

Press release: Report 11/2017: Derailment and subsequent collision at Watford

Summary

Just before 07:00 hrs on Friday 16 September 2016, a London-bound passenger train operated by London Midland struck a landslip at the entrance to Watford slow lines tunnel. The leading coach of the 8-car train derailed to the right. The train came to a halt in the tunnel about 28 seconds later with the leading coach partly obstructing the opposite track. About nine seconds later, the derailed train was struck by a passenger train travelling in the opposite direction. The driver of the second train had already received a radio warning and had applied the brake, reducing the speed of impact. Both trains were damaged, but there were no serious injuries to passengers or crew. However, had the first train been derailed only a short distance further to the right the consequences would have been much more severe.

The landslip occurred during a period of exceptionally wet weather. Water from adjacent land flowed into the cutting close to the tunnel portal and caused soil and rock to wash onto the track. The site had not been identified by Network Rail as being at risk of a flooding-induced landslip. Such a landslip had occurred at the same location in 1940, also causing a derailment. Drawings from the 1940s relating to a structure subsequently constructed to repair the slope were held in a Network Rail archive, but were not available to either Network Rail's asset management team or the designers of a slope protection project which was ongoing at this location at the time of the accident. As a consequence, this project made no provision for drainage.

Both trains were crewed by a driver and a guard. The drivers each contacted the signaller to inform him of the accident and request the evacuation of passengers. The guards checked on their passengers to confirm that there were no casualties, and made regular announcements to keep passengers informed.

Recommendations

The RAIB has made six recommendations. Four recommendations are addressed to Network Rail relating to the improvement of drainage, improvement in the identification of locations vulnerable to washout, access by the emergency services, and to expedite a project intended to identify all drainage assets. One recommendation is made to the Rail Delivery Group, in conjunction with RSSB, to promote a review of the circumstances when bogie or infrastructure design could provide derailment mitigation. One recommendation is made to Siemens, the manufacturer and maintainer of the trains, to address issues relating to the securing and location of emergency equipment which came loose in the driving cabs of both trains when they collided.

The RAIB has also identified three learning points relating to issues identified during the investigation.

Simon French, Chief Inspector of Rail Accidents said:

The collision of a passenger train with a derailed train in Watford tunnel on the morning of 16 September last year serves as a reminder of why everyone in the railway industry continues to work so hard to manage risk – the collision of two trains in a tunnel is a scenario we all hoped never to witness.

The derailment of the 06:19 service from Milton Keynes could so easily have led to a catastrophic sequence of events were it not for two notable factors. The first was the sheer professionalism of the driver who, within moments of becoming derailed, had the presence of mind to apply the brake and then transmit an emergency message using the train's 'GSM-R' radio. His actions alerted the driver of a train approaching in the opposite direction who immediately applied the brake. As a consequence, the northbound train had reduced speed from 79 to 34 mph before striking the derailed train a glancing blow. This reduction in speed may well have made a big difference to the eventual outcome.

The second mitigating factor was the slotting of one rail of the track in the gap between a gearbox and a traction motor on three of the axles, so preventing the derailed train deviating any further into the path of the approaching train. This unintended consequence of the train's design probably made the difference between a glancing blow and something closer to a head-on collision.

We've seen this before – RAIB has previously observed trains staying in line following a derailment due to the configuration of bogie mounted equipment. Examples in the UK include derailments at Moy in 2005, Duncraig in 2007, Ardnarff in 2008, Barrow upon Soar in 2008 and Clarbrough tunnel in 2010. International examples include the derailment of a Japanese Shinkansen at 204 km/h following an earthquake in 2004 (all Shinkansen trains were subsequently fitted with guide brackets to enhance the chance of effective guidance following a derailment) and a 270 km/h derailment of a high speed train in Taiwan in 2010. I am also aware that certain high speed lines, such as HS1, already have infrastructure features designed to reduce the likelihood of secondary collision in a double track tunnel.

We continue to urge the rail industry to carry out research into design features that may limit deviation of the bogies from the track during derailment, and to think about ways that such features can be specified in future builds of trains. Modern passenger trains have tended to perform well when derailed, and this is often due to guidance provided by elements of bogie mounted equipment – it would be regrettable if future opportunities to enhance this

feature of train design were missed, or if such features were inadvertently designed out. There is also a need to think through how the infrastructure can be adapted to help guide derailed trains at high risk locations.

I recognise that there is a shortage of authoritative data on the dynamics of high speed derailment. However, useful research has already been undertaken in Sweden and Japan which the UK rail industry can learn from. I hope that the issue of post-derailment guidance is to be taken seriously in the future given the prospect of more trains on our existing network and even higher speeds on new infrastructure such as HS2.

For those involved, the aftermath of the collision must have been a difficult and distressing experience. The process of checking for injuries, reassuring passengers and then keeping them informed of progress with plans for evacuation required the railway staff on-board to remain calm and focused –which they did.

Although the staff on board the train responded well in this instance, some of our previous investigations have revealed a different story. I therefore urge train operating companies to consider their readiness to deal with unexpected events of this type – of particular importance are the arrangements to provide support and assistance to those on the train, especially when remote from a staffed station. Furthermore, the robustness of emergency plans should be evaluated by means of realistic training exercises and simulations.

Lastly, the landslip that caused the derailment occurred at a location that had not been identified as being at high risk (the previous landslip event at this location had occurred during the Second World War). Extreme weather events may cause earthwork failures anywhere on the network, and existing methods of assessing risk may never be a totally reliable method of predicting when and where they will occur. This leads me to conclude that more needs to be done to ensure that the fundamental cause of so many earthwork failures, poor drainage, is properly addressed. – hence our recommendation in this area.

Notes to editors

1. The sole purpose of RAIB investigations is to prevent future accidents and incidents and improve railway safety. RAIB does not establish blame, liability or carry out prosecutions.
2. RAIB operates, as far as possible, in an open and transparent manner. While our investigations are completely independent of the railway industry, we do maintain close liaison with railway companies and if we discover matters that may affect the safety of the railway, we make sure that information about them is circulated to the right people as soon as possible, and certainly long before publication of our final report.

3. For media enquiries, please call 01932 440015.

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PDF, 13.6MB, 53 pages

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Notice: S Jackson and Sons: application made to abstract water

The Environment Agency consult the public on certain applications for the abstraction and impoundment of water.

These notices explain:

- what the application is about
- which Environment Agency offices you can visit to see the application documents on the public register
- when you need to comment by

Official Statistics: Population trends of breeding birds in the UK, to 2016

The Breeding Bird Survey (BBS) is the main scheme for monitoring the population changes of the UK's common breeding birds, providing an important indicator of the health of the countryside. BBS trends are produced each year for over 100 species, and the results are used widely to set priorities and inform conservation action and reporting.

The BBS is run by a Partnership, jointly funded by the British Trust for Ornithology (BTO), Royal Society for the Protection of Birds (RSPB) and Joint Nature Conservation Council (JNCC) (on behalf of Natural Resources Wales (NRW), Natural England (NE), Council for Nature Conservation and the Countryside (CNCC) and Scottish Natural Heritage (SNH)), and is indebted to the thousands of volunteer data recorders who take part in the scheme.

News story: More seats for rail passengers as nearly £1 billion is invested in Midlands services

Rail passengers will get new longer trains with more seats and more space as nearly £1 billion is invested in services on the West Midlands network.

There will be 400 new carriages rolled out by 2021 and space for an extra 85,000 passengers on rush hour services in Birmingham and London, with the longer trains providing extra seats and space for passengers.

Under the deal with West Midlands Trains Ltd (a joint venture between Abellio, East Japan Railway Company and Mitsui & Co Ltd) to run the West Midlands franchise, passengers will get:

- free wifi on all main line services by the end of 2019
- for the first time compensation if services are delayed by more than 15 minutes
- improved access for those requiring extra assistance, including disabled people

Smart ticketing and live passenger information will also be rolled out under the deal, as part of a package of reforms that will improve journeys for passengers.

The franchise covers services across the West Midlands, as well as trains from London Euston to Crewe and from Liverpool to Birmingham.

[West Midlands video](#)

Transport Secretary Chris Grayling said:

This is great news for passengers using West Midlands services – with new trains, more space, more regular services and easier access for disabled people.

We are improving the whole travelling experience with live train crowding information, compensation for people delayed by 15 minutes or more, smart ticketing and better value tickets for part-time workers.

This shows we are delivering on our commitment to build a railway

that works for everyone.

Dominic Booth, Managing Director of Abellio UK, said:

We are delighted to have been announced as preferred bidder for the West Midlands franchise, driving growth in one of the most exciting regions in the country. We will be investing nearly £1 billion into the network, delivering new trains, better stations and a whole host of other benefits for passengers.

The trains running only in the West Midlands area will be jointly managed by the Department for Transport and West Midlands Rail (WMR), a consortium of 16 local councils.

Andy Street, Mayor of the West Midlands, said:

We want to see a new golden era for our local trains and today's announcement is an important step towards that.

Having the ability to use our local knowledge and understanding to shape what West Midlands Trains will deliver for passengers under this franchise has also been a game changer.

I believe the deal secured today will help create a railway that can not only improve people's journeys but keep our economy growing and we look forward to working with West Midlands Trains in making that happen.

There will be 20,000 extra seats for rush hour passengers in Birmingham, and 10,000 for people in London.

On top of this, there will be standing room for 50,000 passengers in Birmingham in metro-style carriages, similar to the ones used on the London Overground, for short cross-city journeys, and standing room for an additional 5,000 passengers in London.

The new franchise will see closer partnership working between track and train – delivering the Secretary of State's vision for the network. The West Midlands network of trains and infrastructure will be run by a local team of people with a commitment to the smooth operation of their routes, improving services and performance.

Other key benefits for passengers under the franchise deal include:

- plans to limit the impact of delays caused by leaves on the line in the autumn, including through the introduction of new modern trains
- an extension of smart ticketing in the West Midlands making this available at more stations, and a new smart card season ticket for people using the Northampton to Euston line
- more than 800 new digital information screens across 150 stations providing real time journey information, plus a new mobile service that gives live crowding information to help passengers plan ahead
- passengers will also be entitled to 25% compensation if their train is delayed by 15 minutes for the first time – they already receive 50% of their money back for delays of half an hour and full compensation if it is more than an hour
- more than £70 million invested in new and existing depots to improve train reliability
- more than £60 million invested on station improvements which will deliver:
 - over 1,000 new car park spaces
 - over 2,500 cycle parking spaces
 - a cycle hire scheme
 - new and refurbished waiting rooms
 - more seats at stations

As well as feasibility studies for the development of new stations in the West Midlands.

The new contract will start in December and last until March 2026.

West Midlands

There will be more than 180 new train carriages for the West Midlands, creating more space for people.

This includes investment in 100 new carriages on the Cross City line and 80 new carriages for the Snow Hill line, offering longer and more spacious services.

The carriages for the Cross City line will offer metro-style services with increased space to carry more passengers, and wider doors for quicker access.

Other benefits for passengers include:

- more trains between Birmingham and Shrewsbury with 2 services per hour

from December 2018

- a regular 2 trains per hour service between Birmingham and Rugeley via the Chase Line from December 2018
- a new direct hourly service between Birmingham and Stoke-on-Trent from December 2018 providing much needed additional capacity on this busy route
- an extension of Cross City line services from Longbridge to Bromsgrove
- a new hourly shuttle between Leamington Spa and Coventry serving the new station at Kenilworth.
- two morning and two evening rush hour direct services between Walsall and London from December 2018, helping to unlock economic growth in the region
- more Sunday services on the Cross City line with the number of trains per hour between Longbridge and Birmingham doubling from 2 per hour to 4 in December 2018, and then increasing to 6 in May 2021
- increased Sunday services on the Snow Hill line with the number of trains per hour between Snow Hill and Stourbridge Junction increasing from 2 to 6
- a new Sunday service between Birmingham and Shrewsbury from December 2018, and a second train per hour introduced in May 2021

London

Passengers on London services will benefit from 225 brand new carriages, with all other carriages being completely refurbished.

People travelling between Northampton and Euston and on the Abbey Line between St Albans Abbey and Watford Junction will be able to pay for their travel with a smart card for the first time.

In other improvements:

- more space for passengers will be rolled out on the Marston Vale line with earlier and later services between Bedford and Bletchley and a new hourly Sunday service from May 2021 for the first time
- modern trains for the Abbey line and improvements to Sunday services from May 2021 which will provide a similar level of service to that provided on a Saturday
- mobile phone and laptop chargepoints on all London services by May 2021
- more Sunday trains on the line from Euston to Northampton, with up to 4 services an hour running between Euston and Milton Keynes by May 2021

North-west

New trains will be arriving in the north-west on the Liverpool to Birmingham line, which passes through Crewe and Winsford. These are longer and have more seats for passengers than the existing trains.

A later last train from Liverpool to Birmingham on a Saturday, departing at least 45 minutes later.

Enhanced Sunday services between Birmingham and Liverpool from December 2021 increasing from one train per hour to 2 trains per hour.

A new Sunday service for Acton Bridge from May 2021.

[Press release: Landmark review places family ties at the heart of prison reform](#)

- New study by Lord Michael Farmer calls family relationships “the golden thread” to help reduce reoffending.
- Research shows prisoners who receive visits from a family member are 39 per cent less likely to reoffend.

Research has shown close ties between prisoners and key family members can significantly reduce the risk of reoffending – which costs society £15 billion every year.

In a landmark review, [‘Importance of strengthening prisoners’ family ties to prevent reoffending and reduce intergenerational crime’](#) published today (10 August 2017) Lord Farmer has identified family as the “golden thread” running through the reforms across the prison estate.

In September 2016 Lord Farmer, in partnership with the membership charity Clinks, was commissioned by the government to investigate how connecting prisoners with their families can improve offender wellbeing, assist in keeping the public safe and reduce reoffending.

Lord Farmer said:

My report is not sentimental about prisoners’ families, as if they can, simply by their presence, alchemise a disposition to commit crime into one that is law abiding.

However, I do want to hammer home a very simple principle of reform that needs to be a golden thread running through the prison system and the agencies that surround it. That principle is that relationships are fundamentally important if people are to change.

The Ministry of Justice has already started developing a strategy which will take forward recommendations from the review.

Progress is being made on a number of the recommendations, including giving governors the budget and flexibility to spend their resources appropriately

to help prisoners keep important family ties.

Alongside this the government has started piloting significant relationship performance measures which will provide crucial guidance to deliver more consistent services in areas such as visitations across the entire prisons estate.

The recommendations have been welcomed by Justice Secretary David Lidington who has set out his commitment to creating calm and ordered prison environments to deliver more effective rehabilitation.

Speaking today, he echoed Lord Farmer's view that family relationships are essential to reducing reoffending.

Justice Secretary David Lidington said:

Families can play a significant role in supporting an offender and I am grateful to Lord Farmer for his dedication and research on this important issue.

We are committed to transforming prisons into places of safety and reform and we recognise the need to provide those in our care with stable environments, and opportunities to change their behaviour.

There are numerous examples of good practice in this area, and we will continue work on a strategy to best support offender needs. That has to start with the numbers of prison officers available to support offenders which is why we are increasing staffing number by 2,500.

Lord Farmer's review reflects on progress that has been made in this area over recent years, with many prisons already having defined programmes which puts family relationships at the centre.

Innovative schemes and partnerships with local organisations are also vital vehicles for preparing men for release, and there are already proven partnerships in this area such as Storybook Dads, who help fathers keep in contact with their children, and Partners of Prisoners, who work with prisons to deliver more welcoming visitor environments.

Clinks CEO & Deputy Chair of the Farmer Review, Anne Fox said:

The Farmer Review listened to over 1,000 men in prison and their families, voluntary organisations across the UK, prison staff and academics.

The review concludes that quality family services will help people turn away from crime and it will support families to cope. Voluntary organisations have pioneered best practice for decades and now is the time to spread it far and wide.

The government has secured an additional £100 million a year investment for an extra 2,500 prison officers. With the increasing numbers of prison officers there will be more time available to directly supervise offenders, provide one-to-one support and increase the number of visits.

This, alongside the creation of Her Majesty's Prison and Probation Service, will put offender management at the centre of our reform agenda and create a necessary cultural change, bringing with it stability and security – and ultimately reducing the risk of reoffending.

Notes to editors:

- Ministry of Justice research shows that prisoners who receive visits from a family member are 39% less likely to reoffend.
- [The Prisons Reform White Paper](#) outlined that family members may encourage offenders to take responsibility for their offending, and the impact it has on their lives and the lives of those around them. If a prisoner receives visits by a partner or family member (one measure of family ties) the odds of reoffending are 39% lower than for prisoners who had not received such visits.
- Clinks supports, represents and campaigns for the voluntary sector working with offenders. Clinks aims to ensure the sector and all those with whom they work are informed and engaged in order to transform the lives of offenders and their communities. Contact details for Clinks, Ben Watson Communications Manager, 07809 332084, Ben.Watson@clinks.org
- Storybook Dads is a national charity that operates in 90 prisons nationwide, including women's prisons and Young Offenders establishments. It helps to maintain family ties by enabling imprisoned parents to read personalised bedtime stories to their children. The recordings are enhanced by adding sound effects and music and are sent to the children, so that the children can listen to their parents' voice whenever they need to. Storybook Dads helps approximately 5,000 families annually to keep in touch in this unique and meaningful way.