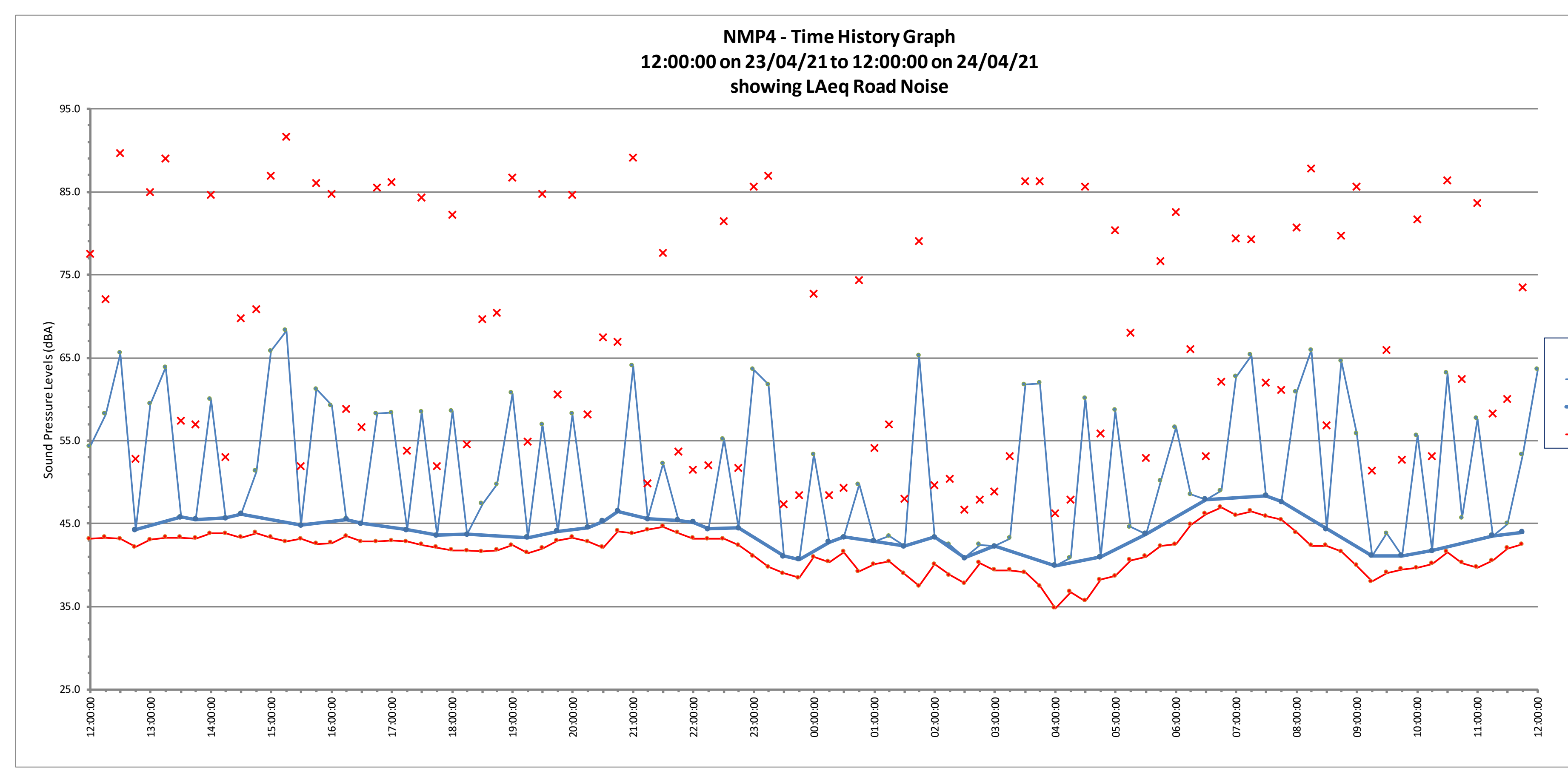
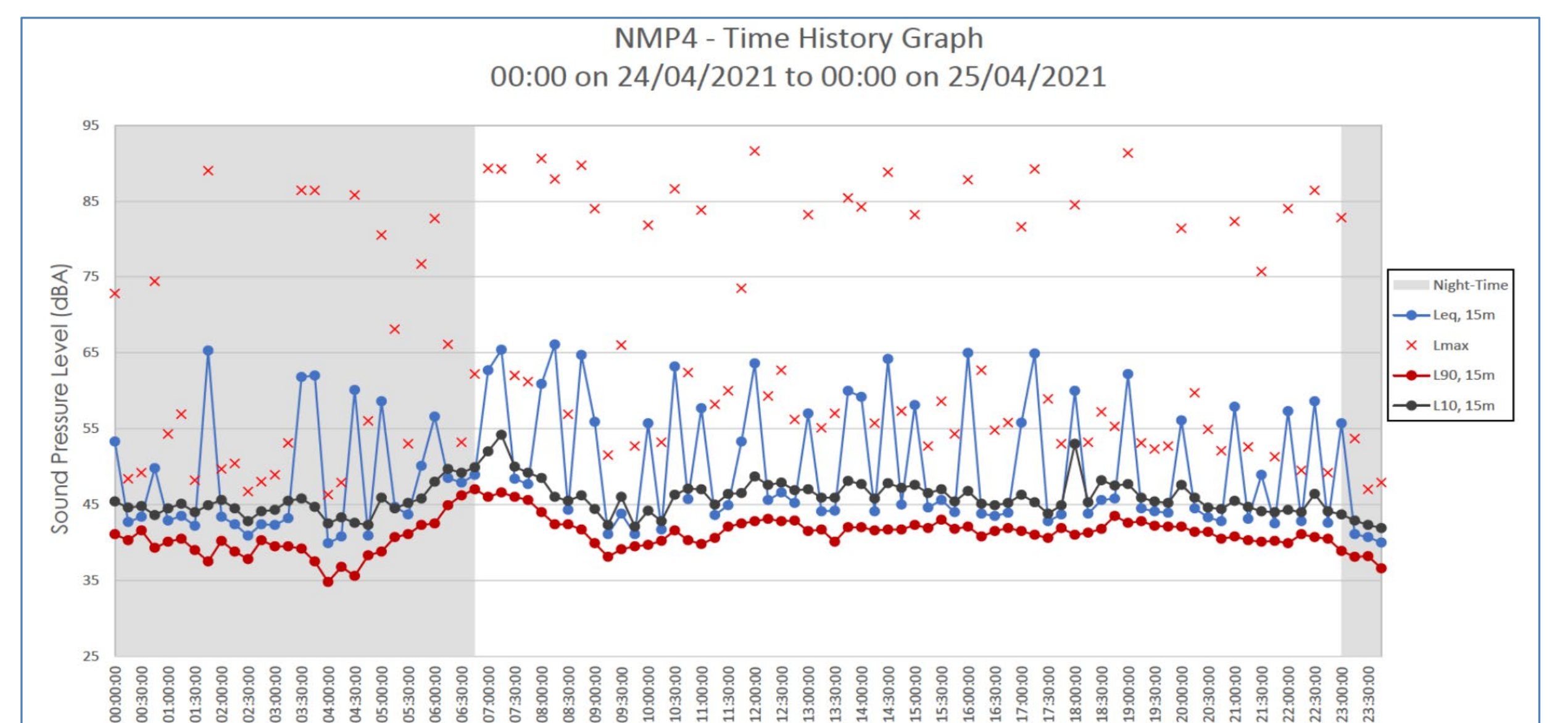
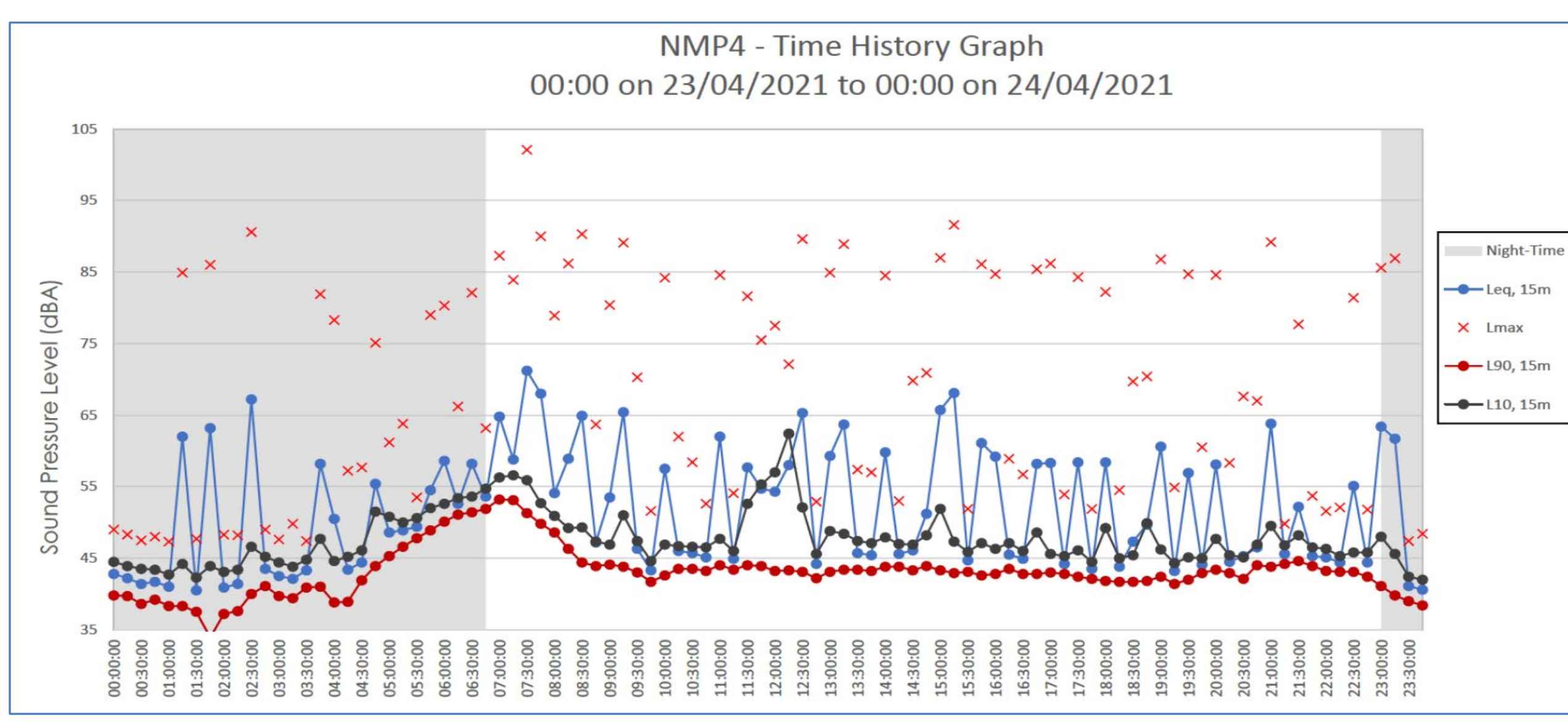




NMP4 - Time History Graph										
Start Time	LAMP		LAMP		LAMP		LAMP		LAMP	
Start Time	LAeq	dB	LAeq	dB	LAeq	dB	LAeq	dB	LAeq	dB
00:00	38.0	41.75	42.9	46.21	38.0	41.75	42.9	46.21	38.0	41.75
01:00	38.0	41.75	42.9	46.21	38.0	41.75	42.9	46.21	38.0	41.75
02:00	38.0	41.75	42.9	46.21	38.0	41.75	42.9	46.21	38.0	41.75
03:00	38.0	41.75	42.9	46.21	38.0	41.75	42.9	46.21	38.0	41.75
04:00	38.0	41.75	42.9	46.21	38.0	41.75	42.9	46.21	38.0	41.75
05:00	38.0	41.75	42.9	46.21	38.0	41.75	42.9	46.21	38.0	41.75
06:00	38.0	41.75	42.9	46.21	38.0	41.75	42.9	46.21	38.0	41.75
07:00	38.0	41.75	42.9	46.21	38.0	41.75	42.9	46.21	38.0	41.75
08:00	38.0	41.75	42.9	46.21	38.0	41.75	42.9	46.21	38.0	41.75
09:00	38.0	41.75	42.9	46.21	38.0	41.75	42.9	46.21	38.0	41.75
10:00	38.0	41.75	42.9	46.21	38.0	41.75	42.9	46.21	38.0	41.75
11:00	38.0	41.75	42.9	46.21	38.0	41.75	42.9	46.21	38.0	41.75
12:00	38.0	41.75	42.9	46.21	38.0	41.75	42.9	46.21	38.0	41.75
13:00	38.0	41.75	42.9	46.21	38.0	41.75	42.9	46.21	38.0	41.75
14:00	38.0	41.75	42.9	46.21	38.0	41.75	42.9	46.21	38.0	41.75
15:00	38.0	41.75	42.9	46.21	38.0	41.75	42.9	46.21	38.0	41.75
16:00	38.0	41.75	42.9	46.21	38.0	41.75	42.9	46.21	38.0	41.75
17:00	38.0	41.75	42.9	46.21	38.0	41.75	42.9	46.21	38.0	41.75
18:00	38.0	41.75	42.9	46.21	38.0	41.75	42.9	46.21	38.0	41.75
19:00	38.0	41.75	42.9	46.21	38.0	41.75	42.9	46.21	38.0	41.75
20:00	38.0	41.75	42.9	46.21	38.0	41.75	42.9	46.21	38.0	41.75
21:00	38.0	41.75	42.9	46.21	38.0	41.75	42.9	46.21	38.0	41.75
22:00	38.0	41.75	42.9	46.21	38.0	41.75	42.9	46.21	38.0	41.75
23:00	38.0	41.75	42.9	46.21	38.0	41.75	42.9	46.21	38.0	41.75
24:00	38.0	41.75	42.9	46.21	38.0	41.75	42.9	46.21	38.0	41.75



LAeq Road Noise (dB)

LAeq Road Noise (dB)

Start Time	LAeq	dB
12:00:00	68.5	122018.1
13:00:00	59.7	83170.8
14:00:00	54.4	36026.2
15:00:00	44.7	296120.2
16:00:00	54.9	36026.2
17:00:00	53.6	36026.2
18:00:00	53.5	22887.1
19:00:00	54.3	42009.9
20:00:00	54.8	12662.6
21:00:00	56.1	60110.3
22:00:00	56.2	10411.9
23:00:00	56.1	14042.9
24:00:00	63.0	196263.1
25:00:00	56.1	12662.6
26:00:00	57.9	64656.4
27:00:00	57.1	73176.2
28:00:00	56	118042.1
29:00:00		

Cross-check to verify application

Start Time	LAeq	dB
07:00:00	67	188431.6
08:00:00	60.1	37153.3
09:00:00	59.1	74306.6
10:00:00	52.4	17719.1
11:00:00	54.1	32977.5
12:00:00	60.1	122018.1
13:00:00	54.4	36026.2
14:00:00	54.9	36026.2
15:00:00	44.7	296120.2
16:00:00	54.9	36026.2
17:00:00	53.6	36026.2
18:00:00	53.5	22887.1
19:00:00	54.3	42009.9
20:00:00	54.8	12662.6
21:00:00	56.1	60110.3
22:00:00	56.2	10411.9
23:00:00	56.1	14042.9
24:00:00	63.0	196263.1
25:00:00	56.1	12662.6
26:00:00	57.9	64656.4
27:00:00	57.1	73176.2
28:00:00	56	118042.1
29:00:00		

LAeq Road Noise (dB)

Start Time	LAeq	dB
07:00:00	67	188431.6
08:00:00	60.1	37153.3
09:00:00	59.1	74306.6
10:00:00	52.4	17719.1
11:00:00	54.1	32977.5
12:00:00	60.1	122018.1
13:00:00	54.4	36026.2
14:00:00	54.9	36026.2
15:00:00	44.7	296120.2
16:00:00	54.9	36026.2
17:00:00	53.6	36026.2
18:00:00	53.5	22887.1
19:00:00	54.3	42009.9
20:00:00	54.8	12662.6
21:00:00	56.1	60110.3
22:00:00	56.2	10411.9
23:00:00	56.1	14042.9
24:00:00	63.0	196263.1
25:00:00	56.1	12662.6
26:00:00	57.9	64656.4
27:00:00	57.1	73176.2
28:00:00	56	118042.1
29:00:00		

Nearside Track		dB	Freight - Locomotive		dB	Freight - Vehicles		dB
Passenger			Class 66 SEL		84.623	25 Vehicles SEL		93.102
Turbostar Class 170 SEL		83.393	Class 66 SEL		84.623	25 Vehicles SEL		93.102
T = 16 hours		-47.588	T = 16 hours		-47.588	T = 16 hours		-47.588
Distance -10 log10 (200/25)		-9.031	Distance -10 log10 (200/25)		-9.031	Distance -10 log10 (200/25)		-9.031
Air Absorption 0.2-0.008x200		-1.400	Air Absorption 0.2-0.008x200		-1.400	Air Absorption 0.2-0.008x200		-1.400
Ground Absorption - 0.6x1.0x(6-2.3) log10 (200/25)		-2.005	Ground Absorption - 0.6x1.0x(6-2.3) log10 (200/25)		-2.005	Ground Absorption - 0.6x1.0x(6-2.3) log10 (200/25)		-2.005
Track Curvature		-0.164	Track Curvature		-0.164	Track Curvature		-0.164
Daytime 10 log 16/2		9.031	Daytime 10 log 16/2		9.031	Daytime 10 log 16/2		9.031
Passenger - Nearside Track		<u>32.236</u>	Freight - Locomotive - Nearside Track		<u>33.866</u>	Freight - Vehicles - Nearside Track		<u>41.945</u>
Freight - Locomotive plus Vehicles - Nearside Track		<u>42.522</u>						
<b>Farside Track</b>								
Passenger			Class 66 SEL		84.623	25 Vehicles SEL		93.102
Turbostar Class 170 SEL		83.393	Class 66 SEL		84.623	25 Vehicles SEL		93.102
T = 16 hours		-47.588	T = 16 hours		-47.588	T = 16 hours		-47.588
Track Ballast		-1.500	Track Ballast		-1.500	Track Ballast		-1.500
Distance -10 log10 (203.5/25)		-9.106	Distance -10 log10 (203.5/25)		-9.106	Distance -10 log10 (203.5/25)		-9.106
Air Absorption 0.2-0.008x203.5		-1.428	Air Absorption 0.2-0.008x203.5		-1.428	Air Absorption 0.2-0.008x203.5		-1.428
Ground Absorption - 0.6x1.0x(6-2.3) log10 (203.5/25)		-2.022	Ground Absorption - 0.6x1.0x(6-2.3) log10 (203.5/25)		-2.022	Ground Absorption - 0.6x1.0x(6-2.3) log10 (203.5/25)		-2.022
Track Curvature		-0.164	Track Curvature		-0.164	Track Curvature		-0.164
Daytime 10 log 16/2		9.031	Daytime 10 log 16/2		9.031	Daytime 10 log 16/2		9.031
Passenger - Farside Track		<u>30.616</u>	Freight - Locomotive - Farside Track		<u>31.846</u>	Freight - Vehicles - Farside Track		<u>40.925</u>
Freight - Locomotive plus Vehicles - Farside Track		<u>40.901</u>						
<b>Passenger - Both Tracks Total</b>								
		<u>34.512</u>						
<b>Freight - Both Tracks Total</b>								
		<u>44.797</u>						

Date	Start Time	Number of Running Trains indicated by Real Time Trains in Hourly Period			Rail Noise Calculated by CRN at 200 metres from Nearside Track (dB)			Road Noise	Ambient Noise (Rail and Road)
		Passenger	Freight	All	Passenger	Freight	All	dB	dB
16/02/2024	12:00	4	2	7					
	13:00	4	1	5					
	14:00	4	1	5					
	15:00	5	1	6					
	16:00	2	2	4					
	17:00	5	1	7					
	18:00	4	1	6					
	19:00	4	2	7					
	20:00	5	0	5					
	21:00	3	0	3					
	22:00	2	3	5					
	23:00	2	3	5					
17/02/2024	00:00	0	2	2					
	01:00	0	1	1					
	02:00	0	0	0					
	03:00	0	1	1					
	04:00	0	2	2					
	05:00	1	3	4					
	06:00	2	1	3					
	07:00	5	1	6					
	08:00	4	0	4					
	09:00	3	1	4					
	10:00	2	0	2					
	11:00	2	0	2					
Total		63	29	96	38.7	45.6	46.4	44.4	48.5