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## Secretariat Memorandum

Author: Rufus Impey & Vincent Stops

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### Impact of the Snow in December 2009 and January 2010 on London and the South East's Transport System

#### 1 Purpose of report

- 1.1. To update members on the impact of the recent snow and cold weather in December 2009 and January 2010 on transport in London and the south east.

#### 2 Recommendations

- 2.1. Members are recommended to note this report.

#### 3 Background

- 3.1. This paper builds on the previous report to the board (10 February 2009). This informal paper briefed members on the impact of snow last winter.
- 3.2. Severe disruption has occurred, principally to the rail network, as a result of snow and cold weather between December 2009 and January 2010. However, given that London and the south east are not used to such extended periods of cold weather it is not clear that the railway network could have done substantially more to avoid service disruption.
- 3.3. London TravelWatch's concerns therefore focus on the communication of information to rail users and the speed of service recovery by specific train operators.

#### 4 Buses

- 4.1. This year's snowfall started mid afternoon on a working day in London. Snow had been well forecast. This was unlike February 2009 when snow fell overnight. Clearly traffic movements, particularly bus services contributed to maintaining the roads in a passable state this year. This year, unlike in 2009, the TfL website was able to handle the increased volumes of enquiries to the transport information.
- 4.2. Unlike the previous year there were no reports of buses being unable to leave their garages.

## **5 Streets**

- 5.1. We observed side streets and footways were the last to be cleared. At the date of writing some remain un-cleared and difficult to walk and cycle on.

## **6 London Underground**

- 6.1. London Underground faced relatively little disruption to services in its core area of zones 1 to 6 in comparison to the National Rail network. Disruption occurred on the 6 January particularly on the District, Metropolitan and Piccadilly lines. The disruption did not result in wide scale closures of the network and while some delays were experienced, most journeys remained possible.
- 6.2. In the following hours and days, London Underground's network recovered from the disruption caused by the snow fall. Continuing issues were faced on the Metropolitan line which extends furthest from London as far as Amersham, which is 27 miles from central London at a height of 500 feet above sea level. A service was running on this route but the greater volumes of snow on this line meant more disruption was faced. However, at the time of writing London Underground's network has been working for several days with no major disruption to services.

## **7 National Rail**

- 7.1. The principal weather disruption issues that affected National Rail were as follows:
- Disruption to all operators with many running emergency timetables or reduced services
  - First Capital Connect – services operated by this company have been the most affected by the weather. The company introduced an emergency timetable as a result of a shortage of trains caused by the cold weather.
  - South Eastern Trains – in comparison with some other parts of London and the south east, Kent often experiences heavy snow fall because of its geographic location and this led to the introduction of an emergency timetable which drastically reduced services on all but the Highspeed line. This disruption last for a number of days but has now ended.
  - National Rail Enquiries – volumes of users caused problems with the website at the peak of the disruption. As the prime access point for passenger information this is extremely disappointing for transport users. London TravelWatch questions if this is in anyway linked to the introduction of a new National Rail Enquiries website format? Further issues were also encountered with information about live departures adding to passengers' difficulties.
- 7.2. Following the disruption to transport in London from heavy snow February 2009 an informal report was made to the London TravelWatch Board. This report outlined the key weaknesses of the National Rail network in coping with snow.
- 7.3. The main conclusion of this report was that the key vulnerability of the system is the direct current third rail power system which is found predominantly south of the river Thames. When the conductor rail is covered with snow, it causes poor contact between the conductor shoe and the rail itself. The result is either damage or stops the train. In February 2009 this was the key reason why most disruption was faced south of the river whereas on the overhead electrified AC lines more services were able to operate.

- 7.4. The February 2009 report recommended firstly that a reduced service that operates as far preferable than a full scale cancellation of all trains. To address the vulnerability of the third rail system by installing AC electrification would be astronomically expensive.
- 7.5. For the December to January disruption the key recommendation from London TravelWatch is that a reduced service with short operating hours are far preferable to full cancellation. This allows the reduced numbers of passengers to travel albeit with delays to their services.
- 7.6. To support a reduced service communications must be sufficiently robust to get the information to passengers. London TravelWatch is therefore particularly concerned at the difficulties faced by the National Rail Enquiries and Train Operating Company websites with the volume of users. The issues with live departure boards to handle emergency timetable information also hampered the communication of service disruption to passengers. London TravelWatch will continue to monitor the situation and the measures taken to address these problems.
- 7.7. The First Capital Connect (FCC) train services have been the most significantly affected by the weather disruption in January 2010. Passengers had already faced disruption and reduced services caused by a labour dispute. The snow led to the introduction of an emergency timetable which saw a two train per hour service on the main Brighton to Bedford route. At the time of writing (12 January 2010) FCC's services have still not fully recovered.
- 7.8. FCC have told London TravelWatch that the reason for the emergency timetable is that the cold and snow has caused door and traction motor failures which mean they are have been unable to operate the service to its full extent. FCC believes that they originally set out to run a too ambitious service. With the emergency timetable they have therefore focused their efforts on delivering a core of services on the Thameslink routes. Services were not possible on the Wimbledon loop because of the lack of trains and Network Rail's prioritisation of the main routes. Train services on the Wimbledon Loop only resumed on the 12 January.
- 7.9. Particularly on the Wimbledon Loop train services have been very limited. This and other issues with service provision of the emergency timetable prompt questions about the following :
- Review of the emergency timetable arrangements to ensure that the service match core demand
  - Consideration in the Thameslink Programme of infrastructure that will enable train services to be operated when significant disruption occurs.
- 7.10. Over the weekend of the 9 and 10 January the service was further restricted by closure of the Thameslink core for engineering work and the need to return all of their working trains to the correct position to be able to start the Monday morning service. FCC made the decision that this was a higher priority than weekend services.
- 7.11. London TravelWatch contacted FCC to request that the live departure information be prefaced with a note explaining that the information contained might not be fully accurate. A statement was posted on the website saying the following :

“We will keep this page updated. Meanwhile for up-to-the-minute information please keep checking our live train running. We will try to operate the above service as much as possible and to keep the systems that operate live departure boards up to date. However there may be occasions when the live departure boards return incorrect information.”

- 7.12. South Eastern Trains announced an emergency timetable from 5 January which would see very limited services arriving in London before 0900 and also saw an early finish to services in the evening. South Eastern Trains released the following press statement on 9 January explaining the problems with their train services :

“In this part of the UK train services are vulnerable to snow and icy weather conditions

This is because we use the 'third' conductor rail system. Our electrical trains draw power from a third rail running alongside the track.

When the rails are covered with a layer of ice - the ice can act as an insulator making it difficult for the trains to draw power and move.

We - working with Network Rail - do what we can to stop the ice forming in the first place. By running de-icer trains and 'ghost' trains (empty trains) through the night to try to keep the ice from forming.

But, despite our best efforts, ice will form in freezing temperatures and trains become 'stuck' and 'fail'.

To help ensure we're able to run the best service possible in icy weather conditions we will put in place a revised timetable - which means that it's easier for us to 'recover' trains if they run into difficulties. We do this so that passengers aren't stuck on failed trains for long periods of time while we try to get the services moving again.

The decision to run the revised timetable on several days over the past week has been the right one. As when trains have run into difficulties we've been able to make sure that passengers have been assisted quicker than would have been the case if the full timetable was in operation.

We're guided by Network Rail, the company that's responsible for the railway infrastructure in the UK, about the service we're able to operate for passengers locally. They use detailed weather predictions to assist and guide them when making decisions about the service.”

The weight of enquiries to their website in the initial aftermath of the disruption of the 6 January caused their website to crash. A simplified version of their website was posted to provide the basic information needed by passengers. South Eastern Trains services have now returned to normal and their website is now functioning fully. As their press statement suggests the principal causes of the service disruption were the heavy snow in the Kent area combined with the vulnerability of the 3<sup>rd</sup> rail electrification system.

- 7.13. London TravelWatch does not believe that South Eastern Trains actions were unreasonable in the circumstances and that operation of a reduced service reflects in part the reduced demand. Our only suggestion is that for future winters emergency timetables are reviewed to ensure that they give the most effective service possible to the core routes.
- 7.14. As with other routes South Eastern Trains cooperated extensively with Network Rail's efforts to deice the railway and run a timetable which minimised usage of points. The latter action reduces the impact of frozen points on the train service. The train service was recovered to normal levels by 9 January 2010.

## **8 Eurostar 19 to 22 December 2009**

- 8.1. On the evening of the 18 December 2009 five Eurostar trains were stranded in the Channel Tunnel. The problem was caused by the high temperature of 24°C in the tunnel in contrast to the freezing conditions in Northern France. Powdery snow collected in the air intake louvers which rapidly melted and condensed on the electrical equipment inside the locomotive. This is not a new problem and has occurred on a number of occasions in the past but never involving so many trains. The events exposed issues with Eurostars procedures :
- Allowing all five trains to enter the tunnel after problems were initially encountered with the first trains
  - Failures in coordination of the evacuation of the trains
  - Problems with the logistics of recovering all five trains
  - Issues with communication to passengers of the disruption
- 8.2. Eurostar has launched an independent review of the problem led by Christopher Garnett (formerly of GNER and Eurostar). London TravelWatch has met with the investigation team and Eurostar to discuss the causes behind the issues. Eurostar has continued to face intermittent disruption from the weather to its services and has run a reduced service on a number of occasions.

## **9 Conclusion**

- 9.1. The transport system in London and the south east has faced the most sustained period of cold weather and snow since the early 1980s. The system has not been tested with a sustained period of cold weather for at least twenty years. The impact has been mainly felt on the railways with most operators facing considerable disruption.
- 9.2. South Eastern Trains undoubtedly faced very challenging weather to be able to operate a service. They have responded by attempting to run a limited service to provide a core service. Their new Highspeed line service operated as normal demonstrating the resilience of their particular new trains. Other types of rolling stock were affected by the conditions in different ways, with FCC's Class 319s appearing to have been particularly vulnerable. London TravelWatch recommends that FCC reviews its emergency timetable arrangements and that the Thameslink Programme considers the issue of service robustness in the face of more extreme forms of disruption such as snow.
- 9.3. The major issue apart from the disruption itself is the failure website of communication. This applies both to individual train company websites and National Rail Enquiries. The National Rail Enquires website was inaccessible during the peak periods of use on the 6 January 2010. The same was true of a number of TOC websites such as South Eastern

Trains. South Eastern Trains later replaced their website with a simplified page attempting to disseminate the service information as quickly as possible.

- 9.4. A general problem, with all websites, was that they directed passengers to the live departure boards for up to the minute train service information. However, because of the emergency timetables that were in place, the information either did not appear or included reference to trains which were not running at all. This issue was faced in the short term by many TOCs but particularly affected FCC whose emergency timetable has persisted for the longest period of time. London TravelWatch requested that FCC clarified this issue on their website, which they did.
- 9.5. Given the scale of the cold weather and snow, it is not surprising that train services suffered disruption as London and the south east are not used to such conditions. Most operators had to put in place emergency timetables and this considerably disrupted passenger journeys. However, for most companies the disruption was relatively quickly brought under control and localised. For First Capital Connect disruption has persisted far longer and has not been comparable to its neighbouring TOCs, National Express East Anglia, East Midlands Trains, and Southern.
- 9.6. The bus service was generally maintained this year which may indicate some lessons learnt from snow in February 2009.