

Association of Public Transport Users

Network Rail Performance

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NR East Midlands Area**

Current Network Rail Performance between Bedford & St. Pancras

Introduction

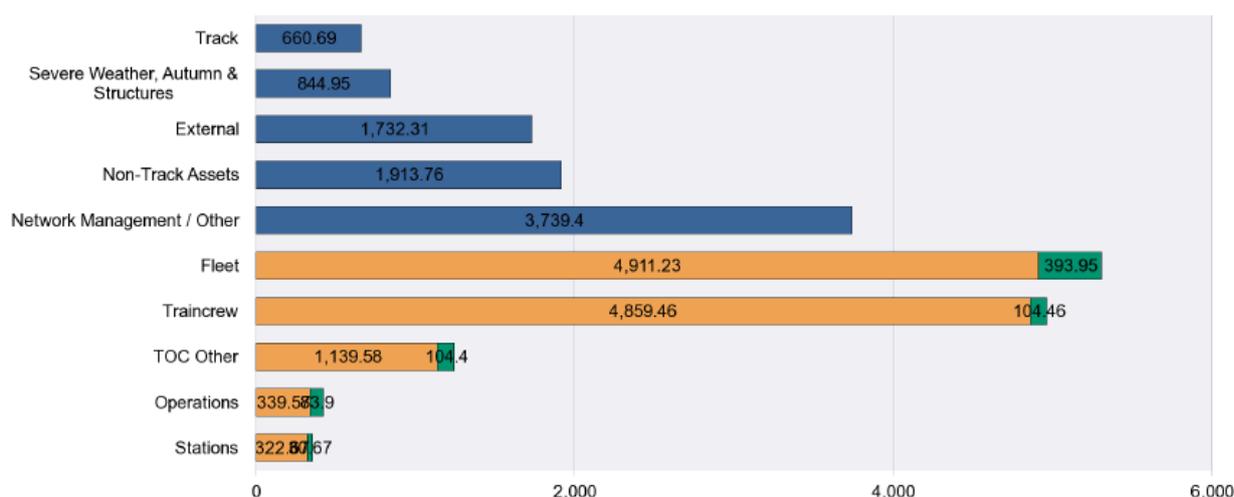
The Network Rail (NR) East Midlands (EM) team are responsible for the maintenance and operations of the railway infrastructure across a wide geographical area. This incorporates a number of long distance and inter urban services from Chesterfield to St Pancras, Derby to Skegness, Stoke to Derby and Leicester to Peterborough. Our prime customers are Govia Thameslink Railway (GTR) Thameslink, Cross Country, East Midlands Trains, DB Cargo, Freightliner Group, GB Rail Freight and Colas Rail.

Current Performance

The table below shows the performance of the Thameslink (North) service group to the end of P12:

Period 12				Year to Date			
PPM		CaSL		PPM		CaSL	
Target	Actual	Target	Actual	Target	Actual	Target	Actual
83.5%	78.8%	4.6%	8.8%	83.6%	76.8%	4.7%	9.2%

PPM Failures by Category: Year to Date

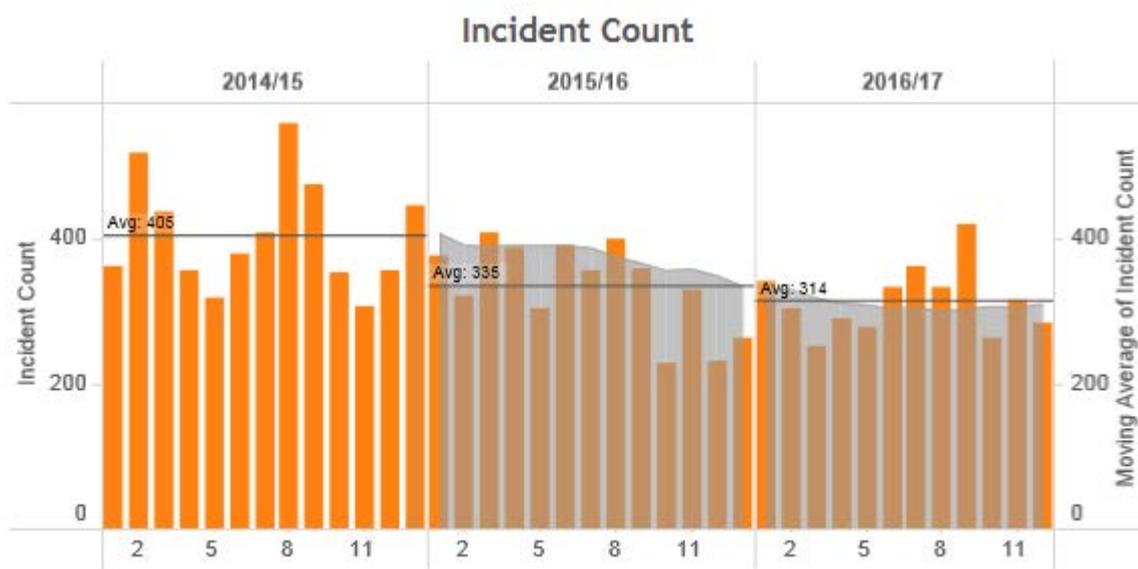


Train performance has been challenging in 2016/17 due to a number of factors, of which the most prominent are:

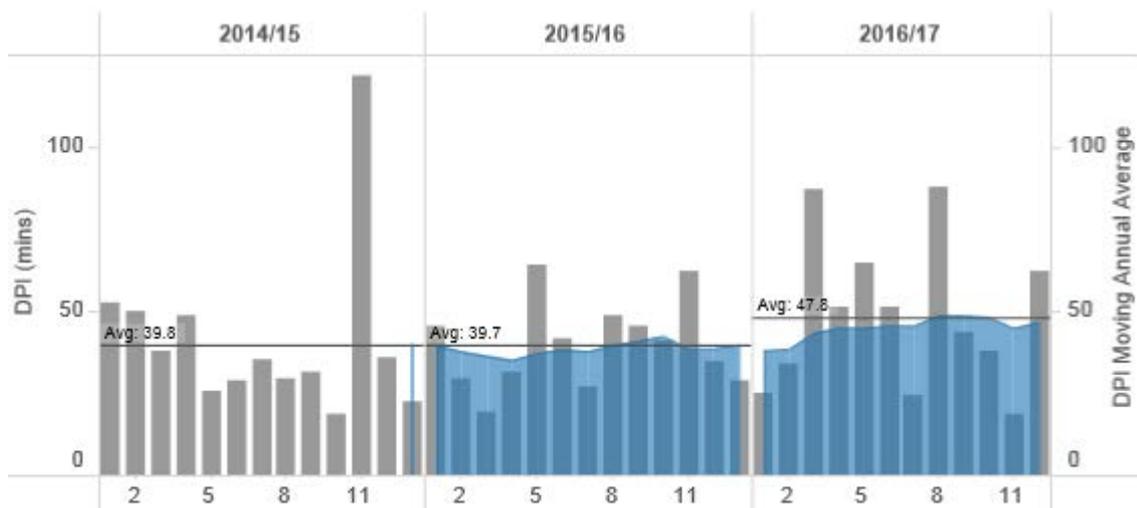
- 1) Several challenging major infrastructure failures.
- 2) An increase in DPI (Delay per incident).
- 3) Fleet issues.

Delays due to track faults and points failures combined contribute to 9% of the total Network Rail delay. The graphs below show the failures and associated delay trends for Bedford Delivery Unit, which manages the railway infrastructure from Sharnbrook to St Pancras. These include all Network Rail events including weather related incidents (the impact of Storm Doris) and those classed as *external*, such as trespass and suicide.

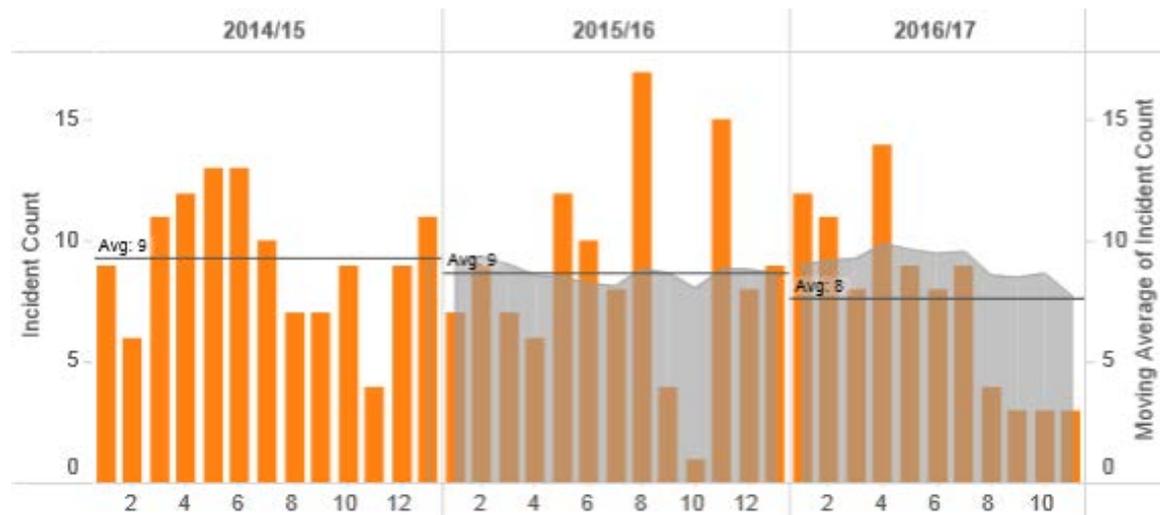
All Incidents in Bedford Delivery Unit Area



Average Minutes Delay Per Incident on Bedford Delivery Unit Area



No. of Incidents in Bedford DU Area due to Track Faults



Recent Significant NR Performance Issues

Luton – Loss of Signalling

On the 8th November 2016, a redundant signalling cable came into contact with the overhead line in the Luton Station area, leading to a power surge and damage to signalling equipment. This issue caused significant delays for several days while work was carried out to restore the power. Overall this incident caused 1151 PPM failures, 986 cancellations and 17059 minutes of delay.

Maintenance teams worked ‘around the clock’ to reinstate the signalling system. A new signalling transmission system (known as a TDM – Time Division Multiplex) was installed in an industry leading timeframe to restore the service.



An 'After Action Review' was carried out into this incident due to the scale of the disruption, to determine any learning. From this a Special Instruction Notice (SIN) has been issued to ensure all redundant cabling in the East Midlands area is checked to ensure it is safe and secured to prevent any more similar events in the future. Due to the volume of signalling structures and signalling installations, this is a significant undertaking. This work is now substantially complete.

Carlton Road (near Kentish Town) – Power Issues

On 12th January 2017 there were Track Circuit failures at Carlton Road Junction on the Up and Down Slow lines which were caused by a power feeder failure. This incident caused 5711 minutes delay and 153 PPM failures and a massive disruption to customers. Again an *After Action Review* was conducted by our colleagues in the Anglia route which determined weaknesses in the planning stage of a power upgrade project on Anglia route, which interfaced with the Midland Mainline Route. The Contractor was stood down pending a full investigation. From this, new communications protocols have been developed to inform any fringe areas of significant electrical work which could impact on service.



Storm Doris – Major incidents at Harpenden & St. Albans

A forecast of unsettled weather was expected over parts of the United Kingdom on Thursday 23rd February 2017. This soon evolved into a forecast of strong winds and an industry Emergency Weather Teleconference was held on Wednesday 22nd February.

The overwhelming feeling was to keep GTR & EMT passengers moving, as the winds were not expected to impact train operations south of Bedford, and mitigations agreed to be in place to reduce the maximum speed of trains to 50mph over other affected areas when required.

Plans were made to ensure teams with relevant experience and competencies, including chainsaw training were available at strategic locations.

South of St. Albans station a tree fell on the Down Fast overhead lines prior to the expected peak wind times at approximately 0815. Once the tree was removed, Slow Lines were handed back at 1345, with a full repair of the Overhead Lines taking place on the night of Sunday 27th February.



Another tree fell at around 1315 onto the overhead lines above the Fast Lines at south End of Harpenden Junction. The tree was removed and the Up & Down Slow open to traffic from 1800. Full rectification took place in the night of Friday 24th February.



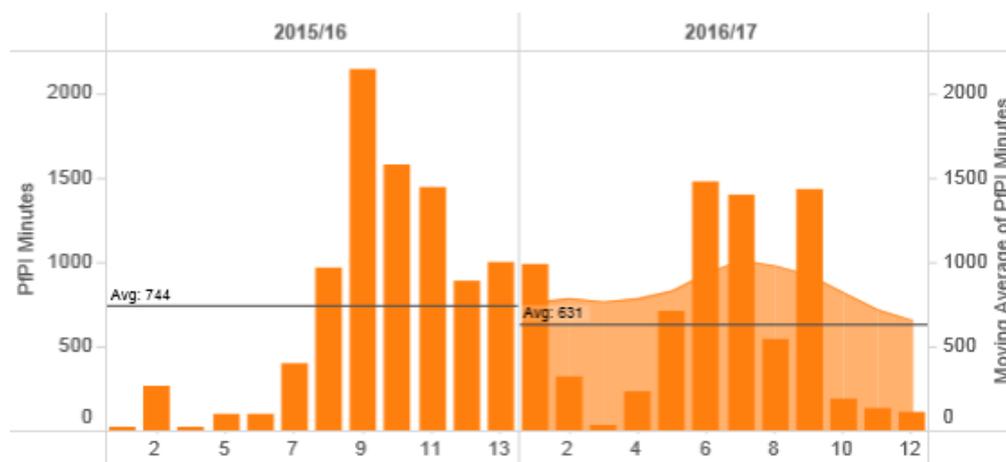
Both cross-industry and internal After Action Reviews have taken place. In conclusion, this was a missed opportunity to introduce a reduced emergency timetable in advance and proactively manage passenger expectations. The Network Rail response was generally good, but initially hampered by the conditions and the locations of the incidents in relation to suitable access points.

Response to performance concerns

Temporary Speed Restrictions (TSR's)

Significant focus has been placed on removing the number of unplanned TSR's on East Midlands. These are TSR's which have been imposed due to deterioration in track quality. These have reduced from 25 in Period 8 to the current number of 5.

Delay minute impact due to TSRs on Bedford Delivery Unit Area



BTP Embedded Officer

Since 6th February a BTP Officer has been working with the NR Operations Teams at West Hampstead. His remit has been primarily to prevent incidents of and reduce the impact of Trespass & Vandalism and suicidal activity. Most recently he has been co-ordinating BTP Officer, BTP VITAL Patrol Officers, GTR REO and NR MOM resources – with a focus on the prevention of bicycle thefts and suicide prevention patrols in key areas.

Vegetation Management

An additional £300k has been made available to undertake increased vegetation clearance on the Bedford to St Pancras corridor. This work commenced in September and will be complete by the end of May 2017.

Additional Response Teams

On week days between the hours of 0500 – 1200 and 1500 – 2200, additional fault response teams are positioned at Kentish Town to mitigate the effects of any infrastructure failures between these hours.

Additional Network Rail Investment

On 10th January 2016, the DfT announced new funding of £300m to improve the resilience of the London to Brighton Mainline and associated routes. This will include track renewals, re-signalling and civil works to improve resilience in areas which are known to cause delays to passenger franchise GTR's Southern and Thameslink services.

This is in addition to the £20m promised by Transport Secretary Chris Grayling to improve performance. The funding is to be used to 'focus on core asset items based upon risk analysis to provide a resilient asset railway'. A strategic group has been identified to ascertain the best way to spend the money.

The estimated savings for the whole fund, in terms of delay minutes and incidents to GTR, has been set at 36883 minutes and 362 incidents. The programme of works is currently being defined following the recent funding announcement. However, it is anticipated to span 2 years. To achieve the greatest impact, the focus has been on core asset management principles to deliver an 'asset resilient railway'. A summary of the key work is shown below:

- E&P: Installation of dual system feeds, power resilience upgrades and improved electrical isolations process. Overhead line campaign upgrades and third rail improved reliability.
- Track: Removal of jointed track, removal of any remaining pre-1978 rail, TSR prevention and track quality improvement work through the removal of wet beds & twist faults.
- Off Track: Vegetation management to prevent OLE dewirement and reduce wheel slip due to leaf fall, improved fencing to reduce T&V risk. Upgraded access points to improve response time and capability.
- Signalling: Improved train detection through TC improvement works – bonding and IBJ replacement.
- Earthworks: Embankments and cuttings, risk reduction.
- Telecoms: Resilient systems at all stations. Resilient concentrator capability.
- Structures: A programme of work to remove red risk bridges (through sacrificial beams etc.), improved scour risk management. Enhanced management of culverts.
- Buildings: Improved Passenger Train Interface risk.

The methodology to define the work packages used incident count and delay minute data for the last 13 periods on GTR affected services supported by FMECA analysis (Failure Mode Effect and Criticality Analysis). This determined that the funding should be split as follows: £200m for South East Route and £100m on the LNE & EM route.

The initial distribution of £100m funding on the LNE & EM route is outlined below:

Asset Category	Description	Approximate Spend (£m)
Track	Re- Rail	£2.62
Track	IBJ Replacement	£1.33
Track	Other (Reliability)	£0.67
Track	S & C refurb	£7.26
Off Track	Fencing	£21.53
Off Track	Vegetation	£9.73
Off Track	Drainage	£5.80
Off Track	Road Vehicle Incursion	£2.00
E & P	Elstree & Borehamwood Feeder solution development	£1.50
E & P	Signaling power improvements	£15.61
E & P	OLE campaigns	£8.52
E & P	Structures Renewal	£1.00
Signaling	Various signaling equipment	£16.56
Structures, Buildings & Geotech	Tunnels, Earthworks, Air conditioning, etc.	£2.10

Key works on South East Route

- £3.5m to solve water ingress at Sevenoaks Tunnel.
- £10m to improve Balcombe Tunnel on the Brighton mainline.
- The largest focus on the Midland Mainline will be on Fencing, which will help with Trespass, Vandalism and Suicide Prevention (the largest causes of “External” delays to the rail network), with a significant sum of almost £16m to be dedicated to improving the resilience of the power supply to the Signaling systems.

Projects Update

Radlett Strategic Rail Freight Interchange

Network Rail has now completed the detailed review with Helioslough of the ability to path trains on/off the proposed terminal at Radlett, in the context of the current development timetable and against a typical 24 hour weekday operation.

As a result of this review Network Rail can confirm that it is possible to path trains on and off the proposed SRFI at Radlett at all off-peak times within a typical 24 hour weekday cycle, without detriment to existing or currently proposed passenger and freight services. For the avoidance of doubt this includes services proposed in the Development Timetable.

In addition to the prime focus over the last few months of assisting the developer in understanding the viability of pathing trains in/out of the proposed terminal at Radlett in the context of the current development timetable; we are however aware of the developers S106 obligations with respect to gauge clearance and will be working with the developer over the coming months to establish how best we can assist the developer in discharging his S106 obligations in this area.

Kentish Town Slab Track

On the Fast Lines approximately 1 mile north of London St Pancras, the track is constructed using a slab which is now approaching life expiry. This is being managed via a long standing speed restriction and spot repairs of the existing slab. Due to its location and construction, the renewal is a complex project to deliver. However, work is currently scheduled to commence later this year with a 10 day blockade scheduled for Christmas 2017.

Overhead Line Renewals Programme

One large project that will increase line speeds in many areas from 110mph to 125mph and thus improve performance and service in these areas is a £50m Project to renew the existing OLE system between St Pancras and Bedford. This part of our electrified railway was originally constructed between 1977 and 1981. This is independent of any other Midland Mainline Electrification programme. These works are scheduled to be complete by November 2023.

St. Albans Station Capacity

Also It was recognised through a Passenger capacity report undertaken by NR that there are potential safety risks at St Albans Station during peak hours (see photos below). Funding of £75k has been secured to undertake development works during the rest of CP5. This should help improve the safety of passengers during peak times.

