



## Appendix A

# Noise Logging Results



## Logger 1 - Wales

Noise Monitor ID	Allocated No.	Receiver Lot/Address	Registered Proprietor	NCA	Distance to Near Track (m)
L1	MMU-003.5	241 DP 710251	Wales	U1	90

### Logger Location



## Site Photos – Logger 1



### Noise Logging Details (Unattended Monitoring)

L1

Logger Type	ARL EL-215
Serial Number	194449
Start of measurement period	09:15, 07/08/2009
End of measurement period	07:45, 18/08/2009
Frequency Weighting	A
Pre-Test Calibration Check	94.2dB(A)
Post-Test Calibration Check	93.6dB(A)
Time Response	Fast
Engineering Units	dB(A) SPL re:20µPa

### Passby Measurements Details (Attended Monitoring)

L1

Sound Level Meter	Brüel & Kjær 2250
Serial Number	2506887
Measurement Dates	18/08/2009

### Logger 1 Noise Monitoring Results – Ambient Levels

Date	L <sub>eq</sub> 15hr dB(A)	L <sub>eq</sub> 9hr dB(A)
Friday-7-Aug-09	59.7	61.4
Saturday-8-Aug-09	63.1	62.2
Sunday-9-Aug-09	62.3	60.7
Monday-10-Aug-09	62.0	59.2
Tuesday-11-Aug-09	56.0	54.7
Wednesday-12-Aug-09	58.0	49.9
Thursday-13-Aug-09	58.3	61.2
Friday-14-Aug-09	61.7	60.8
Saturday-15-Aug-09	58.2	60.8
Sunday-16-Aug-09	59.0	56.5
Monday-17-Aug-09	59.7	59.4
Tuesday-18-Aug-09	66.5	-
<b>Overall</b>	<b>61.3</b>	<b>59.8</b>

### Logger 1 Noise Monitoring Results – Background Levels

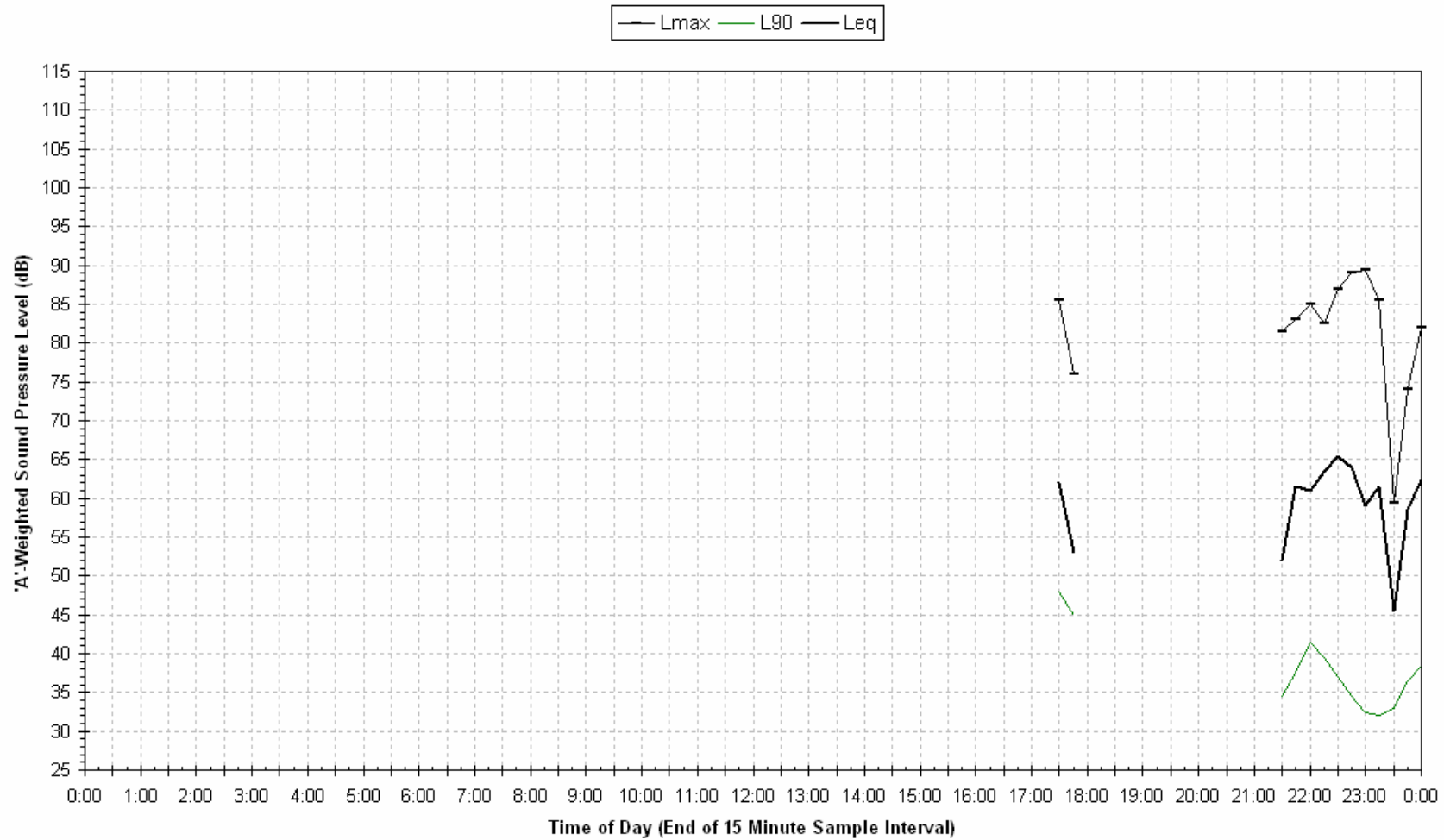
Date	Assessment Background Level L <sub>90</sub> dB(A)		
	Day	Evening	Night
Friday-7-Aug-09	-	35.1	30.5
Saturday-8-Aug-09	36.4	39.0	29.0
Sunday-9-Aug-09	36.5	39.5	31.8
Monday-10-Aug-09	38.2	38.3	32.3
Tuesday-11-Aug-09	43.0	44.5	39.6
Wednesday-12-Aug-09	40.3	40.0	30.0
Thursday-13-Aug-09	39.5	38.8	32.8
Friday-14-Aug-09	39.7	44.3	34.0
Saturday-15-Aug-09	39.5	42.5	31.9
Sunday-16-Aug-09	38.0	39.8	33.5
Monday-17-Aug-09	38.3	34.9	32.8
Tuesday-18-Aug-09	-	-	-
<b>RBL</b>	<b>38.9</b>	<b>39.5</b>	<b>32.3</b>

### Passby Measurement Results at Logger 1 Location dB(A)

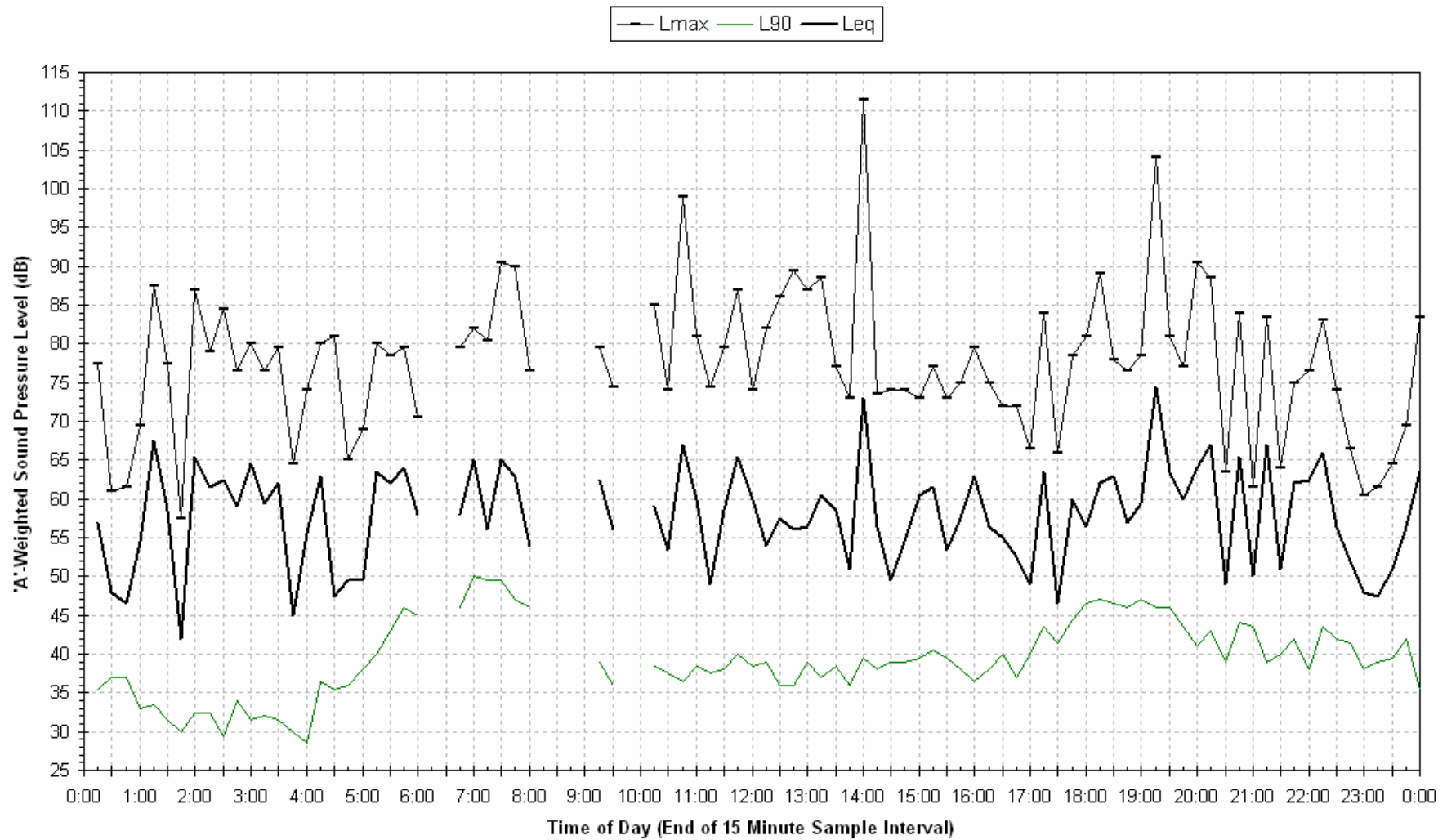
Up/Down	Train Type	Duration	L <sub>eq</sub>	L <sub>max</sub>
Up	Coal	0:02:58	70.4	82.2
Up	Coal	0:02:46	65.8	87.9
Up	Coal	0:03:23	69.9	95.6
Up	Coal	0:02:08	70.2	89.7
Up	Coal	0:01:14	56.5	70.7
<b>Up Average</b>		<b>0:02:30</b>	<b>68.5</b>	<b>85.2</b>
Down	Empty Coal	0:04:51	62.3	85.2
Down	Empty Coal	0:02:46	70.5	81.1
Down	Empty Coal	0:02:05	71.8	77.4
Down	Empty Coal	0:01:58	71.1	77.9
Down	Empty Coal	0:02:36	66.9	76.2
Down	Empty Coal	0:02:00	64.1	85.3
<b>Down Average</b>		<b>0:02:43</b>	<b>69.1</b>	<b>81.5</b>
Down	Passenger	0:00:16	66.1	74.7
<b>Passenger Average</b>		<b>0:00:16</b>	<b>66.1</b>	<b>74.7</b>



Statistical Ambient Noise Levels  
Wales - Friday 7 August 2009

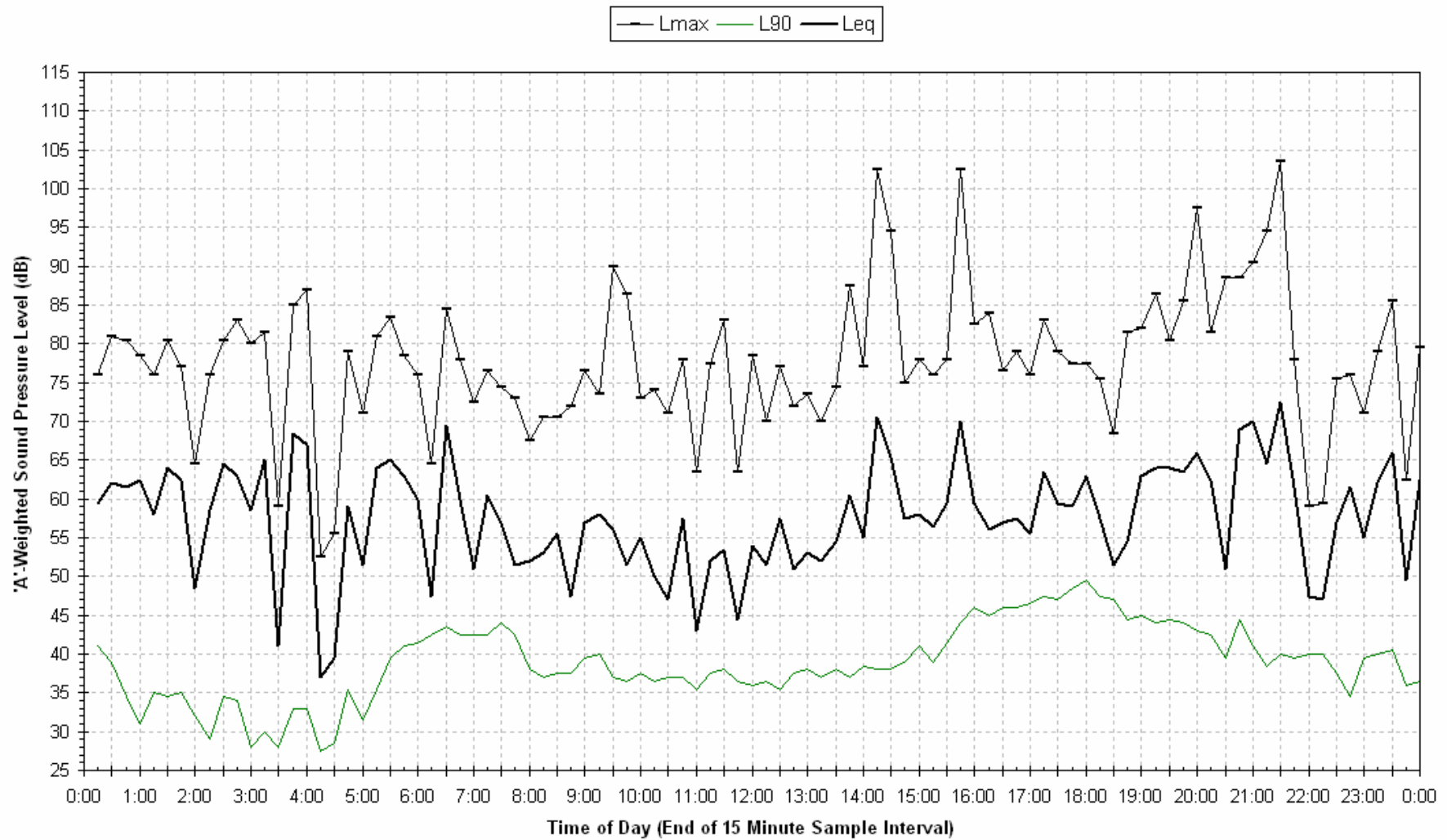


# Statistical Ambient Noise Levels Wales - Saturday 8 August 2009

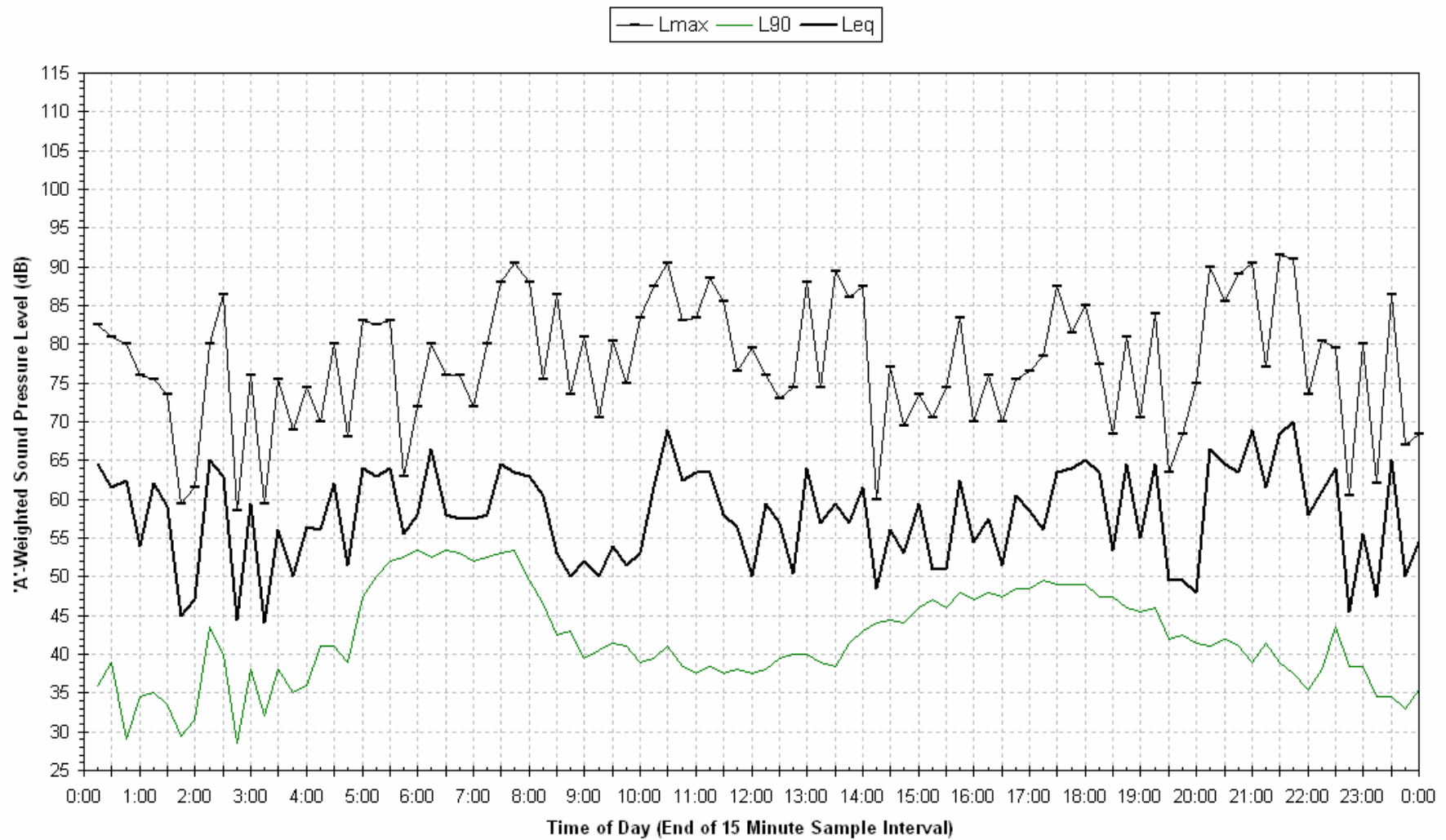




Statistical Ambient Noise Levels  
Wales - Sunday 9 August 2009



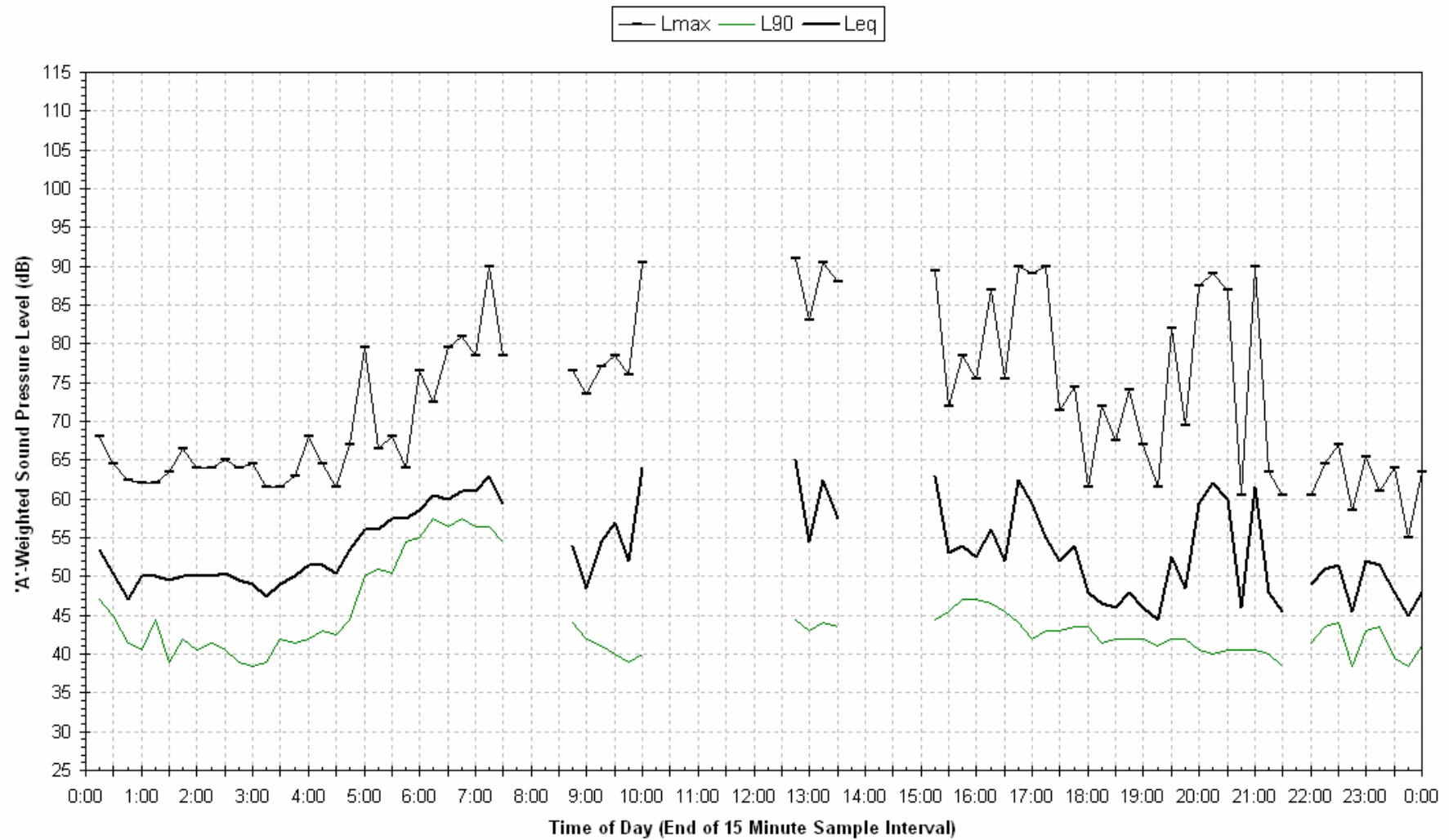
Statistical Ambient Noise Levels  
Wales - Monday 10 August 2009



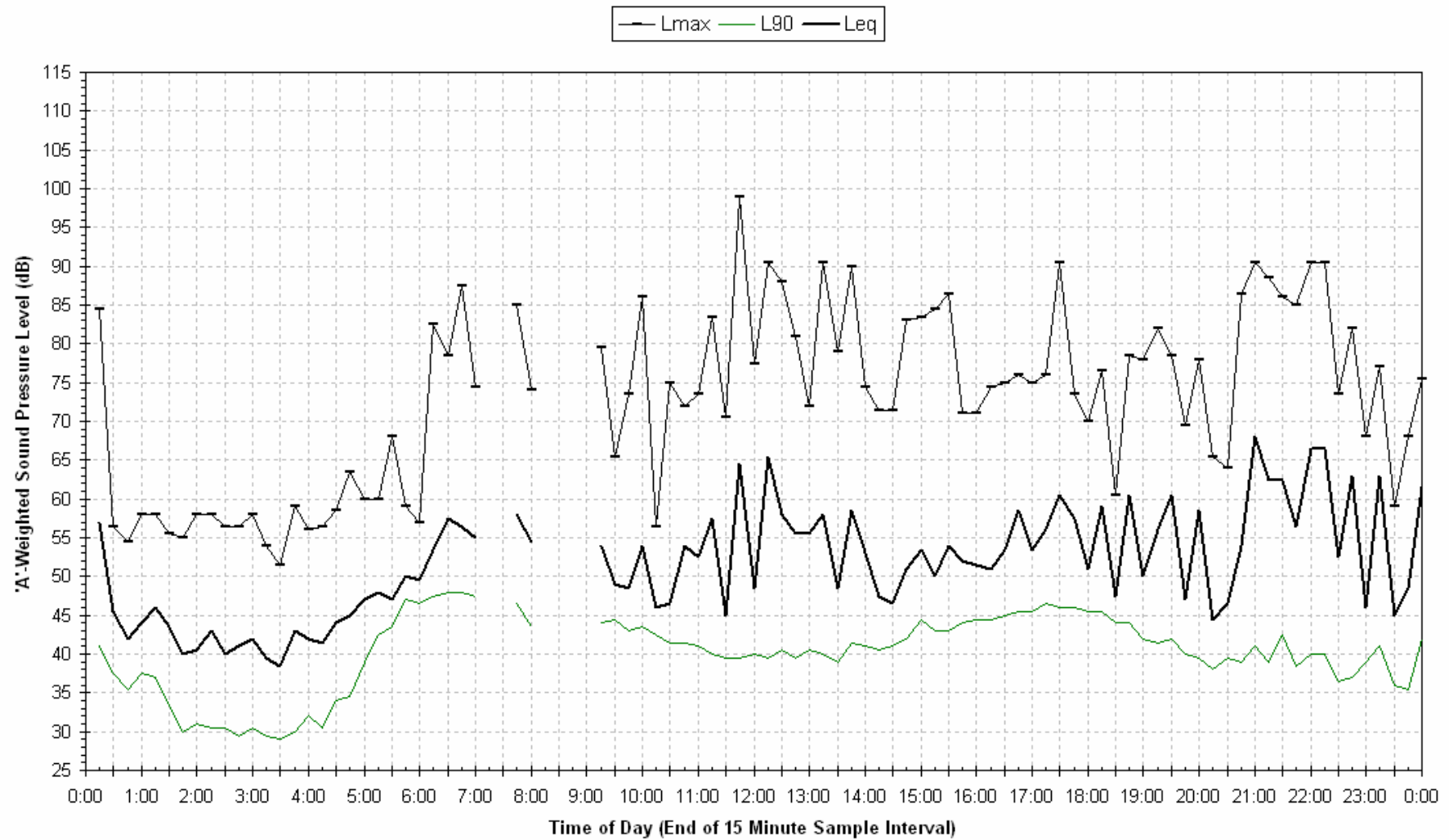
# Statistical Ambient Noise Levels Wales - Tuesday 11 August 2009



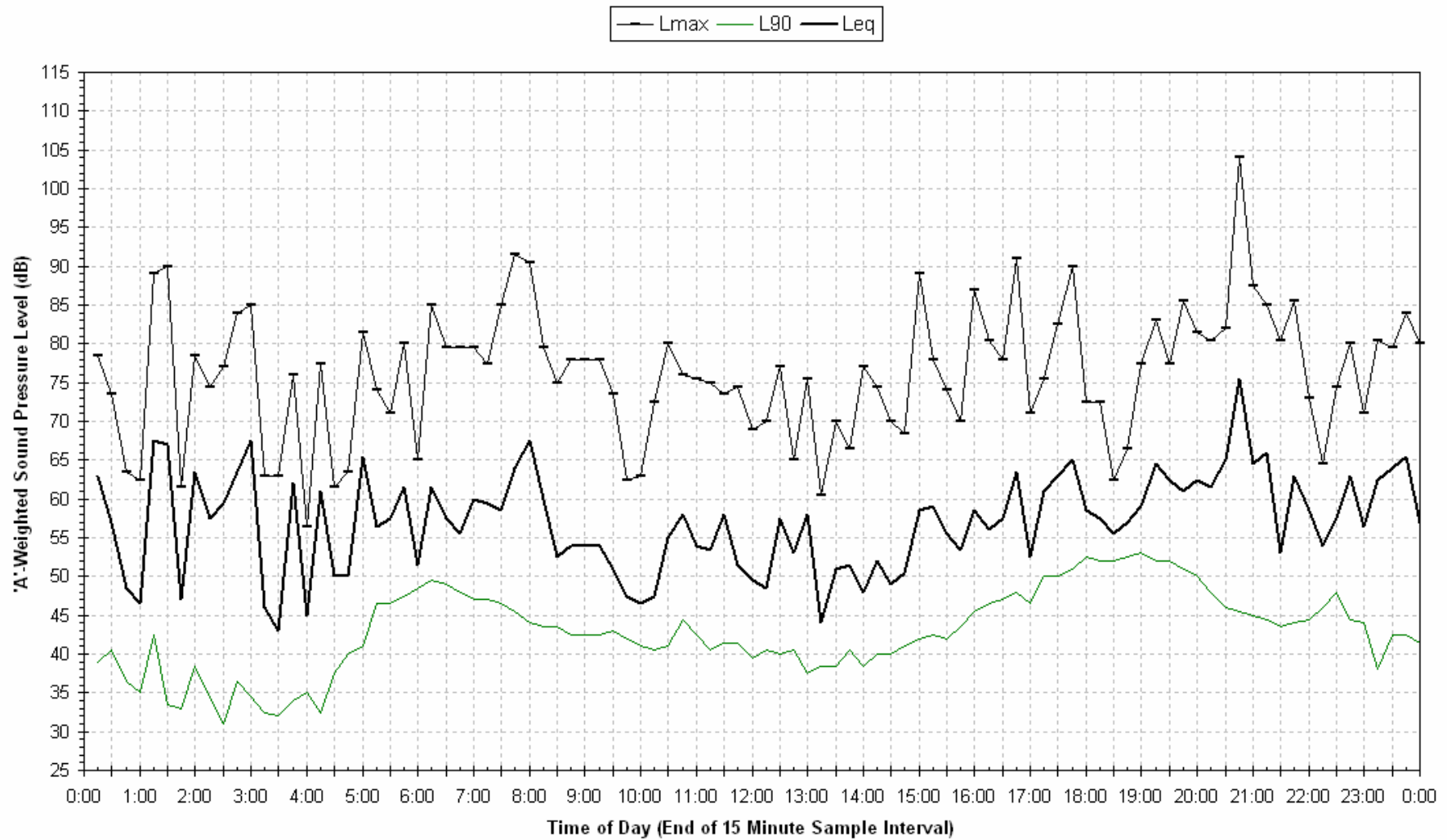
**Statistical Ambient Noise Levels  
Wales - Wednesday 12 August 2009**



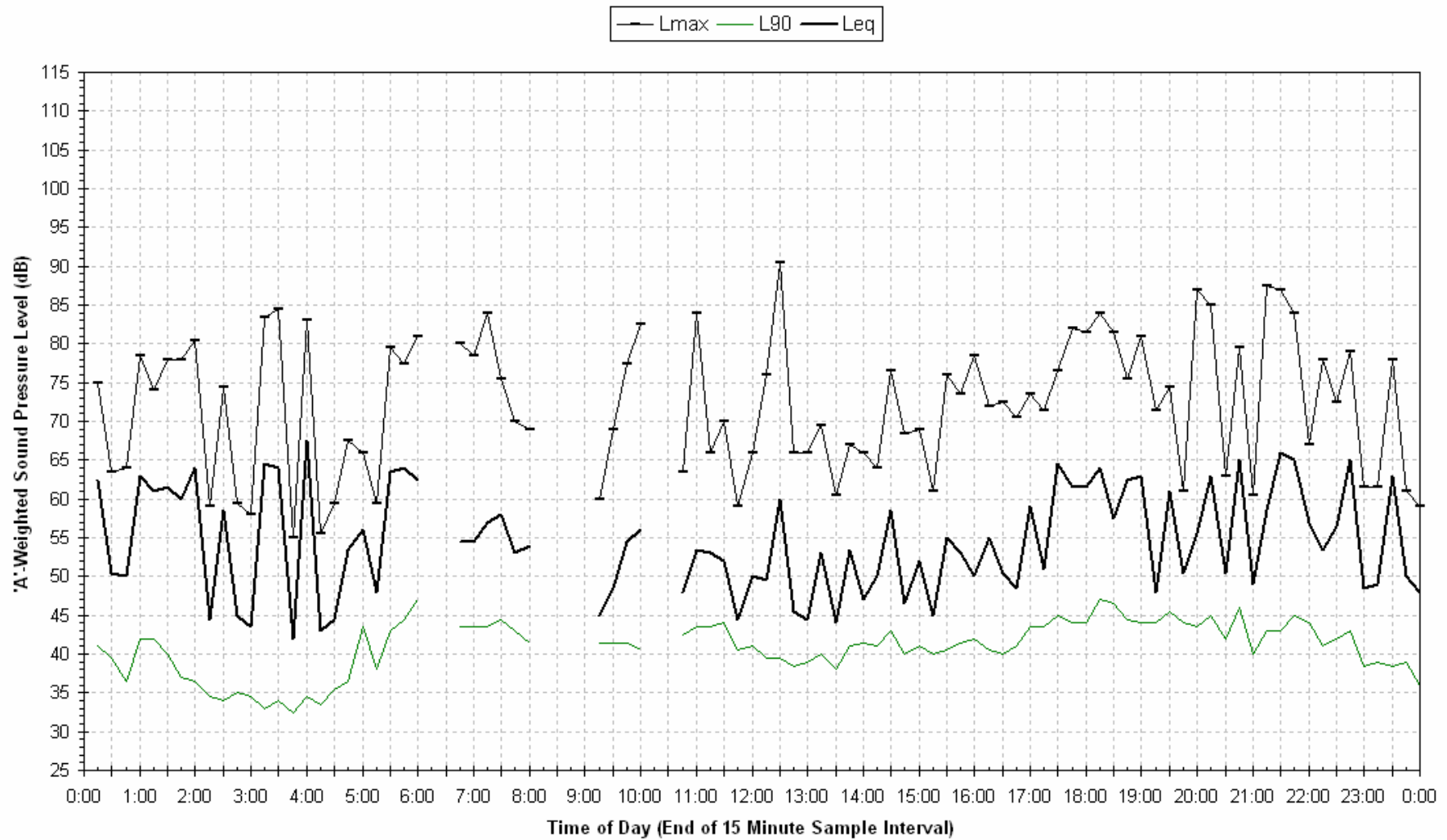
# Statistical Ambient Noise Levels Wales - Thursday 13 August 2009



Statistical Ambient Noise Levels  
Wales - Friday 14 August 2009

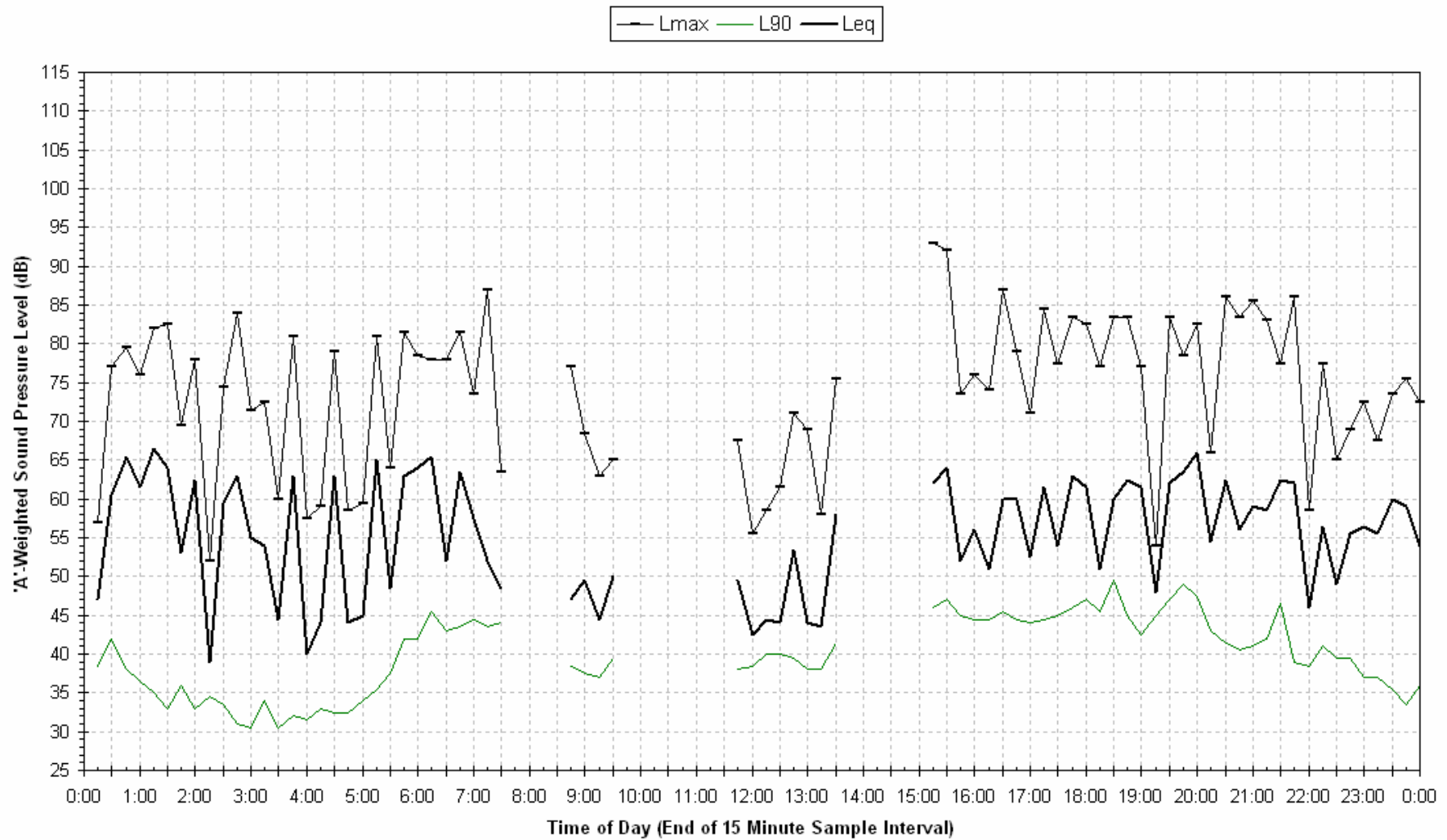


Statistical Ambient Noise Levels  
Wales - Saturday 15 August 2009

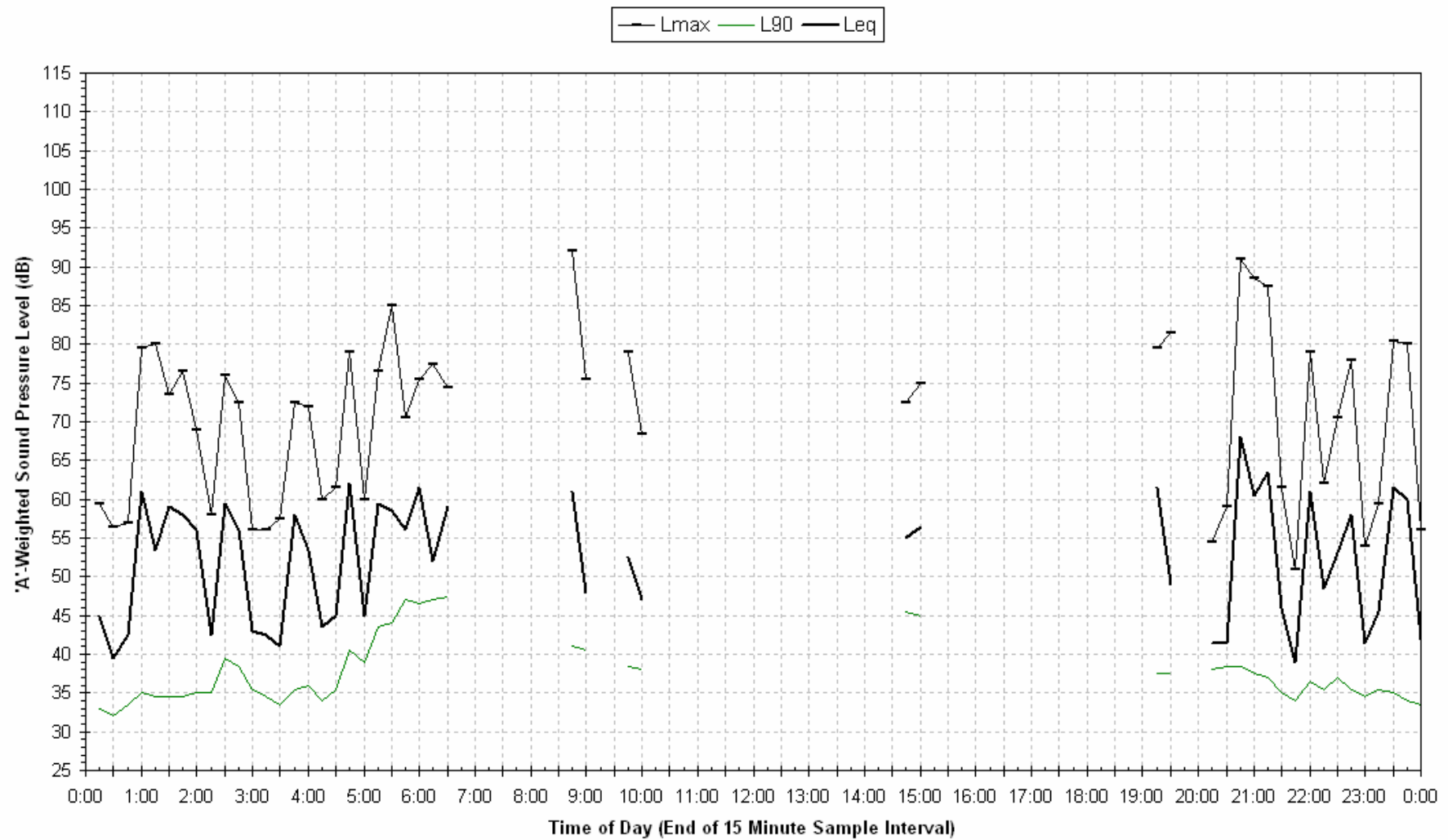




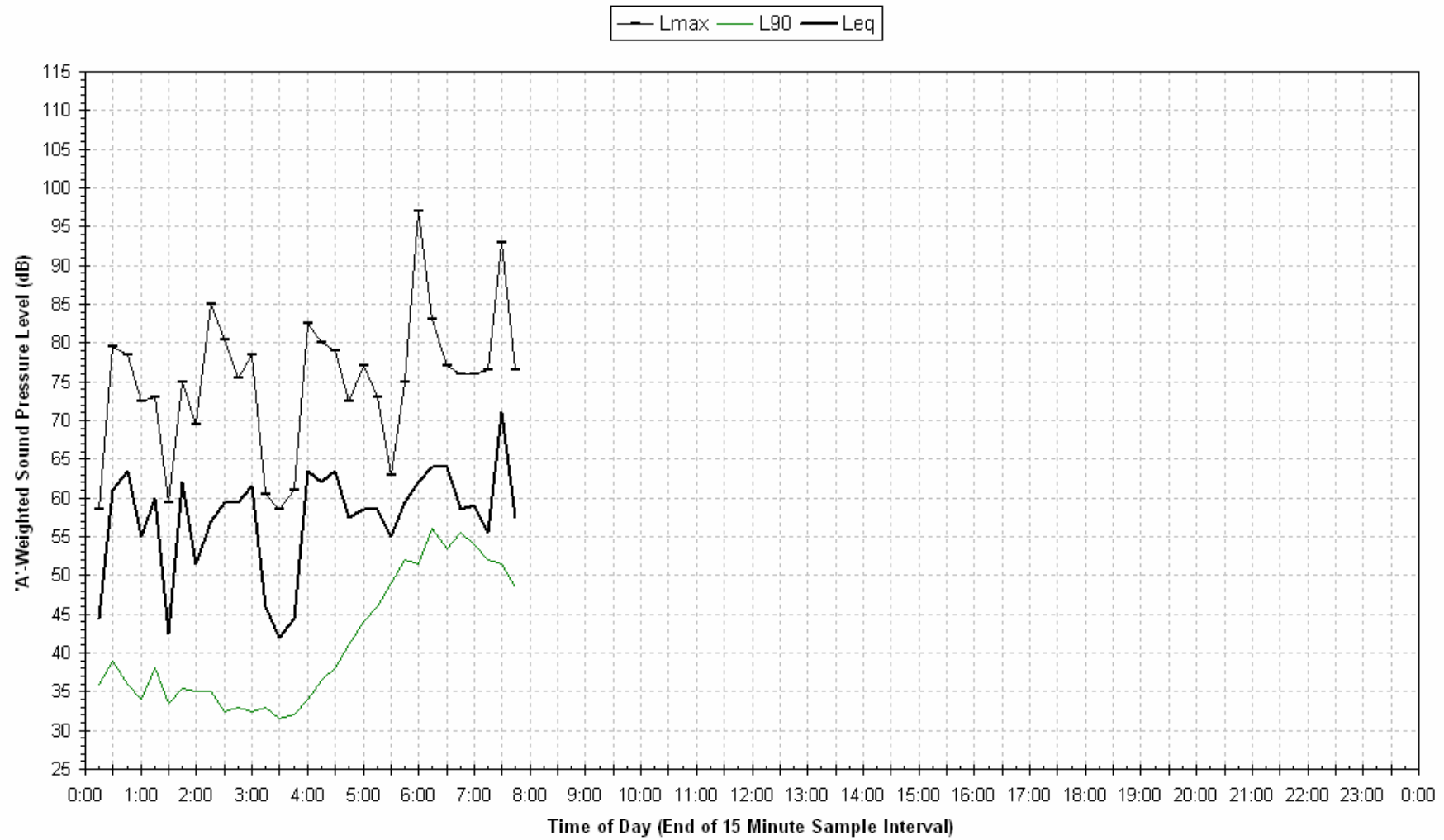
Statistical Ambient Noise Levels  
Wales - Sunday 16 August 2009



Statistical Ambient Noise Levels  
Wales - Monday 17 August 2009



**Statistical Ambient Noise Levels  
Wales - Tuesday 18 August 2009**



## Logger 2 - Campbell

Noise Monitor ID	Allocated No.	Receiver Lot/Address	Registered Proprietor	NCA	Distance to Near Track (m)
L2	MMU-012	523 DP 1033311	Campbell	U3	80

### Logger Location





## Site Photos – Logger 2



### Noise Logging Details (Unattended Monitoring)

L2

Logger Type	ARL EL 215
Serial Number	194677
Start of measurement period	12:45, 06/08/2009
End of measurement period	14:35, 17/08/2009
Frequency Weighting	A
Pre-Test Calibration Check	94.6 dB(A)
Post-Test Calibration Check	94.1dB(A)
Time Response	Fast
Engineering Units	dB(A) SPL re:20μPa

### Passby Measurements Details (Attended Monitoring)

L2

Sound Level Meter	Brüel & Kjær 2250
Serial Number	2506887
Measurement Dates	18/08/2009

### Logger 2 Noise Monitoring Results – Ambient Levels

Date	L <sub>eq</sub> 15hr dB(A)	L <sub>eq</sub> 9hr dB(A)
Thursday-6-Aug-09	58.0	57.4
Friday-7-Aug-09	57.3	58.6
Saturday-8-Aug-09	57.1	59.6
Sunday-9-Aug-09	57.0	58.8
Monday-10-Aug-09	58.1	56.6
Tuesday-11-Aug-09	56.3	52.1
Wednesday-12-Aug-09	50.9	48.9
Thursday-13-Aug-09	55.7	59.4
Friday-14-Aug-09	59.1	58.4
Saturday-15-Aug-09	58.4	60.6
Sunday-16-Aug-09	56.9	57.6
Monday-17-Aug-09	56.3	-
<b>Overall</b>	<b>57.1</b>	<b>58.0</b>

### Logger 2 Noise Monitoring Results – Background Levels

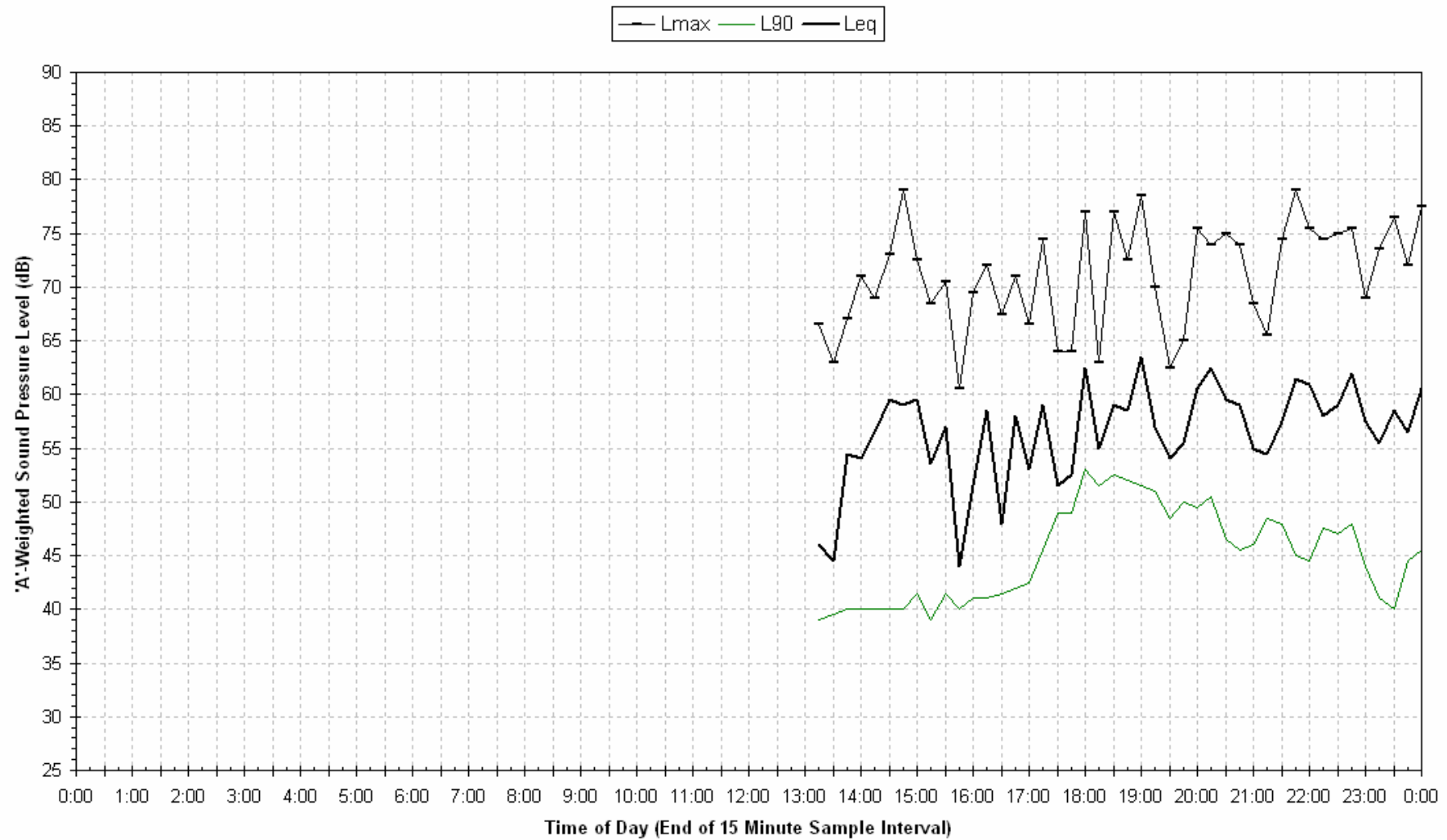
Date	Assessment Background Level L <sub>90</sub> dB(A)		
	Day	Evening	Night
Thursday-6-Aug-09	-	45.3	35.5
Friday-7-Aug-09	45.1	39.1	34.3
Saturday-8-Aug-09	36.5	41.3	30.5
Sunday-9-Aug-09	36.5	41.0	32.5
Monday-10-Aug-09	39.0	40.8	38.0
Tuesday-11-Aug-09	45.5	42.3	39.2
Wednesday-12-Aug-09	40.8	43.2	38.8
Thursday-13-Aug-09	42.9	42.3	39.0
Friday-14-Aug-09	41.0	45.5	38.5
Saturday-15-Aug-09	40.5	43.3	35.4
Sunday-16-Aug-09	39.0	43.0	38.0
Monday-17-Aug-09	-	-	-
<b>RBL</b>	<b>40.6</b>	<b>42.3</b>	<b>38.0</b>

**Passby Measurement Results at Logger 2 Location dB(A)**

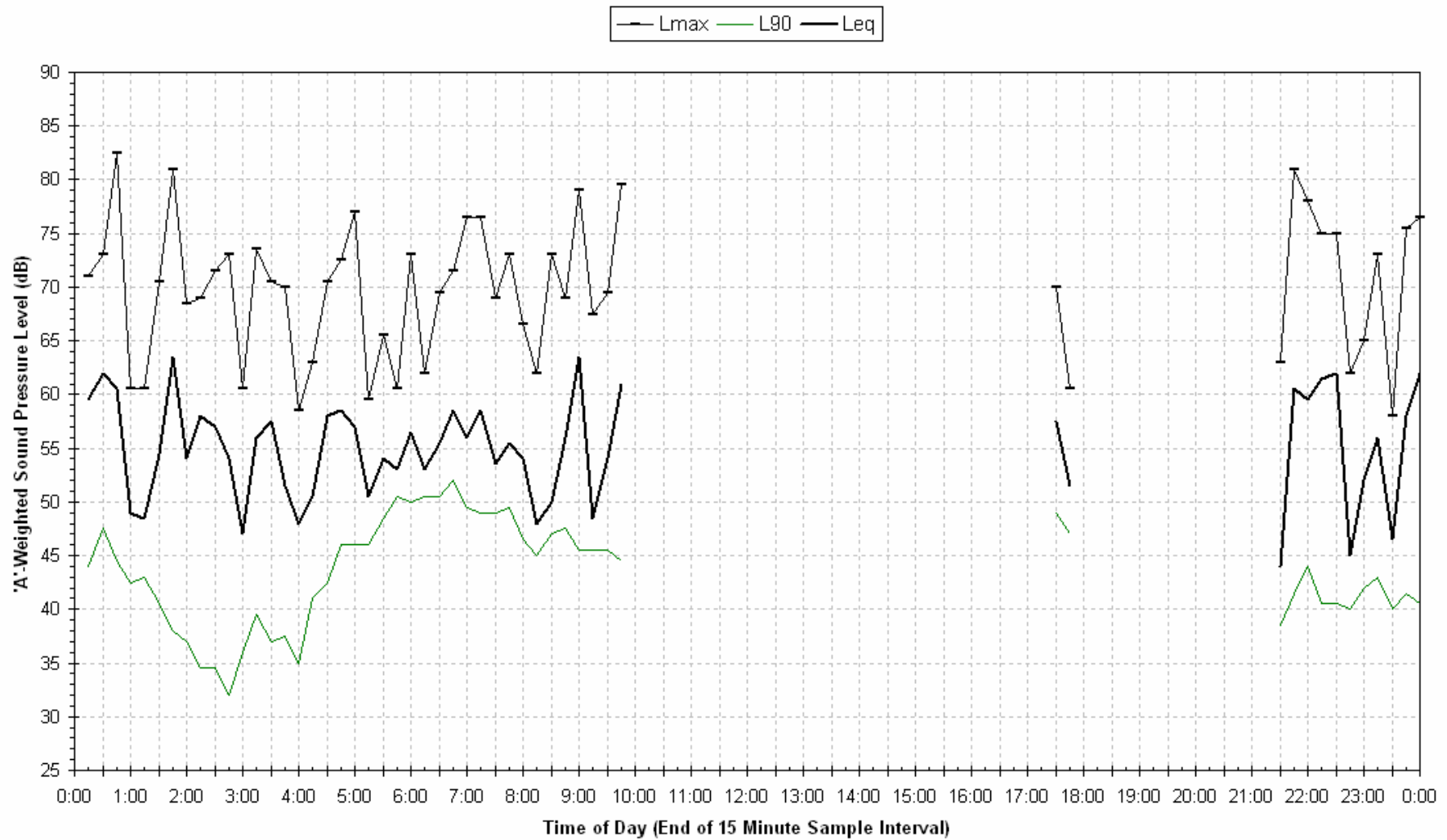
Up/Down	Train Type	Duration	L <sub>eq</sub>	L <sub>max</sub>
Up	Coal	0:02:50	57.6	66.8
Up	Coal	0:02:58	60.4	77.3
Up	Coal	0:02:12	58.7	64.9
Up	Coal	0:02:27	65.6	74.7
<b>Up Average</b>		<b>0:02:37</b>	<b>61.8</b>	<b>70.9</b>
Down	Empty Coal	0:01:22	62.1	66.5
Down	Empty Coal	0:01:28	66.7	71.8
Down	Empty Coal	0:01:50	63.9	70.5
Down	Empty Coal	0:01:07	68.1	77.4
Down	Empty Coal	0:01:43	64.6	71.8
Down	Empty Coal	0:02:20	65.1	73.8
Down	Freight	0:01:34	67.1	77.2
<b>Down Average</b>		<b>0:01:38</b>	<b>65.8</b>	<b>72.7</b>
Down	Passenger	0:00:29	58.9	67.0
<b>Passenger Average</b>		<b>0:00:29</b>	<b>58.9</b>	<b>67.0</b>



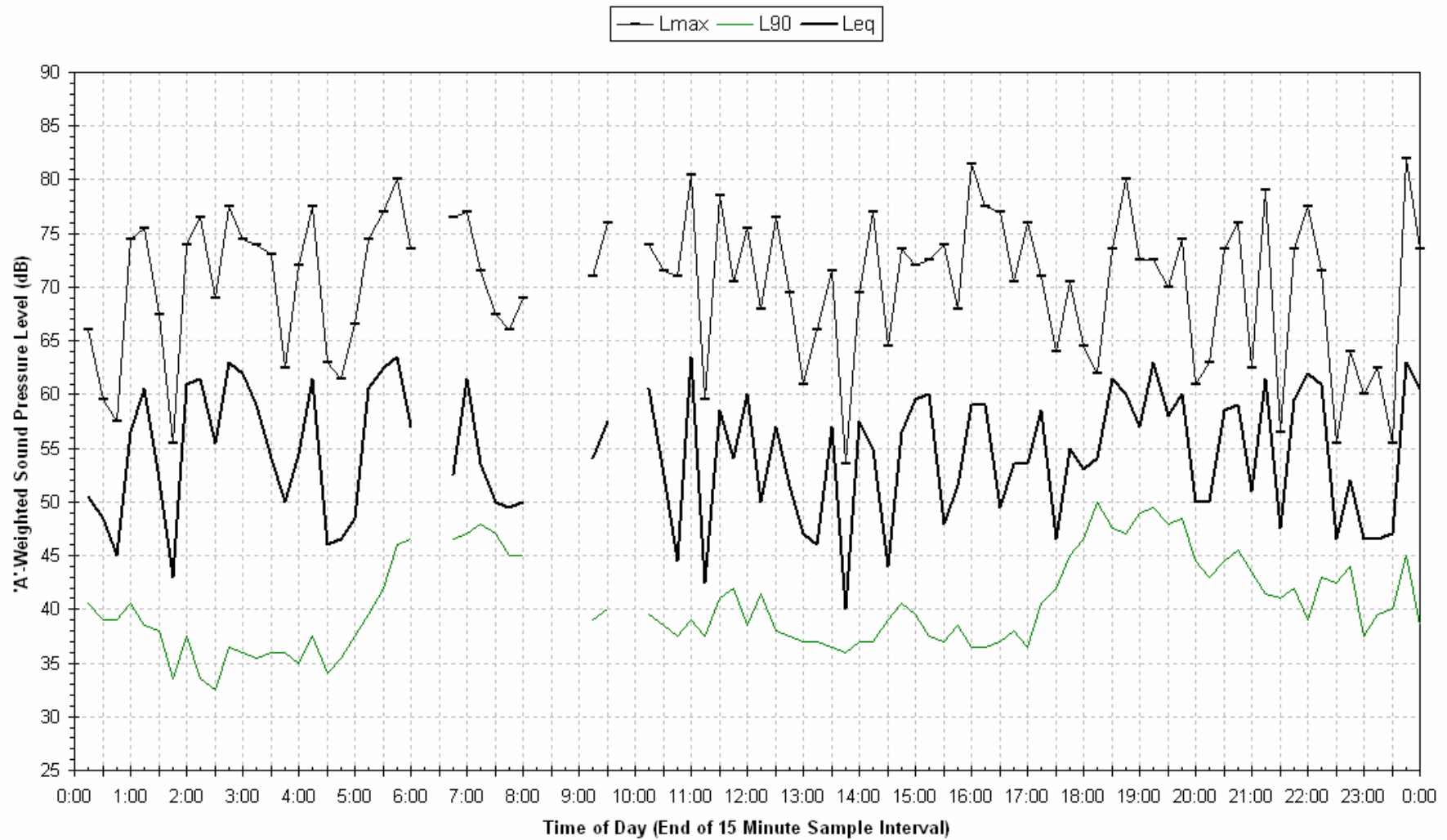
Statistical Ambient Noise Levels  
Campbell - Thursday 6 August 2009



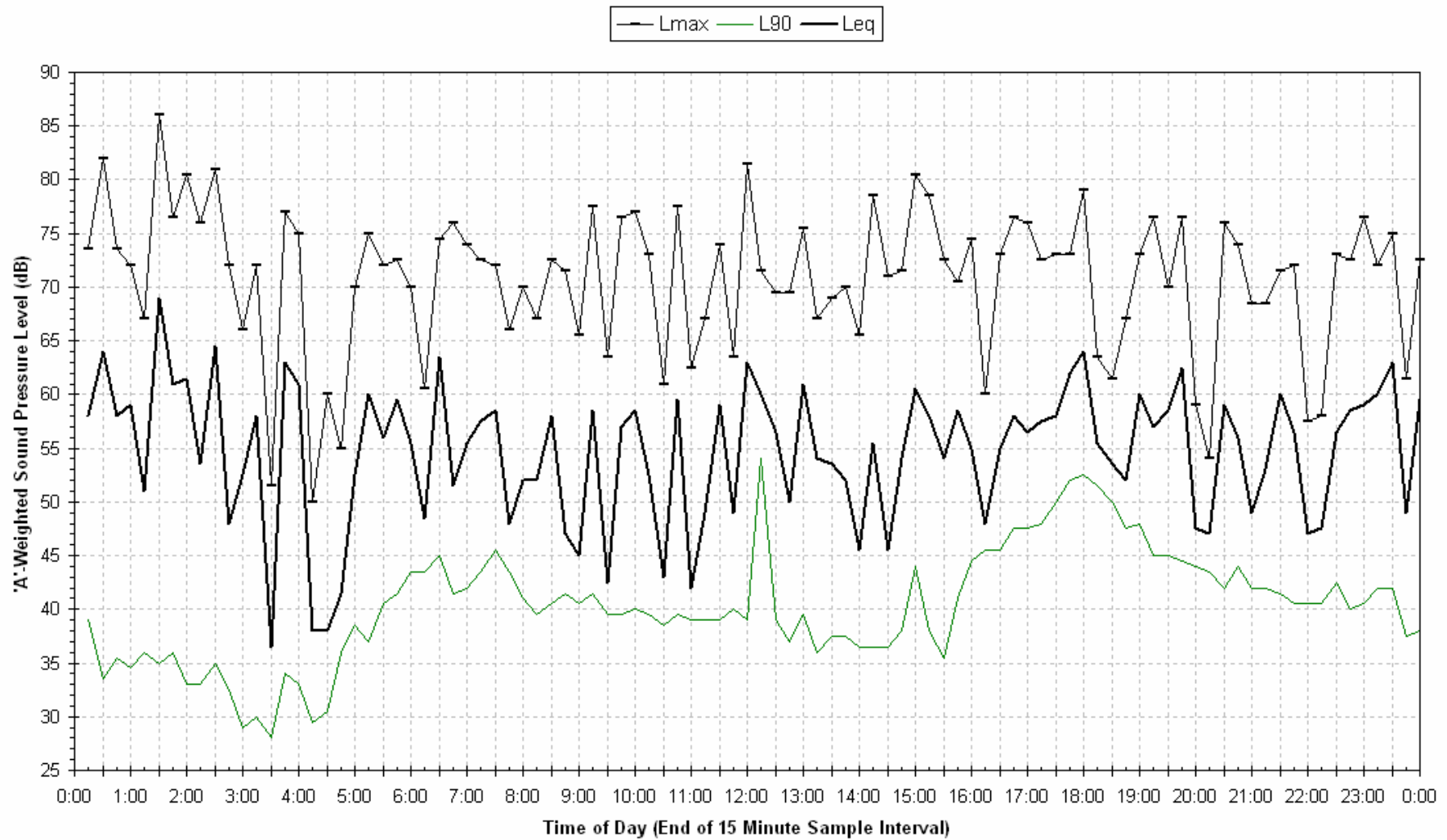
Statistical Ambient Noise Levels  
Campbell - Friday 7 August 2009



**Statistical Ambient Noise Levels  
Campbell - Saturday 8 August 2009**



Statistical Ambient Noise Levels  
Campbell - Sunday 9 August 2009



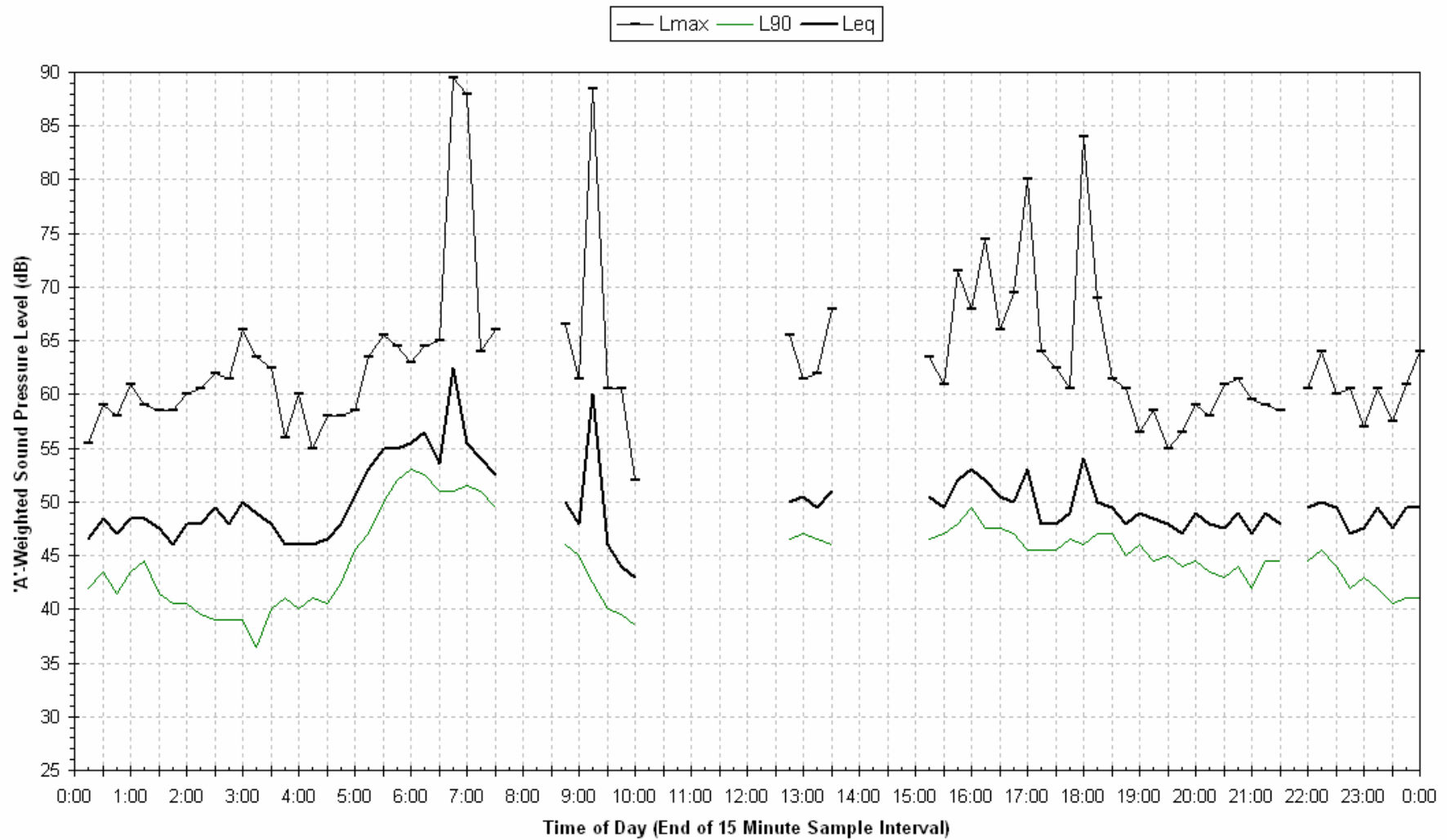
Statistical Ambient Noise Levels  
Campbell - Monday 10 August 2009



Statistical Ambient Noise Levels  
Campbell - Tuesday 11 August 2009

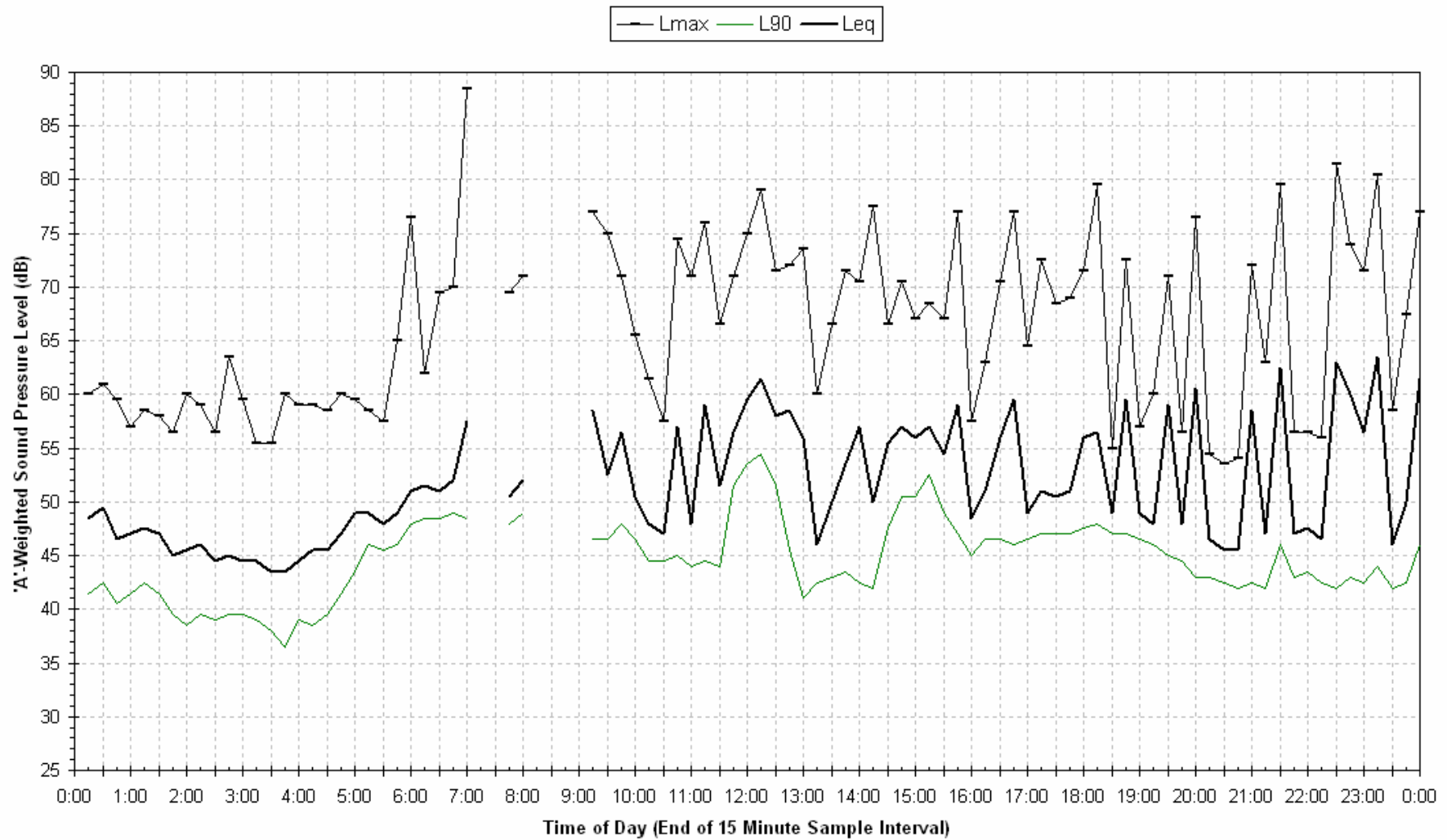


**Statistical Ambient Noise Levels  
Campbell - Wednesday 12 August 2009**

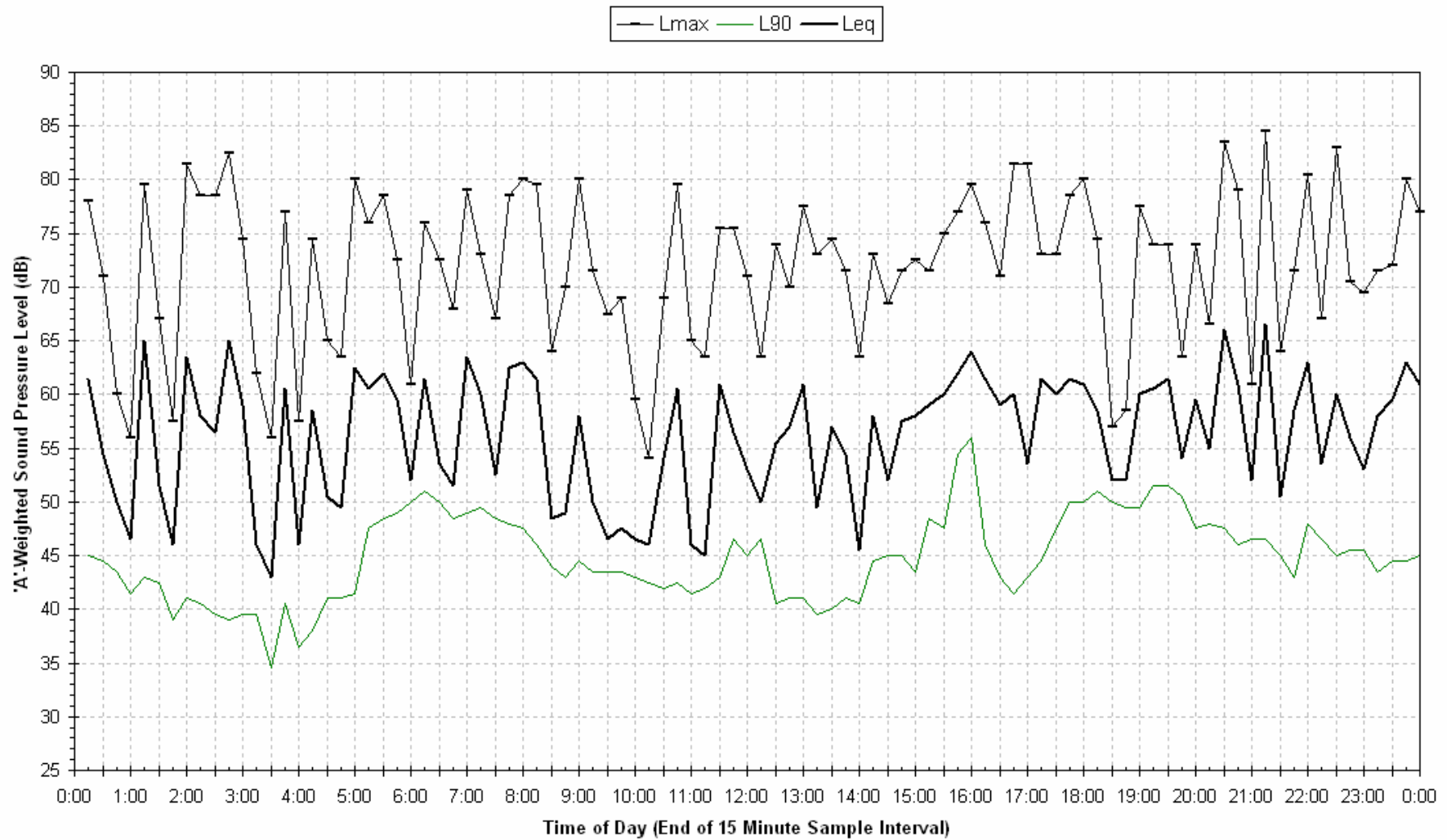




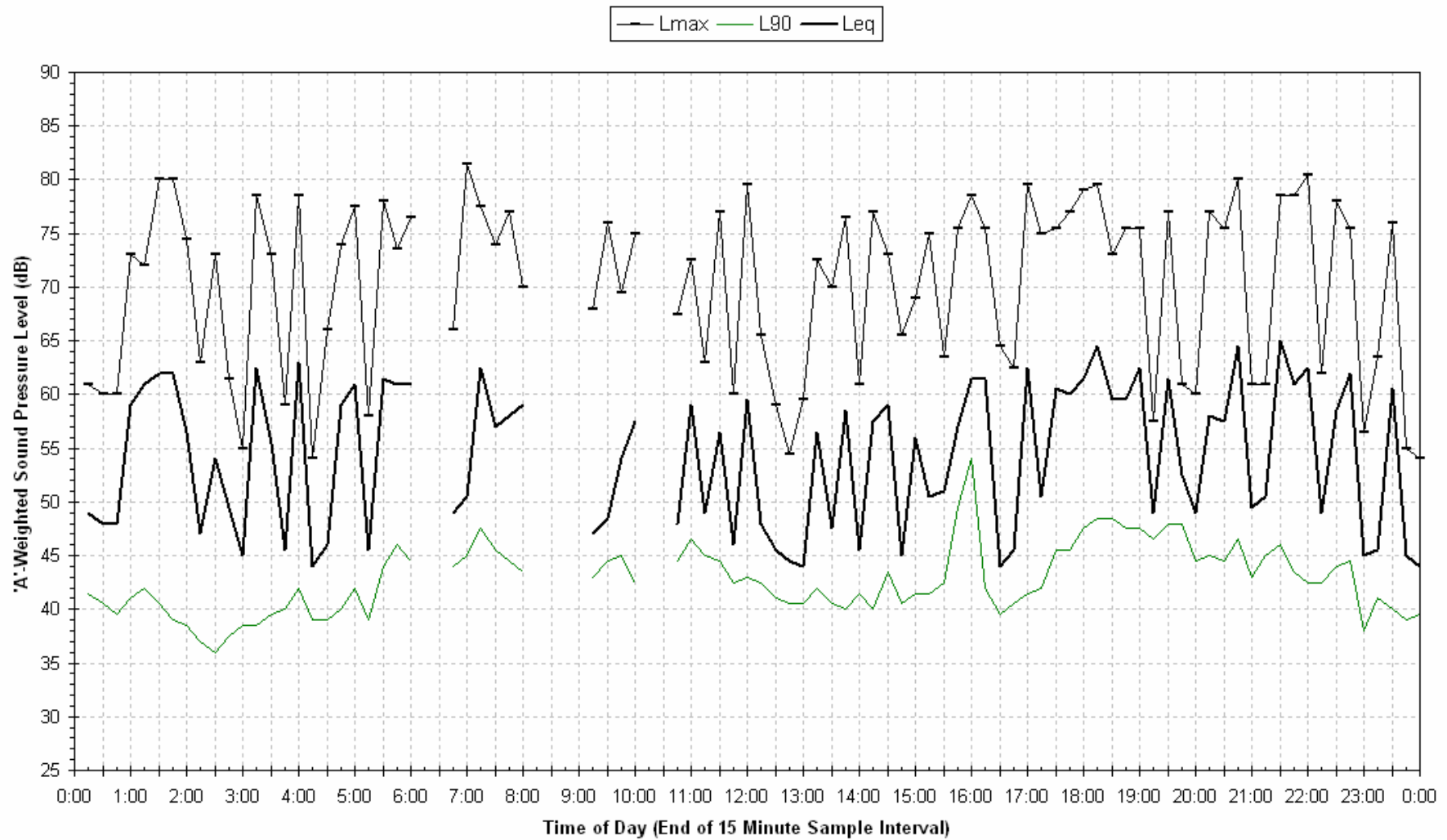
Statistical Ambient Noise Levels  
Campbell - Thursday 13 August 2009



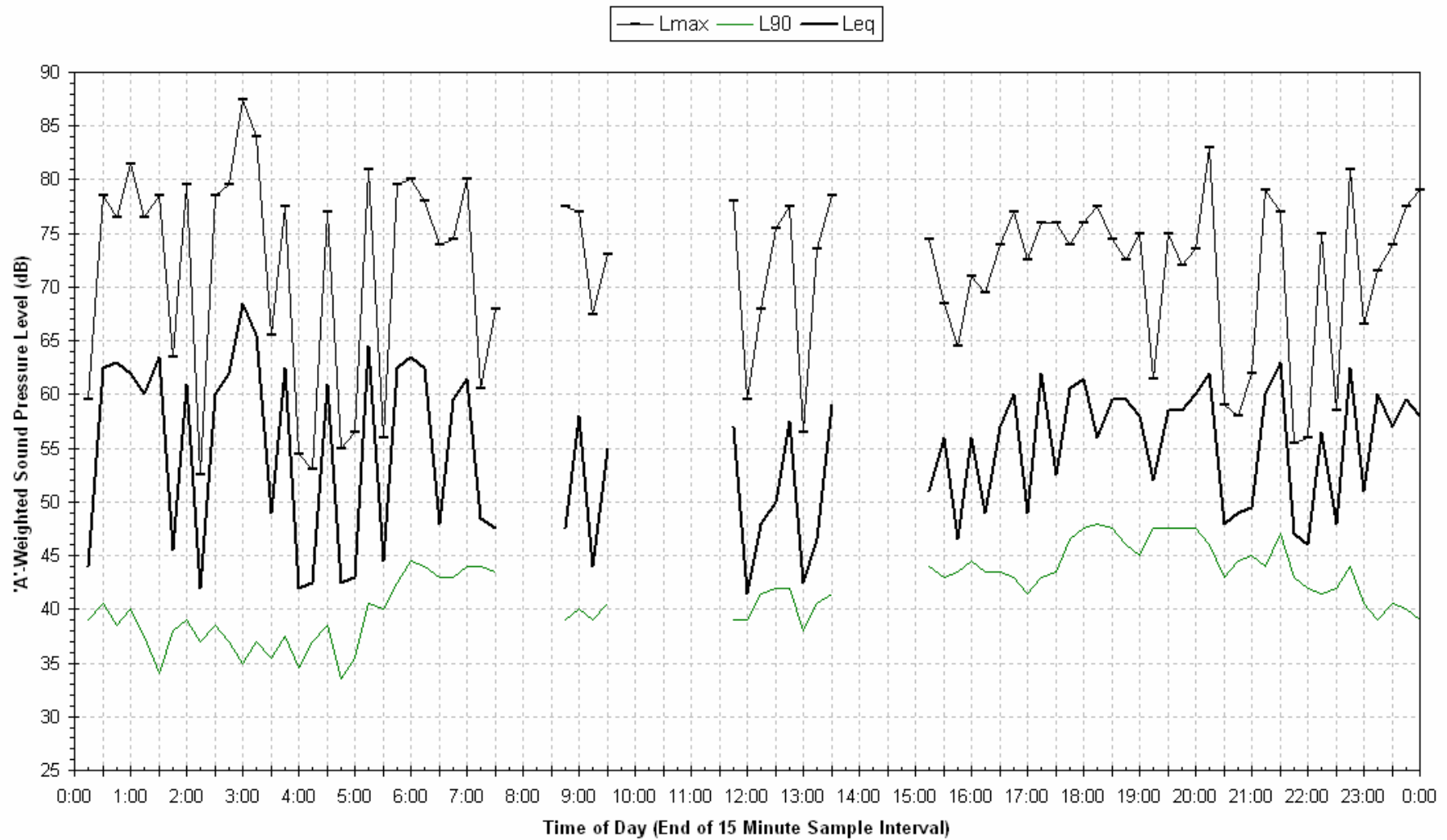
Statistical Ambient Noise Levels  
Campbell - Friday 14 August 2009



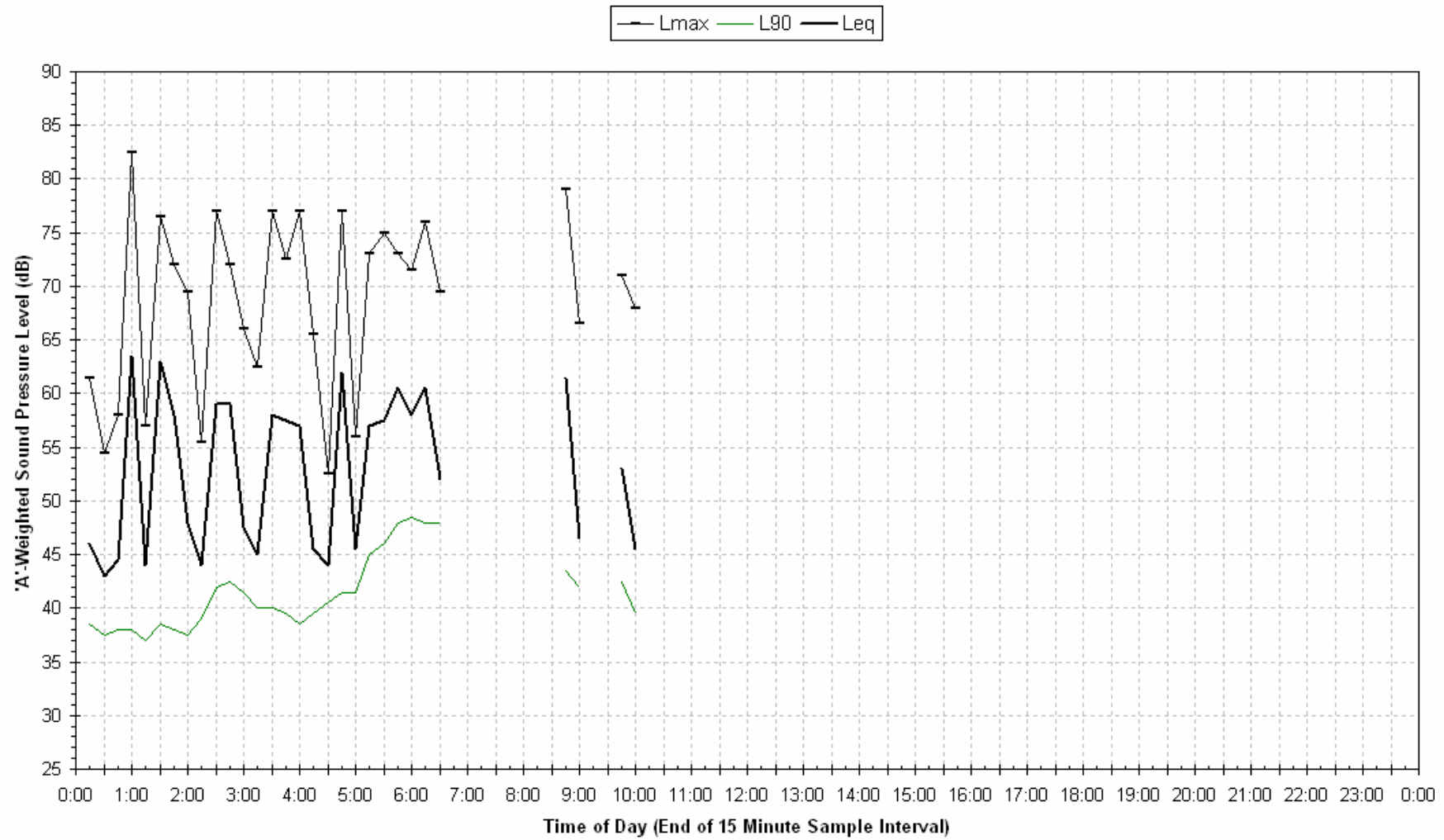
Statistical Ambient Noise Levels  
Campbell - Saturday 15 August 2009



Statistical Ambient Noise Levels  
Campbell - Sunday 16 August 2009



Statistical Ambient Noise Levels  
Campbell - Monday 17 August 2009





### Logger 3 - Hornery

Noise Monitor ID	Allocated No.	Receiver Lot/Address	Registered Proprietor	NCA	Distance to Near Track (m)
L3	MMU-013	4 DP 621181	Hornery	U3	205

#### Logger Location



### Site Photos – Logger 3



### Noise Logging Details (Unattended Monitoring)

L3

Logger Type	ARL EL 215
Serial Number	194528
Start of measurement period	13:10, 06/08/2009
End of measurement period	13:20, 17/08/2009
Frequency Weighting	A
Pre-Test Calibration Check	94.4 dB(A)
Post-Test Calibration Check	94.0 dB(A)
Time Response	Fast
Engineering Units	dB(A) SPL re:20µPa

### Passby Measurements Details (Attended Monitoring)

L3

Sound Level Meter	Brüel & Kjær 2250
Serial Number	2506887
Measurement Dates	18/08/2009



### Logger 3 Noise Monitoring Results – Ambient Levels

Date	L <sub>eq</sub> 15hr dB(A)	L <sub>eq</sub> 9hr dB(A)
Thursday-6-Aug-09	51.5	49.5
Friday-7-Aug-09	49.0	49.0
Saturday-8-Aug-09	51.9	48.0
Sunday-9-Aug-09	58.5	49.8
Monday-10-Aug-09	50.1	48.8
Tuesday-11-Aug-09	48.7	48.4
Wednesday-12-Aug-09	48.1	46.8
Thursday-13-Aug-09	51.9	48.8
Friday-14-Aug-09	51.4	50.4
Saturday-15-Aug-09	49.7	48.3
Sunday-16-Aug-09	50.0	47.0
Monday-17-Aug-09	49.8	-
<b>Overall</b>	<b>52.0</b>	<b>48.7</b>

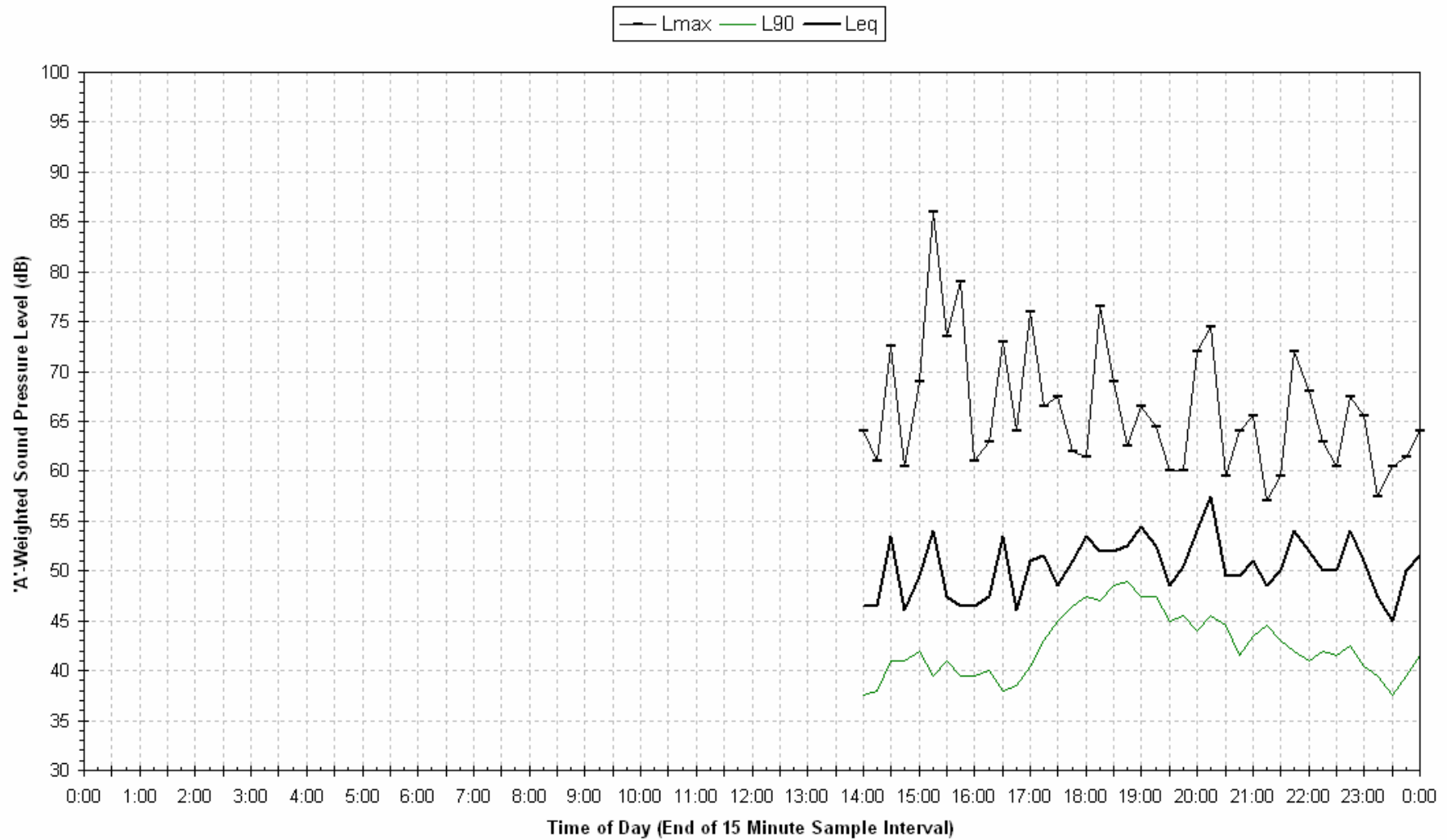
### Logger 3 Noise Monitoring Results – Background Levels

Date	Assessment Background Level L <sub>90</sub> dB(A)		
	Day	Evening	Night
Thursday-6-Aug-09	-	41.8	34.0
Friday-7-Aug-09	-	-	32.8
Saturday-8-Aug-09	34.3	40.3	31.5
Sunday-9-Aug-09	36.0	38.0	31.3
Monday-10-Aug-09	36.8	40.3	34.0
Tuesday-11-Aug-09	38.7	44.2	38.8
Wednesday-12-Aug-09	38.0	44.3	34.8
Thursday-13-Aug-09	38.9	43.8	35.5
Friday-14-Aug-09	39.2	44.0	36.0
Saturday-15-Aug-09	38.5	44.0	33.0
Sunday-16-Aug-09	36.5	44.0	38.5
Monday-17-Aug-09	-	-	-
<b>RBL</b>	<b>38.0</b>	<b>43.9</b>	<b>34.0</b>

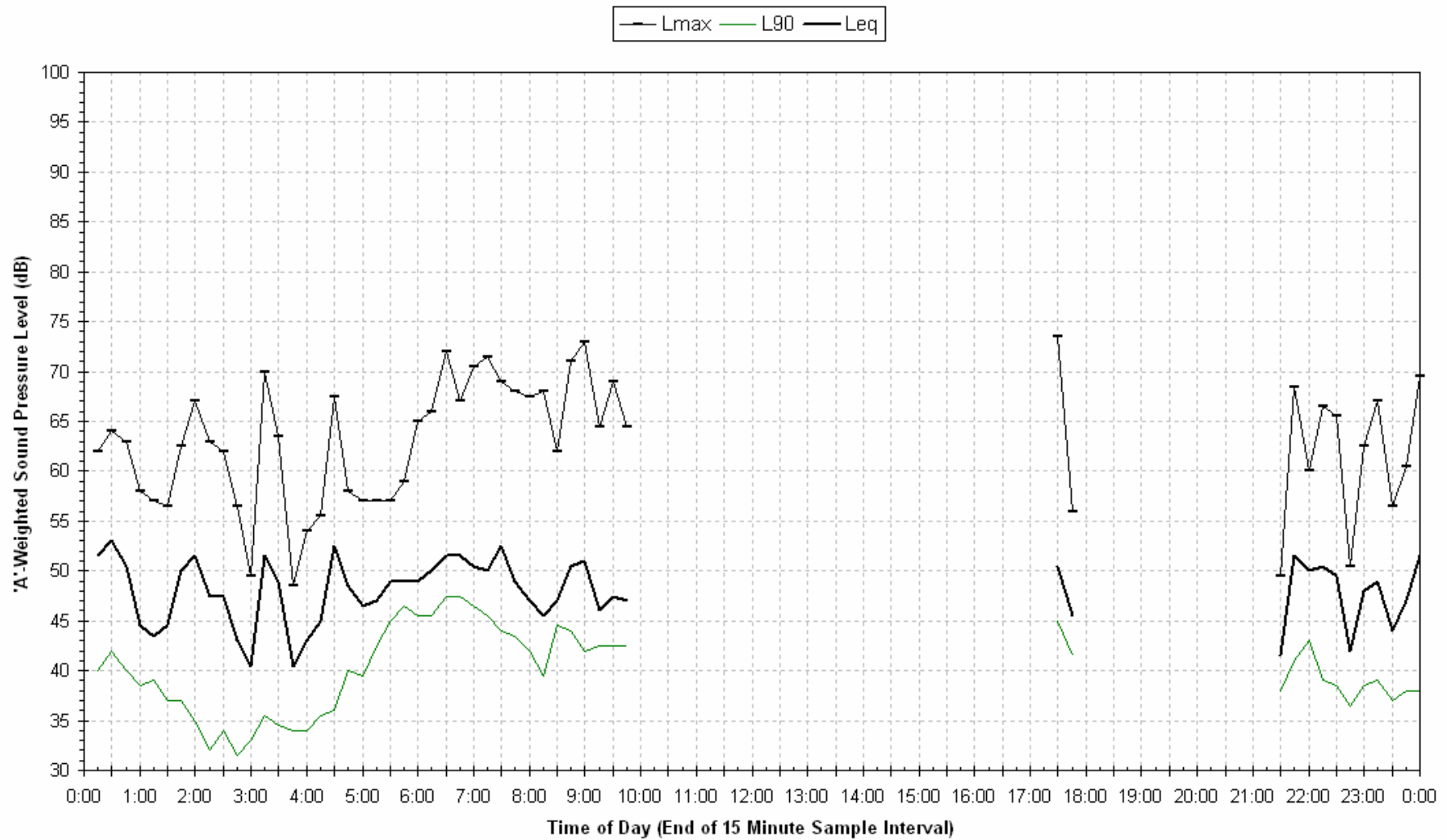
**Passby Measurement Results at Logger 3 Location dB(A)**

Up/Down	Train Type	Duration	L <sub>eq</sub>	L <sub>max</sub>
Up	Coal	0:02:10	45.2	58.1
Up	Coal	0:02:52	49.7	59
Up	Coal	0:04:04	49.5	59
Up	Coal	0:02:46	51.9	58.4
Up	Coal	0:03:22	47.7	56.5
<b>Up Average</b>		<b>0:03:03</b>	<b>49.3</b>	<b>58.2</b>
Down	Empty Coal	0:01:50	54.0	60.3
Down	Empty Coal	0:01:43	53.8	63.8
Down	Empty Coal	0:01:52	54.7	63.4
Down	Empty Coal	0:01:52	57.1	69.1
Down	Empty Coal	0:02:46	56.2	67.3
<b>Down Average</b>		<b>0:02:01</b>	<b>55.4</b>	<b>64.8</b>
Up	Passenger	0:00:16	49.7	60.0
Down	Passenger	0:00:29	49.1	55.8
<b>Passenger Average</b>		<b>0:00:23</b>	<b>49.4</b>	<b>57.9</b>

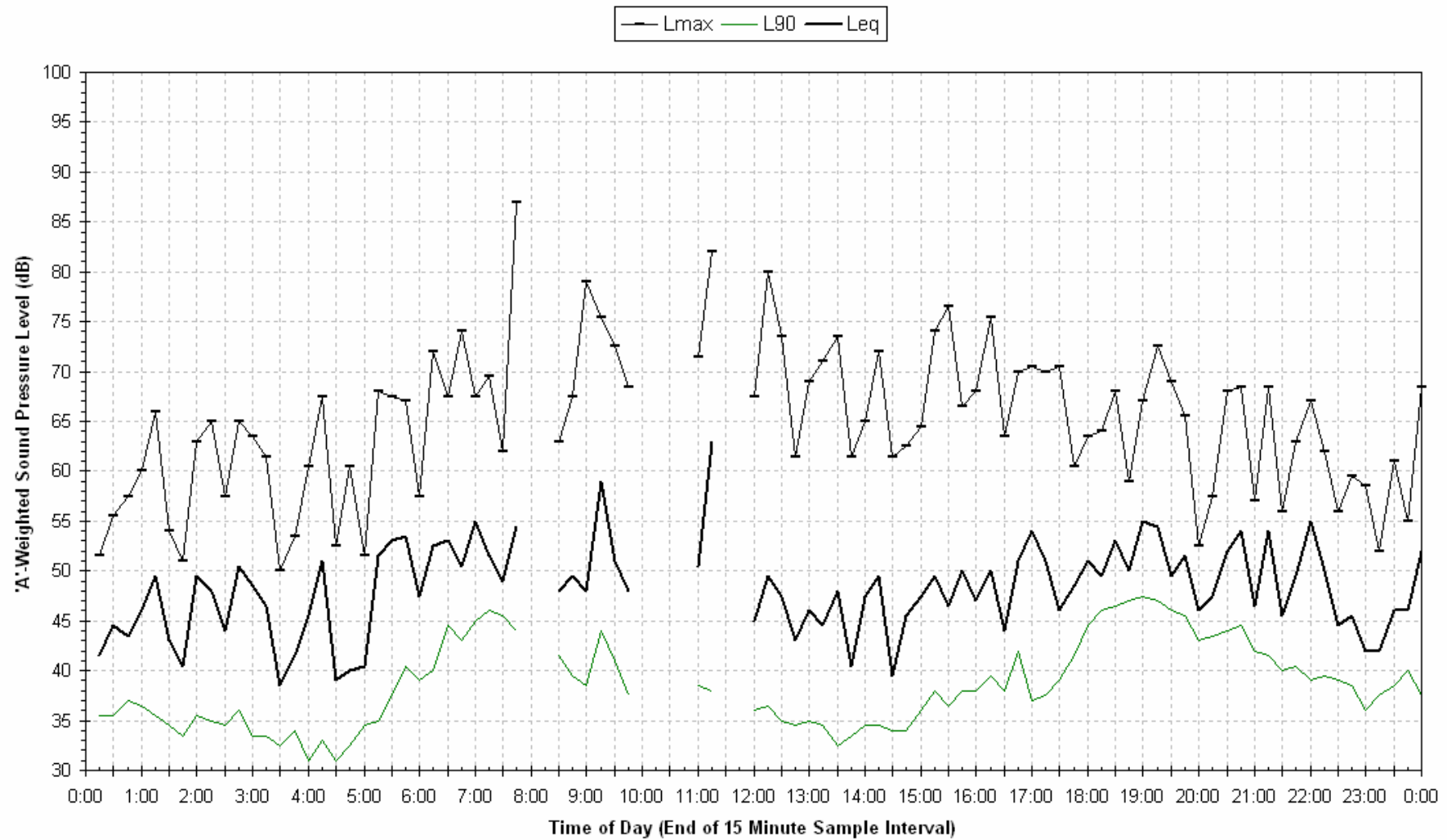
Statistical Ambient Noise Levels  
Hornery - Thursday 6 August 2009



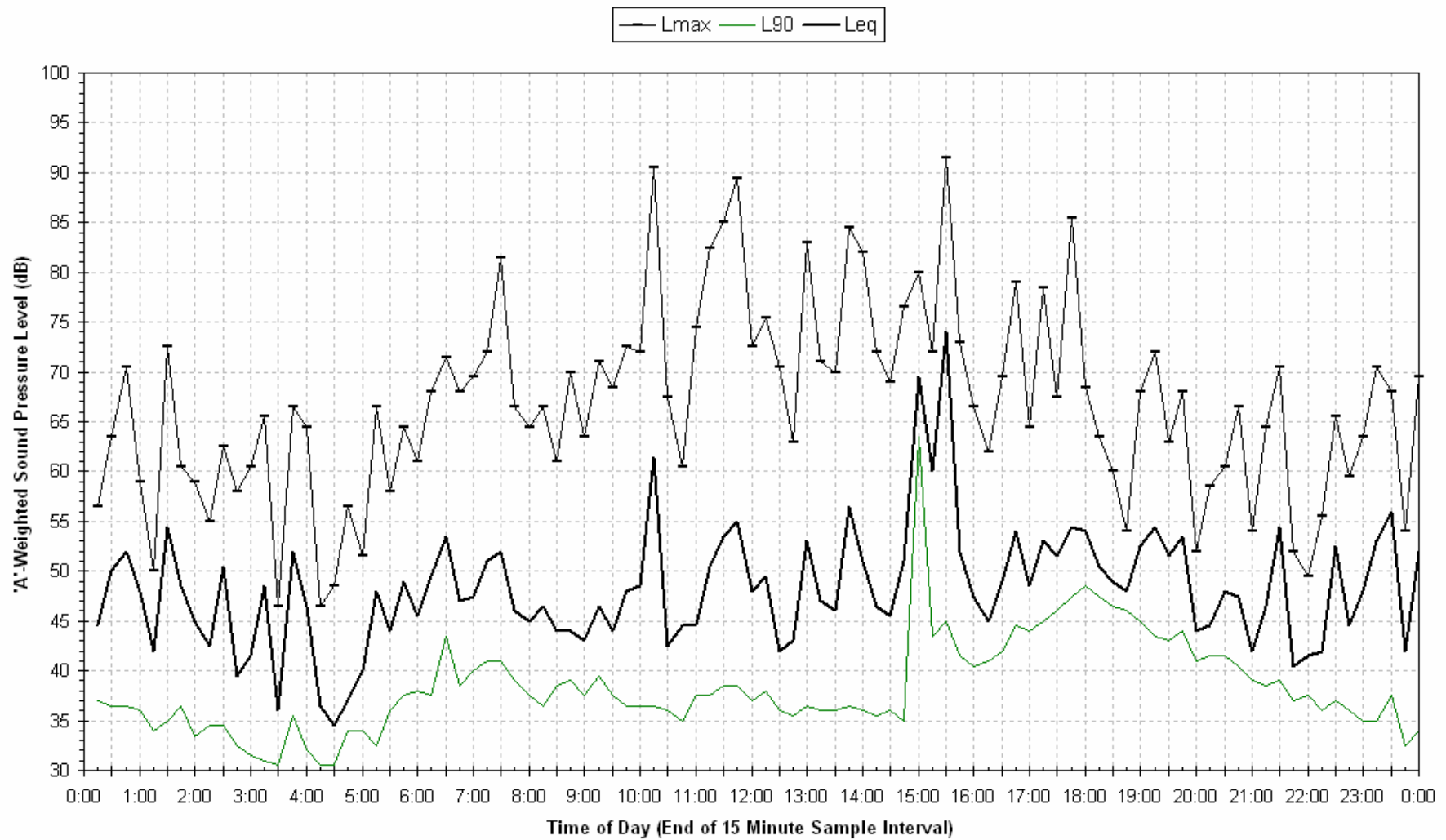
Statistical Ambient Noise Levels  
Hornery - Friday 7 August 2009



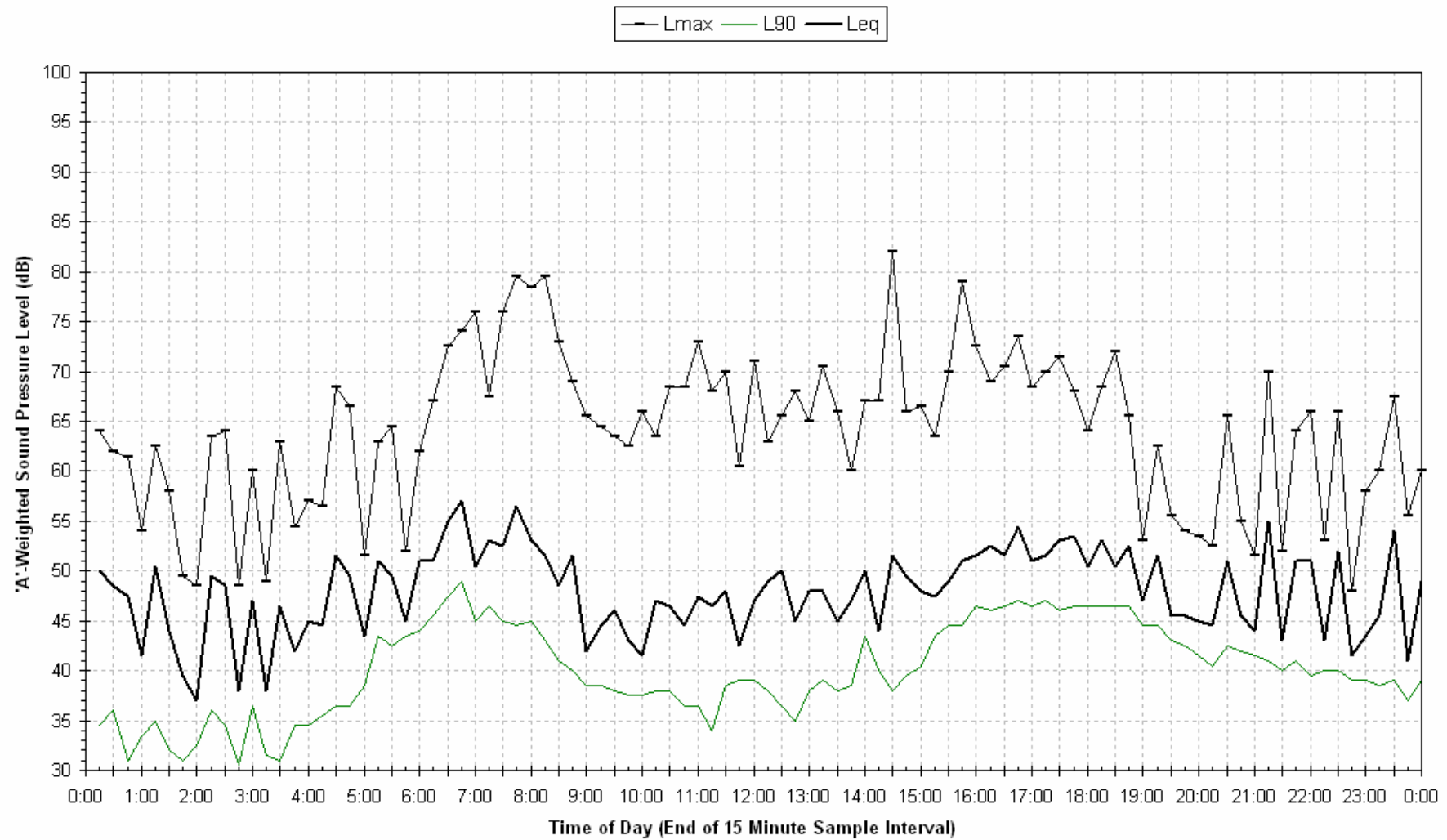
Statistical Ambient Noise Levels  
Hornery - Saturday 8 August 2009



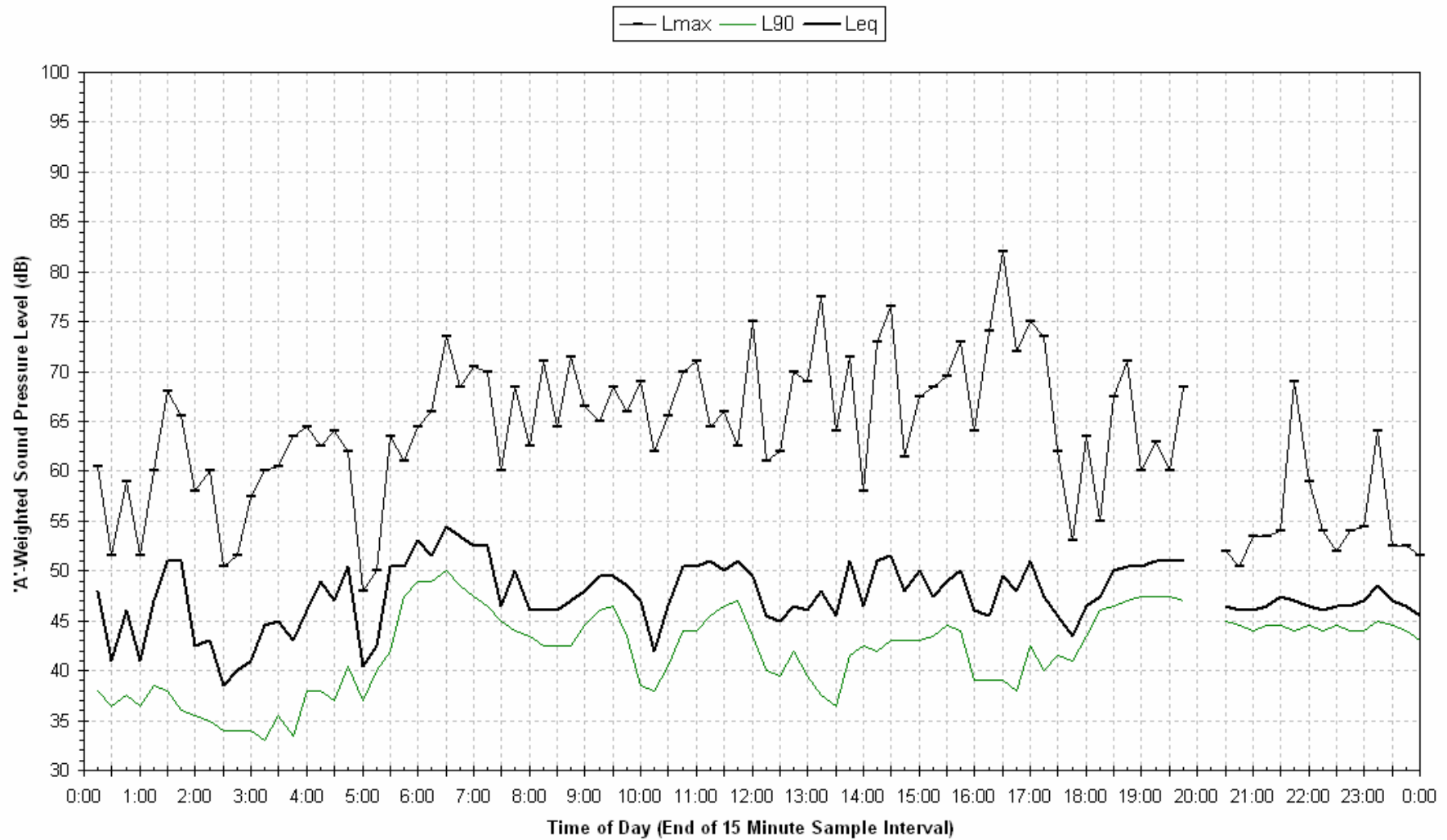
Statistical Ambient Noise Levels  
Hornery - Sunday 9 August 2009



Statistical Ambient Noise Levels  
Hornery - Monday 10 August 2009

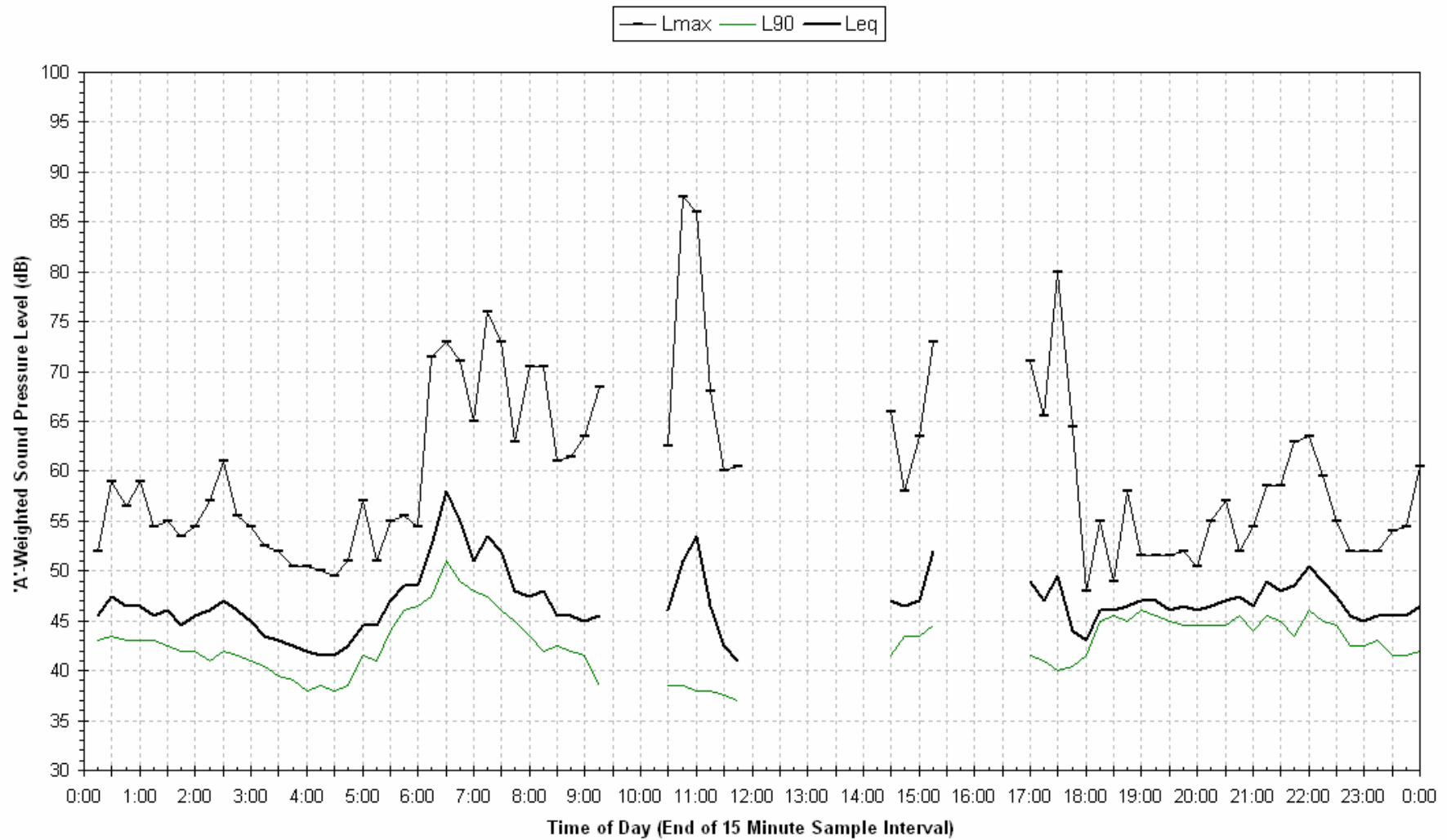


**Statistical Ambient Noise Levels  
Hornery - Tuesday 11 August 2009**





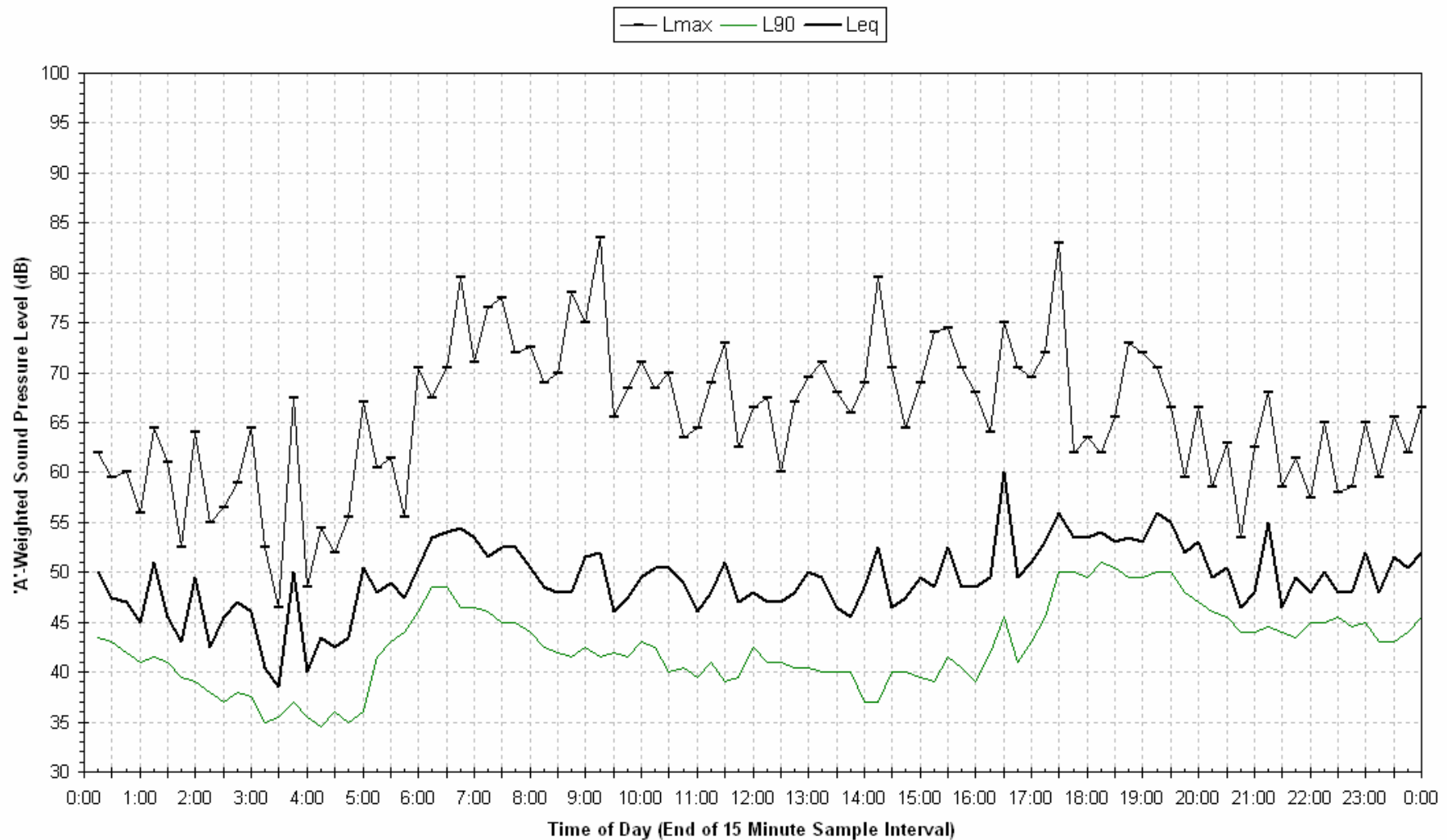
Statistical Ambient Noise Levels  
Hornery - Wednesday 12 August 2009



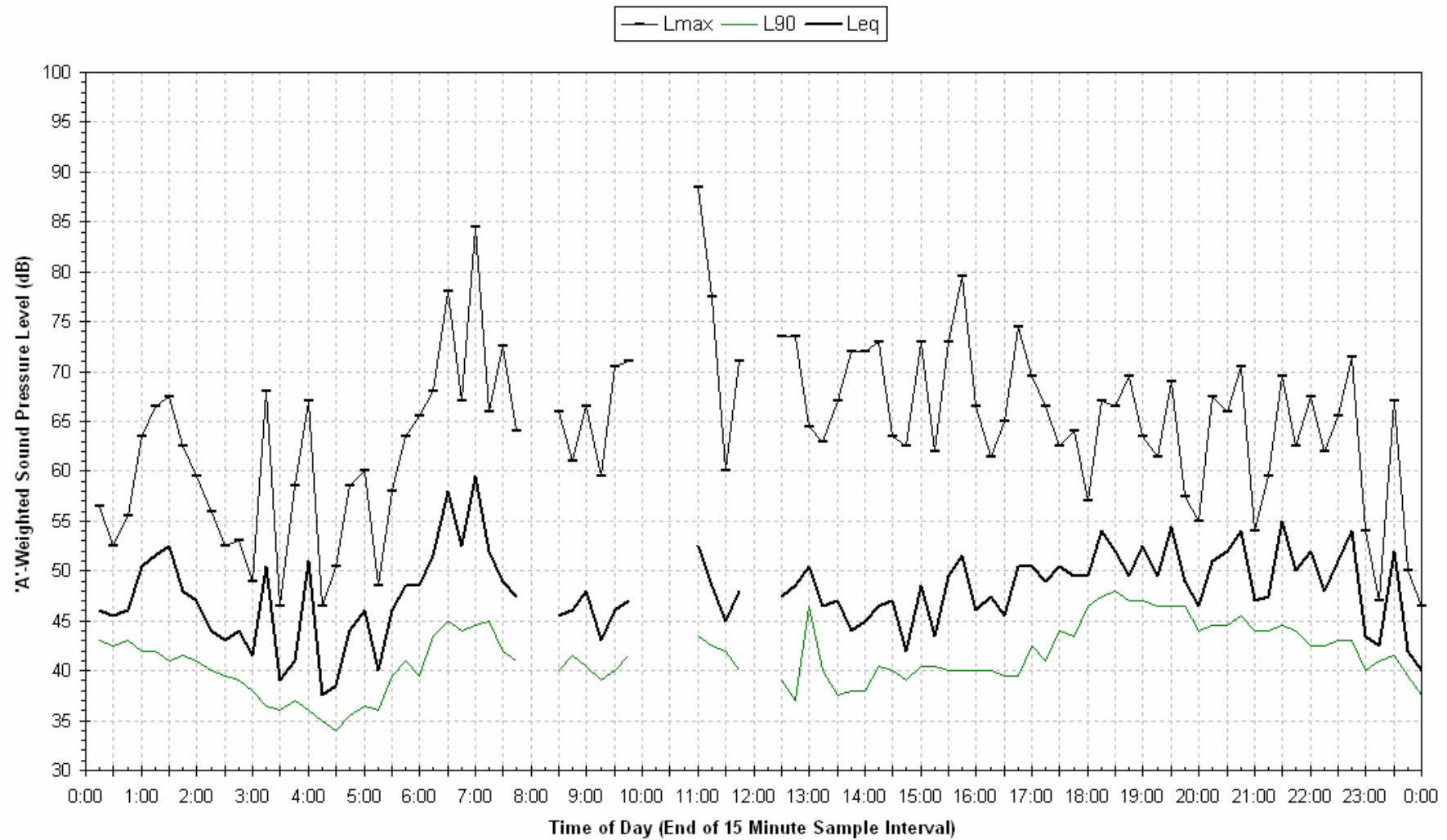
Statistical Ambient Noise Levels  
Hornery - Thursday 13 August 2009



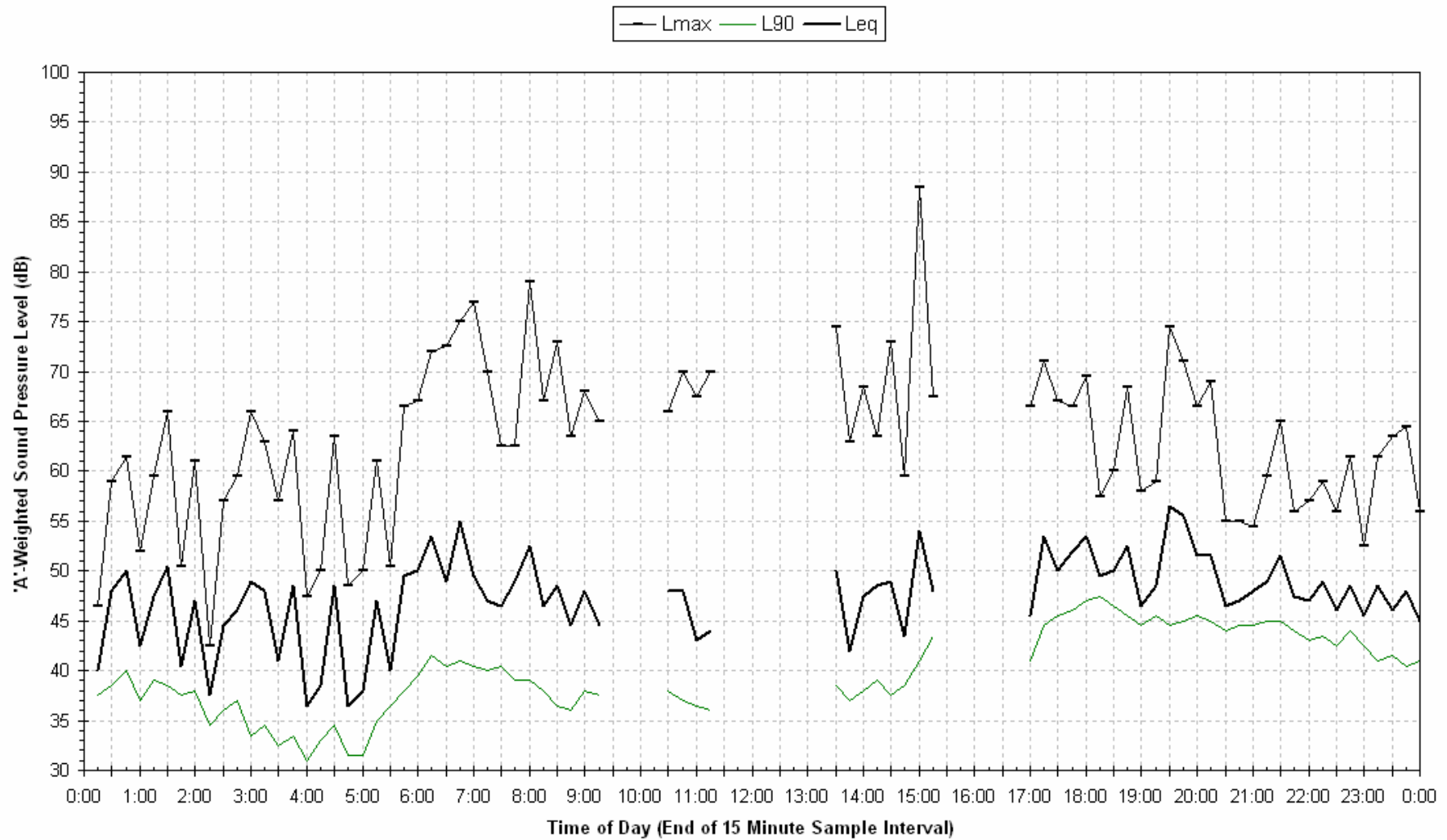
Statistical Ambient Noise Levels  
Hornery - Friday 14 August 2009



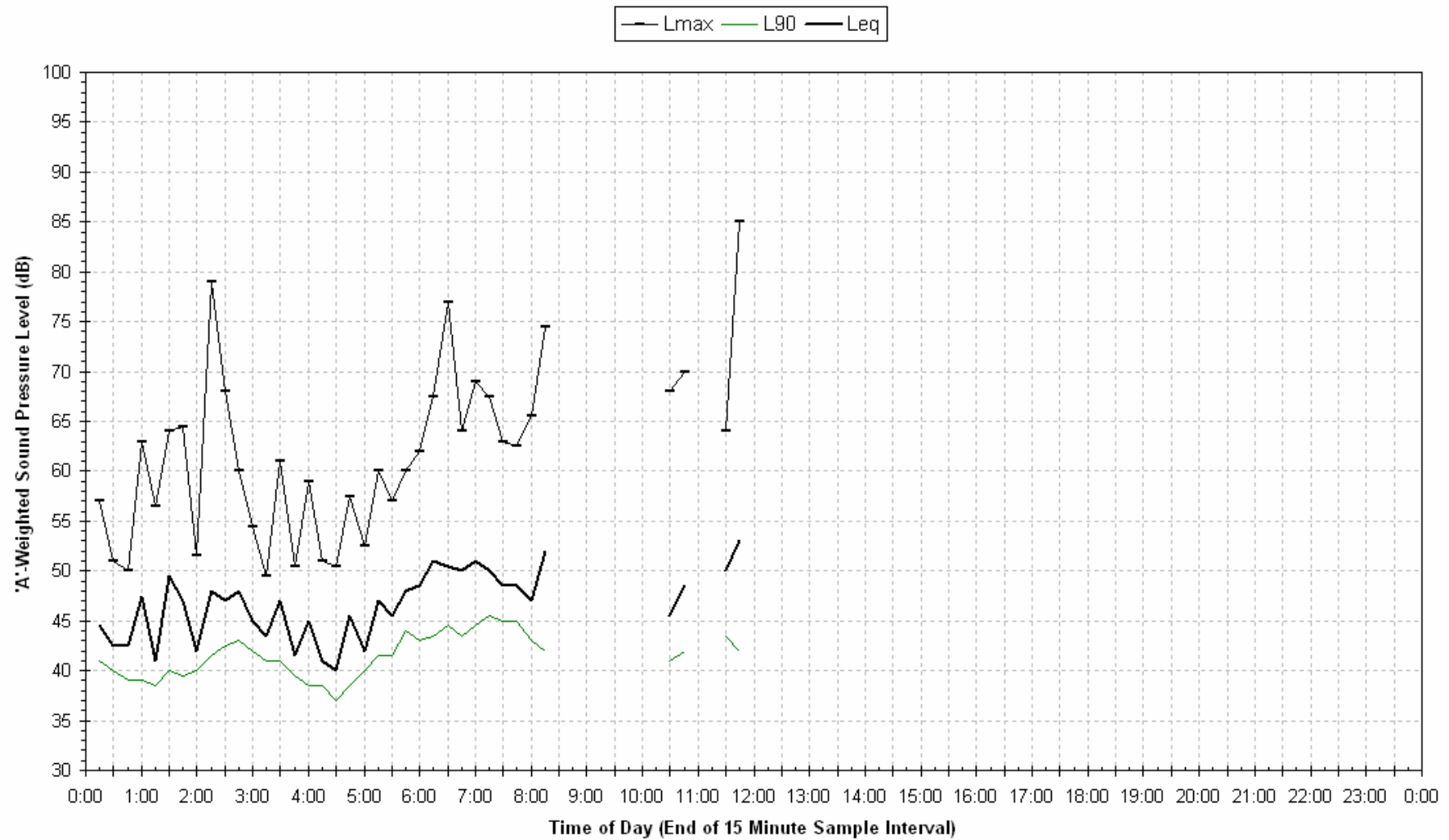
Statistical Ambient Noise Levels  
Hornery - Saturday 15 August 2009



Statistical Ambient Noise Levels  
Hornery - Sunday 16 August 2009



# Statistical Ambient Noise Levels Hornery - Monday 17 August 2009



## Logger 4 – Hook (Pothana Winery)

Noise Monitor ID	Allocated No.	Receiver Lot/Address	Registered Proprietor	NCA	Distance to Near Track (m)
L4	MMD-007	POR 41 DP 755209	Hook	D3	160

### Logger Location





#### Site Photos – Logger 4



#### Noise Logging Details (Unattended Monitoring)

L4

Logger Type	ARL EL 215
Serial Number	194662
Start of measurement period	15:00, 28/07/2009
End of measurement period	17:15, 04/08/2009
Frequency Weighting	A
Pre-Test Calibration Check	94.1 dB(A)
Post-Test Calibration Check	94.3dB(A)
Time Response	Fast
Engineering Units	dB(A) SPL re:20μPa

#### Passby Measurements Details (Attended Monitoring)

L4

Sound Level Meter	Brüel & Kjær 2250
Serial Number	2506887
Measurement Dates	29/07/2009, 04/08/2009

#### Logger 4 Noise Monitoring Results – Ambient Levels

Date	L <sub>eq</sub> 15hr dB(A)	L <sub>eq</sub> 9hr dB(A)
Tuesday-28-Jul-09	59.1	59.0
Wednesday-29-Jul-09	58.6	59.7
Thursday-30-Jul-09	57.6	59.3
Friday-31-Jul-09	56.8	59.5
Saturday-1-Aug-09	58.4	59.2
Sunday-2-Aug-09	58.9	57.7
Monday-3-Aug-09	58.8	59.7
Tuesday-4-Aug-09	57.9	-
<b>Overall</b>	<b>58.3</b>	<b>59.2</b>

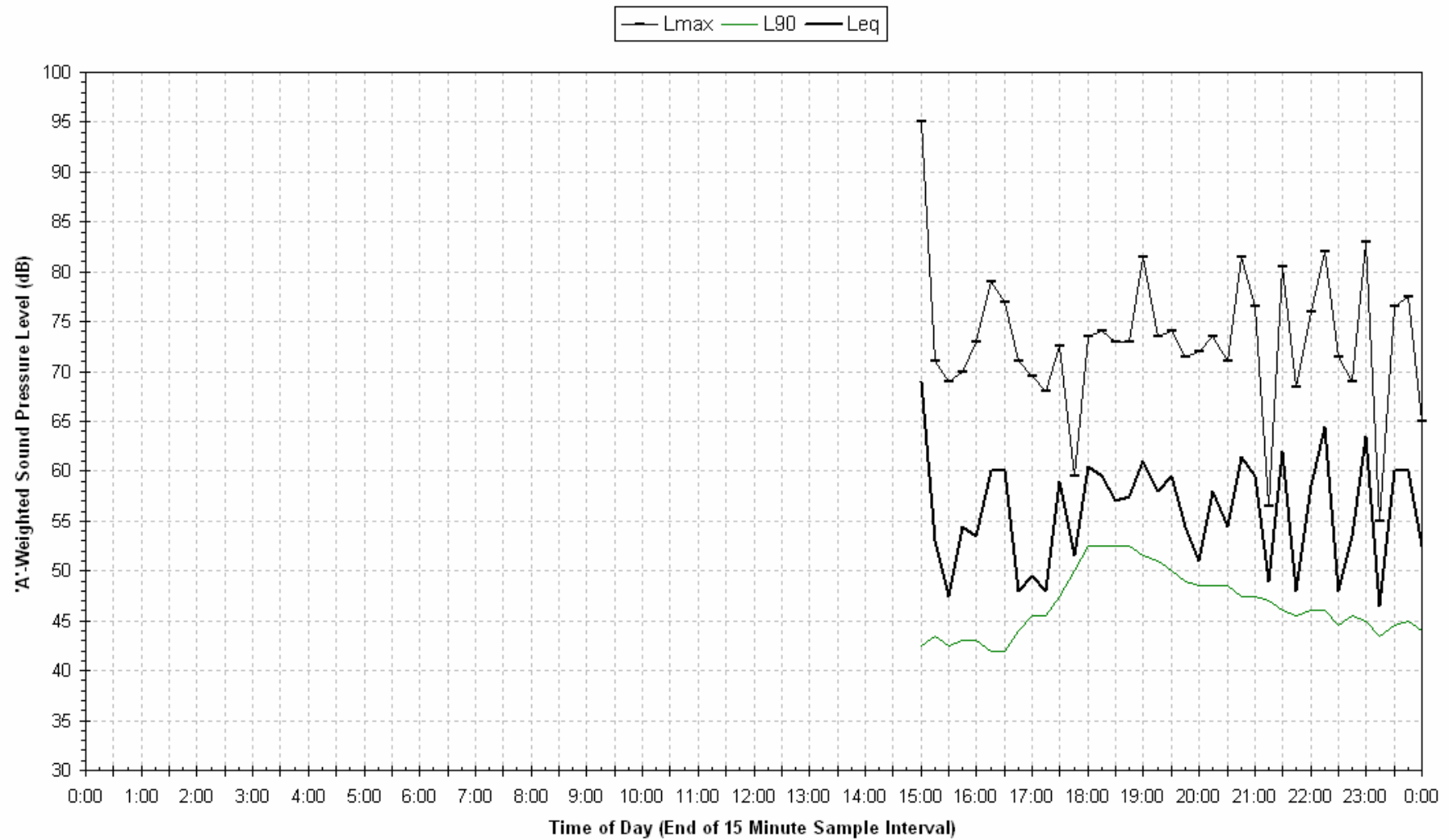
#### Logger 4 Noise Monitoring Results – Background Levels

Date	Assessment Background Level L <sub>90</sub> dB(A)		
	Day	Evening	Night
Tuesday-28-Jul-09	-	46.0	41.7
Wednesday-29-Jul-09	40.0	45.8	38.3
Thursday-30-Jul-09	41.8	46.0	39.0
Friday-31-Jul-09	43.5	44.0	38.8
Saturday-1-Aug-09	40.0	44.3	33.0
Sunday-2-Aug-09	37.0	41.8	38.5
Monday-3-Aug-09	42.5	43.0	38.5
Tuesday-4-Aug-09	-	-	-
<b>RBL</b>	<b>40.9</b>	<b>44.3</b>	<b>38.5</b>

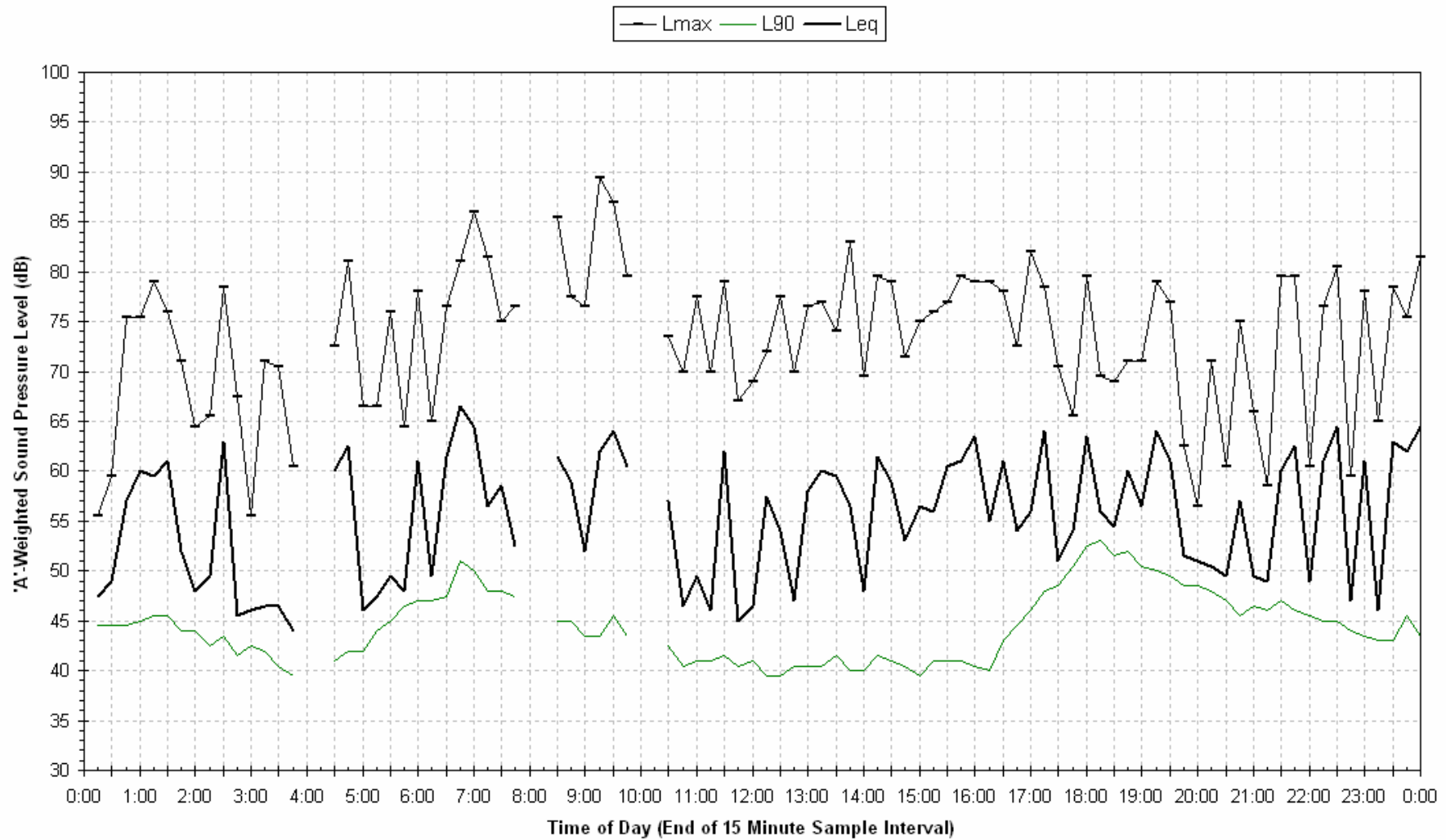
#### Passby Measurement Results at Logger 4 Location dB(A)

Up/Down	Train Type	Duration	L <sub>eq</sub>	L <sub>max</sub>
Up	Coal	0:03:10	60.5	73.3
Up	Coal	0:02:32	64.6	75.5
Up	Coal	0:02:33	65.3	75.5
Up	Coal	0:02:32	64.7	74
Up	Coal	0:04:20	65.9	79.9
Up	Coal	0:02:47	61.3	69.6
Up	Empty Freight	0:01:28	61.3	69.9
Up	Freight	0:01:41	59.5	72
<b>Up Average</b>		<b>0:02:38</b>	<b>63.5</b>	<b>73.7</b>
Down	Empty Coal	0:01:55	65.5	71.4
Down	Empty Coal	0:01:44	69.2	76.5
Down	Empty Coal	0:01:21	65.3	71.2
Down	Empty Coal	0:01:39	70.6	81.4
Down	Empty Coal	0:01:11	69.5	78.1
Down	Empty Coal	0:02:32	65.6	71.1
<b>Down Average</b>		<b>0:01:44</b>	<b>68.2</b>	<b>75.0</b>
Up	Passenger	0:00:28	58.9	65.1
Down	Passenger	0:00:19	67.2	72.6
<b>Passenger Average</b>		<b>0:00:23</b>	<b>64.8</b>	<b>68.9</b>

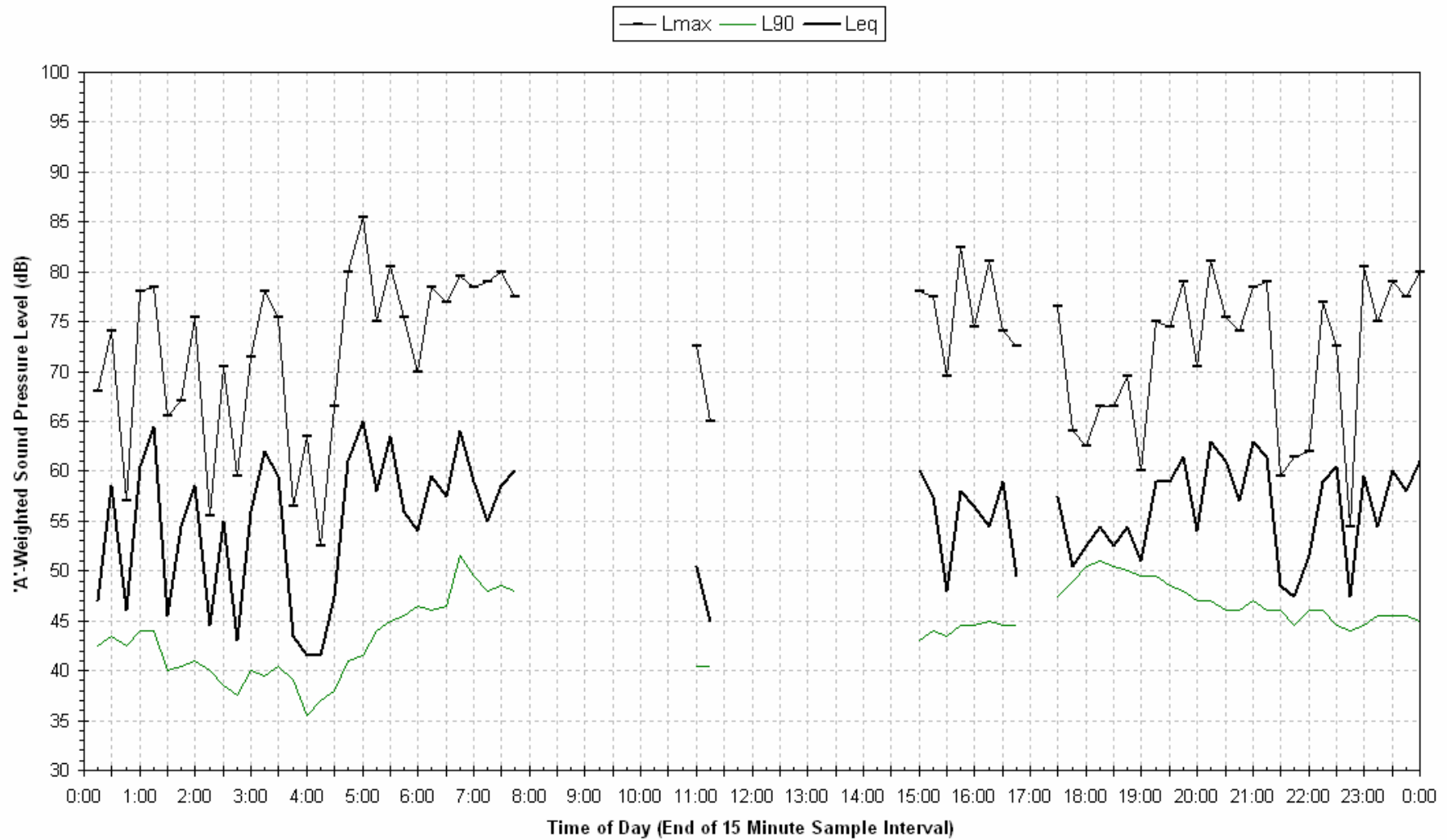
Statistical Ambient Noise Levels  
Pothana winery - Tuesday 28 July 2009



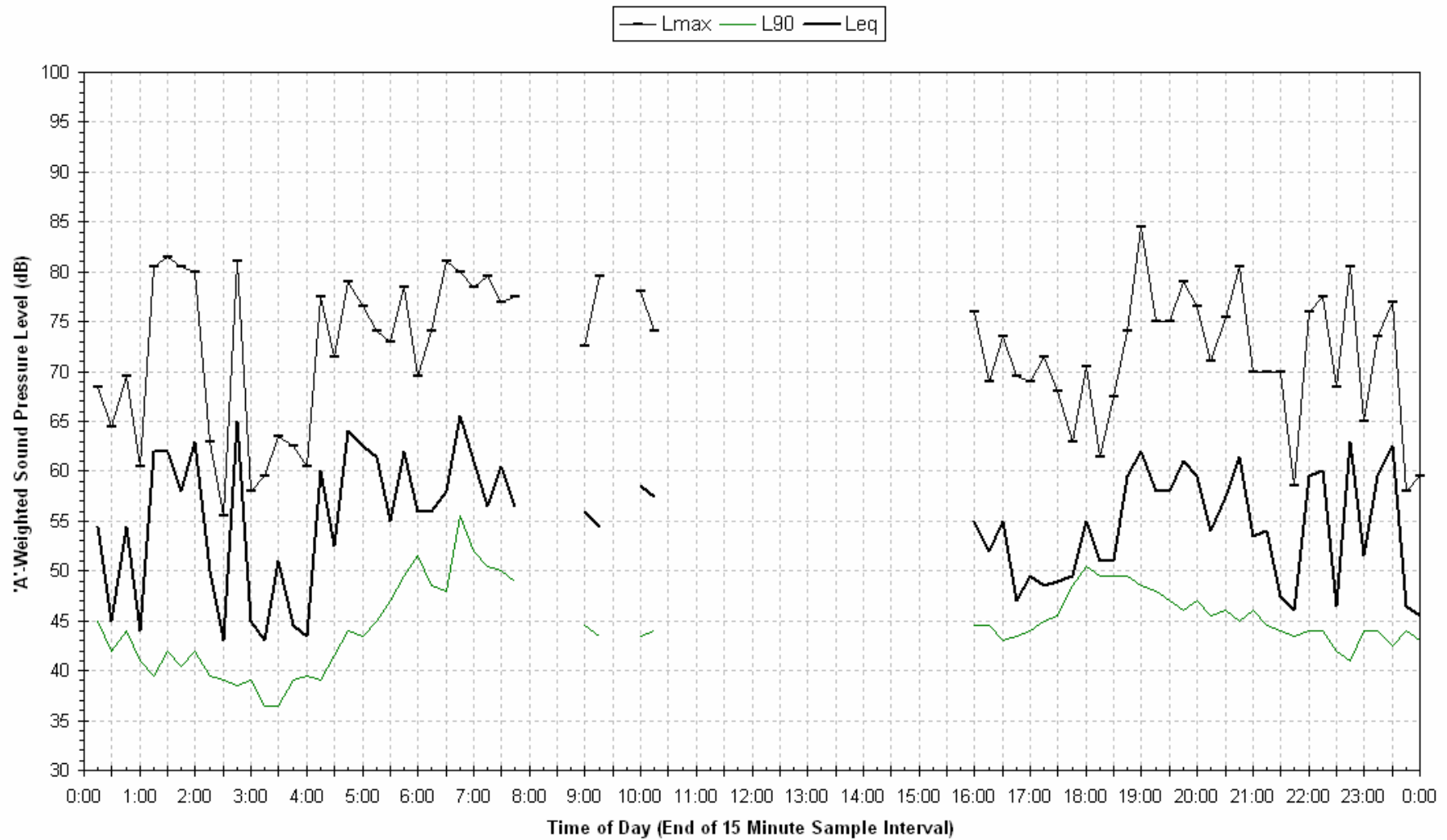
Statistical Ambient Noise Levels  
Pothana winery - Wednesday 29 July 2009



**Statistical Ambient Noise Levels**  
**Pothana winery - Thursday 30 July 2009**



**Statistical Ambient Noise Levels  
Pothana winery - Friday 31 July 2009**

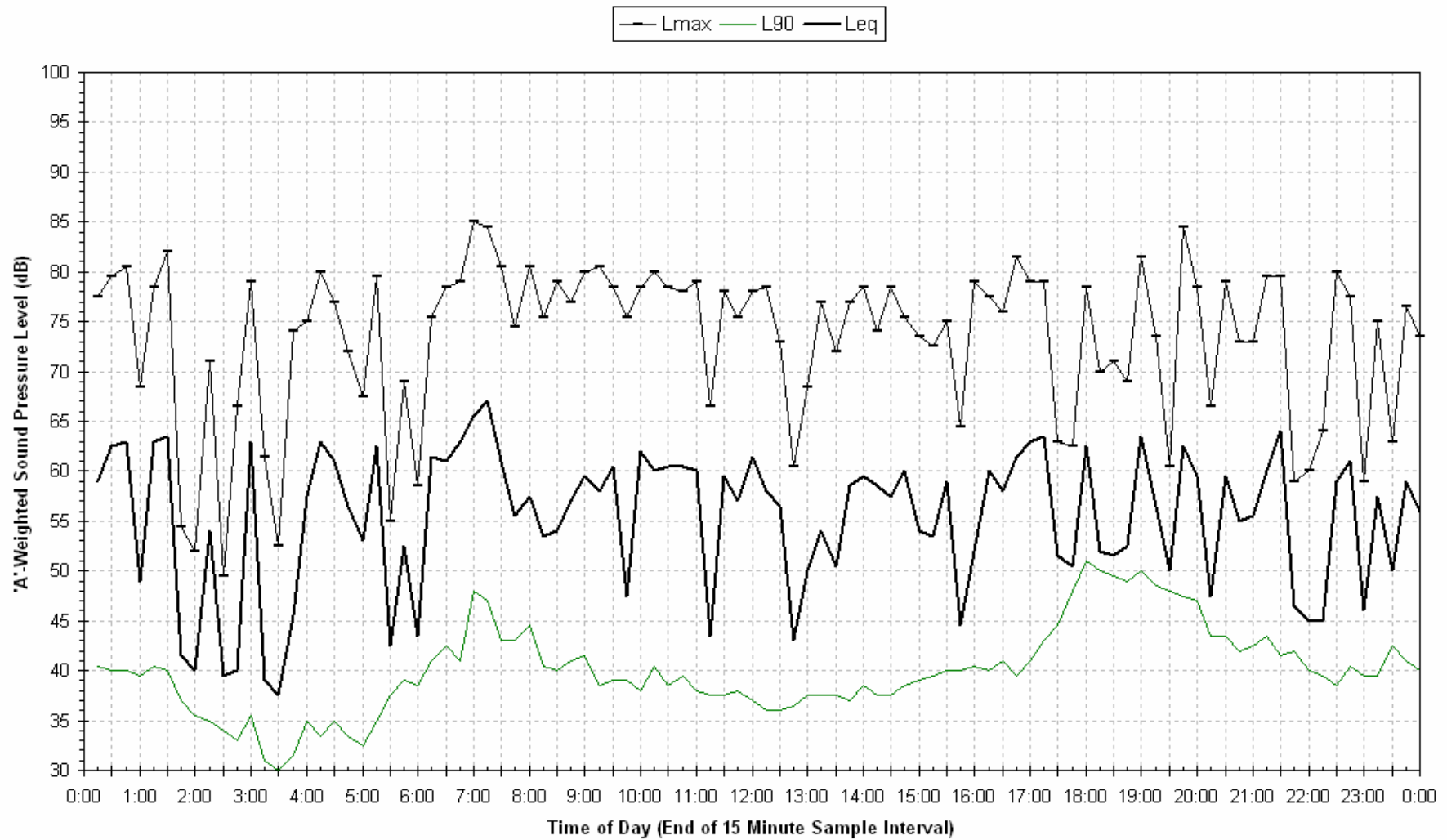




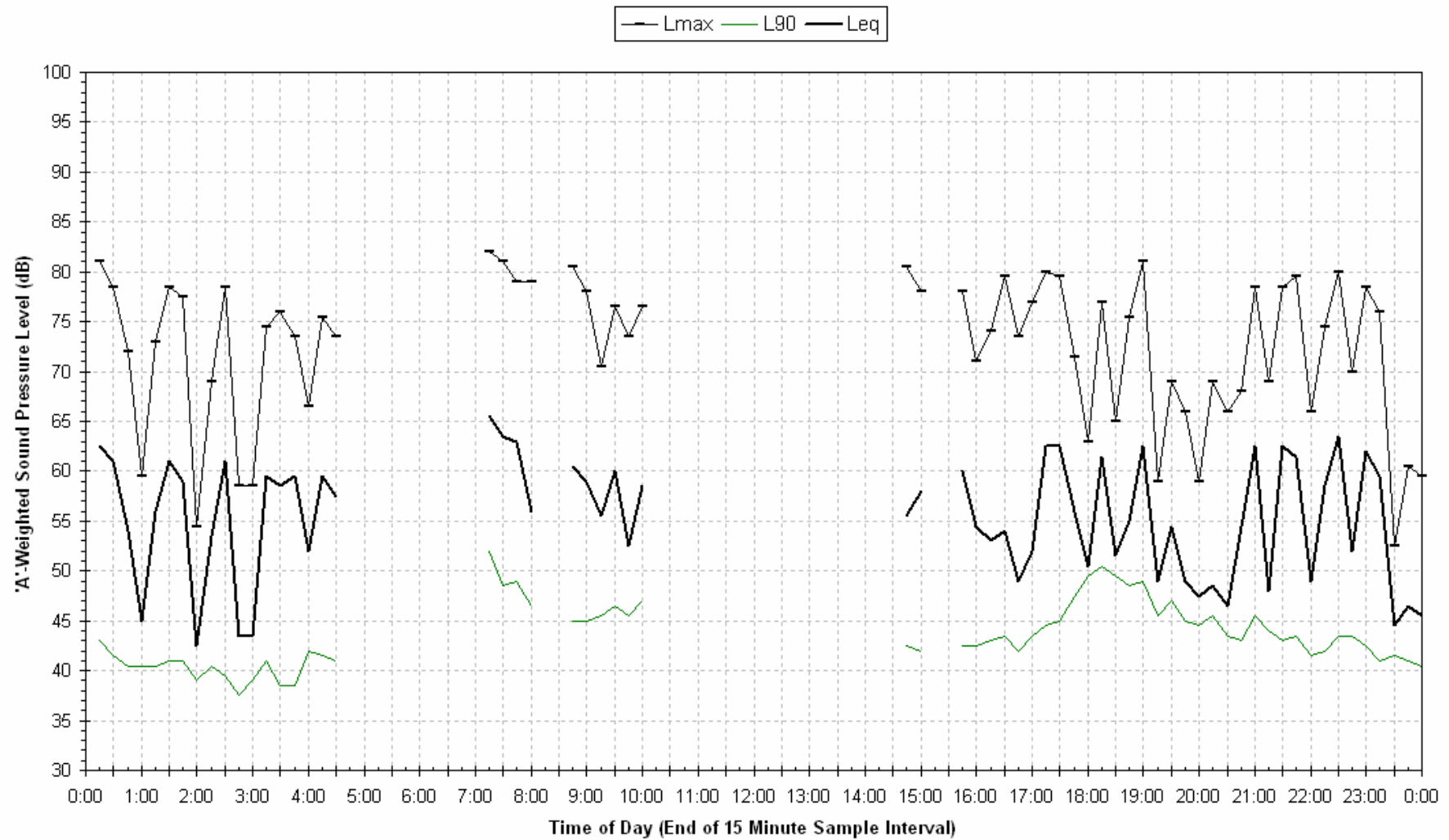
Statistical Ambient Noise Levels  
Pothana winery - Saturday 1 August 2009



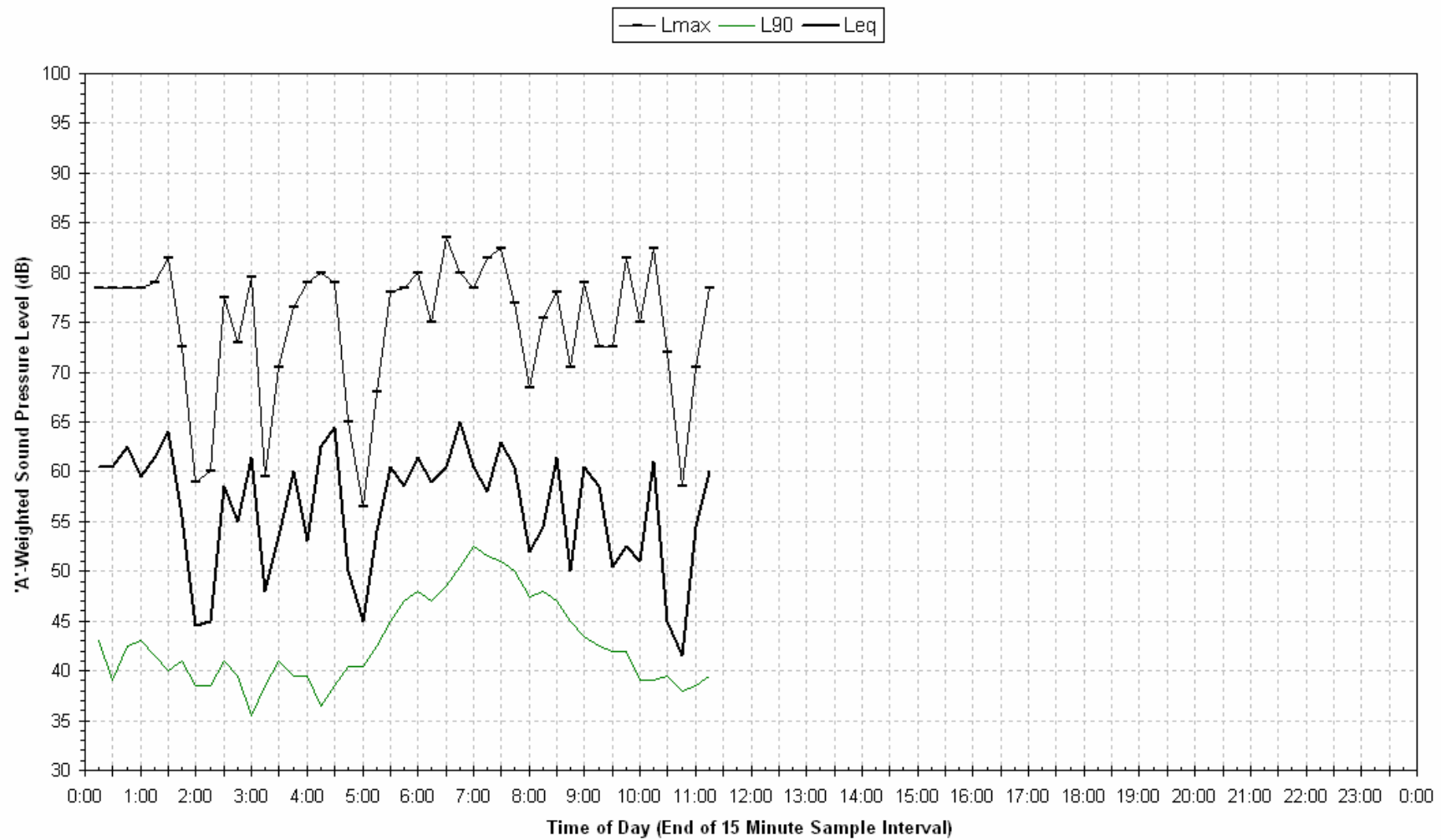
**Statistical Ambient Noise Levels**  
**Pothana winery - Sunday 2 August 2009**



**Statistical Ambient Noise Levels  
Pothana winery - Monday 3 August 2009**



Statistical Ambient Noise Levels  
Pothana winery - Tuesday 4 August 2009



## Logger 5 – Wilson (14 Railway Street Branxton)

Noise Monitor ID	Allocated No.	Receiver Lot/Address	Registered Proprietor	NCA	Distance to Near Track (m)
L5	MMU-021	B DP 395546	Wilson	U4	70

### Logger Location





## Site Photos – Logger 5



### Noise Logging Details (Unattended Monitoring)

L5

Logger Type	ARL EL 215
Serial Number	194662
Start of measurement period	12:15, 11/09/2009
End of measurement period	11:15, 22/09/2009
Frequency Weighting	A
Pre-Test Calibration Check	94.1 dB(A)
Post-Test Calibration Check	94.0 dB(A)
Time Response	Fast
Engineering Units	dB(A) SPL re:20µPa

### Passby Measurements Details (Attended Monitoring)

L5

Sound Level Meter	Brüel & Kjær 2250
Serial Number	2506887
Measurement Dates	17/09/2009

#### Logger 5 Noise Monitoring Results – Ambient Levels

Date	L <sub>eq</sub> 15hr dB(A)	L <sub>eq</sub> 9hr dB(A)
Friday-11-Sep-09	55.2	53.6
Saturday-12-Sep-09	55.5	53.6
Sunday-13-Sep-09	54.3	53.3
Monday-14-Sep-09	54.0	52.4
Tuesday-15-Sep-09	57.3	51.9
Wednesday-16-Sep-09	56.1	51.7
Thursday-17-Sep-09	55.3	52.8
Friday-18-Sep-09	56.5	53.6
Saturday-19-Sep-09	56.8	53.8
Sunday-20-Sep-09	56.8	53.0
Monday-21-Sep-09	57.1	52.5
Tuesday-22-Sep-09	54.5	-
<b>Overall</b>	<b>55.9</b>	<b>53.0</b>

#### Logger 5 Noise Monitoring Results – Background Levels

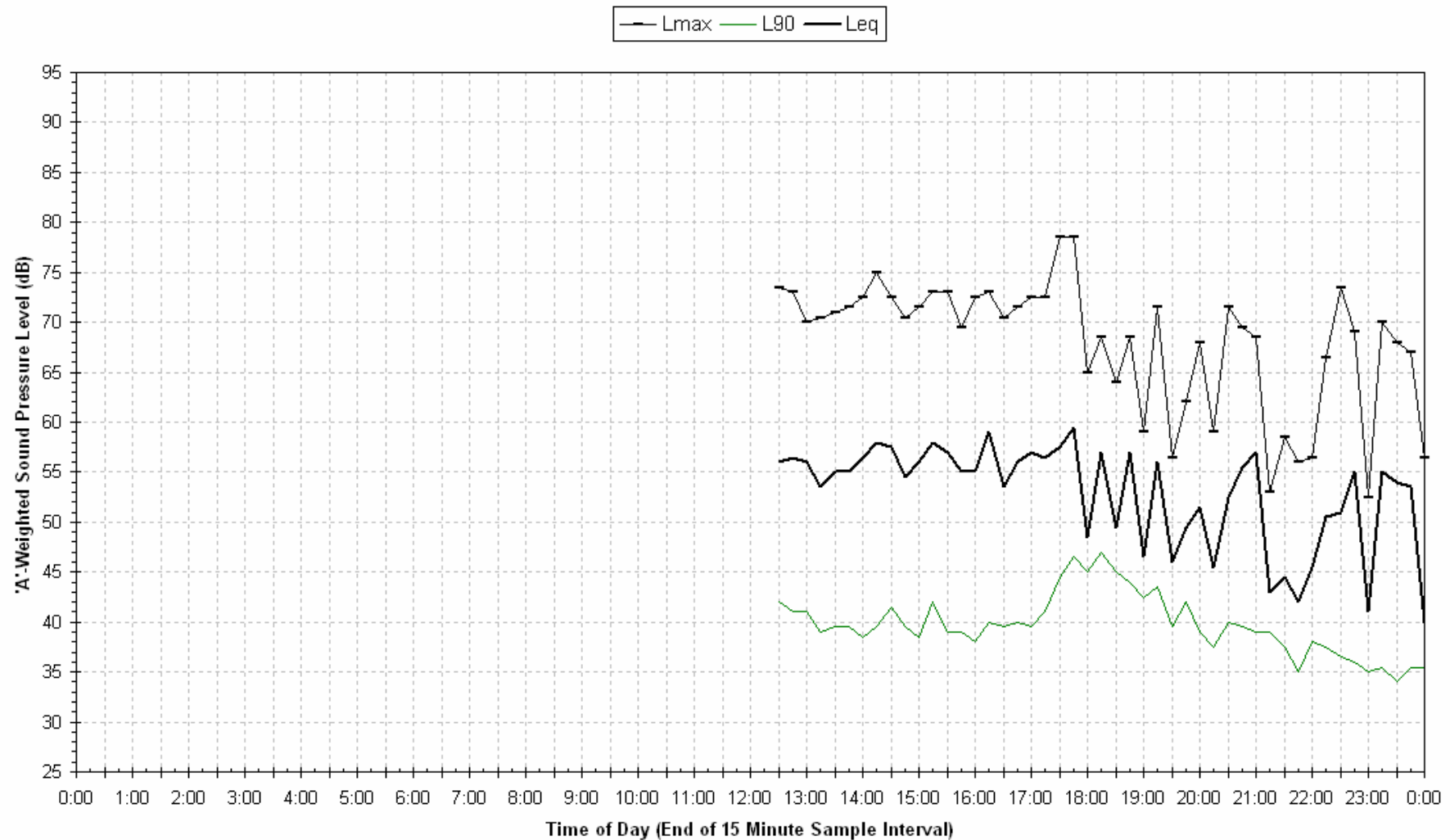
Date	Assessment Background Level L <sub>90</sub> dB(A)		
	Day	Evening	Night
Friday-11-Sep-09	-	37.5	31.3
Saturday-12-Sep-09	40.0	36.3	30.0
Sunday-13-Sep-09	40.0	35.3	31.3
Monday-14-Sep-09	40.5	32.0	29.3
Tuesday-15-Sep-09	37.6	34.5	31.0
Wednesday-16-Sep-09	36.7	35.0	30.3
Thursday-17-Sep-09	38.4	34.3	31.3
Friday-18-Sep-09	38.9	33.5	30.7
Saturday-19-Sep-09	37.2	36.0	33.0
Sunday-20-Sep-09	37.0	35.5	31.0
Monday-21-Sep-09	39.0	34.5	32.3
Tuesday-22-Sep-09	-	-	-
<b>RBL</b>	<b>38.7</b>	<b>35.0</b>	<b>31.0</b>



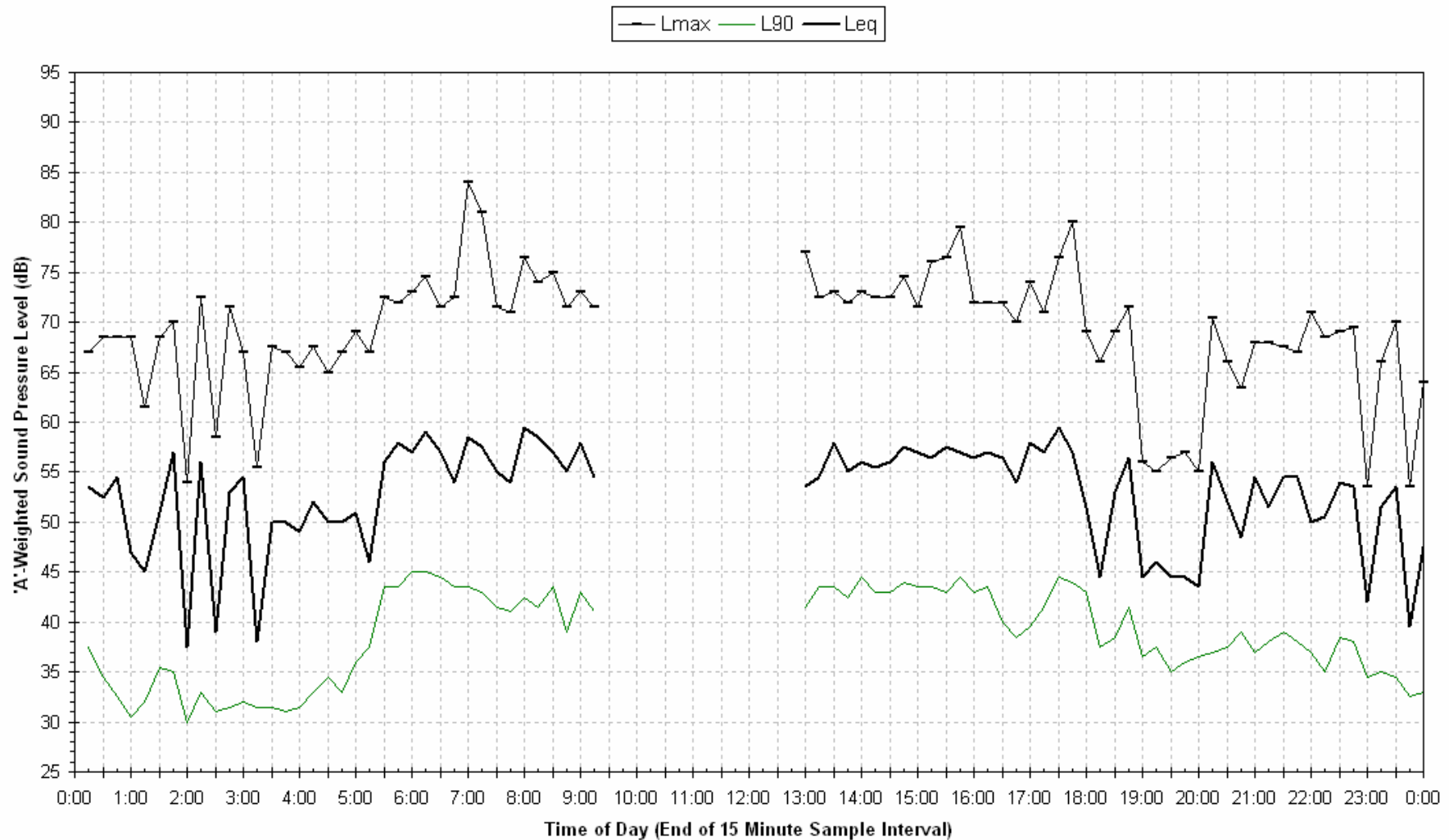
### Passby Measurement Results at Logger 5 Location dB(A)

Up/Down	Train Type	Duration	L <sub>eq</sub>	L <sub>max</sub>
Up	Coal	0:02:41	59.5	69.6
Up	Coal	0:01:42	57.9	68.3
Up	Coal	0:01:44	62.1	76.2
Up	Coal	0:02:37	61.6	71
<b>Up Average</b>		<b>0:02:11</b>	<b>60.6</b>	<b>71.3</b>
Down	Empty Coal	0:00:49	60.2	67.7
Down	Empty Coal	0:01:48	61.5	69.8
Down	Empty Coal	0:02:04	57.7	62.6
Down	Empty Coal	0:01:21	61.3	68.6
Down	Empty Coal	0:01:23	61.6	70.2
Down	Empty Coal	0:00:55	59.3	70.3
<b>Down Average</b>		<b>0:01:23</b>	<b>60.5</b>	<b>68.2</b>
Up	Passenger	0:00:12	52.6	59.0
Down	Passenger	0:00:13	56.9	62.7
<b>Passenger Average</b>		<b>0:00:12</b>	<b>55.3</b>	<b>60.9</b>

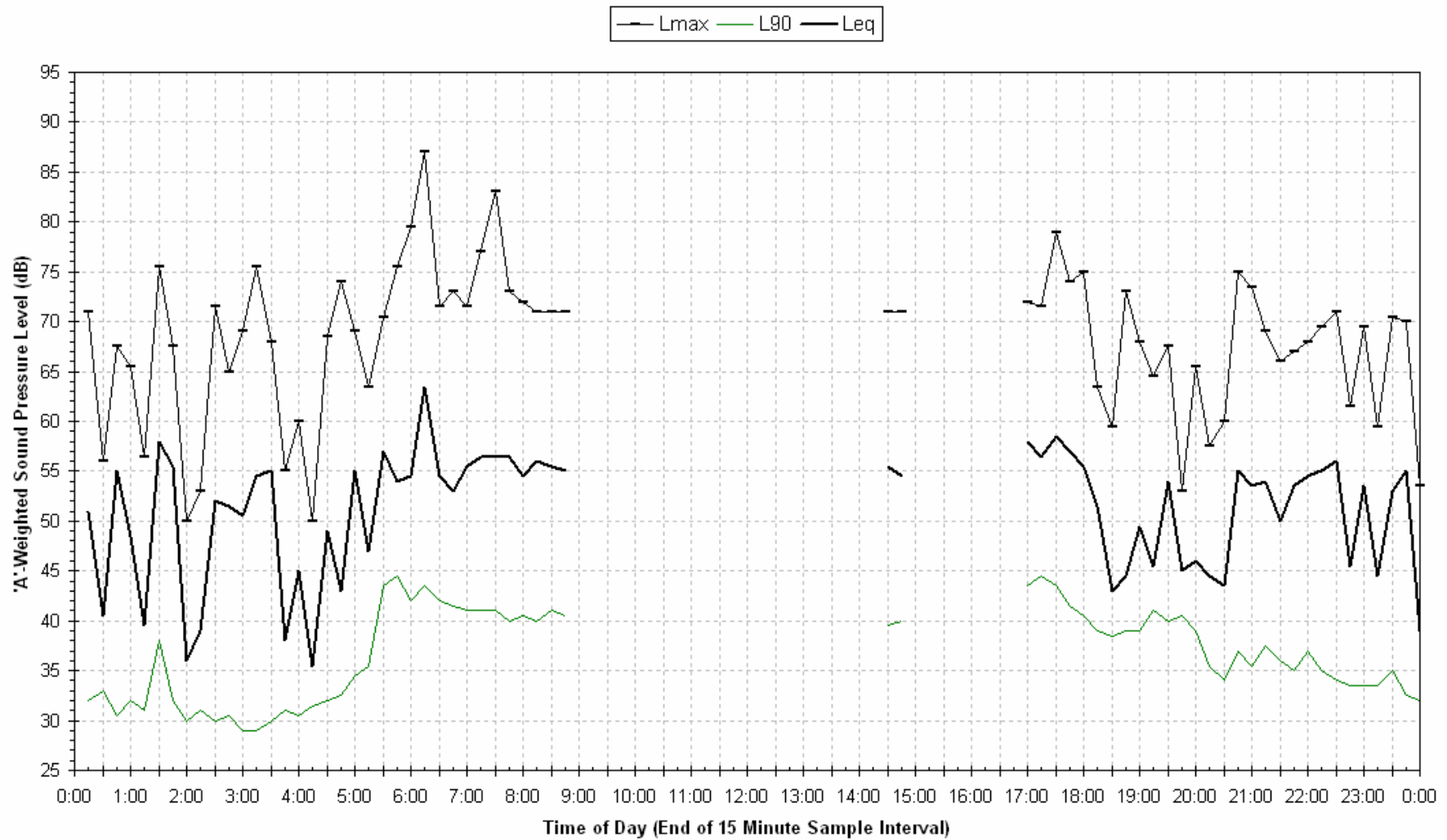
Statistical Ambient Noise Levels  
14 Railway St - Friday 11 September 2009



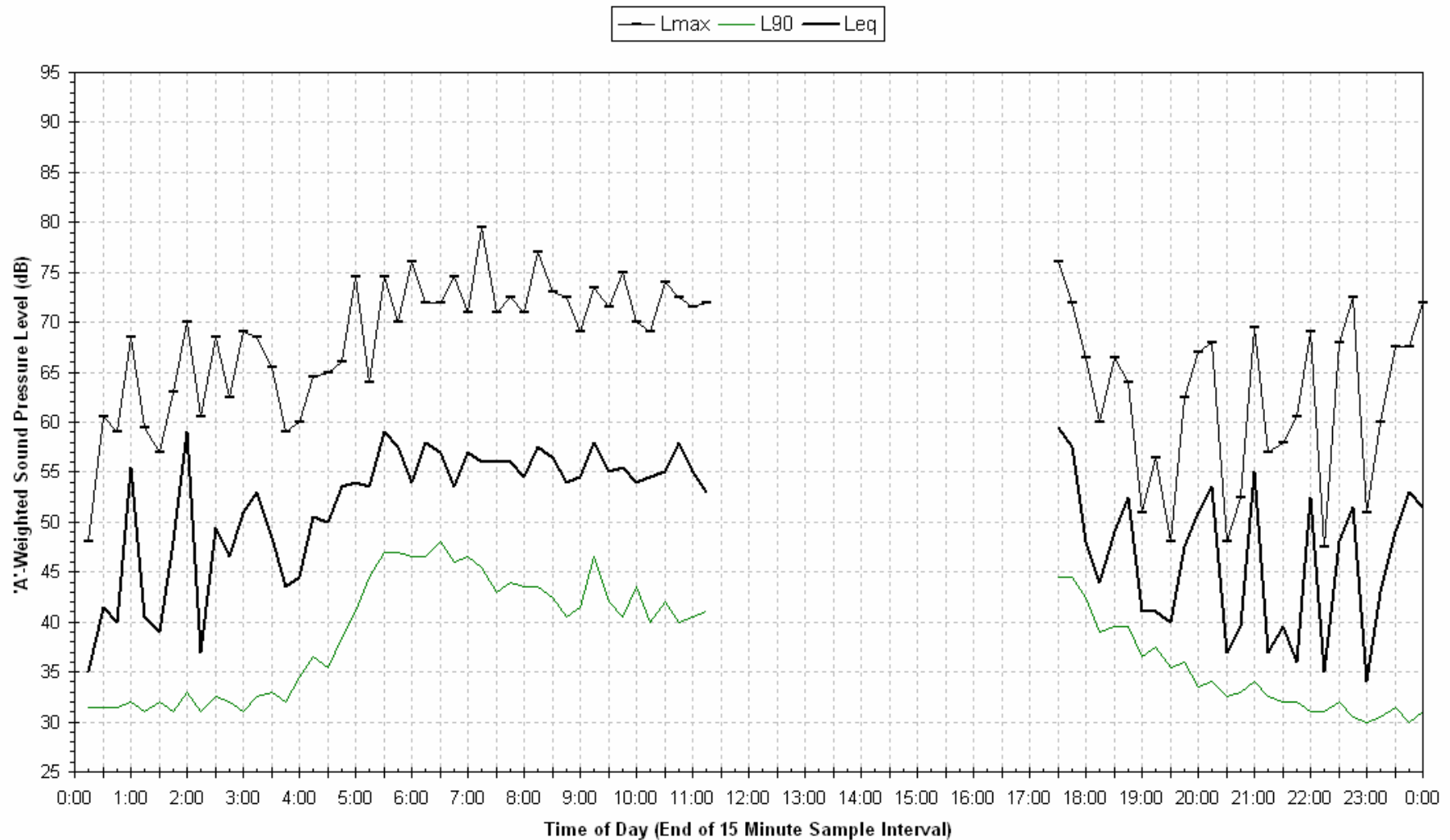
Statistical Ambient Noise Levels  
14 Railway St - Saturday 12 September 2009



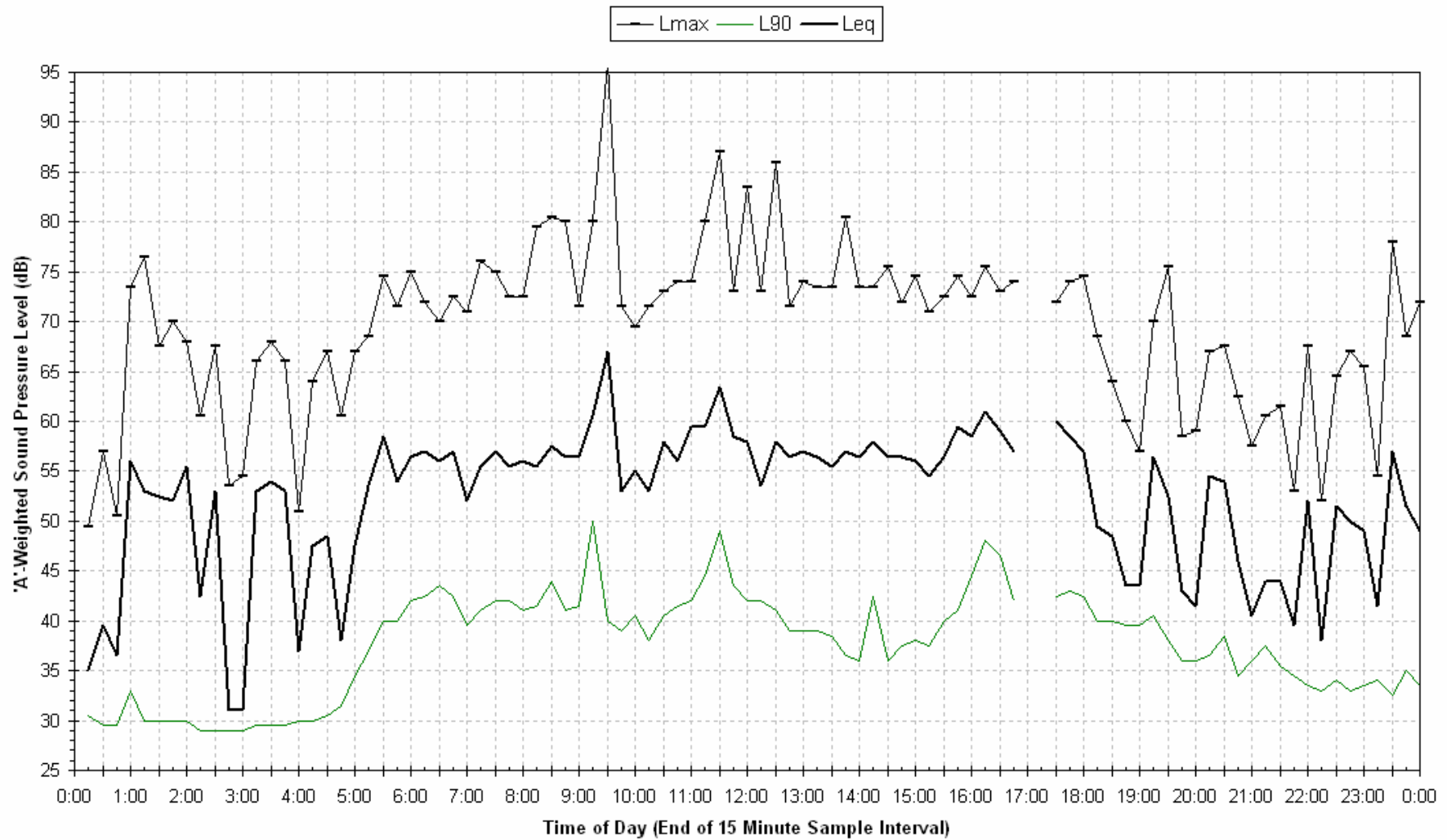
Statistical Ambient Noise Levels  
14 Railway St - Sunday 13 September 2009



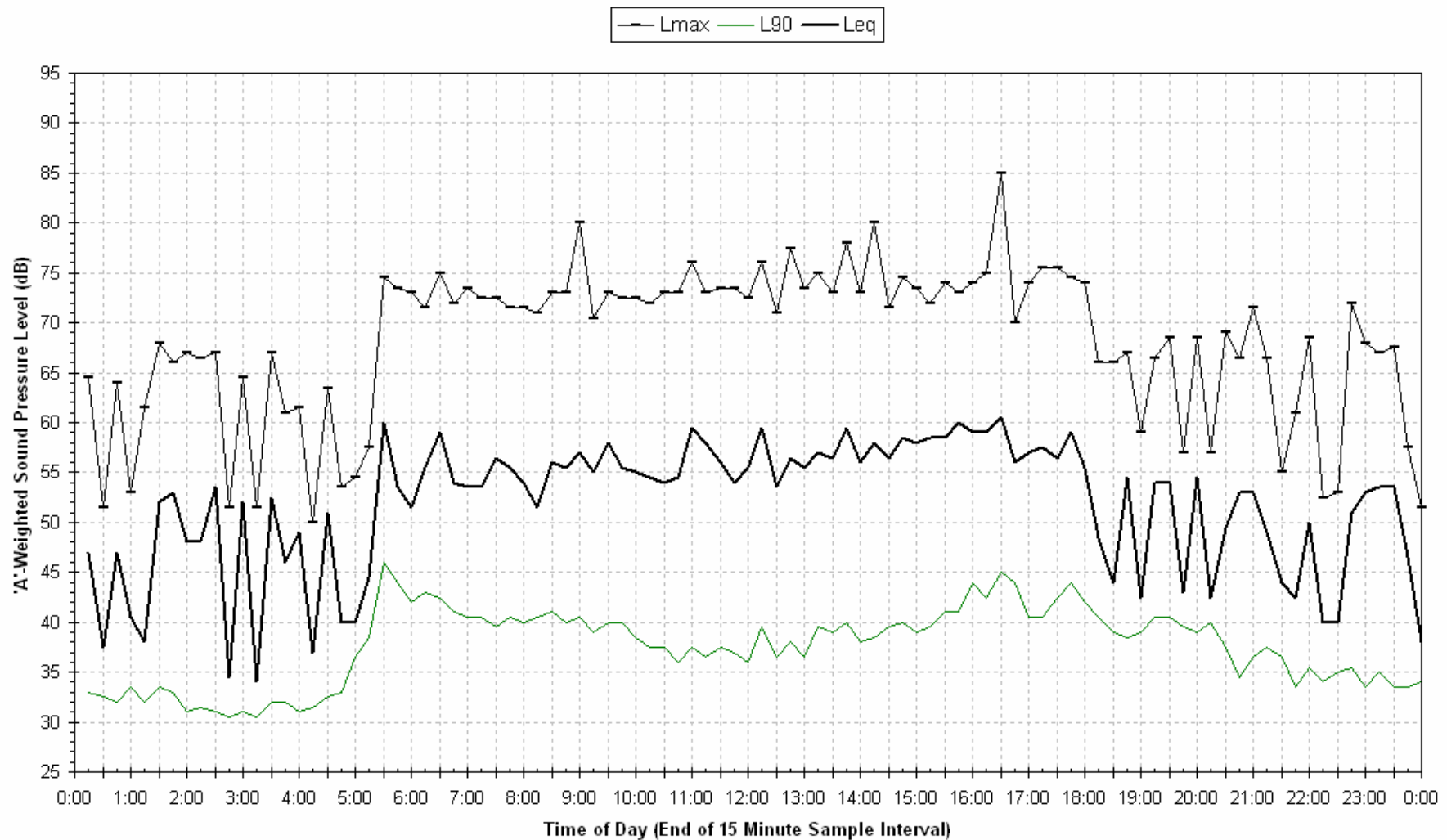
Statistical Ambient Noise Levels  
14 Railway St - Monday 14 September 2009



Statistical Ambient Noise Levels  
14 Railway St - Tuesday 15 September 2009

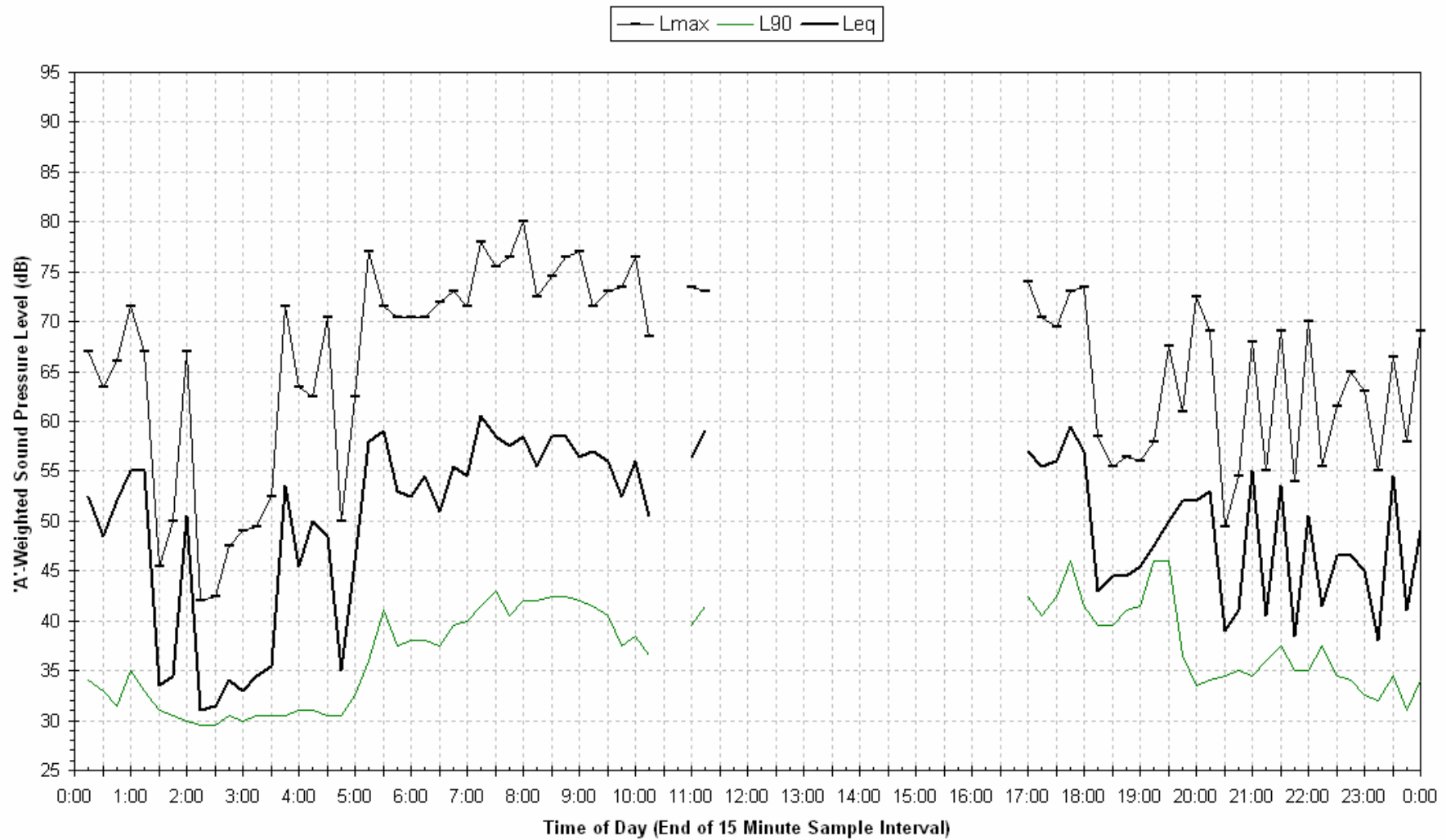


Statistical Ambient Noise Levels  
14 Railway St - Wednesday 16 September 2009

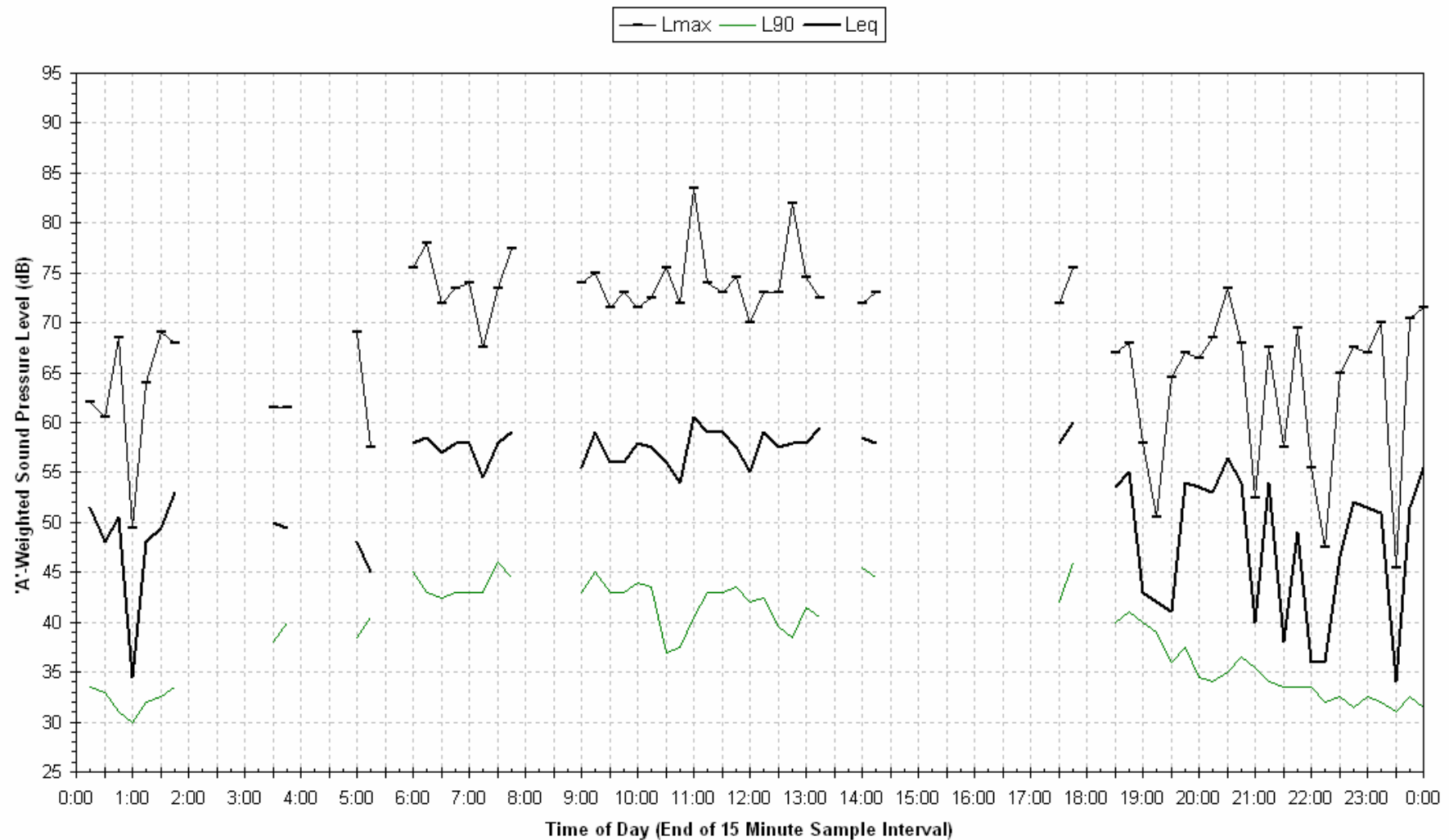




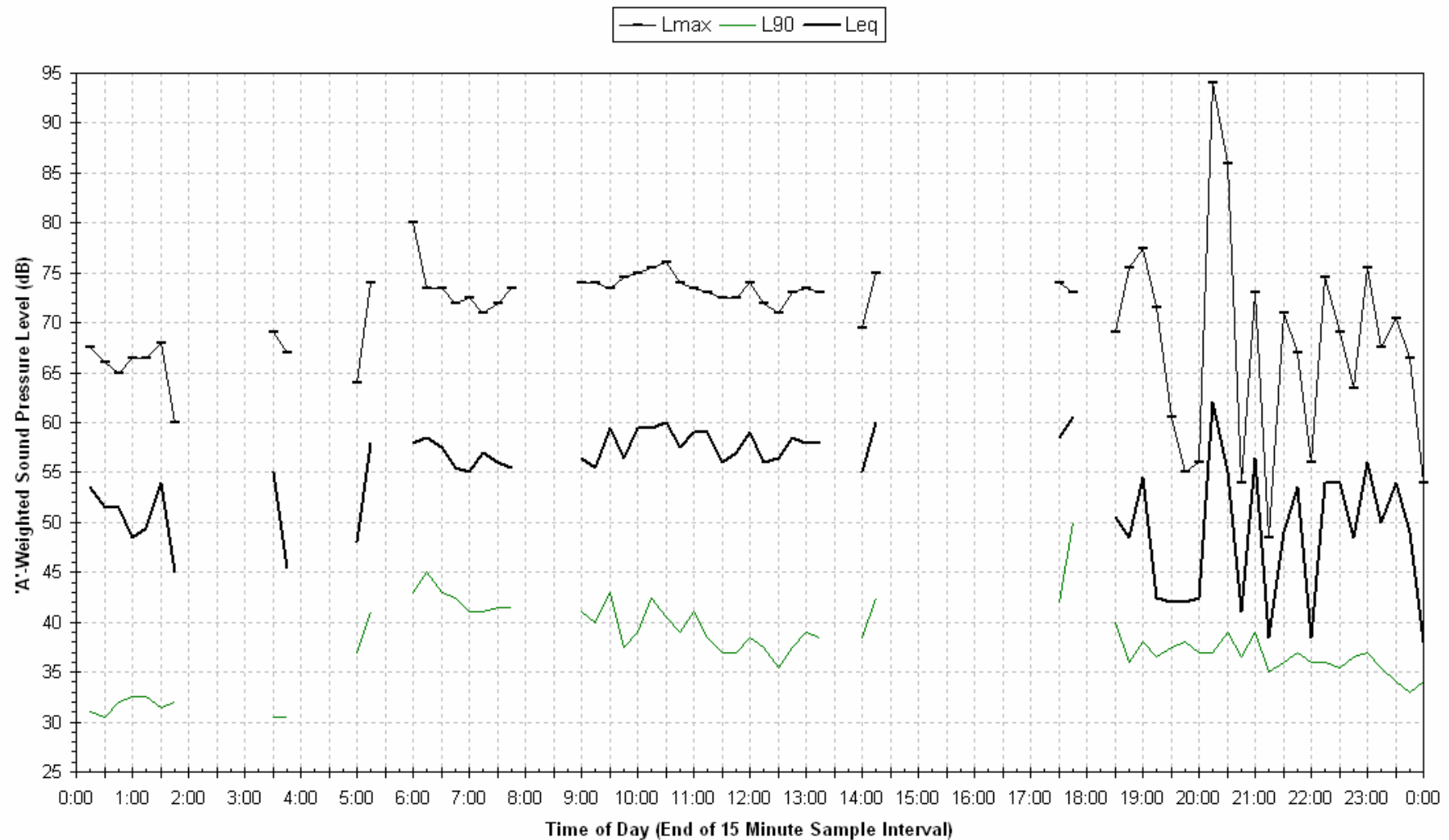
Statistical Ambient Noise Levels  
14 Railway St - Thursday 17 September 2009



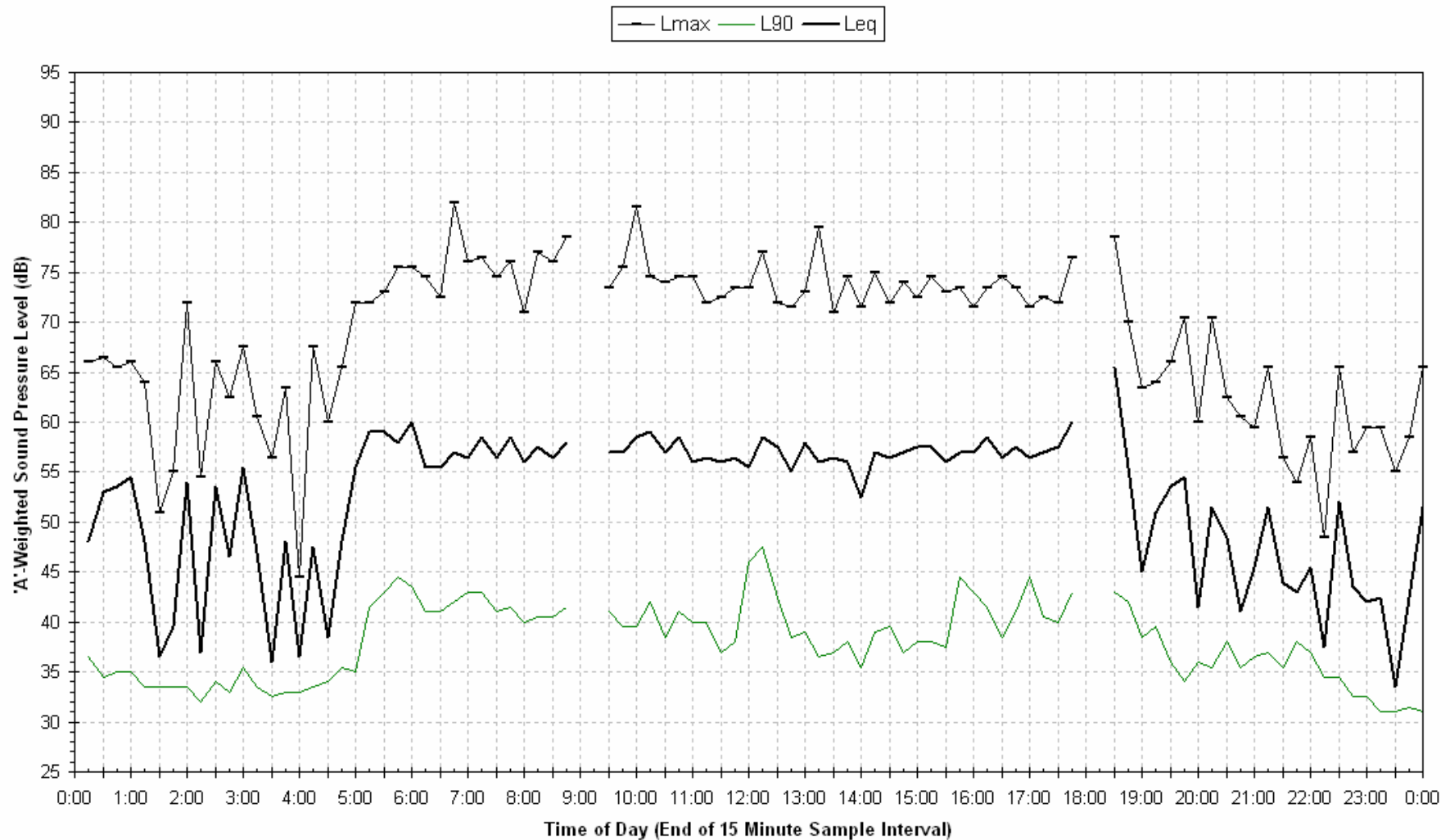
**Statistical Ambient Noise Levels  
14 Railway St - Friday 18 September 2009**



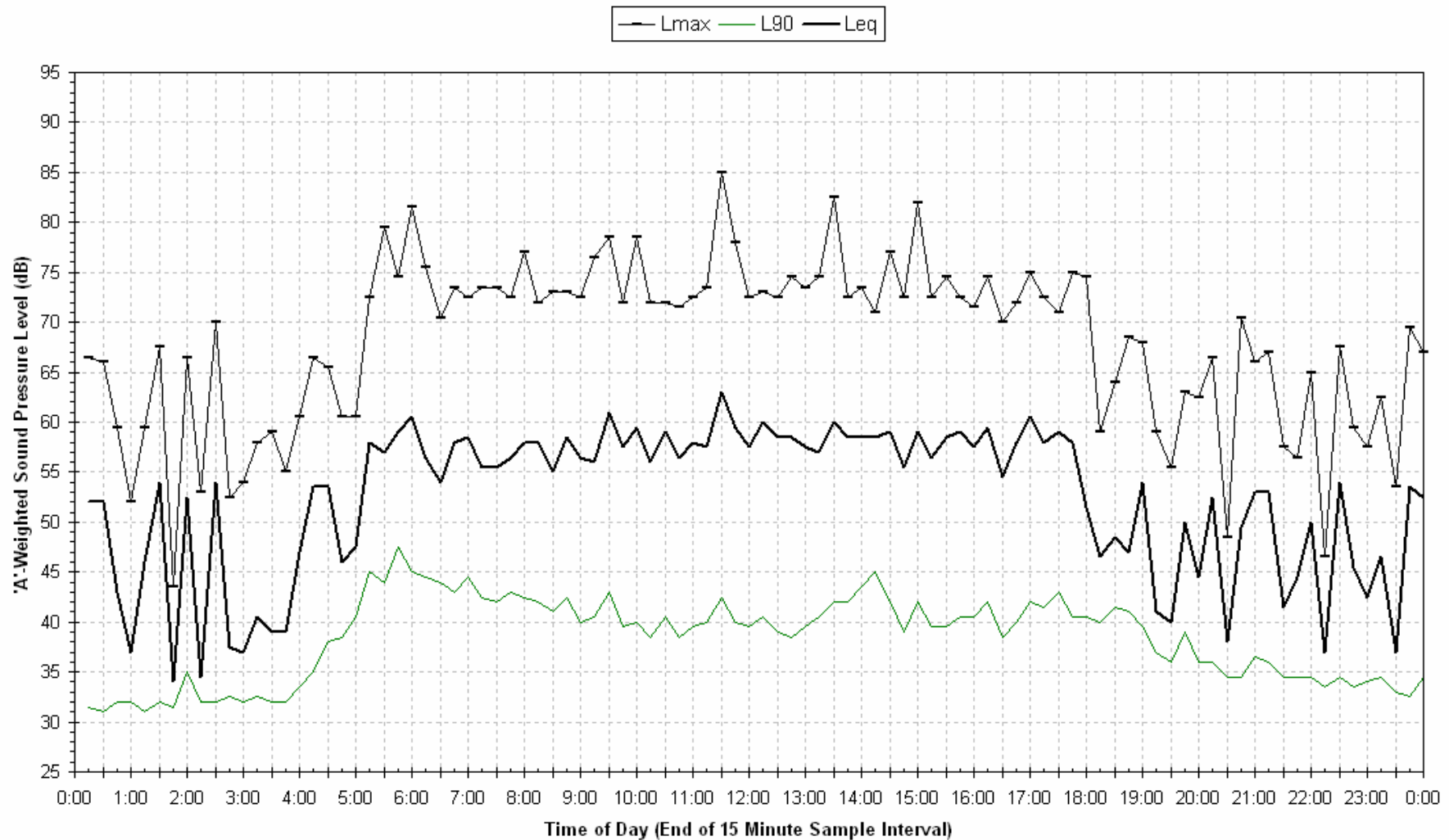
Statistical Ambient Noise Levels  
14 Railway St - Saturday 19 September 2009



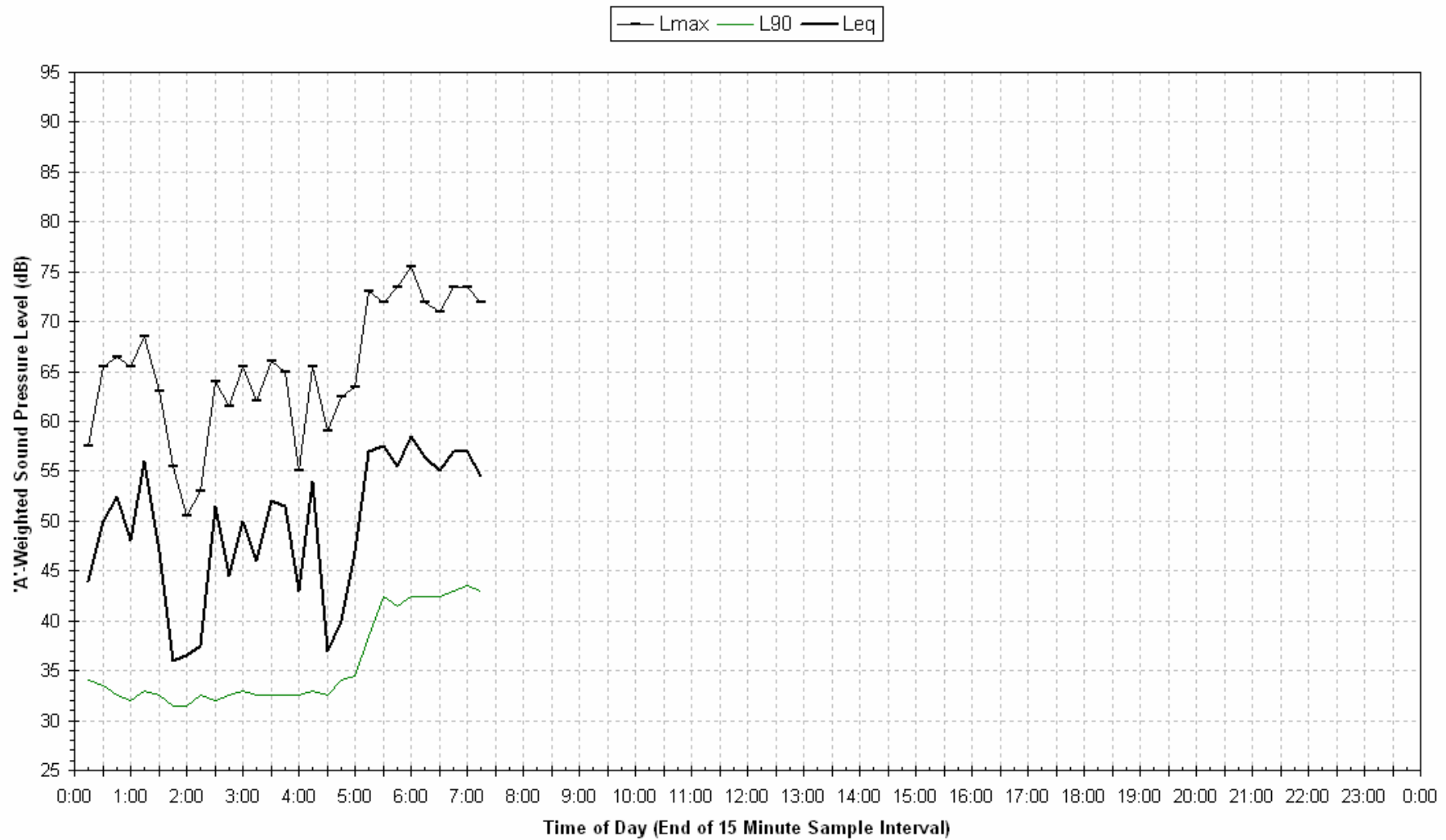
Statistical Ambient Noise Levels  
14 Railway St - Sunday 20 September 2009



Statistical Ambient Noise Levels  
14 Railway St - Monday 21 September 2009



Statistical Ambient Noise Levels  
14 Railway St - Tuesday 22 September 2009





## Logger 6 - Crittenden

Noise Monitor ID	Allocated No.	Receiver Lot/Address	Registered Proprietor	NCA	Distance to Near Track (m)
L6	MMU-028	12 Sec 4 DP 8123	Crittenden	U4	40

### Logger Location





## Site Photos – Logger 6



### Noise Logging Details (Unattended Monitoring)

L6

Logger Type	ARL EL 215
Serial Number	194662
Start of measurement period	09:40, 07/08/2009
End of measurement period	12:15, 17/08/2009
Frequency Weighting	A
Pre-Test Calibration Check	94.3 dB(A)
Post-Test Calibration Check	93.9 dB(A)
Time Response	Fast
Engineering Units	dB(A) SPL re:20µPa

### Passby Measurements Details (Attended Monitoring)

L6

Sound Level Meter	Brüel & Kjær 2250
Serial Number	2506887
Measurement Dates	07/08/09, 13/08/09, 17/08/09

#### Logger 6 Noise Monitoring Results – Ambient Levels

Date	L <sub>eq</sub> 15hr dB(A)	L <sub>eq</sub> 9hr dB(A)
Friday-7-Aug-09	54.6	53.4
Saturday-8-Aug-09	54.0	53.4
Sunday-9-Aug-09	54.8	52.6
Monday-10-Aug-09	52.5	52.0
Tuesday-11-Aug-09	47.5	43.1
Wednesday-12-Aug-09	54.8	42.2
Thursday-13-Aug-09	54.6	51.7
Friday-14-Aug-09	57.2	52.2
Saturday-15-Aug-09	52.9	53.7
Sunday-16-Aug-09	58.5	52.2
Monday-17-Aug-09	58.7	
<b>Overall</b>	<b>55.4</b>	<b>51.9</b>

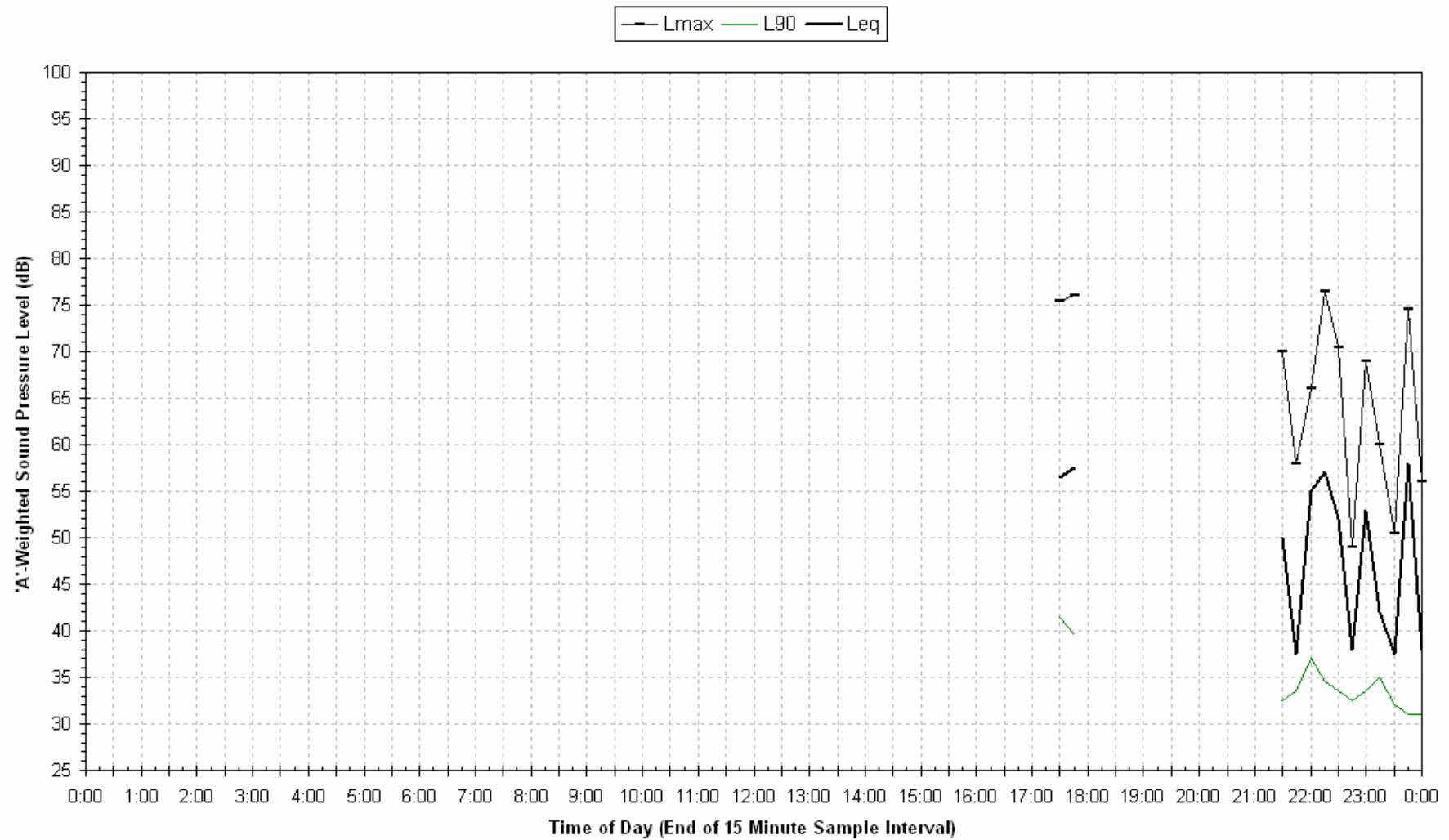
#### Logger 6 Noise Monitoring Results – Background Levels

Date	Assessment Background Level L <sub>90</sub> dB(A)		
	Day	Evening	Night
Friday-7-Aug-09	-	32.7	29.5
Saturday-8-Aug-09	32.5	36.3	29.0
Sunday-9-Aug-09	36.0	34.5	31.8
Monday-10-Aug-09	32.0	35.0	31.3
Tuesday-11-Aug-09	35.6	34.7	31.7
Wednesday-12-Aug-09	36.7	35.9	29.0
Thursday-13-Aug-09	36.4	34.8	31.0
Friday-14-Aug-09	34.2	38.8	31.0
Saturday-15-Aug-09	34.5	35.8	29.4
Sunday-16-Aug-09	35.7	35.3	29.5
Monday-17-Aug-09	-	-	-
<b>RBL</b>	<b>35.6</b>	<b>35.1</b>	<b>30.3</b>

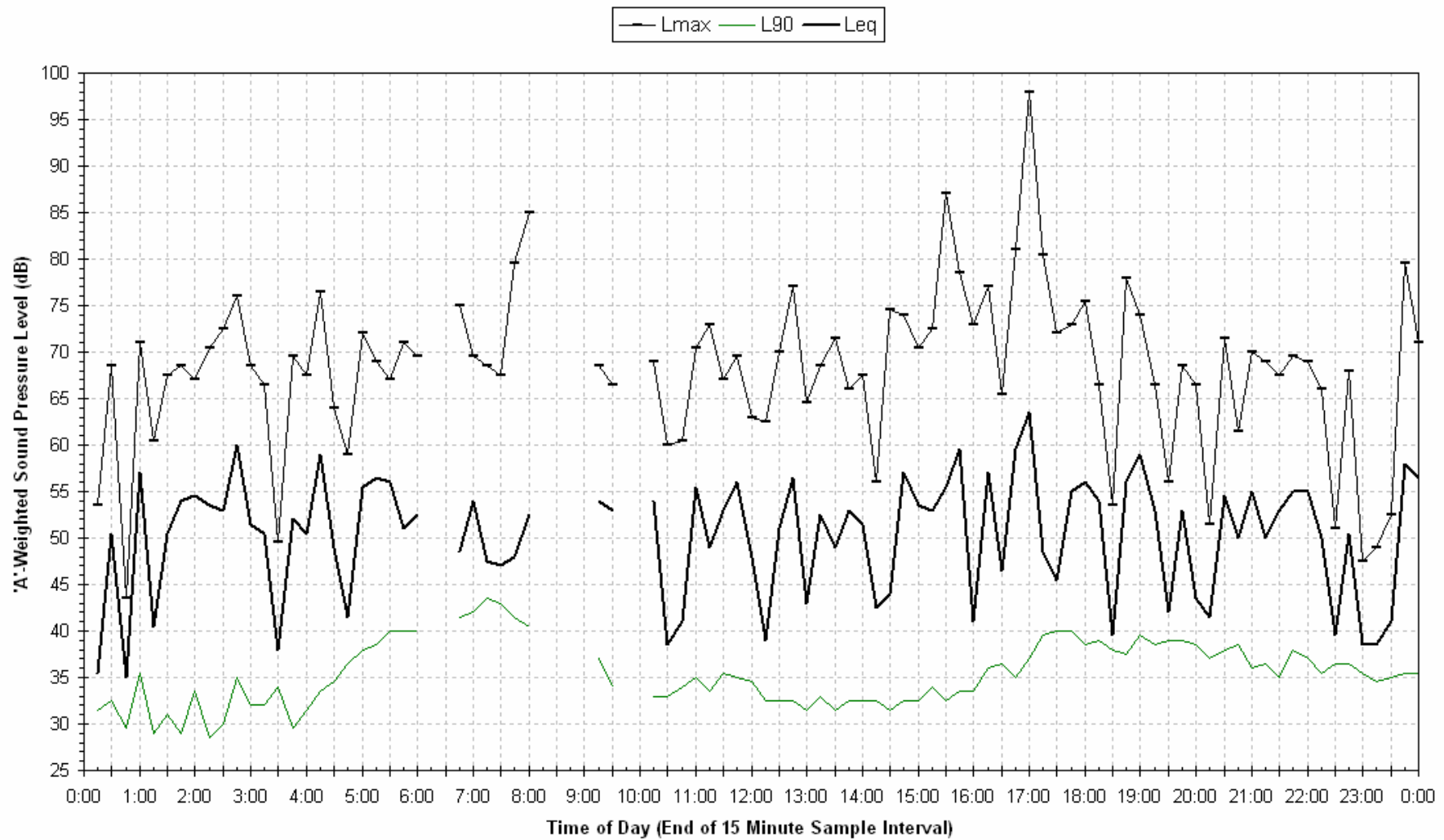
### Passby Measurement Results at Logger 6 Location dB(A)

Up/Down	Train Type	Duration	L <sub>eq</sub>	L <sub>max</sub>
Up	Coal	0:02:20	60.6	70.7
Up	Coal	0:02:09	65.1	78.7
<b>Up Average</b>		<b>0:02:15</b>	<b>63.4</b>	<b>74.7</b>
Down	Empty Coal	0:02:06	64.3	68.9
Down	Empty Coal	0:02:27	64.2	70.6
Down	Empty Coal	0:02:05	60.3	74.7
Down	Empty Coal	0:02:35	71.7	91
Down	Empty Coal	0:02:44	61.8	79.6
Down	Empty Coal	0:02:13	61.9	68.7
Down	Empty Coal	0:02:08	61.3	67.2
Down	Empty Coal	0:02:19	62.7	68.2
<b>Down Average</b>		<b>0:02:20</b>	<b>65.4</b>	<b>73.6</b>
Up	Passenger	0:00:19	52.5	59.7
Down	Passenger	0:00:39	52.0	60.4
<b>Passenger Average</b>		<b>0:00:29</b>	<b>52.3</b>	<b>60.1</b>

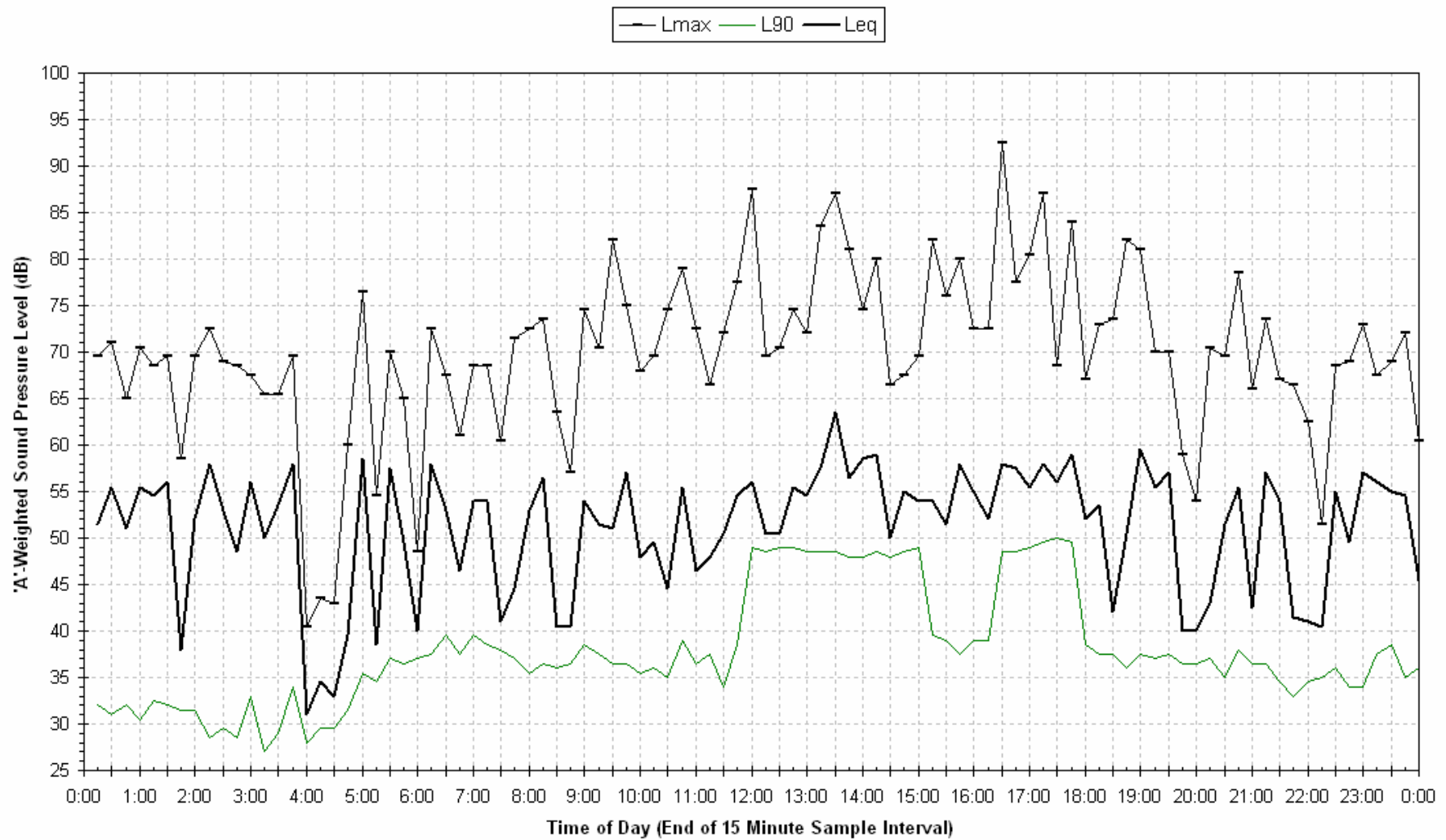
Statistical Ambient Noise Levels  
Crittenden - Friday 7 August 2009



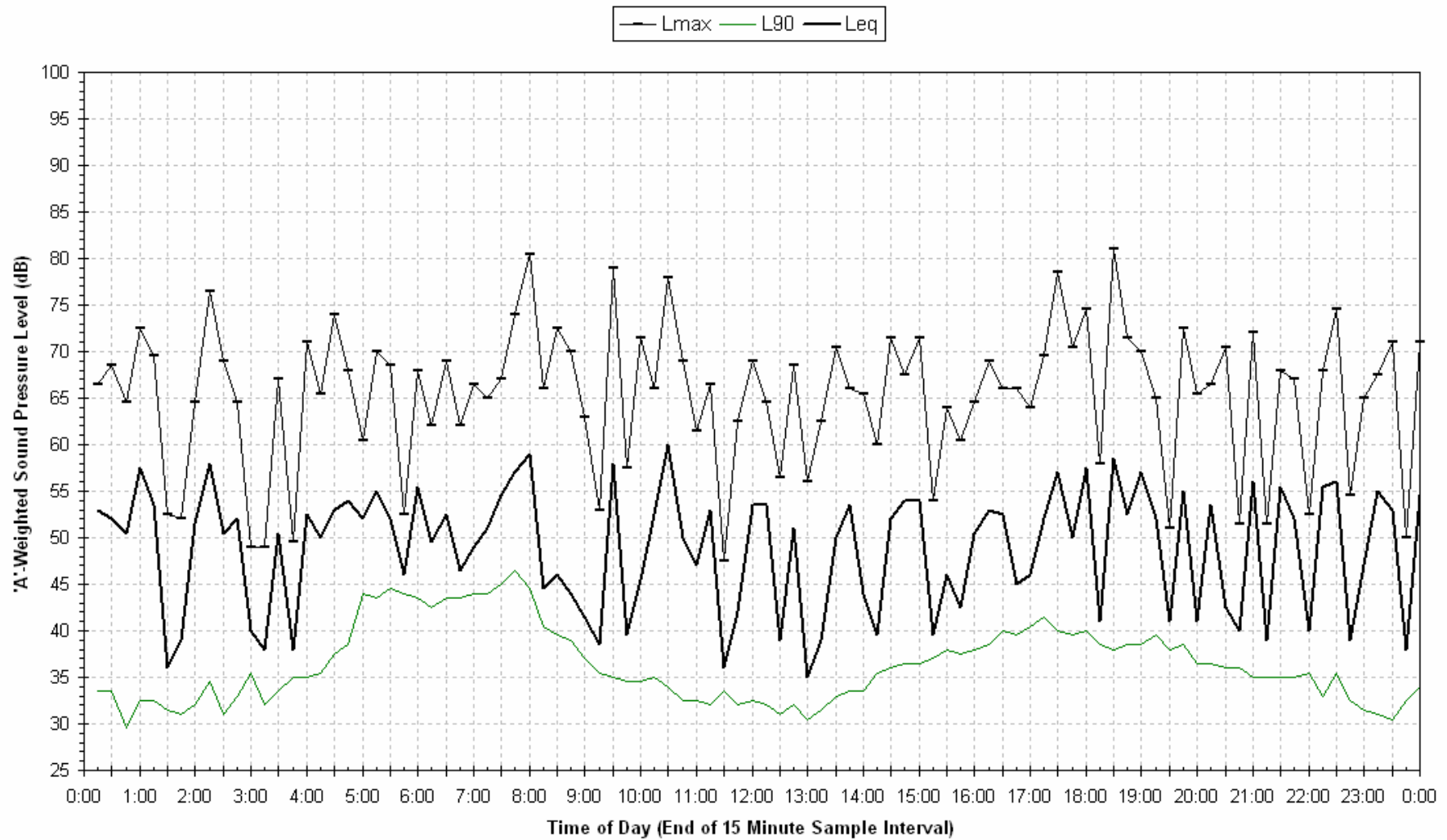
Statistical Ambient Noise Levels  
Crittenden - Saturday 8 August 2009



Statistical Ambient Noise Levels  
Crittenden - Sunday 9 August 2009



Statistical Ambient Noise Levels  
Crittenden - Monday 10 August 2009

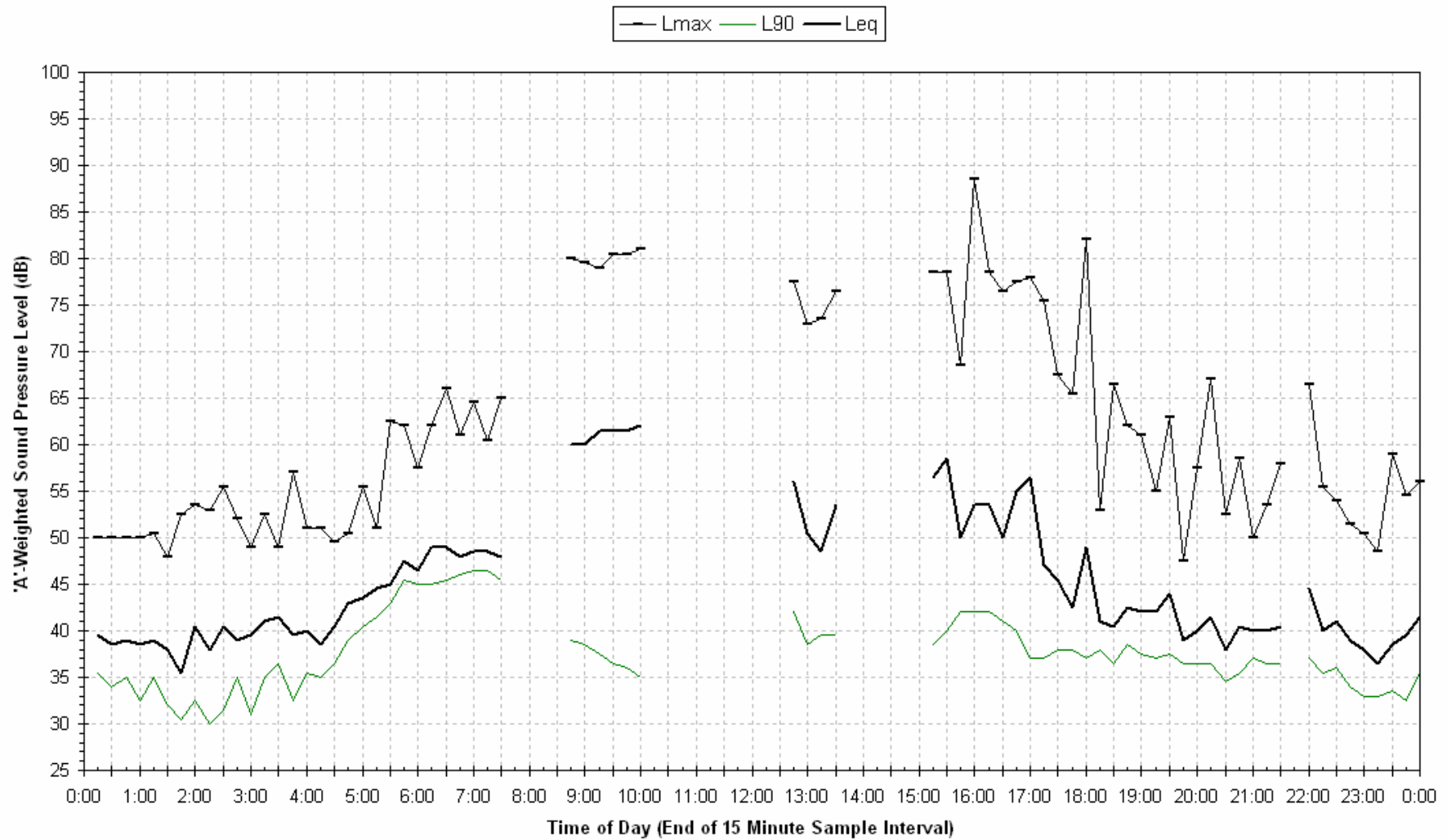




Statistical Ambient Noise Levels  
Crittenden - Tuesday 11 August 2009



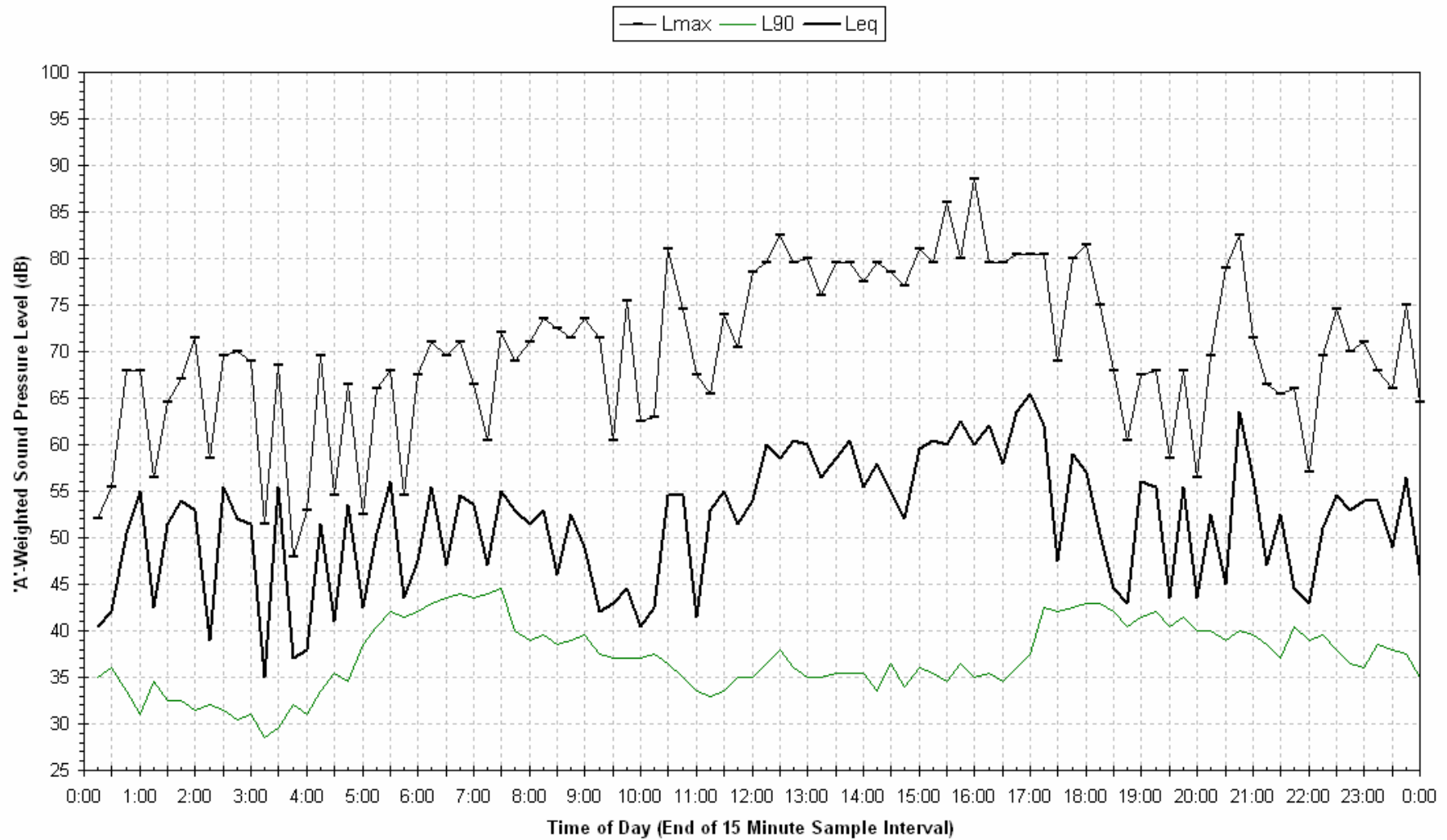
**Statistical Ambient Noise Levels  
Crittenden - Wednesday 12 August 2009**



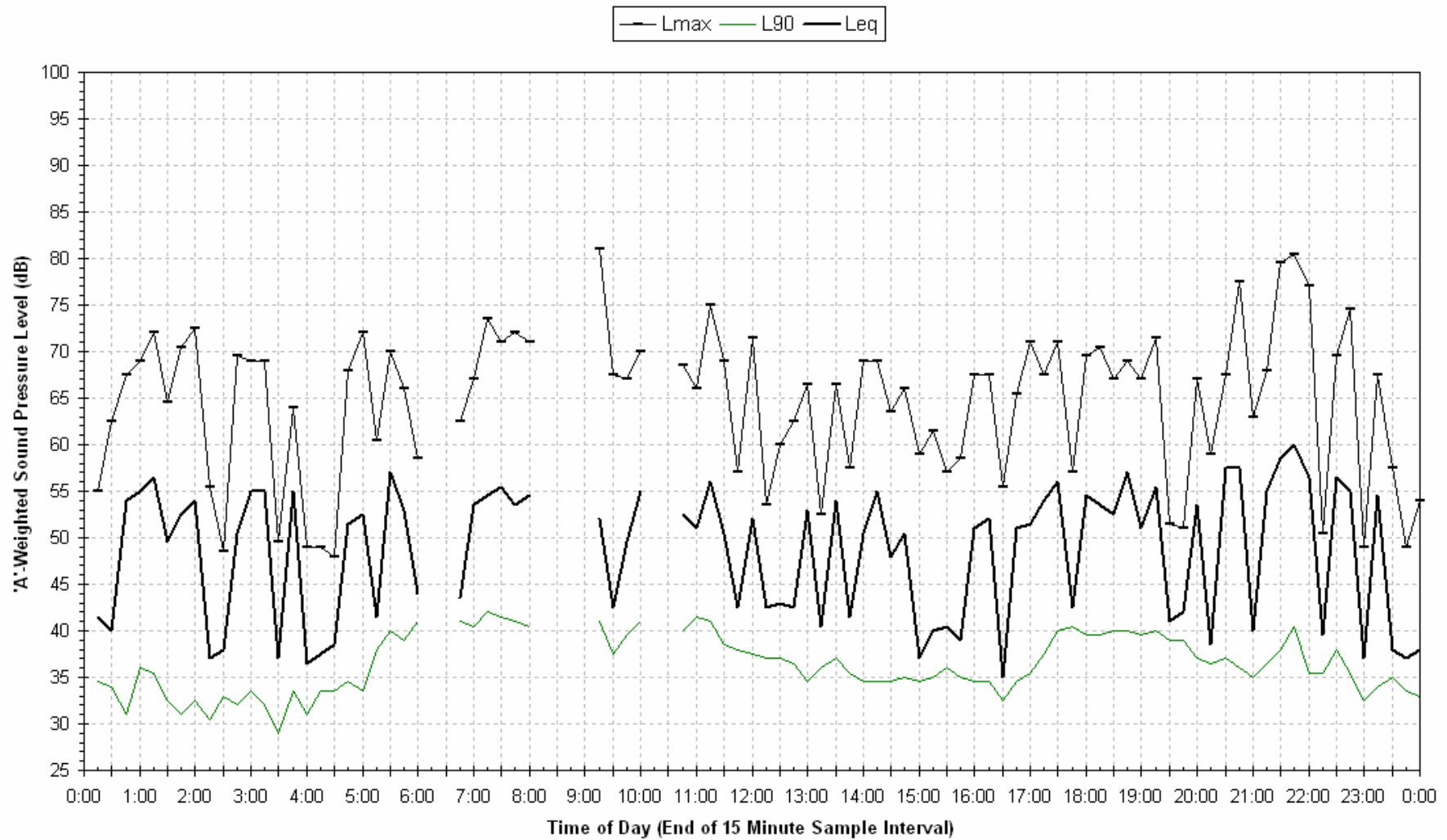
Statistical Ambient Noise Levels  
Crittenden - Thursday 13 August 2009



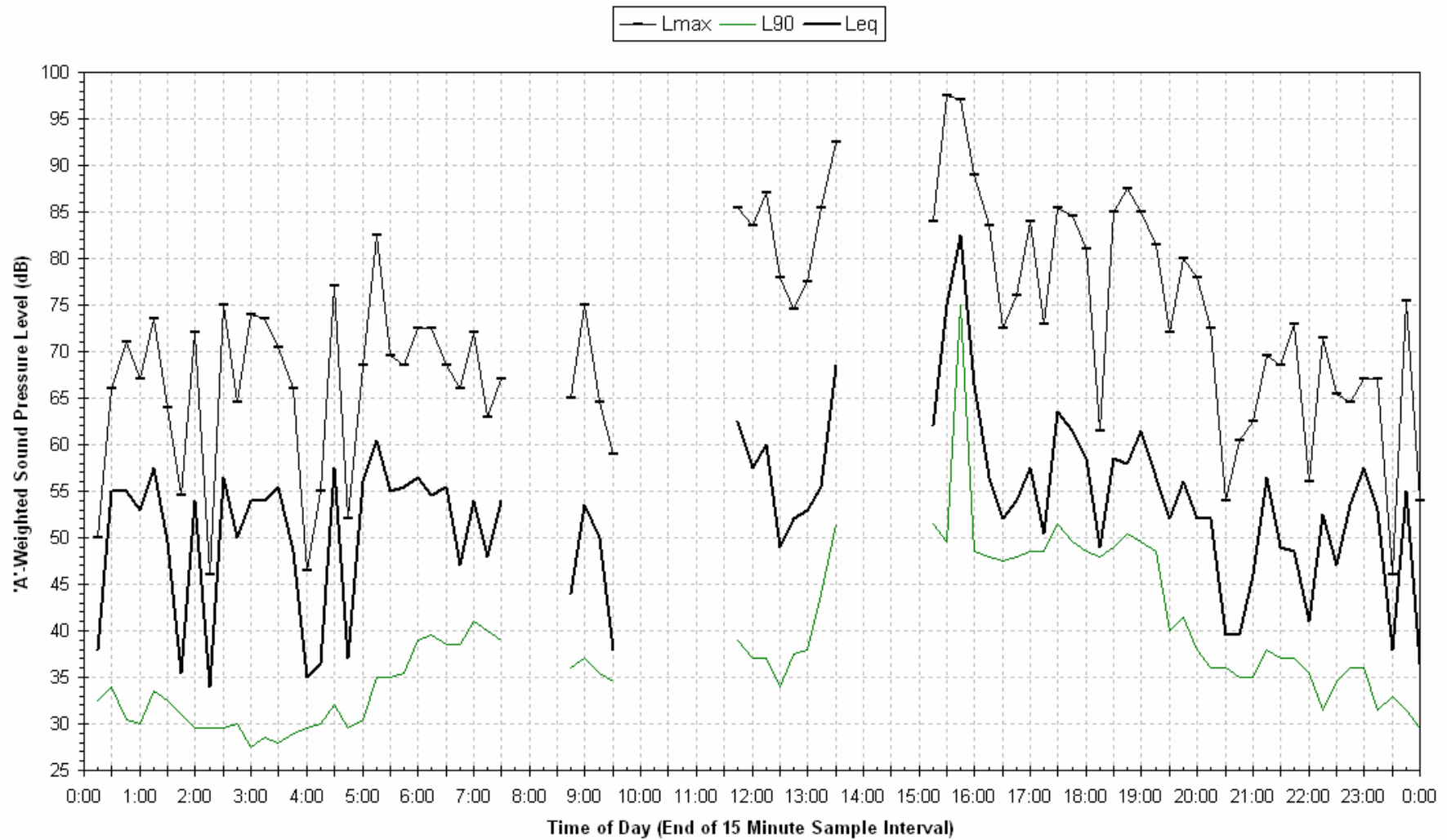
Statistical Ambient Noise Levels  
Crittenden - Friday 14 August 2009



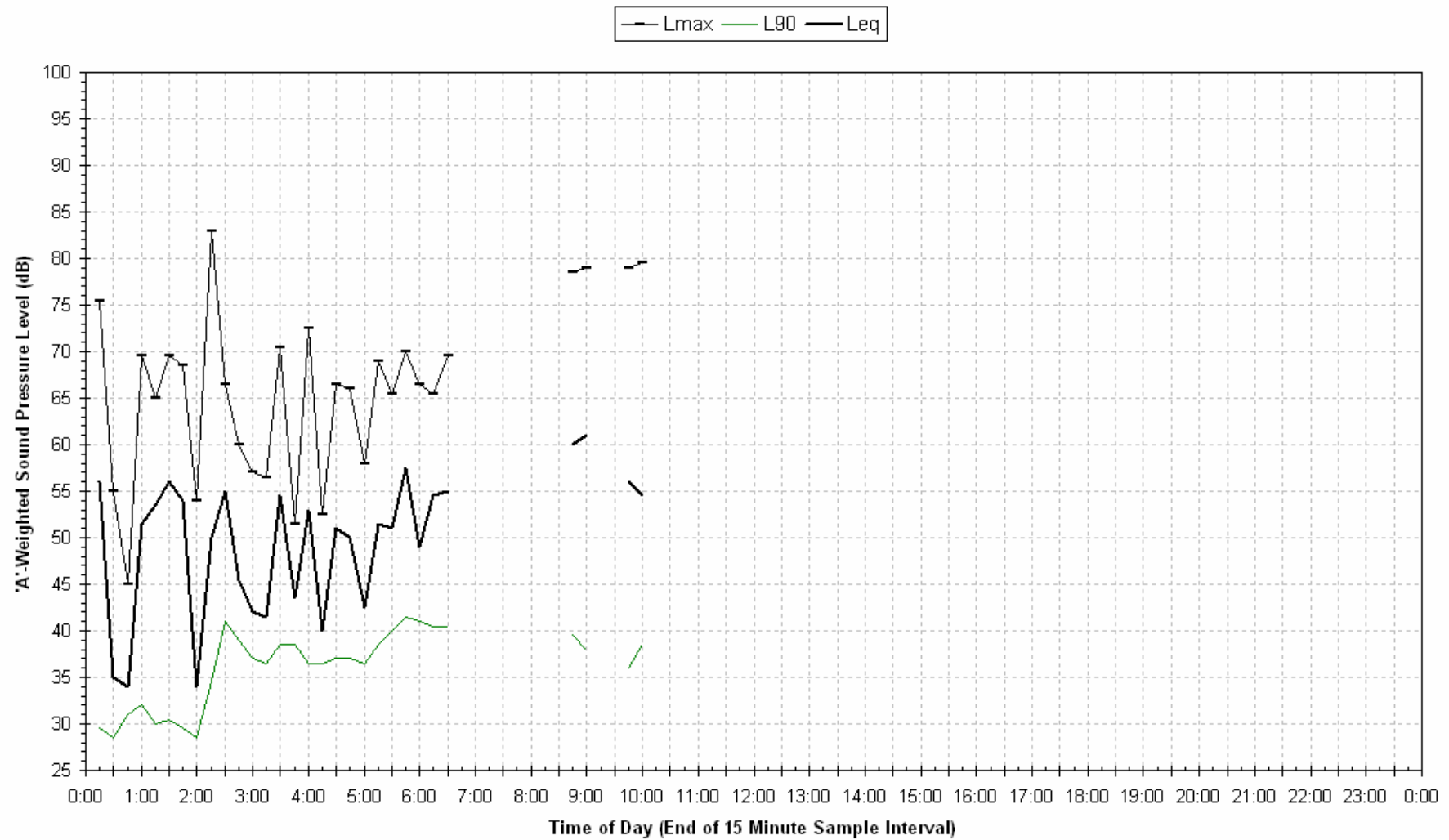
Statistical Ambient Noise Levels  
Crittenden - Saturday 15 August 2009



# Statistical Ambient Noise Levels Crittenden - Sunday 16 August 2009



Statistical Ambient Noise Levels  
Crittenden - Monday 17 August 2009







## Logger 7 – Greta Land Company (2A Nelson Street Greta)

Noise Monitor ID	Allocated No.	Receiver Lot/Address	Registered Proprietor	NCA	Distance to Near Track (m)
L7	MMU-039	20 DP 706407	Greta Land Company Pty Ltd	U5	70

### Logger Location



## Site Photos – Logger 7



### Noise Logging Details (Unattended Monitoring)

L7

Logger Type	ARL EL 215
Serial Number	194539
Start of measurement period	09:50, 31/07/2009
End of measurement period	13:50, 07/08/2009
Frequency Weighting	A
Pre-Test Calibration Check	94.0 dB(A)
Post-Test Calibration Check	93.8 dB(A)
Time Response	Fast
Engineering Units	dB(A) SPL re:20µPa

### Passby Measurements Details (Attended Monitoring)

L7

Sound Level Meter	Brüel & Kjær 2250
Serial Number	2506887
Measurement Dates	31/07/2009, 05/08/2009

#### Logger 7 Noise Monitoring Results – Ambient Levels

Date	L <sub>eq</sub> 15hr dB(A)	L <sub>eq</sub> 9hr dB(A)
Friday-31-Jul-09	58.8	60.4
Saturday-1-Aug-09	58.5	60.0
Sunday-2-Aug-09	58.8	59.0
Monday-3-Aug-09	58.3	60.1
Tuesday-4-Aug-09	59.0	61.0
Wednesday-5-Aug-09	59.3	58.7
Thursday-6-Aug-09	60.1	59.8
Friday-7-Aug-09	59.0	
<b>Overall</b>	<b>59.0</b>	<b>59.9</b>

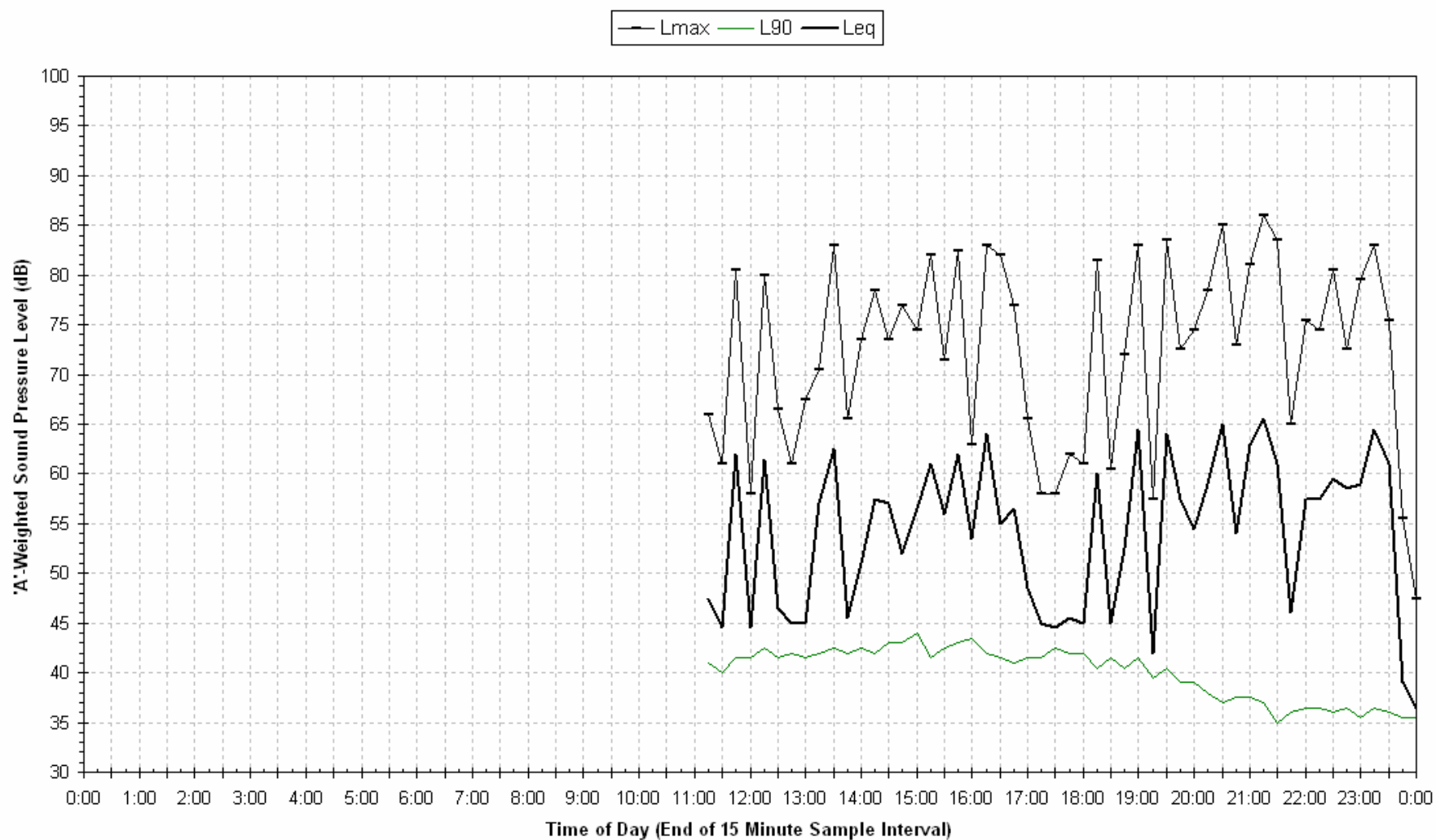
#### Logger 7 Noise Monitoring Results – Background Levels

Date	Assessment Background Level L <sub>90</sub> dB(A)		
	Day	Evening	Night
Friday-31-Jul-09	-	36.3	35.0
Saturday-1-Aug-09	38.0	36.5	33.5
Sunday-2-Aug-09	36.0	39.8	35.5
Monday-3-Aug-09	39.7	38.0	34.8
Tuesday-4-Aug-09	38.5	38.8	34.5
Wednesday-5-Aug-09	37.0	41.0	35.8
Thursday-6-Aug-09	36.2	42.5	34.5
Friday-7-Aug-09	-	-	-
<b>RBL</b>	<b>37.5</b>	<b>38.8</b>	<b>34.8</b>

**Passby Measurement Results at Logger 7 Location dB(A)**

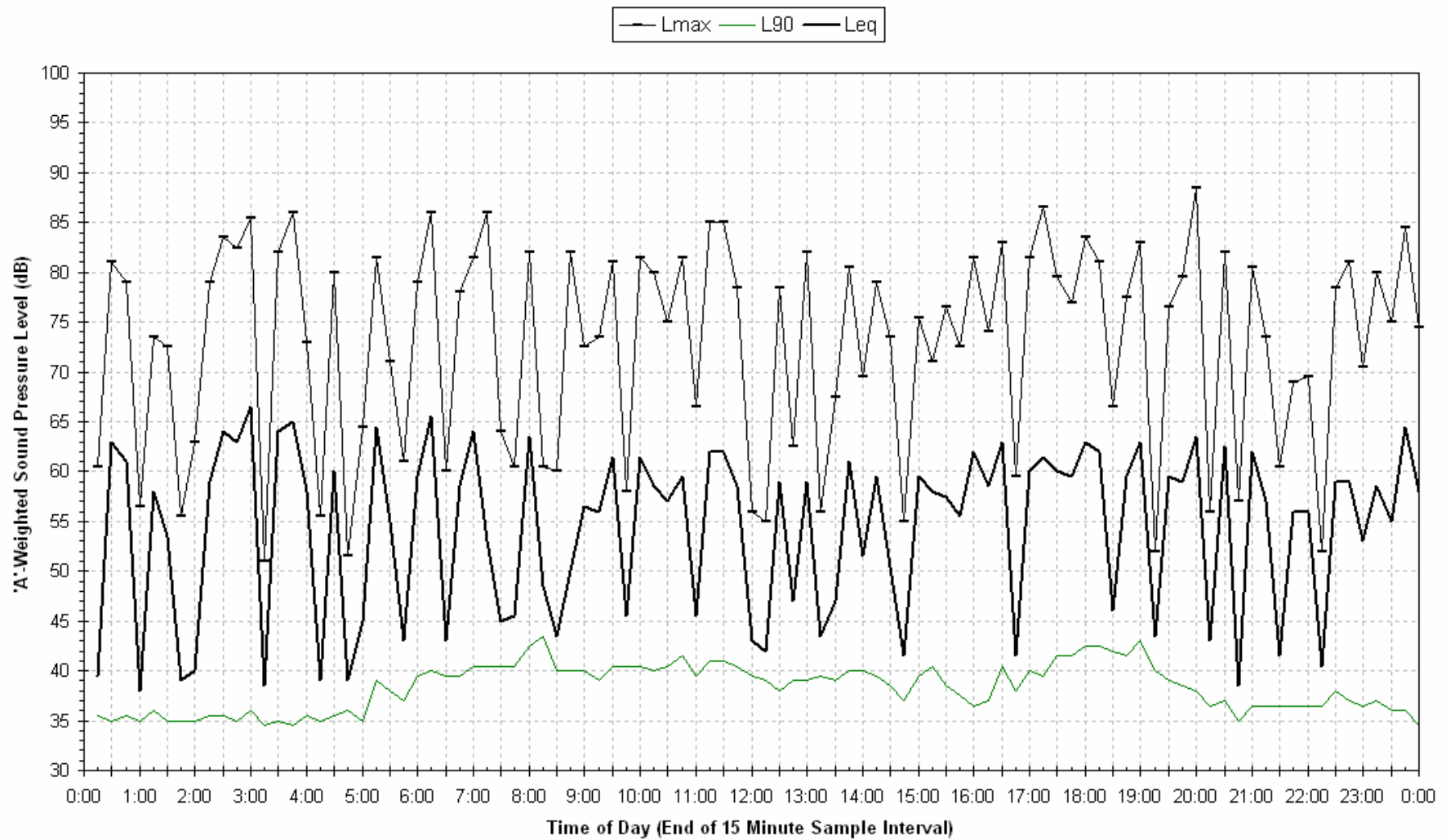
Up/Down	Train Type	Duration	L <sub>eq</sub>	L <sub>max</sub>
Up	Coal	0:02:57	72	85
Up	Coal	0:01:46	66.2	76.3
Up	Coal	0:02:01	70.9	83.2
Up	Coal	0:03:11	65.9	80.5
Up	Coal	0:02:57	72	85
<b>Up Average</b>		<b>0:02:29</b>	<b>69.6</b>	<b>81.3</b>
Down	Empty Coal	0:01:10	60.9	66.9
Down	Empty Coal	0:02:05	64.9	70.6
Down	Empty Coal	0:02:11	65.4	73.9
Down	Empty Coal	0:01:11	62.9	69.5
Down	Freight	0:01:37	60.9	66.9
<b>Down Average</b>		<b>0:01:39</b>	<b>63.4</b>	<b>69.6</b>
Up	Passenger	0:01:40	54.7	66.1
<b>Passenger Average</b>		<b>0:01:40</b>	<b>54.7</b>	<b>66.1</b>

Statistical Ambient Noise Levels  
2A Nelson Street - Friday 31 July 2009



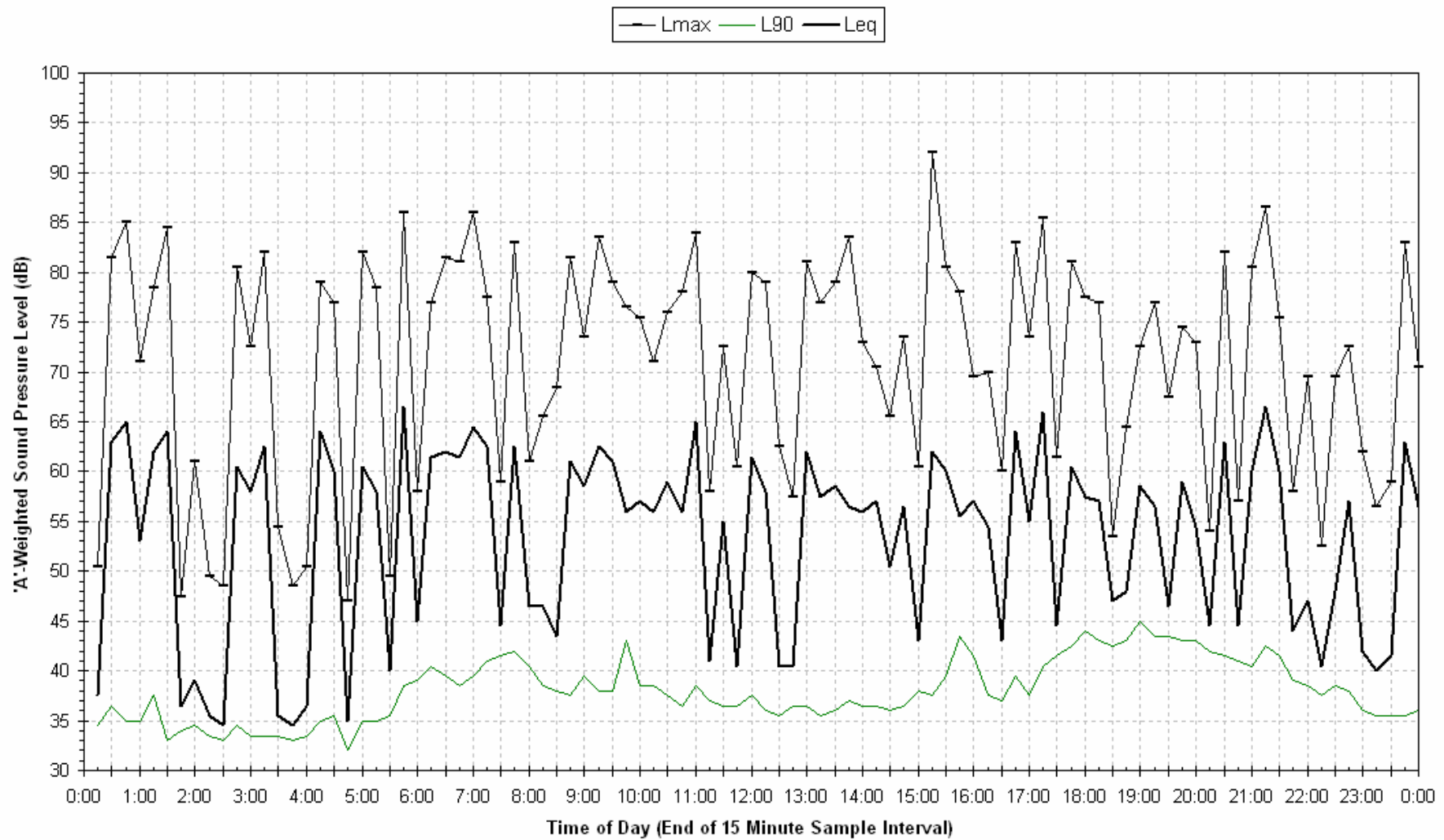


Statistical Ambient Noise Levels  
2A Nelson Street - Saturday 1 August 2009

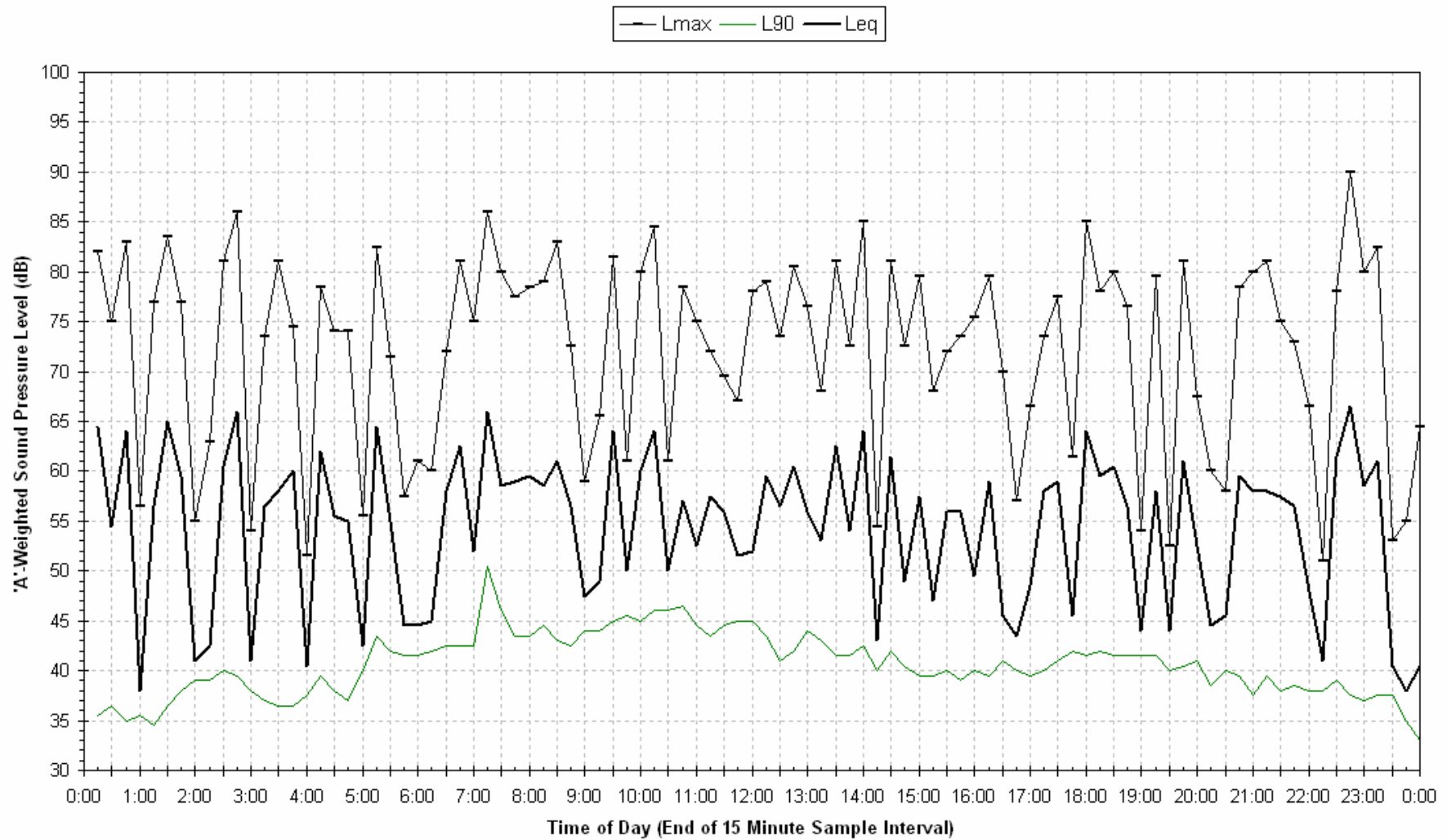




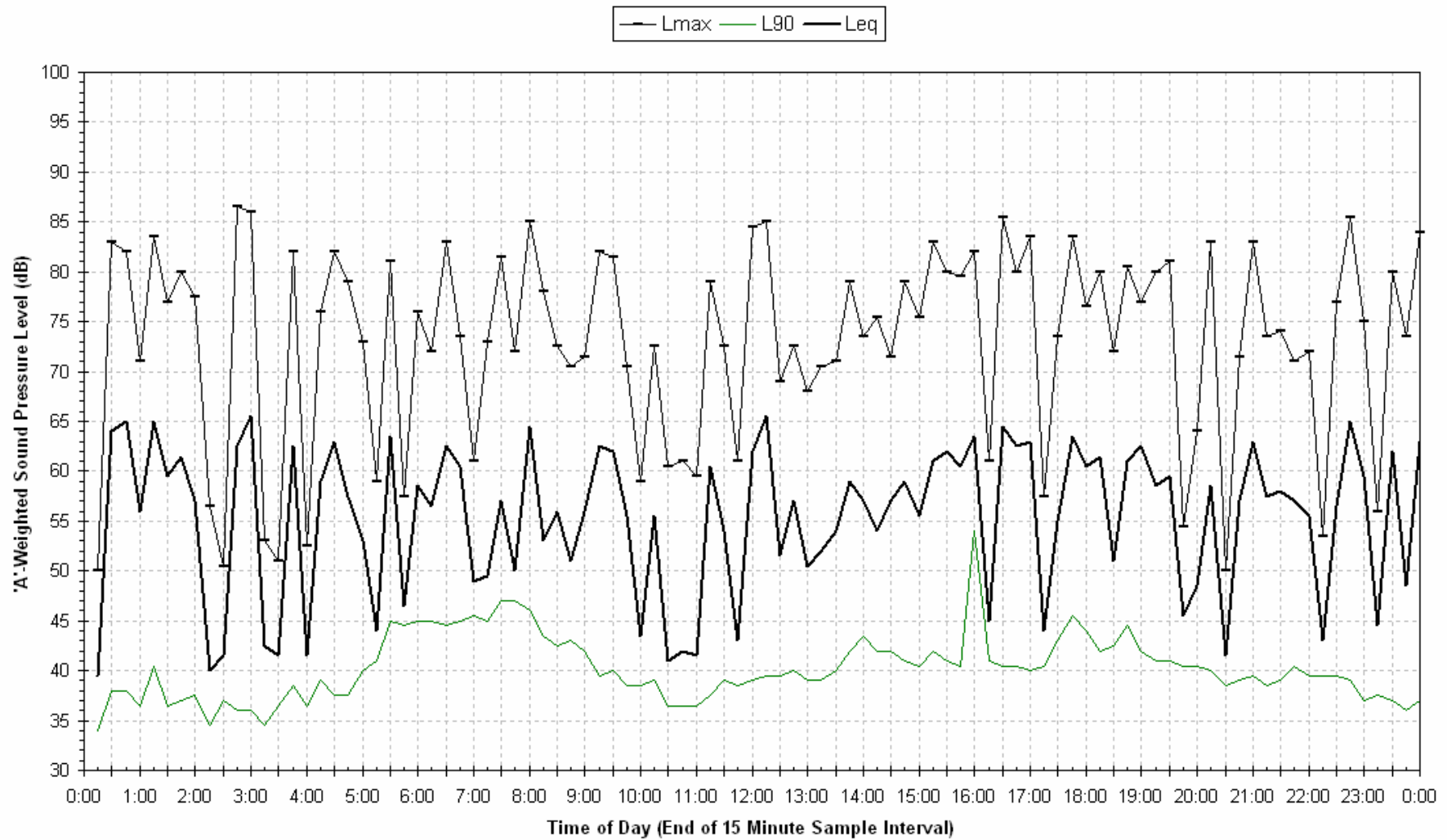
Statistical Ambient Noise Levels  
2A Nelson Street - Sunday 2 August 2009



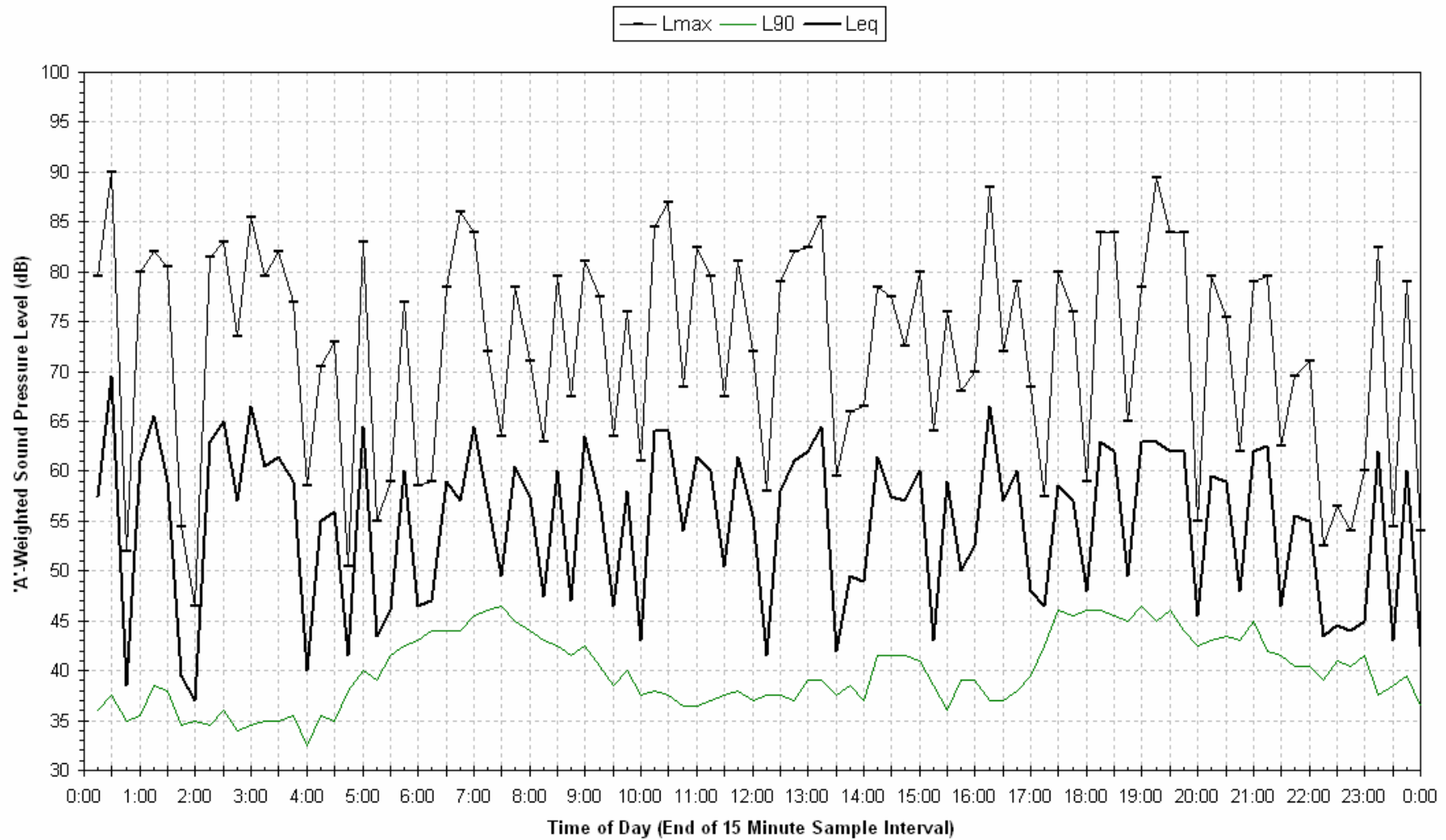
Statistical Ambient Noise Levels  
2A Nelson Street - Monday 3 August 2009



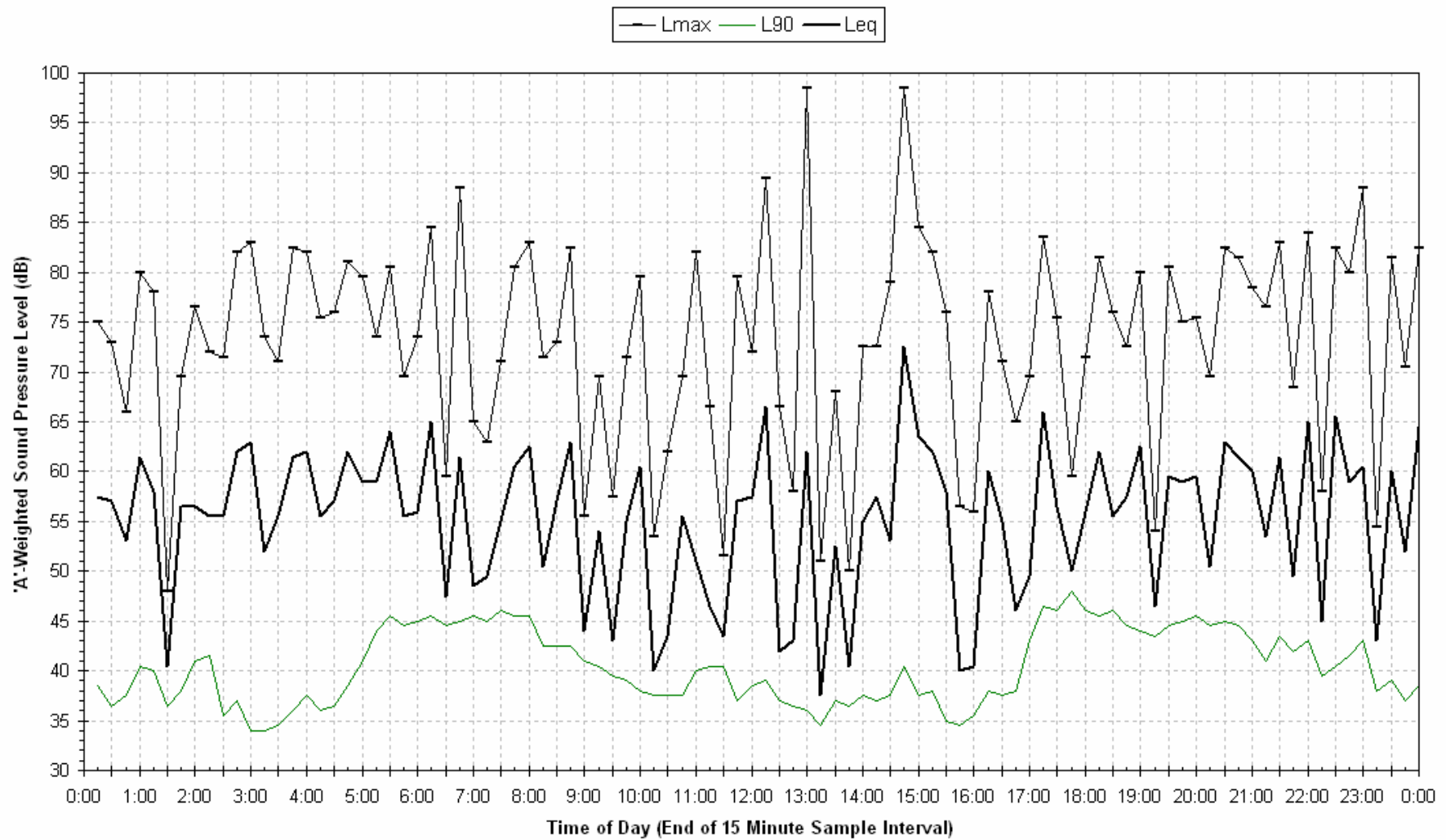
Statistical Ambient Noise Levels  
2A Nelson Street - Tuesday 4 August 2009



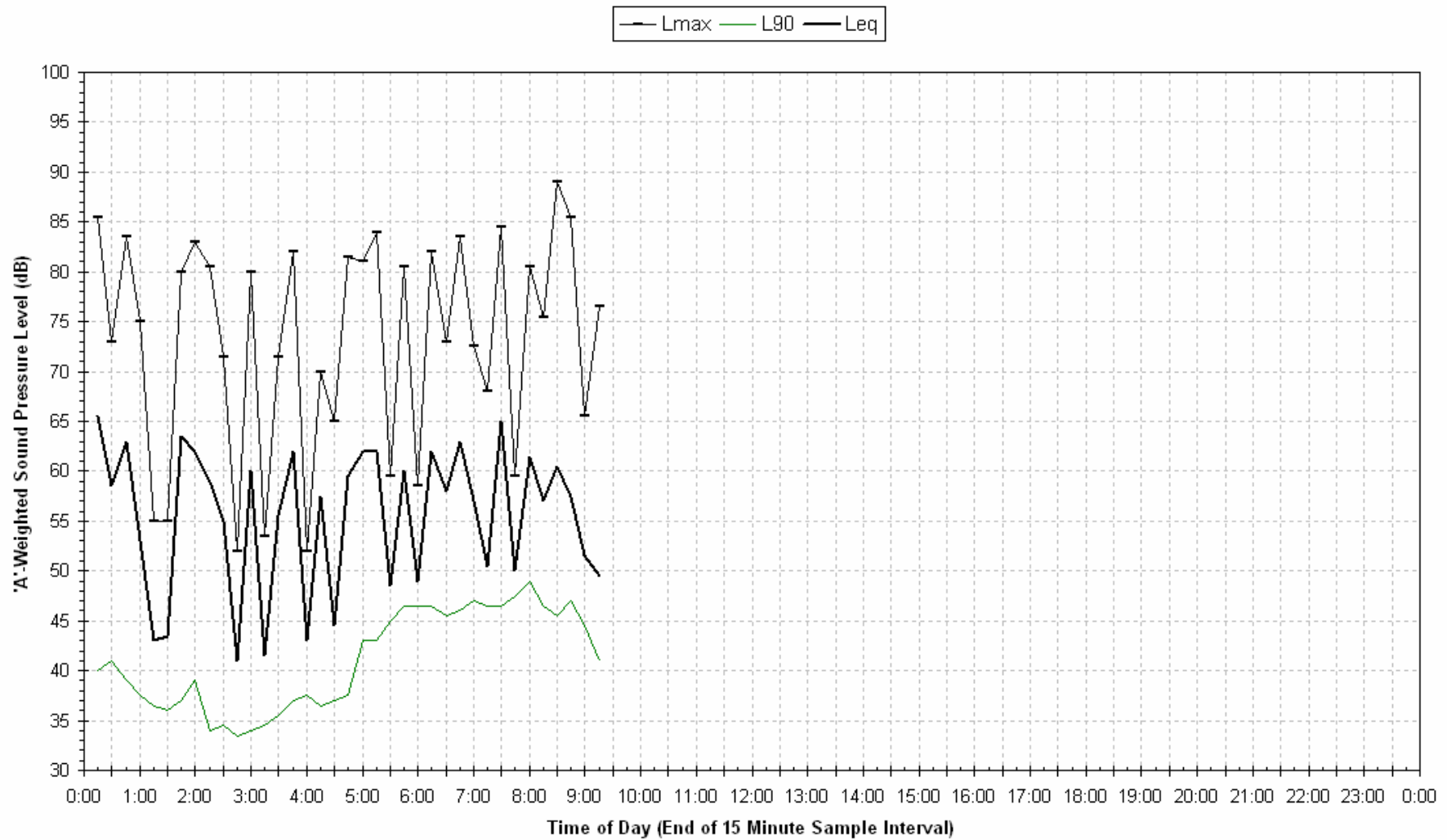
Statistical Ambient Noise Levels  
2A Nelson Street - Wednesday 5 August 2009



Statistical Ambient Noise Levels  
2A Nelson Street - Thursday 6 August 2009



Statistical Ambient Noise Levels  
2A Nelson Street - Friday 7 August 2009





Logger 8 - Croft

Noise Monitor ID	Allocated No.	ReceiverLot/Address	Registered Proprietor	NCA	Distance to Near Track (m)
L8	MMD-018.3	1 DP 37026	Croft	D7	100

Logger Location





## Site Photos – Logger 8



### Noise Logging Details (Unattended Monitoring)

L8

Logger Type	ARL EL 215
Serial Number	194637
Start of measurement period	11:50, 06/08/2009
End of measurement period	06:15, 17/08/2009
Frequency Weighting	A
Pre-Test Calibration Check	93.9 dB(A)
Post-Test Calibration Check	94.0 dB(A)
Time Response	Fast
Engineering Units	dB(A) SPL re:20μPa

### Passby Measurements Details (Attended Monitoring)

L8

Sound Level Meter	Bruel & Kjaer 2250
Serial Number	2506887
Measurement Dates	16/09/2009

### Logger 8 Noise Monitoring Results – Ambient Levels

Date	L <sub>eq</sub> 15hr dB(A)	L <sub>eq</sub> 9hr dB(A)
Thursday-6-Aug-09	58.9	58.4
Friday-7-Aug-09	57.2	58.9
Saturday-8-Aug-09	57.5	59.3
Sunday-9-Aug-09	57.4	58.2
Monday-10-Aug-09	57.7	57.1
Tuesday-11-Aug-09	52.4	50.0
Wednesday-12-Aug-09	52.2	49.4
Thursday-13-Aug-09	56.0	58.3
Friday-14-Aug-09	58.9	58.6
Saturday-15-Aug-09	58.2	58.7
Sunday-16-Aug-09	58.1	57.3
<b>Overall</b>	<b>57.2</b>	<b>57.6</b>

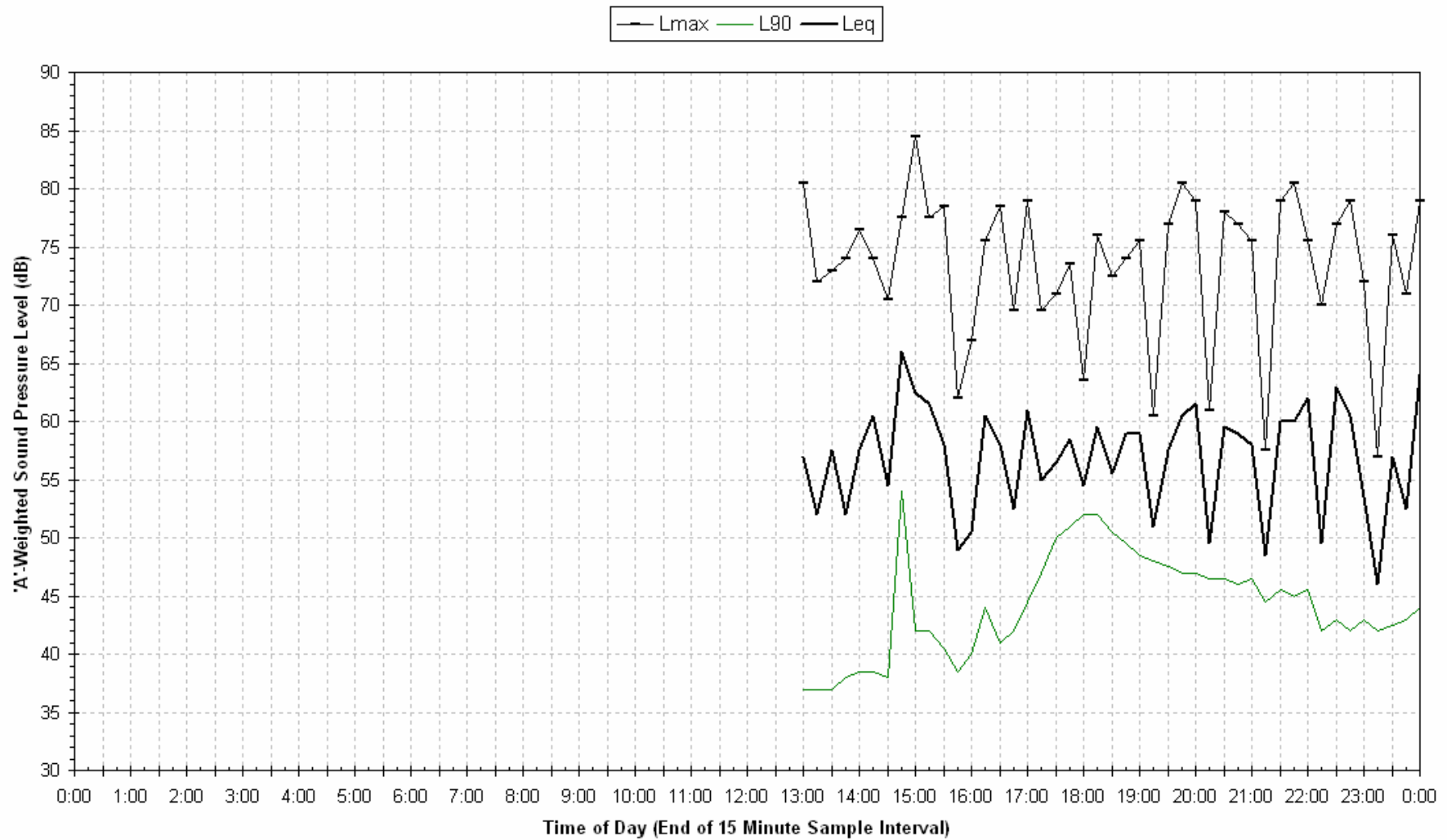
### Logger 8 Noise Monitoring Results – Background Levels

Date	Assessment Background Level L <sub>90</sub> dB(A)		
	Day	Evening	Night
Thursday-6-Aug-09	-	45.3	36.8
Friday-7-Aug-09	42.1	45.6	37.0
Saturday-8-Aug-09	37.0	43.5	34.5
Sunday-9-Aug-09	36.5	42.8	35.5
Monday-10-Aug-09	37.8	44.3	40.5
Tuesday-11-Aug-09	41.0	45.2	43.5
Wednesday-12-Aug-09	40.8	44.0	40.5
Thursday-13-Aug-09	39.5	44.0	41.3
Friday-14-Aug-09	39.2	44.3	41.5
Saturday-15-Aug-09	38.8	42.5	35.5
Sunday-16-Aug-09	37.1	41.3	-
<b>RBL</b>	<b>39.0</b>	<b>44.0</b>	<b>38.8</b>

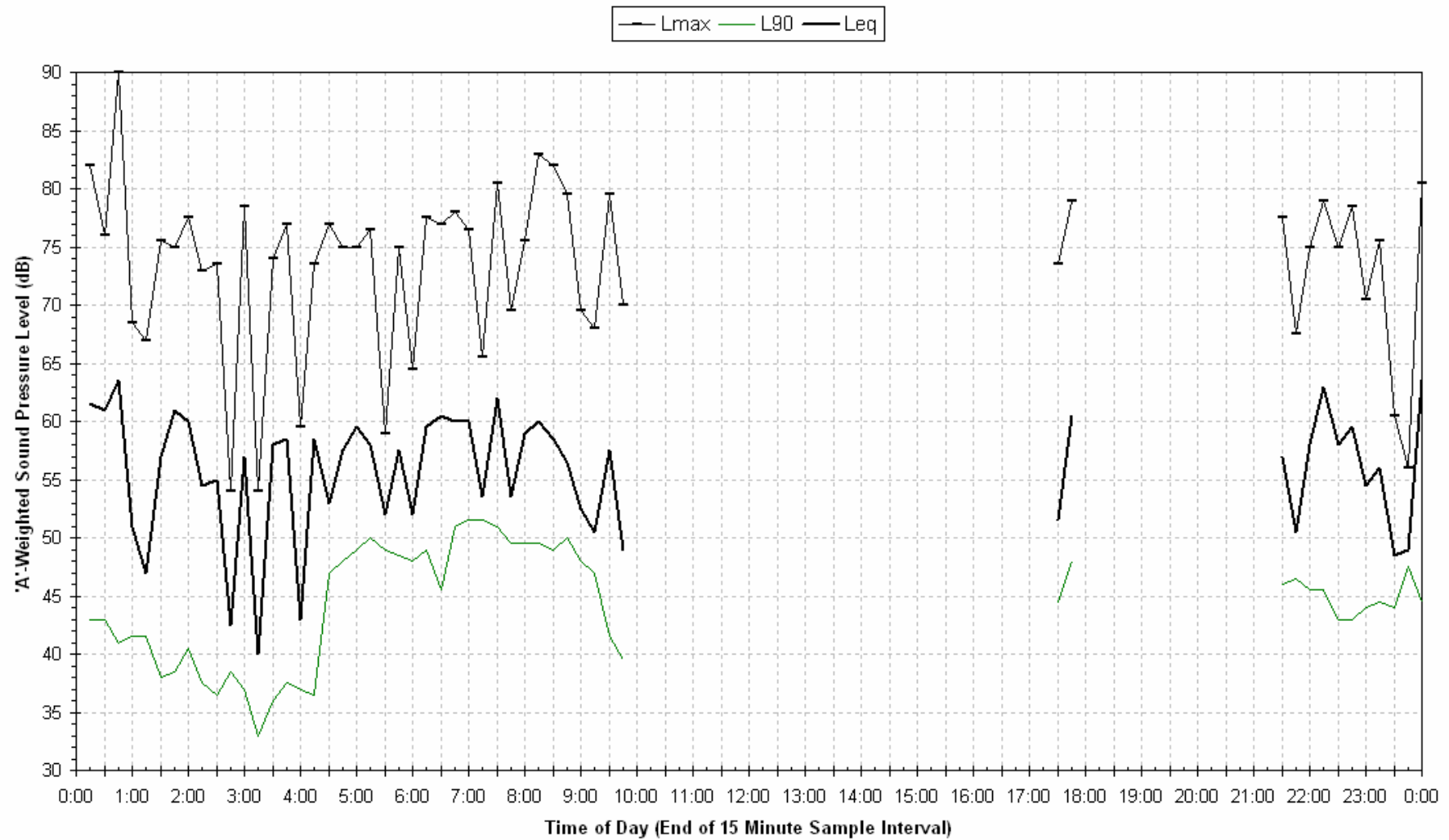
### Passby Measurement Results at Logger 8 Location dB(A)

Up/Down	Train Type	Duration	L <sub>eq</sub>	L <sub>max</sub>
Up	Coal	0:02:13	66.4	76.1
Up	Coal	0:02:09	64.2	73.2
Up	Coal	0:02:11	64	72.7
Up	Coal	0:02:03	67	77.9
Up	Freight	0:00:45	64.3	71.2
<b>Up Average</b>		<b>0:01:52</b>	<b>65.4</b>	<b>74.2</b>
Down	Empty Coal	0:03:04	67.5	76.0
Down	Empty Coal	0:00:59	64.2	70.3
Down	Empty Coal	0:01:27	67.4	72.7
Down	Empty Coal	0:01:27	64.6	70.8
Down	Empty Coal	0:00:49	69.0	76.1
Down	Empty Coal	0:01:33	67.9	73.4
<b>Down Average</b>		<b>0:01:33</b>	<b>67.1</b>	<b>73.2</b>
Up	Passenger	0:00:20	67.5	75.6
<b>Passenger Average</b>		<b>0:00:20</b>	<b>67.5</b>	<b>75.6</b>

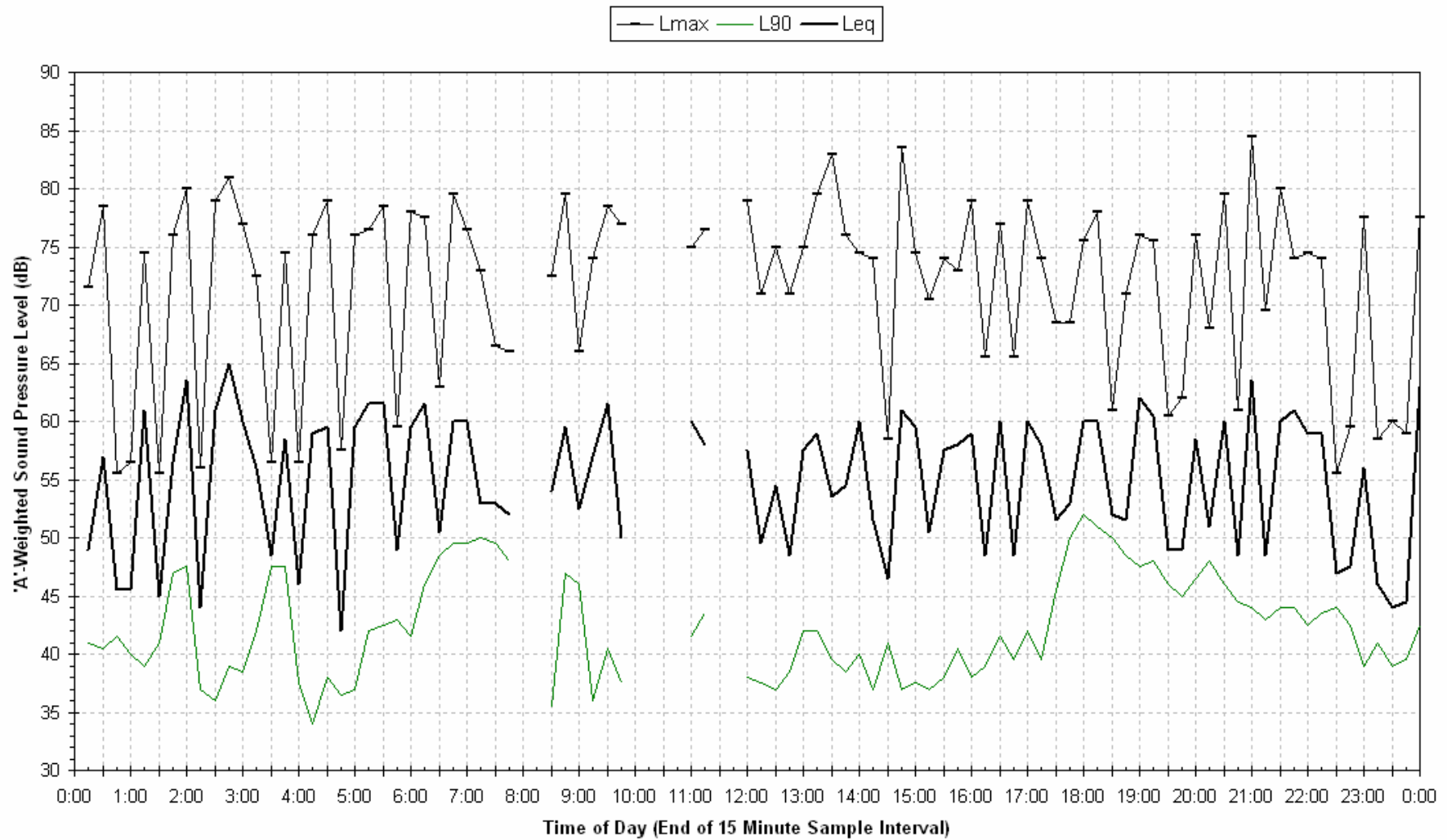
Statistical Ambient Noise Levels  
Croft - Thursday 6 August 2009



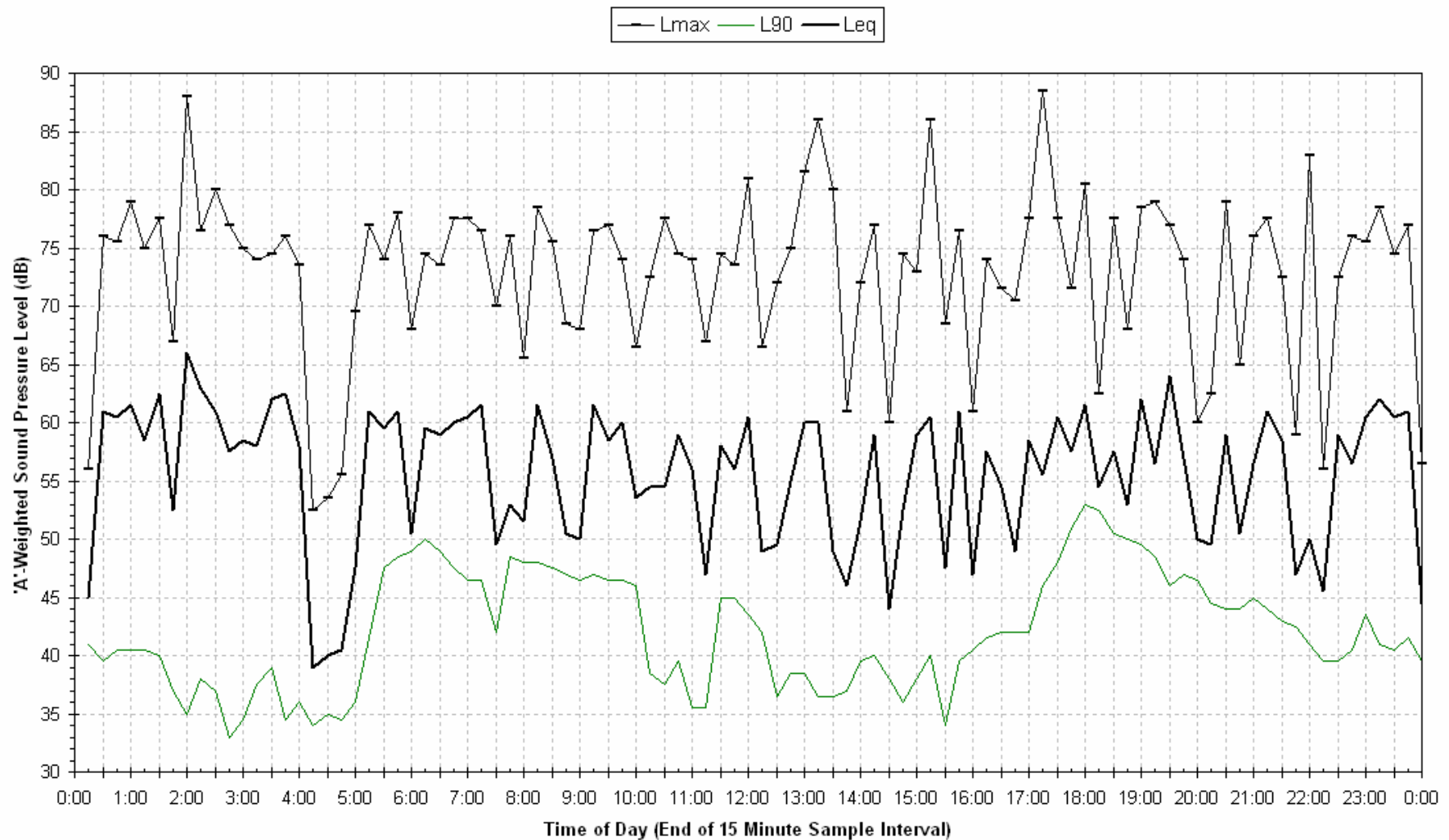
Statistical Ambient Noise Levels  
Croft - Friday 7 August 2009



Statistical Ambient Noise Levels  
Croft - Saturday 8 August 2009



Statistical Ambient Noise Levels  
Croft - Sunday 9 August 2009

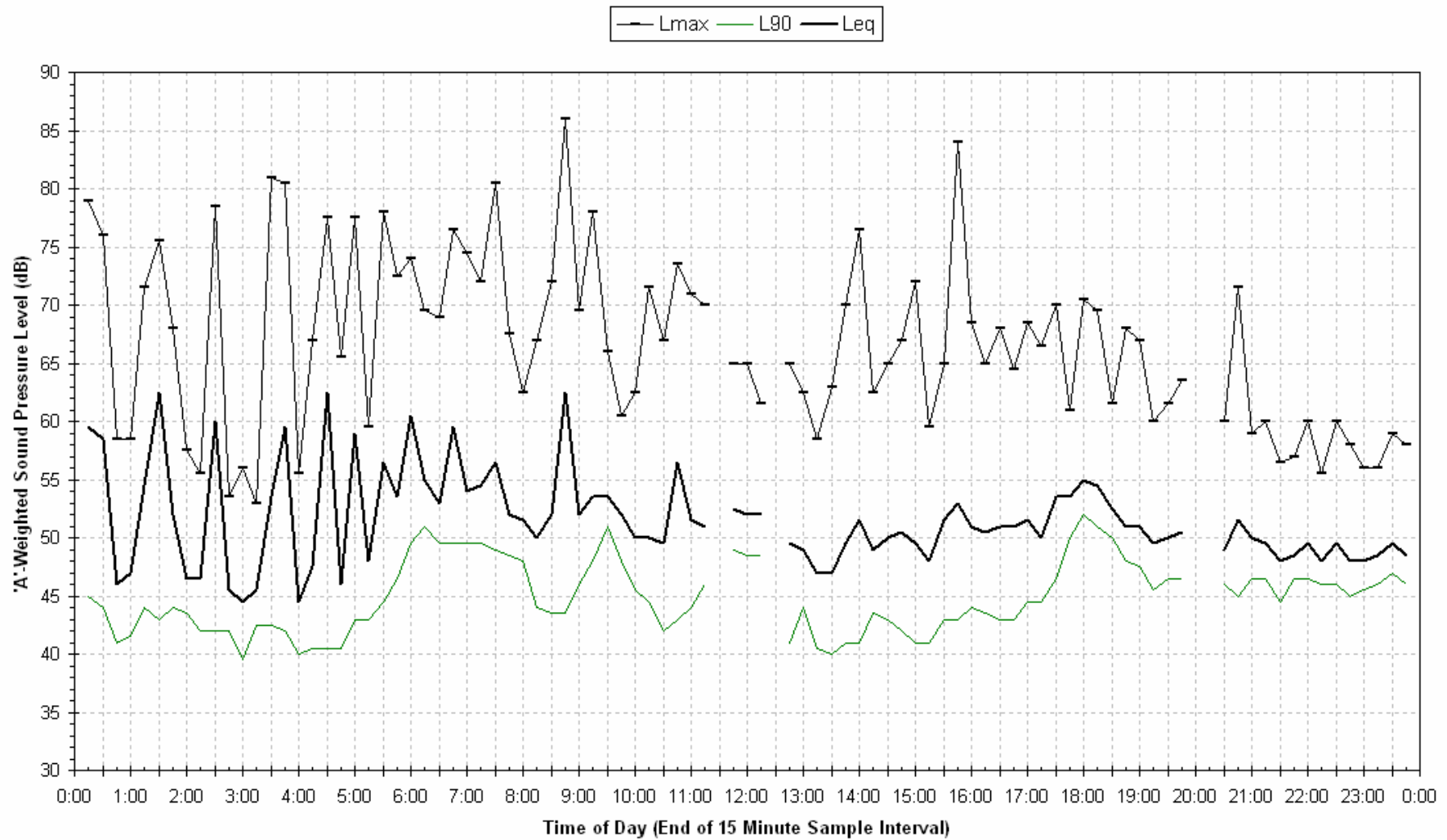




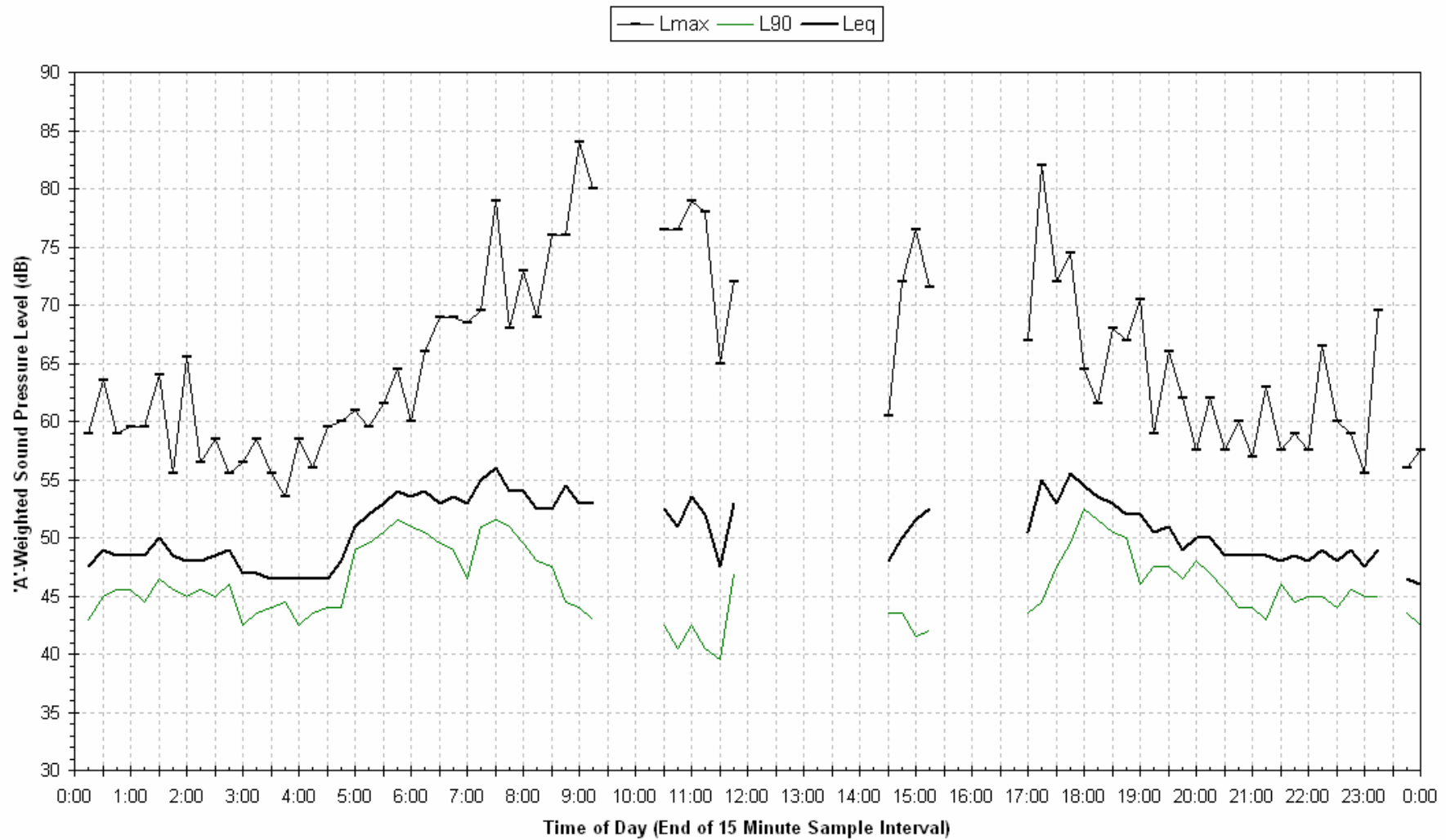
Statistical Ambient Noise Levels  
Croft - Monday 10 August 2009



Statistical Ambient Noise Levels  
Croft - Tuesday 11 August 2009



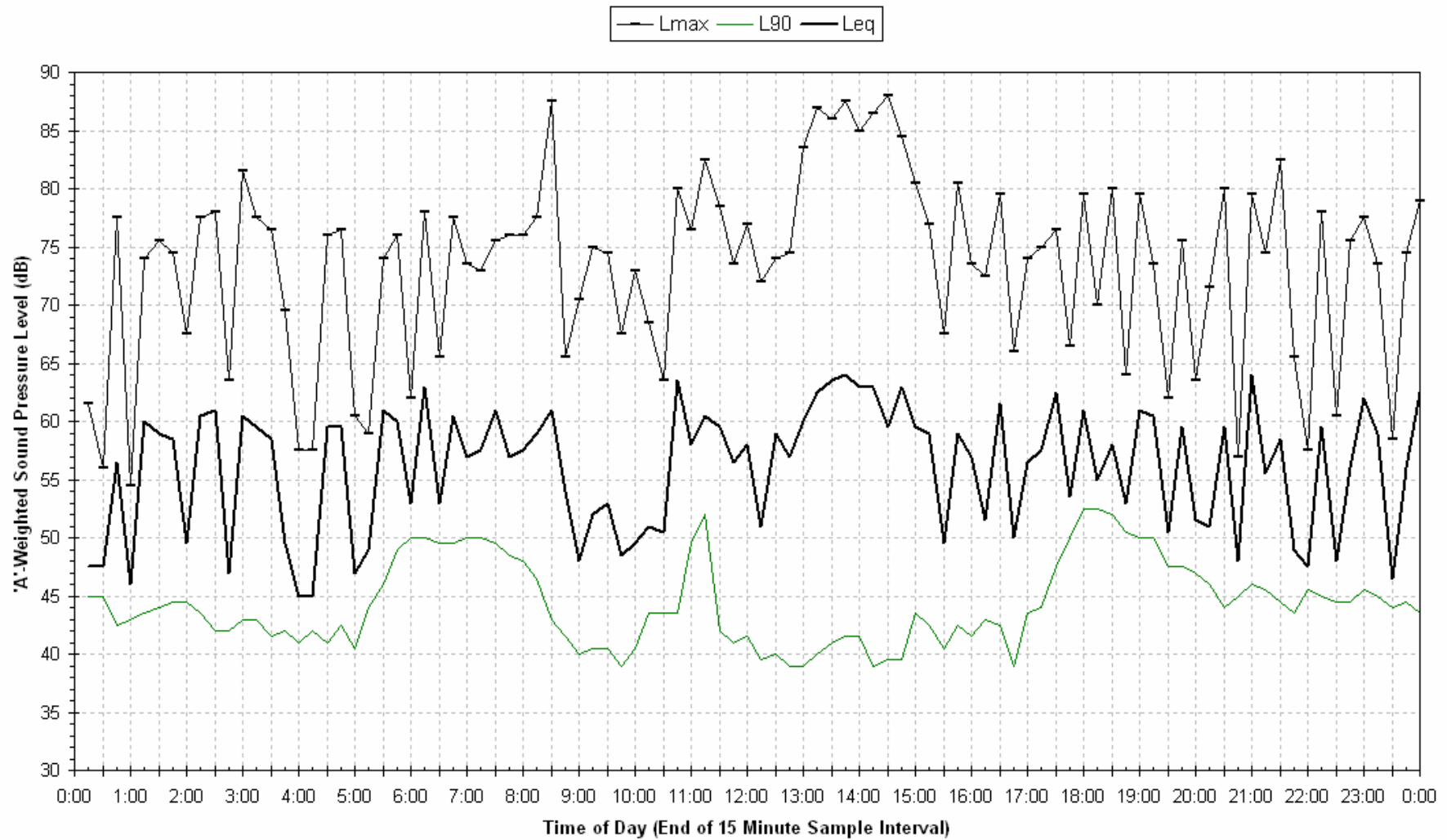
Statistical Ambient Noise Levels  
Croft - Wednesday 12 August 2009



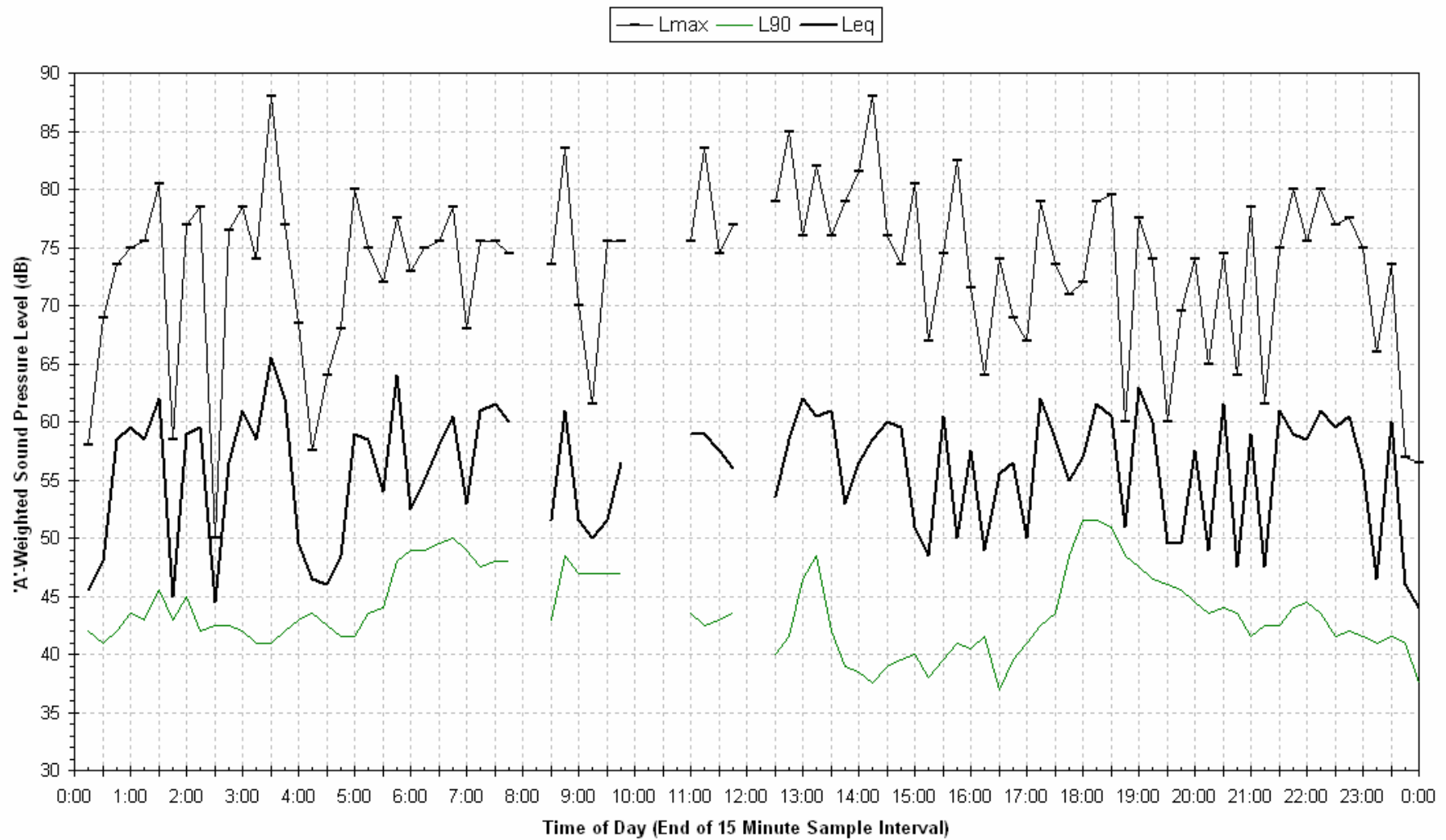
Statistical Ambient Noise Levels  
Croft - Thursday 13 August 2009



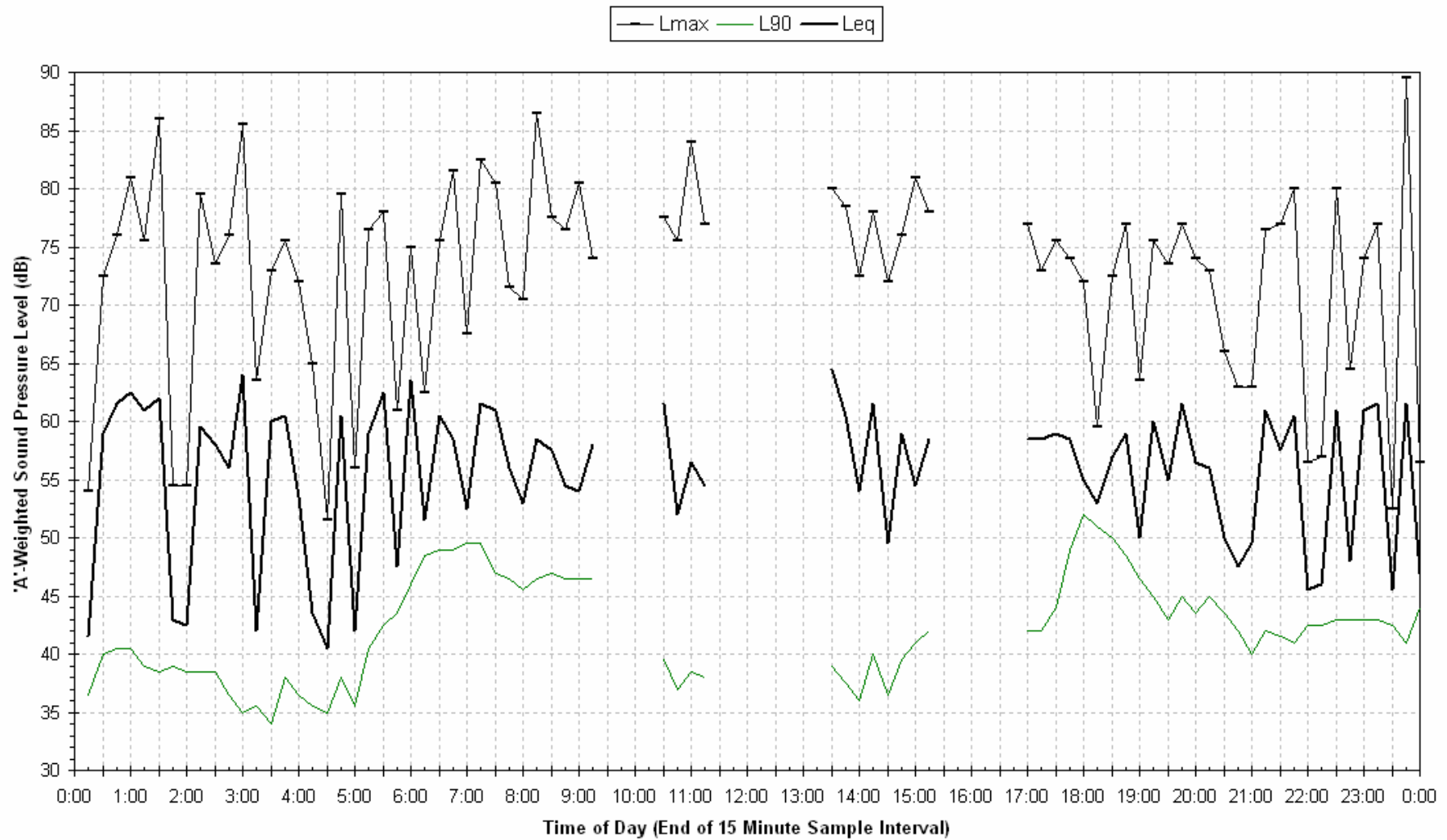
Statistical Ambient Noise Levels  
Croft - Friday 14 August 2009



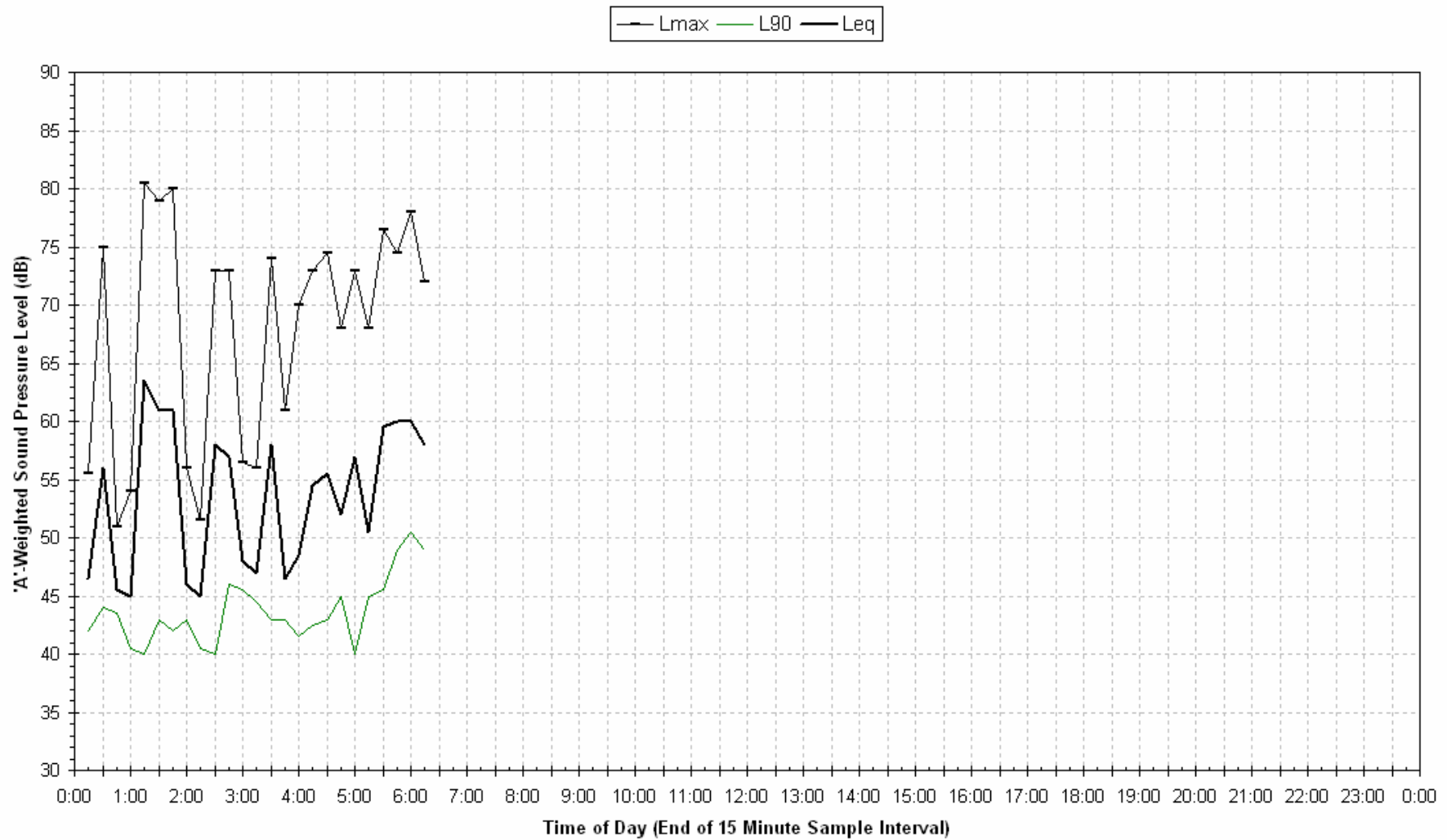
Statistical Ambient Noise Levels  
Croft - Saturday 15 August 2009



Statistical Ambient Noise Levels  
Croft - Sunday 16 August 2009



Statistical Ambient Noise Levels  
Croft - Monday 17 August 2009





## Logger 9 - Sadler

Noise Monitor ID	Allocated No.	ReceiverLot/Address	Registered Proprietor	NCA	Distance to Near Track (m)
L9	Not Allocated	106 DP 250308	Sadler	D7	90

### Logger Location



## Site Photos – Logger 9



### Noise Logging Details (Unattended Monitoring)

L9

Logger Type	ARL EL 215
Serial Number	194637
Start of measurement period	11:45, 11/09/2009
End of measurement period	11:05, 22/08/2009
Frequency Weighting	A
Pre-Test Calibration Check	93.6 dB(A)
Post-Test Calibration Check	93.8 dB(A)
Time Response	Fast
Engineering Units	dB(A) SPL re:20μPa

### Passby Measurements Details (Attended Monitoring)

L9

Sound Level Meter	Brüel & Kjær 2250
Serial Number	2506887
Measurement Dates	16/09/2009

### Logger 9 Noise Monitoring Results – Ambient Levels

Date	L <sub>eq</sub> 15hr dB(A)	L <sub>eq</sub> 9hr dB(A)
Friday-11-Sep-09	60.4	63.4
Saturday-12-Sep-09	61.7	63.3
Sunday-13-Sep-09	61.3	62.7
Monday-14-Sep-09	58.2	60.6
Tuesday-15-Sep-09	59.3	61.1
Wednesday-16-Sep-09	67.4	60.4
Thursday-17-Sep-09	59.9	59.4
Friday-18-Sep-09	59.3	62.8
Saturday-19-Sep-09	60.1	62.0
Sunday-20-Sep-09	60.3	60.2
Monday-21-Sep-09	60.6	61.9
Tuesday-22-Sep-09	56.0	-
<b>Overall</b>	<b>61.3</b>	<b>61.8</b>

### Logger 9 Noise Monitoring Results – Background Levels

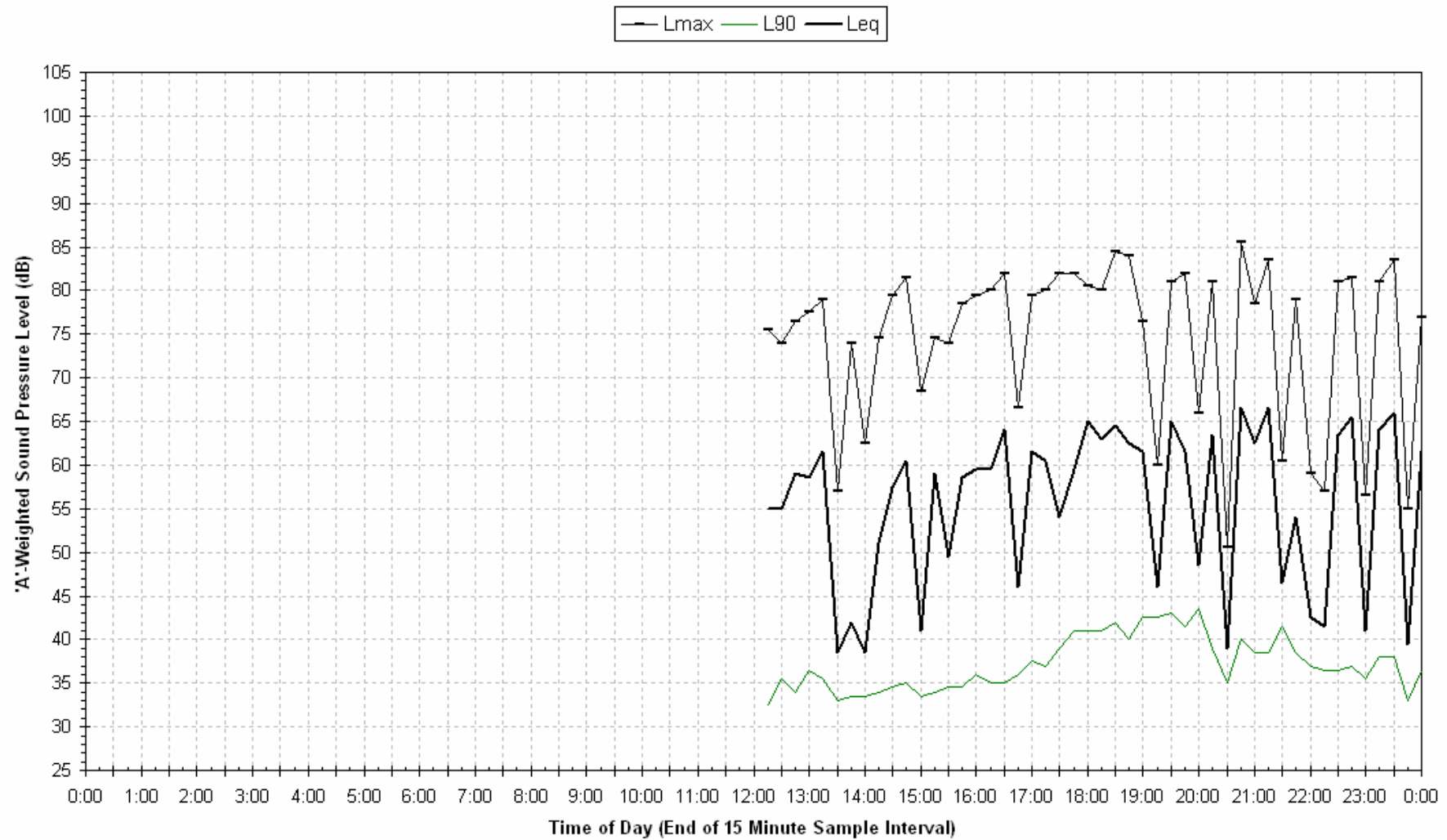
Date	Assessment Background Level L <sub>90</sub> dB(A)		
	Day	Evening	Night
Friday-11-Sep-09	-	37.8	29.3
Saturday-12-Sep-09	34.0	37.3	32.4
Sunday-13-Sep-09	34.0	35.0	30.0
Monday-14-Sep-09	33.0	32.5	29.0
Tuesday-15-Sep-09	34.1	34.3	32.5
Wednesday-16-Sep-09	35.0	34.3	29.0
Thursday-17-Sep-09	34.9	35.3	30.0
Friday-18-Sep-09	34.0	35.0	33.0
Saturday-19-Sep-09	34.5	32.2	29.5
Sunday-20-Sep-09	33.3	34.9	28.5
Monday-21-Sep-09	37.0	34.0	29.5
Tuesday-22-Sep-09	-	-	-
<b>RBL</b>	<b>34.0</b>	<b>34.9</b>	<b>29.5</b>

### Passby Measurement Results at Logger 9 Location dB(A)

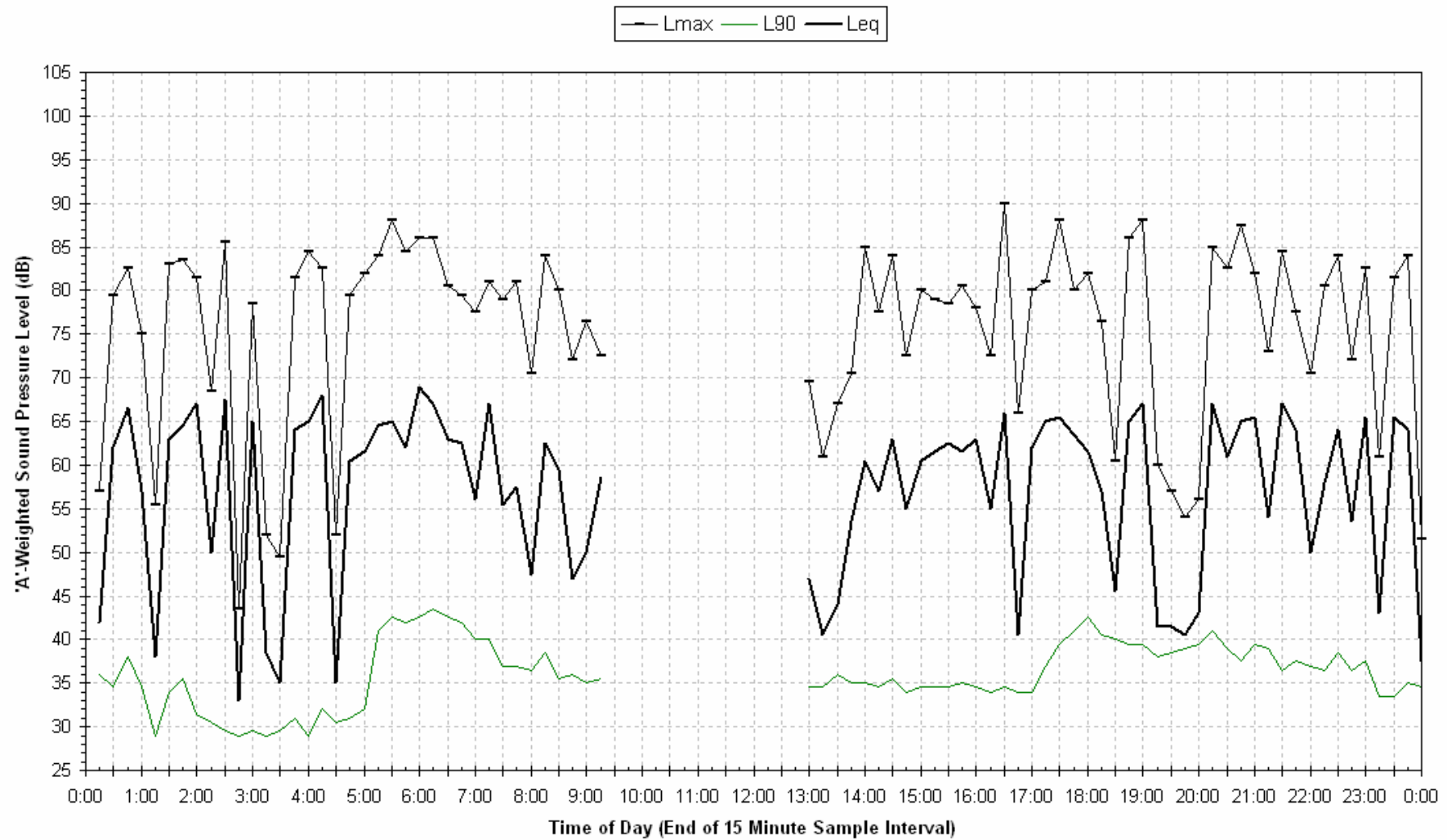
Up/Down	Train Type	Duration	L <sub>eq</sub>	L <sub>max</sub>
Up	Coal	0:02:44	66.2	78.2
Up	Coal	0:01:58	65	74.4
Up	Coal	0:02:17	68.5	79.3
Up	Coal	0:01:04	63.8	72.6
Up	Coal	0:02:07	66.2	76.6
Up	Empty Freight	0:00:44	62.1	74.5
<b>Up Average</b>		<b>0:01:49</b>	<b>65.8</b>	<b>75.9</b>
Down	Empty Coal	0:01:25	70.3	77.6
Down	Empty Coal	0:01:35	69.4	78.2
Down	Empty Coal	0:02:00	66.4	74.7
Down	Empty Coal	0:01:52	66.3	77.1
<b>Down Average</b>		<b>0:01:43</b>	<b>68.5</b>	<b>76.9</b>
Up	Passenger	0:00:28	55.4	61.1
Down	Passenger	0:00:31	61.6	70
<b>Passenger Average</b>		<b>0:00:30</b>	<b>59.5</b>	<b>65.6</b>



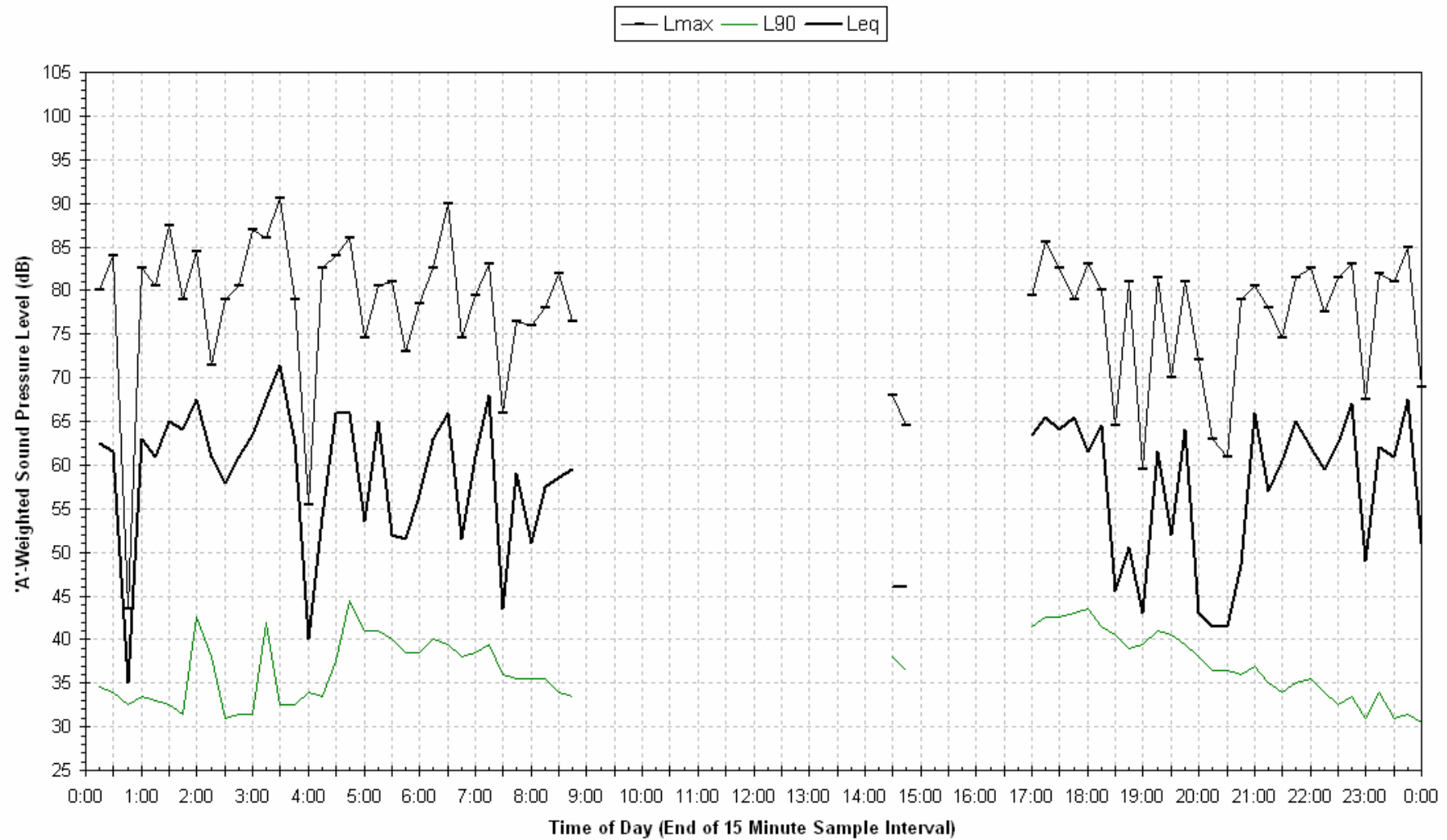
Statistical Ambient Noise Levels  
Sadler - Friday 11 September 2009



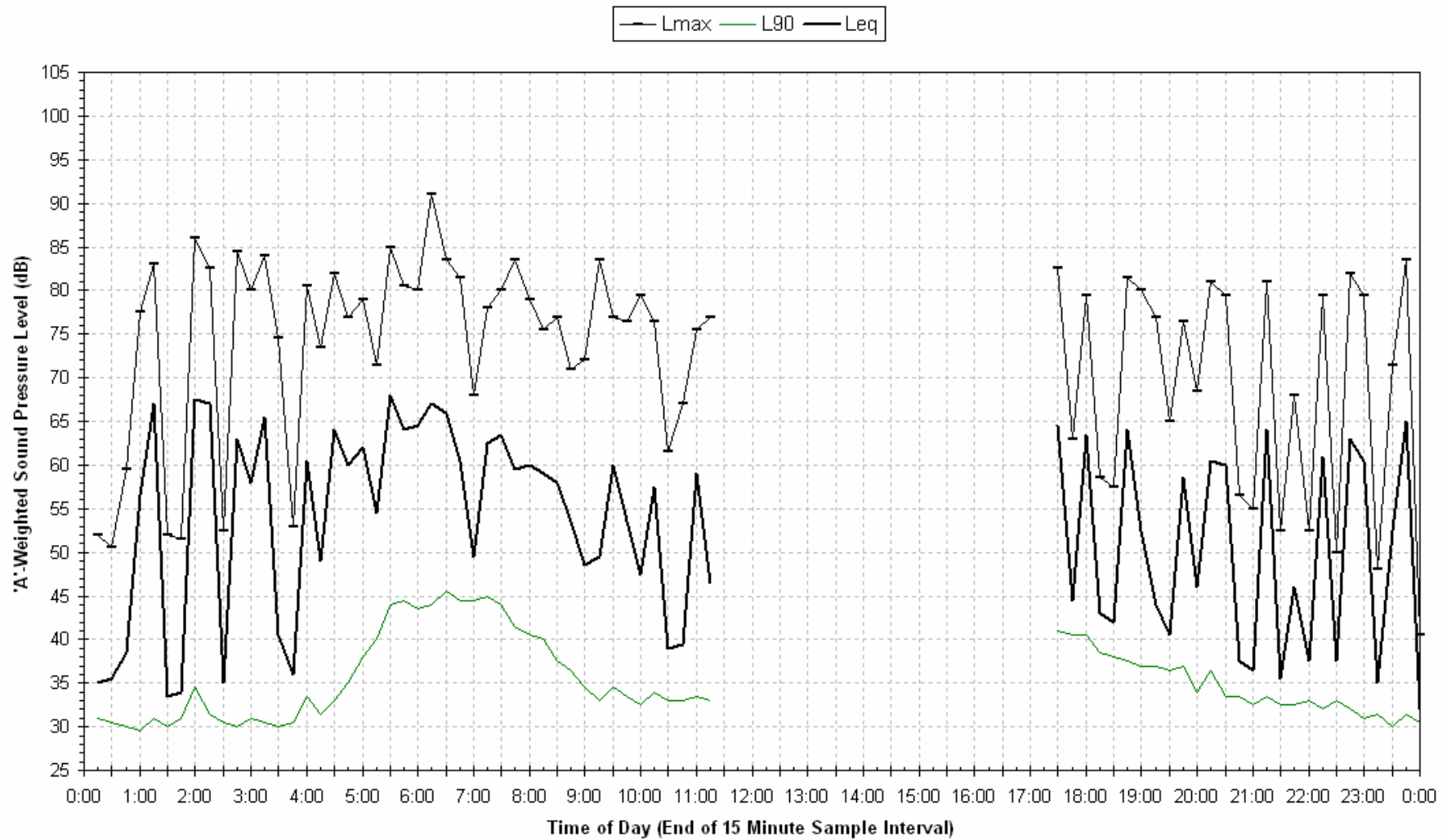
Statistical Ambient Noise Levels  
Sadler - Saturday 12 September 2009



Statistical Ambient Noise Levels  
Sadler - Sunday 13 September 2009

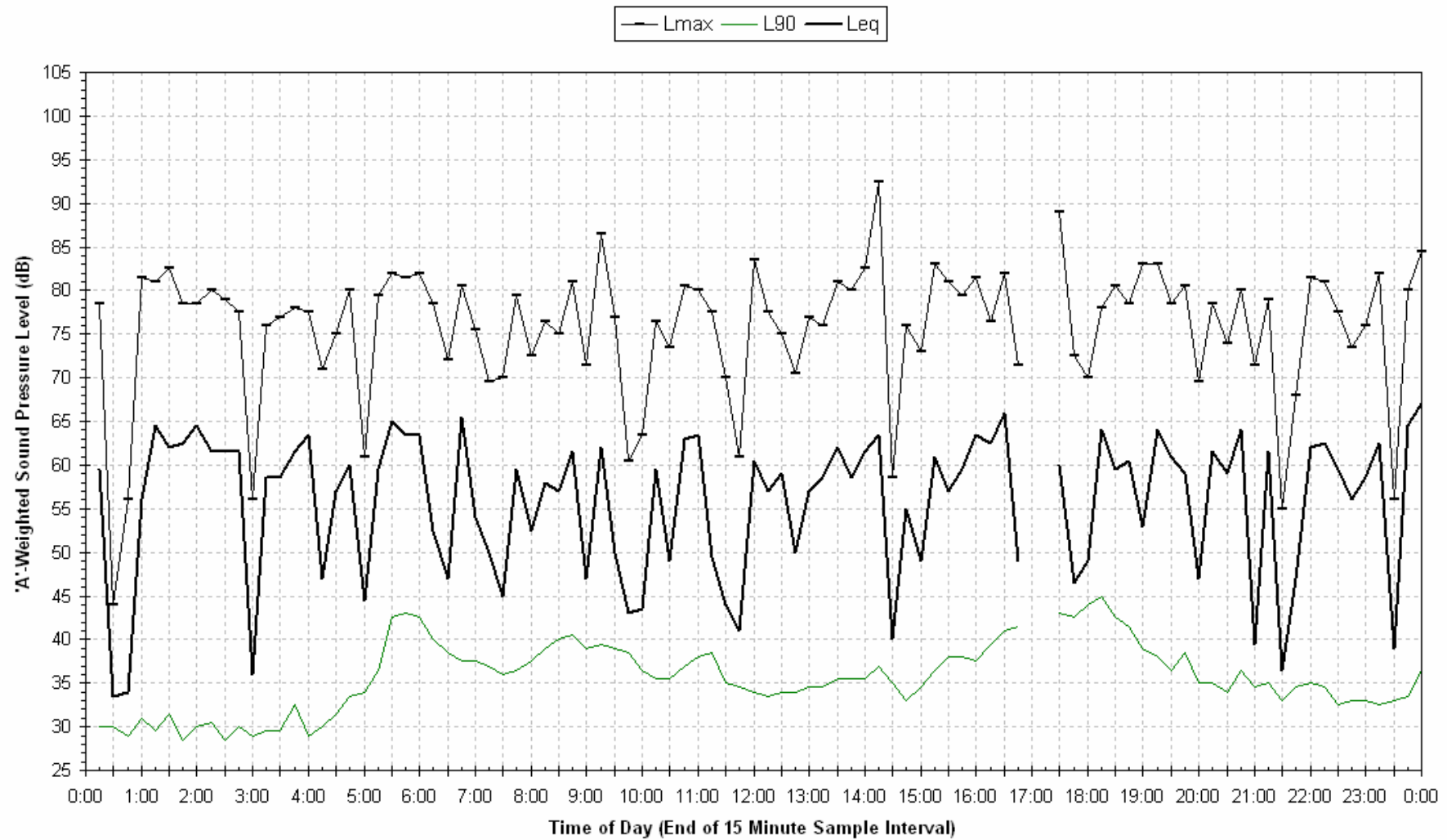


Statistical Ambient Noise Levels  
Sadler - Monday 14 September 2009





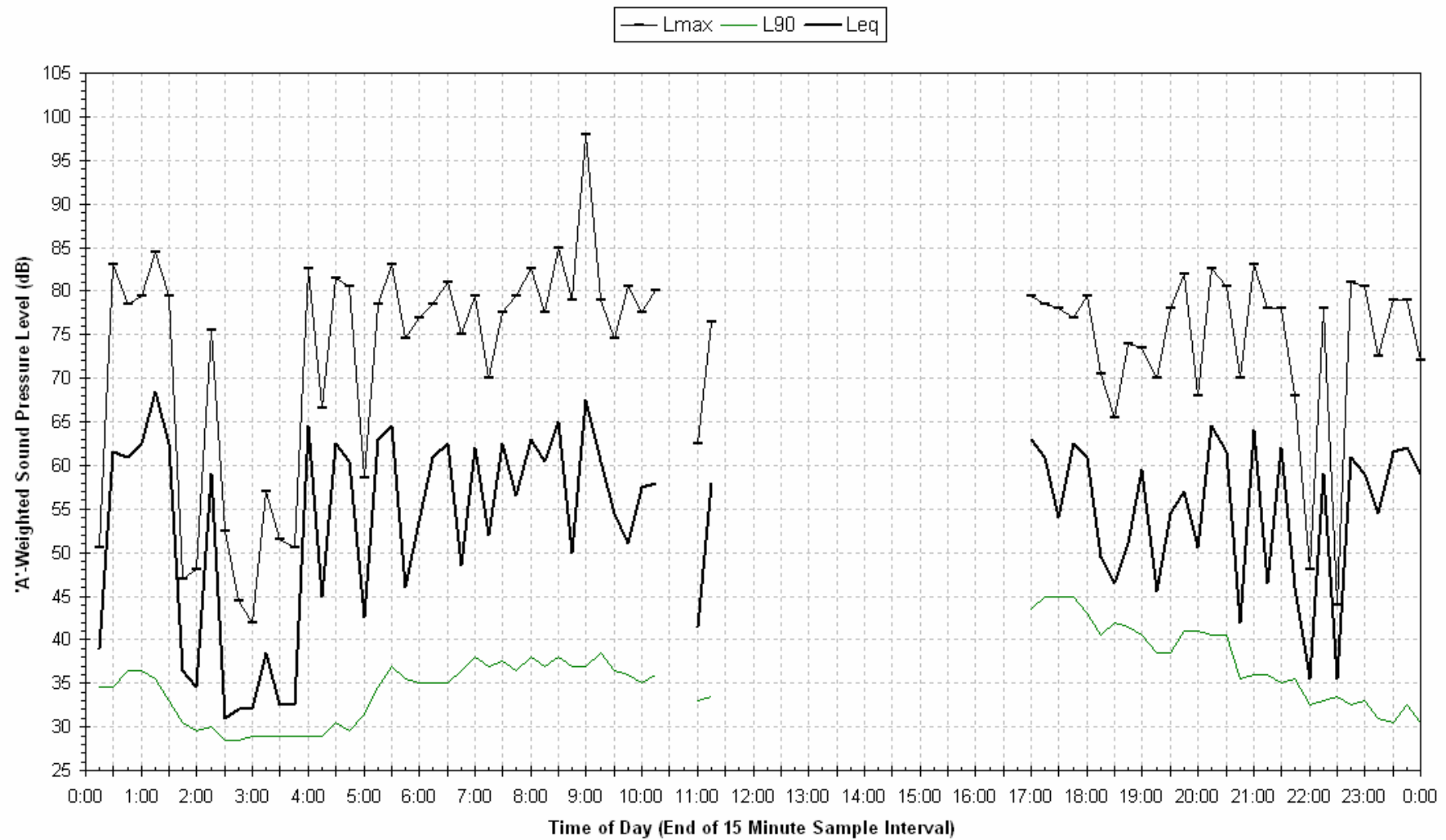
Statistical Ambient Noise Levels  
Sadler - Tuesday 15 September 2009



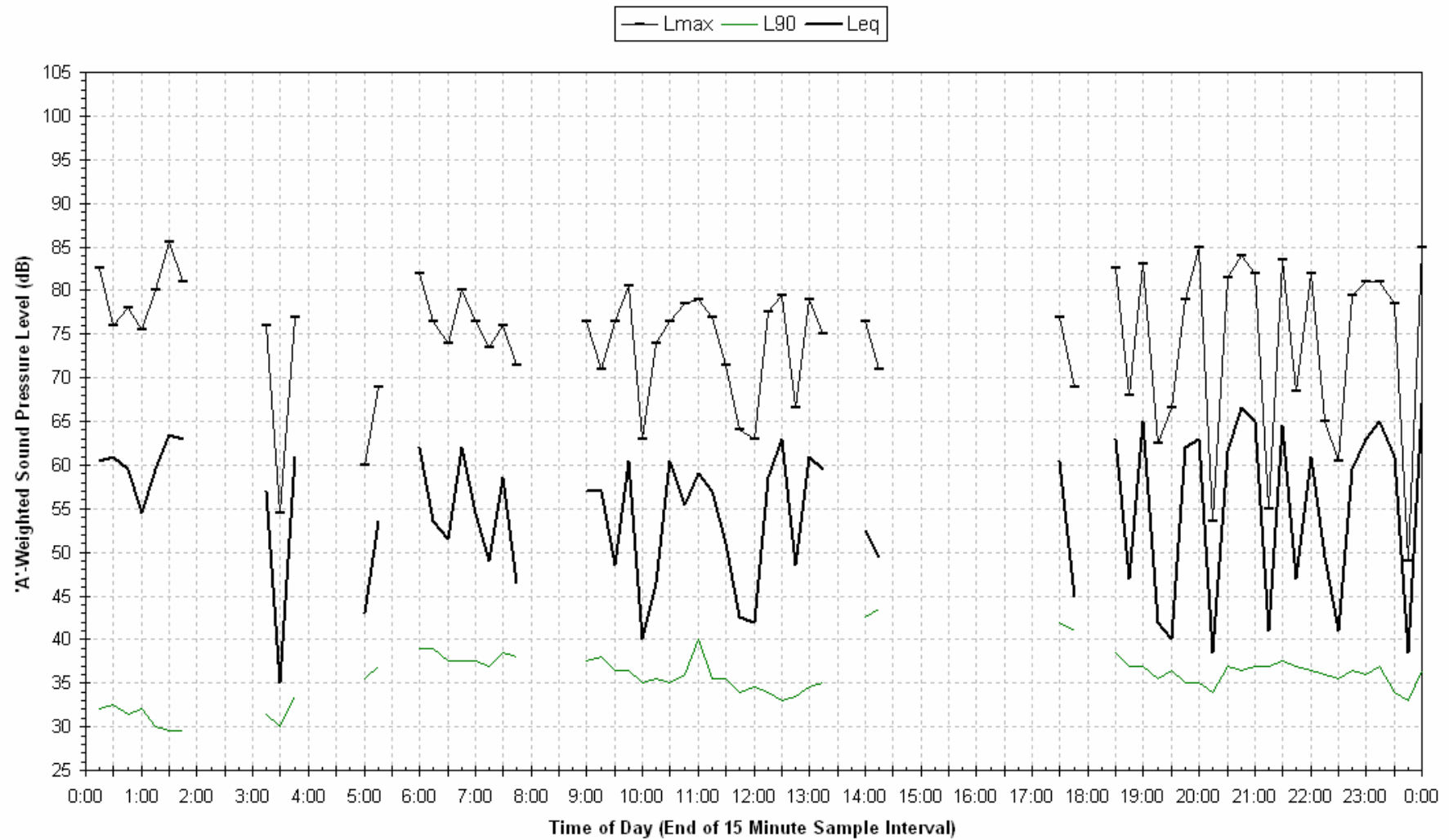
Statistical Ambient Noise Levels  
Sadler - Wednesday 16 September 2009



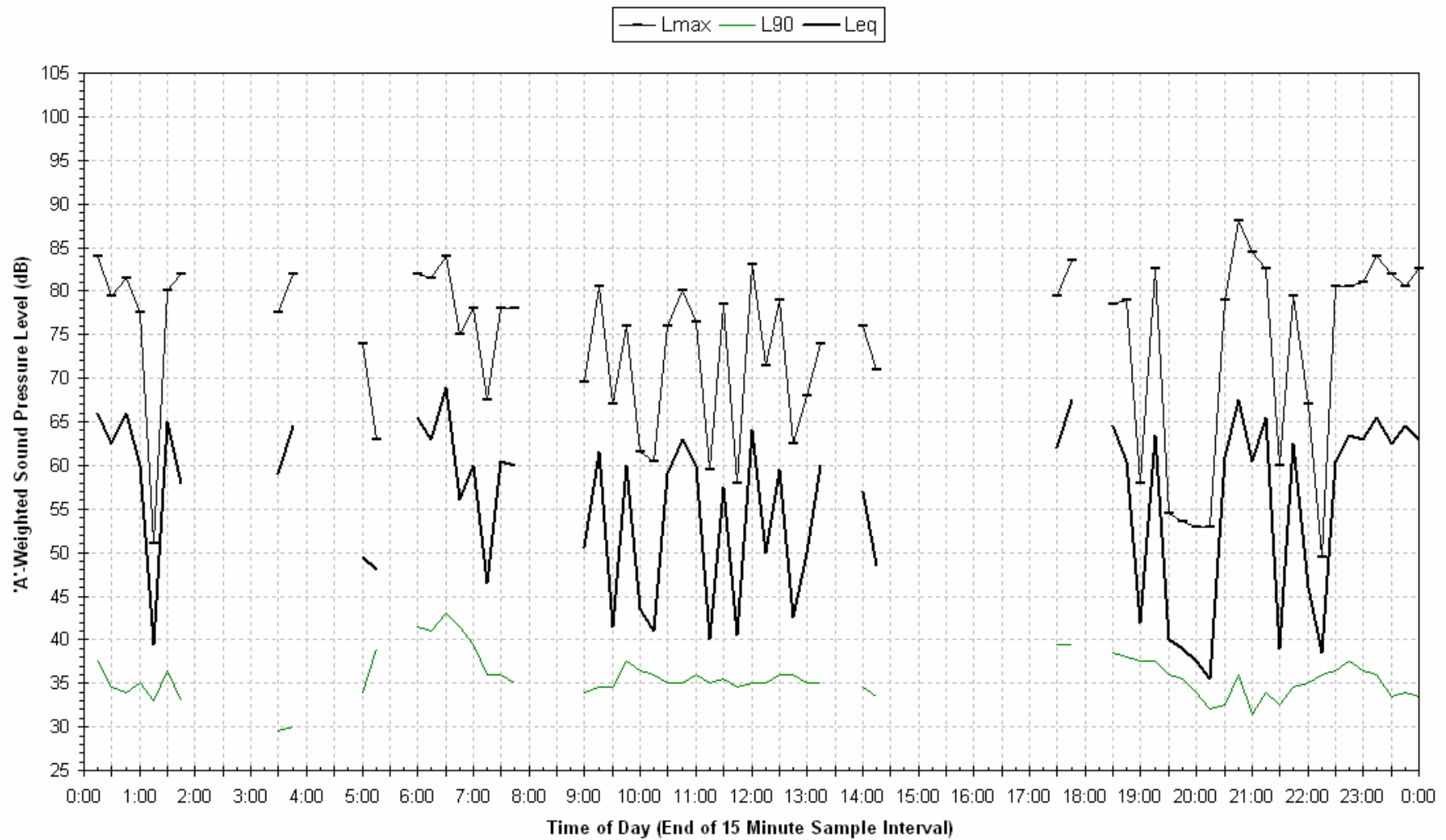
Statistical Ambient Noise Levels  
Sadler - Thursday 17 September 2009



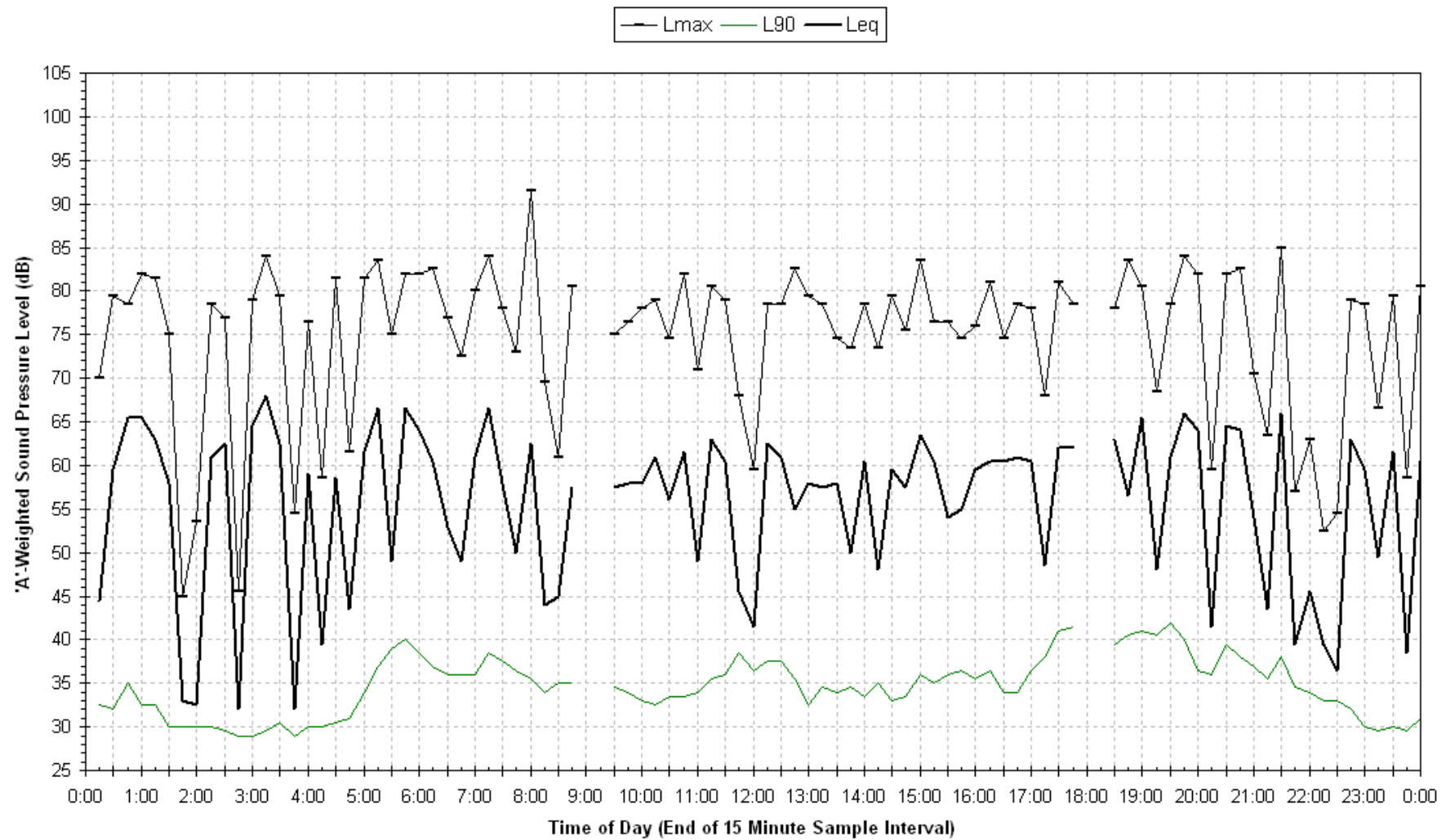
Statistical Ambient Noise Levels  
Sadler - Friday 18 September 2009



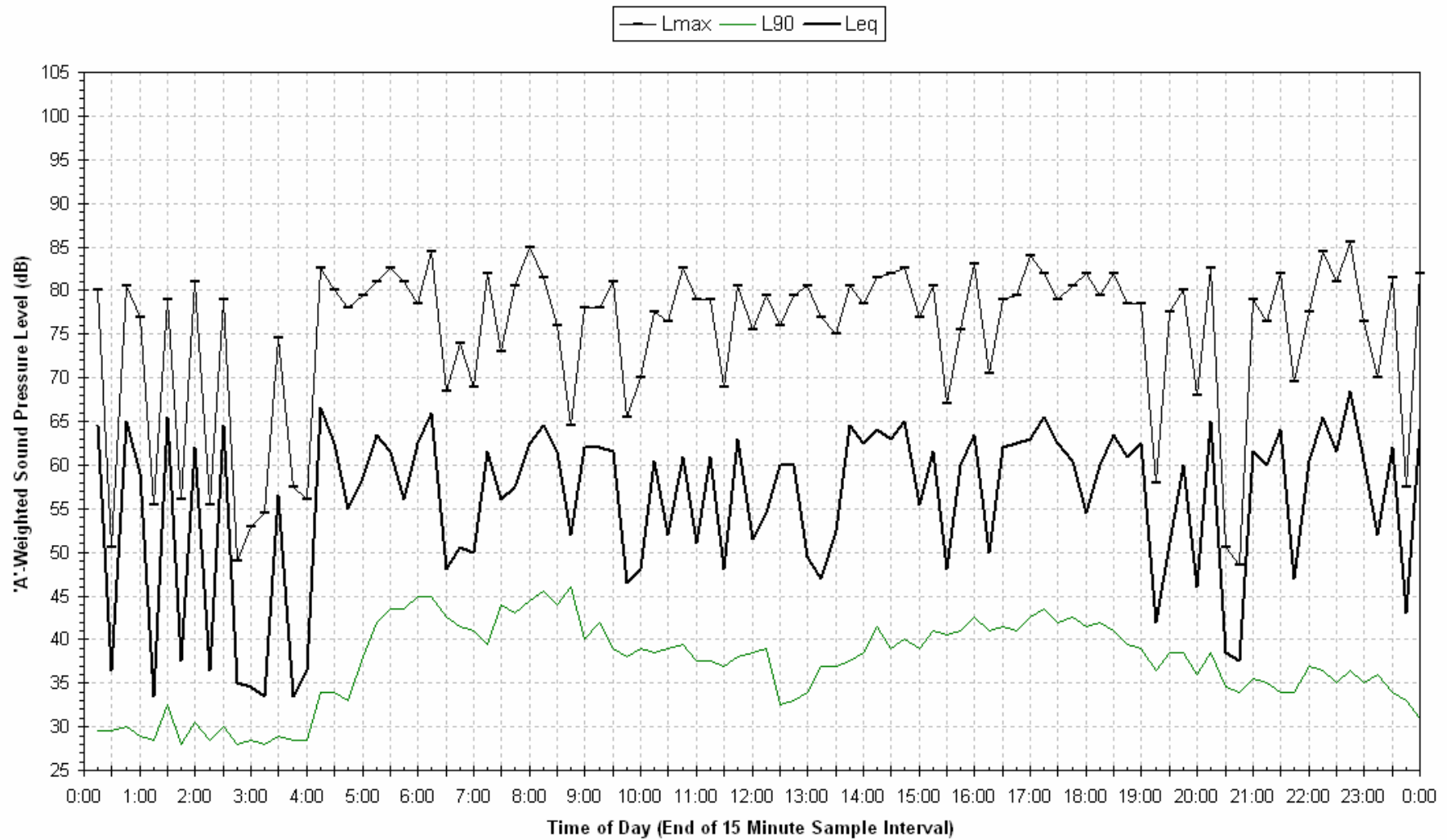
Statistical Ambient Noise Levels  
Sadler - Saturday 19 September 2009



Statistical Ambient Noise Levels  
Sadler - Sunday 20 September 2009

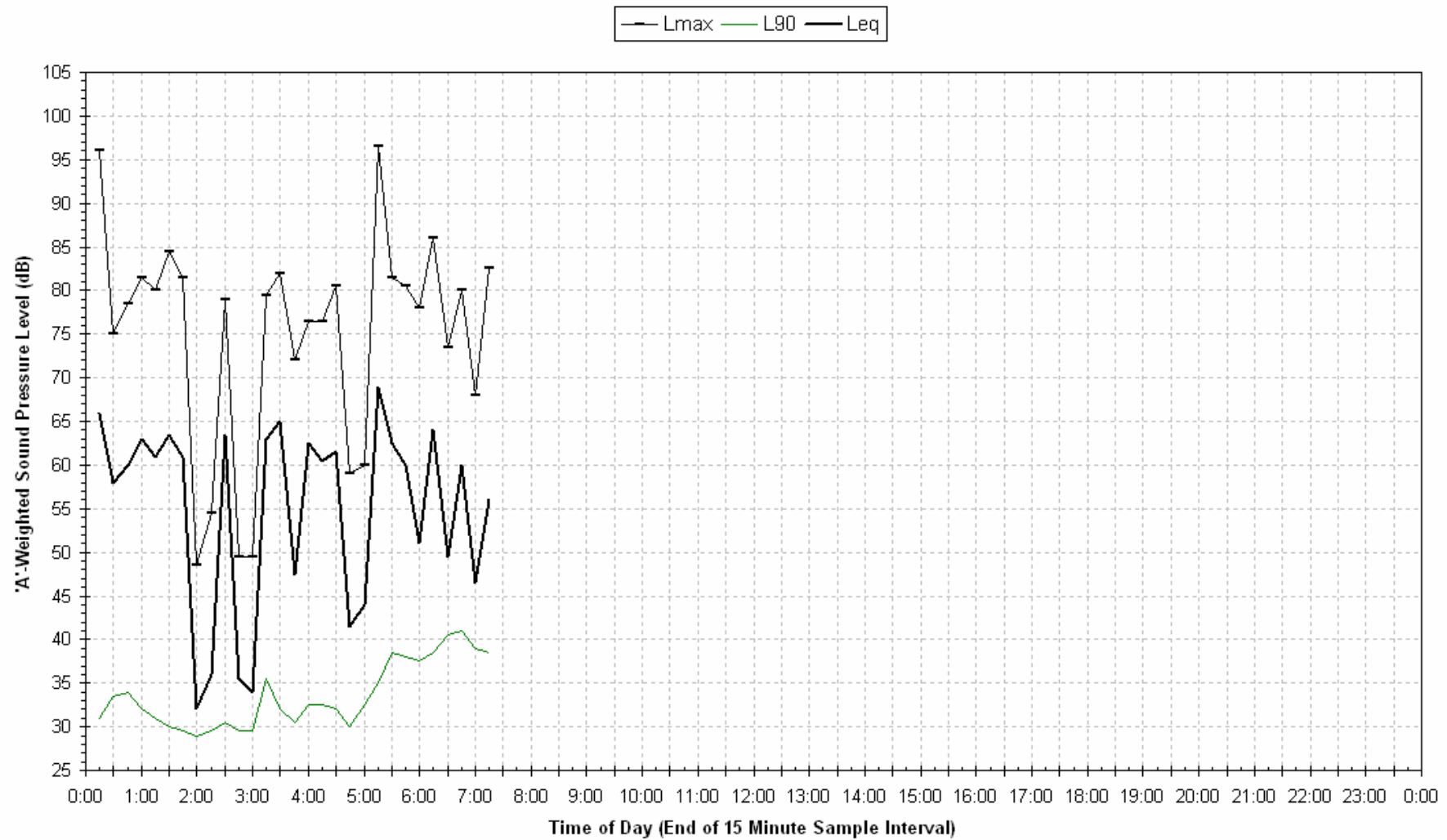


Statistical Ambient Noise Levels  
Sadler - Monday 21 September 2009





Statistical Ambient Noise Levels  
Sadler - Tuesday 22 September 2009



## Logger 10 - Hardy

Noise Monitor ID	Allocated No.	Receiver Lot/Address	Registered Proprietor	NCA	Distance to Near Track (m)
L10	MMU-053	66 DP 1076981	Hardy	U6	85

### Logger Location



## Site Photos – Logger 10



Noise Logging Details (Unattended Monitoring)	L10
Logger Type	ARL EL 215
Serial Number	194677
Start of measurement period	17:10, 28/07/2009
End of measurement period	16:50, 04/08/2009
Frequency Weighting	A
Pre-Test Calibration Check	94.4 dB(A)
Post-Test Calibration Check	94.5 dB(A)
Time Response	Fast
Engineering Units	dB(A) SPL re:20µPa

Passby Measurements Details (Attended Monitoring)	L10	L10
Sound Level Meter	Larson Davis 831	Bruel & Kjaer 2250
Serial Number	01620	2506887
Measurement Dates	29/07/2009	04/08/2009

### Logger 10 Noise Monitoring Results – Ambient Levels

Date	L <sub>eq</sub> 15hr dB(A)	L <sub>eq</sub> 9hr dB(A)
Tuesday-28-Jul-09	63.0	60.0
Wednesday-29-Jul-09	58.7	61.1
Thursday-30-Jul-09	58.5	60.2
Friday-31-Jul-09	60.2	60.4
Saturday-1-Aug-09	59.5	60.5
Sunday-2-Aug-09	59.1	59.0
Monday-3-Aug-09	58.5	60.9
Tuesday-4-Aug-09	58.0	-
<b>Overall</b>	<b>59.7</b>	<b>60.4</b>

### Logger 10 Noise Monitoring Results – Background Levels

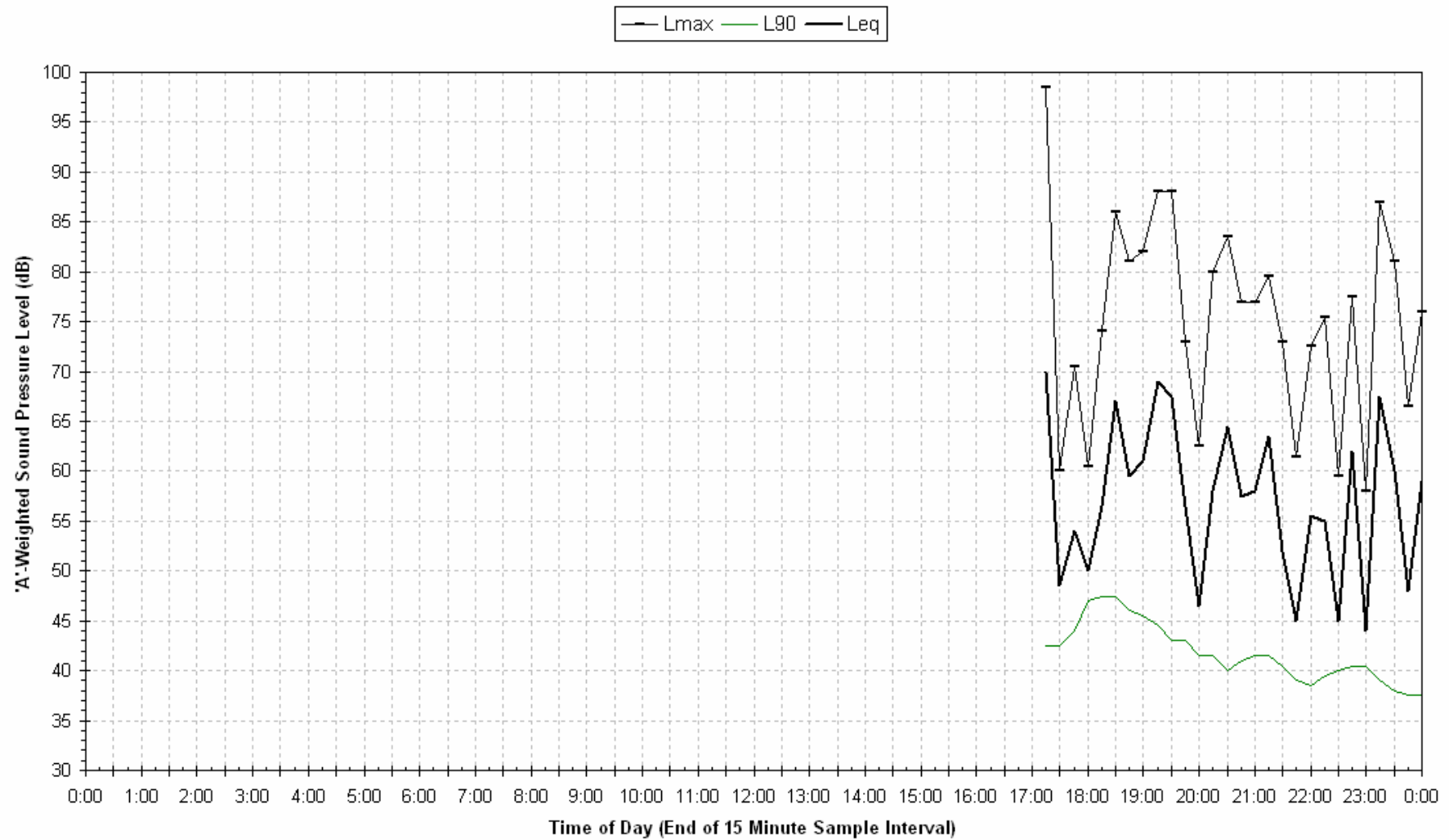
Date	Assessment Background Level L <sub>90</sub> dB(A)		
	Day	Evening	Night
Tuesday-28-Jul-09	-	39.5	37.5
Wednesday-29-Jul-09	38.5	40.8	36.5
Thursday-30-Jul-09	42.3	39.0	35.0
Friday-31-Jul-09	41.0	38.5	36.0
Saturday-1-Aug-09	39.0	39.5	33.5
Sunday-2-Aug-09	36.0	38.3	36.5
Monday-3-Aug-09	37.0	37.8	35.0
Tuesday-4-Aug-09	-	-	-
<b>RBL</b>	<b>38.8</b>	<b>39.0</b>	<b>36.0</b>

### Passby Measurement Results at Logger 10 Location dB(A)

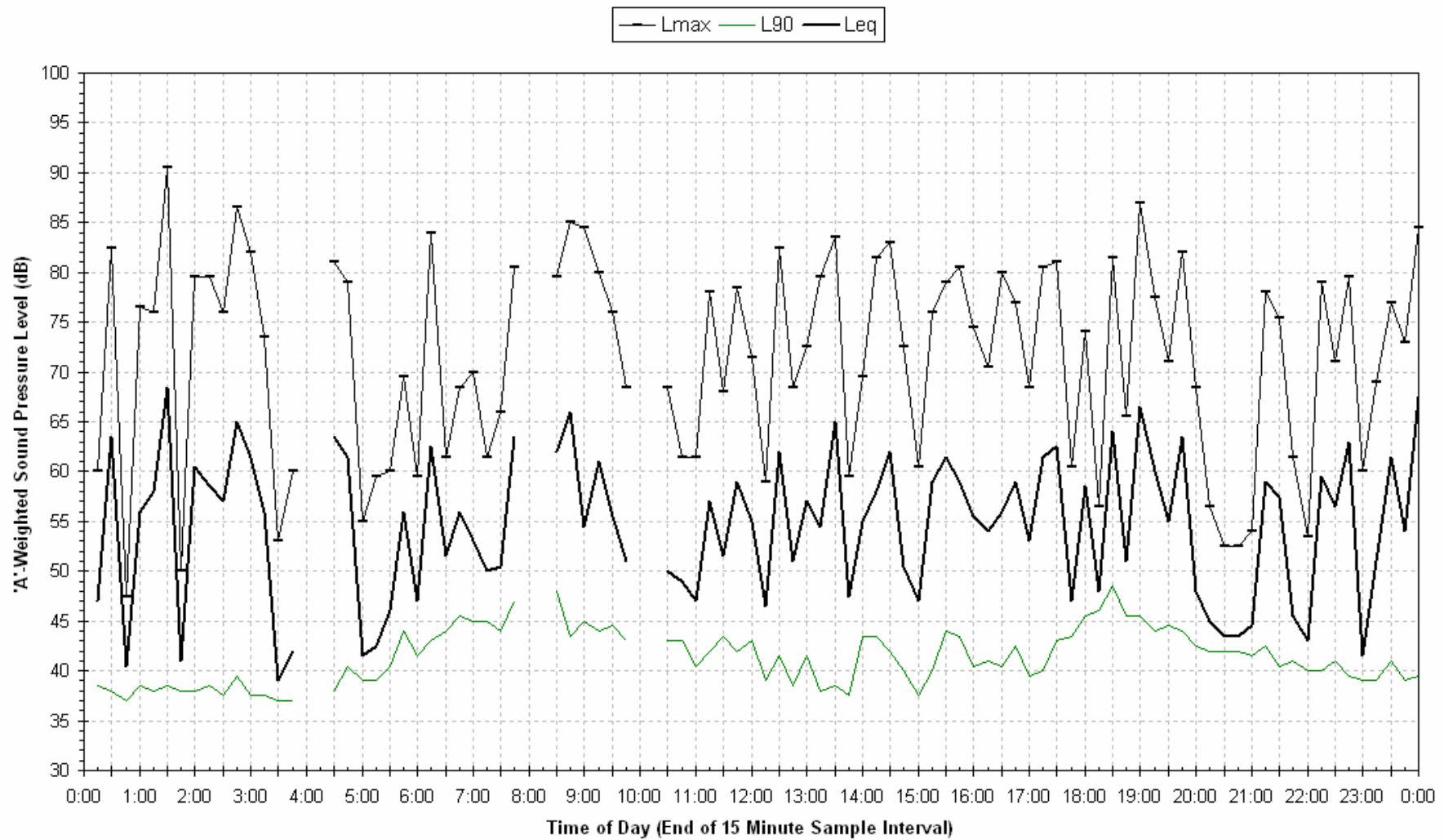
Up/Down	Train Type	Duration	L <sub>eq</sub>	L <sub>max</sub>
Up	Coal	0:04:18	60.7	71.9
Up	Coal	03:54.6	63.9	77
Up	Coal	00:51.5	71.4	81.6
Up	Coal	01:11.7	68.2	79.2
Up	Coal	01:52.5	64.3	73.7
<b>Up Average</b>		<b>02:25.7</b>	<b>67.3</b>	<b>76.7</b>
Down	Empty Coal	01:19.7	65.9	75.4
Down	Empty Coal	03:03.7	58.3	64.8
Down	Empty Coal	02:17.2	60.2	66.2
Down	Empty Coal	01:45.6	61.5	70.8
Down	Empty Coal	00:51.9	58.7	62.1
Down	Empty Coal	01:30.5	63.8	71.3
Down	Empty Coal	01:14.7	63.1	68.8
Down	Empty Coal	0:01:54	68.2	92.2
Down	Empty Coal	0:02:17	60.4	73.8
<b>Down Average</b>		<b>0:01:48</b>	<b>63.0</b>	<b>71.7</b>
Up	Passenger	00:08.7	53.2	57.1
Down	Passenger	00:06.7	54.1	58.0
<b>Passenger Average</b>		<b>00:07.7</b>	<b>53.7</b>	<b>57.6</b>



Statistical Ambient Noise Levels  
Hardy - Tuesday 28 July 2009

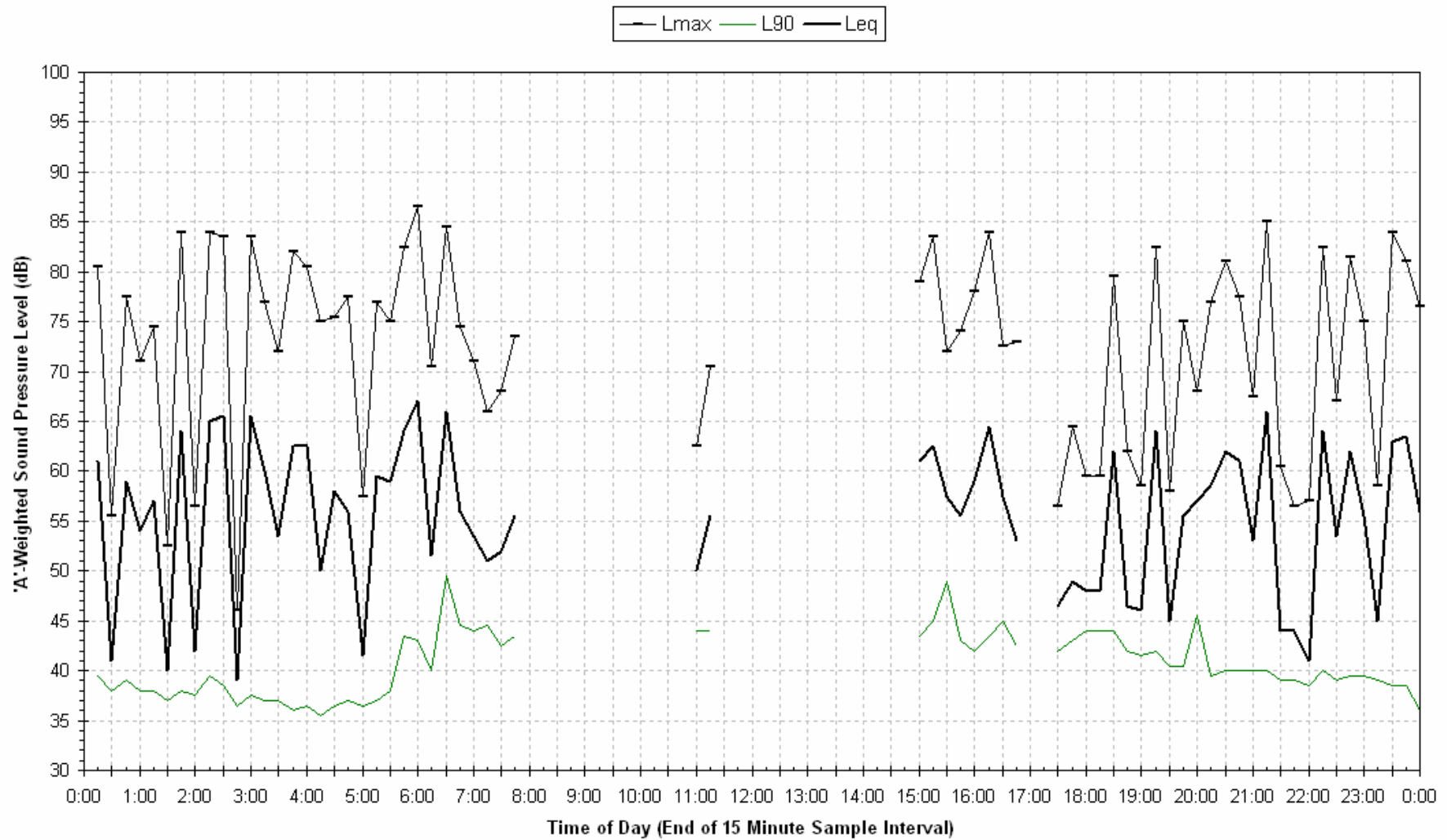


Statistical Ambient Noise Levels  
Hardy - Wednesday 29 July 2009

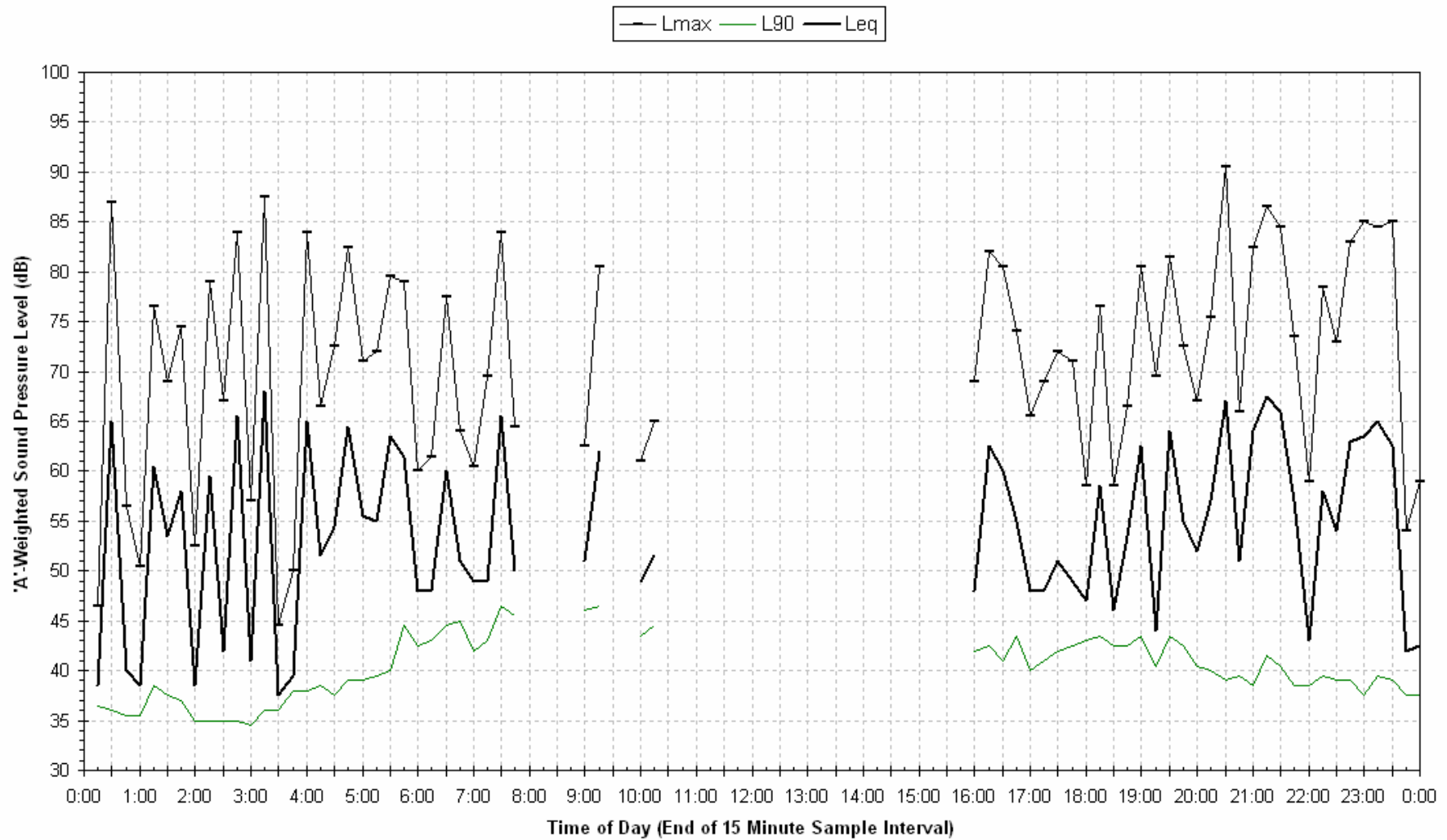




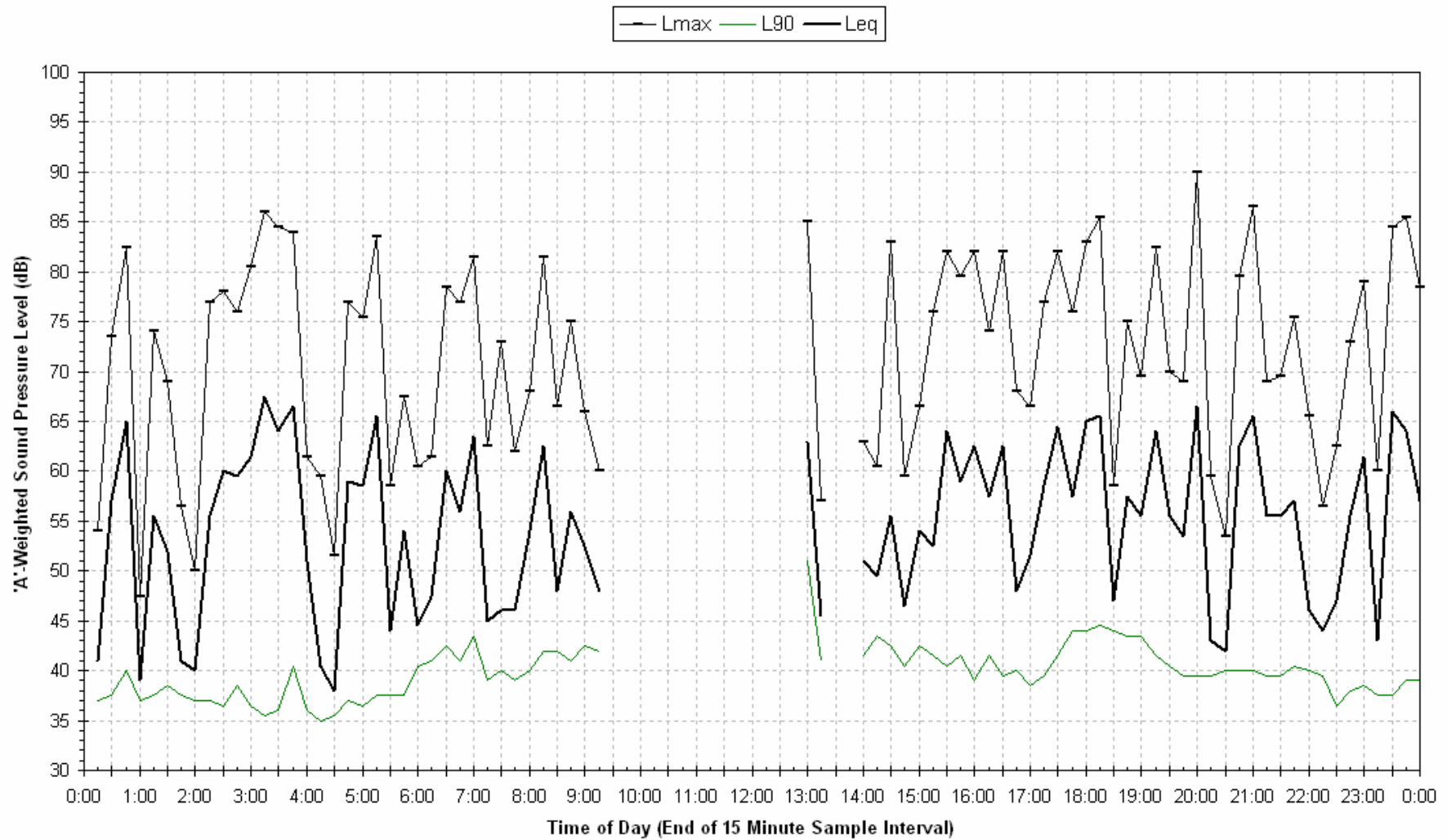
Statistical Ambient Noise Levels  
Hardy - Thursday 30 July 2009



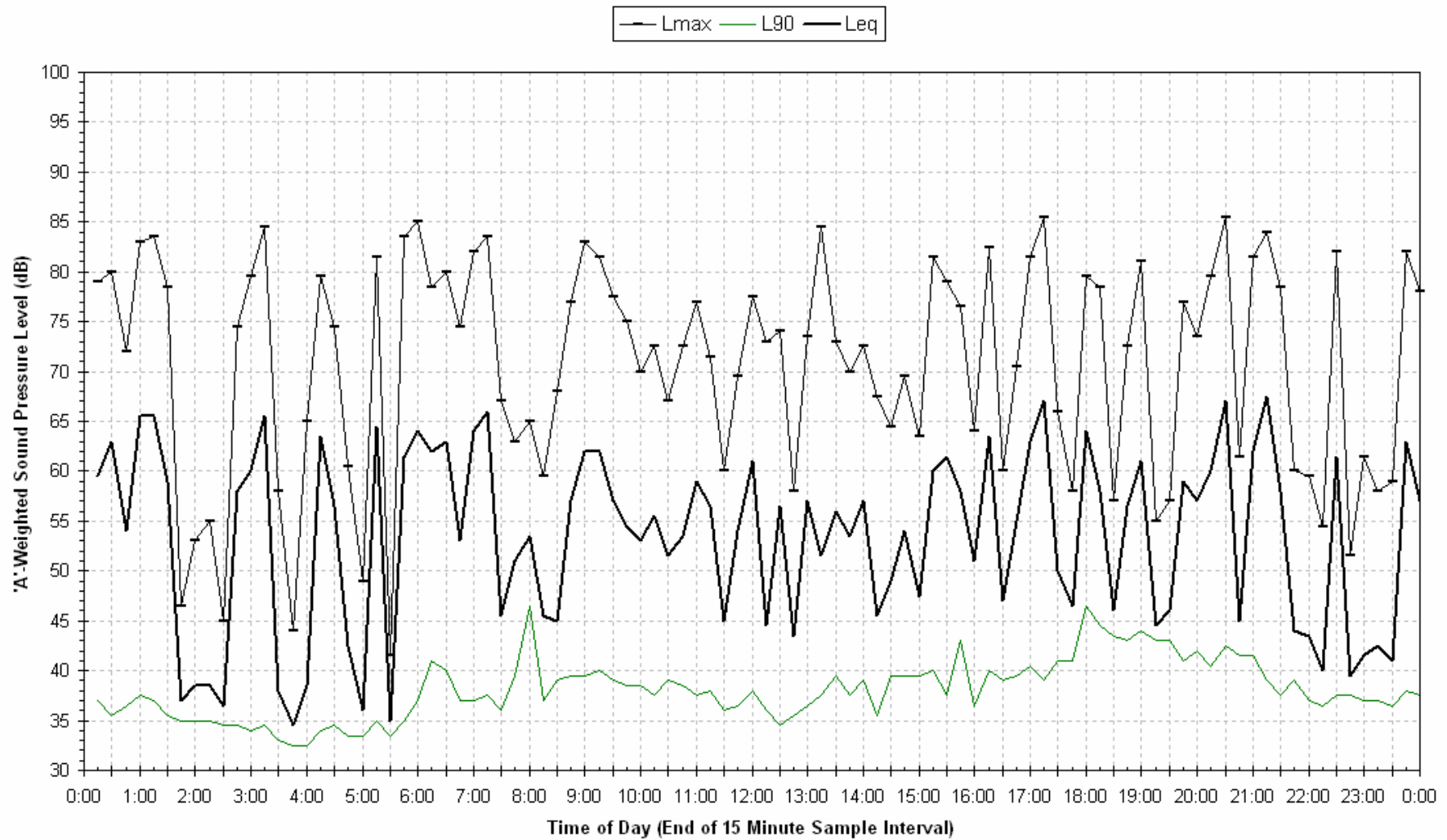
Statistical Ambient Noise Levels  
Hardy - Friday 31 July 2009



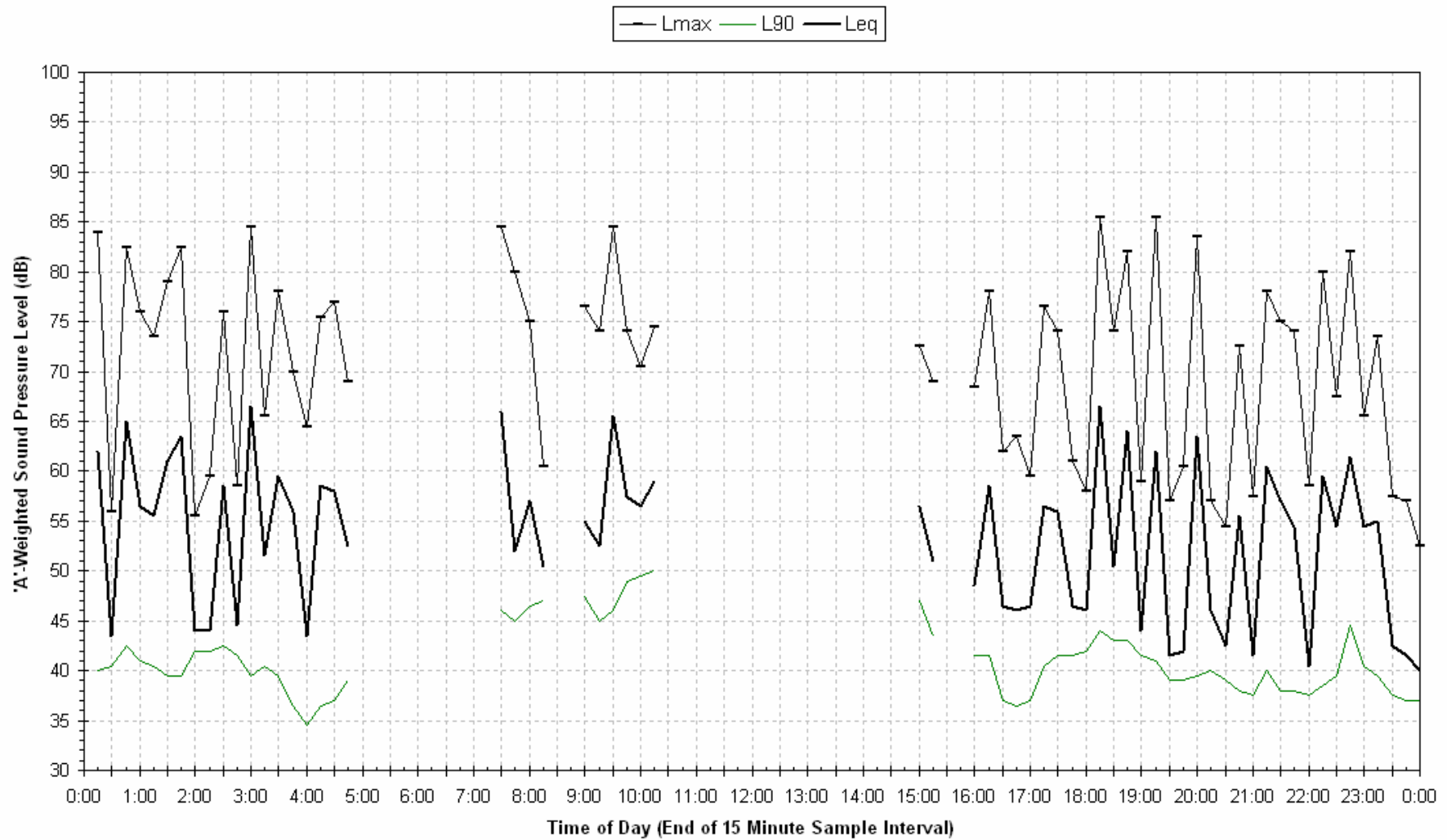
Statistical Ambient Noise Levels  
Hardy - Saturday 1 August 2009



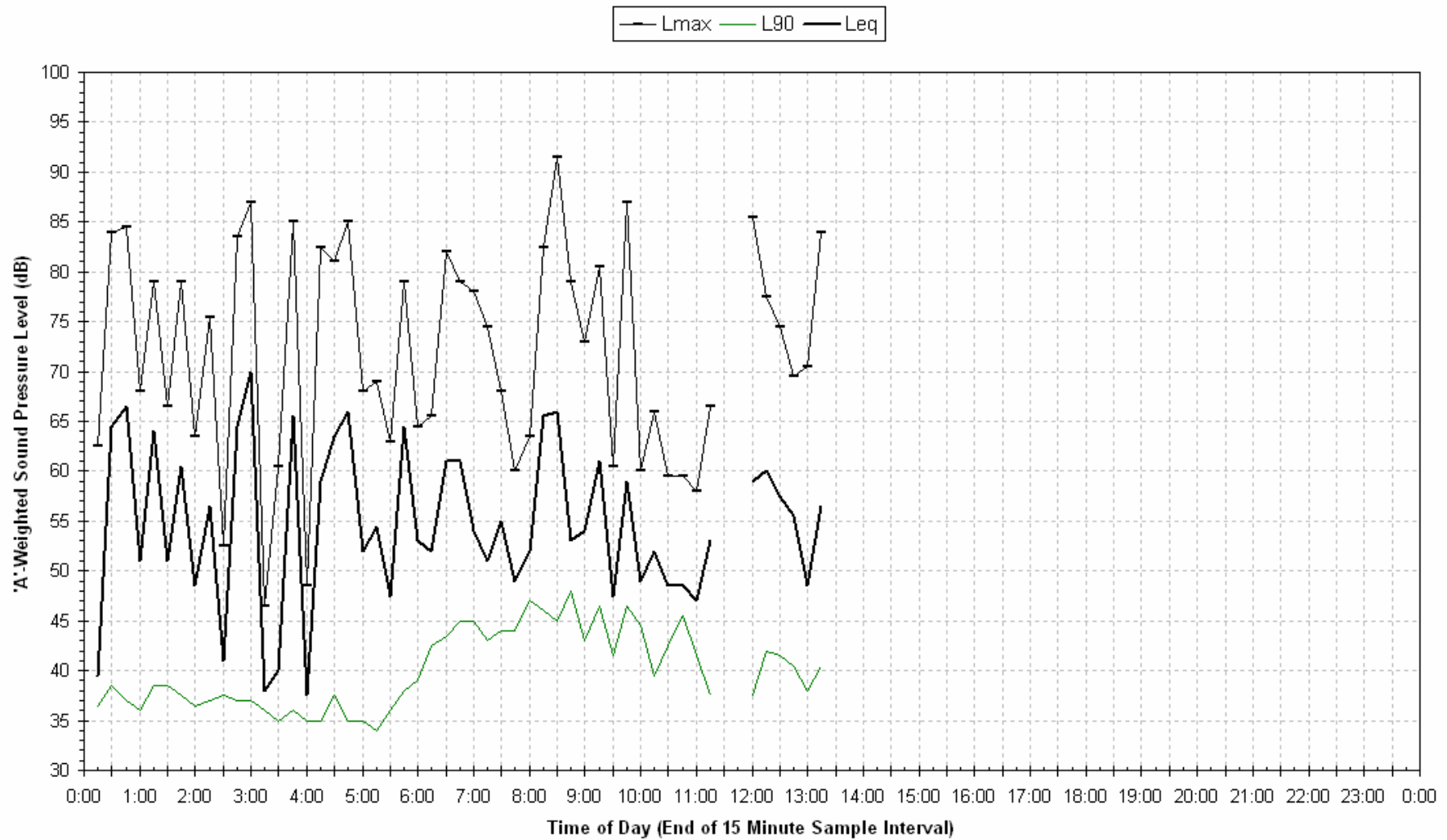
Statistical Ambient Noise Levels  
Hardy - Sunday 2 August 2009



Statistical Ambient Noise Levels  
Hardy - Monday 3 August 2009



Statistical Ambient Noise Levels  
Hardy - Tuesday 4 August 2009



## Logger 11 - Power

Noise Monitor ID	Allocated No.	Receiver Lot/Address	Registered Proprietor	NCA	Distance to Near Track (m)
L11	MMD-026	1 DP 852322	Power	D10	105

### Logger Location





## Site Photos – Logger 11



### Noise Logging Details (Unattended Monitoring)

L11

Logger Type	ARL EL 215
Serial Number	194528
Start of measurement period	08:20, 29/07/2009
End of measurement period	17:20, 05/08/2009
Frequency Weighting	A
Pre-Test Calibration Check	94.0 dB(A)
Post-Test Calibration Check	94.5 dB(A)
Time Response	Fast
Engineering Units	dB(A) SPL re:20μPa

### Passby Measurements Details (Attended Monitoring)

L11

Sound Level Meter	Bruel & Kjaer 2250
Serial Number	2506887
Measurement Dates	29/07/2009, 05/08/2009

### Logger 11 Noise Monitoring Results – Ambient Levels

Date	L <sub>eq</sub> 15hr dB(A)	L <sub>eq</sub> 9hr dB(A)
Wednesday-29-Jul-09	52.1	52.4
Thursday-30-Jul-09	53.3	53.0
Friday-31-Jul-09	51.6	52.1
Saturday-1-Aug-09	57.4	51.3
Sunday-2-Aug-09	53.7	51.9
Monday-3-Aug-09	52.0	52.3
Tuesday-4-Aug-09	53.6	52.8
Wednesday-5-Aug-09	52.3	-
<b>Overall</b>	<b>53.7</b>	<b>52.3</b>

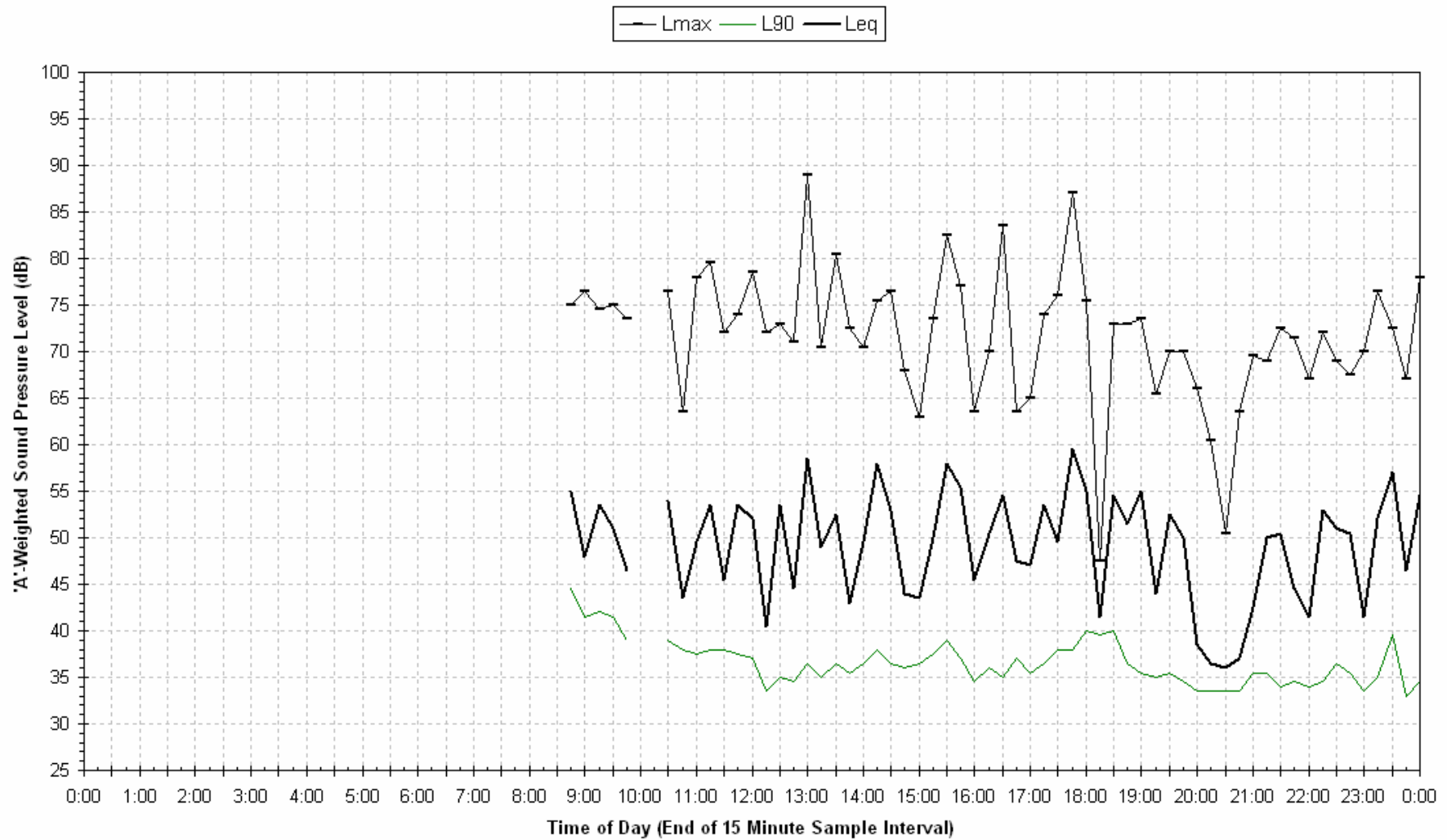
### Logger 11 Noise Monitoring Results – Background Levels

Date	Assessment Background Level L <sub>90</sub> dB(A)		
	Day	Evening	Night
Wednesday-29-Jul-09	-	33.5	33.3
Thursday-30-Jul-09	40.0	34.5	32.8
Friday-31-Jul-09	39.0	35.0	32.5
Saturday-1-Aug-09	36.4	31.0	31.0
Sunday-2-Aug-09	33.0	33.5	33.5
Monday-3-Aug-09	37.0	33.3	30.5
Tuesday-4-Aug-09	35.2	31.3	30.5
Wednesday-5-Aug-09	-	-	-
<b>RBL</b>	<b>36.7</b>	<b>33.5</b>	<b>32.5</b>

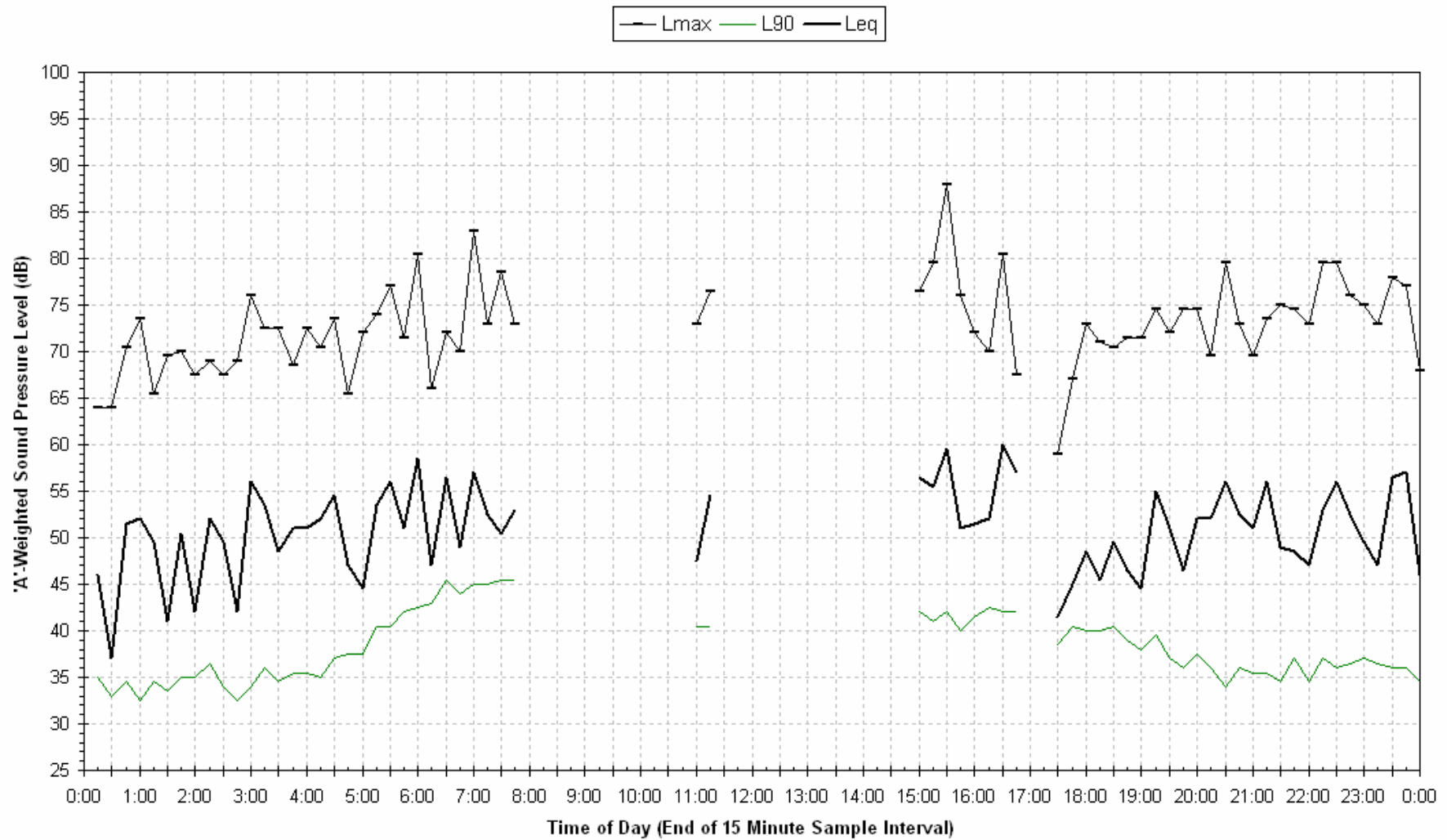
### Passby Measurement Results at Logger 11 Location dB(A)

Up/Down	Train Type	Duration	L <sub>eq</sub>	L <sub>max</sub>
Up	Coal	0:05:17	57.5	69.5
Up	Coal	0:01:17	51.7	61.2
Up	Coal	0:01:39	52.3	59.3
Up	Coal	0:01:41	54.4	63.1
Up	Coal	0:04:21	49.9	59.1
Down & Up	Coal	0:03:21	58.0	69.7
<b>Up Average</b>		<b>0:02:56</b>	<b>55.0</b>	<b>63.7</b>
Down & Up	Coal	0:03:21	58.0	69.7
Down	Empty Coal	0:01:06	54.5	61.5
Down	Empty Coal	0:04:24	51.7	60.9
Down	Empty Coal	0:02:22	54.9	60.7
Down	Empty Coal	0:01:54	61.9	73.9
Down	Empty Coal	0:01:06	58.1	64.0
Down	Empty Coal	0:02:05	62.3	74.5
Down	Empty Coal	0:01:57	57.9	67.4
Down	Empty Coal	0:02:41	59.8	71.0
Down	Empty Coal	0:02:07	59.4	69.4
<b>Down Average</b>		<b>0:02:18</b>	<b>58.9</b>	<b>67.3</b>
Up	Passenger	0:00:14	43.5	49.3
Up	Passenger	0:00:25	51.5	60.1
<b>Passenger Average</b>		<b>0:00:20</b>	<b>49.1</b>	<b>54.7</b>

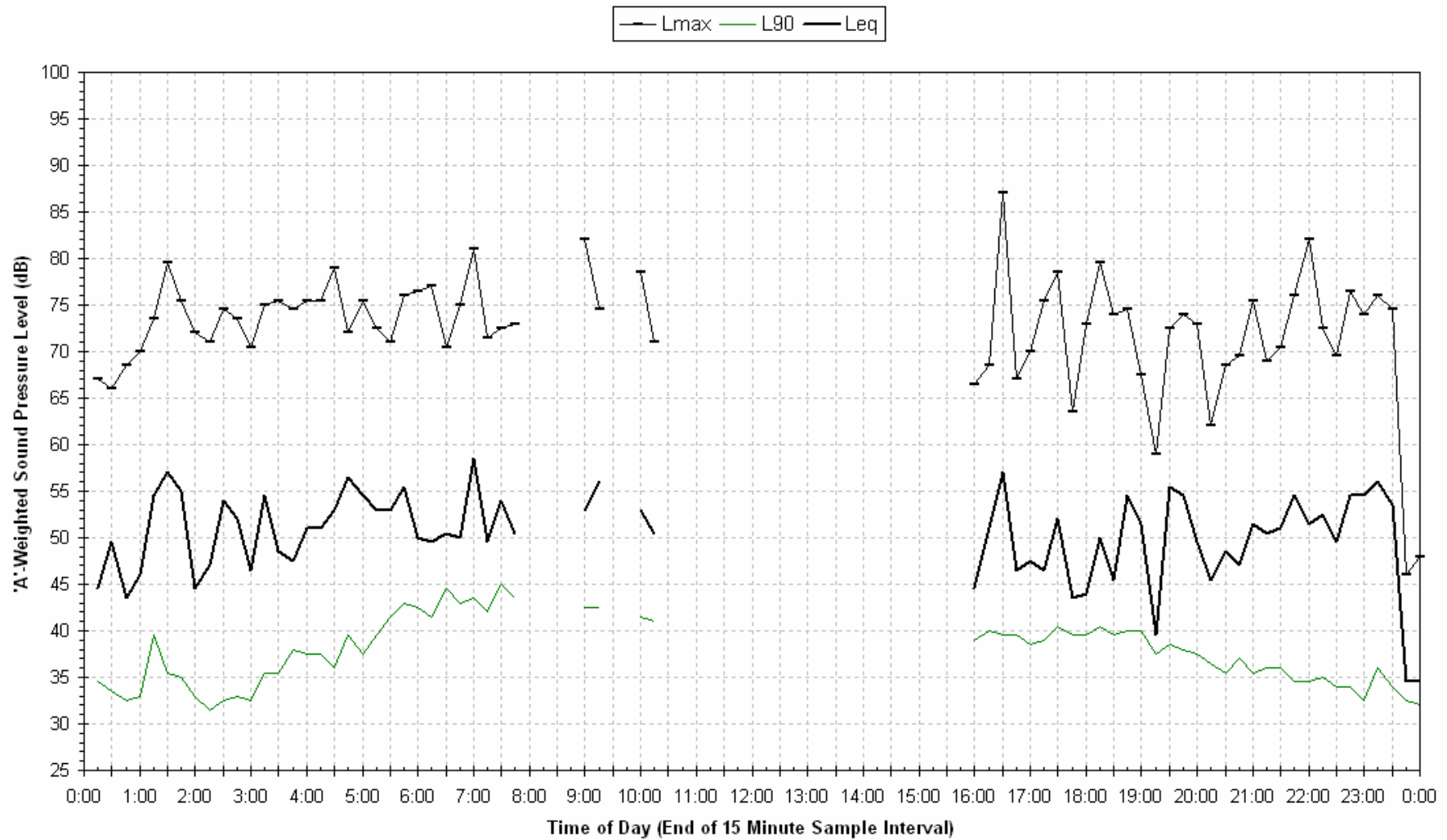
Statistical Ambient Noise Levels  
Power - Wednesday 29 July 2009



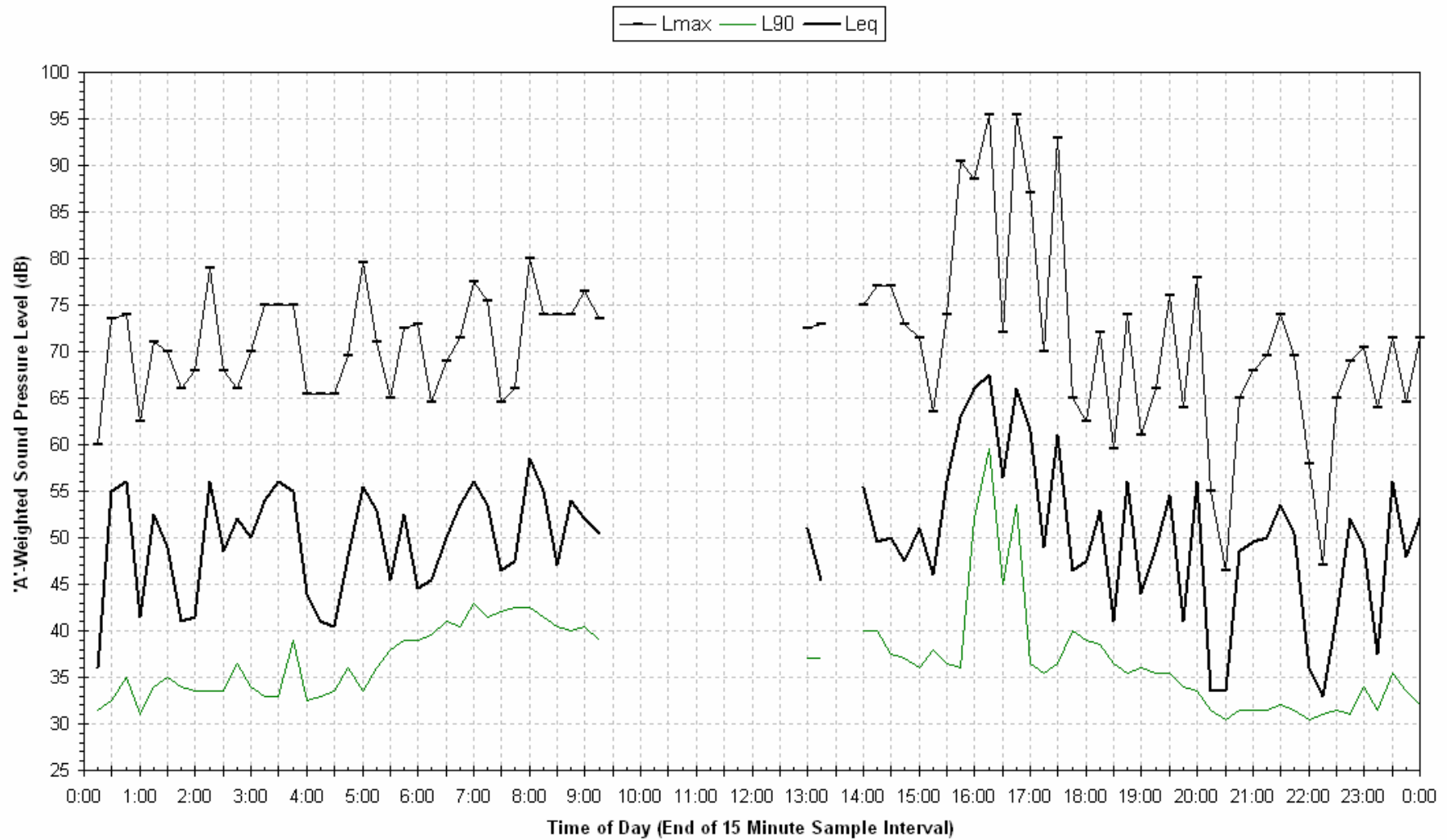
**Statistical Ambient Noise Levels  
Power - Thursday 30 July 2009**



Statistical Ambient Noise Levels  
Power - Friday 31 July 2009

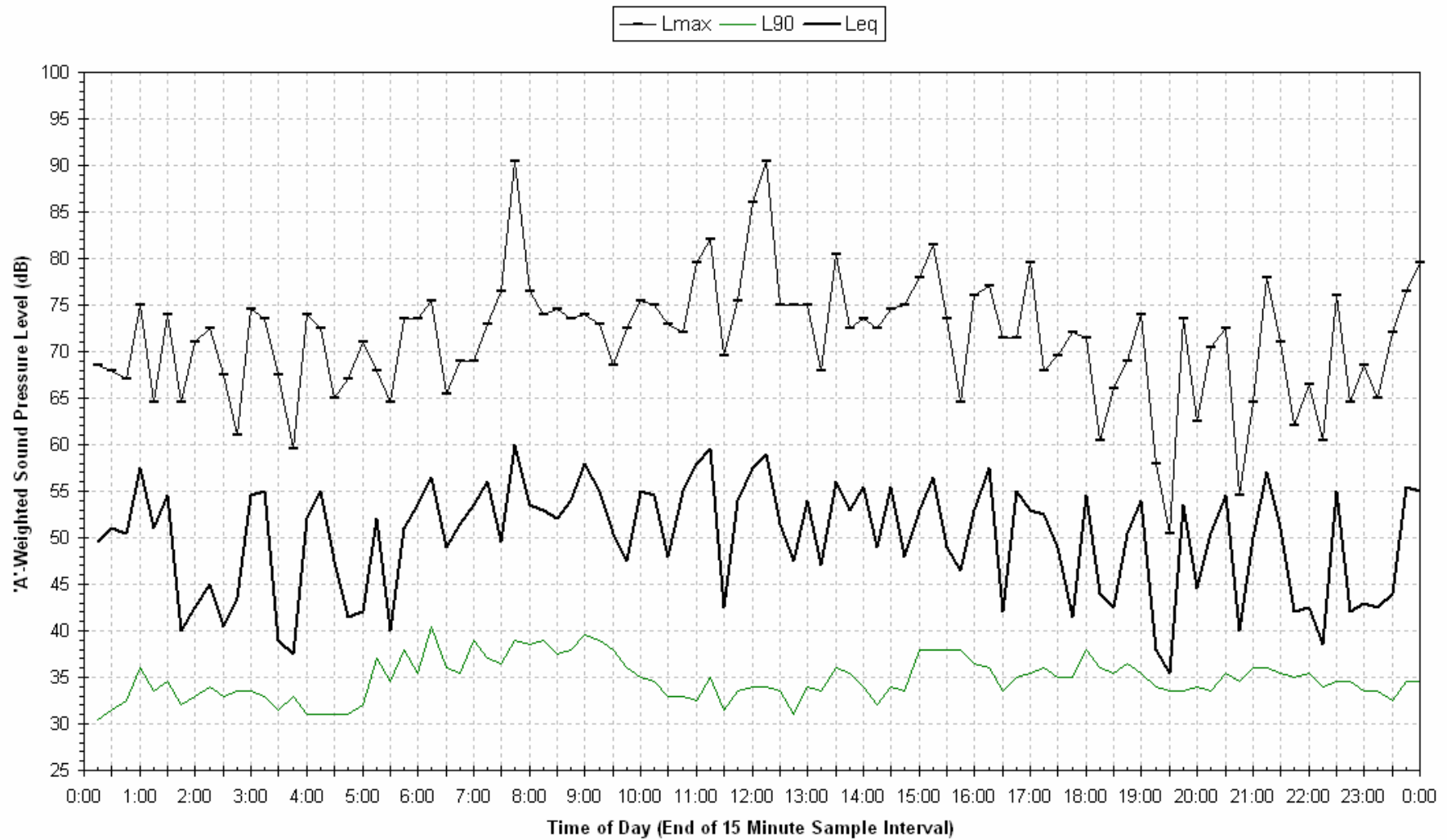


Statistical Ambient Noise Levels  
Power - Saturday 1 August 2009

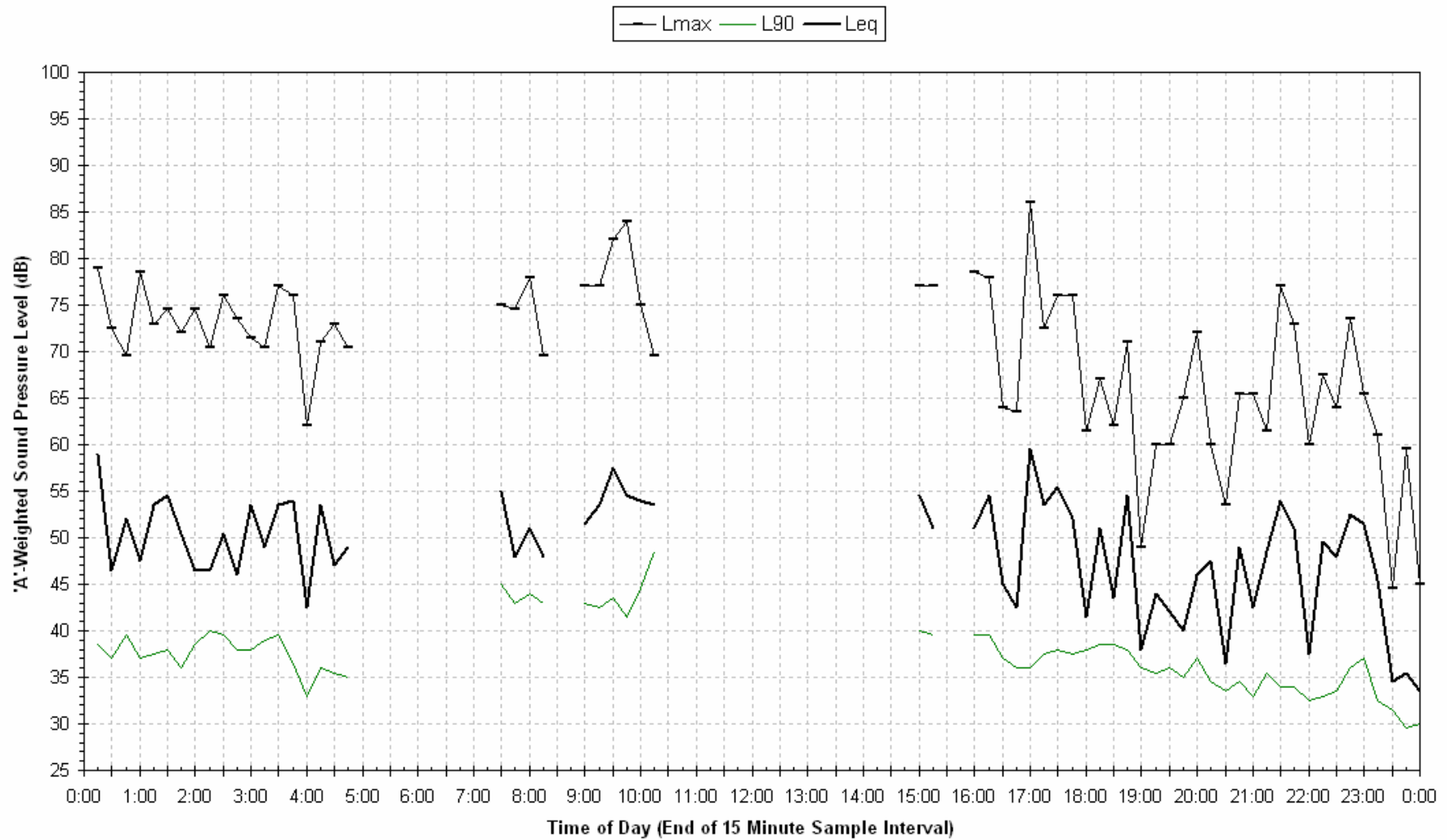




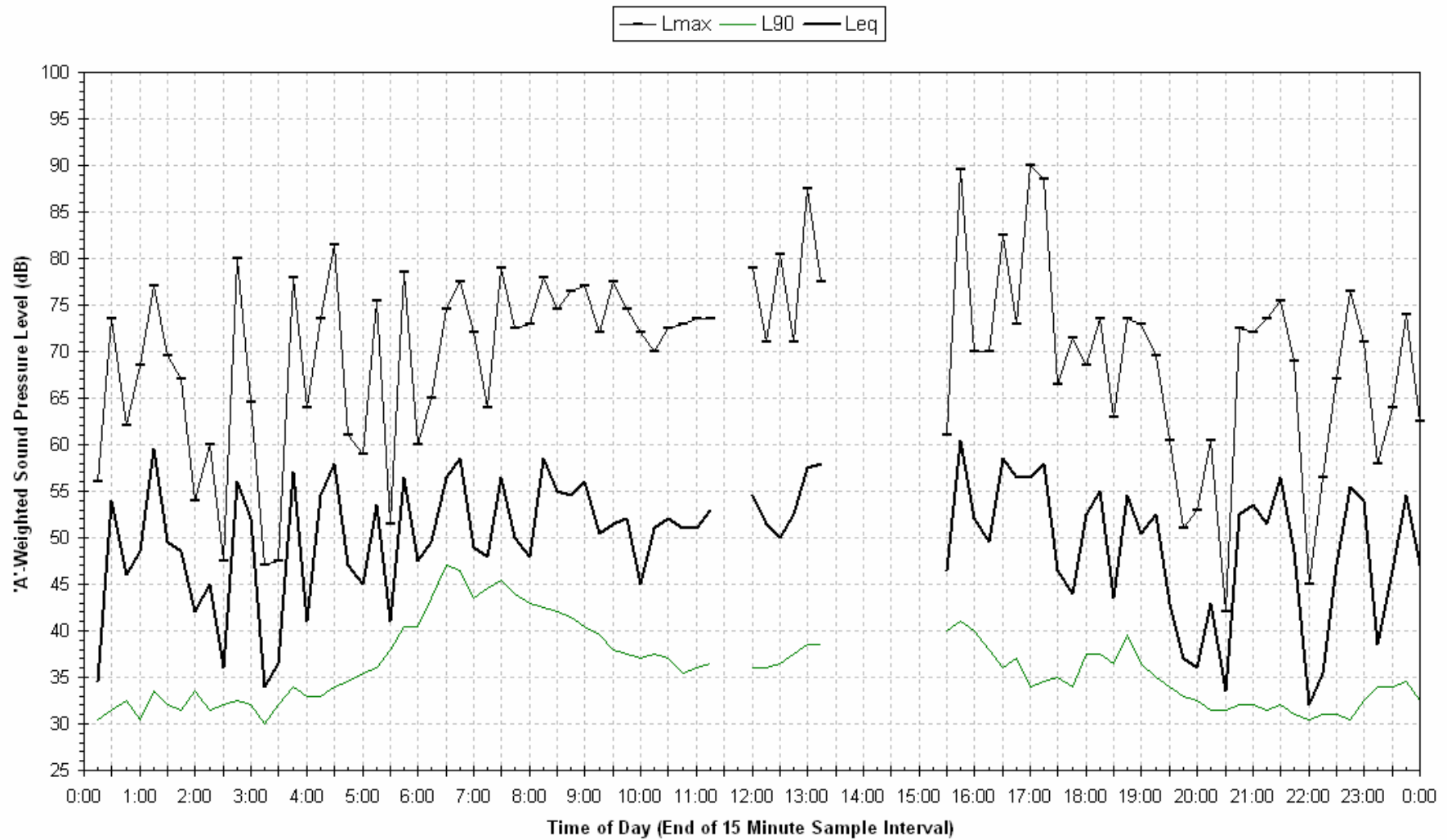
Statistical Ambient Noise Levels  
Power - Sunday 2 August 2009



Statistical Ambient Noise Levels  
Power - Monday 3 August 2009



Statistical Ambient Noise Levels  
Power - Tuesday 4 August 2009



Statistical Ambient Noise Levels  
Power - Wednesday 5 August 2009



## Logger 12 - Benson

Noise Monitor ID	Allocated No.	Receiver Lot/Address	Registered Proprietor	NCA	Distance to Near Track (m)
L12	Not Allocated	30 DP 848387	Benson	D10	275

### Logger Location





## Site Photos – Logger 12



### Noise Logging Details (Unattended Monitoring)

L12

Logger Type	ARL EL 215
Serial Number	194537
Start of measurement period	10:30, 11/09/2009
End of measurement period	10:20, 22/09/2009
Frequency Weighting	A
Pre-Test Calibration Check	93.8 dB(A)
Post-Test Calibration Check	93.8 dB(A)
Time Response	Fast
Engineering Units	dB(A) SPL re:20µPa

### Passby Measurements Details (Attended Monitoring)

L12

Sound Level Meter	Brüel & Kjær 2250
Serial Number	2506887
Measurement Dates	25/09/2009

### Logger 12 Noise Monitoring Results – Ambient Levels

Date	L <sub>eq</sub> 15hr dB(A)	L <sub>eq</sub> 9hr dB(A)
Friday-11-Sep-09	51.0	53.8
Saturday-12-Sep-09	54.4	52.5
Sunday-13-Sep-09	51.8	53.4
Monday-14-Sep-09	48.0	48.3
Tuesday-15-Sep-09	49.2	49.9
Wednesday-16-Sep-09	48.3	50.2
Thursday-17-Sep-09	50.9	51.5
Friday-18-Sep-09	50.1	50.7
Saturday-19-Sep-09	51.2	53.1
Sunday-20-Sep-09	55.7	51.4
Monday-21-Sep-09	48.9	52.9
Tuesday-22-Sep-09	47.5	-
<b>Overall</b>	<b>51.3</b>	<b>51.9</b>

### Logger 12 Noise Monitoring Results – Background Levels

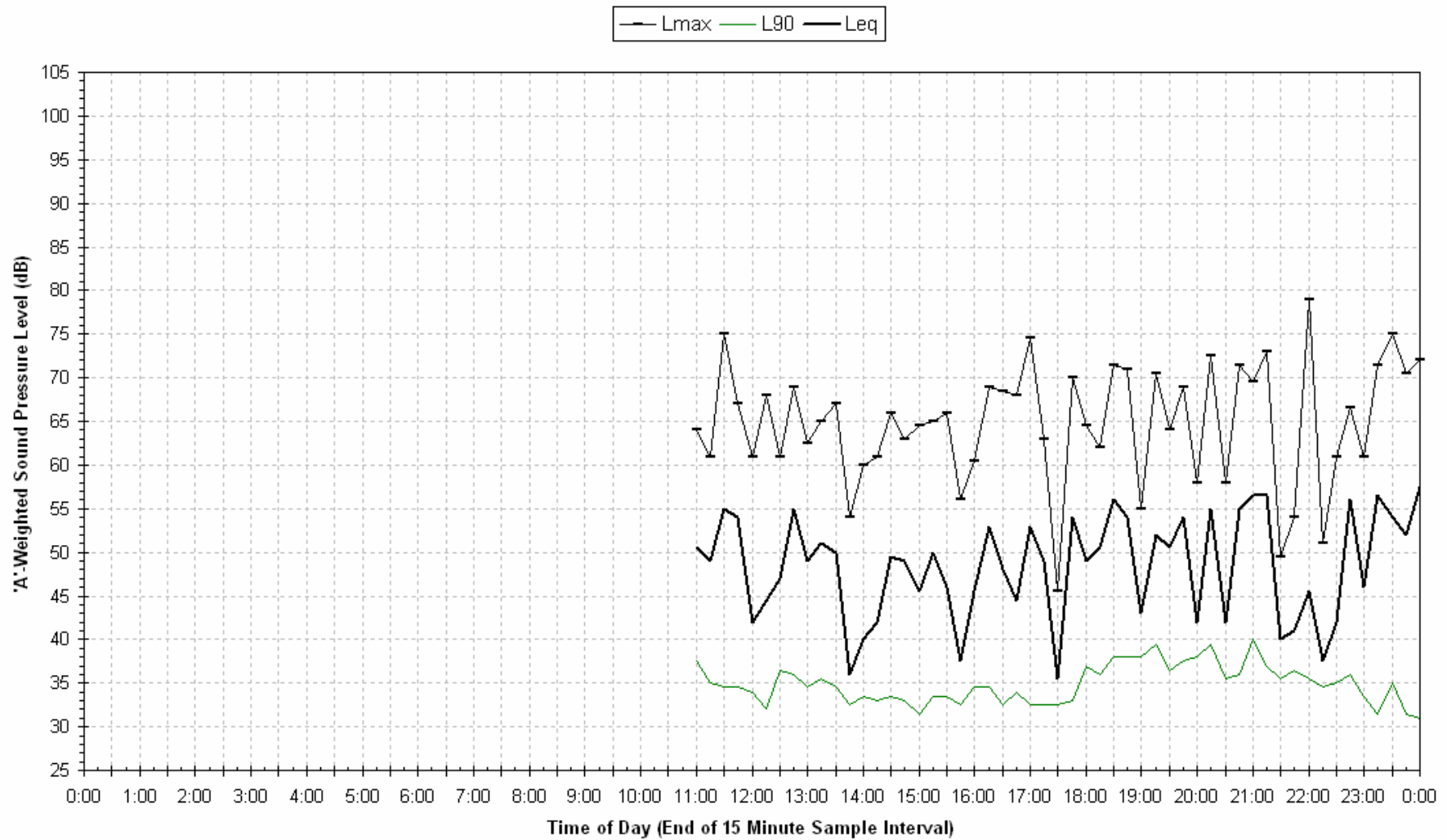
Date	Assessment Background Level L <sub>90</sub> dB(A)		
	Day	Evening	Night
Friday-11-Sep-09	-	35.5	31.3
Saturday-12-Sep-09	32.5	31.3	30.0
Sunday-13-Sep-09	36.0	34.0	30.0
Monday-14-Sep-09	31.9	31.5	29.0
Tuesday-15-Sep-09	31.0	35.8	29.0
Wednesday-16-Sep-09	30.0	34.0	30.0
Thursday-17-Sep-09	34.9	34.8	33.7
Friday-18-Sep-09	32.7	31.0	28.5
Saturday-19-Sep-09	31.0	34.9	29.5
Sunday-20-Sep-09	32.0	34.2	29.0
Monday-21-Sep-09	30.0	35.3	32.0
Tuesday-22-Sep-09	-	-	-
<b>RBL</b>	<b>32.0</b>	<b>34.2</b>	<b>30.0</b>



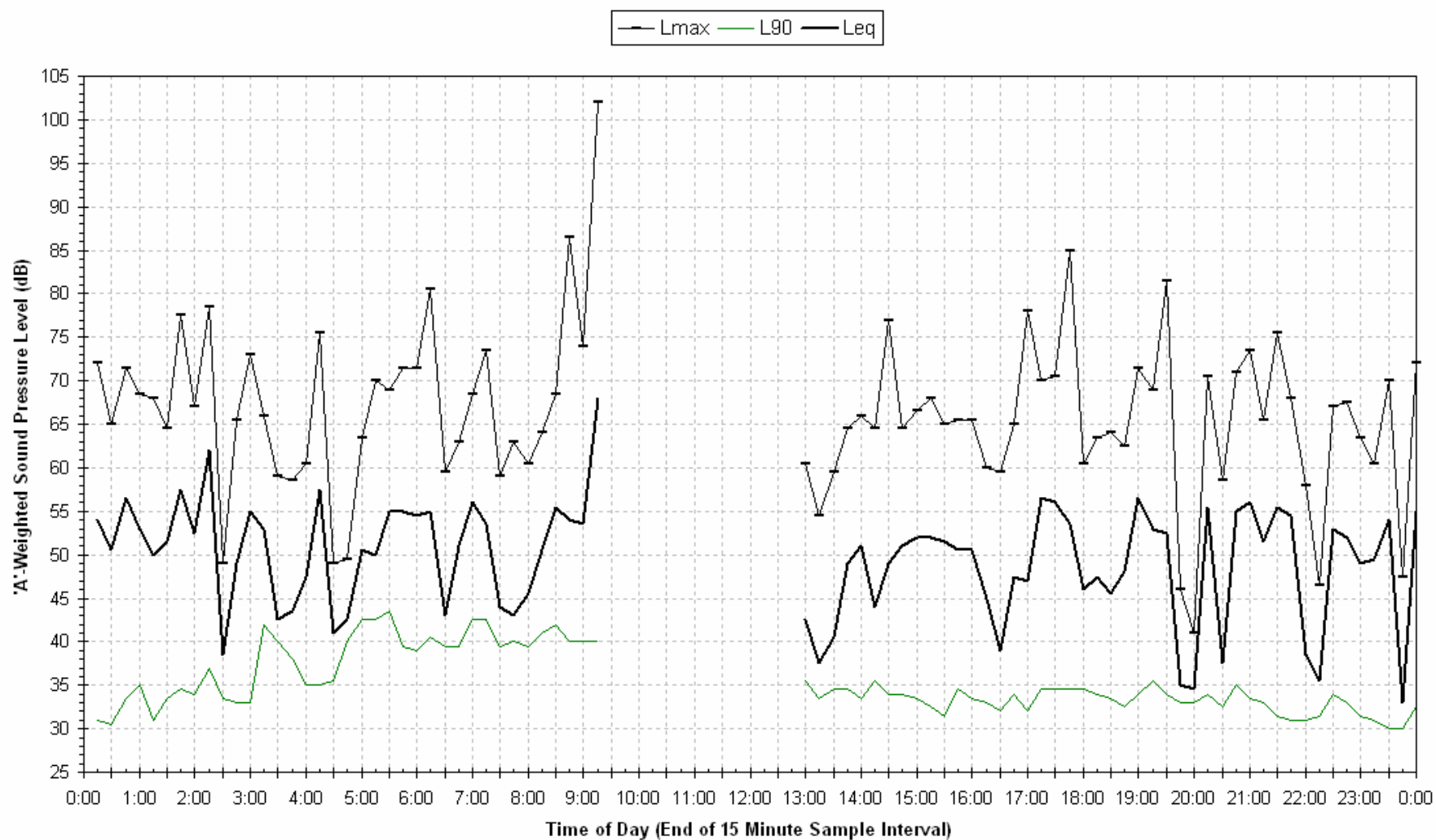
### Passby Measurement Results at Logger 12 Location dB(A)

Up/Down	Train Type	Duration	L <sub>eq</sub>	L <sub>max</sub>
Up	Coal	0:03:08	58.1	73.6
Up	Coal	0:02:13	57.5	65.3
Up	Coal	0:03:07	52	71.8
Up	Coal	0:02:40	54.9	59.3
Up	Coal	0:01:03	60.5	66.6
<b>Up Average</b>		<b>0:02:26</b>	<b>57.5</b>	<b>67.3</b>
Down	Empty Coal	0:01:10	61.1	65.6
Down	Empty Coal	0:02:11	57.8	65
Down	Empty Coal	0:01:42	61.2	66.9
Down	Empty Coal	0:01:41	60.7	65.8
<b>Down Average</b>		<b>0:01:41</b>	<b>60.4</b>	<b>65.8</b>
Up	Passenger	0:00:16	48.4	50.3
Down	Passenger	0:00:17	57.5	64.3
<b>Passenger Average</b>		<b>0:00:16</b>	<b>55.0</b>	<b>57.3</b>

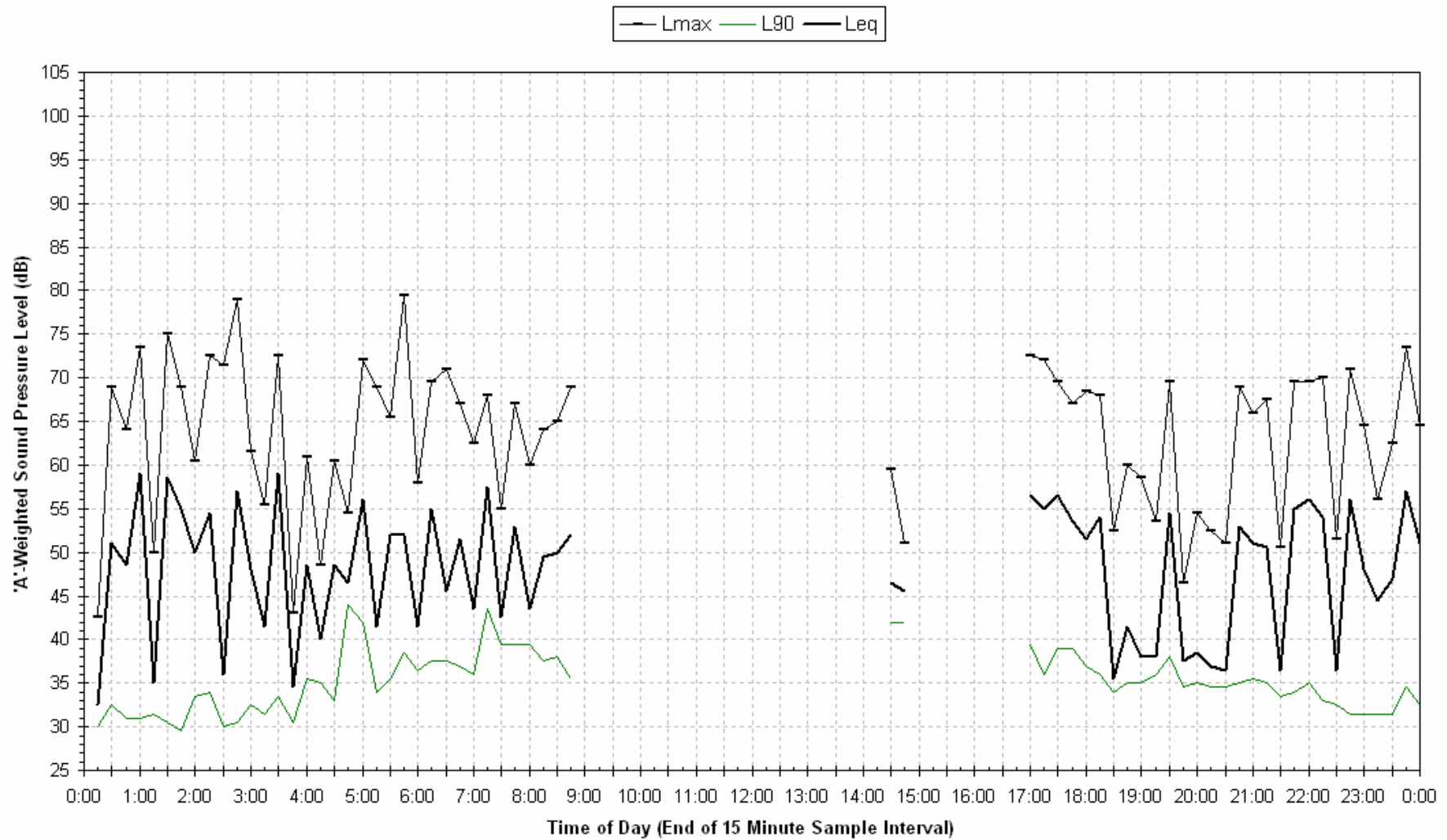
Statistical Ambient Noise Levels  
Benson - Friday 11 September 2009



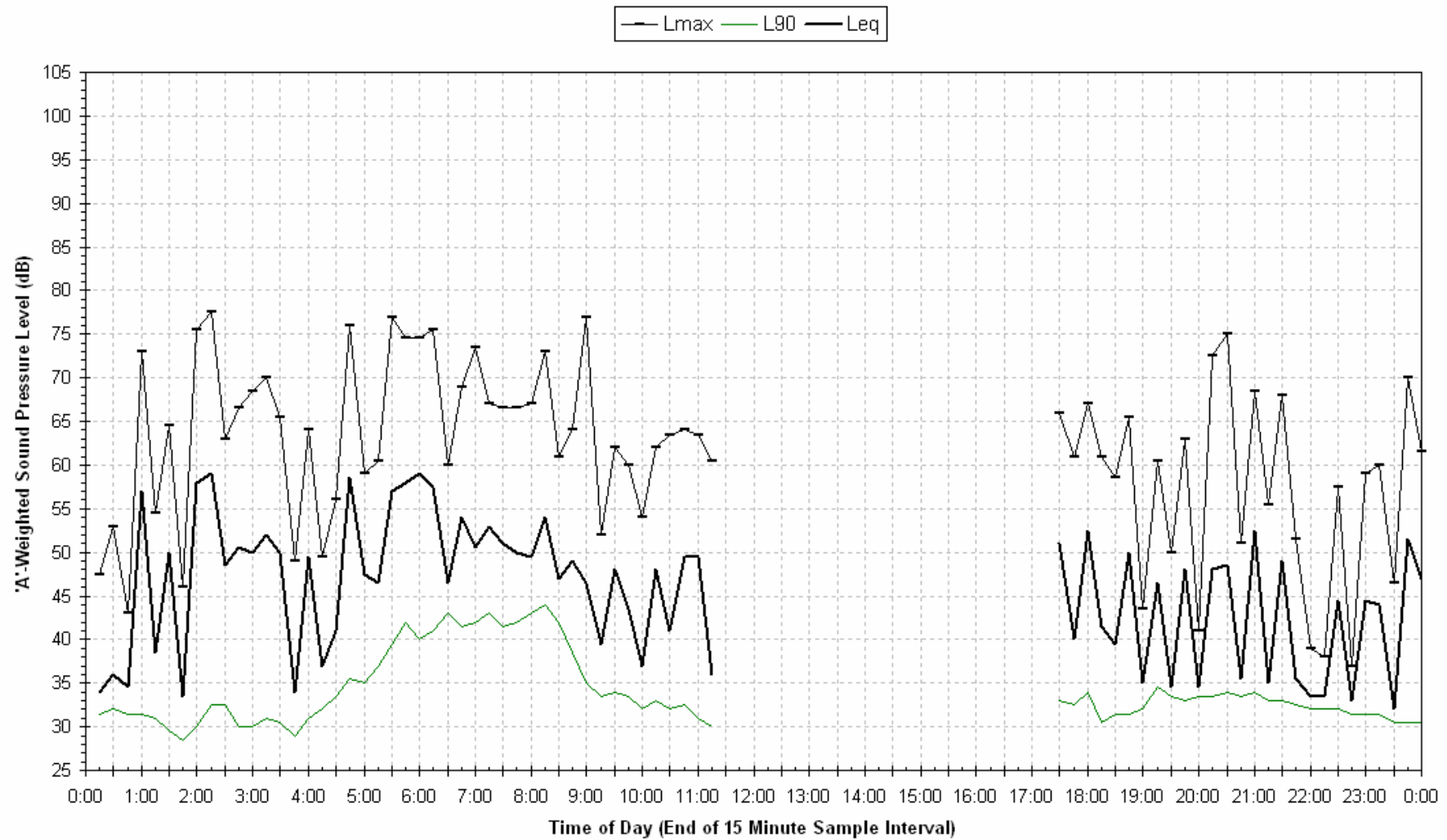
**Statistical Ambient Noise Levels  
Benson - Saturday 12 September 2009**



Statistical Ambient Noise Levels  
Benson - Sunday 13 September 2009



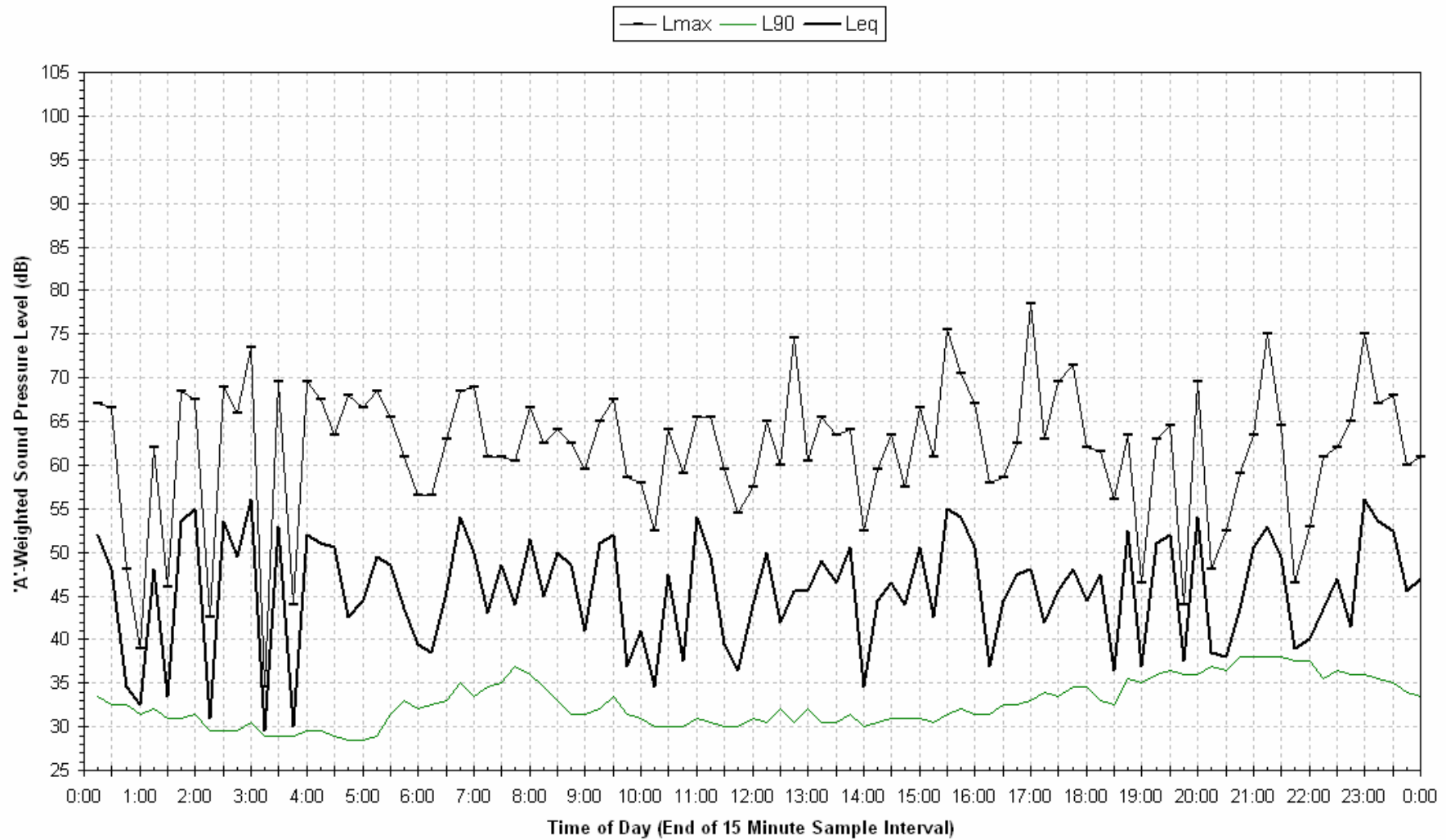
Statistical Ambient Noise Levels  
Benson - Monday 14 September 2009



Statistical Ambient Noise Levels  
Benson - Tuesday 15 September 2009

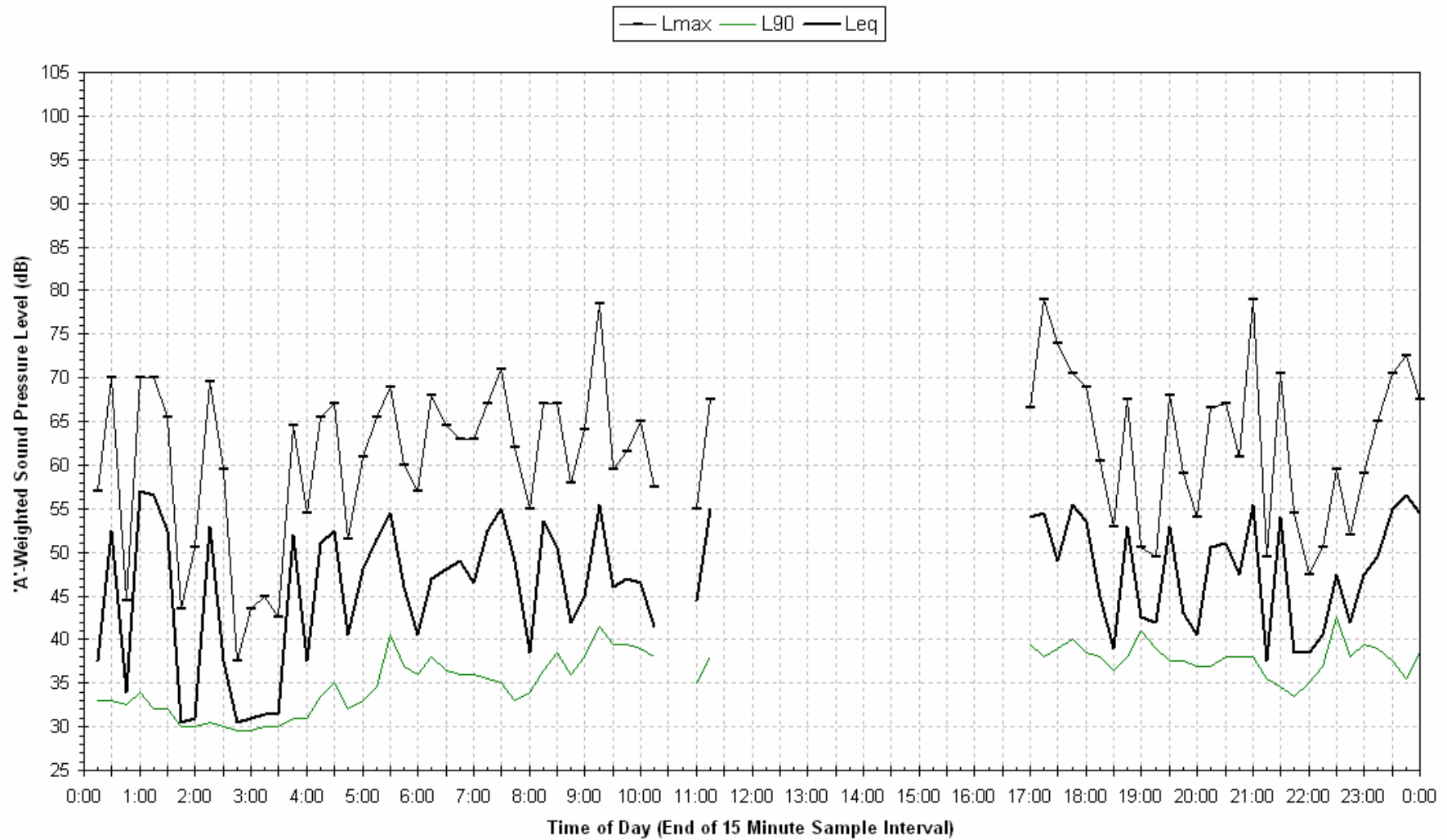


Statistical Ambient Noise Levels  
Benson - Wednesday 16 September 2009

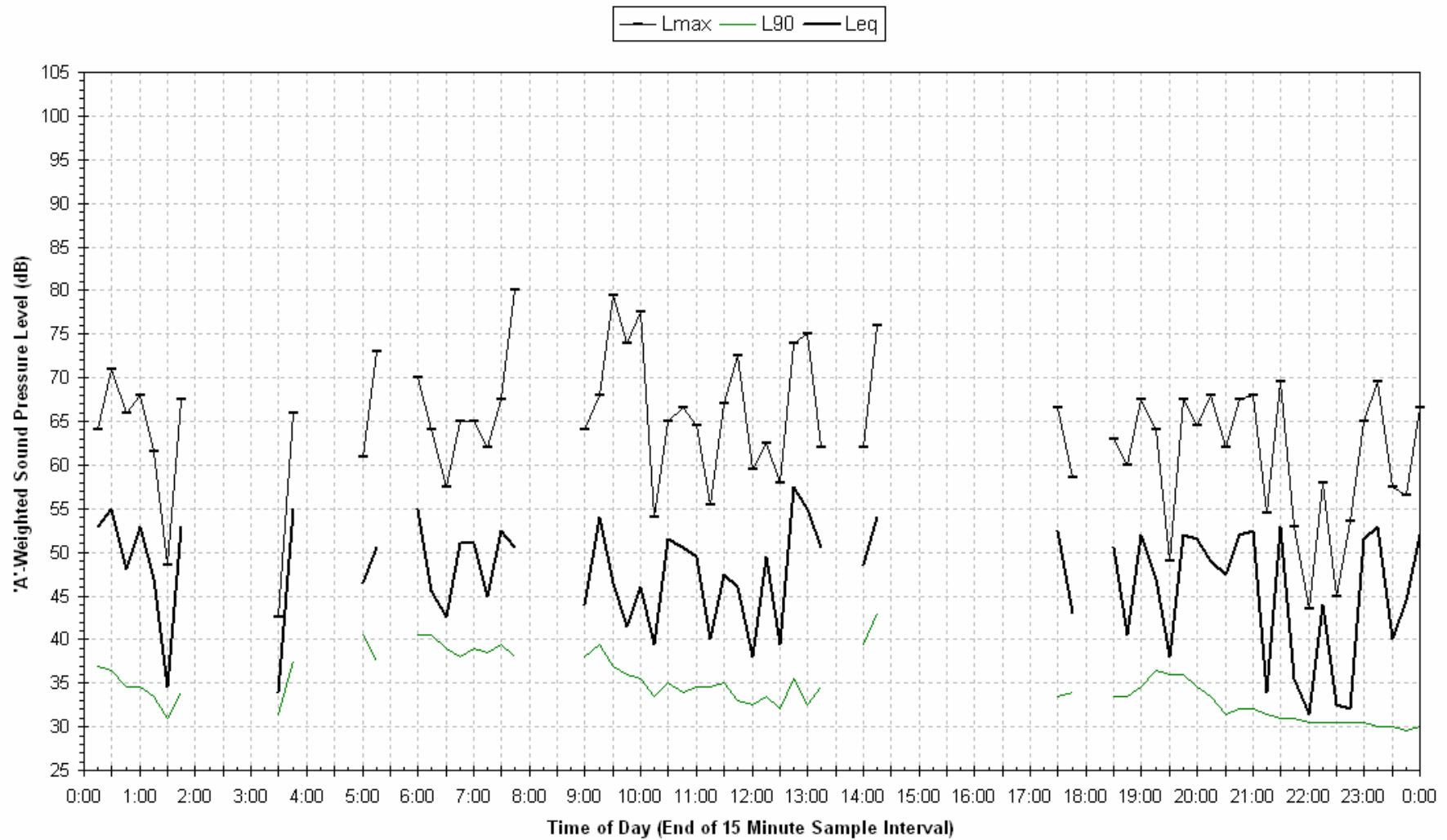




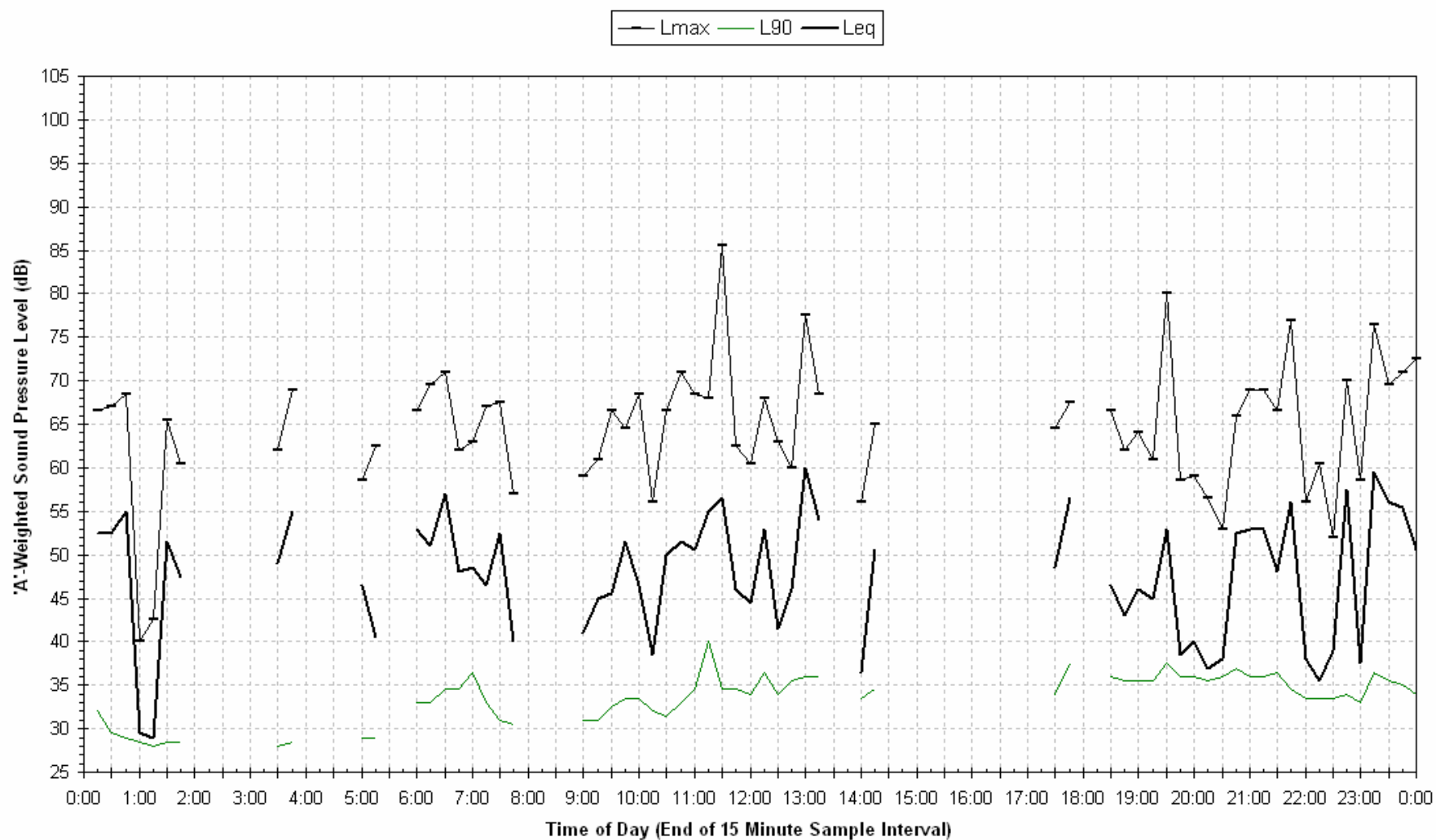
Statistical Ambient Noise Levels  
Benson - Thursday 17 September 2009



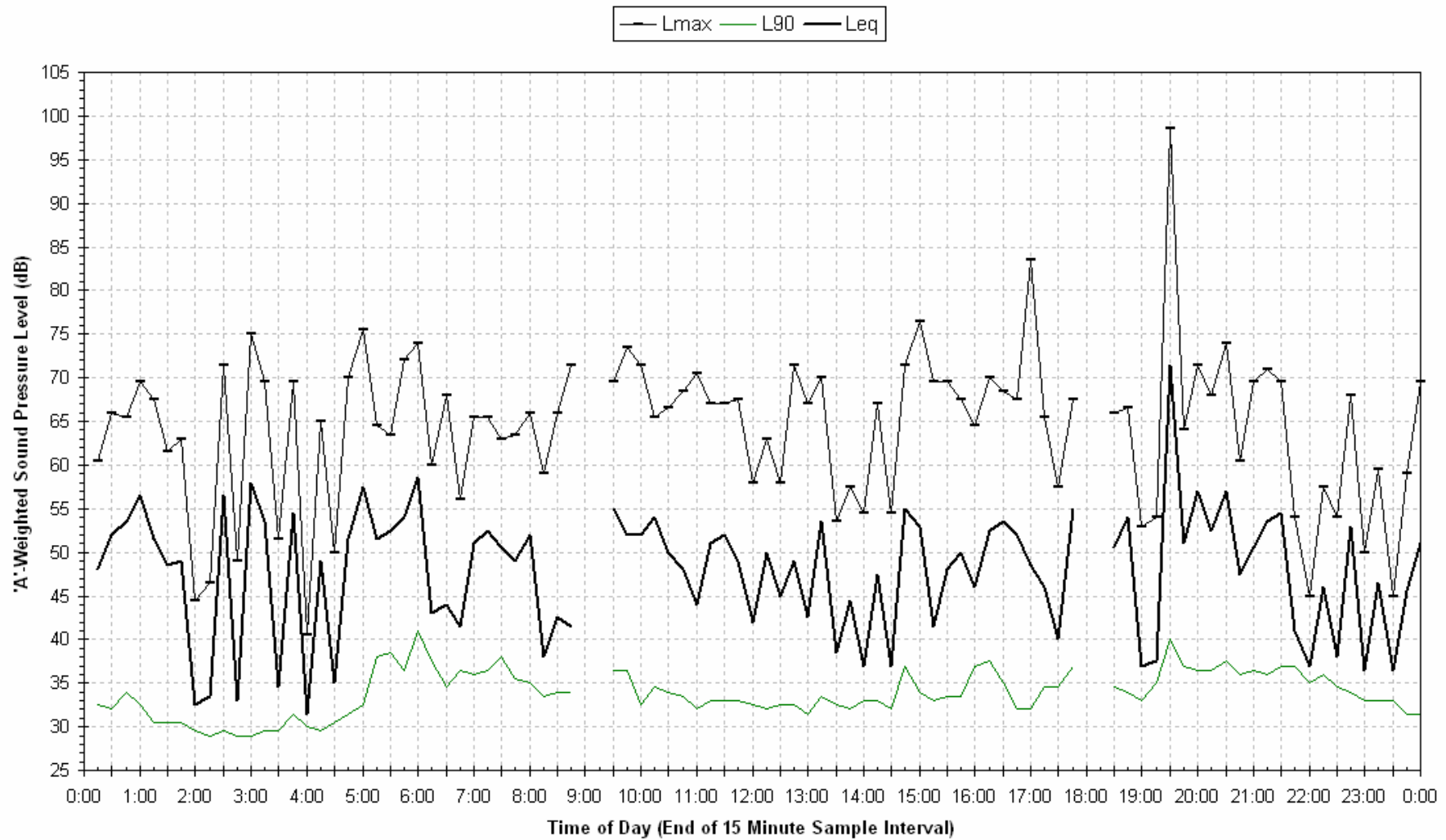
**Statistical Ambient Noise Levels  
Benson - Friday 18 September 2009**



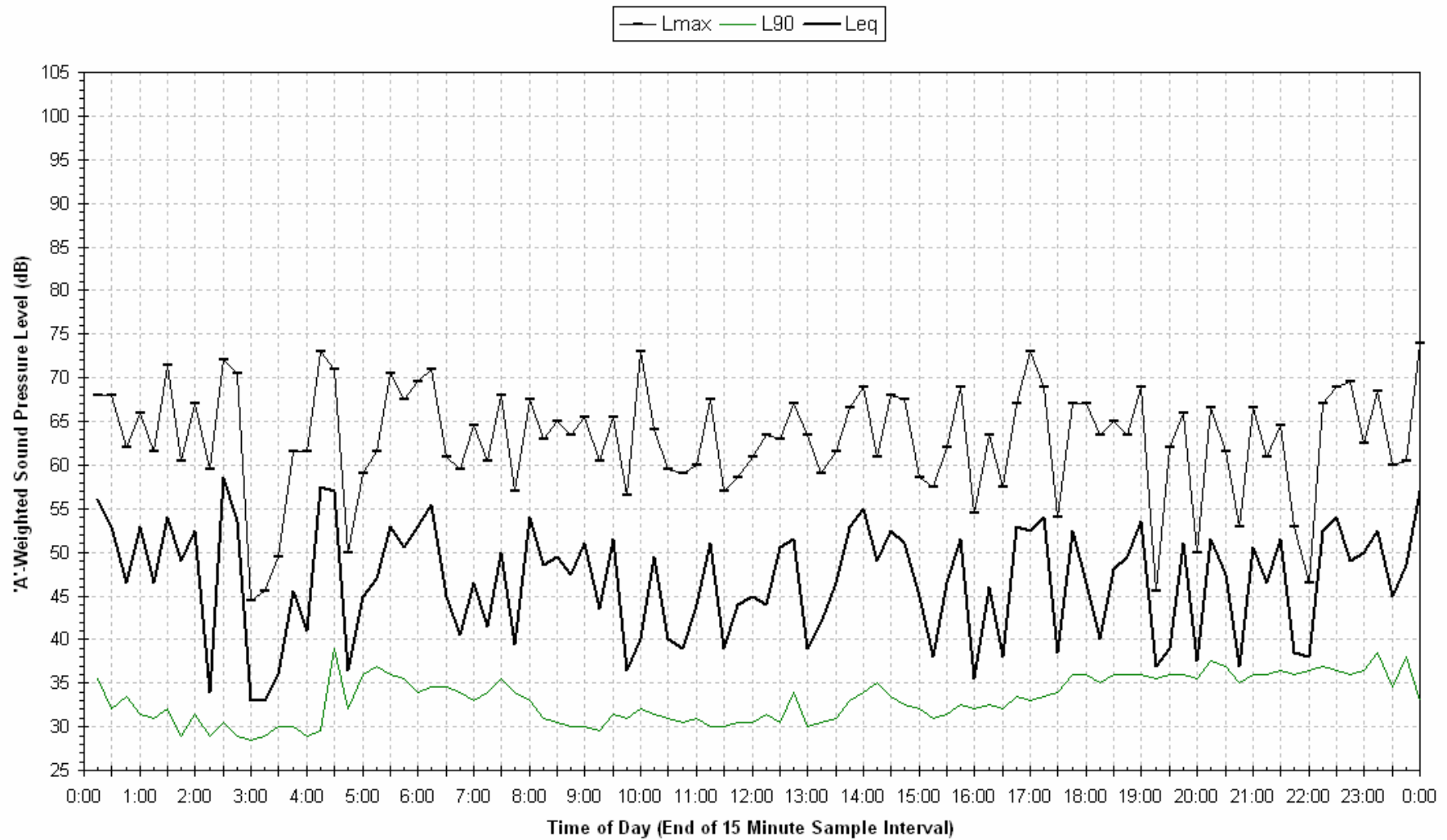
**Statistical Ambient Noise Levels  
Benson - Saturday 19 September 2009**



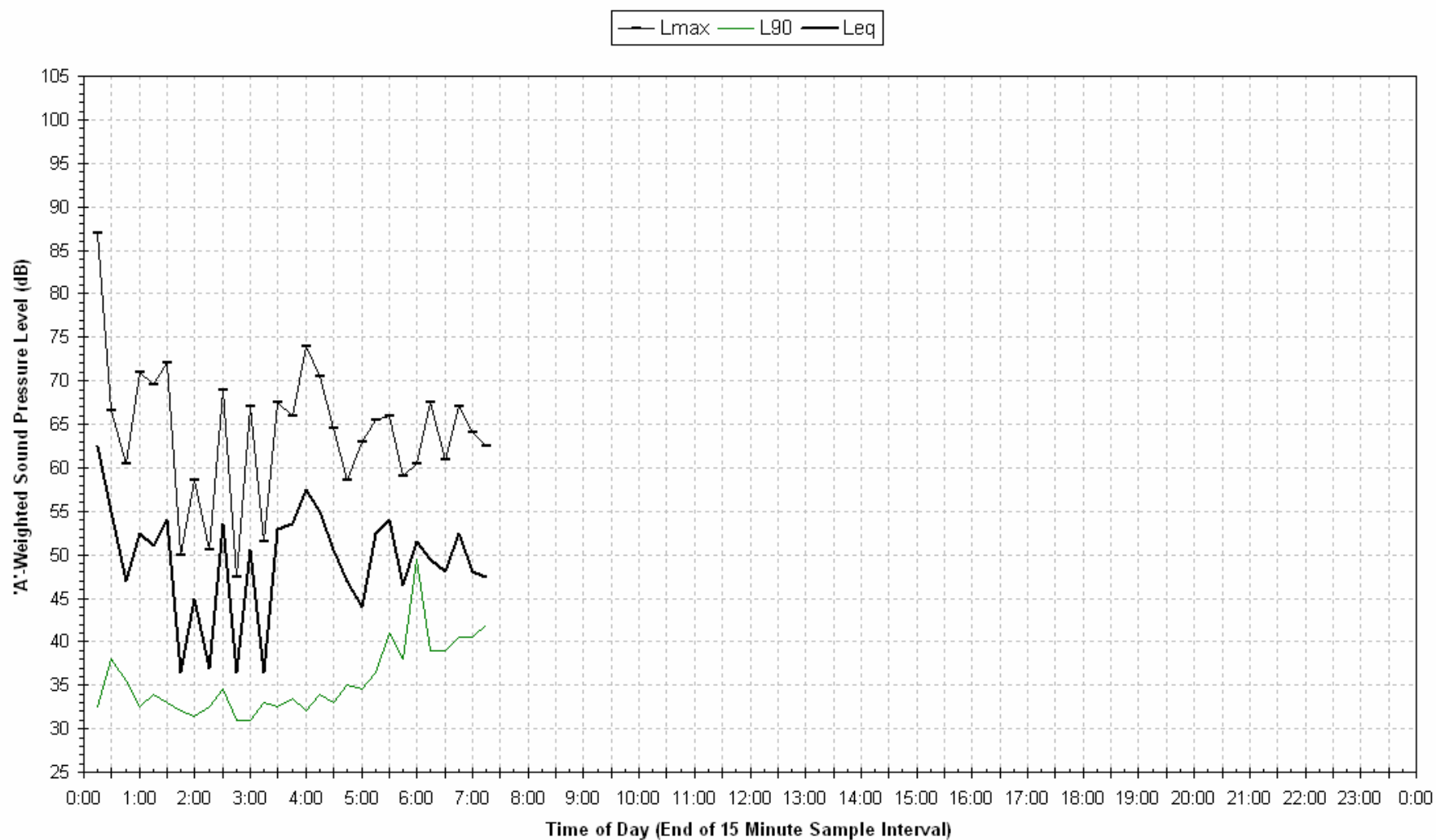
Statistical Ambient Noise Levels  
Benson - Sunday 20 September 2009



Statistical Ambient Noise Levels  
Benson - Monday 21 September 2009



Statistical Ambient Noise Levels  
Benson - Tuesday 22 September 2009



Logger 13 – Morrison (Clifton House)

Noise Monitor ID	Allocated No.	Receiver Lot/Address	Registered Proprietor	NCA	Distance to Near Track (m)
L13	MMD-029	80 DP 1003006	Morrison	D11	35





## Site Photos – Logger 13



### Noise Logging Details (Unattended Monitoring)

L13

Logger Type	ARL EL 215
Serial Number	194534
Start of measurement period	16:00, 28/07/2009
End of measurement period	17:30, 04/08/2009
Frequency Weighting	A
Pre-Test Calibration Check	94.6 dB(A)
Post-Test Calibration Check	94.7 dB(A)
Time Response	Fast
Engineering Units	dB(A) SPL re:20μPa

### Passby Measurements Details (Attended Monitoring)

L13

Sound Level Meter	Larson Davis 831
Serial Number	01620
Measurement Dates	29/07/2009, 04/08/2009



### Logger 13 Noise Monitoring Results – Ambient Levels

Date	L <sub>eq</sub> 15hr dB(A)	L <sub>eq</sub> 9hr dB(A)
Tuesday-28-Jul-09	68.8	68.9
Wednesday-29-Jul-09	68.8	69.6
Thursday-30-Jul-09	69.1	69.7
Friday-31-Jul-09	68.6	70.2
Saturday-1-Aug-09	68.5	69.6
Sunday-2-Aug-09	69.4	69.0
Monday-3-Aug-09	69.4	70.0
Tuesday-4-Aug-09	68.3	-
<b>Overall</b>	<b>68.9</b>	<b>69.6</b>

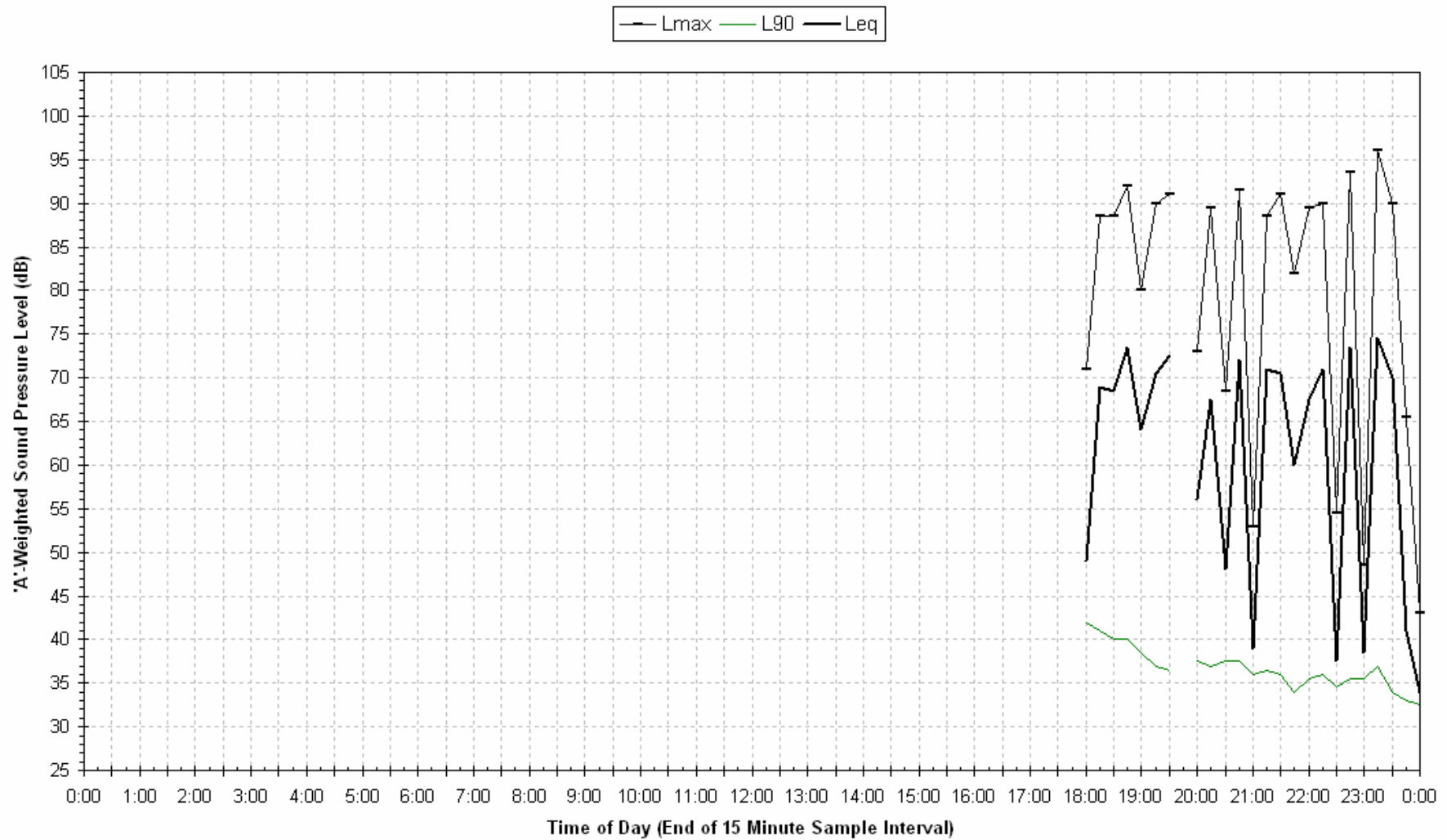
### Logger 13 Noise Monitoring Results – Background Levels

Date	Assessment Background Level L <sub>90</sub> dB(A)		
	Day	Evening	Night
Tuesday-28-Jul-09	-	35.7	33.3
Wednesday-29-Jul-09	39.5	39.0	34.5
Thursday-30-Jul-09	43.5	37.8	37.5
Friday-31-Jul-09	43.3	38.0	34.0
Saturday-1-Aug-09	38.8	33.0	30.5
Sunday-2-Aug-09	37.0	38.3	35.3
Monday-3-Aug-09	40.0	36.0	33.5
Tuesday-4-Aug-09	-	-	-
<b>RBL</b>	<b>39.8</b>	<b>37.8</b>	<b>34.0</b>

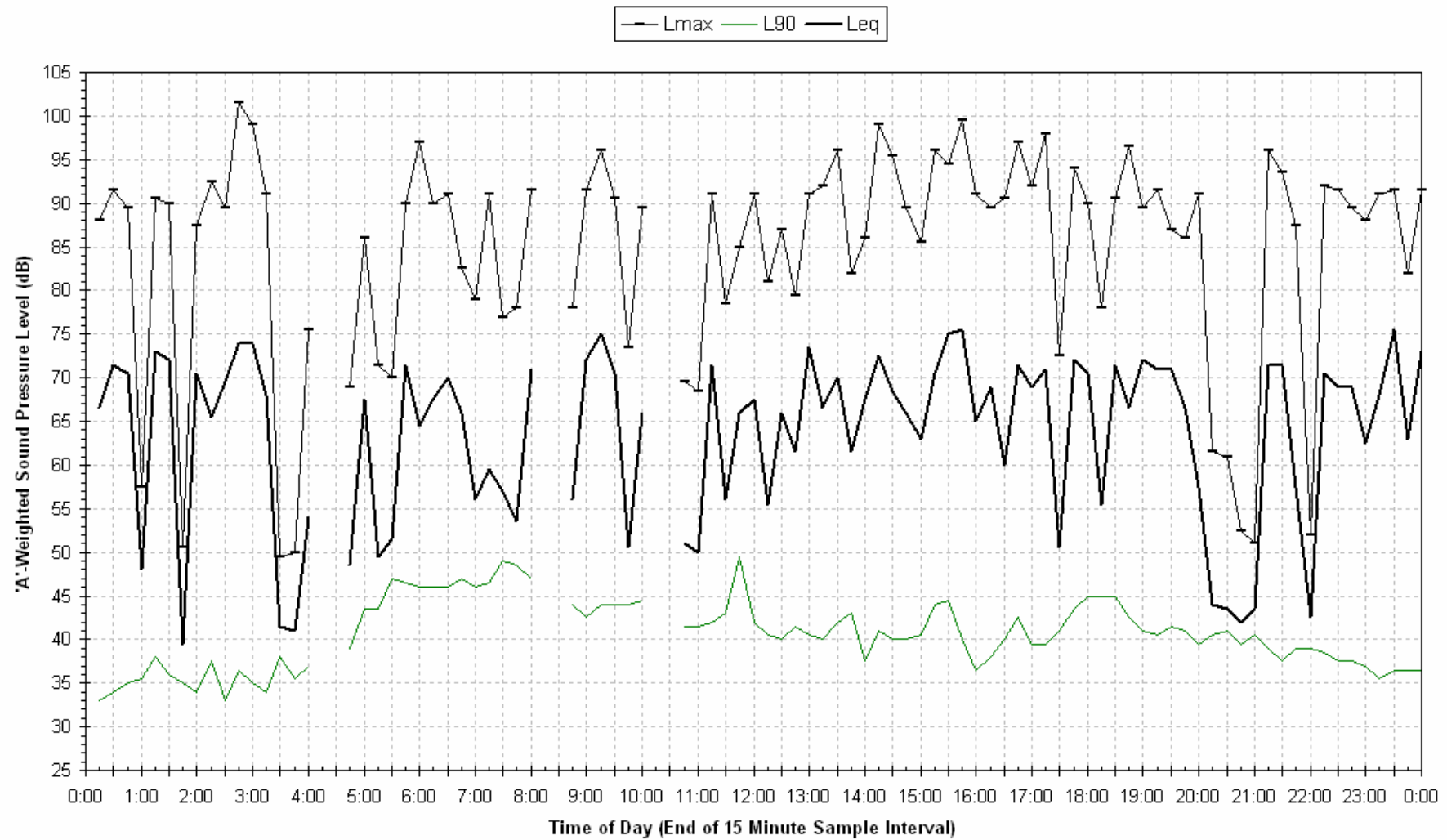
### Passby Measurement Results at Logger 13 Location dB(A)

Up/Down	Train Type	Duration	L <sub>eq</sub>	L <sub>max</sub>
Up	Coal	02:59.7	73.1	85.7
Up	Coal	02:57.2	76.3	90
Up	Coal	02:38.6	78.5	95.7
Up	Coal	01:52.0	75.7	90
Up	Coal	02:12.8	78.6	100.7
Up	Coal	02:29.7	71.9	79.4
Up	Coal	02:29.7	76.7	90.6
Up	Coal	01:31.7	75.4	84.9
Up	Empty Freight	00:44.8	79.6	86.5
<b>Up Average</b>		<b>02:12.9</b>	<b>76.8</b>	<b>89.3</b>
Down	Empty Coal	01:30.7	79.5	90.2
Down	Empty Coal	00:53.5	78.7	90.9
Down	Empty Coal	03:45.4	68.6	80.6
Down	Empty Coal	01:18.8	76.7	82.6
Down	Empty Coal	01:41.1	79.1	85.0
Down	Empty Coal	01:07.1	79.5	89.4
Down	Empty Coal	01:34.5	77.9	87.1
Down	Empty Coal	03:46.6	71.9	90.6
<b>Down Average</b>		<b>01:57.2</b>	<b>77.6</b>	<b>87.1</b>
Up	Passenger	00:06.8	77.8	80.6
Up	Passenger	00:12.0	76.7	82.3
Down	Passenger	00:14.5	76.1	81.6
<b>Passenger Average</b>		<b>00:11.1</b>	<b>76.9</b>	<b>81.5</b>

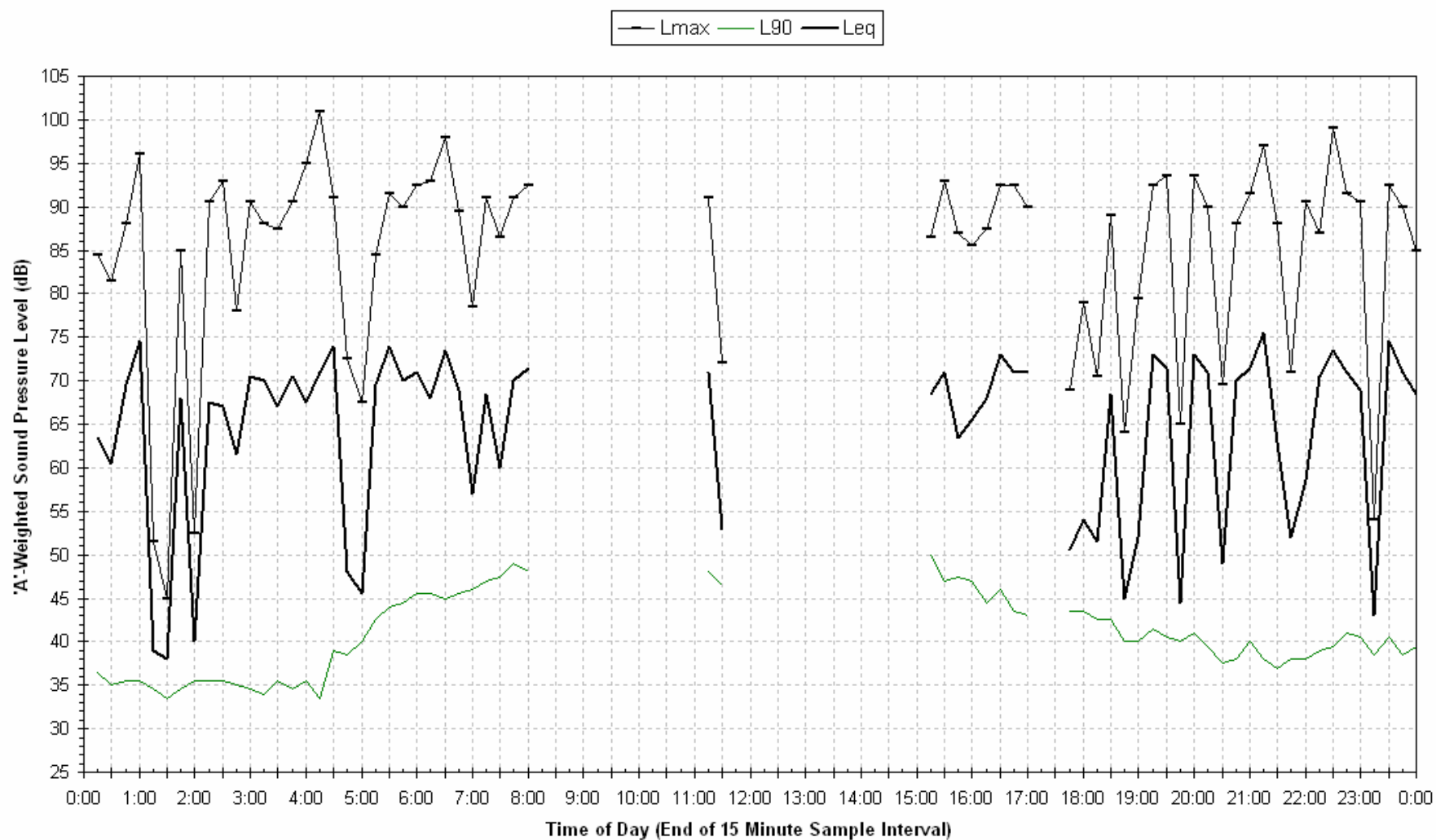
Statistical Ambient Noise Levels  
Clifton House - Tuesday 28 July 2009



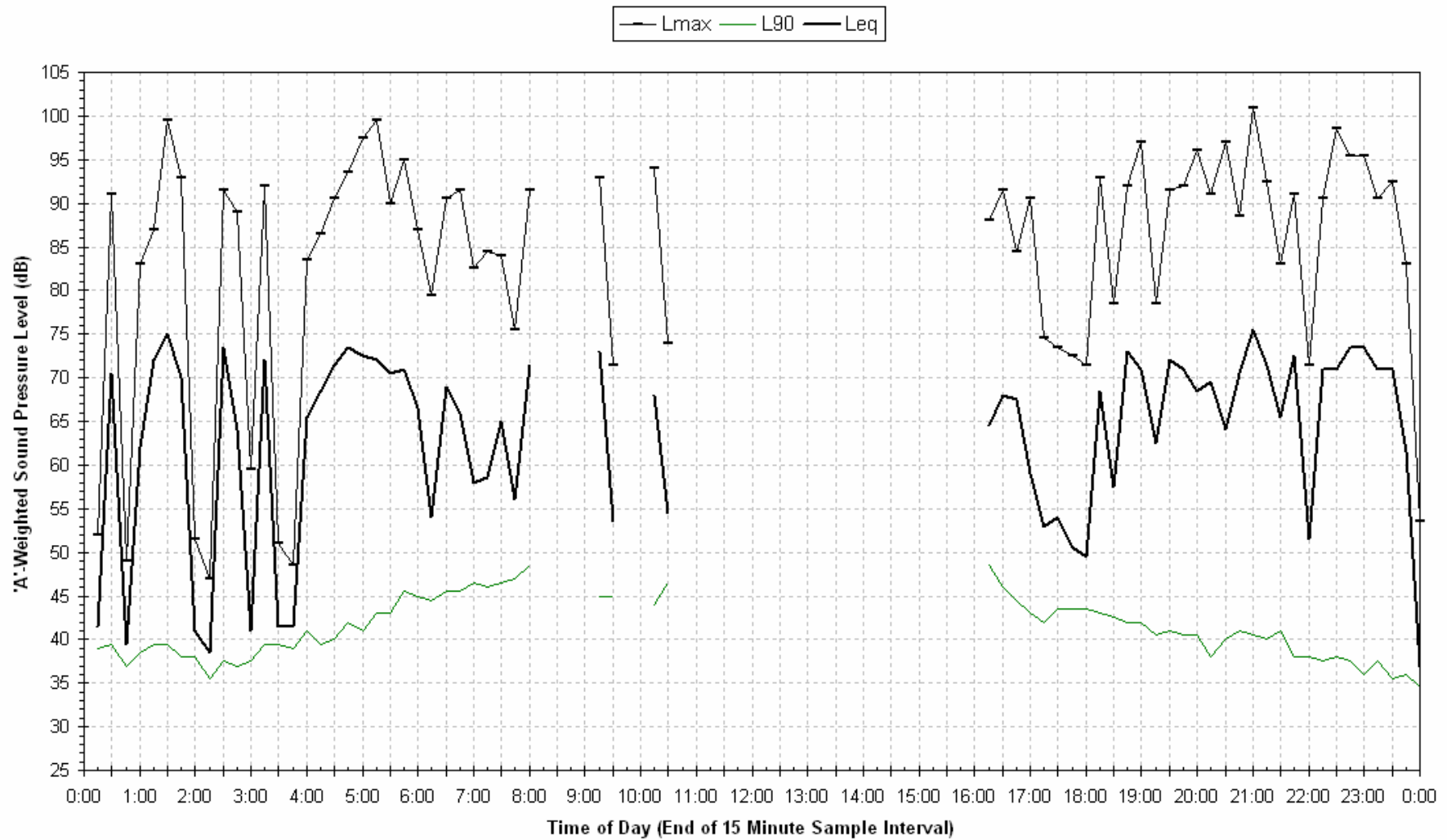
Statistical Ambient Noise Levels  
Clifton House - Wednesday 29 July 2009



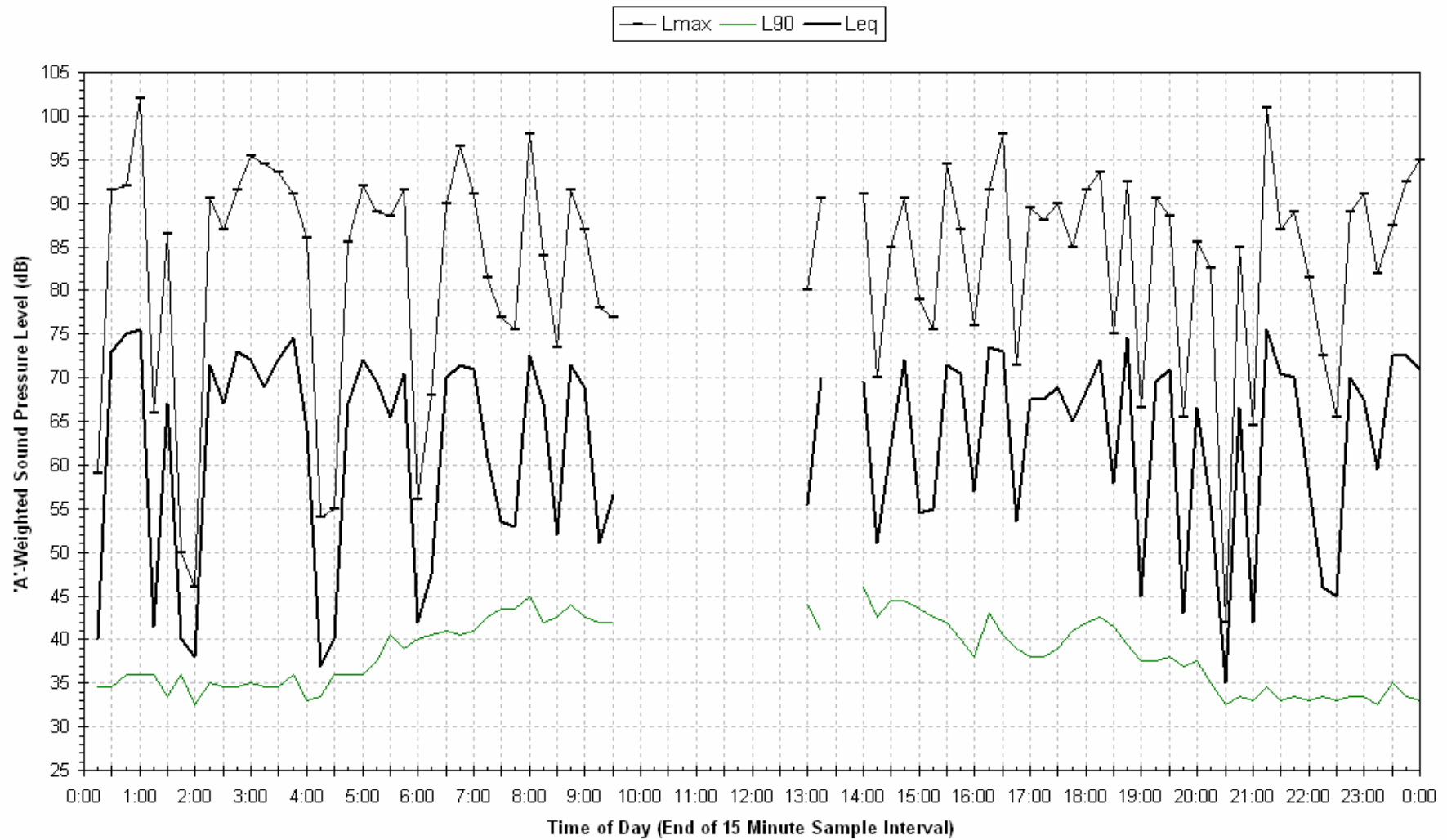
**Statistical Ambient Noise Levels  
Clifton House - Thursday 30 July 2009**



Statistical Ambient Noise Levels  
Clifton House - Friday 31 July 2009

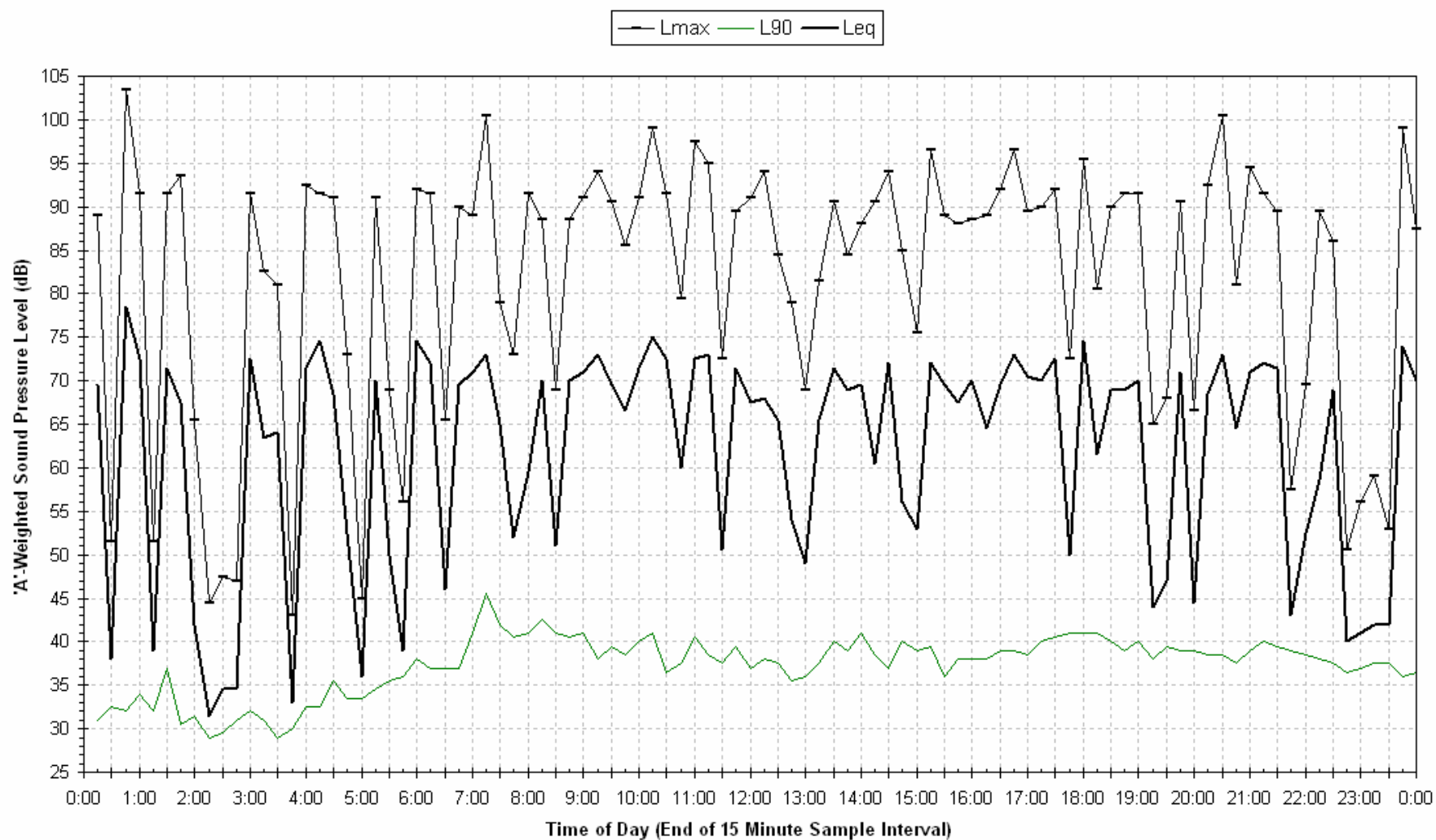


Statistical Ambient Noise Levels  
Clifton House - Saturday 1 August 2009

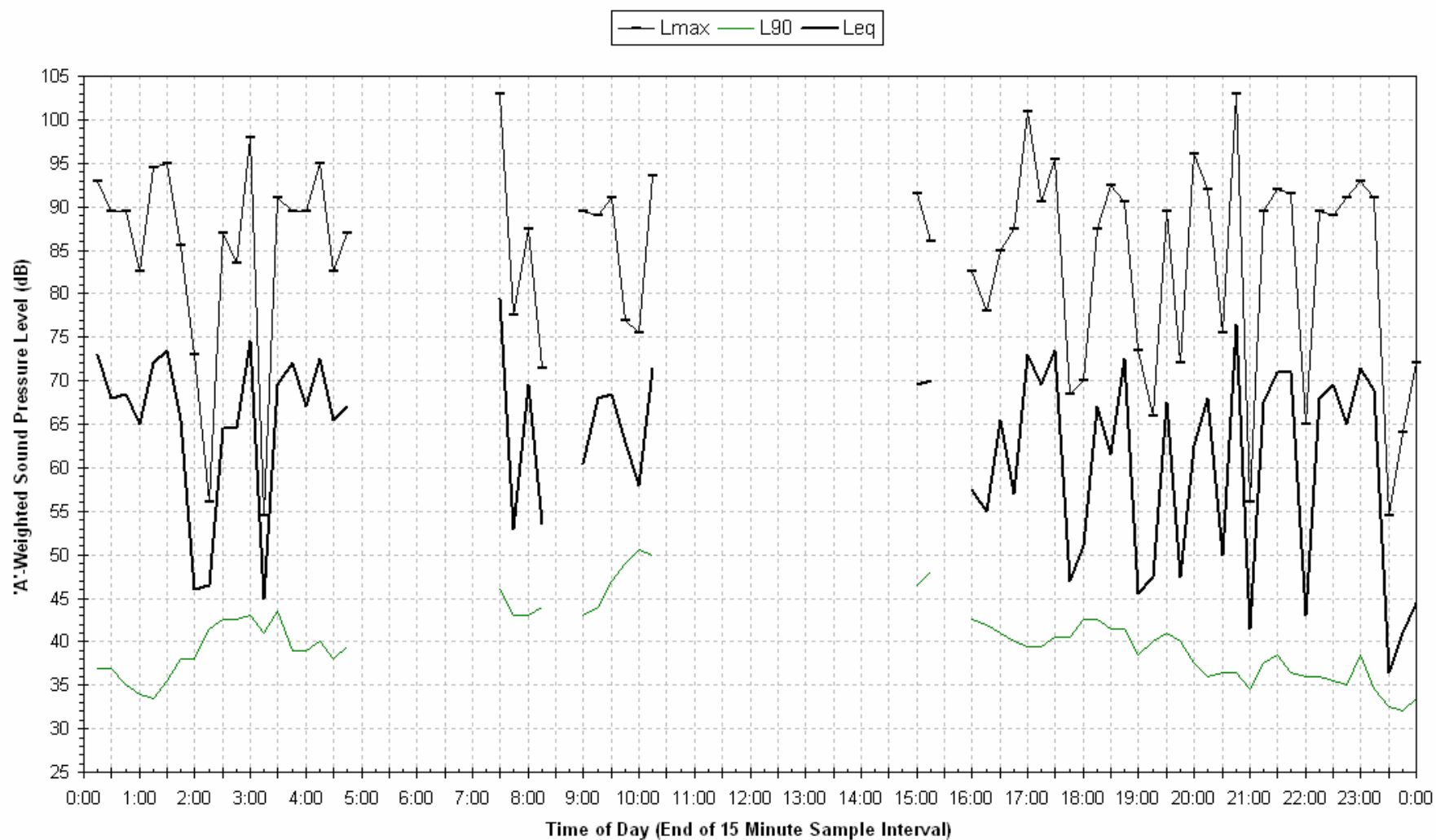




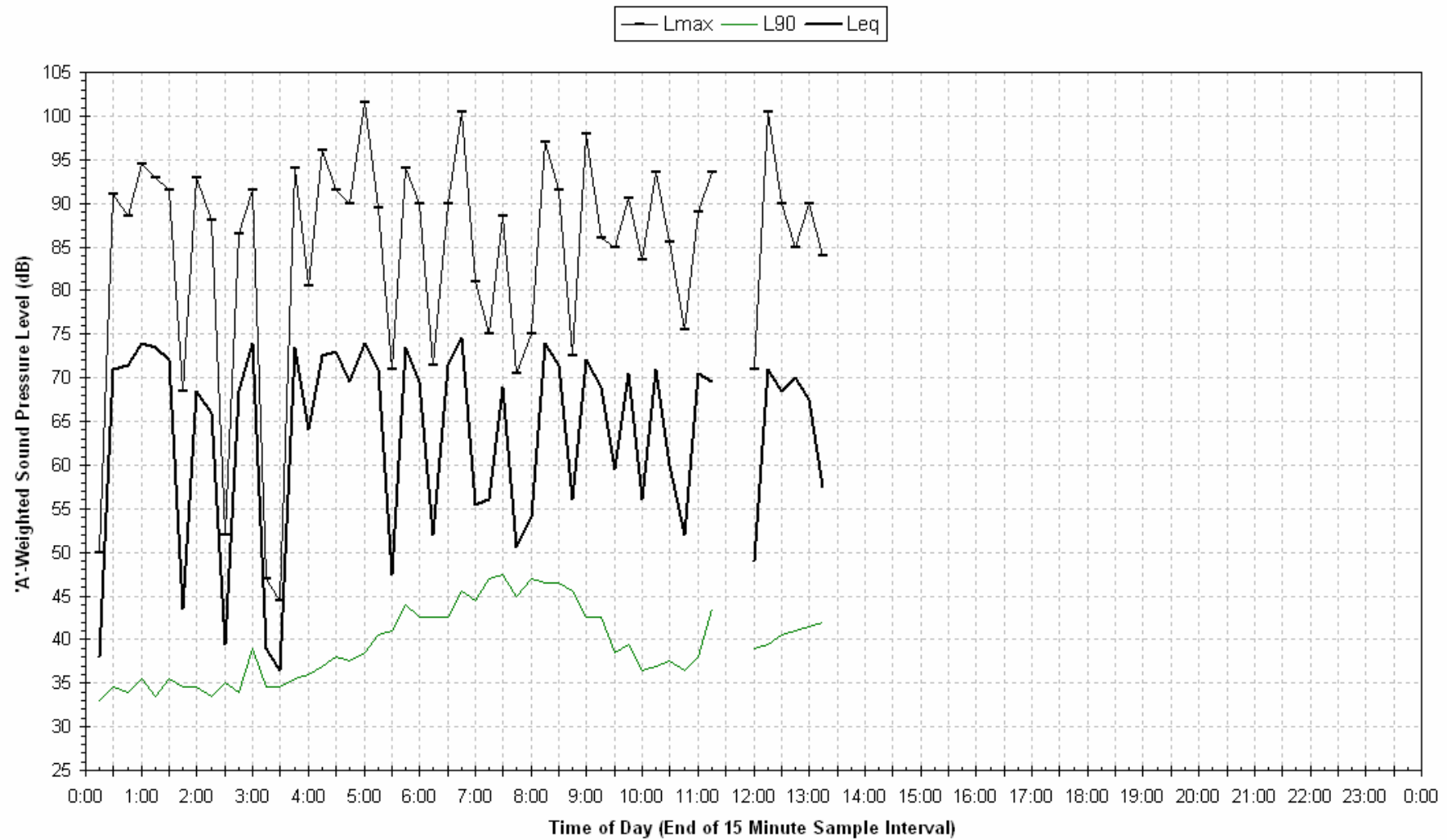
Statistical Ambient Noise Levels  
Clifton House - Sunday 2 August 2009



**Statistical Ambient Noise Levels  
Clifton House - Monday 3 August 2009**



Statistical Ambient Noise Levels  
Clifton House - Tuesday 4 August 2009



## Logger 14 - Mildenhall

Noise Monitor ID	Allocated No.	Receiver Lot/Address	Registered Proprietor	NCA	Distance to Near Track (m)
L14	MMU-062	1 DP 778909	Mildenhall	U8	55

### Logger Location





## Site Photos – Logger 14



### Noise Logging Details (Unattended Monitoring)

L14

Logger Type	ARL EL 215
Serial Number	194534
Start of measurement period	16:00, 28/07/2009
End of measurement period	17:30, 04/08/2009
Frequency Weighting	A
Pre-Test Calibration Check	94.6 dB(A)
Post-Test Calibration Check	94.7 dB(A)
Time Response	Fast
Engineering Units	dB(A) SPL re:20μPa

### Passby Measurements Details (Attended Monitoring)

L14

Sound Level Meter	Larson Davis 831
Serial Number	01620
Measurement Dates	30/07/09, 03/08/09, 04/08/09

#### Logger 14 Noise Monitoring Results – Ambient Levels

Date	L <sub>eq</sub> 15hr dB(A)	L <sub>eq</sub> 9hr dB(A)
Tuesday-28-Jul-09	58.1	57.4
Wednesday-29-Jul-09	57.3	59.3
Thursday-30-Jul-09	57.7	61.9
Friday-31-Jul-09	63.7	60.6
Saturday-1-Aug-09	60.0	59.7
Sunday-2-Aug-09	60.2	57.8
Monday-3-Aug-09	58.7	60.4
Tuesday-4-Aug-09	59.7	-
<b>Overall</b>	<b>59.9</b>	<b>59.8</b>

#### Logger 14 Noise Monitoring Results – Background Levels

Date	Assessment Background Level L <sub>90</sub> dB(A)		
	Day	Evening	Night
Tuesday-28-Jul-09	-	40.3	38.5
Wednesday-29-Jul-09	36.5	43.0	39.5
Thursday-30-Jul-09	41.3	41.8	38.8
Friday-31-Jul-09	41.8	42.5	38.5
Saturday-1-Aug-09	39.0	40.8	35.5
Sunday-2-Aug-09	35.0	40.5	38.3
Monday-3-Aug-09	40.0	39.0	39.0
Tuesday-4-Aug-09	-	-	-
<b>RBL</b>	<b>39.5</b>	<b>40.8</b>	<b>38.5</b>

### Passby Measurement Results at Logger 14 Location dB(A)

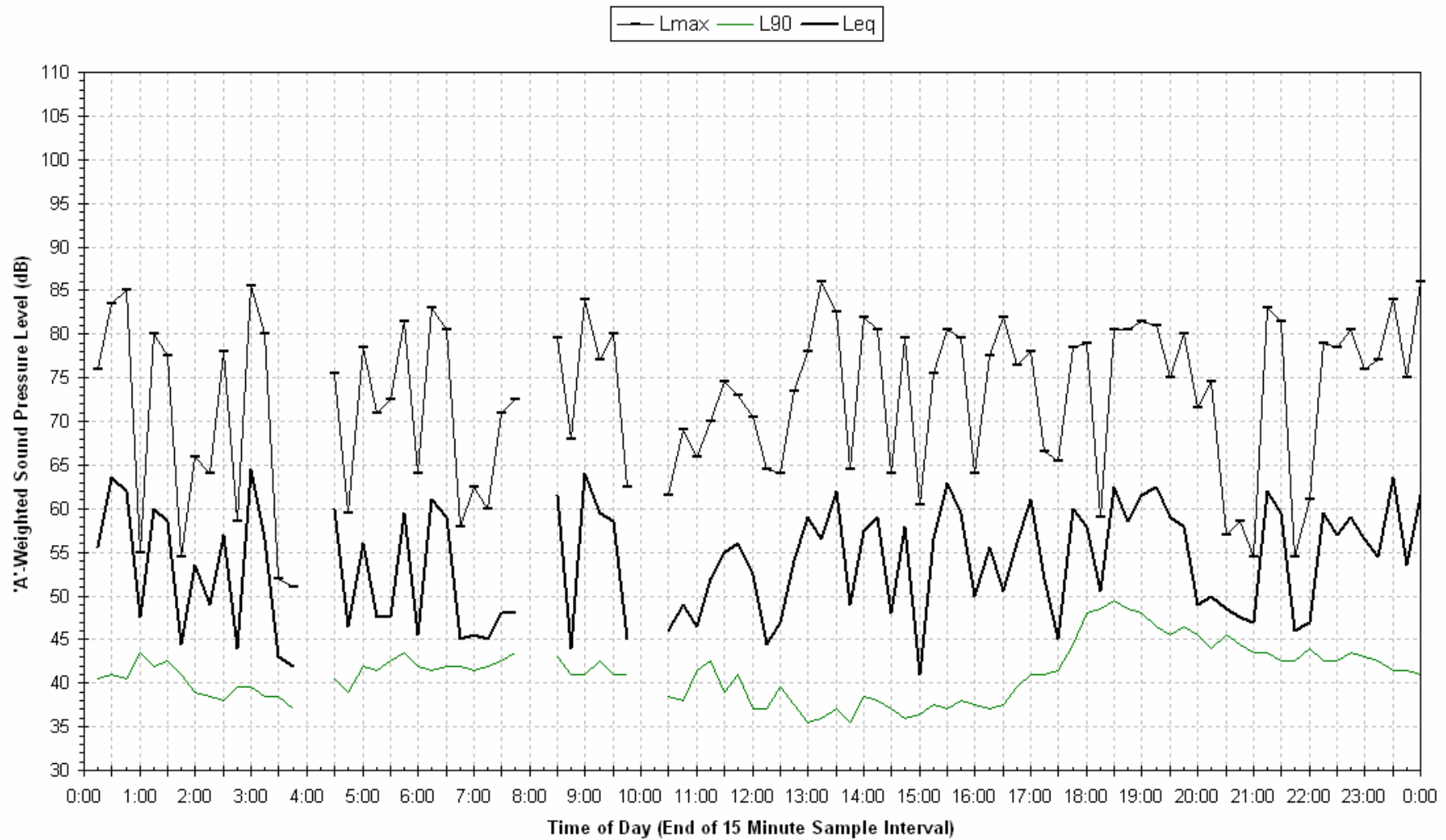
Up/Down	Train Type	Duration	L <sub>eq</sub>	L <sub>max</sub>
Up	Coal	02:01.5	69.8	81.1
Up	Coal	03:11.4	64.6	76.2
Up	Coal	02:20.0	67.4	79.7
Up/Down	Rail Maintenance	03:33.2	61.6	78.4
<b>Up Average</b>		<b>02:46.5</b>	<b>66.9</b>	<b>78.9</b>
Down	Empty Coal	01:29.9	69.5	79.7
Down	Empty Coal	01:30.6	64.6	75.5
Down	Empty Coal	01:38.4	67.5	77.3
Down	Empty Coal	01:36.1	68.3	78.3
Down	Empty Coal	01:34.9	69.5	81.9
<b>Down Average</b>		<b>01:34.3</b>	<b>67.4</b>	<b>78.5</b>
Up	HRC	00:13.7	58.9	64.4
<b>Passenger Average</b>		<b>00:13.7</b>	<b>58.9</b>	<b>64.4</b>

Statistical Ambient Noise Levels  
Mildenhall - Tuesday 28 July 2009

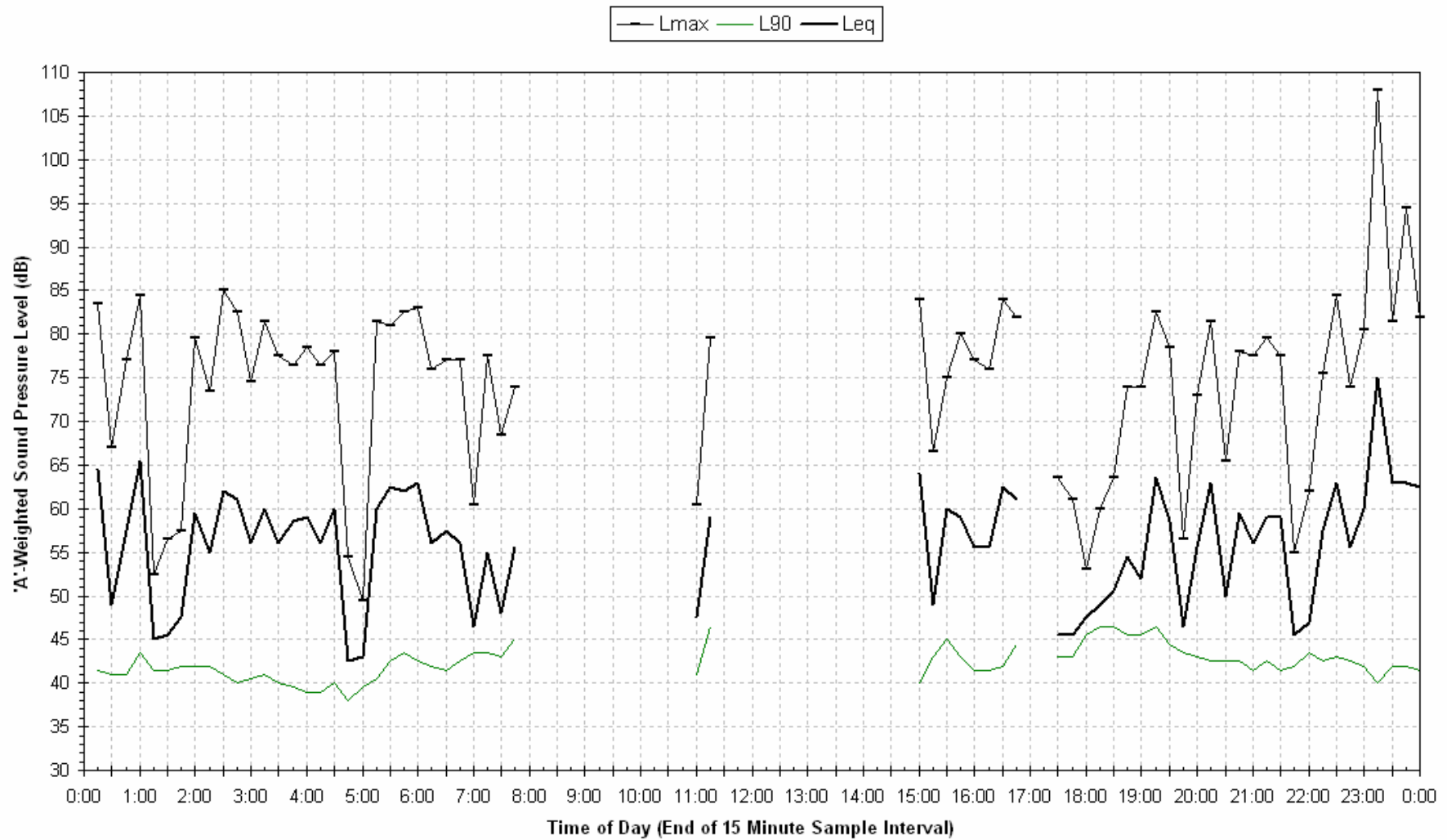




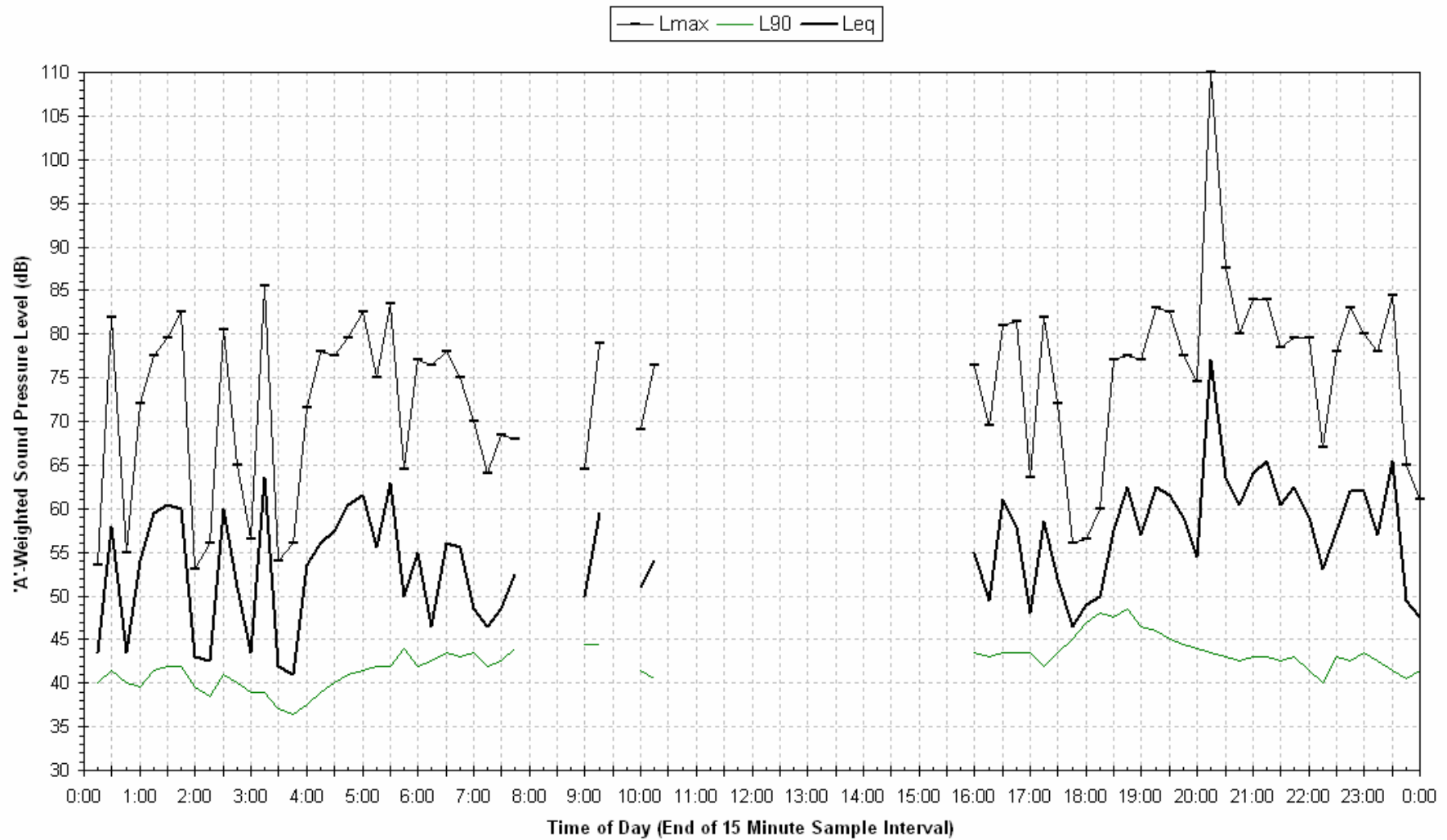
Statistical Ambient Noise Levels  
Mildenhall - Wednesday 29 July 2009



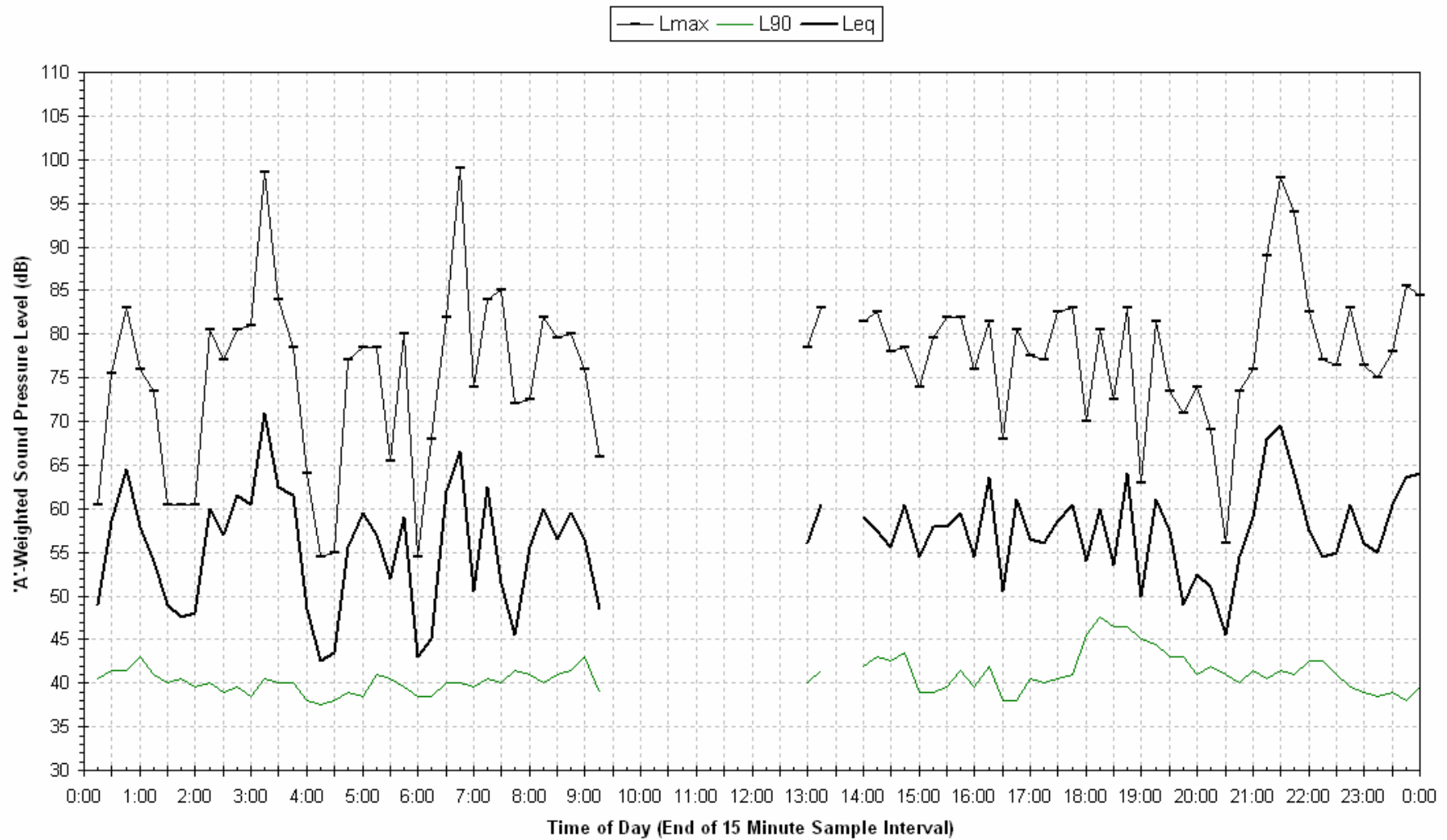
Statistical Ambient Noise Levels  
Mildenhall - Thursday 30 July 2009



Statistical Ambient Noise Levels  
Mildenhall - Friday 31 July 2009



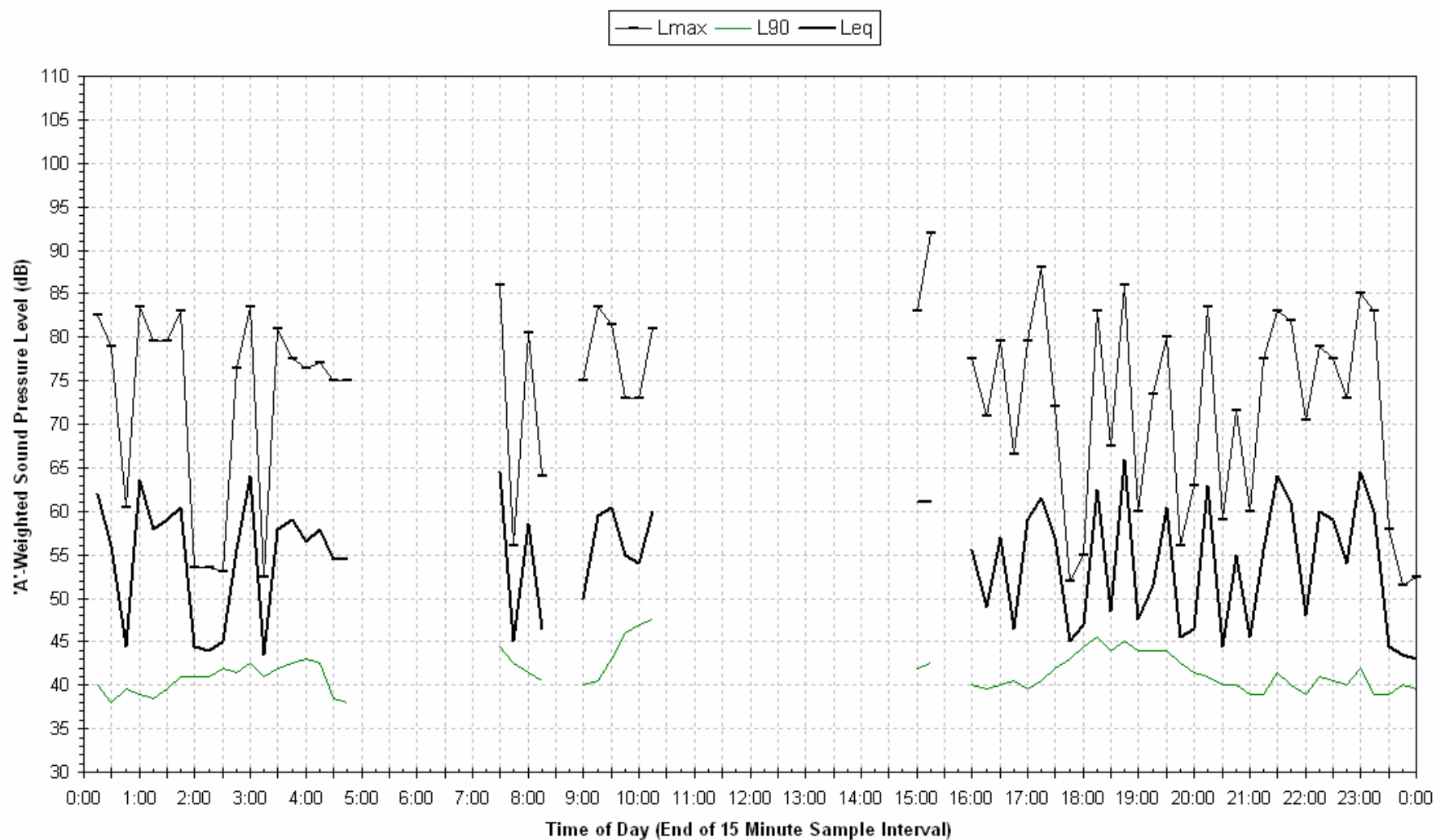
Statistical Ambient Noise Levels  
Mildenhall - Saturday 1 August 2009



Statistical Ambient Noise Levels  
Mildenhall - Sunday 2 August 2009



# Statistical Ambient Noise Levels Mildenhall - Monday 3 August 2009



Statistical Ambient Noise Levels  
Mildenhall - Tuesday 4 August 2009





## Logger 15 - Proctor

Noise Monitor ID	Allocated No.	Receiver	Lot/Address	Registered Proprietor	NCA	Distance to Near Track (m)
L15	Not Allocated	13	Dumont Rutherford	Close, Proctor	U10	100

### Logger Location



## Site Photos – Logger 15



### Noise Logging Details (Unattended Monitoring)

L15

Logger Type	ARL EL 215
Serial Number	194677
Start of measurement period	15:30, 11/09/2009
End of measurement period	12:15, 22/09/2009
Frequency Weighting	A
Pre-Test Calibration Check	94.0 dB(A)
Post-Test Calibration Check	94.0 dB(A)
Time Response	Fast
Engineering Units	dB(A) SPL re:20µPa

### Passby Measurements Details (Attended Monitoring)

L15

Sound Level Meter	Brüel & Kjær 2250
Serial Number	2506887
Measurement Dates	15/09/2009

### Logger 15 Noise Monitoring Results – Ambient Levels

Date	L <sub>eq</sub> 15hr dB(A)	L <sub>eq</sub> 9hr dB(A)
Friday-11-Sep-09	61.9	62.1
Saturday-12-Sep-09	60.8	61.3
Sunday-13-Sep-09	61.0	61.9
Monday-14-Sep-09	61.0	61.2
Tuesday-15-Sep-09	60.9	60.3
Wednesday-16-Sep-09	60.2	61.2
Thursday-17-Sep-09	60.6	60.5
Friday-18-Sep-09	60.9	62.0
Saturday-19-Sep-09	60.5	61.5
Sunday-20-Sep-09	60.8	61.5
Monday-21-Sep-09	61.2	61.3
Tuesday-22-Sep-09	48.0	-
<b>Overall</b>	<b>60.6</b>	<b>61.4</b>

### Logger 15 Noise Monitoring Results – Background Levels

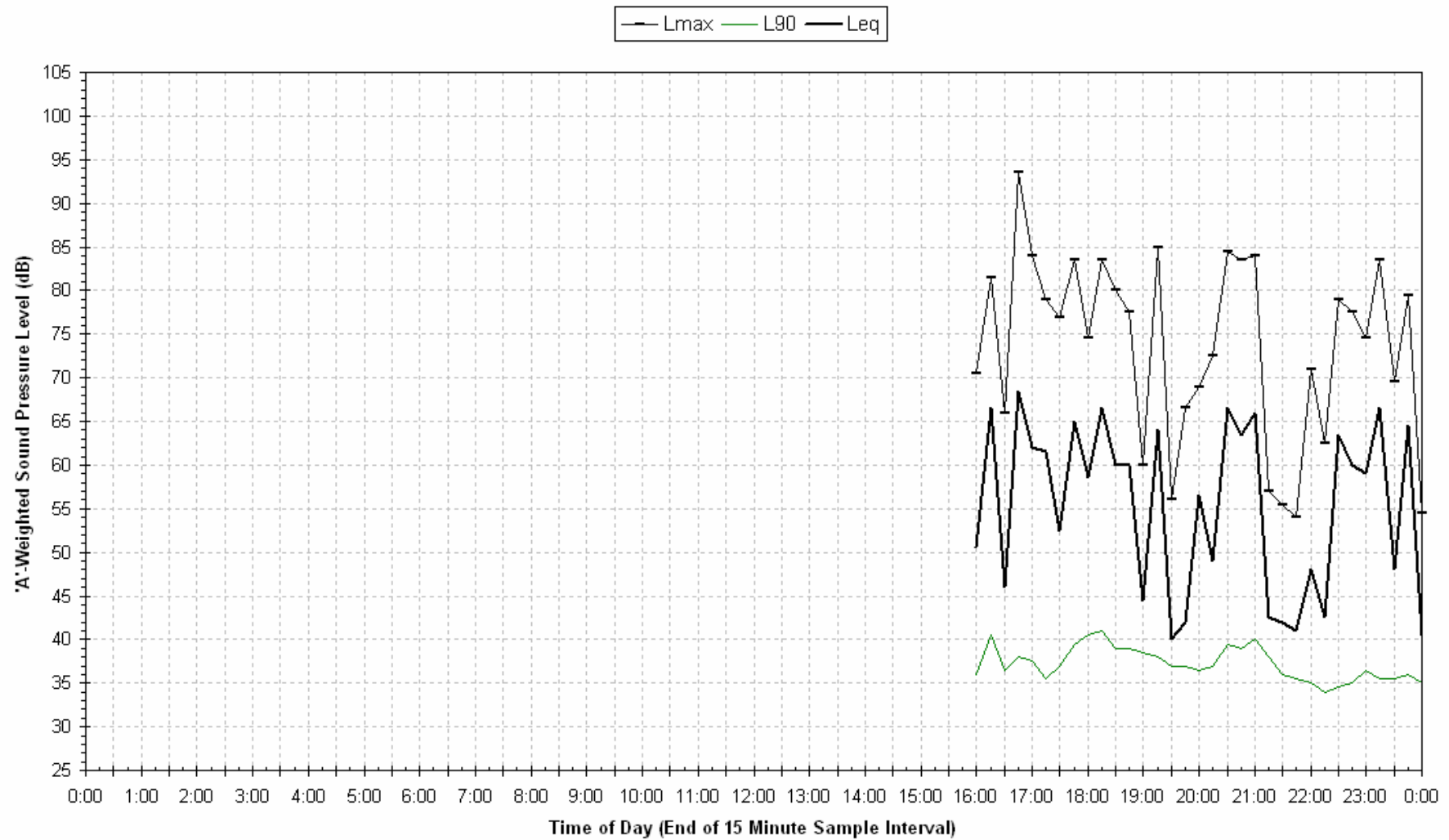
Date	Assessment Background Level L <sub>90</sub> dB(A)		
	Day	Evening	Night
Friday-11-Sep-09	-	35.8	32.5
Saturday-12-Sep-09	34.0	36.0	30.9
Sunday-13-Sep-09	36.0	33.0	29.3
Monday-14-Sep-09	39.0	34.0	29.0
Tuesday-15-Sep-09	35.0	37.5	30.3
Wednesday-16-Sep-09	35.2	37.5	30.8
Thursday-17-Sep-09	36.0	33.8	32.5
Friday-18-Sep-09	35.1	33.7	29.3
Saturday-19-Sep-09	34.4	35.2	32.5
Sunday-20-Sep-09	33.8	33.7	28.8
Monday-21-Sep-09	36.7	34.8	30.0
Tuesday-22-Sep-09	-	-	-
<b>RBL</b>	<b>35.1</b>	<b>34.8</b>	<b>30.3</b>

### Passby Measurement Results at Logger 15 Location dB(A)

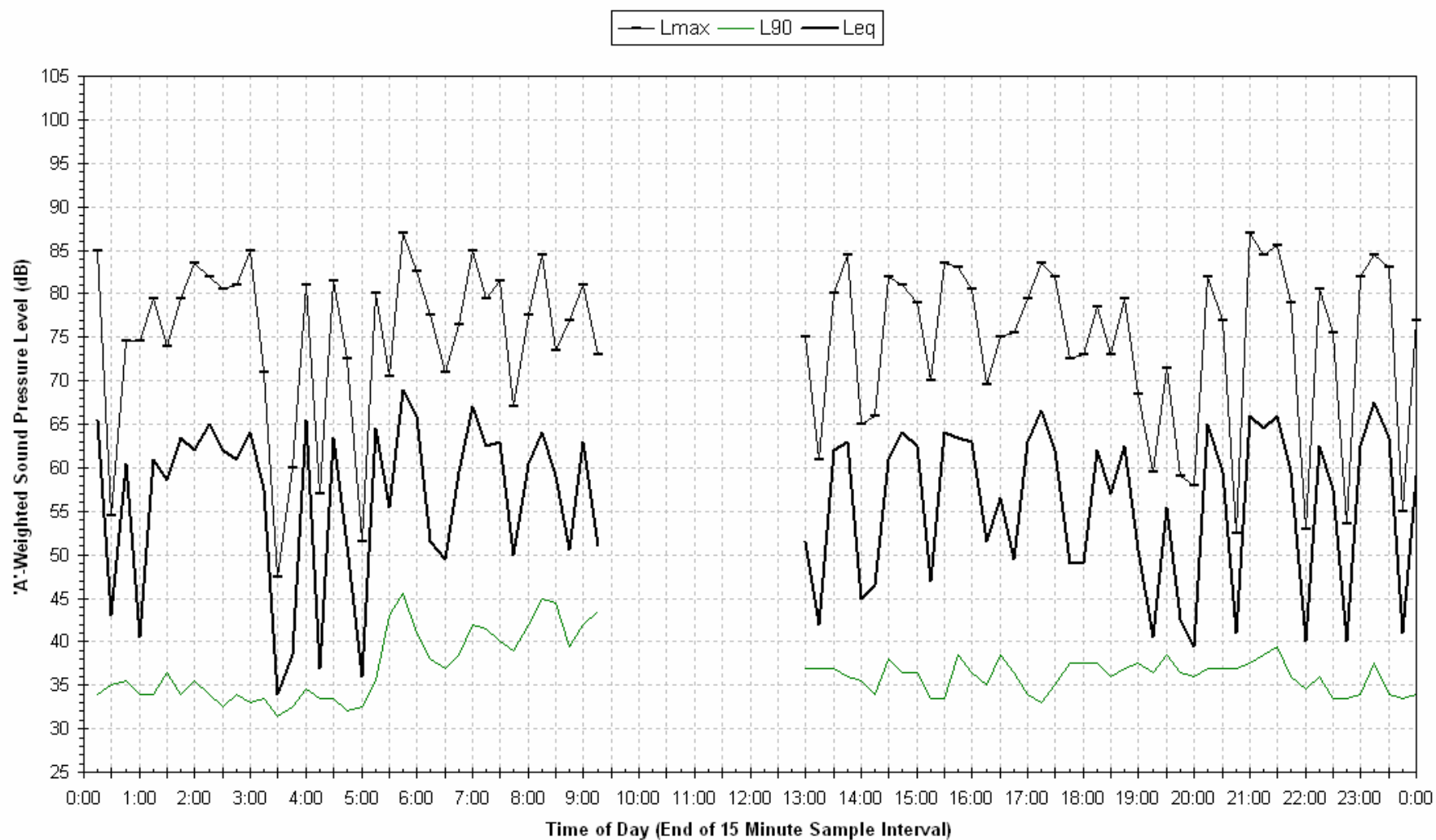
Up/Down	Train Type	Duration	L <sub>eq</sub>	L <sub>max</sub>
Up	Coal	0:02:57	63.0	68.4
Up	Coal	0:02:52	65.0	78.2
Up	Coal	0:03:16	69.6	80.9
Up	Empty Freight	0:01:08	62.6	71.3
Up	Coal	0:02:52	63.7	73.5
<b>Up Average</b>		<b>0:02:37</b>	<b>65.7</b>	<b>74.5</b>
Down	Empty Coal	0:02:39	67.9	85.8
Down	Empty Coal	0:02:50	75.1	96.0
Down	Empty Coal	0:02:04	69.1	78.9
Down	Empty Coal	0:02:12	71.0	81.1
Down	Empty Coal	0:02:06	68.9	79.1
<b>Down Average</b>		<b>0:02:22</b>	<b>71.3</b>	<b>84.2</b>
Up	Passenger	0:00:28	60.2	67.6
Down	Passenger	0:00:36	63.7	72.3
<b>Passenger Average</b>		<b>0:00:32</b>	<b>62.3</b>	<b>70.0</b>



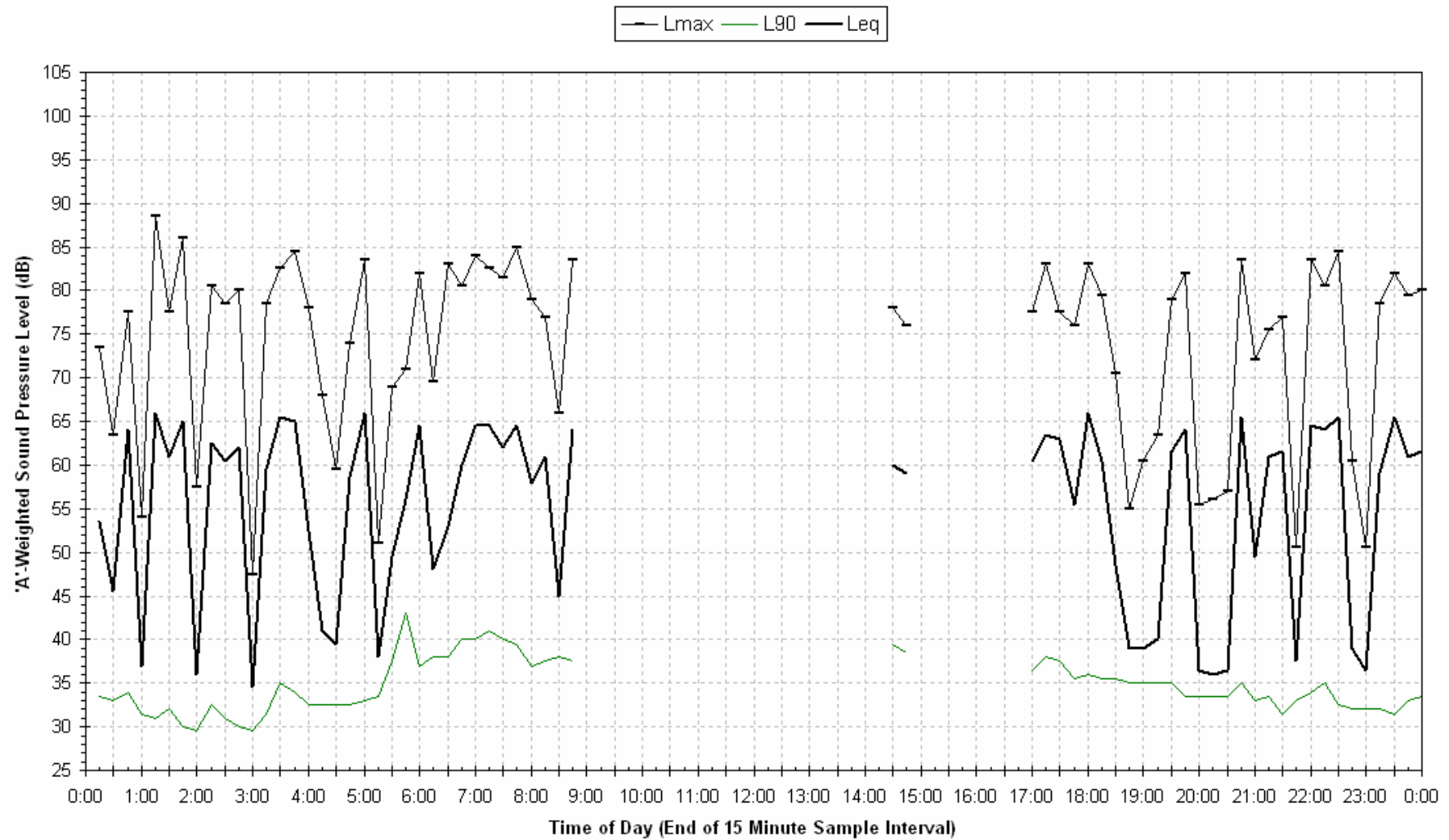
Statistical Ambient Noise Levels  
Proctor - Friday 11 September 2009



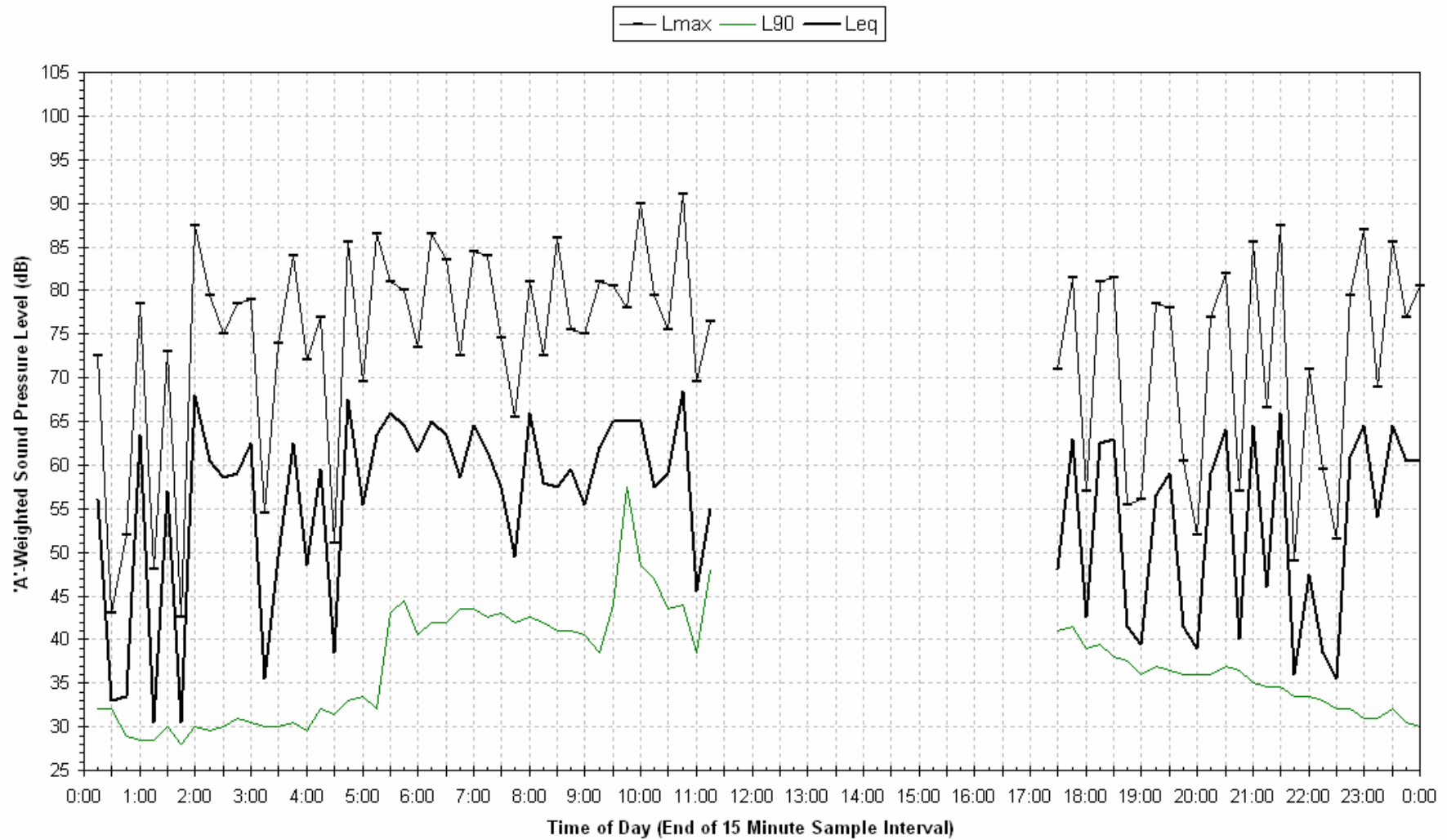
Statistical Ambient Noise Levels  
Proctor - Saturday 12 September 2009



Statistical Ambient Noise Levels  
Proctor - Sunday 13 September 2009

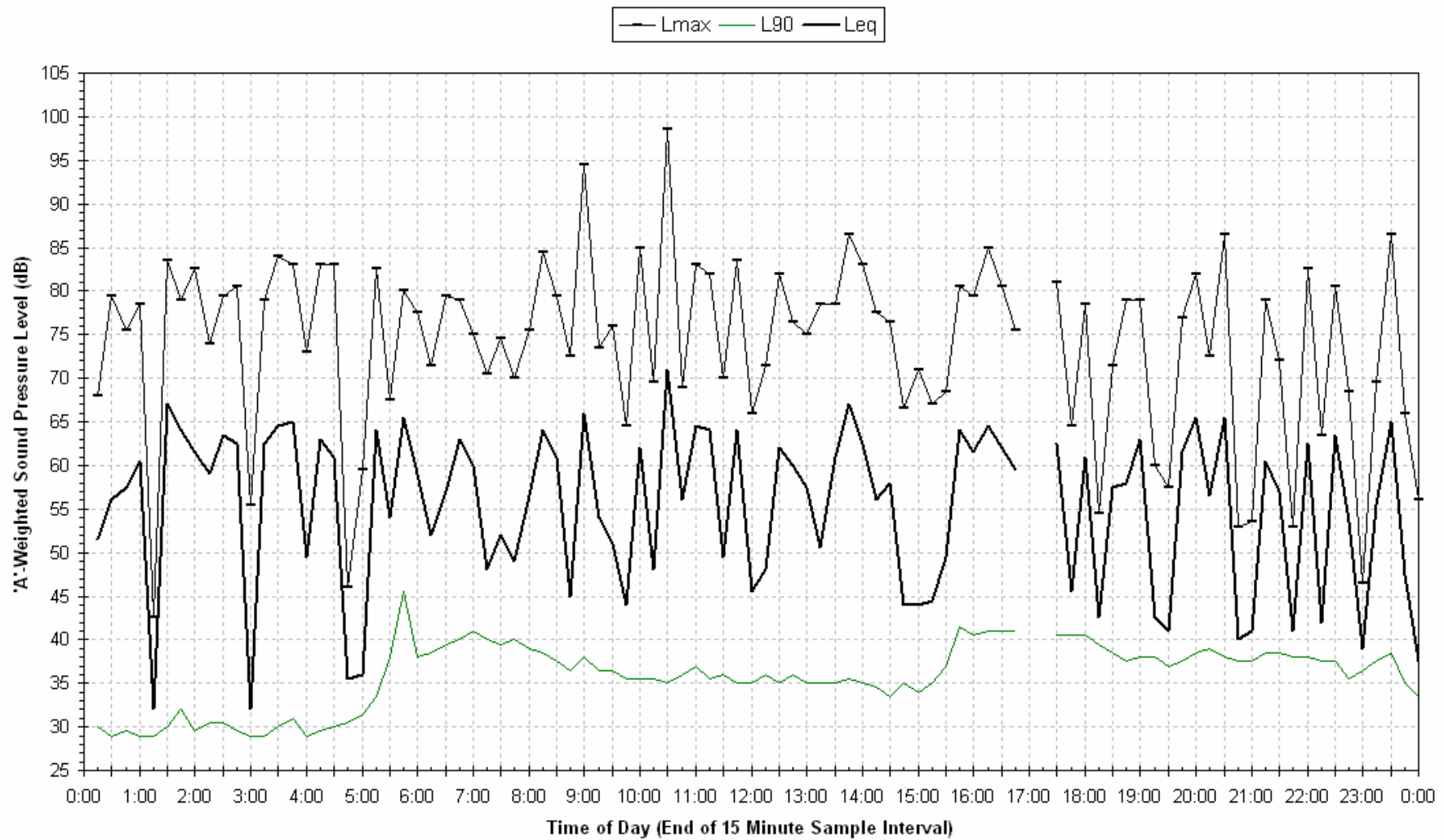


Statistical Ambient Noise Levels  
Proctor - Monday 14 September 2009

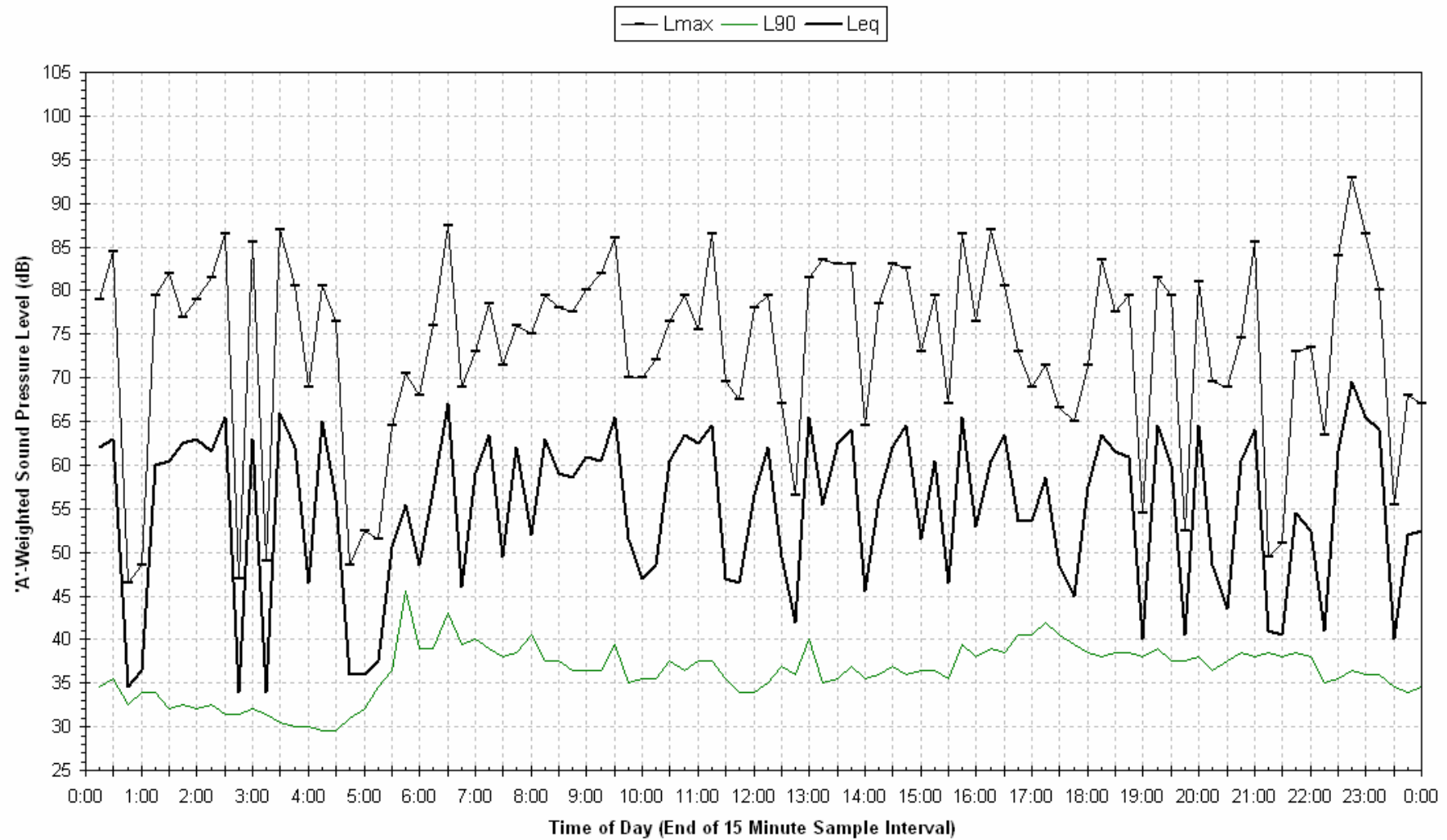




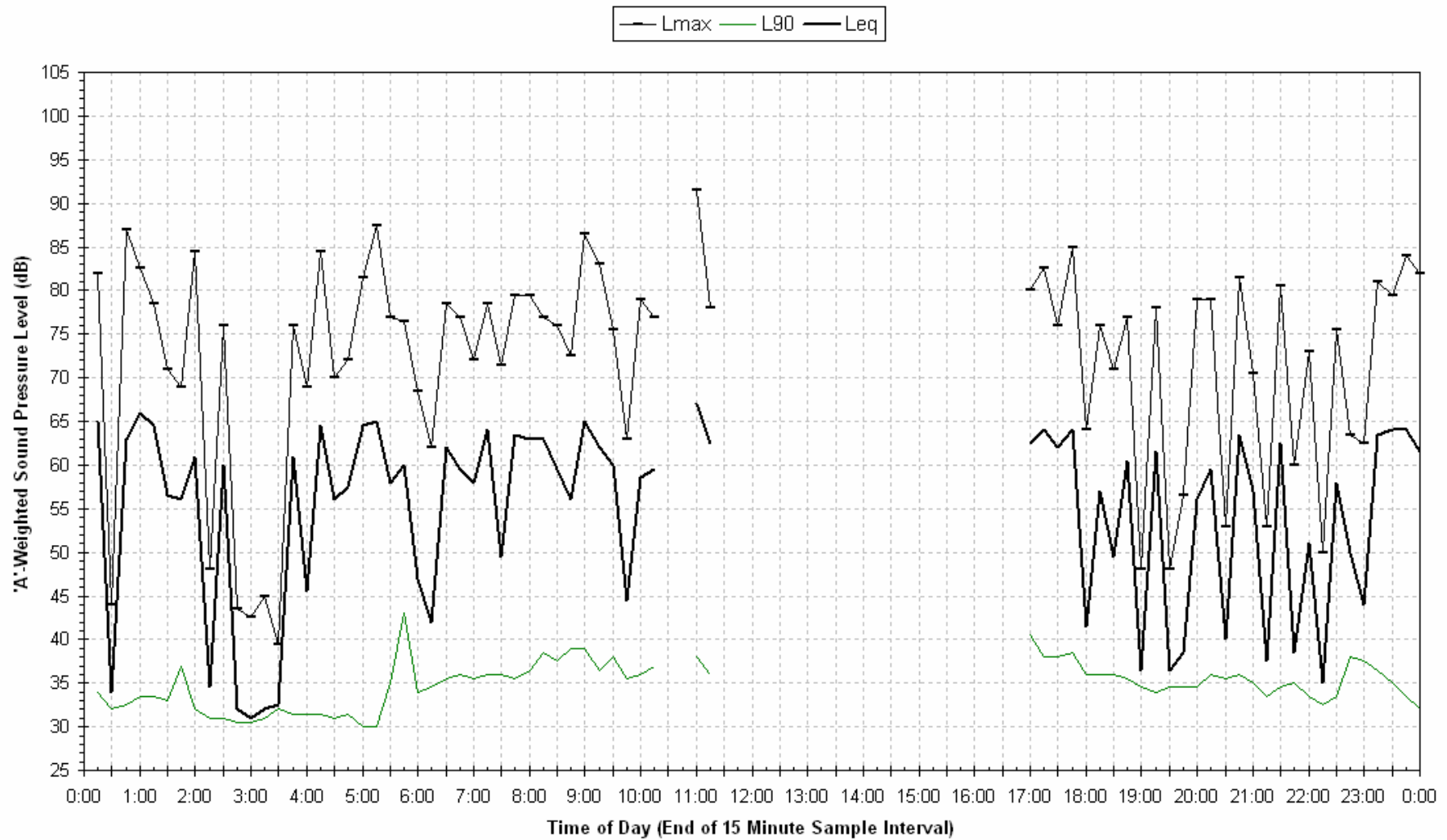
Statistical Ambient Noise Levels  
Proctor - Tuesday 15 September 2009



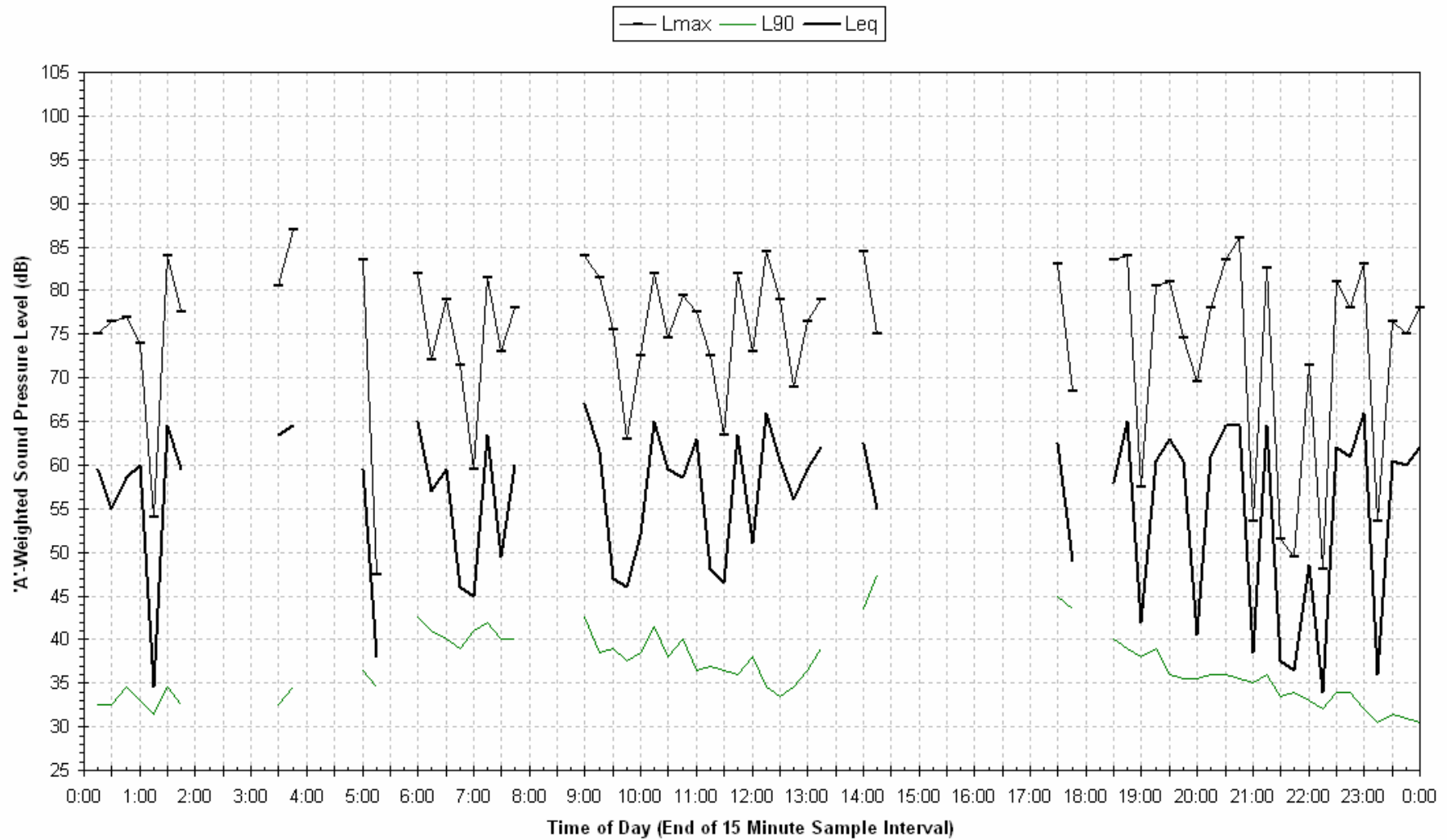
Statistical Ambient Noise Levels  
Proctor - Wednesday 16 September 2009



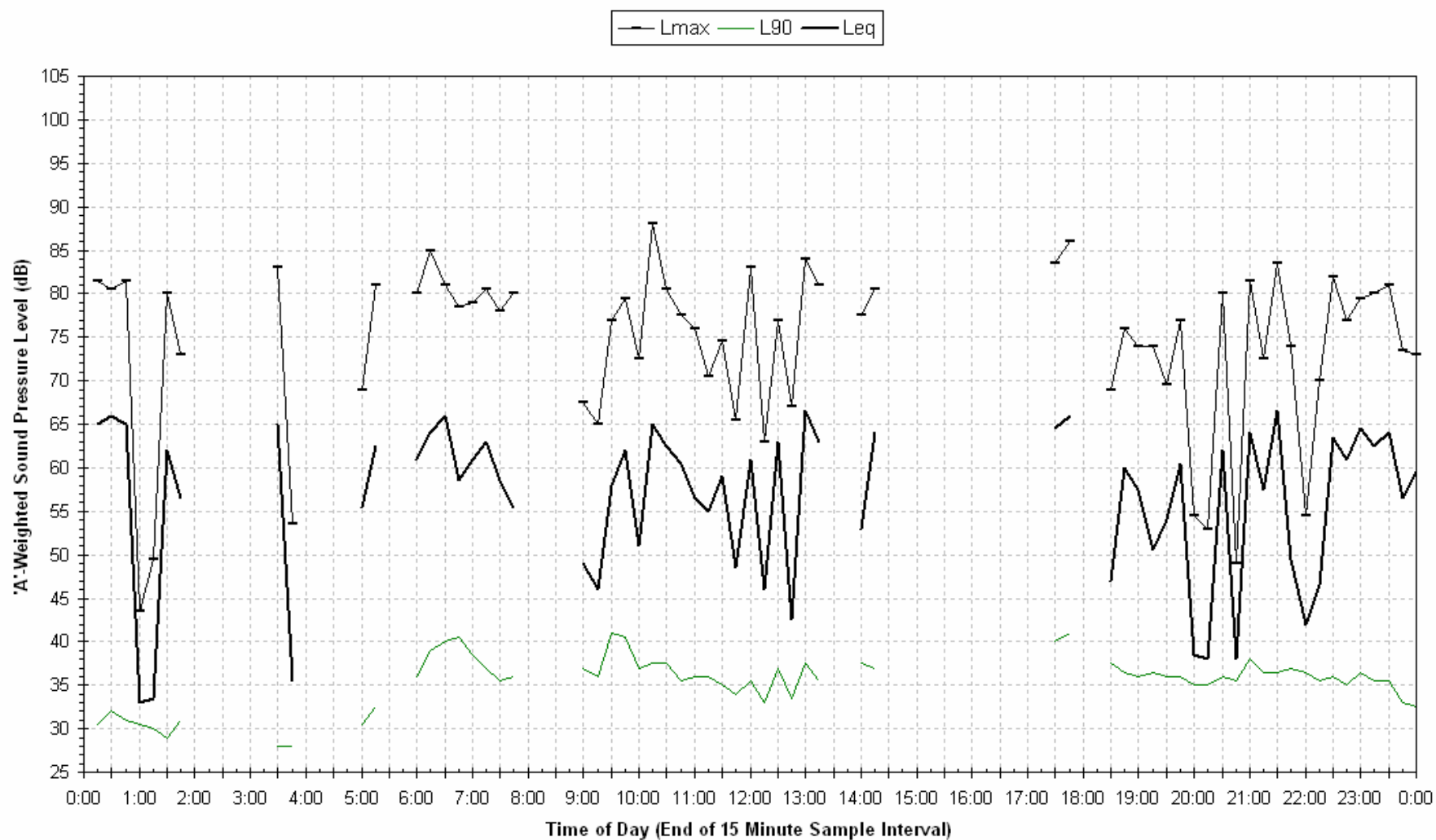
Statistical Ambient Noise Levels  
Proctor - Thursday 17 September 2009



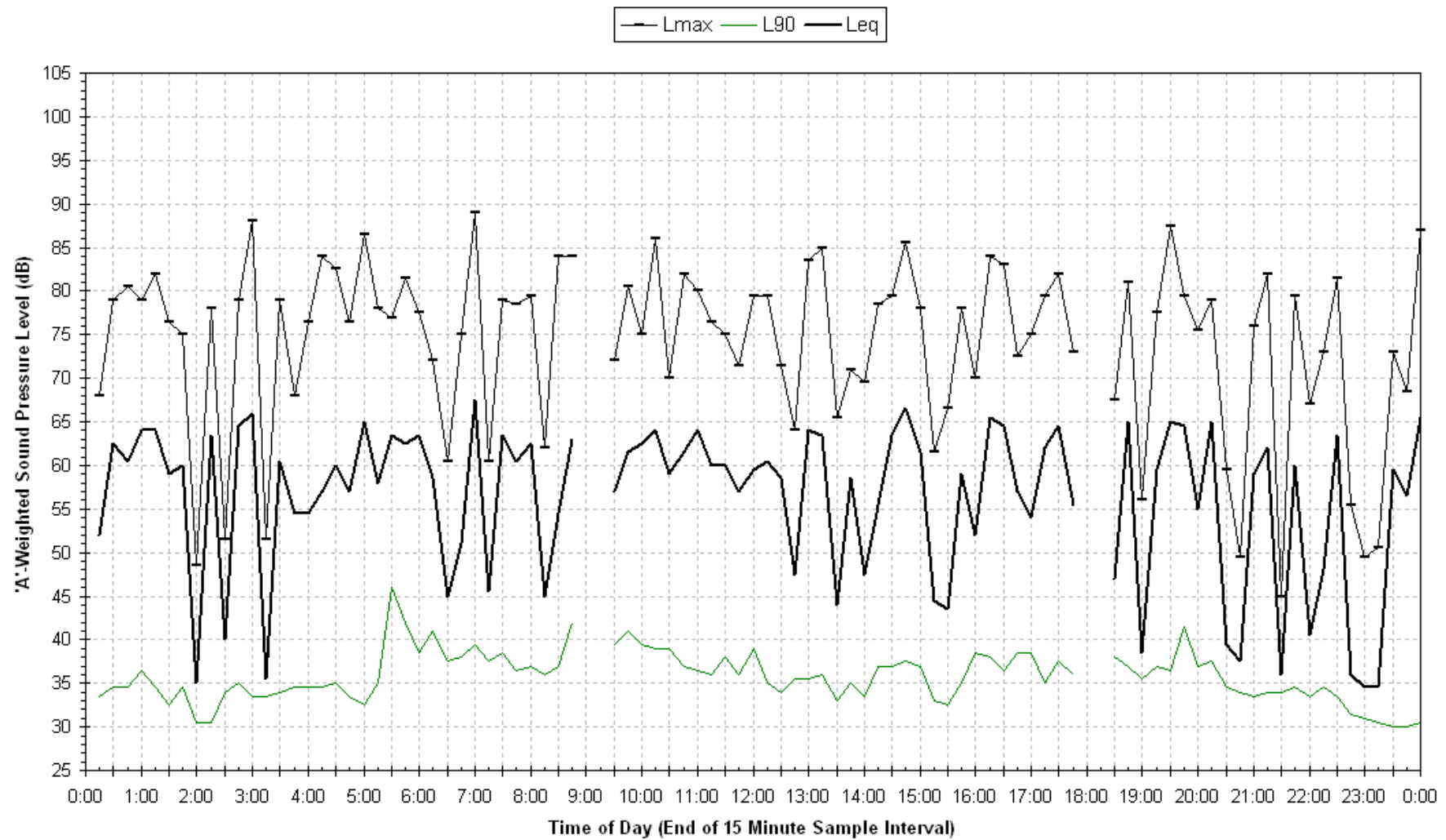
Statistical Ambient Noise Levels  
Proctor - Friday 18 September 2009



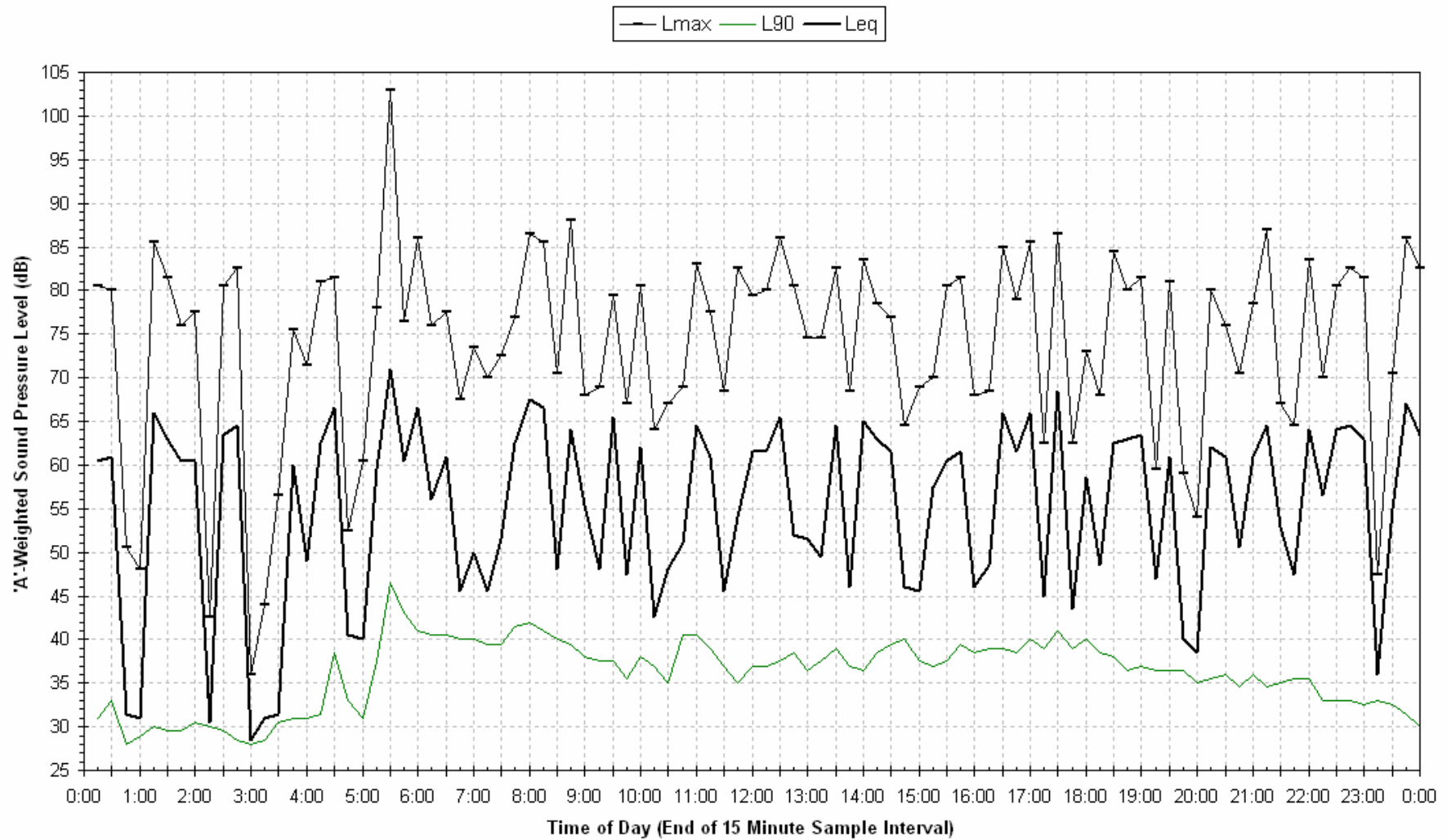
**Statistical Ambient Noise Levels**  
**Proctor - Saturday 19 September 2009**



Statistical Ambient Noise Levels  
Proctor - Sunday 20 September 2009

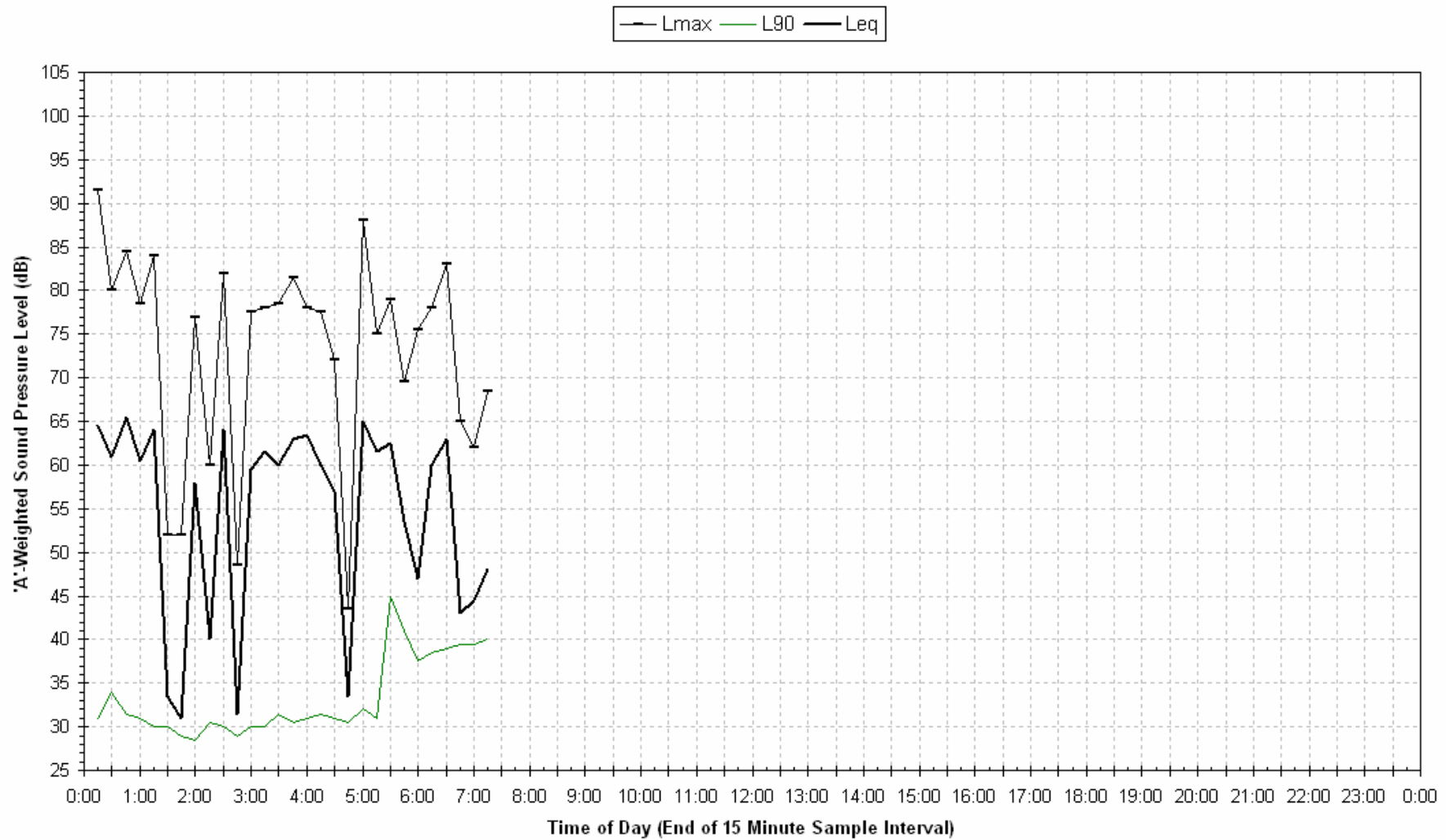


Statistical Ambient Noise Levels  
Proctor - Monday 21 September 2009





Statistical Ambient Noise Levels  
Proctor - Tuesday 22 September 2009



## Logger 16 - Tranter

Noise Monitor ID	Allocated No.	Receiver Lot/Address	Registered Proprietor	NCA	Distance to Near Track (m)
L16	MMD-041	1 DP 778987	Tranter	D12	30

### Logger Location



## Site Photos – Logger 16



Noise Logging Details (Unattended Monitoring)	L16 (Session 1)	L16 (Session 2)
Logger Type	ARL EL 215	ARL EL 215
Serial Number	194449	194534
Start of measurement period	16:50, 29/07/2009	14:15, 06/08/2009
End of measurement period	15:00, 03/08/2009	10:45, 14/08/2009
Frequency Weighting	A	A
Pre-Test Calibration Check	93.9 dB(A)	94.8 dB(A)
Post-Test Calibration Check	94.0 dB(A)	94.7 dB(A)
Time Response	Fast	Fast
Engineering Units	dB(A) SPL re:20μPa	dB(A) SPL re:20μPa

Passby Measurements Details (Attended Monitoring)	L16
Sound Level Meter	Brüel & Kjær 2250
Serial Number	2506887
Measurement Dates	30/07/2009, 05/08/2009



### Logger 16 Noise Monitoring Results – Ambient Levels

Date	L <sub>eq</sub> 15hr dB(A)	L <sub>eq</sub> 9hr dB(A)
Wednesday-29-Jul-09	62.3	64.5
Thursday-30-Jul-09	62.1	63.1
Friday-31-Jul-09	61.3	63.7
Saturday-1-Aug-09	62.5	62.8
Sunday-2-Aug-09	63.0	63.4
Monday-3-Aug-09	61.9	-
Thursday-6-Aug-09	-	65.0
Friday-7-Aug-09	63.8	65.1
Saturday-8-Aug-09	64.7	64.8
Sunday-9-Aug-09	63.8	64.3
Monday-10-Aug-09	63.4	62.3
Tuesday-11-Aug-09	52.1	48.7
Wednesday-12-Aug-09	50.9	48.7
Thursday-13-Aug-09	62.3	64.2
<b>Overall</b>	<b>62.4</b>	<b>63.3</b>

### Logger 16 Noise Monitoring Results – Background Levels

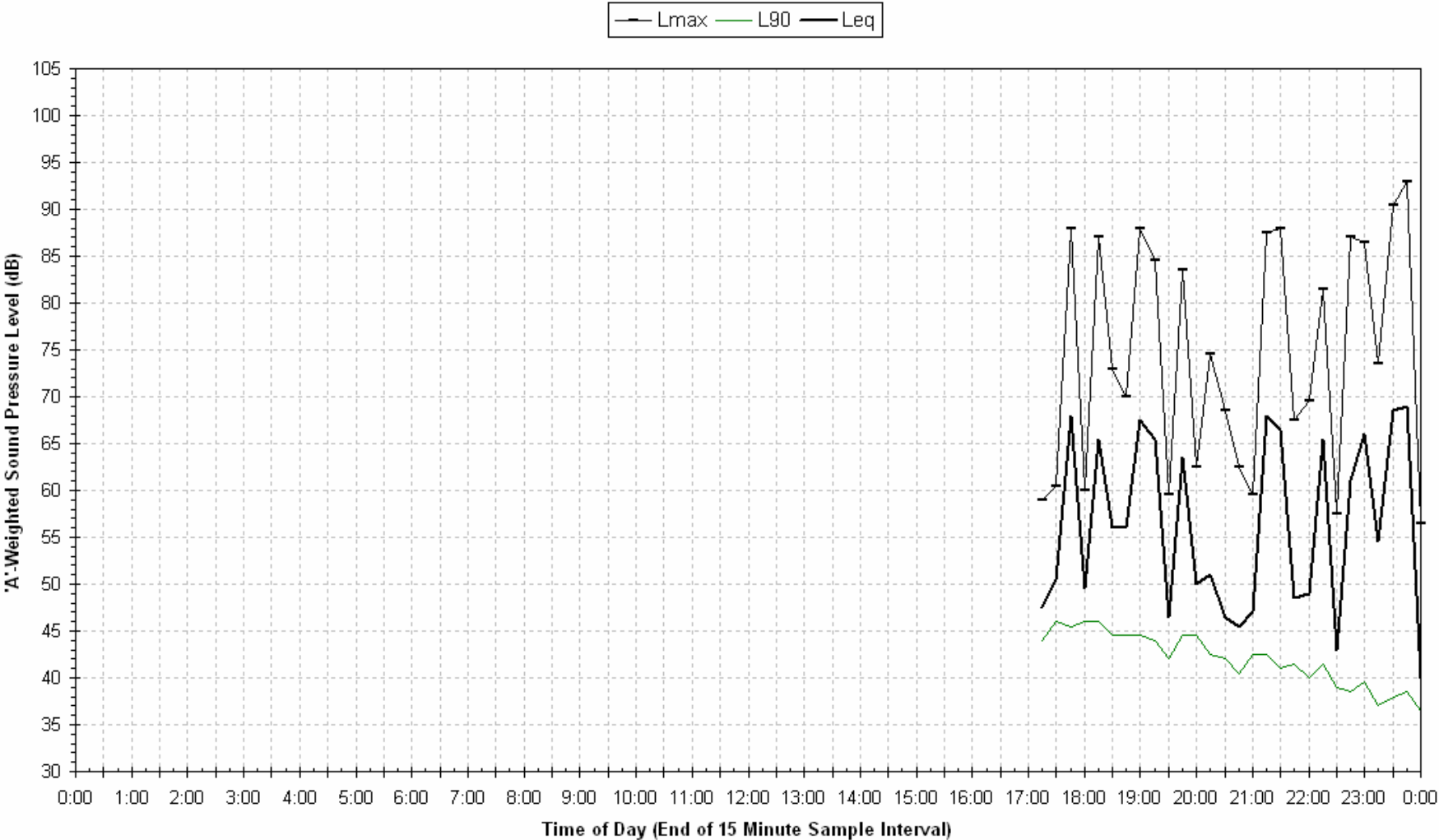
Date	Assessment Background Level L <sub>90</sub> dB(A)		
	Day	Evening	Night
Wednesday-29-Jul-09	-	40.8	36.0
Thursday-30-Jul-09	45.0	40.5	37.5
Friday-31-Jul-09	45.0	40.5	37.3
Saturday-1-Aug-09	42.7	37.8	36.5
Sunday-2-Aug-09	40.0	40.3	37.5
Monday-3-Aug-09	46.0	-	-
Thursday-6-Aug-09	-	-	35.7
Friday-7-Aug-09	46.0	38.0	35.5
Saturday-8-Aug-09	41.9	40.8	36.5
Sunday-9-Aug-09	39.5	40.5	35.3
Monday-10-Aug-09	39.5	42.0	38.5

Date	Assessment Background Level L <sub>90</sub> dB(A)		
	Day	Evening	Night
Tuesday-11-Aug-09	44.0	39.5	39.0
Wednesday-12-Aug-09	41.2	41.5	37.2
Thursday-13-Aug-09	41.5	41.0	37.0
<b>RBL</b>	<b>42.3</b>	<b>40.5</b>	<b>37.0</b>

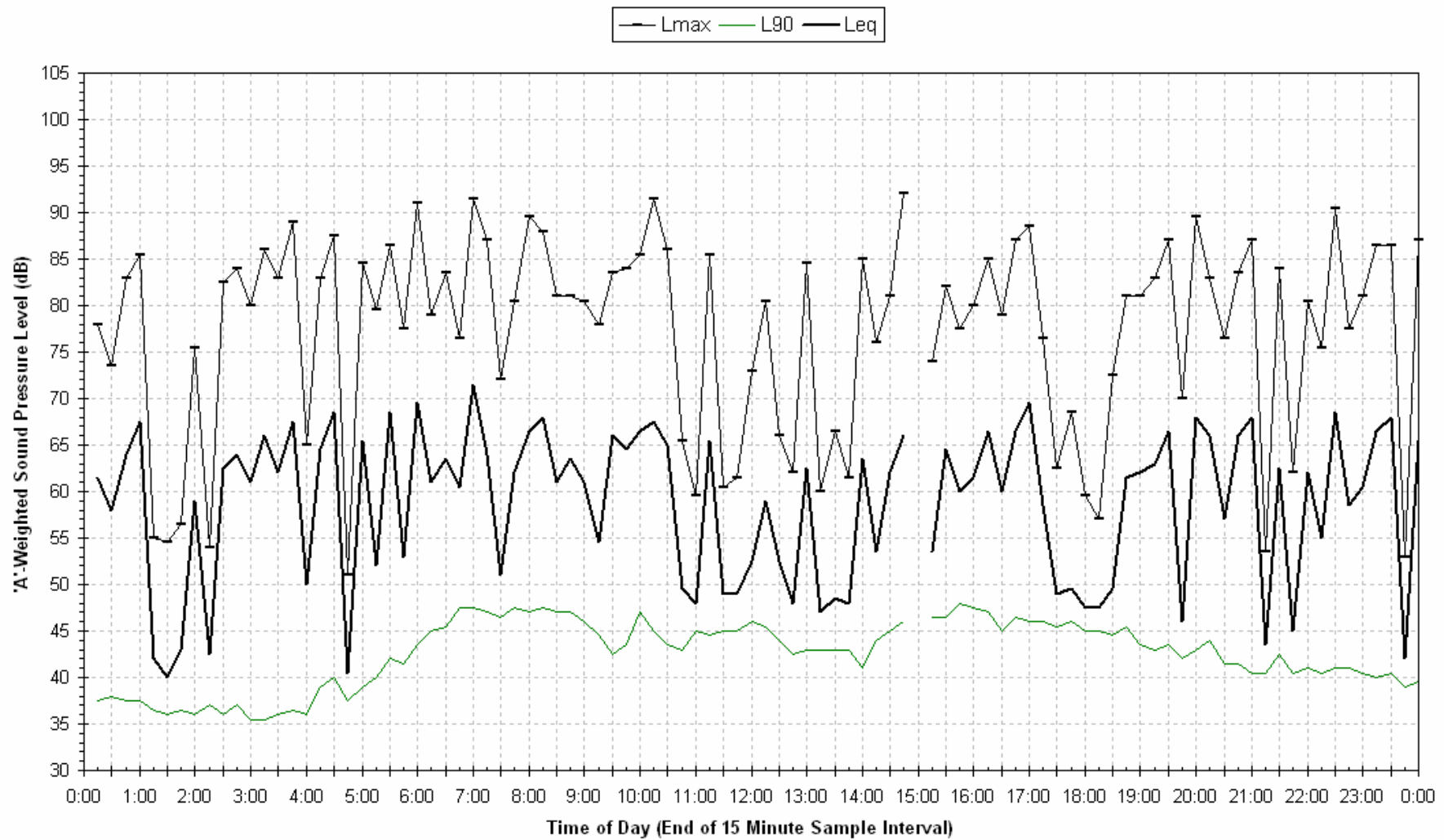
**Passby Measurement Results at Logger 16 Location dB(A)**

Up/Down	Train Type	Duration	L <sub>eq</sub>	L <sub>max</sub>
Up	Coal	0:03:39	72.4	90.4
Up	Coal	0:02:39	66.8	78.2
Up	Coal	0:02:31	66.1	80.2
Up	Coal	0:03:30	60.9	73.0
Up	Coal	0:03:06	70.0	85.4
Up	Freight	0:01:25	68.9	79.7
<b>Up Average</b>		<b>0:02:48</b>	<b>68.8</b>	<b>81.2</b>
Down	Empty Coal	0:01:17	71.2	80.3
Down	Empty Coal	0:01:33	72.4	84.1
Down	Empty Coal	0:02:00	73.2	83.1
Down	Empty Coal	0:01:55	73.8	86.2
Down	Empty Coal	0:01:42	75.2	85.7
Down	Empty Coal	0:01:04	71.0	81.9
Down	Empty Coal	0:01:40	69.8	81.6
<b>Down Average</b>		<b>0:01:36</b>	<b>72.7</b>	<b>83.3</b>
Down	Passenger	0:00:13	65.7	74.8
<b>Passenger Average</b>		<b>0:00:13</b>	<b>65.7</b>	<b>74.8</b>

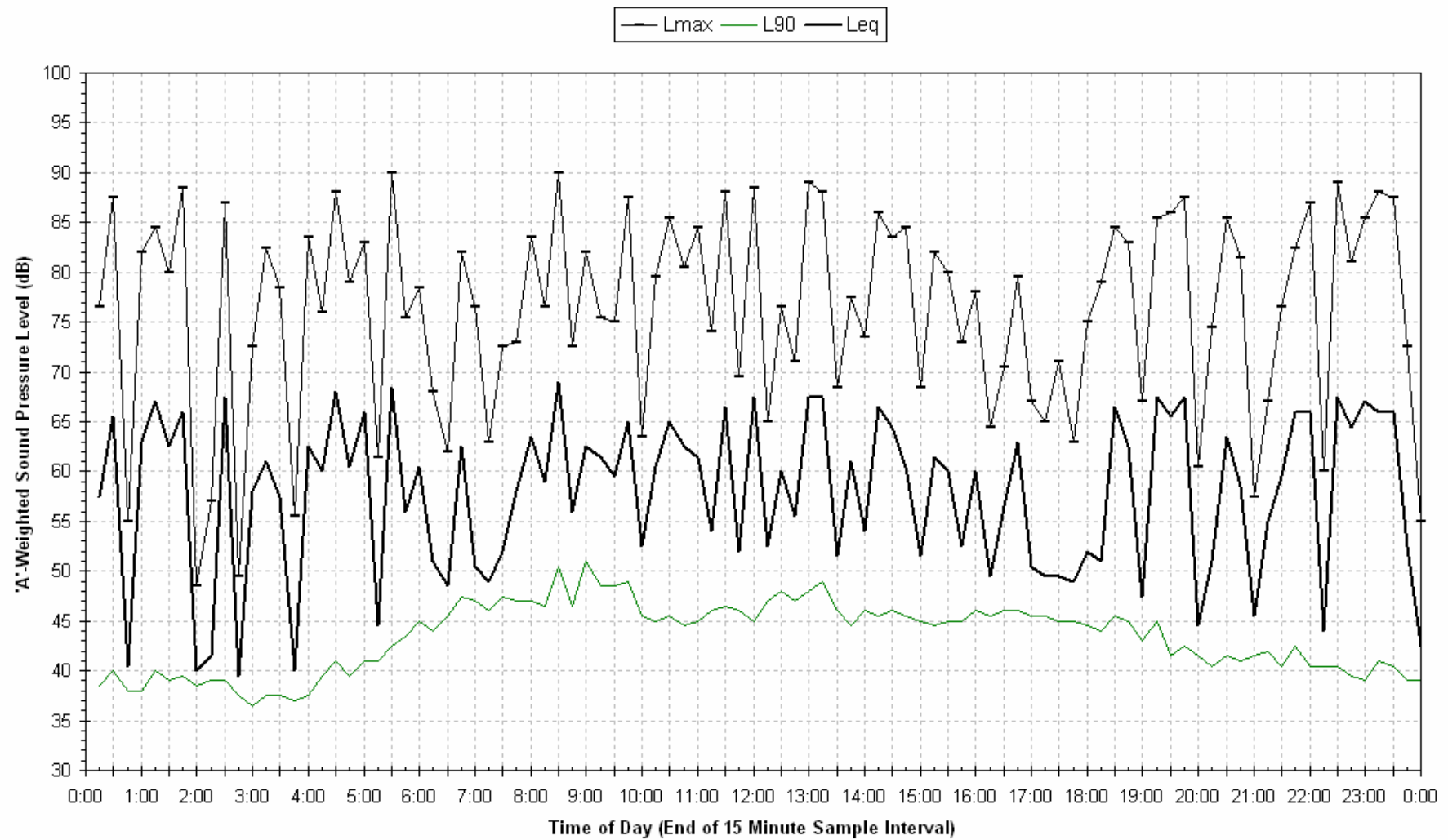
Statistical Ambient Noise Levels  
130 Wollombi - Wednesday 29 July 2009



Statistical Ambient Noise Levels  
130 Wollombi - Thursday 30 July 2009

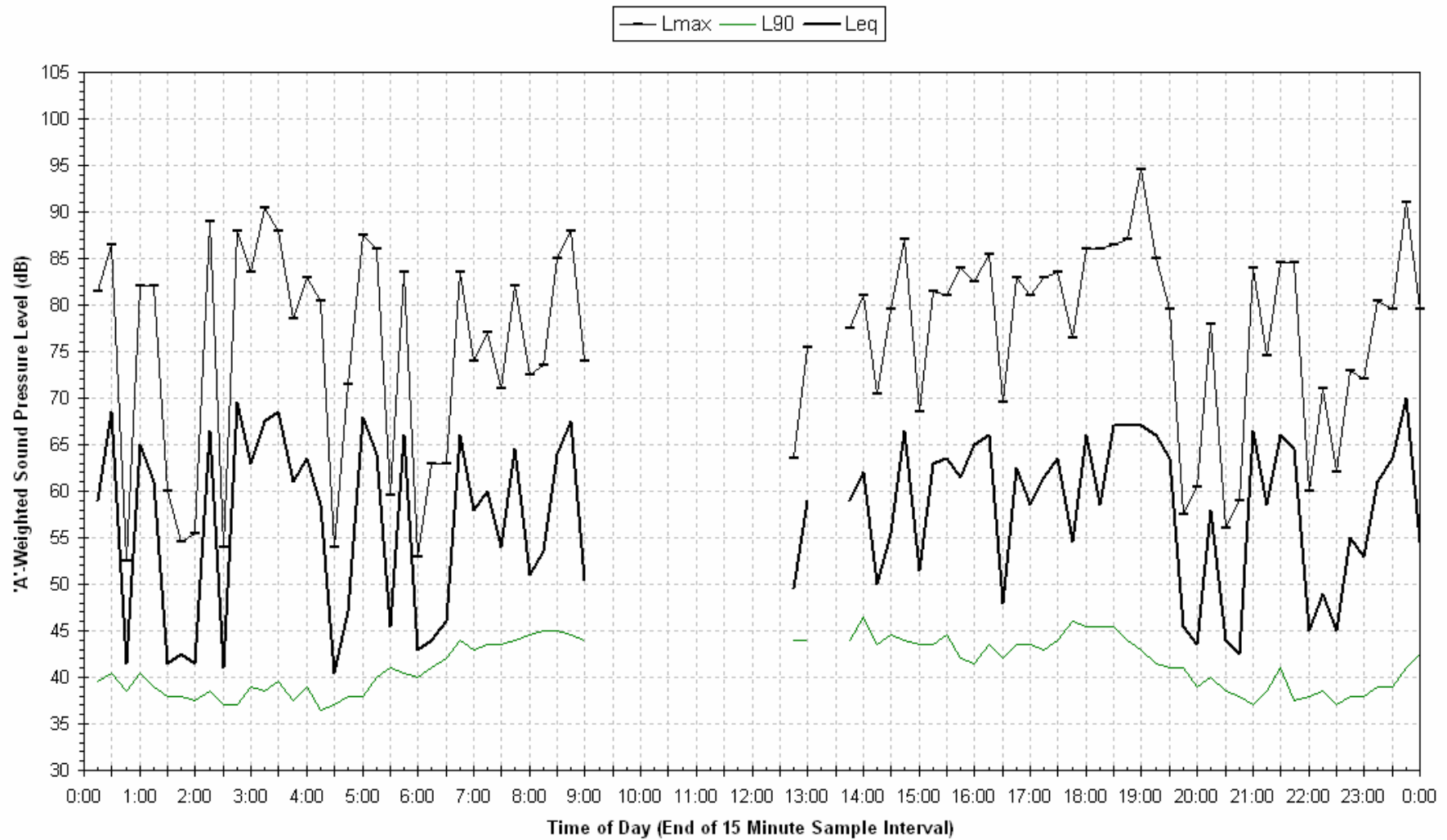


Statistical Ambient Noise Levels  
130 Wollombi - Friday 31 July 2009





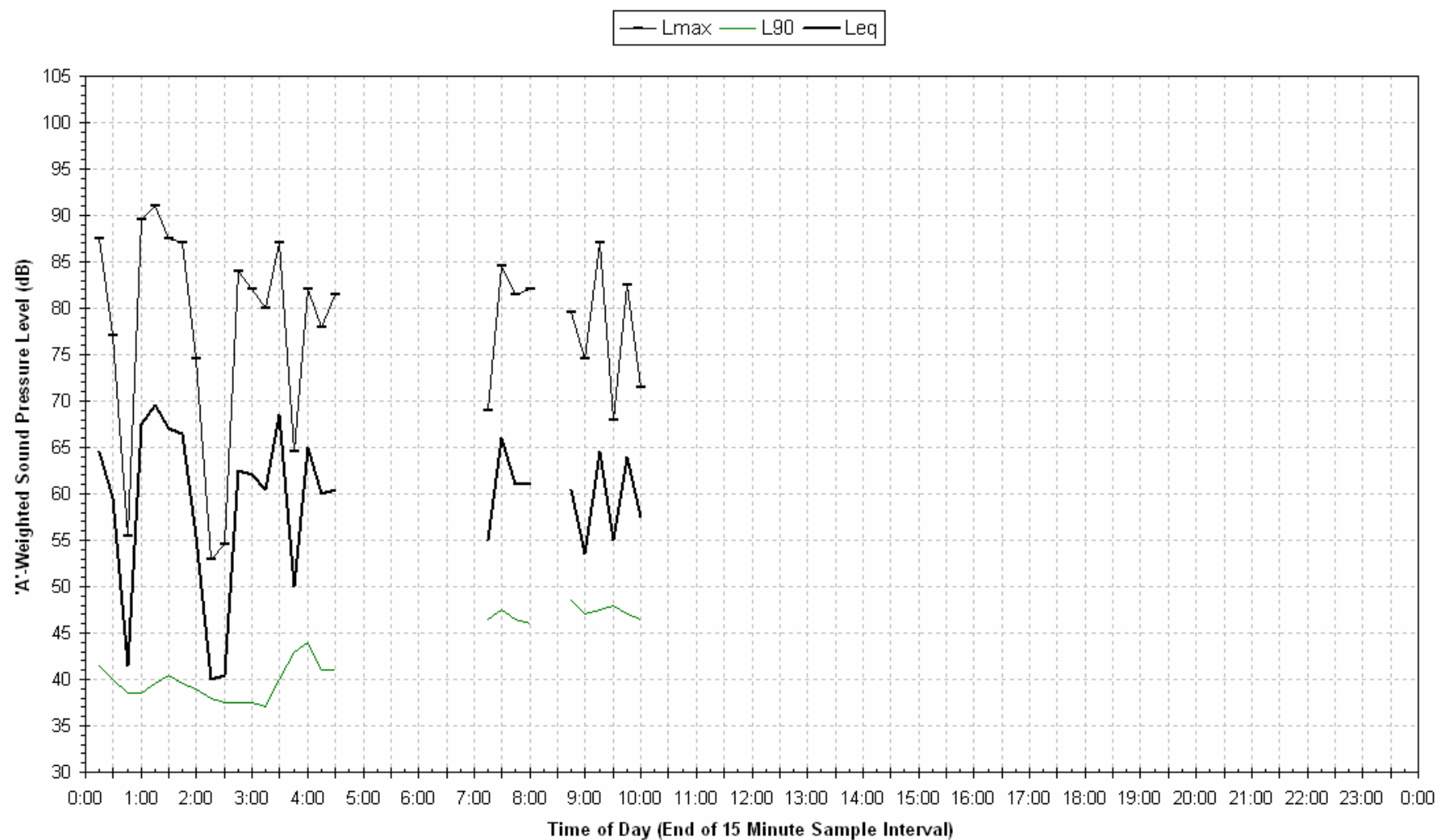
Statistical Ambient Noise Levels  
130 Wollombi - Saturday 1 August 2009



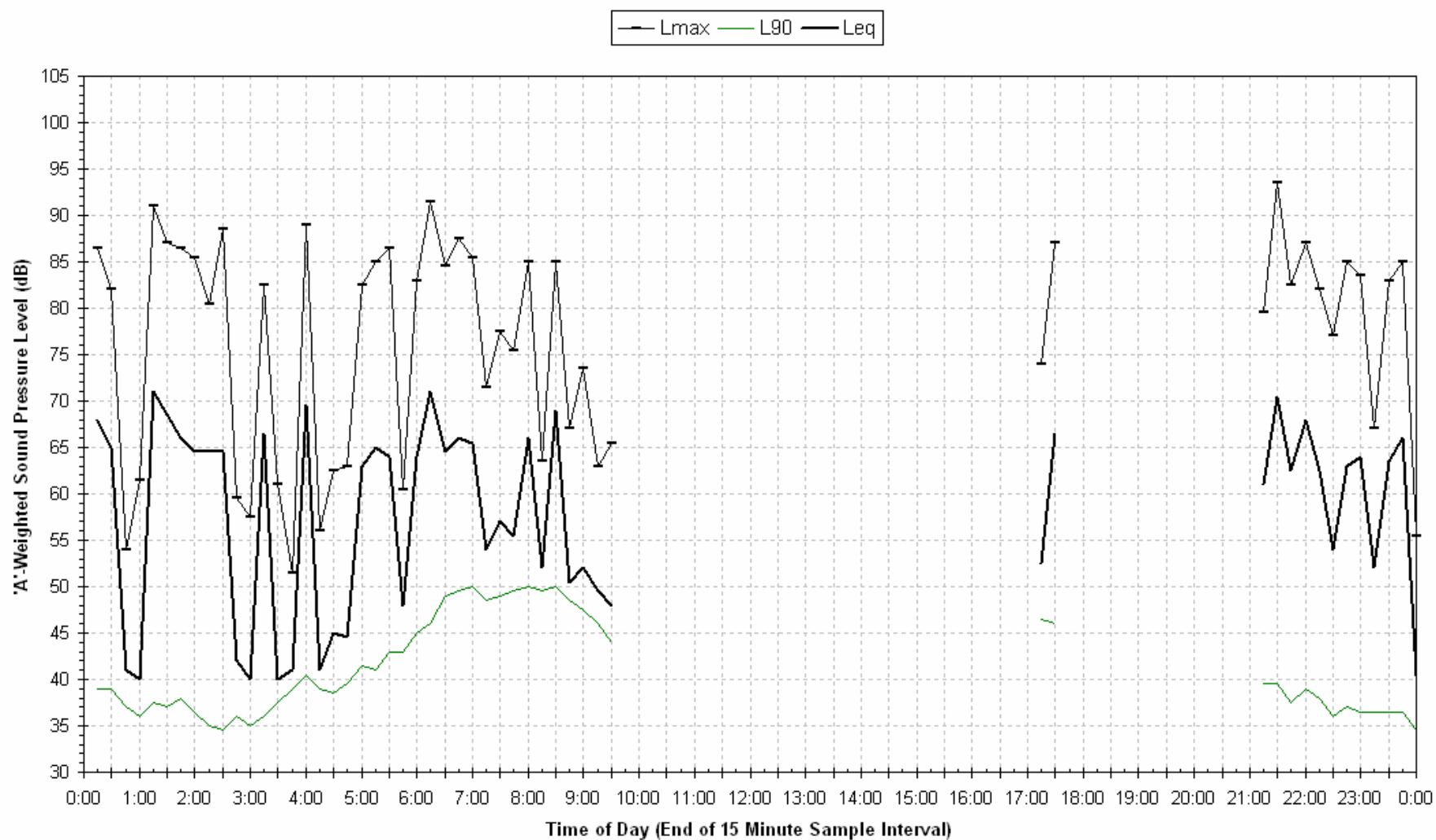
Statistical Ambient Noise Levels  
130 Wollombi - Sunday 2 August 2009



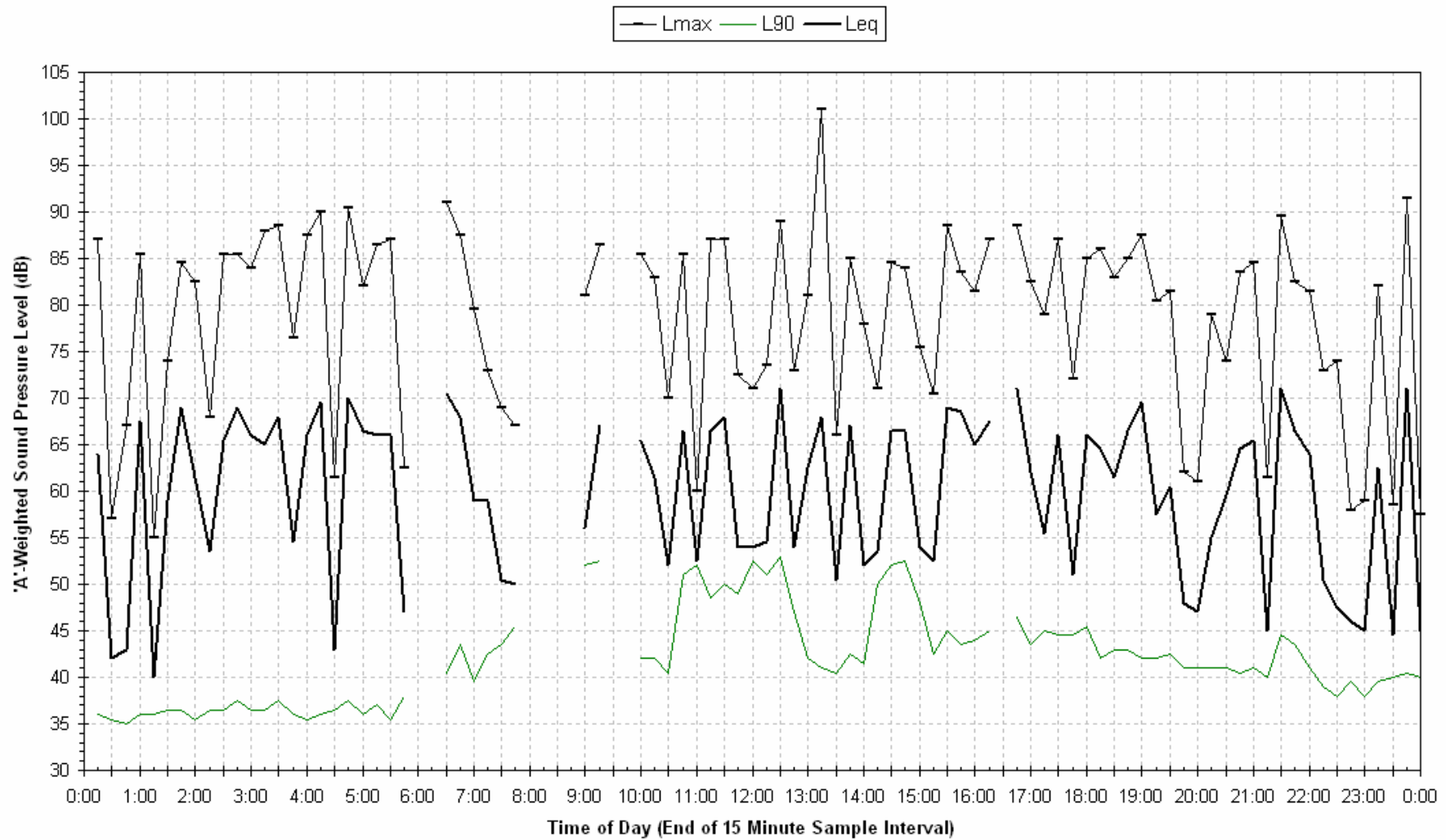
**Statistical Ambient Noise Levels  
130 Wollombi - Monday 3 August 2009**



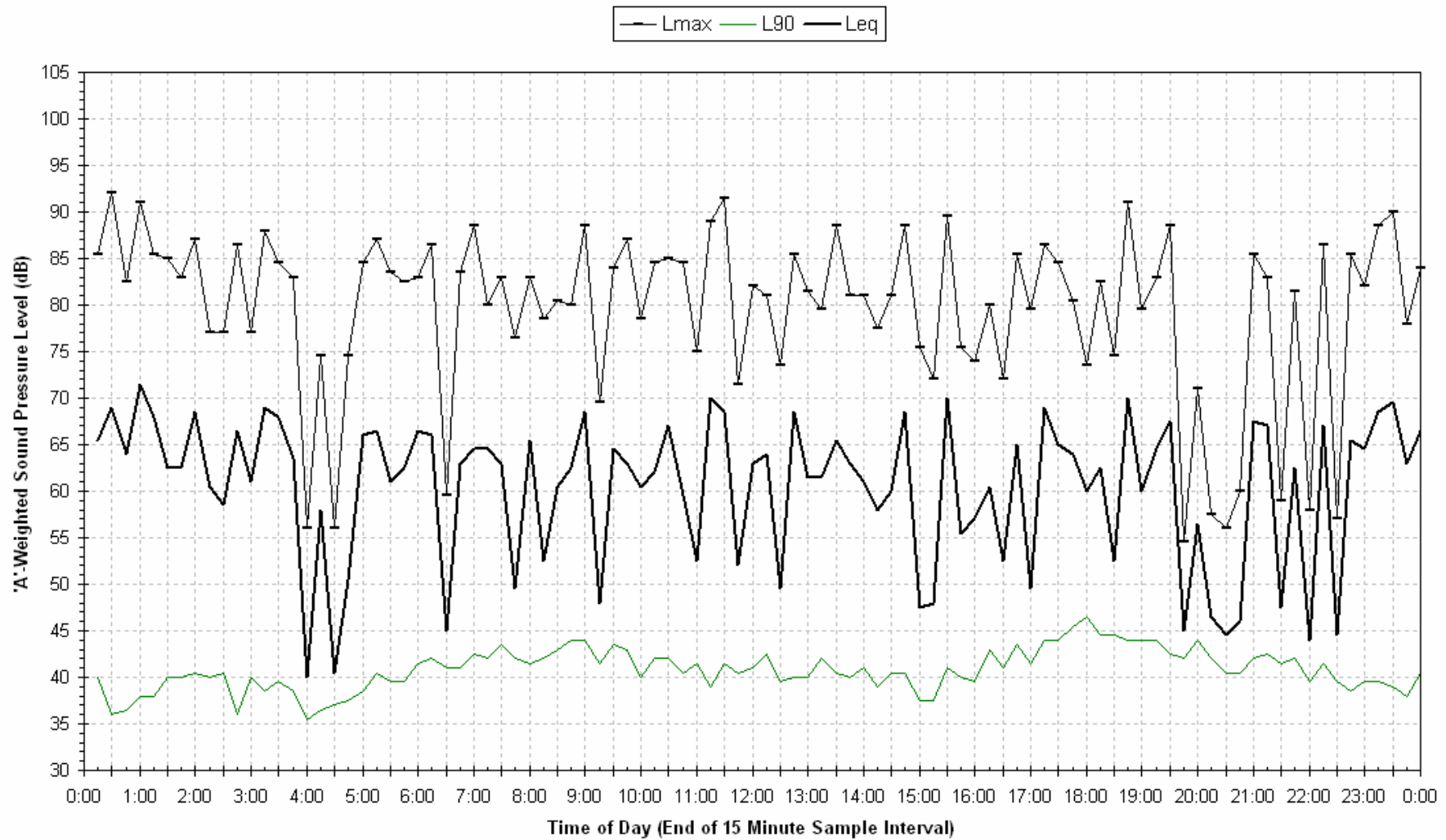
Statistical Ambient Noise Levels  
130 Wollombi - Friday 7 August 2009



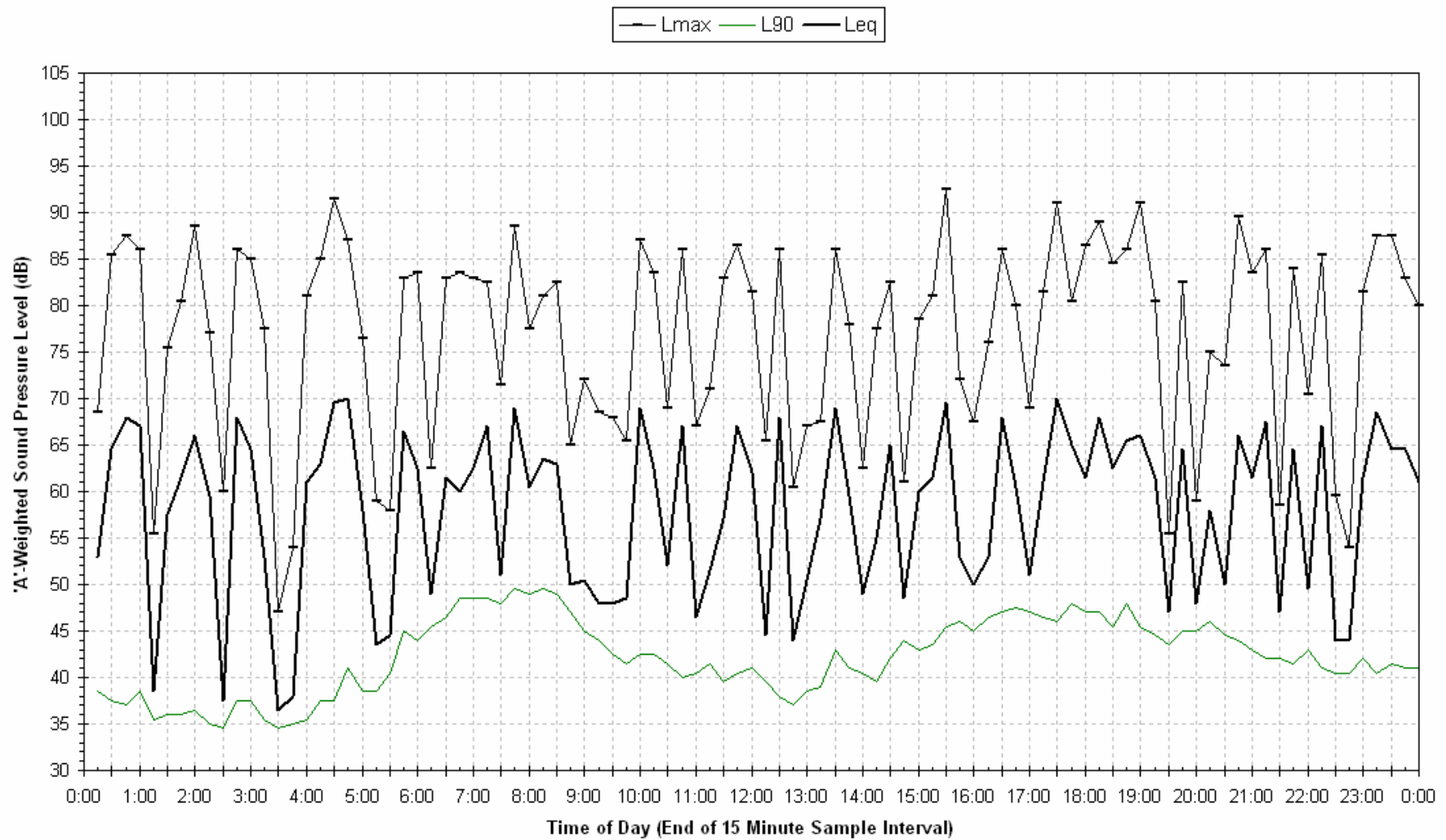
Statistical Ambient Noise Levels  
130 Wollombi - Saturday 8 August 2009



Statistical Ambient Noise Levels  
130 Wollombi - Sunday 9 August 2009

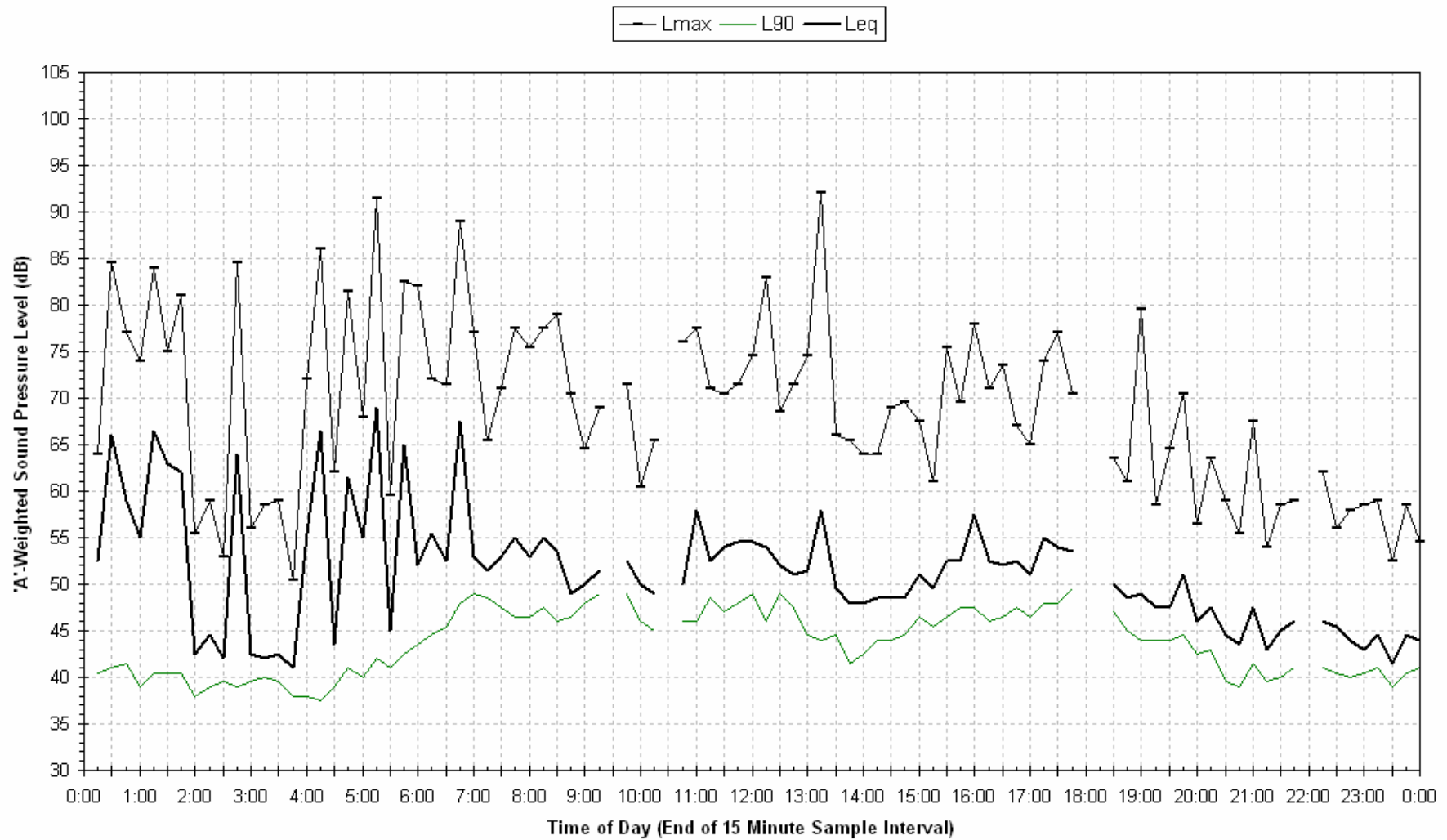


Statistical Ambient Noise Levels  
130 Wollombi - Monday 10 August 2009

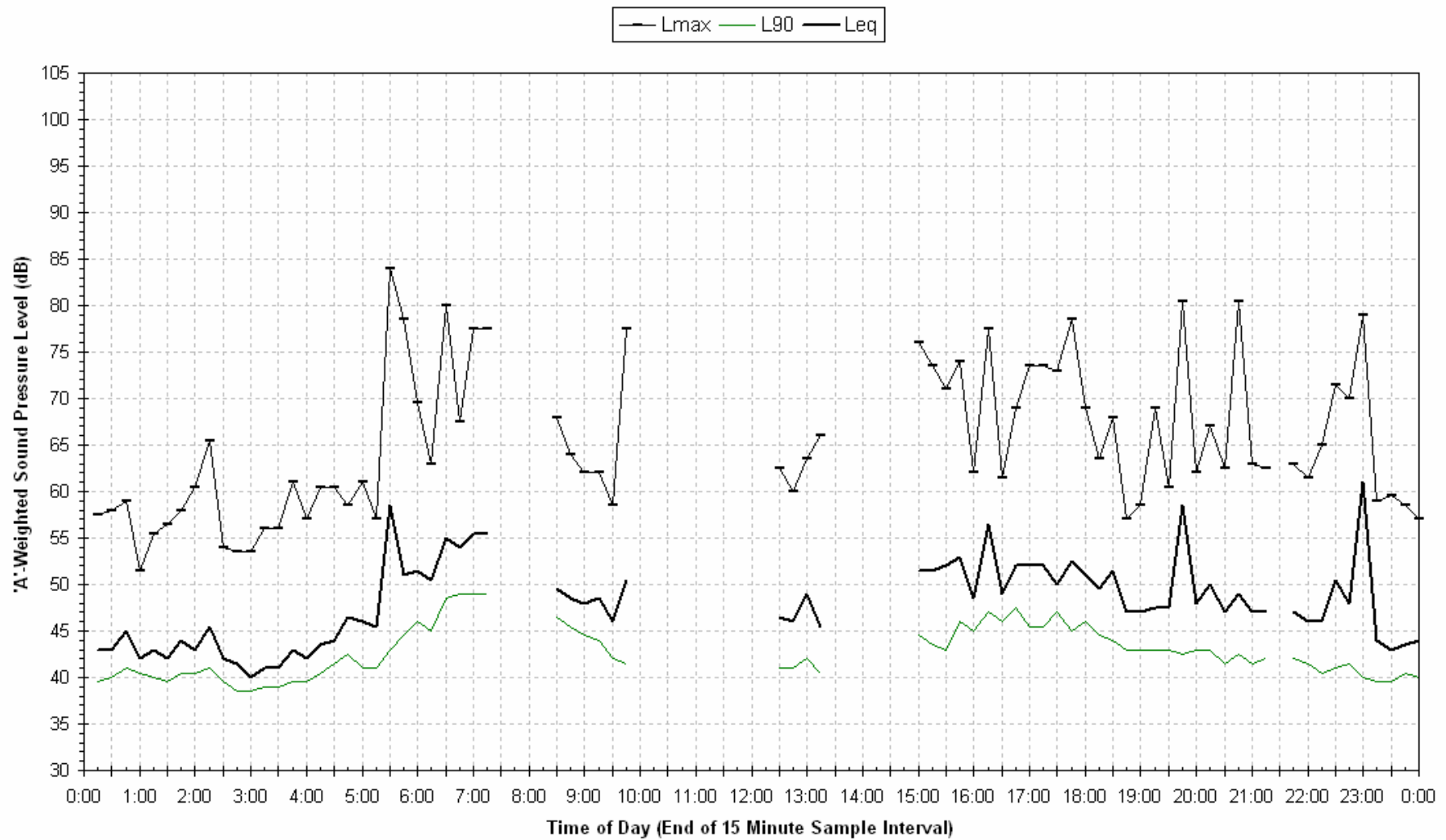




Statistical Ambient Noise Levels  
130 Wollombi - Tuesday 11 August 2009



**Statistical Ambient Noise Levels  
130 Wollombi - Wednesday 12 August 2009**



## Logger 17 - Gardiner

Noise Monitor ID	Allocated No.	Receiver Lot/Address	Registered Proprietor	NCA	Distance to Near Track (m)
L17	Not Allocated	65 Wentworth Street, Gardiner Farley		U11	50

### Logger Location



## Site Photos – Logger 17



### Noise Logging Details (Unattended Monitoring)

L17

Logger Type	ARL EL 215
Serial Number	194528
Start of measurement period	11:15, 14/09/2009
End of measurement period	12:30, 22/09/2009
Frequency Weighting	A
Pre-Test Calibration Check	94.0 dB(A)
Post-Test Calibration Check	94.0dB(A)
Time Response	Fast
Engineering Units	dB(A) SPL re:20μPa

### Passby Measurements Details (Attended Monitoring)

L17

Sound Level Meter	Brüel & Kjær 2250
Serial Number	2506887
Measurement Dates	15/09/2009

#### Logger 17 Noise Monitoring Results – Ambient Levels

Date	L <sub>eq</sub> 15hr dB(A)	L <sub>eq</sub> 9hr dB(A)
Monday-14-Sep-09	63.0	65.8
Tuesday-15-Sep-09	65.0	65.2
Wednesday-16-Sep-09	64.9	65.8
Thursday-17-Sep-09	65.3	65.2
Friday-18-Sep-09	65.2	66.7
Saturday-19-Sep-09	65.0	65.7
Sunday-20-Sep-09	65.7	64.7
Monday-21-Sep-09	65.2	65.0
<b>Overall</b>	<b>65.0</b>	<b>65.5</b>

#### Logger 17 Noise Monitoring Results – Background Levels

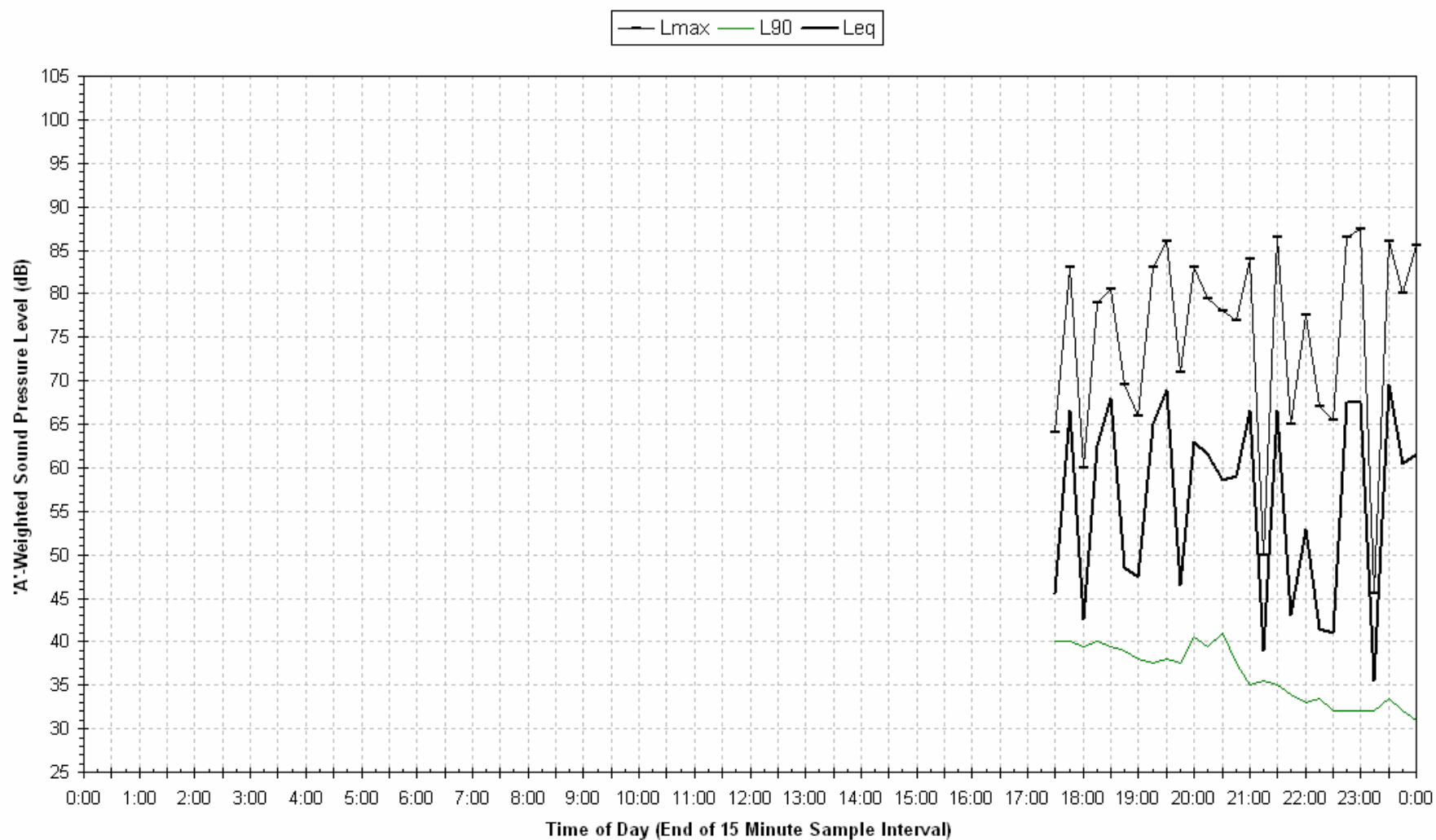
Date	Assessment Background Level L <sub>90</sub> dB(A)		
	Day	Evening	Night
Monday-14-Sep-09	-	34.5	31.8
Tuesday-15-Sep-09	33.0	37.3	32.5
Wednesday-16-Sep-09	34.5	38.3	29.8
Thursday-17-Sep-09	35.4	32.3	30.5
Friday-18-Sep-09	33.7	37.0	32.7
Saturday-19-Sep-09	32.9	37.0	32.5
Sunday-20-Sep-09	32.5	34.4	30.5
Monday-21-Sep-09	35.3	35.5	31.0
<b>RBL</b>	<b>33.7</b>	<b>36.3</b>	<b>31.4</b>



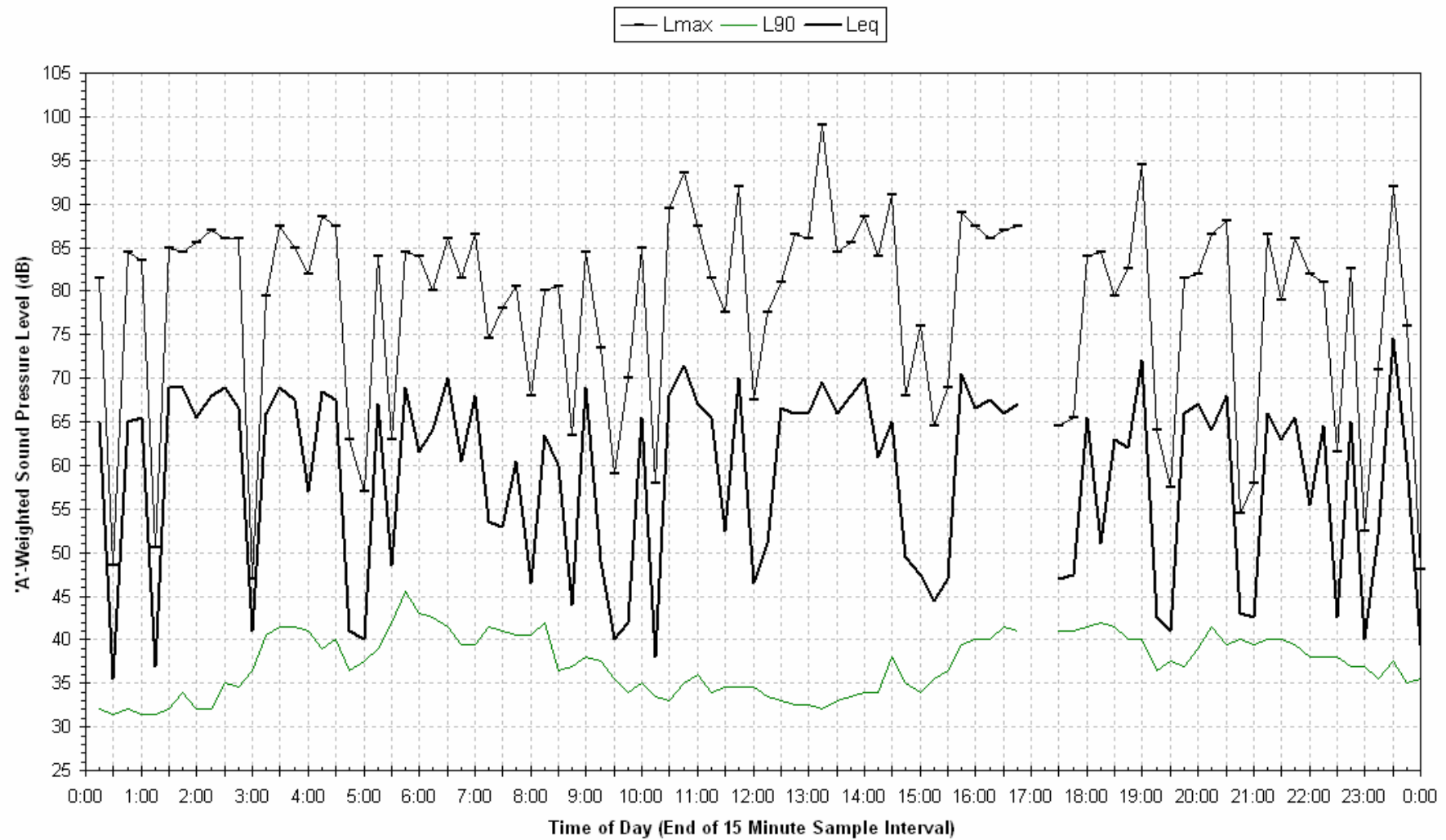
### Passby Measurement Results at Logger 17 Location dB(A)

Up/Down	Train Type	Duration	L <sub>eq</sub>	L <sub>max</sub>
Up	Coal	0:02:12	73.7	84.1
Up	Coal	0:02:56	74.1	88.6
Up	Coal	0:05:32	72.3	89.2
Up	Coal	0:02:05	71	82.6
<b>Up Average</b>		<b>0:03:11</b>	<b>72.9</b>	<b>86.1</b>
Down	Empty Coal	0:01:31	72.4	81.2
Down	Empty Coal	0:02:40	74.2	88.8
Down	Empty Coal	0:02:00	76.7	84.7
Down	Empty Coal	0:02:04	74.2	85.2
Down	Empty Coal	0:02:35	70.6	75.2
Down	Empty Coal	0:02:15	75.8	88.1
Down	Freight	0:01:08	75.5	92.3
<b>Down Average</b>		<b>0:02:02</b>	<b>74.6</b>	<b>85.1</b>
Up	Passenger	0:00:16	62.1	76.2
<b>Passenger Average</b>		<b>0:00:16</b>	<b>62.1</b>	<b>76.2</b>

Statistical Ambient Noise Levels  
Gardiner - Monday 14 September 2009

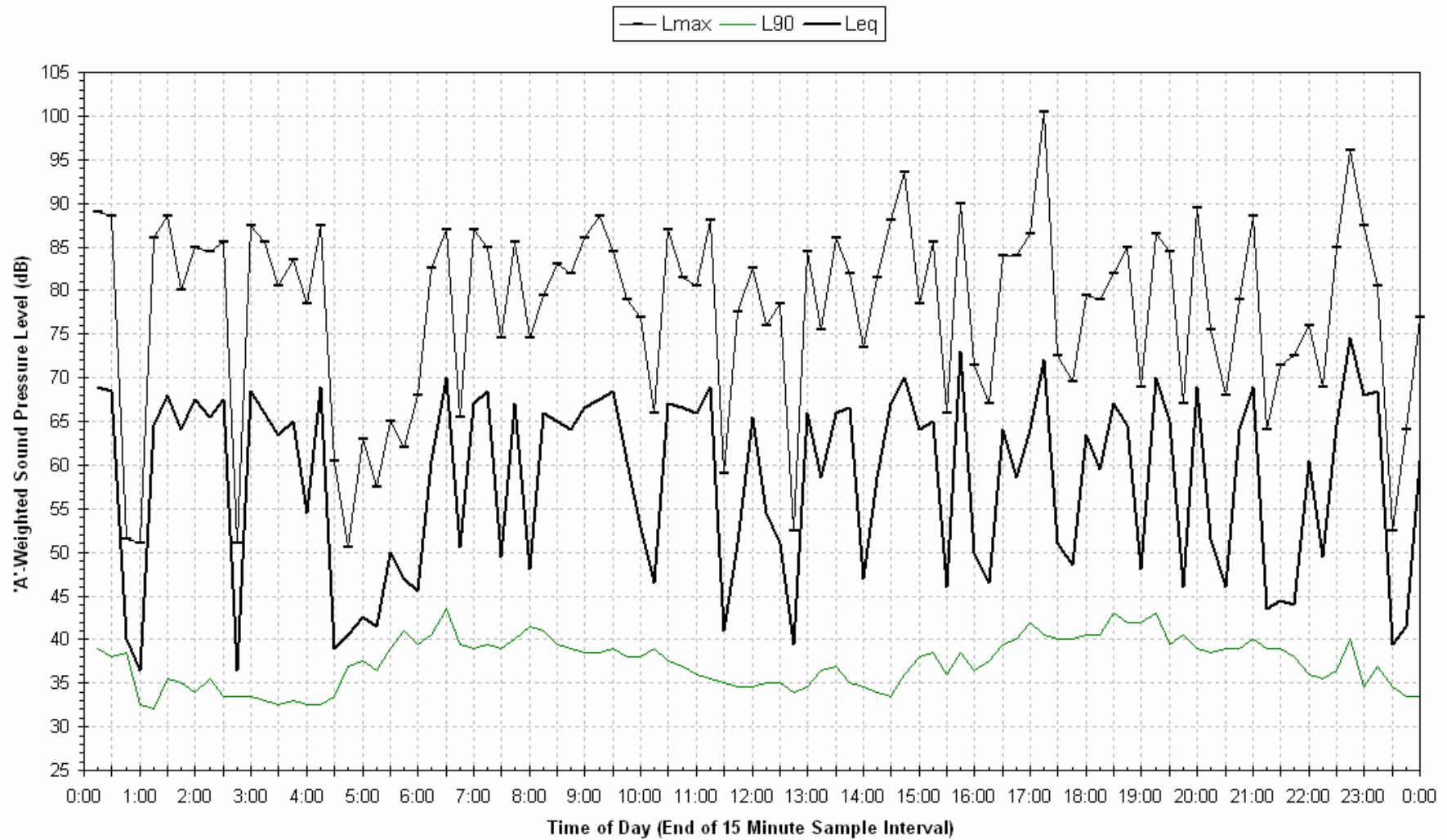


Statistical Ambient Noise Levels  
Gardiner - Tuesday 15 September 2009

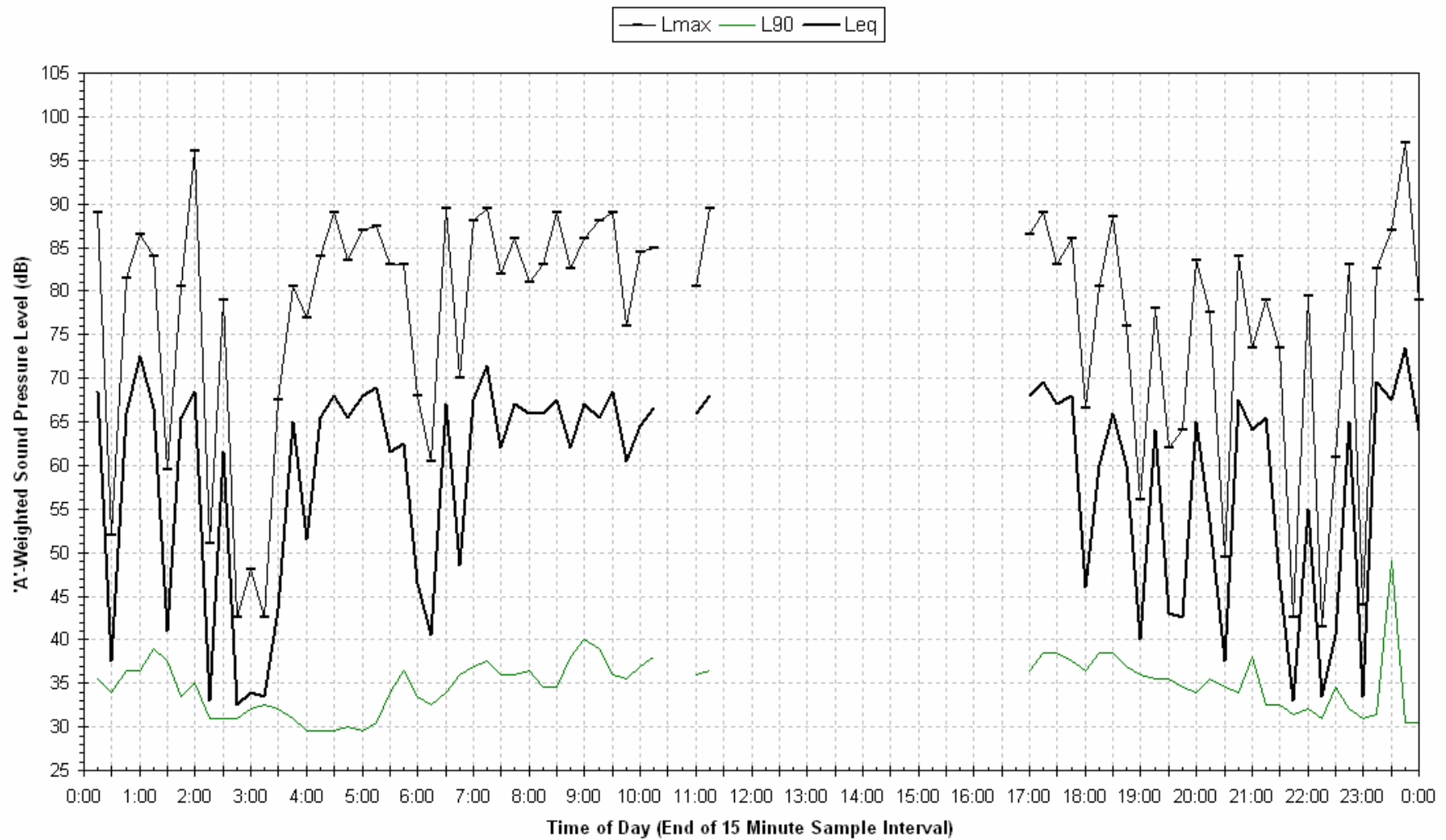




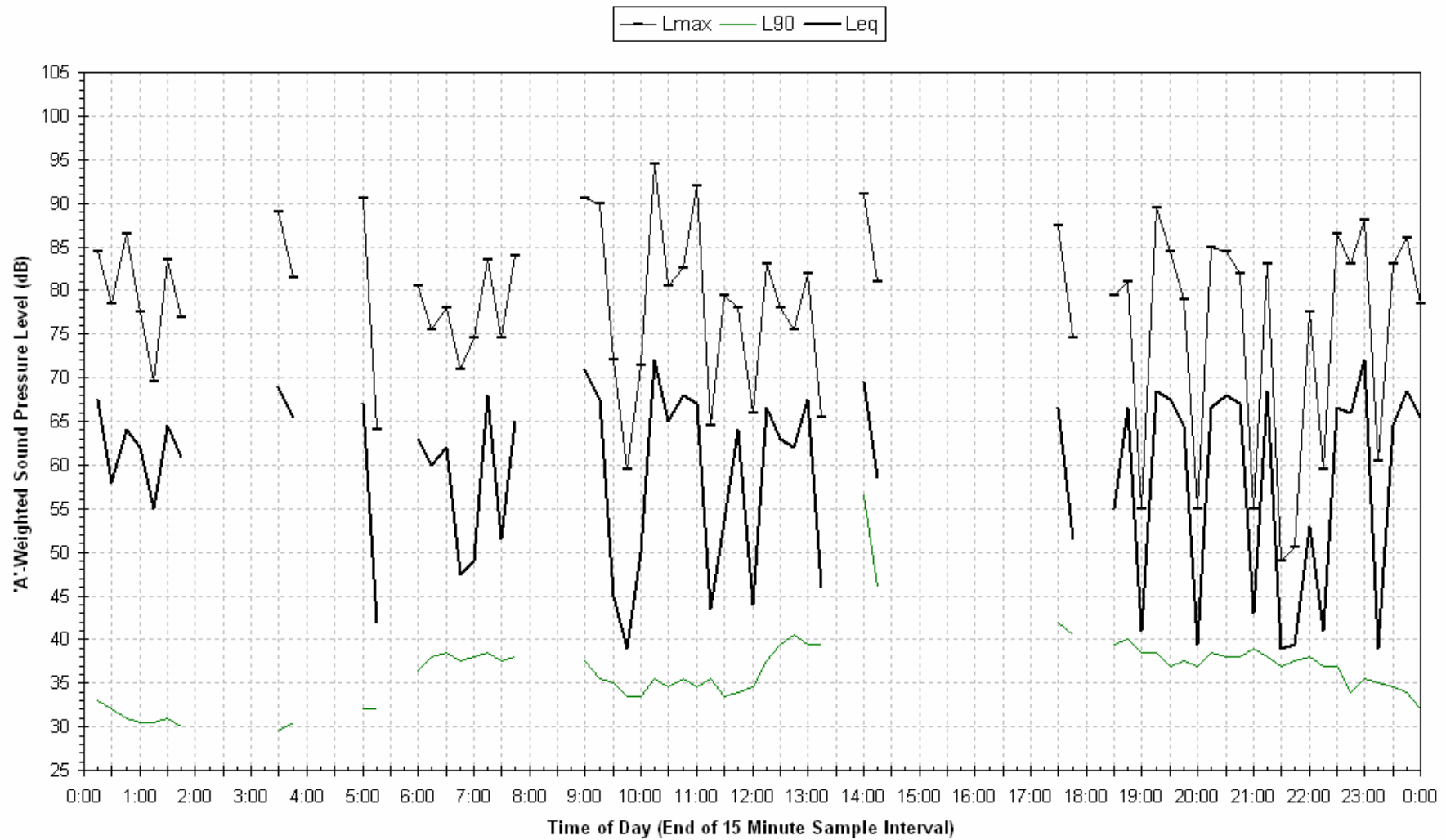
Statistical Ambient Noise Levels  
Gardiner - Wednesday 16 September 2009



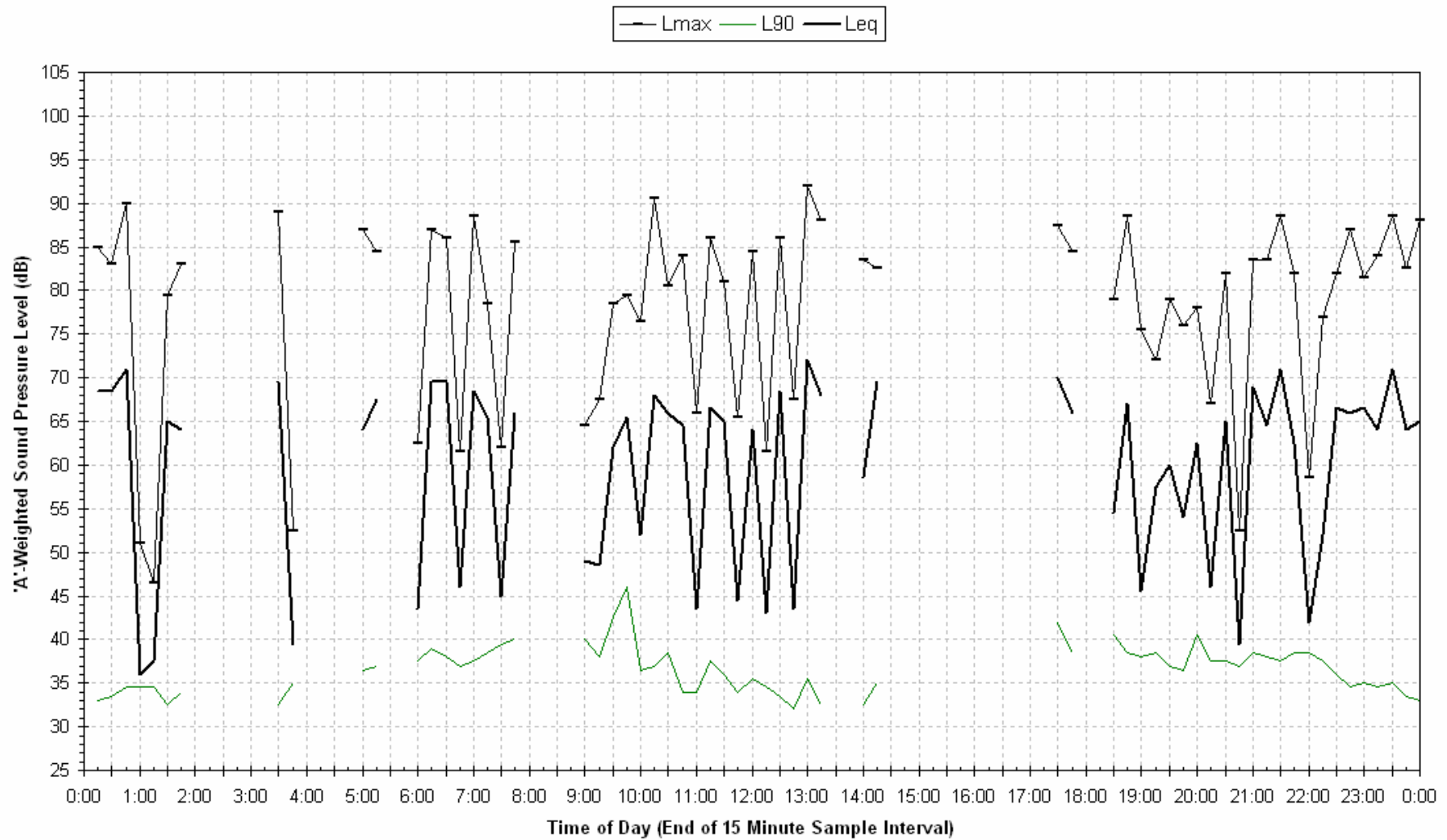
Statistical Ambient Noise Levels  
Gardiner - Thursday 17 September 2009



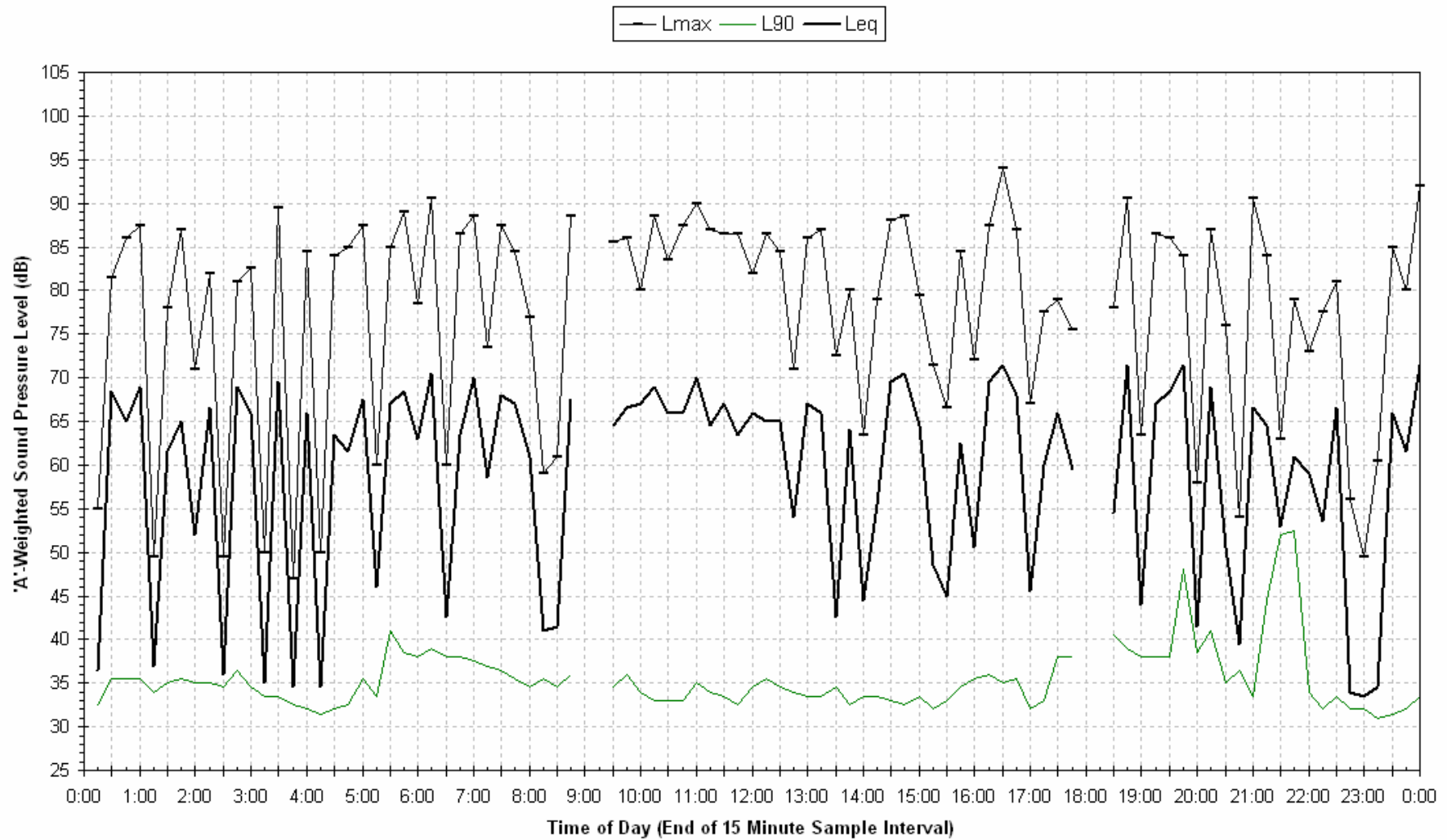
Statistical Ambient Noise Levels  
Gardiner - Friday 18 September 2009



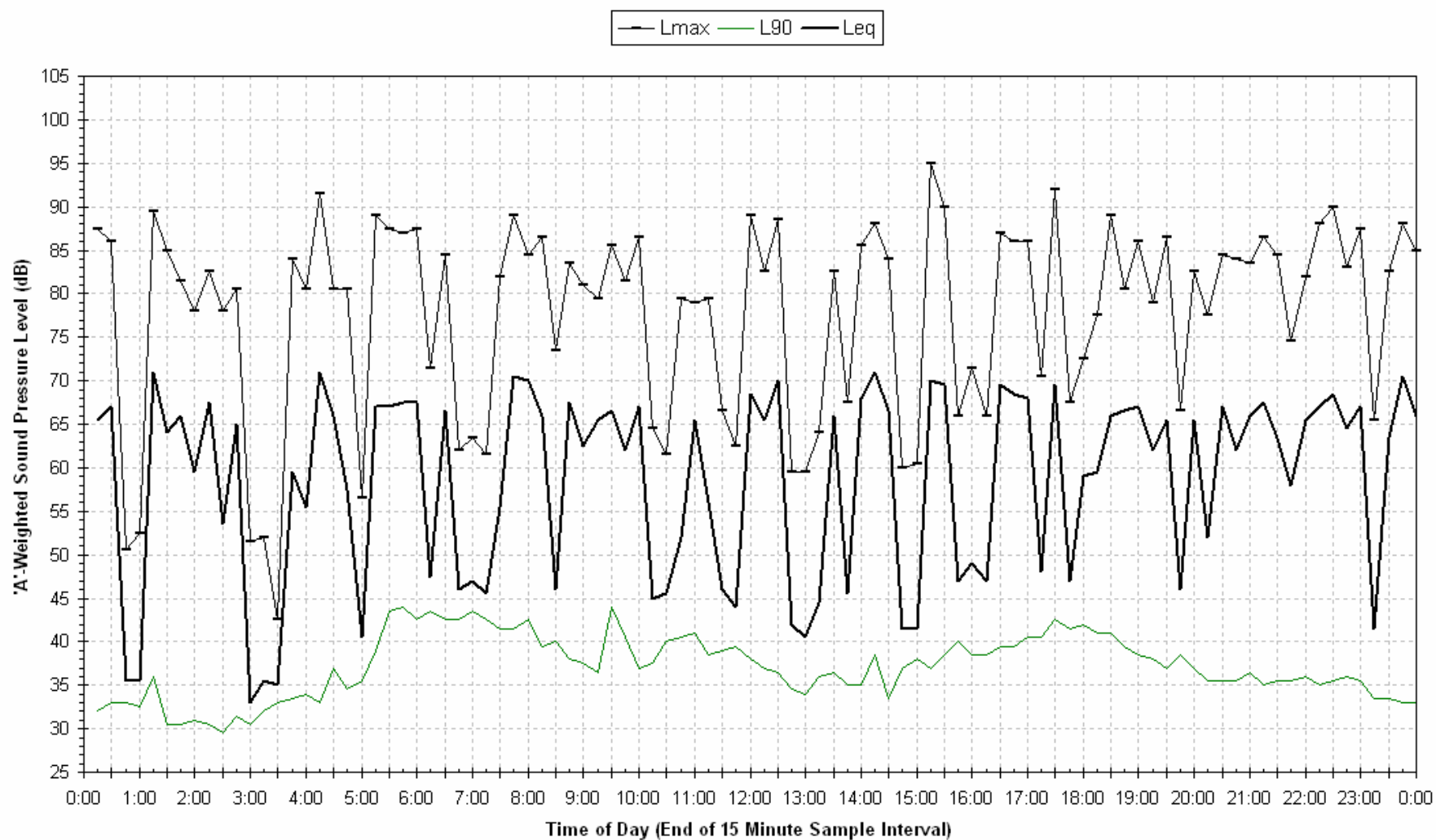
Statistical Ambient Noise Levels  
Gardiner - Saturday 19 September 2009



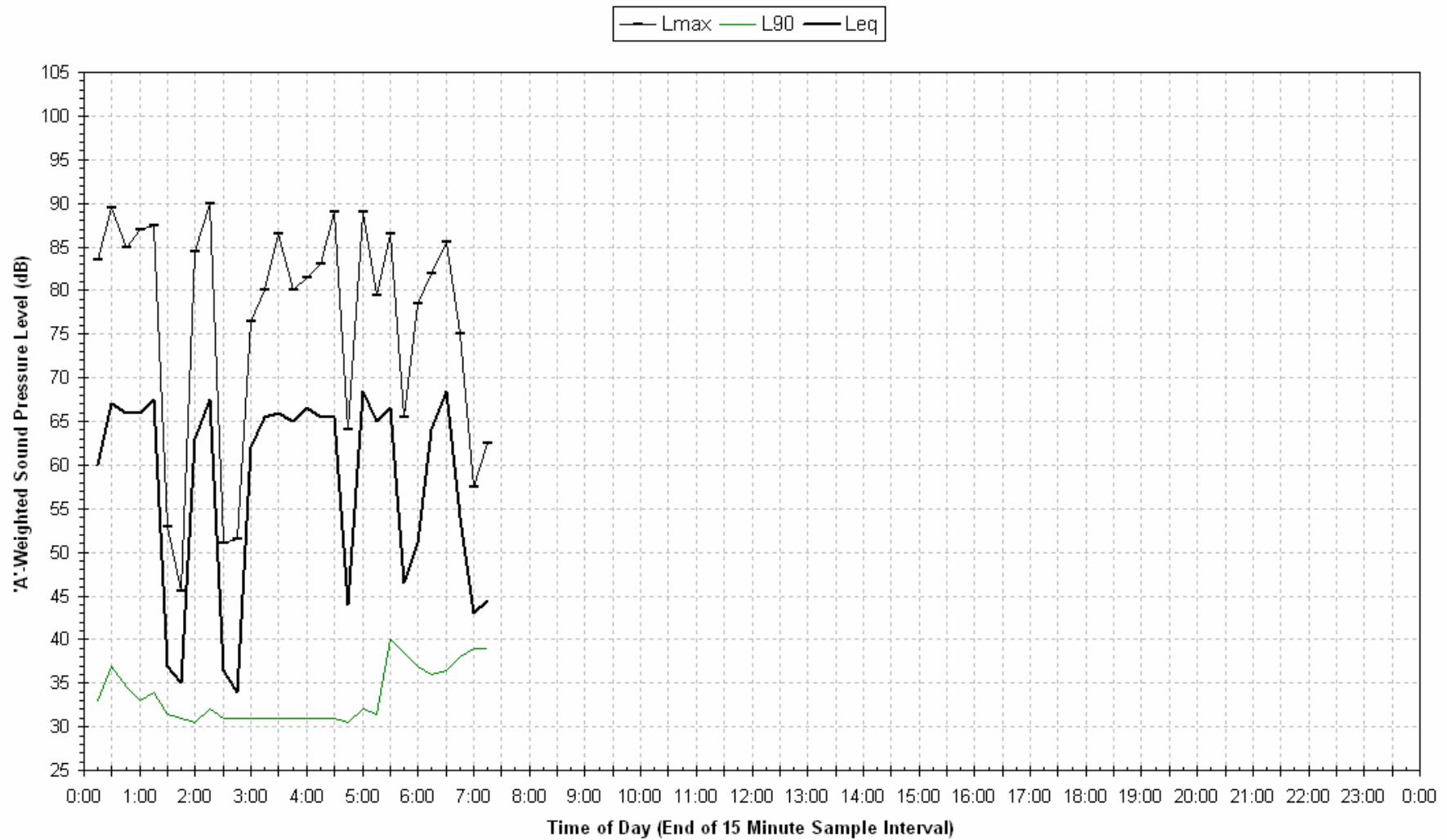
Statistical Ambient Noise Levels  
Gardiner - Sunday 20 September 2009



**Statistical Ambient Noise Levels  
Gardiner - Monday 21 September 2009**



Statistical Ambient Noise Levels  
Gardiner - Tuesday 22 September 2009









## Appendix B

# Unattended Vibration Monitoring Results



## Logger 1 - Wales

Monitor ID	Allocated Receiver No.	Lot/Address	Registered Proprietor	Receiver Area	Distance to Near Track (m)
V1	MMU-003.5	241 DP 710251	Wales	U1	83

### Logger Location



## Site Photos – Logger 1



## Vibration Logging Details (Unattended Monitoring)

L1

Logger Type	Instantel Minimate
Serial Number	BE14109
Start of measurement period	09:20, 07/08/2009
End of measurement period	08:50, 18/08/2009



## Event Report

Histogram Start Time	09:18:57 August 7, 2009	Serial Number	BE14109 V 10.02-8.0 MiniMate Plus
Histogram Finish Time	08:49:05 August 18, 2009	Battery Level	6.9 Volts
Number of Intervals	15810 at 1 minute	Calibration	July 22, 2009 by The Saros Group
Range	Geo :31.7 mm/s	File Name	P109CU5R.7L0
Sample Rate	1024sps		
Job Number:	1		

### Notes

Location:

Client:

User Name:

General:

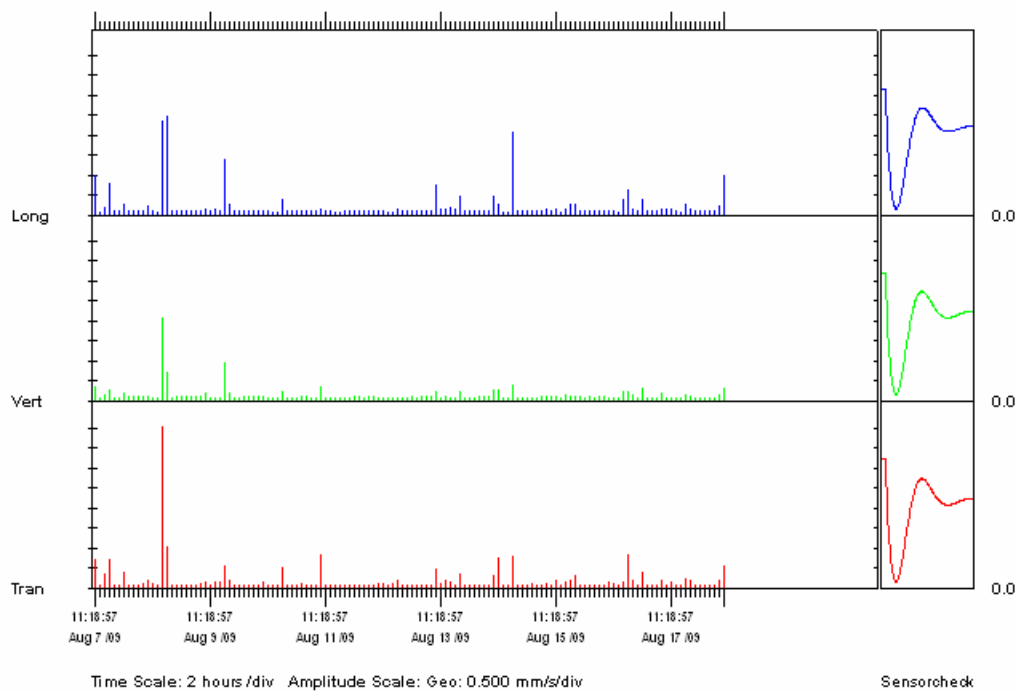
### Extended Notes

### Post Event Notes

Wales

	Tran	Vert	Long	
PPV	4.03	2.08	2.46	mm/s
ZC Freq	>100	>100	>100	Hz
Date	Aug 8 /09	Aug 8 /09	Aug 8 /09	
Time	13:52:57	13:52:57	15:31:57	
Sensorcheck	Passed	Passed	Passed	
Frequency	7.4	7.5	7.3	Hz
Overswing Ratio	3.9	3.9	4.3	

Peak Vector Sum 4.22 mm/s on August 8, 2009 at 13:52:57



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## Logger 2 - Campbell

Monitor ID	Allocated No.	ReceiverLot/Address	Registered Proprietor	NCA	Distance to Near Track (m)
V2	MMU-012	523 DP 1033311	Campbell	U3	73

### Logger Location



## Site Photos – Logger 2



## Vibration Logging Details (Unattended Monitoring)

L2

Logger Type	Instantel Minimate
Serial Number	BE14107
Start of measurement period	12:35, 06/08/2009
End of measurement period	14:30, 17/08/2009





## Event Report

Histogram Start Time	12:35:01 August 6, 2009	Serial Number	BE14107 V 8.12-8.0 MiniMate Plus
Histogram Finish Time	14:27:58 August 17, 2009	Battery Level	6.7 Volts
Number of Intervals	15952 at 1 minute	Calibration	July 22, 2009 by The Saros Group
Range	Geo :31.7 mm/s	File Name	P107CU46.MD0
Sample Rate	1024sps		
Job Number:	1		

### Notes

Location:

Client:

User Name:

General:

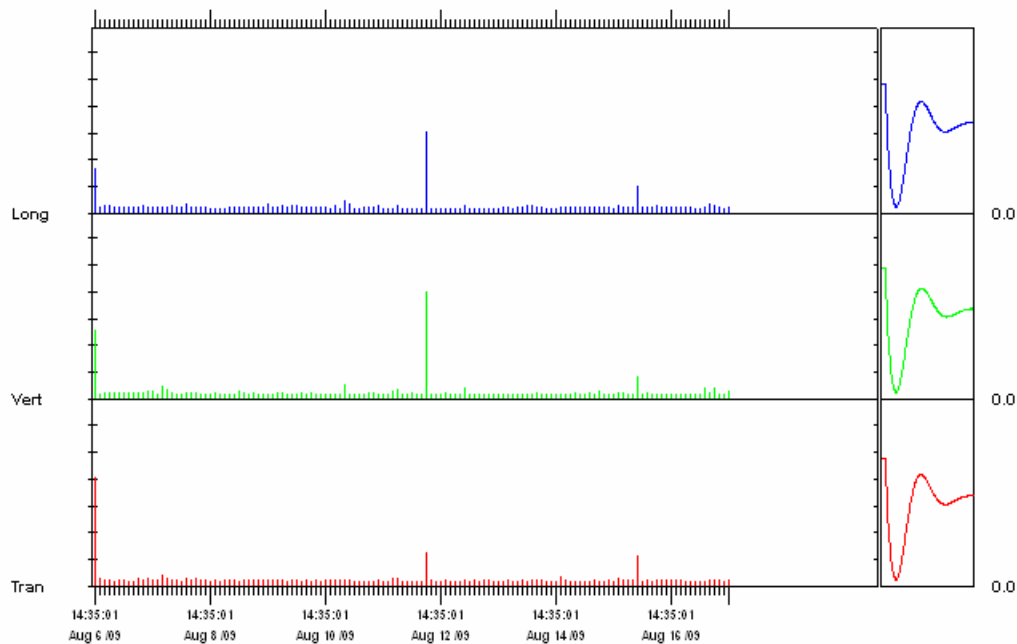
### Extended Notes

### Post Event Notes

Campbell

	Tran	Vert	Long	
PPV	2.02	2.00	1.52	mm/s
ZC Freq	34	>100	>100	Hz
Date	Aug 6 /09	Aug 12 /09	Aug 12 /09	
Time	12:37:01	07:03:01	07:03:01	
Sensorcheck	Passed	Passed	Passed	
Frequency	7.6	7.5	7.6	Hz
Overswing Ratio	3.6	3.7	3.5	

Peak Vector Sum 2.29 mm/s on August 12, 2009 at 07:03:01



Time Scale: 2 hours /div Amplitude Scale: Geo: 0.500 mm/s/div

Sensorcheck

Printed: October 3, 2009 (V 8.12 - 8.12)

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## Logger 10 - Hardy

Monitor ID	Allocated ReceiverLot/Address No.	Registered Proprietor	NCA	Distance to Near Track (m)	
V10	MMU-053	66 DP 1076981	Hardy	U6	50

### Logger Location



## Site Photos – Logger 10



### Vibration Logging Details (Unattended Monitoring)

L10

Logger Type	Instantel Minimate
Serial Number	BE14108
Start of measurement period	17:00, 28/07/2009
End of measurement period	18:00, 02/08/2009

Note: This ground vibration monitor was mistakenly set to monitor vibration levels during daytime only. As such, night-time vibration levels are not available. However, there are not expected to be any different to daytime vibration levels.



## Event Report

Histogram Start Time	09:00:13 July 29, 2009	Serial Number	BE14108 V 8.12-8.0 MiniMate Plus
Histogram Finish Time	18:00:00 July 29, 2009	Battery Level	6.3 Volts
Number of Intervals	539 at 1 minute	Calibration	July 22, 2009 by The Saros Group
Range	Geo :31.7 mm/s	File Name	P108CTP2.CD0
Sample Rate	1024sps		
Job Number:	1		

### Notes

Location:

Client:

User Name:

General:

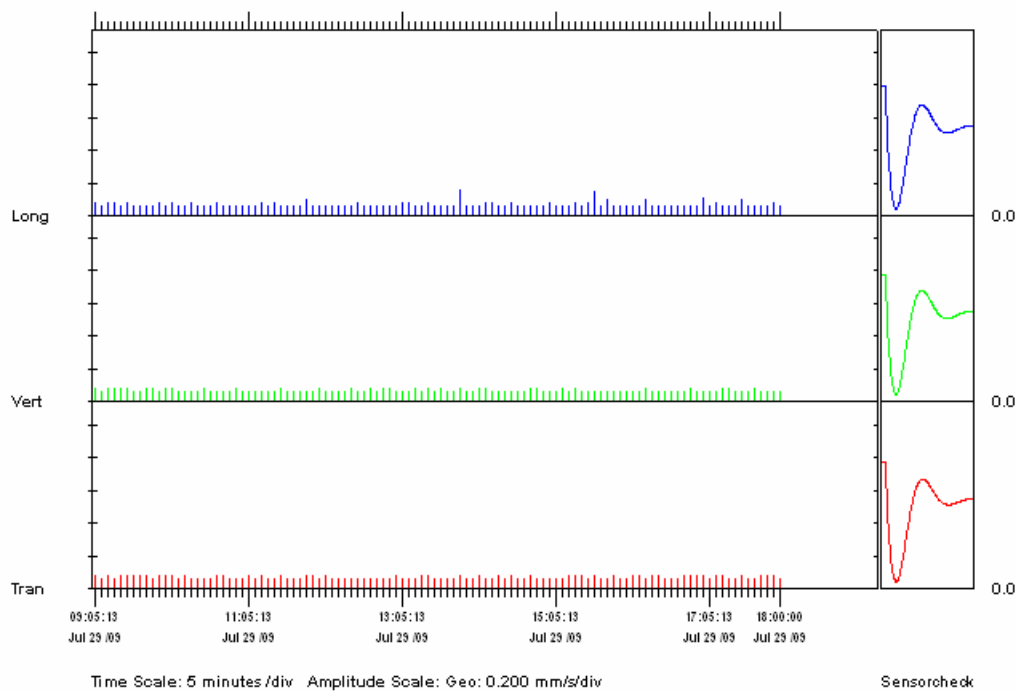
### Extended Notes

### Post Event Notes

Hardy

	Tran	Vert	Long	
PPV	0.0794	0.0794	0.159	mm/s
ZC Freq	51	>100	43	Hz
Date	Jul 29 /09	Jul 29 /09	Jul 29 /09	
Time	09:05:13	09:05:13	13:49:13	
Sensorcheck	Passed	Passed	Passed	
Frequency	7.3	7.5	7.4	Hz
Overswing Ratio	4.0	3.8	3.7	

Peak Vector Sum 0.165 mm/s on July 29, 2009 at 13:49:13



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## Event Report

Histogram Start Time	09:00:13 July 30, 2009	Serial Number	BE14108 V 8.12-8.0 MiniMate Plus
Histogram Finish Time	18:00:00 July 30, 2009	Battery Level	6.1 Volts
Number of Intervals	539 at 1 minute	Calibration	July 22, 2009 by The Saros Group
Range	Geo :31.7 mm/s	File Name	P108CTQX.D00
Sample Rate	1024sps		
Job Number:	1		

### Notes

Location:

Client:

User Name:

General:

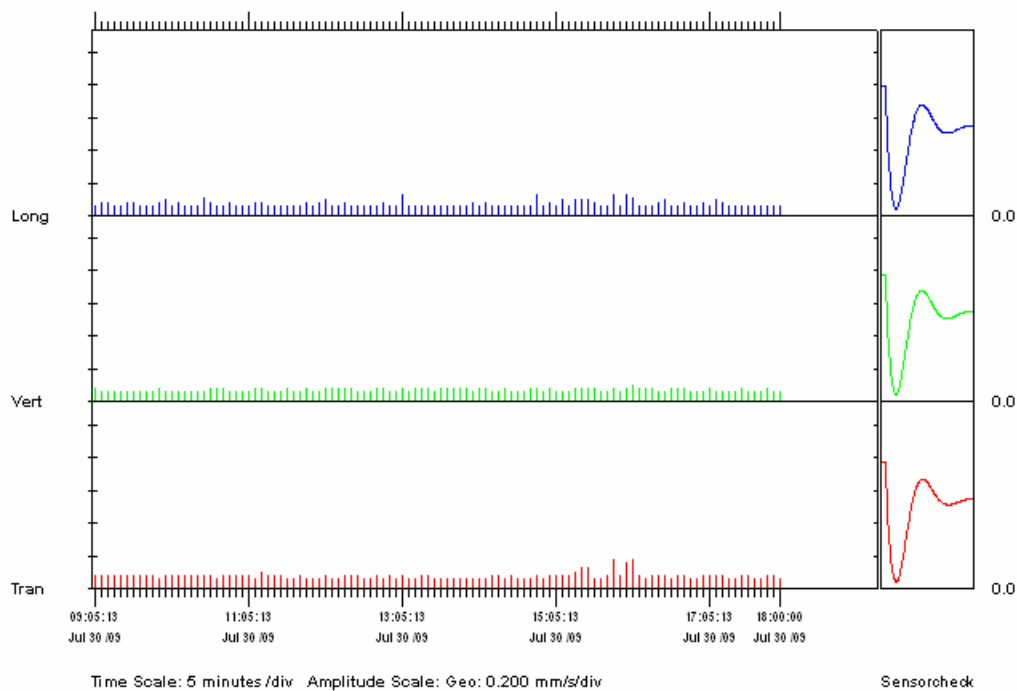
### Extended Notes

### Post Event Notes

Hardy

	Tran	Vert	Long	
PPV	0.175	0.0952	0.127	mm/s
ZC Freq	51	37	39	Hz
Date	Jul 30 /09	Jul 30 /09	Jul 30 /09	
Time	15:48:13	16:02:13	13:02:13	
Sensorcheck	Passed	Passed	Passed	
Frequency	7.3	7.5	7.4	Hz
Overswing Ratio	4.0	3.8	3.7	

Peak Vector Sum 0.186 mm/s on July 30, 2009 at 16:02:13



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## Event Report

Histogram Start Time	09:00:13 July 31, 2009	Serial Number	BE14108 V 8.12-8.0 MiniMate Plus
Histogram Finish Time	18:00:00 July 31, 2009	Battery Level	6.0 Volts
Number of Intervals	539 at 1 minute	Calibration	July 22, 2009 by The Saros Group
Range	Geo :31.7 mm/s	File Name	P108CTSR.QD0
Sample Rate	1024sps		
Job Number:	1		

### Notes

Location:

Client:

User Name:

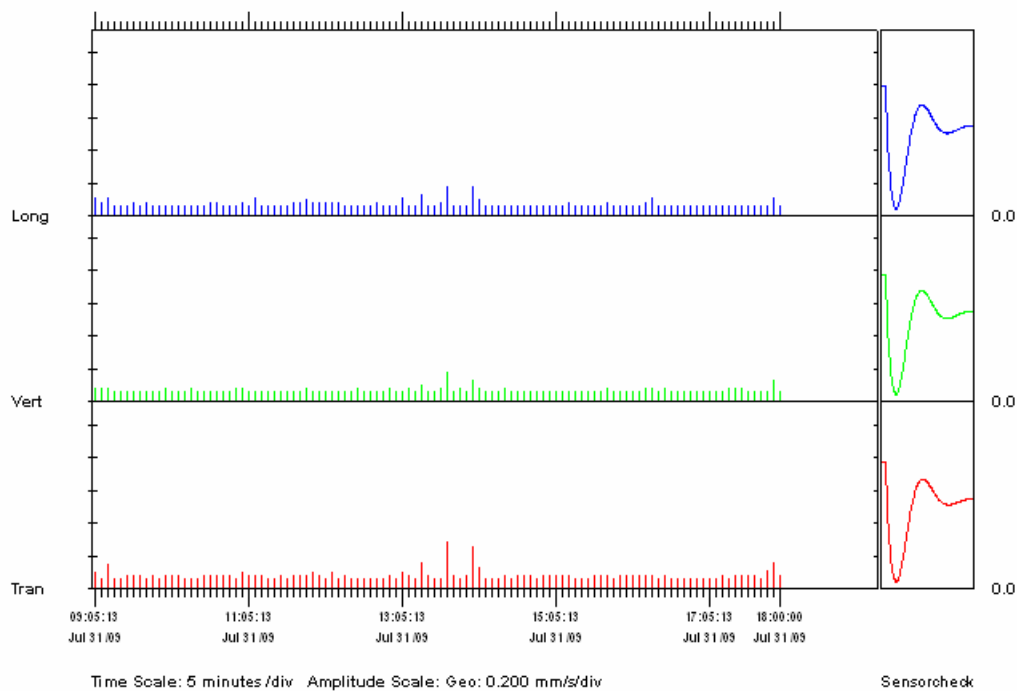
General:

### Extended Notes

### Post Event Notes

	Tran	Vert	Long	
PPV	0.286	0.175	0.175	mm/s
ZC Freq	37	37	85	Hz
Date	Jul 31 /09	Jul 31 /09	Jul 31 /09	
Time	13:40:13	13:40:13	13:40:13	
Sensorcheck	Passed	Passed	Passed	
Frequency	7.3	7.5	7.4	Hz
Overswing Ratio	4.0	3.8	3.7	

Peak Vector Sum 0.300 mm/s on July 31, 2009 at 13:40:13



Printed: October 3, 2009 (V 8.12 - 8.12)

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## Event Report

Histogram Start Time	09:00:13 August 1, 2009	Serial Number	BE14108 V 8.12-8.0 MiniMate Plus
Histogram Finish Time	18:00:00 August 1, 2009	Battery Level	5.9 Volts (Battery Low)
Number of Intervals	539 at 1 minute	Calibration	July 22, 2009 by The Saros Group
Range	Geo :31.7 mm/s	File Name	P108CTUM.CD0
Sample Rate	1024sps		
Job Number:	1		

### Notes

Location:

Client:

User Name:

General:

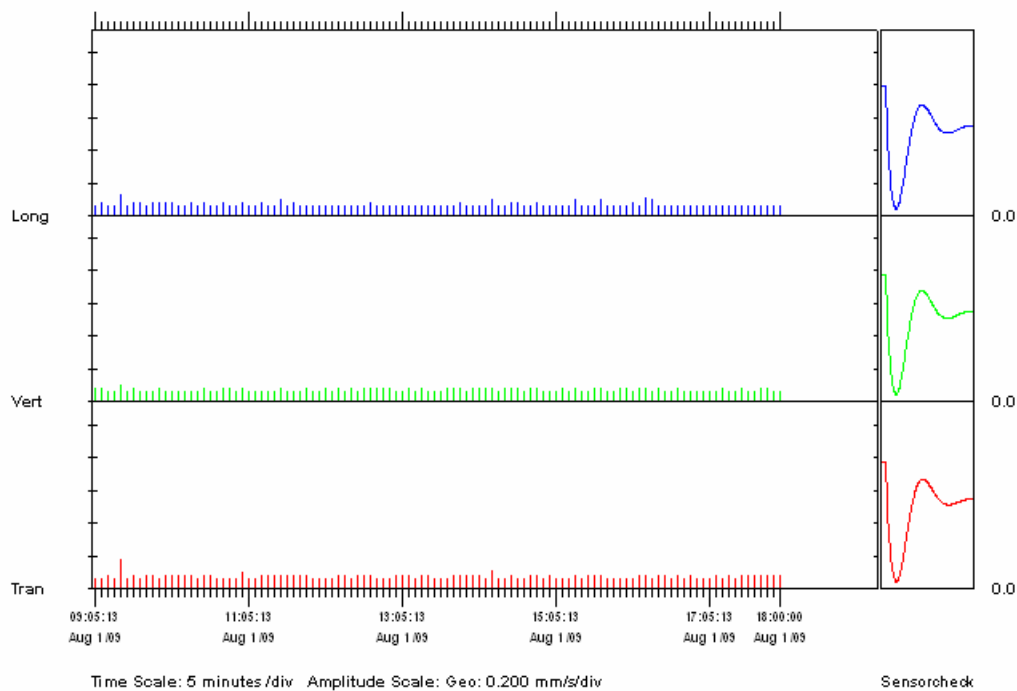
### Extended Notes

### Post Event Notes

Hardy

	Tran	Vert	Long	
PPV	0.175	0.0952	0.127	mm/s
ZC Freq	47	73	51	Hz
Date	Aug 1 /09	Aug 1 /09	Aug 1 /09	
Time	09:21:13	09:21:13	09:21:13	
Sensorcheck	Passed	Passed	Passed	
Frequency	7.2	7.5	7.4	Hz
Overswing Ratio	4.0	3.8	3.7	

Peak Vector Sum 0.192 mm/s on August 1, 2009 at 09:21:13



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## Event Report

Histogram Start Time	09:00:13 August 2, 2009	Serial Number	BE14108 V 8.12-8.0 MiniMate Plus
Histogram Finish Time	17:20:13 August 2, 2009	Battery Level	5.7 Volts (Battery Very Low)
Number of Intervals	500 at 1 minute	Calibration	July 22, 2009 by The Saros Group
Range	Geo :31.7 mm/s	File Name	P108CTWH.000
Sample Rate	1024sps		
Job Number:	1		

### Notes

Location:

Client:

User Name:

General:

### Extended Notes

### Post Event Notes

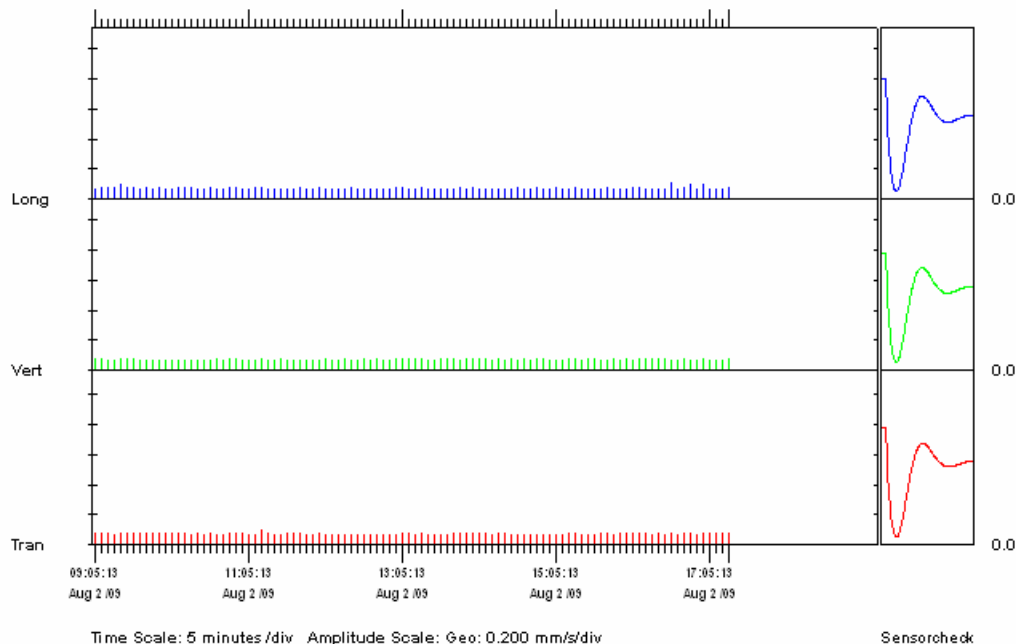
Hardy

	Tran	Vert	Long	
PPV	0.0952	0.0794	0.111	mm/s
ZC Freq	51	73	47	Hz
Date	Aug 2 /09	Aug 2 /09	Aug 2 /09	
Time	11:11:13	09:01:13	16:33:13	
Sensorcheck	Passed	Passed	Passed	
Frequency	7.2	7.5	7.4	Hz
Overswing Ratio	4.0	3.8	3.7	

Peak Vector Sum 0.122 mm/s on August 2, 2009 at 16:33:13

### Monitor Log

Aug 2 /09 09:00:13 Aug 2 /09 17:20:13 Event recorded. (Battery Low Exit)



Printed: October 3, 2009 (V 8.12 - 8.12)

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## Logger 13 – Morrison (Clifton House)

Monitor ID	Allocated No.	ReceiverLot/Address	Registered Proprietor	NCA	Distance to Near Track (m)
V13	MMD-029	80 DP 1003006	Morrison	D11	35

### Logger Location



## Site Photos – Logger 13



### Vibration Logging Details (Unattended Monitoring)

L13

Logger Type	Instantel Minimate
Serial Number	BE14107
Start of measurement period	16:15, 28/30/2009
End of measurement period	11:00, 30/07/2009



## Event Report

Histogram Start Time	16:16:59 July 28, 2009	Serial Number	BE14107 V 8.12-8.0 MiniMate Plus
Histogram Finish Time	11:00:59 July 30, 2009	Battery Level	5.7 Volts (Battery Very Low)
Number of Intervals	2564 at 1 minute	Calibration	July 22, 2009 by The Saros Group
Range	Geo :31.7 mm/s	File Name	P107CTNR.WB0
Sample Rate	1024sps		
Job Number:	1		

### Notes

Location:

Client:

User Name:

General:

### Extended Notes

### Post Event Notes

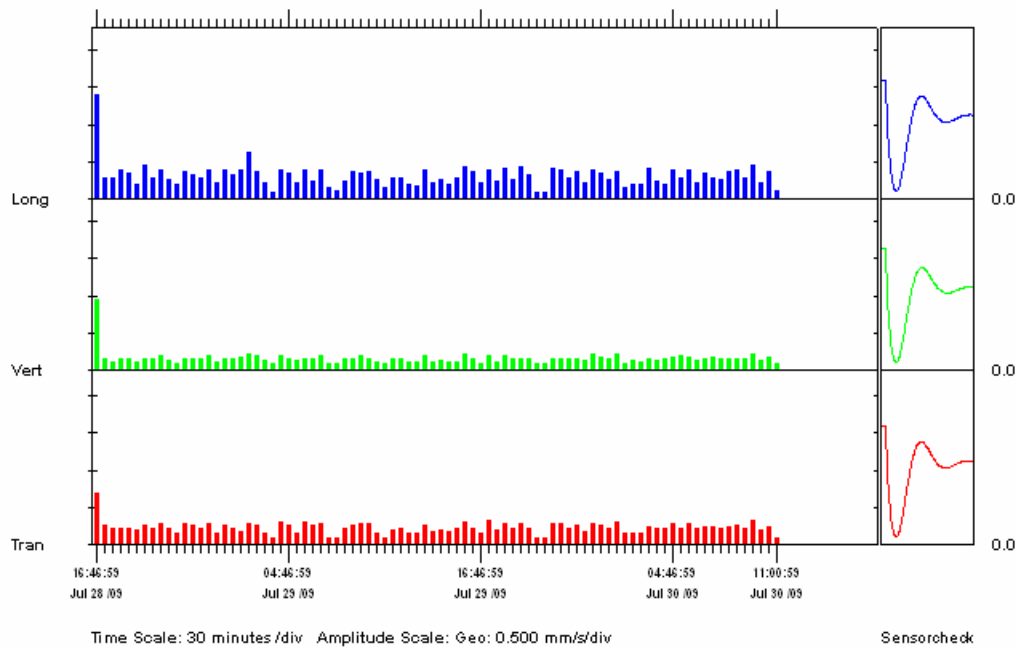
Morrison

	Tran	Vert	Long	
PPV	0.683	0.952	1.40	mm/s
ZC Freq	>100	>100	>100	Hz
Date	Jul 28 /09	Jul 28 /09	Jul 28 /09	
Time	16:20:59	16:20:59	16:20:59	
Sensorcheck	Passed	Passed	Passed	
Frequency	7.6	7.5	7.5	Hz
Overswing Ratio	3.7	3.8	3.7	

Peak Vector Sum 1.70 mm/s on July 28, 2009 at 16:20:59

### Monitor Log

Jul 28 /09 16:16:59 Jul 30 /09 11:00:59 Event recorded. (Battery Low Exit)



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## Logger 14 - Mildenhall

Monitor ID	Allocated No.	ReceiverLot/Address	Registered Proprietor	NCA	Distance to Near Track (m)
V14	MMU-062	1 DP 778909	Mildenhall	U8	25

### Logger Location



## Site Photos – Logger 14



### Vibration Logging Details (Unattended Monitoring)

L14

Logger Type	Instantel Minimate
Serial Number	BE14109
Start of measurement period	13:40, 28/07/2009
End of measurement period	03:15, 30/07/2009



## Event Report

Histogram Start Time 13:42:47 July 28, 2009  
Histogram Finish Time 03:13:47 July 30, 2009  
Number of Intervals 2251 at 1 minute  
Range Geo :31.7 mm/s  
Sample Rate 1024sps  
Job Number: 1

Serial Number BE14109 V 10.02-8.0 MiniMate Plus  
Battery Level 5.7 Volts (Battery Very Low)  
Calibration July 22, 2009 by The Saros Group  
File Name P109CTNK.RB0

### Notes

Location:

Client:

User Name:

General:

### Extended Notes

### Post Event Notes

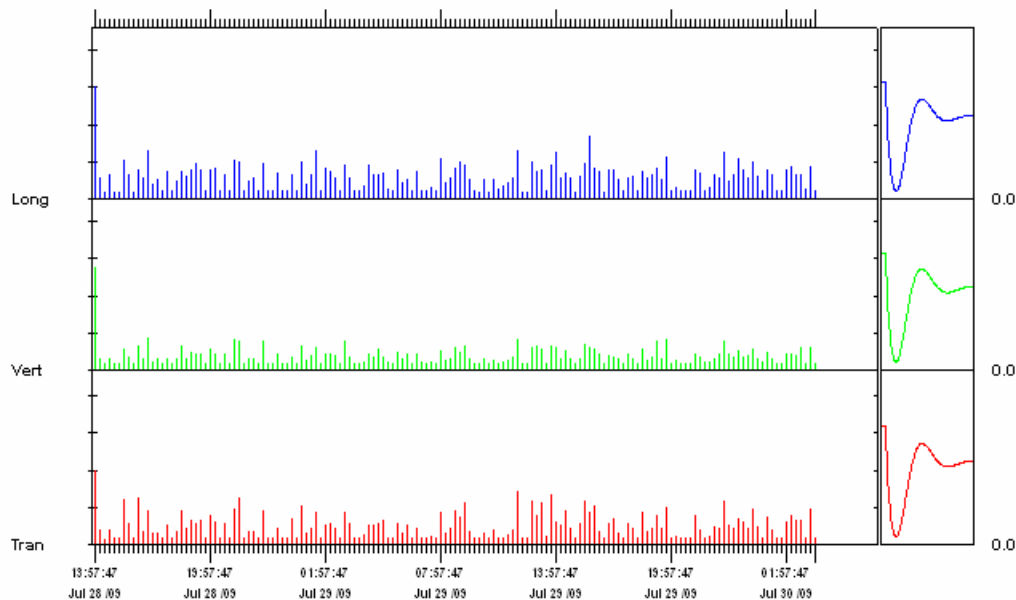
Mildenhall

	Tran	Vert	Long	
PPV	1.00	1.38	1.51	mm/s
ZC Freq	4.3	>100	>100	Hz
Date	Jul 28 /09	Jul 28 /09	Jul 28 /09	
Time	13:46:47	13:47:47	13:47:47	
Sensorcheck	Passed	Passed	Passed	
Frequency	7.4	7.5	7.4	Hz
Overswing Ratio	4.0	4.0	4.3	

Peak Vector Sum 2.19 mm/s on July 28, 2009 at 13:47:47

### Monitor Log

Jul 28 /09 13:42:47 Jul 30 /09 03:13:47 Event recorded. (Battery Low Exit)



Time Scale: 15 minutes /div Amplitude Scale: Geo: 0.500 mm/s/div

Sensorcheck

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Appendix C

# Environmental Risk Assessment Tables





## Consequence Table

Aspect	Insignificant	Minor	Moderate	Major	Catastrophic
<i>Air quality, noise and water quality.</i>	Applicable air quality, noise and water quality standards met across the region.	Isolated exceedence of air quality, noise or water quality standards that is short lived.	Exceedence of applicable air quality, noise or water quality standards in a local area.	Exceedence of applicable air quality, noise or water quality standards in a number of local areas.	Widespread exceedence of applicable air quality, noise or water quality standards across the region.

## Likelihood Table

Likelihood	Description
Almost Certain	The event is expected to occur in most circumstances.
Likely	The event will probably occur in most circumstances.
Possible	The event could occur.
Unlikely	The event could occur but not expected.
Rare	The event occurs only in exceptional circumstances.

## Risk Matrix

Likelihood Level	Consequence Level				
	Insignificant	Minor	Moderate	Major	Catastrophic
Almost Certain	Low	Medium	High	Extreme	Extreme
Likely	Low	Medium	High	High	Extreme
Possible	Negligible	Low	Medium	High	High
Unlikely	Negligible	Low	Medium	Medium	High
Rare	Negligible	Negligible	Low	Medium	Medium

## Environmental Risk Register – Noise and Vibration

Risk No	Risk Pathway Description (how the project interacts with assets, values and uses)	Description of Consequences	Planned Controls to Manage Risk (as per Project Description)	Risk Assessment (Control)			Additional Controls Recommended to Reduce Risk	Treated Risk Assessment		
				Consequence	Likelihood	Risk Rating		Consequence	Likelihood	Risk Rating
1	Construction of the project exceeds noise or vibration goals (including blasting activities)	Loss of amenity for local residents, restrictions on work activities imposed by DECCW	Construction noise, vibration and blasting management plan including: review of work methods, community communication protocols, noise and vibration monitoring, management and mitigation measures etc.	Minor	Almost Certain	High	Further monitoring, sustained community consultation.	Minor	Almost Certain	Medium
2	Construction of the project generates vibrations that exceed human comfort criteria at sensitive receivers	Loss of amenity for local residents, disgruntled community, restrictions on work activities imposed by DECCW	Construction noise, vibration and blasting management plan including: review of work methods, community communication protocols, noise and vibration monitoring, management and mitigation measures etc.	Moderate	Almost Certain	Medium	Further monitoring, sustained community consultation.	Minor	Almost Certain	Medium

Risk No	Risk Pathway Description (how the project interacts with assets, values and uses)	Description of Consequences	Planned Controls to Manage Risk (as per Project Description)	Risk Assessment (Control)			Additional Controls Recommended to Reduce Risk	Treated Risk Assessment		
				Consequence	Likelihood	Risk Rating		Consequence	Likelihood	Risk Rating
3	Construction of the project generates vibration that leads to structural damage to property adjacent to construction site	Loss of amenity, loss of property, reconstruction costs	Construction noise, vibration and blasting management plan including: review of work methods, community communication protocols, noise and vibration monitoring, management and mitigation measures etc. Dilapidation survey prior to construction, only in the vicinity of sensitive receivers (e.g. Clifton House or houses within 30-50m of major construction activities)	Moderate	Unlikely	Medium	Undertake vibration monitoring for high risk activities	Moderate	Rare	Low
4	Operation of the project generates noise that exceed operational noise goals in residential areas	Loss of amenity, non-compliance with DECCW rail noise policies and EPL licence	Undertake modelling of rail noise emissions, identify sensitive receivers and impacted areas, determine mitigation measures (noise barriers, architectural treatments)	Moderate	Likely	High	Compliance monitoring, noise control retrofitting	Moderate	Possible	Medium

Risk No	Risk Pathway Description (how the project interacts with assets, values and uses)	Description of Consequences	Planned Controls to Manage Risk (as per Project Description)	Risk Assessment (Control)			Additional Controls Recommended to Reduce Risk	Treated Risk Assessment		
				Consequence	Likelihood	Risk Rating		Consequence	Likelihood	Risk Rating
5	Operation of the project generates vibration that exceed human comfort criteria	Loss of amenity for local residents	Undertake vibration monitoring, predict potential vibration impacts  Include vibration control in design	Moderate	Unlikely	Medium	Undertake further vibration monitoring	Moderate	Rare	Low
6	Operation of the project generates vibration that causes structural damage to property	Loss of amenity for local residents, loss of property	Undertake vibration monitoring, predict potential vibration impacts  Include vibration control in design	Moderate	Unlikely	Medium	Undertake further vibration monitoring	Insignificant	Rare	Negligible






## Appendix D

# Noise Contours – Existing Situation 2009





#### Legend

- 60 dB(A)
-  Monitoring Location


#### Existing Night-time Operational Levels 60 dB(A) Criteria Contour

1.5m above Ground Level  
Neutral weather conditions.  
All levels in dB(A)





**Legend**

- 60 dB(A)
-  **Monitoring Location**


**Existing Night-time Operational Levels**  
**60 dB(A) Criteria Contour**

**1.5m above Ground Level**  
**Neutral weather conditions.**  
**All levels in dB(A)**





**Legend**

- 60 dB(A)
-  **Monitoring Location**


**Existing Night-time Operational Levels**  
**60 dB(A) Criteria Contour**

**1.5m above Ground Level**  
**Neutral weather conditions.**  
**All levels in dB(A)**





#### Legend

- 60 dB(A)
-  Monitoring Location


#### Existing Night-time Operational Levels 60 dB(A) Criteria Contour

1.5m above Ground Level  
Neutral weather conditions.  
All levels in dB(A)





#### Legend

- 60 dB(A)
-  Monitoring Location


#### Existing Night-time Operational Levels 60 dB(A) Criteria Contour

1.5m above Ground Level  
Neutral weather conditions.  
All levels in dB(A)





#### Legend

- 60 dB(A)
-  Monitoring Location

#### Existing Night-time Operational Levels

60 dB(A) Criteria Contour

1.5m above Ground Level  
Neutral weather conditions.  
All levels in dB(A)



Appendix E


## Noise Contours – Year 2012







**Legend**

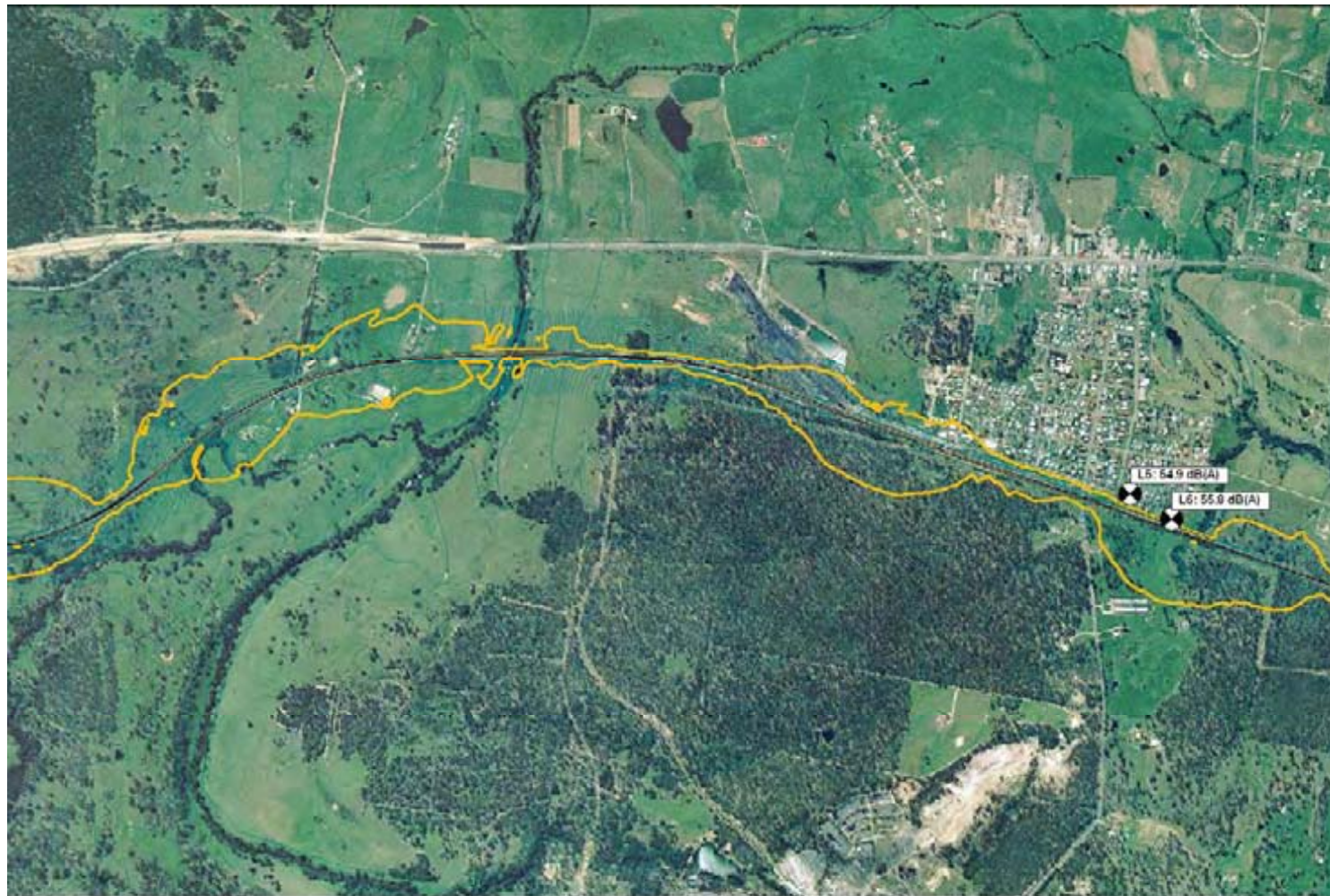
- 60 dB(A)
-  **Monitoring Location**

**2012 Night-time Operational Levels**


**60 dB(A) Criteria Contour**

**1.5m above Ground Level  
Neutral weather conditions.  
All levels in dB(A)**





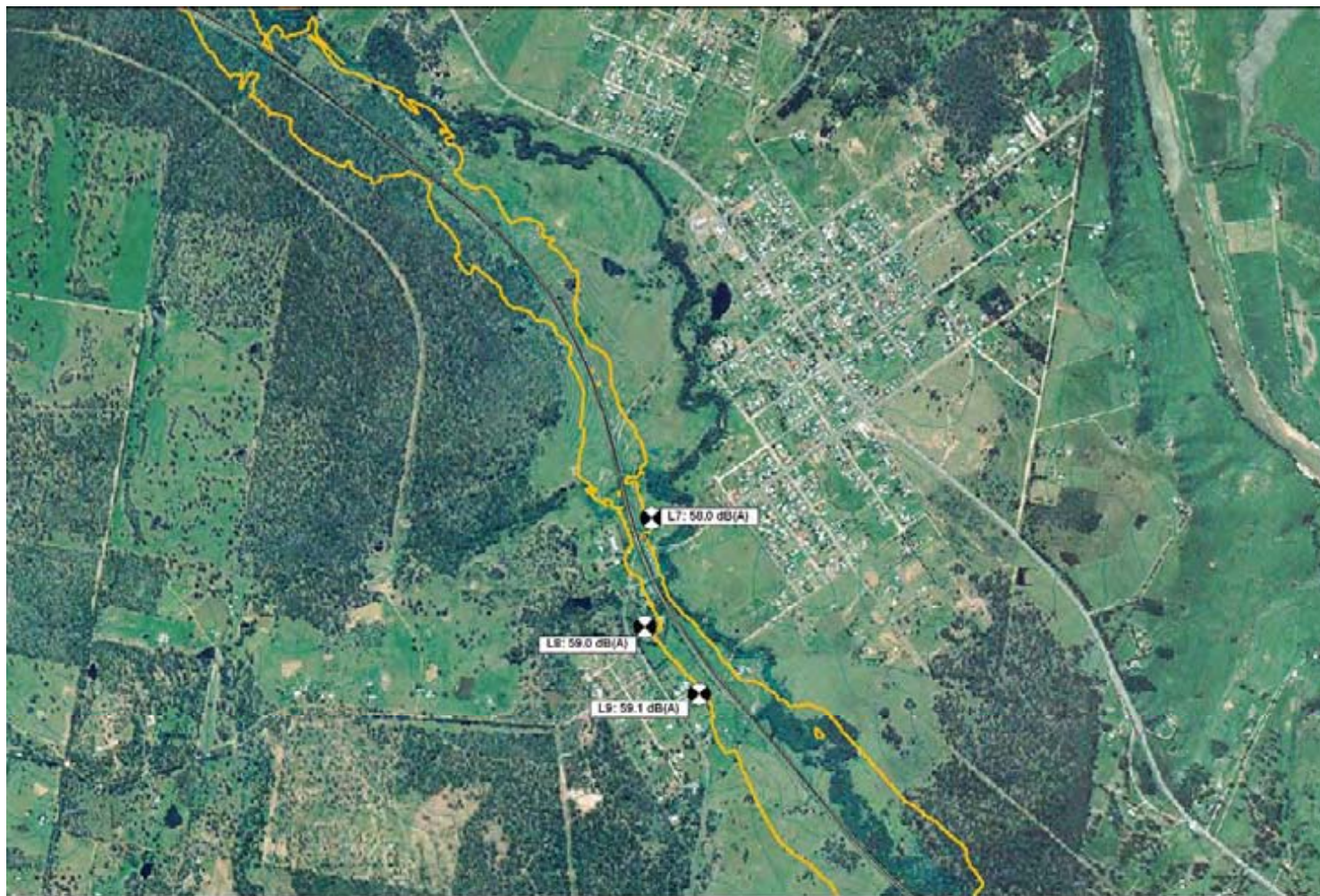
**Legend**

- 60 dB(A)
-  **Monitoring Location**


**2012 Night-time Operational Levels**  
**60 dB(A) Criteria Contour**

**1.5m above Ground Level**  
**Neutral weather conditions.**  
**All levels in dB(A)**





**Legend**

- 60 dB(A)
-  Monitoring Location


**2012 Night-time Operational Levels**  
**60 dB(A) Criteria Contour**

1.5m above Ground Level  
Neutral weather conditions.  
All levels in dB(A)





**Legend**

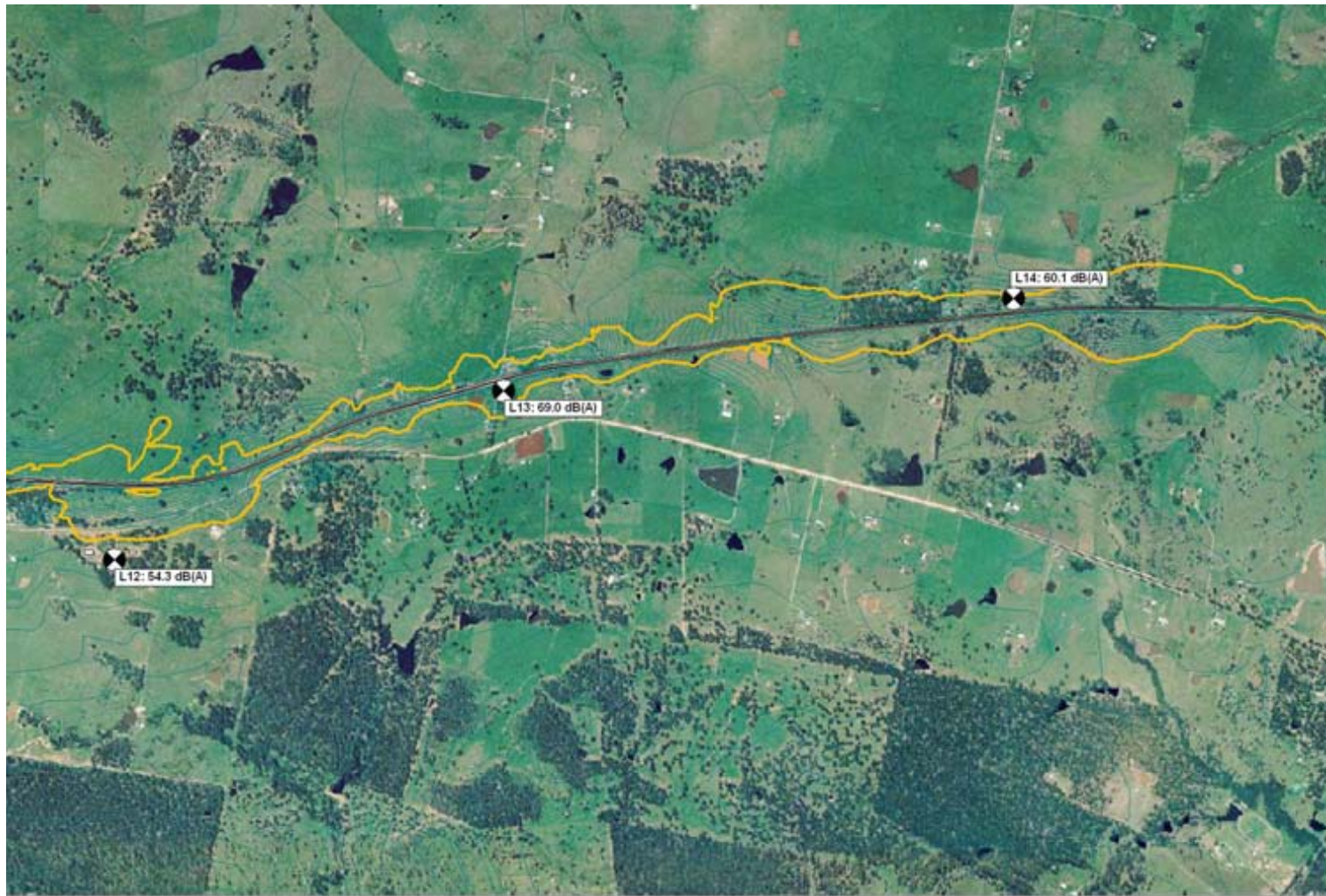
- 60 dB(A)
-  **Monitoring Location**

**2012 Night-time Operational Levels**


**60 dB(A) Criteria Contour**

**1.5m above Ground Level  
Neutral weather conditions.  
All levels in dB(A)**





**Legend**

- 60 dB(A)
-  **Monitoring Location**

**2012 Night-time Operational Levels**


**60 dB(A) Criteria Contour**

**1.5m above Ground Level  
Neutral weather conditions.  
All levels in dB(A)**





**Legend**

- 60 dB(A)
-  Monitoring Location

**2012 Night-time Operational Levels**  
**60 dB(A) Criteria Contour**

**1.5m above Ground Level**  
**Neutral weather conditions.**  
**All levels in dB(A)**




Appendix F

## Noise Contours – Year 2022





**Legend**

- 60 dB(A)
-  Monitoring Location

**2022 Night-time Operational Levels**


**60 dB(A) Criteria Contour**

1.5m above Ground Level  
Neutral weather conditions.  
All levels in dB(A)





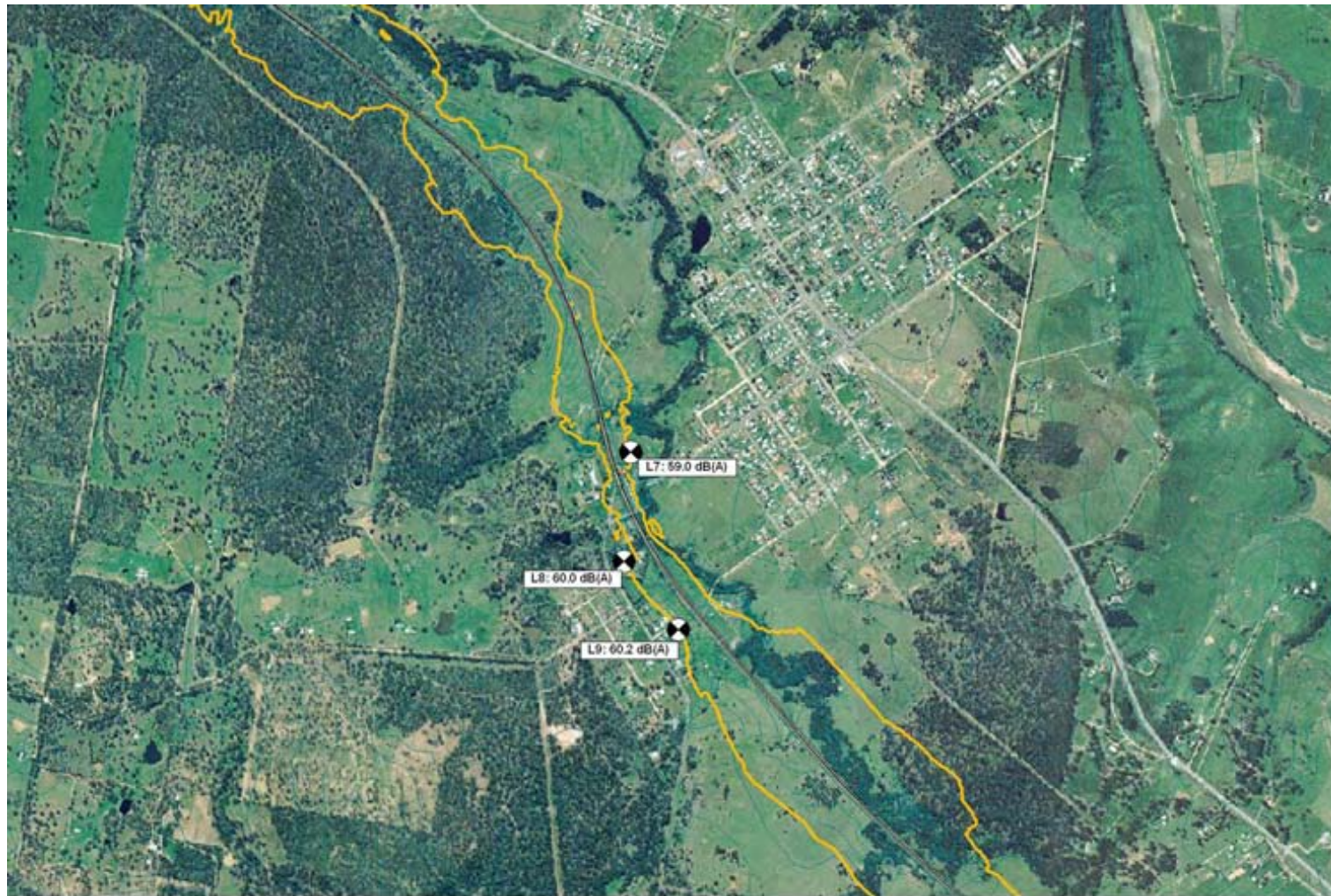
**Legend**

- 60 dB(A)
-  Monitoring Location


**2022 Night-time Operational Levels**  
**60 dB(A) Criteria Contour**

1.5m above Ground Level  
 Neutral weather conditions.  
 All levels in dB(A)





**Legend**

- 60 dB(A)
-  Monitoring Location

**2022 Night-time Operational Levels**


**60 dB(A) Criteria Contour**

**1.5m above Ground Level  
Neutral weather conditions.  
All levels in dB(A)**





**Legend**

- 60 dB(A)
-  Monitoring Location

**2022 Night-time Operational Levels**


**60 dB(A) Criteria Contour**

**1.5m above Ground Level  
Neutral weather conditions.  
All levels in dB(A)**





**Legend**

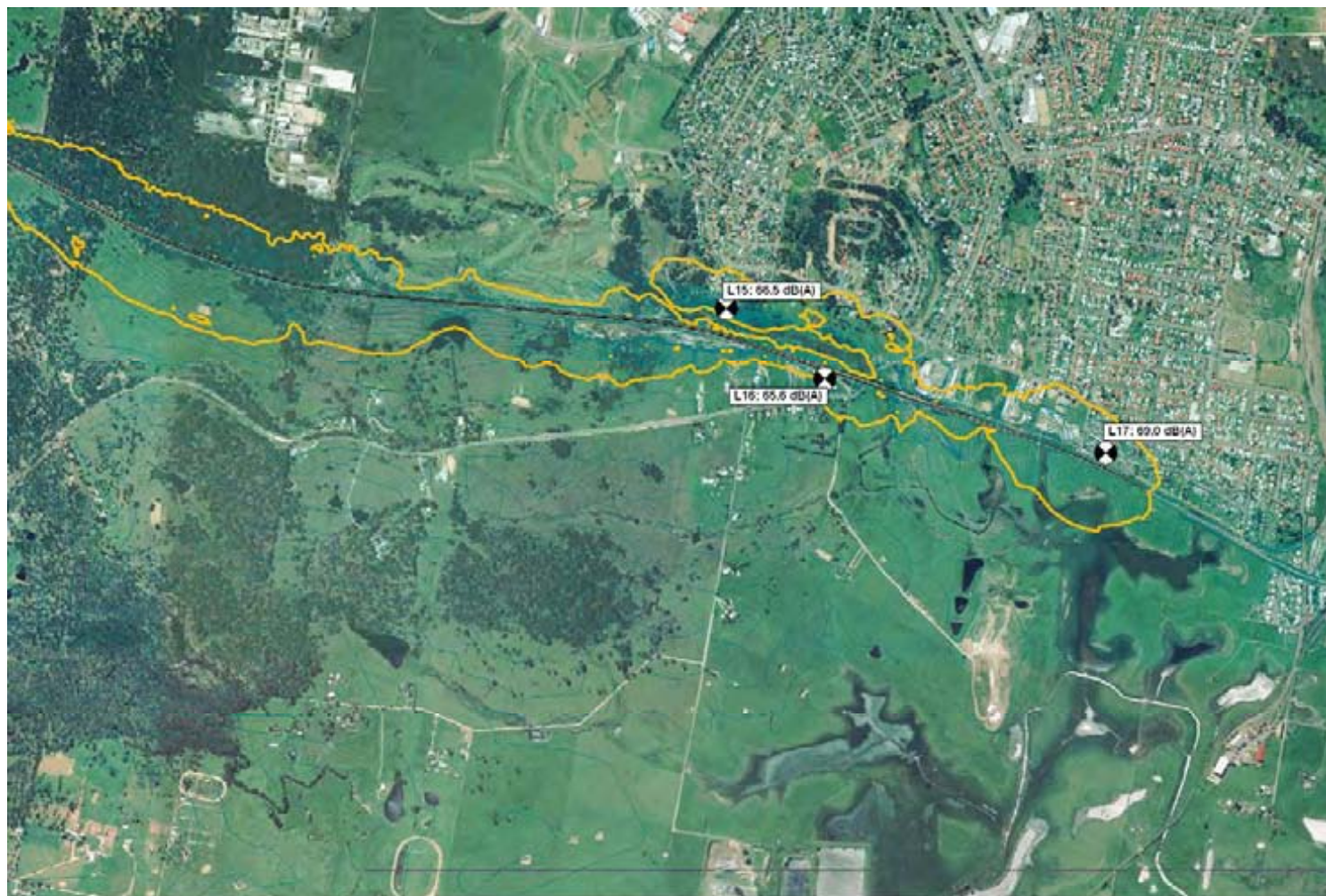
- 60 dB(A)
-  **Monitoring Location**

**2022 Night-time Operational Levels**

**60 dB(A) Criteria Contour**

**1.5m above Ground Level  
Neutral weather conditions.  
All levels in dB(A)**





**Legend**

- 60 dB(A)
-  Monitoring Location

**2022 Night-time Operational Levels**  
**60 dB(A) Criteria Contour**

1.5m above Ground Level  
 Neutral weather conditions.  
 All levels in dB(A)