and return to Mallow on Friday morning.

10.4 Mr. Kelly sees one of the Weekly Circulars sent by rail to Thurles for the joint use of both guards on each ballast train.

11.1 Mechanical Maintenance Inspector James Coleman was responsible for supervising the operators of permanent way machines working between Rathluirc and Buttevant. He spent until about 07.30 on the morning of 1st August at Buttevant Station clearing out a clogged ballast cleaner. He had not been advised that the programmed departure of the ballast train on that morning had been postponed to 08.00.

11.2 Later that morning and after the Up fertilizer train had gone through he crossed the ballast cleaner from the Down siding to the Up siding. Points for connections to the Down and from the Up running lines were made by the pointsman, William Condon. Mr. Coleman did not stop his machine before going over either set of points. The crossing movement which took eight to nine minutes was completed about 12.25. He was not aware of any procedure requiring him to stop at the nose of the points. He had not previously carried out a crossing movement at Buttevant since the Station layout had been altered.

11.3 Inspector Coleman receives the Weekly Circular from the Chief Inspector, Pearse Station, Dublin. He does not sign for it.

12. Acting Mobile Ganger William Egan saw the ballast cleaner crossing from the Down to the Up siding about 12.15. After the cleaner had crossed he saw the pointsman securing the facing points on the Down main line at the turnout to the Down siding.

13. Platelayer Patrick Byrne also saw the ballast cleaner crossing to the Up siding. About 12.30 he had noticed that the facing points on the Down main line at the turnout to the Down siding were secured for traffic on the main line.

14.1 Platelayer Joseph Stack had seen the ballast cleaner crossing to the Up siding and he confirmed that the pointsman, Mr. Condon, re-made and locked the facing points on the Down main line.

14.2 Shortly afterwards as he was crossing the main lines near the level crossing Mr. Stack heard the signalman saying to Mr. Condon, "Bill, open the gates". Mr. Condon replied that he was in a hurry so Mr. Stack volunteered to open the level crossing gates. After he had opened the gates he saw Mr. Condon walking along the Down platform in the Mallow direction. Mr. Stack remained near the gates. He noticed the light engine passing on the Up line. Next he heard the Down train hooting continuously as it approached and directly afterwards he heard the signalman, who was facing in the Mallow direction, shouting and waving his hand. Then the Down train passed and shortly afterwards he heard a crash.

15.1 Signal Operative Thomas Landers was one of a gang erecting a new Down Home signal about 20 yards on Rathluirc side of the level crossing. This work did not interfere with the operation of any of the existing signals.

15.2 He had seen the ballast cleaner crossing from the Down to the Up lines. He thought it was after the light engine had gone past on the Up line that a colleague told him a train was approaching on the Down line. He then noticed that the Down Home signal was in the Clear position. Ganger Foley drew his attention to a man at the new facing points on the Down line at the turnout leading into the Down siding. The man, whom he could identify as Mr. Condon, had what looked like a bar and appeared to be trying to make the points for the Down line. At this stage Mr. Landers had seen the approaching train. As it passed him the hooter was being operated continuously. He saw the train going into the Down siding. He did not notice if the aspect of the Down Home signal changed before the train passed it.

16.1 Signal Ganger John Foley was in charge of the gang of signal operatives working in Buttevant. On 1st August he was with the gang erecting a new Down Home signal. After the light engine moved over the level crossing Mr. Foley saw a train approaching on the Down line and at about the same time noticed the Down Home, Starting and Advance Starting signals displaying Clear aspects. When the train was about 300 yards away he looked in the Mallow direction and saw Mr. Condon at the new facing points on the Down line trying to make the points for the main line. He estimated the train's speed at 60/65 mph as it passed him.

He thought the brakes had been applied. At about the time the train passed the Home Signal he heard the signalman shouting "Make the points" to Mr. Condon. He did not check if the signals had changed before the train passed. He saw the train turning into the Down siding.

16.2 The work programme for Mr. Foley's gang is arranged by Inspector McGrath. The gang had been at Buttevant for a few days in April. Since 4th June the gang had been at Buttevant except when required for work elsewhere or when some of the gang had taken holiday leave or had attended ANCO training courses. One copy of the Weekly Circular is sent from Cork to Mallow for Mr. Foley's gang. He does not sign for it. None of the work being carried out by his gang at Buttevant had been promulgated in the Weekly Circular.

17.1 Signalman Thomas O'Doherty was on duty in Rathluirc Station Signal Cabin at the time of the accident. He did not know that the departure time for the ballast train had been postponed. At about 10.30 the Buttevant signalman told him the ballast train's engine was still in Mallow. The Up fertilizer train passed through Rathluirc at 12.25. The 10.00 Down passenger train passed at 12.35. He received an "Obstruction, Danger" signal from Buttevant at 12.47. Mr. O'Doherty was aware that permanent way maintenance work scheduled to take place in the Rathluirc/Buttevant section earlier that morning had not been carried out.

17.2 Mr. O'Doherty told the Court that, in accordance with CIE Rules, before unconnected points on main lines were hand operated it would be necessary to check with the Stations in advance and in rear if there was traffic offering. If traffic was offering a signalman should not allow unconnected points to be moved. At no time on the day of the accident was he asked by the Buttevant Signalman if there was traffic offering. One copy of the Weekly Circular is supplied for the joint use of the Rathluirc Signal Cabin staff.

18.1 Signalman John Kelleher said he was in the Mallow North Signal Cabin at the time of the accident. The Up fertilizer train which had arrived at 10.35 departed at 12.02 and he got the "Train out of Section" Signal at 12.15. As he was aware that the Up magnesite train would be running late he offered the ballast train's light engine to Buttevant at about 12.20. The signalman would not accept it then as he was allowing a ballast cleaner across the running lines. The light engine was accepted at 12.29 and departed at 12.30. The Buttevant signalman had told him on the telephone that the light engine would be held on the Up line until the 10.00 and 10.30 Down passenger trains had passed.

He saw no reason why he should pass this information to the driver of the engine. He received the "Train out of section" signal for the light engine at 12.45. Times of signals for the 10.00 Down passenger train were "Is Line Clear" 12.38, and "Train Entering Section" 12.45. He received the "Obstruction, Danger" signal at 12.47.

18.2 Mr. Kelleher could not recall an occasion when a signalman at Buttevant had discussed with him a proposed movement over the hand operated facing points at the turnout to the Buttevant Down siding. In his opinion Rules 67 (c) and 71 (b) covered hand operation of points not connected to a signal cabin. One copy of the Weekly Circular is available between the signalmen attached to Mallow North Signal Cabin.

19.1 Ganger Edward Hanrahan said that he was in charge of the renewals gang engaged on rail development work in Buttevant Station and on permanent way maintenance work being carried out in the Rathluirc/Buttevant section.

From 31st July, 1980 he was acting for Inspector Connally who had gone on holiday leave. A new crossover was installed by his gang on 23rd March last and new facing points on the Down line were installed a week later. His recollection was that Inspectors Connally and Luddy were at Buttevant for both installations, that one of them took the clip padlock keys after the points had been secured and that Inspector Connally told him the keys were to be held in the Signal Cabin. It was the first time he had supervised the installation of a crossover or points on a double line.

19.2 From May onwards the new unconnected facing points on the Down line were used by hand propelled bogies as the need arose. For these movements the points were hand operated by one of his gang, Platelayer William Condon, under the instruction of a signalman. Padlock keys were borrowed from the Signal Cabin for each operation. The points were first used by ballast trains in June when the Down siding became available. Mr. Hanrahan was not at the Station for any ballast train movements.

19.3 He had arranged for Mr. Condon to report for work at Buttevant at 07.30 on the morning of the accident for the ballast train's movement at the postponed departure time of 08.00.

19.4 Mr. Hanrahan had no information as to when the recently installed points would be connected to the Signal Cabin. When the facing points were initially installed only one clip was fitted. A second clip was fitted after one of the stretcher rods had been slightly damaged by a ballast packing machine. Mr. Hanrahan did not know who was responsible for co-ordinating the permanent way and signalling work at Buttevant.

While he knew how unconnected points should be secured he had not seen the Regulation published in 1977 (Appendix VI) prior to the Investigation. He was appointed ganger about two years ago. He gets a Weekly Circular from the Station Master at either Rathluirc (Charleville) or Mallow.

20.1 Divisional Chief Inspector Martin Armstrong reports to the Divisional Engineer, Limerick. He was aware that for the morning of 1st August the Divisional Engineer's Stone Ballast Programme for work in the Rathluirc/Buttevant section provided for the departure of a ballast train from Buttevant at 04.00. On the previous day, at about 10.30, Mr. Armstrong spoke to the train guards in Mallow and agreed with them to postpone the departure of the ballast train to about 08.00. He made this new arrangement because the ballast cleaner would not be available and it would be preferable to do the ballast laying in daylight. He did not know until after the accident that the postponed departure time had not been met.

20.2 Mr. Armstrong was aware of the Regulation which had been published in the Weekly Circular (Appendix VI) and which stated that keys of clip padlocks on unconnected points should be retained by the Permanent Way Inspector. He had assumed that Inspector Connolly had retained the Buttevant padlock keys. He had never seen the Area Rail Manager's instruction (Appendix VII) which stated that these keys should be held in the Signal Cabin.

20.3 He was aware that the new facing points on the Down line were hand operated from the weekend of 7th June, 1980 to the day of the accident. Sixteen laden ballast trains and the same number of empty trains had used the points, mostly at weekends, during this period. There were also some ballast machine movements. Mr. Armstrong has been with CIE since 1934 and he could not recollect another instance of unconnected facing points on a busy passenger line being hand operated for more than 2 or 3 days before they were connected to a Signal Cabin. He had not asked the Signal and Electrical Engineer's Section to expedite the connecting-up of the unconnected points.

21.1 Signal Operative Richard O'Rourke had been working on the erection of a new Down Home signal. He was walking along the Down platform as the 10.00 Down passenger train approached. From the time when the train was about 200 yards from the Down Home signal the hooter was sounding continuously. He heard Signaller O'Sullivan shouting "Condon, make the points" and he saw Mr. Condon trying to make the facing points on the Down line with a bar. Mr. Condon did not move away until the train was about two yards from him.

22 Signal Operative William Moynihan, who was also on the Down platform, saw that Mr. Condon was struggling to make the points on the Down line as the 10.00 passenger train approached.

23.1 Driver Bartholomew Walsh has been driving passenger trains regularly for four years. On the morning of the accident he drove the 10.00 ex Dublin Down passenger train. He was accompanied by Guard McCarthy and Checker Blake. They departed from Dublin two to three minutes late. He had checked the train's braking and vigilance systems and found them to be operating satisfactorily. Guard McCarthy had told him the train was made up of eleven coaches and a spare dining car.

23.2 After passing Rathluirc (Charleville) he had slowed to 25 m.p.h. for a temporary speed restriction. The Buttevant Distant, Home, Starting and Advance Starting signals were in the Clear positions as they first came into sight. As he was about ten yards from the Home signal it changed to the Danger position. At that stage his speed was about 68 m.p.h. He immediately shut off power, applied the emergency brake and sounded theooter. He next saw a man about one quarter mile ahead on the Down line apparently working at points which were not fully made. The man stayed so long at the points Mr. Walsh thought he must have been killed by the train. By this time he noticed that the Starting and Advance Starting signals had also gone to the Danger position. The front bogey of the locomotive went into the Down siding and the train was derailed. He thought the train was travelling at about 55 m.p.h. as it turned into the siding. When his locomotive came to a halt and he saw the extent of the derailment he immediately went to protect the Up line in accordance with Rule 180. He did not shut off the locomotive's motor.

23.3 While Mr. Walsh was aware that new facing points had been installed in Buttevant he thought they were connected to the Signal Cabin. He gets the Weekly Circular in Cork Station where he signs for it.

24.1 Signalman Denis J. O'Sullivan has been a signalman at Buttevant for about 25 years. He is also the haltkeeper. He was on duty at the time of the accident. He confirmed that the signalman is responsible for opening and closing the adjoining level crossing gates. Each opening or closing involves a two to three minutes' absence from the Signal Cabin. Before the rail development work commenced, the connection to the Down siding was by a set of trailing points. Mr. O'Sullivan, like the other Buttevant signalmen, works seven 8-hour shifts each week.

24.2 Signalman O'Sullivan was on duty while the new crossover and the new facing points on the Down line were being installed. Keys for the points clip padlocks were brought to the Signal Cabin on the day each installation was completed. Mr. O'Sullivan had inspected the new points at the crossover and at the facing points on the Down line and was satisfied that they were properly secured. He had probably seen the Regulation dealing with the securing of unconnected points which was published in the Weekly Circular in 1977 (Appendix VI). He had seen the Area Rail Manager's instruction that keys were to be held in the Cabin (Appendix VII). There were ten or eleven sets of keys, without any identification markings, in the Cabin and Mr. O'Sullivan did not know which particular padlocks any set of keys opened.

Initially he was unaware of an intention to use the unconnected points.

He first became aware that they would be used before being connected to the Signal Cabin when he received a copy of the Divisional Engineer's Stone Ballast Programme for the week ended 8th June, 1980.

24.3 At 08.00 on the morning of the accident he relieved Signalman Roche.

He knew from the Divisional Engineer's Ballast Programme that a light engine had been scheduled to depart Mallow at 03.30. Mr. Condon, who was already on duty, told him that the engine for the ballast train would be late as the crew had gone home. The 11.10 ex Cork Up passenger and the Up fertilizer trains passed through at 11.59 and 12.13 respectively. At 12.15 he was asked to accept the light engine from Mallow but decided not to do so until he had allowed a ballast cleaner across the main lines to the Up siding. This movement had already been discussed separately with both Mr. Coleman, the machine driver, and Mr. Condon, the pointsman. Mr. O'Sullivan also told Mr. Condon that when the ballast cleaner had crossed the main lines and all the points had been resecured he would accept the light engine. When the cleaner was in the Up siding Mr. Condon told Mr. O'Sullivan that all points had been resecured. Mr. Condon was then 30 to 40 yards from the Signal Cabin. Mr. O'Sullivan checked visually from the Signal Cabin veranda and satisfied himself that the points on both Down and Up lines had been resecured.

He agreed that the facing points on the Down line were about 135 yards from the Cabin. The light engine was accepted at 12.29 - the time of 12.15 as written in the Train Record Book was an error. He had already accepted the 10.00 Down passenger train at 12.25 and he hoped that one opening of the level crossing gates would allow both that train and the light engine to pass over the crossing. He got the "Train Entering Section" signal for the Down train at 12.38 at which time all signals were at Danger and the level crossing gates were across the railway.

Signalman O'Sullivan asked Mr. Condon, who was standing at the nearby footbridge, to open the crossing gates. Platelayer Joseph Stack who, unknown to Mr. O'Sullivan was also nearby, offered to and actually opened the gates. The light engine had arrived at 12.42, Mr. O'Sullivan pulled off the Down signals to give the Down passenger train a clear run through the Station.

24.4 The light engine had been held at the Up Home signal. It was released to the Up platform where Guard Tynan dismounted. The engine was then driven over the level crossing and brought to a halt beyond the points for the crossover to the Down line. Mr. O'Sullivan said he had told Mr. Condon of his intention not to allow the light engine to cross the main lines until both the 10.00 and 10.30 ex Dublin Down passenger trains had gone through the Station. This would leave the light engine standing on the Up line beyond the level crossing for about 30 minutes. He had never previously held a light engine for as long as 30 minutes at this location. Mr. O'Sullivan did not tell Mr. Condon that the arrival of the 10.00 Down passenger train was imminent. The slip padlock keys had not been returned to the Signal Cabin since the points had been resecured after the movement of the ballast cleaner. Mr. O'Sullivan agreed that while he did not ask for the keys they were normally returned as each operation was completed. Guard Tynan returned to the Signal Cabin shortly afterwards and told Mr. O'Sullivan that there was a man on the line working with a bar. At about the same time Mr. O'Sullivan had seen Mr. Condon, whom he had thought to be still standing near the Signal Cabin, working with a bar at the facing points on the Down line. He immediately put the Down signals to Danger and shouted to Mr. Condon to throw back the points. The Down train was then very near the Home signal. Mr. Condon stayed at the points until the train had almost reached them. The train entered the siding and jack-knifed. Mr. O'Sullivan sent "Obstruction Danger" signals to Rathluirc (Charleville) and Mallow at 12.48.

24.5 Mr. O'Sullivan agreed that when he discussed the movement of the ballast cleaner from the Down to the Up sidings with Mr. Condon he told him to bring the cleaner across but did not specifically tell him to open the points nor had Mr. Condon asked for permission to open them. Mr. O'Sullivan had never previously seen unconnected points being used on a busy main line. He had been instructed by Inspector Luddy in the procedure for allowing movements over the hand operated facing points.

25.1 Platelayer William J. Condon joined CIE about ten years ago. He was transferred to Buttevant about five months before the accident. He had worked on the rail development work at the Station, on permanent way maintenance and latterly as a pointsman. He assisted at the installation of the new crossover and the facing points on the Down line over the two last weekends of March. Sometime later Inspector Connally appointed him to hand operate the new points, explained how they should be secured and operated and warned him to pay special attention to the facing points on the Down line. Mr. Condon could not recollect that he had ever previously used a pinch bar to operate points on a mainline. Prior to the accident, he was unaware of the Regulation dealing with the securing of unconnected points that had been published in the Weekly Circular in 1977 (Appendix VI). All the clip padlock keys were held in the Signal Cabin in accordance with Inspector Connally's verbal instruction. Mr. Condon was unaware of the Area Rail Manager's instruction (Appendix VII) that keys should be held in the Cabin. There was a total of eight sets of keys and he used different-sized safety pins to identify keys for locks on the Down line from keys for locks on the Up line.

25.2 Mr. Condon's understanding of the procedure for taking an engine from Mallow into the Down siding was generally as described in other evidence.

He got instructions from the signalman for each movement. If he expected a delay before he could operate points he would remain in the Signal Cabin.

He would never open the facing points on the Down line until the traffic that was going into the siding was on the Down line. When an engine or train had gone into the siding he always immediately resecured the points for mainline traffic. If the points were again needed within ten minutes or less, he might retain the keys and reopen the points without speaking to the signalman, provided that this had already been understood between them. He usually stopped traffic at the nose of the facing points but if he had the points made for the siding as traffic approached on the Down line he would flag the driver to go straight into the siding without stopping. Mr. Condon estimated that it took 5 to 6 minutes to move the facing points at the turnout for the Down siding. Signalmen sometimes checked the points to see if they had been secured properly. Mr. Condon would never operate points if he saw signals in the Clear position.

25.3 On the morning of the accident he came on duty at 07.00 as instructed by Mr. Hanrahan who was expecting a light engine for the ballast train. During the morning he had been in the Signal Cabin a number of times.

After the Up fertilizer train had passed through, he took the keys for the clip padlocks on the points on the Up and Down lines from the Cabin and opened both sets of points to allow the ballast cleaner to cross to the Up siding. The cleaner did not stop at the nose of either set of points. After the cleaner had crossed to the Up siding Mr. Condon resecured both sets of points for main line traffic.

25.4 Sometime about noon he had been told, he thought by the signalman, that the light engine was expected shortly. Later as he walked towards the Signal Cabin he saw the engine at the Up Home signal and he heard the signalman shout "open the gates". Mr. Condon replied that he was in a hurry and Joseph Stack, who was nearby, offered to open them. At that moment, and despite not having discussed and agreed the movement with the signalman, Mr. Condon assumed that the light engine was about to cross to the Down siding because of the signalman's shout, because the signalman had not asked if the main lines were safe for traffic, because the signalman did not mention he had a train in the section from Rathluirc and because the light engine was already several hours late and the ballast cleaner had just been repositioned to facilitate the light engine's entry to the Down siding. When Mr. Condon started to walk towards the facing points on the Down line he noticed that the Advance Starting signal was at Danger. When he reached the points he did not check the signals but saw that the light engine had gone over the level crossing to the crossover.

He then made the facing points for the connection to the Down siding. When he was nearly finished he looked up and saw the passenger train approaching only about 300 yards away. Despite making a desperate attempt to re-make the points for the main line he could not shove them over before jumping clear as the train reached them. He had heard a shout from the Signal Cabin as he was trying to remake the points.

25.5 Mr. Condon had no watch. He had access to a copy of the Working Timetable. He agreed that if he had checked the signals before he started to operate the points he would have known that the line was clear for traffic approaching from Rathluirc (Charleville).

26. Gabriel O'Callaghan was one of a number of motorists stopped on the public road at the level crossing gates just before the accident. When approaching the gates he had seen an engine moving in the direction of Rathluirc. Just before the Down passenger train passed over the crossing he heard an engine hooting more than he felt was normal. At about the same time someone on the Signal Cabin veranda was shouting. After the train passed he saw a cloud of dust in the Station. Shortly afterwards he met Mr. Condon who said "Nobdy told me the train was coming. I hadn't time to change them".

27. Michael Broderick, a second waiting motorist, saw the engine pass, heard the Down passenger train hooting continuously and saw a signalman outside the Cabin shouting to someone on the Mallow side of the Station. Mr. Broderick thought that the train was being braked as it passed over the level crossing.

28. Thomas Higgins was also in his car at the level crossing and saw an engine pass in the Rathluirc direction. Shortly afterwards he heard the hooter of the approaching Down train and saw the signalman waving in the Mallow direction. He noticed another CIE employee, Joseph Stack, standing on the public road at the Buttevant Town side of the crossing.

29. Garda Sergeant Frank McDermott arrived at about 12.55. He assisted in the rescue work until about 14.15. When he examined the Down passenger train he found the two rear carriages standing on the Down line, the next two carriages on the turnout to the siding and the remaining vehicles were derailed.

He made a rough sketch showing the positions of the train units and arranged to have photographs taken. When he examined the facing points on the Down line he formed the opinion that they were set to guide traffic into the siding.

Near the points he found a crowbar under a carriage, two unlocked padlocks outside the rails and two unwound clips under the rails. When the three rear-most carriages were removed he found a wedge of timber (a scotch) lying between the rails.

30. Detective Garda Finian O'Donohue was at Buttevant shortly after 13.00.

He saw the scotch mentioned by Sergeant McDermott. He also noticed a scotch about a foot past the nose of the facing points and wedged tight against the rail and setting the points for the siding.

31.1 Technical Manager (Mechanical) Sean Heneghan said the speed recorder from the locomotive of the derailed train was recovered intact and it indicated speeds between 68 and 70 m.p.h. as the train approached the Down Home signal.

These speeds were maintained until the locomotive had gone about 33 yards beyond the nose of the Down line facing points where the speed dropped to 65 m.p.h. over a distance of about 65 yards when rapid deceleration commenced and the speed dropped to zero over a further 35 yards. The recorder indicates speeds for the last 1,850 yards travelled. The Down Home signal is about 350 yards from the nose of the Down facing points and about 490 yards from where the locomotive ultimately stopped. Taking account of the time required for brake electro-magnets to respond to a brake application which, on the basis of tests carried out previously on the same locomotive, he estimated at eight seconds, and of the driver reaction time, say, three seconds, Mr. Heneghan's opinion was that the driver became aware of danger as he approached the Down Home signal.

After allowing for wheel wear and a slight speedometer inaccuracy he calculated that the train was travelling at about 65 m.p.h. although the recorder indicated 70 m.p.h. and the driver would have seen 68 m.p.h. on the speedometer. Mr. Heneghan had calculated, taking account of the track gradient at Buttevant, that the passenger train travelling at 65 m.p.h. would take 921 yards for an emergency stop with additional 100 yards of travel during the driver's reaction time.

31.2 Mr. Heneghan detailed the make-up of the train, the damage sustained by its component units and their years of manufacture (Appendix V). There were screw-shackle couplings between the units. The train was classified for "super express" sectional running in the Working Timetable. It was hauled by an 071 class locomotive weighing about 98 tonnes and permitted to haul 323 tonnes in "super express" running. The estimated load being hauled was 378 tonnes, including 15 tonnes for passengers. The only practical effect of the excess weight would be a reduced rate of acceleration and a possible consequential increase in running time. The maximum permitted load for that class of locomotive in "standard express" running is 430 tonnes. The guard's journal which should have recorded the train's weight was not recovered from the wreckage.

31.3 Mr. Heneghan was satisfied that all units in the train were safe to travel at speeds of up to 75 m.p.h. Since the train turned into the siding at high speed this could well have predisposed it to jack-knife. The sudden deceleration and the consequent dissipation of kinetic energy led to heavy damage. He agreed that the possibility of jack-knifing would have been marginally less if the train's gross weight had been lower. There was some telescoping of units. He was of the opinion that if the train had consisted only of modern all-steel coaches with buck-eye-type couplings the damage sustained in the accident would still have been very considerable. This was borne out in certain high-speed derailments abroad. Buck-eye-type automatic couplings are in general use in the U.K., U.S.A., Japan and the U.S.S.R., while screw-shackle couplings are used on most European railway systems. The more modern CIE all-steel coaches are fitted with buck-eye-type couplings but these units are never mixed with units having screw-shackle couplings. He agreed that buck-eye-type couplings together with Pullman-type gangways between vehicles might, by spreading the impact forces, minimise damage in certain accident situations, especially low-speed accidents.

32. Maintenance Manager Michael D. Concoran was satisfied that the braking and vigilance systems on the locomotive and the brakes on the train vehicles were satisfactory prior to the accident.

The locomotive systems had been checked at Inchicore on the morning of the accident while the braking systems on all the vehicles had been checked within the previous six months. He was aware of differing views on the relative merits of screw-shackle and buck-eye couplings but he was not aware that this was a subject of controversy within CIE. There was some support for the suggestion that in certain accident situations vehicles fitted with buck-eye-type couplings had a greater tendency both to jack-knife and to telescope.

33.1 Chief Civil Engineer Patrick O. Jennings was appointed to his present post in April, 1980 and has 20 years' experience of railway work. He told the Court he had overall responsibility for the rail development work at Buttevant. The Station has been closed to passenger traffic since 1977 and is now used as a ballast depot. At his request, initial plans for the development work were drawn up by the Divisional Engineer, Limerick, in May 1978. These plans, subject to some modification, were approved by Mr. Jennings and subsequently by the Railways Manager in March, 1979.

33.2 Significant elements in the work were replacement of trailing points connections to the Down siding by a facing points connection, removal of redundant life-expired connections, provision of a trailing crossover adjacent to the platforms to replace a trailing crossover on the Rathluirc side of the level crossing, a locomotive run-around facility within the Down siding and decommissioning the subsidiary Signal Cabin.

33.3 Mr. Jennings said the development work at Buttevant was in compliance with the relevant UK Ministry of Transport Requirements. Approval for this work had not been sought from the Department of Transport because, in his view, it was not in a category for which approval was necessary. The new crossover was replacing an existing crossover. Approvals had, however, been sought recently for new crossovers at Ballybrophy and Killarney where new operational procedures for passenger trains were involved. He agreed that on the day of the accident the new facing points on the Down line did not comply with the U.K. Requirements because they were not connected to a Signal Cabin. These facing points were provided to facilitate ballast train movements. While Mr. Jennings did not consider that in normal usage facing points were less safe than trailing points he did accept that in an accident situation facing points might be less safe. The angle of the new turnout into the Down siding was one in eight. The maximum permitted speed on this type of turnout was 20 m.p.h. and the maximum safe speed would be about 30 m.p.h.

Use of the subsidiary Signal Cabin had necessitated time-consuming operations at the Station and its withdrawal from service resulted in some reduction in hours worked by signalmen.

33.4 Under an instruction from Mr. Jennings the Divisional Engineer commenced the development work in April, 1979, by removing the more southerly of the two trailing connections to the Down siding. Notification of these works was given in the Weekly Circular for week ended 7th April, 1979. Mr. Jennings stated that the procedure for the promulgation of an item of this nature in the Circular was that the Divisional Engineer would write to him requesting the insertion and Mr. Jennings would include it in a list which he would send to the Passenger Services Manager. No further work was undertaken at Buttevant until September, 1979 when appropriate notification was again promulgated in the Circular. During March/April, 1980 speeds through Buttevant were restricted to 25 m.p.h. because of the installation of the crossover and turnout.

33.5 During his annual inspection in April, 1980, Mr. Jennings became aware of a need for ballast cleaning in the Buttevant area but he had no idea when a cleaning machine would be available. He did not then envisage that the unconnected facing points on the Down line would be used to facilitate traffic or ballast train movements. He would see no objection, however, to unconnected points being used in accordance with the "engineering possessions" Rule - No. 217. Insofar as Mr. Jennings was aware, no authorisation had been given to use the unconnected points. He did not know that ballast movements were taking place at Buttevant prior to 1st August. Mr. Jennings said that the more northerly of the two trailing connections to the Down siding (No. 6) fouled the site for the new facing turnout and was removed during the week ended 26th April. Mr. Jennings said it was proposed to upgrade the Dublin/Cork line to cater for heavier and faster traffic. Speeds of 80 m.p.h. were envisaged.

34.1 Divisional Engineer Robert E.G. Sides was appointed Divisional Engineer, Limerick, four years ago. Buttevant which is in the Limerick Division was used as a ballast depot because there was suitable rock in a local quarry and adequate space in the Station. Mallow was used temporarily as a ballast depot while track laying was in progress in the Buttevant siding. Mr. Sides considered the retention of the trailing points connection to the Down siding impracticable after the subsidiary Signal Cabin had been decommissioned because of their excessive distance from the main Signal Cabin. It was for the Chief Civil Engineer's Office to check that the rail development work met relevant design requirements and standards.

34.2 The trailing points connection (No. 6) to the Down siding was removed about the 26th/27th April, 1980. Material recovered from this connection was subsequently used to complete the new facing points connection to the Down siding. Trackwork within the siding was completed by the beginning of June at which time Mr. Sides decided to resume drawing ballast from the stockpile at Buttevant. He had told the Assistant Signal and Electrical Engineer that all new points should be connected-up as soon as possible. He had not asked that work at Buttevant be given priority over other signalling work then in hand. He knew that the points clip padlock keys were held in the Signal Cabin.

34.3 When he decided to resume drawing ballast from Buttevant, Mr. Sides sent to the Area Rail Manager, Cork, a Stone Ballast Programme, dated 3rd June, 1980, listing ex Buttevant ballast train movements for the 6th to 8th June, 1980. He knew that ballast trains would have to pass over the new hand-operated facing points at the turnout on the Down line and he regarded his programme as a request to the Traffic Department for a train to go into the Down siding. There was no reaction from the Area Rail Manager and the first ballast train movement over the points took place on 6th June. It was for the Permanent Way Inspector to ascertain from the Station Master, Mallow, the Traffic Department's requirements for men to work the points. Mr. Sides had assumed that these requirements would be similar to those envisaged for the hand operated trailing points No. 6 which were referred to in the Weekly Circular for 26th April, 1980 (Appendix VIII). Points No. 6, which were removed about 23rd/24th April, could not have been used after the 30th March when part of the connection to the siding was removed. Due to an oversight, advance notification regarding the installation of the new trailing crossover was not forwarded for inclusion in the Weekly Circular. The new facing points on the Down line were installed earlier than he had anticipated and before notification could be published. While he was aware that information published in the Weekly Circular for week ended 26th April (Appendix VIII) was incorrect, Mr. Sides did not consider it necessary to have it amended or to advise anyone in Cork or Dublin that the No. 6 points had been removed. Persons familiar with Buttevant would know the situation on the ground. Mr. Sides did, however, agree that on the basis of the Weekly Circular alone it appeared that No. 6 points were still available, should the need arise, and that they were the only points leading to the Down siding.

34.4 Initially, Mr. Sides had no idea that the new facing points at Buttevant would be used before they were connected to the Signal Cabin. Hand operation of facing points was unusual, but not exceptional. Leaving facing points on a main line unconnected for as long as four months was unusual. The notice in the Weekly Circular for week ended 26th April, 1980 (Appendix VIII) saying that the trailing connection had been disconnected from the Signal Cabin, that it would be clipped and scotched pending the completion of other alterations and that, should the need arise, the points could be hand operated, was probably issued after the connection had been removed.

35.1 Signal and Electrical Engineer Patrick J. Leahy said that since July, 1973 he had responsibility for all CIE signalling work. He is a member of the Institute of Railway Signal Engineers. In April, 1979 the more southerly trailing points to the Down siding at Buttevant were disconnected. Certain cording was disconnected during March, 1980 to allow the installation of the new crossover on 23rd March and of the facing points connection a week later.

The signal gang, which consisted of a ganger and five operatives, then returned to Knocklong which had a higher priority and did not resume at Buttevant until the beginning of June. If the gang had had no other commitments he would have arranged for their return to Buttevant about the beginning of May. Had Mr. Leahy known that the unconnected facing points were to be used for traffic purposes he would have given the work at Buttevant a higher priority than the work at Knocklong.

35.2 Mr. Leahy said that every effort is made to ensure that Station diagrams in signal cabins are up to date. While the Buttevant diagram was dated 1958 it did show all the points that were currently connected to the Cabin.

Some points that had been connected to the subsidiary cabin and were removed as part of the rail development work were also shown. While agreeing that, if the new facing points on the Down line were shown, this could have served as a reminder to the signaller, Mr. Leahy said that current practice was not to alter a diagram until all the requisite connections were made. The design of the signalling scheme appropriate to the rail development work was in compliance with the relevant U.K. Ministry of Transport Requirements.

35.3 There is only one signalling gang in the Cork Area. The work load in the Area has increased, and, for a variety of reasons, the back-log of installation and maintenance work could be up to six months. There is extensive weekend working. Arrangements have been made to increase this work force.

35.4 Mr. Leahy agreed that a device could be fitted to unconnected points indicating their status to signalmen. He would not, however, recommend such a device because it would not be in compliance with the U.K. Requirements, it might encourage usage of unconnected points, it would not be fail-safe and it would not indicate if points were properly secured.

36 Assistant Signal and Electrical Engineer Cecil Scully had received the Divisional Engineer's letter of 4th March, 1980 stating that the new crossover would be installed on 22nd /23rd March. On 25th March the Divisional Engineer asked for observations on a draft notice for the Weekly Circular advising, inter alia, that the trailing crossover had been installed. Mr. Scully amended the draft notice and forwarded it to the Rules and Regulations Officer on 8th April. The notice which was published in the Circular for the week ended 26th April, 1980 (Appendix VIII) had been further amended after it left him by deletion of the reference to the new trailing crossover. Mr. Scully stated that none of the correspondence he had received from the Divisional Engineer up to the day of the accident made reference to either the old No. 6 trailing points connection or the new facing points connection to the Down siding.

37 Executive Officer David Ronan is attached to the Rules and Regulations Office. He confirmed that, in accordance with normal practice, reference to the new trailing crossover was deleted from the draft notice which he received from the Signal and Electrical Engineer's Office for publication in the Weekly Circular because the crossover points were not connected to the Signal Cabin. Additionally, he amended the draft notice to make its contents clearer. He agreed that the notice published in the Circular for week ended 26th April, 1980 (Appendix VIII) should have stated that points listed as being clipped and scotched were also locked. While Mr. Ronan did not know at that time that the new facing points on the Down line had been installed, he was satisfied that it would be inappropriate to make reference to them in the Weekly Circular until they had been connected to the Signal Cabin. He understood the notice published in the Circular for week ended 26th April (Appendix VIII) to mean that trailing points No. 6 would be retained until rail development work at Buttevant Station was completed and that the ballast train movements listed in the Divisional Engineer's Stone Ballast Programme of 3rd June would be over these trailing points. Up to the date of the accident he had no notification of any change in this situation.

38.1 Permanent Way Inspector John Connally has acted as Inspector for 31 years and was responsible for the permanent way gang engaged on the rail development work at Buttevant. He is based at Mallow. He did not recollect having read the Regulation dealing with the securing of new and redundant points which was published in the Weekly Circular in mid - 1977 (Appendix VI). While he was familiar with the securing of unconnected points, he did not know that the Regulation stated that clip padlock keys must be held by a Permanent Way Inspector. Inspector Connally gets the Weekly Circular every week. He has a copy of the CIE Rule Book. He had not been examined in the Rules within the last ten years.

38.2 Inspector Connally was at Buttevant Station on the days when both the new crossover and the new facing points on the Down line were installed. On the day the crossover was installed Traffic Inspector Luddy was also at Buttevant. When the new crossover points had been secured Mr. Luddy arranged that the clip padlock keys would be held in the Signal Cabin. Subsequently, when the new facing points on the Down mainline were installed and secured, their padlock keys were also handed into the Signal Cabin. Inspector Connally could not remember another occasion when his gang had installed new points on main lines. He had never heard of points remaining unconnected for more than one or two days. He had never previously seen or used either clips or clip padlocks. At that stage he did not expect that either the crossover or the facing points on the Down line would be used before they were connected to the Signal Cabin. He had not seen the Area Rail Manager's instruction that points clip padlock keys were to be kept in the Signal Cabin, (Appendix VII).

38.3 Inspector Connally first knew that the Down facing points were to be operated manually when he read the Divisional Engineer's Stone Ballast Programme dated 3rd June, 1980 which stated that the Permanent Way Inspector, Mallow, was to arrange manual operation of the points into the siding. He went to Buttevant and after a discussion with the signaller-on-duty he arranged that William Condon would operate the points manually under a signaller's instruction. Inspector Connally was at Buttevant on 7th June, 1980 when the facing points were used for a ballast train movement. The procedure for operating the points worked satisfactorily. Mr. Connally was of the opinion that the holding of clip padlock keys in the Signal Cabin was a safer arrangement than if he held them because the signaller would always be aware of what was happening. Additionally, he, Inspector Connally, could not be present at Buttevant for all ballast train movements over the unconnected points.

39.1 Area Supervisor Lawrence Luddy is based in Cork where he reports to the Area Rail Manager. He is in his present post for about two years.

He found the three Buttevant Station signalmen to be competent in Rules and Signalling Regulations when he examined them in May/June, 1980. On the instruction of the Area Rail Manager he was at Buttevant on 22nd/23rd March, 1980 when the new crossover was installed. His function there was to ensure the smooth running of trains while the installation work was in progress and, on its completion, that the lines were safe for main line traffic.

He also checked all the other points at the Station. The trailing connection to the Down siding, points No. 6, had not then been removed. When the installation of the crossover was completed and its points were properly secured the clip padlock keys were handed into the Signal Cabin for retention in accordance with the Area Rail Manager's direction of 3rd April 1980 (Appendix VII).

Mr. Luddy reported on the position on the ground at Buttevant to the Area Rail Manager on 23rd March. It was the first time he had checked new installations of this kind at a Station. He told both Mr. Connolly and Mr. Hanrahan that points leading to main lines should not be moved without the signalman's permission. He told the signalmen that they should satisfy themselves that points were properly resecured after use. On the Area Manager's instruction he had revisited the Station on 26th March and was satisfied that the various points were properly secured and that all the clip padlock keys were being kept in the Signal Cabin.

39.2 Mr. Luddy was not at Buttevant on the weekend 29/30th March, 1980 when the facing points were installed on the Down line. He was at Buttevant during May after the Down facing points had been installed. For some weeks prior to 1st August he knew that these facing points were being hand-operated to allow ballast trains to move into and from the Down siding. While his understanding of the Regulation published in mid - 1977 (Appendix VI) was that there should be no train movements over unconnected points Mr. Luddy did not consider it to be part of his duties to stop the movement of ballast trains over the unconnected points.

40.1 Area Rail Manager Michael J. Lynch is responsible for Traffic Department staff and functions in the Cork Area, which includes Buttevant. He was aware of the proposed rail development work there. He knew that installation of the new crossover on 22nd/23rd March required possessions of both lines and as there would be only one signalman on duty he instructed Inspector Luddy to be present to assist the signalman, to ensure the safety of passing trains and to report back to him. Mr. Lynch was not sure if at that time he was conscious of the Regulation dealing with the securing of new points published in the Weekly Circular in mid - 1977 (Appendix VI).

He regarded his instruction that keys be kept in the Signal Cabin (Appendix VII) as an additional safety measure and as complying with Rule 71 (b) which states that points must not be operated without the permission of the signalman.

In his view, hand operation of unconnected points should be in compliance with Rule 217. Mr. Lynch visualised occasional use of the unconnected facing points at Buttevant. He was unaware, prior to the accident, that they were being used on a regular basis for ballast train movements. He did not know of any other Signal Cabin in the Cork Area where points clip padlock keys were held. He regarded the Divisional Engineer's Stone Ballast Programme, dated 3rd June, 1980 as a normal advice of ballast train movements and not as a request of any kind.

41.1 Passenger Services Manager Jeremiah B. Mooney reports to the Railways Manager. His responsibilities include compilation of the CIE Working Timetable and production of the CIE Weekly Circular. Mr. Mooney confirmed, from records, that the oil/magnesite train scheduled to depart from Cork (Tivoli) at 11.30 on 1st August and to pass Mallow and Buttevant at 12.32 and 12.47 respectively was delayed in Cork and did not reach Mallow until 13.45. The Buttevant signalman was advised by the Mallow signalman that this train was running late.

41.2 The Weekly Circular is mainly a railway document but it takes account of the integrated rail/road transport structure. In general, the first three pages of the Circular deal with rail speed restrictions, engineering works in progress on railways, possessions of lines, alterations to signals, and Rules and Regulations. The following pages give timetables for special trains and certain general information relating to trains and buses. Draft material for the first pages of the Circular is supplied by the Rules and Regulations Officer and the Chief Civil Engineer. The Rules and Regulations Officer would supply information on the commissioning of new points. Information regarding the possessions required for the installation of the Buttevant crossover was supplied by the Chief Civil Engineer but, in error, was omitted from the Circular. When this omission was discovered, arrangements were made to send written notification of these possessions to Mallow and Buttevant. Mr. Mooney was not told of the installation of the new facing points on the Down line.

41.3 Mr. Mooney was aware that CIE had previously given an undertaking that important notices relating to safety or to railway operations would be repeated in the Weekly Circular until they had been incorporated into the appropriate CIE rules and regulations books.

He thought that the notice regarding the securing of new and redundant points which was published in the Circular in mid - 1977 (Appendix VI) would be ultimately incorporated into the Appendix to the working Time Table. It was for the originator of a Weekly Circular notice to request a repeat publication. The format of the Circular has been improved by putting all miscellaneous-type notices in the back pages.

42 Passenger Rolling Stock Controller John Dalton reports to the Passenger Service Manager. His duties include the allocation of rolling stock to trains. On the day prior to the accident he decided to add an extra buffet car to the following morning's 10.00 ex Dublin passenger train. This buffet car had been released after maintenance and was added to the train to enable Catering Department staff to switch equipment and stock, en route, from another out less suitable buffet car. The Station Master, Heuston, was advised of the intention to add the extra buffet car to the train and it was for the Station Master to pass this information to the train's guard. Mr. Dalton agreed that the maximum load permitted to be hauled by an 071 type locomotive in "super express" running was, as per the CIE Working Timetable, 323 tonnes and in "special express No. 1" running 430 tonnes. On a journey from Dublin to Cork one difference between "super express" and "special express No. 1" running was that in "super express" running the journey time would be about 10 minutes shorter. If Mr. Dalton had known before the previous weekend that the extra buffet car was to be added to the train he would have arranged for a notice to be published in the Weekly Circular to the effect that this train had been designated for "special express No. 1" running. There were six to ten such notifications in the period May/August, 1980.

The make-up of trains has frequently to be changed at very short notice to meet demand and it was not unusual for train weights to exceed 323 tonnes. He had not told the Passenger Services Manager that this was occurring. Rule 129 requires a train guard to advise his driver, before departure, of the make-up and load of his train.

43. Signal and Electrical Inspector James Burrows has been an Inspector for 13 years and was supervising the gang of signal operatives working at Knocklong and Buttevant Stations. He was aware that unconnected facing points had been installed on the Down line at Buttevant on 30th March, 1980.

It was only during the last two weeks of July that he became aware that these points were being hand operated for ballast train movements. No one had requested him to have these facing points connected to the Signal Cabin as a matter of urgency. Clip padlock keys for unconnected points at Knocklong Station were held by the Permanent Way Inspector while the signals gang was working there.

44. Station Master Brendan O'Meara has been Station Master at Mallow since 1966. He is responsible for Mallow and five other stations, including Buttevant. He arranges for distribution of the Weekly Circular to appropriate staff at the six stations. Only drivers, guards and acting guards sign for the Circular. Mr. O'Meara said that working 56-hour 7-day weeks was common practice for signalmen at both Mallow and Buttevant.

45.1 Rules and Regulations Officer Thomas Quinn was appointed to his present post in May, 1979. His function is to promulgate the Rules and Regulations necessary to ensure safety in railway operations and to keep these Rules and Regulations updated. The Regulation dealing with the securing of new and redundant points (Appendix VI) was initially published in the Weekly Circular for week ended 25th June, 1977 because of the volume of rail development work then in progress and to ensure a common method for securing points out of service. The notice was repeated on 2nd July and 16th July 1977.

He was not aware of any subsequent request for its republication. There is a similar regulation in the British Railways Regulations. The basic meaning of the Regulation is that unconnected points should not be used except when the Permanent Way Department requires them for work inside the points. In his view, no specific CIE rule covers the use of unconnected points but compliance with Rule 217, which involves stopping trains, would ensure that they were operated safely. Use of the unconnected facing points on the Down line on 1st August, 1980 was not in compliance with Rule 217. In his view also, while a signalman must ensure that everything is done in accordance with Rules, responsibility for invoking Rule 217 rested with the Permanent Way Department. Two other relevant Rules were 67(c) which states that unconnected facing points must be properly secured for the passage of trains and 71(b) which prohibits the movements of points without a signalman's permission. The Regulation dealing with the securing of points (Appendix VI) would be included in a new edition of the Appendix to the Working Timetable which was due to go for printing shortly.

45.2 The Buttevant signalmen attended refresher courses in Rules and Regulations in February, 1980. It is not customary to give instruction in changed operating procedures until the works which give rise to these changes have been completed and commissioned. Mr. Quinn did not know that new facing points had been installed on the Down line at Buttevant. Normally, only guards, drivers and signalmen attend refresher courses in Rules and Regulations. Mr. Quinn arranges meetings with Area Inspectors for the purpose of ensuring a uniform interpretation of Rules and Regulations.

46.1 John Lennon, BE, MICEI, Consulting Engineer was called by Counsel representing William Condon and others as an expert in safe systems of work. Mr. Lennon said that the unconnected facing points at Buttevant were used, and could be altered, without any physical reference back to the Signal Cabin. In his opinion, if it was necessary to use these unconnected points, the Signal Cabin should have been provided with indicators showing the status of the points and when an attempt was made to move them.

46.2 The safety of the running line is maintained when the facing points are properly secured. The safety system fails if the procedures for altering the points break down. A physical link to the Signal Cabin which would give warning of a change in the status of the points could have been installed.

He would not propose this as standard in running a railway but, in the remote and undesirable possibility that unconnected points might have to be used, it would serve as a warning linkage to the Signal Cabin. A fail-safe analogy was the train driver's dead - man's handle. Paragraph 21(c) of the U.K. Ministry of Transport Requirements states that facing points on passenger lines should have apparatus to detect that each switch is in its proper position before signals can be cleared.

46.3 In Mr. Lennon's view, there was no overall control or co-ordination between the various CIE Departments working at Buttevant.

CONCLUSIONS

47.1 The accident on 1st August, 1980 occurred because a set of unconnected facing points on the Down main line at Buttevant Station were partly or wholly made into the Down siding when the 10.00 ex Dublin passenger train reached them and the train, which was travelling at about 65 m.p.h., was diverted into the siding and derailed.

47.2 The facing points were installed about four months before the accident but had not yet been connected to the Signal Cabin. During the two months prior to the accident these points were used a number of times to accommodate ballast train, light engine and maintenance machine movements into, and from, the Down siding. Procedures drawn up locally to cover the operation of the points and the control of movements over them were inadequate and were not in compliance with relevant CIE Rules.

47.3 The CIE Regulation (Appendix VI) dealing with the securing of new points not yet connected to a Signal Cabin was not fully implemented.

47.4 Since the facing points had been installed by the Engineering Division and were being used by that Division for ballast train operations, the lapse of time in connecting them to the Signal Cabin was inexplicable.

47.5 The facing points had been hand operated about thirty minutes before the accident to facilitate the movement of a ballast cleaner and, as the 10.00 ex Dublin passenger train approached, the points were being hand operated again by a pointsman in the mistaken belief that a recently arrived light engine, which was standing on the Up line, was about to cross to the Down siding. When the passenger train came into sight the pointsman tried to re-make the points for the main line, but was unable to do so before the train reached them.

47.6 No notification was promulgated in the CIE Weekly Circular concerning the installation of either the facing points on the Down main line or the trailing crossover between the Station platforms. Information published in the Weekly Circular concerning the status of the old No. 5 trailing points connection to the Down siding was erroneous.

OBSERVATIONS AND RECOMMENDATIONS

48.1 As the 10.00 ex Dublin passenger train approached Buttevant Station on 1st August, 1980 all the Down signals were in the Clear position. As the train neared the Home signal it changed to Danger at which stage it was impossible to halt the train before it reached the unconnected facing points at the turnout to the Down siding. The train driver was never made aware that the points were not connected to the Signal Cabin.

48.2 There is no specific CIE Rule authorising the use of unconnected points. The Regulation dealing with the securing of points (Appendix VI) makes no reference to their use, but does state that clip padlock keys are to be retained by the Permanent Way Inspector, which implies that unconnected points should remain in his charge. The only use of unconnected points that should properly be contemplated is when they are needed to allow trains etc. to pass over them in connection with construction works inside the points. For this use, absolute possession of the section of track should be mandatory. A suggestion at the Investigation that unconnected points, if used, should be linked to a Signal Cabin where indicators display their status would have represented an improvement on the situation that existed at Buttevant Station on the day of the accident; however, this would be inadequate and would not be in compliance with the U.K. Ministry of Transport Requirements for Passenger Lines, which are used and applied by CIE. Unconnected points should only be used in the exceptional circumstances set out above and then only in accordance with the "absolute possession" conditions prescribed in CIE Rule 217A.

RECOMMENDATION NO. 1

The Regulation entitled "Laying in New Points and Disconnection of Redundant Points" (Appendix VI), should be amended by adding:- "Padlocks shall be unlocked and subsequently relocked by the Permanent Way Inspector-in-Charge. When points not connected to, and detected in, a Signal Cabin are being moved Rule 217A shall apply".

49.1 The Report into the Railway Accident at Gormanston on 21st October, 1978 recommended that the layout of the CIE Weekly Circular be improved to draw particular attention to notices relating to Rules and Regulations and that such notices be republished at intervals until the relevant information had been incorporated into the appropriate permanent documents. The Circular's format is still unsatisfactory. There are the long intervals between the initial publication of important notices, some of which have safety implications, and their republication.

49.2 Prior to the accident at Buttevant, the Regulation dealing with the securing of unconnected points (Appendix VI) was last published in the Weekly Circular for week ended 16th July, 1977. The Appendix to the Working Timetable, in which the Regulation will be permanently promulgated was last printed in 1935 and the most recent Amendment was published in 1949. Rule 217A was last published in the Circular for week ended 28th February, 1976 and was not mentioned in evidence during the Investigation. It is unreasonable to expect that railway personnel engaged mainly on operational or outdoor duties can keep their copies of the Rules and Regulations permanent documents updated from Weekly Circular notices and extracts for more than two years.

49.3 Some of the information concerning facilities at Buttevant Station promulgated in the Weekly Circular was erroneous. Other relevant information that had traffic and/or safety implications was omitted.

49.4 For the regular and safe running of trains it is important that all personnel required to have the Weekly Circular do in fact receive it. Many witnesses at the Investigation said they did not sign for the Circular. The system of distribution is uneven and some copies have to be shared.

49.5 The part of the Regulation dealing with the securing of unconnected points (Appendix VI) which states that clip padlock keys should be held by the Permanent Way Inspector was amended locally without reference to the Rules and Regulations Officer. Uniform compliance with Rules and Regulations is essential for the safe regulation of railway traffic. When there is doubt regarding the interpretation or intention of a Rule or Regulation or where any CIE employee considers it desirable to suggest an amendment to a particular Rule or Regulation the Rules and Regulations Officer should be consulted.

RECOMMENDATION NO. 2

- (i) The format of the CIE Weekly Circular should be improved to highlight information and notices that may have implications for safety on the railway.
- (ii) Notices published in the Weekly Circular relating to Rules and Regulations should be republished frequently until such time as they have been incorporated into the appropriate permanent documents. Intervals between these republications should never exceed one year.

- (iii) Guidelines should be drawn up by CIE covering the type of information relating to engineering and other works on the railway that must be promulgated in the Weekly Circular. Responsibility for ensuring the accuracy and timely publication of this information should be assigned to an appropriate Office within CIE.
- (iv) Each CIE railway employee who is required to have the Weekly Circular should also sign to acknowledge having received it.
- (v) Notices should be published in the Weekly Circular drawing attention to the requirement for full compliance with CIE's Rules and Regulations and advising that employees wishing to suggest amendments to, or seeking advice on the interpretation or intention of Rules or Regulations should, in the first instance, contact the Rules and Regulations Officer.
- (vi) An updated issue of the Appendix to the Working Timetable should be printed and distributed as soon as possible.

50. Witnesses quoted various CIE Rules as being applicable to the use of the unconnected points at Buttevant Station while some witnesses were unaware of the Regulation dealing with the securing of unconnected points (Appendix VI). Evidence was given that normally only train guards, train drivers and signalmen attend refresher courses in Rules and Regulations.

RECOMMENDATION NO. 3

- (i) Arrangements should be made by CIE to increase the frequency of attendances at refresher courses in Rules and Regulations, and
- (ii) Inspectors who examine other staff in Rules and Regulations, who are required to draw up operational procedures or who are responsible for gangs working on permanent way or signalling installation work, should attend suitable refresher courses in Rules and Regulations.

51.1 In the context of the installation and use of the facing points on the Down main line at Buttevant, there were surprising break-downs in communications between, on one hand, certain management and supervisory personnel and, on the other hand, the personnel at Buttevant Station. On the day of the accident the Rules and Regulations Officer was not aware that new facing points had been installed on the Down main line.

Neither the Chief Civil Engineer nor the Signal and Electrical Engineer knew that the unconnected points were being used by ballast trains. The Divisional Engineer regarded his Stone Ballast Programme dated 3rd June, 1980, addressed to the Area Rail Manager, as a request to use the points, while the Area Rail Manager regarded the Programme as advisory only. The Area Supervisor understood from the Regulation dealing with the securing of points (Appendix VI) that there should be no movements over the unconnected points but he did not consider that it was his duty to stop any such movements. The Permanent Way Inspector did not recollect ever having seen that Regulation. He had never previously used or seen points clips or clip padlocks. There was no evidence to suggest an attempt either to give an urgent priority to having the facing points connected to the Signal Cabin, or to co-ordinate the elements of the rail development work programme. The failure of the light engine's crew to comply with the deferred departure time of 08.00 ex Mallow on the day of the accident suggests either casual supervision and/or a lack of the strict personal discipline which is usually found in railway personnel.

51.2 Signalmen at Mallow and Buttevant normally work seven eight-hour shifts in their weekly roster and longer hours when covering for absent colleagues. While signal operatives also worked extensive overtime each week, their work back-log sometimes extends for up to six months. It seems unreasonable that personnel, such as Signalmen, who have significant roles in the control and regulation of train movements, should be required to work excessive overtime. That a six months' backlog of signalling work could accumulate suggests an organisational weakness that should be resolved.

RECOMMENDATION NO. 4

That CIE undertake:-

- (i) An evaluation of management, supervisory and organisational practices and procedures for the purpose of eliminating deficiencies mentioned during the Investigation,
- (ii) To establish and implement guidelines for maximum hours of work per week, length of shifts and minimum periods between shifts, for signalmen. The guidelines to take account of traffic density and of the undesirability of excessive overtime work from the safety, health and social points of view, and
- (iii) To determine an acceptable staff numbers/workload ratio for the Cork Area signal operatives' gang taking account of the safety and traffic implications of deferring work and of the undesirability of excessive overtime, and to arrange to increase staff numbers as may be necessary.

52.1 Neither the CIE Working Timetable nor the Buttevant Stone Ballast Programme was a reliable indicator of the times of train movements on the main line at Buttevant about the time of the accident. The 11.30 Up oil/magnesite train, which was scheduled to pass through Mallow and Buttevant at 12.30 and 12.47 respectively, did not arrive at Mallow until 13.45. The Up fertilizer train was almost an hour behind schedule when it passed through Buttevant Station at 12.13. The Up light engine which was to leave Mallow at the delayed departure time of 08.00 actually departed at 12.30 and reached Buttevant at 12.45.

52.2 The sectional running of the train involved in the accident, the 10.00 ex Dublin Down passenger train, is designated "super express" in the Working Timetable. On the day of the accident this running was altered to "special express No. 1" because of the extra weight being hauled. Evidence was given that this altered running could increase the journey time to Cork by up to 10 minutes. Nevertheless, while the train was two or three minutes late departing from Dublin it passed through Rathluirc (Charleville) at 12.35, one minute ahead of the scheduled time for "super express" running and up to eight minutes ahead of the estimated time for "special express No. 1" running. The "hauled" weight of the train involved in the accident was about 378 tonnes which is 45 tonnes in excess of the maximum permitted by CIE in "super express" running for the particular class of locomotive that was hauling the train. It was stated that it was quite usual for approvals to be given to alter promulgated sectional runnings. The risk of such approvals being given at short notice and as a matter of routine should be avoided.

RECOMMENDATION NO. 5

Rule 28 should be amended by adding: -

"(d) when approval has been given to alter the designated sectional running of a train and when the new designation has not been promulgated in the CIE Weekly Circular, the Station Master at the station from which the train starts must satisfy himself that the driver is aware of the altered sectional running before the train commences its journey. A report of the circumstances of each such approval and of the running times actually achieved shall be submitted to the Railways Manager".

53. While the evidence at the investigation on the relationship between the amount and type of damage sustained in the accident, the number of casualties and the age and design of the vehicles involved was inconclusive, it is certain that the timber bodied coaches had poor damage-resistant qualities, and that the screw-shackle connections between the vehicles did not prevent them from jack-knifing. A study of similar railway derailment accidents abroad indicates that modern all-steel coaches mounted on heavy underframes and fitted with buck-eye-type automatic couplings and Pullman-type gangways can survive certain major derailment accidents without serious damage. CIE's Annual Report for 1979 refers to a requirement for new mainline coaches.

RECOMMENDATION NO. 6

- (i) Any new CIE mainline coaches should be of all-steel construction, on heavy underframes and be fitted with buck-eye-type automatic couplings and Pullman-type gangways, and
- (ii) Pending delivery of new coaches, efforts should be made to ensure that all the timber-bodied coaches still in service are used only on the railway lines with light traffic and where the maximum permitted speed does not exceed 60 m.p.h.

54. The present maximum permitted speed on the Dublin/Cork line is 75 m.p.h. Sectional runnings are based on maximum speeds of 73 m.p.h. Evidence was given that the line is being up-graded to cater for higher train speeds.

RECOMMENDATION NO. 7

CIE should examine, in the context of available resources, customer demand and traffic growth, whether the up-grading of any railway lines in the system to cater for speeds in excess of 75 m.p.h. is justified.

55. The Buttevant Station level crossing gates are normally closed across the railway. The signalmen's duties include the opening and closing of these gates. Each opening and closing involves an absence of two to three minutes from the Signal Cabin. At no other location on the Dublin/Cork railway line are signalmen required to open and close level crossing gates that are normally closed across the railway.

RECOMMENDATION NO. 8

CIE should examine how the Buttevant public road level crossing gates could be safely operated from inside the Signal Cabin and arrange to have this facility provided if the cost is justified in the context of efficiency, a reduction in stress and fatigue, traffic regulation and staff morale.

56. The Report into the Collision at Rosslare Strand Station on 13th August, 1974 stated that the approval required by statute had not been sought for alterations carried out at the Station during 1973. In 1977 the Department of Tourism and Transport and CIE agreed guidelines on works that should be submitted for prior approval. In the context of alterations at stations, these guidelines required that approval would be sought for any trackwork where it was proposed to depart from the U.K. Ministry of Transport Requirements for Passenger Lines - Railway Construction and Operation. The facing points on the Down line at Buttevant were used without being connected to the Signal Cabin and while they did not comply with the U.K. Requirements. The approval required by statute was not sought for the installation of these points or for their use.

57. It is clear that in the circumstances obtaining at Buttevant the presence or absence of radio communications could not have affected the situation. However, in other potential or actual accident situations, the presence of radio communication to and from trains and of voice communication between train drivers and train guards could be significant in preventing or reducing, the extent of an accident. Such communication might also improve aspects of security.

APPLICATION FOR COSTS

58.1 On the thirteenth day of the Investigation and just prior to its conclusion, application was made on behalf of William J. Condon for legal costs. The application was based on Section 7(3) and Section 7(4) of the Regulation of Railways Act, 1871. A similar application based on Section 7(4) of the Regulation of Railways Act, 1871 was made on behalf of the National Association of Transport Employees (NATE) and its members, represented before the Investigation by Messrs. Goldberg, Fleming and Company. We do not think that it would be appropriate for us to make any Order in respect of costs under the provisions of Section 7(3). Under Section 7(4) the Court holding an investigation of any accident shall make a report stating the causes of the accident and all the circumstances attending the same, and any observations thereon or on the evidence or any matters arising out of the Investigation which they think right to make. Senior Counsel for William J. Condon urged on us that the Section was wide enough in its scope for us to make observations in this Report in respect of the matter of costs. We agree with this view.

58.2 While both William J. Condon on the one hand and Denis J. O'Sullivan, Bartholomew Walsh and a number of other members of the NATE on the other hand were all summonsed by the Court as witnesses, nevertheless, a distinction can be drawn between the situation of William J. Condon and that of the other members of the NATE summonsed. It was apparently apprehended by William J. Condon that there might be a conflict of interest between himself and other members of the NATE. We believe William J. Condon was justified in seeking separate representation and in appearing before the Court of Investigation properly represented. The other members of the NATE were also responsibly represented by their Association which instructed solicitors and counsel on their behalf. An association has the duty of protecting its members and it seems to us that representation before a Court of Investigation is a normal and expected part of an association's work for its members.

58.3 We recommend that consideration be given by the Minister to the making of some contribution towards the costs of legal representation incurred firstly by William J. Condon and secondly by the NATE. In this context we note that the application on William J. Condon's behalf for costs was made in the first instance against CIE. While we do not consider that such an Order is open to us, this does not preclude William J. Condon's advisers from making application to CIE on his behalf and, accordingly, any contribution which the Minister might feel proper to make should be considered in the light of the proposals from CIE in this respect.

MISCELLANEOUS

59.1 At the commencement of the afternoon hearing on the sixth day of the Investigation Senior Counsel representing William Condon said that certain allegations had come to his attention, namely, that efforts were made to influence or direct evidence given by certain witnesses. At the request of the Court, Garda Inspector Ryan, who was present at the hearing, undertook to investigate the allegations. The afternoon hearing then resumed. We have since been informed that no prosecution is likely.

59.2 Evidence from some witnesses has not been specifically referred to in the SUMMARY OF EVIDENCE where witnesses duplicated evidence already established, or where evidence was not relevant to the purpose of the Investigation.

59.3 All the oral testimony and submissions were taken down in shorthand and subsequently transcribed into thirteen volumes amounting to almost five thousand folios.

Signed

J.V. Feehan

J.V. Feehan

Declan Budd

Declan Budd

Date

11th March, 1981

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REGULATION OF RAILWAYS ACT, 1871 (SECTION 7) ORDER, 1980

WHEREAS the Minister for Transport has, in pursuance of section 7 of the Regulation of Railways Act, 1871, directed an inquiry to be made by J.V. Feehan, B.E., M.I.E.I., an inspector under the said Act, into the cause of the accident which occurred on the railway of Coras Iompair Eireann at Buttevant, in the county of Cork, on the 1st day of August, 1980, being an accident of which notice was for the time being required by the said Act to be sent to the Minister for Transport:

AND WHEREAS it appears to the Minister for Transport that a more formal investigation of the accident, and of the causes thereof, and of the circumstances attending the same, is expedient:

NOW, the Minister for Transport, in exercise of the power conferred on him by section 7 of the Regulation of Railways Act, 1871, as adapted by the Tourism and Transport (Alteration of Name of Department and Title of Minister) Order, 1980 (S.I. No. 11 of 1980), hereby orders as follows:

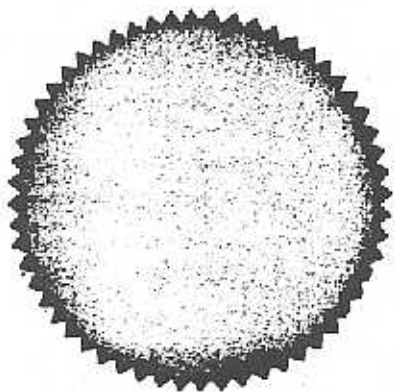
1. This Order may be cited as the Regulation of Railways Act, 1871 (Section 7) Order, 1980.

2. It is hereby directed that such investigation be held, and the said J.V. Feehan, an inspector under the said Regulation of Railways Act, 1871, is hereby directed to hold the same,

3. Declan Budd, barrister-at-law, is hereby appointed to assist the said J.V. Feehan in holding such investigation.

GIVEN under the Official Seal of the
Minister for Transport, this
1ST day of SEPTEMBER,
1980.

D.B. *F.H. Natrud*



A person authorised under
section 15(1) of the Ministers
and Secretaries Act, 1924 to
authenticate the seal of the
Minister for Transport.

LEGAL AND TRADE UNION REPRESENTATION

James O'Driscoll
with Uinsin Mac Gruaird, B.L.
instructed by
Gerard O'Keefe & Co.,
Solicitors.

Henry Sexton, Solicitor, and
John Kiernan

Oliver D. Gogarty, S.C.
With A. Murphy, B.L.
instructed by
Mr. Maurice Kenny, Solicitor.

Dr. John O'Mahony, B.L.
instructed by
Peter Fleming of
Gerald Y. Goldberg,
Fleming & Co., Solicitors,
Patrick T. O'Sullivan,
Edward Walsh and
Tadhg Barry.

Gerald Y. Goldberg,
Fleming & Co., Solicitors

Jerry O'Neill

REPRESENTING

William Condon
Matthew Blake
Miss Ann Carey
Mrs. Margaret Cahill
Margaret Carter

Transport Salaried Staffs'
Association (TSSA)

Conas Iompair Eireann
(CIE)

National Association of
Transport Employees (NATE)
Denis J. O'Sullivan
John O'Callaghan
Edward Roche
John Kelleher
Thomas O'Doherty
Denis Hogan
James Mullins
Bartholomew Walsh
James Kelly
Thomas Tynan
Edward Harrahan
Joseph Stack
William Egan
James Coleman
Patrick Byrne
John Mulcahy
Edmond Landers
Edmond Copse

Mrs. McCarthy

Irish Transport and General
Workers' Union (ITGWU)

LIST OF WITNESSESAPPENDIX IIICIE Personnel:

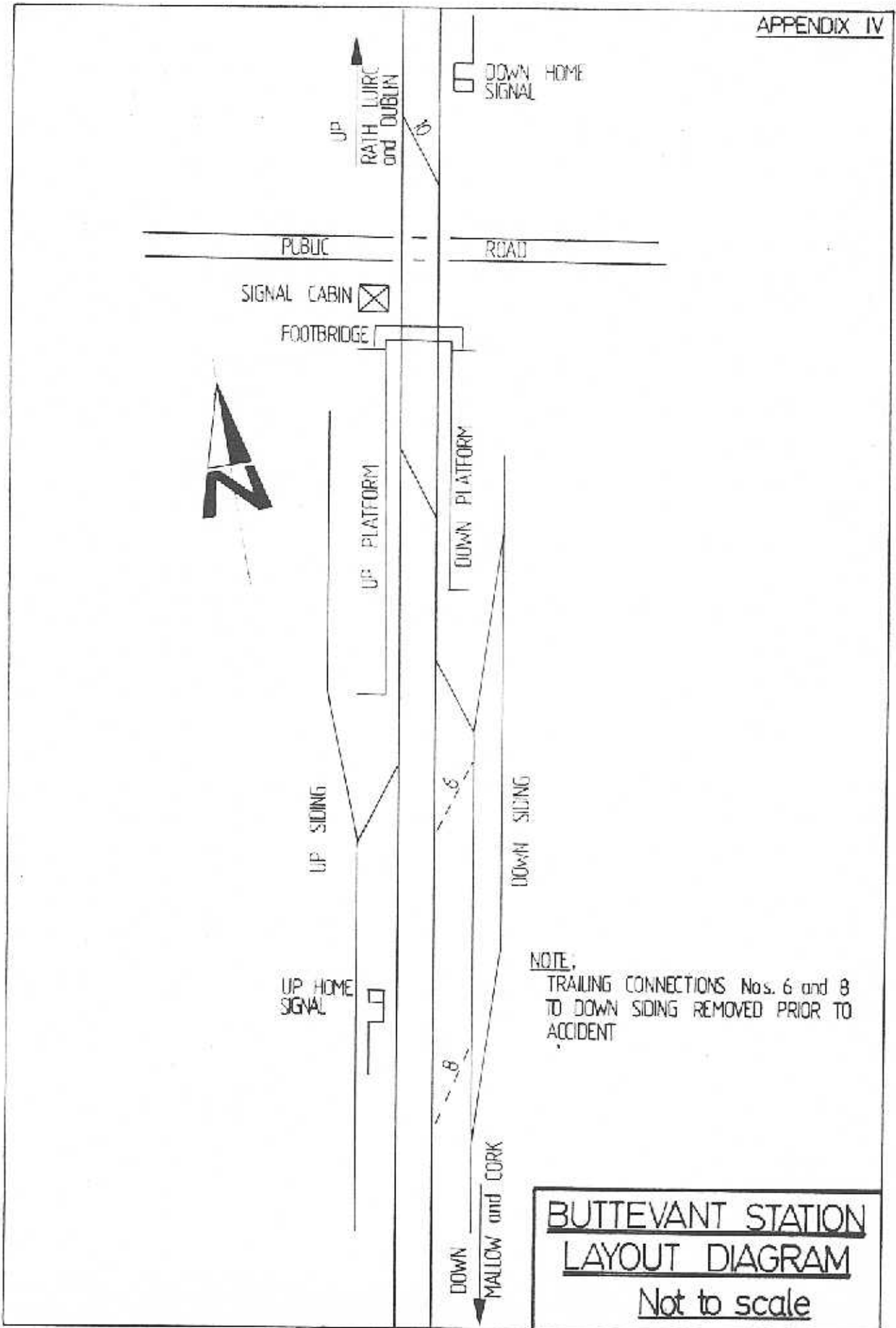
Denis Hogan	Train Driver
John Fanning	Train Driver
Frank Gray	Administration Manager (Dublin area)
James Leddy	Pantry-boy
Derek Fox	Pantry-boy
John O'Callaghan	Signalman
James Mullins	Train Driver
Thomas Tynan	Train Guard
James Kelly	Train Guard
Jeremiah B. Mooney	Passenger Services Manager
Thomas O'Doherty	Signalman
John Kelleher	Signalman
Edward Roche	Signalman
Patrick Byrne	Platelayor
Edmond Copse	Platelayor
Timothy Morrissey	Labourer
William Egan	Acting Mobile Ganger
Patrick Quirke	Platelayor
John Mulcahy	Platelayor
Thomas Landers	Signal operative
John Foley	Signal Ganger
Joseph Stack	Platelayor
James Coleman	Mechanical Maintenance Inspector
Edward Hanrahan	Renewals Ganger
Martin Armstrong	Divisional Chief Permanent Way Inspector
Edmond Landers	Signal Operative
Richard O'Rourke	Signal Operative
William Moynihan	Signal Operative
Bartholomew Walsh	Train Driver
Denis J. O'Sullivan	Signalman
William J. Condon	Platelayor
Sean Heneghan	Technical Manager (Mechanical)
Michael D. Concoran	Maintenance Manager
Patrick Jennings	Chief Civil Engineer
Robert E.G. Sides	Divisional Engineer, Limerick
Patrick J. Leahy	Signal and Electrical Engineer

CIE personnel (continued)

John Dalton	Rolling Stock Controller
Cecil Scully	Assistant Signal and Electrical Engineer
David Ronan	Rules and Regulations Office
John Connally	Permanent Way Inspector
Laurence Luddy	Area Supervisor, Cork
Michael J. Lynch	Area Rail Manager, Cork
Michael McGrath	Signal and Electrical Inspector
James Burrows	Signal and Electrical Inspector
Brendan O'Meara	Station Master, Mallow
Thomas Quinn	Rules and Regulations Officer

Other persons:

Michael Broderick
 Thomas Higgins
 Gabriel O'Callaghan
 Edward O'Riordan
 Daniel Curtin
 John Lennon
 Garda Sgt. Frank McDermott
 Garda Peter Dooley
 Det. Garda Finian O'Donohue
 Garda James McGrath.



NOTE:
 TRAILING CONNECTIONS Nos. 6 and 8
 TO DOWN SIDING REMOVED PRIOR TO
 ACCIDENT

BUTTEVANT STATION
LAYOUT DIAGRAM
 Not to scale

MAKE-UP OF 10.00 TRAIN ON 1st AUGUST, 1980
AND DAMAGE SUSTAINED IN ACCIDENT

Vehicle No.	Description	Year of Manufacture	Condition after accident
075	Locomotive, Co-Co, 2,250 b.h.p.	—	Front plates damaged
3191	Boiler/Generator Van	1971	severely damaged
1145	Open 1st class carriage, timber body	1963	body destroyed
2408	Buffet car, do.	1953	do.
2412	Self-service car, do.	1954	do.
1491	Standard carriage, plywood body	1961	badly damaged
1529	Standard Craven, light alloy frame	1964	do.
1527	do. do.	1964	body damaged
1508	do. do.	1964	both ends damaged
1542	do. do.	1965	one end damaged
1541	do. do.	1965	no damage
1365	Open Standard, timber body	1953	no damage
1936	Standard class and brake van, timber body	1959	no damage

Estimated tare weight, including locomotive 461.02 tonnes
Screw shackle connections between vehicles.

EXTRACT FROM WEEKLY CIRCULAR FOR WEEK ENDING 25/6/1977

(also published in Circular for weeks ending 2/7/1977, 16/7/1977, and 1/11/1980)

LAYING IN NEW POINTS AND DISCONNECTION OF REDUNDANT POINTS

1. New and redundant points.

When new points are installed in running lines but are not immediately connected to the signal box (or ground frame), or when points in running lines become redundant and are disconnected from the signal box (or ground frame) but are not immediately removed, the Permanent Way Inspector must ensure that they are secured in the following manner:-

- (a) The closed switch blade must be clipped and padlocked and further secured by a fish plate screwed to the sleeper by at least two screws or fang bolts.
- (b) The open switch blade must be secured in place by all the stretcher rods being properly fitted with all their bolts and also by the insertion of a scotch between the switch blade and the stock rail, the scotch being screwed to the sleeper or otherwise secured.

The key to the padlock must be held by the Permanent Way Inspector.

In the case of facing points provided with a facing point lock, the S. and E. Technician must ensure that the plunger is secured in the lock stretcher bar.

2. Spring points.

Unworked spring points which are laid in but are not immediately brought into use or are put out of use but not immediately removed must be secured by similar means.

RCP 700/170

Area rail manager, Cork.

OII/I28

3.4.1980

Station Master, Mallow.

Buttevant Station - New Crossover.

Please ensure that the keys of Cabin "B" and all keys for points clips must be kept in the Signal Cabin at all times. Also that the Points leading to the Main Road must not be moved by Per. Way Ganger or Per. Way Inspector until permission is received from Signaller.

M.J. LYNCH,
AREA RAIL MANAGER

EXTRACT FROM WEEKLY CIRCULAR FOR WEEK 26/4/1980

YARD AND SIGNALLING ALTERATIONS

Burtevant

The following alterations have taken place at Burtevant :

- (a) Crossover points (no. 3 "B" Cabin controlled) has been taken out of use. It is clipped and scotched pending subsequent removal.
- (b) Points (no. 6 "B" Cabin controlled) connecting the down siding with the down main line has been disconnected from the cabin. It is clipped and scotched pending the completion of other alterations at Burtevant whereupon it will be removed. It is permissible to use these points should the need arise, however they will have to be hand operated.
- (c) Subsidiary signal (no. 7 "B" Cabin controlled) controlling the movement of trains from the down siding over no. 6 points (see (b) above) has been dispensed with.
- (d) Points No. 14 connecting the up main line with the up siding has been disconnected from the cabin. It is clipped and scotched pending reconnection whereupon the siding end of these points will be converted to "traps". It is permissible to use these points should the need arise, however they will have to be hand operated.
- (e) The "B" signal cabin has been eliminated.

RCP 1000/68