



Weather Resilience and Climate Change Adaptation

LNW Route Periodic Performance Report – 2017/2018 P1

Figure 1 provides an overview of the impact of different weather related events by day for period 1 in relation to delay minutes and PPM performance for LNW route. If adverse/extreme conditions were experienced by one or more TOC during a week, a yellow or red dot will indicate the performance of the TOC(s) in question. Weather events don't always cause drops in performance (e.g. extreme rainfall may not flood the railway) and therefore, performance on adverse/extreme days can be higher than expected.

Figure 1 Weather related PPM and delay minutes for P1 2017 LNW

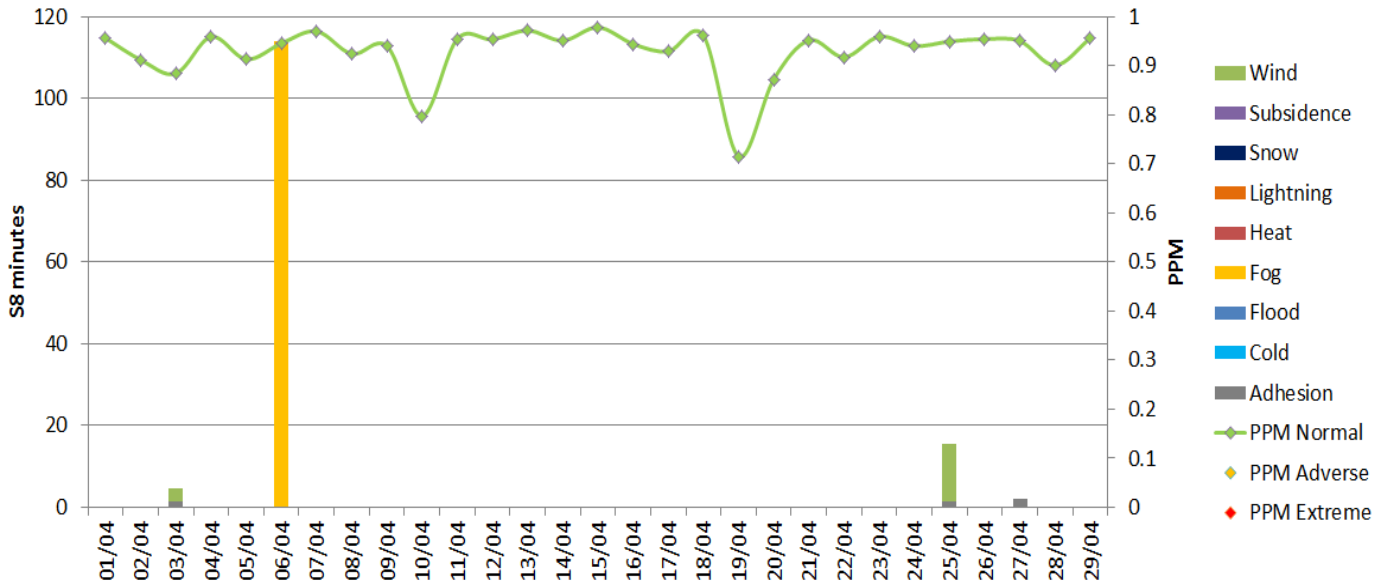
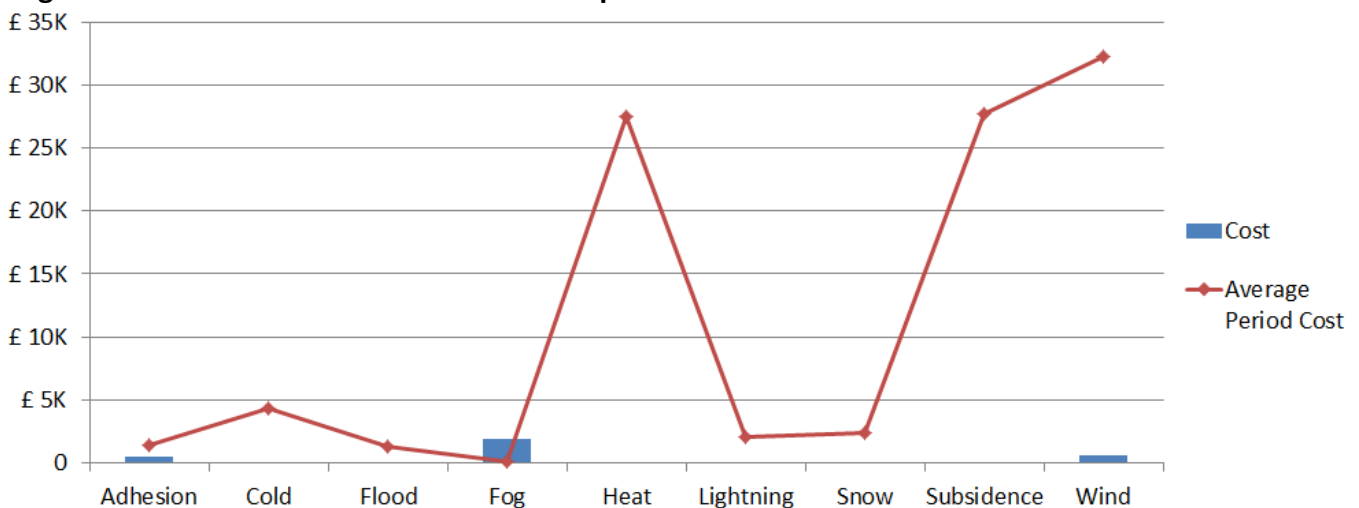


Figure 2 Weather related Schedule 8 cost impact for P1 LNW



Note that this figure relates to Schedule 8 cost and does not include OPEX or other costs.

Table 1 Top 10 weather related incidents P1

Date	IncidentDescription	stanoxSection	Route	Weather Category	Minutes	Cost
06/04/2017	FOG WORKING CLH	Clitheroe : Blackburn	LNW North	Fog	114	£1,926.15
25/04/2017	BAG ON OLE XOS	Birmingham New Street : Soho L.M.D.	LNW South	Wind	14	£541.54
25/04/2017	1R00 4 LOST XPJ XRA	Portobello Jn (West Mids) : Perry Barr North Jn	LNW South	Adhesion	1.5	£462.92
03/04/2017	BAG ON OHL AST DUD	Aston	LNW South	Wind	3	£70.50
03/04/2017	2H93 3 LOST PETLBJG NWBICUL	Petteril Bridge Jn : Culgaith Crossover	LNW North	Adhesion	1.5	£27.00
27/04/2017	2C03 LOST 4 OLIVEMJ LIV	Liverpool Lime Street : Bootle Branch Jn	LNW North	Adhesion	2	£25.76
21/04/2017	3S50 CAPE CRE	Crewe	LNW North	Adhesion	0	£0.00
24/04/2017	BAG ON OLE GUI	Guide Bridge (Vq) Fhh	LNW North	Wind	0	£0.00



Weather Resilience and Climate Change Adaptation

LNW Route Periodic Performance Report – 2017/2018 P2

Figure 1 provides an overview of the impact of different weather related events by day for period 2 in relation to delay minutes and PPM performance for LNW route. If adverse/extreme conditions were experienced by one or more TOC during a week, a yellow or red dot will indicate the performance of the TOC(s) in question. Weather events don't always cause drops in performance (e.g. extreme rainfall may not flood the railway) and therefore, performance on adverse/extreme days can be higher than expected.

Figure 1 Weather related PPM and delay minutes for P2 2017 LNW

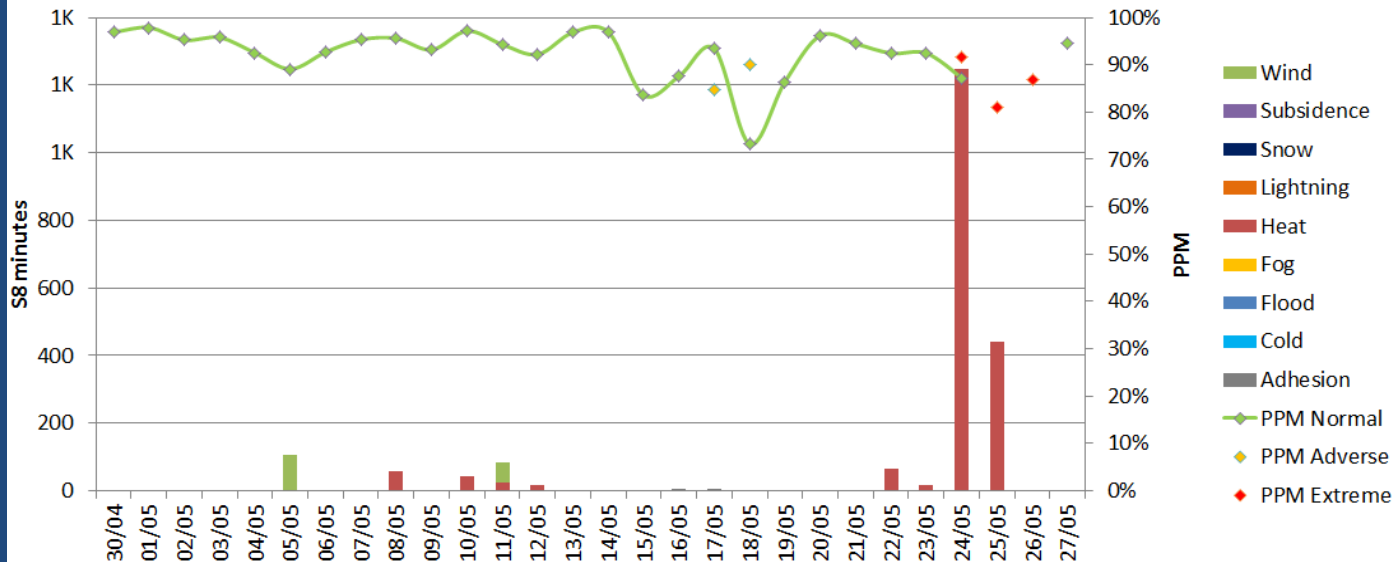
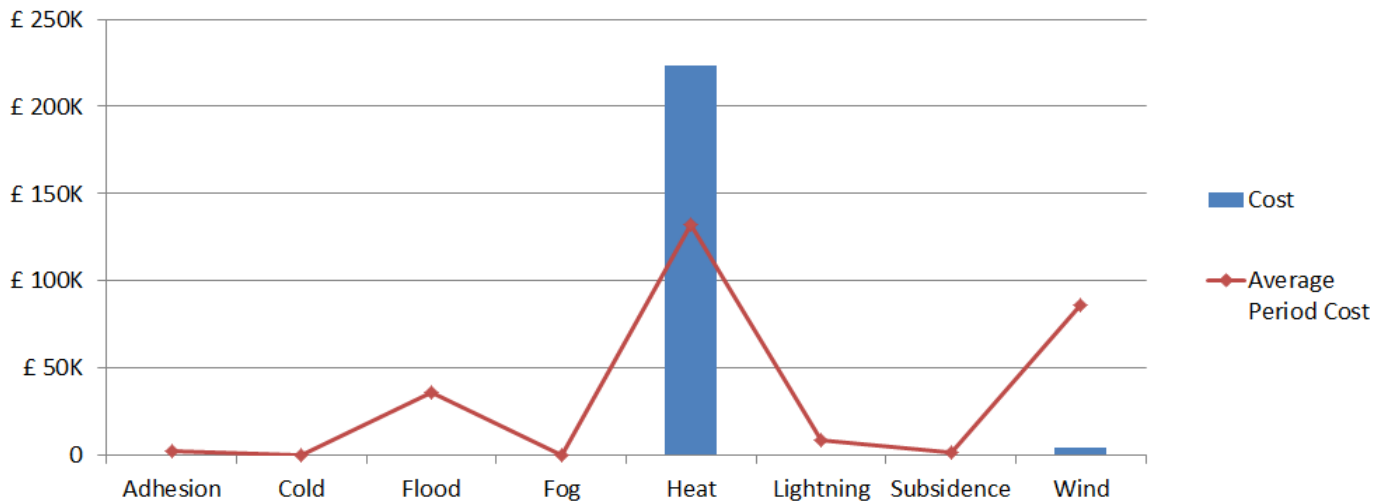


Figure 2 Weather related Schedule 8 cost impact for P2 LNW



Note that this figure relates to Schedule 8 cost and does not include OPEX or other costs.

Table 1 Top 10 weather related incidents P2

Date	IncidentDescription	stanoxSection	Route	Weather Category	Minutes	Cost
24/05/2017	20 ESR CRT DM WEEDKGF	Rugby : Weedon	LNW South	Heat	940	£135,015.33
25/05/2017	20 ESR CRT DM WEEDKGF++	Rugby : Weedon	LNW South	Heat	292	£45,225.18
24/05/2017	30 ESR XQW XLX	Whitacre Jn : Landor Street Jn	LNW South	Heat	302	£18,511.82
25/05/2017	20 ESR HEAT SPEED U/M GSTANG	Lancaster : Garstang & Catteral	LNW North	Heat	99	£8,100.77
25/05/2017	LANARKJ CRS CRT 20MPH	Law Jn : Carstairs	LNW North	Heat	25	£4,929.85
08/05/2017	20 ESR HEAT SPEED XOA OXN	Oxenholme Lake District : Carnforth North Jn	LNW North	Heat	57	£3,828.54
10/05/2017	HEAT SPEED XOA OXN	Oxenholme Lake District : Carnforth North Jn	LNW North	Heat	42	£3,798.41
05/05/2017	BAG ON OLE BHM XRA	Birmingham New Street : Perry Barr North Jn	LNW South	Wind	105	£2,470.60
11/05/2017	BALLOON ON OHLE TIP	Wolverhampton : Galton Jn	LNW South	Wind	46	£1,818.33
11/05/2017	20 ESR HEAT SPEED XOA OXN	Oxenholme Lake District : Carnforth North Jn	LNW North	Heat	21	£1,536.22

Weather Resilience and Climate Change Adaptation

LNW Route Periodic Performance Report – 2017/2018 P3

Figure 1 provides an overview of the impact of different weather related events by day for period 3 in relation to delay minutes and PPM performance for LNW route. If adverse/extreme conditions were experienced by one or more TOC during a week, a yellow or red dot will indicate the performance of the TOC(s) in question. Weather events don't always cause drops in performance (e.g. extreme rainfall may not flood the railway) and therefore, performance on adverse/extreme days can be higher than expected.

Figure 1 Weather related PPM and delay minutes for P3 2017 LNW

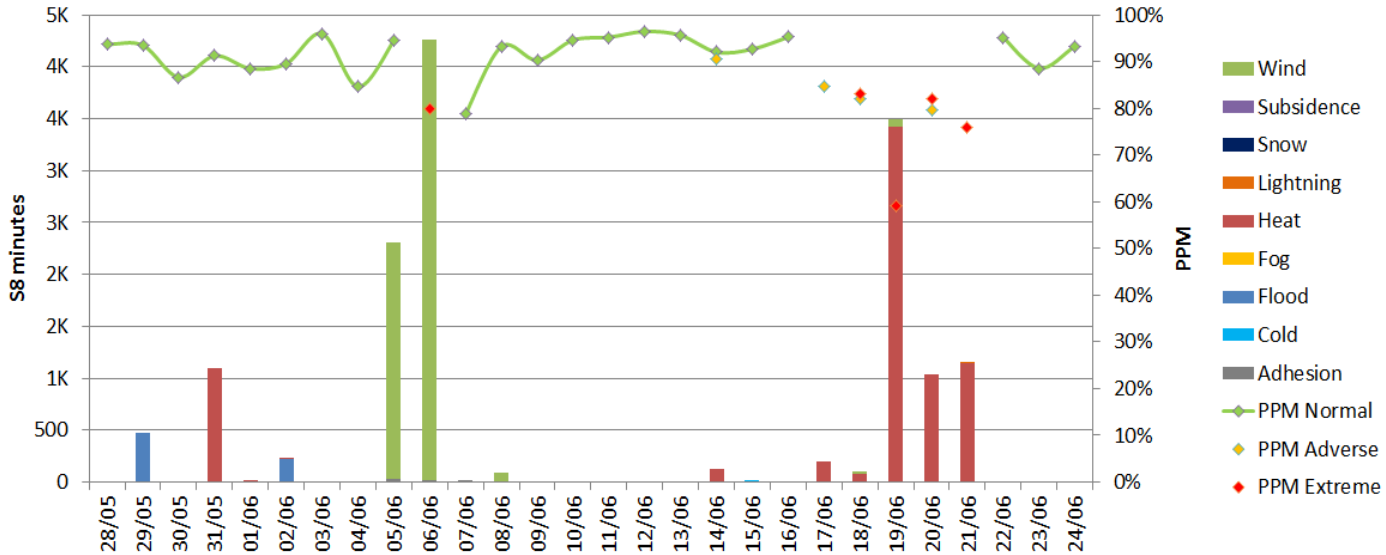
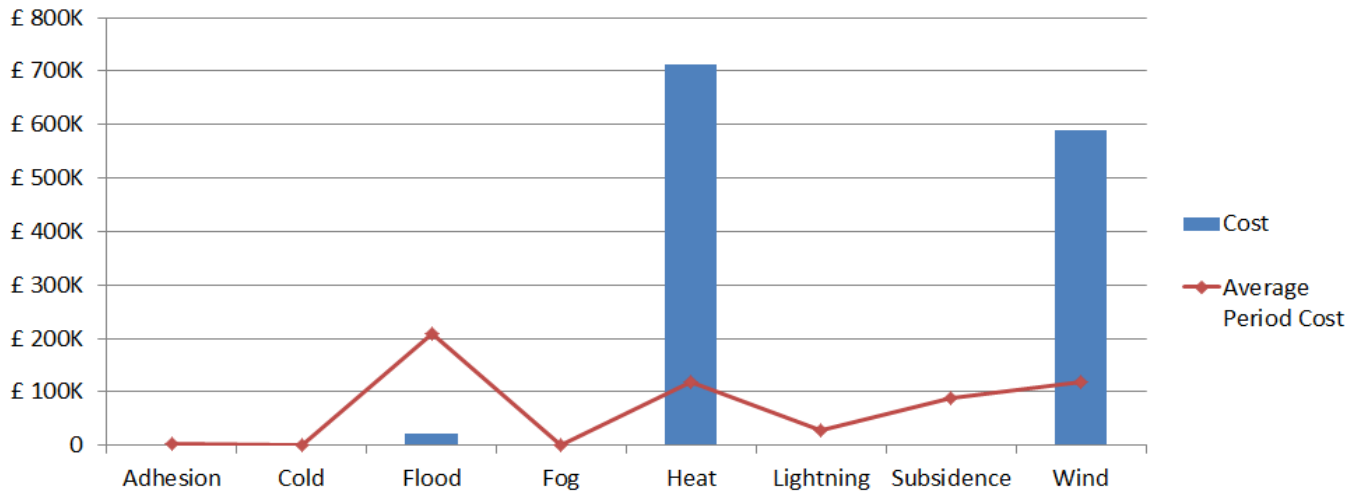


Figure 2 Weather related Schedule 8 cost impact for P3 in LNW



Note that this figure relates to Schedule 8 cost and does not include OPEX or other costs.

Table 1 Top 10 weather related incidents P3

Date	IncidentDescription	stanoxSection	Route	Weather Category	Minutes	Cost
06/06/2017	TRAMPOLINE ON LINE LEDBSH	Bletchley : Ledburn Jn	LNW South	Wind	3830.5	£511,868.79
19/06/2017	20 MPH CRT HEAT SPEED UF HTE	Watford Junction : Harrow & Wealdstone	LNW South	Heat	1348	£163,057.92
20/06/2017	20 ESR CRT HEAT SPEED UF KNT	Harrow & Wealdstone : Willesden West Londn Jn	LNW South	Heat	977	£132,872.77
21/06/2017	20 ESR CRT HEAT SPEED UF TRI	Tring	LNW South	Heat	543	£93,000.00
19/06/2017	20 MPH CRT HEAT SPEED UF WMB	Harrow & Wealdstone : Willesden West Londn Jn	LNW South	Heat	597	£85,110.75
21/06/2017	20 ESR CRT HEAT SPEED UF KNT	Harrow & Wealdstone : Willesden West Londn Jn	LNW South	Heat	457	£82,135.48
05/06/2017	MYT TREE ON LINE 20ESR	Milner Royd Jn : Hebden Bridge	LNW North	Wind	2770	£56,207.59
31/05/2017	20 ESR HEAT SLD BON	Salford Crescent : Bolton	LNW North	Heat	956	£22,582.46
19/06/2017	30/60 CRT HEAT SPEED UF XOD	Ledburn Jn	LNW South	Heat	236	£20,941.64
14/06/2017	20 ESR CRT UF XWI	Willesden West Londn Jn	LNW South	Heat	103	£19,439.68



Weather Resilience and Climate Change Adaptation

LNW Route Periodic Performance Report – 2017/2018 P4

Figure 1 provides an overview of the impact of different weather related events by day for period 4 in relation to delay minutes and PPM performance for LNW route. If adverse/extreme conditions were experienced by one or more TOC during a week, a yellow or red dot will indicate the performance of the TOC(s) in question. Weather events don't always cause drops in performance (e.g. extreme rainfall may not flood the railway) and therefore, performance on adverse/extreme days can be higher than expected.

Figure 1 Weather related PPM and delay minutes for P4 2017 LNW

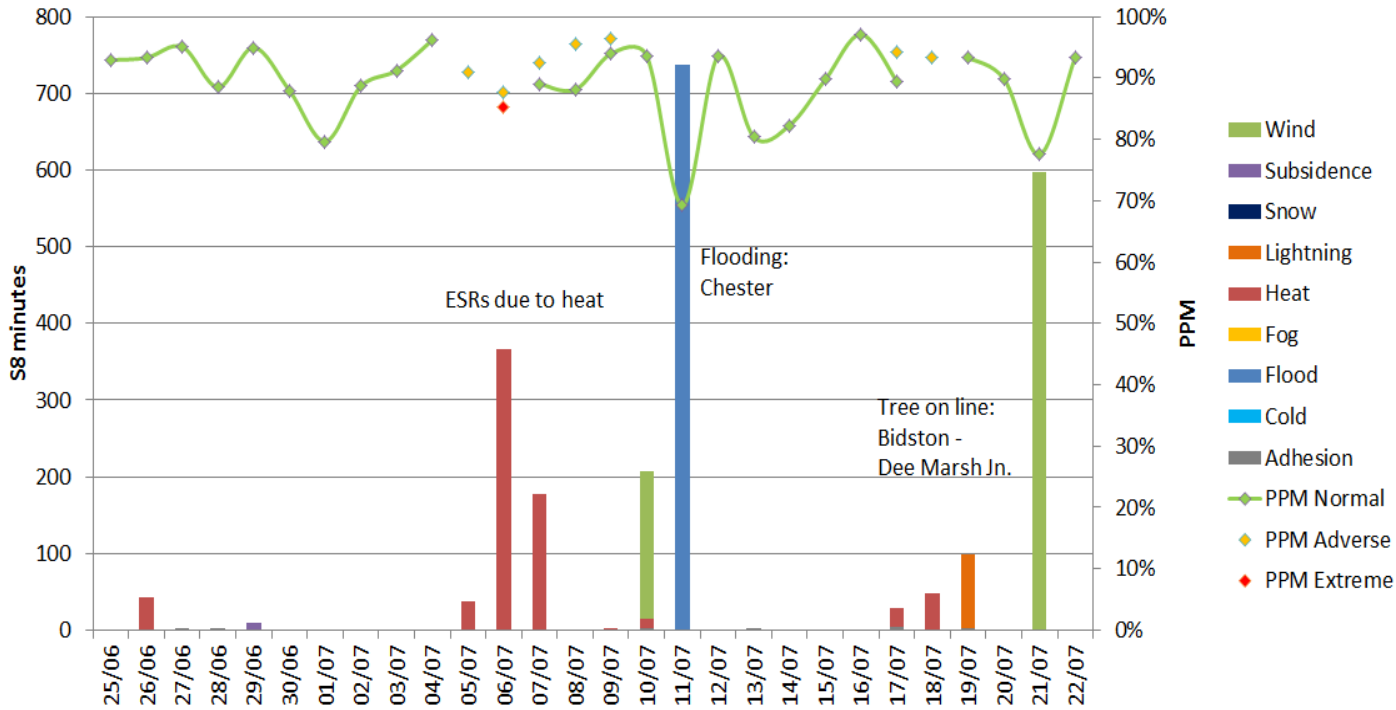
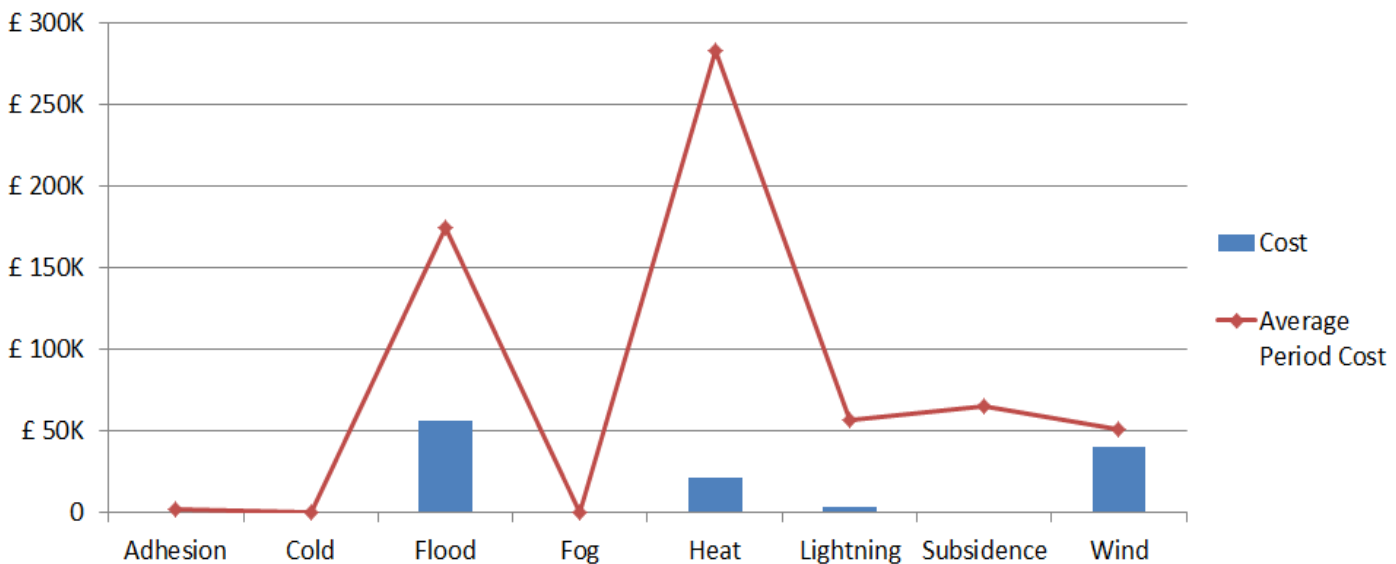


Figure 2 Weather related Schedule 8 cost impact for P4 LNW



Note that this figure relates to Schedule 8 cost and does not include OPEX or other costs.



Weather Resilience and Climate Change Adaptation

LNW Route Periodic Performance Report – 2017/2018 P5

Figure 1 provides an overview of the impact of different weather related events by day for period 5 in relation to delay minutes and PPM performance for LNW route. If adverse/extreme conditions were experienced by one or more TOC during a week, a yellow or red dot will indicate the performance of the TOC(s) in question. Weather events don't always cause drops in performance (e.g. extreme rainfall may not flood the railway) and therefore, performance on adverse/extreme days can be higher than expected.

Figure 1 Weather related PPM and delay minutes for P5 2017 LNW

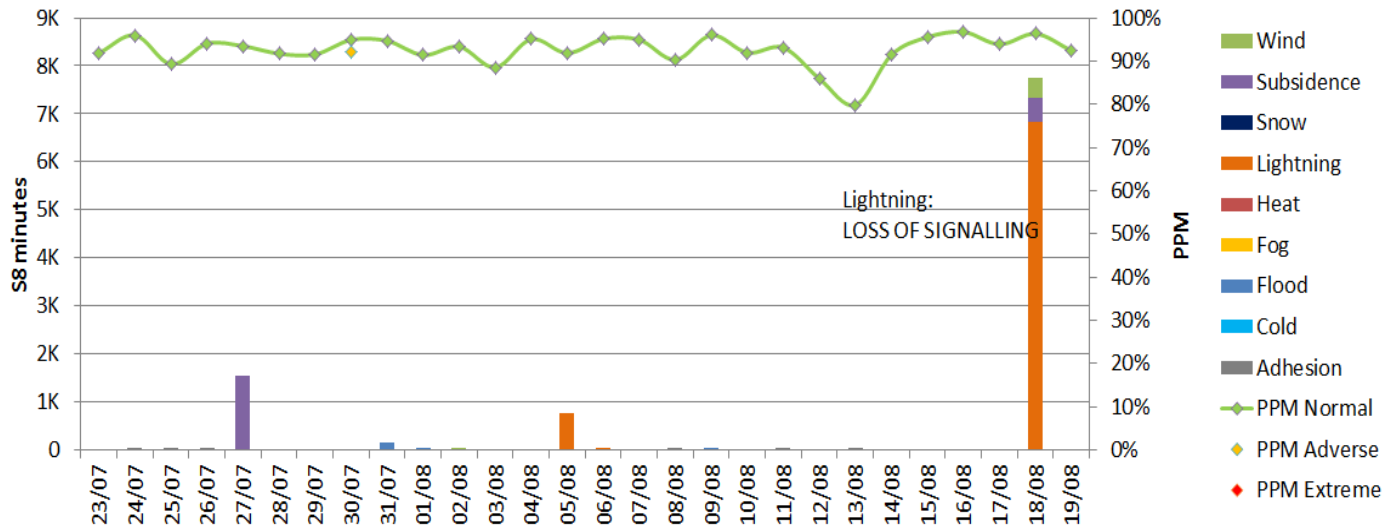
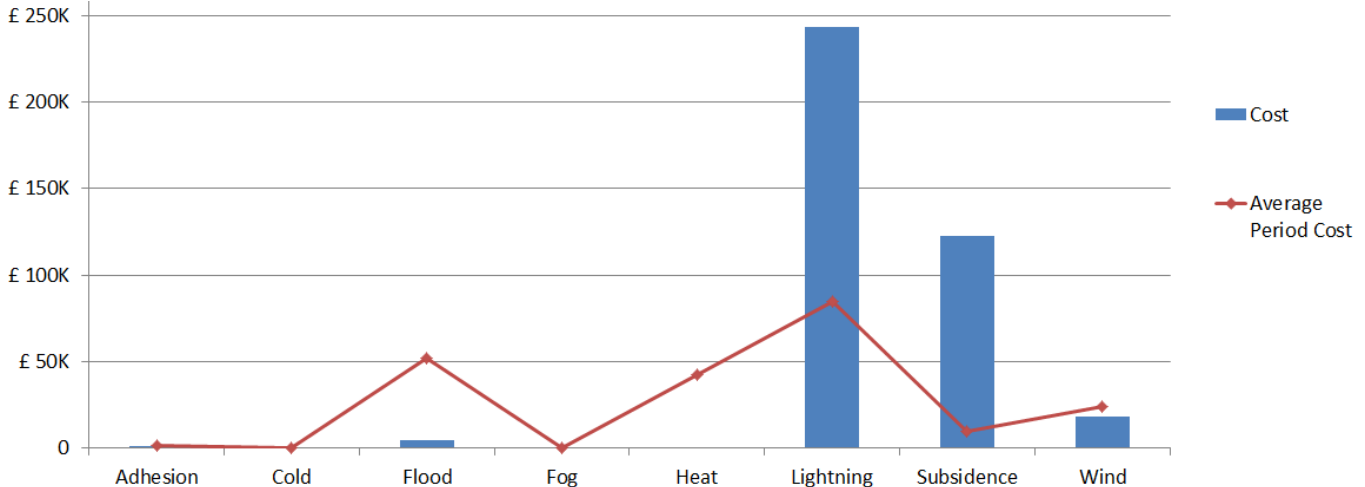


Figure 2 Weather related Schedule 8 cost impact for P5 LNW



Note that this figure relates to Schedule 8 cost and does not include OPEX or other costs.

Table 1 Top 10 weather related incidents P5

Date	IncidentDescription	stanoxSection	Route	Weather Category	Minutes	Cost
18/08/2017	LOSS OF SIGNALLING NMC	Ashburys	LNW North	Lightning	6826.5	£226,435.00
27/07/2017	50MPH ESR DN LNGBAP	Rugby : Northampton	LNW South	Subsidence	1553.5	£110,964.32
18/08/2017	TREE ON THE LINE KNN	Kings Norton : Longbridge	LNW South	Wind	429	£17,098.13
05/08/2017	LOSS OF SIGNALLING COV NUN	Nuneaton : Coventry	LNW South	Lightning	761	£15,680.68
18/08/2017	EARTH MOVEMENT FRD HSB	Helsby	LNW North	Subsidence	505.5	£11,544.65
31/07/2017	FLOODING PFY	Blackpool North : Kirkhmnjn	LNW North	Flood	155	£4,040.75
06/08/2017	LIGHTNING STRIKE LIF	Lichfield North Jn : Lichfield Trent Valley HI	LNW South	Lightning	15	£1,148.15
02/08/2017	HDH OBJECT ON LINE	Willesden Jn. High Level : Gospel Oak	LNW South	Wind	29	£1,001.66
26/07/2017	1H14 2 LOST KDG MAC	Macclesfield : Kidsgrove	LNW North	Adhesion	8	£540.55
24/07/2017	2V40 UNIT DEFECTS THW	Rowley Regis : Birmingham Snow Hill	LNW South	Adhesion	17	£473.31



Weather Resilience and Climate Change Adaptation

LNW Route Periodic Performance Report – 2017/2018 P6

Figure 1 provides an overview of the impact of different weather related events by day for period 6 in relation to delay minutes and PPM performance for LNW route. If adverse/extreme conditions were experienced by one or more TOC during a week, a yellow or red dot will indicate the performance of the TOC(s) in question. Weather events don't always cause drops in performance (e.g. extreme rainfall may not flood the railway) and therefore, performance on adverse/extreme days can be higher than expected.

Figure 1 Weather related PPM and delay minutes for P6 2017 LNW

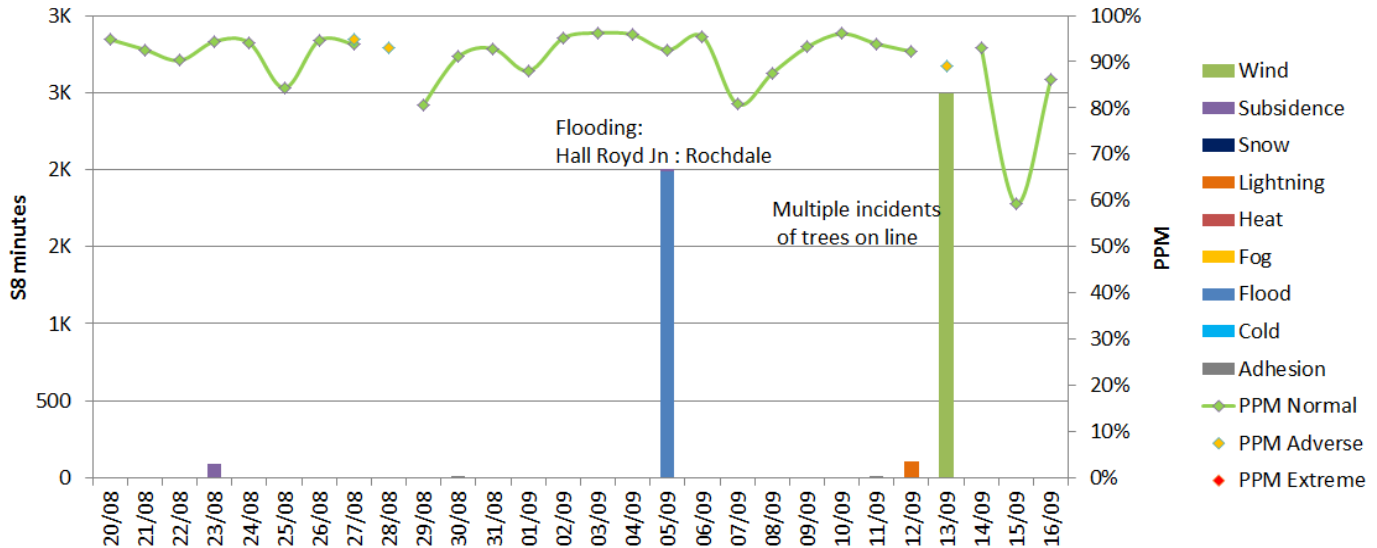
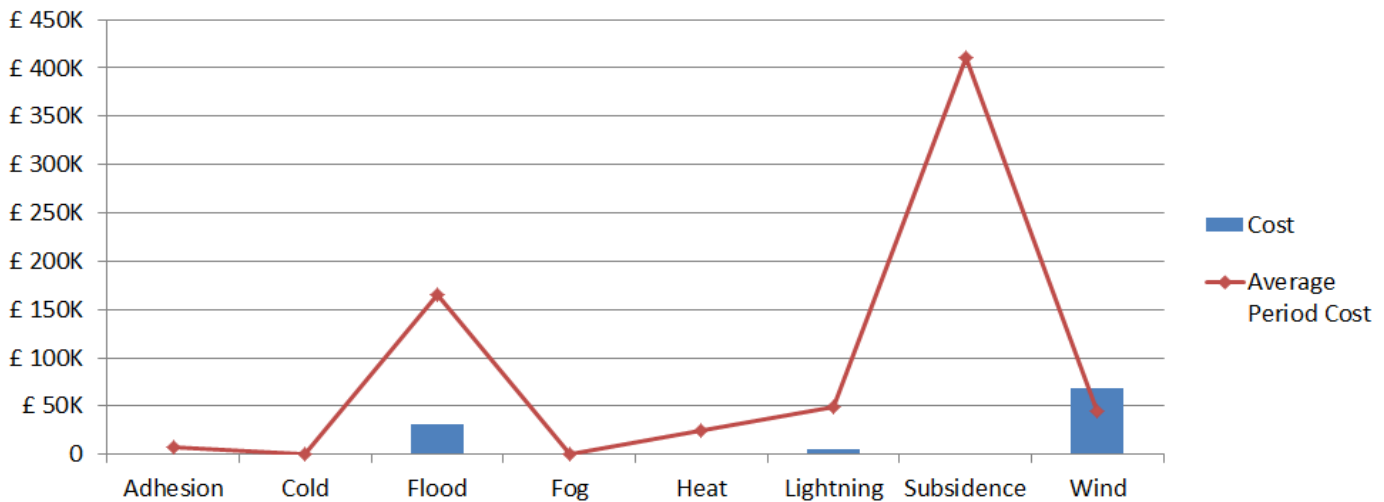


Figure 2 Weather related Schedule 8 cost impact for P6 LNW



Note that this figure relates to Schedule 8 cost and does not include OPEX or other costs.

Table 1 Top 10 weather related incidents P6

Date	IncidentDescription	stanoxSection	Route	Weather Category	Minutes	Cost
13/09/2017	TREE ON LINE FOK LIC	Lichfield City : Four Oaks	LNW South	Wind	871.5	£24,045.87
05/09/2017	FLOODING WDN	Hall Royd Jn : Rochdale	LNW North	Flood	1457	£23,474.59
13/09/2017	TREE ON LINE WDE	Whitlocks End : Stratford-Upon-Avon	LNW South	Wind	633.17	£18,330.04
13/09/2017	BRANCH ON OLE XBJ	Bushbury Jn	LNW South	Wind	146	£7,740.50
05/09/2017	FLOODING MEC	Southport : Burscough Bridge	LNW North	Flood	408.5	£6,176.67
12/09/2017	LIGHTNING STRIKE CHNLYNJ	Hazel Grove : Chinley North Jn	LNW North	Lightning	103	£5,735.78
13/09/2017	TREE ON LINE HGN	L'Pool Sth Pw HI (Allertn) : Hunts Cross	LNW North	Wind	285	£4,663.72
13/09/2017	TREE BRANCH ON LINE LTT	Hooton : Ellesmere Port	LNW North	Wind	146	£3,782.90
13/09/2017	TREE ON LINE WRX GOB	Wrexham General : Gobowen	LNW South	Wind	128.5	£2,352.75
13/09/2017	TREE ON LINE SHR WEM	Wem : Shrewsbury	LNW North	Wind	71	£2,251.35

Weather Resilience and Climate Change Adaptation

LNW Route Periodic Performance Report – 2017/2018 P7

Figure 1 provides an overview of the impact of different weather related events by day for period 7 in relation to delay minutes and PPM performance for LNW route. If adverse/extreme conditions were experienced by one or more TOC during a week, a yellow or red dot will indicate the performance of the TOC(s) in question. Weather events don't always cause drops in performance (e.g. extreme rainfall may not flood the railway) and therefore, performance on adverse/extreme days can be higher than expected.

Figure 1 Weather related PPM and delay minutes for P7 2017 LNW

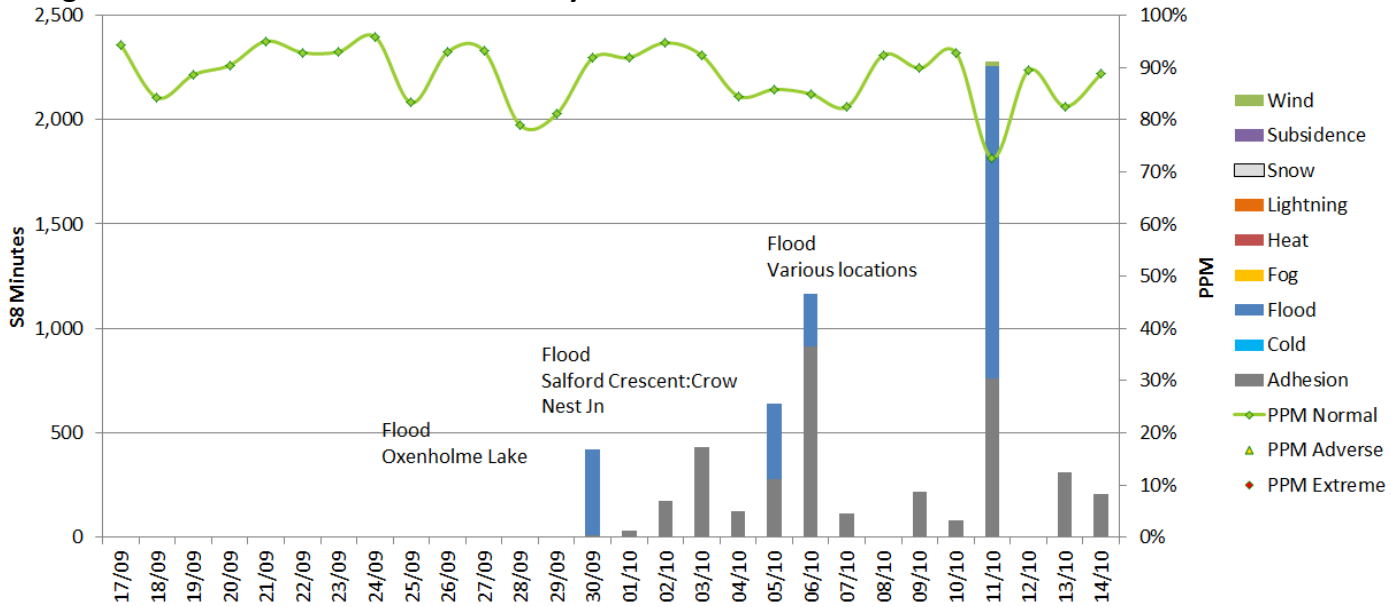
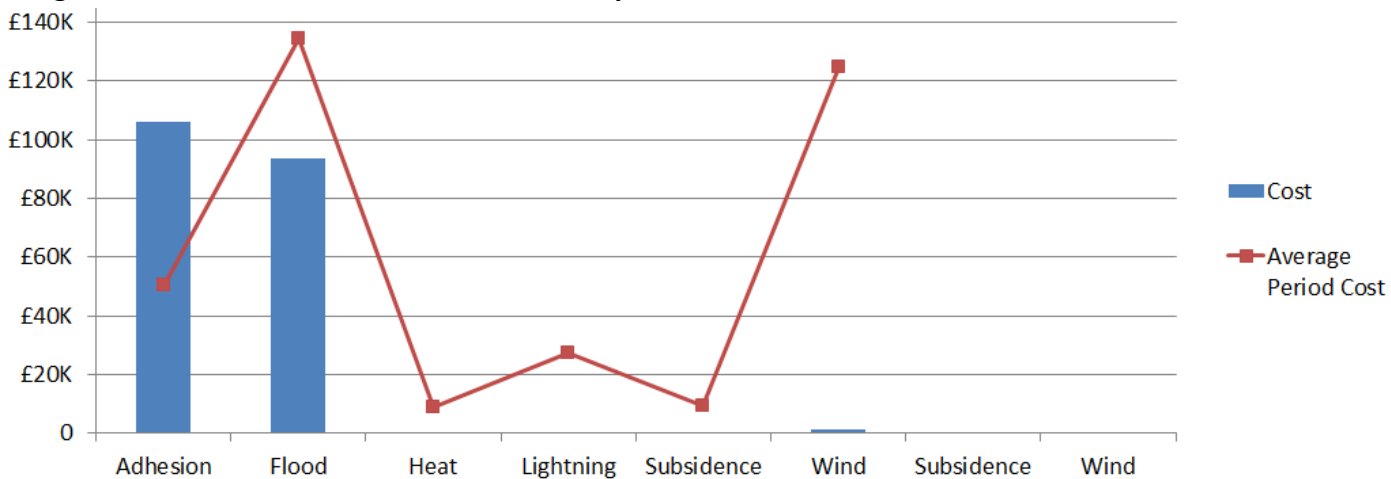


Figure 2 Weather related Schedule 8 cost impact for P7



Note that this figure relates to Schedule 8 cost and does not include OPEX or other costs.

Table 1 Top 10 weather related incidents P7

Date	IncidentDescription	stanoxSection	WeatherCategory	Minutes	Cost
11/10/2017	FLOODING XIT	Tebay	Flood	527	£55,005
06/10/2017	WRONG SIDE FAILURE WND WSF	Aylesbury : Amersham	Adhesion	612.5	£21,248
30/09/2017	FLOODING WDM	Oxenholme Lake District	Flood	409	£12,274
11/10/2017	FLOODING WGT MRY	Wigton : Workington	Flood	855	£11,750
03/10/2017	WRONG SIDE FAILURE BCS WSF	Aynho Jn : Bicester North	Adhesion	247	£7,346
06/10/2017	FLOODING GOS	Ulverston : Arnside	Flood	252	£6,158
05/10/2017	FLOODING ATN (UP)	Salford Crescent : Crow Nest Jn	Flood	363	£5,497
13/10/2017	PRHC MORCMSJ LAN	Carnforth North Jn : Lancaster	Adhesion	79	£4,847
03/10/2017	2C02 ERHC UDC HTE HDL	Watford Junction Dc : Harrow & Wealdstone	Adhesion	86.5	£4,451
06/10/2017	WRONG SIDE FAILURE BCSTARD	Aynho Jn : Bicester North	Adhesion	106	£3,087



Weather Resilience and Climate Change Adaptation

LNW Route Periodic Performance Report – 2017/2018 P8

Figure 1 provides an overview of the impact of different weather related events by day for period 8 in relation to delay minutes and PPM performance for LNW route. If adverse/extreme conditions were experienced by one or more TOC during a week, a yellow or red dot will indicate the performance of the TOC(s) in question. Weather events don't always cause drops in performance (e.g. extreme rainfall may not flood the railway) and therefore, performance on adverse/extreme days can be higher than expected.

Figure 1 Weather related PPM and delay minutes for P8 2017 LNW

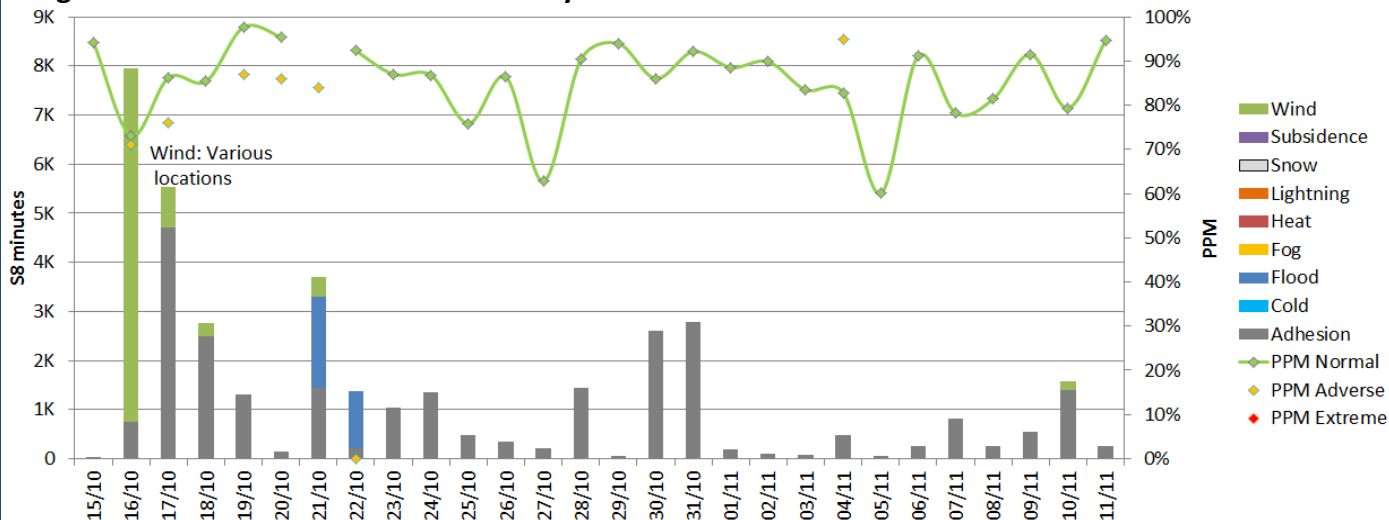
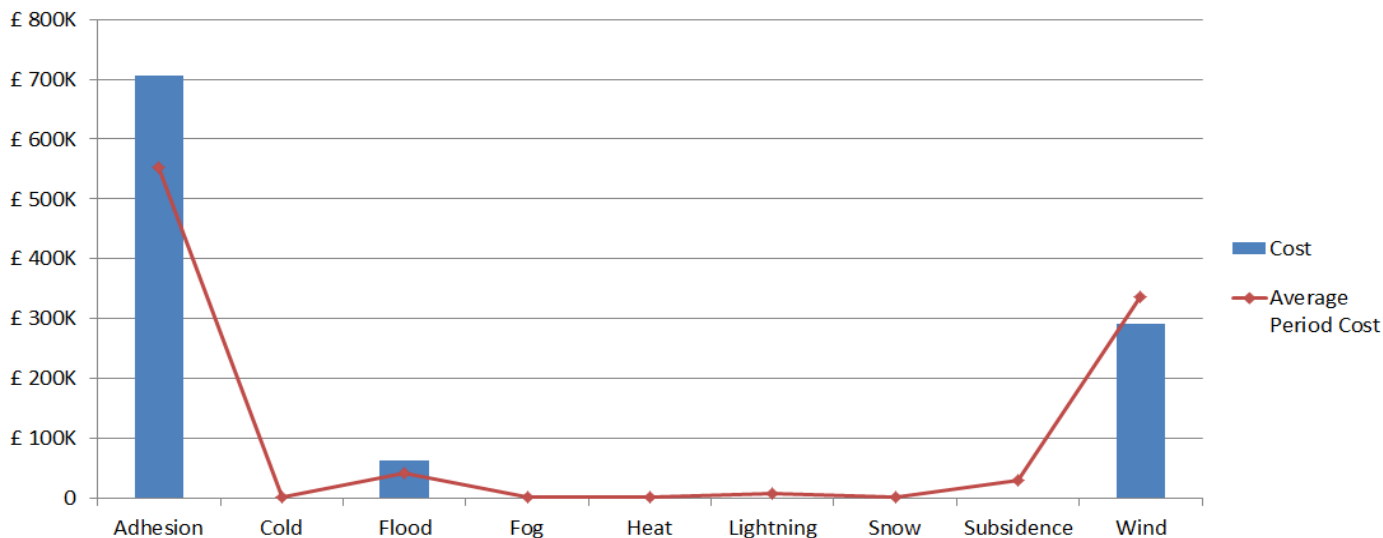


Figure 2 Weather related Schedule 8 cost impact for P8 LNW



Note that this figure relates to Schedule 8 cost and does not include OPEX or other costs.

Table 1 Top 10 weather related incidents P8

Date	IncidentDescription	stanoxSection	Route	Weather Category	Minutes	Cost
31/10/2017	LE212 PTS FLR OLIVEMJ	Liverpool Lime Street : Bootle Branch Jn	LNW North	Adhesion	2166	£71,938.40
18/10/2017	MJ BE WRONG SIDE TC FLR WLN	Wellington (Shropshire) : Madeley Jn (Salop)	LNW South	Adhesion	736	£38,473.06
30/10/2017	6V91 ADHESION XIA WSL	Walsall : Park Lane Jn	LNW South	Adhesion	1391	£37,773.90
16/10/2017	50 BESR OXN XGS	Oxenholme Lake District	LNW North	Wind	432	£36,008.64
22/10/2017	FLOODING PFY	Blackpool North : Kirkhmnjn	LNW North	Flood	1161	£35,438.02
17/10/2017	HBD DOUBLE BLOCK	Milner Royd Jn : Hebden Bridge	LNW North	Adhesion	1882.5	£34,724.82
16/10/2017	BAG ON OLE WYL	Four Oaks : Aston	LNW South	Wind	917	£29,444.56
16/10/2017	TREE ON LINE SYB	Ashburys : Stalybridge	LNW North	Wind	559	£27,534.12
16/10/2017	TREE ON LINE WLN SHR	Shrewsbury : Wellington (Shropshire)	LNW South	Wind	1174.5	£26,665.51
17/10/2017	6C54 RHC PROG XIT	Tebay	LNW North	Adhesion	901	£24,568.30

Weather Resilience and Climate Change Adaptation

LNW Route Periodic Performance Report – 2017/2018 P9

Figure 1 provides an overview of the impact of different weather related events by day for period 9 in relation to delay minutes and PPM performance for LNW route. If adverse/extreme conditions were experienced by one or more TOC during a week, a yellow or red dot will indicate the performance of the TOC(s) in question. Weather events don't always cause drops in performance (e.g. extreme rainfall may not flood the railway) and therefore, performance on adverse/extreme days can be higher than expected.

Figure 1 Weather related PPM and delay minutes for P9 2017 LNW

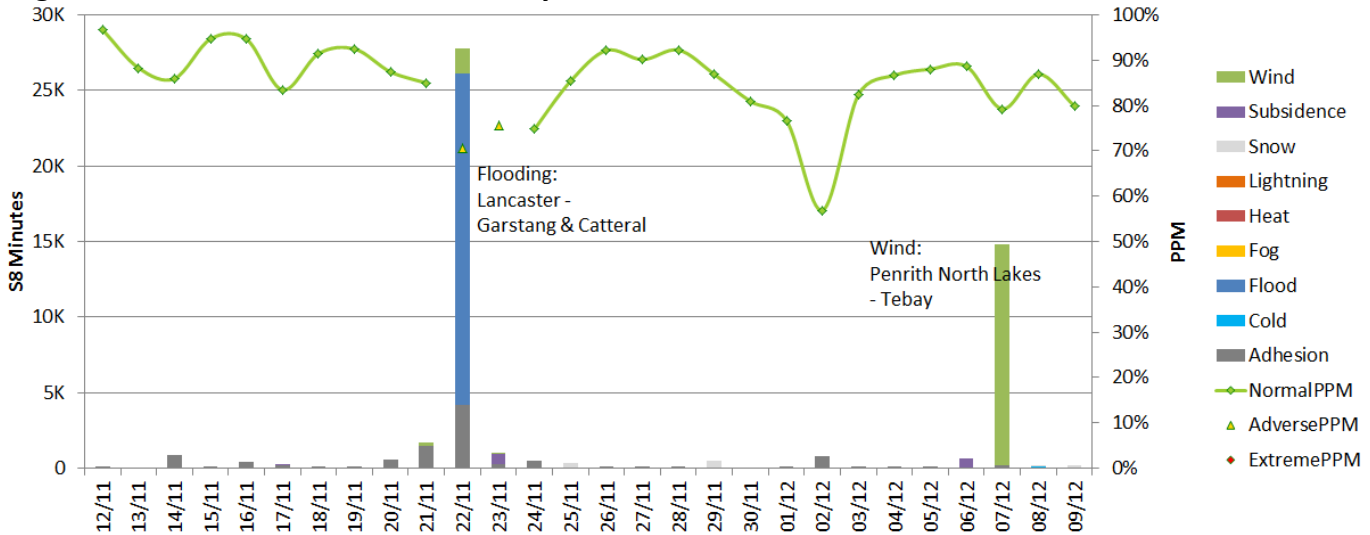
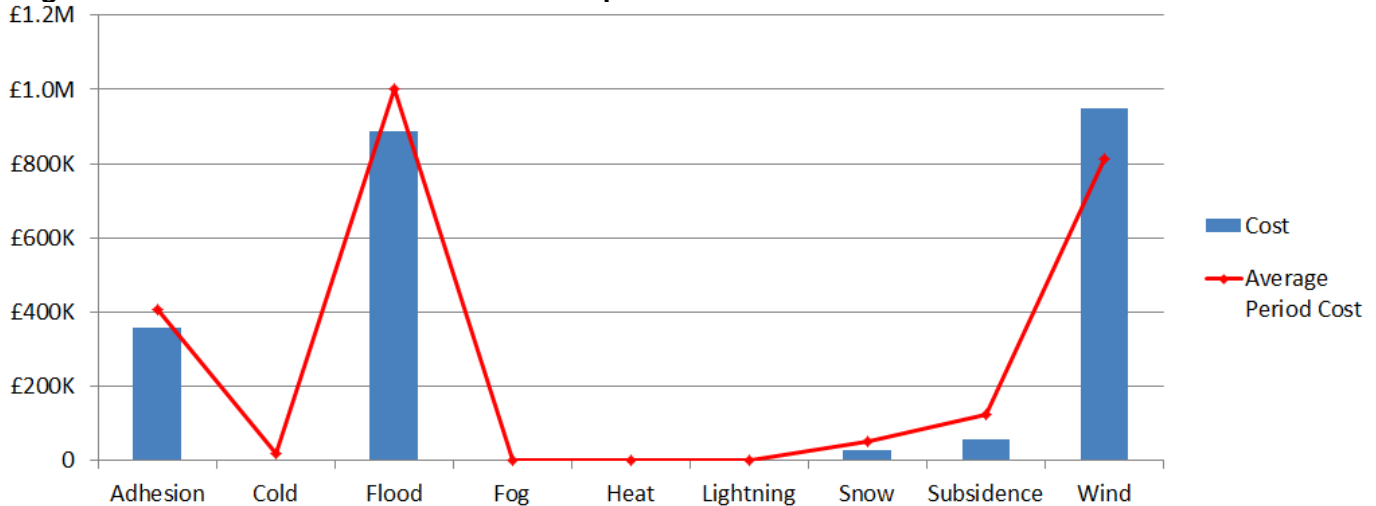


Figure 2 Weather related Schedule 8 cost impact for P9 LNW



Note that this figure relates to Schedule 8 cost and does not include OPEX or other costs.

Table 1 Top 10 weather related incidents P9

Date	IncidentDescription	stanoxSection	Weather Category	Delay Minutes	Cost
07/12/2017	OLE DAMAGE EDENVGL	Penrith North Lakes : Tebay	Wind	14585.5	£825,842.23
22/11/2017	FLOODING OUBECK	Lancaster : Garstang & Catterral	Flood	7047	£456,247.74
22/11/2017	FLOODING OUBECK	Lancaster : Garstang & Catterral	Flood	8337.5	£292,204.43
22/11/2017	BESR OXN SHAPSMT 22/11	Tebay : Oxenholme Lake District	Wind	1429	£108,188.63
22/11/2017	FLOODING SVR CNF	Arnside : Carnforth North Jn	Flood	3703	£85,911.94
22/11/2017	2R55 ERHC BRV	Birmingham New Street : Kings Norton	Adhesion	1377	£50,872.47
23/11/2017	LANDSLIP LAN OUBECK	Lancaster : Garstang & Catterral	Subsidence	722	£45,073.48
21/11/2017	2N60 ERHC FOK UP	Four Oaks	Adhesion	484	£37,677.68
14/11/2017	ERHC BON BBN	Blackburn : Bolton	Adhesion	619.5	£24,176.01
22/11/2017	FLOODING WDM SVL	Windermere : Oxenholme Lake District	Flood	694	£23,054.68



Weather Resilience and Climate Change Adaptation

LNW Route Periodic Performance Report – 2017/2018 P10

Figure 1 provides an overview of the impact of different weather related events by day for period 10 in relation to delay minutes and PPM performance for LNW route. If adverse/extreme conditions were experienced by one or more TOC during a week, a yellow or red dot will indicate the performance of the TOC(s) in question. Weather events don't always cause drops in performance (e.g. extreme rainfall may not flood the railway) and therefore, performance on adverse/extreme days can be higher than expected.

Figure 1 Weather related PPM and delay minutes for P10 2017/2018

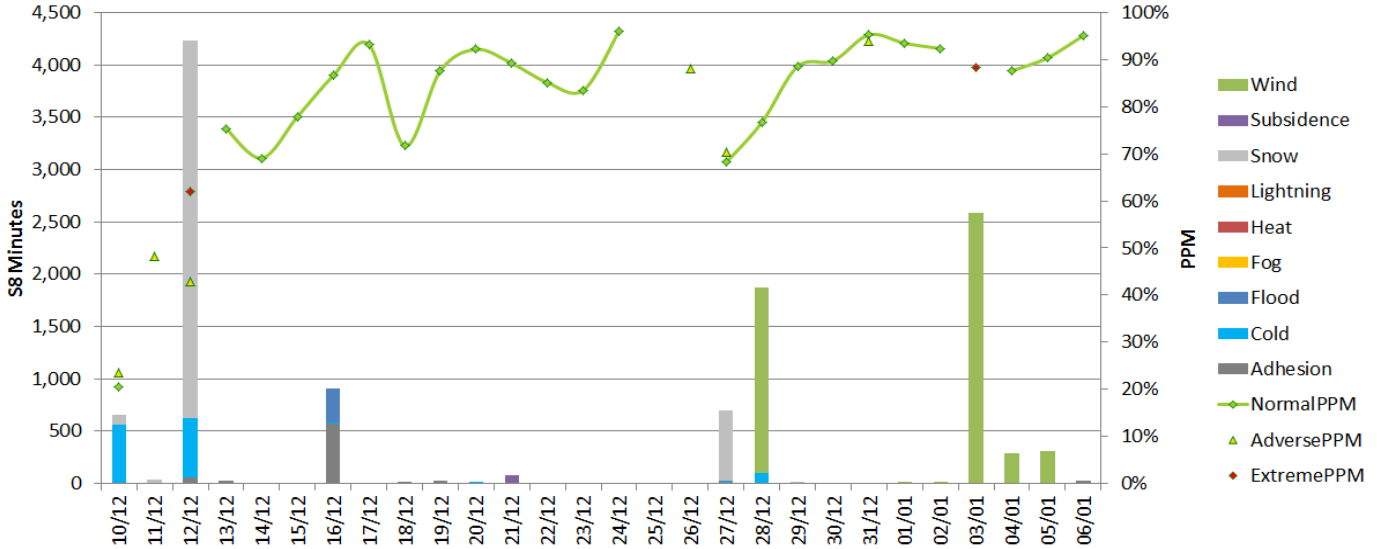
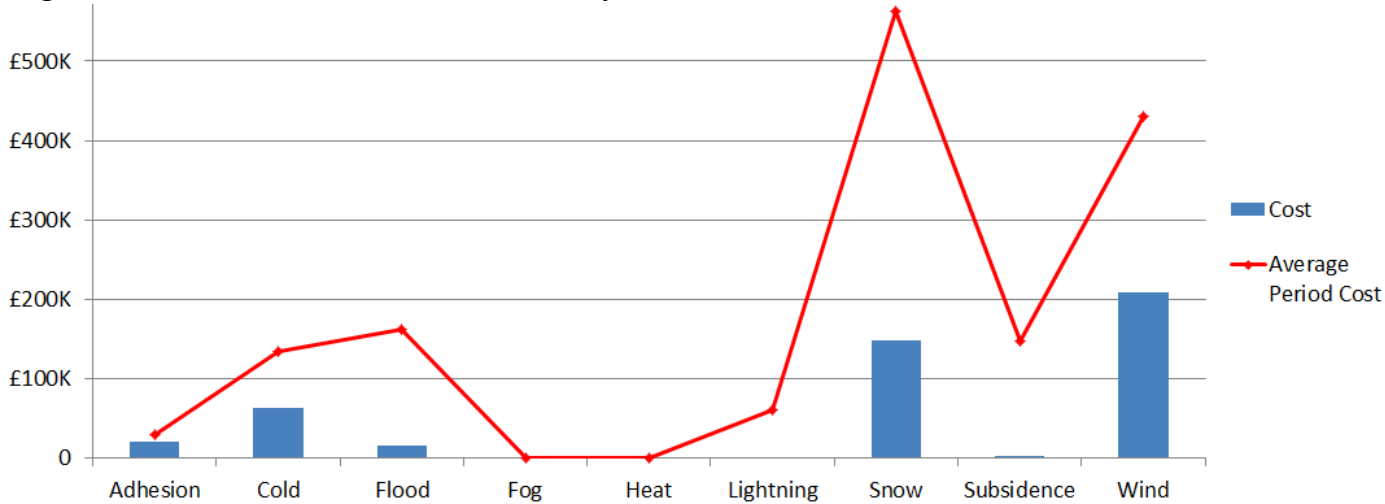


Figure 2 Weather related Schedule 8 cost impact for P10 LNW



Note that this figure relates to Schedule 8 cost and does not include OPEX or other costs.

Table 1 Top 10 weather related incidents P10

Date	IncidentDescription	stanoxSection	Route	Weather Category	Delay Minutes	Cost
28/12/2017	BAG ON OLE DUD AST SRCT	Birmingham New Street : Aston	LNW South	Wind	1772	£71,262.65
12/12/2017	NS69 TC FLR ADD	Stechford : Birmingham New Street	LNW South	Cold	352	£35,239.33
12/12/2017	PF34 PTS FLR PEAKFSB	Peak Forest S.B.	LNW North	Snow	1118	£30,236.48
12/12/2017	AN404 PTS FLR BKT	Lichfield City : Four Oaks	LNW South	Snow	953	£27,117.58
03/01/2018	BAG ON OLE BRV	Birmingham New Street : Kings Norton	LNW South	Wind	750	£21,119.78
27/12/2017	RY446 PTS FLR DVNTYNJ	Rugby	LNW South	Snow	639	£21,056.22
03/01/2018	OBJECT ON LINE PNK	Stafford : Bushbury Jn	LNW South	Wind	348	£20,722.00
03/01/2018	CX2 BREAKER OP PRE GSTANG	Garstang & Catteral : Preston	LNW North	Wind	256	£20,059.89
10/12/2017	TRIANGLE OOU HTN	Hatton	LNW South	Cold	560.63	£18,734.82
03/01/2018	50 BLANKET ESR CHNLYNJ GRN	Chinley North Jn : Earles Sdgs S.B.	LNW North	Wind	191	£15,181.75

Weather Resilience and Climate Change Adaptation

LNW Route Periodic Performance Report – 2017/2018 P11

Figure 1 provides an overview of the impact of different weather related events by day for period 11 in relation to delay minutes and PPM performance for LNW route. If adverse/extreme conditions were experienced by one or more TOC during a week, a yellow or red dot will indicate the performance of the TOC(s) in question. Weather events don't always cause drops in performance (e.g. extreme rainfall may not flood the railway) and therefore, performance on adverse/extreme days can be higher than expected.

Figure 1 Weather related PPM and delay minutes for P11 2018

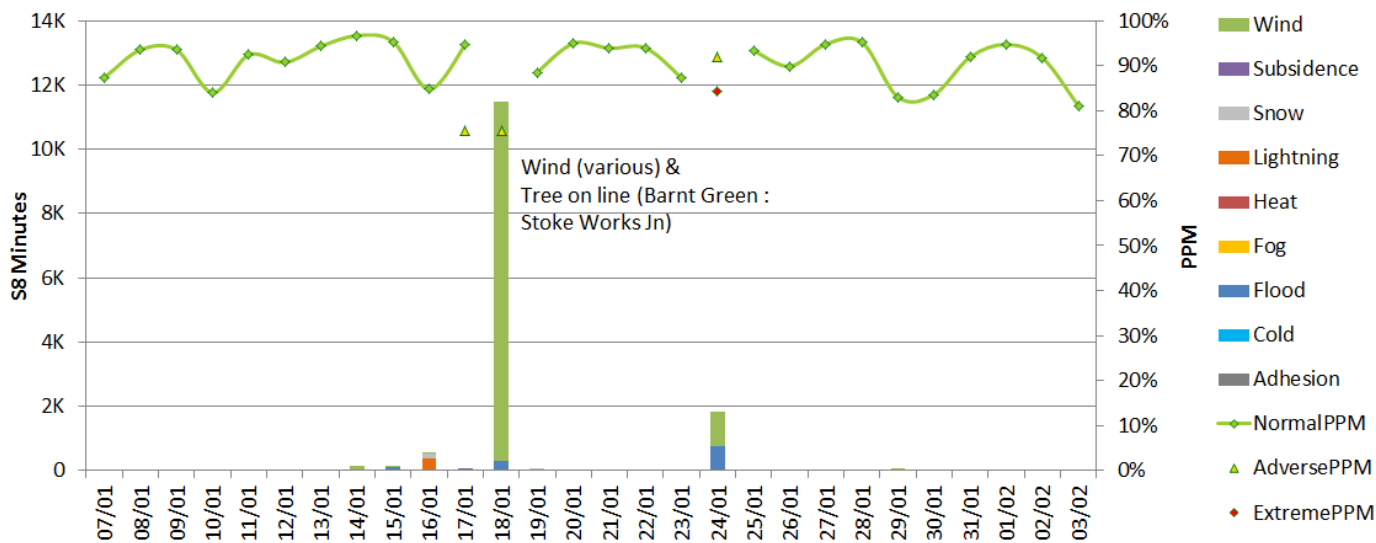
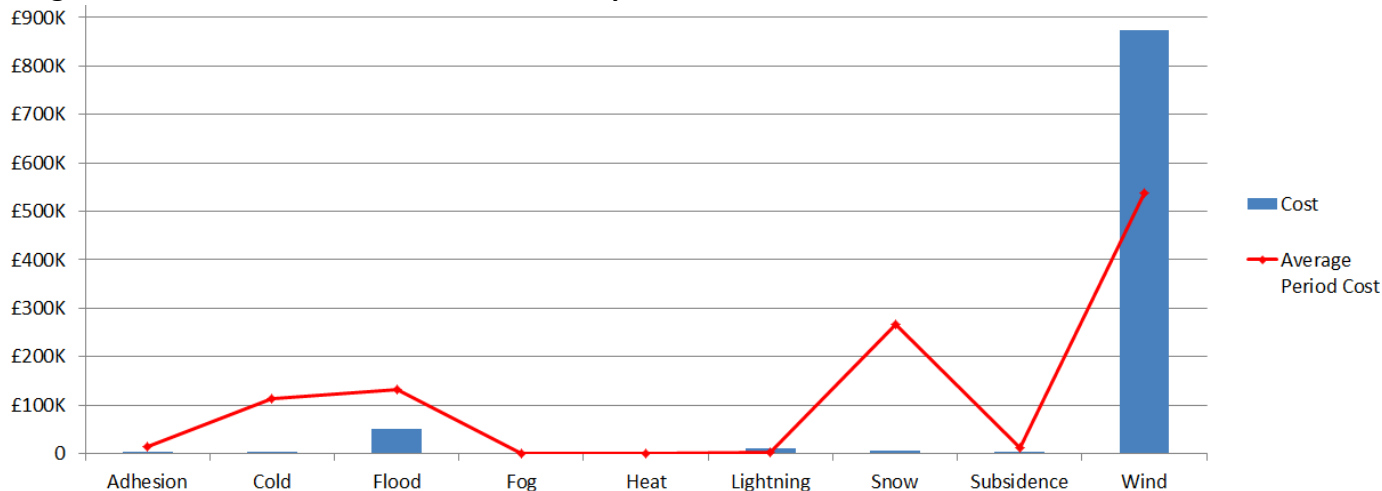


Figure 2 Weather related Schedule 8 cost impact for P11 LNW



Note that this figure relates to Schedule 8 cost and does not include OPEX or other costs.

Table 1 Top 10 weather related incidents P11

Date	IncidentDescription	stanoxSection	Route	Weather Category	Delay Minutes	Cost
18/01/2018	LQ8 OCB TRIP WVH STA	Stafford : Bushbury Jn	LNW South	Wind	3515	£448,695.91
18/01/2018	TREE ONLINE XSW BTG	Barnt Green : Stoke Works Jn	LNW South	Wind	1423.26	£107,875.32
18/01/2018	WS14 OCB KNN LOB	Kings Norton : Longbridge	LNW South	Wind	3052	£85,811.46
24/01/2018	50 BLANKET ESR OXN PNR OXN	Tebay : Oxenholme Lake District	LNW North	Wind	908	£50,352.28
18/01/2018	CF8 OLE TRIP SDB CEL	Alderley Edge : Sandbach	LNW North	Wind	609.5	£39,197.93
24/01/2018	SYMNGTN FLOODING	Carstairs South Jn : Beattock Summit	LNW North	Flood	588	£37,898.60
18/01/2018	WHD OBSTRUCTION	Willesden Jn. High Level : Gospel Oak	LNW South	Wind	944	£33,664.22
18/01/2018	1O02 STRUCK A TREE KNW	Leamington Spa	LNW South	Wind	522	£22,075.51
18/01/2018	PULFORD LC FLR WRX CTR (L2.1)	Chester : Wrexham General	LNW South	Wind	609.5	£21,657.10
18/01/2018	BAG ON OLE WFJ	Watford Junction	LNW South	Wind	146	£20,241.07



Weather Resilience and Climate Change Adaptation

LNW Route Periodic Performance Report – 2017/2018 P12

Figure 1 provides an overview of the impact of different weather related events by day for period 12 in relation to delay minutes and PPM performance for LNW route. If adverse/extreme conditions were experienced by one or more TOC during a week, a yellow or red dot will indicate the performance of the TOC(s) in question. Weather events don't always cause drops in performance (e.g. extreme rainfall may not flood the railway) and therefore, performance on adverse/extreme days can be higher than expected.

Figure 1 Weather related PPM and delay minutes for P12 2018

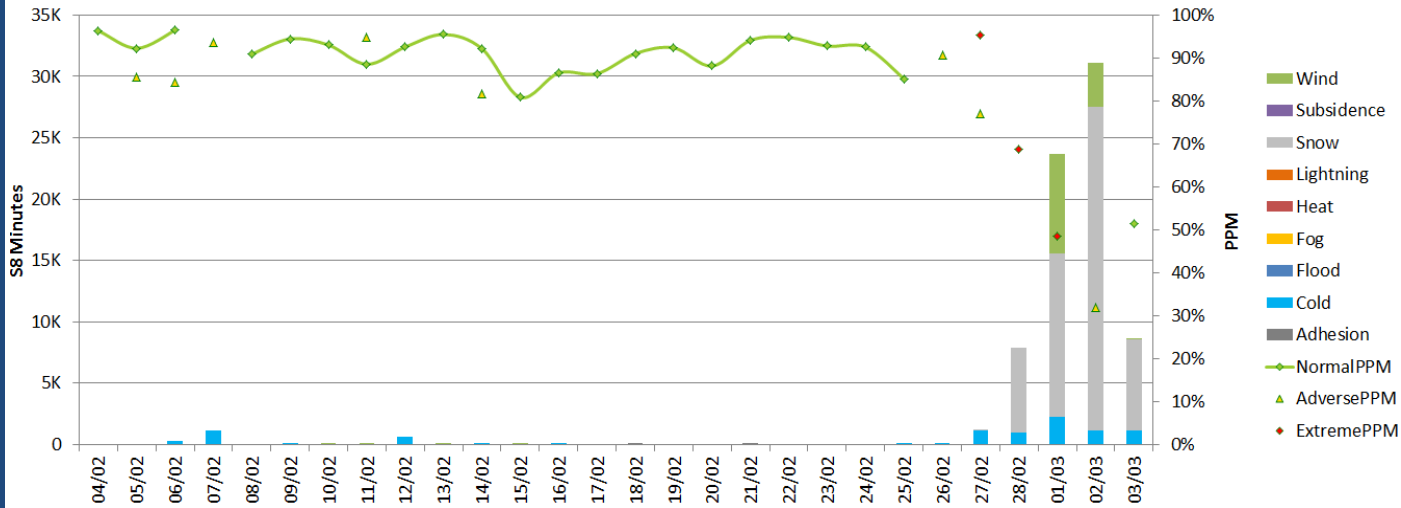
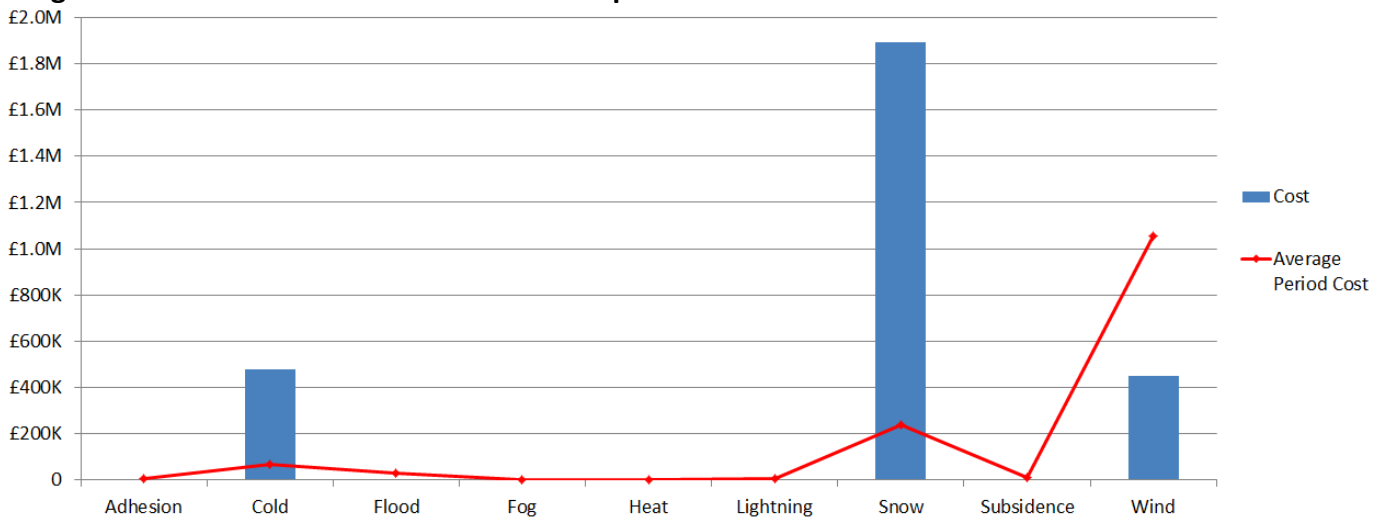


Figure 2 Weather related Schedule 8 cost impact for P12 LNW



Note that this figure relates to Schedule 8 cost and does not include OPEX or other costs.

Table 1 Top 10 weather related incidents P12

Date	IncidentDescription	stanoxSection	Route	Weather Category	Delay Minutes	Cost
02/03/2018	SNOW DRIFT XCO SNE	Stone : Colwich	LNW South	Snow	1288	£191,138.64
02/03/2018	EXTREME WEATHER BSW	Birmingham Moor Street : Tyseley	LNW South	Snow	5572.28	£161,299.30
02/03/2018	SNOW DRIFT RDC	Barnt Green : Redditch	LNW South	Snow	4535	£133,318.22
02/03/2018	ICICLES COWBURN TUNNEL	Chinley North Jn : Earles Sdgs S.B.	LNW North	Snow	3611.5	£129,768.31
02/03/2018	ICE IN TUNNEL WEEDKGF	Rugby : Weedon	LNW South	Cold	671	£100,522.61
03/03/2018	SEVERE WEATHER NMP 03.03.18	Northampton	LNW South	Snow	832.5	£98,634.60
02/03/2018	SNOW IN ALL PTS XOZ ###	Birmingham New Street	LNW South	Snow	1652.5	£97,074.34
28/02/2018	MP2501 PTS FLR ORDSLJ	Salford Crescent : Deansgate	LNW North	Snow	3758	£96,914.37
02/03/2018	TREE ON OLE GSTANG	Garstang & Catteral	LNW North	Wind	962	£96,395.80
02/03/2018	VWC WEATHER INC 02/03/18 EUS	London Euston	LNW South	Snow	496.5	£93,734.44



Weather Resilience and Climate Change Adaptation

LNW Route Periodic Performance Report – 2017/2018 P13

Figure 1 provides an overview of the impact of different weather related events by day for period 13 in relation to delay minutes and PPM performance for LNW route. If adverse/extreme conditions were experienced by one or more TOC during a week, a yellow or red dot will indicate the performance of the TOC(s) in question. Weather events don't always cause drops in performance (e.g. extreme rainfall may not flood the railway) and therefore, performance on adverse/extreme days can be higher than expected.

Figure 1 Weather related PPM and delay minutes for P13 2018 LNW

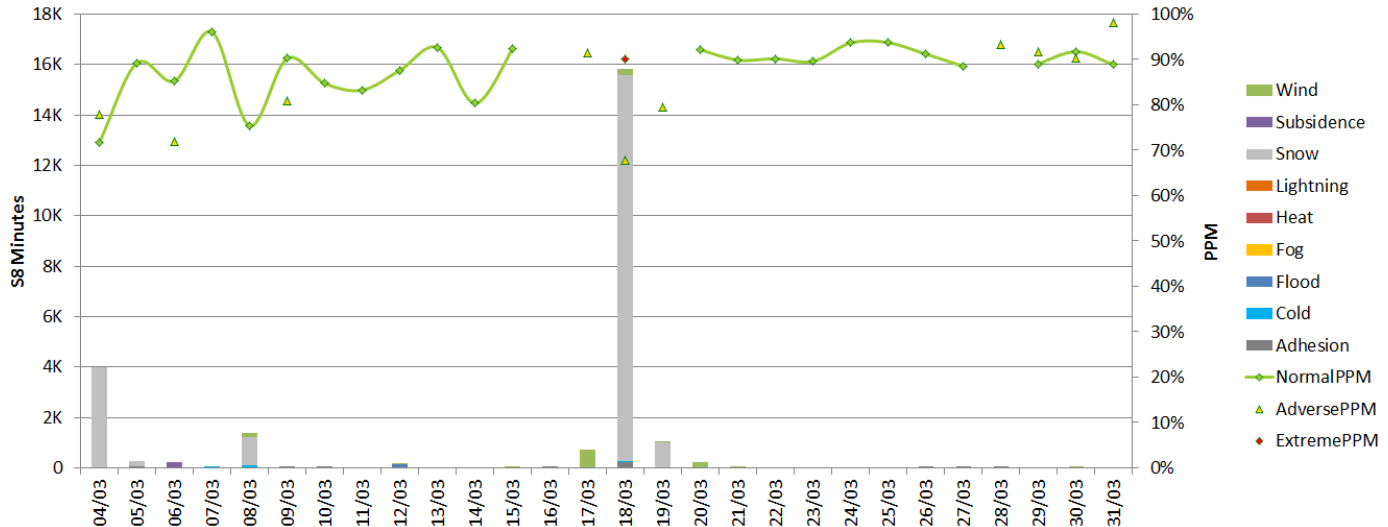
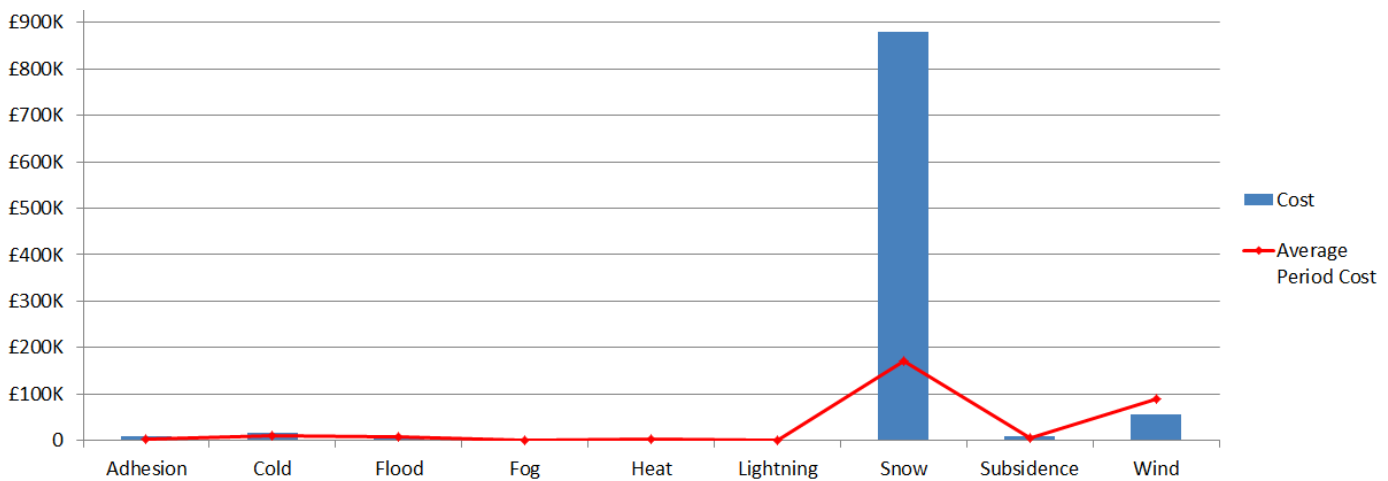


Figure 2 Weather related Schedule 8 cost impact for P13 LNW



Note that this figure relates to Schedule 8 cost and does not include OPEX or other costs.

Table 1 Top 10 weather related incidents P13

Date	IncidentDescription	stanoxSection	Route	Weather Category	Delay Minutes	Cost
18/03/2018	WP6 OLE TRIP FOK	Four Oaks : Aston	LNW South	Snow	4791	£140,689.50
18/03/2018	ICICLES OHLE TRIP ADD	Amington Junction : Nuneaton	LNW South	Snow	648	£113,206.61
04/03/2018	ICICLES RCD HALRYDJ	Hall Royd Jn : Rochdale	LNW North	Snow	2445.5	£62,013.91
18/03/2018	ICICLES CAUSING ADD	Weedon : Hanslope Jn	LNW South	Snow	350	£57,783.42
18/03/2018	SNOWDRIFT BUX	Buxton	LNW North	Snow	2681	£48,989.66
18/03/2018	SNOW DRIFT CHNLYNJJN	Chinley North Jn	LNW North	Snow	1047.5	£37,200.62
18/03/2018	GW1-4 OLE XGJ	Galton Jn	LNW South	Snow	433	£34,590.97
04/03/2018	SNOW DRIFT SNE XCO 04/03	Stone : Colwich	LNW South	Snow	157	£32,323.34
08/03/2018	SEV WEATHER NORTHERN LINE HNX	Southport : Hall Road	LNW North	Snow	1079.5	£29,548.14
04/03/2018	ICICLES TOTLYTE 04/03/18	Totley Tunnel East : Earles Sdgs S.B.	LNW North	Snow	759	£29,209.63