# Rail Disruption

## It happens: Deal with it!



*Dawlish 2014 – photo Network Rail*

## Contents

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# 1   Summary

What has become clear during the consultation and practical involvement in Rail Replacement by the author is how reliant passengers are on rail.  It is common for regular passengers to be creatures of habit – they arrive at the station at about the same time, stand on the same part of the platform, join the same carriage on the same train.  When anything does not run to this schedule, concern starts very quickly.  The Transport Focus report 28/7/2015 "Reacting to extreme weather on the railways" also raises the issue that this can sometimes outstrip the ability of rail to deliver.  Many passengers expect rail to carry on working during severe weather disruption, when local and main roads are closed.  However there is a need for significant improvements in how disruption is handled.  We all know rail disruption happens, but how it is handled remains the number one concern of rail passengers.

Most passengers will have their horror stories about journeys that went wrong, but they will also have examples of where it went right and the rail industry must learn from that experience.  We have examples of good practice from major rail projects (both past and current e.g.  Thameslink) and major events such as the 2012 Olympics, however there are also examples of information breakdown and passengers (and often front line railway staff) not knowing what is going on or what to do.

Although there has been a rapid growth in use of technology (web, Twitter, Facebook, Smartphone applications and Customer Information screens), passengers may not know about them.  This information can be incomplete and contradictory, although it is often ahead of what the front line staff know, but there are still a significant number of passengers that rely on face to face contact with staff and use public, rather than personal, sources of information.

Following responses from passengers to the disruption survey (www.railfuture.org.uk/disruption) and contact with train operating companies, there is an understanding of the problem, but many questions remain.  Our challenge to the rail industry is to tell passengers what you are doing about the problem and involve them in the solutions.

# 2   The Problem

The rail industry continues to be a success.  Passenger numbers continue to grow on a year by year basis even when the economy was shrinking, against expectations.  Investment in rail maintenance and expansion continues at a level not experienced since Victorian times, and expectations from passengers continue to grow even further.

The rail network is based around that initial Victorian investment with many routes evolving from piecemeal development as companies raced to be the first to reach major towns and cities for both passengers and freight.  These investments changed the country but much was also unsustainable with basic running costs far exceeding the income received (from passengers, government and business) and a growing maintenance requirement in both rail infrastructure and trains.  Because of this there have been major reorganisations with closure of poorly used lines and even some major lines identified as 'duplicate'.  In recent decades the main structure of the rail network has been established and largely settled (although many, including Railfuture, campaign for further improvements and expansion).

Upgrading and maintaining the current network remains a major challenge – use of the railway means there is little time available to carry the work out without causing disruption.  Carrying out this work correctly, in a safe and secure manner remains the number one priority of the industry.  Use of the network, and sometimes the upgrading and maintenance work itself, can put pressure on individual components and systems and cause unplanned disruption.  In many cases the maintenance of rolling stock can be a problem, with units being in frequent use.  In addition the network is subject to damage from third parties – weather, vandalism, bridge strikes by vehicles and misuse of level crossings, trespass (by people and animals) and passengers hit by trains – for whatever reason.  Commonly other infrastructure elements such as embankments, cuttings, tunnels and bridges can also create problems for trains.  Events can also generate issues for rail – recent examples include the London Olympics (2012) and many other events across the country, there may also be combinations of these.

 The size of the network and the massive amount of components that are used to connect up the system adds major complexity to the system – and identifying the type, location and state of each of these remains a massive challenge for the industry with major investment into doing just that underway.  This will lead to much better informed decisions on where maintenance is required and managing change.

In the past there was significant 'investment' in trying to reduce the complexity of the network with the reduction of some lines to single track and the removal of points and signalling – with this work resulting in some disruption.  Some of these reductions are now regretted and there are plans to restore some of these to enable more services to run – involving further disruption.

Major upgrades are not always a one-off and some major work has been carried out again after 20 or 30 years.  The West Coast Mainline is an intercity example of this as is London Bridge which was significantly reorganised

in the 1970s and is now being rebuilt.

# 3   Summary of Responsibilities during Disruption

There are agreed responsibilities in the rail industry and an arbitration process to help resolve any grey areas.  In general the responsibilities are:

**Network Rail**

- Infrastructure – rail, points, signaling, electrical supply, bridges, tunnels, embankments, level crossing infrastructure.
- Trespass (including suicide), infrastructure vandalism, level crossing misuse (there is action that is taken by Network Rail to manage this, but this will never cover all issues)

**Train Operating Company**

- Operations – Train problems (mechanical/electronic), Staffing issues, passenger disruption (health problems, anti-social behavior), and delays to train departures – compounding problems further down the network.

**The timetable** (the working timetable that includes freight and empty stock movements) is the basis of the service that Network Rail supply – this can reflect agreed, necessary changes as required (even at short notice).  It can also contain information regarding planned service disruption and include the times of replacement buses.

Transport for London (TfL) often manages elements of infrastructure and manage the passenger interface.

# 4   Planned Disruption

There are a number of options available to rail industry planners and the priority will usually be to ensure minimum impact on rail operations and, especially, passengers – the industry is organised so that the cost of disruption is met by the responsible party with compensation paid to the affected organisations to defray their additional costs and loss of income (some of which may also be paid to passengers affected – generally for unplanned disruption) – this may be Network Rail on ToC, ToC on ToC, ToC on Network Rail.

The size of the planned disruption will be dependent on the work required – safety being the prime issue, size of work that can be carried out with milestones to ensure a working railway is returned as planned.  Any disruption requires a managed closedown of the relevant components, the work itself, checks and restoration of the relevant/changed components.

## 4.1   Day time (mid-week)

**Limited Closure** – this can be used for minor works and can be carried out between train services.  It would not usually be planned for peak time and busy routes – may be the result of an infrastructure failure and the need to restore services as quickly as possible.

**Blockade** – Unusual, but could be used if there was a major infrastructure failure.

## 4.2   Overnight

**Limited Closure** - this can be used for minor works and can be carried out between train services.

**Blockade** – Overnight blockades can be used as there may be little, or no, overnight traffic, or it can be diverted easily – (this also includes freight and may also include empty stock movements to depots for maintenance and positioning for the next day's services).  Late evening services may be replaced with Bus or alternative routes.

Overnight working has additional challenges as work has to be carried out in artificial lighting and can cause disruption to people living near the rail.

## 4.3   Weekends

Traditionally rail traffic over the weekend does not have the peak flows of mid-week, but passenger numbers are high in many areas.  And spread throughout the day.  However there is an assumption that these passengers can be more flexible than those during the week that are traveling to work and diversions or road alternatives (bus/coach) are ;likely to be easier to provide.  However with the national growth in passenger numbers, this still involves significant numbers.  Local circumstances may differ, but in general Saturday is busier than Sunday – especially before about 12:00.

**Limited Closure** – this can be used for minor works and can be carried out between train services.

**Blockades** – This is commonly used to allow work to be carried out – either for individual work or as part of long

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term project.  Services can run down on Friday night and work through to Monday morning – leaving time for services to be resumed.

### 4.4 Holiday/Extended Working

A bank holiday is effectively an 'extended weekend' and allows time for more smaller or larger works to be carried out.

**Blockades** – planning for Holiday blockades will normally take place well before (months or even years) the event – ensuring adequate publicity and planning, especially when part of a major infrastructure upgrade (e.g. Thameslink, West Coast Mainline).

### 4.5 Period Blockade

Sometimes the planned work does not allow services to be restored after the weekend or holiday blockade.  An example could be rail tunnel re-lining, bridge replacement, station platform re-alignment, and major infrastructure failure (Dawlish 2014).  Plans for alternative rail services can be made (alternative routes, alternative termini), longer term bus replacement services.

## 5 Unplanned Disruption

As identified, the complexity of the network means that there are many critical components that can fail, from the infrastructure, rolling stock, operational issues and third party impacts.  These are often real time events with no opportunity to fully plan for them.  Although they are stand-alone events, they may also be combined with other events or even occur during planned disruption.  There is little opportunity for advance warning, especially for those passengers that have already started their journeys, both directly affected by the incident or already on services that are likely to be affected as the impact spreads.

The most common problem identified in our survey is the lack of, or quality of, or consistency of information available to passengers, and often rail staff themselves during these events.  There is evidence that information is often available about the event and passengers with access to smartphone apps and internet access can often see what is happening before railway staff (even on some occasions the train driver/train manager/station staff).

## 6 Overall Blockade Experience

Planned blockades are generally very successful with a large majority delivering their objectives and returning the railway to normal on schedule.  This includes work like replacing track, points and signaling or removing existing bridges, removing sections of an embankment, pushing a new bridge into place and reconnecting tracks.  There is evidence of using the blockade to carry out other minor works (e.g.  decorating a station as the line is closed for track improvements elsewhere).  Often commuters on the Monday morning would not even notice how much had been done There are however experiences of services being delayed after the blockade due to over-runs – a difficult decision for the construction team as completing the work may be less disruptive than reversing out some or all of the changes.

There has been significant investment into reducing the impact of changes to the network.  There are now many examples of significant work being carried out around a working railway – including lifting bridges into place over an open line.  Where closure/blockades are required there have major improvements in reducing the time required – pushing a new tunnel under the railway, lifting bridges into position after there has been major preparation in the weeks or months previously with very limited impact (e.g.  speed restrictions).

Joint working with Network Rail and ToCs has been successful in some areas – working alongside each other in a control centre has allowed better flow of information and decision making – but this success appears to be variable.

There is usually little knowledge of the details of work that is planned to be carried out and the public is unlikely to know if it has not been completed unless services are not restored as planned (ranging from further disruption such as speed restrictions to parts of the network not being available – from some to all tracks).  There are examples of where the network was expected to be restored and there was wide publicity, but further checks resulted in the blockage having to be extended (Tonbridge<>Hastings early 2014) and major incidents where work and safety checks could not be completed in time with late notice of further disruptions the following day (Kings Cross & Paddington Christmas 2014).  Large projects at Christmas and Easter have a mixed success rate.

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## 6.1    Extended Blockades at Christmas, Easter and other Bank Holidays

Passenger numbers are lower during bank holiday periods and especially at Easter and Christmas – with the majority of businesses either reduced or closed – the major morning and evening peaks will be significantly lower but offset slightly by a noticeable increase of leisure travel (from some of regular passengers on holiday and more ad-hoc travellers) as they visit family and friends and retail, sport and other attractions. From a rail industry perspective this is also an opportunity to carry out some extended blockades.

Although very common, Bank Holiday blockades are not taken lightly and there are problems ensuring that the workforce and supplies (including major plant and machinery) is available at the right place and time.  It was reported that about 11,000 rail workers were deployed over Christmas 2014.  This is likely to come at an increased cost.  These are often planned years in advance, if part of a major project, and in any case many months before.  Publicity for these events is usually circulated in general across a wide audience and especially the regular rail travellers, but may go unnoticed by passengers that travel by rail much less often. Alternative arrangements may be put in place, but sometimes there has been a general advice to avoid travelling in these areas if affected.  Advance ticket booking is limited to 12 weeks before travel, one of the reasons for this time restriction and will normally reflect these works.  With the number of large projects underway (Electrification, Thameslink, Northern Hub, East Kent Resignaling Phase 2, Freight enhancements, Station rebuilds – e.g.  Reading, Birmingham New Street, London Bridge) these extended blockades are key to the delivery of these on-time, also where there is interface work on projects such as Crossrail and HS2 in the future – although the majority of the work is separate from the current network.

Plans for these blockades will include contingency plans in case of problems during the works and potential impact on the service after the work is planned to finish.  However there have been examples in the past where services have not been restored on time and major disruption has been caused, although this has improved in recent years Christmas 2014 works outside Kings Cross (Thameslink and other work) and Paddington to Reading (Crossrail, Electrification and other work) overran.  Although there was an alternative route to Reading from Waterloo, it struggled with the additional numbers and caused delays of many hours to journeys.

The works outside Kings Cross appear to have been caused by plant failures and services could not be restored in time, this was made public on Boxing Day afternoon, but too late for many passengers travelling the following day – passengers were diverted to Finsbury Park (Underground/suburban station) where a limited service was provided – with some onward travel to Peterborough to connect with longer distance services.  Finsbury Park was unable to cope with the volume of passengers and the emergency rail service also struggled.  There appeared to be a major lack of staff resources at Finsbury Park to advise and manage the passenger numbers.  It is clear that many more staff need to be on-call to step in if similar failures occur in the future.

Even within the problems identified at Kings Cross, there was at least some examples of best practice – passengers to and from Cambridge were diverted to and from Liverpool Street, Hull Trains services were diverted to St. Pancras.

The Paddington disruption was not just in the London area but extended to Penzance and Swansea and consequently to west Wales.  The morning train to Penzance was cancelled so there was no afternoon train back to cater for a fully booked train to Paddington with passengers faced with using class 150 and Cross country services to Exeter and South Western services to Waterloo with long distance standing.  In South Wales the trains that did run ran about 30 minutes after the booked times west bound and there were cancellations in the hourly HST service to Swansea There was over crowding on the 2/3 car ATW trains with passengers being left behind.  There were hundreds of shoppers heading to and from Cardiff and Swansea so that when the 17.30 from Swansea was cancelled there were 300 passengers on the platform who had to wait for an hour for the next service.  So although Paddington was sorted out late morning the ripple effect was taking place further down the line in the afternoon.

Other suggestions in this report will also help to manage the problems.  Ideally they should not occur and contingency plans should be more robust, but the amount of work being carried does always create risk that services cannot be recovered on time and a plan B, C or D is required.

## 6.2   Work carried out at Christmas 2014 (from Network Rail web site)

Major works were also carried out around London Bridge at the same time and there were no significant issues reported – Network Rail have produced a YouTube time lapse video that shows how much work was carried out (and will continue to 2018) London Bridge Works Christmas 2014

### West Coast Main Line

The latest phase of upgrade work at Watford, Norton Bridge and Stafford has completed.

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After the last trains on Christmas Eve, work took place at Watford until early this morning to replace and install new sections of railway and bring into use a new modern signalling system.

At Norton Bridge and Stafford engineers worked until the early hours of Sunday 28 December as part of a £250m package of improvements to improve the line and build a new flyover to remove the last remaining bottleneck on the West Coast Main Line.

### East Coast Main Line

Between London King's Cross and Peterborough more than 1000 people worked to complete 13 different projects.  Further north, projects included bridge improvements in Dewsbury and Newcastle and track improvements near York and on the Doncaster to Leeds line.  The line out of King's Cross is now running to the planned timetable.

### Midland Main Line

On the route serving St Pancras hundreds of people completed projects including:

- Signalling alterations for the Thameslink project
- The demolition and partial reconstruction of two bridges for the Midland Main Line electrification project
- Track improvements between Kettering and Corby and at Toton

### Thameslink

New signalling has successfully been installed on the New Cross Gate to Sydenham corridor and also in South London near Bermondsey allowing resumption of planned Southern and London Overground passenger services.

Work to replace tracks at the entrance to the Hornsey Depot in North London has also been completed.  This means that GoVia Thameslink can resume operation of their planned service on the Great Northern route.

### Scotland

The Edinburgh to Glasgow Improvement Project team demolished the roof of Carmuirs Tunnel, near Falkirk.  They will install a new tunnel over the New Year break.

Signalling was renewed between Haymarket and Inverkeithing and track work was undertaken in Queen Street Tunnel, Glasgow.

### Anglia

Track renewals have been carried out between Stratford and Shenfield and upgrades to the overhead line equipment on the Great Eastern Main Line has been completed.

Two bridges on the Gospel Oak to Barking line have been replaced.  At Chadwell Heath work is underway on the eastern section of Crossrail.

### Wales

A bridge was replaced a bridge over the River Teme on the line between Hereford and Shrewsbury.

Bridge demolition work was also successfully completed on the South Wales Main Line between Newport and Cardiff as part of electrification works.

## 6.3    Chiltern Rail Landslip

An excellent example of dealing with an unplanned disruption that then became an extended planned disruption.  Information was made available quickly – alternative travel options made available, staff (including HQ) dispatched to help and simple gifts handed to passengers disrupted.  Passengers later praised the operator on handling the disruption as well as understanding the cause and the efforts taken to restore the service.

http://www.chilternrailways.co.uk/important-travel-information-landslip-between-leamington-spa-and-banbury

So managing planned disruption is a complex issue and the rail industry does take a broad view of impacts.  Often the work may go very well and disrupted passengers are content with how they have been dealt with before, during and afterward, but this is not always the case and the passenger experience is often poor.

# 7   Disruption Handling – Passenger Requirements

The railway network is increasingly busy.  Although the working week (and especially the peak periods) are the busiest, there are significant numbers in the off peak, weekend and holiday periods – in fact there are

calls for more services and even on Christmas and Boxing Day which have become a traditional closure period for most of the network. These passengers rely on the reliability of the timetable for their day to day commute, business and leisure meetings and often pay a premium for this service above other forms of travel. When things go wrong, passengers are likely to be concerned and the personal impact may go much further than just inconvenience.

## 7.1 Information

Passengers expect information to be available before and during their journey (and even after the journey if there has been significant disruption). Guidance and assistance on how to get round disruption is also key and can be supplied in various ways:

- The Personal Touch – Ideally someone to talk to face to face is still the preferred option (train manager/guard, station staff)
- Audio/Visual Announcements – early information may be supplied on the train and station via audio and visual media – remembering the special requirements of some passengers – both may be needed,
- Internet/Smartphone applications/Social Media will continue to grow as a way of contacting passengers, but effectiveness will remain poor when wireless network quality is bad or non-existent. For some time the majority of passengers are unlikely to be able to access online information – and it is vital that railway staff are able to access it and pass it on as necessary.
- Before a journey starts information is often supplied to the various media outlets – radio, TV, newspapers and posters at railway stations (and other appropriate sites) – often passengers need to be made aware of this (and especially the location of posters) – it is still surprising how many people still say they knew nothing about planned disruption even when this has been done.
- Passengers need to be clearly informed of practical alternatives (there have been examples of customer information suggesting use of Transport for London services when the disruption has been many miles away from London).
- Before planned disruption there should be notice of what it is required for and wide publication of alternatives. Information also needs to be complete – (e.g. track closure might be well publicised and some services continuing to run – but use of rail replacement buses may limit or close the station car park and will only be discovered when the passenger arrives for what was expected to be a non-disrupted service).
- After the event there should be information available on what happened. Passengers would like to know what happened, what was done to try and prevent this in the future – in "passenger speak", truthful and honest. Passengers are willing to help prepare for and analyse after the event top help produce lessons learned and future actions.
- Passenger Information During Disruption (PIDD) is a passenger right and is one key element of the European Passenger Rights and Obligations (PRO) directive. The Office of Rail Regulation has asked the rail industry to rise to the challenge of PIDD. Train operators have now signed up to this and it is a license requirement.

## 7.2 Industry wide consultation

Passengers expect an industry wide response to planning for both planned and unplanned disruption. This needs include other public transport providers in the area. There have been good examples of this with particular success in London when rail ticket validity has been extended to buses, tube and tram for both planned and unplanned disruption (however some examples of an operator not allowing free transfer to their own alternate services at the same time). Thameslink enhancements in London have involved a wide range of public transport providers, the Olympics were a further example of a major third party event that was planned for by the industry and was a success. There are limited examples of train operators co-operating to allow the acceptance of other operator's tickets when there are major disruptions, but sometimes obvious alternatives even during planned disruption appear to be missing (e.g. Essex Thameside from the Southend area when Greater Anglia is affected).

## 7.3 Alternative Provision

The preferred alternative provision will always be a rail service – and there have been good examples of alternative routes or diversions during planned disruption, even if limited.

Where planned disruption cannot be avoided, clear notices at stations need to be provided well in advance. Audio and visual reminders should be given on the services that will be affected – good examples of this have been the forthcoming and previous planned disruption during the Thameslink work in London and previously before and during the London Olympics 2012. This gives the passenger an opportunity to avoid the disruption if possible.

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The default alternative provision is often bus or coach substitution. These are often easily available, although the quality may be poor in some areas. They are also inconvenient to passengers with mobility problems, those with buggies, luggage and bikes. There are also examples of bus substitution not covering all the route options available at the station and passengers having to travel significant distances in the opposite direction before being able to get a service in their required direction.

Passengers with special needs are often unaware that there is still an obligation to get them past the disruption and taxis and special mini-buses are often provided on demand.

Signing to alternative provision needs to be clear.

Responsibilities for advising, informing and directing passengers need to be clearly identified. At manned stations this should be clear, although additional resources may need to be made available. At unmanned stations a personal presence should be provided, but if not there should be a suitable presence on the alternative service who can advise and assist passengers.

Direct experience if working on rail replacement has shown both good and poor practice. Quality has not been consistent and errors have occurred with passengers being put on the wrong bus/coach (when their journey has already been delayed).

## 7.4     Recovery during and after disruption

The aim of the train operators and Network Rail is often to recover operations to normal as soon as possible. This is often complicated by the rolling stock and staff being in the wrong location. Better decision making is required.

There are often decisions taken to divert existing services, stop them short of destination, skip scheduled station stops or cancel services (it is rare to have the capacity to run any additional ones). This may have a longer term benefit of reducing disruption to on board passengers and having the rolling stock and staff back on schedule quicker, but often the information about this is not passed to passengers waiting at a station. More intelligent use of this needs to be taken – it may be possible to add a stop on a following service, but if not and duration of delay to 'stranded' passengers needs to be limited to (say) 15 minutes, otherwise the station should not be skipped or train terminated early.

## 7.5     Controlling Mind and Procedures

There need to be clear responsibilities during both planned and unplanned disruption. Procedures for handling them should be documented and then reviewed after the event to improve quality and consistency. Passenger interests should be a clear part of this review, through an extended stakeholder panel (Transport Focus and Railfuture may be able to assist here).

## 7.6    Compensation

Disruption happens, and passengers have a right to compensation for disrupted journeys (identified under European PRO directives). This is improving and there are moves towards consistency – even a trial to identify affected passengers automatically and provide compensation is being trialled in the C2C franchise (results would be interesting). The issue of vouchers is also being questioned and the option of cash refund is now becoming the norm (or even default with some operators),

There has been some additional compensation paid to passengers who have suffered delays due to long term upgrade work or disruption caused by operational problems.

Is the level of compensation adequate? After paying for a rail ticket and having journey time extended via a replacement bus, compensation should be paid.

Many passengers are still not aware of their rights and industry wide publicity is required.

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Railfuture is a national voluntary organisation structured in England as twelve regional branches, and two national branches in Wales and Scotland. We are completely independent of all political parties, trades unions and commercial interests, and funded entirely from our membership. We campaign for better rail services for passengers and freight. Whilst pro-rail, we are not anti car or aviation.