Board meeting 01.02.11

Secretariat memorandum

Author : Tim Bellenger

Agenda item: 8
LTW 371
Drafted: 24.01.11

Impact of the Snow in December 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 2010 on transport in London and the south east.

2 Recommendations

2.1. Members are recommended to note this report.

2.2. It is recommended that the conclusions of this report are taken up at the appropriate levels with service providers and authorities. In particular the issue of information provision and compensation arrangements as described in paragraphs 10.3 to 10.5 need to be addressed.

3 Background

3.1. This paper builds on the previous reports to the board (10 February 2009 and 26 January 2010), and on the scrutiny report of the London Assembly Transport Committee of March 2009. The Department for Transport commissioned an independent audit of the resilience of English transport systems from Sir David Quarmby to which London TravelWatch contributed. Please see the links set out in Appendices A and B. This is referred to as the Winter Resilience Review.

3.2. It should be noted that through the period of weather disruption London TravelWatch staff undertook constant monitoring of the situation on a day to day basis, by observation, by responding to phone calls and emails from passengers and also by conversations on face to face, telephone and email with operators and authorities. This enabled London TravelWatch to respond immediately to the Winter Resilience Review, contributing directly to some of that review's detailed recommendations.

3.3. Severe disruption has occurred, principally to the rail network, as a result of snow and cold weather that began on 30 November 2010. This paper seeks to explore whether recommendations regarding previous weather events in 2009 and 2010 have been implemented or were successful. Previously it has been stated that as London and the south east is 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.

3.4. 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 at the beginning of 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. However, where diversions or curtailments of services were put in place, especially at short or no notice, the information contained on the website seemed to be dependent on the efficiency of operators reporting such service perturbations to TfL.

4.2. Unlike in 2009 there were no reports of buses being unable to leave their garages.

5 Streets

5.1. Again we observed side streets and footways were the last to be cleared. However, there was some evidence to suggest that local authorities and others were better prepared than in previous years.

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 did occur but it 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.

7 Network Rail

7.1. The performance of Network Rail in a number of key areas of operation gives serious cause for concern. These were:

- Failure of the Integrated Train Planning System (ITPS) to cope with the need to update and implement contingency timetables. This system feeds all other Customer and Passenger Information Systems (CIS and PIS) as well as websites operated by National Rail Enquiries (NRES) and individual train operators.
- Failure to have in place sufficient resources to de-ice tracks and conductor rails and to clear snow and other line blockages.
- Failure of Uninterrupted Power Supply back up equipment to deploy at least one location.

7.2. The performance of individual train operators was largely dependent on the ability of Network Rail to deliver a railway on which their trains could operate. However, there were a number of individual areas where performance could have been substantially improved such as:

- The ability to switch easily to a contingency timetable
- To fit pre-heating devices to fuel lines on diesel trains
- To clear snow and ice from stations, not just from platform edges and approach roads but also from the centre of platforms to allow easy passenger circulation
- To have in place emergency arrangements with local authorities in the entirety of the operation area of each train operator, including contact with smaller local authorities

7.3. Examples of failures by the rail industry included the following:-

- Failure of train operators to successfully upload their contingency timetables to ITPS.
- Train operators succeeded in uploading a contingency timetable to ITPS but the normal timetable was not removed by Network Rail and so information systems showed both contingency and normal timetables running together.
- Insufficient de-icing units and clearance trains being available for deployment at the appropriate times and locations.
- A new passenger train fleet that included a ‘de-icing’ capability, but was not able to be deployed for a number of days as the ‘de-icer’ fluid had not had regulatory approval to be used.
- Incomplete installation of heated conductor rails and points. The former are a new innovation since 2009, and the ones that had been installed worked very well, but often led to displacement of disruption to other locations.
- Failure of Network Rail to de-ice parts of the network which had been subject to an engineering possession prior to handing back for operational use.
- Failure of alternative power supply units at a Service Delivery Centre (Signal box/Control) when a power cut occurred on the main supply
- Some operators had difficulty in running their contingency timetables because their staff live in places served by other train operators who were experiencing greater operational difficulties
- Failure of some diesel units when temperatures fell below freezing, and so trains became either trapped or were unable to leave stabling points

- Inconsistency of clearance of platforms between train operators at stations e.g. in some instances only platform edges were cleared and piles of snow remained extant for some weeks afterwards in the centre of some platforms at major stations.

- Failure to have in place contact arrangements with local authorities in the event of trains and passengers being stranded in particular locations – in this case the London boroughs.

7.4. Following the disruption to transport in London from heavy snow in 2009 and 2010 we made a number of recommendations for dealing with incidents such as this in future.

7.5. The main conclusion of these reports was the key vulnerability of the rail system in London is the direct current third rail power system which is found predominantly south of the Thames. When the conductor rail is covered with snow, it causes poor contact between the conductor shoe and the rail itself. This can result in the train becoming immobilised or suffering damage to its electrical systems. 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. Since then a number of locations have been fitted with heated conductor rails and more point heaters have been installed. These installations worked in keeping the rails concerned free of snow and ice. However, as noted above this often transferred problems to other locations. So it is recommended that the installation of such heated equipment is adopted as a standard feature of third rail systems. The Winter Resilience Review has recommended an industry wide review of the technical alternatives to the third rail system.

7.6. The 2009 and 2010 reports recommended that a reduced service that operates was far preferable to a full scale cancellation of all trains. This recommendation was largely adopted by most train operators in the London TravelWatch area, and this appeared to work very well when adopted – except as noted above where the ITPS system failed. Southeastern adapted their previous emergency timetable to run a much later evening service on their London metro services following previous feedback from passengers and stakeholders.

8 Eurostar services

8.1. Following previous problems in 2009 and 2010 Eurostar had implemented a major review of its preparedness and although they did have some major difficulties, particularly following on from another operators train blocking a high speed route in France, the disruption was on a much smaller scale than previously.

9 Compensation arrangements

9.1. One additional item that has been raised with us through casework is that compensation arrangements vary between individual train companies depending on when their franchise was let, and whether they think they can afford any compensation. This related to the arrangements in place with Southeastern, who compensated only those passengers who were trapped on trains overnight, as required by their 2004 franchise, and not others who otherwise had their journeys

disrupted. Other operators whose franchises were let later than 2004 had much more generous compensation conditions and obviously put those into effect. In the case of network wide events it would seem not unreasonable on the grounds of equity that there is a case for a central direction by the government to make such arrangements more uniform.

10 Conclusion

10.1. 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, on a repeated basis. The impact has been mainly felt on the railways with most operators facing considerable disruption.

10.2. 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, but as concluded by the Winter Resilience Review there are a number of key areas where the rail industry in particular needs to perform at a much higher level.

10.3. The area of information is the most important as far as passengers are concerned and it is regrettable that the ITPS failed on a number of counts at the critical moment. The Winter Resilience Review agreed with our overall conclusion that in many cases the transport industry has become over dependent on electronic information systems controlled from a central point, and that a thorough review of technologies and processes is required. Given the consistency between our submission and the eventual conclusion of the Winter Resilience Review it is fair to say that the review attached significant weight to our submission.

10.4. Passenger compensation regimes also need to be modernised and made more consistent. London TravelWatch, in-conjunction with Passenger Focus and First Group, is currently undertaking research into passenger expectations on compensation arrangements. The results will be reported at a later date.

10.5. The rail industry needs to have a concerted technical drive to improve standards in the event of such weather emergencies in future. In particular the ITPS system – a failure in which can result from a variety of causes not just snow and ice, needs to be much more capable of being able to cope with the need to introduce emergency timetables at short notice.

Appendix A

Email submission to the Winter Resilience Review 9 December 2010

From: Tim Bellenger
Sent: 08 December 2010 14:07
To: WINTERRESILIENCEREVIEW
Subject: RE: Independent Winter Resilience Review - Publication of the Final Report

Dear Sir/Madam,

I understand that a further review is being undertaken in the light of recent events. We have some evidence that we would like to submit to you.

Do you have any timescales for your new review, and what are the items you are likely to be seeking evidence on?

Yours sincerely

Tim Bellenger
Director, Research and Development

From: WINTERRESILIENCEREVIEW
Sent: 09 December 2010 09:24
To: Tim Bellenger
Subject: RE: Independent Winter Resilience Review - Publication of the Final Report

Tim,

We're not formally requesting evidence for this audit, but David is talking to operators, highway authorities and others about their experiences, lessons learnt and applied etc over the last few weeks. We're not asking formally for evidence as we received a lot for the main review (including yours), and we now have a very short timescale to conduct the audit (it is due before Christmas) so it wouldn't be possible to sift through large amounts. We're also conscious that many operators are facing problems and we don't want to unnecessarily take their focus away from immediate issues.

The audit's focus is again on roads and rail, but also covering aviation. However, if you do have some evidence to hand (especially about south London rail operations) I'm happy to receive it and will pass it on to David.

Lloyd Miles
Regional and Local Major Projects Division
Department for Transport

From: Tim Bellenger
To: WINTERRESILIENCEREVIEW
Subject: RE: Independent Winter Resilience Review - Publication of the Final Report

Dear Lloyd,

Thank you for your reply to my email.

We have gleaned a number of comments from operators and our observations of what happened in the period from 30 November 2010 to the time of writing. These I will divide by topic for ease of reference:-

1. Road based modes. Generally, these responded to the weather conditions better than in the previous 2 'snow and ice' periods. However, there were still instances in the London area where significant parts of the network were effectively closed to buses for some periods. In at least one instance we know of there seemed to be poor connectivity of actions between adjacent boroughs – at Crystal Palace the boroughs of Croydon, Bromley, Lambeth and Southwark all meet at one major road junction. This was the junction of the A212 and A214 roads were there is a gyratory system. However, the ploughs and gritters coming from their respective directions turned round just before the borough boundaries such that there was a 'no mans land' of untreated surfaces on these major routes – which also includes access to a bus station. Side roads and pavements also seemed not to have gained any attention even after the worst of the conditions – for example as of yesterday evening there were still many untreated surfaces in the London Borough of Bromley.

2. Bus information. Transport for London's website did carry some information where it was known that services were not operating or were running via a different route, but this was patchy and depended largely on whether an operator had communicated that they would operate via a different route or not.

3. Rail. The major issues here were to do with a) information provision , b) lack of sufficient resources such as snow ploughs, de-icing units, heated conductor rails and points and c) lack of coordination with agencies outside the railway industry. These issues were much more pronounced on the parts of the network where the third rail electrification system is used.

   Information provision. The evidence provided to us by a number of operators suggests that there were multiple failures in Network Rail's train planning system which supplies information to customer information screens at stations and to websites and the National Rail Enquiry Service. This system has previously been subject to a finding by the ORR that Network Rail was in breach of its licence conditions – please see the attached link http://www.rail-reg.gov.uk/server/show/ConWebDoc.10183

   In the case of the recent weather issues the failure occurred when operators attempted to upload emergency timetables to deal with the resulting problems – something that they had agreed to do previously. The issue here is not snow and ice, but would apply equally in any situation which would have network wide implications such as an act of terrorism or some other weather phenomena. The system also seemed to fail when as a result of accidents, blockages or train failures

services had to be diverted or curtailed mid journey. Network Rails train planning system drives all the major forms of electronic communication – upon which both staff and passengers are now totally dependant, therefore we believe that as a matter of urgency the failures of this Network Rail operated system need to be addressed as a matter of urgency. We would therefore expect that further action by the regulator may be required. It should also be noted is that except at a few major stations Network Rail is one step removed from dealing directly with passengers as customers – rather they view their customer relationship as being with the train operators who will receive compensation rather than the passengers directly.

Lack of resources to deal with the snow and ice. Southeastern Railway have specifically said to us that Network Rail simply did not have sufficient resources such as snow ploughs and de-icing units to deal with the quantity and extent of snow and ice that accumulated in their operating area. We also believe that this was true of the Southern Railway operational area – both these areas also have significant impacts on other operations such as South West Trains, First Capital Connect and London Overground. It was also reported that where since previous extensive snowfalls heated conductor rails and point mechanism had been put in place that these did work, but this then merely transferred problems to the areas where no such fitments had been put in place. We believe therefore that a number of strategic decisions need to be made by the government and by Network Rail in the interests of passengers (and freight customers) to a) upgrade the third rail network by the provision of heated conductor rails at the earliest opportunity, and to fit such equipment as standard on any new electrification programmes: b) upgrade point mechanisms by the addition of heaters, and to fit this as standard to all new installations; c) to provide additional self propelled snow plough and de-icing units, either by enhancements to existing passenger rolling stock (Southeastern Railway admitted that their programme of fitting de-icing fluid tanks to passenger trains had not been completed) or by providing dedicated units that are not dependant on an off shore supply of power – so battery, diesel, steam anything that will move on its own. These units need to be positioned strategically around the network in accessible places based on franchise operator territories – it may even be a good idea for these to be controlled and operated by franchise operators rather than Network Rail.

Lack of co-ordination with outside agencies. Southeastern Railway admitted to us that whilst they were able to deal very effectively with the major council in their operating area (Kent) to open emergency shelters for stranded passengers, they did not know who to contact in the smaller authorities such as Bromley when several major incidents occurred in that local authorities jurisdiction. Therefore emergency planning arrangements simply did not happen. We believe that this is not acceptable and there must be a requirement put on train operators to have and maintain emergency planning arrangements with all local authorities where they operate regardless of size. Similarly local authorities should be prepared to cooperate with the rail industry.

An additional point we would raise is that compensation arrangements vary between individual train companies depending on when their franchise was let, and whether they think they can afford any compensation. In the case of network wide events we believe that there is a case for a central direction by the government to make such arrangements more uniform.

I hope that this information is useful to you. I think a generic conclusion is that the electronic information systems that both road and rail modes rely on now need to have improved resilience when network wide disruption occurs – not just in the case of snow and ice. If you need any further assistance from us please do not hesitate to contact me at the address below.

Yours sincerely

Tim Bellenger
Director, Research and Development

From: Tim Bellenger
To: WINTERRESILIENCEREVIEW
Subject: RE: Independent Winter Resilience Review - Publication of the Final Report

Dear Lloyd,

Sorry one additional point is that where electronic information systems failed, there was little manual intervention such as posters, announcements etc at rail stations which could have been used to convey information.

Yours sincerely

Tim Bellenger

Appendix B

Winter resilience review report link – December 2010

http://transportwinterresilience.independent.gov.uk/docs/audit/winter_resilience_audit.pdf

2009/10 Winter report

http://transportwinterresilience.independent.gov.uk/docs/final-report/