

# Disaster at Waller's Ash Tunnel

Stephen Duffell

'Dreadful, melancholic, frightful, calamitous', were just some of the terms the newspapers of the time used to describe an accident in which four men died. Waller's Ash Tunnel lay on the London and South Western Railway between Winchester and Andover Road station (renamed Micheldever in 1854), and trains had been passing through it for a couple of years since the opening of the line.

A contemporary report states, 'On Saturday 2 April 1842, men were working in the tunnel and others were in a shaft above the arch, when a fall of chalk hurled men down to the bottom of the shaft, breaking the tunnel arch and burying them in debris, killing four.' The newspaper reports, mainly in the *Hampshire Chronicle*, and subsequent inquest into the deaths revealed the whole sorry story:

First indications of a problem in the tunnel occurred four to six weeks before the collapse when a soft chalky substance was seen dripping from the roof of the tunnel, some 30 feet in from the Winchester portal (the south end). Then two weeks before, the surface of the earth over this particular place was found to be giving way – a shaft had been made at this spot during the tunnel's construction which was not completely filled in. During construction it had not been deemed prudent to fill up this shaft beyond a certain height, the upper portion being left open until the lower should have become consolidated. About a week before, a slip of chalk fell from off the sides of this shaft, which was observed by the inspector of the district; and on the Tuesday before, an examination took place by the engineers of the line with orders given to reopen the shaft and remove the material around it. This process was then commenced and a very considerable portion of the superincumbent weight had been removed. During this period no perceptible change of the arch took place; but on Saturday morning early, the part of the arch immediately beneath the shaft gave symptoms of motion; and, although the watchman below communicated this fact to the workmen above, they still continued their operations, and in about an hour were unfortunately precipitated, with a quantity of loose chalk, into the tunnel. Six of the number were buried: and of these two were taken out unhurt, whilst the others met their death.

The men had started their shift at 6 am and those originally in the shaft were James Watmore aged 58 years, his two sons, one 30 years and the other 18, Charles Nyas aged 20, James Allett, James Batchelor aged 19, Thomas Batchelor aged 25, Daniel Laws 23, William Knight 24 and John Gambell. Nothing particular was observed, until ten minutes to eight o'clock, when they were talking about going to breakfast. At this moment, as Gambell describes it, the place about them began to close in like a whirlpool, and Watmore, Nyas, Allett and James Batchelor were hurled into the abyss beneath, some 40 to 50 feet, the tunnel below giving way to a distance of about

30 feet, and hurled them amongst the immense mass of falling material. Laws, T Batchelor, Knight, and one of the sons of Watmore, fell from a considerable height, and the two first were so severely injured as to be obliged to be removed to Winchester Hospital, where they were promptly attended to by Mr Lightfoot, the surgeon. Gambell states that he must have immediately shared the fate of the four unfortunate men who had been crushed to death, had he not fortunately got hold of a piece of rope which hung from the scaffolding: but on this giving way, he fell a depth of 40 feet and received a severe hurt in the spine, had his right cheek, arms and hands severely lacerated by the rough material or chalk stone in his fall, and was carried home to his father's residence at Micheldever, where he at present lies.

The alarm of the unfortunate calamity was soon given and reached Andover Road station, where the porters and men employed there were instantly despatched to the assistance of the sufferers. After the removal of Gambell, Laws, Knight and Thomas Batchelor, and the two younger Watmores, a number of workmen began digging out the other unfortunate sufferers. The first found was Allett who was in a standing position, with his head and almost every bone in his body smashed to pieces. The next was Nyas, who was also frightfully mutilated; the third, poor old Watmore, recovered after four hours labour, and who presented a sorry spectacle; and the last was James Batchelor.

'Their remains were taken to a small hut over the tunnel, where they stayed until the coroner's inquest. A medical gentleman, residing on the vicinity of Mitchel Devon (sic) was in attendance at the spot a few minutes after the accident, and rendered the most prompt and humane attention to the unfortunate sufferers. Those in the shaft were:

James Watmore, a married man with a large family, aged 58 – dead

Thomas Batchelor, aged 19, single man – dead

Charles Nyas, aged 20, single man – dead

James Allett, single man, aged 23 – dead

James Batchelor, aged 25, taken to Winchester Hospital – head, face, legs and other parts of his body seriously contused, considered in a dangerous state

David Laws, a single man aged 24, also taken to Winchester Hospital – seriously injured and in a dangerous state

Thomas Knight, aged 24, recently married – head, back and other parts of his body severely bruised, not dangerous

John Campbell 22 – injured in the same manner as Knight, not in danger

Both the sons of Watmore, with only a few bruises

## The inquest starts

The inquest was held on the following Monday, 4 April, at the 'Cart and Horses' Inn at Kings Worthy, at 11 o'clock on the morning. The coroner was Mr Todd and when the 12 jury men appeared they were chiefly labourers, some wearing smockfrocks. The Coroner, however, without waiting to have their names called, said he was extremely sorry to have to commence his duty by making a public complaint of the conduct of an officer of his court. He had given the most explicit injunctions to the constable to summon the most respectable jury that could be collected in the neighbourhood. He had no fault to find with any of those who had attended as jurors, all of them were no doubt, respectable enough for their station, and some might very properly be selected for such an investigation; but there were others whom it would be positively cruel to call upon to take part in these proceedings. Persons in smockfrocks and pensioners really should not be expected to share the responsibility of this case. It demanded the utmost attention and most careful consideration of men of some education, independence and station in the county. The eyes of the whole kingdom were fixed upon them; the public took a very great interest in the progress and result of their proceedings and he would not take on himself the responsibility of conducting the

inquiry alone. He would therefore discharge the present jury and immediately issue another warrant, requiring the constable to summon a class of persons more independent in station and character. He begged them to believe that he adopted this course only under a deep feeling of positive duty, and without the slightest disrespect to any of them individually. He felt that in a case of so much importance it was necessary that he should have the assistance of gentlemen of independent property and station, persons in the habit of travelling by railways, and possessing, from education and habits of life, the means of forming an intelligent judgement upon the whole facts submitted to them. If he could not have independent gentlemen he must have respectable tradesmen; he could not go lower than that.

*(He wouldn't half get stick for that, these days. I suspect, though, that in the days before any form of compulsory education, he might have had something of a point, though I also suspect that he probably underestimated the capabilities of the first-chosen jury. I would think the circumstances very similar to the call that there has been to do away with juries in complicated fraud cases, where laymen are deemed to be unlikely to be able to understand the financial complexity of the matter. — Ed)*

Seen from the top of the northern portal of Wallers Ash, a down Bournemouth line service will soon be entering the tunnel. Chalk falls are a regular feature of the railway between Winchester and Basingstoke with evidence in the cess, particularly on the down side. S.C. Townroe



It was particularly annoying to him to have to make these observations; but it would be injustice to his own feelings and office, it would be unfair to the public, it would be cruel to those whom he addressed, to expect such persons to share in the responsibility of this enquiry. He did not shrink from his own fair portion; but he would not, through the carelessness or ignorance of a constable, consent to proceed without a better and a more numerous jury. Persons of the humbler class of life would be placed in the most awkward predicament in having to pronounce a verdict, and probably something more, in a case of such magnitude. The present jury were now discharged. He should have no objection that some of them should be re-summoned; and as to the others he should take care that their 'shilling' should be paid them if the money came out of his pocket. He regretted that any delay should intervene; it was no fault of his, however, for he had given the most particular injunctions on the subject to the constable. The whole conduct of that officer had been most reprehensible. Owing to his neglect, he himself had received no notice of the case till 12 hours after everybody else knew of it. He had directed himself not to confine himself to one parish, but to summon a respectable jury from the whole neighbourhood. The manner in which he had discharged that duty showed that he was no more fit to be a constable than a lord chancellor. If he had it in his power, he should certainly fine him £5, and if he did not, within reasonable time, summon a more respectable jury, he should indict him at the present sessions.

After the lapse of about an hour and a half the following jury, consisting of respectable persons of the county, were sworn: Samuel Devon, Richard Vokes, William Levitt, Thomas Turner, Robert Gandy, William Chalwin, Charles Robinson, Robert Hammond, George Paine, Robert Taplin, Thomas Watson, Michael Vokes (foreman), Charles Allen, Noah Vincent, Thomas Taylor, and John Tomkins.

## Duties of the jury

The coroner, addressing the jury, said they were aware that the case which they were about to investigate was one of considerable importance, and excited much interest in the public mind. Great responsibility was, therefore, thrown upon them, and he should have to beg their best attention, in order to enable them to form a correct conclusion from the facts laid before them. The oath they had just taken sufficiently indicated the nature of the inquiry. So far as it spoke of the cause of death, regular proof from the medical witnesses he had summoned would be given, so that they would have a foundation for every part of their verdict. That portion of the inquiry would not take up much time. The incidental matters, however, connected with the death of these unfortunate men were of the greatest importance, and must engage their closest attention. Very competent witnesses would be called to prove everything that had transpired before and at the time of the accident; and he trusted the whole of the circumstances would be brought before them. It would not be proper for him to anticipate the evidence or allude to any of the reports which might have reached their ears, except so far as to beg of them to dismiss such matters

entirely from their minds. Any information they might possess might guide them in putting questions to witnesses, but their verdict must be founded on statements received on oath.

Their first duty was to take a view of the bodies and of the place where the calamity had occurred. They should then return and hear such evidence as might satisfy their minds as to the cause and manner of the accident. The bodies which lay in a small house near the tunnel appropriated for labourers on the line, presented a much less shocking spectacle than might have been expected. Indeed, their appearance was more that of persons who had died of suffocation than contusion or mutilation. The jury did not return to the 'Cart and Horses' till half-past two.

## The labourers give evidence

The first witness to give evidence was Mr. H. Lyford, a surgeon from Winchester. He was called on Saturday morning about 8 o'clock, to attend the accident at the Waller's-ash tunnel. He went by train from Winchester, and on his way met with two men who were being conveyed to Winchester on a truck. He stopped and examined them. One had a fractured collar bone and appeared in a very collapsed state and he directed that they should be conveyed to the hospital without delay. I proceeded a short distance to Capon's cottage by the side of the railway, where the four bodies were lying. I saw a young man dead, on whose body were very few marks of injury, and the general appearance of the corpse conveyed to his mind the idea that he had died from suffocation.

He then went on to the tunnel where a great number of men were digging for bodies supposed to be buried, the tunnel itself at the southern extremity being full of chalk, which had fallen in. He saw one dead body dug out, and left the labourers searching for the others. He had since seen the bodies of four men now lying in the cottage, and on the whole they all presented a similar appearance having very little external contusion, and bearing the marks of death by suffocation, which I am of the opinion was the immediate cause of death in each case.

Having established the cause of death, the remaining witnesses explained the circumstances of the accident, starting with the foremen in charge of the night-shift labourers. George Price of Basingstoke was a railway ganger and supervised a gang of men set to work on the top of Waller's Ash tunnel, beginning on the Wednesday night, directed by Mr. Ogilvie, an engineer employed under Mr. Brassey, the contractor.

His duty was to look after the men who were removing the chalk, some 20 to 30 feet deep, from the top of the brickwork. When he first got there, he saw the brickwork from the inside; at the top of the tunnel it was a little cracked and sunk, and along both sides just at the spring of the arch. There was, originally, a hollow space above the arch, and it is supposed this sinking was occasioned by a portion of the soil above having fallen in. There did not appear to me to be any danger. He had 23 men employed in removing the chalk. They continued working all Wednesday and every succeeding night, another gang being employed during the day. A great quantity of chalk was removed, and no change took place in the state of the brickwork till Saturday morning between 3 and 4 o'clock. At that

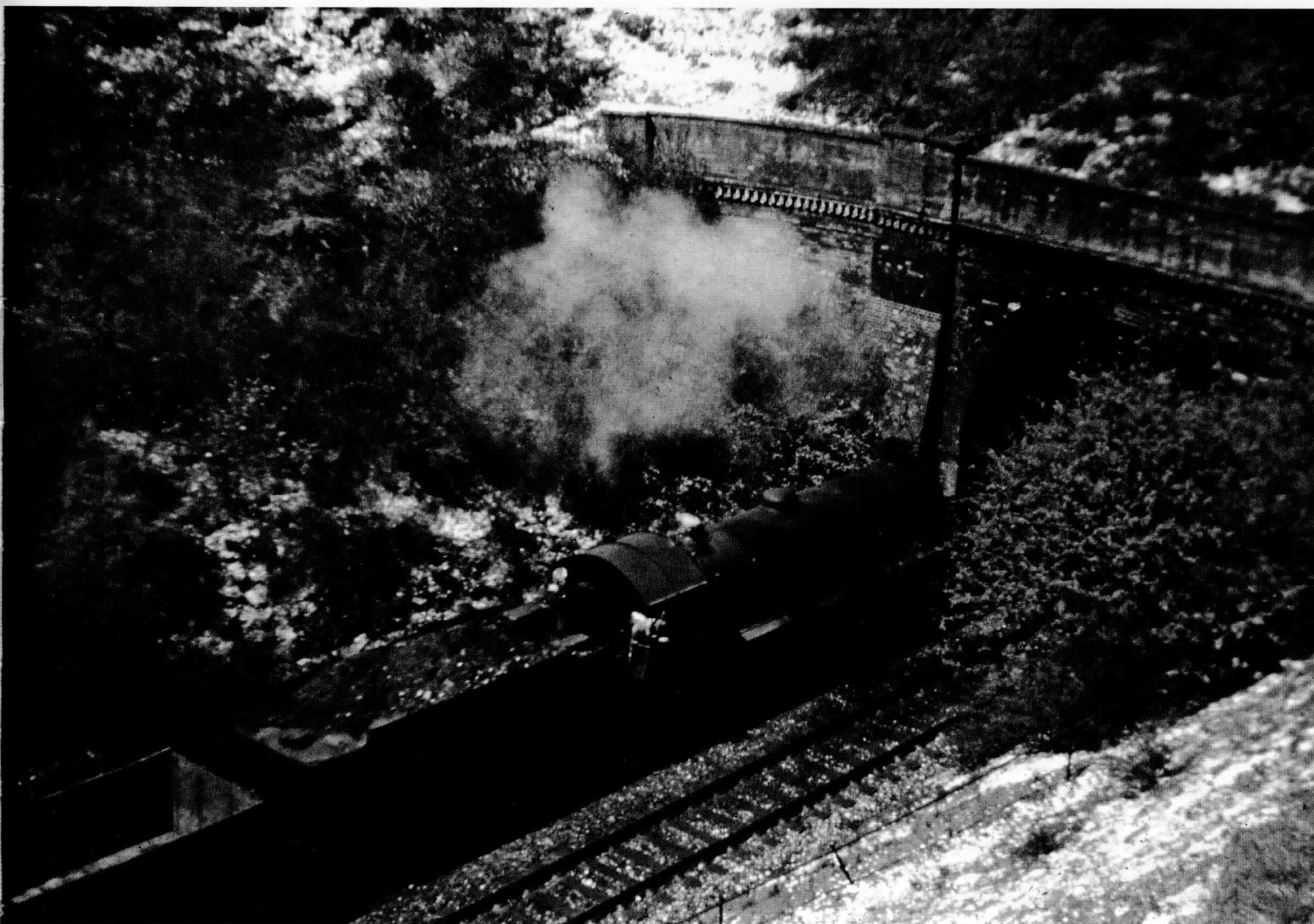


time the watchman came up to George Price and said he thought there was something amiss for he saw little bits of brick dropping. Price then paid particular attention to the state of the arch and saw small pieces of brickwork chipping off and falling faster than he had seen before. This chipping continued to increase for half an hour, and then as much as a wheelbarrow full fell from one spot to the thickness of half a brick. He immediately sent a watchman to Winchester to inform Mr. Douglas, the inspector of the line. Price then went to the top of the tunnel and got every one of them out of the hole for fear anything would happen. It was then about 4 o'clock, and there were no men at work in the tunnel. The men were put to work on another job, and Price went down below to see what state the tunnel was in. In about 10 minutes as much as three or four wheelbarrows-fulls had fallen from the brickwork, extending to a greater depth. He sent another messenger to Winchester to say it was getting worse, fearing the former would not make enough alarm. He did so to stop the trains at Winchester. He

remained by himself till about a quarter to six, when Henry Ferris, the day foreman, came, followed by several other labourers, it being nearly their time to begin work.

During the interval from 4 o'clock to 6 the brickwork continued to fall, but not so quickly as before. I wished the men to look at it, and some of the men said they would work in it, and others not. After Henry Ferris has inspected the brickwork he went up with his men to work on the top. Price's men had gone away, but Price remained below till the accident happened. Mr. Thomas Jones, foreman of the miners, arrived between 6 and 7 o'clock, and under his directions several men were employed in shoring up the brickwork with timber. We were so employed till about a quarter to 7 o'clock, when the brickwork began to break in deeper, faster and wider. They kept working till the arch gave way, and the earth began to fall in. At that time there were about a dozen men or more at work inside the tunnel, and about 20 on top. The first fracture of the arch was about a yard square: it continues to increase, followed by

Another Townroe image, this time of a Urie 'S15' literally about to enter the southern portal of the tunnel with a northbound freight. A goodly supply of fuel in the tender but perhaps not to the finest quality. More than a century and half after the fall it is still hard to appreciate that there was scaffolding placed on the down line while they dealt with the fall and yet trains were continuing to pass: working single line, on the up side.





a great quantity of chalk, which continued to fall for nearly a quarter of an hour, when the opening extended nearly 20 or 30 feet in length and the full width of the tunnel. About 12 men who were at work above came down with the chalk soil. None of the men inside were injured as they saw their danger in time to make their escape. I heard the men who were buried in the chalk cry out for about five minutes, 'Oh, Lord!' 'Oh, Christ!' The remainder of the men immediately set to work to dig out the sufferers, and Price proceeded to give notice of what had happened at Andover Road station. He did not know the four men who were killed, as they were Ferris's men.

Henry Ferris was examined next. He lived in Micheldever, near the Andover Road station, was employed on the railway as a ganger, and supervised a gang of 21 men. They started work the previous Monday, with directions to remove the chalk from the top of the tunnel. We worked off and on every day of the week till Friday night, up to which time no change had taken place in the tunnel to attract any notice. About half-past 6 o'clock on Saturday morning he went to work. He saw George Price, foreman of the night gang, under the tunnel, as he passed by on a small truck pushed by George Trendley, one of his men. Ferris observed that a small portion of the brickwork had shelved off to the extent of a couple of barrows-full since the night before; but I did not think from that that there was any danger. Price told Ferris he considered it dangerous and he had taken his men off about 4 o'clock, but did not caution me about placing my men. Ferris went above, got into the hole, and saw no alteration. As Ferris saw no danger he set his men to work as usual. None objected to work, doing so willingly. Ferris saw no change take place before the accident, but the fall was so instantaneous there was no warning and no notion of any danger from below. There was a man sent up, but he had not time to reach us before the fall. Ferris had not been out of the shaft above five or ten minutes when the fall took place. He did not leave the hole because he saw any danger, but got out to fix some posts to make another stage for men to work upon. At the moment the accident happened, Ferris was two or three yards from the edge of the hole. The whole mass appeared to go in at one time, and two of the stages on which the men were working fell in with the chalk and nine or ten of the men. Digging immediately commenced at the top for the men that were buried, and ropes were let down in case others should fall, allowing them to be extricated through the hole, as the tunnel was closed up. Ferris assisted in getting Elliot out, and knew the four dead men, but did not see them all dug out. Ferris agreed in response to a question by a juror that at 6 o'clock Price still adhered to the opinion that there was danger, at least he said he had taken off his men in apprehension of danger.

Next witness was a labourer, William Watmore, who lived at Micheldever, and was the son of James Watmore, who was killed in the tunnel. He was at work in Ferris's gang, on the top stage over the shaft, when the fall took place and saw no danger till the accident happened. None of the men were unwilling to work, and all seemed more willing to go down that

morning than he ever saw before. His father was at the bottom of the shaft, which might have been 20 feet deep, and at the top wider than the tunnel. There were about 11 men in the shaft, three at the bottom and the rest on stages. They had no notice of the accident and received no warning. It happened all of a sudden, and none of the men in the shaft called out before it took place. No alarm whatever was given. He and his brother jumped off and saved ourselves, but the other nine fell through with the chalk. The rest of the men immediately set to work to dig them out. He worked till he was ready to drop. The first dug out was Thomas Batchelor, the next Daniel Laws – they were both alive and sensible. They were directly sent to the hospital. The next we dug out was Charles Nyas, quite dead. My father was next taken out dead; then William Elliot and James Batchellor (sic), quite dead. The rest of the men got out themselves without being much hurt. Questioned by a juror about what Ferris had told them of events within the tunnel, Watmore replied that Ferris did not tell them that any bricks had fallen. They did not know when they went to work that anything unusual had occurred in the tunnel. Ferris was tying a rope to a post just opposite our stage not long before the accident – that post also gave way. Some of the men had previously objected to go down the shaft – some objected every day – but none did so on this morning. No beer was given, nor anything else, to induce them to go down. We all went to work over the tunnel, and did not pass through it. The night gang had all gone off before we got there. We did not know they had been taken off in consequence of the danger. We did not hear that any brickwork had fallen.

Another labourer, Charles Knapp, who also lived at Micheldever, was at work in the day gang last Saturday morning when the accident happened. On Friday he was at work on the bottom stage in the shaft. On Saturday morning we were ordered to turn into the hole again. He rather objected because it made his back ache when he worked there the day before; but he was not afraid not having heard of any danger. He did go down the shaft that morning as before; but after a few minutes Ferris ordered James Batchelor to take his place, which he did, and Knapp got out to wheel the stuff away from the top of the tunnel, till the planks on which he wheeled were wanted below so he went to work there a little while. He returned to fetch his shovel, and on returning with it, just as he was entering the tunnel again, he met Mr. Douglas, who said to him, 'You get back as fast as you can and tell the men to get out of the hole'. He ran up the slope directly, but before he could get to the top, it fell in, scaffolding and all. Mr. Douglas did not seem frightened when he spoke to him. He heard nothing till it all fell in together. When he left the tunnel to fetch his shovel, nothing that he knew of had fallen in except a brick or two, and Mr. Jones was then in the tunnel throwing up a brick to see whether any more would fall. There were at this time perhaps 10 or 11 men fixing timber, near Mr. Jones, to support the brickwork of the arch. The first Knapp heard of any danger was from Mr. Douglas. All he saw of danger was the falling in of two or three bricks when Mr. Jones chucked up the piece to test the solidity of the brickwork. He assisted to dig out the men.



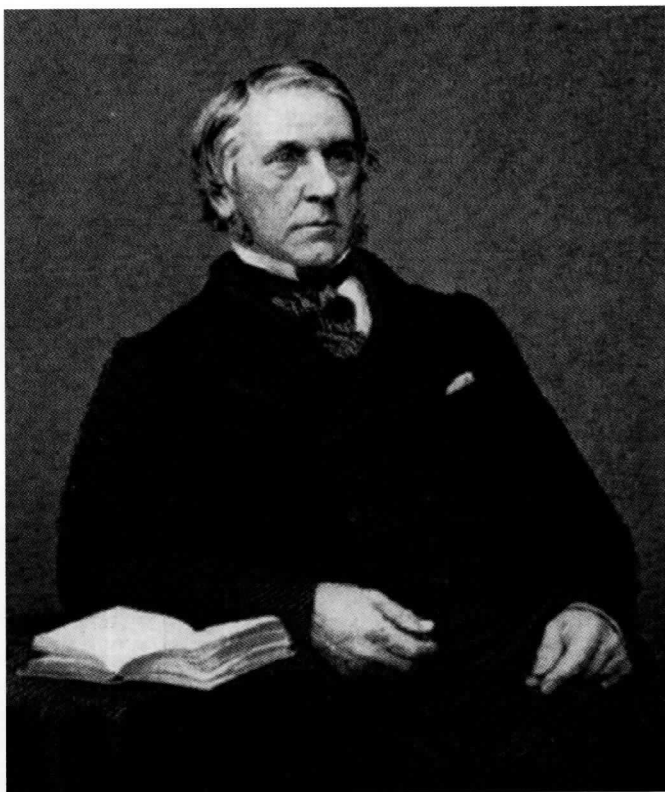
The south end tunnel mouth is just visible in the background as No. 35028 *Clan Line* heads south with the 'Bournemouth Belle', 20 February 1960. Note modernisation, in the form of the colour light distant signal for Wallers Ash. *Tony Molyneaux*

The final witness in the afternoon was George Mansbridge, who lived at Kings Worthy, and was employed on the railway in Mr. Capon's gang. He was at work on Saturday morning in the tunnel close under the shaft where the brickwork fell in, assisting to shore it up with planks. He had seen for a quarter of an hour before the accident happened a number of bricks fall, about a barrowful, some whole and some broken, that fell from that part of the arch which afterwards fell in. He heard Mr. Jones tell someone directly after the bricks fell to go and tell the men to get out of the hole. Whether anyone went he did not know. About a quarter of an hour afterwards Thomas Watmore, who was then working in the tunnel, said, 'Why, there is someone working above now;' upon which, Mr. Jones said, 'Go along up to the top and tell them to get out.' He did not know whether anyone went or not, but within a minute or

two the whole mass fell in. No one in the tunnel was hurt. They could see it come as long as two minutes before and had time to escape. The brickwork fell first, the top came in all together, and the chalk followed directly, entirely filling the tunnel.

### Joseph Locke gives evidence

The inquest was adjourned for an hour at 5 o'clock and was resumed at 6 o'clock, with Mr. Joseph Locke being sworn in and examined. As the principal engineer of the South Western Railway, he had the general superintendence of the whole line in every department. He has had opportunities of seeing this tunnel during its construction, and it was his duty to approve the works before they are made use of; and he approved Waller's Ash tunnel before the line was opened. At the place



**Joseph Locke, 1805–60.** Locke was a renowned and respected civil engineer, having worked on several major railway schemes including the Liverpool & Manchester, Grand Junction Railway, Lancaster and Carlisle, Manchester and Sheffield, Caledonian and others.

where the accident happened there was a peculiarity in the construction of this tunnel, as a large conical-shaped piece of chalk fell from the roof of the tunnel after excavation and before the completion of the brickwork, leaving a dome-shaped cavity extending nearly 20 feet above the crown of the arch. It was not a perfect cone, having one side longer than the other. Its width was scarcely so great as the tunnel. The brickwork, in consequence of that slip, was strengthened in that particular place, and from the time the brickwork was built till last Monday no change was observed. In every other part of the tunnel, and of all on the line, the brickwork fits tightly into the solid chalk. In some parts of this tunnel the brickwork springs from the solid chalk; but that is not the case where the accident took place. The brickwork there rises from the bottom. In my opinion the sides of the chalk tunnel are stronger than brickwork. All we have to do is guard against frost and exposure to the weather, which in a tunnel are never severe, and against which proper precautions have been taken by cementing the sides. Some parts have not been cemented, the chalk being left loose, projecting about an inch, with a view of seeing the effect of the weather on it, but no decay whatever has taken place. Wherever this chalk-work has from any cause been found defective, it has in all cases been taken out and brickwork filled in. After the tunnel was completed, a question arose as to the best means of filling up the vacancy above the arch, and it was ultimately determined to sink a

shaft there, which was done, to the depth of about 20 feet, the total depth of the arch being 45 or 50 feet. The arch was perfect. There was no perforation in the brickwork. The entire face of the arch, as far as the cavity extended, was filled up with chalk to a depth of about 10 feet, which was as much as was considered proper to be done, without loading the arch unequally from the irregularities in the shaft. By the subsidence or settlement of the material we calculated that the cavity would be gradually filled up without injuring the brickwork. The shaft was left open; but there was a temporary covering over it. This shaft, unlike all others on the line, was left open, as it was considered probable there might be occasion to add more material at some future time. Nothing more has been done since the partial filling-up of the shaft, which took place when all the other shafts were closed, a few months after the line was opened. His attention was called to this tunnel on Tuesday morning by a guard, at Southampton who reported to him that there was some defect in it. He proceeded by the train to the spot, where he met Mr. Ogilvie, the superintendent under Mr. Brassey, the contractor, and Mr. Martin, the company's superintendent; also Mr. Walker and Mr. Douglas, together with gangers and other persons connected with the works. He learned from Mr. Ogilvie that he had brought Mr. Martin down in consequence of having heard on the previous day some slip had taken place. He went underground, and found there some slipped bricks, which indicated pressure from above, and then went on top where Mr. Martin was, and found a number of men occupied in digging down and widening the shaft, so as to get down to the loose material on the arch. He approved of what they were doing, and ordered them to continue their operations, believing it better to remove the cause rather than attempt to resist it. He afterwards went below and examined the arch more minutely, and with a ladder had an opportunity of testing the arch in every portion. There was only one part, and that to a very small distance on the side of the arch, at all out of shape. It was so small, however, that it was difficult to say whether it had been recently caused, or an unequal settlement after the centres had been taken away. It was scarcely perceptible, and was just above where the 'snipping' of the bricks had taken place. He did not think it necessary to order anything further to be done on that account. The arch in every other respect was of a most perfect form, and there was no brick that had 'snipped' beyond a quarter of an inch in thickness. The 'snipping' was merely the surface, or skin, of the whitewashing peeled off. There was no defect whatever in the materials or construction of the arch. It was the unanimous opinion of all present on the spot, that the fall of earth in the shaft suddenly upon the brickwork had caused the bricks to snip. Although he apprehended no immediate danger, he was convinced that the arch must ultimately be taken out. Locke immediately wrote a letter to Mr. Brassey, calling his attention to all the facts, and he gave orders to Mr. Ogilvie to have men working night and day, in order to relieve the arch. On the following day he was unwell, and did not leave his room, but Mr. Martin reported to him that his orders were being



executed and that no change had taken place in the appearance of the arch. That was on Wednesday, and he continued to receive similar reports twice or thrice every day till the accident occurred. He passed through the tunnel on Thursday and Friday last; but did not minutely inspect it. He saw Mr. Brassey on Thursday morning, who told him in consequence of his letter to him, and the reports of his own superintendents, he had sent for his principal miner, Mr. Jones, who was on the Gosport branch, with a view to fix on a plan to take out the arch when the material above had been removed. They determined to erect a stage of timber under the arch. On Friday afternoon he saw part of the timber on the ground for that purpose, and some of the uprights were actually standing in the tunnel. He knew Mr. Jones, as a very superior, practical miner, as good as any in England. On Friday evening Mr. Brassey informed him everything was going on well, though no change had taken place in the arch, which still retained its perfect shape and he was more satisfied with the state of the tunnel that night than before. This was the last report he had. On Saturday morning, the early train not arriving till a late hour, he received from Nine Elms a letter at my chambers in London, telling him of the collapse. He went to Nine Elms station at 1 o'clock and remained there till the next train, which started at 3 o'clock, by which he came down to the spot. Before his departure from Nine Elms, the second and third trains then due, had come in, which told him of the accident in the tunnel. On his arrival, he found that the arch had fallen in immediately under the shaft, to the extent of about 20 feet square, and directly under the apex of the cone to which he had before alluded. The primary cause of the accident was the fall of earth on the arch. He could not account for the sudden giving way of the arch after remaining so long unaltered, except on the supposition that the brickwork having been fractured by the previous fall of chalk, the working of the miners above might have shaken it. The fretting of the arch and snipping of the bricks had rendered it too weak to support the super incumbent mass. If he had seen the brickwork 'snipping' to the extent of one or two barrows-full at a time, even if only to the thickness of one brick, he should certainly have felt alarmed and thought there was danger. If he had been present he would have immediately have had all the men removed; but if after a barrowful had come down the falling had ceased for some hours, as from 4 to 6, and the arch remained perfect, he should have considered it probable that it might have stood for days. He had frequently seen arches that have given way to the extent of one brick thick stand for a long time, but not where there were men working above. He should have considered it safe to work at the top if the arch had been at ease, but if it appeared to be 'fretting' he would have discontinued the working above. He considered Mr. Jones a competent person to form an opinion of the degree of danger that would arise from any change taking place in the state of the arch.

A juror questioned Mr Locke on the thickness of the arch, which was said to vary from 1–18 inches. Where the accident took place the crown of the arch was 2 feet 4 inches and built

with cement. The crown had not settled a quarter of an inch. The sides were perfectly solid; and in the whole length of the tunnel there was no deviation from a straight line in the sides of the arch. After he saw the 'snipping' of the bricks, he considered they might have been enabled still to leave the arch without additional support beneath, and he did not believe that any water had penetrated the arch or lodged upon it.

Mr. Bircham, solicitor to the Company, asked about maintenance of the line and Locke stated that the works of the railway are let by contract to Mr. Brassey, under bond. He maintains the rails, the road, the tunnels, and all the work connected with the line, and guarantees their stability. The company has a veto on the appointment of all his officers, so as to ensure efficient and proper superintendence. The line is divided into districts, and the company stipulates that every part of the line shall be examined every day by some one person in every district. We thus maintain a daily surveillance over the whole of the line. It was by this means we obtained, on Monday morning last, a report made to an officer of the company relative to the state of the tunnel, which brought Mr. Martin on the following morning to the spot. The total quantity of earth which fell into the tunnel was from 300 to 400 tons, the whole of which was removed within 36 hours, so that the trains have passed through again this morning.

William Watmore was recalled and asked about the wetness of the material in the tunnel. He noted the chalk taken out of the bottom of the shaft on Wednesday and afterwards was very wet indeed. The weather was wet on Friday; but it was fine on Tuesday, and the chalk taken out on Wednesday was wet.

## Thomas Brassey gives evidence

Mr. Thomas Brassey was then sworn in and examined. He lived at Kingston, and was the sole contractor for maintaining the works on the South-Western line. He had been the contractor for that portion of the line in which Waller's Ash tunnel is situated. He corroborated the statement of Mr. Locke, as to the construction of the tunnel, and particularly that portion of it where the fall of chalk originally took place. The shaft was left open, but protected from the weather by a covering of timber and two or three feet of chalk upon it. No wet could find its way into the shaft but what fell perpendicularly. The surface of the ground was drained, so that no water could get down but what fell over the shaft, but whatever soaked through the upper chalk would lodge in the shaft or find its way to the brickwork in the tunnel. There was no change in the tunnel till last Monday. He heard by note received from Mr. Ogilvie, his agent, on Tuesday morning, that there was some 'snipping' of brick seen in the Waller's Ash tunnel, and that Ogilvie would report further in the course of the day. On Tuesday night Ogilvie reported some slight further 'snipping', but that there was no change in the form of the arch, and that he had taken steps to remove the super incumbent weight. That night, Brassey sent a special messenger to Fareham for Thomas Jones and another experienced miner to meet him at the tunnel next morning, that they might devise the best means of proceeding. He also



Thomas Brassey, 1805–1870, was also an engineer but is better known as a contractor. Aside from work in England (see *Rebuilt* and the letter by Alan Blackburn), Brassey was involved in several projects overseas including France and Canada. He is remembered in Winchester as there is a residential road named after him not far from the present railway station.

sent, as a further precaution, to have a large quantity of timber brought to the spot. He went to the tunnel on Wednesday morning, and was there a considerable part of that day and of Thursday and Friday. He examined the tunnel each day carefully, getting up on a ladder and looking at the brickwork, but could not at any time see any change in the form of the arch. On Friday night when he left at 6 o'clock, the snipping was in some places perhaps half a brick deep; in others just a flake off. It was about 20 or 30 feet long on one side at about a quarter of the arch, and about 9 inches wide. No wet had got through the arch, not a drop. The tunnel was whitewashed when completed, but not since, and now is not at all stained by wet. The chalk taken out of the shaft was fine and moist, but not wet. On Thursday and Friday he had a stage of timber (which he had procured from London and Fareham) erected to serve for a scaffold to repair the work at least, or to support the arch if necessary, Mr. Locke having already determined that the damaged part of the arch should be taken out.

On Saturday morning (having gone to Kingston on Friday evening) he was again on his way to the tunnel, when he received intelligence of the accident, and on reaching the spot I found that about eight yards in length of the tunnel had fallen in immediately under the shaft. All the men had been dug out. When the accident happened there were about 12 or 14 feet deep of chalk on this arch; about 10 feet deep had been removed

when he got there. Upon investigating the circumstances, and he did make every enquiry, and could not find that anyone had been to blame for want of due caution or notice of danger. He considered Jones and Hill were as competent a judge of danger as himself had he been there. If he had seen a barrowful of brickwork fall at one time, he should not have apprehended immediate danger either to persons below the part or on it, although it would have shown that the arch was in motion. There would have been more cause for alarm if a second such fall took place, but it is scarcely possible to say, without having seen the falls, how far they threatened danger. It would depend on where and how they fell, which could only be judged by persons seeing them. The labourers had no extra pay for the work over the tunnel, nor any other unusual inducement held out to induce them to undertake it. Watmore (one of the deceased) was a regular sinker, and must himself been a good judge of the extent of danger in such a case. The arch was there three-bricks thick, and set in cement; except at the point where it has fallen, the arch is quite sound to the present time.

## Final evidence

Thomas Jones, of Fareham, a miner, had been employed on railways 12 years, and under Mr. Brassey for the last two years. He had never examined Waller's Ash tunnel until last Wednesday morning, when he did so by order of Mr. Brassey. He found the bricks crushed a little on one side, and 'chipping', but not at all displaced, and could not see that its shape was altered in the least. There was no appearance of wet coming through. He did not consider there was any present danger, but by Mr. Brassey's order he proceeded to get a scaffold ready, and to lighten the weight on top of the arch. The work went on day and night, and he saw no difference in the appearance of the arch till Saturday morning, when he arrived at the tunnel at about 20 minutes past six. There had been there a change, succeeded by quiet; about half a barrowful of brickwork had fallen before he got there to a thickness of about 4½ inches. Everything remained quiet till a short time before the accident happened, the men continuing their work above and below. About three or four minutes before the accident a space, 3 or 4 feet square, fell from the top of the arch about 9 inches in thickness. He directly saw danger, and hallooed out to the men to get out of the way, and they had just time to escape when the chalk fell through. He sent no message above; there was no time after I saw the danger to do so. He saw no danger till within two or three minutes before the accident happened, and remained under the shaft myself till the last moment, and never left till all the men were dug out.

John Douglas, of Winchester, was an inspector for Mr. Brassey of the district between Basingstoke and Winchester, and he first received notice from one of his platelayers on Monday morning last of some defect in the Waller's Ash tunnel, which was reported immediately to Mr. Ogilvie. In consequence of this report a number of men were set to work there, and continued without intermission till Friday evening, when he was there till nearly 8 o'clock. He left word with the watchman to give him immediate notice if anything should

happen in the night. Up to that time not the slightest change had taken place, but the next morning I was sent for before 6 o'clock. The messenger said that a change had taken place that morning at 4 o'clock in the tunnel for the worse, and that a few more bricks had fallen. He went to the spot immediately, and arrived before 7 o'clock, and found that a barrow full of bricks or pieces of bricks had fallen. He asked Jones what he thought as to danger, and he said he thought no more would come down. Douglas did not at all think it would come in immediately, and continued in the tunnel urging the men on in getting the props in, and then sent a 'signal-man' down the line to signal any engine or train that might be coming to slacken their pace in case anything should happen. Nothing more occurred till about a quarter past seven, when some more bricks fell down, and then the whole almost instantly. Rather before this Jones, being on the scaffolding, had felt something fall on his head, and he then called out that we should send to make sure no one was in the shaft, and instantly despatched a man for that purpose. Someone at the time observed that word had been sent up. The man Douglas spoke to went, but it was not above a minute after that the tunnel fell in, those in it having barely time to escape by running backwards before the whole mass came in.

George Price was recalled, to be asked about his dealings with Ferris. When Ferris came to work with his men at 6 o'clock on Saturday morning, Price told him he had taken off his men at 4 o'clock that morning because he thought there was danger. He wished Ferris to look at the brickwork, which he did, and he said he thought there was no danger. There had been a second fall very shortly after the first, and when Ferris came there must have been five or six barrow loads fallen in all. When Ferris said he thought there was no danger, Price did not contradict him, but was still of the same opinion as before, and should not, if it had been his turn to come on with his men at six, have allowed them to go into the hole unless some of the gentlemen, such as Mr. Locke or Mr. Martin, had seen it.

William Capon, of Fareham, superintendent over labourers for Mr. Brassey, had come to the work at Waller's Ash tunnel last Friday with a gang of men. No change took place during Friday. He got to the tunnel at half past 6 o'clock Saturday morning, and found Ferris at the top, but did not go down into the tunnel that morning until after the accident. Ferris told him a few bricks had fallen from the arch. The men were all at work when he got there, some in the tunnel and some in the shaft. He was on the top and had no notice from below until after the accident happened. Ferris had no conversation that morning as to any increased danger. Ferris was two minutes before the accident standing on the upper stage in the shaft, and if he had remained two minutes longer, would have perished more likely than almost any man.

## The jury's verdict

The coroner checked with the jury whether they wished to hear any more evidence and as they did not he proceeded to sum up. The main object of the inquiry, to ascertain the immediate cause of death of these unfortunate men, he thought that the

facts which had been proved should undoubtedly lead them to return a verdict of accidental death. The other question which arose incidentally but unavoidably out of the former – namely, to investigate the cause of the accident as between the Railway Company and the public – i.e. whether it arose from any degree of carelessness on their part, and whether any precautions by way of notice to the workmen in the shaft could have prevented it. They had heard the whole circumstances described from the original formation of the tunnel up to the time this unhappy occurrence took place. The tunnel had been erected and placed under the inspection of the most able officers; and nothing wrong having occurred for two years there was perhaps no reasonable expectation of an accident. Notice of the 'snipping' of the brickwork in the arch was taken on Monday last, and everything had been done that could be done up till Saturday morning. The question was, whether more might not have been done. The employment in the shaft seemed to have been unpleasant, the men objecting to go into it, not so much from apprehension of danger as on account of the inconvenience. Price, one of the foremen, noticed a change at 4 o'clock that morning, some of the brickwork having fallen in, which induced him to remove his men from their employment within the tunnel. Indications of danger seemed to have increased up to the time Ferris reached the spot, two hours afterwards. Price communicated his apprehensions to Ferris, and showed him about six barrows full of bricks that had fallen – whole bricks continuing to fall. Now this fact that whole bricks continued to fall, showed that there must have been a considerable loosening of that part of the arch, therefore there was some cause for the apprehension existing in Price's mind. Ferris however, did not appear to have seen the danger in the same light, while Jones did not apprehend any danger until almost immediately before the accident occurred. But these were all merely subordinate officers, and the work was left to the superintendence of illiterate men, Jones, for instance could not write his name. He really did think that persons of that uneducated class should not have been left in charge of so dangerous portion of the line. Some more competent officer than Ferris should have been present on the occasion, who, on finding the fall of brickwork to increase so greatly between 4 and 6 o'clock, would at once have seen the propriety of at all events removing the men who were at work within the shaft, and under the tunnel. To use the expression of Price, someone of the 'Gentlemen' officers should have been present for that purpose. That was the only point in which blame could be attached to the company, who were ultimately responsible for all the acts of those employed under them. How far they were blameworthy in that respect he would leave the jury to pronounce. There could be no doubt the materials which fell in on this occasion, having once separated from the freehold, were as soon as the accident had occurred subject to the law of deodand,<sup>1</sup> and only redeemable on payment of such a sum as the verdict of a jury might award. Deodands were regulated invariably by the circumstances of the case and the degree of blame attached to the parties. Sometimes they were merely nominal, and in the case of a recent railway accident the deodand imposed was no less than



£1,000. The jury must consider themselves arbitrators between the public and the railway company, giving them credit so far as they had done their best, but still holding a tight rein over those parties at whose mercy we were all more or less placed, under the present mode of travelling. He must leave it to them, avoiding extremes, to assess what amount they thought proper as a deodand. If they thought no blame attached either to the company or to their servants, they would be perfectly justified in making it nominal; if otherwise, they might give any sum between 1s. and the full value of the goods forfeited. He now called upon them to consider their verdict.

The jury retired at a quarter to 11 o'clock, and after an absence of 35 minutes the following verdict was delivered: 'Accidental death in each case, with a deodand of £50 on the materials that fell. The jury consider that Henry Ferris, the foreman of the deceased, was not a fit and competent person to be entrusted with the lives of men in so important a work.' The Coroner said he entirely concurred in the verdict, and he had great pleasure in being enabled to say this, instead of being compelled to declare that he took it as their finding and not his. The proceeding did not finish till midnight.

## The government inspector

Waller's Ash was not the only tunnel giving the LSWR some concerns. At Fareham on the Gosport branch there had already been a major collapse, and the Government Inspector, Major-General Pasley, was visiting the site from time to time. Thus it was convenient for him to stop off at Waller's Ash tunnel on his way to Fareham and inspect the site of the accident. He visits first on Wednesday, 6 April but his report does not appear to have survived.

On 13 April he again visits and reports back to the President of the Board of Trade:

In my report of Wednesday 6 April upon the accident, after having inspected the work then in progress for repairing the broken part of the arch of the Tunnel and securing the chalk above, I stated my opinion that everything was going on well, and that if rightly informed as to the thickness of the brickwork and the state of the chalk above in other parts of the tunnel and in the three tunnels near it, of which points it is obviously impossible to judge by inspection of the work when finished, I had no hesitation in saying that all three tunnels were in a safe state. Notwithstanding this impression, on Tuesday last, six days after my first inspection, I took the opportunity of examining work at Waller's Ash Tunnel a second time on my return from Gosport, and I found that good progress had been made, the breach in the arch of the tunnel having been substantially repaired with brickwork laid in cement, and entirely chased with the exception of a manhole by which the workmen ascend and get up their materials. Labourers were then employed in spreading and ramming loose chalk over the brickwork of the tunnel preparatory to sloping off the sides of the open chamber in the chalk above it.

Yesterday, Mr Martin, the resident engineer, at whose request partly I made this second inspection, took me into a gallery in the chalk which I had not seen before, as the mouth of it was then closed and which had not been described to me. It is about 30 feet long, 15 or 16 feet wide and 7½ feet high in the form of a natural arch, in the same direction with and immediately over the Tunnel to the northward of the part that fell in recently, with which it communicated. This gallery appeared to be composed of sound chalk, and had been formed by the first downfall of that material, which crushed this portion of the Tunnel, before the railway was opened as mentioned in my former letter. At that period after having repaired the arch beneath it, instead of filling up the hole, they left it open, but took the precaution of supporting it by rough woodwork, consisting of 4 transverse frames with longitudinal timber over and on each side of them. This arrangement no doubt must have prevented the chalk above the gallery from falling and crushing the portion of tunnel beneath it. On the 2 April when the recent accident occurred, Mr Martin informed me that he had instructions to build some arch ribs of brickwork laid in cement, to replace the woodwork, which may be expected to decay in a few years, and that it was also in contemplation to fill up this gallery in order to ensure its permanent security. My opinion is that when no vacant spaces are left above the brickwork of a Tunnel, in the sort of chalk near Winchester, it may be considered safe; and that the filling up of the gallery with chalk rubbish carefully rammed may suffice, though the additional brickwork will no doubt be beneficial. After examining this gallery I went up to the top, where I observed some cracks in the chalk above the spot where the men were at work, which was at the bottom of the chasm formed by the last accident, about 45 feet below the surface. Not having noticed these cracks when I visited the same spot before, I pointed them out to Mr Martin and suggested, that if the chalk below were injudiciously moved when levelling it, a second accident similar to the former might take place, which might be prevented by him or his assistant Engineer being constantly on the spot, instead of leaving the execution of the work to common labourers and a Foreman. Agreeing with me in opinion, he directed that the practice of working by night, when the state of the chalk could not be seen in so deep a hole should be discontinued. Thus the matter rests. Neglect or want of judgement may occasion an accident, but I apprehend none and should have no objection to remain on the spot myself, where the men are at work, provided that they are properly superintended. I wrote to Mr Locke the Engineer in Chief to state my apprehension and to recommend him to examine the spot again.

I beg to add that there is an immense mound of spoil or refuse chalk upon the surface piled immediately over the portion of the gallery described in this letter, and on

the very brink of the chamber produced by the last accident. This is an additional reason for anxiety and precaution. But under ordinary circumstances, I should not think it reasonable to require any person of more skill or importance than a Foreman to superintend the removal of chalk, nor would I have suggested such a thing if I had not observed the suspicious cracks before alluded to.

## Resumption of traffic through the tunnel

The line reopened for traffic on Monday, 4 April, and that night the newspapers were able to report another accident close to the tunnel, this time happily with no serious consequences. An engine, going up to Nine Elms to be repaired, with the 8 o'clock

This time it is a 'King Arthur' that is seen, and on the up line shortly to enter Wallers Ash tunnel. The date is 20 February 1960 and the engine No. 30768 *Sir Balin*.



luggage train, ran off the line, dragging with it the tender, and became embedded in the earth. Some alarm was manifested in case the mail train should arrive, and run into the luggage train, as the down line was blocked by the scaffolding erected in the tunnel. It was impossible to extricate the stricken engine, but after considerable exertions, the train was taken to Winchester, where it crossed on to the down line, and on passing the engine in the cutting, recrossed, by means of extra points, on to the up line, reaching Vauxhall station nearly two hours late.

A subsequent newspaper report reassured the public that an accident between the mail train and the luggage train was impossible, as there were three intervening watchmen, who would have given notice of the trouble. These reports suggest that single-line working had been instituted through the tunnel, with extra points being installed. Presumably, to erect staging under the fallen arch, the up line would have been slewed over at this point.

On Saturday night when the accident was known about at Nine Elms station, it was thought that passengers would transfer to the 'Red Rover' stagecoach that was still running between London and Southampton but instead of being full the coach contained one passenger.

## Modern-day conclusions

Some accident reports from earliest days can be dry to read and seemingly of little relevance to present-day conditions. Not so this one and we should, of course, remember that it was in consequence of incidents that safety standards were devised resulting in the modern-day rule book commensurate with safe working.

There are also several interesting points raised – and even missed in the report – which are worthy of brief investigation. Firstly we learn there were three other tunnels: two immediately north of Micheldever and that at Litchfield summit, the point here being that we now have confirmation that the two Micheldever tunnels were always that – two separate tunnels – and not as has been suggested a single tunnel later opened out in the centre to form a deep cutting.

We also have mention of a guard having experienced something wrong/falling as his train passed through. It is perhaps surprising this man was not either questioned by the engineer's or even called to the inquest. Hence we have no idea as to what he might have experienced.

Reading through we might also express surprise that it appeared, and indeed was confirmed towards the end of the report, that trains were permitted to continue passing through when scaffolding was in place. The immediate conclusion was that there was only a single line in place – temporarily – but it appears two sets of rails were present but with one only in use at the time.

Then we have mention of a 'signal-man' whilst later the term 'watchman' is used. In fact there is mention of three watchmen in the vicinity. A 'signal-man' at the time was literally just that at this period, 'a man who signalled to the trains' no doubt with a flag, arm signal, or perhaps even a board. Finally, we have mention of a 'miner' working on the Gosport branch. This should not be taken literally as meaning 'being at Gosport' as there were never any tunnels there, but instead contemporaneously the 'Gosport branch' was referred to as starting at Eastleigh and no doubt the miners were engaged in the tunnels around Fareham. Here remember additional lines of bricks had to be set on to the inside of the tunnel rendering it no longer wide enough for two sets of rails and consequently just a single line has persisted ever since. It is fortunate the same option was not undertaken at Wallers Ash but the strata through which each tunnel passes was very different in both places.

Obviously there are no images or even engravings of the incident or remedial work from the 1840s but the reader is directed to the following websites that both depict the south portal where the collapse occurred, and give a good indication of the depth of the cutting and what a long way it was between those working in the tunnel and those on top.

<http://svsfilm.com/nineelms/bassett.htm>

[www.prorail.co.uk/BWselection.php?id=225](http://www.prorail.co.uk/BWselection.php?id=225)

<sup>1</sup> A deodand is a thing forfeited or given to God, specifically, in law, an object or instrument that becomes forfeited because it has caused a person's death. The English common law of deodands traces back to the eleventh century and was applied, on and off, until Parliament finally abolished it in 1846. (Wikipedia) Possibly the other deodand referred to, of £1,000, referred to the accident on the GWR in Sonning Cutting on Christmas Eve, 1841 – some three-and-a-half months before the Waller's Ash accident, as a result of which the Coroner's jury put a deodand of £1,100 on the locomotive *Hecla* and the wagons of her train – there is a Wikipedia entry that describes it, and it is also in Hamilton Ellis's *Four Main Lines*, and in MacDermott, to give but two references. In that case the deodand was later overturned, and never paid. It would be interesting to know if this one was paid, since Hamilton Ellis implied that deodands were abolished after the Sonning accident (although clearly the law hadn't been changed by April 1842).