House of Commons

Transport Committee

Keeping the UK moving: The impact on transport of the winter weather in December 2010

Fifth Report of Session 2010–12

Volume I

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The Transport Committee

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Summary

Winter 2010–11 was the UK's third cold winter in succession. December 2010 was particularly cold and snowy, causing extensive disruption to the UK's transport networks. Most significant was the closure of Heathrow Airport from 18 to 20 December but other airports closed for a time during the month; rail services were badly affected, especially south of the Thames; and there was disruption on the roads. Most dramatically, the severe winter weather reduced the UK's GDP by 0.5% and we were told that travel disruption cost the UK economy £280 million per day.

There is more that could and should be done to ensure that the UK's transport networks are more resilient to severe winter weather and we are sympathetic to the argument that more money should be spent on this. Areas for additional investment and co-ordination by the Government include:

- Improving the resilience of the third rail network south of the Thames. We recommend that the Secretary of State should lead work on this and commit the Government to the long-term aim of replacing the existing network with a more resilient form of electrification.
- Having oversight of airport snow plans and other major incident plans, to make sure additional investment in winter resilience is delivered. This is particularly significant in relation to Heathrow, to help maintain its status as an international hub airport.
- Publishing online practical advice about how individuals and communities can overcome problems caused by severe winter weather.
- Launching a high profile campaign about motorists' winter preparedness, with the aim of increasing the proportion of motorists taking precautions against severe weather next winter.
- Investigating the case for providing the Met Office with additional funding to improve its long-range forecasting capability.

We also recommend that the Department's climate change adaptation plan should include reference to the risk of severe winter weather in future, particularly in view of uncertainties in climate predictions identified by Sir John Beddington, the Government's Chief Scientific Adviser.

Inadequate information provision was raised by witnesses as an issue for rail, road and air travellers during December 2010. A related issue was passenger welfare, especially for passengers caught up in the disruption at Heathrow. The problems at Heathrow have been thoroughly analysed in a review led by Professor David Begg. The Begg report and the evidence we received from the aviation sector give the impression that Heathrow was totally unprepared to recover from any major incident which necessitated its closure.

We agree with the Begg report's recommendation that airports should develop passenger welfare plans. We would support measures by which airport operators could reclaim the

costs of providing support to stranded passengers from airlines which had not discharged their legal responsibilities to look after passengers. We also welcome the Government's intention to revamp the regulatory regime applying to airports and look forward to scrutinising the draft bill on this.

The rail industry needs to do far more to look after the interests of passengers during periods of disruption. Culture change is urgently required: the legacy of privatisation cannot be used to excuse the continuing inability of train companies to provide accurate information to passengers about delays and cancellations. We fully support the Office of Rail Regulation's initiative to clarify responsibilities for providing accurate information. This should be achieved by next winter: failures in information provision should cost the firms responsible money.

Finally, we recommend the development of clearer 'travel warnings' to specify more precisely which journeys should not be undertaken in severe weather and consideration of the Freight Transport Association's suggestion of snow and ice warnings for HGVs, akin to strong wind warnings. We also call on the Highways Agency and police forces to ensure that blockages on the strategic road network are managed more proactively and that greater use is made of roadside information and in-car information systems to provide motorists with real time information about road conditions and disruption.

1 Introduction

Winter 2010–11: how bad was it?

1. Winter 2010–11 was the UK's third cold winter in succession. The UK mean temperature for the winter as a whole (ie December, January and February) was 2.4˚C, warmer than last year's 1.6˚C but the second coldest since 1985–86[1] and 1.3˚C below the seasonal average.[2] December was particularly cold. The average temperature in the UK was over 5˚C lower than normal, making it the coldest December since at least 1910.[3] Temperatures below -10˚C were recorded in a number of places throughout the month.

2. Although much drier than average,[4] December was also snowy. There were nine "snow events", beginning in late November,[5] and the snowfall was the most widespread of any winter for 30 years.[6] There were very large accumulations of snow in parts of Scotland and northern England.[7] January and February were more benign, with February 2011 being notably mild.[8]

3. The worst periods of snowfall, from 30 November to 3 December and from 16 to 22 December, and the intensely cold weather caused extensive disruption to the UK's transport networks. Most significant was the closure of Heathrow Airport from 18 to 20 December after 7cm of snow fell in one hour on 18 December.[9] Several other airports also closed for a time, including Gatwick Airport for 46 hours between 1 and 3 December.[10] Rail services south of the Thames, where electricity is conveyed to trains using a third rail, were badly affected as were some inter-city services.[11] Infrastructure and operational failures in France caused disruption to Eurostar from 19 to 24 December.[12] Although the major road network in England was mostly kept running,[13] the AA submitted evidence of "massive congestion and disruption".[14] Local roads in many areas were severely disrupted.[15]

1 Met Office, http://www.metoffice.gov.uk/climate/uk/2011/winter.html.

2 Ibid.

3 Ev w10, summary and Ev w10, annex B.

4 Met Office, see footnote 1.

5 Ev w10, summary and paragraph 2.

6 Ev 53, paragraph 1.

7 Ev w12-13, Annex A.

8 Met Office, see footnote 1.

9 *Report of the Heathrow Winter Resilience Enquiry*, 24 March 2011 (hereafter *Begg Report*) paragraph 52 and see Ev 92, section 3.2.

10 Ev 78, paragraph 3.2.

11 Ev 72.

12 Ev 56, paragraphs 26-27.

13 Ev 57, paragraph 39 and see Ev w46, paragraph 5 and Ev w51, paragraph 1.5.

14 Ev w14 and 16, paragraphs 1.2, 5.1 and 5.2.

15 For example see Ev w47, paragraph 13 and Ev w66, paragraphs 11 and 13.

4. Perhaps most dramatically, the Office for National Statistics estimated that the severe winter weather at the end of 2010 reduced the UK's gross domestic product in the final quarter of the year by 0.5%, tipping the UK back towards recession.[16] This put the cost of the weather disruption to the UK economy at £1.6 billion.[17] The Secretary of State told us that the cost of travel disruption to the economy was £280 million per day.[18]

A third severe winter in succession

5. The winter of 2008–09 was the worst for 20 years.[19] Heavy snow in London and south east England in early February 2009 caused severe disruption to transport in London which was the subject of inquiry by our predecessors.[20]

6. Winter 2009–10 was the UK's coldest for 30 years and the coldest since records began in northern Scotland.[21] Snow fell frequently from mid-December until the end of February and every month of the winter was colder than average.[22] There was disruption to rail services and aviation but the main issue was the availability of adequate supplies of salt for gritting roads.

7. In March 2010 the previous Government commissioned a review, led by David Quarmby CBE, chair of the RAC Foundation, to "identify practical measures to improve the response of England's transport sector—road, rail and air—to severe winter weather".[23] The Quarmby review published an interim report in July 2010 and its final report in October 2010. Mr Quarmby was subsequently asked to undertake an "urgent audit" of how well the highway authorities and transport operators in England had coped with the period of bad weather beginning at the end of November. His audit was published on 21 December but did not take account of the second period of exceptionally bad weather, in the week before Christmas.[24]

Effective scrutiny

8. One theme of all three recent bad winters has been the subsequent scrutiny of how transport infrastructure and operators fared and the lessons which can be learnt for the future.[25] The Quarmby review and audit were thorough investigations into what went

16 *Statistical Bulletin: UK output, income and expenditure*, 4th quarter 2010, ONS.

17 The total fall in GDP at market prices was £1.927 billion (table C2), a decrease of 0.6%. 0.5 percentage points of this decline was attributed to the severe weather.

18 Q219.

19 *The Resilience of England's Transport Systems in Winter*, Final Report, DfT, October 2010 (hereafter *Quarmby final report*) section 1.1 and Met Office, http://www.metoffice.gov.uk/climate/uk/2009/winter.html.

20 Fourth Report, 2008-09, *The effects of adverse weather conditions on transport*, HC328 (hereafter *TSC report on adverse weather 2008-09*).

21 Met Office, http://www.metoffice.gov.uk/climate/uk/2010/winter.html, and *Quarmby final report*, sections 1.1 and 1.2.

22 Ibid.

23 *Quarmby final report*, Appendix A for terms of reference.

24 *The Resilience of England's Transport Systems in December 2010*, An Independent Audit by David Quarmby CBE (hereafter *Quarmby Audit*) and see Q2.

25 For example, in 2008-09, see *TSC report on adverse weather 2008-09*, paragraphs 2 and 31.

wrong with road and rail travel[26] and their recommendations were accepted by the Government.[27] In response to the disruption at Heathrow, the airport's owners, BAA, established an inquiry led by Professor David Begg, a non-executive director at BAA, which published a thorough and hard-hitting report on 24 March, after we had finished our oral evidence.[28] **We commend the Government, and its predecessor, and transport providers for their willingness to learn from periods of transport disruption due to adverse weather. We recommend that, when transport is subject to significant weather disruption in future, the Government should initiate reviews along the lines of the Quarmby review to examine what happened and ensure that lessons are learnt.**

9. This report builds on the work undertaken by Quarmby and others to focus on what the Government can do to ensure that UK transport networks are better prepared for bad winter weather in future and passengers are kept well informed during periods of disruption. We launched our inquiry on 18 January 2011[29] and heard oral evidence from Mr Quarmby and his colleague Brian Smith, witnesses from the road, rail and aviation sectors, and the Secretary of State for Transport. We are grateful to everyone who submitted evidence, both in writing and orally.

26 Aviation was less badly affected than other modes in winters 2008-09 and 2009-10 but relevant winter resilience issues were covered in part D of *Quarmby final report* and chapter 6 of *Quarmby Audit*.

27 HC Deb, 26 July 2010, c72WS; 22 October 2010, c79WS; and 21 December 2010, c168WS.

28 *Begg Report* (see footnote 9).

29 Our terms of reference were "The impact of the recent cold weather on the road and rail networks in England and Wales and on the UK's airports, including the extent to which lessons were learnt from winter 2009-10, the provision of accurate weather forecasts to transport providers in advance of the bad weather, and the recommendations of the Quarmby reviews of the resilience of England's transport systems in 2010".

2 Preparing better for severe weather

Weather forecasting and the impact of climate change

10. The Met Office provides forecasts to Government departments and to a number of transport infrastructure providers and operators, but other transport firms and agencies depend on private sector forecasters.[30] Witnesses were generally content with the quality of the short term weather forecasts they received. Lincolnshire County Council, for example, described forecasts as "accurate and timely" and British Airways pointed out that the Met Office had predicted exactly when the 18 December snowstorm would begin as well as its intensity and how much snow would fall at Heathrow.[31]

11. However, there was some criticism, for example from the RAC, of the helpfulness of medium and longer term forecasts.[32] The Met Office told us that it had first warned the Cabinet Office of "an increased risk of a cold and early start to winter conditions" in October and that the public had been warned of an early start to winter from early November.[33] We would question how useful this information was to policy-makers, however, given that the Met Office advised that there was a 70% chance that temperatures would be average or colder during the winter and a 60% chance that they would be average or warmer.[34]

12. Some witnesses suggested that the Met Office's forecasts were biased towards warmer weather because the agency had focused unduly on climate change and overlooked other important factors, such as solar activity.[35] This issue is well beyond our remit, but the proponents of this theory were unable to provide us with long-range forecasts from other sources for December 2010 which did not themselves contain significant errors.[36]

13. On 8 December 2010 the Secretary of State for Transport asked Professor Sir John Beddington, the Government's Chief Scientific Adviser, for advice on whether the occurrence of three severe winters in successive years made severe winters more likely in future.[37] Sir John's advice was that "it is not currently possible to quantify with any certainty the number of severe winters we might expect over the coming few decades". Although the long term prediction is for warmer average winter temperatures in the UK because of climate change, Sir John pointed out that "contemporary climate change models typically underestimate the observed frequencies of blocking anticyclones" which tend to cause severe winters in the UK. He also said better understanding and modelling of other physical processes which are known to influence the UK's climate, such as solar variability, would be a "significant step forward".

30 For example, see Q174, Ev 89 and Ev w25.

31 Ev w1, paragraph 1 and Ev 89, paragraph 3.5.

32 Ev w52, paragraph 2.2.

33 Ev w11, paragraph 12.

34 HC Deb, 27 Jan 2011, c454w.

35 Ev w4, paragraph 9 and Ev w54 (Piers Corbyn).

36 For example, material from Piers Corbyn which has been deposited in the Parliamentary Archives.

37 Q224.

14. Sir John argued that the Met Office needed "additional high-performance computing resource" to improve decadal forecasting, although he noted that the Met Office was "optimistic" about improving its seasonal predictions in time for next winter.[38] The Secretary of State put a £10 million price tag on the additional computing power needed by the Met Office to provide more accurate decadal forecasts.[39] He told us that he had established a cross-departmental working group to "look at issues about weather forecasting and optimum levels of investment".[40]

15. **Better medium- and long-range weather forecasting would assist transport providers and others in planning to deal with the effects of severe winter weather. For example, it would give transport operators the opportunity to warn passengers of when contingency timetables would be likely to be needed and to get snow and ice clearing equipment into position. The current seasonal predictions—such as the forecast provided to the Cabinet Office in October—do not provide a firm basis on which decision makers can act with confidence. £10 million would be a small price to pay for improving the Met Office's long-range forecasting capability, given the cost to the UK economy of transport disruption due to severe winter weather. We recommend that the Secretary of State press the Ministry of Defence to investigate the case for providing the Met Office with additional funding for enhanced computing power and to report back to us with the outcome.**

16. Along with a number of other departments, the Department for Transport has prepared a climate change adaptation plan, which looks at how transport networks could be adapted to deal with global warming during the rest of this century.[41] The Department's key climate risks include increased incidence of extreme weather, but not extreme winter weather.[42] The Secretary of State told us that "consideration of severe snow and ice were not included as they are weather variables that, according to latest climate science, are not projected to increase in frequency or severity as a result of long term climate change".[43] In oral evidence, however, he accepted that if winters became milder and wetter "I take that to mean more precipitation and, therefore, if we do get periods of extreme cold weather that is likely to occur as snow".[44]

17. The Highways Agency and Network Rail have also published climate change adaptation reports, both of which refer to risks associated with severe winter weather.[45] The Highways Agency report specifically refers to the possibility that "within long term general climate trends, extreme and untypical weather events will occur. Increasing average

38 Letter to the Secretary of State for Transport from Sir John Beddington, dated 15 December 2010, http://www.dft.gov.uk/pgr/resilience/letter/pdf/beddington.pdf.

39 Q229.

40 Q235.

41 *Climate Change Adaptation Plan for Transport 2010-12*: *Enhancing resilience to climate change*, DfT, March 2010 (hereafter *DfT adaptation plan*).

42 Ibid, p18.

43 Ev 61.

44 Q225.

45 *Interim Climate Change Risk Assessment*, Highways Agency, Dec 2010 and *Network Rail Interim Climate Change Adaptation Report,* 30 Sep 2010.

temperatures do not preclude cold spells."[46] **We are surprised that the Department for Transport's climate change adaptation plan does not include reference to risks associated with severe winter weather, unlike those produced by the Highways Agency and Network Rail. Given that climate change does not preclude the occurrence of severe winters in future, and bearing in mind the uncertainties in modelling the UK's climate identified by Sir John Beddington, we recommend that the final version of the Department's plan, which is due to be signed off in spring 2012,[47] should include reference to the risk of severe winter weather in future and how this should be planned for.**

Influencing public expectations

18. Witnesses were united in arguing that severe winter weather inevitably caused disruption to transport wherever in the world it occurred.[48] The Office of Rail Regulation, for example, gave us examples of disruption to rail networks in December 2010 in Germany, Denmark, Sweden, Finland, the Netherlands and Switzerland.[49] British Airways noted that December's snow caused airport closures across the northern hemisphere.[50] David Quarmby said "on the whole, we do as well as, if not in some respects better than, other European countries with similar weather patterns to our own".[51]

19. Nevertheless, the public expects public authorities to do far more to keep transport systems operating in snow and ice. For example, a survey by the AA in the week beginning 26 November 2010 reported that 75% of drivers thought local authorities had not done very well in clearing snow and ice from minor roads and 86% were critical of councils' efforts in clearing pavements.[52] Preliminary findings of research by the Institute of Transport and Tourism showed that over 80% of respondents thought that clearing pavements of snow and ice was as important as clearing roads, although nearly 50% disagreed with the proposition that more tax should be paid in order to achieve this.[53] Media reporting of adverse winter weather also adds to the sense that the UK is unable to cope with snow and ice.[54]

20. **There is undoubtedly more that could and should be done to ensure that the UK's transport systems are more resilient to severe winter weather, as this report will show. More realistic expectations about what can be achieved during severe weather and the level of winter resilience which is affordable are also necessary. A level of immediate disruption in severe weather is likely but transport providers should focus on planning**

46 *Interim Climate Change Risk Assessment*, Highways Agency, Dec 2010, p6.

47 *DfT adaptation plan*, p6.

48 Eg Qq 3, 218.

49 Ev w38, paragraph 3.

50 Ev 86-87, paragraphs 1.3 and 1.4 (and see Ev 93, paragraph 3.4).

51 Q3.

52 Ev w15-16, paragraphs 4.2.1 and 4.3.4.

53 Ev w44-45, section 6.

54 For example, "Why can't we handle snow?", *Daily Express*, 1 Dec 2010, p14; "Here we (don't) go again: Britain freezes to a halt", *Independent*, 2 Dec 2010, pp2-4; "A bad day for the nation as failure takes hold", *Daily Express*, 3 Dec 2010, p12; "Why Britain has been brought to a standstill again", *Daily Express*, 3 Dec 2010, p12.

to recover from periods of severe weather disruption as quickly as practicable, bearing in mind the trade-off between costs and benefits in investing in winter resilience.

21. Another area for improvement concerns preparations by motorists for winter weather. We were struck by the finding from the AA's December 2010 survey that 44% of drivers had done nothing to prepare for severe winter driving conditions. Of those who had taken precautions, only 39% had followed basic advice to put blankets, a shovel and other emergency equipment in their car. [55] **We recommend that the Highways Agency work with motoring organisations such as the AA and the RAC to launch a high profile publicity campaign about winter preparedness in autumn 2011. This campaign should aim to increase the proportion of motorists taking precautions, such as keeping a shovel and a blanket in the boot of their cars, next winter to at least 60%. The Government should report back to us in early 2012 about whether this has been achieved.**

22. A third issue concerns the advice provided by the Highways Agency and the police about when to travel in severe winter weather. The Secretary of State said "the advice issued by police, and reiterated by myself and other Ministers at the height of the disruption, was simply not to use the roads unless it was absolutely essential ... drivers were advised not to go out unless they had to". It is not clear to us how many travellers are deterred from making journeys by such advice or whether there is sufficient understanding of what the police and the Government mean by "essential" journeys. Simon Sheldon-Wilson of the Highways Agency said research on driver behaviour in winter 2009–10 had shown that there had been little change in behaviour despite the severity of the weather.[56] **We recommend that the Government and the police should work together to develop clearer 'travel warnings' which specify more precisely which journeys should not be undertaken in severe weather conditions. For example, a 'severe weather travel warning' might indicate that only journeys necessitated by a medical or other serious emergency should be undertaken, while a lower-level travel warning should be used to deter journeys undertaking for social reasons. We also recommend that the Government sponsor research into how warning messages about travel influence behaviour.**

23. **We also recommend that the Department's current consideration of alternatives to travel should acknowledge the importance of improving facilities and arrangements for remote working and tele- and videoconferencing in maintaining economic activity during periods of severe weather disruption. Any proposals resulting from the Department's recent call for evidence on this issue should include improvements to the resilience and capacity of remote access networks, so that more people can work at home during periods of disruption.**

Voluntary effort

24. The Department for Transport published a "Snow Code" in October 2010 to encourage people to clear their own paths and frontages of snow and ice, following suggestions that

55 Ev w16, paragraph 4.3.3.

56 Q97.

such activity could lead to people being liable for injuries sustained on cleared areas of road and pavement.[57] There were a number of other examples of voluntary effort to help overcome transport difficulties caused by the winter weather. For example, the Local Government Association told us about arrangements in some areas to enable local communities to apply salt and grit to their own roads and pavements as well as examples of voluntary effort to clear roads, deliver hot meals to elderly people and act as "snow wardens", looking out for problems caused by the severe weather.[58]

25. The Secretary of State argued that local authorities "need to look at ... how they could support community action with supplies of salt and grit" and pointed out that the Department had assisted local authorities in making arrangements with farmers to do snow-clearing work by confirming that red diesel could be used for that purpose. "There are some things we can do from the centre but I do not think they can be prescriptive" he concluded; "I think they can only be enabling".[59]

26. There is a clear responsibility on national and local government and other transport providers to ensure that transport systems are kept running during periods of severe weather. In addition, however, more could be done to facilitate voluntary action in certain circumstances, for example to help clear icy pavements and assist vulnerable people. The Government can do more to promote best practice so that local authorities, and local communities, are better placed to plan their own responses to severe weather. **We recommend that, before next winter, the Government should publish online practical advice about how individuals and communities can overcome problems caused by severe winter weather. This information should also include guidance for local authorities on enabling and encouraging voluntary action, for example in relation to the recruitment of volunteer snow wardens.**

Government co-ordination and expenditure

27. Expenditure on winter resilience is incurred by a number of organisations in both the public and private sector, including the Highways Agency, Network Rail, airport operators, airlines, and train operating companies. It is difficult to estimate with any accuracy how much these bodies spend each year on winter resilience, although the Quarmby review estimated that the Highways Agency and local highway authorities between them spend £160 million during an average winter.[60] The economic and social costs of winter disruption are also difficult to calculate. The Quarmby review suggested that the annual cost of disruption in an average winter was "about £1 billion" and, as we have seen, December's severe weather cost the UK economy some £1.6 billion.[61] Further research would be required to assess whether any of this "lost" output is in fact deferred to a later period when weather conditions have improved.

57 Ev 59, paragraph 52.

58 Ev 84-85, Annex A and Qq 75 and 92.

59 Qq264-65.

60 *Quarmby Audit*, paragraph 3.37.

61 *Quarmby final report*, paragraph 12.12 and see paragraph 4.

28. The Quarmby review looked at whether it was worthwhile to increase expenditure by highways authorities on winter resilience. Mr Quarmby said:[62]

> The desk exercise we examined suggested that if local authorities were able to spend up to 50% more on winter resilience-that is, from about £200 million to about £300 million a year-possibly, benefits between £50 million and £400 million might result. In other words, on paper at least, there is a suggestion that at the local authority level you might get significant additional benefits by spending a bit more. This would be on treating a higher proportion of the networks, more treatment of footways, pedestrian areas and cycleways, maybe more attention to snow clearing resources and so on.

29. However, the Quarmby review also noted that there is "little appetite among the public to spend more on winter resilience, given the relative infrequency of severe winters, and the generally short duration of their impact".[63] This is borne out by research undertaken by the Local Government Association and the Institute of Transport and Tourism.[64]

30. Nevertheless, **given the cost of transport disruption to the UK economy, we are sympathetic to the argument that it would be beneficial if more money were spent on winter resilience. Extra investment should be targeted on those parts of the travel network which have shown themselves to be least resilient in recent years and where the costs of disruption are highest.** In some cases it will be for the private sector to fund enhanced resilience, overseen by the appropriate regulators. Modest extra expenditure on planning and co-ordination will often be the most effective means of ensuring that transport systems recover quickly from disruption. We set out below areas where extra investment could prove beneficial and the Government's role in achieving this.

Rail: the third rail system south of the Thames

31. The Secretary of State said that, in his view, the rail network had operated "quite well given the extreme conditions" in December 2010, except for some localised problems. These included disruption to the electric lines in Kent and Sussex which Mr Hammond described as "unacceptably vulnerable to disruption".[65] Commuters from those counties will be well aware that ice and snow on the additional rail which conveys electricity to trains can paralyse the network. The rail industry's National Task Force said that on some days fewer than 70% of services which Southeastern, Southern and First Capital Connect planned to operate ran on time: on 2 December hardly any trains ran to timetable south of the Thames.[66] During the worst of the weather there were instances of trains stranded

62 Q4.

63 *Quarmby final report*, paragraph 12.1.

64 Ev w44-45, section 6 and *Weathering the Storm II*, Local Government Association, July 2010, p9.

65 Qq 218, 238-39.

66 Ev 66, paragraph 5.2 and Ev 71, appendix 2. These statistics measure performance against a pre-announced timetable, including, in some cases, contingency timetables and therefore do not fully capture the level of disruption experienced by passengers.

overnight in Kent and Sussex.[67] Meanwhile, the high speed line through Kent was barely affected by the weather conditions.[68]

32. David Quarmby said that two factors explain the vulnerability of the 3,000 mile third rail network south of the Thames: it runs through deep rural areas which are susceptible to heavy snowfall and electric current is transmitted from the top of the third rail, rather than the side of the rail as with some light rail systems, such as the Docklands Light Railway (DLR).[69] David Ward, Network Rail's route director for Kent, downplayed comparisons to light rail systems which are smaller and less complex than main line rail networks.[70] The National Task Force has described the numerous mitigating measures being worked on to improve the resilience of the third rail network, ranging from changing traction control systems on rolling stock to heating the third rail at key points. "Longer term options to replace the [third rail] system with overhead electrification are also being considered".[71]

33. The early start to the 2010–11 winter took the rail industry by surprise. The National Task Force said:

> Network Rail did not have all its equipment in proper working order … this situation was exacerbated by the fact that not all trains were initially operating in ice mode and there were some units that had yet to be modified with the latest software. With hindsight, some basic operating mistakes were also made in implementing the key route strategies.[72]

Mr Ward explained that Network Rail's anti-icing strategy was timed to coincide with the December timetable changeover and that, although some anti-icing work had been brought forward because of the forecast bad weather, three specialist vehicles were unavailable during the first period of disruption. Robin Gisby of Network Rail said: "If we had got going 48 hours earlier, probably that first week would have been a little better … in the second period [of disruption] we were a bit better".[73] However, there were continued problems with some equipment, such as points heaters, which was not designed to work in the extremely low temperatures experienced throughout December.[74]

34. The third rail network south of the Thames dates back over 100 years and is often prone to disruption due to poor weather. In our view, improving the resilience of this part of the rail network, which carries thousands of commuters into London each day, should be a priority for investment. In the long-run, the rail network south of the Thames would be more resilient and safer if it made use of overhead wires. In the meantime, however, there would appear to be scope to introduce a number of technical 'quick fixes' to help overcome the problems caused by ice and snow, particularly on more vulnerable parts of

67 Q68.

68 *Rail Magazine*, issue 660, p6.

69 Q28.

70 Q67.

71 Ev 68, paragraph 7.1.

72 Ev 67, paragraph 6.3.

73 Qq68-69.

74 Q67.

the network. Priority should be given to the most cost effective improvements which can help keep the main commuting lines open. **We recommend that the Secretary of State convene a third rail working group, bringing together Network Rail, the train operators, and other interested parties, including passenger groups, to assess how the network south of the Thames can be made more resilient, focusing in the first instance on quick fixes for next winter and then devising costed options for more extensive work for the next Network Rail control period. We also recommend that the Secretary of State should commit the Government to the long-term aim of replacing the existing third rail network with a more resilient form of electrification. The working group should consider how this can be achieved and report to Government with an estimate of timescale and cost. We recommend that this report should be published in due course.**

Helping airports recover from severe weather disruption

35. Although several UK airports closed at times during December 2010 most attention focused on the closure of Heathrow on 18 December and its slow recovery thereafter. The Begg report, arising from the inquiry into Heathrow's closure initiated by BAA, includes a detailed timeline and study of what happened at Heathrow. It identified several factors which contributed to the problems at Heathrow, including a low state of preparedness for the snow, slow clearance of snow from aircraft stands, failures in communication and co-ordination, confused and conflicting messages for passengers, and slow mobilisation of crisis management teams. The Begg report's main recommendation was that Heathrow should adopt "an improved resilience target that the airport never closes as a result of circumstances beyond its control, except for immediate safety or other emergency threats".[75] We have not chosen to duplicate the detailed analysis of the Begg report and we focus instead on the Government's role in relation to significant disruption at major airports. We consider passenger welfare and information provision in the next chapter.

36. Several witnesses contrasted winter resilience at the UK's two biggest airports, Heathrow and Gatwick. British Airways said Gatwick Airport had shown "continual improvement" in its winter resilience after a "poor" response to the winter weather in December 2009.[76] David Quarmby described Gatwick's closure at the start of December 2010 as "a well-managed incident".[77] There was considerable criticism of how the disruption at Heathrow from 18 December was handled, however. British Airways said there was "little evidence of forward planning and a lack of experience about how to return to regular operations effectively and efficiently when the airport re-opened".[78] Virgin Atlantic said "key elements of Heathrow airport's snow plan were not implemented" and "the information flow from Heathrow to airlines [was] slow, limited and at times contradictory".[79] BALPA, the pilots' association, blamed much of the disruption on the absence of off-stand de-icing facilities, which meant aircraft blocked stands while waiting

75 *Begg Report*, paragraph 9.

76 Ev 88, paragraphs 2.2.1 and 2.2.3.

77 Q30.

78 Ev 87, paragraph 2.1.7.

79 Ev 74-75, paragraphs 15 and 20.

for de-icing.[80] The Board of Airlines Representatives criticised inadequate investment in snow-clearing vehicles at Heathrow.[81] **Criticism that major airports under-invested in winter resilience equipment would appear to be borne out by the substantial investments by the owners of both Gatwick and Heathrow Airports in such equipment after December's disruption.**[82]

37. The Begg report's conclusions about the disruption at Heathrow all concerned planning and crisis management.[83] The confusion over the opening of the second runway on 21 December, which we probed in detail, exemplified the lack of grip BAA's senior managers had over the crisis. British Airways and Virgin Atlantic both complained that they found out about the re-opening of the second runway when it was announced in the House by the Prime Minister.[84] In addition, we received conflicting accounts from the Secretary of State and Colin Matthews, the Chief Executive of BAA, about why the Government's offer of military assistance to clear the runway on the morning of 21 December had been refused.[85] We accept Mr Matthews' point that trained labour was required to clear the runway safely and efficiently but it would seem to us that this work was only prioritised once the Government began to make clear that continuing delay in the airport's recovery was unacceptable. **All in all, the Begg report and the evidence we received from the aviation sector give the impression that Heathrow was totally unprepared to recover from any major incident which necessitated its closure**.

38. The Association of British Travel Agents and British Airways noted that winter resilience at Heathrow was affected by the fact that the airport operates at close to full capacity.[86] This is an important constraint on Heathrow's ability to recover from periods of closure and also points to Heathrow's status as an international hub airport. Heathrow makes a significant contribution to the UK economy and the Government has a legitimate interest in ensuring that it remains competitive as an international hub, particularly as its status is threatened by airports in Paris, Amsterdam and Frankfurt. **Although it is for the private sector to provide the additional investment in winter resilience recommended by the Begg report, we consider that the Department for Transport should play an active role in ensuring that this investment is delivered. Consequently we recommend that the Secretary of State should designate a senior official within his department as having oversight of snow plans and other incident recovery plans at Heathrow and the UK's other main airports. This role should have responsibility for signing off airport snow plans and other major incident plans, contributing the Government's view to discussions about investment in equipment for dealing with snow and ice and other sources of disruption and participating, on behalf of the Secretary of State, in "Gold" command teams providing strategic leadership during crises. Government oversight of**

80 Ev w58-59, paragraphs 7 and 8 to 20.

81 Ev w24, paragraph 11 and see Ev w22, paragraph 11.

82 Ev 80, paragraph 6.1 and Ev 93, section 4.

83 *Begg Report*, paragraph 14.

84 Q150 and see *Begg Report*, paragraph 138 and Ev 95.

85 Ev 61, 94 and 95 and Qq 212, 259 and 261-62.

86 Ev w49, paragraph 15 and Ev 86, paragraph 1.2 and see Ev 93, paragraph 3.4.

incident recovery plans is particularly important in relation to Heathrow, to help maintain its status as an international hub airport.

Co-ordination between modes

39. Several witnesses described how the resilience of one transport mode to winter weather depended to some extent on the resilience of other modes. For example, Gatwick Airport observed that disruption to the rail network in Sussex had affected its operations because passengers and staff had found it difficult to get to the airport, even though the airport itself was clear of snow.[87] Heathrow Airport pointed out that its difficulties during the second period of snow in December were compounded by the closure of local roads which trapped people at the airport.[88] Virgin Trains called for planning for situations in which train operators and other forms of public transport were expected to carry more passengers because of airport closures.[89] The Department told us that some ports had been badly affected by the winter weather because of untreated access roads.[90] Inter-relationships between modes was also covered in the report arising from the Quarmby review.[91] The Secretary of State told us that problems experienced in 2009–10 in ensuring that roads to stations were gritted had been less significant in 2010–11.[92]

40. These issues are primarily for transport operators and infrastructure providers to resolve. **We would expect all major transport operators and infrastructure providers to ensure that their contingency planning took account of the impact of their winter resilience operations on other modes. Where conflicting priorities cannot be resolved, particularly, for example, in relation to access to airports, the Government should step in. We recommend that the Department for Transport should develop and publish criteria setting out when it will ensure that the impact of winter resilience planning by one part of the transport system takes due account of other modes.**

41. The Freight Transport Association and the Institute of Highway Engineers were amongst witnesses arguing for more transparency in the preparation and dissemination of local authority winter resilience plans, so that, for example, transport operators could use information about which roads would be gritted in making their own winter preparations.[93] The Quarmby report also made recommendations on this issue.[94] We agree that this would be helpful and **we recommend that the Government provide guidance to local authorities about publishing their plans for transport networks' winter resilience in draft so that all interested parties can comment and ensure consistency with their own plans.**

87 Ev 80, paragraph 6.7.

88 Ev 92-93, paragraph 3.3.1.

89 Ev w63, paragraph 46.

90 Ev 60, paragraph 58.

91 Q12 and *Quarmby final report*, sections 15 and 16.

92 Q269.

93 Ev w31, p2 and Ev w48, paragraph 20.

94 *Begg Report*, recommendations 5 and 6.

Salt

42. Laying salt on roads and pavements helps prevent ice forming and snow lying but is largely ineffective against deep snow and does not work at temperatures below -8˚C.[95] The UK is reliant on salt imports (to supplement limited domestic supply) to get through a severe winter and problems with supply and distribution in winter 2009–10 were the main focus of the Quarmby review. The Highways Agency managed a strategic stock of salt, to distribute to local authorities who were running short, and recommendations were made about reducing salt spreading rates, although the Local Government Association said these came too late to affect planning by local authorities and would require investment in more modern equipment.[96]

43. The AA and the RAC expressed concerns about the resilience of the UK's salt supply arrangements.[97] The Institute of Highway Engineers said the strategic salt supply had not been adequate and:

> Local authorities would be at near critical/emergency levels before any supplies could be released. It was clear that the location of the stock also affected the possible release of emergency supplies. There were no supplies north of Humberside for example. Local authorities were also unable to determine from DfT the amount of salt being released under this process.[98]

The Institution of Civil Engineers described the strategic salt arrangements as a "work in progress"[99] and Durham County Council complained about a "lack of transparency", arguing:

> In reality, all that has been achieved is that the reserve salt stocks have transferred from the mine head to local authorities … it is essential that headroom is provided by the suppliers importing more salt during the summer periods.[100]

44. The Secretary of State said "the bottom line is that we have ended the winter with about 800,000 tonnes more salt left in February than we had in the previous year".[101] He referred to follow-up work, including in ensuring that local authorities use lower salt spreading rates.[102] **The strategic salt arrangements introduced in 2010 helped ensure that local authorities had sufficient salt to keep main roads open during a particularly severe winter. To this extent it was a considerable success. The criticisms we heard of this year's arrangements were largely points of detail which we expect the Government to consider in reviewing the arrangements ahead of next winter. In particular, we recommend that the Government consider ways of ensuring that strategic salt supply arrangements are more transparent to local authorities and that new guidance on salt spreading rates is followed. We call on the Government to publish a written statement on the outcome of its review of the strategic salt arrangements before next winter.**

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95 Q276.

96 Ev w63, paragraph 20.

97 Ev w15, paragraph 3.3 and Ev w51, paragraph 1.7.

98 Ev w30.

99 Ev w67, paragraph 18.

100 Ev w26.

101 Q275 and see Ev 62.

102 Q275.

3 Information provision and passenger welfare

Introduction

45. Inadequate provision of information was raised by witnesses as an issue for rail, road and air travellers in December 2010. Incorrect timetables or a lack of real time information about services are not simply inconvenient: these problems can generate unnecessary journeys at a time when people should stay at home and compromise passenger welfare. In this chapter we outline the specific difficulties which came to light because of the bad weather in December and make recommendations aimed at putting passengers first during times of disruption.

Rail

46. Passenger Focus, the Government funded consumer organisation for rail and bus travel, told us that "progress is being made in the way the rail industry handled delays" but "a culture of looking after passengers when things go wrong is not yet second-nature across [the] industry".[103] Chris Burchell, the chair of the rail industry's National Task Force and the Managing Director of Southern trains, candidly agreed with this analysis.[104] Although the National Rail Enquiries system coped well with the high volume of hits on its website, it did not always show correct information and tickets continued to be available for sale for trains which did not run. In addition, Passenger Focus said "station displays and online live departure boards did not always keep pace with events".[105] The Office of Rail Regulation also referred to the "variable" quality of information provided to passengers and problems with the new Integrated Train Planning System (ITPS) for keeping timetabling information up-to-date were raised by London TravelWatch and Virgin Trains.[106] The Secretary of State identified "inadequate" communications with rail passengers as one of the main points arising from the winter disruption.[107]

47. Before January 2010 changes to timetables used to take two days to reach customer-facing systems which meant that during periods of weather disruption websites and telephone enquiry lines were often unable to provide customers with accurate information. Now, systems can be updated with changes to the next day's timetables if those changes are notified to Network Rail before 1pm.[108] This is still not sufficient to deal with late changes to timetables. Chris Scoggins, the chief executive of National Rail Enquiries, said "where …

103 Ev w36, paragraphs 4.1 and 4.2.

104 Q63.

105 Ev w36, paragraph 3.3.1.

106 Ev w27-29, paragraph 8 and Ev w63, paragraph 46.

107 Q218.

108 Ev 66, paragraph 4.2.2.

timetables were not correct we did have messages displayed on our website … clearly warning people that the timetables were incorrect. However, it was still possible to buy tickets for trains that were not going to run".[109] He said work to provide more timely updates to consumer-facing information about timetables was due to be completed in October.[110]

48. Robin Gisby of Network Rail said the rail industry was hoping to emulate London Underground in terms of the quality of real time communication with passengers about services. This was complicated by the "massively complex, fragmented and under-invested set of information systems" inherited from British Rail: Mr Gisby spoke of "170 separate information systems and other operational systems, some of which are 40 or 50 years old still".[111] The rail industry has identified improving the dissemination of real time information as a priority,[112] and the Office of Rail Regulation has published proposals to amend the licences it grants to service and station operators and Network Rail to clarify responsibilities for information provision.[113] The Secretary of State said the Quarmby review had identified that "the system has become dependent upon a computer-driven information supply such that the back-up systems are not used".[114] He was sympathetic to the suggestion that during times of disruption information could be provided by staff in regional control centres, over-riding automated systems.[115]

49. **In our view, the rail industry needs to do far more to look after the interests of passengers during periods of disruption. Culture change is urgently required: the legacy of privatisation cannot be used to excuse the continuing inability of train companies to provide accurate information to passengers about delays and cancellations. We fully support the Office of Rail Regulation's initiative to clarify responsibilities for providing accurate information. The licence changes proposed by the ORR should be introduced as soon as possible and backed up by effective regulation. By next winter, there should be clarity within the industry about who is responsible for real time information provision and customer-focused timetable systems should always display accurate information. Failures in information provision should cost the firms responsible money.**

50. **In addition, we are attracted by the idea of using regional control centres to take charge of real time communications with passengers during periods of disruption. We recommend that the Department investigate this option with a view to assessing whether regulatory action is required to achieve it.**

109 Q53.

110 Q53.

111 Q63.

112 Ev 69, paragraph 7.3.2.

113 Public letter from Bill Emery, Chief Executive, ORR, published 29 March 2011, http://www.rail-reg.gov.uk/upload/pdf/passenger_information_consultation_290311.pdf.

114 Q231.

115 Q232.

Aviation

51. BAA were unlucky in that the snow on 18 December fell on what was expected to be Heathrow's busiest ever weekend.[116] Airlines are principally responsible under EU law for looking after passengers when flights are severely delayed or cancelled but it is clear that some did not discharge their responsibilities.[117] Nearly 10,000 passengers spent the night of 20 December in one of the terminals at Heathrow and we received evidence describing how difficult conditions were for the people stranded there. [118] The Begg report calls on the Civil Aviation Authority (CAA) to investigate how the legal responsibilities on airlines to look after passengers during periods of disruption can be enforced and what rights and obligations are placed on an airport where airlines fail to meet their legal responsibilities. In addition, Begg calls on BAA, airlines and retailers to develop a sustainable welfare plan to ensure that stranded passengers are looked after.[119]

52. **Passenger welfare should be at the heart of airport operations. We concur with the recommendation of the Begg report that Heathrow should develop a welfare plan for passengers during periods of disruption: other airports should do the same. It is unacceptable that such plans do not already exist. If airlines fail to meet their obligations to accommodate stranded passengers, airports should be prepared to step into the breach. We would support measures by which airport operators could reclaim the costs of providing support to stranded passengers from airlines which had not discharged their legal responsibilities and we recommend that the CAA investigate how this can be achieved.**

53. One of the striking aspects of the December disruption at Heathrow was that it was not reflected in the airport's performance measures, which recorded an unexceptional month.[120] The Secretary of State said this would be addressed in a Bill introducing a new economic regulatory regime for airports which had been included in the Queen's Speech but which is now scheduled to be introduced in the next parliamentary session. Mr Hammond said "it is clear to me that we need greater levels of incentive, both regulatory and economic, for airport operators to build appropriate levels of resilience into their operations" and that this required "the shared community" at Heathrow "to face up to the need for higher levels of investment" in resilience.[121] BAA, British Airways and Virgin Atlantic all concurred that a new economic regulatory regime was welcome although Manchester Airports Group described change as "unnecessary".[122] The Secretary of State announced to us that the Airport Economic Regulation Bill would be published in draft for scrutiny by Parliament and the aviation sector.[123] **December's events have highlighted the**

116 *Begg Report*, paragraph 59.

117 Ev 92, paragraph 3.3.1 and Ev w56, paragraph 3.6.

118 *Begg Report*, paragraph 100 and see Ev w70.

119 *Begg Report*, recommendations 13 and 14.

120 Q138 and http://www.heathrowairport.com/assets/Internet/Heathrow/Heathrow%20downloads/Static%20files/LHR_SQR_Dec10.pdf.

121 Q240.

122 Qq 139-40, 196 and Ev w20, paragraph 5.3.

123 Q241.

need for the regulatory regime applying to airports to be revamped so that it properly takes account of passenger welfare in periods of disruption. We welcome the Government's intention to introduce legislation and we particularly welcome the Secretary of State's announcement that the Bill will be published in draft. We look forward to scrutinising the draft Bill when it is published.

54. Voluntary arrangements between BAA and the airlines using Heathrow to ration slots during recovery from disruption were used for the first time on 19 December.[124] Colin Matthews told us that:

> There is a good question as to whether in the regulatory framework there should be the ability for someone to impose an emergency timetable … I am not saying necessarily that it should be us or it should be the CAA, but there is a very good argument for someone being able to design an emergency timetable which isn't simply done because 95 airlines agree … There is a good case for having something more rigorous, more planned, whereby an emergency timetable can be imposed very, very quickly.[125]

The Secretary of State told us that it was "essential that there is an ability to impose restricted timetables at a disrupted airport, particularly at Heathrow because of its lack of spare capacity, and to enforce them to avoid the unacceptable spectacle of thousands of passengers turning up for flights that were not going to happen and then being held in sub-standard conditions in terminals".[126] Stewart Wingate, the chief executive of Gatwick Airport, described this issue as "perhaps a peculiarity to Heathrow" and said there was "no appetite" for an emergency timetable at his airport.[127]

55. The report of the Begg review makes detailed recommendations about how an emergency timetable regime could be implemented at Heathrow.[128] We have not had the opportunity to scrutinise this proposal fully, although we note that the Board of Airline Representatives is opposed to the suggestion.[129] **In principle, we can see the benefits to passengers of imposing an emergency timetable at busy airports during periods of disruption, particularly so that passengers can be sure of whether or not their flight will take off. However, the CAA must have a role in ensuring that decisions concerning the design and implementation of an emergency timetable are fair and transparent and in providing airlines with a right of appeal. Consideration must also be given to financial compensation to airlines whose flights are grounded because an emergency timetable has been implemented.** We intend to keep a close eye on how this proposal develops.

124 Q183 and Ev 87, paragraph 2.1.9.

125 Q183.

126 Q218.

127 Q186.

128 *Begg Report*, recommendations 8 and 10.

129 '"Hands off airline timetables" says BAR UK', press notice issued 15 March 2011.

Roads

56. There were a number of examples of very significant problems on major roads in December 2010, involving hours of delay, including the closure of the M25 at junction 3 on 30 November and the closures of the M4 and M40 on 18 December.[130] When we took oral evidence these incidents were still under investigation. The Highways Agency said it was "investigating what further steps could be taken to help further mitigate the impact of localised intense snowfall on people's journeys. Such measures may include wider resource deployment prior to and during severe weather, as well as more focused road user communications during localised intense snowfalls where disruption to traffic is likely".[131]

57. The AA's survey of motorists found considerable support for a more proactive approach by the police to stopping traffic joining blocked motorways.[132] The Freight Transport Association (FTA) called on the Highways Agency to identify areas of the network where lorries are prone to jack-knifing, one of the prime causes of motorway closures, and supported the use of convoys of lorries, escorted by gritters and snow ploughs, to grind salt into ice and snow.[133] The FTA also suggested that the Highways Agency could adopt an alert system for predictions of ice and snow, similar to the existing system for warning of high winds.[134]

58. **The Highways Agency is right to look into ways of minimising the impact of intense periods of snowfall on major roads, particularly in order to avoid large numbers of motorists being caught up for extended periods in queues because of road closures. We recommend that greater use be made of roadside information displays as well as more sophisticated in-car information systems, such as the now ubiquitous sat-navs, to provide motorists with real time information about road conditions and disruption.**

59. **We also recommend that the Highways Agency and police forces should continue to develop more proactive responses to dealing with blockages in the strategic road network, including, for example, by identifying areas which are susceptible to accidents and ensuring that traffic officers are located there during severe weather and ensuring that motorists are not directed on to motorways which are closed in bad weather.**

60. **Finally, we recommend that the Government consider the FTA's suggestion of introducing snow and ice warnings for HGVs, akin to strong wind warnings, which could play a role in reducing the number of HGVs which cause major delays by jack-knifing.**

130 Ev 57-58, paragraph 40.

131 Ev 58, paragraphs 41-44.

132 Ev w16, paragraph 4.3.5.

133 Ev w46-47, paragraphs 6-8 and 12.

134 Ev w67, paragraphs 17-18.

4 Conclusion

61. Although the UK experienced one of its most severe winter months in recent times last December, much of the transport systems kept moving. Workers in all transport modes deserve enormous credit for this outcome. There were, however, some significant problems.

62. Where problems did occur transport providers have sought to learn lessons and there were clear examples of improvements from winter 2009–10, for example in relation to salt stocks. Some of the problems with airports and rail services were extremely disruptive to passengers, however, and we welcome the apologies provided to us by Colin Matthews of BAA and Chris Burchell, on behalf of train operators.[135]

63. In this Report we have identified a number of further ways in which the Government can help enhance the resilience of transport networks. These include:

- Exploring means of improving medium- and long-range weather forecasting;
- Ensuring that planning for severe winter weather is incorporated into climate change adaptation plans;
- Considering what additional expenditure is acceptable to improve winter resilience, so that the public is better informed about transport provision in periods of disruption;
- Facilitating voluntary effort to overcome some of the problems caused by snow and ice at local level, within a framework set by national and local government;
- Better travel warnings for motorists and HGV drivers and more innovative thinking about providing real-time information about road conditions;
- Further work by the Highways Agency and police forces to ensure that blockages on the strategic road network are managed more proactively;
- Leading work on making the third rail network more resilient;
- Requiring Government oversight of major airports' snow plans and changing the scope of airport regulation to reflect the need to cope with periods of disruption; and
- Publishing guidance to local authorities on the transparency of winter resilience plans.

In addition, we support the broad objectives of the Government's planned reform of the economic regulation of airports and the Office of Rail Regulation's actions to clarify responsibilities within the rail industry for the provision of accurate timetable and real-time information for rail users.

135 Q152 and Q37.

64. **Our recommendations are a sensible package of measures which will not cost a large sum of money to implement but which, taken together, will help reduce the enormous cost of severe weather disruption to the UK economy. After three severe winters in succession the Secretary of State is well placed to ensure that the winter resilience of the UK's transport networks is significantly enhanced and we now look to him to act.**

Conclusions and recommendations

Introduction

1. We commend the Government, and its predecessor, and transport providers for their willingness to learn from periods of transport disruption due to adverse weather. We recommend that, when transport is subject to significant weather disruption in future, the Government should initiate reviews along the lines of the Quarmby review to examine what happened and ensure that lessons are learnt. (Paragraph 8)

Preparing better for severe weather

2. Better medium- and long-range weather forecasting would assist transport providers and others in planning to deal with the effects of severe winter weather. For example, it would give transport operators the opportunity to warn passengers of when contingency timetables would be likely to be needed and to get snow and ice clearing equipment into position. The current seasonal predictions—such as the forecast provided to the Cabinet Office in October—do not provide a firm basis on which decision makers can act with confidence. £10 million would be a small price to pay for improving the Met Office's long-range forecasting capability, given the cost to the UK economy of transport disruption due to severe winter weather. We recommend that the Secretary of State press the Ministry of Defence to investigate the case for providing the Met Office with additional funding for enhanced computing power and to report back to us with the outcome. (Paragraph 15)

3. We are surprised that the Department for Transport's climate change adaptation plan does not include reference to risks associated with severe winter weather, unlike those produced by the Highways Agency and Network Rail. Given that climate change does not preclude the occurrence of severe winters in future, and bearing in mind the uncertainties in modelling the UK's climate identified by Sir John Beddington, we recommend that the final version of the Department's plan, which is due to be signed off in spring 2012, should include reference to the risk of severe winter weather in future and how this should be planned for. (Paragraph 17)

4. There is undoubtedly more that could and should be done to ensure that the UK's transport systems are more resilient to severe winter weather, as this report will show. More realistic expectations about what can be achieved during severe weather and the level of winter resilience which is affordable are also necessary. A level of immediate disruption in severe weather is likely but transport providers should focus on planning to recover from periods of severe weather disruption as quickly as practicable, bearing in mind the trade-off between costs and benefits in investing in winter resilience. (Paragraph 20)

5. We recommend that the Highways Agency work with motoring organisations such as the AA and the RAC to launch a high profile publicity campaign about winter preparedness in autumn 2011. This campaign should aim to increase the proportion of motorists taking precautions, such as keeping a shovel and a blanket in the boot of

their cars, next winter to at least 60%. The Government should report back to us in early 2012 about whether this has been achieved. (Paragraph 21)

6. We recommend that the Government and the police should work together to develop clearer 'travel warnings' which specify more precisely which journeys should not be undertaken in severe weather conditions. For example, a 'severe weather travel warning' might indicate that only journeys necessitated by a medical or other serious emergency should be undertaken, while a lower-level travel warning should be used to deter journeys undertaking for social reasons. We also recommend that the Government sponsor research into how warning messages about travel influence behaviour. (Paragraph 22)

7. We also recommend that the Department's current consideration of alternatives to travel should acknowledge the importance of improving facilities and arrangements for remote working and tele- and videoconferencing in maintaining economic activity during periods of severe weather disruption. Any proposals resulting from the Department's recent call for evidence on this issue should include improvements to the resilience and capacity of remote access networks, so that more people can work at home during periods of disruption. (Paragraph 23)

8. We recommend that, before next winter, the Government should publish online practical advice about how individuals and communities can overcome problems caused by severe winter weather. This information should also include guidance for local authorities on enabling and encouraging voluntary action, for example in relation to the recruitment of volunteer snow wardens. (Paragraph 26)

9. Given the cost of transport disruption to the UK economy, we are sympathetic to the argument that it would be beneficial if more money were spent on winter resilience. Extra investment should be targeted on those parts of the travel network which have shown themselves to be least resilient in recent years and where the costs of disruption are highest. (Paragraph 30)

10. We recommend that the Secretary of State convene a third rail working group, bringing together Network Rail, the train operators, and other interested parties, including passenger groups, to assess how the network south of the Thames can be made more resilient, focusing in the first instance on quick fixes for next winter and then devising costed options for more extensive work for the next Network Rail control period. We also recommend that the Secretary of State should commit the Government to the long-term aim of replacing the existing third rail network with a more resilient form of electrification. The working group should consider how this can be achieved and report to Government with an estimate of timescale and cost. We recommend that this report should be published in due course. (Paragraph 34)

11. Criticism that major airports under-invested in winter resilience equipment would appear to be borne out by the substantial investments by the owners of both Gatwick and Heathrow Airports in such equipment after December's disruption. (Paragraph 36)

12. All in all, the Begg report and the evidence we received from the aviation sector give the impression that Heathrow was totally unprepared to recover from any major incident which necessitated its closure. (Paragraph 37)

13. Although it is for the private sector to provide the additional investment in winter resilience recommended by the Begg report, we consider that the Department for Transport should play an active role in ensuring that this investment is delivered. Consequently we recommend that the Secretary of State should designate a senior official within his department as having oversight of snow plans and other incident recovery plans at Heathrow and the UK's other main airports. This role should have responsibility for signing off airport snow plans and other major incident plans, contributing the Government's view to discussions about investment in equipment for dealing with snow and ice and other sources of disruption and participating, on behalf of the Secretary of State, in "Gold" command teams providing strategic leadership during crises. Government oversight of incident recovery plans is particularly important in relation to Heathrow, to help maintain its status as an international hub airport. (Paragraph 38)

14. We would expect all major transport operators and infrastructure providers to ensure that their contingency planning took account of the impact of their winter resilience operations on other modes. Where conflicting priorities cannot be resolved, particularly, for example, in relation to access to airports, the Government should step in. We recommend that the Department for Transport should develop and publish criteria setting out when it will ensure that the impact of winter resilience planning by one part of the transport system takes due account of other modes. (Paragraph 40)

15. We recommend that the Government provide guidance to local authorities about publishing their plans for transport networks' winter resilience in draft so that all interested parties can comment and ensure consistency with their own plans. (Paragraph 41)

16. The strategic salt arrangements introduced in 2010 helped ensure that local authorities had sufficient salt to keep main roads open during a particularly severe winter. To this extent it was a considerable success. The criticisms we heard of this year's arrangements were largely points of detail which we expect the Government to consider in reviewing the arrangements ahead of next winter. In particular, we recommend that the Government consider ways of ensuring that strategic salt supply arrangements are more transparent to local authorities and that new guidance on salt spreading rates is followed. We call on the Government to publish a written statement on the outcome of its review of the strategic salt arrangements before next winter. (Paragraph 44)

Information provision and passenger welfare

17. In our view, the rail industry needs to do far more to look after the interests of passengers during periods of disruption. Culture change is urgently required: the legacy of privatisation cannot be used to excuse the continuing inability of train companies to provide accurate information to passengers about delays and

cancellations. We fully support the Office of Rail Regulation's initiative to clarify responsibilities for providing accurate information. The licence changes proposed by the ORR should be introduced as soon as possible and backed up by effective regulation. By next winter, there should be clarity within the industry about who is responsible for real time information provision and customer-focused timetable systems should always display accurate information. Failures in information provision should cost the firms responsible money. (Paragraph 49)

18. In addition, we are attracted by the idea of using regional control centres to take charge of real time communications with passengers during periods of disruption. We recommend that the Department investigate this option with a view to assessing whether regulatory action is required to achieve it. (Paragraph 50)

19. Passenger welfare should be at the heart of airport operations. We concur with the recommendation of the Begg report that Heathrow should develop a welfare plan for passengers during periods of disruption: other airports should do the same. It is unacceptable that such plans do not already exist. If airlines fail to meet their obligations to accommodate stranded passengers, airports should be prepared to step into the breach. We would support measures by which airport operators could reclaim the costs of providing support to stranded passengers from airlines which had not discharged their legal responsibilities and we recommend that the CAA investigate how this can be achieved. (Paragraph 52)

20. December's events have highlighted the need for the regulatory regime applying to airports to be revamped so that it properly takes account of passenger welfare in periods of disruption. We welcome the Government's intention to introduce legislation and we particularly welcome the Secretary of State's announcement that the Bill will be published in draft. We look forward to scrutinising the draft Bill when it is published. (Paragraph 53)

21. In principle, we can see the benefits to passengers of imposing an emergency timetable at busy airports during periods of disruption, particularly so that passengers can be sure of whether or not their flight will take off. However, the CAA must have a role in ensuring that decisions concerning the design and implementation of an emergency timetable are fair and transparent and in providing airlines with a right of appeal. Consideration must also be given to financial compensation to airlines whose flights are grounded because an emergency timetable has been implemented. (Paragraph 55)

22. The Highways Agency is right to look into ways of minimising the impact of intense periods of snowfall on major roads, particularly in order to avoid large numbers of motorists being caught up for extended periods in queues because of road closures. We recommend that greater use be made of roadside information displays as well as more sophisticated in-car information systems, such as the now ubiquitous sat-navs, to provide motorists with real time information about road conditions and disruption. (Paragraph 58)

23. We also recommend that the Highways Agency and police forces should continue to develop more proactive responses to dealing with blockages in the strategic road

network, including, for example, by identifying areas which are susceptible to accidents and ensuring that traffic officers are located there during severe weather and ensuring that motorists are not directed on to motorways which are closed in bad weather. (Paragraph 59)

24. Finally, we recommend that the Government consider the Freight Transport Association's suggestion of introducing snow and ice warnings for HGVs, akin to strong wind warnings, which could play a role in reducing the number of HGVs which cause major delays by jack-knifing. (Paragraph 60)

Conclusion

25. Our recommendations are a sensible package of measures which will not cost a large sum of money to implement but which, taken together, will help reduce the enormous cost of severe weather disruption to the UK economy. After three severe winters in succession the Secretary of State is well placed to ensure that the winter resilience of the UK's transport networks is significantly enhanced and we now look to him to act. (Paragraph 64)

Formal Minutes

Tuesday 26 April 2011

Members present:

Mrs Louise Ellman, in the Chair

Jim Dobbin	Mr John Leech
Mr Tom Harris	Paul Maynard
Julie Hilling	Iain Stewart
Kwasi Kwarteng	Julian Sturdy

Draft Report (*Keeping the UK moving: The impact on transport of the winter weather in December 2010*), proposed by the Chair, brought up and read.

Ordered, That the draft Report be read a second time, paragraph by paragraph.

Paragraphs 1 to 64 read and agreed to.

Summary agreed to.

Resolved, That the Report be the Fifth Report of the Committee to the House.

Ordered, That the Chair make the Report to the House.

Ordered, That embargoed copies of the Report be made available, in accordance with the provisions of Standing Order No. 134.

A paper was ordered to be reported to the House for printing with the Report.

Written evidence was ordered to be reported to the House for placing in the Library and Parliamentary Archives.

[Adjourned till Tuesday 3 May at 4.00 pm

Witnesses

Tuesday 15 February 2011

Tuesday 8 March 2011

Monday 14 March 2011

List of printed written evidence

List of additional written evidence

(published in Volume II on the Committee's website www.parliament.uk/transcom)

List of unprinted evidence

The following written evidence has been reported to the House, but to save printing costs has not been printed and copies have been placed in the House of Commons Library, where they may be inspected by Members. Other copies are in the Parliamentary Archives (www.parliament.uk/archives), and are available to the public for inspection. Requests for inspection should be addressed to The Parliamentary Archives, Houses of Parliament, London SW1A 0PW (tel. 020 7219 3074; email archives@parliament.uk). Opening hours are from 9.30 am to 5.00 pm on Mondays to Fridays.

1 David Walsh

2 Additional material from Piers Corbyn

List of Reports from the Committee during the current Parliament

The reference number of the Government's response to each Report is printed in brackets after the HC printing number.

Session 2010–12

Fifth Report	Keeping the UK moving: The impact on transport of the winter weather in December 2010	HC794
Fourth Report	The cost of motor insurance	HC591
Third Report	Transport and the economy	HC 473
Second Report	Financial Scrutiny of the Department for Transport	HC 683
First Report	Drink and drug driving law	HC 460
Third Special Report	The performance of the Department for Transport: Government response to the Committee's Fourth Report of Session 2009–10	HC 549
Second Special Report	Update on the London Underground and the public-private (PPP) partnership agreements: Government response to the Committee's Seventh Report of Session 2009–10	HC 467
First Special Report	The major road network: Government response to the Committee's Eighth Report of Session 2009–10	HC 421

Oral evidence

Taken before the Transport Committee

on Tuesday 15 February 2011

Members present:

Mrs Louise Ellman (Chair)

Steve Baker
Mr Tom Harris
Julie Hilling
Kelvin Hopkins
Mr John Leech
Paul Maynard
Gavin Shuker

Examination of Witnesses

Witnesses: **David Quarmby CBE**, Chair, and **Brian Smith**, Panel Member, Independent Review of Winter Resilience, gave evidence.

Q1 Chair: Good morning, gentlemen, and welcome to the Transport Select Committee. I do apologise for keeping you waiting. Could you please just give your name and organisation? This is for our records.
David Quarmby: David Quarmby, Chairman of the RAC Foundation.
Brian Smith: Brian Smith. I am here as a member of the panel that David chaired earlier in the year. Perhaps just to restate, I am now retired but I was working for Cambridgeshire County Council until March last year as the Executive Director responsible for technical functions.

Q2 Chair: Thank you very much. Mr Quarmby, you want to make an opening statement to us.
David Quarmby: If I may, Chair, thank you. Chair, members of the Committee, thank you for inviting me to attend the first meeting of the Committee's inquiry into winter resilience. The Committee will know that I led the panel appointed last March by the then Secretary of State Lord Adonis to carry out an independent review into the resilience of England's transport systems to severe winter weather. On the panel with me were indeed Brian Smith—and I am delighted Brian is with me here today to help answer the Committee's questions—and also Chris Green, career railwayman, former Chief Executive of Virgin Trains and a former non-executive member of Network Rail. He couldn't be here today.
Our review published its interim report in July, focusing on highways and measures that could be implemented for this winter, and on weather forecasting and climate change, and then the final report, which looked at rail, aviation and longer-term resilience of salt supply. On 1 December last I was asked by the Transport Secretary Philip Hammond to carry out a quick audit into how well the highways community and the transport operators were managing the unusually early and intense winter weather at that time. I need to explain that the period under review was 24 November, which is when the first snowfall hit Scotland and the north of England, through to 9 December, when a thaw set in following intense snow over much more of England as well.
So my audit and its conclusions relate to that first winter period when, for example, Gatwick Airport was closed for 48 hours but other airports were little affected, and the three railway companies south of the river were particularly badly hit. My report was published, however, during the second winter episode in the 10 days or so leading up to Christmas. That was when Heathrow Airport was closed or severely restricted for several days but the train companies seemed to do better than previously. But I did not have evidence about this period and have not commented on it in detail.
Chair, as you know, it did not seem necessary for me to submit further written evidence to the Committee, and instead I have simply referred the Committee to the three reports. They are long documents, so I did suggest that the executive summaries of each would give a good overview of what we had looked at, the conclusions we had reached and the recommendations we had made.
Now, in mid-February, looking back, may I offer the Committee three brief reflections? First, the performance of the railways in the second severe weather episode was better than in the first. This suggests that Network Rail and the train companies were, in some parts of the network, caught short in their preparations for winter, availability of de-icing equipment, readiness of contingency timetables and so on, and in the management of their consequences. Our main review reported that over recent years Network Rail and the train companies have in fact taken a wide range of measures to improve many different aspects of winter operations and resilience, including passenger information. Not all of it was ready or in place by the beginning of December, but I believe lessons were learned quickly to prepare for the second episode and no doubt you will hear about that later this morning.
Secondly, the problems at Heathrow and the evident frustration of Government at the time about the lack of leverage on what is a private regulated industry have made me reflect on whether the CAA's licensing regime for aerodromes needs to embrace performance in managing winter weather, in addition to the requirement which is largely safety based for a snow plan. The Committee will no doubt be considering this anyway.

Thirdly, for me, the whole question of weather forecasting, weather trends and climate change remains unfinished business. In our windswept island off the north-west coast of Europe, at the mercy of many different weather systems, we do have very unpredictable and volatile weather. Nevertheless, the Met Office reconfirmed to me during the December audit that severe winters still have a probability of 1 in 20 and this is gradually declining due to global warming. Nevertheless, the effect of global warming is to increase the moisture content of the air so that, other things being equal, more snow is possible in the future when severe weather events do occur. They also confirmed that weather in any one winter is virtually independent, statistically speaking, of weather in preceding winters. In other words, there is no evidence of clustering of severe winters. With two severe winters on the trot, and a few weeks of another severe winter, I could be forgiven for asking the question again, but I imagine you will be discussing this with the Met Office during your inquiry.

Chair, that is all I wish to say by way of introduction. Thank you.

Q3 Chair: Thank you very much. That is very helpful. The general view seems to be that the UK copes less well with bad weather than all other countries. Is that right?

David Quarmby: No, I would refute that. In the December audit we had an appendix with some, albeit rather anecdotal, European comparisons. Countries often quoted—Scandinavia, parts of the USA such as the east coast, and Canada—have deep snow for extended periods every winter, and they are fully resourced to deal with that. However, even they get overwhelmed by extreme weather sometimes, as we have seen on the east coast of the States in recent weeks. The most useful comparisons are with other countries who have similar weather to our own, such as the Netherlands, Belgium, and much of Germany. Severe winters are not common, and the level of resources they have reflects that, as it does for us too. But there, as well as here, people expect the authorities to cope, and most of them do so pretty well, as indeed do our authorities.

Appendix A in our report describes briefly how the Netherlands and Germany fared during late November and early December. In the Netherlands, the roads were gritted quite well but when the severe snow came there were really big hold-ups. There was, however, plenty of salt, as indeed there was for us. The railways did not fare well in the Netherlands: points iced up, trains coped badly in the snow, and information for passengers was pretty poor right across the network. Schiphol Airport remained open, though many flights were cancelled, but they do have six runways.

In Germany, the roads were initially okay, but when the snow came there were hundreds of accidents on the Autobahnen, and incidents on the A2, which links the Ruhr with Berlin, led to tailbacks of up to 30 km. There were five hours of delay on the A3 between Cologne and Frankfurt. Many stretches of the rail network were badly affected. Frankfurt and Munich airports were closed on similar days to which Gatwick was closed. Berlin's two airports ran out of de-icing materials.

Overall, I would say that neither the Netherlands nor Germany fared better than we did, although there were some important differences. I would say that, on the whole, we do as well as, if not in some respects better than, other European countries with similar weather patterns to our own.

Q4 Chair: Do you think we should be prepared to spend more on winter resilience?

David Quarmby: This is one of the things we examined in the final report where we looked at the economics of winter resilience, and there you may recall we estimated, in an average winter, that the cost to England's economy is about £1 billion. About half of that is hard cost and half is what economists call the welfare cost—that is the inconvenience cost to individuals.

We then did a desk exercise to estimate whether, if you were to add 50% to the cost of local authorities' winter resilience spending, you would get disproportionate benefits as a result of using more resources. The desk exercise we examined suggested that if local authorities were able to spend up to 50% more on winter resilience—that is, from about £200 million to about £300 million a year—possibly benefits[1] worth between £50 million and £400 million might result. In other words, on paper at least, there is a suggestion that at the local authority level you might get significant additional benefits by spending a bit more. This would be on treating a higher proportion of the highway networks, more treatment of footways, pedestrian areas and cycleways, maybe more attention to snow clearing resources and so on. Of course, in these austere times, we were never going to suggest that any authority should seriously look at that, but nevertheless that is the assessment that we made.

Q5 Paul Maynard: You helpfully gave us an overview of the situation in the Netherlands and Germany, yet there remains a perception in this country that we perform less well than other comparable countries. Why do you think that perception has come about, and how can we ensure better perception amongst the public?

David Quarmby: As I say, we only looked in any depth at the Netherlands and Germany. We did not look at other countries; it was not part of our remit. But I think the simple answer to your question is that, as a nation, we tend to deprecate ourselves, and the media play into that. So, of course, it is a good media story to say, "Oh, everybody else does better than we do." I don't think the evidence supports that. What you can do about it I cannot readily suggest; one thing to note is that many local authorities and the transport operators have worked to get the media on their side, to explain to them what they are doing and to make them part of the communications to the public at large—in other words, to make the local media, particularly, part of the solution instead of part of the problem. A number of local authorities have found that this is effective not only in getting a more

[1] To the economy and to society (note from witness)

objective story out about what is going on but also in managing people's expectations about what is reasonable by way of protection against winter.

Q6 Paul Maynard: Are you aware of what the Dutch or German Governments may have done in response to their own winter problems?
David Quarmby: I don't know what they have been doing as a result, no. The only knowledge I have through my connection through Abellio, where I am a director, which is the international subsidiary of the Dutch railways, is that I know the Netherlands railways are going through a very big review of how things went during their winter period. I would like, Chair, just to ask Brian to comment. I think he has more information than I have about America.
Brian Smith: I would like to make a couple of comments and then I will just make a comment on America. Running through all your questions so far is the issue of how quickly you recover from an event. I think that is absolutely crucial here, running through this. That links back then to the question about how much you invest, because in fact you could invest in more pre-treatment and you could cover more of your network, but that doesn't make a difference, really, until you get a snow event. So the real issue then comes back to whether you have equipment available. I think one of the areas that is worth pursuing—and many authorities have done this—is to look at whether you have arrangements in place, whether it is with the local farmers or other contractors, to bring in additional equipment.
Interestingly, though, just linking it to America, I have been very fortunate in the last couple of weeks to be away in a warm place where many Americans were as well. Strangely, many of them started talking about this very bad winter that they have had over there, with lots of snow, more snow in their winter than ever before. It was just interesting to hear some of their comments almost in the same way of how badly they have been doing. They were not prepared. You tend to find their main roads are cleared quickly, and they do have that equipment, but some of those same perceptions and issues were coming through about their frustrations and needing to do better in the future. I suspect that, probably, wherever you are, you would find some of those same issues coming through.

Q7 Mr Harris: Did you receive any indication from local authorities about what preparations they are making for having significantly less money to spend on winter preparations next year?
David Quarmby: During my December audit, I spoke in depth with 15 county and unitary authorities across England, and I made a point of asking all of them whether they were under pressure with their winter budgets in relation to the in-year cuts that were being imposed on local authorities during the current year, and also whether they were anticipating any budget cuts in what was then the current budget process for the 2011–2012 year. Interestingly, none was under pressure to cut back in-year on the necessary activities to deal with the winter that was going on, and none reported that winter service in the ongoing budget process for 2011–12 looked likely to have to make significant budget cuts for the future. However, that was early December.
Brian Smith: Can I add one thing to that which is very important? It is quite a large spend for a local authority preparing for winter, and I would echo from my knowledge exactly that situation. I think local authorities take the view they just have to be prepared in this, but they are looking at this area for greater efficiency. One of the things in the review which David led on, and we pushed, was the issue of using salt more efficiently. So there are some areas of work going on, and all other things being equal in terms of the amount of snow and treatment, then I think local authorities are certainly doing work to see if they can spend less within the same coverage.

Q8 Chair: So there is ongoing work about salt?
Brian Smith: Yes.
David Quarmby: Indeed, yes.

Q9 Chair: How is that being taken forward?
David Quarmby: Salt was a big subject for our review in any case. You may wish to raise questions about what is going on currently, but jumping to the end of the story, in order to deal with the strategic salt supply situation for this country,[2] we advised in our final report that there were two things that should happen, having looked at a number of alternatives. One is that there should be a systematic approach to making more economical use of salt across all highway authorities. Secondly, the two main UK salt suppliers should be urged, cajoled and encouraged to be able to increase their throughputs at times of high demand.
On the former, the experience of last winter, when there was an emergency cutback in January of last year on the use of salt, was that many authorities found they could manage with rather lower rates of spreading salt than were then the norm. During the course of our inquiry we felt that this needed to be looked at more evidentially and should be researched properly in order to give a sound basis on which local authorities could confidently adopt more economical spread rates. This was accelerated by Government during November and December, and Government managed, through the UK Road Liaison Group, to publish a new set of lower spread rates that local authorities should feel able to use. This was in December, just before Christmas.
So the pattern of using salt more sparingly is now built into the standards that local authorities are advised to use, and this will not only reduce some costs, as Brian was saying, but it will help the overall strategic situation of being able to match demand better to supply at a national level in future winters.

Q10 Mr Leech: Is there any evidence in countries like Britain—England, Scotland, Wales and Northern Ireland—because we have so few examples of very adverse weather conditions, that people's behaviour under these circumstances doesn't change and therefore helps to create more of a problem, whereas in other countries they are used to the adverse weather

[2] Where demand in a severe winter exceeds UK supply capacity (note from witness)

conditions and their behaviour alters to deal with the particular climate?

David Quarmby: I think that is a very important point. I have no hard evidence, but certainly we all have anecdotes—and I have plenty—of young people, particularly young drivers, who won't have had much experience of winter conditions, going out and seeking to drive without understanding quite how dangerous it is going to be, or without having been able to experience that before and therefore have the skills to be able to manage that.

I was aware in February 2009, which is when London had a really serious snowfall and didn't manage so well as they did the subsequent winter, in South-East London, where I live, that there were a number of hills that became impassable, and it is interesting how many of those were impassable just because drivers had tried to drive up or down them and got stuck. They had not been gritted properly at that time, and cars just collided, got across the road and completely blocked it. So I think there is a problem of lack of experience of drivers, and younger drivers in particular.

Q11 Mr Leech: Is there any statistical evidence to back up that anecdotal evidence that the increase in the number of accidents here is higher than the increase in other countries during adverse weather conditions?

David Quarmby: We didn't look at that and I don't know whether that evidence exists. Part of the difficulty about using accident data, as we discovered when doing our economic study, was that the total traffic flows—the total number of journeys—fall quite dramatically, so even if the accident rate goes up, the number of accidents goes down, because there are fewer people on the road. So it is quite difficult to discern that interpretation.

Q12 Mr Leech: I would just like to move on to another area now. Is there any evidence to suggest that certain transport modes were let down by other transport modes—or even within modes? For instance, Manchester Airport Group were quite critical about the reactions of some of the airlines, and some of the airlines were quite critical of some of the actions of some of the airports. Is there any evidence that one transport mode was let down by another and caused more problems in their particular area?

David Quarmby: Given the fact that most people make multi-modal journeys, whether you are walking to a station and travelling by train and then going on a bus at the other end, or you are driving somewhere to park and ride, or you are driving to an airport and then you are flying, it would be surprising if that was not the case. However, we didn't have any hard evidence of problems linking up in that way, but plenty of anecdote which supported our recommendation.[3] For example, there were a number of places where we felt that roads to railway depots, railway stations and bus garages had not been properly gritted. The buses were not able to get out and staff were sometimes not able to sign on at railway depots, signalling centres, maintenance areas, or wherever. That is one of the reasons why we put such a lot of weight in our recommendations on the fact that local authorities should consult fully in determining what networks they are going to treat, and on what basis, with other transport operators.

Q13 Mr Leech: Doesn't that mean then that it is more difficult to solve the problem in the future, given that each transport mode is able, effectively, to blame someone else for perhaps some of their own failings?

David Quarmby: I don't think it is a blame game. The response we had from all the people we spoke to during the course of the review, and in my audit too, was that everybody is trying to solve the problems. Okay, if, under certain circumstances, people start blaming others, maybe that is how some people behave, but on the whole organisations were keen to find solutions that dealt with the integration of the kind of journeys that people need to make.

Q14 Chair: In general did you feel that people were co-operating?

David Quarmby: Yes, absolutely.

Q15 Chair: Did you feel that operators were co-operating?

David Quarmby: Yes.

Brian Smith: If I could add as well, on the basis of the two winters we looked at in the report last year, as David says, the recommendation that there should be better consultation across modes was clearly widely accepted. One of the things that I have certainly picked up in the last few months—and I think some of that experience played into the December events—is that there had been more of that preparation and consultation so at least people aren't surprised when the bus depot isn't treated, or whatever the example is. The key issue is people have been talking and they know what to expect. That, indeed, extends to local companies and the like, so that you don't find out when you are in the event what the problem is, because you can't plan. This is about good plans to start with that allow you to be effective when you have a snow event.

Q16 Kelvin Hopkins: Lincolnshire Council has pointed out that the switch from directly employed labour to contracted staff has reduced their capacity to deal with bad weather and their resilience. How can councils mitigate this risk?

David Quarmby: That is a phenomenon we were aware of, and again I was aware of it in the December audit. Councils told me two things. First, if you set up your service contracts correctly in the first place, then you make sure that there is flexibility of labour with your contractors whose staff are prevented by snow and ice from doing the things they would normally do, and can turn their efforts towards clearing pavements and side roads and so on. There were a number of authorities we spoke to who had contracts that enabled them to do that.

The second thing, of course, is to provide the kind of leadership that enables the community at large and town and parish councils, as well as districts, to

[3] That more attention should be given to how modes do link up together (note from witness)

mobilise volunteer labour. We found that there were some really striking examples of where that had been done particularly well. I think it is an area of best practice for local authorities to engage their local communities as well as their lower-tier authorities in what are the practical ways they can all help out at times of severe winter periods.

Q17 Kelvin Hopkins: Contracting out works better where there is an expected programme of work to do, it is routine and so on, but if it is a once in 20 years or once in five years major event, maybe contractors are not best placed to do that, and perhaps emergency procedures are best dealt with by direct employment.
David Quarmby: Interestingly, we found cases where the contractors were able to draw on their own supply chains to bring in additional resource, for example for snow clearance, which the local authority itself might not have been able to do. There are factors and there are advantages and disadvantages, but a well-drawn contract is one that will allow for the flexible use of labour when circumstances require and will also enable the contractor to draw on their own supply chain to help out.
Gavin Shuker: I would like to turn to rail. If anyone else wants to come in on local authorities before I do that, then I am happy to defer.

Q18 Julie Hilling: One of my concerns is about the side roads and the pavements. Main thoroughfares seem to be cleared relatively quickly in most circumstances, but part of my constituency is quite high, where, certainly last year, people were trapped in their homes for a couple of weeks. You said that additional investment from local authorities would bring results. What sort of scale are we talking about in terms of being able to deal effectively with those side roads and pavements?
David Quarmby: I will ask Brian to comment in a minute, but there are two points I would make, one on side roads particularly in the more remote rural areas. The key there, I believe, is to have good arrangements with contractors and through farm contracts too, which are often on a retainer basis which is not very expensive; these arrangements will enable plant, ploughs, diggers and so on to be brought into use to deal with clearing snow and ice on local roads. This happens for example in Staffordshire and Derbyshire, counties I spoke to at some length during my December audit. Both of those counties are well organised for that, and so is North Yorkshire. There are other counties that are less well organised in having available on-the-shelf contracts and contractors who will come out and do that. It does not cost a lot but it needs a bit of management effort to put that in place. That, again, is another piece of best practice for local authorities.

Q19 Julie Hilling: Mine is an urban constituency, but quite high.
David Quarmby: Yes. That, again, can be done. The council itself should not feel that it has to invest in a lot of equipment that it only uses once every few years. It is possible to put in place these latent contracts which will bring resources into play when they are needed. That, I think, would work for the outer fringes of an urban area just as well as it would in the deeper rural areas.
On footways, that was an area that we found in our main review had been neglected. Many local authorities didn't bother to treat footways at all, but there clearly was a demand, from a lot of the evidence that we received. So we made quite a clear recommendation in our main review that authorities should consider carefully how and to what extent they should treat the more important and more frequently used footways in their areas. Some authorities already contract with their district councils to do this in two-tier areas. That is something that you can get parish and town councils to do. Some, in fact, were starting to introduce specialised equipment to enable them to treat footways efficiently. I think all those things are welcome, but they are needed.

Q20 Julie Hilling: Can I also ask then about voluntary activity? My mum still thinks that she has a legal duty to clear her path outside her house. Is that something that we should be looking at?
David Quarmby: You may remember that about this time last year there were some questions raised, I think in the upper House, about whether or not people were liable if they started to clear the area in front of their own house[4]. This came to our notice during our review and we took a leaf out of Westminster City Council's book, who had, the previous winter, prepared a simple leaflet for their householders. We decided that the Government should take the initiative to produce a similar set of advice for the whole country, which we called the *Snow Code*. We recommended that in July, and it was very good that by the time we published our final report on 22 October, on the same day the Government published the *Snow Code* and made it available to all local authorities to distribute. It said you should feel confident to clear your frontage if you just follow these few basic points of common sense and good practise, like "Don't pour boiling water on the ice" and so on.
We are a long way, culturally, from other countries like Germany and Switzerland, who place a legal requirement on their householders to do that. I don't think that would go down very well in this country.

Q21 Chair: The issue last year was about liability, wasn't it?
David Quarmby: It was.

Q22 Chair: If people did clear the path outside their own home, they could be liable.
Brian Smith: That was exactly the issue—just to build on that—in so far as particularly there was media reporting of it and there were one or two legal people in local authorities who said, "You could be liable." Hence the *Snow Code*, which gives an underpinning there and gives basic advice saying, "You will not be prosecuted if you have adopted a sensible approach to clearance." Certainly, following

[4] If a passerby then slipped or had an accident (note from witness)

on from your mother's example, we would want to encourage people.

Just building on your question, it is always going to be difficult, particularly in urban areas and the pavements, to clear those. There are a whole range of issues from parked cars and the like to which you can point. Therefore, we will have to rely a lot on the frontages clearing, and that is the best answer, but to do it in a responsible way.

Q23 Steve Baker: Should we adjust our expectations for the effectiveness of road salt in heavy snow?

David Quarmby: Yes. Brian knows more about this than I do, although I have become a bit of an expert on salt. Salt is good as a precautionary treatment to prevent ice forming on roads, and it is good to clear small amounts of ice and snow. Salt will not clear 3 inches of ice and snow. Indeed, one of the problems during the December period was that the minor roads that were not treated, because of the succession of freezing and thawing and freezing and thawing, had compacted ice and snow building up to 2, 3 or 4 inches on many minor roads.

Nearly all the authorities to whom I spoke with large rural areas have a policy of making sure that there is at least one access road cleared to every single rural community. That still leaves all the other roads. Yes, there is a need to manage people's expectations that salt will not clear compacted ice and snow. Once it gets past the first centimetre or so and builds up beyond that, the best you can do is, for example, to spread a mixture of sand and salt or even just sand on it in order to give traction to vehicles, but you have really got to wait for it to thaw.

Brian Smith: There is one other thing I would like to say, if I may. The other misunderstanding or the lack of understanding of the public is that, once the temperature goes down to about minus 8°C, the salt will actually not work. So, again, I think there are some issues here about public understanding about what salt will and will not do. The way I have often described it is that salt is not a magic dust that you can put down and the snow disappears. But there are a number of the public and, dare I say, the media who do seem to have that view of salt.

Q24 Gavin Shuker: Just turning to rail, to what extent does the current set-up, with train operating companies and Network Rail, lend itself well to handling the kind of problems we are talking about today?

David Quarmby: The architects of the privatised railway, back in the early 1990s, didn't build a system that was ideal for managing winter conditions. That said, I believe that the industry has evolved some very effective mechanisms, mostly through the means of what is called the National Task Force. I am sure you will hear more of that from Robin Gisby and Chris Burchell who are following us. The evidence we have had from the National Task Force, and indeed, my own experience, having been in the rail sector for over a decade, is that it is an effective mechanism for bringing together the infrastructure operator Network Rail, the train companies and others who have a part to play in this. The National Task Force forges strategies and programmes of action that will integrate and deliver activities that require both parties to co-operate and work together. You have only to look at what has been achieved under the NTF's winter programme to believe that it is pretty effective.

Q25 Gavin Shuker: To what extent, though, can we hold accountable Network Rail and train operating companies under the current set-up?

David Quarmby: I think you can do so very clearly because each has very clear responsibilities. Network Rail, as the infrastructure manager, has a duty to make the network available for service. The train operators' task is to so configure their trains, timetables and supervisory, operational and management arrangements in order to make the best use of the railway network under severe conditions.

Q26 Gavin Shuker: Can you give me an example where a train operating company or Network Rail has had punitive effects placed on them as a result of bad performance during cold weather?

David Quarmby: The arrangement that exists between Network Rail and the train companies does involve—I think I am right on this—penalties being placed on Network Rail if the infrastructure is not available for service. Interestingly, that does not apply to airports, which is something we discussed in our inquiry. So there is a financial incentive on Network Rail to make the network as available as they possibly can for safe and efficient operation.

Q27 Gavin Shuker: Just to clarify, were those penalties triggered during one or more of the last cold weather periods?

David Quarmby: I believe so, yes.

Q28 Gavin Shuker: I do not want to take up too much of the Committee's time, but I would like to raise the particular issue of the area south of London and the third rail system. I think other Committee members will want to come in. What is the fundamental problem there? Why did the network south of London perform so badly?

David Quarmby: The fundamental problem is a very well-known one. It is the vulnerability of the third rail system of bringing traction current to the trains. It is particularly vulnerable because of the top surface contact that is the characteristic of that system. Interestingly, there are a number of other equivalent third and fourth rail systems across Europe which do not pick up the traction current from the top of the rail but from the side or even from underneath the rail, and they are not vulnerable at all in the same way. In fact, the Docklands Light Railway is an example of traction current that is picked up from underneath the rail, not on top, and the DLR was pretty well unaffected by the recent winter weather.

What makes it worse for the rail companies south of the Thames, compared with Mersey Rail, for example, or London Underground, is the amount of the network that runs through deep rural areas, particularly in Kent and Sussex, and to an extent in Hampshire, which we know are very vulnerable to severe weather conditions—Kent particularly. It is the combination of

the weather conditions in those counties and the vulnerability of the third rail that at least creates the starting problem. Now you have to ask, "What do Network Rail and the train companies do to mitigate the impacts of those?" That is covered in our report, and I am sure it is covered in the evidence you have had from the rail sector.

Q29 Paul Maynard: You mentioned the *Snow Code* earlier. Do you think there is a role for Government to take on, rather like we had in the 1970s with the Central Office of Information public safety films, a much more aggressive role in imparting to the public what they should expect in terms of service provision levels on transport, how they should behave in adverse weather conditions when considering their travel options, and how they should adapt their driving needs? Does the Government need to play a much more proactive role in shaping public perception and expectation?

David Quarmby: It is a fair question, and many people will have different views about that. My own view is that expectations are best managed and information is best given close to people's own transport and highways experience. For example, a local authority that communicates well through its websites and so on is best placed to advise people on what use they can make of their local highways, what treatment they can expect of their roads, what journeys they can reckon to make and what their expectations can be. In the same way, the transport operators, the railway companies and the airlines are best placed to explain to people what is going on, what they can expect, and where and when they can get information about the services available.

In terms of people's behaviour, the only thing that probably is worth doing is some kind of campaign to encourage people to drive more sensitively and with greater care when they are driving on wintry roads. That would be a matter for the Department for Transport. In more general terms it is really best done by organisations and authorities that are closest to the individual.

Q30 Paul Maynard: You identify airlines and train operating companies as being best placed to provide that information. One perception, for want of a better word, is that during the last two major snowfalls this winter train operating companies, airlines and other transport organisations did not perform well at informing passengers as to what was happening. Were there any examples of good practice you could point to of companies that did do a good job of keeping passengers informed, and how did they do it?

David Quarmby: Yes. I would not agree with the assertion that people were badly served by information. There were some real pockets of problems, and the railway companies south of the Thames in the first winter period were an example of that. There were some highway authorities that did not give very thorough information to their residents and businesses, but my judgment would be that most train operating companies and most airlines did a pretty good job of keeping their passengers and prospective passengers in the picture. The problem comes, of course, if the airlines and the train operators can't provide certainty themselves about what is going to happen.

The contrast between Gatwick and Heathrow in the two winter periods is an interesting one. Gatwick made a decision to close and they remained closed for two days, and they made a judgment that they would be able to open on the morning of the third day, which they did. They informed all the airlines, and the airlines informed their passengers. I know it wasn't brilliant, but on the whole that was a well-managed incident. The problem with Heathrow later in December was the lack of certainty about the airport's own plans about reopening. There was a sense among the airlines that the closure on the Saturday morning, 18 December, was only going to be a short closure. Then it looked as if it was going to last until the Sunday, then the Monday, and then it did not resume full service until the Thursday.

You have to have certainty in the operation before you can begin to give good information to the passengers. But my belief is that the task of giving the information is something that the airlines do, I think, well. There was a further point that has just slipped me.

Q31 Mr Harris: I was intrigued by your comment that the privatisation of the railway industry left us without the proper preparations to deal with this sort of weather. Could you expand on that?

David Quarmby: I simply said that a unified railway is intrinsically, I think, better able to plan and manage circumstances under which the railway has to cope with severe winter conditions, because it involves rolling stock, operations and infrastructure, which, in our privatised railway, are split between Network Rail on the one hand and train operators on the other. But, having said that, I believe that the mechanisms that have been put in place over the last decade are a very good and effective response to what for the last nearly 20 years now has been a split regime between the infrastructure operator and the train operator.

Q32 Mr Harris: In your opinion, having looked at this for some period, whether the rail industry is privately owned or nationalised, did that have any effect on the ability of the industry to cope with this severe weather?

David Quarmby: I don't think whether it is owned by the public or privatised has any impact on it at all. It is about the effectiveness of the institutions working together, the mechanisms they have and the commitment and enthusiasm of the people involved.

Q33 Mr Harris: It is the structure. I was actually going to ask about something else but I just wanted to pick up on that earlier comment. I am hearing from you on railways and other areas that the problem is not so much the severe weather as members of the public: that expectations are too high, and members of the public perhaps expect too much from the infrastructure when this kind of weather happens. Are you taking the view that the response by the railway industry and other areas was adequate or as good as could be given the circumstances, and the public and

the media should perhaps take a fairer approach and shut up?

David Quarmby: I was not saying that, no. In my audit report I was saying that I felt there were problems which should not have arisen in terms of the railway operation, particularly south of the river. I have explained in the audit, and I amplified in my opening remarks, that a huge amount of work has been done over recent years under the aegis of the National Task Force to make the railway, in the round, more able to manage winter conditions. It is an ongoing programme of work that is being done and to some extent the rail sector was caught out by the early onset of the first severe winter period in late November, early December. There was a particular problem, which I noted in my report, of the lack of good information for passengers, particularly on Southeastern and Southern, not quite so bad on South West Trains. There were some issues about the availability of anti-icing equipment and materials and the mobilisation of resources.

I did also say in my opening remarks that I felt the railways managed the second winter episode rather better. I believe that the arrangements that are in place, the infrastructure that is there, the operating procedures and the systems that have been put in should enable a good response to be made to winter conditions.

I think there is still more work to do, particularly on the passenger information side, where I expressed the view in my audit report—and I still stay with this view—that there is too much reliance on electronic systems for delivering information to passengers. There is not enough resilience in the information systems that will give people the information they need to know. When they are standing on the platform of Orpington station for half an hour with a foot of snow, not knowing what is happening, for one reason or another, the electronic customer information systems are not giving them the information they need. So there is work to do in that area, and I think my friends in the rail industry would agree with that, but no doubt you will ask them that.

So far as the roads go, we expressed the view in our main review, and I repeated that in the audit, that there are a number of local authorities who do their winter resilience very well on highways, but not all of them do it as well as the best, and I identified probably four things that local authorities should attend to and for which there are very good examples of best practice. It is about planning, communications, mobilisation of resources, and engaging lower-tier authorities. If a local authority does all those things well, then they will generally have a satisfied residents and business community.

I am not saying that the country does all this brilliantly. What I am saying is that most people do a pretty good job. In the period I covered in my December audit there were a number of places where we were caught short, but everybody knows what they need to do.

Q34 Kelvin Hopkins: Pursuing the problem of information on the rail networks further, I am a daily commuter from Luton on Thameslink, and I have done that for 42 years. My impression is that there are inherent problems. We have several different systems. The main signal boxes, which is essentially Network Rail, are the only people who really know where the trains are. The computerised electronic indicators indicate phantom trains or trains that have disappeared. It gets to the point where it is completely useless looking at them. Then you have an automated voice system, but it seems to bear little relation to the indicator or where the trains are, and then, just occasionally, on rare occasions, you get a live voice correcting things. In the past we would have had a live voice knowing what was happening, one system, BR, and we would know where the train is going. Day after day after day we found problems and a great deal of frustration. But are the problems not inherent in the systems you have and this division between track and train?

David Quarmby: I think you can rely on those who are following me in this session to give you a fuller answer to those points, because they have the detail at their fingertips. But I would agree with your overall judgment that the experience we had in the two winter periods we have just had in December illustrate many, many different examples of exactly what you have described, where, for various reasons, the systems were unable to keep up with what was happening, they were not linked together, and there was no live voice that was able to give people an up-to-date picture, which perhaps was something that could not be formatted or was not within the protocols of the electronic systems.

I did quote in my report, and I will do so again here, that London Underground have made huge strides in the way in which they give information to their passengers. Their drivers are instructed, if a train is delayed for, I think, 30 seconds, that the procedure is to speak to the passengers, to explain that they are delayed, give a reason if they can, and assure them that somebody knows they are delayed.

Q35 Kelvin Hopkins: I have to say that London Underground is one system in the public sector.

David Quarmby: I don't think that makes any difference. I think it is perfectly possible to have systems and procedures, to train staff and to have a culture that says keeping people fully informed on the up to date position is top of the agenda for us. It doesn't matter that it is fragmented ownership or that it is public or private. It is a clear organisational and cultural commitment to do that. London Underground have that. I believe many railwaymen they have that, but the business of delivering it over a much bigger network, and a more complex and fragmented network, is more challenging. But I think it is a challenge that has to be met, and I made that very clear in my audit.

Chair: Thank you very much, gentlemen, for coming and answering our questions. We will pursue most of the issues you have raised in further sessions. Thank you very much.

Examination of Witnesses

Witnesses: **Robin Gisby**, Director of Operations and Customer Services, and **David Ward**, Route Director, Kent, Network Rail, **Chris Burchell**, Chairman, National Task Force, and **Chris Scoggins**, Chief Executive, National Rail Enquiries, Association of Train Operating Companies, gave evidence.

Q36 Chair: Good morning, gentlemen. Could you identify yourselves with your name and organisation for our records? I will start at the end.
David Ward: David Ward, Route Director for Kent, Network Rail.
Robin Gisby: I am Robin Gisby. I am the Director of Operations and Customer Services for Network Rail.
Chris Burchell: I am Chris Burchell. I am here in the capacity as the Chairman of the National Task Force. I am also the Managing Director of Southern, the railway company.
Chris Scoggins: I am Chris Scoggins. I am the Chief Executive of National Rail Enquiries.

Q37 Chair: Thank you very much. What would you say were the main challenges facing Network Rail and the train operating companies this winter?
Robin Gisby: If I may start on that, perhaps my colleagues would join me. The first bout of cold weather came very suddenly and a little earlier than we would normally expect. As Mr Quarmby said earlier, we were not quite ready for it. We made a number of mistakes during that first week, some of which I believe we have highlighted in our evidence to you. We learned from that quite rapidly. In the second bout of cold weather, which was longer, colder and there was more snow, we responded much better and delivered a slightly better service for what still must have been very difficult for passengers.
Chris Burchell: If I may, I would add a couple of points. At the outset, on behalf of all the train operators I would like to apologise to all the passengers who were disrupted or faced disruption during the snow events last December, and in particular to customers who suffered severe disruption because there were areas of the network that really did struggle in the worst and extreme cases. But in the same breath it is also worth pointing out that during that entire period much or most of the network remained open most of the time and in that period most of the scheduled services operated and most of those services actually ran to time.
There is a variety of performance over the network. There are certainly some areas where we need to do better next time. We recognise that and we are sorry for that. But, if I may, if the Committee will indulge me, I would pay tribute to the thousands of rail staff who worked incredibly hard to keep lines open and also to enable services to continue to operate in some pretty tough conditions. It is thanks to them that we managed to provide a reasonable service most of the time. I would like to have that on record, if I may.

Q38 Chair: Do you get enough notice about the severity of the weather?
Robin Gisby: Yes, I think we do. We lead on that, as Network Rail. We have a fairly well-established process that we have developed over the last couple of years for all aspects of seasonal weather and other incidents that affect the network, such as the ash cloud and so on. I would agree with previous evidence that we were caught out a little in the first week. We moved to the full level of national conferences on the Wednesday. I think that is covered in our evidence. That was on 1 December. If you look at the temperature and snowfall graphs in appendix 1 you will see that the weather came in a couple of days before. We were dealing with that at a local level between every one of my routes and the local train operators, but I think we probably could have moved to a national footing a couple of days earlier.
If I can go back to the previous couple of years, we would normally still have been dealing with the effects of autumn through to the first week or two of December. We responded a little slowly in that first 48 hours and, once the snow has come in, it is that much more difficult to shift it. Working with the weather forecasting authorities and running a process with many people engaged in that within the rail companies—we have the Highways Agency, the DfT, Transport for London and so on, and we have the weather forecasting people leading that—I think we do get good quality and pretty accurate information.

Q39 Chair: So it wasn't a problem about forecasting?
Robin Gisby: No, I don't believe it was. We have used the Met Office and the MeteoGroup. We use them pretty effectively. They are part of our response to this. They are part of the conferences that we hold during the year in how we are going to improve our delivery each time. So, no, I don't think it was.

Q40 Mr Leech: Mr Burchell, you rightly commended the work of railway staff in keeping the railways moving. How badly were you hampered by staff not being able physically to get to work?
Chris Burchell: Around the network there were certainly cases of that. Train operators and Network Rail will assess, on an ongoing basis, where their staff live and where their workplaces are to see whether they can operate the network or trains or not. Certainly from the point of view of train crew, signallers or maintenance staff, that can happen and can affect the service provision that you can make. But, by and large, our staff performed magnificently. I know of anecdotal stories of one of my members of staff, a cleaner, who walked for three hours in order to get into work. People go well above and beyond in general, but there are instances where it does hamper you.

Q41 Mr Leech: Do you have any contingency plans in place in order to assist people getting into work in key jobs that effectively shut down the system if they are not able to get there?
Chris Burchell: Yes, absolutely we do, particularly around control offices. We will open up or block-book hotel rooms and so on, so that if people are unable or unlikely to be able to get home or get back again, we can put them up locally so that we can keep our central control rooms operating. The same will apply

for drivers. We have supervisors who will be ringing round and making sure that we can get them to work. I know my colleagues here will have some four-wheel drive vehicles that enable us to get key staff to key locations to try and keep key parts of the network open.

Q42 Mr Leech: What co-ordination is there with local authorities and the Highways Agency about key access routes to train stations and making sure that they are open?
Robin Gisby: There is quite a lot of that. Listening to and reflecting on some of the conversation earlier, we obviously work closely with all such agencies to make sure we can get staff to work and that we have access to depots and signal boxes. We do put people up locally. Some people sleep locally, particularly in some of our more remote locations. We have several hundred signal boxes in quite remote locations. So that element of working together between modes works pretty well. There is some quite good co-operation. We also did some other things. For example, we worked to keep Boulby salt mine open in the north-east because we knew that was important to get extra salt through to the Highways Agency. So we were working in both directions.
It was not the effect of one mode helping or hindering another. I did not really go through this period with any great sense that we were held back by other issues. Around stations and access to stations, there is a little bit of an issue about walking, safety, routes and slipping and sliding. We do try ourselves with the train operators to do the extra bit to make sure the final walking to the station, the platforms and so on are as safe as they can be. But, generally, I felt the co-operation between the different agencies and organisations was pretty good.
Chris Burchell: David Quarmby picked up on this particular point in his first report about liaison with local authorities and highways agencies. It was a recommendation for the railways to look at that interface between stations and highways, and I know that train operators picked up on that recommendation as part of our winter weather activity for last year, in preparation for this season. In addition to that, the industry reviewed its guidance on how to deal with station platforms and how to treat platforms so that we could present a safer and better station environment for passengers. That was all reviewed last year and implemented in time for this winter.

Q43 Mr Leech: Finally, very briefly, on platforms, there is also an issue with disabled ramps, because there are a lot of station improvements that are going on, including proper disabled ramps being put in. Is there a proper programme in place to make sure that those ramps are safe, because, certainly anecdotally, I have heard evidence where people have said that those ramps were completely treacherous during the problems?
Chris Burchell: Those ramps are a key feature of the modern station so they will be included in the guidance, and if there are issues from this winter we will review that and learn from it.

Q44 Mr Harris: Can I ask about compensation for season ticket holders? As a direct consequence of the severe weather, has there been any kind of increase in the amount of compensation that you might pay to someone because their service has been delayed on more than one occasion?
Chris Burchell: Compensation regimes vary between train operators, and they vary depending on largely when that franchise was let and the conditions included within that contract. Certainly the most recent contracts include a system called Delay Repay, which is a very direct and dynamic compensation regime. If your train is not available to you, if your line is blocked or if you are delayed by more than 30 minutes, you are eligible for compensation. Train operators with that regime will have been paying out significant sums as a consequence.

Q45 Mr Harris: Is that compensation paid out on the basis of the standard published timetable or on the basis of an emergency timetable that might be introduced in severe weather? In other words, if an emergency service has to be introduced, does that mean that someone is paid compensation for the fact that the regular service is not there?
Chris Burchell: I think operators will use their discretion here, because the general principle of Delay Repay is that you will get compensation if you are delayed by more than 30 minutes on your normal journey. Depending on the nature of the emergency timetable or contingency timetable and the effect that that will have on your journey, I think operators would be sympathetic. But, generally speaking, the compensation is measured against the timetable of the day.

Q46 Mr Harris: What is Southern's policy?
Chris Burchell: We have shown quite a bit of discretion to our passengers in terms of the services that we provided in terms of compensating them.

Q47 Mr Harris: Is it down to discretion or is there something in black and white, in either the franchise agreement or in the way you work yourselves, that people can go to which says, "According to this particular rule, I am entitled to X amount of compensation," that does not depend on a manager's discretion? They can go to the black and white rules.
Chris Burchell: All of the rules on compensation are contained within the passenger charters, and they vary between each operator. Passengers can refer to those for very clear guidance on what is eligible.

Q48 Mr Harris: Are you aware of any unhappiness among some of your season ticket holders in general—not necessarily Southern—that they feel they have not been given enough compensation and have not been treated fairly, because compensation payments have been decided on the basis of the emergency timetable rather than the standard timetable?
Chris Burchell: That has not been brought to my attention particularly.

Q49 Mr Harris: I have just one more question. How many people have referenced the wrong kind of snow to you in the past six months?
Chris Burchell: Quite a few.

Q50 Mr Harris: Have you ever got to the bottom of what the wrong kind of snow might actually be?
Chris Burchell: I hesitate on this. From our own experience, and my own experience in Southern, if I look at the reliability of my train fleet and the way my train fleet has performed in the recent winter extreme events, if you like, some of our trains have performed differently in different snow periods. When we look at why that is, certainly in the most recent case, what we were finding with the sustained very low temperatures and the continuous snowfall over a concentrated period was that there was more opportunity for snow to get into the technical areas of the train and to cause the train reliability problems. That was not a feature particularly in January last year or in February the year before. Whether that is the right or wrong kind of snow, I wouldn't want to put my name to that quote, but there are certainly differences and we have experienced differences depending on each event.

Q51 Mr Harris: Based on your experience of the past few weeks or months, if we experience the same severity of winter at the end of this year, do you think the industry is better positioned to deal with that?
Robin Gisby: Yes, I think so. If you go back to what we learned from January 2010, there were a range of extremes with which we were dealing in the National Task Force and which we picked up in David Quarmby's original report. We have put some of that in place. We had our difficulties, as I have said, in that first cold spell. But from what we have learned and what we have coming through, we will continue to do better. We must take the view that this kind of extreme weather is not going to go away, it is going to come rapidly, and vary quite a lot across the country and during 24 hours.
With regard to our responsiveness to issues south of the river with the conductor rail, we are doing a number of things there. We are looking at more heating of it. That worked in Kent very well. We are looking at improved de-icing of it and one or two other things that can happen on the train. Elsewhere, with the provision of snow ploughs and other things, particularly feeding contingency timetables into passenger information, again, there are some good things happening there. For a repeat of similar conditions—and it is only reasonable to assume that it will happen—we will continue to improve the level of service we can offer.

Q52 Chair: Mr Scoggins, did you have access to accurate, up-to-date timetables so that passengers could get information before they travel?
Chris Scoggins: Yes, generally speaking, Chairman, we did indeed have access to up-to-date timetables. There were instances where the brand new timetabling system, which delivered a lot of improvements to us compared to its predecessor, due to its newness, had some difficulties on certain days in certain areas. On those we had to do workarounds on the day, with the resources available.

Q53 Chair: But Passenger Focus say that people bought tickets for non-existent journeys. How could that have happened?
Chris Scoggins: Indeed. Where those timetables were not correct we did have messages displayed on our website, which I believe is the focus of Passenger Focus's attention here, clearly warning people that the timetables were incorrect. However, it was still possible to buy tickets for trains that were not going to run. We have identified work that we currently have under way which will deliver for October this year, by which we will take the corrections to the timetable that are put in during the night or early in the morning into our journey planning systems. That is a programme that is already under way. We are also looking at how we can pass those corrections, in instances where there have been difficulties with the timetable, out to other journey planning and retail systems. The industry is investing millions in this at the moment and we need to carry on working closely with Network Rail also to make sure that the changes to contingency timetables can be passed through to passengers more quickly.

Q54 Gavin Shuker: I just want to reflect on how train operating companies work under these conditions. As I understand it, there are certain financial penalties that are associated with poor performance. If I were looking to minimise those as a train operating company, what kind of mechanisms could I employ during cold weather?
Chris Burchell: To minimise the penalties?
Gavin Shuker: That's right.
Chris Burchell: I think to deliver the best service for passengers that you can is the best way to minimise the penalties. The relationship that train operators have with Network Rail is one of contract in this area, but I can quite honestly say to you that in these circumstances train operators and Network Rail will work hand in hand to deliver the absolute best service they possibly can for passengers. That is the primary concern we have and that is what we aim to do. In most cases and in most places we sit next to each other in our control rooms, and when we are planning the next day's service we do it together, with the sole focus of providing the best capacity and the best and the most reliable service that we can for our passengers.

Q55 Gavin Shuker: Is it better to cancel a service or run it late?
Robin Gisby: It depends, I think. Those are judgments that are best made locally between one of my route directors and a train operator. I would not like the Committee to get the impression that these are two remote organisations that don't talk to each other. Most people at the sharp end are co-located, working together and, as Chris says, fundamentally driven by trying to operate the best service.
The compensation mechanisms happen later. It is not the thing that you would think about the day before and on the day at all. You are trying to run the best

service. It is a balance. On some routes and with some types of passengers, what do you do? We quoted in our evidence Virgin, who quite consciously chose to run a full service because they had sold a lot of tickets previously, Christmas was coming, people wanted to get home, and it is quite difficult if you change that service. They were also taking a considerable amount of passengers who were diverted because the airports were closed, from the Irish ports and so on. They chose to run slowly because of the impact of ice and snow in damaging their rolling stock. That meant punctuality was very much in second place to capacity.

Again, if you have a lot of people in London, the weather changes suddenly in the afternoon and you've got to get them home, you will try and run a full service to get everybody home as opposed to necessarily cancelling trains. On the other hand, at times, we ourselves will take a view that we cannot reliably keep this bit of the network, this branch line or something, open, and we would agree with a train operator that we won't run that service that day. Those are decisions that flow on a 24-hour cycle, from the morning national conference call that we organise, through to decisions made within the route jointly between ourselves and the train operators so that we can plan what happens tomorrow.

On the whole—and you will see the numbers in appendix 3 of our submission—we were running 17,000, 18,000, 19,000 trains a day, even on some quite difficult days. But we must not get confused by averages of averages here, because on some routes, on some locations, it was very difficult for passengers. There were some very low numbers in there where we hit particular issues and did not respond well. Elsewhere we ran a pretty good service.

Q56 Gavin Shuker: I appreciate that statement. In terms of avoiding financial penalties as a train operating company, however, is it better to cancel a service or is it better to run it late?

Chair: Mr Burchell?

Gavin Shuker: As I understand it, it is a factual issue.

Chris Burchell: I will be honest with you. In terms of the specific financial penalty, I don't know. I don't know—I can find out for you and I can let you know.

Q57 Chair: But surely it must be that that is a major consideration of the people taking the decisions?

Robin Gisby: The financial penalty? Not at all.

Chris Burchell: Let me explain. When we put our contingency timetables together there are a number of things that we must take into account. The primary objective of the timetable that we wish to operate is to deliver the best service we can to passengers. Within that we have to take into account how much of the network is available, and it may not all be available, depending on the weather conditions. We have to take into account the forecasts. What is the current state of the network and what is likely to happen to it, given the next 24 hours' forecast? We have to take into account what resources we have available and the likelihood that they can get to work and deliver it. That is trains, staff, and so on.

We also have to take into account the passenger needs and demands, and that is obviously key. That is why you will see some variation between operators. The longer distance intercity operators, as Robin correctly says, will have sold many advance tickets for specific trains. If you cancel those trains, that becomes a real problem, but also, because rail is often the only mode that is operating if airports have shut, they will be shouldering a larger burden for other modes, so they will tend to try and run every train but maybe run it late.

However, in complex, very high volume, high intensity services, such as my own, where, for example, we do a lot of splitting and joining, in the cold winter weather the reliability of the coupling operation becomes quite difficult. We make a decision to reduce or eliminate the amount of splitting and joining that we do of our services. That results in some cancelled services, but it does also result in a plan that delivers a much more reliable proposition to customers. That is what we focus on, and not the commercial implications.

Q58 Gavin Shuker: In terms of the commercial implications, is it better to introduce an emergency timetable rather than running services late?

David Ward: Are you asking from a commercial perspective or an operational perspective?

Chair: We are asking about what you do.

David Ward: I make those decisions with Chris. Particularly in Kent this year, there have been some difficult decisions to make. I can assure the Committee I do not ask for any commercial modelling of those. The criteria are: what is the forecast, what is the likely demand going to be, what is the infrastructure availability likely to be, and how can we deliver something that is safe and robust?

Some of the problems we faced were challenging. On the first day, 30 November, which is when the real snow came in, we had a forecast that said there would be little or no snow in south-east England until about 3 o'clock in the afternoon. That meant the normal London peak demand in the morning was there, but it meant we would be extremely challenged to get that amount of people home during the evening peak. We didn't introduce an emergency timetable. We went for the full timetable because we knew that was what the underlying demand would be. We managed it and we got everybody home except for a few isolated incidents. We don't make those decisions based on commercial criteria, I can assure you of that.

Q59 Chair: So you are looking entirely at demand, at what passengers want.

David Ward: We look at demand, what infrastructure is going to be available and what we can deliver robustly and safely. We do not—

Chris Burchell: The commercial regimes themselves are pretty complicated between us. The amount of money that flows does depend on what runs, how late it is, who causes the delay, what the impact of that delay is on other train services, and so on. To be able to make a simple judgment on the day that says, "This will be better and that's better commercially" is not something we would be applying.

Q60 Chair: There is nobody giving you advice or guidance on what should be done.

Robin Gisby: No, not at all. I now know what the cost of all of this has been in terms of compensation payments, overtime and everything else, but I have only really finally known that in the last few weeks, well after the actual event, because the decision is not just made in any way on commercial grounds. It is entirely as David describes.

There is one overlay to it, which again we tried to refer to in our evidence. You could have several operators on a particular route and they could all choose quite reasonably to do something slightly different. We had the issue north of York where the East Coast operator wanted to go slower because of the impact of damage on its rolling stock and the CrossCountry operator wanted to go at its normal speed. We had to try to knit those together. Similarly, on Chris's route, with regard to the operator FCC—First Capital Connect—if it is sunny in Bedford and it is snowing in Brighton, it is quite difficult to explain to two different groups of passengers whether or not you should run a contingency timetable in those circumstances. But these are decisions that are made largely day A for day B entirely on the basis of what is the best possible service we can operate.

We will at times put a little bit of caution ahead of ambition. If you go back to the previous year and the decisions we took, we shut down Charing Cross at about 8 o'clock at night because we didn't want to get people stranded. In these difficulties, when the emergency services are dealing with a lot of other stuff apart from the railways, the last thing we want to do is to send people off through several hundred miles of the south-east, get them stuck and have to rescue them.

This time we made a couple of decisions that we would make slightly differently. There was a Thursday, I think, on South West Trains in the first week, it must have been about 2 December, when, between us, we opted to run the full timetable and we got in a pickle on the day because the weather was a little difficult and we ran a less good service than if we had cut it back and put what in we call a contingency timetable and had tried to plan to do 90% instead of the full thing. So around the margins we made one or two decisions that I think, looking back, we would have done slightly differently, but fundamentally we run this to try and deliver as good a service as we can for passengers and for freight companies.

Q61 Gavin Shuker: Thank you. That is very clear and very consistent across all the different witnesses that there are no financial considerations that come to mind when it comes to deciding how best to respond to cold weather.

Robin Gisby: It is a consequence of what we do operationally and to try and deliver a service.

Q62 Gavin Shuker: Great, which leads to the obvious question: what on earth are we doing placing financial penalties on the network and train operating companies if it has no effect at all on the way in which they make their decisions?

Robin Gisby: I can answer in two ways. One is, irrespective of how we are structured, how we run and all the rest of it, we will still attribute delays because we have to learn. If the service between Victoria and Brighton doesn't work very well, we need to know if it is the points, the signalling system, the power system, the train or whatever. So we will always attribute delays. Other people might call that apportioning blame. We just call it good management practice to know how our operation is going. Linked to that is what I consider to be a compensation regime rather than a fining system, which I think was referred to earlier, because if I don't deliver as good an infrastructure as I should do my train operating customers have some fixed costs that they are stuck with, and those are big costs. There is a regime that, if I don't deliver, then I should pay this gentleman some money for that.

Also, because we like to try and run a better system, there is a huge driver for my customers that, if we improve performance, we will get more passengers and we will drive up the revenue within the industry. So having an incentive regime, let's call it, rather than a fining regime, that encourages us all to work better, ultimately will deliver a better service for passengers and freight and will drive up the usage of the railway. I am sure we all agree that is a good thing.

Chris Burchell: I would add that the incentives regime applies throughout the year and across all the delay issues with which we deal. As Robin said, it is there to drive us to improve our standard of performance delivery to passengers. That is what we focus on and use that regime for. Incentive regimes do drive behaviour, and if the incentive regime was causing us not to put the passenger first in the way that we have just described to you, then I think you would be highlighting it as an issue. The fact that it does not drive that kind of behaviour shows that we are doing the right thing.

Q63 Kelvin Hopkins: Everything you have said seems to argue that you put passengers first, but Passenger Focus's view is at odds with what you say. They say: "A culture of looking after passengers when things go wrong is not yet second nature in the rail industry." They also quote examples of where people have bought tickets for non-existent trains.

I mentioned in an earlier session this morning about the poor information systems. Even outside bad weather times, one can find utter confusion for the electronic computerised indicator systems. Indeed, not two or three weeks ago, I waited for over an hour on a cold night at West Hampstead station, with a constant changing and flickering system which bore no relation to what was actually happening. There are problems.

Robin Gisby: There are problems. Much of it is the inheritance that we got from BR where we had a massively complex, fragmented and under-invested set of information systems. We have now focused on that a lot. It has taken some time, because a lot of what we did in the first years was about improving reliability and performance and driving up train performance and, through that, customer satisfaction and revenue.

We have invested within Network Rail, because most of the money in this area flows through us through the settlements that we get with the regulator. It was a big feature of this control period. The new timetable planning system that we have put in has taken the whole game a long way further forward. But you will see again in our evidence that that system still interfaces with 170 separate information systems and other operational systems, some of which are 40 or 50 years old still. So we have now got to progressively invest in a number of those to tighten them up.

There is a programme in that area, particularly between our core systems and the train companies, feeding through into passenger information, which is around an area called Darwin—I think we refer to it in our evidence—which is to eliminate exactly the problem that you experience at places like West Hampstead, where there appears to be a dislocation between the operational systems and what is appearing on the platform. That new investment is being piloted right now with another train operating company and will be rolled out via the train operators quite quickly.

Chris Burchell: I agree with Passenger Focus. I think there is significant room for improvement in this area. As Robin highlights, the legacy or our inheritance is not particularly easy, particularly good or particularly flexible. But, certainly, through all the industry as a whole, through the National Task Force, we have identified that this is a very important priority for us to improve.

We have set up a number of work streams already to look at the systems side of things and also, picking up David Quarmby's point in his report about culture, how we disseminate information to our staff and then what our staff do with it once they have it, as well as other network and internet type based solutions that we need to find as well. There is a lot of activity in this area. I think Passenger Focus are right to be telling us that we can improve and we are determined to do so.

Q64 Kelvin Hopkins: Isn't there a contrast, which has been drawn earlier, between what happens on surface rail and London Underground? London Underground has technical problems arising largely, it seems, from the disastrous PPP—and there are still technical problems—but we are constantly informed where the problems are. We are told positive information: there are no problems on the network at any time. I travel regularly from West Hampstead to Westminster, as you can understand, and there are problems, but we are told constantly by a live voice.

Robin Gisby: I think without doubt they do a very, very good job. We are in discussion with them because we do want to emulate some of the success they have had. It has taken them five or six years to get to where they are and it is a mix of cultural change as well as systems change, and we have to go down that same journey. It is arguably a little bit more complicated for us with 20,000 miles of track and all the disbursed-out things that we deal with, compared with a relatively tight system like LUL have. But I do think the role they have of communicating almost in real time about what is going on is excellent and it is one of several role models that we are striving to emulate.

Chris Burchell: We have already started to make some changes in this area. I talked about some activity that we have planned from this point going forward to do better here, but we have already started to make changes. The industry has introduced a code of practice for information during disruption and there are a number of things that each operator and Network Rail are working together on to deliver quickly. We are already starting, I hope, to see some improvement there. The latest National Passenger Survey does start to show some improvement in the satisfaction of passengers with the way that train operators deal with delays. But there is a lot of room for improvement still. So, as I say, we are determined to do better here.

Q65 Julie Hilling: I would like to raise a couple of areas. Are we currently wasting an awful lot of money now on accountants who are running around working out who owes what money for the delays in terms of, "It's Network Rail's fault" or someone else's?

Robin Gisby: No, we are not, I don't think. We are very keen to continue to be very accurate about what causes delays. If you have a set of points that have been at sub-zero temperatures for three days and they now have 2 feet of snow on them, it is quite difficult at times to attribute that accurately. But this is much more an engineering and operational thing as opposed to an accounting thing. We are still very keen to understand delays and deal with them and continue to run a better service. There is not a significant overhead or cost at all in the actual linking of that through to a compensation regime.

Q66 Julie Hilling: There is an issue about peak trains or at least peak trains which are running in off-peak periods and passengers who are turning up for their off-peak trains being told, "You can't travel on this because it's a peak train," even though it is in the off-peak period. Do you think that is appropriate? Did that question make sense?

Chris Burchell: I am not sure I understood it, sorry.

Julie Hilling: Certainly with Virgin, where they would have peak trains, the peak train then would be running with a couple of hours' delay on it, but people were being told they could not travel on that train because it was still a peak train without paying the additional money. Is that appropriate?

Robin Gisby: I am not aware of that particular situation, but I am sure we could follow it up separately. I know from Virgin's own experience that they were extremely full because they took an awful lot of airline business because the airports were shut as well. Although they did move people, the trains ran a little bit late and it would have been quite uncomfortable on them, but at least people got home for Christmas, which was the big objective in that December. Whether that led to a train that had started on time in a peak hour and by the time it reached Manchester, Liverpool or Glasgow it was outside is something maybe we could take separately and come back to the Committee on.

Q67 Julie Hilling: It was the time it was leaving London or started in London. Then I have a question about the mechanics of all of this. Do we have systems that fundamentally won't work when we get temperatures of the level that we had? Last year we had the problems with the overhead lines. This time we had a problem with third rail and we are having problems with unit failure. Actually, is there a point when fundamentally things won't work?

Robin Gisby: I will say something and then Mr Ward can fill in for south of the river. Salt works down to minus 9°C but not below that. Some of our points heaters and our other equipment have been built around a design spec that is not like what we are seeing or we are going to see. We did send people to Switzerland, Sweden and elsewhere to look at what they do. I think we can take the game a bit further forward on a number of things to deal with very cold weather and, at times, very hot weather and floods as well, because all extremes are here. David, you probably want to say some more about south of the river.

David Ward: Yes. The third rail system that Mr Quarmby mentioned earlier was introduced in 1910 and has been the backbone of the traction south of the river. It is very accurate to say it is probably the most extensively used. We have approaching 3,000 miles of railways south of the river that are powered by the third rail system—the top contact system. The analogies with the Docklands Light Railway are interesting. Yes, it is a side contact, but it is a light railway, it is a metro; it travels at 40 km per hour. Our trains travel at 100 miles an hour. They are quite sophisticated trains that have to deal with long-distance operation as well as commuter operation.

In terms of de-icing that we have heard about, we do not de-ice. I think that is really important to understand. What we do is we anti-ice. The reason we anti-ice—and there is a difference in that anti-ice coats a barrier on the third rail that stops ice sticking to the rail—is the quantities we use. In our plan, which starts every year at December timetable change, we plan to deliver 300,000 miles of anti-icing by train. That is 12 times around the globe, to put it in context. It is approaching 2 million litres of fluid that we apply to the rail. Therefore, for environmental reasons, we don't use a glycol de-icer, which is what you and I would use on our car or driveway.

The issue with an anti-icer is that it is extremely effective for 90% to 95% of the conditions that we face through every winter: frost, ice, whatever. It is when we get into the realms of the extreme weather that it starts to diminish. It also diminishes with the number of trains that pass over it. The shoe wears its resilience down. We started our anti-icing programme on 23 November. We brought it forward 19 days because of the weather forecast. We used 15 specialist vehicles to do that, which we call multipurpose vehicles. They delivered about 50,000 litres of fluid before the planned start of 12 December. We planned that start. Because of the sheer quantity of it, we have to timetable it. It makes sense that you start it at the December timetable change so that it is absolutely co-ordinated with the logistics of the train operator and the core timetable.

There are three vehicles that were missing, and this is important because we did make an error. We have three specialist vehicles which we call the GLVs. I am sorry to use acronyms but it is the Gatwick Luggage Van. They were built in 1957 and they are coaches or just a single railway coach that Network Rail converted in 2002–03. We don't plan to operate them on any daily basis. We keep them in the sidings and they deliver exactly the same fluid, which they deliver at a temperature. Therefore, it does have an element of de-icing by temperature. Its range in any given day is about 200 miles. So, on 3,000 miles, it is around about 10% of the network that we can get to in any given day with that.

Q68 Mr Leech: I have a couple of points of quick clarification. Mr Gisby, you suggested that you would have made a few decisions differently.

Robin Gisby: Yes.

Mr Leech: Is that with hindsight, is that suggesting that you just made the wrong choice at the time, or is it just having seen the evidence and what happened after those decisions were made?

Robin Gisby: It is probably a bit of both. Mr Ward referred to the two GLVs that were in maintenance during that first week. We should not have done that. We could have had them out a couple of weeks earlier and that would have helped at the margin, a couple of hundred miles against the many thousands of miles. There was a decision, as I said, about the South West Trains timetable on that Thursday. There were a few trains that got stranded. There was a difficult issue at Tonbridge and one at Three Bridges. Should we have kept running as late as we did? One of the ones was only about an 8 o'clock departure out of Victoria so that would have been a bit early to shut things down. We also flagged up in our evidence a couple of other basic operating mistakes that were made in that first week.

It is better to run eight and 12-car trains because they have more traction than four-car trains, and there were a few four-car trains out there when the weather was tricky. So it is little things like that. If I did it again, we would improve those numbers by two or three percentage points in appendix 3. We learned that, and in the second period we were a bit better.

Q69 Mr Leech: But would it be fair to say that the decisions were reasonable decisions to be made at the time rather than significant errors and that, for the future, you would be learning from those errors about how you might do things differently next time, rather than someone making a big mistake?

Robin Gisby: I don't see one big mistake in this. If we had got going 48 hours earlier, probably that first week would have been a little better, and we all feel we didn't do as well as we could have done because we like to do this well. What we actually delivered for passengers and freight users in that first week could have been better. We regret that because of the impact it had on them and we just don't like delivering that level of service.

Q70 Mr Leech: My other point of clarification is in relation to what Mr Burchell said about the rail industry taking some of the slack from other modes, of passengers having to go by railway instead of other modes of travel. Is it the case that in some circumstances you were having to deal with more passengers than you would normally deal with and, because of the number of people who were choosing to stay at home, you had a bigger proportion of your passengers than perhaps other modes of transport did?
Chris Burchell: Certainly there is evidence that the intercity operators were picking up a number of people who may have travelled by air instead and that that therefore increased the number of passengers they were expecting or being expected to carry. In other places, for example, where the road network wasn't operable but there was a local rail service, some railway companies were carrying more bus passengers. There is evidence that people will choose their mode depending on what is running and what is available, and that does depend on the information.

Q71 Mr Leech: There will have been some services that were over the normal numbers because of the adverse weather conditions, and you were having to cope with more passengers than normal and also cope with the adverse weather conditions as well.
Chris Burchell: That is true, but I think there is also an impact that a number of passengers will decide not to travel if they don't need to. Even if they have made a booking, they may decide not to leave home. But that is the judgment we have to make in terms of the likely level of demand that we are going to see.

Q72 Mr Leech: Would it be fair to say, though, that the rail industry is the only transport mode that suffers in that way, because of the nature of the rail industry? People who can't travel by car or air all tend to end up on the railways.
Chris Burchell: I don't think I would perhaps use those terms, but I do think that passengers, rightly, have a reasonably high expectation of the service that rail can provide, because in most situations the rail service is resilient and sometimes when other modes aren't operating the railways still are. Therefore, we welcome those passengers. If we can provide a service for them, that is a good thing.
Robin Gisby: I think, on the whole, yes. We saw it at that time particularly, as Chris says, with the longer distance operators. They were full and standing at times between London and Scotland because it was the only way of getting there. You saw that also with the Eurostar. We did have some difficulties with queues at St. Pancreas for two or three days because some of their rolling stock was unavailable, but the amount of traffic they took because Heathrow was closed at the start of that second week—I think it was about 18 or 19 December—was a huge extra burden on them because it was the only way of getting home.
Chair: Thank you very much, gentlemen, for coming and answering our questions.

Examination of Witnesses

Witnesses: **Derek Turner**, Network Delivery and Development Director, and **Simon Sheldon-Wilson**, Director, Traffic Management, Highways Agency, **Councillor David Parsons CBE**, Deputy Chairman, Local Government Association, and **Matthew Lugg**, Director of Highway Transportation, Leicestershire County Council, gave evidence.

Q73 Chair: Good afternoon, gentlemen, and welcome to the Committee. Could I ask you please to identify yourselves with your name and organisation for our records? I will start at the end.
Derek Turner: I am Derek Turner. I am the Network Delivery and Development Director for the Highways Agency.
Simon Sheldon-Wilson: Good afternoon. I am Simon Sheldon-Wilson, Director of Traffic Management for the Highways Agency.
Matthew Lugg: Hello. My name is Matthew Lugg. I am Chair of the UK Roads Board, also Vice President at the Association of Directors of Environment, Economy, Planning and Transport, and also Director of Environment and Transport for Leicestershire County Council.
David Parsons: I am David Parsons. I am Vice Chairman of the Local Government Association and leader of Leicestershire County Council.

Q74 Chair: Thank you very much. Could any of you give me some examples of how you have learned from the problems of last year's bad weather and made improvements this time around? Can you give any examples of things you did better this year?
Derek Turner: First of all, we spent a lot of time, as a result of David Quarmby's report, in establishing a strategic salt stockpile to enable us to provide resilience centrally for the supply of salt, which was a problem in February last year and the previous winter. Also, from the Agency's perspective, because we undertook the salt strategic stockpile on behalf of the country as a whole—our own salt stocks were adequate last year—we did however increase them significantly this year up to 260,000 tonnes from 227,000 the previous year.
We also had an issue, you will recall, over previous years on the A38 at Haldon Hill in Devon where vehicles lost traction. We introduced a different system there with the local authorities and the local police where we marshalled traffic and actually led them across the hill. That worked successfully this year, it is an example of the way we would look to deal with difficult locations in the future.
In addition to that, we started pre-deploying our national vehicle recovery vehicles across the network at 26 locations across the strategic road network, enabling us to gain additional traction for HGVs that were slipping on slopes. So there are three examples.

Q75 Chair: Does anybody else have any examples of things you did better this year?
David Parsons: There were more grit bins around my particular county, which is Leicestershire. There were teams of volunteers in 4x4s to deliver hot meals to elderly folk if they were unable to get their daily meal. We have introduced a series, also, of snow wardens, which are our eyes and ears on the ground. We also increased our salt stocks and that was very important. Of course, we are also involving district councils in the organisation of how we run our county in a time of weather emergency.

Q76 Chair: What about weather forecasts? Were the weather forecasts accurate enough or good enough? Would it be better if we had more medium-term forecasts?
Matthew Lugg: My experience from the short-term perspective is that the weather forecasts have been pretty good. The problem is in the medium to longer-term forecasting where, take for example this winter, after the period of very severe weather there was a prediction of a further cold spell in February which we haven't had, Chair. The local forecasts short term have been pretty good, but longer term I think there is still scope for improvement.

Q77 Chair: Are there any other views on weather forecasts?
Derek Turner: I think, as we have said in our evidence, the overall forecast is fairly reliable. We expect, in the forecasts that our service providers purchase from their providers, 90% accuracy. They are generally meeting that in terms of when and where the weather is going to be. I think the intensity is something which we are slightly concerned about and, in particular, the degree of low temperatures.
On 15 November the Met Office were predicting a 40% chance of a colder than average winter period, a 30% chance of a milder than average winter period and a 30% chance of it being the same. It has actually turned out to be one of the coldest winter periods across the nation as a whole that we have seen for many many years, back to the 1980s.
In addition to that, while the snow predictions were accurate where it was going to fall, the intensity of the snowfall, particularly on 30 November and 1 December, was greater than we were expecting or we were led to believe. That becomes quite an issue.

Q78 Chair: Who did you consult when you were drawing up your winter resilience plans?
David Parsons: In my own county we consult the people of the county. How do we do that? We do it online, through our community forums and through parish councils and so on. We try and keep people as well aware of what is going on in our counties as possible. I think this is fairly general practice across the country.

Q79 Chair: What about the Highways Agency?
Derek Turner: The service providers have to draw up their winter service plans for our agreement, but in drawing those up we would expect them—and they do—to consult the local authorities and with the police to a certain extent in terms of dealing with extreme circumstances. We also try to ensure that they talk to each other throughout the area. There are certain locations where we could improve our communication with local authorities and the local police, and we will certainly take lessons from that from this winter period.

Q80 Chair: Councillor Parsons, do you feel there are any inadequacies in the way the Highways Agency approached this? Was local government consulted enough?
David Parsons: I rely on advice on this, Chair. I have no evidence that we were not contacted by the Highways Agency. I was trying to think of how the Highways Agency network in my neck of the woods fared. It fared equally well—I think local government did a good job in the bad winter which has just gone by, and all indications were that the Highways Agency did co-operate.
Matthew Lugg: If I can add to that, local authorities do generally have a good working relationship with the Highways Agency, particularly where there are interfaces with trunk roads within the geographic area. It is very important that there is clarity about who is doing what and where so that there is no ambiguity or anything missed. In terms of resilience and mutual aid, the Highways Agency again have worked very closely to help support local authorities when salt stocks have been diminished and there is a need for some support locally.

Q81 Chair: Are you saying that works well? The co-operation works.
Matthew Lugg: I am indeed, yes.

Q82 Mr Leech: In local government, do we get the right balance between trying to keep the local area moving in general and specifically looking after the interests of particularly the most vulnerable groups?
David Parsons: Yes, I think we do. I spend half my life on local government improvement. Can you be more specific?

Q83 Mr Leech: Let me give you an example. In Manchester, they are pretty good at keeping the major roads free, but then, for instance, because people are likely to be more ill in the cold weather, they are not able to get to the doctors' surgery because the pathways to the doctors' surgeries aren't clear. Do we get that balance right between letting the system run smoothly and making sure that we are looking after those most vulnerable people?
David Parsons: I have a view on that. I think that is an area on which we could improve. I have a similar example of people getting to a school on a road and then not being able to get off the bus, go up the path and get into the school. That has actually happened and that is a lesson that we would do well to learn. But, nevertheless, I do think that that sort of lesson is being learnt. One of the benefits of somebody in my position being elected leader is that you can go around and chivvy people like this and make sure that those links are made.

Q84 Mr Leech: But is that a lack of co-ordination or just a lack of resources to deal with the whole problem?
David Parsons: No. I think that was a lack of co-ordination, undoubtedly.

Q85 Mr Leech: Is there any evidence from certain authorities that there is a lack of co-ordination between local authorities and the Highways Agency in terms of accessing Highways Agency routes by certain roads not being prioritised by local authorities that perhaps should be in order to access the major Highways Agency routes?
David Parsons: That has not been brought to my attention but I would seek advice. Do you know about that?
Matthew Lugg: Most local authorities salt a large proportion of the network—between 20% and 45%. Inevitably that will cover the strategic roads, which are the A and B routes, and they are the roads that will connect to the trunk roads. I am not aware of any sort of disconnect in terms of that relationship. There may be some issues about the timing of treatment based on the regimes that local authorities and the Highways Agency have, but in general I don't think there are roads that are not treated.

Q86 Mr Leech: I have one last question, Chair. I asked one of the previous panels about whether or not people changed their behaviour enough in terms of the way they drive or the way they go about their daily business during adverse weather conditions. Do you think there is evidence that, because we only get these adverse weather conditions very rarely, people don't perhaps do as much as they could in terms of changing their behaviour to make the road safer?
David Parsons: That is a very interesting question. It is one on which I traditionally would seek advice. The answer is I truly don't know. I suppose one can have a gut feeling that perhaps they don't, but nevertheless I would seek advice on that.

Q87 Mr Leech: From the Highways Agency, for instance, we hear about a lot of jack-knifed lorries. Do we have more of a problem with jack-knifed lorries than other counties that are used to really adverse weather conditions?
Chair: As the Highways Agency what, in fact, can you do about dealing with problems that arise from jack-knifed lorries? There was some criticism this year about blockages caused by that situation or by other types of congestion because of the bad weather. Is there something different you could do as the Highways Agency?
Derek Turner: As I explained, one of the things that we are doing and have done from previous years is this pre-deployment of our national vehicle recovery fleet. They will help to get the HGVs that have lost traction through the difficult part and over a steep incline. To prevent a vehicle jack-knifing is beyond our capability. The problem, as you are aware, is not just that when the vehicle jack-knifes it blocks the road but it also prevents the salt spreaders from carrying out their service, and that is a very difficult thing when it happens. There was some evidence of HGVs travelling in the outside lane and some evidence of HGVs jack-knifing and causing a number of seed points for congestion.
We do attempt to try and encourage drivers to change their behaviour pattern. In the pre-Christmas period, we issued 15 press notices and gave over 252 TV and radio interviews to try and explain that.

Q88 Chair: But what would you do differently next time, because there was a problem in this area?
Derek Turner: Indeed there was. What we are looking at is to try and look at and learn the lessons from places like Haldon Hill and improve our pre-deployment of the recovery vehicles to try and help those HGV drivers who stray out into the untreated areas.

Q89 Julie Hilling: I wanted to turn to Mr Leech's arguments and some questions that I was asking a previous panel. In terms of side roads, roads on to estates and pathways, although the main thoroughfares seem to be cleared relatively quickly, there is still an ongoing issue and a long-term issue often in certain parts of my constituency, which are quite high. There were several weeks last year when people could not get out of their houses and could not get off the estates. Should local authorities have a responsibility to clear side roads and pavements?
David Parsons: Yes, and they do. We have a priority network, but that doesn't mean to say that we will not then, if that priority network is treated, go into other areas and try and get those side roads dealt with.

Q90 Julie Hilling: So when that isn't happening, and I would suggest it has not been happening well over the last couple of years, what should be done then?
David Parsons: I suppose the simple answer is that we believe in localism. We ask the councils what they are going to do and it is up to local authorities exactly what their procedures are. But in my own local authority, once the priority network is cleared, we then seek to go and get other roads cleared as well.

Q91 Julie Hilling: My suggestion is that that is not currently happening. What do we need to do to make sure that happens across the country?
Matthew Lugg: One of the issues is about the resources available, but there is scope to gear in additional resources. Certainly, in Leicestershire, we work very closely with the district councils who have some equipment. The arrangement we have through a service level agreement is that we provide salt and then they will spread it within some of the areas that we can't get to because our focus will be on the priority network.
But, similarly, as David says, we helped to clarify this, working with the Department for Transport, where we issued the *Snow Code*, where we were trying to give better advice to the public about what they could and couldn't do, because there has always been this concern about liability and therefore people have not always been keen to go out and do some self-help. We would now more actively encourage that so that people could clear their own part of the network if we can't get to it in a reasonable time.

Q92 Chair: But to what extent can voluntary efforts clear the roads and pavements? What contribution can voluntary efforts make?
David Parsons: We have volunteers in deep rural areas who will do this for us on contract. We have encouraged—and this has happened—school yards to be cleared so that people can get into schools. We have evidence, certainly in my own county, that that sort of thing happens.

Q93 Steve Baker: Earlier on, Mr Quarmby was telling us about the shortcomings or the limitations on the use of salt. Could I ask you in your own words to tell us what those limitations are, because it seems sometimes we do have too high an expectation of what can be achieved through salting?
Derek Turner: At extremely low temperatures, like some of the periods which did occur, salt ceases to be as effective. Salting is used as a pre-treatment, particularly to prevent ice forming. The idea is that you produce a barrier, similar to what you heard from your railway witnesses, to prevent the ice forming by having a slurry of brine. That ceases to happen gradually at very low temperatures, below minus 10°C. It isn't just a cut-off point. The other issue with salting is that salt itself is not very effective in terms of preventing snow forming and accumulating on the carriageway, which is why you need to plough the carriageway. If there is a slurry of brine there, it will prevent the snow accumulating, which is why we try to get out and lay that slurry of brine before snow starts to fall. But one of the issues with the very intense and heavy snowfalls is that the brine gets diluted by the sheer volume of water of the snow and then ceases to become effective.

Q94 Steve Baker: It seems pretty clear that we should not be too ambitious in our expectations for salting when it snows very heavily. It sounds as if in very heavy snow we should just expect to drive on a snowy surface. Is that right?
Derek Turner: In very heavy snow, over an intense period, it is difficult to clear the snow by salting alone. You would need to plough the road to remove that amount of snow. If you have a carpet of snow that has formed, the issue is that granular salt will just bore its way down. If it is a brine, a pre-wet that is applied, it will still bore its way down through the snow. With these very heavy snowfalls that we saw on 30 November and 1 December, even ploughing is a problem because the intensity of snowfall is such that the snow starts to accumulate soon after the ploughs have passed.

Q95 Mr Harris: We all know the arguments that are peddled out every year—and they are valid arguments—that Britain doesn't have the same level of response to bad weather that you would have in somewhere like Canada or Norway because we have less severe weather to deal with and therefore it wouldn't be good value for money to have that same level of preparedness. But are there countries, perhaps European countries with a similar climate to ours, that the Highways Agency and the local authorities benchmark against to judge whether or not our response is up there with what is reasonably to be expected from a moderate climate?
Derek Turner: If I could start, I heard what Dr Quarmby said and I agree with his analysis. This winter, the comparable western European countries performed in a similar way. The conditions were similar and the outcome, unfortunately, was fairly similar as well. The treatments and the type of approach that we have are benchmarked against other similar European countries.
It is, as you say, different in terms of Canada and Scandinavia where you would be looking to things like changing tyres and snow chains. Indeed, the road network is very different there because in many of the Scandinavian countries there are fewer surfaced roads or positively drained roads. So the application of grit, for instance, which is one of the other treatments which is used in those countries, is less of a problem because the grit washes off into the ditches rather than blocking drains, which is one of the issues in this country if we apply large quantities of grit to the road.

Q96 Mr Harris: Has that level of benchmarking been going on over a number of years is or is that a recent practice?
Derek Turner: In the Agency's terms it has been going on for a number of years. Indeed, the World Road Association is meeting in Scotland in May this year and I am sure the issue will be discussed yet again as to whether we can learn anything from comparable countries. But I think David Quarmby's response was right. The situations are difficult to deal with.
The example I gave at Haldon Hill, where we did have a really good successful scheme, cost £100,000 to introduce and £10,000 each time we deploy it. If you spread that across the country, those soon mount up to a considerable amount of money, bearing in mind we spend something in the order of £20 million on winter service on the strategic road network.

Q97 Mr Harris: My colleague Mr Baker asked about the effects of salt, and if salt isn't effective when there is deep snow, maybe we should get used to driving on deep snow. Would it be more sensible to advise people that, instead of driving on deep snow, they shouldn't drive? Is there a cultural problem we have in this country with people thinking, "I have a car, I intend to drive irrespective of the weather and it's up to the public sector or the Highways Agency to get me out of trouble if I get into trouble"? Is there a more robust message that we should be sending to drivers that, if the authorities have forecast that there is going to be heavy snow, then you, as a private individual, should make a more informed judgment about whether or not you should drive?
Derek Turner: I would personally support that. Simon, you might want to add something on that.
Simon Sheldon-Wilson: We did some research back in March of last year to look at driver behaviour following the severe winter weather then. Of the respondents to that survey, just over half said that they wouldn't change their travel plans, or indeed travel behaviour, to a certain extent; they would continue to drive. Of the balance of that, round about half

abandoned their journeys part way through and returned home. A very small percentage, about 14%, delayed until conditions improved.
We work hard to get our messages out across the winter period through the media and with the advice that travel should only be taken if it is essential, and that is in common with the police message as well. But, clearly, from that research we did and when we looked at that again, we can see that the change in behaviour is still quite small. Whether, over a continuous period of winters like those we have recently experienced, that behaviour will change is yet to be seen.

Q98 Chair: Mr Parsons, what is your view on this?
David Parsons: This is also true of local authorities. Starting with my local authority, we are constantly bringing out information as to whether people should travel or not. It is quite difficult if you live in an area which is a long way away and you need to maybe access services and something like that. But certainly in my own local authority we are constantly putting that message out and I believe that to be the case of many, if not all, local authorities.

Q99 Steve Baker: Mr Harris has prompted me to go a bit further than I did earlier. I happen to use winter tyres for various reasons and, as a result, on snow I never have a problem. What would be the trigger point at which you would advocate the adoption of winter tyres much more widely?
Derek Turner: This is quite an interesting area and certainly warrants further research. I know that the FTA have a view on the applicability of a requirement to fit winter tyres for the type of frequency of the winter weather that we hitherto, or hitherto in the last or two three years, have been experiencing. The Department will be looking at trying to assess this, but our current view is that the conditions do not warrant or have not warranted it. The general use of winter tyres for the general public will of course improve traction, as opposed to chains, which is quite a serious increase in traction capability, but it has huge implications in terms of safety and damage to the road surface. It is an area which will be one of the things that will come out of the discussions as a result of this winter.

Q100 Chair: Councillor Parsons, how much will it cost local government to repair potholes and other problems on the highway caused by bad weather?
David Parsons: Last year the Government gave us £100 million.

Q101 Chair: Is that enough?
David Parsons: I am advised that the roads are in a worse state than they were last year, so I would be looking for more money, if it were available, than we got last year.

Q102 Chair: How much more?
David Parsons: I would be more than happy to double that figure, Chair.

Q103 Chair: So about £200 million?
David Parsons: But my Government might slap me down and say it has not got the money.

Q104 Chair: But that is what you think is required?
David Parsons: I started from the benchmark that we did have £100 million, and that the roads are in a worse state, so I am giving you a guesstimate as to how much we would appreciate.

Q105 Chair: What other problems will be caused by spending cuts in local government in preparing for any bad weather next year?
David Parsons: It is up to local authorities, in my view, to deal with the spending cuts as they see fit. We have local priorities in my own area; local government has its priorities. The one thing I would say, bearing in mind that it is difficult to predict the weather, is that I would not recommend, and I am certainly not doing it in my own local authority, actually cutting expenditure in this particular area.

Q106 Julie Hilling: This is linked partly to the spending, but one of the issues, it seems, throughout transport is about information and saying to people, "Don't travel unless you have to," and so many people saying, "I've got to." Could we be better in terms of specific information such as, "This route is okay. This route isn't. If you go that way, it's okay"? I guess that also links to financial needs in terms of how you would put that information out and what systems you would need.
Simon Sheldon-Wilson: At the moment we have a National Traffic Control Centre where we co-ordinate traffic data from across the whole of the Highways Agency's road network and then we disseminate that to road users through a variety of means, primarily through our website Traffic England. We have made some improvements over the last year. We have introduced an iPhone app, so we are keeping up-to-date with the latest technology. We have 450,000 users of that who have downloaded and used the app. We had 95,000 people a day using it over the winter period. We also experimented in the latter part of the December winter with Twitter feeds providing information on roads that were being affected by any incident, whether that is severe weather or anything else.

Q107 Julie Hilling: Does that link to local authority, more urban roads? Is there a feed-in for whether you can go up that street or not?
Simon Sheldon-Wilson: What we don't do from that is provide diversionary information. We provide information on what is happening on the network for people to make decisions about the route they would choose to take. We provide it through to the media as well, through an information service directly to media broadcasts, and we provide information to Transport Direct where other information from other modes is also being collated so that people who want to take a view on other routes or other modes of transport can go to Transport Direct where there is a combination of information, including our own.
David Parsons: We do have real-time information. I think that that system can be improved and I think

that is one of the lessons. Real-time information, as has been said, is also put out on local radio. We use that greatly during bad weather and it is extremely useful.

Q108 Steve Baker: My colleague mentioned people who insist that they must travel whatever the weather. Would you agree with me that for those people it would be sensible to at least consider buying four-season or winter tyres?

David Parsons: Yes.

Chair: You got the answer then. Thank you very much, gentlemen. Thank you for coming.

Tuesday 8 March 2011

Members present:

Mrs Louise Ellman (Chair)

Steve Baker
Mr Tom Harris
Mr John Leech
Paul Maynard
Gavin Shuker

Examination of Witnesses

Witnesses: **Andrew Lord**, Director of Operations, British Airways, **Steve Ridgway**, Chief Executive, Virgin Atlantic, and **Corneel Koster**, Director of Operations, Safety and Security, Virgin Atlantic, gave evidence.

Q109 Chair: Good morning, gentlemen, and welcome to the Transport Select Committee. Could I ask you, please, to identify yourselves with your name and organisation? This is for our records. We will start at the end here.
Andrew Lord: Good morning. Andrew Lord, Director of Operations British Airways.
Steve Ridgway: Steve Ridgway, Chief Executive of Virgin Atlantic.
Corneel Koster: Good morning. Corneel Koster, Director of Operations, Safety and Security, Virgin Atlantic.

Q110 Chair: Thank you very much. Mr Ridgway, you have told us in the evidence that you have already submitted that the December disruption affected 55,000 Virgin passengers and cost you £10 million. How was that cost incurred?
Steve Ridgway: We had two major incidents in December. One was at the beginning of December, where we lost quite a lot of flights at Gatwick; we lost 18 flights. Then the big one was at Heathrow in the run-up to Christmas, where over 170 flights were cancelled. That is where the large bulk of those 50,000 passengers were affected. That may not sound many flights, but I think you need to remember that Virgin Atlantic is a long-haul only airline and certainly, in the case of Gatwick, we only operate very large aircraft which carry up to 450 passengers. We certainly affected a very large number of passengers, both at the beginning of the month and then particularly in the run-up to Christmas. The cost of that was obviously a huge amount of lost revenue, particularly in the Christmas week, which is probably the peak travel week of the year, as well as some costs we incurred on chartering aircraft to try and get passengers where they needed to be before Christmas, as well as the compensation obligations we have under EC 261 to pay compensation to passengers that were affected.

Q111 Chair: Mr Lord, what did British Airways lose on the bad weather?
Andrew Lord: The scale for British Airways was slightly different. Across the month, we cancelled in the order of 3,000 flights across our network. We are obviously a network carrier so we had a large number of short-haul services that were cancelled because of disruption throughout the network. Europe was particularly badly hit for snow. We were also impacted by the cancellations at the start of the month at Gatwick and Heathrow because of that disruption and then obviously the major disruption in the week of 18 December. The costs we incurred were very similar to those already explained by Steve for Virgin.

Q112 Chair: What do you think went wrong at Heathrow when things didn't seem to be as bad at other airports?
Steve Ridgway: There is no doubt it was a serious incident. There was a lot of snow, as many of us remember, in that part of the country on that weekend. Heathrow had not been affected anything like so seriously at the beginning of the month. We had high expectations, and Heathrow had high expectations, that there would be disruption, but it would be able to deal with it. It was very disappointing that at such a key time we were not able to get the airport open much earlier, because travel at that time is very non-discretionary for travellers. It is around key Christmas plans, people are planning their trips down to the last minute to arrive Christmas Eve or Christmas Day or whatever, and of course it rolled on sufficiently that it affected that.
What exactly happened? There are lots of things being looked at, and Heathrow is conducting its own inquiry, but it would seem to us that we were never quite sure whether the contingency plan was fully implemented in the way that it was proposed, and I am sure we will talk about that a bit more. But we certainly didn't get the airport open in anything like enough time.

Q113 Chair: It has been reported that you have refused to pay fees to BAA. Is that right?
Steve Ridgway: We were very disappointed, and frankly very angry, about what happened and the fact that we disrupted so many thousands of passengers' lives and trips in that run-up. We have very little recourse. We don't have what I would regard as normal commercial terms with BAA. We have conditions of use, and there is virtually no recourse under that, so we wanted to make a pretty loud statement that we were very unhappy about this situation. Particularly, looking forward, we know there is a new Airport Economic Regulation Bill going to go through Parliament, and we want to see far more potential redress both for airlines and passengers, not just around snow and disruption but around the overall way that we operate this key piece of transport infrastructure in this country.

Q114 Chair: Did you say then that you have no recourse to the airports authority?
Steve Ridgway: We have no recourse to compensation in an event like this, so we were trying to make a point that that is not satisfactory. If there is failure to perform, we need to have some kind of redress. That is what we are looking for going forward, because it is not there right now and it has not been there for a very long time.

Q115 Chair: But the press did report that you were withholding fees. Is that correct?
Steve Ridgway: We withheld a very small part of our landing fees as a protest. We knew, ultimately, that we would have to pay those fees. We did not want to disrupt passengers further if BAA took very stringent measures, but I think it was very important that we were able to show the kind of frustration that we all felt about what had happened and we needed to try and ensure that it didn't happen again.

Q116 Chair: Is it legal advice you had that said you didn't have any recourse to the airports authority, or was it to do with maintaining good working relations?
Steve Ridgway: Yes, it is predominantly that. Under our conditions of use we have very little, if any, recourse in the event of events like this.

Q117 Chair: Mr Lord, what is your position in relation to the withholding of fees or any possible legal action?
Andrew Lord: We have not taken the same course of action that Virgin have chosen to do. Heathrow airport have already taken a decision not to charge airlines for the period around 18 December and the following day for parking fees and some other charges. We are still considering what options we may have, but we believe the best interest is for us to work with BAA and other partners at the airport in terms of how we move forward to make sure we don't have a repeat occurrence. We don't think our customers are interested in any public disagreement with BAA or any other party.

Q118 Chair: Do you think that you have any legal recourse if you wanted to take that path?
Andrew Lord: As I said, we are considering our options, but, in the same way that Virgin have already stated, the airlines don't have any direct ability to claim any financial recompense.

Q119 Gavin Shuker: What financial incentives do you have in place to make sure that passengers' travel plans are not affected?
Steve Ridgway: If I can answer that initially, I guess the greatest and most effective sanction that we have is competition, and you are seeing that sitting here in spades. That need to perform and to provide passengers with that choice and make sure they travel with us as opposed to other airlines is all-consuming and all-powerful. That is the thing that drives us to make sure that we don't let our passengers down, and it ultimately becomes a matter of reputation. So it is a very, very powerful force. You can see it in many sectors and industries, and you have certainly seen it for a long time between our two companies.
Andrew Lord: We are obviously working in a service industry, so customers have a great deal of choice. Our priority, particularly in circumstances of this nature, is to focus on safety and security and to make sure that we deliver the best service to our customers, however difficult the circumstances. We are all commercial organisations. If we don't deliver what our customers need, they will choose to go elsewhere. That is the greatest incentive we have.

Q120 Gavin Shuker: How would you characterise that compared to the airports out of which you operate? Do they face similar financial penalties for disrupted service to passengers?
Steve Ridgway: They don't face the same factors because, simply, they are monopoly owners of an asset, like Heathrow, for example. That is why regulation is so important so that as far as possible—and it's very difficult; I understand that—you need to stimulate the same competitive pressures, responses and need to provide those high levels of service to customers as you get when you have companies that are competing fully commercially. That is why regulation is so important when you have a monopoly owner of an asset like this, and indeed in other assets as well.
Andrew Lord: Also, clearly, the airport operators lose out if airlines cancel. They incur financial loss as a result of charges not being incurred because services don't operate. But, again, as Steve has already said, there is not direct competition in the same way as there is between the airlines.

Q121 Gavin Shuker: Just to change topic briefly, there was of course a snow plan in place over which BAA consulted with the airlines. What was the nature of that consultation earlier last year?
Andrew Lord: If I go first, following the previous winter, a review was carried out by all parties, particularly at Heathrow, on how things could be improved. As a result of that, a detailed snow plan was produced by BAA, in consultation with a number of the key airlines at Heathrow. The final consultation, I believe, was in mid-October, and that plan was published and was the plan to which all parties would be working. Specifically, it detailed what resources would be made available for certain parts of the airport in order of snow clearance, anti-icing, de-icing of aircraft stands, taxiways, aprons, runways and service roads. That was the plan that was published and the whole Heathrow operating community were due to work to it.

Q122 Gavin Shuker: Are you pleased with the level of consultation with airlines? Did that aspect work well?
Andrew Lord: From the perspective of British Airways, we were heavily involved. As ever, we could always have looked, as a community, to see if we could have completed that work a bit earlier rather than leaving it to the final meeting in mid-October, but I think the plan that was published for a significant snow event was robust. We should all recognise that

the event that actually occurred on 18 December was an extremely severe event in terms of the volume of snow and the rate at which it fell. I don't believe, with the plan that was produced, anybody foresaw the level of snow, but none the less our expectation was that the airport would close and then reopen fairly quickly.

Q123 Chair: Mr Lord, in the written evidence you have given us you say something very different. You say there that you were not involved in the plan, that you might have seen it but you actually were not involved in putting it together and didn't feel a part of it. That is not the same as what you are saying now.
Andrew Lord: We were involved in it towards the end, in the final meeting that happened in October. I believe there was some consultation prior to that, but it wasn't necessarily to the level of engagement across the whole community that is going on today following the events of December.[1]

Q124 Chair: Yes, but we are trying to probe at the moment what happened and what went wrong. The written evidence you have given us says fairly clearly that as an operator you were not in fact involved properly in the formulation of that emergency plan—the snow plan.
Andrew Lord: We were not involved in the entire production of the plan. We were involved to some extent around the specific resources that we believed BAA would produce for clearance at terminal 5—to some extent.

Q125 Gavin Shuker: Just to drill down into the detail of this point, was it all airlines that were consulted as part of the snow plan? My second question is related to the first. To what extent was that final meeting actually just rubber-stamping by one or two airlines versus deep involvement much further back?
Corneel Koster: If I can answer that, the snow plan was certainly being consulted on via the Airport Operators Committee, so all airlines had the opportunity to comment on it. However, it is updated every year rather than written from scratch, and we would like to stress that we are not the experts on keeping an airport open. It is the airport operator that is, in the end, the expert on that. For us, for Heathrow, the plan looked rather sensible, but we think the plan went wrong in execution when it took too long to reopen the second runway. The fact that there was some disruption on Saturday the 18th, we would agree with Andrew Lord, was inevitable. However, it was on the scale of the disruption, the length of time that it took to open the second runway, and the communication where we felt Heathrow fell short. We were consulted, but could you call it a rubber stamp? It is a slight, light consultation, and in the future we will make sure that we are consulted a lot more when it comes to snow plans.
Chair: A rubber stamp is not quite the same as proper consultation, but we are listening to what you say and also looking to the future.

[1] This refers to specific planning for 18 December, the initial question was on generic snow planning. (Note from witness)

Q126 Mr Harris: Mr Ridgway, if Virgin were in the business of running airports as well as flying planes, how differently would you do it from BAA?
Steve Ridgway: Again, it maybe comes back to the answer to the previous question. Airline margins are so thin and competition is so fierce that you are very, very focused on making sure that you operate and deliver the promises that you have made to your customers. That drives us day in, day out because it is about the business we have built, our brand and our reputation. I can't say for sure, but judging by the way all our staff reacted over those few days in terms of trying to look after our customers and get the operation going again, I just feel that we would have left no stone unturned in trying to make sure that we got our operation back running again as quickly as possible. It is much more in our DNA and it is driven by that fierce competition that we face. If we fail, we face a very big penalty for doing that.

Q127 Mr Harris: From a practical point of view, was there anything specific that you have recommended to BAA they didn't do that they should have done?
Steve Ridgway: You may be aware that airlines have, and we certainly have, a very good crisis management team and process, so if there are ever any incidents of any sort we activate what we call our amber group very early. We pre-activated our amber group on Thursday night, before the anticipated snow, because we could see the weather forecast coming through and the deterioration. That team is very competent and, ironically, had rather too much practice earlier in the year during the ash crisis. We were putting in place all the things in anticipation of the weekend, booking hundreds of hotel rooms, making sure we could get staff in, billeting staff at or near the airport so that we could operate flights, and so on.
My colleague Mr Koster can talk about this, but we did not see the same early ramp-up of the pre-contingency meetings that were part of the snow plan under the BAA's plans. Yes, I think it was different, and we were disappointed that we didn't appear to see the same early approach to activating the plan.

Q128 Mr Harris: Assuming that we may be in line for severe winters in future—this is to all of you—what difference do you think the fact that Heathrow is operating on such a high capacity without a third runway will make? Would the existence of a third runway have a material benefit in helping the airport to cope with severe weather in the future?
Steve Ridgway: I think the key point about Heathrow is, yes, it is absolutely full and it is operating at a very, very high level, but that makes it even more important that, before there is something like a third runway, we are able to keep that airport open almost at all costs. It is the world's busiest international airport. It is a key UK strategic asset. It is vital to our trading as a nation. It is obviously a vital part of the economic recovery that is going on right now. All focus should be making sure that the planning and the resources, whether it be snowploughs through to de-icing fluid, communications and execution, with all the

stakeholders, are most effective. Yes, Heathrow is working at very high capacity and there is little margin in events like this, but that is why those plans need to be robust and they need to be executed robustly.

Q129 Mr Harris: I do not want to reopen the third runway debate, but is your view that, were the third runway and extra capacity miraculously to materialise, this sort of disruption could be at least partly avoided?
Steve Ridgway: If the infrastructure wasn't as stretched as it is, there is no doubt that it would be easier in case of events like this to keep the airport operating and to probably get it operating earlier. But we are where we are and we have to deal with that, and yes, there will be, undoubtedly, debates about infrastructure needs for the UK going forward.

Q130 Mr Harris: Do British Airways feel the same?
Andrew Lord: We have a very similar view. It is about complete airport infrastructure so it is about available parking stands for aircraft as well. Not only is Heathrow constrained from a runway perspective, but it is constrained from an aircraft parking stand perspective as well. There is an awful lot of work ongoing to improve the operational resilience of the airport, and a lot has been done over the last two or three years to improve that. There is no doubt that, if the airport gets to operating smoothly and recovering quickly, then, clearly, the impact to customers is much improved and much reduced. You can see that in the recovery that all the airlines have had since January. The service levels that have been delivered since then have been quite excellent. Comparing it to some of the major European hubs that are operating at 75% capacity, their ability to recover, when they have major disruption, is much quicker because they have the infrastructure available to do it.

Q131 Mr Leech: There is a perception that in this country we don't deal with adverse weather conditions in the winter as well as some countries that have far more severe winters. In your experience of flying planes to different parts of the world, do you think that is a fair perception?
Corneel Koster: If I can answer that, we would not agree with that perception. We agree with David Quarmby that UK aviation generally demonstrates a high level of resilience, though possibly not as good as places that have a much higher probability of such severe snow events and weather patterns. Of course, they are going to be more prepared and they will make different trade-offs on investment around equipment, manpower and infrastructure. We believe that several European airports faced a difficult period in December as well.
If we can compare Heathrow with Gatwick, Gatwick also suffered during the snow event in early December and had several quite rocky days and several days when the airport infrastructure didn't operate as well as it should have. But what then happened prior to the next event on 18 December is that the command and communication infrastructure at Gatwick learned a lot and implemented a much more integrated approach of working with the airlines to ensure that the airfield would open as soon as possible. Overall, we would not agree that the UK deals with these events in a non-optimal way.

Q132 Mr Leech: You made an interesting point right at the beginning. You suggested that some airports that are used to very adverse weather conditions on a more regular basis are perhaps in a better position to deal with the adverse weather. Is it really about a lack of experience in dealing with severe weather that causes the disruption when we have it on an irregular basis?
Corneel Koster: We don't think it is a matter of experience. Generally, the UK has dealt with previous snow events better than it did this time, and we think it is really important, which is a testament to the fact that you have called for this session, that we need to learn and improve in the future to do even better, because we did disappoint tens of thousands of passengers. We can be better and we can be more prepared.

Q133 Mr Leech: Are there any airports around the country, around Britain, that deal with adverse weather the best, and are there lessons to be learned by certain airports from other airports around Britain?
Andrew Lord: It is fair to say that there are always lessons to be learned. In our experience, the way Gatwick Airport has learned over the last 12 to 18 months has been probably the best example, from having severe closures in the previous winter to having more reduced closure at the start of December and end of November, and then managing the impact of the heavy snow through 18 December quite well by putting the learnings in place and working with the whole community in Gatwick, both looking at the airfield and the local infrastructure around it to ensure that the communication and the decisions taken were in the best interests of all the customers. There are, clearly, lessons that Heathrow can take from Gatwick and also from some other airports in the UK, but I do think we need to recognise that the level of snow that we saw on the 18th was the first we had seen of that nature for 30 or 40 years.

Q134 Mr Leech: Following on from that last comment there, if we are going to have worse winters in the future and more snow potentially, do we need to reassess how bad we expect the weather to be so that we are ready for a much worse eventuality than perhaps we have been prepared for in the past?
Andrew Lord: I think that is a very valid point and work is certainly—

Q135 Mr Leech: Where do you draw the line? How do you assess how bad we need to prepare for?
Andrew Lord: That is a much more difficult question to answer. In terms of the assessment as to the advice we can get from the experts, be that the Met Office or a scientist, that work is ongoing, both Government-led and in the industry, to see whether or not events of this winter are going to be more regular and more frequent. What it will ultimately come to is how we can ensure that we mitigate those events in the best way possible to ensure we maintain a safe operation

and provide a robust service for our customers, and, if there is any disruption, make sure we keep it to the absolute minimum and recover quickly.

Q136 Mr Leech: I have one further follow-up question from that. Are you suggesting then that, if the weather experts tell us that these events are not going to happen more frequently, we ought not to be more prepared for worse eventualities, or are you saying that we have got to be prepared for worse eventualities but we have to bear in mind how likely those events are going to take place?

Andrew Lord: Certainly, in British Airways, we will be prepared for more events of this nature going forward, and indeed for this winter we invested more than £2 million in additional equipment to make sure we could deal with severe snow following the previous winter in a better way, and generally we have. Ultimately, whatever the experts say, British Airways will certainly take the view that we will invest and put plans in place to deal with the eventuality in a far better and more robust way for our customers than they experienced over the last year. What we require is all partners in the industry to do the same thing. At the end of the day, the airlines are reliant on the airports to provide the facilities to keep the airfield open and operating.

Steve Ridgway: There is no doubt with the experience of the last two winters that it would be prudent to plan more carefully. We probably need more robust snow plans, which probably have a greater degree of granularity around the severity of the likely weather, and we need to try and balance the resources against that. But, at the end of day, it is going to come down to making sure those plans are robust, that all the key stakeholders are involved and that we do execute those as efficiently as we can. A lot of that is around planning and communications during the event. But I think you are seeing that need to ramp up and have greater capability to deal with adverse circumstances like this.

Q137 Steve Baker: I get the impression so far that you are largely at the mercy of the airport operators. Is that how you see things?

Andrew Lord: At the end of the day, if the airport facilities and infrastructure are not available for us to operate safely, then, yes, ultimately we are. At the end of the day we have to work together with the airport operators. We are their customer. Ultimately, our customers suffer if we can't get the service that we need out of them. So, ultimately, yes.

Corneel Koster: I would say, yes, we are quite dependent on them to get the airfield open and to provide accurate information to enable us to inform our passengers accurately so that they can re-plan their travels. However, there are a lot of things that an airline can do on winter resilience, and if you like, I can share with you what we do in Virgin Atlantic. For example, we have a gold standard de-icing contract which we pay for year round to make sure that, if we have ice or snow events, we get preference from our supplier. We run winter preparation exercises all across the world. When there was an expected severe weather pattern, as we did this time, on the Thursday we started running our contingency team meetings to prepare for the event. We updated our airport team with the EC 261 information. We started making hundreds and hundreds of block hotel bookings to ensure that we could house our passengers but also so that we could get our teams who live far away to and from the airport to make sure that the key people were available for their critical shifts.

We started analysing the weather pattern and, sometimes, we do make proactive cancellations. This time, the weather pattern for us didn't look so severe that we had to cancel our schedule on the Saturday and we received no information from any airport operator that we were advised to cancel our schedule. So there are a lot of things that we do in preparation for an event like this and to enhance our winter resilience.

Q138 Steve Baker: Given this division of labour—I am just returning to Mr Ridgway's point about normal commercial terms not being in place—could I ask you all what is it that you want to see in terms of putting in place something which more closely approaches normal commercial terms?

Steve Ridgway: We need to get to a regime where we are seeing a set of quality standards that are required in a wide variety of circumstances, obviously particularly around normal operations, to make sure that we operate very high standards and reliability around things like on-time performance. There need to be enough sticks and carrots to make sure there are the penalties there in terms of non-performance, and equally there can be incentives there in terms of where we are seeing service levels being exceeded.

It is quite ironic, and I can just show you this, that Heathrow had a very good month in December. If you look at all their quality score indexes, they pretty much pass on all those metrics. Virgin Atlantic's own version of that—our score card for December—was pretty bad in terms of how we measured our performance, whether it be financially, what we did to our customers or whatever. Our big plea is that we get to a much more balanced score card around making sure that the airport owners have the right sticks, if you like, and the right carrots to emulate the very real competitive pressures that exist in normal competitive businesses.

Andrew Lord: We would share a very similar view. At the end of the day, if the airport operators don't provide the service to us that we need, it is our customers that suffer, and that is a situation that's not acceptable to us as a service industry. We need to ensure that there is appropriate incentive as well as penalty in the right measures and that the industry is working together to make that happen. If we are working against each other because certain business or regulatory measures don't drive the right behaviours, then that would be ultimately the wrong outcome for the customers of all the airlines.

Q139 Chair: Does all of this mean that you agree with the proposal to give the Civil Aviation Authority powers to regulate at times of bad weather?

Steve Ridgway: Yes. I think that is why the new Airport Economic Regulation Bill is very important in

terms of making sure that we have a more robust regime. If you have monopoly owners of assets, we know from some of the learnings from the other sectors, such as the utilities, electricity or whatever, where there are duties of provision which I think don't exist in the provision of airport services. We can learn from other sectors where we have regulated monopoly owners of assets and make sure that we put a regime in place that has a variety of measures both to incentivise and penalise the owners of those assets in the event of inadequate performance or in the event of not developing those facilities and that infrastructure in the way that we need to as a country to remain competitive.

Q140 Chair: So you are looking for incentives and penalties in the new regulation that is proposed.
Steve Ridgway: Yes.

Q141 Chair: Mr Lord, what is your view about the new regulation proposed?
Andrew Lord: We welcome the review. We are still considering our position with regard to it, but I think it does come to very much the same thing, which is that there needs to be the right balance between penalties and incentives. We need to ensure that our customers get the service that they need out of us and we need to ensure that all the airlines have a viable commercial business going forward. What we need to ensure is that the regulation is not done in such a way that it just passes cost on to the airline customers of the airports and then, ultimately, the airlines have to make a decision on whether they pass that cost on or absorb it. But we need to ensure that the right measures, be they penalties or incentives, are in place for the ultimate airline customers.

Q142 Chair: Do you think that the Government should have a bigger role in aviation at times of severe weather, given the national importance of aviation?
Steve Ridgway: I think the role for Government is to make sure that there is a policy and the right framework to ensure that, in regard to the key providers of aviation services to the UK economy, which is obviously the airlines, the airports and many other infrastructure companies. We have very high levels of service provision and the right investment decisions being made to continually develop our facilities in this country and ensure that we are competitive. It is not the Government's job to do that. I think the Government found it frustrating in December that, like the airlines, they had so little power or recourse. I think there was a bit of a wake-up call there, if you like. But it is really around that policy framework and understanding the importance of aviation. It is one part of our transport infrastructure, but it is absolutely key, and particularly, as we all know, to an island trading nation like this. It is about the robustness of that framework and the recognition of the importance of aviation in that whole transport mix.

Q143 Chair: But should Government have any specific powers in relation to severe weather and aviation? You have spoken more generally, Mr Ridgway, about Government's responsibility looking at the aviation sector.
Steve Ridgway: It is something the Government may require in very extreme circumstances, but I think, ultimately, the initial responsibility is on the airport owners and on the airlines that work with that airport owner to make sure that those facilities can be kept open. I guess there could be very extreme circumstances where it is such a key strategic asset in terms of keeping the airports open that the Government may wish to step in with the military or whatever, but the initial responsibility obviously is in the private sector in the companies that operate in that area.

Q144 Chair: Mr Lord, what is your view on Government involvement at times of severe weather?
Andrew Lord: Clearly, the Government needs to take a view depending on the circumstances at the time. As the Quarmby report stated, the aviation industry itself is very good at dealing with these events and planning for them. There are always lessons that we can learn, as we are doing now post 18 December. I don't think it is necessarily appropriate for the Government to get into the level of detail on whether or not airports or airlines are doing all that they can on the day, but it is absolutely right that the Government hold the industry accountable for making sure that the appropriate actions are being complied with and making sure that we are looking forward in terms of future plans and whether or not there is action from an infrastructure or investment programme with which we need to get involved.

Q145 Chair: What do you expect to come from the Begg report looking at Heathrow?
Steve Ridgway: We have fully co-operated and participated in the Begg report. We had concerns initially and maybe still have concerns about the independence of that report but, none the less I think—

Q146 Chair: What are your concerns about independence?
Steve Ridgway: The inquiry is being run by BAA itself, obviously, and by one of their directors, so that independence is very important, but there are two critical things to come out of it for us. One is the key learnings around the specific issues of what went wrong in this particular event in late December, and that is around many of the things that we have talked about today, such as the robustness and implementation of the snow plan and the communications. I personally hope that it will also be a trigger to enable us to work more closely together, and coming back to the point I made earlier, around getting a set of incentives and behaviours that make sure everybody is working together and we are looking after our customers, as they are our mutual customers, to the very best of our ability.

Q147 Chair: What about clarifying respective roles of the airline operators and the airport operators? Is there any issue there?

Steve Ridgway: The report will need to identify a whole raft of areas around real clarity on responsibility for what the airport should be doing, the way it will implement its snow plan and particularly the way it will provide that core communication to the airlines, because, after all, that is the communication that then flows out from the airlines to the customers so that they know what is going on. In many ways, the more clarity and the more granularity there is around that, and around the different roles of the airport owner, the airlines, the other handling companies and many other businesses that operate on the airport, can only be good for the future.

Q148 Chair: Mr Lord, do you agree with that or are there any points of difference?
Andrew Lord: We would generally agree with it. We have fully co-operated as well. I would hope that the report will identify where there were specific failings, particularly around command and control and communication, as well as a robust plan moving forward in terms of declaring capacity when the airfield is not fully available. One of the biggest learnings that we would hope would come out of this is the ability to take decisions in advance of an event happening so that we can give certainty to our customers on what schedule we are able to fly.

Q149 Gavin Shuker: How would you characterise the communication from the BAA to the airlines during this?
Andrew Lord: If I may go first, in terms of the community at Heathrow, for the first 24 to 36 hours it was very poor. The first joint meeting was not until 11 o'clock on Sunday 19 December, and the communication specifically on the 18th regarding the state of the airfield and the likelihood of the airfield reopening was very poor and managed through the media rather than directly with the airline community, which was less than helpful.
Corneel Koster: We completely agree that on the Saturday the communication was basically absent and the communication that came to us was very conflicting. We, for example, had passengers sitting on aircraft waiting to depart who heard from the media that Heathrow wasn't going to reopen. Normally, they would like to hear it from the airline, via the captain of course. That created a lot of unease and conflicting information. Inaccurate information was an issue as well. On the Monday, for example, when Heathrow was limited in operation, at a certain moment there was a communication from the BAA which advised passengers not to come to terminals 1 and 3 because terminals 1 and 3 were closed. But we actually had flights operating out of those terminals and we had passengers with confirmed bookings missing flights, which was particularly painful with all the backlog of passengers during those days before Christmas.
Then, last but not least, on the 21st, when eventually the second runway reopened, for a good part of the morning we were being informed that it would not reopen on the Tuesday. The earliest it would reopen would be on Wednesday at 6 o'clock in the morning. Then, all of a sudden, in the afternoon things changed and the second runway reopened. If you are a long-haul operator, that means you have lost another day. You can't launch those flights. We need proper lead time, especially on the inbound flights, before we can get the operation moving. So late and conflicting communication, and sometimes communication direct to passengers instead of via the airline, led to an exacerbated situation.

Q150 Chair: Who should be responsible for that communication—for giving out that information?
Steve Ridgway: The prime communication about what is going on at the airfield and the capability of the airfield to respond and reopen has to come from, in this case, BAA. Then we can pick up from that and, given the lead times of then getting customers into the airport and getting the crews re-oriented, it is our responsibility to get those messages out. We had all the facilities in place to do that. It was certainly pretty galling on the Tuesday to more or less hear in the media, essentially, from the Prime Minister that the runway would be opening later that afternoon. There was then this expectation from passengers that from 5.30 on Tuesday it would all be business as normal, and of course that was not true. We had aircraft stranded all over Europe and crews out of place, and in fact it rolled on in our case—and I am sure British Airways' as well—right through until after Christmas. We only ran our Christmas Eve programme by an absolute hair because of some of those issues. So accurate and timely communications is absolutely critical.
Andrew Lord: The other thing I would just add is that, in fact, going to the Tuesday, the decision had been taken on capacity for the next 24-hour period. A number of airlines, ourselves included, had already published a reduced schedule for the Wednesday. As Mr Ridgway said, the first the operational side of our airline was aware that the second runway was going to open was the Prime Minister's statement. That, in turn, resulted in a huge volume of calls to our call centres, massive misinformation to customers, and we, too, had already had significant disruption. We had 38 long-haul aircraft divert and over 55 short-haul aircraft in the wrong position, with the associated crew disruption. We were able to get back to our full schedule by 24 December and a full long-haul schedule on the 23rd. That was down to the tremendous efforts of all our staff and all my colleagues at British Airways. We had a huge number of volunteers come in to run the operation and also to deal with the huge volume of calls from our customers.
Chair: Thank you very much, gentlemen, for coming and answering our questions.

Examination of Witnesses

Witnesses: **Stewart Wingate**, Chief Executive, Gatwick Airport, **David Wilson**, head of Airside Operations, Gatwick Airport, **Colin Matthews**, Chief Executive, BAA, and **Amanda McMillan**, Managing Director, Glasgow Airport, BAA, gave evidence.

Q151 Chair: Good morning and welcome to the Transport Select Committee. Could you identify yourselves, please, with your name and your organisation for our records? We will start at the end here.

David Wilson: Good morning. My name is David Wilson. I am Head of Airside Operations at Gatwick Airport.

Stewart Wingate: Good morning. My name is Stewart Wingate. I am the Chief Executive Officer of Gatwick Airport Ltd.

Colin Matthews: I am Colin Matthews, the Chief Executive of BAA.

Amanda McMillan: Good morning. I am Amanda McMillan, the Managing Director of Glasgow Airport.

Q152 Chair: Thank you very much. How much did the snow disruption cost your airports? Mr Matthews, what did it cost you?

Colin Matthews: I will answer that. Can I make, with your permission, three comments just to start off? The first is to say that I am very sorry indeed for the thousands of passenger journeys that were disrupted and the thousands of Christmas holidays that were spoilt. It was extremely damaging for passengers, very damaging for our airline customers as well, and indeed damaging to our company. That period of time cost us, in Heathrow alone, just short of £20 million.

In very simple terms, here is what went wrong. We planned for 6 cm of snow, and in the event, we had a great deal more than that fall, and it fell in a very, very short period of time indeed. In retrospect, it is clear that we should have had a plan that envisaged much more snow than that, and for the future we need to have such a plan. Since December, therefore, we have built a new snow plan, acquired new equipment and trained new drivers. We have contractors on standby ready to step in, we have volunteers trained, and we have practised new snow moving routines. Very significantly, we have discussed with airlines much more precise definitions of how to clear aircraft stands—that was what got us in particular difficulty—to make sure it is clear between us and the ground handlers who is doing what, to make sure ground handlers are available to move their equipment and to move the aircraft.

I have also discussed with the three chief executives of our biggest carriers the establishment of a very small group of a handful of chief executives, including them, myself, the chief executive of the CAA and the chief executive of NATS, which can provide and co-ordinate joined-up leadership for the whole of the Heathrow community on those matters that concern passengers most. Then, on top of that, I set up the David Begg review, and when that report is finalised in a few weeks' time, if it says we have to do more, then we will do more.

I will make one final point, if I may, on collaboration. There are two distinctly different ways that I or anyone else can talk about the December disruption. The first is essentially defensive, whereby I and other people at Heathrow explain why it really wasn't our fault; it was someone else's fault. The much more constructive way is for us to agree with airlines how to make things better for passengers. That has been my real preoccupation since taking on my job, and it will continue to be my real preoccupation. I think that is where passengers' interests lie—that we have better joined-up arrangements between us and all of the operators at Heathrow to provide better passenger service.

The answer to your question is, £20 million for Heathrow, and £24 million if you include all of our airports.

Q153 Chair: Would you say that your relationship with the airlines has been damaged permanently?

Colin Matthews: I think the relationship with our airlines is better than it was three or four years ago when there was the security crisis in 2006. It is certainly extremely painful for all of us through December's disruption. It is vital for passenger service that we have good relationships with airlines, and I am confident that we can do that.

Q154 Chair: Mr Wingate, what did it cost Gatwick?

Stewart Wingate: At Gatwick Airport, the cost of the snow disruption in December was £4.5 million. To put that into context, that represents 5% of our earnings before interest and tax on an annual basis; so it had a significant impact on the financial performance of our business. During the course of December, in the first snow incident, which was significantly worse than the middle of the December snow incident, we did waive parking charges to our aircraft carriers. We fully intend, during the course of the coming summer, to consult with our airlines to include snow disruption and our ability to recover from snow disruption in our service quality regime which establishes service level agreements with our airlines at Gatwick and has financial penalties for us. Voluntarily, we are going to embark on that piece of work at Gatwick.

Q155 Chair: How has your relationship with the airlines been affected?

Stewart Wingate: I think the relationships during the course of December strengthened at Gatwick with our airlines, certainly from the time of the change of ownership of Gatwick back in December 2009. You heard earlier from the airlines that there has been a perception that we have worked very hard to improve our snow plans; we have worked very hard benchmarking Scandinavian and German airports. We have invested heavily in additional equipment at the airport and we have changed our procedures, particularly with the way in which we clean the apron areas and the stands at the airport, as well as the runways, in order to make sure that we perform better when we are impacted by snow. To put it in perspective, at Gatwick, in the 10 years prior to us taking ownership of the airport, there had been six

days where the airport had been impacted by snow. In our first year, there have been over 12.

Q156 Chair: And Ms McMillan?
Amanda McMillan: On the relationship with airlines specifically, yes, I am confident that going through tougher times with airlines makes for a more productive relationship going forward. We have held debriefs, as we do after all major incidents and all weather episodes, and we believe that we have a constructive relationship going forward.

Q157 Chair: What did the disruption cost the airport?
Amanda McMillan: Across Glasgow, it was in the hundreds of thousands of pounds. We are part of the £4 million loss to BAA within the airport division.

Q158 Gavin Shuker: If I can ask, first of all, a question related to Heathrow, what are service quality metrics?
Colin Matthews: My team measures weekly and monthly 20 service measures. In fact, only some of those are included within the regulatory framework, which your previous witnesses were addressing. For instance, one of them would be punctuality, and our punctuality numbers in December were appalling because of that dreadful disruption.
We have about 20 measures. Four or five of those are related to quality: the security and safety of passengers. Four or five of them are related to the quality of the experience, the punctuality, the baggage performance and so on. One of them is financial, but 19 of them relate specifically to the delivery of service to passengers, security, comfort and all the rest.

Q159 Gavin Shuker: My maths isn't great, but with those 19, and there are four terminals—I think there are numbers available, and that is 76. How many of those did you fail in December?
Colin Matthews: I don't have it in front of me, and I could send you a copy of that, but probably half of those would have been dramatically failed in December. I think the point that Steve Ridgway was making was with respect to those ones that are included within the regulatory settlement, and perhaps the security queuing, which is one that has a specific financial penalty associated with it. In the event, that would not have been one that suffered in December. I completely agree that we need an updated regulatory framework. We should choose the right measures that reflect passenger experience and the airport should do less well if we do a less good job and the airport should do better financially if we give a better service to passengers. That is very straightforward and common sense.

Q160 Gavin Shuker: I will confess. I did know the answer to the question before I asked it. There are four measures on which you failed under the regulatory arrangements. One was for seats in terminal 3. The target was 3.8 and you got 3.7. One was security queues of less than five minutes. In terminal 3, 95% was the target and 94.3% was hit. Pier service in terminal 5 was a 92% target and 82% actual. Then, for preconditioned air in terminal 5, 98% was the target and 87% was the actual. I appreciate your frankness in saying that we need an arrangement which measures the right things. Do you believe these are the right things to measure?
Colin Matthews: I think we could have a much better suite of measures. Those are ones that were decided some years ago. In the case, for instance, of pier service in terminal 5, we are opening in a few weeks' time terminal T5C. That will increase by 33% the number of flights that are served from a terminal instead of remotely. That was a measure that was inevitably going to be missed until we built the third satellite. That will be opened in a few weeks' time. But, no, I agree, based on what we know now, for sure, we would choose a different suite of measures.
You referred to terminal 3. While we are building the new terminal 2, terminal 3 is particularly congested. It is a particular problem to make sure that we have a great service for passengers. We are refurbishing terminal 3. We have just completed a new development of the arrivals. If you can remember back to a time when arriving you would have sticky carpet in the immigration hall, we don't have sticky carpet any more. We have a bright, crisp, environment. It is better, but until we have a new terminal 2 open, we are going to be very constrained on terminal capacity at Heathrow. We are constrained, and in the short term we need to concentrate on making the best experience for passengers despite that constraint.

Q161 Gavin Shuker: The result of failing these metrics obviously is a rebate to the airlines.
Colin Matthews: Yes.
Gavin Shuker: How much did you pay in rebates in December 2010?
Colin Matthews: I don't have that figure in my mind. To be honest, though, my principal concern in December was not the rebates. It was getting passengers where they wanted to be. We did not hesitate for a second to spend every penny that we possibly could to resolve the problems of stranded passengers, to get passengers moving again. That is something the airport has never done before. The airport has never provided accommodation or food before. It has never provided laptops to help passengers rebook with airlines or credit cards to our staff to allow people to buy nappies for people. We were doing thousands of things that an airport has never done before because the scale of the disruption was so huge it utterly overwhelmed the ability of us and the airlines particularly, who have that specific responsibility for care for stranded passengers.

Q162 Gavin Shuker: By my maths, you paid the sum of £501,000 back to airlines, but you reported a loss of £20 million as a result of the snow disruption at Heathrow. If that is, I guess, just 2.5% of the amount of money that you lost, where did you lose that £20 million?
Colin Matthews: About two thirds of that was from lost revenue.

Q163 Gavin Shuker: That is retail sales, presumably.
Colin Matthews: No, it is not. Just like any other business, if we don't provide the service we don't get paid. If passengers don't take off, we don't get paid. We didn't get paid. That is the biggest amount. The second amount that is big is the cost associated with more consumption of anti-icing products than we have ever dreamt of consuming before. December, in total, was the coldest month at Heathrow since 1890, when records began. So we have been consuming those products more dramatically than ever before. We were spending money, as I have described, on accommodation and food for passengers, laptops, free parking, you name it—everything we could possibly do to relieve the situation for passengers. On the scale of things, therefore, the £500,000 you have referred to being the regulatory rebate was a relatively small proportion of the total very expensive cost to us of the December disruption.

Q164 Gavin Shuker: Finally, in summary, you managed to pass the vast majority of your targets in December. You have accepted that we need a different arrangement for measuring performance going forward, and you only paid £500,000 back to airlines. But, as I understand it, in your conditions and terms of use of Heathrow Airport you say: "In any event neither BAA Limited nor the airport company nor their respective servants or agents shall be under any liability whatever for any indirect loss and/or expense (including loss of profit) suffered by an Operator." Is it not true, therefore, that the current arrangements we have for holding you to account for the work that you are doing and that airlines have to hold you account for the work that you are doing are completely insufficient?
Colin Matthews: I accept that we need a new regulatory framework, and we have been working actively with Government to achieve that, but I don't accept that we escaped any kind of pain from December's disruption. It cost us £20 million. That is a very, very large amount of money for any organisation. It is a very large amount of money for us.

Q165 Chair: Are there any outstanding claims from airlines with either of you, Mr Matthews?
Colin Matthews: In the current arrangements, I don't think airlines have a basis for financial claims against us.

Q166 Chair: But are they making any claims against you of which you are aware?
Colin Matthews: We have received some letters, but I do not think airlines have a basis for compensation claims against us.

Q167 Chair: Mr Wingate, are there any outstanding claims?
Stewart Wingate: We have no outstanding claims.

Q168 Mr Leech: Mr Wingate, you mentioned in answer to a previous question that you had spoken to people at other airports. I think you mentioned Scandinavia and Germany. What lessons have you learned from those discussions with those other airports?
Stewart Wingate: The airports that we have spoken to are Oslo, Stockholm, Helsinki and Munich. We have not just spoken to them: we have actually visited the airports and done extensive benchmarking with management teams from those airports. We have even had management teams of those airports review our current snow plans and snow arrangements in terms of how we manage snow events. We had significant consultation on our findings from the benchmarking that we did in the summer of last year.
With regard to the key changes that we have put in place, the first one is that at Gatwick, looking at all the occasions of snow during December, the first occasions early in December were significantly worse both in terms of quantity and the length of time that it continuously snowed for, compared to the middle of December occurrence, which was actually a short, sharp deposit of snow.
We have ensured at all times that we have 24/7 senior management attendance on site, including myself, the executive team and all the senior operational teams. Clearly, that happens at other airports across Europe. Importantly, we created a new crisis control centre which we called silver command. That operated 24/7 and was established well in advance of the snow actually falling. It was established when the forecasts made it clear that it was very highly likely that snow was to fall. We learned the benefits of early and decisive decision making to inform passengers to travel or not to travel to the airport in the event of bad weather and we put that into practice. We learned new operational procedures, particularly around clearing the stands, clearing the taxiways and the aprons and not just focusing on the airfield.
We invested in new equipment, £600,000 in all during the course of the summer, and a further £8 million was invested on 3 December. That bought us new equipment. It doubled the de-icer storage, the actual medium storage that we have at the airport, taking our capability to over half a million litres, and we refurbished our snow fleet. We also learned a lot about how we go about communicating to the press and the media, and to that extent we ensured at all times that it was only senior executives of the business that presented the facts to the media during the course of December. We learned a lot and we put it into practice.

Q169 Mr Leech: What temperature does your de-icer work until?
Stewart Wingate: We have two different de-icers that we use. We have an acid-based de-icer which we tend to use in the range of round about freezing up to 3° or 4°, and then we have a glycol-based product which is effective down to about minus 10°.[2] So we hold stocks of, primarily, two de-icing mediums.

[2] On further investigation, Gatwick has determined it is possible for their glycol-based de-icer product to b effective down to -50 Celsius. The exact temperature it would stop being effective at would depend on the concentration of the chemical, and the volume of snow, ice or water on the airfield surface. (Note from witness)

Q170 Mr Leech: I think I am right in saying that, during the cold weather in the winter, some areas had temperatures significantly lower than minus 10°, certainly in Scotland.
Mr Harris: We usually do.
Mr Leech: You usually do—yes, that is very true. What would happen if the temperature went down to minus 15°, minus 20°? How would you deal with that?
Stewart Wingate: This is where it is absolutely critical operationally in the snow plan, first of all, to apply the right material based on the temperature. This is a very important point. That is why we heavily used the glycol-based product at Gatwick throughout the December periods, because our temperatures typically were ranging between about zero and minus 12° throughout the period. Had we used the acetate product, we would have been in trouble, because that would have simply frozen like water. So it is a very important point to say that you use the right material. The second point is that it will actually melt the ice when you apply the glycol-based product in that temperature range, but then, importantly, you have to sweep the water away from the airfield and literally suck it off the airfield before the temperature drops further. If the temperature drops further and you haven't got the medium off the airfield, then it will freeze, simply as your freezer would freeze in your kitchen.

Q171 Mr Leech: But if, before you get the opportunity to clear the airfield, the temperature drops below the temperature at which the de-icer will work, what do you do?
Stewart Wingate: You have to de-ice the airfield ahead of a snow event happening. That will minimise the chance of the snow depositing and lying on the ground. You then have to clear the snow, and as the temperature drops you just have to deploy your resource simply to sweep and suck the water from the airfield. If the temperature plummeted so fast that that simply wasn't possible—it is quite a hypothetical question, I suggest—then it would freeze.

Q172 Chair: Ms McMillan, can you tell us what happened in Glasgow?
Amanda McMillan: We had regular temperatures beyond minus 10° and they fell as low as minus 15° and minus 16° on the airfield. As Stewart describes, we do not tend to wait on the eventuality. We proactively spread de-icant based on weather forecasts. If we know it is going to be extreme temperatures, then we will actively de-ice the runway so that we avoid the scenario that you describe. The challenge for all of us, I think, is to hold the right quantities of de-icant based on weather predictions. Certainly, at Glasgow this year, we increased the resilience by having greater tankage of de-icant on our airfield so that we could survive longer periods of time, because one of our biggest hurdles this year was trying to get de-icant stocks to the airfield. There were competing demands for it across the UK, and also the transport system was under serious strain. Your original question was how airports provide the maximum degree of certainty that they can cope. It is around pre-planning, weather forecasting, active management of the airfield and using the right products.
There is another angle on de-icant, which is aircraft de-icant. We did have problems this year in Scotland because, once you go below minus 15°, the mix that is used by airlines can be too weak to de-ice the aircraft. They essentially dilute it and make it a ratio of compound. That needed to be changed this year because of the temperatures. So there is constantly learning here. The weather even in Scotland—I saw Tom nodding there—can be very different. We have got to learn lessons as well.

Q173 Mr Leech: But, effectively, you are quite reliant on good forecasting.
Amanda McMillan: Absolutely.

Q174 Mr Leech: How reliable has forecasting been over the last few years? Clearly, forecasting is getting better generally as technology improves, but how many occasions have there been in the last, say, of couple of years whereby a weather forecast has been wrong and you have been caught unawares?
Stewart Wingate: If I may start on that, in terms of short-term forecasts we take feeds from the Met Office and Hubcast, and we have them broken down into quarter hour segments. We have very accurate short-term forecasts and we certainly had no problems at Gatwick over the last year with the short-term forecasts.
Where it becomes more difficult is when you try to predict the weather for the future. That is why, when we took the bold decision to invest £8 million of additional investment and equipment, we couldn't base that on any long-term forecast but simply on the weather events that we have seen in our first year of ownership.

Q175 Chair: Mr Matthews, are the weather forecasts good enough?
Colin Matthews: I would answer as Stewart did. We have different feeds on weather forecasts. They do not always agree. In the short term they are reasonably good. Sometimes the weather forecast changes rather rapidly. It did just prior to December 18 as a matter of fact, moving from a suggestion of 5 cm of snow very rapidly to more. It is certainly vitally important that we have the best forecasts we possibly can, but they are never going to be perfect.

Q176 Mr Harris: Mr Matthews, I am quite sure that everyone, in December, was delighted about the removal of sticky carpets in terminal 3, but it is not much of a consolation for those passengers who were told that flights were cancelled when in fact they were boarding and taking off. Would you agree that communications isn't your strong point?
Colin Matthews: We need to improve our ability to communicate dramatically. In order to do that, I think we need to have much closer integration between airlines and airport. The key bit of information which we had to generate was a reliable list of which aircraft were going to leave and which ones were not. Until we were at that stage, everyone was coming to the

airport hopeful that their aircraft was going to go. As a result, on the Sunday, we had so many passengers in terminals 1 and 3 that, literally, we couldn't allow more through the door. That was a terrible position to be in. Subsequently, on the Sunday night, we reached agreement with airlines to plan in advance which aircraft were going to leave and which were going to be cancelled, and then you could tell passengers before they came to the airport whether their journey was going to be productive or not.

Q177 Mr Harris: You are ticking a box here, "Yes, of course we need to improve our communications." You are also saying you couldn't have done anything differently. Is that right?
Colin Matthews: There are always things we could have done better. I am sure the report that David Begg is making, without question, will point to things that we could have done better and we need to do better in the future. The key element that drove our problem of having the terminals overfull of passengers was not having on the Saturday or the Sunday a reliable list of which flights were going to depart and which ones were not. Therefore, all the passengers were coming to the terminal, and, although the terminals are big, they are not big enough to house a whole day's worth of departures if no one is leaving them. Therefore, we need the ability to pull together with airlines. As the airlines said, and I completely agree, we have to be able to have an authoritative version of an emergency timetable, if you like. That is something which is put in place in the rail industry, and we need to be in a position quickly, and indeed before the snow event, if the forecast is clear, in a realistic time frame. In that way passengers reliably can know that their aircraft is going to go and they come to the airport, or they know that it is not going to go and they won't come to the airport.

Q178 Mr Harris: We heard from the previous witness that the announcement was made on the media that terminal 3 was closed. As that announcement was going out, planes were being boarded and taking off and people who were heading for terminal 3 to catch their flight turned round and went home. When the message went out that terminal 3 was closed, that was clearly a false statement. Have you satisfied yourself about what process led to BAA giving information to the media which was not true? Did BAA know at the time it wasn't true? Did they only discover afterwards that it was not true?
Colin Matthews: Actually, the message was accurate. Unfortunately, terminals 1 and 3 were so full of passengers that we literally could not, in a safe way, let more passengers in. Of course, the way to relieve that is to make sure aircraft depart with passengers on them. It is a wholly unacceptable position to get to, but the message was not false. We could not let more people into terminals 1 and 3, because they had more passengers in them than we could safely care for.

Q179 Mr Harris: So, looking back, there is nothing you would have done differently, is there?
Colin Matthews: There are many things we would have done differently, the most important of which—

Q180 Mr Harris: I am really asking about communication, and the relationship with the media. In terms of communicating with the media and the airlines, you seem to be saying that you are satisfied that everything you needed to do was done.
Colin Matthews: I am not saying that. We certainly could have done better and will do better in the future, but the key—

Q181 Mr Harris: Can you give me a specific?
Colin Matthews: The key driver is the one I have given you. We need to be able to agree with airlines which aircraft are going to go. That is the heart of passengers having accurate information. "Is my flight going to leave or not?" Everything beyond that is secondary. If the flight is going to go, of course they will come to the airport.

Q182 Mr Harris: Why wasn't that done? Whose fault was it?
Colin Matthews: It has never been done at Heathrow before. It has never been done at any airport before. We do not have the routine of an emergency timetable. We suffered the experience of the volcanic ash closure earlier on in the year. That was the first time this was discussed—it was discussed. We put it in place during the Sunday, and clearly it would have been better if that had been ready on the shelf, polished, to be produced on the Saturday. In the event, it was ready on the Sunday night. So, from Sunday night, I could stand up and say, "Check the BAA website. If your flight is listed, it is going to go. Come to the airport. If it is not listed, please don't come because we have more people in our terminals than we can look after."

Q183 Mr Harris: So, with seven months under their belt, the airline industry has learned nothing at all from the volcanic ash eruption. Nothing has changed. Despite that peculiar, unusual, unique event, when emergency timetables were introduced, seven months later you have learned nothing at all from that experience.
Colin Matthews: The Sunday in December was the first time that we have agreed and implemented an emergency timetable. That was done voluntarily. There is a good question as to whether in the regulatory framework there should be the ability for someone to impose an emergency timetable. That is the case in the rail industry. I am not saying necessarily that it should be us or it should be the CAA, but there is a very good argument for someone being able to design an emergency timetable which isn't simply done because 95 airlines agree. By the way, getting 95 airlines to agree on something is remarkably difficult. There is a good case for having something more rigorous, more planned, whereby an emergency timetable can be imposed very, very quickly. It took us until Sunday. It has never been done before. We pulled it off on Sunday. It would have been better if that had been done 24 hours before.

Q184 Mr Harris: Are we talking about the volcanic eruption there or are we talking about last December?
Colin Matthews: December.

Q185 Chair: Who should be responsible for imposing an emergency timetable?
Colin Matthews: It could be us; it could be the CAA. That is something which senior people in Heathrow should discuss, and I am open to other people's views on that. It would improve the passenger experience. Faced with the threat of disruption, given that Heathrow is so full, if we knew that tomorrow we were going to have only 75% of the capacity available and we could say that tonight so that passengers could check on their website, that would lead to a better passenger experience. At the moment we do not have the authority to do that and passengers would be better served if we had those arrangements.

Q186 Chair: Mr Wingate, what is your view about powers to impose an emergency timetable?
Stewart Wingate: This is perhaps a peculiarity to Heathrow. From a Gatwick perspective, I have spoken to my major airlines, and there is little desire to have an emergency timetable. The thing that worked well at Gatwick in all of the snow incidents during the course of December was the fact that senior representatives of the airport and the airlines sat in the same room with the same information and collaboratively made decisions concerning the operation but also concerning decisions to communicate as well. We spoke with one voice at all times, and we spoke ahead of the snow events happening, to passengers. As a result of that, we managed to minimise the number of passengers who came to the airport and the number of passengers who were stranded at the airport. At no time did we have more than 500 passengers at the airport on an evening.

Q187 Chair: How was it, Mr Matthews, that the airlines didn't know about the reopening of the second runway until the Prime Minister announced it? How did that happen?
Colin Matthews: The reopening of the second runway was driven by several different factors, one of which was the fact that we had the northern runway open and what was limiting our ability to dispatch more aircraft was not not having a second runway open; it was clearing the stands. So we focused all our resources on clearing stands, because that was the limiting factor.
The second thing is that, on the Saturday and the Sunday, passengers had an overly optimistic expectation of how many flights were going to depart. That meant there were more passengers in our terminals than we could look after. We were very anxious not to reproduce that and made sure we were cautious in the rate at which we could bring the new capacity on track.
The third thing was that the wind direction changed, and when the wind direction changed we would have had to clear new taxiways to get on and off the northern runway. In order to avoid shutting the airport completely, we therefore cleared the southern runway. The decision to open the southern runway was driven not just by one simple factor but by several different factors. The decision, in fact, was taken intelligently at the right time. That decision was taken by us, and the key driver in the event that triggered the moment was a change in wind direction.

Q188 Chair: But how could the Prime Minister know before the airlines?
Colin Matthews: I don't know how that came about. We certainly were being encouraged by everyone, naturally, to open the second runway, and I was concerned to make sure that we focused our resources on the things that would deliver the most flights for the most possible passengers. For a period of time that meant clearing stands, not opening the second runway. As soon as the second runway became the critical factor, then we put our resources on to that and cleared it relatively quickly.

Q189 Chair: But I am still curious about the Prime Minister knowing more than the airlines who are actually working there. Was somebody leaking information?
Colin Matthews: We kept in touch with many parties throughout, right from the period before the snow and through it, including Government. In fact, on that Tuesday, the Secretary of State was in Heathrow and he was looking at our crisis centre, seeing how we were managing it, and so he was close to the events on that day. We were keeping the Government involved throughout the whole days. Equally, I was talking regularly to airline chief executives as events unfolded. So, yes, we kept the Government closely informed about what was happening and we did our best to keep the airlines informed.

Q190 Chair: A general "closely involved" policy is a bit different, isn't it? It is rather different from some very important operational information not going to the airlines whose business is this.
Colin Matthews: We do need to build a tighter engagement with the airlines. We set up our crisis management arrangement on the Friday afternoon. That crisis team has systematically implanted within it representatives from the airlines.

Q191 Chair: The airlines have given a rather different account of it and they thought the crisis teams met later. Is this an area—
Colin Matthews: They are referring to setting up a particular discussion with the airlines that led to the agreement of that emergency timetable. That happened on the Sunday, and as I have said, I would have preferred if we had been in a position to roll it out quicker on the Saturday. Our crisis mechanisms routinely have airline representatives embedded within them. I have no doubt that out of this event we need to improve the co-ordination with airlines. We definitely do. The co-ordination of information and communication is one of the key elements that we need to get better, I completely accept that, but it is not true to say that it was absent. We need to make it better.

Q192 Paul Maynard: I am sorry I was late. I had a clashing appointment thanks to the Table Office. Can I ask Mr Matthews to what extent he believes the

travails that Heathrow experienced were down to Heathrow operating at 99% capacity?
Colin Matthews: One way in which our shortage of capacity definitely influences it is that, given a certain amount of disruption, the effects and the consequences are bigger and longer at Heathrow than elsewhere, because we have no spare capacity as we would, say, in Glasgow, for which Amanda is responsible, to fly extra flights. An aircraft takes off and lands roughly every 45 seconds throughout the day, so once disruption starts, it takes longer to get over the effects and recover the situation.

Q193 Paul Maynard: There is probably no answer to this, but is there a level of capacity at Heathrow that would allow you to demonstrate greater resilience if you were—to pluck a number from thin air—at, say, 75% capacity? Would that enable you to cope better?
Colin Matthews: If I may, a much more effective way would not be to reduce the flying on 365 days a year, because in Heathrow last year we would have had perhaps 10 days of disruption, and 355 days of normal service. Much more effective would be a reduction by 50% on those 10 days rather than a reduction across 365 days. The ability to agree and impose a reduced schedule when that is necessary would give a far better benefit for passengers than it would be to, say, have 95% or 90% or some number of percentage utilisation throughout the year.

Q194 Paul Maynard: Is your difficulty over achieving collaborative working which you have identified the inhibitor to an emergency timetable, and how can you improve the links with the airlines, who are, of course, your customers?
Colin Matthews: It is a good point. We have about 95 airlines at Heathrow, and if you take the interests of all of them together, clearly they would agree it is better to have a planned reduction, but if you look at the interests of one specific airline, their motivation often will be, "I will do whatever I can to get my aircraft away, get the passengers to the aircraft, get them loaded and find some way to escape." That is perfectly logical. That is the history of how Heathrow operates. If you like, we provide the capacity and there is a kind of free-for-all whereby airlines make the most they can on behalf of their passengers.
I understand why we are where we are, but it would be better in times of disruption to be able to get an executive grip of what happens and not have that free-for-all. It is relatively easy for me to talk to the three chief executives of the three airlines that are based in the UK. It is much more difficult for me to reach the other 92 airlines that are spread around the world.

Q195 Paul Maynard: There was great concern over overcrowding in the terminals and the consequent impact on passenger welfare. It has been suggested to us that sections of the airside could be declassified to provide extra space. Is that a helpful or a sensible suggestion?
Colin Matthews: To some extent that did happen. One of the characteristics that is difficult for us in disruption is that the baggage system works well in one direction; it doesn't work well in the others. We did change the boundaries so that we could get baggage out of the system again and passengers could have access to the carousels, which are airside and not landside. So, yes, there are some ways in which we can do that, but I think, with respect, that the impact of that is modest. We have 100,000 departing passengers on a day, actually more on that weekend because it was a particularly busy moment. If 100,000 passengers come to the airport and none of them depart, whatever we do, the situation in the terminals is going to be unacceptable. We have, therefore, to be able to get a grip of the schedule in advance of such events.

Q196 Paul Maynard: Finally, at the height of the negative publicity—and this is to both Mr Wingate and Mr Matthews—the Government postulated the idea of snow fines, or fines if an airport failed to respond adequately to a period of adverse weather. Have you had any further contact from the Government exploring that issue further?
Colin Matthews: I think the context would be the new Airport Economic Regulation Bill which is currently being discussed. That would enable the updating of the regulatory framework and it would be good to have a suite of measures that reflects customer experience on an end-to-end basis for their time at the airport and to make sure that an airport does less well if we do poorly and the airport does better financially if we offer good service. We are in favour of that change and the sooner the better that we can get on with that.

Q197 Paul Maynard: Would you agree, Mr Wingate?
Stewart Wingate: At Gatwick, we have undertaken to consult with our airlines in advance of the Airport Economic Regulation Bill going through. During the course of this coming summer, we will look at the service level commitments that we make to our airlines and we will talk to the airlines to see whether it would be appropriate for us to put into the service level agreements between us our response to adverse weather conditions. We will do that on a voluntary basis.

Q198 Chair: Should the Government have rights to be more involved at a time of national crisis like bad weather?
Colin Matthews: I think the most important role of Government is to set policy and make sure that the regulatory framework is right. It should be down to us as operators, the airport, airlines and others, to make sure that we then operate within that effectively. I do think there is a role, as I have described already, for agreeing that someone, particularly at Heathrow—I agree it is a Heathrow preoccupation because of the constraints on our capacity—has some authority to impose an emergency timetable. But the Government should be responsible for policy and the right regulatory framework.

Q199 Chair: Who should that someone be?

Colin Matthews: I think aviation policy is going to come from the Department for Transport, quite appropriately.

Q200 Chair: Yes, but on imposing an emergency timetable.
Colin Matthews: I think that is for debate. I am not saying it necessarily should be the airport; it could be. It could equally be a regulator.

Q201 Chair: Mr Wingate, what is your view about Government powers in situations of great difficulty like disruption caused by bad weather?
Stewart Wingate: When we look at the snow that we had at Gatwick, the first event in the early part of the month was extreme and something that we are unlikely to see in the future—at least we very much hope not. We had not seen it certainly for the last 30 years. In the middle of December, when we did have the 10 cm of snow and it fell very quickly, we had the airport operational again within five hours. So we don't really see a significant role for Government needing to be involved in the way in which we, the airport operator, take accountability and responsibility for recovering from the adverse weather.

Q202 Chair: What about the role for Government?
Stewart Wingate: The role for Government is to set up policy frameworks, as Colin described, and then for us to work within those. Specifically, in terms of us dealing with our airline customers, we at Gatwick are competing. We are competing with other airports around the London region. We are also, with our low-cost carriers particularly, competing across Europe. We feel that the work we do directly with our airlines will determine the success of the airport. From the change of ownership, we have worked very hard, both on our approach to snow but also our approach to service in general across the airport, to significantly improve our performance.

Q203 Chair: What do you expect to come from the Begg report, Mr Matthews?
Colin Matthews: The Begg report is intensive and thorough, and I have no doubt there will be a number of things that it suggests we should do better. I can give you a list of the things we have already done, if you like. It is a long list, but if from the Begg report there are more things we should do, we will do more. Some of the topics have been discussed already. Clearly, the ability to give good information to passengers is a critical one. Clearly, the ability to plan better the overall operation ourselves and airlines together in disruption is a critical one, and, as soon as we have the report and can study it carefully, we will take whatever steps it suggests in order to improve Heathrow for our passengers.

Q204 Chair: Do you think the inquiry is sufficiently independent?
Colin Matthews: All of the panel members are external to BAA. It is chaired by a non-executive director of BAA but someone who has only just come on to the Board. He is objective and has not been implicated in history. I think it has the right skills and can do a good job for us.

Q205 Gavin Shuker: Mr Matthews, I am sure you would agree that it is very important not to prejudge the outcome of the Begg report before it is published.
Colin Matthews: Indeed.

Q206 Gavin Shuker: On 11 January 2011 you issued a press release, the title of which was, "We're sorry, but Heathrow did all it could." How do you feel that fits in with the concept of not prejudging the outcome?
Colin Matthews: We had severe disruption in December. I set up the Begg report as quickly as I possibly could and they are doing their work swiftly. It will, though, be probably the end of this month before we see the final report. You are right: I can't prejudge the outcome of that, but nor did I sit and do nothing. We have bought more equipment, we have trained more drivers, and all that list of topics. I can't stay silent on the things that I think we have done. We did do all we possibly could for passengers. We did things for passengers that I don't think any airport, certainly Heathrow, has ever done before. In a strict sense, it is airlines who are responsible for looking after stranded passengers. If airlines had strictly fulfilled their legal obligations, we wouldn't have done anything; we wouldn't have had to. But it is clear that the scale of the disruption vastly overwhelmed the totality of the resources at Heathrow from the airlines to cope with passengers; therefore we stepped in. We did do everything we possibly could to relieve the situation for passengers. That didn't change the fact, though, that many passengers spent extremely uncomfortable nights in terminals that are not designed for people to spend nights in, so I do understand how painful it was.

Q207 Gavin Shuker: The big idea that you appear to be talking about is the introduction of an emergency timetable enforceable by an external body or by yourself. Is it not the case that that involves cancelling airlines' services? In a sense, the big idea is to try less hard when we have these problems.
Colin Matthews: No. I think it is absolutely critical and the decisions need to be right. Airlines have the same interest in making sure that their schedule is reliably delivered, and some airlines have, in the past, been effective in advance of cancelling flights because, by cancelling flights before the event, there are less disruptions and quicker recovery afterwards. For the whole of the Heathrow organisation to do that together would be beneficial, but, with respect, I don't think that is the big idea. It is one aspect of the big idea.
The big idea is that passengers benefit when the airport and the airlines effectively collaborate, and we need stronger mechanisms for collaboration between the airports and the airlines. I am setting up this new group, which I hope will be effective, of a small number of chief executives, who can and will take a lead consistently on the topics which passengers care about. We do have disruption at Heathrow. It happened from snow and it also happened from ash. It may not be snow next time. Our point is to be able

to respond to whatever crisis comes back effectively together with the airlines. The big idea is collaboration with the airlines and making sure that whatever regulatory changes happen encourage better collaboration, because collaboration is in the interests of passengers.

Q208 Gavin Shuker: On Begg, will you see the findings at the same time as the other contributors or will BAA have an advance view of Begg before other people get to see it?
Colin Matthews: It is a report that I have commissioned and therefore I will see it. I have undertaken that we will publish it.

Q209 Gavin Shuker: Just briefly and finally, Chair, I want to talk about the second runway—the southern runway. What capacity can you operate at when you are just operating on the other runway?
Colin Matthews: At 50%.

Q210 Gavin Shuker: It is 100% with the second runway.
Colin Matthews: Yes.

Q211 Gavin Shuker: It is 100% theoretical capacity that you have available to you. That is very helpful. Was it No. 10 or was it the Secretary of State that got on the phone and told you to open the second runway?
Colin Matthews: It was neither.

Q212 Gavin Shuker: Finally on the second runway, how helpful was the Prime Minister's intervention that they could release the Army to clear the second runway for you?
Colin Matthews: It was a welcome offer of help, but it was made on the Tuesday, and by Tuesday we had cleared the snow, so I wasn't able to accept it. I do not want that to sound churlish. We would have accepted help from any source. We did get much external help in. We more than doubled our resources with additional contractors coming from outside as quickly as we possibly could. We were taking help from wherever we could. That particular offer of help, which was welcome, in the event we couldn't use because it came after the snow was cleared.

Q213 Gavin Shuker: Forgive us. We politicians have devious minds and we might interpret that as a statement of the Prime Minister parking his tanks on your lawn to get the second runway open. Did you interpret it in that way or did anyone in your organisation interpret it in that way?
Colin Matthews: We were focused on one thing and one thing only: how quickly can we get passengers to where they want to be for Christmas? For a period of time, the most effective way of doing that was to focus all of our resources on clearing stands. There came a moment on Tuesday afternoon, when the most important thing to do—it was a shift in wind direction that caused that—was to open the second runway. The minute that was the case we opened the second runway.

Q214 Chair: What arrangements are there for you to co-ordinate with road and rail authorities to keep access to the airports open? Mr Wingate, have you got any arrangements to do that?
Stewart Wingate: For us, this is a key issue as we look to the future. We have now made a significant investment in the additional snow fleet at Gatwick. We know that our capability to respond will be significantly improved now as we go forward to clear the airfield. For ourselves, if we look back to the events on 1 December, we did have the airfield clear of snow on the afternoon of 1 December and it could have been operational for aircraft, but we chose to keep the airport closed because there were no rail services operating to the airport on 1 December or 2 December, and over 40% of our passengers travelled to and from our airport using rail.
Going forward, we will be able to respond significantly quicker ourselves and we now are working very closely with Network Rail, Southern and First Capital Connect on the rail side of surface access, as well as the Highways Agency, because this is something that does trouble us and we are concerned about for the future.

Q215 Chair: Does that mean you are satisfied with the current arrangements or you still have concerns?
Stewart Wingate: No, we still have concerns going forward.

Q216 Chair: Mr Matthews, what is your position?
Colin Matthews: I think our connection with the local authorities is good. I was very recently with the chief executive of one of the boroughs and that was a topic we were discussing—the offer of help in one direction and another to clear the roads.
It is true that, in December, it is the first time there has been so much snow that the M4 spur road, for instance, was shut for snow. That was a factor that added to the difficulties we had on that Saturday afternoon. Clearly, having the airport open and not being able to have passengers come or go by road or rail will lead to huge congestion. I think we have adequate means of co-ordination between us and local authorities on the question of road clearance.

Q217 Chair: So you don't think there are any problems on that in the future—road and rail?
Colin Matthews: In terms of co-ordination, no. One of the questions for us is that we planned for 6 cm of snow. We got a great deal more than that. How much should we plan for in the future? Should we plan for 10, 15, 20 or 25? It is a question not just for Heathrow but for infrastructure in the London area in total. If we are prepared for 25 cm of snow, then presumably the roads round about, the rail and the other infrastructure should have the same planning assumption in their mind too. There is no point in having one clear and the other closed. It is a question for the south-east in general as to how much snow we should prepare for. The climate experts still seem to suggest that, on average, winters are getting warmer, but extreme events may be more frequent. In that case, we will have to be prepared for more snow than we have in the past, but how much is that? Is that 25 cm?

If so, is it agreed with road and rail? It would be better that we had a common view of that for the south-east of England.

Stewart Wingate: For ourselves at Gatwick, this is a key area which we will be working on during the course of this coming summer because the disruption that we suffered in the early December event on rail was significant. The snow fell during the course of 30 November and the airport was shut on 1 and 2 December. The rail services did not return to normal until 5 December. I myself, travelling to the airport, took 13 hours to travel 40 miles on the M25. These are significant issues which will have to be taken into consideration if we have future snowfalls before we make the decision to open Gatwick Airport.

Chair: Thank you very much for answering our questions.

Monday 14 March 2011

Members present:

Mrs Louise Ellman (Chair)

Steve Baker
Mr Tom Harris
Julie Hilling
Kelvin Hopkins
Kwasi Kwarteng
Mr John Leech
Iain Stewart

Examination of Witness

Witness: **Rt Hon Philip Hammond MP,** Secretary of State for Transport, gave evidence.

Q218 Chair: Good afternoon, Secretary of State. Welcome back to the Transport Select Committee. I understand you would like to make a statement to us.

Mr Hammond: Yes, if I may. I would just like to welcome this opportunity to answer the Committee's questions on the response of the transport sector to the challenges posed by what was a period of exceptionally severe weather earlier this winter. After a long period of relatively mild winters, the last three years have seen lengthy spells of snow, ice and very low temperatures across the country. Some parts of the country have experienced even more extended periods of severe weather this winter. We now know from the Met Office that December 2010 was the coldest for 100 years, that snowfall was the most widespread since December 1981 and that many areas have experienced record low temperatures.

Exceptional conditions of this sort would put any transport system to the test and inevitably would lead to disruption. We saw the evidence of this across much of northern Europe. While we cannot avoid some disruption during extreme weather, we should of course seek to minimise the impacts, and it is appropriate after a period of severe weather to carry out a thorough review to learn lessons about what went well and what did not so that we can assess whether there are practical and affordable measures which will help us to be better prepared next time.

I welcome this inquiry as part of that process, and we will look forward to the Select Committee's report as an external view of the performance of the sector and indeed of the Department. Certainly, it is the Department's view, as we made clear in our memorandum to the Committee, that our transport response this winter was significantly improved by implementation of the recommendations arising from the Winter Resilience Review led by David Quarmby following the 2009–10 winter. This meant that the country was able to enter this winter much better prepared than it was the previous year.

During the period of extreme weather, I chaired the ministerial Winter Resilience Network Group that brought together the relevant Government Departments, the devolved administrations and local authority representatives. This proved to be a useful mechanism for co-ordinating responses to some of the specific problems that emerged. Undoubtedly, some known weaknesses showed themselves again, for example, the vulnerability of the third rail network to extreme cold, and some new problems emerged notably in relation to airport operations.

My Department is of course working with local authorities, key transport operators and regulators on the follow-up to issues that emerged last November and December. Transport operators, local authorities and regulators are also working on their own lessons learned, and I note in particular that BAA are producing reports about the impact on air travel and airport operations. Similarly, there is a rail National Task Force project looking at the viability of various technological solutions to the problems experienced on the third rail network.

Our first focus was naturally immediate intervention to improve the situation on the ground during the disruption, then on what could be done in the short term to improve resilience if there were a further bout of severe weather this winter and to make further improvements to our preparations for meeting the winter weather challenges for next year. The Committee's recommendations will be timely in that latter respect. Beyond that, there are some obvious questions about organisation and management of services and service responses that need to be answered, but we are also asking ourselves wider and longer-term questions.

As a starting point, I have sought advice from the Government's Chief Scientific Adviser, Professor Sir John Beddington, on the possible longer-term significance of three severe winters in succession. I have today published that advice and have placed copies in the Libraries of both Houses. In short, Professor Beddington's conclusion is that, while climate change is likely to mean that in the longer term the trend is for milder winters, it certainly does not mean we can rule out fluctuations, perhaps greater fluctuations, around that long-term trend, leading to some individual winters seeing conditions similar to those experienced in the last couple of years.

The question we have to answer is: do the problems of recent winters suggest that a more fundamental change in approach is required? Does it make sense for UK plc to invest significantly more to prepare for winter weather conditions, or would that be disproportionate to the likelihood and cost of disruption? Having commissioned a further work package to consider these questions in more detail with other Government Departments, I would very much welcome the Committee's view on these wider questions as well.

In summary, and to anticipate the Committee's likely high-level questions, my salient observations on the

two severe weather periods affecting the UK in November-December 2010 would be:
1. The third rail network remains unacceptably vulnerable to disruption.
2. Communications with rail passengers during periods of disruption are inadequate.
3. The Highways Agency and local highways authorities generally performed satisfactorily and salt stocks throughout remained more than adequate. However, public expectations of local authority salting plans may not coincide with the resource-constrained reality.
4. Heathrow Airport failed to manage the severe disruption of 18 to 21 December effectively and there are clearly lessons to be learned from this experience.
5. It is essential that there is an ability to impose restricted timetables at a disrupted airport, particularly at Heathrow because of its lack of spare capacity, and to enforce them to avoid the unacceptable spectacle of thousands of passengers turning up for flights that were not going to happen and then being held in sub-standard conditions in terminals.
Those are my salient observations about the event, and I look forward to elaborating on these points in answering the Committee's further questions.

Q219 Chair: Thank you very much for those opening remarks and the new information about the work that has been done since the advent of the bad weather. According to the Office for National Statistics, UK growth fell by 0.5% in the last quarter of 2010 because of the snow in December costing the UK £1.6 billion. Has the Chancellor asked you to account for that?
Mr Hammond: No, the Chancellor has not asked me to account for it. I have asked my economists to make an estimate of the travel disruption cost. You will understand that there are some quite wide ranges involved in these kinds of estimates, but the Department has estimated that the cost of travel disruption to the economy, including broader welfare costs to individuals, is about £280 million a day.[1] Of course, that does not reflect the total cost to the economy of the severe weather, some of which was not delivered in terms of transport disruption.

Q220 Chair: How much—£280 million?
Mr Hammond: £280 million per day is the central point estimate.

Q221 Chair: Because of transport difficulties.
Mr Hammond: Because of disruption to transport. Those are the total direct impacts on the economy, plus welfare impacts,[2] because of disruption to transport as a result of the severe weather. That will be a subset of the total cost to the economy as a whole of the severe weather disruption.

Q222 Chair: Do you regard that as something that should have been avoided or something that was unavoidable?
Mr Hammond: I certainly do not think that all of it could have been avoided. As I said in my opening remarks, clearly, there is a trade-off between investment in resilience to withstand winter weather conditions and the impact of those conditions if they occur. I think the sensible way to treat a set of events like this is to look at the individual incidents that comprise the overall event and see where a modest amount of additional investment may have made a significant difference to the outcome. I think a pattern is beginning to emerge. At Heathrow Airport, for example, the airport operators themselves acknowledge that some additional investment may have enabled them to respond more effectively to the weather event. On the third rail network, the scale of investment required is likely to be significantly larger and we will have to do a more rigorous cost-benefit analysis to make sure that money invested is money well spent.

Q223 Mr Leech: You said in your opening statement that you would look at anything that was practical and affordable. Given that the possible cost to the economy was £1.5 billion, how much do you think would have had to have been spent to avoid that cost to the economy? Has any assessment been made of that?
Mr Hammond: I do not think we are in a position to give a figure to answer that question yet. I emphasise that I do not think there is any practical level of investment that would have avoided the transport disruption cost altogether. We saw across north-western Europe, and later on in the north-eastern United States, severe disruption caused by these types of weather patterns, even in countries that are well used to and well prepared for severe weather disruption, so I think it is unrealistic to think that we could avoid it altogether. But I also think it would be complacent to suggest that, on the evidence, there are not some interventions which look as though they bear further scrutiny on a cost-benefit basis. We have to bear in mind that in many cases the investment would have to be made by transport operators, not the Government. In many cases the transport networks are operated by private operators.

Q224 Mr Leech: You also mentioned in your opening statement the Beddington report that you have put in the Library today, which suggests that winters will get milder, but does it mention anything about the level of precipitation and, therefore, the potential for additional snow at a higher temperature than we have had in the past? If so, how many extra years of very bad weather would we have to have before we decided that it did not look as though the winters will get milder in the future? We have had three bad years on the trot. How many bad years on the trot do we have to have before we start thinking that perhaps the evidence we are being given by the meteorologists is wrong?
Mr Hammond: That was my question to Sir John Beddington. We have now had three severe winters in

[1] In England (note from witness)
[2] In line with standard Department for Transport appraisal practise, the £280m estimate includes direct impacts on GDP and broader welfare costs to individuals. The direct impact on GDP alone is estimated to be around £130m per day. (Note from witness)

a row. Should we be planning for a more frequent occurrence of severe winters? His answer, in short, in his reply to me is no. We would expect the trend to be milder and, from memory, wetter winters, so the implication of that is more precipitation. That does not mean of course that there will not be severe weather events and there might be greater levels of variability between winters than perhaps we have been used to seeing in the past. But my high-level question to him was: is there something happening here that means we have to plan for regular prolonged periods of very low temperatures as well as very high snowfall? His answer to that was no.

Q225 Mr Leech: Does he accept, though, that there may actually be an increase in the level of snow over subsequent years, even though winters may be milder?
Mr Hammond: My recollection is that he did not draw attention specifically to that possibility, but I think it is right to say that in my further conversations with him he made the point that winters could be milder and wetter. I take that to mean more precipitation and, therefore, if we do get periods of extreme cold weather that is likely to occur as snow.
Chair: Mr Stewart, is your question to do with this issue, because I want to keep for the moment on the weather issue?
Iain Stewart: It is to do, more, with the third rail point.
Chair: I will come back to you on that then. Dr Kwarteng is yours on the weather issue?

Q226 Kwasi Kwarteng: Mine is specifically relating to Mr Leech's first question with regard to the cost benefit, Chair. Secretary of State, I want to pick up the question of the cost benefit. You were suggesting that, obviously, we could not get rid of all the costs of the snow, but at some level we could invest a little bit and avoid some of the costs. I was just wondering whether you had been given any figures with regard to the amount of money we could have spent and the estimated amount we could have saved as a consequence of the spending, or was it just a general estimate?
Mr Hammond: If I may say so, that is perhaps at the moment a premature question. Some work is going on about the resilience of the third rail network, looking at the possibility of an extended roll-out of heated third rail. There is another work stream going on looking at the possibility of modifying the contactors on the trains so that, instead of picking up from the top of the third rail, they pick up from the side or underside of the rail where it is less liable to form ice. If there was a practical solution that arose from either of those work streams, we would then have to look at the investment cost and the likely improvement to disruption on those networks that we could expect to see as a result. For example, on heated rail, nobody proposes heating the entirety of the third rail network. It is about applying heating elements to areas where traction power is particularly important: uphill stretches, station stops and so on.

Q227 Kwasi Kwarteng: I understand, but at the end of this process will there be two figures, essentially? Will there be a figure which says, "This is how much we could spend and this is how much we could save"?
Mr Hammond: I anticipate a rather more disaggregated process than that. I anticipate that there will be a series of interventions which are practical, each of which will have a cost attached to it and some estimate of the benefits that will be delivered, bearing in mind that in some cases it will not be for the Government but a private operator to make the investment. So I think we will have to distinguish between the private returns that the operator might expect and the wider public returns.

Q228 Kwasi Kwarteng: Is there a time frame for this? Will it be later this year, early next year or in a couple of weeks? When do you think this process will end?
Mr Hammond: There are various different work streams with different time scales, some of them quite short. I am expecting to have some reports from the Highways Agency by the end of March. I believe some of the rail working group stuff will be available by the end of May. There are other bits of work which are, by their nature, longer term and I do not expect to receive them before the summer.

Q229 Chair: Are you satisfied with the weather forecasts that you have received this year and last year?
Mr Hammond: Generally speaking, I think so. The weather forecasts that the Met Office provided were broadly reflective of what occurred. You are probably referring to the first period of weather in November, when there was some question about the detailed effectiveness of the forecast of snow on the evening of 30 November.
Weather forecasting is not an exact science, and the timing of events to within a few hours and, indeed, the pinpointing of them to within a few miles is not something that the Met Office can do with high degrees of certainty at the moment. When we are talking particularly about London, a pattern being out by a few miles can make a huge difference to the impact. When we are talking about the commuter networks, a timing difference of a few hours can make a huge difference.
It has been suggested to me that the Met Office could provide significantly more accurate forecasting in respect of the UK if it had larger amounts of computing power available. I think Sir John Beddington suggested to me that, if there was an investment of the order of £10 million, the Met Office would have a significantly greater capacity to forecast at local level with more accuracy.

Q230 Iain Stewart: I was going to ask a question specifically on the third rail but you addressed it in answer to my colleague from Spelthorne. I have a follow-up question on rail more generally. I appreciate that the electrification projects that you have announced recently are overhead line rather than third rail, but are there any lessons from the overhead electrified parts of the network that you can take into account in the design of that electrification project and the procurement of new rolling stock, so that in the

design of those trains we build in better resilience to extreme weather?

Mr Hammond: Yes, I think on both counts. The overhead wire network generally performed satisfactorily during the extreme cold weather period, but there were two incidents on the East Coast Main Line which involved overhead line failures. The initial evidence is that that was weather-related, and Network Rail is looking at the implications of that and what can be done to improve infrastructure resilience. Obviously, if there are lessons that can be taken into account in the design of the catenary structure for the Great Western electrification and North Western electrification, that will be done. It is mainly about ice build-up and the additional weight that it applies to overhead wires.

Separately, there are issues to do with the resilience of rolling stock. We saw that the previous winter with the Eurostar trains. Lessons were learned and modifications made. I think there is a raft of further lessons that can be learned this year about resilience of motors and electrical equipment and the protection of air intakes from ingress of snow. A problem occurred this year with windows and windscreens being broken. Ice from passing trains broke off, struck windows and shattered them. It is rather more difficult to see how that can be addressed without moving to very expensive solutions, but lessons can be learned and the infrastructure operator certainly is already looking at that. Rolling stock manufacturers are looking at both retrofitting options and lessons they can learn for new train design.

Q231 Kelvin Hopkins: My questions relate to passenger information on the railways. As a regular train commuter, I am very frustrated time and again by the failure of information systems. It seems to come down to the fact that where the trains are is only known definitely to those in the main signal boxes under the control of Network Rail. On the platforms we have automated indicators, which seem to get into a tizzy when things go wrong, and then we have recorded voice information over the top of that. Often they do not relate to the platform indicators. Then there is live voice information, of which there is too little and often at the last minute. You get a voice override saying that the train just coming in does not stop here or whatever. On more than one occasion I have waited on the platform in the cold for maybe an hour and a half simply because I did not have the information. If I had had the information, I would have abandoned my journey, tried to find another route or at least gone somewhere to get warm.

This seems to be related to the division between track and train, the fragmentation of the industry, rather than having it within one integrated, single entity industry, as I would certainly like it to be. Have you discussed with the railway operators the problem with providing information to passengers, because I know this causes great frustration?

Mr Hammond: Yes. I would agree with everything you have said, except for your conclusion. I do not think it reflects the fragmentation of the railway. The lack of information, which I think I mentioned in my opening remarks, was one of the key complaints that passengers had. The problem, which Quarmby clearly identified in his audit, is that the system has become highly dependent upon the central database where timetable changes have to be uploaded by somewhere between 3 o'clock and 5 o'clock the previous afternoon. There are large numbers of systems, including the electronic information systems at stations, which are driven from that uploaded database.

What it means is that, when weather patterns change at short notice or further timetable changes have to be made, perhaps late in the evening, as I think occurred on 30 November, or where the practicalities during the day's operation mean that the timetable that has been uploaded cannot be operated, there is a disjunction between what the computer is shoving out on to the electronic indicator boards and what is really happening in the world. What Quarmby said was that, basically, there is a cultural problem and the system has become dependent upon a computer-driven information supply such that the back-up systems are not used. For example, I am told that, on lines in the South Eastern franchise, there is an ability for a controller sitting in a London terminus station to provide voice announcements down the line at stations, but that is not routinely done because electronic information is relied upon.

I think there are two separate work streams here. One is about introducing greater flexibility into the main database so that late updates can be accommodated and information provided from them. The second is about providing more resilient and widely used back-up systems so that station and control room staff can override and intervene to provide timely information.

Q232 Kelvin Hopkins: To pursue that a little further, if all the electronic systems and voice announcements were built into the main signal boxes with one person in charge, would that not overcome these problems to a very large extent? One could have override to manual, so to speak, whenever necessary. One person could see where all the trains were and what announcements were being made and could then make any corrections themselves as and when necessary.

Mr Hammond: I do not think this is done from signal boxes, but I take the thrust of your point. A control room at, say, Waterloo would have sight of what was happening all the way down the South West Trains lines. Certainly, looking at how we can make that more resilient and flexible is part of the work that is going on now. I think there is a balance between the desire to use automated systems as far as possible in normal operation—this is part of making the railway affordable and sustainable—and having the back-up systems there when things, as it were, have to revert to manual. If I may switch sectors, it is a little like, in NATS, having all these fantastic computer screens and marvellous electronic equipment, but they still have little wooden blocks with bits of cardboard in them to use as a back-up if anything goes wrong. There is something to be said for the wooden blocks and cardboard approach when the chips are down.

Q233 Kelvin Hopkins: But the same people are operating them in the same control tower, not different people.
Mr Hammond: Yes, they are.

Q234 Mr Harris: £10 million for new computers for the Met Office to use seems quite a good spend if the consequence of that is that it would save significant amounts of money in lack of disruption to the economy. Were you convinced by that argument?
Mr Hammond: It is certainly an argument that I have asked my departmental economists to look at. This is not a pitch to the Department for Transport; it was a comment by the Government's Chief Scientific Adviser. I have not yet had anything formal from the Met Office. This was just an indication of an amount of additional computer processing power that would be required to develop more granular predictive models for the UK.

Q235 Mr Harris: But have you formed an initial opinion? To be honest, it sounds too good to be true that you can spend £10 million and have a significantly more accurate system of forecasting very specific weather patterns across the country. Have you formed an initial opinion about whether these are magic beans or it will have any effect?
Mr Hammond: No, but I have established a working group with the chief scientific advisers from my own Department, the Department of Energy and Climate Change and Defra, together with the chief economists of those three Departments, to look at issues about weather forecasting and optimum levels of investment so that we can look at the long-term question of whether we are predicting it correctly and responding correctly to it in some kind of rigorous framework, with the scientists and economists leading.

Q236 Mr Harris: At the risk of leading you down a path of talking party politically, and, genuinely, I do not want to do that, do you get a bit tired of the ping-pong that goes on every winter between the Front Benches? You are probably not aware that I was one of the Labour Back Benchers who did not call for your resignation when I was invited to by the *Evening Standard*, because I heard all of this when we were in Government and I heard it a year later when you are in Government. This is not helpful, is it?
Mr Hammond: I do not think it is particularly helpful. If I may just join in the spirit of the thing, this was the first winter in which your party had found itself in opposition. I remember very well the first year or so that we were in opposition after 1997. Temptations present themselves to which one realises it is not always wise to succumb once one has been in opposition for a bit longer. Calling for the resignation of anybody and everybody at the first sign of a spot of rain is generally one of those lessons that you learn over time. I take it as part of the political rough and tumble.
I think there was some quite helpful continuity. After all, Quarmby was tasked by my predecessor. I received his report and accepted all its recommendations, and we have implemented the majority of them. We are on target to implement the remainder of them. I then asked him to come back and audit the implementation when the severe weather struck. I think there is probably more of a stream of continuity than disruption as a result of the change of Government.

Q237 Chair: You have a climate change adaptation plan, but there is no reference in it to snow or ice. Are you going to change that? Is it to be revised?
Mr Hammond: I am sorry?
Chair: The Department has published a climate change adaptation plan, but there is nothing in it which refers to snow or ice. Are you revising that?
Mr Hammond: It is a good question. I think the climate change adaptation plan is essentially a long-term view of the Department's contribution to the challenges of climate change, and it is thinking much more in terms of de-carbonising the economy than it is of the short-term impacts of weather that, as I think Sir John Beddington's response to me suggests, are not necessarily part of a longer-term climate change pattern. But I will certainly look at that in the light of that question, and perhaps I can write to you and tell you whether we are going to adapt it.

Q238 Chair: There is a section in it which talks about the increase in extreme weather, storms and other things, but it does not mention snow and ice, so we would be interested to know how you are going to proceed with that. To go back for a moment to the issues on rail, what is your assessment of Network Rail's performance? Do you think they have enough incentives to look at passengers' interests and deal with rail issues in bad weather?
Mr Hammond: Yes. There are certainly lessons that Network Rail and train operators can learn, but, generally speaking, I think the network operated quite well given the extreme conditions. The disruption was localised to the third rail networks, to the East Coast Main Line and there was some disruption in the north-east. Scotland, of course, was very severely hit and for a prolonged period, but across the rest of the network operation levels were reasonable and punctuality performance levels over the period for many operators remained in the high 70% and 80%. While they were nowhere near what we would expect in a normal period, they were not as catastrophic as some of the news reporting would have suggested.
Network Rail was caught at the very beginning of this period with a couple of its de-icing locomotives out of commission because it had not planned the start of extreme weather for 30 November, as I think perhaps many of us had not. Perhaps, for future years, all of us will want to think in terms of a possible commencement of severe weather from mid-November rather than early December, which has been the traditional planning scenario.

Q239 Chair: The rail regulator has called in Network Rail to complain about poor performance. Do you think that suggests there is something wrong with the incentives to Network Rail?
Mr Hammond: Network Rail's principal incentive is to do with the punctuality performance indicators and network availability. Obviously, there are a number of

work strands taking place. The work that ORR is doing is one of those work streams. I will be discussing its findings with both ORR and Network Rail in due course. You asked me for my observation. My initial reaction is that I think the rail network, on the whole, operated quite well given the extreme circumstances, with the notable exceptions of the East Coast Main Line catenary wire failures and the ongoing problems with the third rail.

Q240 Chair: I would like to turn now to aviation. Aviation is an area where you seem to accept that the Government needs to be more involved than it had been before, given the impact of it on the national economy. You have spoken about changing or extending the CAA's regulatory regime to deal with bad weather. Could you tell us more about what you are considering?
Mr Hammond: We have a slot early in the second Session for a Bill that will include a new economic regulatory regime for regulated airports. The regulatory regime that we have in place for our airports is among the oldest of the economic regulation regimes in force today and it is, frankly, no longer fit for purpose. It does not allow the regulator to make adjustments or intervene in real time, or even over a short time period; it does not effectively align the interests of passengers with those of the airport operator; and it is clear to me that we need greater levels of incentive, both regulatory and economic, for airport operators to build appropriate levels of resilience into their operations.
I know you had the CEO of BAA before you last week, but I think it is worth mentioning that the snow plan that Heathrow Airport was operating was a joint snow plan that was signed off by the airlines that were using the airport as well as the airport itself. There is a shared responsibility by the community at Heathrow Airport, including the airlines, to look at this again now in the light of the experience of this year and to face up to the need for higher levels of investment possibly, bearing in mind that higher levels of investment translate into higher costs to users. That is the nature of the regulated airport model.

Q241 Chair: Will you publish the Regulation Bill in draft so that it can be subject to parliamentary scrutiny?
Mr Hammond: It was ready on the stocks in October. Now that we have a longer period of delay, it is our intention to publish this as a draft Bill so that it will see the normal scrutiny process of a draft Bill.
Chair: That would be helpful.

Q242 Kwasi Kwarteng: Am I right in thinking that the new regulatory regime will come into place presumably at the end of next year?
Mr Hammond: No. I think it will be able to come into effect in 2013.

Q243 Kwasi Kwarteng: The beginning of the year after next.
Mr Hammond: Yes.

Q244 Kwasi Kwarteng: Clearly, bad weather is something that can happen before then, because we will have at least one winter, maybe two.
Mr Hammond: Yes.

Q245 Kwasi Kwarteng: What incentives will you have to make sure that what happened last year does not happen again with respect to Heathrow's rather sluggish reaction to the bad weather?
Mr Hammond: The one thing of which I can be fairly confident is that what happened last year will not happen next year, but I cannot be confident that something different will not happen. I think the very direct lessons have been learned, and, as you were no doubt told last week, Heathrow is revising its snow plan to deal with a higher level of snowfall; so it will have a snow plan to deal with 25 cm of snow.
The CAA and BAA are looking at how a modified timetable can be imposed on airlines. There was not total co-operation by all airlines using the airport during the problems this year. Measures can be taken short of the new regulatory powers. I think the knowledge that the new regulatory regime is coming will encourage the airport operators to do things that are aligned with the proposed new powers before they are in force in a way that perhaps the absence of that new regime coming down the line would not encourage them to do.

Q246 Kwasi Kwarteng: As a follow-up, let's say we have bad weather at the end of this year and Heathrow, in whatever way, fails to react as you would think appropriate. Who do you think would bear ultimate responsibility for that failure? Do you see that as something that is under your control?
Mr Hammond: No, it is not under my direct control at all.

Q247 Kwasi Kwarteng: You do not feel any responsibility over it.
Mr Hammond: The CAA is the regulator. Clearly, we have responsibility for the regulatory regime within which the CAA operates, which we have already acknowledged is no longer fit for purpose. That is why we intend to change it with legislation. Obviously, it would have been great if we could do it earlier, but a raft of legislation has to be got through.
It is probably worth bearing in mind that Heathrow Airport as a brand suffered enormous damage during that four-day period in December. There is no doubt in my mind that the biggest losers ultimately are the airport operators themselves, who have severely damaged their brand. In any business, if you build up, painstakingly, over many years a brand and then damage it, it takes a long while to recover. Indeed, it is probably fair to say that Heathrow had only just recovered from the brand damage caused by the opening of Terminal 5 and was getting back into its stride when it suffered this bit of brand damage.

Q248 Kwasi Kwarteng: In your view, the chairman or the board of BAA should bear ultimate responsibility if Heathrow does not step up to the mark.

Mr Hammond: Let's be clear what we are talking about. To the extent that the airport fails to deliver the kind of response to a weather pattern that it is reasonable to expect it to deliver, clearly the airport operator must bear responsibility for that, but let's be clear. There will always be disruption if we get 6 or 8 inches of snow. If that occurs in a situation where 200-odd aircraft are sitting on their stands because the airline operating them has decided not to fly, that is likely to compound that disruption. When it all happens in an airport that is operating at 98% of theoretical capacity on a day-to-day basis, clearly the knock-on effects will be far more significant and take far longer to resolve than they would in an airport operating at 60%, 70% or 80% of its theoretical capacity.

Q249 Kwasi Kwarteng: So they bear responsibility for it. I know you gave a fuller answer.
Mr Hammond: The airport operator is responsible for the operation of the airport.
Kwasi Kwarteng: That is what I was looking for.

Q250 Mr Leech: If you looked at the statistics for Heathrow Airport in terms of how they were performing and their service quality rebate statistics, you could be forgiven for not realising that there was a major disruption in December, because none of the indicators has anything to do with the kinds of problems experienced in December. You would think that Terminal 4 had a perfect score because it met all its indicators. Do you think there is a case to be made for a revamping of those statistics, and perhaps to have a special set of statistics when there are adverse weather conditions, to have a better indicator of how an airport is performing?
Mr Hammond: I think there is a case for changing the regime so that performance in periods of disruption is one of the criteria by which the airport operator is measured—that is the point of the airport economic regulation regime—not just bad weather but, for example, the resilience to and recovery from a terrorist incident or an accident. How quickly the airport recovers is of critical importance to passengers and other users.

Q251 Mr Leech: But should those extraordinary incidents, whether they are adverse weather or a terrorist incident, be in the general day-to-day, week-on-week statistics? Should there be a separate set of statistics that come into place during a particularly difficult time, whether it is adverse weather or anything else, or do you suggest they should be in the day-to-day stats?
Mr Hammond: Under the new economic regulation we are bringing forward, if we have a regime where the operator's remuneration depends, in part, on his delivery of certain performance metrics, then it would be appropriate to measure all of those. What I am suggesting is that resilience to disruption should be one of those metrics so that the resilience of the airport becomes a measured performance output by the operator.

Q252 Mr Leech: Apart from adverse weather conditions and a terrorist incident, what other extraordinary factors do you say should be taken into consideration?
Mr Hammond: Minor accidents, for example. Clearly, if you have a catastrophic accident that will cause major disruption and there is limited scope for the operator to deal with that, but how quickly a runway or taxiway can be cleared after a minor incident, for example, are the kinds of issues.
I think we have to start from first principles and say: what matters to the passenger? The challenge in designing the economic regulatory regime is to ensure that what matters to the passenger is what matters to the operator and the operator's shareholders. So we have to align the economic incentives with the passenger interest. Clearly, over this period, the passenger interest was, first and foremost, getting the airport opened again so that operations could resume; secondly, having decent information about what was going on, which was a big failure; and, thirdly, having levels of welfare support where passengers were delayed and waited for long periods in terminals or were put up in hotels.

Q253 Mr Leech: I turn to a slightly separate issue. When we had the airport operators from Heathrow and Gatwick Airports in front of us, they talked about the de-icing materials they used. They have two levels: one is for less adverse temperatures and one that works down to about minus 15°. They said that beyond minus 15° the only way they could keep things running was by being ahead of the game, knowing in advance and being able to do the de-icing before the temperature was able to drop to that level. But they said that if the temperature dropped suddenly, or information on weather conditions came too late, effectively there was very little that could be done beyond minus 15°.
Given that some of the temperatures we experienced in the winter were as low as minus 20°, should we not be looking for an alternative solution to deal with those kinds of temperatures, or do you think that, given the de-icing materials they have and the assumption that temperatures will not get worse and winters will be milder, what the operators have in place will be sufficient?
Mr Hammond: First of all, although we did see some extremely low temperatures, they were not at Heathrow Airport. I think we got to minus 11° at Heathrow on one occasion, which is cold enough but still within the operating range of the de-icers they use.
There are two separate issues here. We talk about de-icers. There are anti-icing agents for use on runways to prevent water freezing, and there are also the de-icers that the airlines use to de-ice aircraft. To operate an airport, you have to have both working at the temperature that prevails; otherwise, it is no use. I would not identify the problem as being what we do if it goes below minus 15°. I think we have a problem to address before that, which is the fragility of the de-icer supply chain. Both Heathrow and Gatwick Airports were using far more anti-icing fluid than they had ever budgeted to use, and far more than they

believed it was possible to use. It is clear that the stocks they were holding were insufficient. From memory, they have a 300,000 litre tank[3] at Heathrow and they were using up to 100,000-odd litres a day, whereas they believed that the most they could use would be 30,000 litres a day. [4]

There is clearly a need to create greater resilience both in stock-holding at the airport and in the supply chain for this anti-icing fluid. Indeed, the Department for Transport did intervene—it was one of the few direct interventions we made—to secure some additional base material for anti-icing agent manufacture in the week of 20 December to reassure the airport operators that there would not be a run-dry of de-icer if they resumed operations at full level during the remainder of that week.

Q254 Steve Baker: Secretary of State, you were very clear that deep snow will always disrupt Heathrow, but we all know, and I am sure you recognise as well, that there was widespread human suffering there. Should the airlines and airports be quicker to discourage people from travelling at all?

Mr Hammond: Yes, definitely. One of the things that went wrong at Heathrow was the conflicting messages from airlines and the airport operator. On the morning of the 18th, British Airways took the decision that it believed Heathrow would have to close and it therefore suspended all its operations, leaving 200 aircraft on stands.[5] The airport took a more optimistic view and believed it would be able to keep operating throughout the day. So I think British Airways passengers got a very clear message. "No matter what the airport says, we are not flying anywhere, so don't come to the airport." In consequence, the situation in Terminal 5 was manageable.

Other airlines found that passengers were turning up, and the airport discovered it had no way to impose on airlines a reduced timetable. It does not have the mechanism that, for example, Network Rail has to require train operators to move to a reduced, pre-arranged emergency timetable. One of the things the airport operator at Heathrow is looking at, and I am sure they discussed this with you last week, is how they can require airlines to post an emergency timetable and therefore send out clear signals to passengers about what flights definitely will not be going in a situation where reduced service only is available.

Q255 Steve Baker: Is it fair to say that airlines could gain competitive advantage by being clearer, as BA were, about when they are stopping flights?

Mr Hammond: The airline business is, of course, a hugely complicated one and airlines have many factors to consider. In some cases they will have aircraft in the air that they will still be hoping against hope they can land in an airport which at this moment in time does not appear to be capable of taking them. If they do land it, they would then be looking for a load of passengers to take out on the return flight. There are very complex issues and different airlines will have different sets of interests. Long-haul airlines will have a different view from short-haul airlines; airlines that have a home base at Heathrow will have a different view from airlines that do not.

Q256 Chair: Does the Government support the imposition of an emergency timetable, and how would that be achieved?

Mr Hammond: We think there is merit in this suggestion and we have discussed it with the CAA. The South East Airports Taskforce resilience sub-committee is looking at this issue with the CAA. It would be achieved by creating a mechanism whereby, in extreme circumstances, a pre-agreed reduced level of service was imposed across all airlines. There would have to be a mechanism for ensuring that airlines complied with that reduced level of service and could be effectively penalised if they did not comply with it, by which I mean that, if an airline simply flew an aircraft into an airport that they had been asked not to fly into, they would suffer some effective sanction for that.

Q257 Chair: Who would be responsible for drawing up that emergency timetable?

Mr Hammond: That is one of the issues under discussion. It would probably be something done between the airport operator and the airlines, but there would almost certainly have to be involvement by the regulator as an arbiter of last resort if agreement could not be reached.

Q258 Chair: You said that Heathrow was operating at 98% capacity. Was that the major reason for the problems?

Mr Hammond: It seems to me likely to be the case that the higher the level of capacity utilisation in an airport the more vulnerable that airport will be to any form of disruption. If you are operating at 70% capacity and you have to close a runway for a few hours, you will recover fairly quickly; if you are operating at 98% capacity, you will not.

Q259 Chair: Should the Government have taken more interest in what was going on at the airports and taken more action to try to alleviate the situation? There was an offer to Heathrow of military assistance, but apparently that was made too late.

Mr Hammond: I was the one who conveyed that offer to the airport management. The response I got was not that the offer was made too late but that the airport did not feel unskilled labour was appropriate or helpful at that stage. The tasks to be performed needed operatives who were familiar with the layout of equipment on the aprons and taxiways and the airport rather than simply needing muscle. I made it clear to them at the time that, if they got to a point where they just needed some muscle, they should come back to us and we would be able to make that available.

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[3] Actually 405,000 litre tank, based on information provided by BAA (note from witness)

[4] Actually 50,000 litres a day, based on information provided by BAA (note from witness)

[5] 200 is the total number of aircraft stands at Heathrow, British Airways operates 61 stands at Terminal 5 and shares an undefined number of additional stands at Terminal 3 with other airlines (note from witness)

Q260 Chair: Gatwick Airport has complained about problems of access to the airport and lack of co-ordination with rail and road for clearing access so that people can actually get there. Is that something you think the Government should address?
Mr Hammond: One of the Quarmby recommendations was about co-ordination between operators of other transport infrastructure and highway authorities. My understanding is that, with the exception of a brief period of difficulty on the M11 in the vicinity of Stansted, the strategic road network availability to the major airports was good throughout the period and was the highest priority in the Highways Agency's operating response. But there are some issues about local road access, which is the responsibility of the local highway authority, and it is for airport operators and indeed other transport infrastructure operators to liaise directly with local authorities to ensure they have a robust plan.

Q261 Chair: I want to go back to the Government's offer of military help to clear Heathrow. When Colin Matthews gave evidence to the Committee last week, he said in answer to a question: "It was a welcome offer of help, but it was made on the Tuesday and by Tuesday we had cleared the snow, so I wasn't able to accept it. I do not want that to sound churlish. We would have accepted help from any source." That does not fit in with your explanation that they didn't want unskilled labour.
Mr Hammond: The offer was made at 8 o'clock on Tuesday morning and, sadly, as people who were huddled in the terminals will remember, it was not the case that they had cleared the snow by that time. The northerly runway was operating but the southerly one was not, and not all the taxiways were cleared at that time. While it was definitely the case that one runway was working by Tuesday morning, it was in an attempt to assist in the resolution of the southerly runway that we made the offer.

Q262 Chair: So you are disagreeing with what Mr Matthews told us.
Mr Hammond: I am telling you that the offer was made by me, by telephone, to the airport's director of operations just after 8 o'clock on the Tuesday morning. They declined it. The reason they gave me was that they did not need unskilled labour. They needed to use the skilled resources that they had available to them.

Q263 Chair: We will note that difference of explanation. To turn to roads, we had evidence from Councillor David Parsons, the deputy chair of the Local Government Association, that local authorities needed £200 million for routine road maintenance because of the severity of the last two winters. Do you agree with that figure?
Mr Hammond: I cannot verify that figure. We accept that the severe winter weather has imposed a further burden on local highway authorities that they will not have anticipated on top of the damage caused to the roads last year. I have announced that we will be making at least £100 million of additional funding available to English local authorities directly to support them in repairing winter damage to their road networks.

Q264 Julie Hilling: I want to ask about the clearing of less major roads, not just side roads but also roads that are not gritted. It seems to me that the major thoroughfares are cleared pretty quickly and efficiently, but people are trapped on side roads and smaller thoroughfares for weeks, potentially. What more can and should be done?
Mr Hammond: That is a question for local authorities. If roads were not cleared, it certainly was not because of a lack of salt to do the work, but local authorities have to set their own priorities; they have to live within their means. Quite rightly, they will have established a hierarchy of routes to be cleared.
I said in my opening statement that my personal perception is that there is a disconnect between what the public understands happened and what local authorities plan to do. On the one hand, the local authority is saying, "We have delivered. We've cleared all the roads that we planned to clear in our winter resilience plan", and, on the other hand, somebody in Acacia Avenue looks out of a window and says, "There's snow in the road and the pavements are iced. The local authority is not delivering; it's not performing." I think it is very important that we distinguish between a failure to deliver the intended plan and a question mark over whether the intended plan meets the aspirations of local people. Of course, that is a discussion that local communities have to have with their authorities.
To make one further comment, if I may, during the first period of severe weather I said—and I was much lampooned in some of the press for it—I thought there was a case for local authorities making salt available to the community where the community wanted to deliver some self-help. We had many people contacting us saying they would be happy to go out and get together with their neighbours and try to clear their own streets to gain access to the strategic road network if salt was made available to them. One of the things local authorities need to look at is how they could support community action with supplies of salt and grit to enable that to be done in future events.

Q265 Julie Hilling: To push you a little more, clearly we are at a time of economic constraints on local authorities. I certainly had people in my constituency, particularly in the previous winter rather than the one just gone, who were trapped in their houses for three weeks. Elderly people could not get out at all, in particular because there are some very high areas in my constituency. It does not feel it is enough for me to say that the local authority should sort it out. It seems to me we need to do something stronger from the middle and to say that something should be done about this. Self-help is fine if you are able-bodied, but it seems to me we should be pushing a little more to say that it is unacceptable for people to be trapped for extensive periods of time.
Mr Hammond: To be clear, when I talk about self-help, I mean community self-help.
Julie Hilling: Yes.

Mr Hammond: I think people completely recognise that, in any community, whether it is a street or village, there will be some people who can get out there and contribute and some who cannot. That is the nature of a community helping itself.

The issue you raise is one of the conundrums related to the whole localism agenda. We cannot, on the one hand, say to local authorities, "It's your budget and your community. You will be accountable to your community, but you have to make the decisions about how to prioritise the use of your resources", and, on the other, tell them that we will decide in Whitehall what they should do.

We can support them. We are supporting local authorities, for example, by funding a research project on effective winter resilience so that they can make the resources go further. We can support them by measures, for example, making clear, as we did, that agricultural vehicles using red diesel can be used on the roads for snow clearing, opening up the possibility of more local authorities contracting with farmers to do snow-clearing work, as is done in Devon and Cornwall very effectively. So there are some things we can do from the centre but I do not think they can be prescriptive; I think they can only be enabling.

Q266 Julie Hilling: I just have a last question in terms of the cost to the economy. Have you done an analysis of the cost to the economy in terms of health costs and people's lost days of work from fractures and other accidents that happened because pavements or roads were not cleared?

Mr Hammond: No, I have not. I said earlier—I think it was before you came into the Committee—that we have done an analysis of the cost to the economy of the transport disruption, but the health costs from pavement disruption, if I may so describe it, would not be something on which the Department for Transport would focus on directly. That would be a local issue and perhaps something that CLG have looked at, but I do not have a figure for that.[6]

Q267 Julie Hilling: But should that not be part of the analysis, because it is a direct cost of poor weather and poor clearance?

Mr Hammond: I think there are significant impacts across the whole of the economy, and whether they are direct or indirect is perhaps less important. I am simply saying that the Department for Transport's focus is on the areas for which it has responsibility. It does not have any responsibility for the clearing of pavements; that is a responsibility for local authorities.

Q268 Mr Leech: To follow on from the questions about minor roads, is there any evidence from around the country that there is a lack of co-ordination between local authorities and the Highways Agency in terms of making sure that local roads that are the responsibility of local authorities and link into the major strategic network are actually being cleared? Obviously, the local authority decides which roads they will do. Is there any co-ordination to make sure they are doing those ones that key into the network?

Mr Hammond: There is. The local authority should have a hierarchy of roads. Clearly, those which connect directly to the Highways Agency's strategic network should be at the highest level, and I think, generally, that is the case. There were one or two incidents during the December weather periods where there was some suggestion that failures on the local authority network caused back-up on to the Highways Agency network, but I think those were resolved largely by pragmatic action on the ground, which sometimes meant the Highways Agency moved on to bits of road that technically were not their responsibility to get cleared.

Q269 Mr Leech: Were there similar problems in connecting local roads to the other transport networks?

Mr Hammond: As far as I am aware, the railways experience this year was much better than last year. One of the issues that Quarmby identified for 2009–10 was poor co-ordination with highway authorities in clearing access roads to stations, particularly suburban ones. My understanding from talking to the train operators, certainly in the south- east and also on the northern TransPennine franchise, is that the level of co-ordination has been much better and generally routes to stations were getting cleared effectively.

Q270 Kelvin Hopkins: The last few paragraphs of the paper you have submitted today talk about winter tyres. Was there any evidence that some people used studded tyres, wheel chains or anything of that kind? I noticed you have not advised people to do that, but particularly in northern areas perhaps was anybody using them?

Mr Hammond: First, let me make a distinction between winter tyres and studded tyres or snow chains. Winter tyres are formed of a softer rubber, which generally will have a better grip in extreme cold weather and snow, and they can be used on ordinary roads, or naked roads, if I may describe them thus, whereas snow chains and studded tyres can be used only on impacted snow, would cause damage to the road surface if used on ordinary roads and would therefore be illegal to use in those circumstances.

The evidence we have gathered is that the use of winter tyres is still on a very small scale in the UK. I understand that the Scottish Government is conducting an appraisal of the costs and benefits of the use of winter tyres on heavy goods vehicles, looking at this particularly as an anti-jackknifing measure. We will look with great interest at the results of that study.

I have said on several occasions during the winter that the use of winter tyres can deliver very significant benefits to motorists. It can give them an ability to move around almost unimpeded in quite severe weather conditions, but it has a significant cost. Winter tyres are expensive; they wear out quite quickly when used on naked road surfaces; and tyres

[6] The Department for Transport has not undertaken formal analysis of the costs of pedestrian accidents due to severe winter weather. However, the £280m estimate of the daily cost of snow disruption to domestic travel does include an indicative figure of £24m to reflect the costs of pedestrian accidents resulting from sever winter weather. (Note from witness)

are required to be changed twice a year and storage provided for those tyres. Usually, the follow-up question is: have we considered mandating the use of winter tyres? We looked at this very briefly and quickly concluded that there would be no cost-benefit case for mandating the use of winter tyres in the kind of weather that the UK can expect to see.

Q271 Kelvin Hopkins: On a related point—you may have done this without my noticing—did the Department give advice to drivers on how to drive, dealing with skids and driving in a higher gear to avoid high torques, wheel spins and that kind of thing? Some people are not naturally mechanical and are not comfortable driving in slippery conditions. Some of us are techno-freaks and quite happy to do that.

Mr Hammond: I am sure all Transport Secretaries end up hearing themselves say, "It says in *The Highway Code* …" But I am sure it does say somewhere in *The Highway Code* how you should drive in extreme winter conditions. The advice issued by the police, and reiterated by myself and other Ministers at the height of the disruption, was simply not to use the roads unless it was absolutely essential. Driving conditions were extremely dangerous at the height of the bad weather, particularly off the strategic networks, and drivers were advised not to go out unless they had to.

Q272 Chair: Would the salt have run out if the bad weather had continued a little longer?

Mr Hammond: It depends for how long it had continued.

Q273 Chair: How much more bad weather could we have had with salt still being there?

Mr Hammond: The honest answer is that, if it had carried on at the level it did all the way through to 31 March, yes, we would have been in some difficulty, but we were in a much better place than we were the previous year. I have some figures somewhere. We were asked by Quarmby in his July interim report to create a strategic reserve of 0.25 million tonnes of salt. The Highways Agency was tasked with placing orders for that salt for delivery over the early part of the winter. That was done. When the severe weather struck early on 30 November, I instructed the Highways Agency to order a further 0.25 million tonnes of salt to boost our resilience and in anticipation that the first 0.25 million tonnes might be drawn down fairly quickly. In point of fact, over the course of the winter, we distributed just under 100,000 tonnes from the strategic reserve. The strategic reserve that was delivered came to just over 500,000 tonnes in total—I think it was 523,000 tonnes—of which we still have over 400,000 tonnes in stock at ports around the UK. We will carry that forward and it will still be there for next winter.

Q274 Chair: But what does all that mean? How many more days of bad weather could we have had with the salt still running?

Mr Hammond: It is a difficult question to answer. We began the winter with about 1.2 million tonnes of salt in place. The salt producers in the UK produce about 12,000 tonnes a day, so they are adding about 70,000 tonnes a week to the stockpile. [7] We imported another 500,000-odd tonnes, none of which is really answering your question, I know.

Q275 Chair: I can see I am not going to get an answer.

Mr Hammond: Let me write to you. I can give you an estimated figure of the daily usage of salt during the severe winter period. You can then see how many days of resilience we had in terms of that level of bad weather and how long it could have gone on for. But the bottom line is that we have ended the winter with about 800,000 tonnes more salt left in February than we had in the previous year. We have well over 1 million tonnes of salt in place at the end of the winter, and that suggests we could have withstood a significant additional period of winter weather.

There is one other thing that perhaps I should say. In the July report, Quarmby urged highway authorities to reduce the level of salt they were using so that the recommended dosage was reduced. This was based on experimental work that had been carried out demonstrating that the standard 40 grams per metre salting level was effective. It is still not entirely clear at the moment how many local authorities actually adopted that more meagre salt-dosing system. That is one of the things we shall be looking at in the follow-up work, because, in terms of local authorities planning for next year, clearly a crucial factor is whether they are using a 40 gram or 60-gram standard dosing rate.

Chair: That's all very intriguing. We will look forward to the answer and try to translate that into numbers of days the roads could have been kept salted.

Mr Hammond: I will write to you.

Q276 Steve Baker: On that point, if I recall correctly, a previous witness explained that salt is ineffective in deep snow. Do you agree that sometimes, mentally, we have too high an expectation of the effectiveness of salt?

Mr Hammond: Salt is not effective against deep snow. The salting process is much more complex than might be seen at first glance. It is important that the salt is laid at the right time in relation to the weather pattern so that it prevents snow settling or prevents water freezing. If it is laid in conditions where there is too much water around it, it will simply be washed away; if it is laid too late, it will not be effective. If deep snow is lying, it needs to be ploughed before the salt is applied to it. You are definitely correct to say that salt alone is ineffective against deep snow.

The second point that came out very strongly during this winter—but I do not think I had ever heard it

[7] Actually around 45,000 tonnes per week on average for Great Britain (note from witness)

before in the UK context—is that salt is, of course, ineffective once temperatures drop very low, once they get below minus 8°, because salt merely lowers the freezing point of water. It does not render water unfreezable altogether.

Chair: I can see this is getting ever more complicated, but we still look forward to your reply. Thank you very much for coming, Secretary of State.

Written evidence

Joint written evidence from the United Kingdom Roads Liaison Group (UKRLG) and the Association of Directors of Environment/Economy, Planning and Transport (ADEPT) (AWC 05)

1. Introduction

1.1 UKRLG is a body made up of representatives from UK Governments, Strategic Road Authorities and Local Government Technical Associations including ADEPT. Its prime role is to advise UK Governments on highway maintenance policy, including winter maintenance, promote best practice through national codes and guidance documents, and promote and support research and innovation in the highway sector.

1.2 ADEPT is an association of Directors from upper tier and unitary authorities who have responsibility for, inter alia, local transport and highways. It was formerly known as County Surveyors Society (CSS).

1.3 The UKRLG has played a significant role in helping advise UK Governments on highway related transport issues, not only during this current winter but also during the two preceding severe winters.

2. Background

2.1 *Lessons from Severe Weather February 2009*

2.1.1 After the 2009 winter the Secretary of State for Transport asked the UKRLG to identify lessons that could be learnt from the events of winter 2008–09 and to recommend steps that could be adopted by highway authorities, producers and suppliers of salt and other stakeholders to ensure England is even better prepared should similar events occur in the future.

2.1.2 The review made recommendations in four themes:

(i) Winter service resilience.

(ii) Preparation for and operation of winter service.

(iii) Communications.

(iv) Procurement.

2.1.3 The review presented a package of recommendations to develop and improve highway service in winter. It was important that all parties involved considered the recommendations as a whole. The key recommendation, that highway authorities adopt a winter resilience standard, was introduced to help ensure that preparation for winter service was more rigorous and that more resources, especially salt, were available to respond to severe conditions. The document, which is available through the UKRLG website* (link attached at foot of this submission), was published in July 2009 but was not endorsed by Government until December.

2.1.4 One of the early deliverables recommended by the UKRLG was an introduction leaflet for councillors and senior local authority officers about the preparation for winter conditions on their highway network, which was forwarded to all local highway authority chief executives in December 2009 (see leaflet on UKRLG website*).

2.2 *Winter 2009–10*

2.2.1 During the severe winter weather of 2009/10 ADEPT was one of the organisations representing local highway authorities on Government's Salt Cell and, through liaison with its members, helped disseminate advice on prioritisation of salt distribution and measures to reduce usage.

2.3 *The Resilience of England's Transport System in Winter—An Independent Review (The Quarmby Report) (See website**)*

2.3.1 Both the UKRLG and ADEPT provided significant input to the review.

2.3.2 The Quarmby report (in paragraph 10) stated that the UKRLG recommendations and the updated Code of Practice were thought by witnesses to be fit for purpose but that the Government's endorsement of the recommendations and their incorporation into the updated Code of Practice came too late to have much impact on the planning and response to the 2009–10 winter.

2.3.3 UKRLG and ADEPT supported all the recommendations of both the interim and final Quarmby reports and continue to play a leading role in the delivery of many of the review panel's recommendations.

2.3.4 New comprehensive winter service guidance for local authority prioritisation was produced by UKRLG and published in October 2010 (see UKRLG website*).

2.3.5 UKRLG and ADEPT worked with DfT to help produce additional advice on revised salt spread rates, which was published just before Christmas 2010 (see UKRLG website*).

2.4 *The independent audit by David Quarmby December 2010*

2.4.1 UKRLG and ADEPT gave advice and supported David Quarmby in undertaking the urgent audit of how well the highway authorities and transport operators in England had been coping with the unexpectedly early and severe spell of winter weather.

2.4.2 In the key findings of the audit Quarmby recognised that local highway authorities overall performed well in this period, including those who experienced intensive snowfalls, but while many delivered a high level of winter service, others can still improve further and adopt more good practice.

3. Summary of the Key Issues

3.1 This winter and the previous two have severely tested the resilience of local authorities' winter maintenance services.

3.2 Local authorities in general have performed well and disruption to the main roads has been minimal. Public response, at a local level, has been generally positive, particularly where efforts have been made to address problems with pavements and local non-highway facilities, such as car parks, school accesses etc.

3.3 There has been good engagement and cooperation between all the bodies involved in responding to the implications of the last three winters, particularly DfT, LGA, HA as well as ADEPT and UKRLG.

3.4 There has been a considerable amount of new advice and guidance produced, supported by UKRLG and ADEPT, much of which has already been acted on and some that will require longer term investment.

3.5 UKRLG and ADEPT support the recently initiated national resilience stockpile of salt and recommend its continuation. However there is concern about the high cost (twice as much per tonne as normal supplies) for Local Highway Authorities (LHAs) who need to access this provision. Two years of the Salt Cell process have resulted in a much improved understanding of the needs of the highway sector and the capabilities of the supply chain to meet those needs. Further improvements can be made to optimise the supply and use of what, for this period of time each year, is a strategic national commodity.

3.6 LHAs who currently are unable to meet the new resilience standard of 48 gritting runs equivalent of pre-season salt stock level, as recommended by Quarmby, will need to invest in more storage capacity themselves or place greater reliance on collaborative procurement and storage arrangements to avoid a position where supplies could be exhausted at a critical time. Similarly those Authorities that do not have up to date spreading equipment will not be able to immediately achieve the salt usage efficiencies recommended in the recently published guidance. More and larger salt barns will be required, as well as more up to date salt spreading equipment. Although there may be scope for LHAs to collaborate and share resources to reduce costs, it will still be very difficult to secure funding at a time when local authorities' budgets are being significantly reduced.

3.7 LHA's have generally updated their Winter Maintenance Plans and improved their engagement and mutual support arrangements with other organisations, helping to supplement LHA resources during widespread snowfalls. Initiatives such as the DfT's well publicised "Snow Code", allied to clarity from Her Majesty's Revenue and Customs in respect of fuel taxation on agricultural activities carried out in support of LHA operations have also contributed beneficially to the overall effort. Local communities have also been directly engaged, via a range of locally derived initiatives, such as the recruitment of "snow wardens" and the provision of "snow bags", all of which fit well within the Government's localism agenda and demonstrate an encouraging level of commitment to community self-help. This is one area where considerable further advances can be made, through imaginative use of community volunteers and local resources.

3.8 Another recommendation from the Quarmby report to have been taken up and acted upon by LHA's is improved communications. Early publication of winter service plan details, including gritting routes and contact information, has been supplemented by regular bulletins confirming weather forecasts, conditions and service actions. This has increasingly been extended from the conventional media, ie local newspapers and radio stations, to channels such as the internet, Facebook, Twitter etc, thus facilitating and extending real time provision of information to the public.

3.9 Despite all of these advances, there is a clear need to continue to support research and development in Winter Maintenance. The integration of the National Winter Service Research Group into the UK Roads Board will ensure better dissemination of best practice, but there is a real risk that Local Authority funding support for this work will no longer be available.

3.10 Finally, the widely quoted reason for the lack of growth in the economy in the last quarter of 2010 was the extensive disruption to travel and economic activity caused by the severe winter weather. This, in turn, suggests recognition of the significant economic benefits of investing in Winter Maintenance Services and improving overall resilience during severe winter weather.

* http://www.ukroadsliaisongroup.org/liaison/winter.htm

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

February 2011

Written evidence from the Department for Transport (AWC 12)

Introduction

1. The weather experienced in December 2010 followed two previous severe winters. The Meteorological Office has since confirmed that December 2010 was the coldest December since 1910 and the snowfall encountered was the most widespread in any December since 1981.

2. The experience of the last two winters led the previous Government to invite David Quarmby CBE to chair an Independent Review of Winter Resilience, which reported in October 2010 and made 28 recommendations (Hereafter "the Quarmby Review").

3. When severe weather and attendant disruption was first experienced this winter, the Secretary of State for Transport asked David Quarmby to follow up his Panel's earlier Review with an urgent Audit of how well highway authorities and transport operators in England had coped with the cold weather between 24 November and 9 December 2010, and whether his earlier recommendations had been implemented (Hereafter "the Quarmby Audit"). This Audit Report was published on 21 December and made a further eight recommendations.

4. All of this evidence is now feeding into consideration by the Department for Transport and by external transport partners about how best to deliver resilience against severe winter weather in the future, and the full set of recommendations from the Review and Audit are included as an annex to this evidence.

Role of DfT and application of lessons to the transport sector

5. For those areas of transport where the Department for Transport is not itself the operator (which is, in effect, the whole of transport system apart from strategic roads) the Department's role, ahead of a crisis, is to communicate risks to operators and promote preparedness. During periods of crisis, including severe weather, that require a level of coordination between Government Departments and between operators, it seeks to facilitate that coordination through activating its emergency arrangements. In December 2010, in addition to DfT's own coordination arrangements, the Secretary of State also chaired meetings of a cross-Departmental Winter Resilience Network set up under the auspices of the Cabinet Office.

6. Our rapid follow-up to the Quarmby Review ensured that we were better prepared for the winter weather than in previous years. The Government accepted all the Review's recommendations and pushed forward progress on them, so that where these apply directly to the Government all have either been completed or are currently being implemented. The Government also encouraged, and continues to encourage, local authorities and other transport operators to implement all the Review's recommendations where they relate to them. In looking at this area, the Quarmby Audit concluded that "pretty well all the Recommendations we made in our main Review that could have been implemented by now have been, and that others with longer timescales are generally in process."

7. Overall, the transport response this winter was significantly improved by the action that had been taken to implement the Quarmby recommendations. Some disruption from such cold conditions must always be expected, as we saw in other European countries, including those more accustomed to severe winters. However it seems clear that disruption would have been worse without the rapid action taken to implement the recommendations of the Quarmby Review.

8. There remains the difficult question of how much investment in transport can be justified, based on reasonable expectation of weather conditions likely to be faced in the UK. I therefore asked for scientific advice as to whether changes in winter weather patterns might merit increased investment in winter resilience from the Government's Chief Scientific Advisor, Sir John Beddington, as well as my Chief Scientific Advisor, Brian Collins. This is a complex area where uncertain projections about the precise nature of climate change need to be weighed alongside indefinite calculations of the cost of investment and the long-term costs of severe winters. It also affects many areas of public and private spending, not transport alone. I have therefore asked my officials to consider, along with expert colleagues in other Government Departments, to what extent there is an argument and business case for potential increased investment levels in winter resilience.

9. The impacts of the different spells of severe weather varied by mode of transport as well as by region. In particular, the main impact for Aviation arose after the Quarmby Audit. This evidence has therefore been presented by transport mode so that it is clear in each case what was experienced, what preparations had been made and what actions are being taken forward as a consequence.

Aviation

10. The first spell of snowfall and freezing conditions between 30 November and 3 December mainly affected airports on the UK's eastern side, with several (Aberdeen, Bournemouth, Durham Tees Valley, Edinburgh, Humberside, London City, Robin Hood, Southampton) suspending operations temporarily at various times to allow snow and ice clearance. Delays and cancellations were experienced at other airports due to the knock-on effects of disruption at other weather-affected airports in UK and on mainland Europe.

11. However, the main focus was on Gatwick which was forced by heavy snowfall early on 1 December to suspend operations to allow snow clearance operations on its single runway. Subsequent further snowfall meant that Gatwick was unable to resume operations until early on Friday 3 December—almost 48 hours later. London's other main airports—Heathrow and Stansted—were less severely affected by snow and remained operational throughout, although airlines experienced delays and cancellations caused by disruption elsewhere.

12. The second severe weather spell from 16 December caused repeated disruption to UK airports' operations, including temporary service suspensions at Aberdeen, Belfast International, Belfast City, and Norwich. Gatwick suspended operations for five hours on 18 December. Most significantly from the public and media perspective, however, Heathrow experienced very heavy snowfall during 18 December followed by over 20 hours of freezing temperatures, forcing the suspension of flight operations. BAA immediately initiated procedures to clear snow and ice from airport runway and taxiway surfaces, but progress to recover flight operations was slowed because more than 200 aircraft had been frozen on to parking stands. The delicate operation of clearing snow and ice from occupied stands caused significant delays, and the airport was only able to restart very limited flight operations from early on Monday 20 December. Thereafter, however, Heathrow saw a progressive build-up of flights and a return to a near-normal operational schedule by the evening of Wednesday 22 December.

13. The resulting suspension of flights at Heathrow and time taken to restore normal operations caused major disruption and distress to passengers. In response airport operators and airlines put in place a number of passenger welfare arrangements, including offering stranded passengers hotel accommodation. However reports suggest that some passengers chose to remain in airport terminals. Airport operators provided those who did so with blankets and beds, distributed hot drinks, water and food, prevailed upon retail concessions to stay open to allow people to buy food, provided free wi-fi facilities to allow passenger to access information, and deployed passenger support teams (from their own staff and from external voluntary organisations) to answer questions and provide information. Airport operators also negotiated with rail and bus service providers to remain open later so passengers could travel home or back into city centres if desired. At Heathrow passenger welfare arrangements remained in place throughout Christmas.

14. Airport operators assessed the primary cause of December's flight disruptions to be a combination of (i) difficult operational conditions at UK airports due to snow and freezing weather; (ii) severe weather conditions affecting airports across the UK and Europe, and (iii) the impact of the severe weather on flight operations, which meant that some aircraft and crews were in the wrong places. They emphasised that air services operate as a system, and disruption at individual airports was therefore often the consequence of problems elsewhere. Notwithstanding this, airport operators are keenly aware that the disruptions in December caused severe hardship and distress to passengers stranded in terminals, and are looking hard at the issue of passenger welfare as part of their reviews of their contingency response to December's events.

Extent to which lessons were learned by the aviation sector following winter 2009–10

15. The Review noted that the aviation sector has in place appropriate processes and disciplines to enable lessons to be learned from one winter and adopted for subsequent seasons. However, this current winter has emphasised that this needs to be an ongoing process to which sufficient focus must be given and robust measures implemented in response.

16. Prior to last December BAA had already put in place improvements to Heathrow's winter resilience, including agreeing a revised snow plan with airlines and contractors and investing £500k on upgrades to the existing snow and ice clearance vehicle fleet. However, following December 2010's severe weather BAA has commissioned an internal inquiry covering all aspects of its operations including the resilience of its revised snow plan. BAA has also commissioned a separate external review by a team of aviation experts to examine Heathrow's planning, execution and recovery from the difficult weather conditions, and review lessons to be learnt. It will report in the spring.

17. Similarly, Gatwick's operator Gatwick Airport Ltd (GAL) had reviewed its winter resilience plans following the 2009 winter's severe snowfall and low temperatures, including investing over £300,000 in new snow clearance equipment and vehicles. Notwithstanding this, following December 2010's severe weather GAL has now placed orders for over 30 additional snow clearance vehicles.

Assessment from aviation operators of the quality of the weather forecasts received

18. Airports and airlines commission weather forecast information from various different commercial meteorological information providers (including, but not only, the Meteorological Office and MeteoGroup). The Department for Transport is not aware of the aviation industry having expressed any fundamental concerns about the quality of the weather forecast information that they received , although the Department is aware that BAA indicated that the snowfall of 16 centimetres in just over an hour at Heathrow on 18 December was roughly twice the amount that had been indicated in earlier forecasts. The issue of forecasting accuracy will fall within BAA's own internal review of Heathrow's response to December's severe weather, and the expert review being led by Professor Begg.

Quarmby recommendations on aviation

19. The Winter Resilience Review recommended that "…the Civil Aviation Authority considers how it might develop its currently published performance data to improve the presentation, commentary and interpretation of airline performance information, to inform passengers and the market and encourage improvements across the industry". In response, the CAA has enabled easier access to its website-based statistics for members of the public, and published a simple guide for consumers explaining how they can find out punctuality information on their flights. The CAA is also currently undertaking market research to identify which information passengers find valuable, including aspects of service quality. Additionally, the Government's South East Airports Task Force (with which the CAA is closely involved), has set up a subgroup which will make recommendations on punctuality, delay and resilience. The outputs of these workstreams will inform any further improvements to the presentation of the CAA's punctuality data. The Government is also considering proposals, under a Bill to reform framework for economic regulation of airports, for a new licensing regime to give the aviation regulator more flexibility, where appropriate, to bolster airports' resilience to severe weather, thereby reducing the inconvenience and distress to air passengers. The Government plans to bring forward a Bill as soon as Parliamentary time allows.

Rail

19. In the recent spells of severe weather, many passenger train operators experienced significant damage to and failures of trains due to the operating conditions. Problems arose from a combination of the excessive quantity of snowfall, extreme cold temperatures, ice forming on structures and electrical equipment and damage to rolling stock, including frozen doors, traction motor failures, diesel fuel freezing, frozen air systems and frozen couplers. Passenger information was also inadequate in some areas.

20. These problems were not limited to the UK, as train services across much of Northern Europe were also affected by the same weather. Eurostar, for example, suffered significantly from speed restrictions imposed on the operation of trains during snow, because of the risk of snow ingress into electrical equipment.

Extent to which lessons were learned by the rail sector following winter 2009–10

21. The Quarmby Audit recognised that good progress had been made on implementing a number of lessons from 2009–10, for example around the systems integration to improve the distribution of emergency timetables and experiments in heating the third rail. However, the audit also found "glitches" with the application of new systems, and identified that the severity and spread of this year's severe weather highlighted new lessons in terms of operational response, so there is clearly more to do.

Quarmby recommendations on rail

22. The Quarmby Review and Audit made a number of recommendations for rail which are being implemented.

- The rail industry should continue the development and improvement of the systems for managing contingency timetables and for supporting, feeding and making more resilient the information given to passengers at stations and on websites, having particular regard to the effectiveness of short-notice changes sometimes needed during service disruption. The winter weather has involved the first major test of the new "Integrated Train Planning System" (ITPS) in handling widespread short-notice changes. This experience has enabled a number of system improvements and measures to reduce the risk of human error. These are being evaluated to help ensure more effective and up-to-date information can be given at times of disruption.
- The rail industry should continue its development of technical solutions to improve winter resilience, particularly those relating to the maintenance of traction contact on the third rail network south of the Thames. This recommendation has been incorporated into a special National Task Force (NTF) project looking at the viability of various technological solutions. Key activities in this project have been funded and work is progressing on the physical outputs. The Rail Safety and Standards Board is carrying out a research project into the viability of replacing the third rail system with overhead electrification in the longer term.
- The rail industry should conduct a strategic review of technical alternatives to the third rail/top contact system, for the network south of the Thames, and prepare an evaluation and business case for consideration by the Government. The Rail Safety and Standards Board is carrying out research into the economics and technical aspects of alternatives to the present third rail system.
- Individual rail companies and Network Rail should make regular contact with local highway authorities during the winter planning process and season to ensure that the boundaries between public and railway-owned areas regarding the road and footway access to stations, depots and signalling centres are clearly understood between their organisations, and that both are treated in a coordinated way. The industry's National Task Force (NTF) has noted the recommendation, and Individual companies are being encouraged to consider this as part of their early planning process.

— Network Rail and the relevant train companies operating south of the Thames should conduct a thorough review of the actual operational experience of this period of severe winter weather; in particular Network Rail should review the nature and amount of equipment needed to fulfil anti-icing duties (in addition to autumn duties) taking account of risks and operational needs, as well as the availability of winter resilience resources generally (such as snow clearance) across the network. The rail industry will be reviewing all aspects of winter operations, in the light of any further issues arising during the remainder of the winter, but with particular attention to the problems which have most affected running the service during snow and ice, and to the need to keep passengers informed.

Other recommendations are still under consideration as follows:

— Encouraging Network Rail and the train operators to ensure that consistent criteria are developed for decision-making about the use of contingency timetables. The Rail Industry's National Task Force is considering the value of having a set of common criteria to assist in determining what service should be operated, although there is no single national answer because so many variables are involved and conditions are likely to vary widely around the country.

— Provide a new mechanism under which Network Rail can subsequently be held accountable for decisions it makes (in consultation with the train operators) about the implementation of contingency timetables and the levels of service reduction involved.

— The practical application of this recommendation is under consideration between DfT and ORR.

— The rail industry should develop and implement resilient and flexible methods of providing pre-journey and real-time information to passengers alongside and largely independent of the main customer information systems, deploying appropriate technologies and resources; Network Rail and the train companies should also embrace the cultural need to ensure such arrangements attract appropriate priority, resourcing and recognition. Work is continuing to strengthen the operation of the timetabling processes to support better information to passengers, particularly with reference to short-notice changes. Work is also in progress to examine improvements to how short-notice information is best given to intending passengers

23. In addition the rail industry is reviewing all aspects of winter operations, but with particular attention to the problems which have most affected running the service during snow and ice, and to the need to keep passengers informed.

24. On a longer time scale, the Rail Safety and Standards Board is carrying out research into the economics and technical aspects of converting existing third rail systems to Alternating Current (AC) overhead systems.

Assessment from the rail sector of the quality of the weather forecasts received

25. MeteoGroup provides Network Rail with a highly-tailored forecast for the specific conditions encountered on the rail infrastructure, as well as longer-period more generalised forecasts. A website accessible to all rail operators gives continually refreshed data, and has proven accurate throughout the recent conditions.

EUROSTAR

26. Infrastructure and operational failures in Northern France from19 December disrupted Eurostar services and led to closed sales and the operation of a modified timetable until 24 December 2010. Significant queues were formed at times outside St. Pancras International during this period and there were a number of customer complaints about poor information.

27. Although the delays and cancellations were considerable over these two days the disruption to Eurostar's services was different in precise cause from that experienced last year, as the fleet modifications implemented since last year had worked to avoid a repeat of the previous year’s widespread loss of rolling stock units. There was a short-term problem with queues, but these had dispersed by 18.00 hours on Tuesday 21 and the following day Eurostar had reverted to a near normal service.

Extent to which lessons were learned by Eurostar following winter 2009–10

28. An independent review conducted by Christopher Garnett and Claude Gressier looked at how effectively the recommendations made following Eurostar break downs in November 2009 had been implemented. The review was positive about the work carried out to date but acknowledged that work remained to be done in order to: modify the remaining trains in the fleet; make further communications improvements; and look at whether new approaches could be taken to minimise the length of queues.

Assessment from Eurostar of the quality of the weather forecasts received

29. Eurostar use two sources for weather forecasts: the Meteogroup service provided to Network Rail and a weather forecast from French Meteo that fed into the Operations Centre in Lille. Both were considered very reliable.

Quarmby recommendations on Eurostar

30. As there had already been an independent review, there were no Quarmby recommendations directed specifically to Eurostar.

London

31. Although there was significant snowfall in the London area, the impact of snow on the Transport for London (TfL) network was kept to a minimum thanks to use of well established adverse weather plans. For example, on the worst day (Saturday 18 December 2010), LU was able to run 95% of its normal service and out of a total of over 700 bus routes and only six routes were suspended for a period (plus weather-related diversions/curtailments affecting local sections of 39 routes which were not on the pan-London gritting network). TfL deployed its fleet of 38 gritters and was able to keep the London Strategic Road network accessible most of the time. Good services were also maintained on the Croydon Tram network.

Extent to which lessons were learned by the London transport network following winter 2009–10

32. The main learning point from 2009–10 concerned the need to revise gritting plans for the resilience road network, to ensure that bus routes, stations and routes to hospitals etc were gritted. However, due to TfL's procurement of a strategic stock pile of salt and the limited extent of snow falls, these did not need to be implemented, other than for short periods in a handful of Boroughs. Mutual aid between boroughs was applied on a number of occasions but did not require access to the TfL strategic stock pile in East London.

Assessment from Transport for London of the quality of the weather forecasts received

33. Weather forecasts from both the Meteorological Office and Meteo Group were used by TfL and found to be reasonably accurate, although TfL have indicated that they felt that the Met Office appeared to be more risk adverse. There is an appetite for London-only forecasts, rather than the combined London and Southeast, and also for a more numeric basis for forecasting, eg there is a Y% chance of Xcm of snow.

Quarmby recommendations on the London transport network

34. There were no Quarmby recommendations directed specifically to London, though the Final Report noted that its resilience arrangements were a model example for others to consider. In addition the Review highlighted the need for the Rail Industry proactively to provide other transport providers with detailed information where there is disruption to networks, including technical descriptions of problems and assessment of service recovery. This can be used by agencies like TfL to provide passenger information and plan their service.

Strategic Road Network

35. The Highways Agency (HA) maintains and operates the strategic motorway and trunk road network in England on behalf of the Secretary of State for Transport, providing a robust winter service to treat the network to keep it open and safe for use as far as is reasonably practicable to meet its duties under the Highways Act 1980.

36. It is important to recognise that every winter, instances of severe weather will have some impact on the strategic road network, however careful the planning and delivery of the winter service. In heavy snowfall, traffic will slow and in many cases poor conditions on other roads will cause traffic to queue onto the strategic road network and the congestion can make it difficult for salt spreaders and ploughs to reach parts of the network affected. In addition, on one or two isolated parts of the network, such as the A66 over the Pennines, temporary closure due to snowfall can be a regular feature in the winter months.

37. The HA's National Traffic Control Centre (NTCC) and seven Regional Control Centres (RCCs) support the on-road traffic officers by setting strategic and tactical signs and signals to ensure the safety of responders from all agencies at the scene of an incident and to inform road users within the vicinity and on the approach of the impact to their journey.

38. Messages to road users routinely take account of local conditions, and where severe weather covers a wide area it is normal to advise motorists to think carefully before travelling and to ensure that their vehicle is appropriately prepared. This is the context within which to consider the particular challenges posed this year.

39. Despite the severity and early onset of winter weather this season, the HA was well prepared and has managed to keep the whole of its network safe and available for use almost continuously throughout the winter. Parts of the network during both cold spells experienced exceptionally severe conditions with heavy snowfall and very low road surface temperatures being recorded: as low as −15°C in some instances.

40. A small number of closures or restrictions, generally arising from either HGV (particularly jack-knifed vehicles) or other traffic related incidents, did have a significant impact on limited lengths of trunk roads and motorway this winter. The resulting traffic congestion did result in a number of motorists experiencing difficult journeys which were substantially longer than usual. Due to the increased journey time a number of HGV

drivers also encountered issues with driver hour restrictions and as a result many took the decision to park overnight on the hard shoulder (eg sections of the M25), rather than continuing their journey. Incidents that caused a particular impact on the strategic network (such as the M25 Junction 3 on 30 November 2010 and the M5 Junction 4, and the M40 in the vicinity of Junction 9, on 18 December 2010) have been assessed through the HA's standard debrief process. The process is designed to ensure that causes and potential mitigation measures are identified and action taken where appropriate. The Highways Agency continues to investigate the detail of these incidents of severe delay.

Extent to which lessons were learnt by the Highways Agency following winter 2009–10

41. After every winter season, the HA carries out a detailed review to identify key lessons learned and enable it to implement improvements. The main issue highlighted in the review of the 2009–10 season was the lack of resilience in the domestic salt market and the difficulties experienced by local authorities in getting supplies, which in turn impacted on the ability of HA contractors to maintain salt stocks at a sufficient level for the Strategic Road Network. The key improvements made by the HA for this winter focused on improving its salt stock resilience and included:

- Implementation of guidance for more efficient salt spreading for precautionary and snow treatments. This was issued to its contractors to use salt more efficiently whilst also maintaining a suitable standard of treatment. Use of the more efficient rates is now possible across the network following the completion of the HA's new winter fleet roll-out, providing 437 new, "state of the art" winter service vehicles.
- Increased operational salt stocks—prior to the start of the severe weather this year, the HA held 260k tonnes of salt compared with 227k tonnes last season.
- Implementation of a HA reserve salt stock. Prior to the start of this winter season, the HA ordered 60k tonnes of imported salt to act as a reserve stock later in the season.

42. In addition, lessons learned had highlighted the importance of ensuring that there are adequate numbers of traffic officers in affected areas to work with service providers and other agencies to keep the network open. Their role includes dealing with large numbers of incidents, supporting winter service crews in getting to where they were needed and keeping customers informed about conditions across the network. Contingency staffing plans were quickly activated when severe weather was experienced to ensure that appropriate resource levels could be maintained.

43. Also, following the experience of the 2009–10 winter, the HA now endeavours at times of heavy snowfall to deploy recovery vehicles at key locations where maintaining and restoring traffic flow is likely to be a challenge in severe weather, for example to assist large goods vehicles near gradients.

44. Although it is premature to predict the outcome of the Highways Agency's annual winter continuous improvement/lessons learned exercise, it is already investigating what further steps could be taken to help further mitigate the impact of localised intense snowfall on people's journeys. Such measures may include wider resource deployment prior to and during severe weather, as well as more focused road user communications during localised intense snowfalls where disruption to traffic is likely.

Assessment from the HA of the quality of the weather forecasts received

45. The HA contracts the Met Office to provide regular forecasts throughout the year, and in the winter months Met Office representatives are located in the HA's National Traffic Control Centre (NTCC): to provide detailed forecasts. The HA also has approximately 200 weather stations at strategic spots which supplement the forecast information.

46. In addition, the HA's contractors procure their own specialist weather forecasts, which along with detailed weather and road surface information from the HA's weather stations, are used to identify the optimum time and scope of winter treatments.

47. While the various weather forecasts have been generally accurate, conditions can be unpredictable and locally very severe in specific locations and an element of operational judgement is always required.

Local Roads

48. There are over 150 local highway authorities who are responsible for 98% of the road network which carries around 70% of traffic. These authorities have a duty under section 41 of the Highways Act 1980 to "ensure, so far as is reasonably practical, that safe passage along a highway is not endangered by snow and ice". They meet this duty through their own winter service plans, which include details of which roads will receive precautionary salt treatment and be cleared of snow.

49. The severe weather in November and December 2010 had a significant impact on local highway authorities and their networks, putting their winter resources under acute pressure. Dealing with snow conditions can quickly use large quantities of road salt with little effect unless best practice is followed, since salt alone does not disperse snow and the snow itself will dilute any salt applied. The corner stones of efficient

good practice in winter service include the pre-treatment of roads with salt, and following any snow fall it is necessary to plough the road before any further salt applications.

50. In the December snow events, most major routes would have been treated with salt beforehand, and authorities were able to recover their key networks relatively quickly. But minor routes often remained closed for a number of days after the initial snow fall, and became icy in the pro-longed cold spells that the country experienced. Compacted ice on such roads can be very difficult to remove, since traditional methods (predominantly using plain rock salt) needs the action of traffic to assist in dispersing the ice, and moreover the salt ceases to be effective at around −7°C or below.

Footways

51. Footways were a problem during the recent severe weather. It is mainly the high use footways in the busier urban areas that will receive any preventative treatment, but this is not practical for most footways prior to snowfall or the formation of frost and ice. Compacted ice can be very treacherous to walk on, and treatment by salt either before or after snow fall can have limited impact.

52. Following concerns in 2009–10 that people were discouraged from clearing public areas because they might be liable for any injuries if someone fell, the Government published on 22 October a "Snow Code" which provides common sense advice on how to clear snow and ice from public areas. This is available at:

http://www.direct.gov.uk/en/Nl1/Newsroom/DG_191868

Extent to which lessons were learned by the highway authorities following winter 2009–10

53. The Department for Transport has been informed that almost all local authorities undertook reviews of their winter service plans following the winter of 2009–10, and were better placed to deal with the winter weather experienced in December. The Quarmby Audit concluded that most local authorities were in a good state of readiness and that their operational response was well managed during the first spell of severe weather in December.

Assessment from highways authorities of the quality of the weather forecasts received

54. Local Authorities receive their weather forecasts from different sources, including the Meteorological Office and private suppliers. These vary in scope, format and detail, based on the authority's own requirements. Generally these forecasts, particularly in the short term range of one to five days, are accurate, but this accuracy reduces with the longer range predictions. Forecasts on temperature, and the likelihood of snow fall, are also usually accurate over the short term, but the level of snow fall can be extremely difficult to predict as this can have large variations over relatively small distances. This caused problems for a number of authorities who experienced unexpectedly heavy snow fall in their area, or parts of it, during December.

Quarmby Recommendations Relating to Strategic and Local Roads

55. The onset of early severe winter weather did place pressure on the salt supply chain, and the stocks held by local highway authorities. However, the country entered this winter season much better placed than last year in terms of salt stocks, and together held over 1¼ million tonnes of salt at the start of winter, independent of the new national strategic reserve.

56. The Winter Resilience Review and Audit made eleven recommendations regarding the supply and utilisation of salt. Where these fell to the Department for Transport or to HA they have now been completed, or are currently being implemented. The actions taken by the Department on the basis of these recommendations include:

- HA carried out assessments to investigate and confirm arrangements for sourcing and storing the salt. It also worked with its contractors, utilising existing contracts, to place orders with salt suppliers to import salt—where imported salt was required for the strategic reserve to supplement the normal domestically mined salt restocking process.
- A national strategic salt reserve of 600,000 tonnes has been set up. 289,551 tonnes of salt has already been delivered, and so far this winter nearly 89,000 tonnes has been allocated to English highway authorities in the first five releases of strategic salt.
- A year-round monitoring salt system has been established and is being used by the Department to allocate stock from the strategic salt reserve.
- The Review recommended that wherever possible a benchmark of holding salt stock that allows 12 days/48 runs of usage is adopted. This has been highlighted to all local authorities by the Department.
- On 3 November an update to existing guidance on winter service was published. The Government wrote to Chief Executives of all local highway authorities in England to alert them of this revision.
- On 12 November the Government wrote to all English authorities to emphasise the importance of working together to keep our transport network moving this winter, including taking forward the actions from the independent Winter Review.

— On 24 December new guidance on salt spreading rates was published on the UK Roads Liaison Group website. The Government again alerted all English authorities to this new advice.

PORTS

57. Extreme weather disrupted activity at several significant ports during both cold spells. Following the first heavy snowfall, operations in ports (and their associated supply chains) were generally slowed but not stopped in the worst affected areas (Tees, Humber, Felixstowe, Thames). This led to short term dislocation and additional costs to ports, particularly through de-icing of equipment, snow clearance and employment of hauliers. These factors resulted in extended journey times for the delivery of goods.

58. Some ports were inaccessible for part of a day due to blocked or untreated access roads. Several ran low on supplies of salt; some critically so until the Department intervened and facilitated resupply through HA or the local authorities.

Extent to which lessons were learned by the ports sector following winter 2009–10

59. A significant number of ports experienced problems very similar to last year. There are a number of possible causes including:

— Undue reliance on contracts with suppliers that only "endeavour" to ensure salt resupply.

— Undue reliance on the intervention of local authorities.

— A lack of investment in adequate on-site stockpiles (this may be through financial or space constraints rather than an indication of a lack of forward planning).

60. Discussions with the sector are continuing to confirm the source of problems and identify possible solutions by the end of February 2011.

Assessment from the ports sector of the quality of the weather forecasts received

61. Weather forecasting in the maritime sector is mainly focused on conditions at sea. Ports generally use the public forecasts in terms of conditions on land

Quarmby recommendations relating to ports and the Maritime Sector

62. The Quarmby Review and Audit make no specific remarks on the maritime sector. The Quarmby Review noted that;

— virtually all rock salt users outside the highway authorities—ports, industrial estates, hospitals—had difficulty obtaining salt from UK producers, and many had to import;

— local authorities were inconsistent and the access to key sites such as ports, rail terminals etc was a problem;

— ports experienced serious problems obtaining salt for their own premises, particularly when Salt Cell was in operation; and

— many contractual commitments by salt producers were in abeyance for the duration of the emergency.

63. On this basis the Quarmby Final Report did briefly consider the issue of access to ports and other key installations. It concluded that these facilities can require levels of salt that are relatively small and inexpensive so they should increase their pre-season stock holdings rather than rely on in-season re-stocking. They should also engage with the relevant highway authority(s) to ensure that there is clear understanding on responsibilities and that the relevant access roads feature on the highway authorities' priority gritting network.

64. The situation experienced by many ports in December 2010 matched that in the previous severe winters. Although there was a greater general availability of salt compared with winter 2009–10, a number of ports lacked sufficient salt for their facilities or for their access roads. The Department for Transport sometimes had to intercede on their behalf to ensure mutual aid from local authorities or HA stock to enable them to continue operations.

RELAXATION OF DRIVERS' HOURS RULES

65. Relaxation of the EU driver's hour rules[1] can be made by a Government for up to 30 days in times of emergency or in exceptional circumstances (eg severe winter conditions), provided the European Commission (EC) is immediately informed. The Department for Transport has in place clear procedures for assessing the case for relaxing the EU rules and issues guidance to external stakeholders on a quarterly basis which includes the criteria that we use.

[1] EU Driving hours are normally capped to nine hours a day (extendable to 10 hours twice a week) and 90 hours every fortnight (but no more than 56 hours in any single week). Breaks need to be taken for 45 minutes for every 4.5 hours driving and at least 11 hours of daily rest need to be taken each day. Regular weekly rest of 45 hours is also required.

66. In all cases the Department needs to be satisfied that a relaxation is necessary to deal with the serious disruption to the supply chain and the relaxation period is strictly limited, as the working hours rules are there to maintain road safety. It would not be appropriate to allow drivers to drive for very long periods—particularly in difficult driving conditions—without clear evidence that relaxing the rules will make a real difference to the delivery of critical supplies.

67. During the recent severe weather the Department granted a number of temporary and limited relaxations to assist with deliveries of a number of essential supplies; including heating oil, solid fuel, airport de-icer and animal feed. More general relaxations for hauliers suffering supply chain problems caused by the heavy snowfalls and icy weather were also granted, applying initially to the whole of Great Britain but for a longer period in Scotland.

68. Immediate notification of the relaxations were sent to stakeholders, including VOSA, the Police, the companies involved, their trade associations and contacts in Industry.

Winter Tyres

69. During the recent severe winter weather a number of enquiries were made about the need for legislation to require the use of winter tyres. The Department does not believe there is a strong case for legislation requiring winter tyres to be fitted but it is for consumers to fit them should they choose to do so. Their decisions should depend upon driving conditions and types of journeys undertaken (eg motorists who expect to drive in areas where conditions are persistently cold or where snow and ice is present for long periods may find it helpful to change their tyres in the winter).

70. However under the provisions of the Road Vehicles (Construction and Use) Regulations 1986, tyres should not be used unless they are fit for the use to which the vehicle is being put and not where there is a danger that they might damage the road surface.

71. Typically motorists in the UK will find that that the standard tyres fitted to their vehicle have a tread pattern and tyre compound that ensures good performance in a wide range of conditions and they can be used throughout the year.

February 2011

Supplementary evidence from the Department for Transport (AWC 12a)

I have seen Colin Matthews' letter to you of 15 March regarding a clarification of his oral evidence to the Committee.

I feel that I need to place on record that, at the time I first contacted BAA to discuss the Government's offer of military assistance, just after 8:00 am on Tuesday 21 December, Heathrow's southern runway was still covered in snow. There was no discussion on the timing of any deployment of troops. The only reason expressed to me for the decision to decline the offer of assistance was that, at the time it was made, there was no requirement for unqualified labour.

I hope this is helpful.

February 2011

Further supplementary evidence from the Department for Transport (AWC 12b)

When I gave evidence to the Transport Select Committee on 14 March in relation to the above Inquiry I promised to write with further information on two issues, my Department's Climate Change Adaptation Plan and road salt resilience levels.

Climate Change Adaptation Plan for Transport, 2010–12

This document was published on 31 March 2010. It aims to raise awareness of the risks and opportunities that long term climate change may pose to the UK's transport infrastructure and operations. I was asked why snow and ice was not included within the Plan. Consideration of severe snow and ice was not included as it is a weather variable that, according to latest climate science, is not projected to increase in frequency or severity as a result of long term climate change.

There remains a degree of uncertainty regarding the changes to UK snow and ice as a result of climate change, but the indications are that the frequency and severity of these events may reduce in the long term. We recognise that the risks from severe winter weather remain and that we need to ensure an appropriate level of resilience and contingency planning is in place. This continues to be managed as a short and medium term strategic issue in line with Cabinet Office requirements.

Road Salt

The Committee was interested in the daily usage of road salt during this winter.

I attach a table at Annex A which shows total stock holdings for this winter based mainly on data from the weekly audits that were undertaken with highway authorities. As you will understand, the daily usage of salt by highway authorities is highly dependent on weather. To make an estimate of such usage, we have to take the difference in stock levels held between audits and factor in deliveries from UK suppliers and from the strategic national stockpile, as well as any known local authority imports. Consequently, the estimated daily usage figure varies wildly between each audit period and is directly proportional to severe winter weather.

To put this into context, our audits showed that most intense salt use was in the week preceding the audit of 20 December, in which we estimate that 213,000 tonnes of salt was used across England. This averages around 30,000 tonnes per day and given the stock of around 796,000 tonnes held at the time, we would have had enough salt to cope with a further 26 consecutive days of this extreme weather before fully depleting stocks, before taking into account domestic salt production, further imports of the strategic stockpile and any additional local authority imports.

Conversely, the week preceding 5 January audit showed an average daily usage of only 7,500 tonnes which would have seen authorities able to cope until almost the end of winter with no further input from domestic suppliers or imports.

The range of actions we took in the run up to and during the severe winter weather, including building up the first ever strategic national stockpile of salt, ensured that resilience was significantly improved compared to last winter. The total salt stock held in England (including the national stockpile and Transport for London's strategic stockpile) following the last audit undertaken on 7 February 2011 was around 874,000 tonnes. Comparing this to the same time in 2010, the country held around four times more salt.

Due to the more benign weather conditions, we took the decision in early February 2011 to suspend weekly monitoring of salt supplies. My Department will, however, undertake a comprehensive restocking exercise with highways authorities and this is scheduled to take place at the end of March 2011. This will look at the position as we exit this winter as well as planned salt restocking in the run up to the 2011–12 winter season. We will also agree proportionate arrangements for further monitoring in the lead up to next winter (in line with David Quarmby's recommendation on this point).

I hope this is helpful.

Annex A

ROAD SALT STOCK LEVELS IN ENGLAND (AMOUNTS IN TONNES)

Audit Date	*Local highway authorities*	*Highways Agency Operational Stock*	*National Strategic Salt Stockpile*	*Transport for London Salt Stockpile*	*Total for England*	*Equivalent salt stocks in winter 2009–10*	
						Date	*Total for England*
22 November 2010 (forecast based on earlier survey)	971,738	249,777	86,736		1,308,251		
6 December 2010 Audit	672,412	203,178	124,051	27,500	1,027,141		
13 December 2010 Audit	625,753	173,906	148,000	27,500	975,159		
20 December 2010 Audit	463,371	149,316	156,051	27,500	796,238		
29 December Audit (with estimates for nil-returns)	385,870	134,032	134,051	27,500	681,453	Comparable data not available (audits did not start until Salt Cell was activated in January 2010)	
5 January 2011 Audit	373,260	129,916	137,390	27,500	668,066	7 Jan 2010	247,636
10 January 2011 Audit	349,638	124,490	136,790	27,500	638,418	11 Jan 2010	171,487
17 January 2011 Audit	384,889	124,766	186,790	27,500	723,945	18 Jan 2010	183, 527
24 January 2011 Audit	375,468	127,782	177,246	27,500	707,996	25 Jan 2010	215,277
31 January 2011 Audit	380,889	130,906	223,290	27,500	762,585	1 Feb 2010	197,492
7 February 2011 Audit (with estimates for nil-returns)	429,034	140,081	278,106	27,500	874,721	8 Feb 2010	219,990
Current stockpile position			Approx 490,000 (after distribution of around 97,000 tonnes during winter period)	27,500			

March 2011

Written evidence from the rail industry's National Task Force (NTF) (AWC 13)

1. Introduction

This submission is provided by the rail industry's National Task Force (NTF).[2] It is based on information provided to the second Quarmby review in mid December 2010 as updated by further reviews and analysis carried out within each constituent part of the industry.

2. Context

2.1 When considering the performance of the rail industry, it is very important to recognise that, during the recent cold spells, the weather was colder and there was more snow than for many years.[3]

2.2 Between the middle of November and the first week of January the UK experienced two distinct, very cold spells with widespread snowfall. December 2010 was the coldest December on record since 1890 with average maximum temperatures 4.6 degrees below average across England and Wales and average minimum temperatures 5.7 degrees below average. Where snowfields formed there were exceptionally low temperatures of around −20 degrees.

2.3 In addition to low temperatures, there were severe disruptive snowfalls badly affecting large parts of the country. Many areas had snow depths of over 20cms, with some spots exceeding 30–40cms and parts of north east England and east Scotland experiencing local depths of 50–80cms.

2.4 While the cold spells of the winter of 2009 and 2010 were of a similar magnitude, 2010 was different in that the extreme overnight minimum temperatures were more widespread, the severe cold lasted slightly longer and snowfall was more geographically widespread.

2.5 The first spell of cold weather in 2010 came much earlier than normal—in recent years the industry would still have been dealing with the quite different effects of autumn until early December. There were also considerable variations—both across the network and day to day—with the changes sometimes being sudden and rapid.

2.6 Scotland and the north of England, particularly the North East, were affected by snow and extreme cold throughout and were therefore badly disrupted. Elsewhere many other operators continued to provide good services given the circumstances. In the South East the two cold spells were each shorter than last year but more severe. Details of variations in snow fall and temperature are at Appendix 1.

2.7 The NTF was already monitoring a number of workstreams and projects that the industry had developed to deal with more severe winter weather following the cold spell during the 2009–10 winter. The key ones were aimed at addressing the following issues and are covered in more detail in this submission:

- Improving the performance of the direct current (DC) network and rolling stock in the South East.
- Developing contingency timetables when either infrastructure or rolling stock is unavailable.
- Providing more accurate and timely information to passengers.

3. Managing the Risks of Seasonal and other Unusual Events

3.1 Over many years the industry has developed and refined standard processes for dealing with variations to normal planned services, whether they are network wide or local. The industry has also established seasonal planning arrangements that consider winter performance and preparation in particular. As the infrastructure controller, Network Rail plays a central, co-ordinating role for these issues within the industry with train operating companies (TOCs and FOCs) as active partners. Amendments to train plans / timetables are generally proposed by operators, coordinated by Network Rail and implemented through the industry's joint Route Controls.

3.2 For mitigating the effect of winter weather these measures include:

- An annual seasonal weather conference held in September and attended by up to 180 key staff from within and outside the rail industry. This draws on a wide range of experience from the UK and abroad and is led by Network Rail.
- Preparing key route strategies for each Network Rail route and contingency timetables for specific train operators. These are based on a range of structured scenarios that anticipate short term reductions in infrastructure availability and/or the provision of rolling stock and staff. This is led jointly by Network Rail at a route level and each operator, for their own services.

[2] The National Task Force (NTF) is a cross industry body with senior representatives from passenger and freight train operators (TOCs and FOCs), Network Rail (NR), the Association of Train Operators (ATOC), the Department of Transport (DfT) and the Office of Rail Regulation (ORR). It was formed more than 10 years ago and meets four weekly with the primary focus on train service delivery. National PPM for franchised passenger trains which has risen from less than 75% to more than 90%

[3] These are considered to be 28/11/10 to 8/12/10 and 17/12/10 to 24/12/10.

— Providing updated detailed weather forecasts[4] as a trigger to moving to a daily network wide weather conference call. This is led by Network Rail, takes place at 10:00 and 16:00 and includes all train operators and representatives from other relevant stakeholder organisations such as the Department for Transport, Transport Scotland, the Office of Rail Regulation, the British Transport Police and Transport for London.

— Network Rail coordinating the delivery of specialist plant to mitigate the impact of snow and/or ice on the infrastructure where this may affect train operation—resources include snow ploughs, multi purpose vehicles (MPVs) to try to prevent ice sticking to the conductor rail etc—and the operation of service trains to keep the network clear eg "ghost trains". In many cases, train operators will provide resources to operate ghost trains on Network Rail's behalf.

— More detailed local planning, led jointly by Network Rail and train operators, at route and operator level after the national conference call to finalise the proposed next day train service (planning Day B on Day A) in the light of prevailing and emerging conditions.

— Providing timely and accurate information to passengers, freight operators and other parties. This aspect is described in more detail below, and is led by train operators with Network Rail providing the base timetable data for systems.

3.3 In developing these plans both operators and Network Rail need to consider a wide range of issues such as:

— The availability of staff to keep the infrastructure open, to plan and operate services and to provide additional resources at stations and elsewhere. Their journey to work may also be affected by the conditions and perhaps in a location with different prevailing conditions.

— An assessment of how much of the infrastructure is likely to be available based on the forecast at the time. An earlier decision (on Day A) gives more time for detailed planning and communication but may be less accurate locally. Furthermore, the forecast may change during the course of the day. It has not been uncommon for the forecast for precise locations and the severity of snowfall to change in the 24 hours leading up to the event.

— The impact of snow and ice on rolling stock.[5] Operating a reduced or slower service significantly reduces damage in service and therefore also quickens the restoration of a normal service once the weather has improved—a trade off is made between service provision in the severe weather and shorter or longer recovery from the damage that occurs. However it has a major impact on performance and capacity.

— There is also a need to reconcile the more passenger-oriented key route strategies with the needs of freight operators to access branch lines and freight terminals. This is particularly important where rail freight is relied upon by other key parts of Britain's infrastructure eg to supply coal to power stations and salt to local highway authorities.[6]

— Interaction between operators' preferences. On the many route sections with a mix of traffic there is a requirement to reconcile differences between each operator's contingency timetable.[7]

— Usually in these circumstances operators seek to provide the maximum capacity possible and consciously at the expense of reliability. When other modes are struggling, and it becomes vital to provide capacity to move as many passengers as possible, some operators will rightly opt for volume over performance.[8] But this must be a balance between prudence and ambition. On more intense commuter networks during difficult snow and ice conditions, it is generally better to focus on keeping the main routes open and potentially close the network slightly earlier in the evening where the weather forecast suggests that network operating conditions may deteriorate than risk passenger trains becoming stranded in remote locations[9]—hence the key route strategies and the importance of early and accurate information.

4. Provision of Passenger Information

4.1 It has been acknowledged elsewhere that the industry takes very seriously the provision of timely and accurate information. It fully recognises that providing poor information to passengers and others, through

[4] The rail industry is one of the larger commercial users of detailed weather forecasting and recently switched to the Meteo Group.

[5] One long distance train operator had to replace a normal year's worth of bodyside windows in two weeks.

[6] In the North East, the lines to Ferrybridge Power Station were prioritised, as were the lines to Boulby Salt Mine which were kept open throughout the cold periods to enable Freightliner to deliver vital supplies of salt to local highway authorities for road gritting.

[7] On the Brighton Main Line for example Southern may wish to operate a contingency timetable that best suits their operations across Network Rail's Sussex Route whereas First Capital Connect may wish to operate a normal service to suit the needs of customers both on the Sussex route and across London towards Bedford.

[8] This was the case with long distance operators such as Virgin who had extra demand from transferring domestic air passengers in addition to a very large number of reservations. Running the full service enabled them to handle many more passengers. Operating at a reduced line speed of 100mph minimised rolling stock damage but punctuality dropped by around 15 percentage points.

[9] In retrospect the wrong decision was made in Wessex for 2 December where the full South West Trains service was proposed but late changes in the weather patterns meant delivery on the day was very poor. It is a fine balance to avoid both under-reaction and over-reaction when judging the impact of uncertain weather forecasts 24hrs in advance.

whatever channel and at whatever point in their journey, including prior to deciding whether or not to travel, adds to annoyance and distress.

4.2 While there have been some welcome overall improvements, the industry recognises that there were still significant problems encountered locally, especially in the first cold spell. The intent remains to provide customers, at any point during their journeys or while planning them, sufficient accurate consistent real time information for them to make informed choices about their options. The main issues are set out below:

4.2.1 Implementing contingency timetables. This is a complex process as it covers a rapid and short term assessment of the likely availability of infrastructure, staff and rolling stock which must then be integrated into very detailed and integrated plans. Furthermore, while it may not be appropriate for every operator to move to a contingency timetable, there needs to be a significant degree of integration between each operator's customer-driven preferences as the network is operated on the day. In addition the prevailing weather situation itself will change, sometimes very rapidly.

4.2.2 Uploading contingency timetables. The new timetabling system introduced by Network Rail, ITPS, enables contingency timetables to be loaded for the first time directly into downstream passenger information systems. Examples of the wide range of systems that depend on this data include National Rail Enquiries (NRE), train operator station information systems, online journey planner tools, live departure board information etc.[10] Previously contingency timetables could only be loaded directly in to the back office operational systems used by the industry and took two days to reach customer-facing systems. The industry has therefore shortened this to a next day availability since the severe weather in January 2010. The cut off time for upload is now 17.00 Day A for Day B with the relevant operator and route making a decision to implement the contingency timetable no later than 13:00 in order for operational planning staff to process the timetable changes.

4.2.3 Downstream provision of information. Early in 2010 NRE[11] began a programme to enhance key systems to improve their performance after the previous winter. External consultants validated the improvements prior to the latest severe weather through a full load test based on the demand on 7 January 2010 and confirmed the enhancements had been successful.

4.2.4 NRE had additionally introduced new and updated services since January 2010 including:

— Social Media: proactive messages can now be sent to NRE's followers on Twitter and Facebook as well as SMS subscribers;[12]

— National Service Indicator (NSI): giving an overview of the network by operator and route affected went live on 28 October 2010 and had over 1 million views during the bad weather; and

— NRE Helpline: which gives passengers direct access to recorded information went live on 1/12/10.

5. Actual Service Delivery

5.1 As the cold weather developed the industry geared up towards its normal response mode with the first national conference on 1 December 2010.[13] Generally it planned on Day A to operate 92% of a normal service on Day B (19,800 trains instead of 21,600). Six train operators chose to move to contingency timetables on most days and seven chose not to. Ten had not prepared them in detail.

5.2 Typically a further 12% trains were cancelled on the day in the light of prevailing conditions and/or operational issues with a further 18% running late giving a punctuality level (as measured by the Public Performance Measure, or PPM) for the revised plans of around 70%. The total number of passenger trains measured as on time each day was therefore around 13,800 compared with normal punctuality levels of 19,900—92% of 21,600 trains.

5.3 There were however wide variations by day, geography and operator (see Appendices 2 and 3). On some days the capacity provided by First Capital Connect, SouthEastern and Southern was less than 70% of normal. However London Overground ran 95% on average and maintained PPM at around 87%.

5.4 The lower levels of performance have had a major effect on the industry's overall targets during Network Rail's current five-year Control Period to April 2014. Before the recent autumn and winter the majority of the industry's performance measures were at least a year ahead of the five-year trajectory for improvement. These two spells of bad weather have meant that all that progress and more has been lost—some measures have gone back two years. Network Rail is likely to miss virtually all its regulatory targets in 2010–11 and delay minutes attributable to train operators have risen to levels not seen since 2008.

5.5 Whilst performance is now beginning to recover, the rolling stock fleet suffers the effects of damage from snow and ice for some time after the snow has melted. To run trains at their full length in order to maximise capacity for passengers, a proportion of rolling stock is in service with known defects and other

[10] In total ITPS interfaces with around 170 other industry systems.
[11] A part of ATOC.
[12] Around 1 million messages were sent on 1 December 2010.
[13] There were 22 such conference calls during the cold weather.

deferred maintenance. This has the potential to continue to affect service resilience in the event of further train system failures. As a result of the extent of the problem and the choice to prioritise capacity, this situation will take several months to completely rectify.

5.6 The intense cold and now the more recent thaw have also affected aspects of the infrastructure. Like the rolling stock, some routine maintenance had to be delayed and, in addition, a number of large renewal jobs had to be cancelled.

5.7 This was the first major test of the rail industry's new processes for providing better passenger information (ie contingency timetables, uploaded via ITPS, directly fed to train operator and NRE systems) and it led to some local errors causing the base timetable data file to be inaccurate. For example on a few occasions, some train operators were displaying incorrect or duplicate timetables—on websites and at stations. These input errors were corrected manually where possible—a labour intensive task. The reasons behind the base data provision problems were quickly identified and actions were taken which meant that the process worked much more reliably in the second bout of snow.

5.8 Although there were quality problems with the data feed to NRE, their new systems worked well from a performance perspective. During the severe weather their channels experienced unprecedented demand—the website recorded volumes 50% higher than the previous (7 January 2010) high, peaking at 162,000 visits in an hour and totalling two million visits on the busiest day. The website response times remained within specified service levels and pages were served with no variance to a normal day. This compares favourably to 12 months ago when many customers experienced slow responses. Demand to the contact centres was also high, with call volumes reaching four to five times the normal volume. Queues were long, but a high capacity speech recognition service offering all timetable and real time information was also available to callers.

5.9 Four train operator websites did shut down for short periods under the load of additional demand although where this happened some replaced their normal service with links to the National Rail Enquiries site. All other TOC sites coped with the high levels of demand they faced, following a programme of investment during 2010 in response to the experience during the 2009–10 winter.

6. Comparisons with Winter 09/10 and Europe

6.1 In general, the majority of the train operator and Network Rail plans implemented after the January 2010 event were reasonably effective across most of the network. Point heaters generally worked, except for example where cable theft removed the power supply; fewer train doors froze in service despite the longer, lower temperatures; ghost trains ran to keep the infrastructure clear of forming ice and prevent points from freezing; and de-icing supplies were robust.

6.2 Train operators adversely affected by traction motor failures last year had taken preventative measures to limit the impact of ice and snow. Generally these were successful, but this year other train operators that had not experienced problems last year suffered as a result of the more extreme weather encountered. In addition, new failure modes were witnessed by train operators this year that had not been seen previously. One of the most high profile failures of this winter reported in the media was directly as a result of the rolling stock being insulated from the traction supply due to the of amount of ice on the conductor rail. Horn socks worked on some fleets, so there is a need to identify the reasons for any differences in effectiveness. Coupler bags were a mixed benefit, for some services they were necessary at one part of the journey only and hence could introduce operational delays because the bags actually froze and took time to remove.

6.3 That said the sudden impact of the first cold spell took parts of the industry by surprise. Network Rail did not have all its equipment in proper working order and this affected performance on the DC (direct current)[14] network in the South East as the conductor rail could not be kept free of ice for reliable train operation. This situation was exacerbated by the fact that not all trains were initially operating in "ice mode" and there were some units that had yet to be modified with the latest software. With hindsight, some basic operating mistakes were also made in implementing the key route strategies.

6.4 While many of the normal mitigations worked the severe nature of the weather was beyond the design limits of some equipment currently used and parts of the network became overwhelmed by snow or suffered because of the extreme cold.

6.5 The subsequent response in the South East to the second cold spell was much better even though it was more extensive than both the first one and that of the previous year. Volume and punctuality were much improved, as was information provision to passengers once the initial difficulties with the ITPS process had been resolved.

6.6 Throughout much of Scotland and the north of England, the network remained under snow and the delivery of a decent service remained a considerable challenge.

6.7 Much of Europe also suffered. The summary at Appendix 3 is provided by the European Rail Infrastructure Managers group of which Network Rail is a member.

[14] The DC network uses an exposed conductor rail next to the rails to provide tractive power which can become covered in ice. This system is used by South West Trains, Southern, SouthEastern, First Capital Connect and London Overground.

7. Opportunities for Further Improvement

7.1 Immediately after the onset of the cold weather, the NTF began a further review of the rail industry's performance, building on the work started following the January 2010 snow event. For the DC network this is covering:

- Refinement of the traction control systems on some rolling stock. This will improve the resilience of the train to a degree of conductor rail icing by ensuring trains are in "ice mode" when they should be and also ensure that the train's main systems remain active even if the train becomes stranded, provided that good electrical contact can be established. This work is a continuation of work started in 2009.
- Provision of in service de-icing of the conductor rail by train operators' trains in addition to Network Rail's fleet of multi-purpose vehicles. This should provide a more extensive and accurate capability and is being piloted by SouthEastern with 20 units set to be modified. This pilot is part of the action plans from the lessons learned in January 2010.
- The further development of equipment to heat around 400m of conductor rail at stations and key junctions. This was piloted at 42 key locations in Kent and was found to greatly assist traction. Subject to the provision of funding, Network Rail intends to roll out this technology to further sites across Kent, Sussex and Wessex at a cost of £16 million subject to identifying the necessary funding. The pilot was again part of the action plans from January 2010 (see the picture below).

- The precise mix of actions will be agreed between the train operator and the route reflecting the businesses needs and, where they exist, differences in geography, operation and location.
- Static anti-icing track applicators operated by the passage of trains have been developed and are under test at Littlehampton and Oxted to assess their suitability in both depot and mainline conditions. This pilot is part of the action plan / lessons learnt from January 2010.
- Different chemicals to treat the conductor rail. The University of Birmingham has tested a variety of fluids for their anti-icing capability and their ability to stick to the conductor rail in rain or when a train passes.
- In addition 19 MPVs are to be modified to provide them with the capability to lay hot fluids. Initial tests of the heating and distribution equipment were successful and the first prototype will be entering service shortly.
- Longer term options to replace the DC system with overhead electrification are also being considered.

7.2 For operations across the rest of the network, the NTF is reviewing a range of issues including: provision, volume and function of snow clearing equipment, management of overhead wires in extreme cold and responding to large scale icing and thawing.[15] Temporary covers to keep snow from switches and crossings are being installed, protection for clamplock points being damaged by ice on train undersides has been designed and additional points heating equipment is being installed in some locations.

[15] More than 1,000 platforms are currently suffering from some form of damage as a result of the cold.

7.3 The NTF is driving ongoing work (begun early in 2010) in several areas in order to provide passengers with better information:

7.3.1 Embedding implementation of the industry information code of practice in Controls; this will be informed by an audit report undertaken at NTF's request by the ORR to assess compliance during the December 2010 snow.

7.3.2 Improvements to timetabling: while the new processes work well and are much better than what was available, they are still rather inflexible. There is currently a ten to twelve hour window between the 17.00 cut off for uploading contingency timetables and publication by NRE and train operator websites which normally occurs by 03:00 but can take up to 05:00. A review of the effectiveness and flexibility of this process in relation to timely and accurate information provision to passengers is underway.

7.3.3 Improving the effective dissemination of real time information to staff and passengers, addressing the cultural points raised by David Quarmby in his most recent report.

7.3.4 Providing one common national feed of information to station departure board screens through a radical programme of changes to over 60 systems—Phase 1 is underway with Virgin Trains with further investment of £3 million planned.

7.3.5 NRE is upgrading its journey planning systems to ensure that late changes to timetables (those only available after the contingency timetable upload) are available to passengers. Work is underway to assess how the latest timetable information may be made available through other journey planning, retailing and staff systems.

7.4 The industry guidance for stations and other areas was revised and re-issued in summer 2010. Train operators reported relatively low levels of slipping, tripping and falling accidents given the conditions.

8. Summary

8.1 The cold weather experienced in the UK in late November and December 2010, in terms of its specific geographical impacts, often fast changing nature and two extreme spells within an exceptionally cold December, posed major challenges not just to the rail network but to the country's transport system in general.

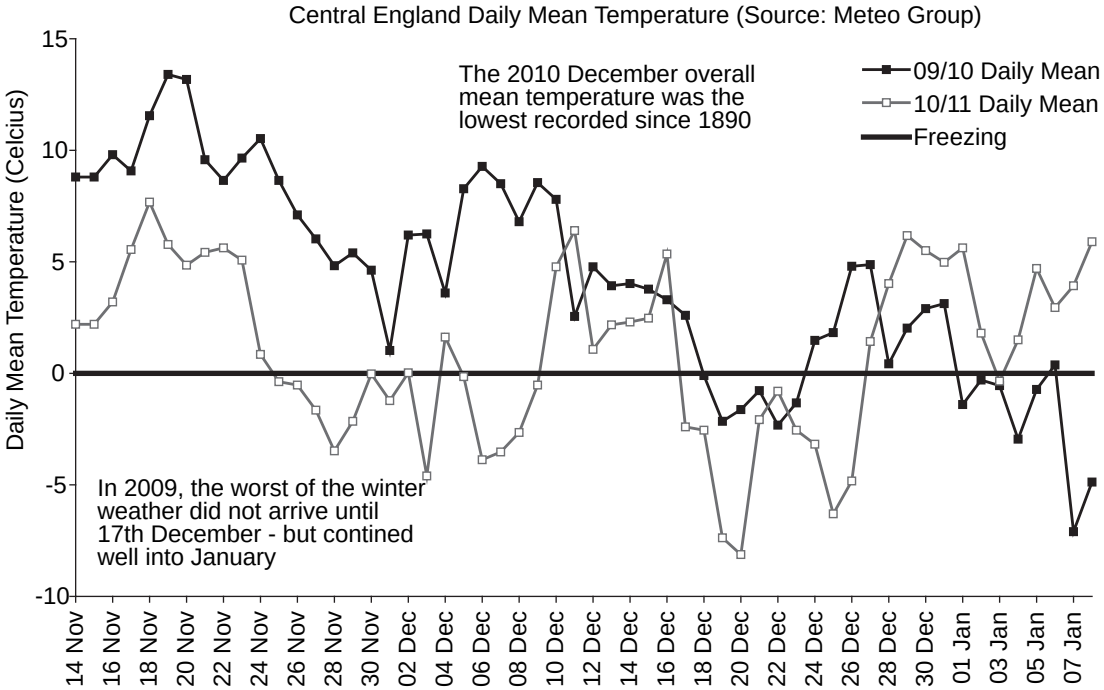
8.2 In responding to such weather, the rail industry was able to draw on processes which have been developed and refined over many years. The industry had also previously identified plans to deal better with extreme winter weather following the January 2010 cold spell. Some were in place by late November, and in most cases their implementation was reasonably effective across most of the network. Others, given their nature, were still in the process of being prepared. After the first extreme spell in the most recent bout of winter weather, the industry learned lessons which enabled it to cope better during the second extreme spell.

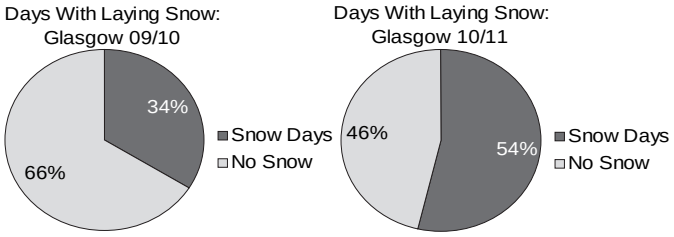
8.3 The combined result of the particular features of the late November/December 2010 weather, and the measures taken by the industry to manage its impacts, was that some aspects of service delivery and provision of passenger information worked well under the circumstances, but others did not. The ability of the industry to respond as it did owes much to the hard work and dedication of thousands of railway staff, many of whom worked in very testing conditions. But there are still areas of weakness that need addressing.

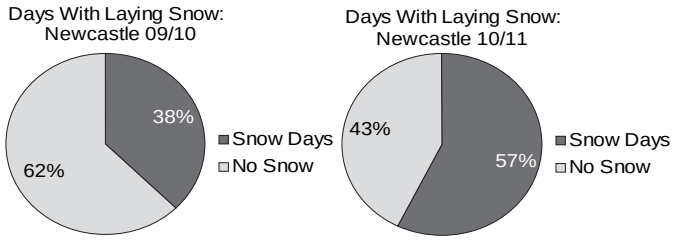
8.4 The effectiveness of the industry's response to the first of the more recent cold spells was covered in the second Quarmby review, and the industry's input was reflected in the recommendations contained in the subsequent report, which we welcome. We are continuing to take forward initiatives identified following the January 2010 cold weather, but many of the issues raised by Quarmby are complex and solutions are not immediate. These will continue to be considered in greater depth and will be tracked by the National Task Force. Where more immediate solutions are not available options will be incorporated into the Initial Industry Plan for Control Period 5 (2014–19) which will set out in September 2010 the industry's thinking on how it can meet the needs of rail users and funders in the longer term.

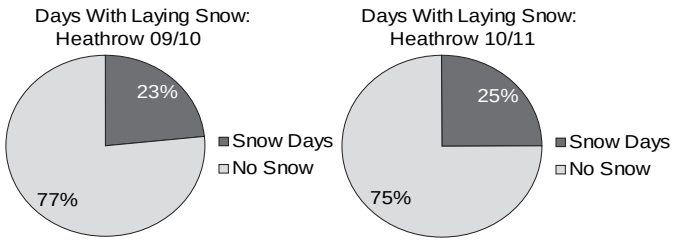
APPENDIX 1

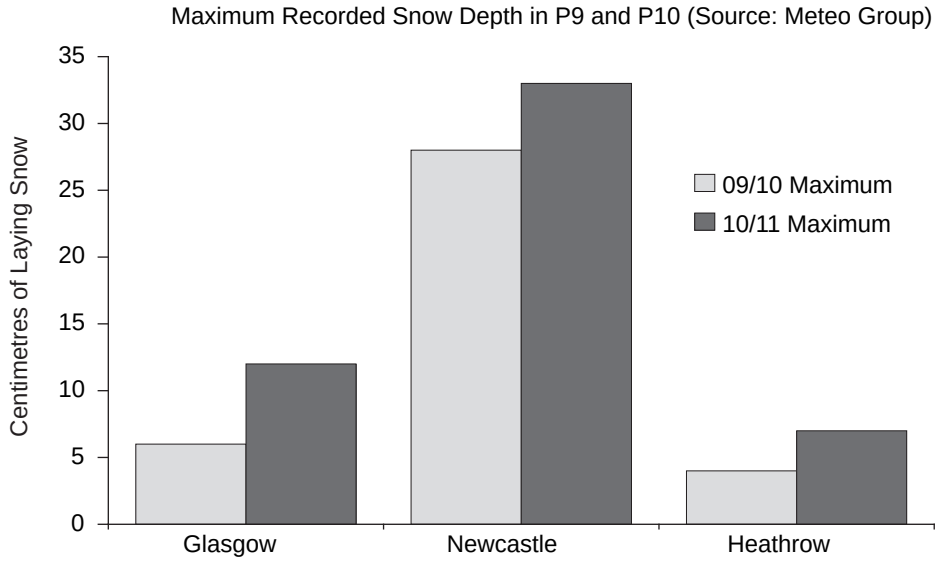
TRENDS IN TEMPERATURE AND SNOW FALL
14 NOVEMBER 2010 TO 7 JANUARY 2011





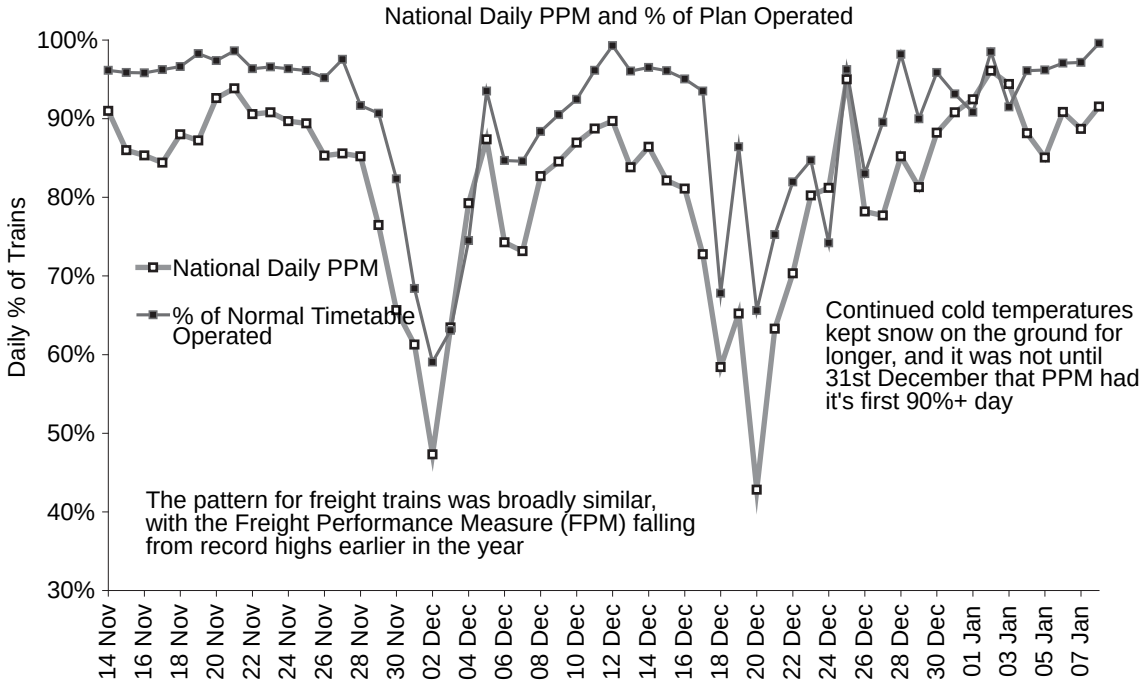






APPENDIX 2

SERVICE DELIVERY FOR FRANCHISED PASSENGER OPERATORS



APPENDIX 3

% PLAN AND PPM BY TRAIN OPERATOR

Rail services run 28 Nov to 24 Dec by Train Operating Companies

Daily performance - Red indicates more than a third of services cancelled

% Standard service finally run	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Mon	Tues	Wed	Fri	Sat	Sun	Mon	Tues	Wed	Thur	Fri
(net of extras/cancellations)	**28/11/10**	**29/11/10**	**30/11/10**	**01/12/10**	**02/12/10**	**03/12/10**	**04/12/10**	**05/12/10**	**06/12/10**	**07/12/10**	**08/12/10**	**17/12/10**	**18/12/10**	**19/12/10**	**20/12/10**	**21/12/10**	**22/12/10**	**23/12/10**	**24/12/10**
Trans Pennine Express	91	84	91	64	69	69	79	96	83	78	92	92	89	97	75	74	89	93	82
NX East Anglia	98	98	96	99	78	84	100	95	98	84	97	93	79	89	68	86	85	86	77
Northern	98	92	94	73	81	77	81	93	91	90	91	98	90	94	83	83	92	91	84
First Great Western	100	91	93	93	86	92	95	100	91	90	95	97	76	77	74	89	89	99	90
First Capital Connect	94	94	88	49	54	57	72	84	68	93	98	96	68	71	14	52	86	74	42
CrossCountry	82	81	93	78	82	76	91	81	86	80	92	93	70	87	52	81	82	90	69
London Midland	97	96	96	95	96	92	91	91	91	88	94	96	74	83	55	78	79	81	80
London Overground	84	99	83	82	55	68	76	81	100	100	99	95	66	107	86	94	91	93	81
East Midlands Trains	90	97	95	48	76	76	88	99	89	83	97	99	95	107	85	94	97	94	82
Firts ScotRail	79	67	56	47	51	44	50	88	41	32	33	99	84	90	68	67	60	61	53
East Coast	87	66	64	60	55	59	88	78	61	74	76	98	102	28	68	4	58	75	71
Merseyrail	95	96	98	98	98	97	98	85	98	99	100	92	67	56	54	16	26	28	23
Virgin Trains	98	93	95	91	89	96	98	71	92	78	85	99	80	65	58	56	62	81	78
Arriva Trains Wales	116	97	98	95	94	97	98	115	93	97	97	75	64	97	60	66	67	96	77
Chiltern	58	94	100	99	98	95	97	120	98	96	100	89	59	31	11	61	65	66	37
c2C	100	99	95	88	70	67	76	132	80	95	97	96	81	101	87	95	99	98	86
Southeastern	97	92	43	15	11	18	56	104	86	96	96	94	51	88	58	86	93	93	85
Southern	94	95	72	36	0	19	36	83	91	90	97	91	49	100	82	91	92	96	83
South West Trains	101	99	99	97	43	61	66	106	98	99	100	98	65	83	61	61	99	98	82
NATIONAL AVERAGE	**95**	**92**	**83**	**69**	**59**	**63**	**74**	**94**	**85**	**85**	**89**	**94**	**72**	**87**	**67**	**77**	**83**	**86**	**75**

Written evidence from Virgin Atlantic Airways (AWC 16)

Introduction

1. Virgin Atlantic Airways welcomes the Committee's inquiry into the impact on transport of recent adverse weather conditions and is pleased to submit comments for consideration.

2. Virgin Atlantic was established in 1984 to provide a competitive customer service orientated alternative for business and leisure passengers on long-haul routes between the UK and major destinations. We serve 28 destinations in the US, Caribbean, Africa, India, Asia and Australia from Heathrow, Gatwick, Manchester and Glasgow. We operate 38 long-haul aircraft, employ over 8,000 people and carry more than five million passengers and 200,000 tonnes of high-value exports and imports each year.

3. Our flying programme was disrupted by two significant snow events in December 2010. The first event mainly affected operations at Gatwick airport between 1 December and 4 December. The second event affected Heathrow and Gatwick airports and caused severe disruptions to our services between 18 December and 23 December. Our services from Gatwick largely cater to the leisure and visiting friends and relatives (VFR) markets travelling to the leading tourist destinations in the USA and the Caribbean. Our services from Heathrow cater to the business, leisure and VFR markets travelling to the world's leading cities.

4. In total approximately 55,000 passengers were affected by the disruption. We are still receiving claims for hotel accommodation and subsistence expenses, as well as refunds for unused tickets, so the full cost of the disruption will not be fully clear for several more weeks. We anticipate that the overall cost could be more than £10 million.

First Snow Event—Gatwick—1 December to 4 December

5. 18 Virgin Atlantic flights were cancelled due to Gatwick's closure between the early hours of 1 December and 06.00 on 3 December. Approximately 5,000 passengers were affected by the disruption:

- 1 December—all five outbound flights were cancelled and inbound flights were diverted to Heathrow. Five ferry flights departed from Heathrow to the Caribbean and USA.
- 2 December—all five outbound flights cancelled and inbounds diverted to Heathrow. Five ferry flights departed Heathrow
- 3 December—reduced programme operating from Gatwick, with one departure transferred to Heathrow.
- 4 December—full flying programme from Gatwick restored.

6. Heathrow airport itself was largely unaffected by the snowfall at Gatwick, but we were forced to cancel two flights as some crew and ground staff were unable to get to work due to poor road conditions.

Second Snow Event—Heathrow—17 December to 23 December

7. 170 Virgin Atlantic flights were cancelled during the disruption at Heathrow between 18 and 23 December. Gatwick airport was also affected, closing on the morning of 18 December, but re-opening fully on the following day. Approximately 50,000 passengers were affected by the disruption.

- 18 December—40 flights cancelled including our entire Heathrow operation. Fourteen aircraft were diverted to airports across UK and Europe, including Lyon, Marseille, Palma, Hannover, and Shannon. Just three Gatwick flights departed before that airport also closed, with two inbounds diverted to Stansted.
- 19 December—Heathrow opens but with severe restrictions. No inbound flights accepted and just four Virgin Atlantic departures. Gatwick reopened in the morning allowing us to operate a full programme, albeit with severe delays.
- 20 December—Heathrow introduces a capacity constraints policy that allows airlines to operate one third of their normal flying programme. We operated a limited number of outbound flights and two ferry flights. Stranded aircraft re-position to Heathrow when the airport starts accepting inbound flights.
- 21 December—Heathrow's second runway finally re-opens late afternoon. We operate 10 outbound flights.
- 22 December—12 out of 20 outbound flights depart.
- 23 December—15 out of 21 outbound flights depart.
- 24 December—full Virgin Atlantic Heathrow flying programme resumes.

How we Helped our Passengers

8. Virgin Atlantic's priority throughout the period of disruption was the welfare of our passengers. We did everything possible to ensure the welfare of our customers within the constraints of the disruption we faced.

9. As with any event that causes a flight to be cancelled or delayed for more than five hours, we offered all affected customers the following options:

- cancel and receive a full refund of unused flights;
- cancel and re-book/re-route on a later, more convenient date to same destination;
- cancel and re-book on a Virgin Atlantic flight to another destination—if the new fare is lower the difference will be refunded or any additional fare cost will be charged; or
- do not cancel and re-book/re-route to the same final destination on the next available flight.

10. As an EU-based airline, all affected passengers who chose the next available flight option, whether stuck in an overseas destination or in the UK, were covered by EU regulation 261/2004 which establishes common rules on compensation and assistance to passengers in the event of denied boarding, cancellation or long delay of flights. We offered the full EU care package to all stranded passengers:

- Hotel accommodation.
- Meals and refreshments in reasonable relation to the waiting time.
- Two short telephone calls, or telex, or fax, or e-mail messages.
- Transport to and from the hotel.

11. A letter setting out passengers' entitlements under EC261 (including instructions for how to claim back all reasonable hotel and subsistence costs) was circulated to all of our airport staff on the evening of Friday 17 December, ready to be handed out to passengers in the event of any disruption the following day. Our airport staff worked tirelessly throughout the disruption to look after stranded passengers in extremely challenging circumstances and with limited information from the airport.

12. Following the experience of the volcanic ash disruption, we knew that it would be impossible to secure sufficient hotel accommodation for all disrupted passengers in the vicinity of Heathrow given the number of people affected across all airlines. We prioritised passengers requiring special assistance and those stranded far away from home. Staff also distributed refreshment vouchers, complementary beverages and blankets at the terminal.

13. Our call centre handled over 85,000 calls between 18–24 December. We would normally expect to handle around 38,000 calls in the same period. Staff from across the business volunteered in our customer contact centres to handle the sheer volume of calls. At times we experienced long call wait times (over 3hrs), but by 20 December our average wait time was seven minutes. We also issued more than thirty detailed web updates to passengers, contacted disrupted passengers by SMS messages where contact details had been provided, and used social media to provide real time updates and answer queries.

Lessons to be Learned

14. Virgin Atlantic is contributing to this inquiry and BAA's own investigation to ensure that lessons are learned and the right mitigation measures are put in place to minimise disruption in the future. We recognise that heavy snowfall in a short space of time will probably always cause some disruption, but our experience in December at Heathrow makes us certain that the response to such events can and must be improved. There are a number of issues that could be explored at length, but our two principal concerns are around:

- the execution of the crisis management plan ("Snow Plan"), including the timeliness of Heathrow's actions and the length of time it took to open the second runway; and
- the standard of information flow from BAA to airlines.

Execution of the crisis management plan

15. We are concerned that key elements of Heathrow airport's Snow Plan were not implemented. For example, the snow plan states that *"Airside Operations Management may, if appropriate, call a Snow Contingency Meeting once a significant snow fall likely to effect the operation is forecast"*. The first meeting involving airlines was not held until 11.00 on Sunday 19 December, 24 hours after closure and following intensive lobbying by the airline community including Virgin Atlantic. By contrast, Virgin Atlantic's own "Amber" Team met at 1500 hrs on Friday 17 December and contingency plans were immediately put into action including securing accommodation close to the airports and Head Office for key personnel.

16. Like the Prime Minister at the time, we were particularly concerned about the lack of urgency at which the second runway at Heathrow was re-opened. Reasons cited included a shortage of de-icing fluid and personnel, justifications which were challenged at the time by the airline community.

17. On several occasions, from 11.00 on 19 December onwards, airlines called for BAA to request the assistance of the armed forces with snow clearance from the Government. We remain unsure whether this possibility was explored by BAA. Early in the morning of 21 December, BAA advised by SMS that there were no short-term plans to reopen the southern runway until 06.00 on 22 December at the earliest. BAA advised

that stocks of de-icer were en route to the airport, although insufficient quantities to maintain a two runway operation in the event of further snow. However, at 14.40 we were advised by SMS that the southern runway was being cleared. This was confirmed at a centralised airport-wide meeting at 16.00 when airlines were told that de-icing stocks were now available and that the second runway would re-open from 16.30.

18. It has been suggested that airlines were fully consulted and happy with the content of Heathrow's "Snow Plan". Virgin Atlantic first had sight of the Winter 2010–11 "Aerodrome Snow Plan" at a meeting on 10 October 2010 alongside other airlines. We understand BAA used the meeting as an opportunity to work through the escalation and implementation of the snow plan, rather than to provide an opportunity for airlines to consider and influence the contents of the plan.

19. We acknowledge that, given this snow plan is reviewed every year rather than started from scratch, we could have taken an earlier opportunity to input comments and suggest amendments. Virgin Atlantic expects Heathrow to actively involve airlines in the development of a new snow plan rather than just the delivery of a finished plan. This includes consultation on appropriate levels of investment in equipment and other CAPEX spend.

Information flow from BAA to airlines

20. We consider the information flow from Heathrow to airlines to have been slow, limited and at times contradictory. There was a consistent failure to communicate adequate information in a timely, organised and controlled manner which severely undermined our efforts to take effective and informed operational decisions, and exacerbated the confusion and frustration experienced by our passengers. For example, Virgin Atlantic first heard about the reopening of the second runway via the Department for Transport and a public statement by the Prime Minister. BAA tweeted the news some 30 minutes before the airline community was officially informed by SMS, causing a repeat of the passenger confusion and mixed messages experienced earlier on in the period of disruption.

21. Throughout the worst of the disruption, official communications between BAA and airlines were issued by SMS. These SMS messages represented the only information VAA's airport operations team had available to pass on to passengers. Despite calls from the airline community, there was little focus on centralised airport-wide meetings on airside status, or consultation with airlines on the reopening of the airfield. This can be contrasted with London Gatwick airport's response to the disruption earlier in December, whereby they immediately established a crisis team at their command centre at the airport. This team was available 24/7—in person or by phone—and able to provide immediate responses to airlines' queries as well as regular proactive updates. After some hours, BAA started to convene conference calls but the dial-in numbers were frequently corrected or changed, and calls were poorly chaired so that they were chaotic and of little practical use to airlines.

22. We received the first SMS communication from BAAT3Ops (BAA Terminal 3 Operations' Local Business Response Team) at 0719 on Saturday 18 December. This message advised that BAA would be monitoring the snow forecast throughout the day. At 10.50 an SMS advised of Heathrow's closure for all arrivals and departures. A subsequent SMS at 12.23 reported the ongoing closure of both runways, with no ETA for reopening. Subsequent messages at 12.46 and 15.08 suggested that the runways would remain closed until at least 16.00. At 16.41 it was suggested that there would be limited departures from 18.00. A call between our Operations Director and a counterpart at BAA at 19.14 finally confirmed that the airport would not reopen at all. This was not communicated by SMS until 19.33. Unfortunately, BAA had already informed passengers waiting in Terminal 3 that the airport would not reopen before having communicated this to airlines.

23. Poor communication lead to several missed opportunities. For example, throughout Sunday 19 December we received a series of SMS from BAAT3Ops, variously stating that that there would be no arrivals, then that LHR would receive some diverted flights and a request for details, then it was decided that there would be no arrivals after all and only a handful of departures. This confusion and the eventual late notice of the reopening of one runway meant that opportunities to repatriate diverted flights were wasted.

24. Our passenger's direct experience was undermined by poor communication from the airport. For example, on 20 December at 15.54 unhelpful communications were issued direct to passengers, advising them not to travel to Terminals 1 or 3 due to congestion. This meant that many passengers who had confirmed seats failed to turn up or missed their flights.

Conclusion

25. Our experience at other airports in our network demonstrates that Heathrow's performance fell below the level we should expect from a leading international hub airport. JFK International Airport experienced its own snow-related closure in the run-up to Christmas. Its first crisis team meeting was called within minutes of the airport operator's expectation that the airport would close. JFK then reopened within 24 hours—despite much heavier snow fall—by which time Heathrow was only just calling its first crisis team meeting with airlines.

26. Virgin Atlantic would be interested to read any recommendations the Committee might want to make within the existing regulatory framework in respect of the following issues:

- clarity regarding requirements, roles, responsibilities, communications strategy and service level expectations with a new Snow Plan;
- consultation with airlines and third party service providers on a new Snow Plan;
- proportionate additional investment, resources and personnel expenditures to be included in a new Snow Plan; and
- Heathrow Airport Limited's liability to passengers and airlines in such events.

27. We would welcome recommendations in the context of broader discussions about the forthcoming Airport Economic Regulation Bill and planning for Q6. In particular, regarding the inclusion of winter resilience service quality metrics in licence conditions and enforcement mechanisms in the new regulatory framework.

February 2011

Supplementary evidence from Virgin Atlantic Airways (AWC 16a)

INTRODUCTION

1. Virgin Atlantic Airways repeats its' welcome to the Committee's inquiry and was pleased to provide oral evidence on 8 March. In light of new policy proposals suggested at the session and developments since our written submission on 3 February, we would like to submit this short supplementary note for the Committee's consideration.

2. This note provides additional information on three key issues relevant to the inquiry:

- dealing with constrained capacity and BAA's Emergency Timetable proposal;
- passenger welfare; and
- airport Conditions of Use.

DEALING WITH CONSTRAINED CAPACITY

3. On 6 March, the Guardian reported that the BAA is drawing up plans for a railway-style "emergency timetable" at Heathrow in the event of extreme weather conditions. The Committee heard evidence to this effect on 8 March.

4. Constraining capacity can be an important tool in helping to effectively distribute traffic during disruption but the primary focus should always be on re-opening the airport, its runways, taxiways and aprons.

5. Virgin Atlantic would not favour the introduction of an "emergency timetable" during disruptive events. We believe such an approach would be ineffective and counter-productive.

6. When an airport experiences disruption, the airport and airlines need to be able to respond to changing circumstances in a dynamic and fluid environment. To try and predict how much capacity could be available in advance of a disruption event would almost certainly constrain an airport's ability to efficiently use the scarce capacity which does exist, and would ultimately impact airline operations and limit the number of passengers we can serve. Further, a pre-emptive timetable risks leading to undesirable airport operator behaviour, such as a slower than absolutely possible response to a disruption event.

7. We agree that there is a need for a more effective mechanism of capacity allocation during periods of reduced airport capacity. Our view is that the current "across the board" pro-ration of aircraft movements fails to meet the needs of passengers. Firstly, during any period of constrained capacity, the slot allocation process should recognise that it is desirable to move as many passengers as possible through the constrained system. Secondly, the allocation process needs to ensure that, in the period immediately following the lifting of any capacity constraint, the airport system returns to full capacity as quickly as possible, such that any passenger backlog is cleared in the shortest possible time.

8. With these considerations in mind, we believe there is a strong case for improving the allocation of restricted capacity via two mechanisms:

- prioritisation of long-haul movements—given the large numbers of passengers that can be cleared from the system on wide-body aircraft and the lack of alternative travel options for passengers travelling to long-haul destinations; and
- prioritisation of home-base carriers—capacity constraints at Heathrow have a much greater impact on the operations of home-base carriers, both on an absolute and proportionate basis. Home-base carriers end up with a bigger proportion of their fleet out of position, higher numbers of crew out of hours, large volumes of connecting passengers to accommodate and significant maintenance backlogs to clear. All these effects combine to limit the ability of home-base carriers to recover their programmes, even once the capacity constraint is lifted.

9. Our view is that these two improvements would be in the interests of passenger welfare and the overall operational effectiveness of the airport. We shared our views with the BAA for their consideration in December through the Airline Operators Committee.

Passenger Welfare

10. Virgin Atlantic's priority throughout the period of disruption was the welfare of our customers.

11. Following our experiences of the volcanic ash disruption, we knew immediately that we would not be able to secure sufficient hotel accommodation close to Heathrow for all disrupted passengers. However, as per our standard procedures, we prioritised passengers requiring special assistance and those stranded far away from home, as it would normally be easier for UK originating passengers to return home until their outbound flight was reconfirmed. We are currently processing claims from passengers for the costs of hotel accommodation and subsistence expenses.

12. Letters setting out passengers' entitlements under Regulation EC261 on Denied Boarding, Delays and Cancellations (including instructions for how to claim back all reasonable hotel and subsistence costs) were circulated to all of our airports on the evening of Friday 17 December ready to be handed out to passengers in the event of any anticipated disruption the following day. Staff also distributed refreshment vouchers, complementary beverages and blankets.

13. Additional (volunteer) staff supported efforts in the contact centre and at the airports themselves, to ensure our passengers received the best possible information. Our teams made regular checks of all terminal areas to identify and assist our passengers, supported by colleagues volunteering from non-operational departments.

14. We believe that as a result of these proactive measures, including the regular website and social media updates, there were very few VAA passengers who either slept in the airport terminals or required assistance through the BAA-established reception centre.

Airport Conditions of Use

15. The Committee asked about the relationship between airports and airlines. One member highlighted the liability clause contained in one airport's Conditions of Use.

16. The Committee may wish to be aware that Heathrow Airport Limited (HAL) is currently consulting on its draft Conditions of Use for 2011–12. While these are open for consultation and may change, we would draw the Committee's attention to draft clause 13.2, which is even more explicit than the current Conditions of Use by stating:

> *"Subject to clause 13.3, neither we nor our employees, servants, agents, subcontractors or Affiliates shall have any liability to you or be obliged to indemnify you in respect of any actual or expected loss of profits, loss of revenue, loss of goodwill, loss of opportunity, or loss of business, increases costs or expenses or wasted expenditure or any other injury, loss, damage, claim cost or expense cause (or to the extent caused) by any act, omission, neglect or default of ours or our employees, servants, agents, sub-contractors or Affiliates."*

17. Virgin Atlantic would not accept such a liability clause from any other third party supplier. Overall, the draft Conditions of Use remain extremely one-sided and do not contain the protections and rights that a customer would have in a normal commercial contract. Whilst there are extensive obligations on airline customers, there is no description of the services HAL is obliged to provide, nor any standards of performance. This is something that must be address by the forthcoming Airport Economic Regulation Bill.

March 2011

Written evidence from Gatwick Airport Ltd (AWC 20)

1. Summary

1.1 Two specific periods of heavy snowfall affected Gatwick in the final weeks of last year. At the end of November into early December accumulations of up to 24cm, drifting up to 40cm in places, closed our airfield and disabled critical surface access networks. The weekend before Christmas—one of Gatwick's busiest weekends of the year when more than 240,000 passengers were scheduled to travel—saw snowfall of 10cm close our airfield for two very brief periods. With snow causing air travel disruption across Europe, there continued to be disruption even when the airport returned to full operations.

1.2 On both occasions our main priorities were to maintain a safe pavement surface condition for aircraft operations, minimise disruption to airport operations and reduce inconvenience to airline passengers. We worked in close collaboration with our airlines, ground handlers and other airport partners, under command and control arrangements, to reopen our airfield as soon as it was safe to do so. Throughout the disruption we were dedicated to the welfare of passengers and the provision of timely communications to airport users and external audiences.

1.3 With Gatwick having come under new ownership in December 2009, the snowfall of winter 2009–10 was the new management team's first experience of adverse weather at the airport. The collaborative approach developed with our airport partners in December 2009 proved very useful in winter 2009–10 and was enhanced throughout 2010, through workshops and table top exercises to improve preparedness for snow disruption. In the most recent snow periods, our ongoing work with airlines, ground handlers, air traffic control, emergency services, UKBA and others proved valuable in seeking to ensure adequate preparations were made ahead of, and speedy recovery from, each heavy snowfall.

1.4 Although winter 2009–10 was described by weather forecasters as a "one in 20 year event" Gatwick invested £600,000 upgrading the airport's snow clearing equipment and de-icer storage facilities in summer 2010. We also worked with airlines and airport partners to develop and agree enhanced snow contingency plans, following benchmarking visits to Scandinavian airports in Oslo, Helsinki and Stockholm Arlanda.

1.5 Following the first period of snow in late November we made an immediate decision to invest a further £8 million to double the size of Gatwick's snow fleet from 47 to 95 vehicles, which will put our snow clearing capability on a par with that of Oslo Airport in Norway. Gatwick now has 14 Shorling snow ploughs for our single runway—more than any other airport in the UK.

2. Introduction

2.1 Gatwick Airport Ltd (Gatwick) welcomes the opportunity to submit written evidence to the inquiry on the impact on transport of recent adverse weather conditions.

2.2 Under independent ownership since December 2008, Gatwick's ambition is to compete to grow and become London's airport of choice. Gatwick is the UK's second largest gateway and the busiest single-runway airport in the world. Directly serving more than 200 destinations (more than any other UK airport) in 90 countries for around 33 million passengers a year, Gatwick is a major economic driver for the South-east region, generating around 23,000 on-airport jobs and a further 13,000 jobs through related activities. The airport is 28 miles south of London with excellent surface access transport links including the award winning Gatwick Express train service.

2.3 In December 2010 transport networks across Europe faced significant disruption due to snow and ice. Airports experienced operational impacts which, alongside safety considerations, resulted in flight delays and cancellations. Gatwick was affected by the adverse weather conditions on two occasions during December.

2.4 We believe we managed the impact of snow and ice professionally with a clear and constant focus on minimising disruption and inconvenience to airline passengers. We acted quickly and worked closely with our airlines, handling agents and other airport partners to reopen our airfield, after necessary closures, as soon as it was safe to do so. Throughout the disruption we were dedicated to the welfare of passengers and the provision of timely communications to airport users and external audiences.

3. Recent Snowfall

3.1 England experienced its coldest December for 100 years in 2010. In the south-east region where Gatwick is located, there were two specific periods of heavy snowfall that affected airport operations and the regional transport network.

3.2 The first period, between Tuesday 30 November and Saturday 4 December saw accumulations of up to 24cm at Gatwick, drifting up to 40cm in places, which disabled the regional transport network for days. Our airfield closed at 9.33pm on 30 November and reopened at 8.07pm on 2 December after our staff worked around the clock to clear c.150,000 tonnes of snow. The first passenger flight took-off at 6.00am on 3 December. In this first snow period, our airfield was closed for a total duration of 46 hours and 34 minutes. Around 680 flights were cancelled and some 300 were delayed.

3.3 The second period—prior to Christmas—between Saturday 18 and Monday 20 December saw two separate snowfalls at Gatwick each with accumulations of up to 10cm. On the first occasion on 18 December our airfield closed at 10.00am but reopened at 2:45pm the same day (four hours 45 minutes); on the second occasion on 20 December our airfield closed at 9.00pm but reopened at 11.00pm the same day (two hours). During this period a 150-strong team worked tirelessly to clear around 50,000 tonnes of snow and ice from the airfield. Notwithstanding some inevitable delays, over 80% of passengers were able make their journey.

3.4 On both occasions, in addition to the airfield snow clearance activities, our teams successfully cleared and maintained the 27.2 miles of roads surrounding the airport. Gatwick executive directors, managers and staff were deployed on both occasions to support our operations teams, airlines and partners with snow clearance, passenger welfare activities and provision of information.

4. Gatwick Co-ordination

4.1 Our Airport Snow Plan was enhanced and jointly approved by airlines, business partners and the emergency services during summer 2010, following a number of stakeholder workshops and benchmarking visits to Scandinavian airports.

4.2 Our command and control contingency process was central to our ability to react swiftly and in a co-ordinated manner to minimise the impact of snow. Gatwick has a standing contingency Crisis Management Team (CMT) on-call 24/7 providing 365 days a year support our operations teams, airlines and airport partners. With advance weather forecasts predicting snowfall on both occasions, the CMT convened the Joint Business Continuity Team (JBCT) comprising airlines, ground handlers, the police, UKBA, air traffic control and other partners, to meet regularly to manage the situation.

4.3 The collaborative approach of the JBCT was invaluable in managing airfield operations and airline passenger matters in the first snow period. In the second snow period, following CMT meetings on 15 and 16 December, the ongoing liaison with the JBCT was combined with the "Silver Command" level of Gatwick's contingency process when it was activated on the afternoon of 17 December in anticipation of imminent snowfall. All relevant partners participated in meetings to ensure adequate preparations were made ahead of, and speedy recovery from, snowfall.

4.4 Following our learning from winter 2009–10, the investment Gatwick has been making, in the first year of new ownership, in snow clearance equipment made a vital difference in enabling the airport to respond more swiftly and minimise the impact of snow. Despite winter 2009–10 being described by weather forecasters as a "one in 20 year event", the severity of the snowfall in November and December fully justified the 2010 summer investment and the subsequent decision to invest a further £8 million in new equipment.

4.5 Our investment, which will be completed in advance of winter 2011–12, will double the size of our airport snow fleet to 95 vehicles. This will put Gatwick's snow clearing capability on a par with that of Oslo Airport in Norway.

4.6 Gatwick took immediate action following the early December snow event and sought out additional equipment that was available on the market from other European airports and now has 14 dedicated Shorling snow ploughs for our single runway in addition to tractors with brushes, snow cutters, de-icing and friction testing vehicles. It took just two weeks to source, inspect, purchase, ship and make operational, six additional Shorling snow ploughs from Zurich Airport.

4.7 Our visits to Scandinavian airports during spring 2010 enabled us to prepare robust plans for enhancing our snow fleet. This meant we were able to make the decision to invest quickly and efficiently.

4.8 Throughout both snow periods we endeavoured to maintain regular contact with stakeholders in government, parliament, the local community and the media, providing updates on the latest situation Gatwick and how the airport was dealing with the adverse weather. The stakeholder feedback we received, and are still receiving, has been positive and supportive of our efforts.

5. Passenger Welfare and Information

5.1 Despite planning and preparation, the intensity of the snowfall, particularly during the first period made delays and disruption to passengers' journeys inevitable. We were dedicated to the welfare of passengers during the first period when we closed for over 44 hours and again during the pre-Christmas weekend, one of Gatwick's busiest of the year with more than 240,000 passengers scheduled to travel.

5.2 During both snow periods we placed high importance on communicating the latest information to passengers and their friends and families. We used a range of channels to communicate with passengers including national and regional print and broadcast media, face-to-face conversations, multi-lingual leaflets and tannoy announcements, terminal information screens, our website, social media and our online inquiry service. Twitter was a very important, real-time channel during the snow periods when our number of "followers" grew from 3,500 to more than 18,000 people.

5.3 We provided free internet kiosks and wi-fi access to enable passengers to rebook or make alternative travel arrangements. We also provided free mobile phone-charging points and distributed mobile phone chargers to passengers to help them maintain contact with friends and family.

5.4 During periods of closure we encouraged passengers who could return home and re-arrange their travel plans to do so. We then focused on providing welfare for those who had no other option than to remain at Gatwick. We distributed thousands of bottles of water, hundreds of blankets, mattresses, cots and food to delayed airline passengers. Hundreds of office-based staff volunteered to support and assist passengers in both our terminals and this visibility was welcomed.

5.5 Our terminal operations staff and volunteers made particular efforts to identify vulnerable passengers such as families with young children, older people and passengers with reduced mobility, directing them to designated comfort zones with camp beds, drinking water, food snacks and access to 24-hour TV news. In some instances, we organised hotel accommodation at the airport. We also ensured that passengers stranded abroad did not receive additional car-parking charges.

6. Review and Lessons Learnt

6.1 Each post-snow review generates lessons to be learnt and these shape our future planning and preparation. Each review also highlights where we undertook best practice and exceptional performance. We have a

comprehensive Airport Snow Plan which is reviewed and agreed annually with our airlines, business partners and the emergency services. Our plan incorporated significant learning from snow events in winter 2009–10 and visits to other airports, including Oslo, Helsinki and Stockholm Arlanda. Based on this we committed to invest a total of £8 million in new snow equipment.

6.2 In accordance with our Airport Snow Plan we worked very closely with our airlines, their handling agents and other airport partners, such as UKBA, to make joint decisions during the snow periods. We enjoyed strong support and collaboration from our airport partners and they will play a full and active role in implementing the lesson learnt from our recent experience and optimising our plans for the future.

6.3 Following winter 2009–10 we reviewed the processes for communicating flight status from handling agents and airlines to enable general messages on the airport status to be viewed by passengers. We improved direct access to Met Office and Hubcast weather forecast data.

6.4 We also made improvements to our welfare plans for passengers and the communication with associated support groups. We enhanced our staff volunteer processes to ensure clarity on roles, tasks, communication structures and resourcing.

6.5 Prior to the snow events we had been reviewing our CMT structure. Gatwick historically had a "Snow Cell" to co-ordinate the joint response to clearing our airfield and returning it to normal operations in the event of adverse weather. Following the first period of heavy snowfall we introduced a number of changes which were in place by 18 December including the amalgamation of the Snow Cell with the "Silver Command" level of Gatwick's contingency process. This improved the speed and efficiency of decision making and communication.

6.6 Disruption to the transport network, and rail services in particular, was a significant issue during the recent snow events, particularly the first period. Gatwick rail station is the busiest airport rail station in the UK, with some 12 million journeys each year. Given the severe nature of the conditions a certain amount of rail disruption was inevitable. However, in early December this continued for some time after we had reopened the airport and the road system was cleared.

6.7 This impacted passengers' journeys to and from Gatwick but also, importantly, the ability for airport staff to travel to work. This created an additional constraint on our ability to return to a full operating schedule and caused significant overcrowding at Gatwick station. We will meet with the train operating companies and Network Rail to review this situation.

7. Conclusion

7.1 The safety of passengers and airport users will always be our main priority during any adverse weather situation. Our decisions are, and will be, driven by concern for their welfare. We sought to address the impact of the two snow periods in the final weeks of last year in a professional manner. We worked closely with our airlines and other airport partners to reopen the airfield as soon as it was safe to do so. Our communication activities both to passengers and external audiences were managed effectively.

7.2 During the first snow period we spoke with Dr David Quarmby, who the Transport Secretary commissioned to carry out an audit on his earlier Winter Resilience Review. In his report, Dr Quarmby said he was aware the Gatwick area had been subject to unprecedented weather systems and he indicated that he believed we had done everything possible to address the situation.

7.3 Looking ahead, there may well be more snowfall before the winter season ends. We have made significant investments to optimise our ability to manage such events and will work with our partners, on and off the airport campus, to minimise disruption to operations and any inconvenience to passengers. However, it should be recognised, that even with sound preparations and enhanced snow clearing equipment, it is likely that heavy and persistent snow events in the future will cause some disruption to normal operations at Gatwick Airport.

February 2011

Written evidence from the Local Government Association (LGA) (AWC 24)

The LGA is a voluntary membership body and our 422 member authorities cover every part of England and Wales. Together they represent over 50 million people and spend around £113 billion a year on local services. They include county councils, metropolitan district councils, English unitary authorities, London boroughs and shire district councils, along with fire authorities, police authorities, national park authorities and passenger transport authorities.

Summary

— Councils kept the majority of planned networks open and services running.

— Councils made unprecedented preparations for this winter and entered the winter with significantly more salt in stock than in previous years.

— Despite these preparations, councils were concerned that suppliers were not able to meet all orders for pre-season supplies and were aware that suppliers would be unable to meet restocking orders in the event of severe weather. Had December's weather been sustained into January, serious resupply issues would have arisen.

— It is clear that the fundamental problems with the salt supply chain still exist and continue to threaten resilience to winter weather.

— When the cold weather began and salt usage began to outstrip supply, arrangements put in place to manage risk worked well because of the cooperation and involvement between all relevant partners (DfT, Highways Agency, Devolved Administrations, the Local Government Association and technical experts from local government).

— The arrangements for acquisition and distribution strategic stockpile were successful this year in so far as they insured that no area ran out of salt.

— However, if we were to experience another prolonged severe winter, it is questionable whether the systems in place would have been sufficient. We would also experience problems in ensuring the strategic stockpile reaches those areas that needed it. It became apparent this winter that haulage industry only has the capacity to deliver 40,000 tonnes of salt a week. In widespread severe wintry conditions, England alone uses approximately 325,000 tonnes of salt a week.

— The long term solution needs to address the fundamental flaws within the salt supply chain, as we and the interim Quarmby Report argued last summer.

— Councils have improved practice and taken on board recommendations from the series of reviews, new guidance and advice that has been issued in the last two years. Some of the good practice will take time to implement and will require investment which will be particularly challenging for local authorities given reductions in their budgets.

— The extreme winter weather has caused damage to local road networks, as can be seen from the increased number of potholes already being reported. Councils will have significantly less money to deal with the damage to the roads this year. Government should make additional funding available to allow councils to undertake repairs to ensure roads are safe and minimise congestion.

Councils' Preparedness

1. Following the severe winters of 2008–09 and 2009–10, councils reviewed their winter service plans to take account of the experience and a series of reviews including the LGA's *Weathering the Storm* reports in 2009 and 2010; the UKRLG *Lessons from Severe Weather February 2009*; revised advice and technical guidance from UKRLG and ADEPT and the interim report from the Quarmby review published in July 2010.

2. Evidence provided by a survey of councils undertaken by the LGA in September 2010 found that councils had taken on board many of these recommendations in preparations for winter 2010. David Quarmby's audit of how the country performed in December 2010 confirmed that in general, councils were in a good state of readiness for winter. Both the LGA survey and Quarmby's audit found that:

(a) Councils had ordered more stocks of salt for the start of the winter gritting season than previous years.

(b) Some councils had not received in full the pre-season salt supplies they had ordered.

(c) The majority of councils reviewed and updated their severe winter weather policies due to the severe weather over the preceding two years, including revising treatment networks to take into account transport links, business parks and other major installations and investing in new gritting and clearing machinery.

(d) Councils had also improved communications providing information on their websites on gritting networks, weather forecasts, notice of road closures or other network difficulties, tweets about road conditions, real-time information about the deployment of gritters, and practical advice to residents on snow clearance.

(e) Councils further developed their level of engagement with citizens, putting in place measures to help individuals and communities to take responsibility for gritting their own roads and pavements. This included increasing the number of grit bins, working with town and parish councils to appoint and train local snow wardens, providing snow ploughs for use on tractors to clear snow in rural areas, re-deploying councils staff unable to get to work to assist with snow clearance and visiting vulnerable people (further examples are given in annex A).

Local Highway Authority Performance

13. David Quarmby's audit report in December 2010 found that in general local highway authorities overall performed well in this period. In areas without significant snow, the normal gritting treatments were generally effective, and traffic and movement on the treated networks was largely unaffected. In areas with major snowfalls, most authorities responded quickly and well to the unusual amount and persistence of snow.[16]

[16] The Resilience of England's Transport Systems in December 2010—An Independent Audit by David Quarmby CBE, December 2010, page 20.

14. In most areas, councils were able to treat their road networks as planned. County highway authorities generally treat 20—45% of their total network as their priority network; many have secondary networks which are treated less intensively, which lift the total to nearer 50% of their total mileage. Most authorities ensure that treated networks include at least one access road to all rural communities. However, it is neither logistically possible, nor affordable, to treat all minor roads, so, as the cold weather persisted, many of the roads off the treated networks saw significant accumulation of compacted snow and ice.

15. One issue which was the focus of considerable attention from the media, was disruption to waste collection. Due to residential roads becoming dangerous for large vehicles, including waste collection vehicles, a number of authorities were unable to carry out usual collection service during December and over the Christmas period. Contrary to suggestions in the media that this was a universal problem, most councils resumed services as soon as the freeze subsided and were able to recover missed collections quickly. In those areas where snow and freezing conditions persisted, a number of councils made arrangements for people to take rubbish to local disposal points until it was safe to resume normal services.

16. Councils' contingency plans for other services, including care for the elderly and vulnerable, ensured that these services continued during difficult circumstances.

Supply Issues

17. The LGA survey conducted in September 2010 revealed that at least one fifth of councils had not received orders for pre-season supplies of salt. This picture was later confirmed by the DfT's salt audit process and the Quarmby audit. The experience of the two previous winters had demonstrated that once stocks begin to reduce, the suppliers are unable to increase production to meet their customers' orders for re-supply. To make matters worse, as a result of high usage of salt in winter 2009–10; producers entered this winter without stockpiles usually held at the mines. Councils were therefore concerned about producers' capacity to meet re-stocking orders when the extreme weather and significant snowfall arrived unusually early in the season.

18. The LGA wrote to Phillip Hammond MP on 3 and 24 November to raise councils concerns about supply and to recommend that the strategic stockpile be increased as a contingency to mitigate potential supply problems. Copies of these letters are supplied at annex B.

19. Within two weeks of exceptionally cold weather, the supply chain was once again failing to meet orders for re-supply from councils. As is discussed below, the national strategic stockpile was released to bolster supplies and this year was successful in ensuring that no council ran out of salt. However, the strategic stockpile does not resolve the issues caused by lack of resilience in the supply chain.

20. This season saw one, relatively short, spell of widespread weather. If the severe cold weather had continued for several weeks, as was the case last year, it is questionable whether the systems in place would have been sufficient. It is highly likely that there would have been problems in distributing the strategic stockpile to where it is needed since the haulage industry only has the capacity to deliver 40,000 tonnes of salt a week. In a "heavy usage week", England alone uses approximately 325,000 tonnes of salt.[17] For this reason, we need to return to the question of improving resilience in the supply chain.

21. There is also a need to ensure transparency and fairness about the way producers use the information made available to them about councils stocks and their requests for supplies from the strategic stockpile. There were examples this year of councils who appeared every week at the top of the list of those in need of supplies complied by DfT but who did not receive any deliveries from suppliers throughout the period. This begs the question of how producers were prioritising their customers if not according to need.

22. It may be that in the short term a national strategic stockpile is an appropriate contingency measure. However, the long term solution needs to address the fundamental flaws within the salt supply chain. This will require investment by the salt industry to increase their production capacity at times of high demand. It will also require diversification of the supply base and more use of overseas suppliers.

23. We therefore reiterate the findings and recommendations from the LGA's report *Weathering the Storm II Improving UK resilience to severe winter weather*, published following winter 2009–10 as follows:

> "The UK salt supply chain is not sufficiently resilient to respond to a sudden increase in demand. The supplier base is very small and there is a perception that the main firms concerned do not have the managerial or mechanical capacity to expand production at times of high demand. Furthermore, salt suppliers find it logistically difficult to follow delivery advice from Salt Cell and to get "just in time" deliveries to those that need them."

Recommendations

24. The government should recognise that salt supply is a strategic resilience issue, make it clear to the firms involved that that is the government's view, and liaise with suppliers during the spring and summer to ensure that the suppliers have business continuity plans in place for the prospect of a winter of high demand.

[17] As estimated by DfT for salt stock projection purposes.

25. Salt suppliers should improve communications with their customer base to ensure that even in times of high demand or when Salt Cell is in operation, they can provide accurate information about the size and timing of deliveries to councils. This is essential in assisting councils in making mutual aid arrangements and improving the possibility of joining up orders and deliveries to groups of councils in an area.

26. The government should secure an agreed way of working with the salt suppliers in emergency situations, which clearly defines how they will use the information provided by Salt Cell and how they will communicate with the customer. Government should reserve the right to intervene and provide logistical and communications support to the suppliers if they fail to keep to these commitments, and should hold a contingency plan for how it will do so.[18]

Contingency Working

27. During the winters of 2008–09 and 2010–11, unusually high salt usage caused by the bad weather and problems within the supply chain, led DfT to convene the "Salt Cell" to advise salt producers on how to prioritise deliveries. In line with recommendations of the reviews following those winters, in 2010 DfT put arrangements in place to allow for monitoring of salt stocks across the UK and developed protocols on the triggering and operation of central processes for the provision of advice to producers. They also ordered a national strategic stockpile, initially 250,000 tonnes, though this was not fully in place until mid-January.

28. Though Salt Cell was not formally convened this year, key players, including the LGA, local authority practitioner representatives, Transport for London, the Highways Agency and representatives from Scotland and Wales were all involved in the Winter Resilience network convened by DfT in early December to coordinate advise and decision making on salt distribution. This facilitated a genuine partnership approach to dealing with issues and problems as they arose, and ensured that decisions were informed by local expertise and knowledge. On the whole, the arrangements worked well, however, there was a certain amount of "learning as we go" given that the group was managing the strategic stockpile and handling information provided by the salt audit for the first time. For example, the process for councils to access the strategic stockpile were changed to reflect the fact that the initial invitation to councils to bid for supplies resulted in the number of bids far out-stripping the amount of salt that could logistically be distributed. It is important that the lessons from this experience are built into plans for contingency arrangements in future years.

29. A large factor in the success of the contingency arrangements was Councils' universal cooperation with the weekly stock audit process which was crucial to providing accurate information about salt stocks to assist salt producers in prioritising deliveries to customers and inform decisions about the release of the strategic stockpile. However, this transparency and clarity was not reciprocated by producers' communications with their customers. Information provided by suppliers on deliveries and decision making remained patchy and sporadic. As noted above, DfT should secure an agreed way of working with suppliers in future years.

Improving Winter Resilience

28. The Quarmby Report included a recommendation for a resilience standard of 48 runs as a pre-season stock level for all highways authorities. The report recognised that this would take some time to put in place given limited production capacity and because it would require some local authorities to invest in more storage capacity.

29. David Quarmby also identified that as a result of last winters' experience, many highway authorities had reduced their spread rates in response to pressures on salt supplies. Quarmby saw the use of reduced spread rates as a strategic response to the potential national shortfall of supply against demand under severe winter conditions and recommended that research be made freely available to local authorities to provide assurance that reduced spread rates would not compromise safety. This evidence was finally made available to councils on the 15 December, too late to impact on practice this year.

30. Dissemination of the latest research and revised technical advice will be important in informing preparation and practice for next winter and we would support a sector-led approach to sharing good practice and new innovative approaches to winter service.

31. However, adoption of the new practice will also require investment in modern spreading equipment and it will be very difficult for local authorities to provide this investment given that their budgets have been drastically reduced.

32. David Quarmby's reports suggested that increased investment in winter service would generate economic and social benefits well in excess of the additional costs, however he also recognised that the "current pressures on local authorities would make it seem untenable".[19]

[18] LGA, Weathering the Storm II—Improving UK resilience to severe winter weather, July 2010.

[19] The Resilience of England's Transport Systems in December 2010—An Independent Audit by David Quarmby CBE, December 2010, page 24.

Damage to Local Roads

33. Current forecasts suggest that a further period of extreme winter weather is unlikely this winter, however councils will now have to deal with the impact of the harsh weather on local roads, and consequently on local authority highways maintenance budgets. December was the coldest winter for 30 years and the unprecedented low temperatures have had a seriously adverse impact on road surfaces. It is too early to accurately estimate the costs of repairing this season's damage. However, initial reports from councils are that the number of potholes is at similar levels to last year and the extra financial burden placed on councils is likely to be very significant. To give an idea of the extent of the problem, last year, the estimated additional cost was at least £5 million for the typical shire county. In recognition of the additional burden on local authorities the previous government provided an additional £100 million to councils last year.

34. The additional damage this year will come at a time when councils have to scale back budgets for highways maintenance as a result of spending review decisions. Without additional funding for increased road maintenance activity required to deal with the increased numbers of potholes resulting from the exceptionally cold weather, the damage to the roads will cause significant damage to roads, present a safety risk to road users and disruption to traffic.

35. The LGA has therefore asked the Secretary of State for Transport to direct immediate emergency financial assistance to councils to allow them to deal with the damage.

Annex A

SALT: HELPING RESIDENTS TAKE RESPONSIBILITY

Councils have developed new approaches to helping individuals and communities to take responsibility for gritting their own roads and pavements.

This is driven by very lively local democratic engagement between residents, community groups, parish councils, and their local elected councillors. Councils have, at the same time, a crucial statutory responsibility to ensure transport networks are open and they try to balance that role with residents' wishes to see pavements and smaller roads gritted, within what we know to be a stock of salt that is limited—even if we currently have more than in recent years—and must be sensible managed.

Examples of the approaches taken by councils include:

Increasing the amount of grit available to local people to clear roads

- The London Borough of Sutton offered free supplies of grit to residents.
- Dorset County Council supplied their parish councils with one-tonne bags of salt to treat local road and replenish salt bins.
- Croydon Council increased the number of salt bins around the borough to 535.
- Gloucestershire County Council installed additional council grit bins and supply salt to fill parish and town councils grit bins.
- Wirral Council installed 110 additional grit bins in across the borough.
- Cumbria County Council maintains 10,000 salt heaps or bins across 178 Parish areas.

Redeploying staff and working with their communities to ensure that grit bi

- Stroud District Council's neighbourhood wardens visit vulnerable people to help with clearing paths around sheltered housing schemes, collecting prescriptions, proving supplies to people who can't leave their homes.
- The London Borough of Sutton equipped street cleaners with special 'hand gritters' to make pavements safe.
- Dorset County Council recruited and trained local snow wardens at parish to help clear snow and manage supply of salt to grit bins.
- Gloucestershire County Council and local Parish Councils used 200 volunteer Snow Wardens to keep the councils informed of conditions in outlying villages and 150 Snow Plough Operators to help clear snow.
- In Leeds, 50 members of staff from the council's highways and parks and countryside divisions were armed with shovels, brushes, vans and wheelbarrows full of grit, to clear footpaths and car parks.
- In Brent 200 staff were diverted to winter maintenance duties clearing pavements and refilling 320 grit bins.
- Derbyshire County Council asked residents to report empty or damaged grit bins to the council so that they can be re-filled and repaired as necessary.

Planning locations of local grit supplies for self help purposes to deal with local problem spots and to help manage re-stocking.

- Wirral Council's grit bins are located in pedestrianised streets, around sheltered accommodation, near to steep hills and problem locations identified by local residents.
- Bury Council maintains around 300 salt bins across the borough at known trouble spots, such as sharp bends or steep inclines and where historically snow and ice have caused serious problems.

Councils also reminded residents of the legal position on clearing their own pavements, providing advice on how to do it safely and reminding them too that builders' merchants sell rock salt that is suitable for snow clearance.

Annex B

LGA CORRESPONDENCE WITH PHILIP HAMMOND MP

Rt Hon Philip Hammond MP
Secretary of State
Department for Transport
Great Minster House
76 Marsham Street
London
SW1P 4DR

3 November 2010

Dear Philip,

Resilience to winter weather

Following feedback from councils and conversations that have taken place between our officers, I am writing to ensure we have a shared understanding of the situation regarding supply and stocks of de-icing salt and the potential risks of shortages should we experience a sustained period of snow fall or cold weather this winter.

I am sure your officials have informed you of the situation regarding current stock levels and the expected ability of salt suppliers to meet existing orders and for in season re-stocking. Our understanding is that suppliers have not been able to fully meet their customers' orders in advance of the winter and will not be able to replenish stocks significantly once they begin to run down. This is confirmed by feedback from councils that a number of areas have not yet received orders for salt.

This means that a few days of sustained bad weather across the country, especially if it coincides with the Christmas period, when in previous years salt suppliers have ceased production, could result in significant shortfalls in salt for some areas of the country.

Given that the suppliers' resilience level is low and they have limited reserves, it is essential that the reserve stock ordered by government is in place as soon as possible and that it is communicated to councils how they can access these reserves if required. It is also essential that we have processes in place to provide clarity about the levels of resilience of supply and transparency about any national coordination of stocks should that become necessary this winter.

LGA officers are happy to continue working with your officials to address these issues and ensure councils are fully informed of the situation as the winter progresses.

Yours,

Cllr Peter Box
Chair, LG Group Economy and Transport Programme Board

The Rt Hon Philip Hammond MP
Secretary of State for Transport
Great Minster House
Horseferry Road
London SW1P

24 November 2010

Dear Philip

SEVERE WEATHER

I know I ought to be cheered to read in this morning's newspapers that you take the view that councils and the Highways Agency have enough road salt to get through any episodes of severe weather this winter. But I am concerned that you may in fact be taking far too sanguine a view. In this context, I am disappointed that you

have not replied to my letter of 3 November in which I set out some of the challenges we will need to face together.

It is true that local authorities have made an unprecedented effort to prepare for this winter. The level of stocks they now hold is the highest it has been for years, at about a third up on the stock with which we began last year and higher still compared to the year before that. Nearly half of the stock of gritting vehicles has been renewed. New measures have been taken, in parallel with your helpful willingness to clarify that there is no legal risk to people who clear their own pavements, to enlist the goodwill of local residents and companies in preparing to keep roads and pavements clear of snow.

Nevertheless, your department, like councils, has known all year that the domestic suppliers of salt would be incapable of meeting the needs of the country. As I understand it, some two-thirds of councils have still not received all the salt they wish to order, despite looking increasingly to overseas supply. David Quarmby's report into The Resilience of England's Transport Systems in Winter made it clear that "the salt supply chain as currently configured is fundamentally vulnerable and lacks resilience".

This is where your department has a national role to play that goes above and beyond anything that councils can do. As your officials are aware, the LGA view is that action needs to be taken with the current near-monopoly to increase capacity; it is a disappointment that this long-running issue has not yet been addressed. We have, however, very much welcomed your willingness to implement the Quarmby recommendation—which echoed the recommendation of the LGA's earlier report on the events of last year—to establish a national strategic reserve of 250,000 tonnes this year. While we understand, however, the considerations that have led you to price that reserve in a way that deters local authorities from trying to access it when they do not need to, it will nevertheless be regrettable should this lead to charges that the Department is setting out to make a surplus from the problems of local motorists.

I am, finally, very pleased that your department has this year prepared early and well for the administrative machinery that may be needed to coordinate action over the winter. We welcome the planning for a possible Salt Cell that has taken place, and the plans for new arrangements to collect information quickly and effectively without the need for the old regional office machinery. But the mechanics are not all: I cannot stress too strongly the importance of encouraging cooperation, trust and solidarity between places and organisations in order to make this arrangement work. I do hope we can look forward to a continuing excellent collaboration between ourselves as the winter closes in.

Yours sincerely

Councillor Peter Box
Chair LG Group Economy and Transport Programme Board

February 2011

Written evidence from British Airways (AWC 31)

British Airways welcomes the opportunity to contribute to the Committee's inquiry—"The impact of the recent cold weather on the road and rail networks in England and Wales and on the UK's airports, including the extent to which lessons were learnt from winter 2009–10, the provision of accurate weather forecasts to transport providers in advance of the bad weather, and the recommendations of the Quarmby reviews of the resilience of England's transport systems in 2010."

British Airways is one of the world's largest international airlines, carrying almost 32 million passengers worldwide on around 750 daily flights in the financial year to 31 March 2010. The airline employs almost 40,000 people, the vast majority of these at its sites throughout the UK.

The airline's two main operating bases are London's Heathrow and Gatwick airports, with a smaller base at London City airport serving New York and European business destinations. From these, British Airways flies 240 aircraft to 155 destinations in 70 countries. In addition to passengers, the airline also transported 760,000 tonnes of cargo around the globe in 2009–10.

1. Overview

1.1 This winter, British Airways has dealt with snow and adverse weather impacts on its operation since mid-November. This has been one of the worst winters for weather-related disruption internationally in many years, and the airline continues to deal with problems across its global network.

1.2 The snow conditions at Heathrow Airport on 18 December can be described as an exceptional event. The volume and speed of the snow fall were unprecedented, and the problems were compounded by the airport's capacity constraints and consequent lack of operational contingency—it operates at 99% of capacity—and of high customer volumes in the pre-Christmas period.

1.3 Beyond the UK, the US in particular has endured heavy snow—32 inches had fallen by early January at some East Coast airports, compared to a winter-long average of 26 inches. A major snowstorm on the East

Coast resulted in flight cancellations on 26 and 27 December, and further snowstorms have occurred since. Indeed, British Airways has had to cancel a number of flights to the US this week.

1.4 Major European airports have also suffered weather closures and mass flight cancellations this winter, including Frankfurt, Amsterdam and Paris. Geneva, which regularly deals with heavy snowfalls, was also forced to close on several occasions. On 24 December alone, Brussels, Düsseldorf, Dublin and Paris Charles De Gaulle were closed because of snow and ice conditions.

1.5 This memorandum focuses on London's airports. British Airways flies to five other mainland UK airports, all of which were impacted by the weather conditions to varying degrees. Aberdeen, Edinburgh, Glasgow and Newcastle had closures at different times that led to flight cancellations but recovery was usually swift. Manchester Airport remained open to receive several longhaul diversions when Heathrow and Gatwick were closed, as did other UK airports in addition to those mentioned above.

2. Impact On UK's Airports

2.1 *London Heathrow*

2.1.1 Although Heathrow Airport experienced snow disruption in late November and early December, the following comments refer specifically to the period following the significant snowfall on 18 December. The weather forecasting for this event is covered in a later section.

2.1.2 Based on extensive experience and our assessment of the weather forecasts and conditions, British Airways believed that Heathrow Airport would be forced to close during mid-morning on Saturday 18 December because of an unprecedented snowstorm. It should be noted that any airport would have been forced to close in the conditions forecast that morning—this was not a closure generated simply because it was happening at Heathrow.

2.1.3 In Terminal 5, our base terminal, the check-in area was close to capacity at 0600 and we anticipated major problems if more customers arrived for flights that were subsequently cancelled. We therefore took the decision at 0730 to cancel all British Airways flights from the airport between 1000 and 1700. (Snow was also expected at Gatwick, albeit less intensely, and our entire shorthaul programme between 1000 to 1659 at Gatwick was cancelled too.) This was widely reported across all media outlets, with widespread criticism of our actions at that time.

2.1.4 British Airways—and NATS—knew the airport could not remain open, but others did not. There was a misjudgement on the part of BAA/Heathrow Airport Ltd (HAL) and others in the unrealistic expectation of the ability of the airport to remain open through the forecast and actual weather conditions. Their assessment of this ability influenced decisions on the day, and led to the confusing situation of the airport's largest carrier cancelling its schedule whilst the airport claimed "business as usual". The "Command and Control" structure was not used proactively or efficiently during this time.

2.1.5 Inaccurate reporting by the media contributed to the confusion and created problems for customers. The airport was declared closed at 1126, but the broadcast media continued to report that it was open and operational as late as 1230. Customers thus received conflicting information about the situation, which undermined the decisive action taken by British Airways and added to their confusion about what to do.

2.1.6 The consequence of the assurances that the airport would remain open and that it was open when actually closed was that tens of thousands of passengers continued to turn up for flights that were cancelled, creating chaos in other terminals.

2.1.7 Overall, the airport failed to recover as quickly as it could have done, and the impact of the 18 December snowfall was extended unnecessarily. British Airways has developed extensive contingency plans for recovery following significant disruption, honed over many years, and was disappointed that this was not replicated by HAL. There was little evidence of forward planning and a lack of experience about how to return to regular operations effectively and efficiently when the airport re-opened.

2.1.8 A major concern during 18–19 December was the emphasis on opening the runway, and lack of focus on the airfield as a whole—the taxiway, apron and stand infrastructure that is an essential part of the airport's efficient operation. Many of the problems faced by all airlines at Heathrow on re-opening arose from the lack of attention to these areas, and it impeded the return to normal operations.

2.1.9 British Airways welcomed the eventual decision by HAL to invoke the Scarce Capacity Protocol (SCP) that is designed to ensure that all airlines were given fair and proportionate access to the take off and landing slots. However, the SCP is overly conservative and difficult to enforce. There were issues around policing SCP during this period, and we would encourage the introduction of measures to ensure compliance with SCP by all airlines in times of anticipated or actual disruption.

2.1.10 British Airways is currently contributing to the BAA's independent review of Heathrow's performance in December, led by Professor David Beg. We are also working with HAL to ensure that the recent problems and failures are fully understood and to share experiences to ensure that the issues specific to this incident do not arise again. Other airlines are also participating in the review.

2.2 *Gatwick Airport*

2.2.1 Gatwick was severely affected by a heavy snowfall that closed the airport at 2130 on 30 November and resulted in the prolonged closure of the airport for two days. The snow was particularly intense, with more than a foot falling on 1 and 2 December, and unprecedented in its severity.

2.2.2 An estimated 150,000 tonnes of snow was cleared from the operational areas. However, the clearance of aircraft parking stands and de-icing that was necessary on 3 December caused further cancellations, especially to our shorthaul schedule.

2.2.3 British Airways' experience at Gatwick has been one of continual improvement. The handling of the first significant weather problems for the new owners of Gatwick, Global Infrastructure Partners (GIP), in December 2009 was poor but this improved for the snow disruption in January and February 2010.

2.2.4 Since then, GIP has invested significantly in new equipment and arrangements with local companies, for example using outside contractors' trucks to remove snow from the airfield. This enabled the apron, parking stands and taxiways to be cleared and operational more quickly and for aircraft to be manoeuvred.

2.2.5 British Airways believes GIP's management team at Gatwick is keen to learn from each experience. Although the new equipment was in place for the 30 November snow closure, some of the processes did not work as well as they could have done. However an immediate review meant that by 18–19 December, the airport responded effectively and in a timely manner to minimise disruption for its airline and passenger customers.

2.2.6 Importantly, Gatwick considers all aspects of the airfield as equally important, not just the runway but also the aprons, taxiways and stands. It also recognises the importance of ensuring surface access by road and rail is possible, both for airport staff and customers. There is no benefit to opening the airport if passengers cannot travel to or from it.

2.2.7 There was close co-operation with airlines and a very positive approach to involving others eg Gatwick has trained British Airways staff to drive its snow-clearing tractors, enabling more people to work on preparing the airport for re-opening. The airport has open and extensive communication and consultation with airlines, which led to a co-ordinated response by both sides during the later disruption period. The centralised command process improved on 18–19 December, and the "snow cell" ensured the airport returned to normal operations more quickly than it had previously. It is worth noting that the "snow cell" was activated prior to the first snow falling on 18 December.

2.2.8 The differences between Gatwick and Heathrow airports should be understood before any comparison is attempted. For example, there is a greater surface area available to dump snow cleared from the airfield at Gatwick than there is at Heathrow, and considerably fewer parking stand areas to manage. It has a single runway, not two, and fewer taxiways. Heathrow has four main terminal areas, rather than two, one of which is located across a runway from the main area, and another is separated by taxiways. Most importantly, Heathrow operates at maximum capacity throughout each operating day.

2.3 *London City Airport*

2.3.1 London City Airport closed for periods on 30 November and 1 December. On 30 November, we were unable to operate more than 3 flights at the airport because of the poor weather, and inbound aircraft had to divert to Gatwick Airport. On 1 December, despite light snow and reduced flow rates for arriving and departing aircraft, we managed to operate 30 flights, out of a planned 52. The airport was further impacted with sporadic weather issues throughout December but none were as severe as 30 November.

2.3.2 London City's management team reviewed the February 2010 disruption and was well prepared for the weather problems it has encountered this winter, including freezing fog. Snow clearance was quick and efficient and undertaken by new equipment. Fog brings other challenges to the operation of the airport and for airlines, about which little can be done. The airfield is designated Category 1 for low visibility conditions, and the restricted landing minima and proximity to large infrastructure on approach and take off mean unique issues and restrictions.

2.3.3 The airport team planned ahead, and brought in additional resources to help keep the airfield operational. Extra staff were used, and although the airport is normally closed at night, snow-clearing teams worked through the nights to ensure the runway, taxiway and aprons were as clear and usable as possible.

2.4 *British Airways*

2.4.1 British Airways and its customers were affected by adverse weather conditions throughout December, but especially so on 1–2 and 18–24 December. It was a particularly bad month—we had to deal with the impact of poor weather across our network on 20 of the 31 days in the month. Despite the circumstances being beyond our control, we recognise the inconvenience the disruption caused particularly at that time of year, and apologise to our customers who were affected.

2.4.2 Thirty-eight British Airways longhaul flights inbound to London were diverted to airports throughout the UK and Europe over the weekend of 18–19 December. The aircraft were en-route to London when the

airports closed. Many more inbound flights were cancelled, and thousands of customers were held at their embarkation airports overseas because of lack of onward connections at Heathrow. This helped alleviate the problem at the airport, and ensured that customers would not be stranded in London.

2.4.3 Many customers were re-routed via other airports and on other carriers. For example, customers in Scotland and the north of England were re-routed onto direct flights from the UK regions to the USA and the Middle East operated by competitor airlines. British Airways has commercial agreements with these companies and these are activated in times of disruption to the benefit of our customers, and at a cost to our business.

2.4.4 There were very limited opportunities to coach domestic customers between UK airports because of prevailing weather difficulties and uncertain road conditions, and an understandable reluctance of coach companies to commit to such an operation.

2.4.5 Throughout the disruption periods, British Airways activated its customer support programme of volunteers from across all areas of the business. Hundreds of additional shifts were filled, and volunteers worked in the airport terminals and in the "disruption centre", answering telephone calls, rebooking customers or processing refunds, and providing general information to customers.

3. Weather Forecasting

3.1 The adverse weather conditions in the South East of England for 18 December were forecast accurately in advance of the arrival of the snow.

3.2 Normally, the challenge is dealing with the variation in weather forecasts—common data are collected and run through different computer modelling systems in the US and in the EU. The models are run four times daily, and the outputs are often in conflict. The difficulty lies in the actual temperature on the day, which define whether precipitation will fall as snow or rain.

3.3 On 18 December, both models forecast heavy snow. As well as using the UK Meteorological Office (MO) data, British Airways has a commercial contract with WSI, a US Based company that provides satellite, radar and forecasting services. This is also used by National Air Traffic Services (NATS).

3.4 British Airways senior operations management team had an extensive discussion with the MO before its decision to cancel flights was taken at 0730. The official MO forecaster predicted exactly when the snowstorm would begin and the intensity and volume that would fall. This information was available to all parties involved in the operation of the airport, but we cannot comment on how it was used by others. Furthermore, live radar is available for weather in the Heathrow area that clearly shows what can be expected from any given direction.

3.5 It is worth noting that neither Heathrow nor Gatwick—nor any UK civilian airfield—have a dedicated forecasting service based on site. This is something British Airways believes should be considered and would add real value in minimising customer disruption.

4. Quarmby Review Recomendations

4.1 British Airways ensured it has sufficient supplies of de-icing and anti-icing fluid available at all times. We used up to 100,000 litres of fluid on several days, but we always had extensive stock holdings at Heathrow and Gatwick in reserve.

4.2 British Airways, in co-operation with HAL and NATS can establish at very short notice a temporary remote de-icing facility that was first used in February 2010 to de-ice aircraft. This enables aircraft to move from parking stands to a remote area close to Terminal 5, where they are de-iced by specialist teams operating four de-icing rigs before proceeding to the runways for departure. This releases parking stands for arriving aircraft, aids the flows of aircraft and customers considerably, and reduces delays for all.

4.3 Contingency planning is a key component in any airline's operating plan, and British Airways continues to update its business continuity plan following every period of disruption or incident. We welcome the recognition by the Quarmby Final Review point 9.29 that the "aviation sector in the UK anticipates and manages the effects of severe winter weather to a very high standard of resilience and has in place the processes and disciplines that enable lessons to be learnt from one winter and adopted for subsequent seasons."

4.4 The Final Quarmby Review recommended (Recommendation 22) "that the Civil Aviation Authority considers how it might develop its currently published data to improve the presentation, commentary and interpretation of airline performance information….". British Airways believes that before this can happen, extensive explanations of the myriad different conditions and restrictions of each airport must be explained before any meaningful interpretation can be made. As highlighted above, the operational differences between Gatwick, London City and Heathrow are very significant, and each airport has a major bearing on the performance of airlines using them.

4.5 Airlines also differ widely in what they offer and how they operate—eg longhaul and shorthaul flying, route structure, point-to-point direct customers, transfer and hub operations, baggage, cargo, charter, scheduled etc. All of these and more must be taken into account before accurate interpretations can be made.

5. Summary

5.1 The adverse winter weather conditions that affected the South East of England in December 2010 were particularly severe. The snowfall at Heathrow Airport on 18 December was exceptional in its volume and intensity and was a unique occurrence because of this. Gatwick also suffered an unusually high volume of snow earlier in the month, resulting in closure.

5.2 The problems at Heathrow were compounded by the lack of spare or contingency capacity at the airport. It operates to its maximum all day every day.

5.3 Road, rail and air travel were badly affected. The aviation industry in the UK will review and learn lessons from the December 2010 disruption. British Airways believes it can contribute meaningfully to the review of the recovery to full operational status at Heathrow in December 2010 now underway. We look forward to working with all parties to ensure that robust, effective and safe resilience and contingency plans are soon in place.

February 2011

Written evidence from Heathrow Airport (AWC 33)

1. Introduction and Context

Throughout December 2010, there were periods of heavy snowfall across the UK. On Saturday 18 December, a blizzard hit the South-East of England, resulting in the heaviest snowfall some parts of the region had seen for thirty years.

The heavy snow across Britain presented a significant operational challenge for much of the UK's transport system and, during the week before Christmas, Heathrow Airport was among the worst affected.

This evidence sets out what preparations BAA made for winter weather, what happened at Heathrow on 18 December and the days following, and the steps we are taking to ensure Heathrow responds more effectively to periods of bad weather in the future.

Heathrow is one of the most capacity-constrained airports in the world, and it is clear that with no realistic prospect of new capacity—certainly in the next decade—the airport will be more vulnerable to weather and operational disruption than European and international competitors.

This means that BAA and Heathrow's airlines will have to work collaboratively to design and operate within a new airport system that is more responsive to the needs of passengers and which is more resilient in the face of disruption, however that comes about.

Early advice from the Met Office suggests that while the UK can anticipate milder winters, it is prudent to expect and to plan for more extreme weather systems such as those experienced in December 2010.

In recent weeks, BAA has prepared an enhanced snow plan that envisages up to 25cm of snow and details how the airport would respond collectively to the many challenges such an event would pose. This new snow plan will be the subject of detailed consultation with airlines ground handling agents and other third parties with a direct interest in Heathrow's swift recovery from disruption.

2. Winter Resilience Planning

There were three main plans that could assist with winter resilience at Heathrow:

- Heathrow Airport Aerodrome Snow Plan.
- Passenger Welfare Support Agreement.
- Capacity Constraints Policy.

Each of these is discussed in turn below.

2.1 *Heathrow Airport Aerodrome Snow Plan*

The Aerodrome Snow Plan for Heathrow Airport sets out the procedures for dealing with snow and ice at Heathrow. The plan is created and agreed with the airline community in advance of winter. Safety is and always should be the airport operator's first priority in bad weather.

Broadly speaking, BAA is responsible for keeping the runways, taxiways and aircraft stands clear of snow and ice, and airlines are responsible for de-icing aircraft. In periods of prolonged snow, we encourage all airside companies (airlines, ground-handlers and service providers) to actively "self-help" by clearing areas close to their operation—for example, footpaths and some part of aircraft parking areas (heads of stands)—using equipment provided by us.

The 2010–11 Snow Plan was discussed and agreed with the airline community several times during the Autumn of 2010. Specific briefings were held to ensure the airlines understood the processes BAA would

follow, the elements for which they were directly responsible, and other areas where they, or their service providers, were encouraged to "self-help".

The snow plan is explicit on operational capabilities during blizzard conditions, such as those experienced on Saturday 18 December:

> "In blizzard conditions, it is likely that aircraft movements will be suspended for the duration of the blizzard event, and for a protracted period after the event, to allow adequate airfield and aircraft treatment. In the event of a significant snowfall in blizzard conditions, recovery will take significantly longer and aircraft operations may be suspended indefinitely. Serious disruption and cancellations affecting all carriers are likely after any period of blizzard conditions."[20]

The snow plan is also explicit on stated prioritisation:

> "The immediate aim is to keep the runway(s), associated exits and entry points for the runway(s) in use, designated taxiway routes, main passenger aprons and airside roads clear of snow. The runway(s) will be cleared first, with work on subsequent areas proceeding as required and agreed by the airline community, ideally and if possible, these should occur simultaneously."[21]

The snow plan for Heathrow kept the airport open during periods of severe weather at the beginning and end of 2010.

2.2 *Passenger Welfare Support Agreement*

The welfare and well-being of passengers is always a primary concern during periods of travel disruption. The CAA, BAA and airlines had carried out work on passenger experience in October 2009, resulting in a voluntary agreement designed to support passenger welfare obligations during periods of disruption.

The Agreement recognised airlines' legal responsibility for passenger welfare under EU regulations:[22]

- Meal voucher provision upon denial of boarding.
- Rebooking and accommodation provision.

Additional voluntary support would be provided by Heathrow Airport:

- Retail outlets to extend opening hours and increase stock levels when notified of welfare requirements by airlines.
- Provision of limited emergency welfare stocks to cover sporadic gaps in airline provision.

A two-tier contingency stock would be held, with immediate response provisions held by the terminals and bulk stock held off-site:

- Stock in terminal: bottled water, plastic chairs, foil blankets, rain ponchos.
- Bulk stock: hats, wash bags, mattresses, woollen blankets, gloves, towels, umbrellas.

This plan had adequately covered airline welfare gaps during snow periods in January 2010 and on 2 December 2010.

2.3 *Capacity Constraints Policy*

Heathrow Airport currently operates near to maximum capacity for significant parts of every day. When an event such as snow or fog or even high winds reduces the flow of aircraft in or out of Heathrow, the time required for the airport to recover can be significant.

We therefore have an agreed Capacity Constraints Policy, which has been agreed with the airlines. The policy was developed to respond to unforeseen events (ie emergency liquids ruling) and was not intended to apply constraints based on forecast events. While we had widely consulted on the Capacity Constraints Policy, it had never been used before December 2010.

The aim of the policy is to aid recovery from significant periods of disruption, whether that is adverse weather, a security threat or potential aircraft incident. In times of major operational stress, the policy states that the Capacity Constraints Group will be activated in consultation with airlines. Chaired by BAA, this group consists of representatives from all the major airlines, air traffic control (NATS) and the airport slot coordinator (ACL Ltd). Building on learning from previous events, the group will implement a pre-agreed process by which available airport capacity is assessed and flight schedules are adjusted to match accordingly.

The Capacity Constraints Group was activated on Sunday 19 December and met throughout the days that followed.

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[20] Snow Plan 2010–11, Appendix G, Operational Capabilities, Paragraph 4

[21] Snow Plan 2010–11, Chapter 4, Paragraph 15

[22] European Commission Regulation 261/2004: Common rules on compensation and assistance to passengers by airlines in the event of denied boarding and of cancellation or long delay of flights

3. Overview of the Challenges we Faced During the Snow

There were four main challenges for BAA during the recent snow:

— Operational stress prior to the snow falling.

— A very heavy snow fall in a short period of time, followed by a sharp reduction in temperature.

— Passenger communication and welfare provision.

— Capacity constraints limiting recovery time.

3.1 *Operational stress prior to the snow falling*

On Thursday 16 and Friday 17 December, snow was already affecting some parts of Western Europe, resulting in airport closures and disruption. At Heathrow, there had also been persistently very cold temperatures throughout the preceding week, allied to light snowfall on Friday 17 December. Both events had a consequent effect on Heathrow operations, with British Airways, Lufthansa and BMI amongst others cancelling a number of Heathrow flights on 16th and 17th December due to disruption elsewhere.

Specifically, on both 16 and 17 December British Airways experienced major problems with their de-icing operation. This resulted in a number of delayed or cancelled departures, which caused a shortfall in available stands for arriving BA aircraft and consequent delays for passengers to disembark. To help support their operational recovery, we had focused a significant amount of airside team resource on anti-icing and clearing stands at T5 during the evening and night of 16 and 17 December.

As a result of this and the disruption in Europe, we were already stretched operationally—both in terms of airfield congestion and airside team resource—before the snowfall on Saturday.

3.2 *Very heavy snow fall in a short period of time followed by a sharp reduction in temperature*

The Met Office reports that around 9cm of snow fell in just over an hour at Heathrow on Saturday 18 December. This is unusual. It is likely that this volume of snow falling in a short period of time would have closed any airport in the world (in fact, many did close during the same period). De-icer can be applied in advance but if more than 3cm of snow falls, runways, taxiways and aircraft stands have to be closed while the snow is physically cleared. 9cm of snow results in around 98,000 tonnes of snow having to be removed.

The situation at Heathrow on Saturday afternoon was complicated by the fact that the airfield was extremely congested, with a higher number of aircraft stands occupied than usual. This was a result of disruption at other airports—as outlined above—and the decision of some carriers to cancel a significant proportion of their scheduled flights in advance of the snow falling. A number of our airside team had worked through the night on Thursday and Friday to support BA operational recovery at T5. This meant they were unavailable to work on Saturday.

Matters were further complicated when the temperature dropped sharply overnight, deteriorating the quality of the snow and making it harder to clear. Each stand had to have a significant amount of snow cleared from it, many also had ice. This was an operation that became more problematic when the stand was occupied by an aircraft, as the majority were. Snow clearance became a delicate operation that took considerable time in order to avoid damaging the aircraft. The inconsistent formulation of ice across the stands also made it particularly difficult for us to accurately estimate clearance times.

Each of these factors made snow recovery a much more complicated matter than it normally would be.

3.3 *Passenger communication and welfare provision*

The closure of Heathrow Airport on Saturday 18 December resulted in a large number of cancellations. One of our most significant challenges was to help the thousands of passengers whose flights had been cancelled. There were two main issues:

— how to help those people already at the airport; and

— how to communicate with people who were due to travel in the next 24/48 hours.

3.3.1 Helping people already at the airport

Under EU regulations, airlines are obliged to provide assistance to passengers if their flights are cancelled. An alternative flight should be offered and, where necessary, the airline should provide assistance such as food, access to a telephone and hotel accommodation. If the alternative flight isn't acceptable to the passenger a full ticket refund should be provided within seven days.

The majority of our carriers were very good at providing assistance to their passengers. However, some were not. The CAA has subsequently written to a number of airlines to remind them of their obligations to assist passengers during times of disruption.

The situation was complicated by the fact that the road network around Heathrow was closed by the Police due to safety concerns on Saturday afternoon. That limited the ability of passengers to travel back home or

move to hotel accommodation. The rail network was also disrupted as a result of the adverse weather conditions. We understand that much of the hotel accommodation around Heathrow quickly became booked up, which further limited the ability of passengers to leave the terminal buildings.

Terminal buildings are designed for passengers to pass through, not as waiting areas or accommodation. As cancellations continued throughout the weekend, passengers experienced very difficult conditions as the terminals became very congested. While BAA stepped in to add support to airline welfare measures—including providing additional accommodation, food, people and assistance with rebookings—it took time to establish these resources. We are disappointed that many passengers spent uncomfortable nights in Heathow's terminals.

3.3.2 Communicating with people due to travel

One of the most obvious challenges at Heathrow in the week before Christmas was how to provide reliable, accurate information to passengers in fast-changing circumstances and where several organisations were involved

Passengers who were due to travel Saturday evening, Sunday and beyond were understandably anxious to understand if their flight would operate. We increased our call centre resource by 600% on Saturday afternoon, posted regular website updates and began a 24/7 Twitter operation to answer passenger queries in real-time.

However, we were reliant upon airlines updating flight schedules in order to be able to provide an accurate picture of the schedule operating at Heathrow. While some airlines were very good at updating their schedules, others did not. This meant that there was a lack of accurate information we could provide to passengers throughout Saturday and Sunday.

This situation was compounded by the difficulties many passengers faced in contacting their airlines directly. Airline websites and call centres were under enormous pressure and we understand that many passengers could not contact their airlines to check whether their flight would operate or if/when they would be rebooked. As a result, thousands of people travelled to Heathrow without a confirmed flight. This complicated matters enormously and created a stressful and unpleasant experience for passengers. On Monday afternoon, at least two of our terminals became very congested.

We agreed a reduced schedule with airlines overnight on Monday 20 December. This allowed us to publish an agreed schedule at 4am on Tuesday morning. The schedule was placed on our website, announced via media statements and highlighted via Twitter. While passenger communication remained challenging, the formally reduced schedule meant passengers could access good quality information via our website, with which they could make rational decisions.

3.4 *Capacity constraints*

Any airport in the world can be closed down by several inches of snow in a period as short as an hour—Copenhagen, New York, Boston, Geneva, Paris, Dublin, Brussels, Amsterdam and Frankfurt were all forced to close, or faced severe disruption, due to heavy snow during the last two weeks of December 2010.

The key difference at Heathrow is capacity and the gap between arriving and departing aircraft—it is seconds rather than minutes. We have more than 1,300 flights a day, with an aircraft taking off or landing every 45 seconds. A less congested and less busy airport can close for a few hours with little impact. At Heathrow, the impact of even a short closure is dramatic.

Our two runways run at full capacity on a normal day. Other airports with spare runway capacity, such as Manchester in the UK and some Scandinavian airports, can operate a reduced schedule on one runway and can therefore close the other or others for whatever period is required to ensure the runway is safe. It is also true that airports with spare runway capacity have room to reschedule delayed flights when the affected runway(s) re-opens.

4. What Lessons has BAA Learnt?

Everyone who works at Heathrow is deeply disappointed by the events that followed the snow on 18 December. At BAA, we are determined to better prepare the airport for poor weather, and other potentially disruptive events, and have taken a number of positive steps to ensure that Heathrow is more resilient in future:

- Our first priority has been to create a new, enhanced snow plan that anticipates a far greater volume of snow, and a faster recovery time, than the one developed by BAA and agreed by airlines in 2010.
- We are undertaking a thorough review of our general contingency planning plans and processes, and the command and control structure that governs those.
- BAA's chief executive, Colin Matthews, made £10 million of capital available with immediate effect for investment in additional winter resilience equipment and resources. We have already purchased several new vehicles, including snow-ploughs, blowers and tractors.

— We appointed Professor David Begg to lead an external panel of experts, who will collectively establish what happened at Heathrow, and the lessons to be learned to avoid similar disruption in future. The panel has a far-reaching brief to look at the planning, execution and recovery from the difficult weather conditions of December 2010. The panel, made up of international airport executives and airline representatives, is due to publish its report before the end of March 2011.

Both the internal and external enquiries are exploring the following issues:

— the support offered to stranded passengers;
— how to minimise the number of passengers arriving for flights that do not depart; and
— how to give reliable information in fast-changing circumstances

It is clear that as the UK's only hub airport, Heathrow's operation is critical, both to the economy and to people travelling for personal reasons. We are working with the airlines to develop a new snow plan which will deliver a risk-based approach to snow clearing. We have eight workstreams which are looking at the following areas:

— command and control;
— capacity management;
— communications;
— airside response;
— terminal response;
— baggage response;
— landside response; and
— welfare and volunteers.

Our aim is to develop a coordinated response that can be delivered across the airport in collaboration with the airlines. We will use the findings of both the internal and external reviews to inform and enhance our operational planning for snow.

February 2011

Supplementary evidence from BAA (AWC 33a)

I am writing further to my appearance before the Committee on 8 March, and to yesterday's appearance by the Secretary of State for Transport, in connection with the Committee's Inquiry into the "Impact on transport of recent adverse weather conditions". Having heard the Secretary of State's responses to the Committee's questions regarding the Government's offer of help from the armed forces made on 21 December, I have re-read the transcript of my own oral evidence on the same subject.

On the same day that the offer of help was made, snow clearance was substantially completed. We were grateful for the Government's offer but in practical terms it came after it could have been usefully and effectively deployed.

I hope that clarifies matters but please do not hesitate to get in contact with me should you, or your colleagues on the Committee, have any questions.

March 2011

Letter from the Chair to Colin Matthews, BAA (AWC 510)

Thank you for your letter of 15 March about the Committee's exchanges with the Secretary of State last week on the Government's offer of help with clearing the second runway at Heathrow following the December snowfall.

I am afraid that your letter does not clarify matters. In your oral evidence you said the Government's offer was made on the Tuesday "and by Tuesday we had cleared the snow".[23] However, your letter states that snow clearance was "substantially completed" when the offer was made, which strikes me as significantly different from what you told the Committee.

In addition, you told us in oral evidence that "we would have accepted help from any source",[24] implying, I felt, that the Government had been late in offering assistance and that you would have gladly accepted military help earlier. However, the Secretary of State said that the reason given for not accepting military help was "that they did not need unskilled labour".[25] Your letter does not comment on this matter.

[23] Q212
[24] Q212
[25] Q262

I would be grateful if you could send us a timeline showing precisely what happened with the second runway, including when the Government offered to help with clearing it of snow, when you decided to reject that offer, when it was cleared, when it was decided to reopen the runway, and how and when that decision was communicated to airlines and to the Government. Perhaps you could also consider the apparent discrepancy between your oral evidence and the comments in your letter and confirm which best reflects what actually happened.

In addition, I would be grateful if you could reconcile your statement in oral evidence that BAA would have accepted help with clearing the second runway "from any source" with the Secretary of State's recollection that skilled labour was required for the job. It would be helpful if you could explain what work is involved in clearing a runway of snow and ice and why military assistance would be unsuitable.

March 2011

Reply from Colin Matthews, BAA to the Chair (AWC 33b)

Thank you for your letter of 21 March regarding the Government's offer of help with clearing Heathrow's second runway following the December snowfall. I am sorry that the answers to date have not been clear for your Committee.

The offer of military support from the Government was first received by BAA at 0800 on the morning of Tuesday 21 December. I have now ascertained that in response to the offer, the Secretary of State was informed that it would be declined because "unqualified" manpower could not have been usefully and effectively deployed. Timing was also a material, and related, consideration which I now understand was not communicated to the Secretary of State when the offer was first made. Moreover, with the Northern runway open, we could not expose military personnel to a live airfield with the associated safety risks.

Heathrow's Northern runway opened within a few hours of the heavy snowfall on Saturday 18 December. In order for the opening of the second runway to be productive, we needed first to clear sufficient aircraft parking stands. Our focus accordingly shifted to clearing snow and ice under and around parked aircraft. By Tuesday morning, our stand clearing operation was well advanced and our focus shifted to the Southern runway which re-opened on Tuesday afternoon at 1600.

Clearing an airport runway involves the use of specialist snow and de-icing machinery for whose operation military personnel are not trained. For stand clearance, we augmented our own resources with those of building contractors who were already familiar with the airport. The Government's offer of assistance was declined because it would have required considerable time and resource to brief military personnel unfamiliar with the airfield, to facilitate equipment and personnel through security checkpoints and to supervise them in "restricted zones". Before these steps could have been completed, the second runway was open and hence my comment that the offer was made too late to be useful.

I spoke with the Secretary of State several times during the disruption and we did accept other forms of assistance from the Government. For instance, the Government permitted a temporary relaxation on night flight restrictions as well as a relaxation on driver hours to support de-icer deliveries.

With regards to the timeline of events, I would refer the Committee to Section 6 of the "Report of the Heathrow Winter Resilience Enquiry" (the "Begg Report") for the full detail. The following extract from Tuesday 21 December is of most relevance in answering the questions from your letter of 21 March:

> "At 1230 a decision was noted at the ECMT to start clearing the second (Southern) runway. … At 1440 this was communicated to the airlines.
>
> By 1600 the Southern runway had been cleared….
>
> At 1630 a NOTAM was issued to communicate this."

I hope this clarifies matters for you and the Committee.

April 2011

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