global environmental solutions

# Cross River Rail

# Environmental Impact Statement

# Construction Noise and Vibration

# PART B

Report Number 20-2524-R2

14 July 2011

SKM-Aurecon Joint Venture
PO Box 3848
South Brisbane QLD 4101

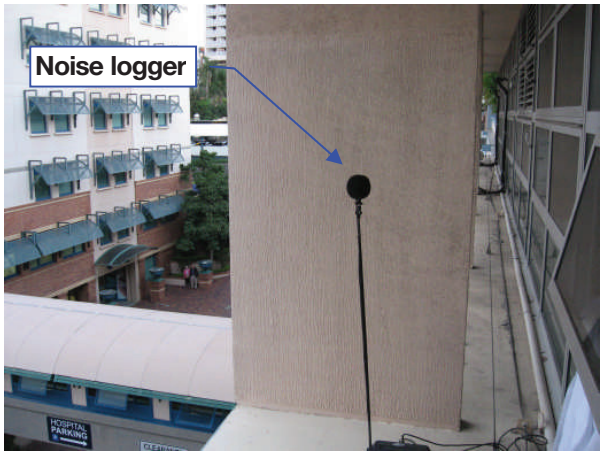
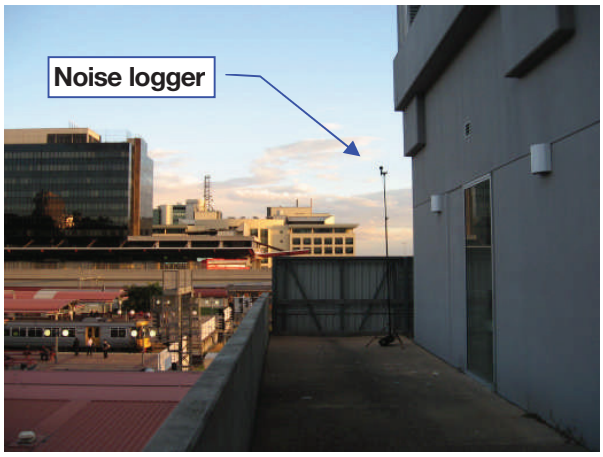
Version: Revision 1

**Noise Monitoring Locations**

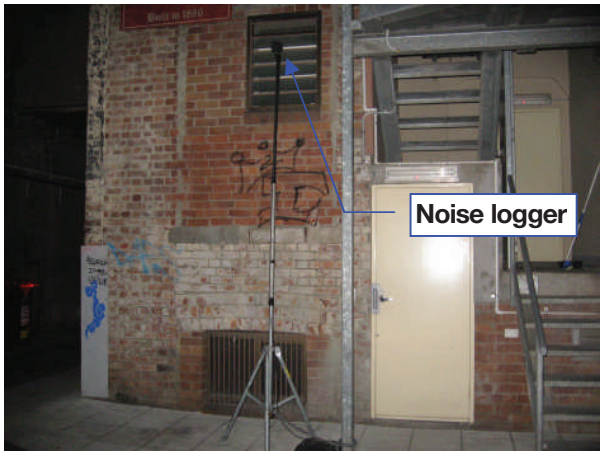
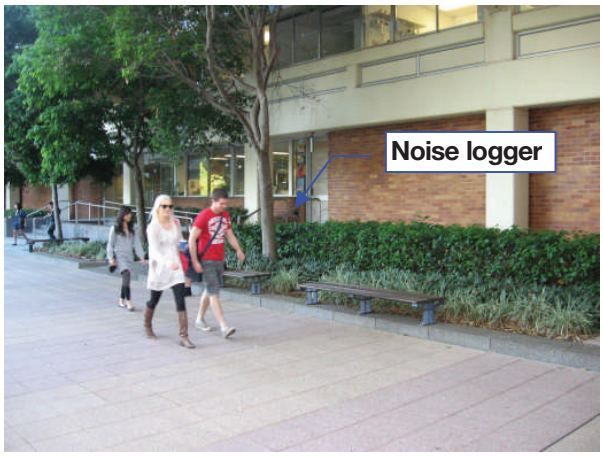
## CRR Noise Monitoring Locations

| Monitoring Location | Address | Comments | Photo |
|---|---|---|---|
| 1 | 1/19 Chalk St Wooloowin | Located 1 m from the façade in front yard facing Chalk St and approximately 100m west of the railway.<br>ARL Noise Logger Id: S/N 19-46-30 | |
| 2 | 28 Bridge St Wooloowin | Located 1 m from the facade in front yard facing Bridge Street and the railway.<br>SVAN Noise Logger Id: S/N 20663 | |
| 3 | St Josephs College Spring Hill | Located 1 m from the facade facing Gregory Terrace.<br>ARL Noise Logger Id: S/N 16-203-525 | |

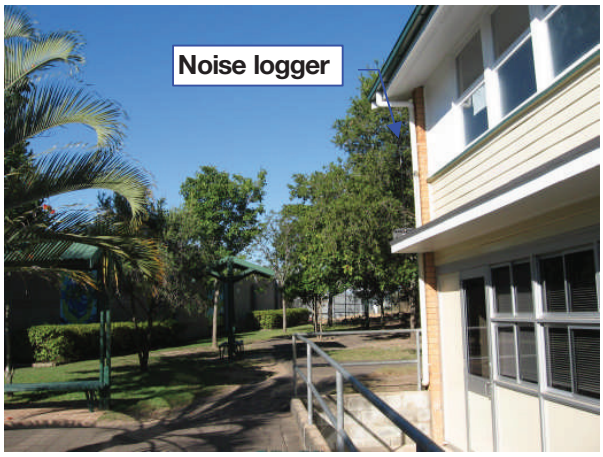
**CRR Noise Monitoring Locations**

| Monitoring Location | Address | Comments | Photo |
|---|---|---|---|
| 4 | Brisbane Girls Grammar School Spring Hill | Located 1 m from the facade towards the tracks and the Inner City Bypass.<br>ARL Noise Logger Id: S/N 16-299-426 | |
| 5 | St Andrews War Memorial Hospital Spring Hill | Located 1 m from the facade on Level 3 adjacent North Street.<br>ARL Noise Logger Id: S/N 16-203-528 |  |
| 6 | Parkland Cres Spring Hill | Located 1 m from the facade, overlooking the Roma Street Station.<br>ARL Noise Logger Id: S/N 16-203-524 |  |

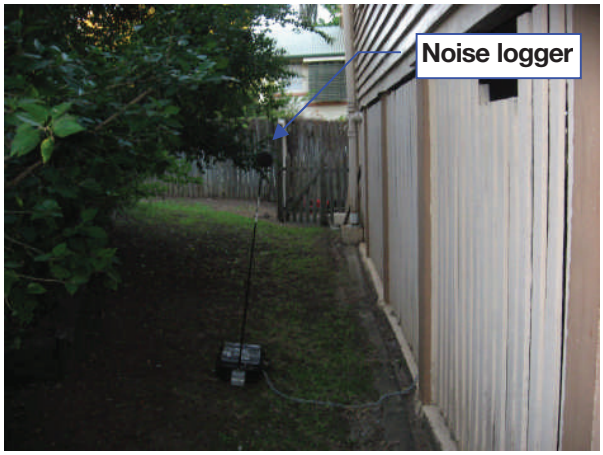
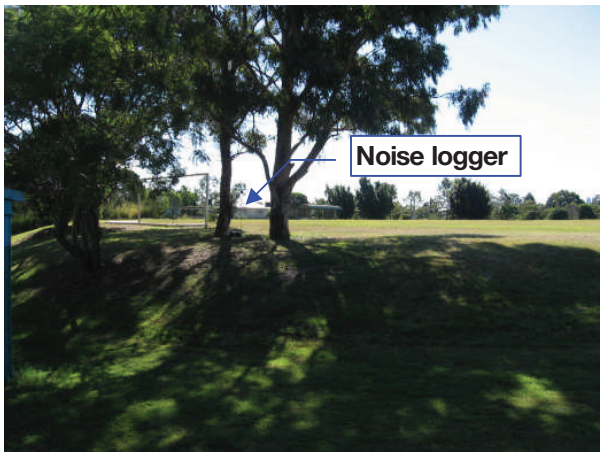
## CRR Noise Monitoring Locations

| Monitoring Location | Address | Comments | Photo |
|---|---|---|---|
| 7 | 191 George St Brisbane City | Located 1 m from the façade at the rear of the building adjacent Irish Murphy's and an empty building site.<br>ARL Noise Logger Id: S/N 16-306-045 |  |
| 8 | QUT Gardens Point Brisbane City | Located 3 m from the facade facing towards the Botanic Gardens.<br>ARL Noise logger Id: S/N 16-307-471 |  |
| 9 | 58 Leopard St Kangaroo Point | Located 1 m from the façade at the rear of the residence.<br>ARL Noise Logger Id: S/N 16-203-508 | |

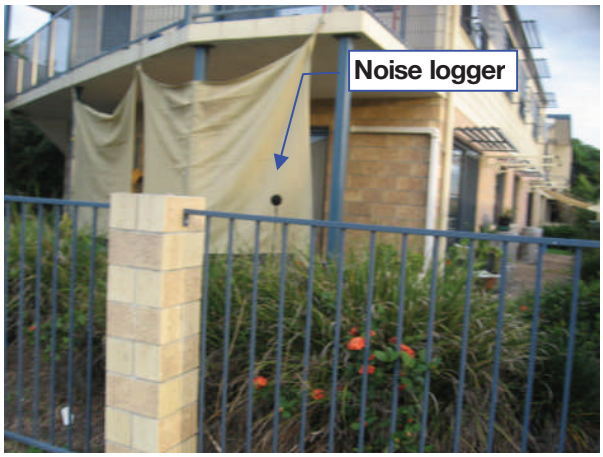
## CRR Noise Monitoring Locations

| Monitoring Location | Address | Comments | Photo |
|---|---|---|---|
| 10 | 143 Park Rd<br>Woolloongabba | Located 1m from the façade at the rear of the residence facing toward Park Road train station.<br>ARL Noise Logger Id: S/N 16-203-524 | |
| 11 | Dutton Park State School<br>Dutton Park | Located 1 m from facade towards the railway at the back of the school. Has a noise barrier for the railway noise.<br>ARL Noise Logger Id: S/N 16-203-505 |  |
| 12 | 19 Dutton St<br>Dutton Park | Located 1 m from façade at side of the residence, facing toward the railway.<br>ARL Noise Logger Id: S/N 16 203 529 | |

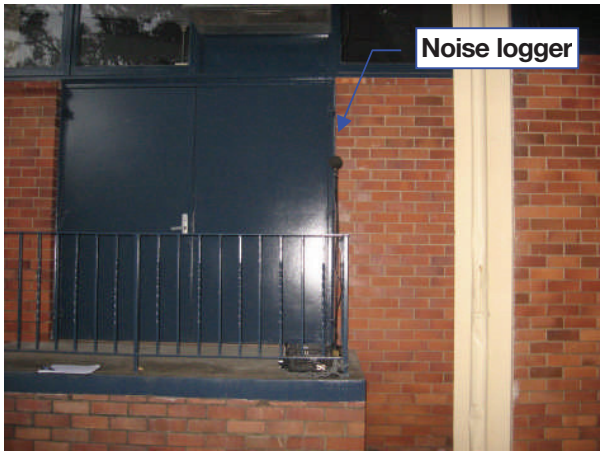
**CRR Noise Monitoring Locations**

| Monitoring Location | Address | Comments | Photo |
|---|---|---|---|
| 13 | 4 Fenton St<br>Fairfield | Located 1 m from façade at side of the residence, adjacent railway. Has a noise barrier for the railway noise.<br>ARL Noise Logger Id: S/N 16-302-483 |  |
| 14 | 17 Lagonda St<br>Annerley | Located 1 m from facade towards the railway at the rear of the residence. Has noise barrier for the railway noise.<br>ARL Noise Logger Id: S/N 16-203-525 | |
| 15 | Yeronga State High School<br>Yeronga | Located in free field next to soccer field approximately 140 m from rail tracks and approximately 100 m from school.<br>ARL Noise Logger Id: S/N 16 302 483 |  |

**CRR Noise Monitoring Locations**

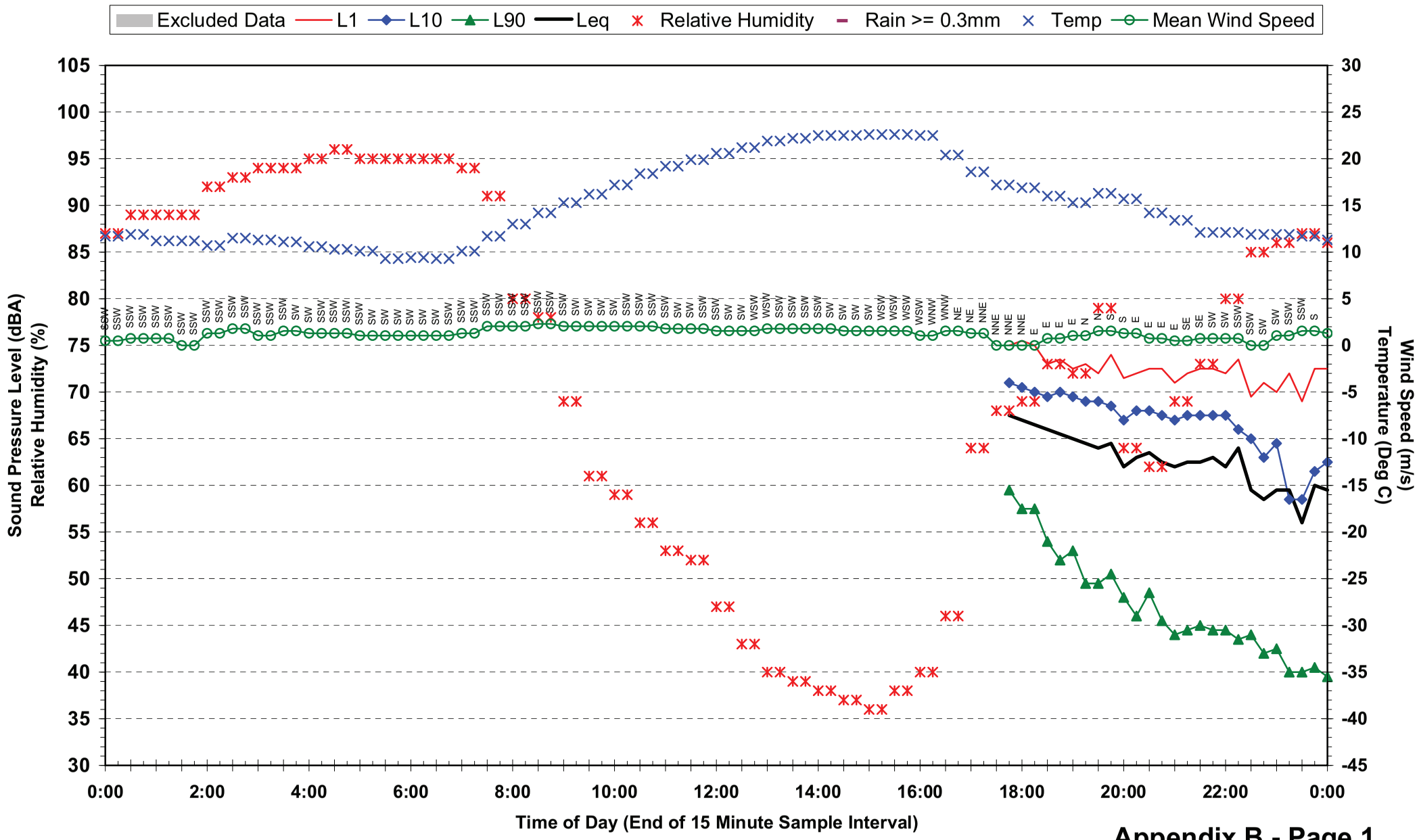
| Monitoring Location | Address | Comments | Photo |
|---|---|---|---|
| 16 | 3 Cardross St Yeronga | Located 1 m from façade at rear of residence facing toward railway. Has a noise barrier at end of street for rail noise.<br>ARL Noise Logger Id: S/N 19-46-30 | |
| 17 | 1223 Ipswich Mwy Moorooka | Located 1 m from facade towards the railway at the back. Has noise barrier for the railway noise.<br>ARL Noise Logger Id: S/N 16-301-471 | |
| 18 | 2/59 Brooke St Rocklea | Located 3 m from façade facing toward Rocklea train station.<br>ARL Noise Logger Id: S/N 16-203-505 |  |

**CRR Noise Monitoring Locations**

| Monitoring Location | Address | Comments | Photo |
|---|---|---|---|
| 19 | Nyanda State High School Salisbury | Located 1 m from façade at rear of school hall and facing railway.<br>ARL Noise Logger Id: S/N 16-203-527 |  |
| 20 | 14 Bellevue Ave Salisbury | Located 1 m from façade in front yard facing Bellevue Ave and approximately 150 m north east of railway.<br>ARL Noise Logger Id: S/N 16-306-045 | |

**Graphical Presentation of Statistical Ambient Noise Levels**

## Statistical Ambient Noise Levels
## Location 1 - 1/19 Chalk St - Tuesday 18 May 2010

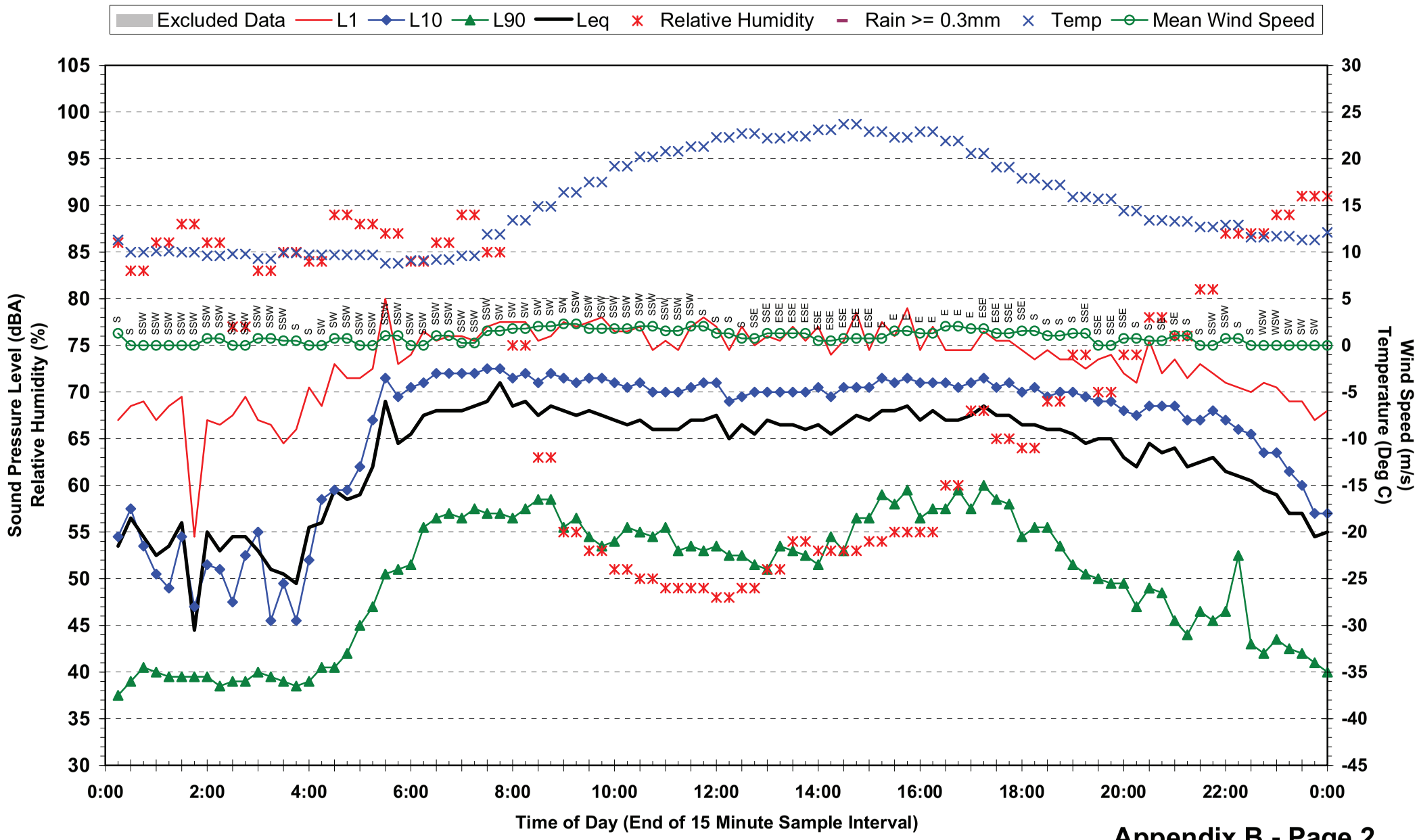



**Appendix B - Page 1**

Ambient Conditions

RHA Report 20-2524

## Statistical Ambient Noise Levels
## Location 1 - 1/19 Chalk St - Wednesday 19 May 2010

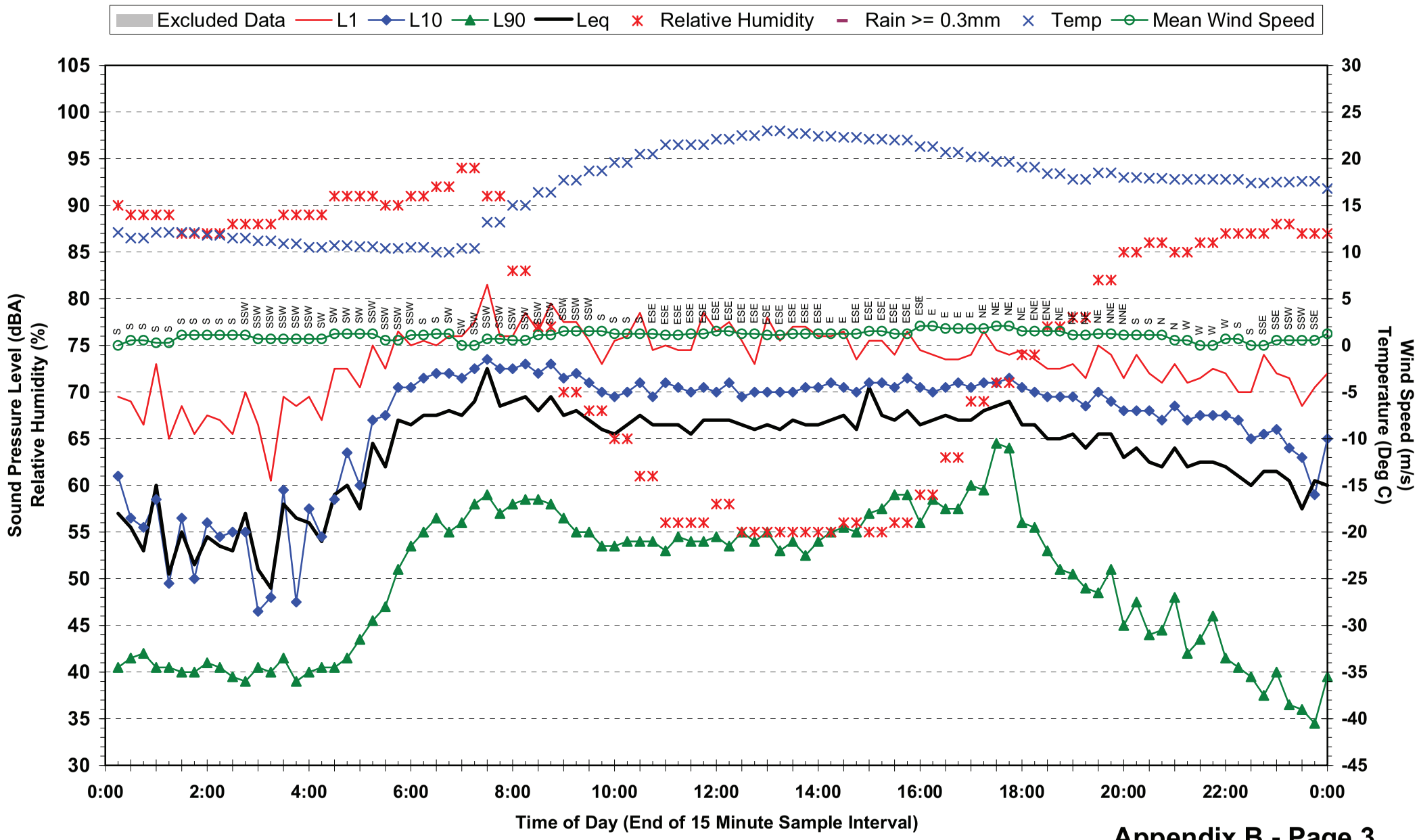



**Appendix B - Page 2**

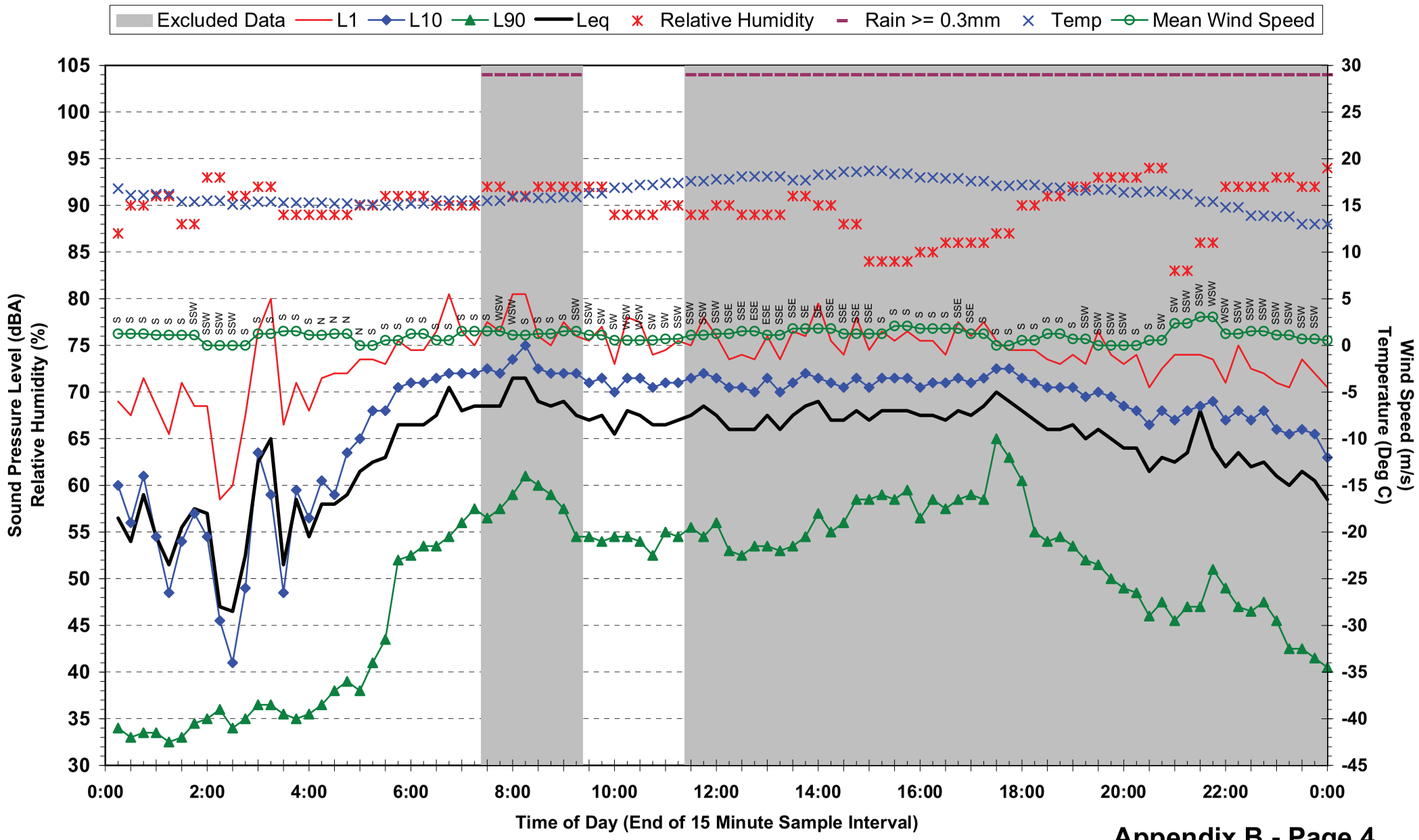
Ambient Conditions

RHA Report 20-2524

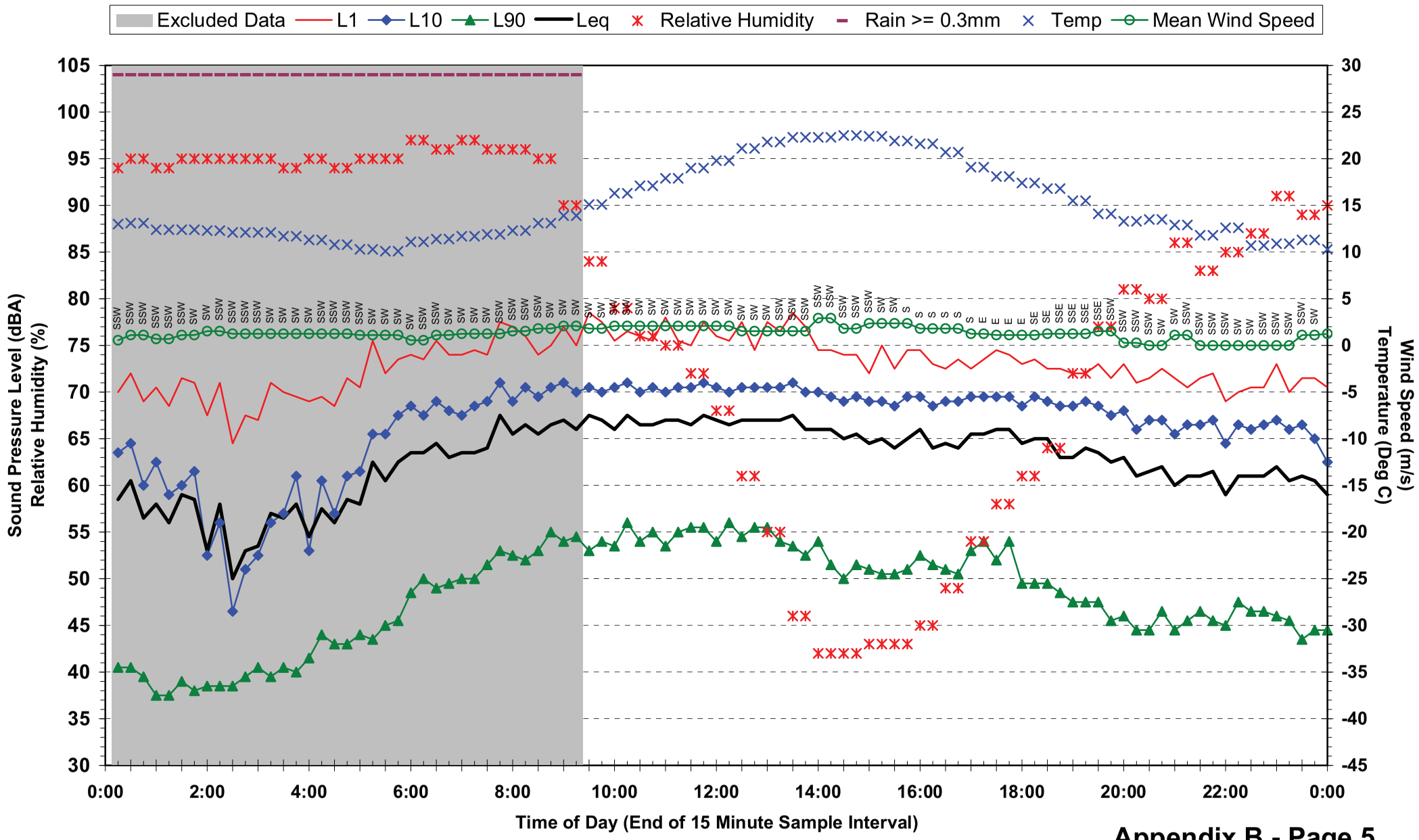
## Statistical Ambient Noise Levels
## Location 1 - 1/19 Chalk St - Thursday 20 May 2010



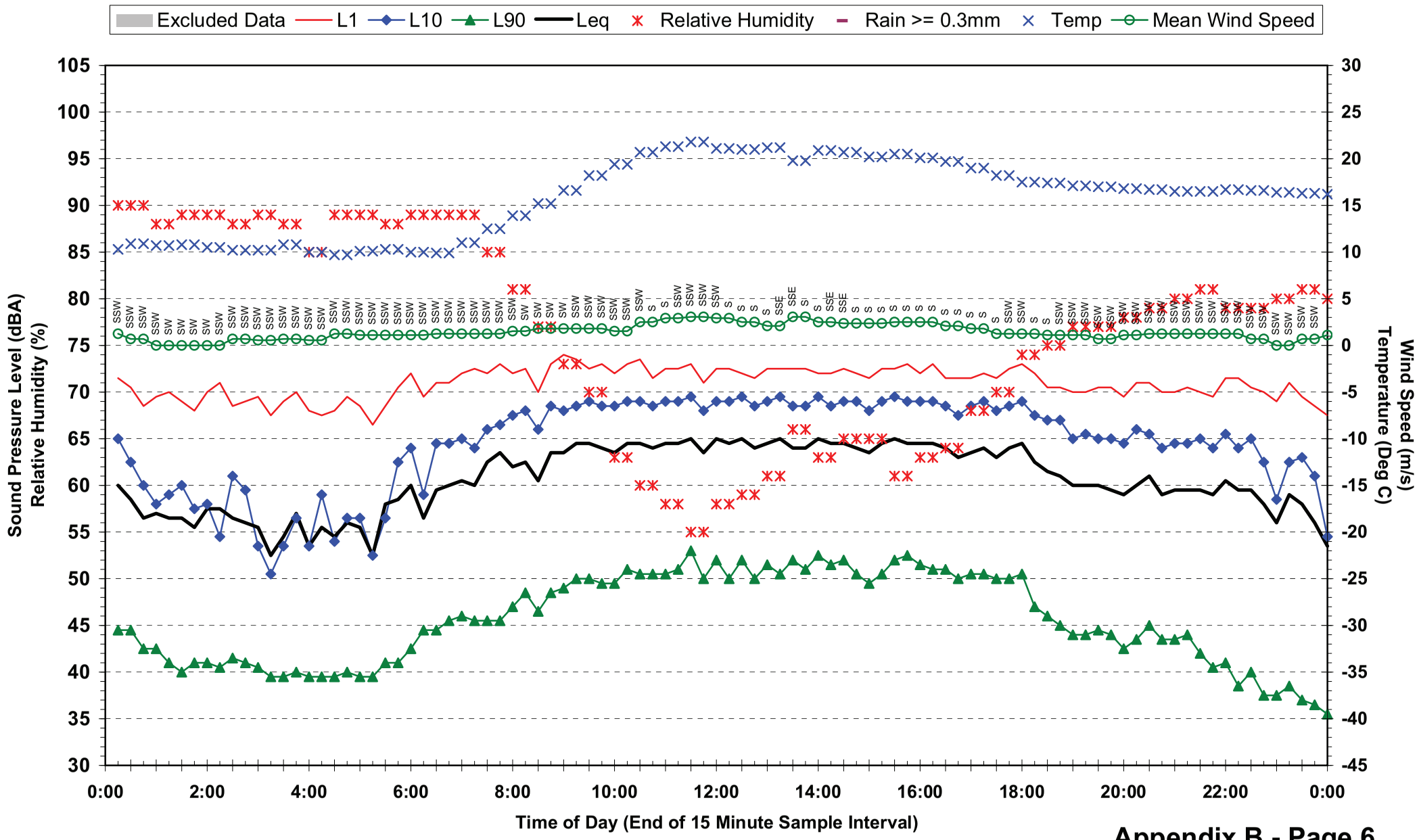
## Statistical Ambient Noise Levels
## Location 1 - 1/19 Chalk St - Friday 21 May 2010



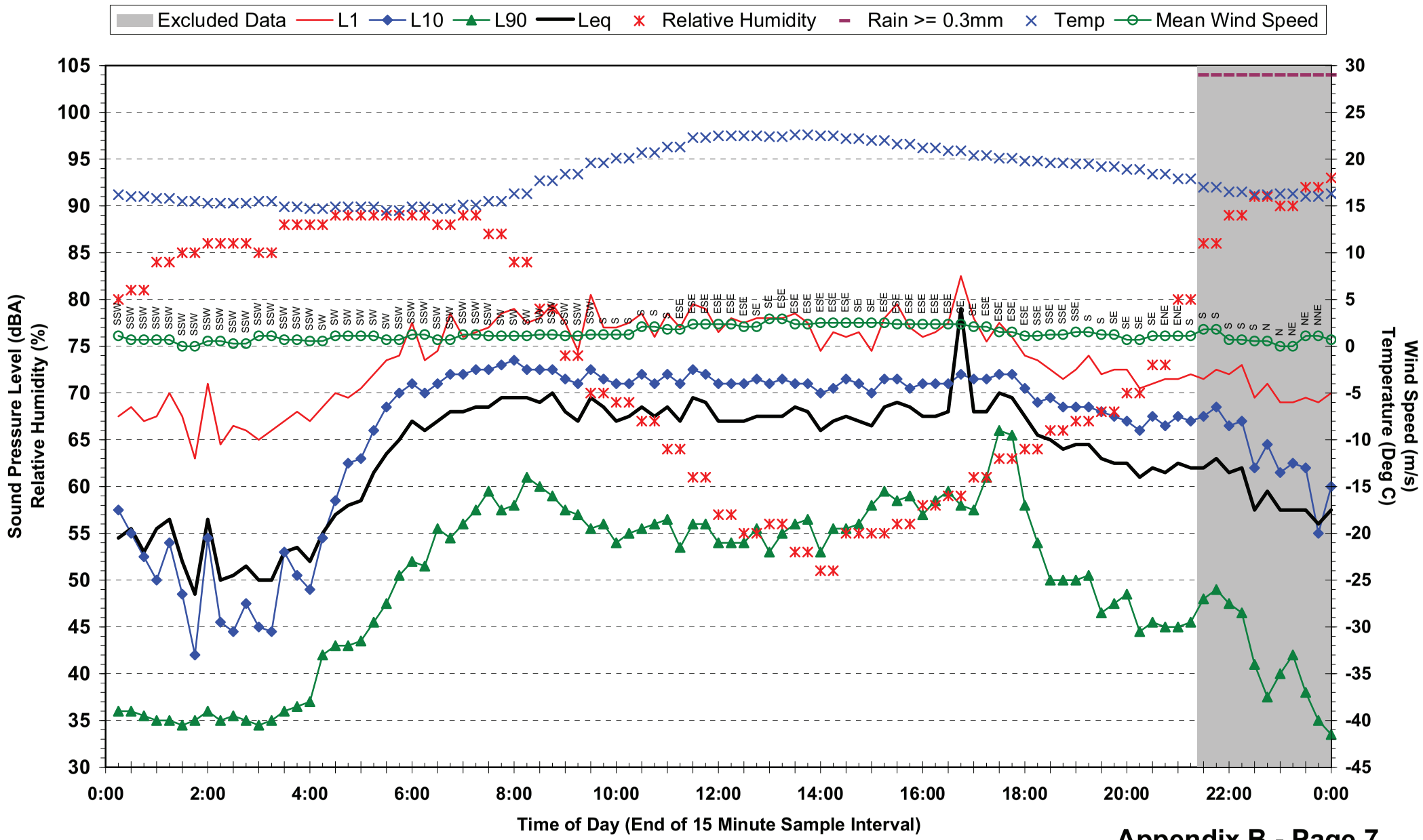
## Statistical Ambient Noise Levels
## Location 1 - 1/19 Chalk St - Saturday 22 May 2010



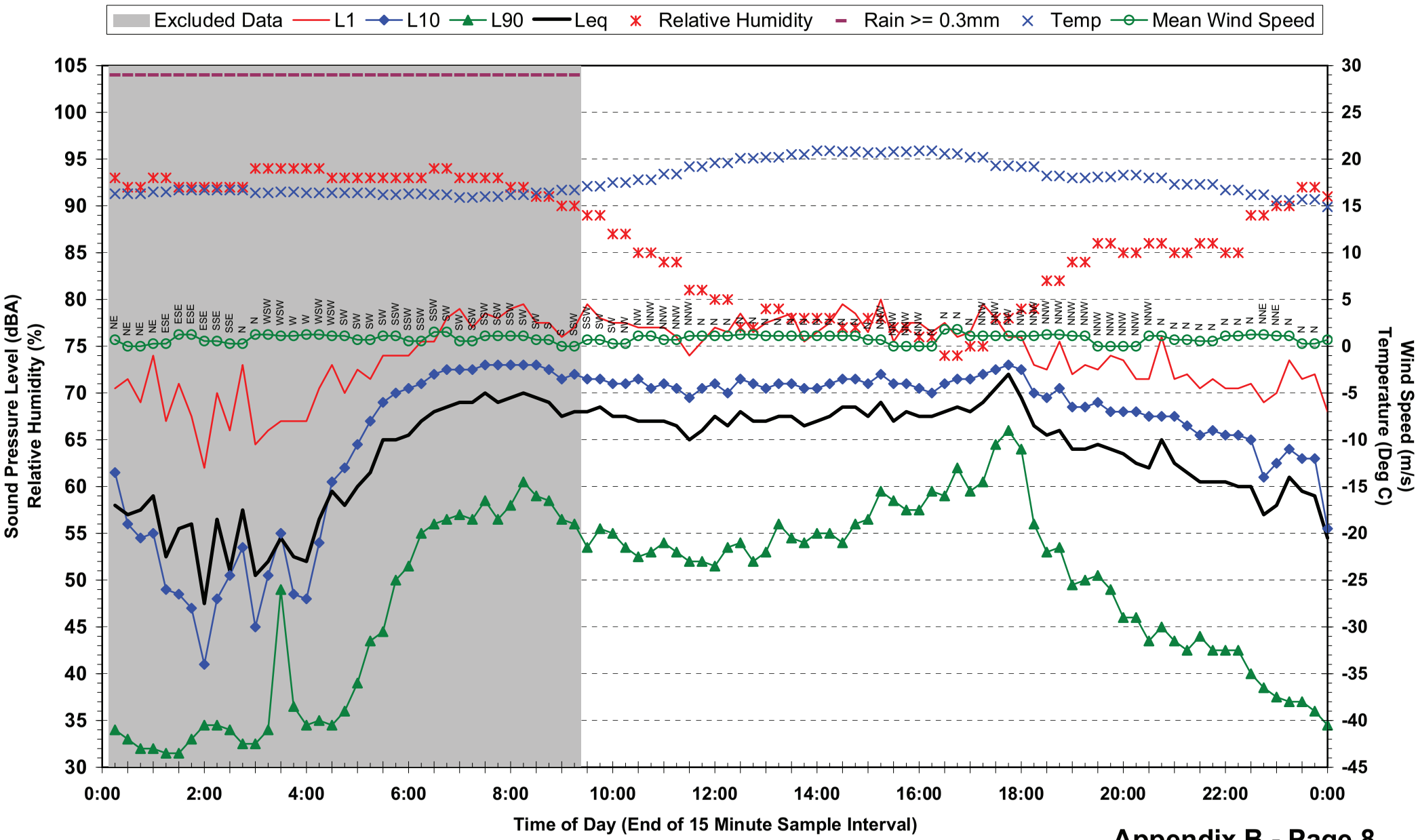
## Statistical Ambient Noise Levels
## Location 1 - 1/19 Chalk St - Sunday 23 May 2010



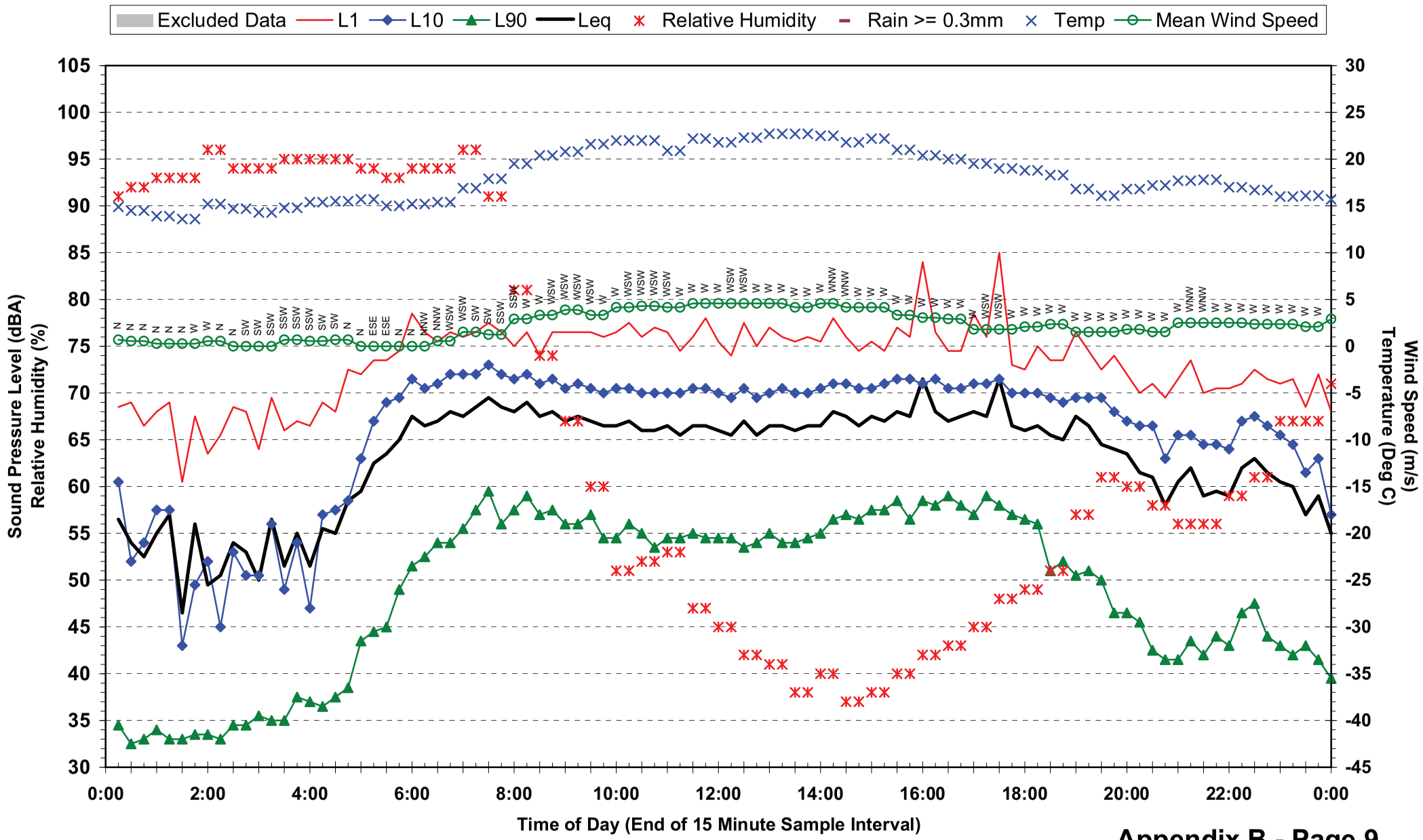
## Statistical Ambient Noise Levels
## Location 1 - 1/19 Chalk St - Monday 24 May 2010



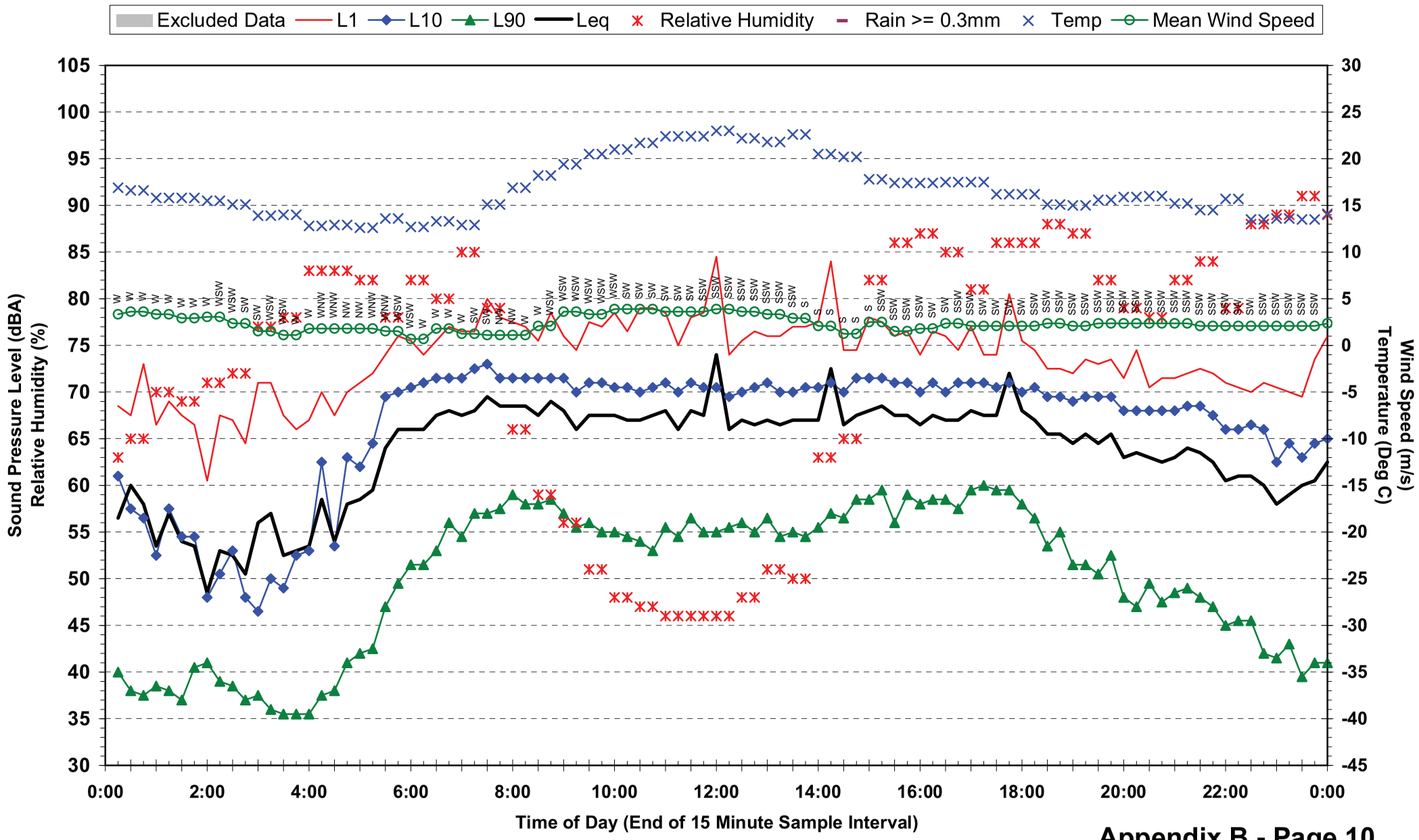
## Statistical Ambient Noise Levels
## Location 1 - 1/19 Chalk St - Tuesday 25 May 2010



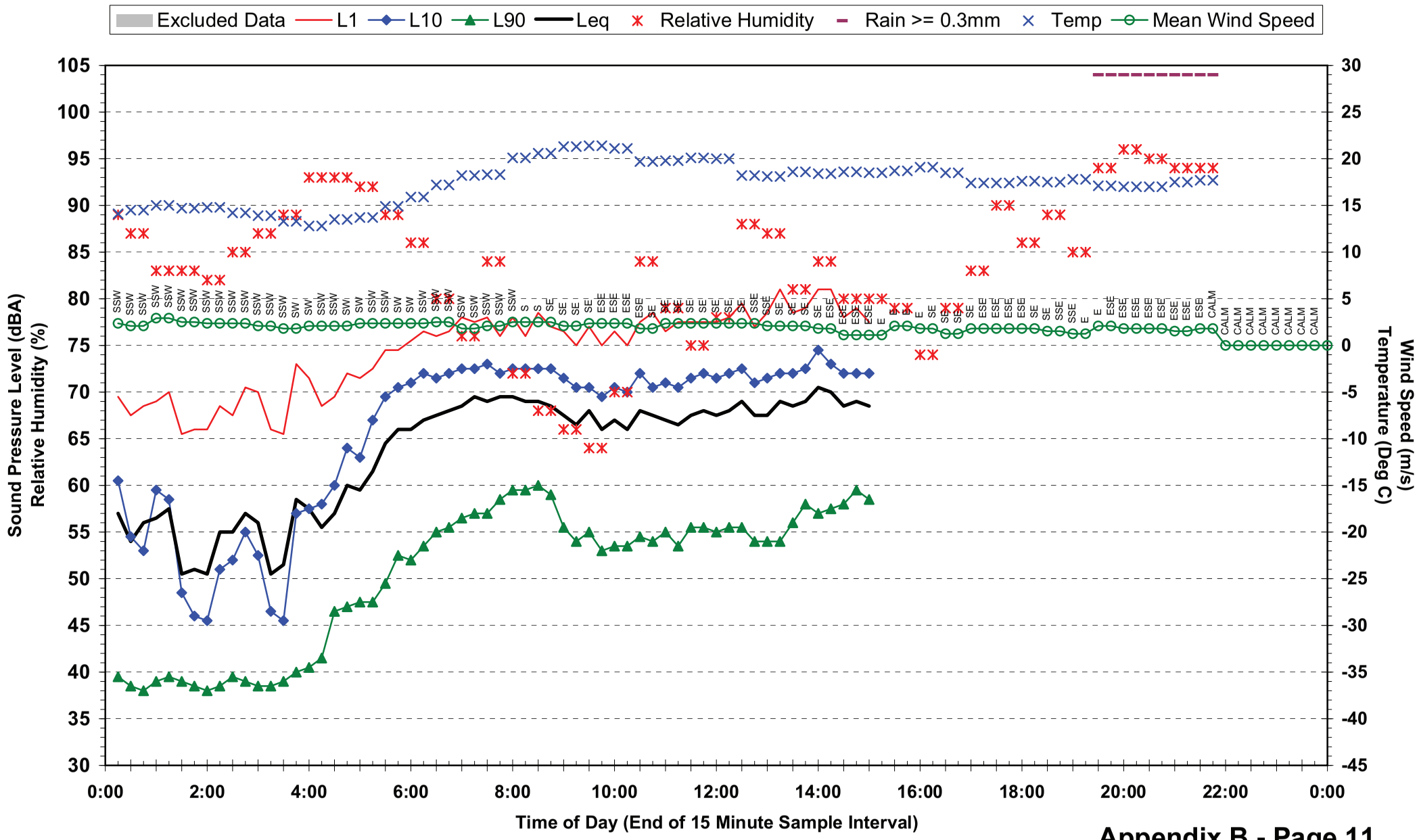
## Statistical Ambient Noise Levels
## Location 1 - 1/19 Chalk St - Wednesday 26 May 2010



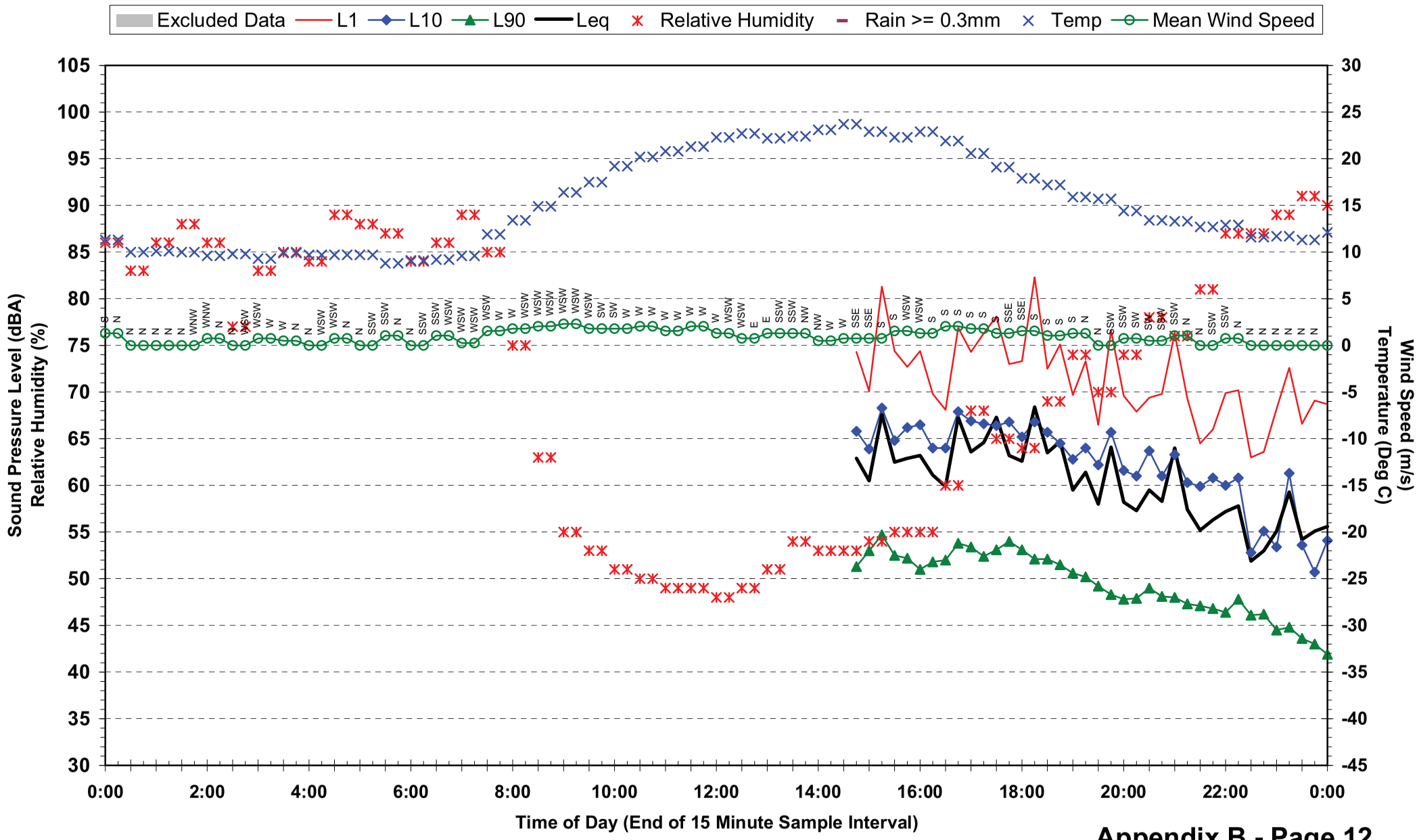
## Statistical Ambient Noise Levels
## Location 1 - 1/19 Chalk St - Thursday 27 May 2010



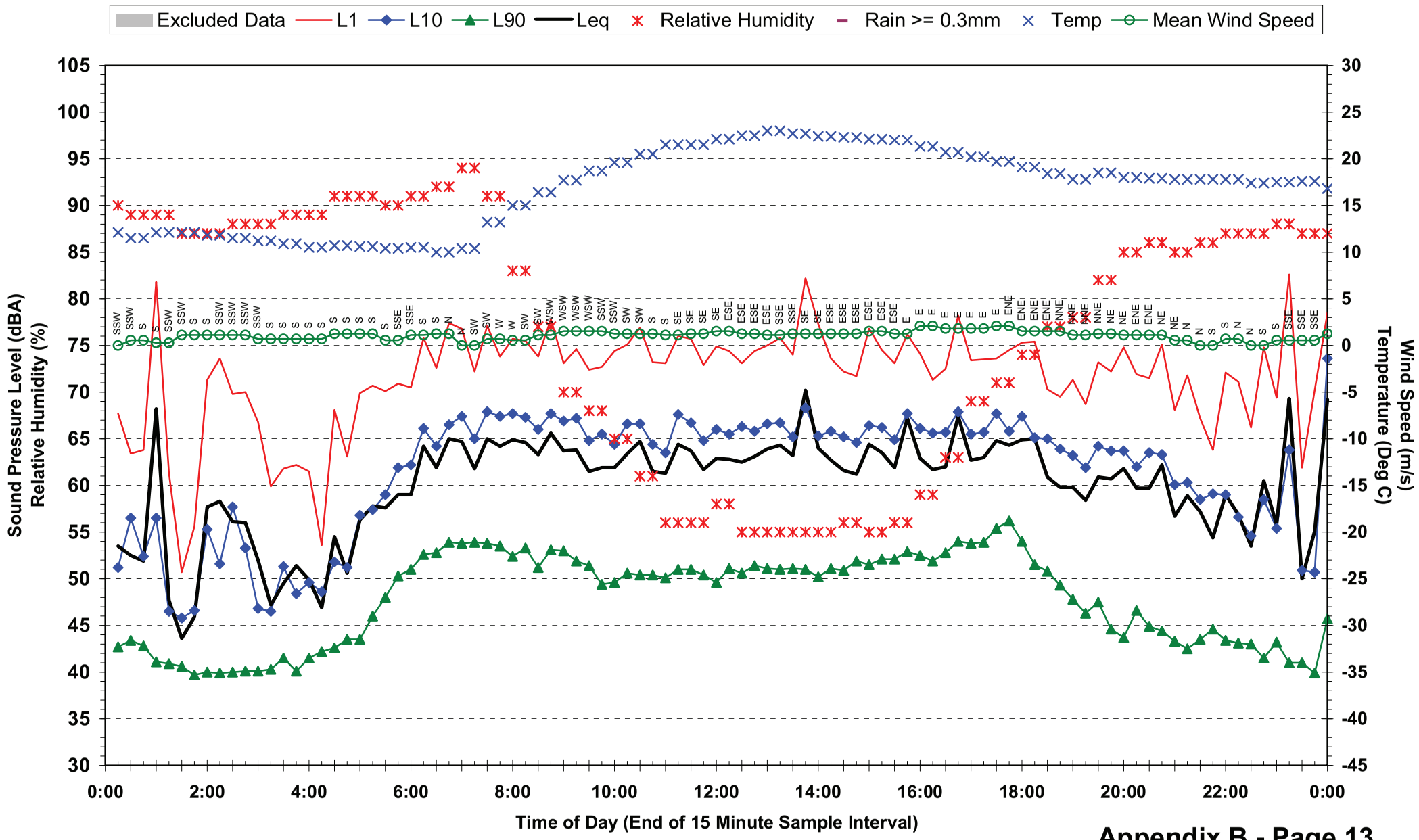
## Statistical Ambient Noise Levels
## Location 1 - 1/19 Chalk St - Friday 28 May 2010



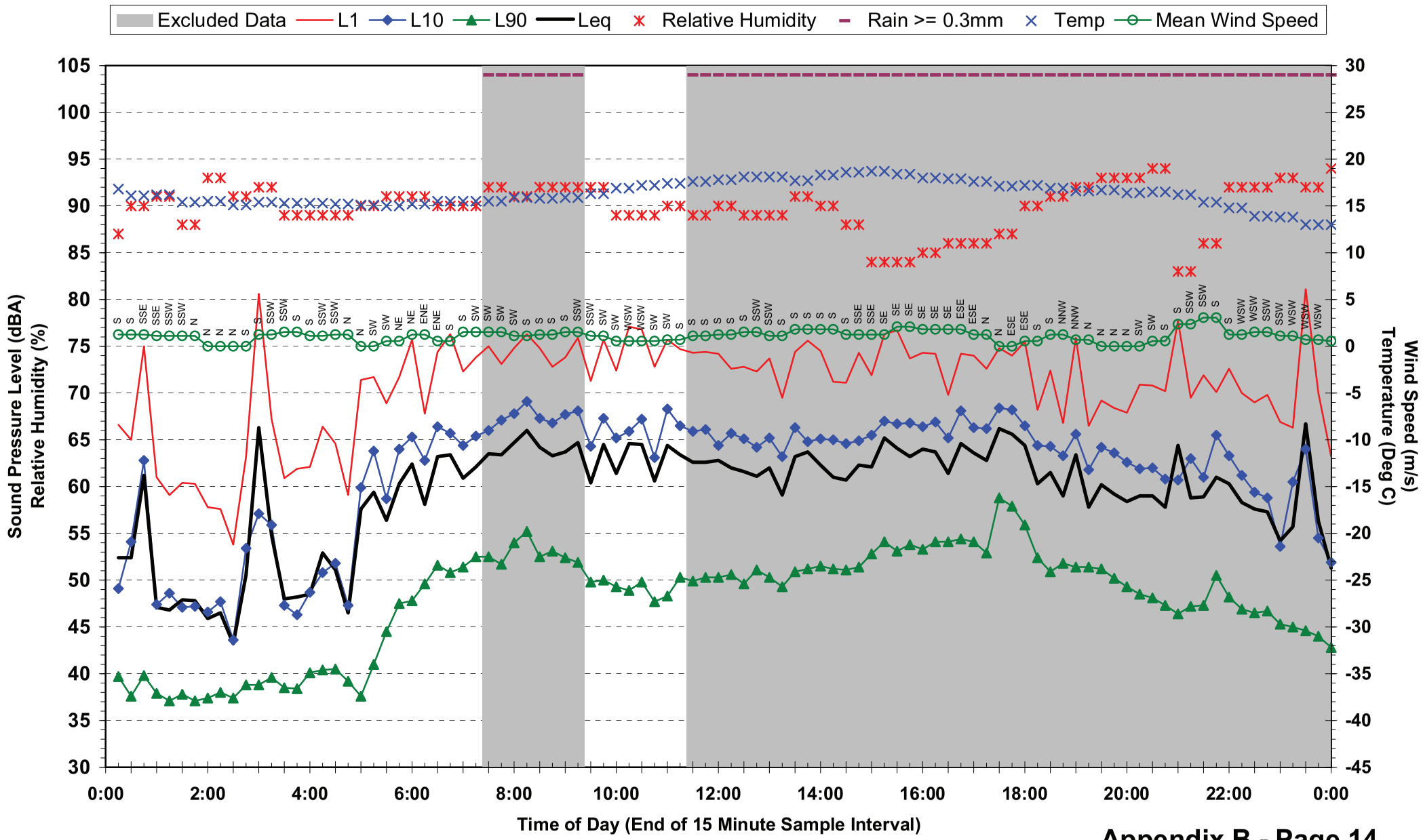
## Statistical Ambient Noise Levels
## Location 2 - 28 Bridge St - Wednesday 19 May 2010



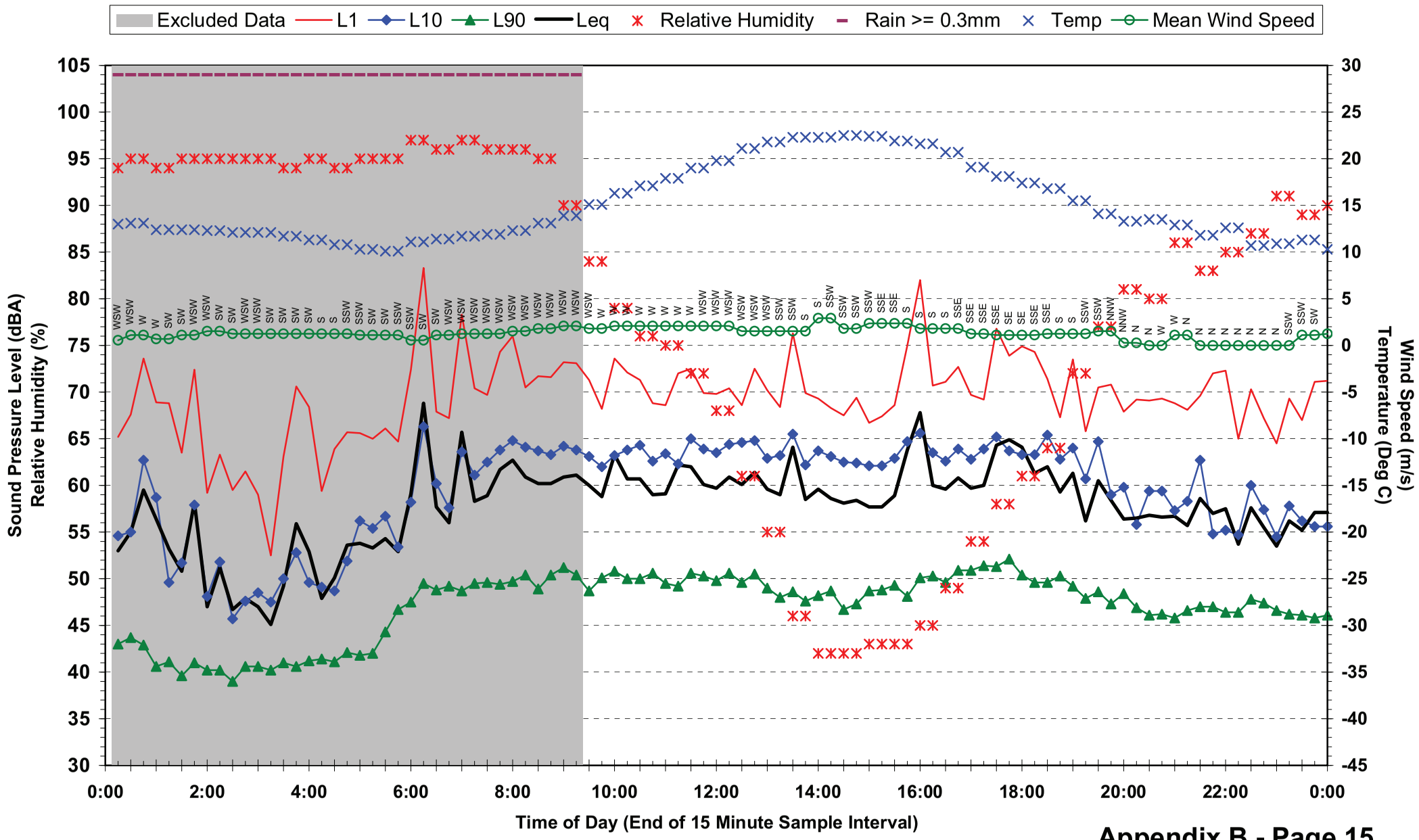
## Statistical Ambient Noise Levels
## Location 2 - 28 Bridge St - Thursday 20 May 2010



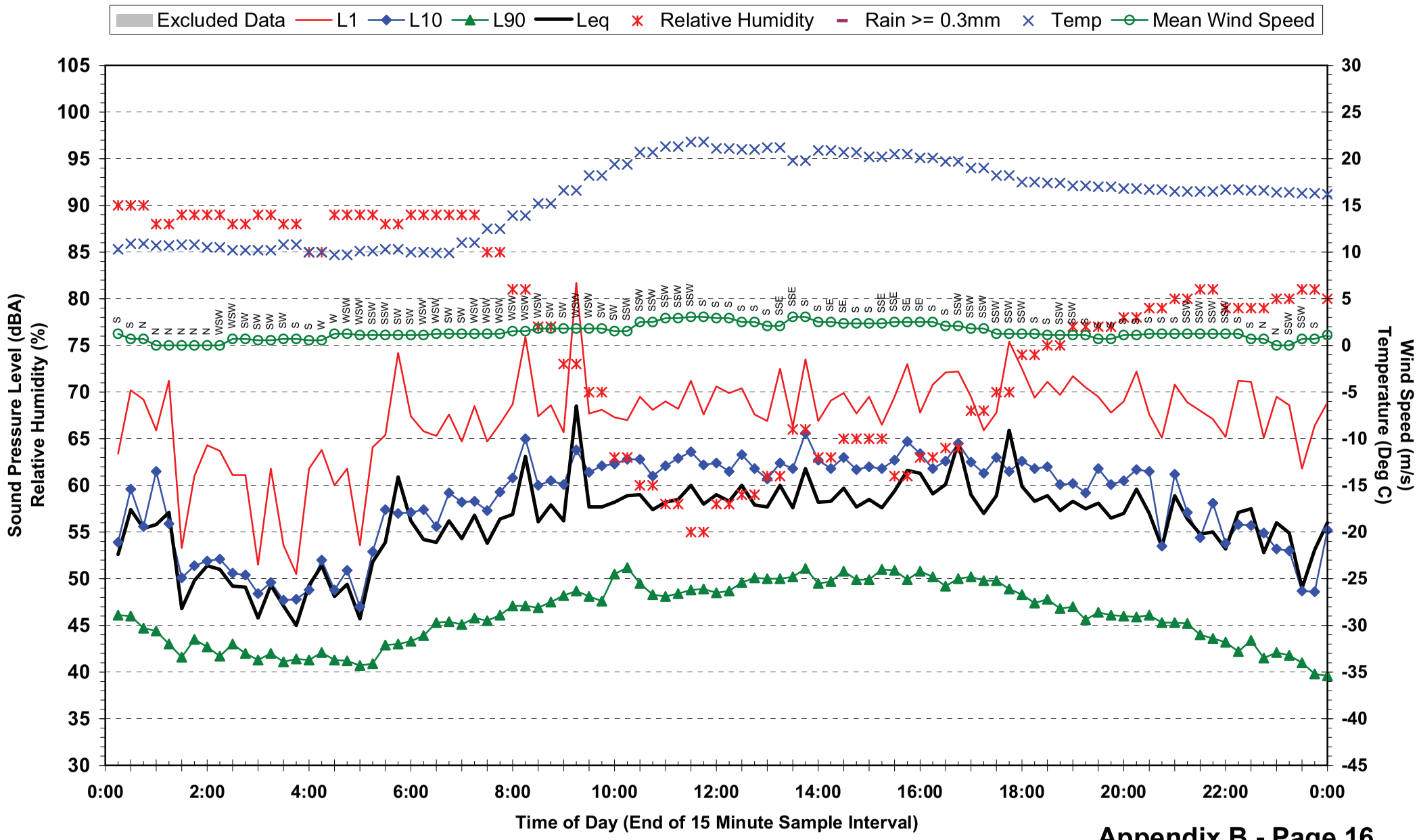
## Statistical Ambient Noise Levels
## Location 2 - 28 Bridge St - Friday 21 May 2010



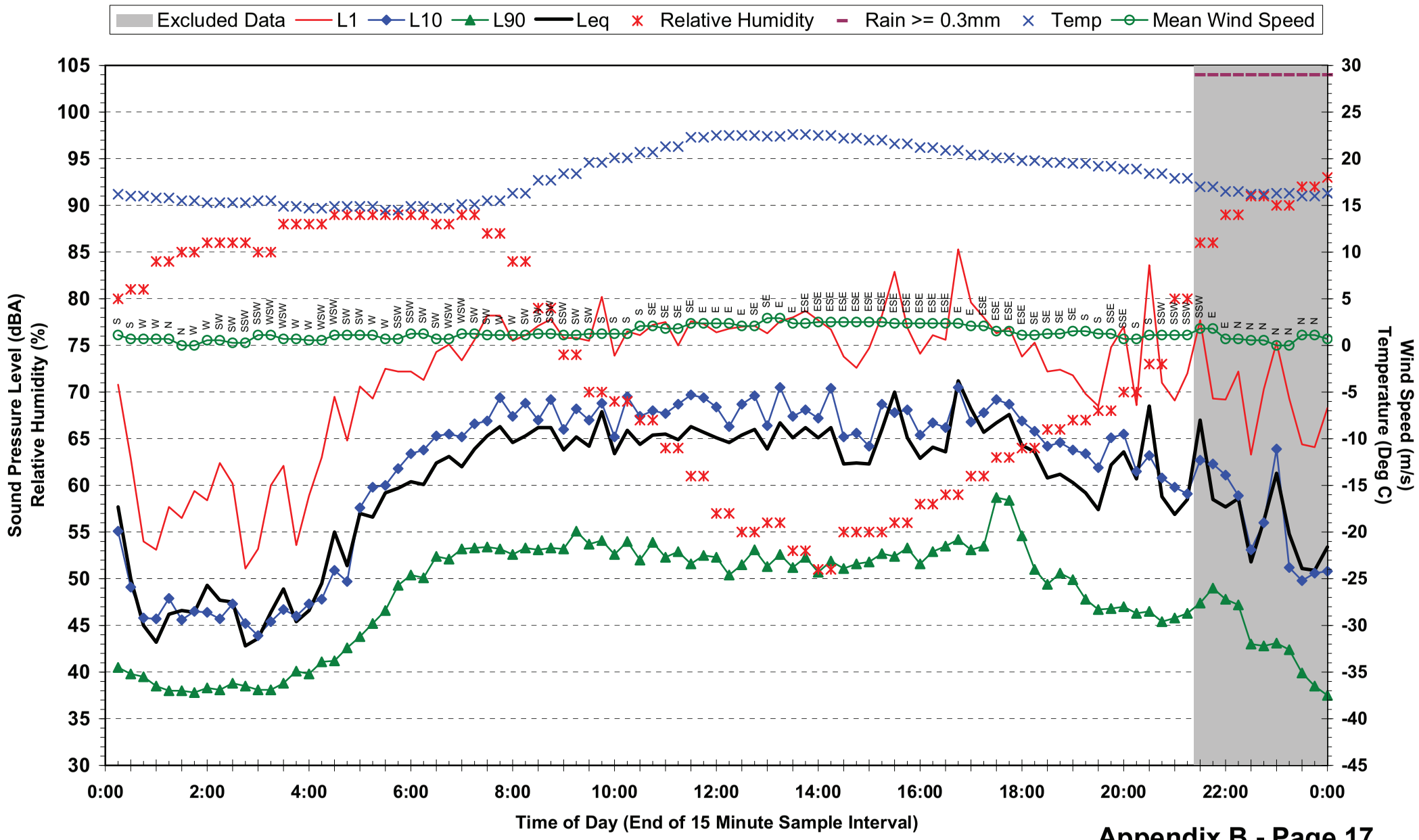
## Statistical Ambient Noise Levels
## Location 2 - 28 Bridge St - Saturday 22 May 2010



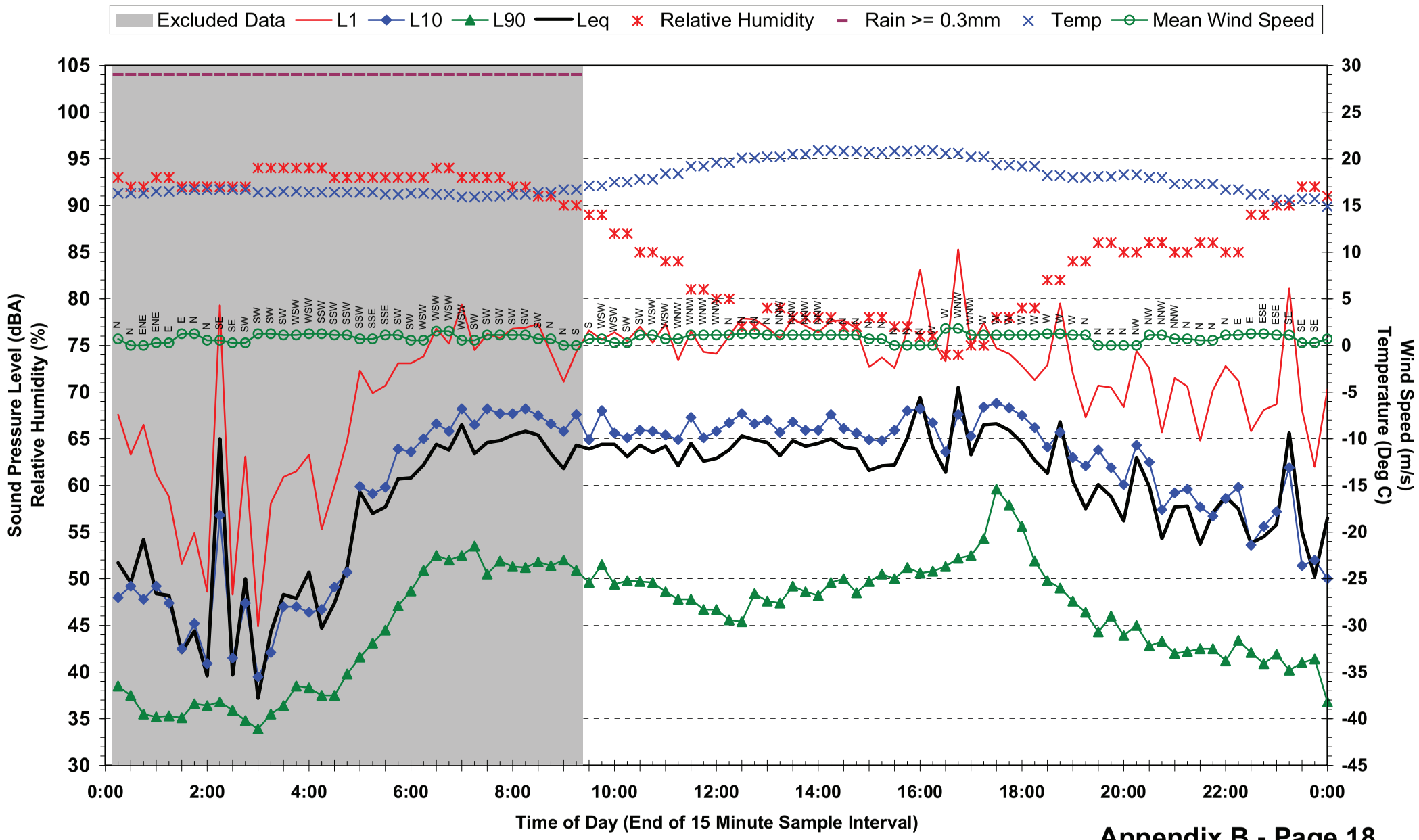
## Statistical Ambient Noise Levels
## Location 2 - 28 Bridge St - Sunday 23 May 2010



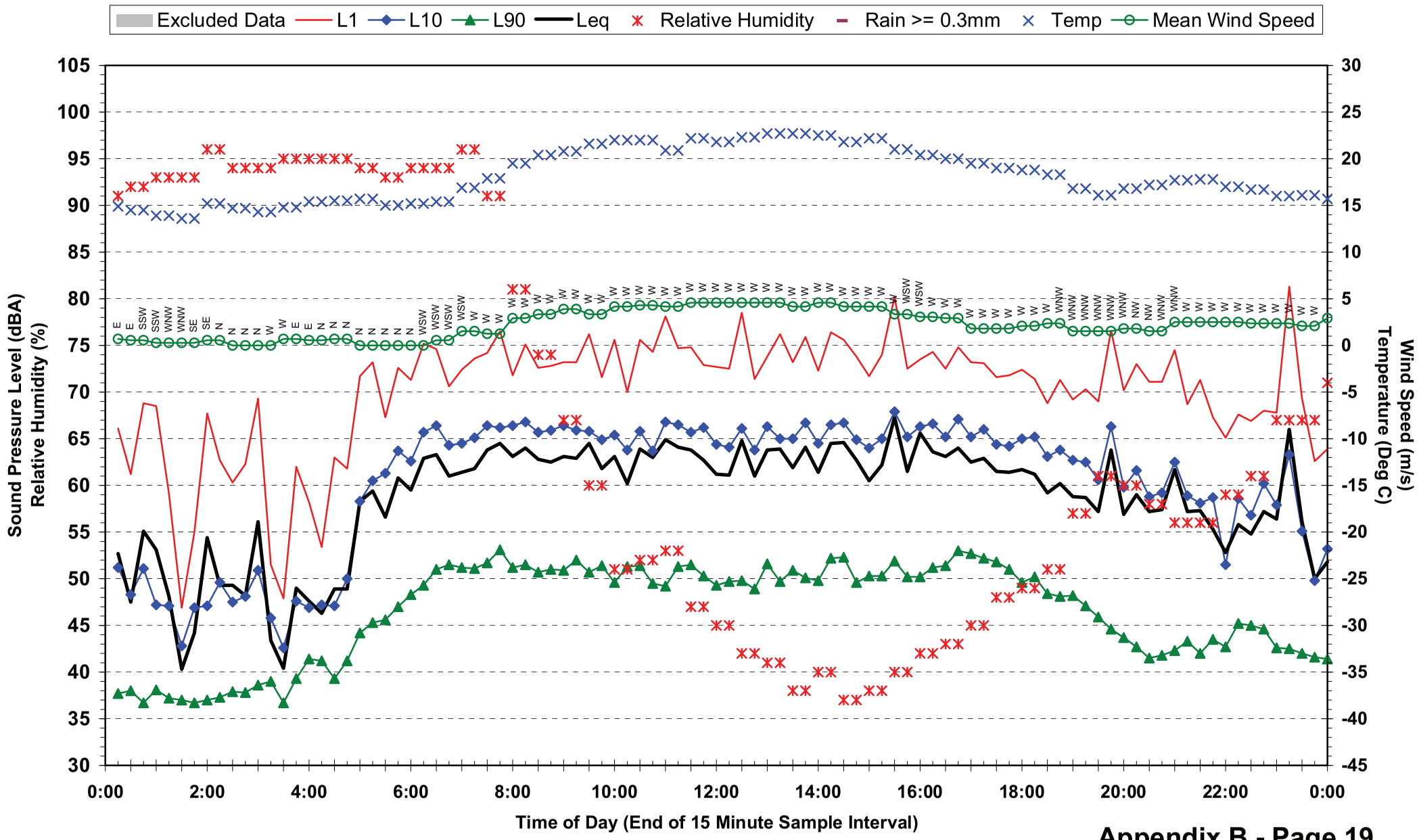
## Statistical Ambient Noise Levels
## Location 2 - 28 Bridge St - Monday 24 May 2010



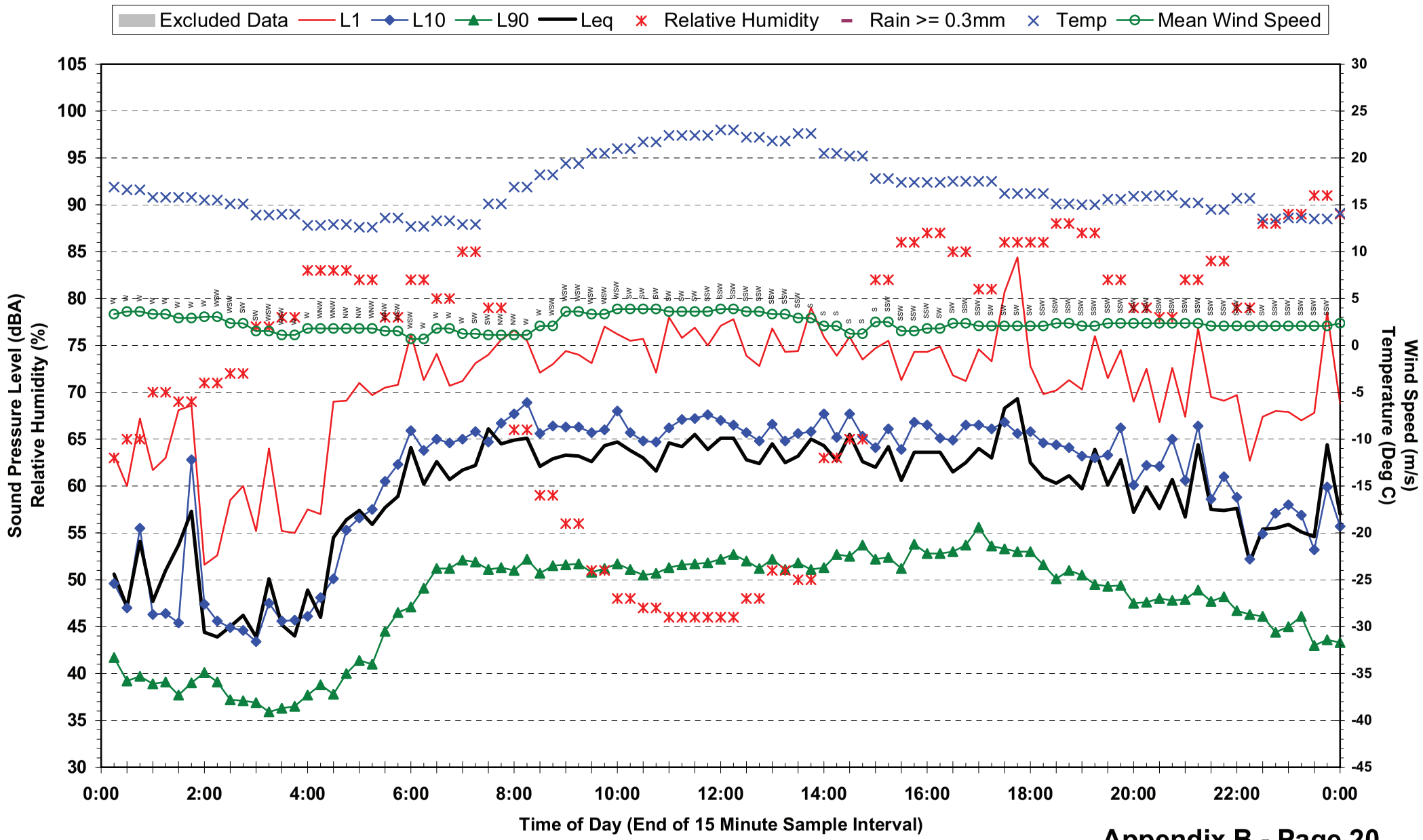
## Statistical Ambient Noise Levels
## Location 2 - 28 Bridge St - Tuesday 25 May 2010



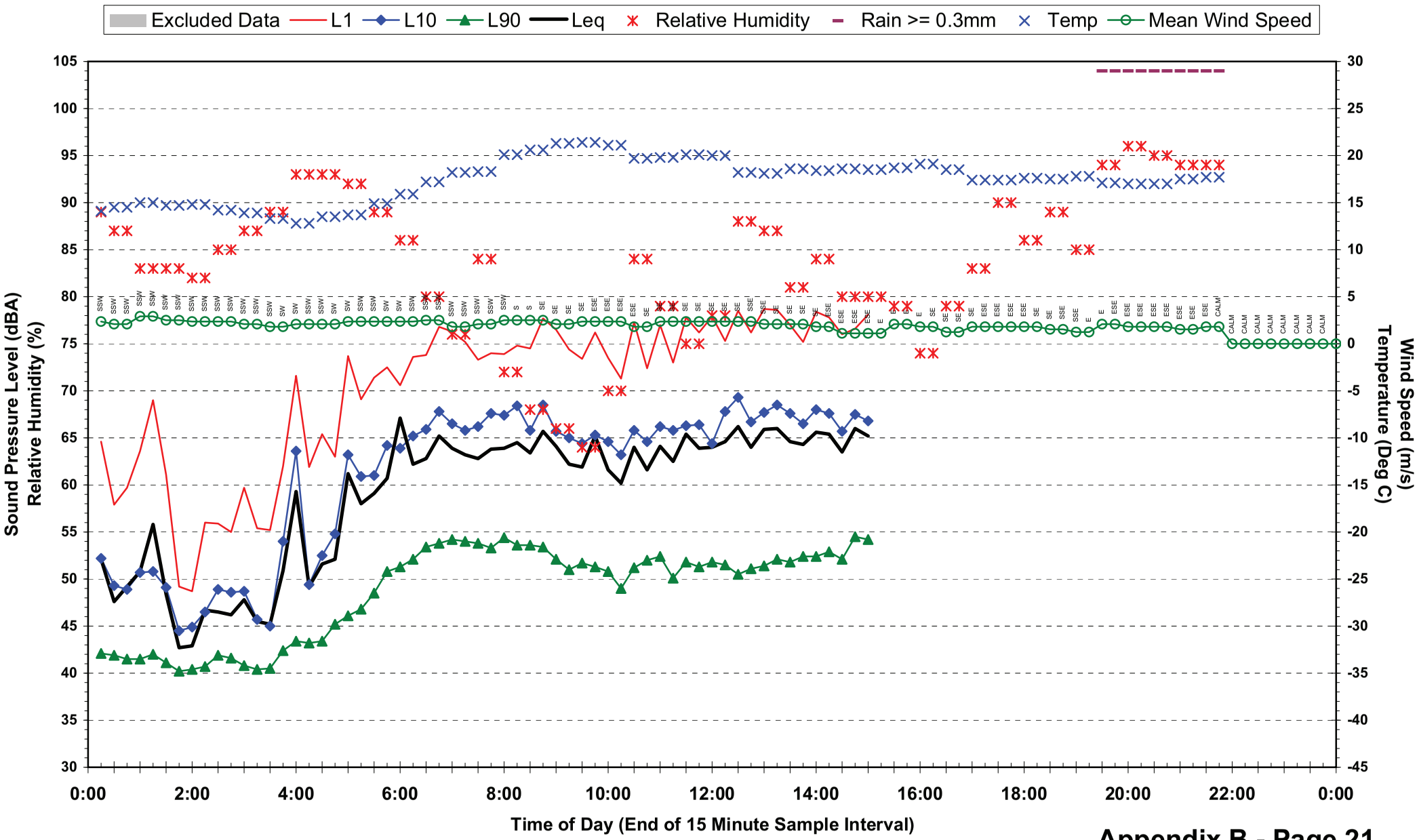
## Statistical Ambient Noise Levels
## Location 2 - 28 Bridge St - Wednesday 26 May 2010



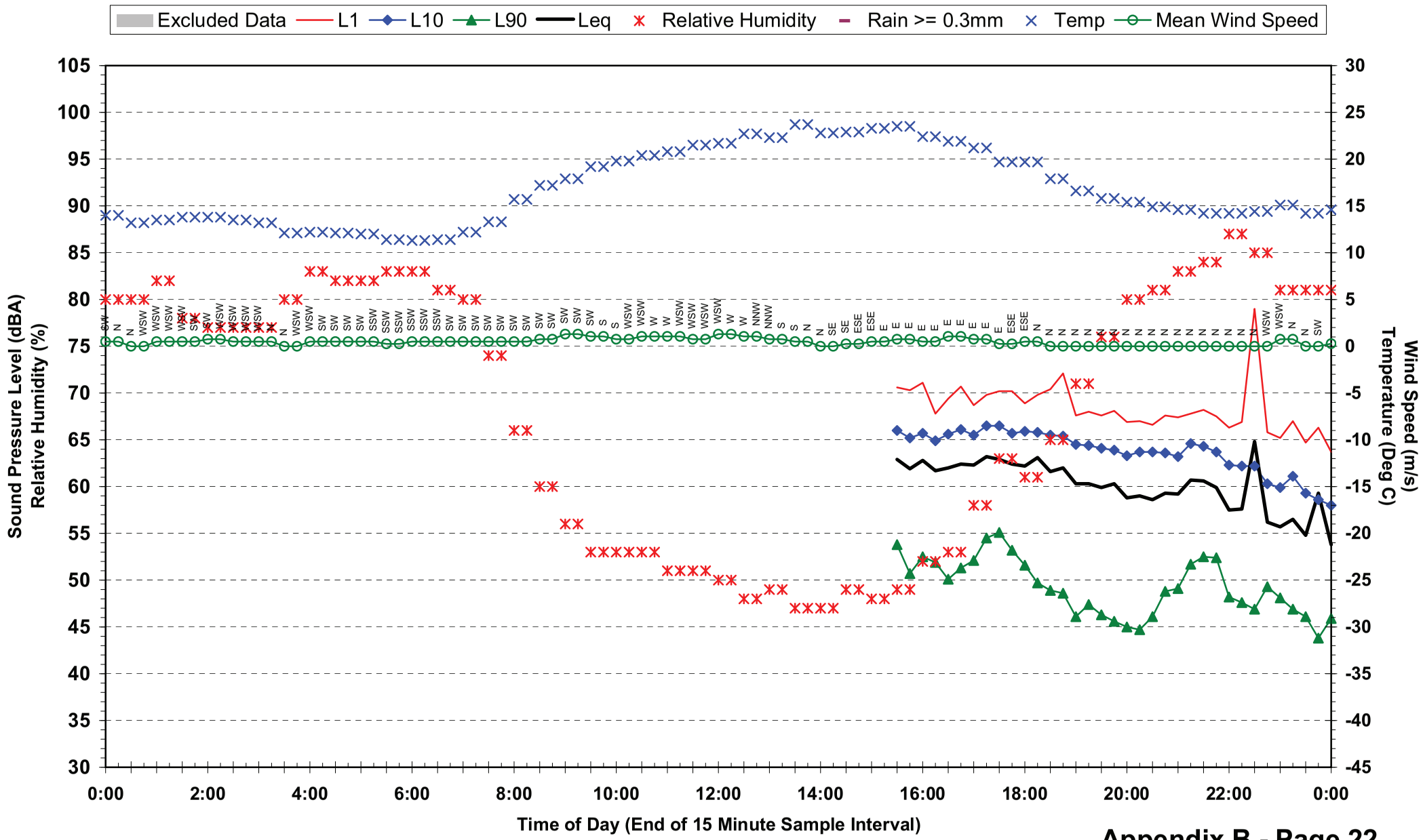
## Statistical Ambient Noise Levels
## Location 2 - 28 Bridge St - Thursday 27 May 2010



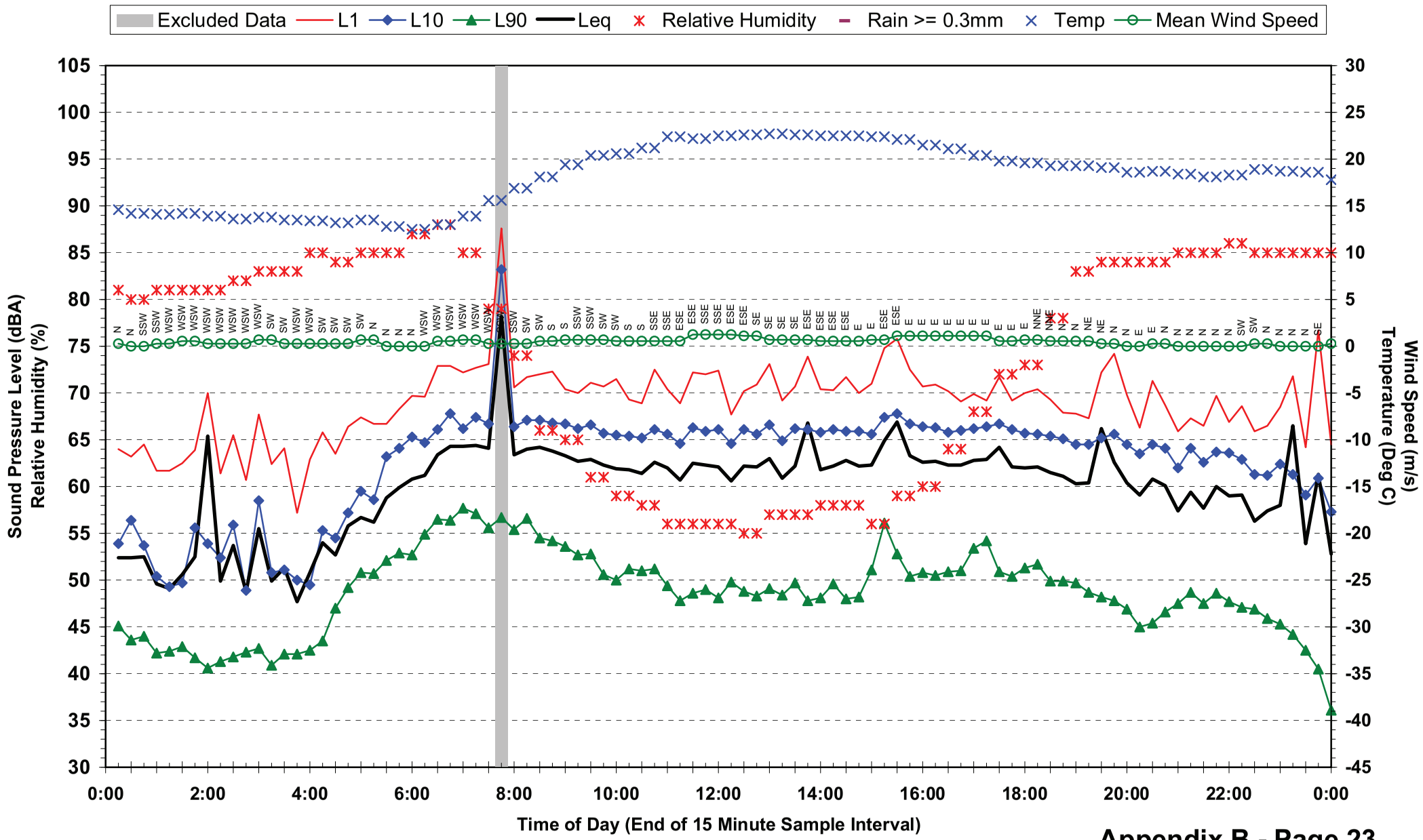
## Statistical Ambient Noise Levels
## Location 2 - 28 Bridge St - Friday 28 May 2010



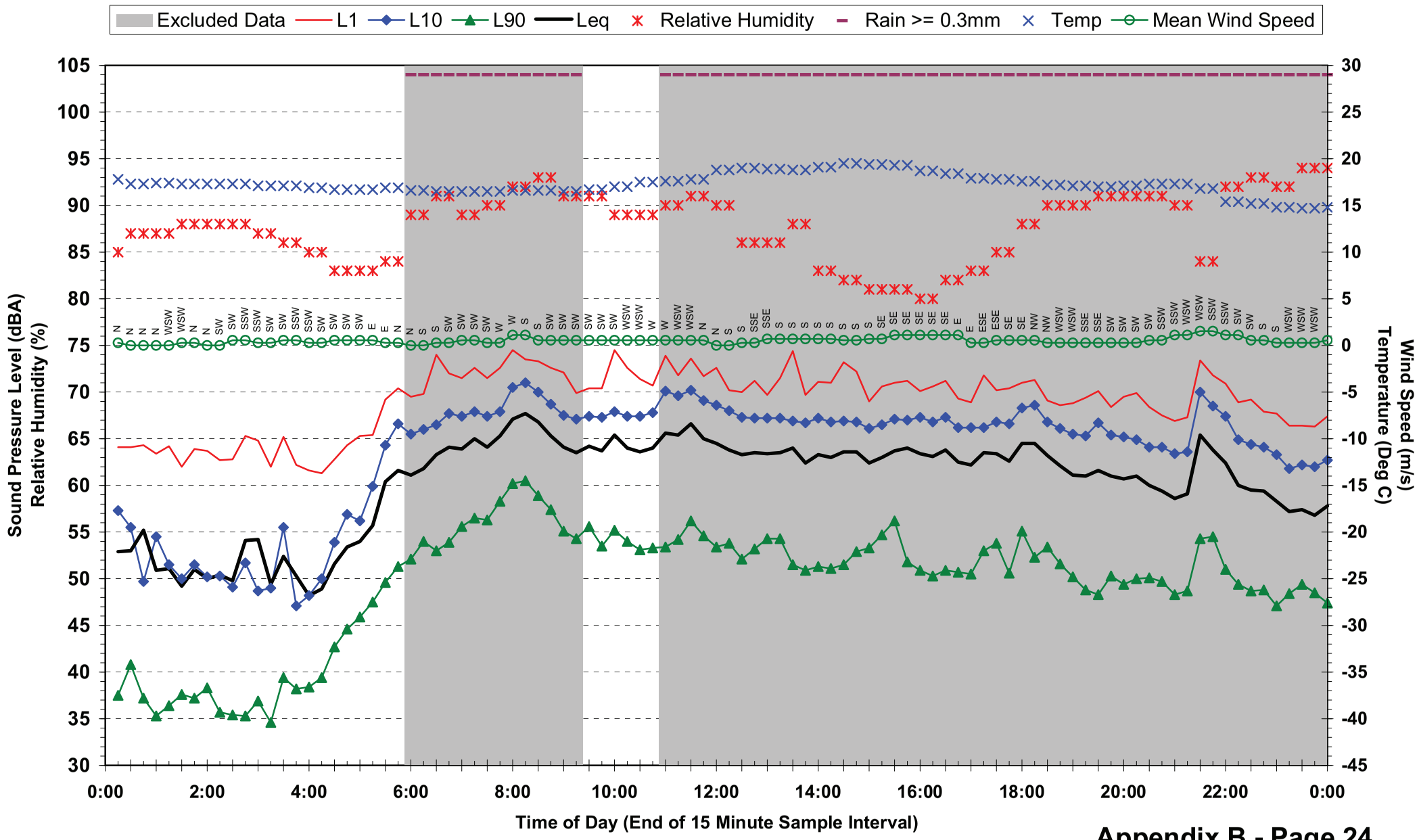
## Statistical Ambient Noise Levels
## Location 3 - St Josephs College Gregory Tce - Wednesday 19 May 2010



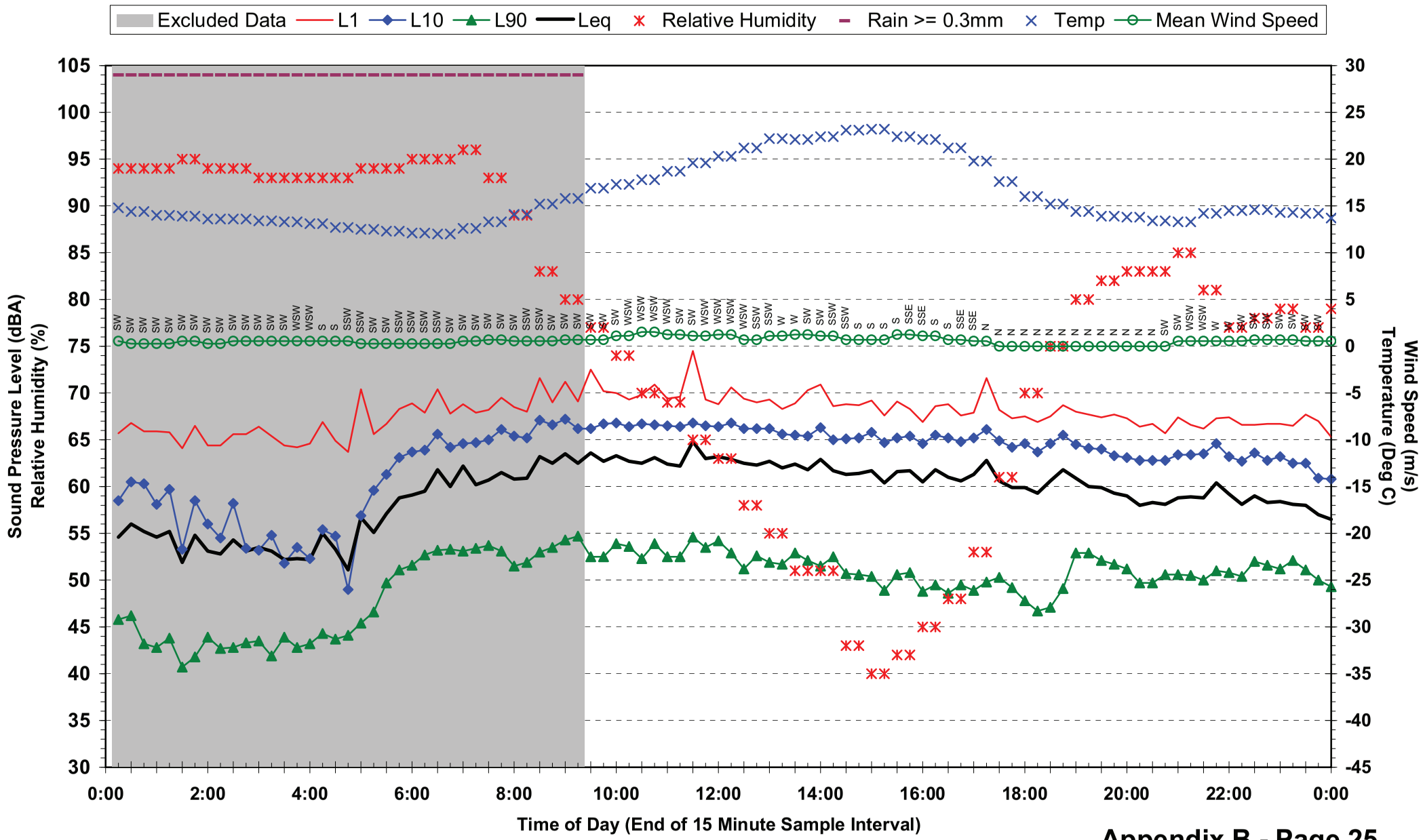
## Statistical Ambient Noise Levels
## Location 3 - St Josephs College Gregory Tce - Thursday 20 May 2010



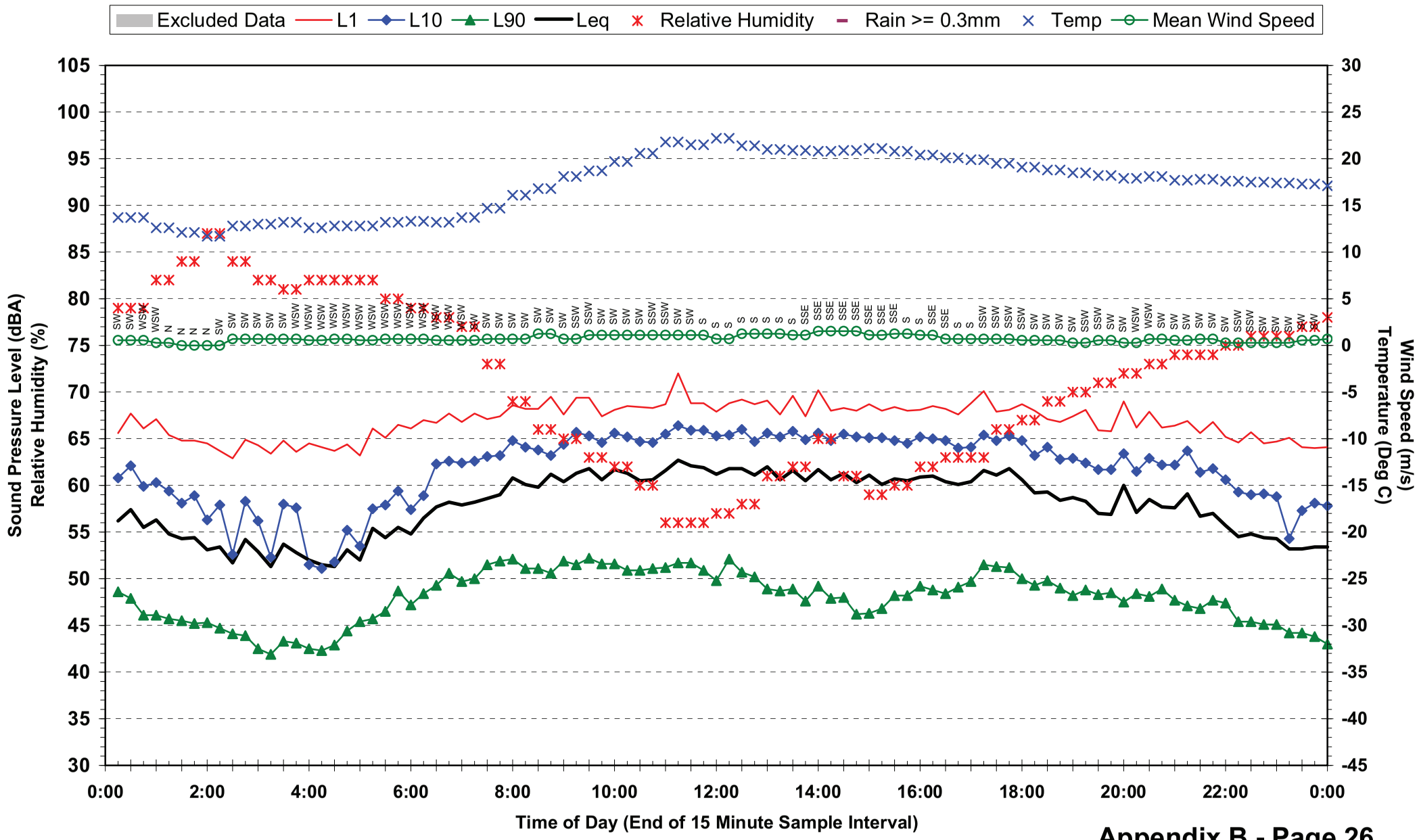
## Statistical Ambient Noise Levels
## Location 3 - St Josephs College Gregory Tce - Friday 21 May 2010



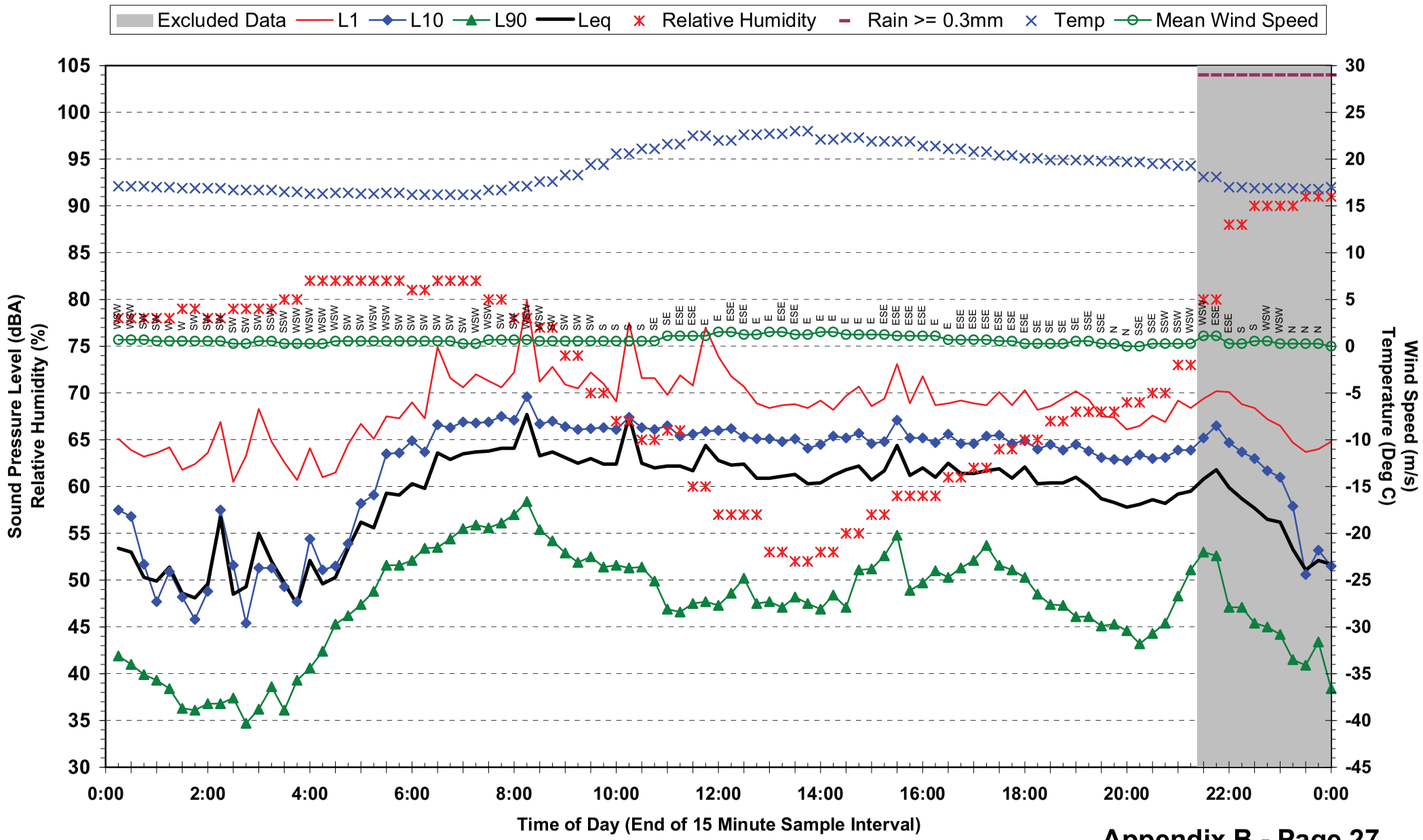
## Statistical Ambient Noise Levels
## Location 3 - St Josephs College Gregory Tce - Saturday 22 May 2010



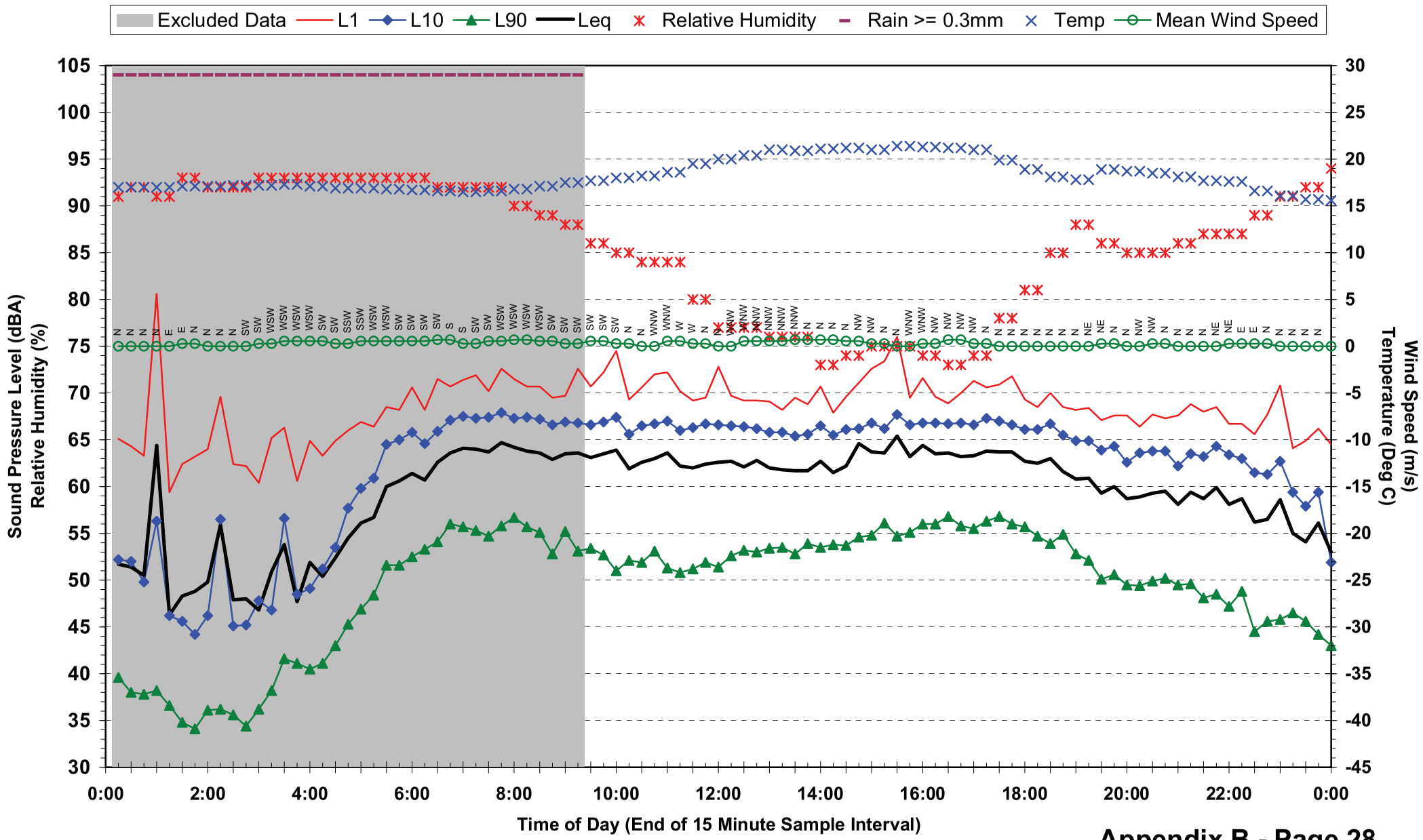
## Statistical Ambient Noise Levels
## Location 3 - St Josephs College Gregory Tce - Sunday 23 May 2010



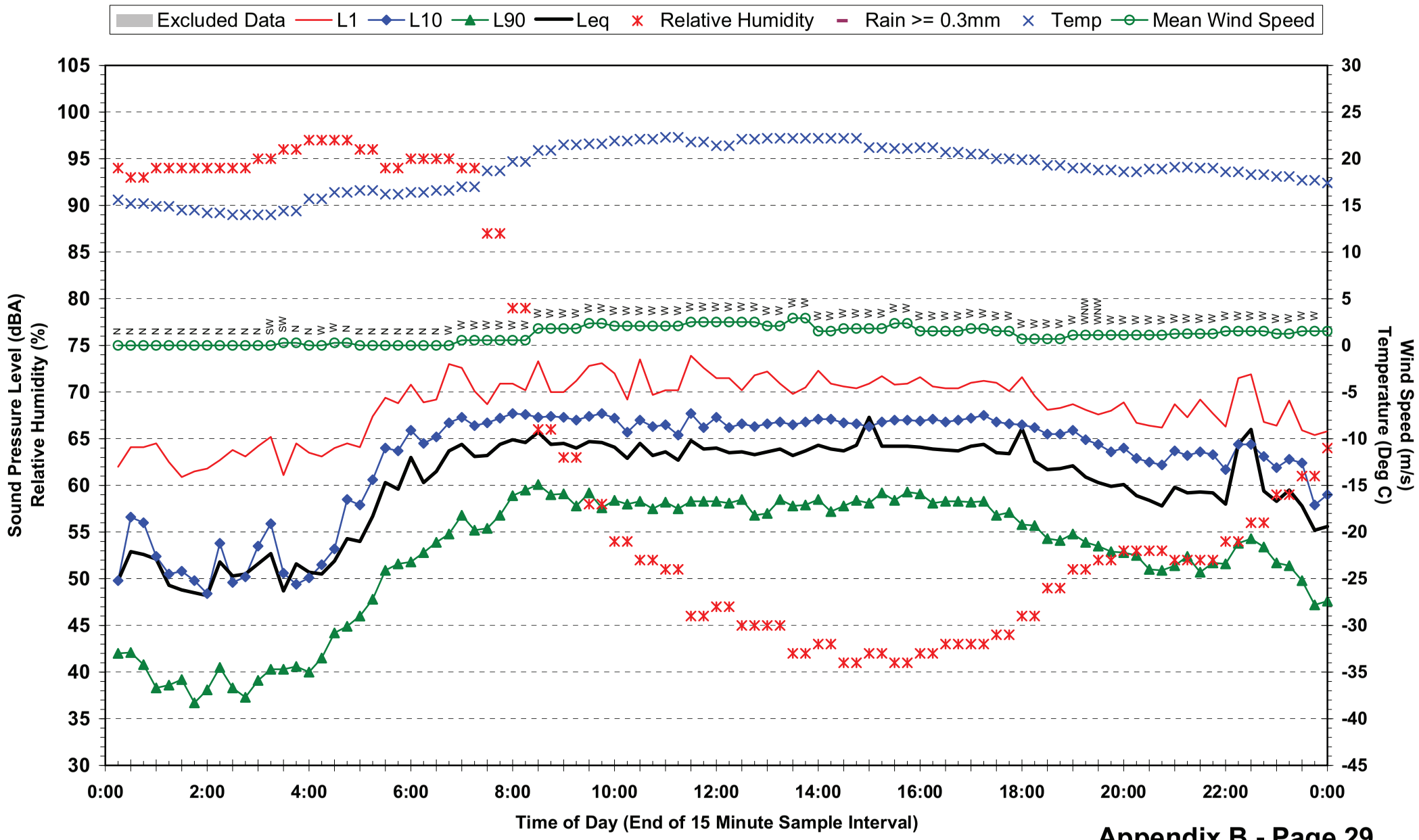
## Statistical Ambient Noise Levels
## Location 3 - St Josephs College Gregory Tce - Monday 24 May 2010

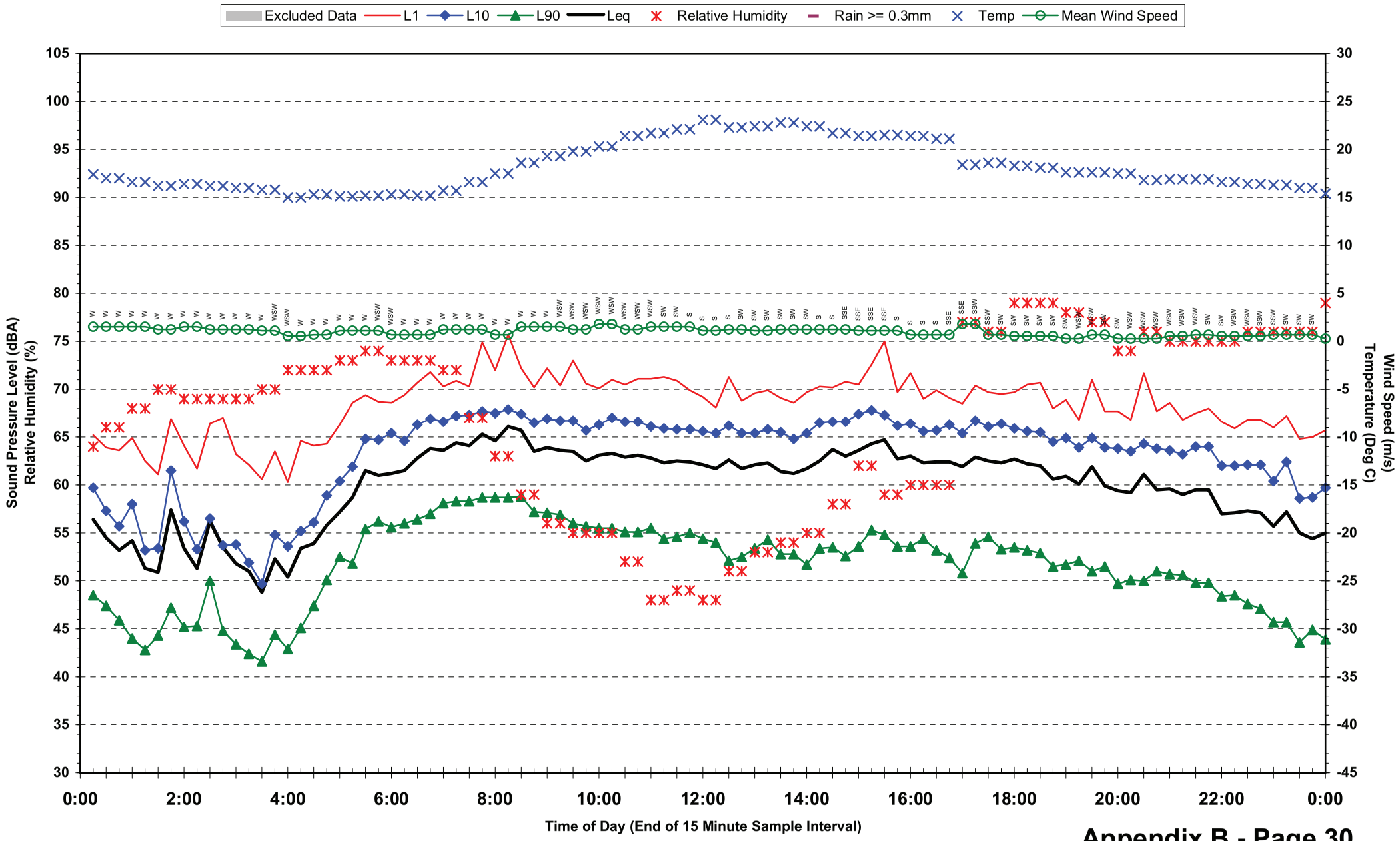


## Statistical Ambient Noise Levels
## Location 3 - St Josephs College Gregory Tce - Tuesday 25 May 2010

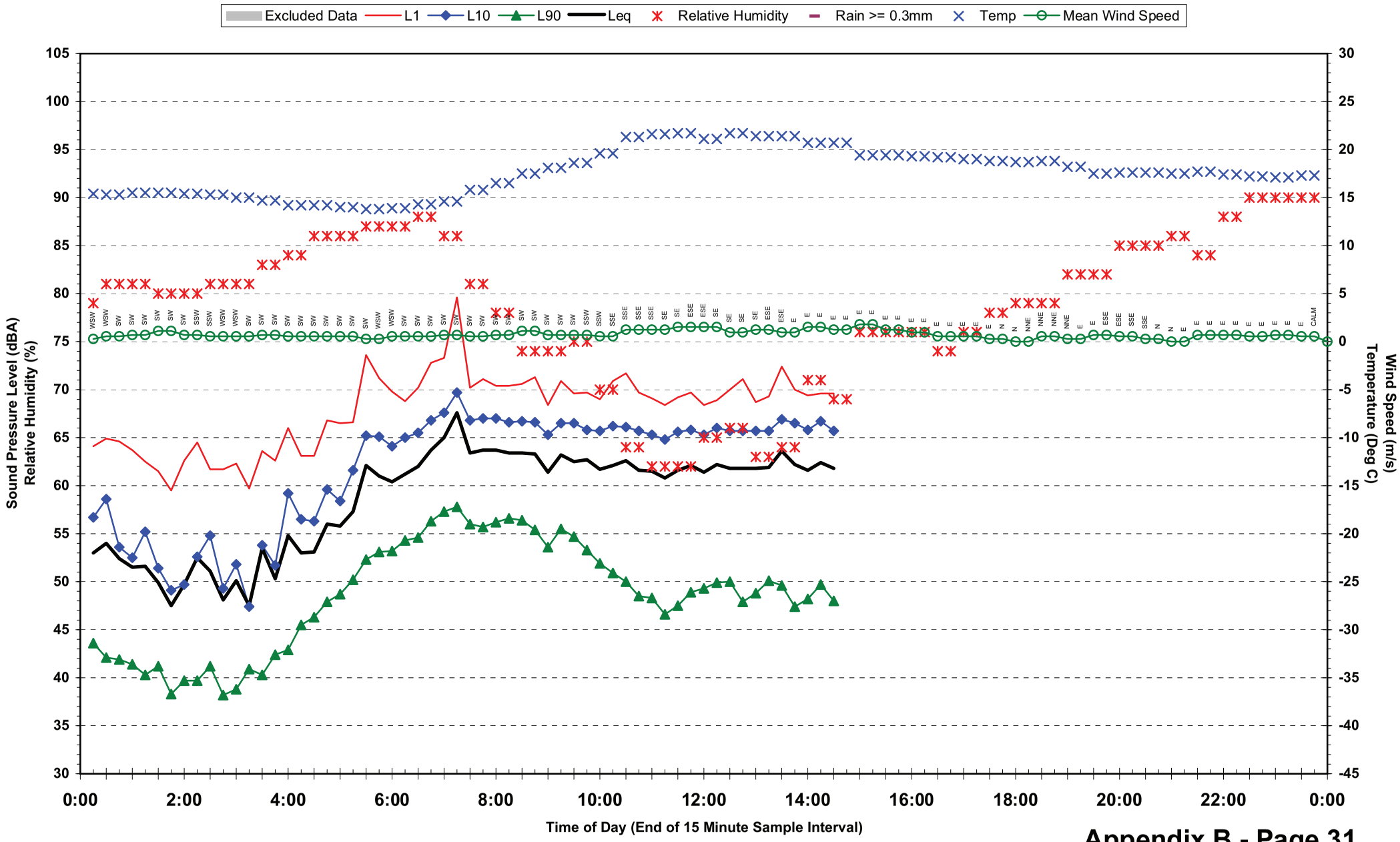


## Statistical Ambient Noise Levels
## Location 3 - St Josephs College Gregory Tce - Wednesday 26 May 2010

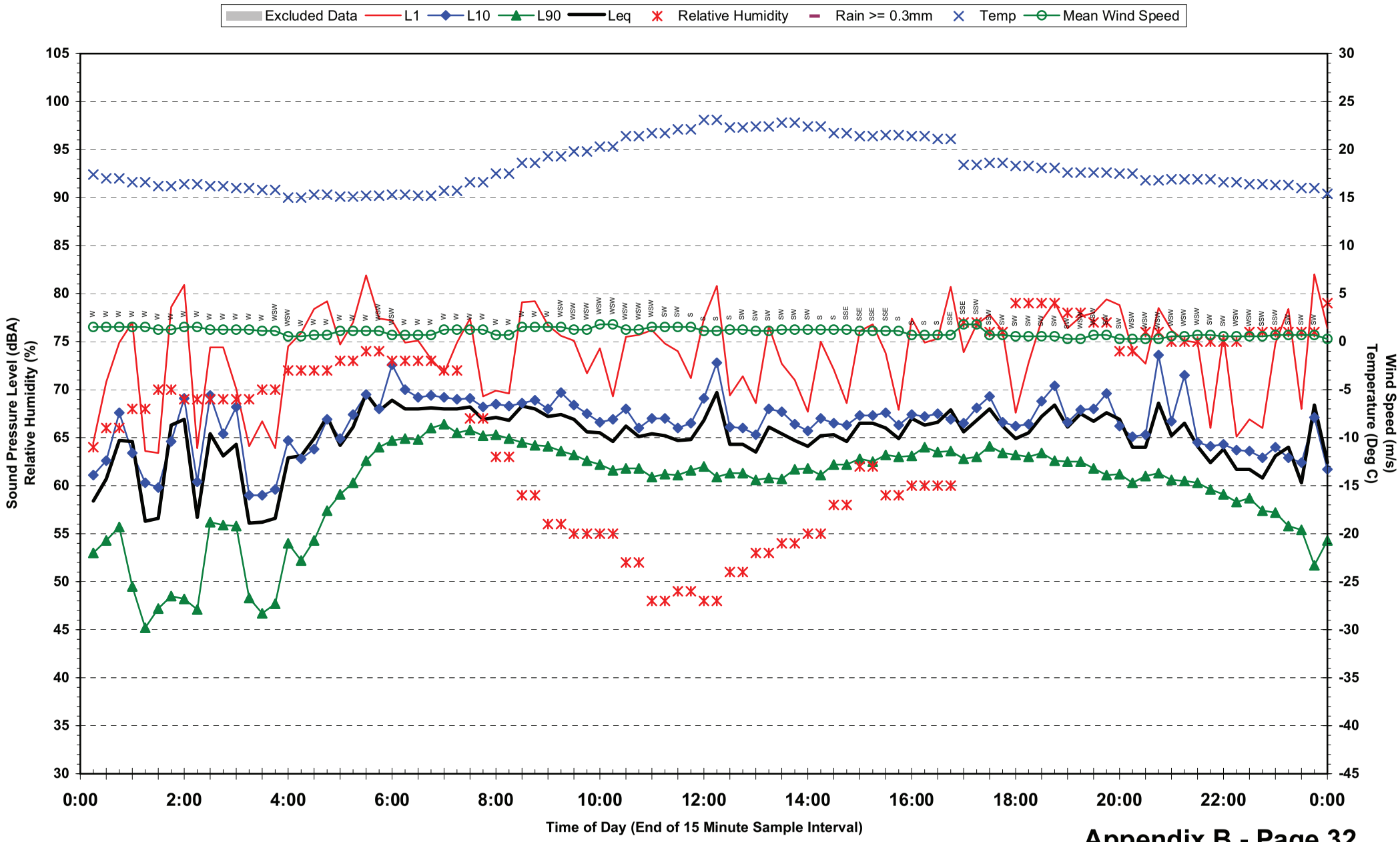



Statistical Ambient Noise Levels
Location 3 - St Josephs College Gregory Tce - Thursday 27 May 2010
Excluded Data
L1
L10
L90
Leq
Relative Humidity
Rain >= 0.3mm
Temp
Mean Wind Speed
Sound Pressure Level (dBA)
Relative Humidity (%)
Wind Speed (m/s)
Temperature (Deg C)
Time of Day (End of 15 Minute Sample Interval)
0:00
2:00
4:00
6:00
8:00
10:00
12:00
14:00
16:00
18:00
20:00
22:00
0:00

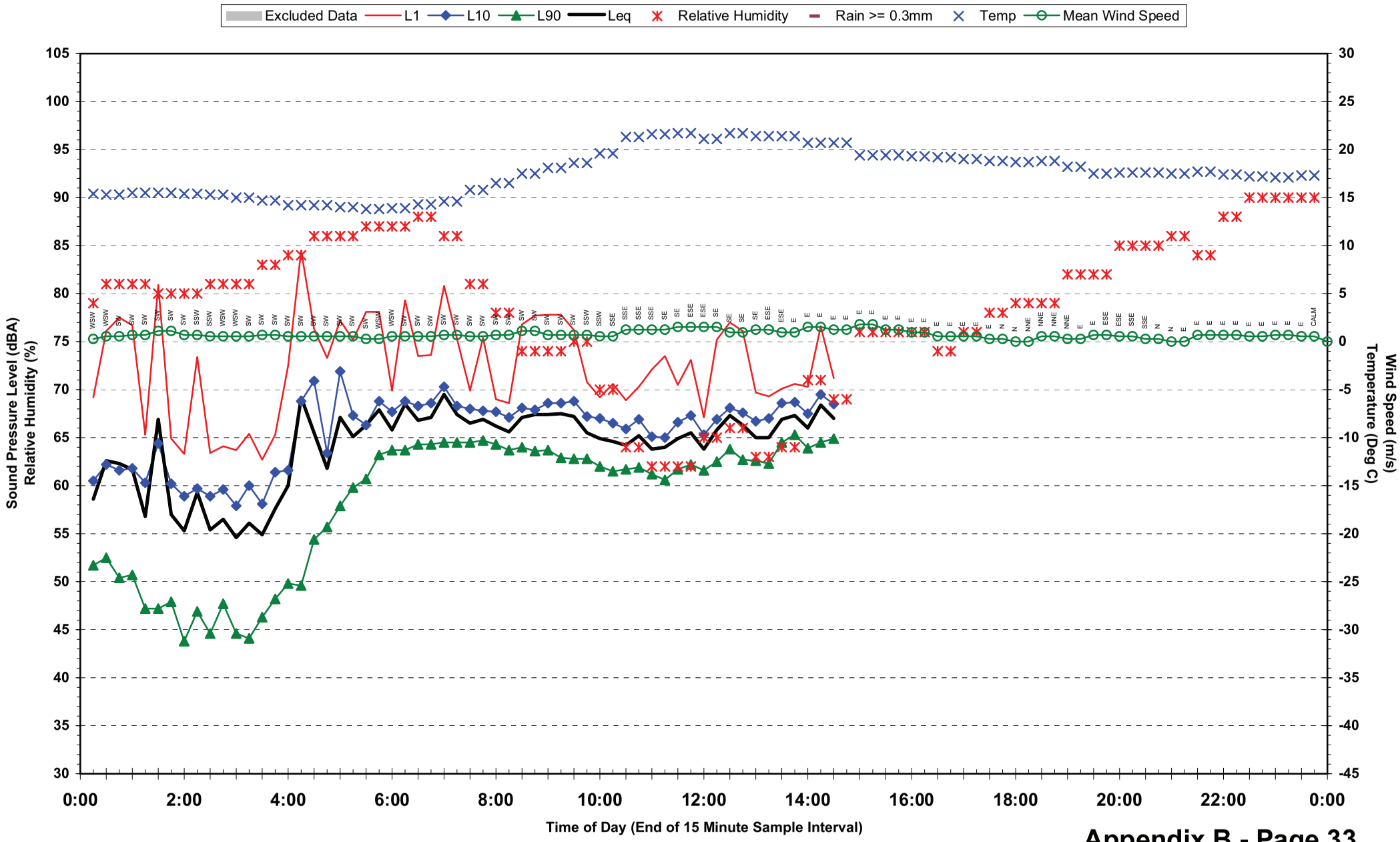
**Statistical Ambient Noise Levels**
**Location 3 - St Josephs College Gregory Tce - Friday 28 May 2010**



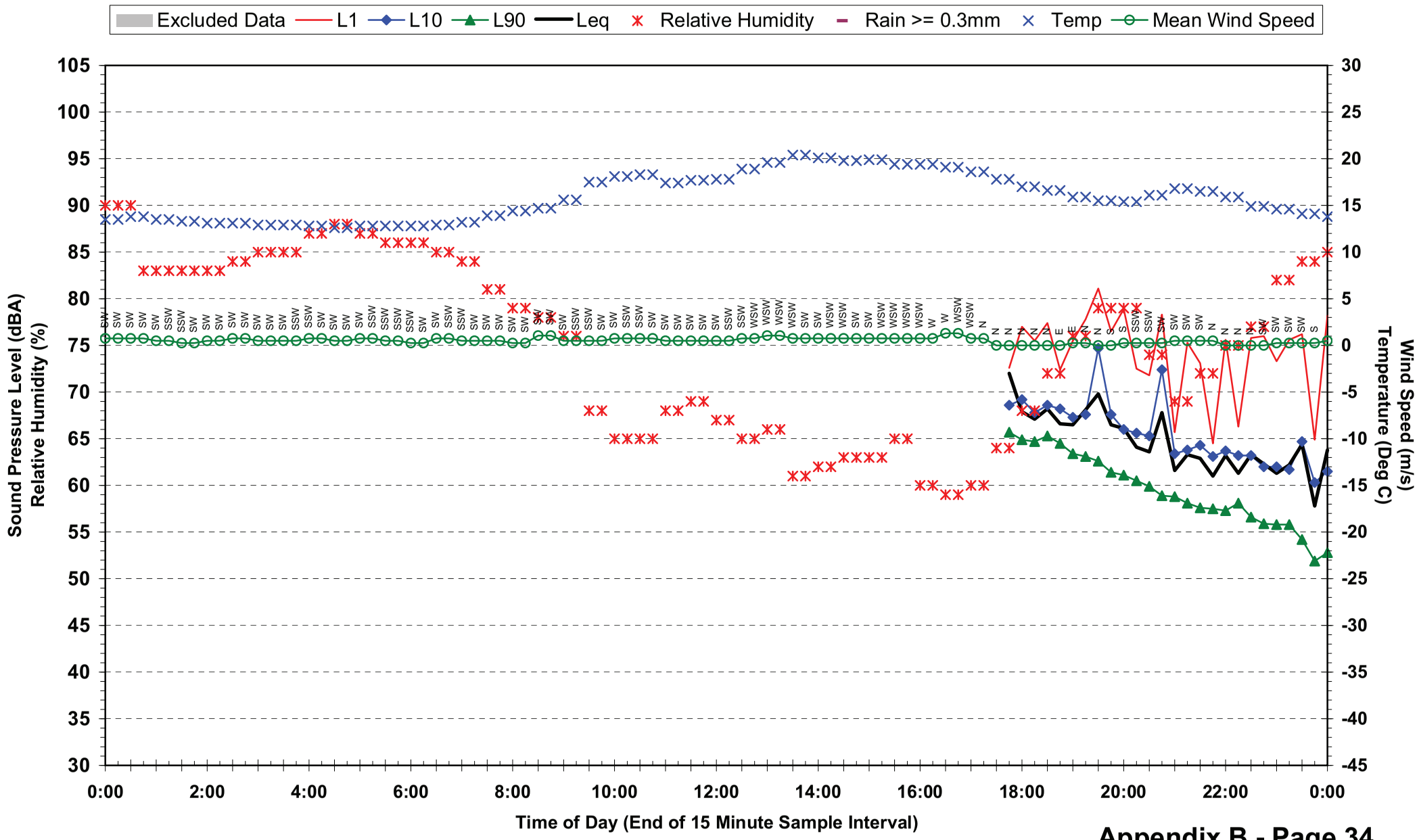
**Statistical Ambient Noise Levels**
**Location 4 - Brisbane Girls Grammar School - Thursday 27 May 2010**



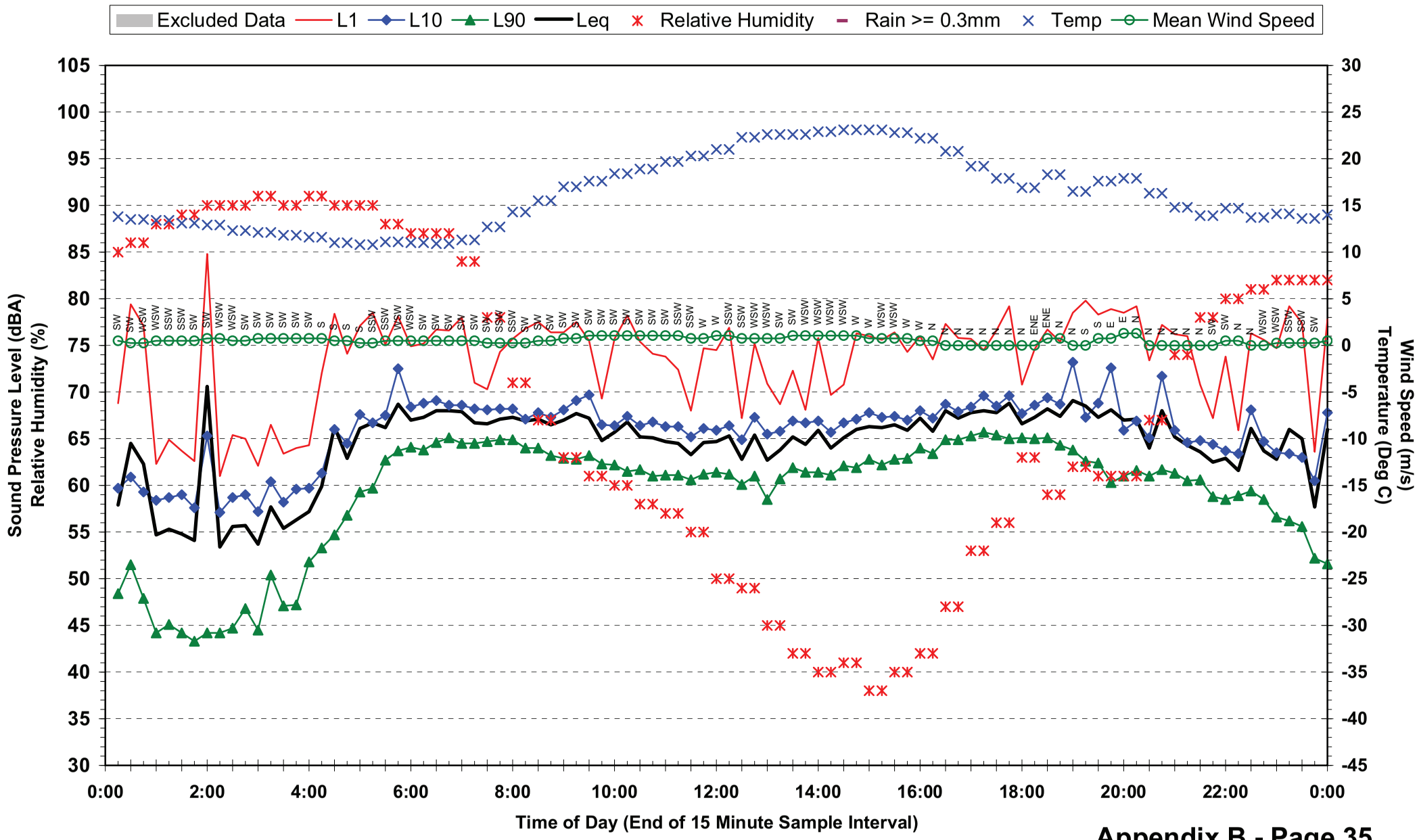
**Statistical Ambient Noise Levels**
**Location 4 - Brisbane Girls Grammar School - Friday 28 May 2010**



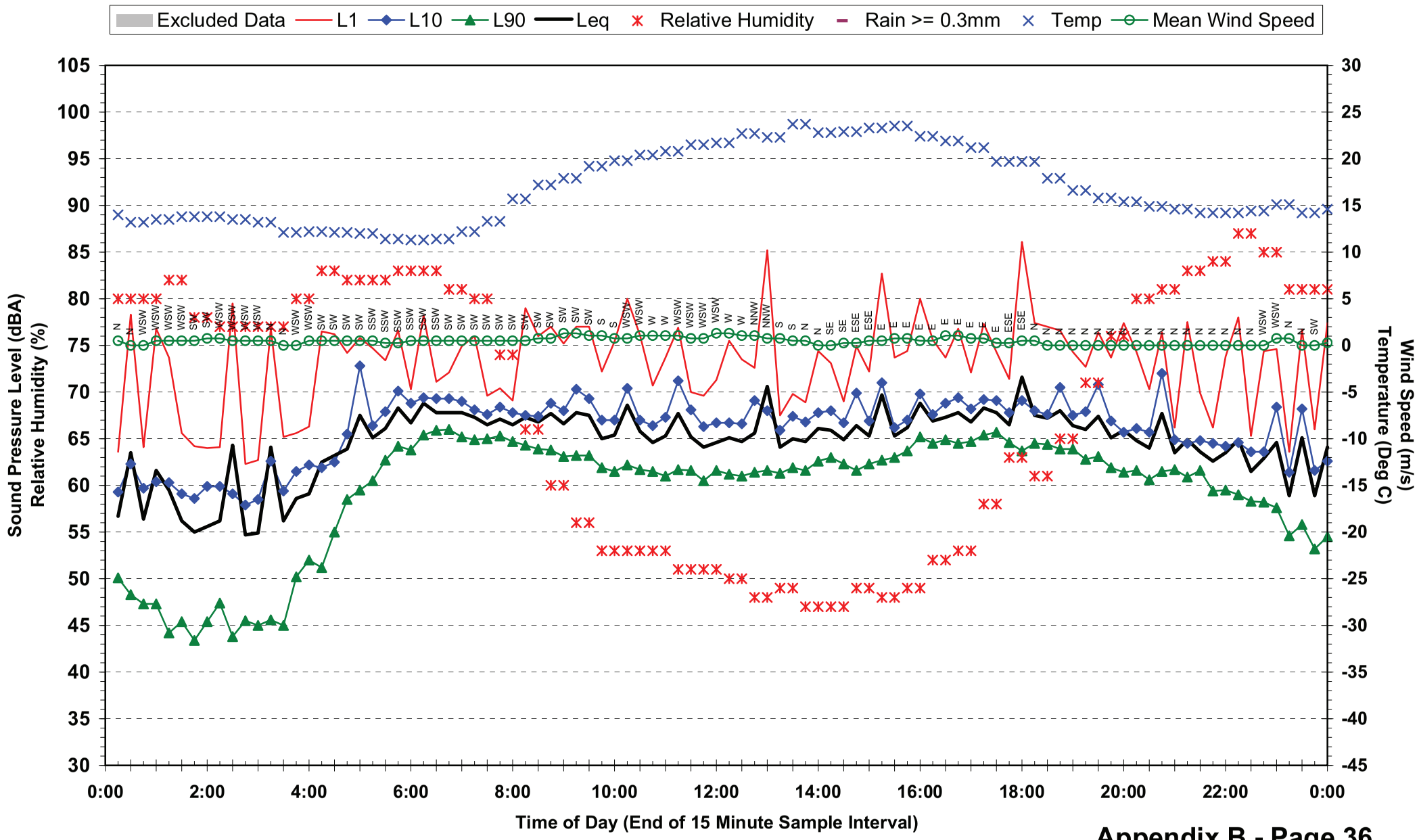
## Statistical Ambient Noise Levels
## Location 4 - Brisbane Girls Grammar School - Monday 17 May 2010



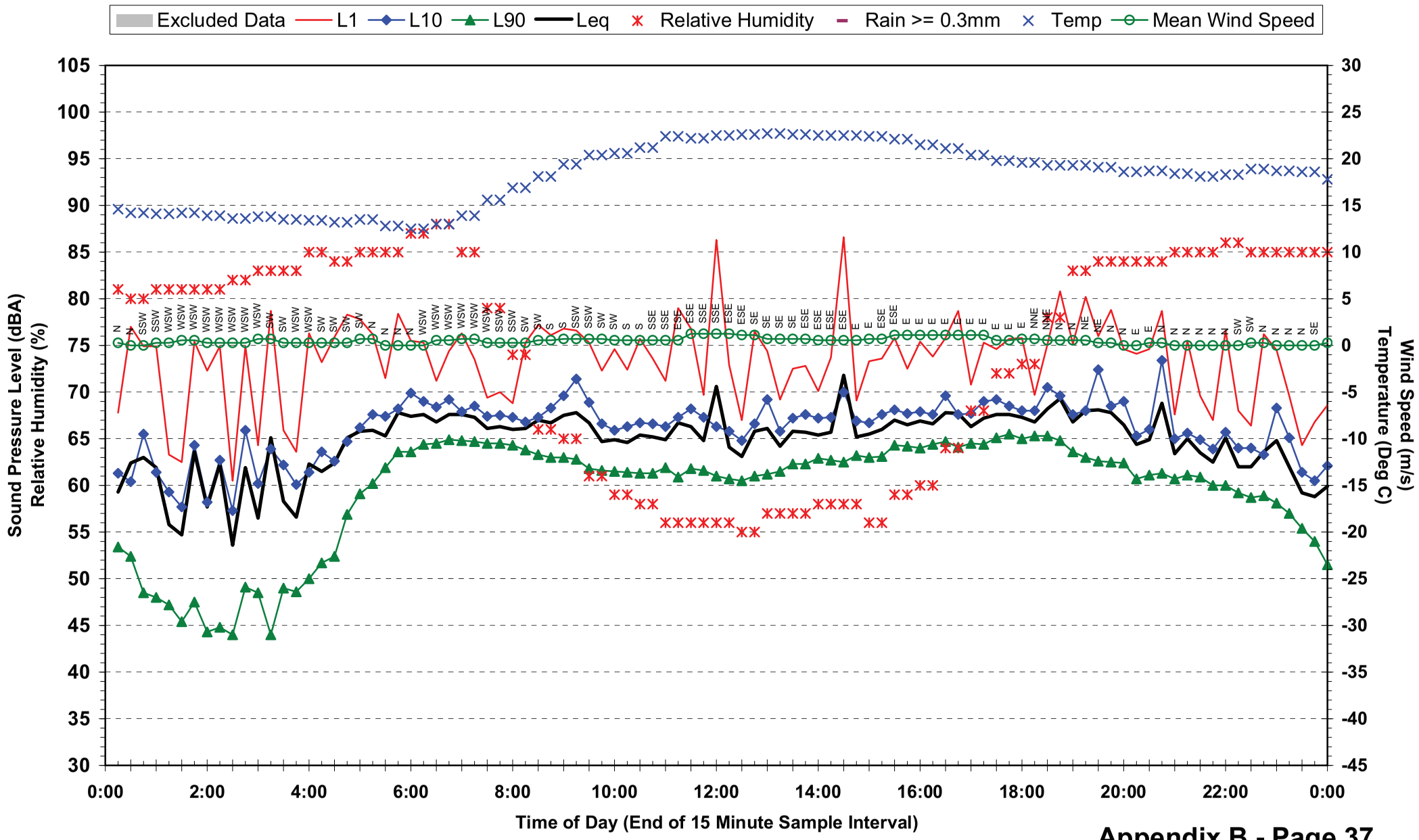
## Statistical Ambient Noise Levels
## Location 4 - Brisbane Girls Grammar School - Tuesday 18 May 2010



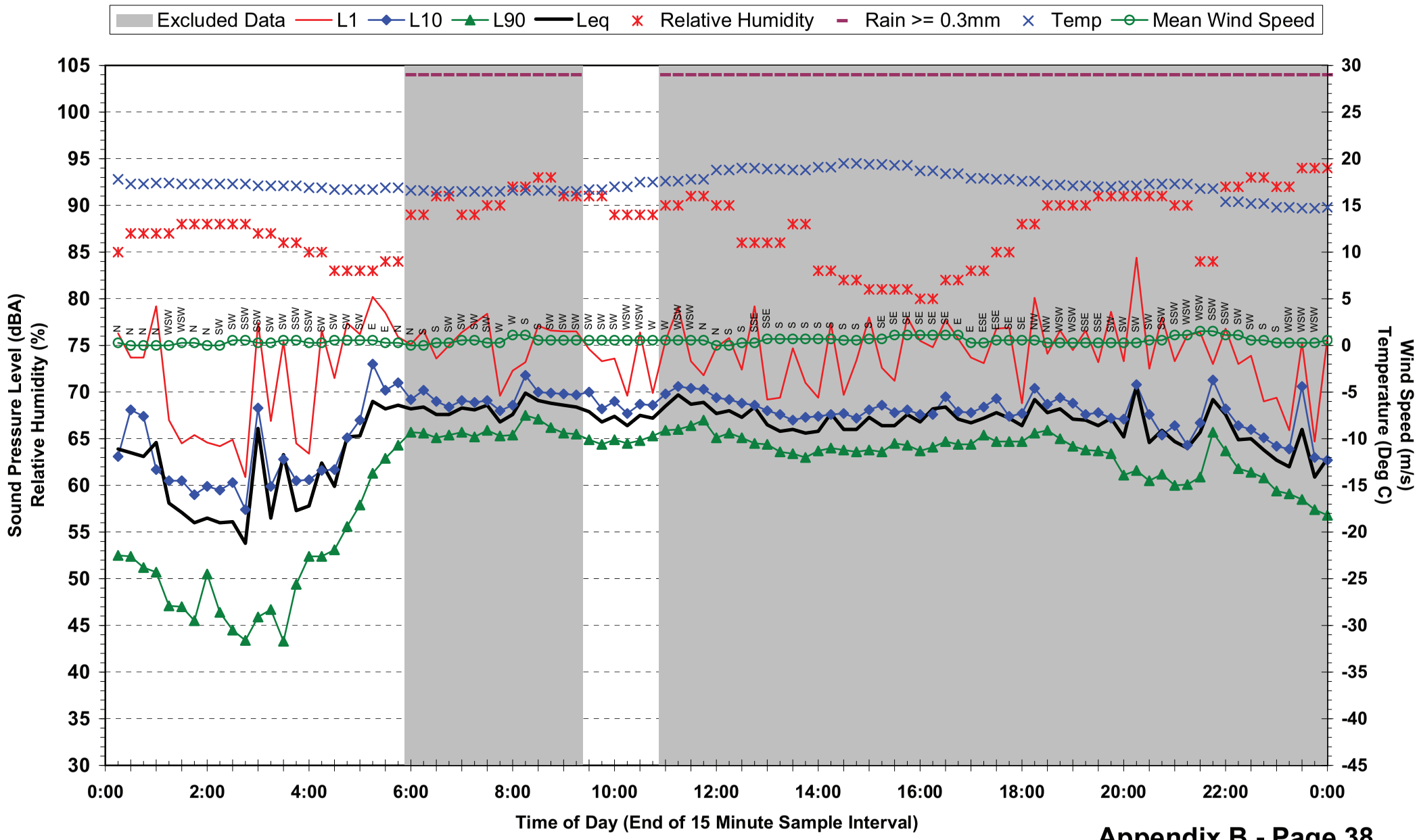
## Statistical Ambient Noise Levels
## Location 4 - Brisbane Girls Grammar School - Wednesday 19 May 2010



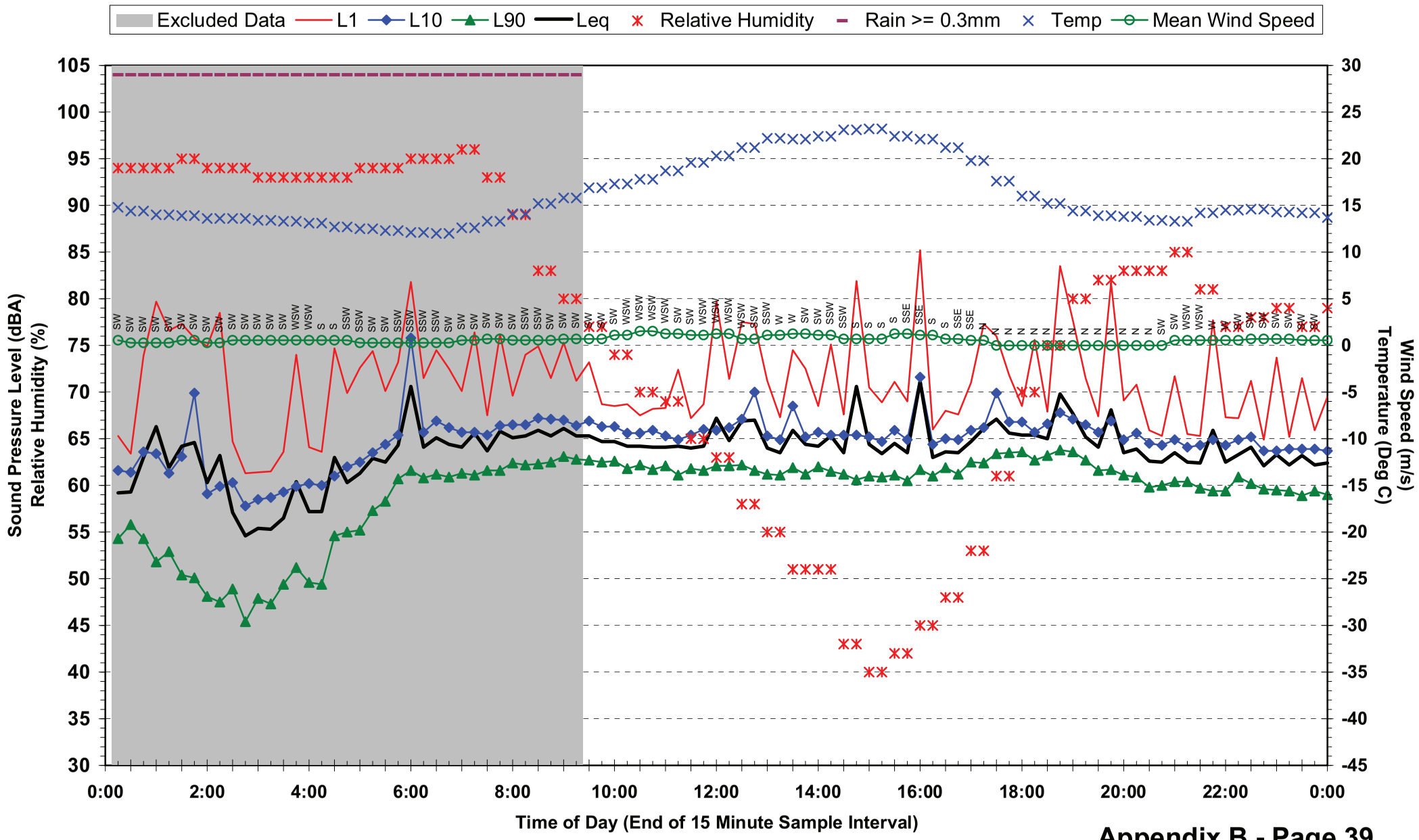
## Statistical Ambient Noise Levels
## Location 4 - Brisbane Girls Grammar School - Thursday 20 May 2010



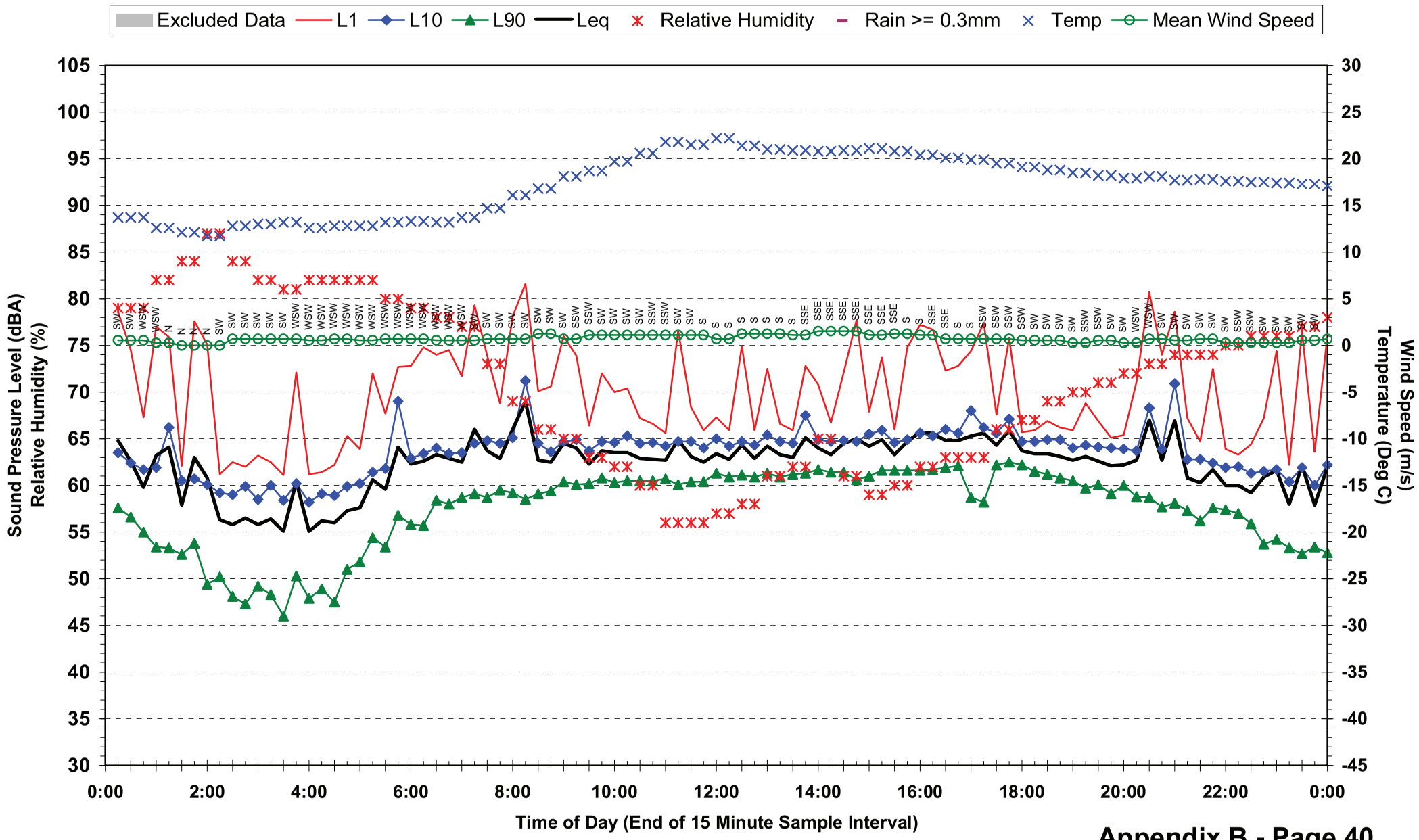
## Statistical Ambient Noise Levels
## Location 4 - Brisbane Girls Grammar School - Friday 21 May 2010



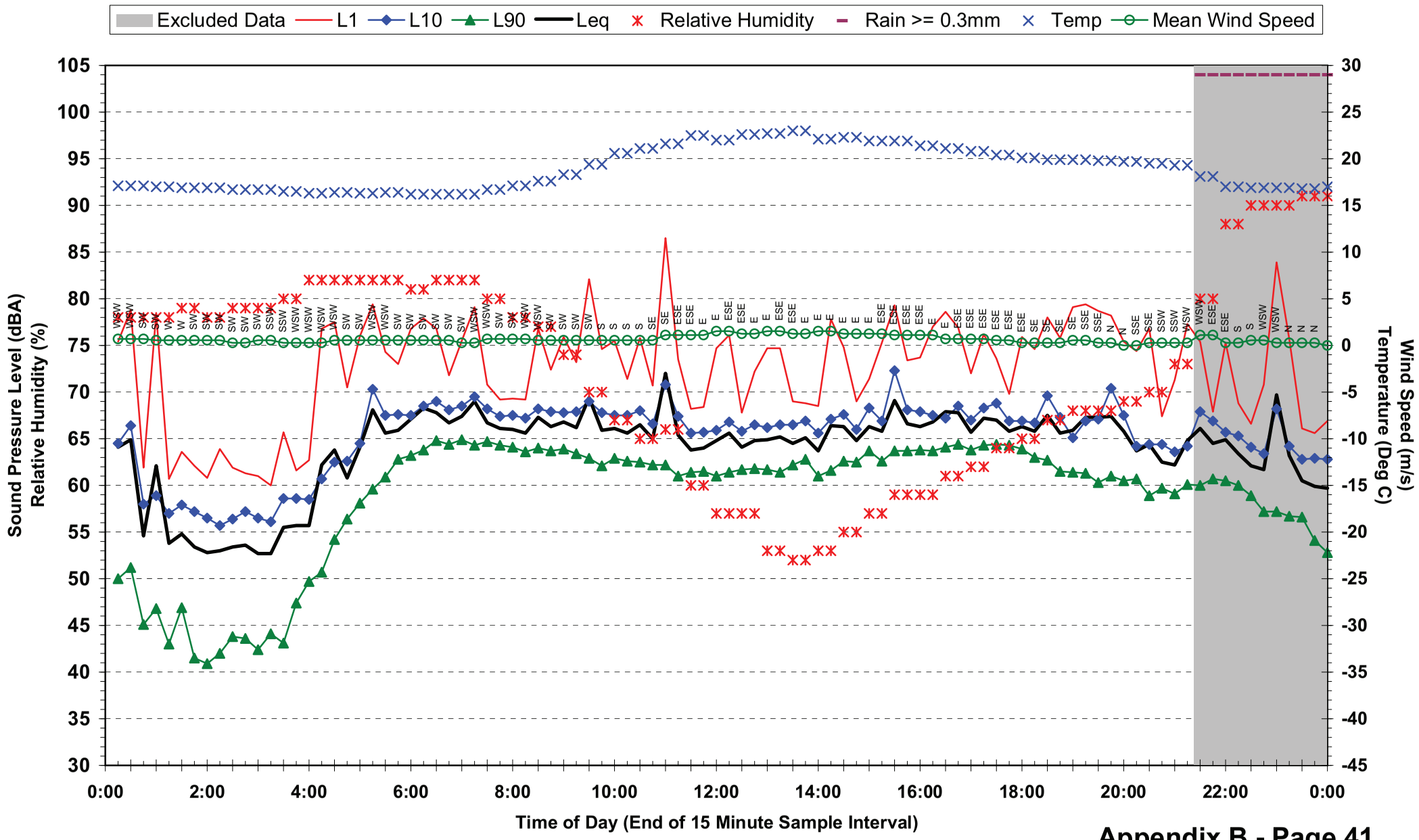
## Statistical Ambient Noise Levels
## Location 4 - Brisbane Girls Grammar School - Saturday 22 May 2010



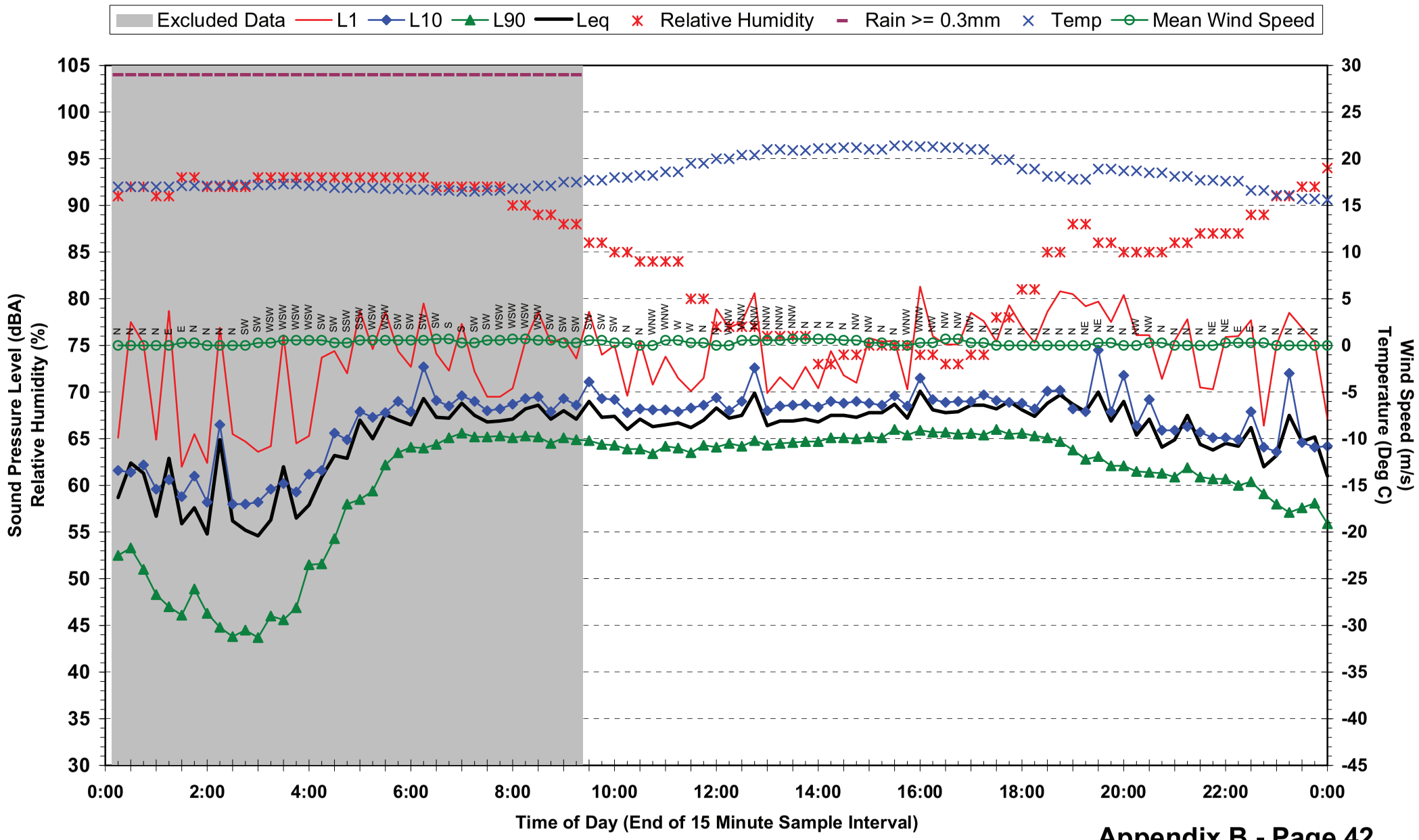
## Statistical Ambient Noise Levels
## Location 4 - Brisbane Girls Grammar School - Sunday 23 May 2010



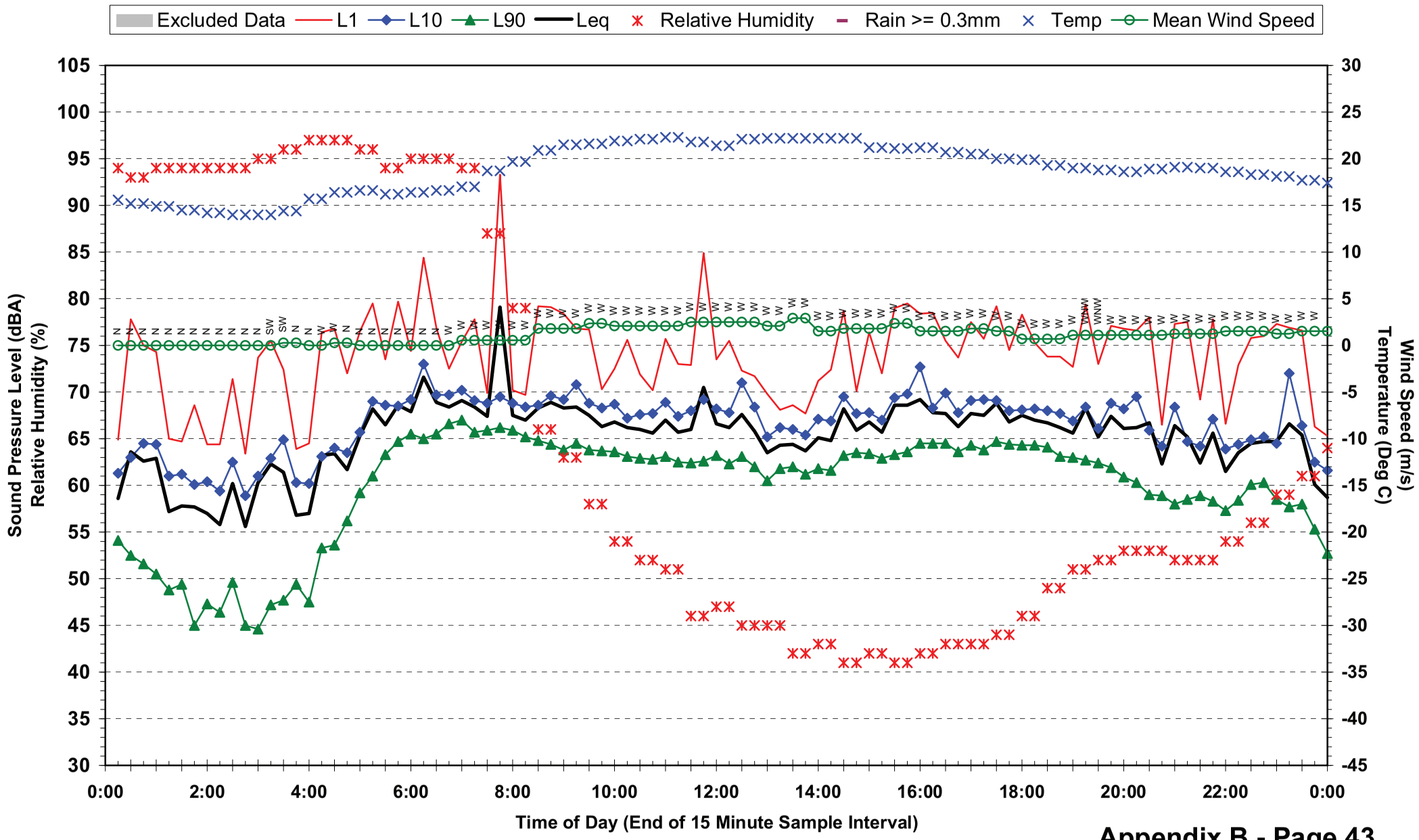
## Statistical Ambient Noise Levels
## Location 4 - Brisbane Girls Grammar School - Monday 24 May 2010



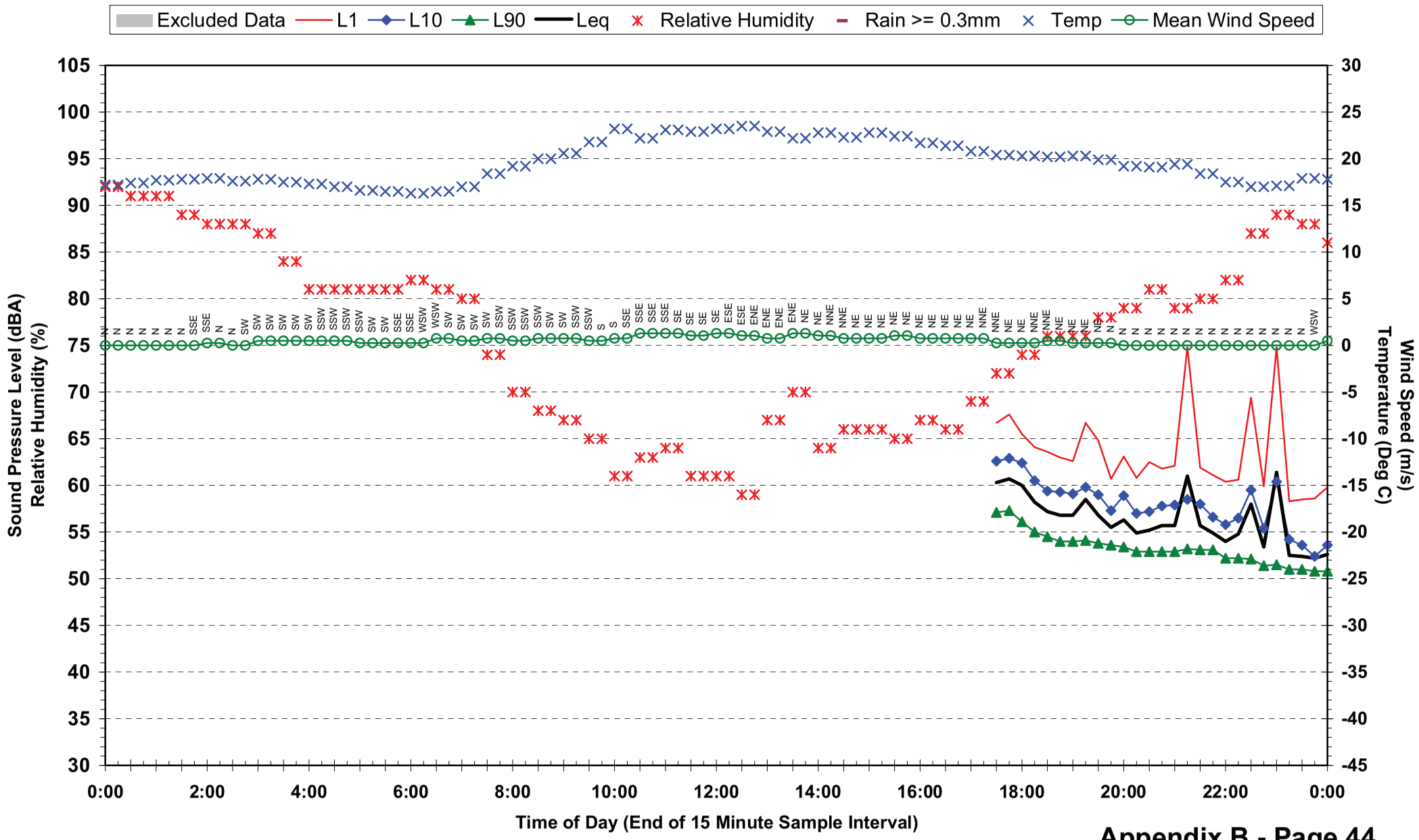
## Statistical Ambient Noise Levels
## Location 4 - Brisbane Girls Grammar School - Tuesday 25 May 2010



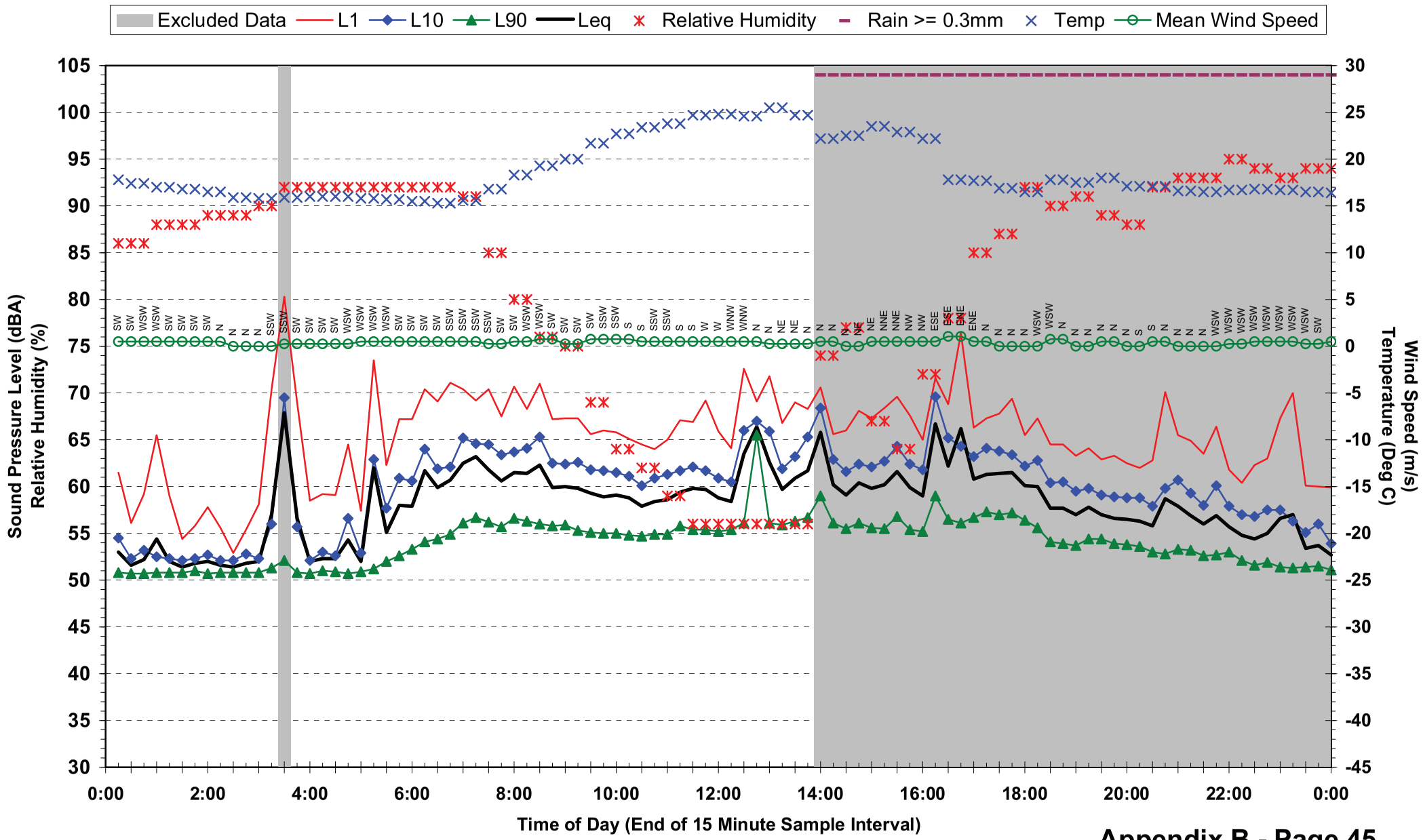
## Statistical Ambient Noise Levels
## Location 4 - Brisbane Girls Grammar School - Wednesday 26 May 2010



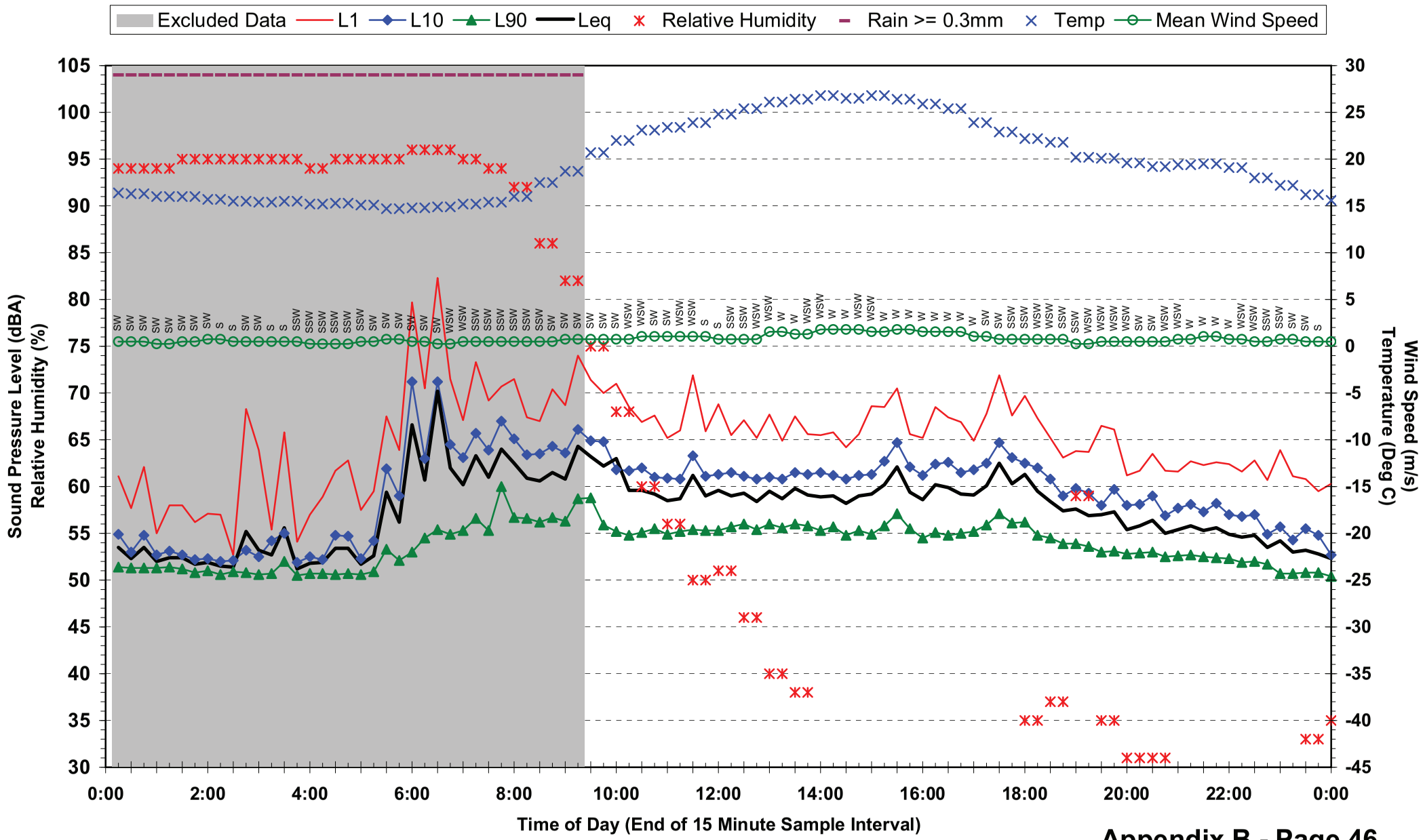
## Statistical Ambient Noise Levels
## Location 5 - St Andrews War Memorial Hospital - Monday 10 May 2010



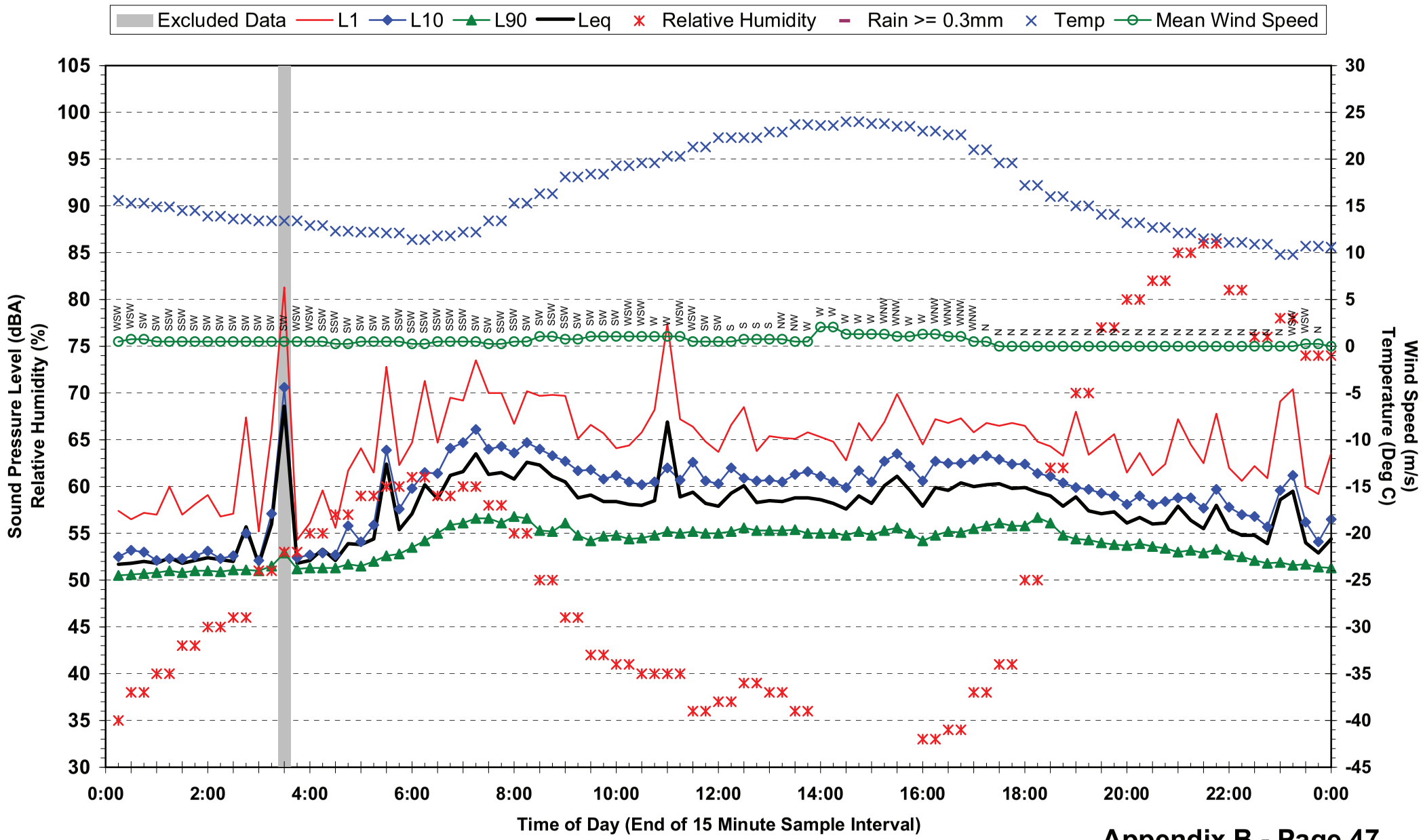
## Statistical Ambient Noise Levels
## Location 5 - St Andrews War Memorial Hospital - Tuesday 11 May 2010



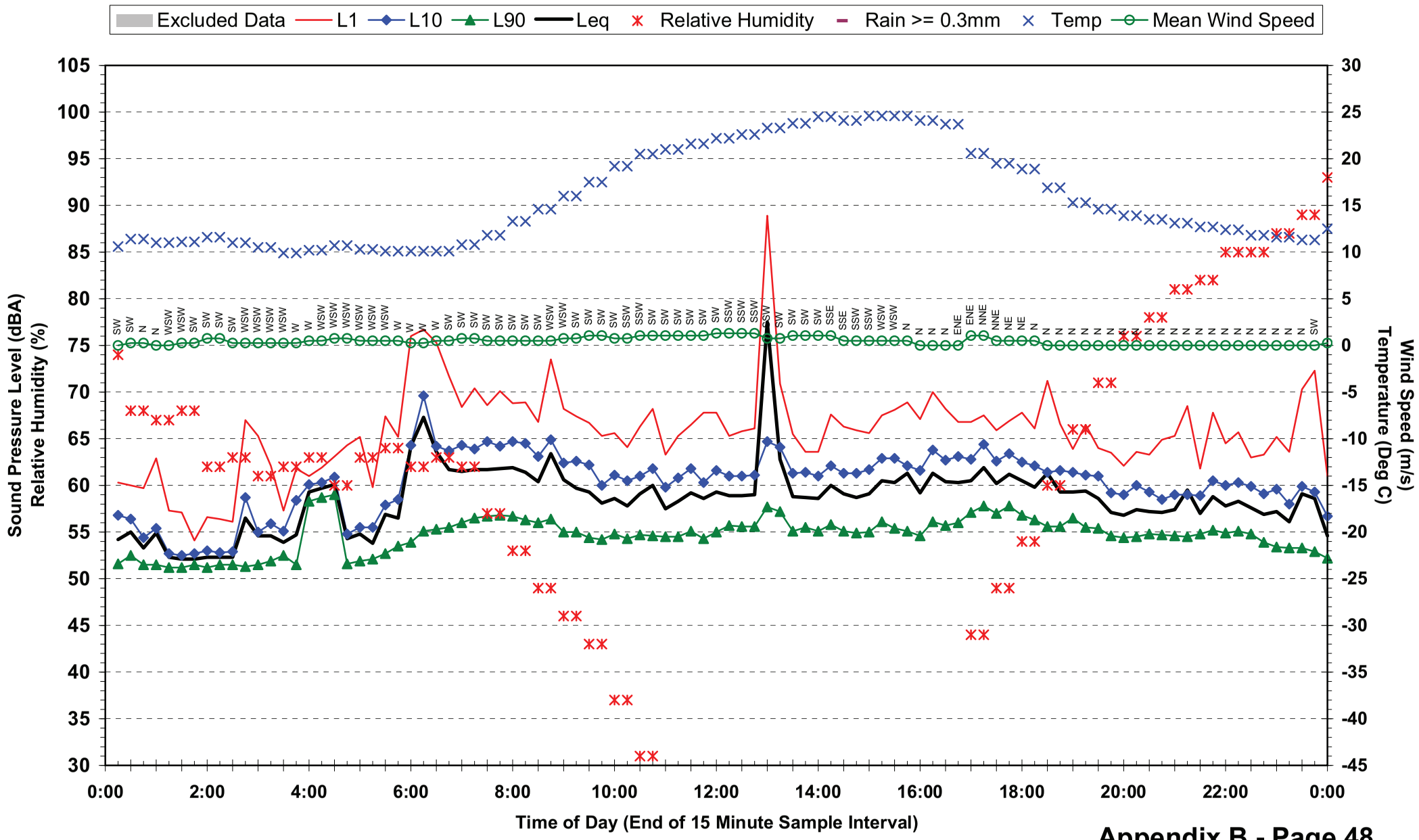
## Statistical Ambient Noise Levels
## Location 5 - St Andrews War Memorial Hospital - Wednesday 12 May 2010



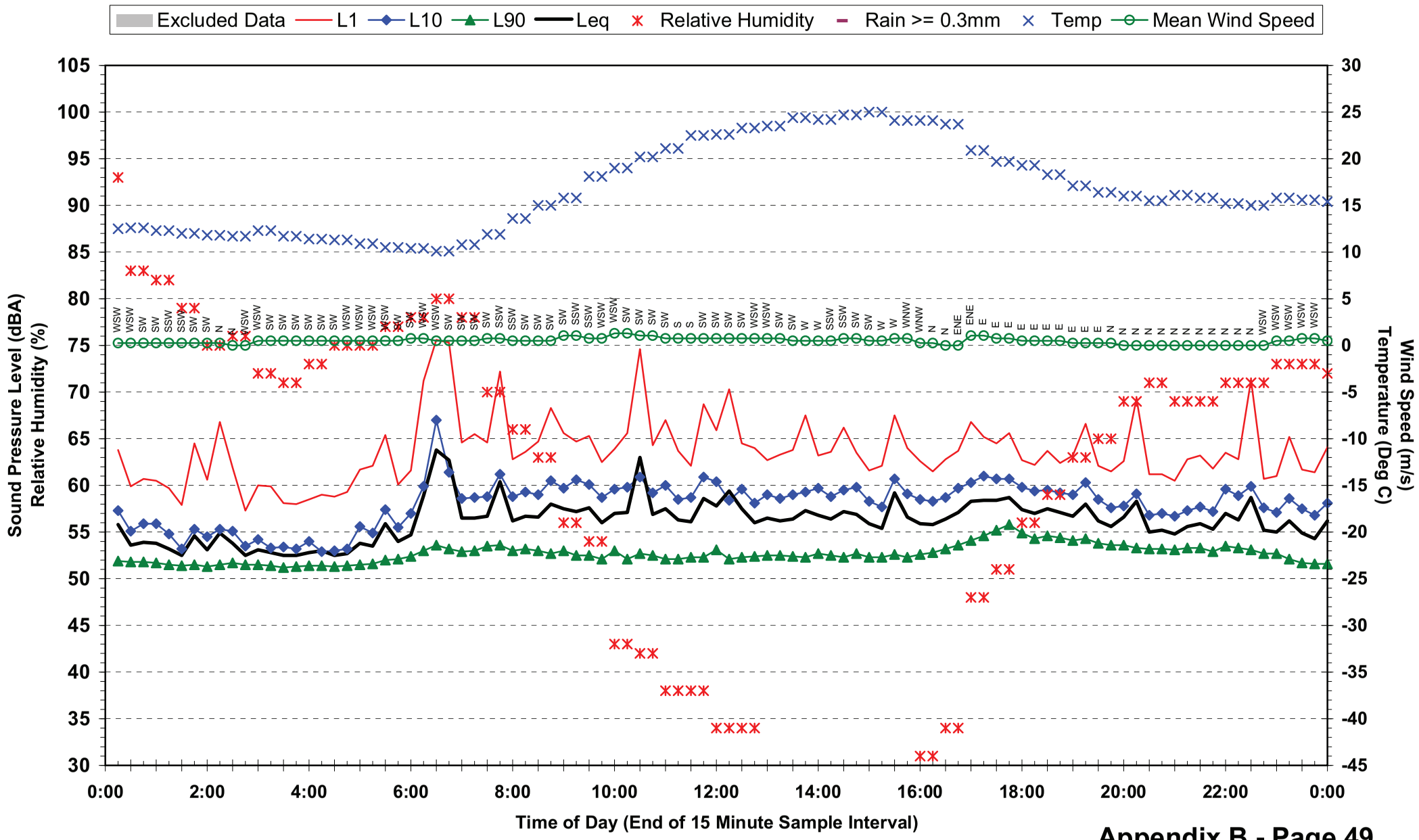
## Statistical Ambient Noise Levels
## Location 5 - St Andrews War Memorial Hospital - Thursday 13 May 2010



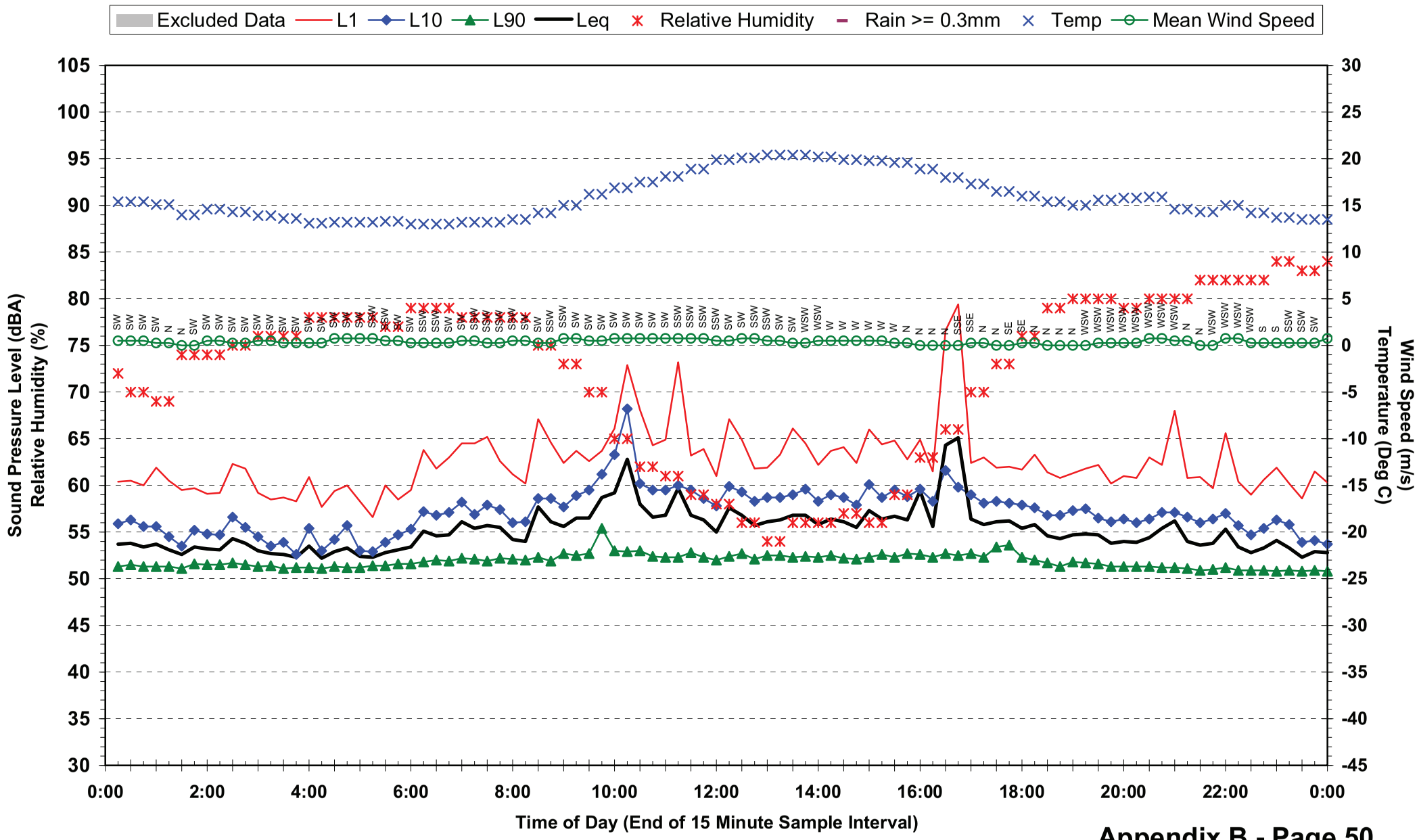
## Statistical Ambient Noise Levels
## Location 5 - St Andrews War Memorial Hospital - Friday 14 May 2010



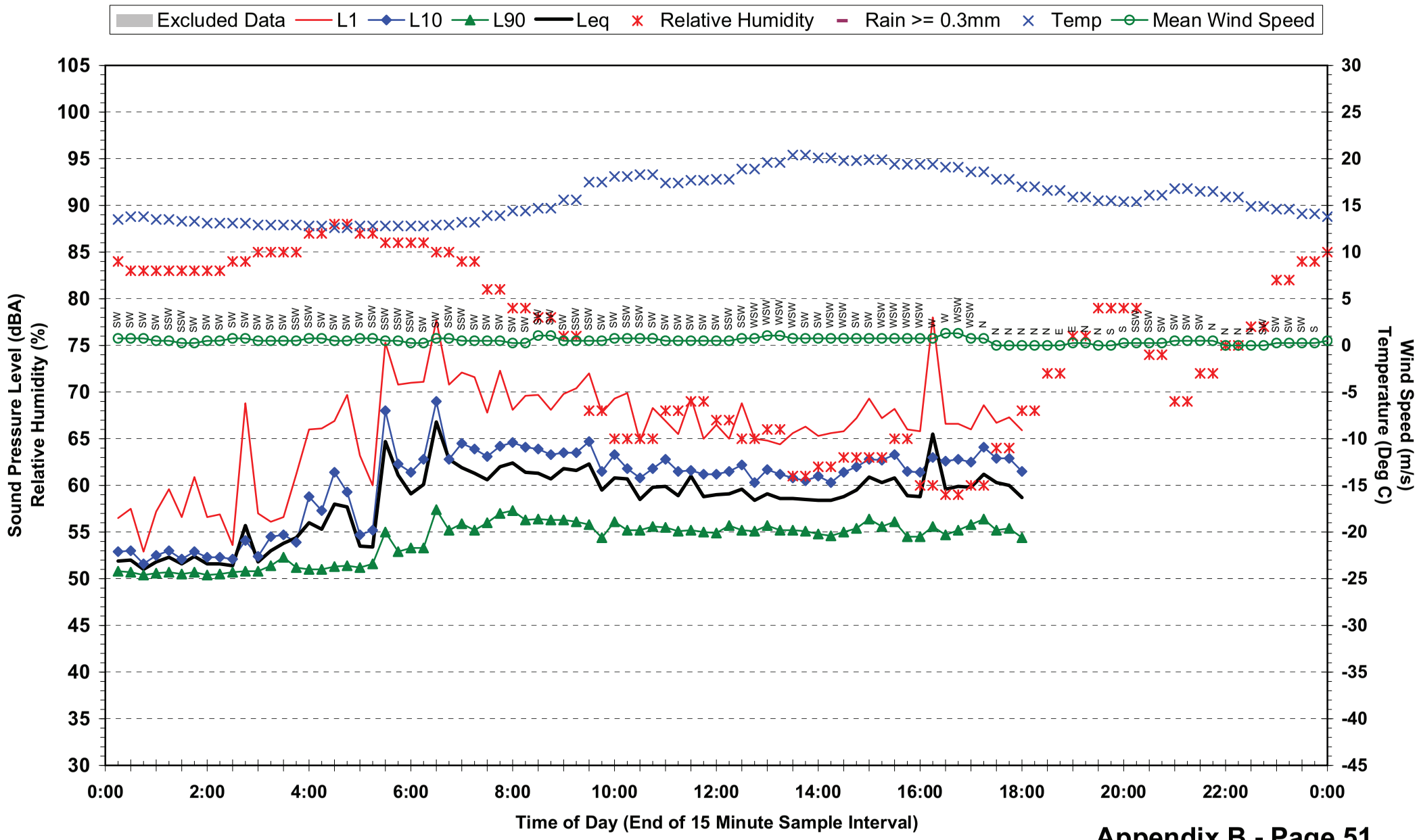
## Statistical Ambient Noise Levels
## Location 5 - St Andrews War Memorial Hospital - Saturday 15 May 2010



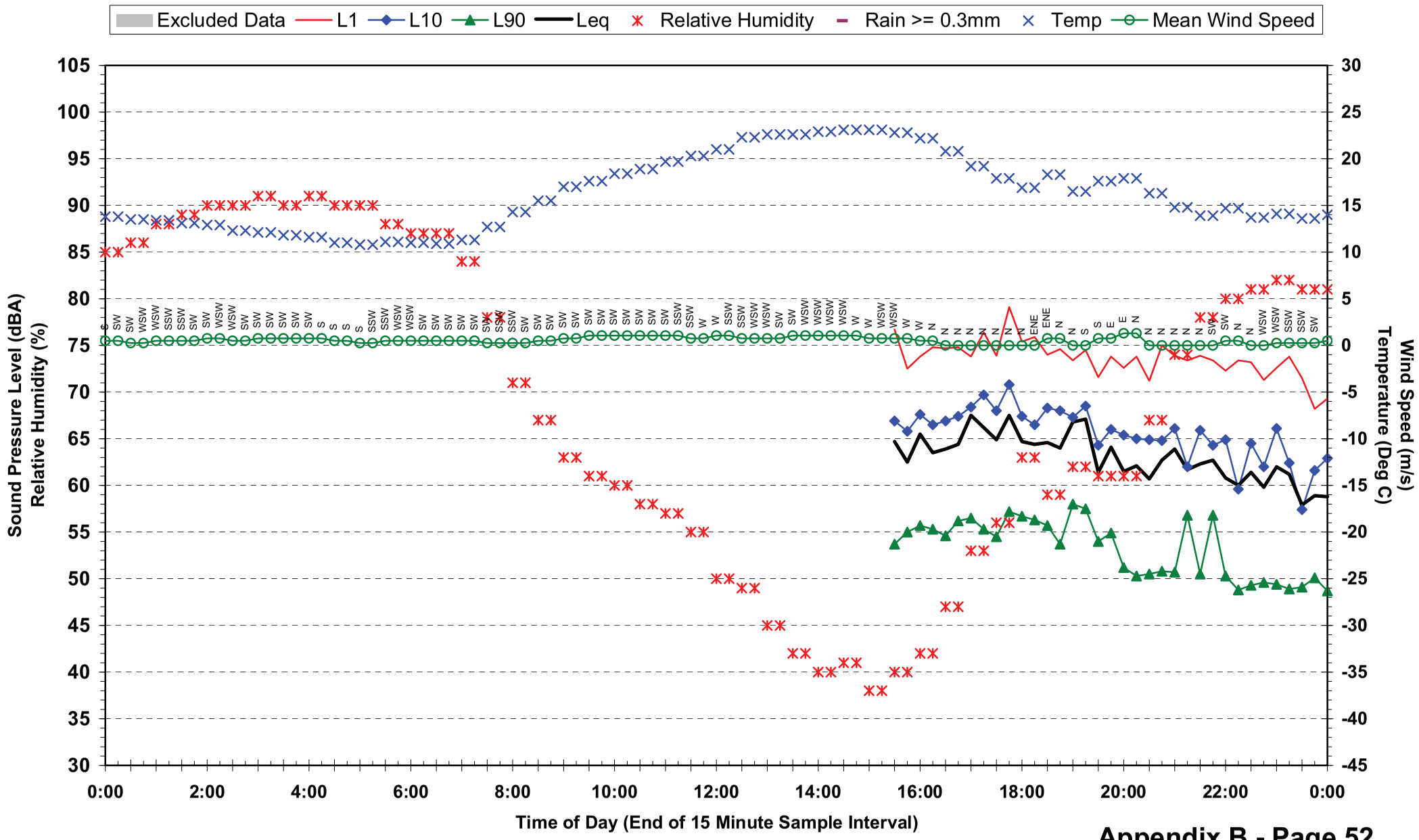
## Statistical Ambient Noise Levels
## Location 5 - St Andrews War Memorial Hospital - Sunday 16 May 2010



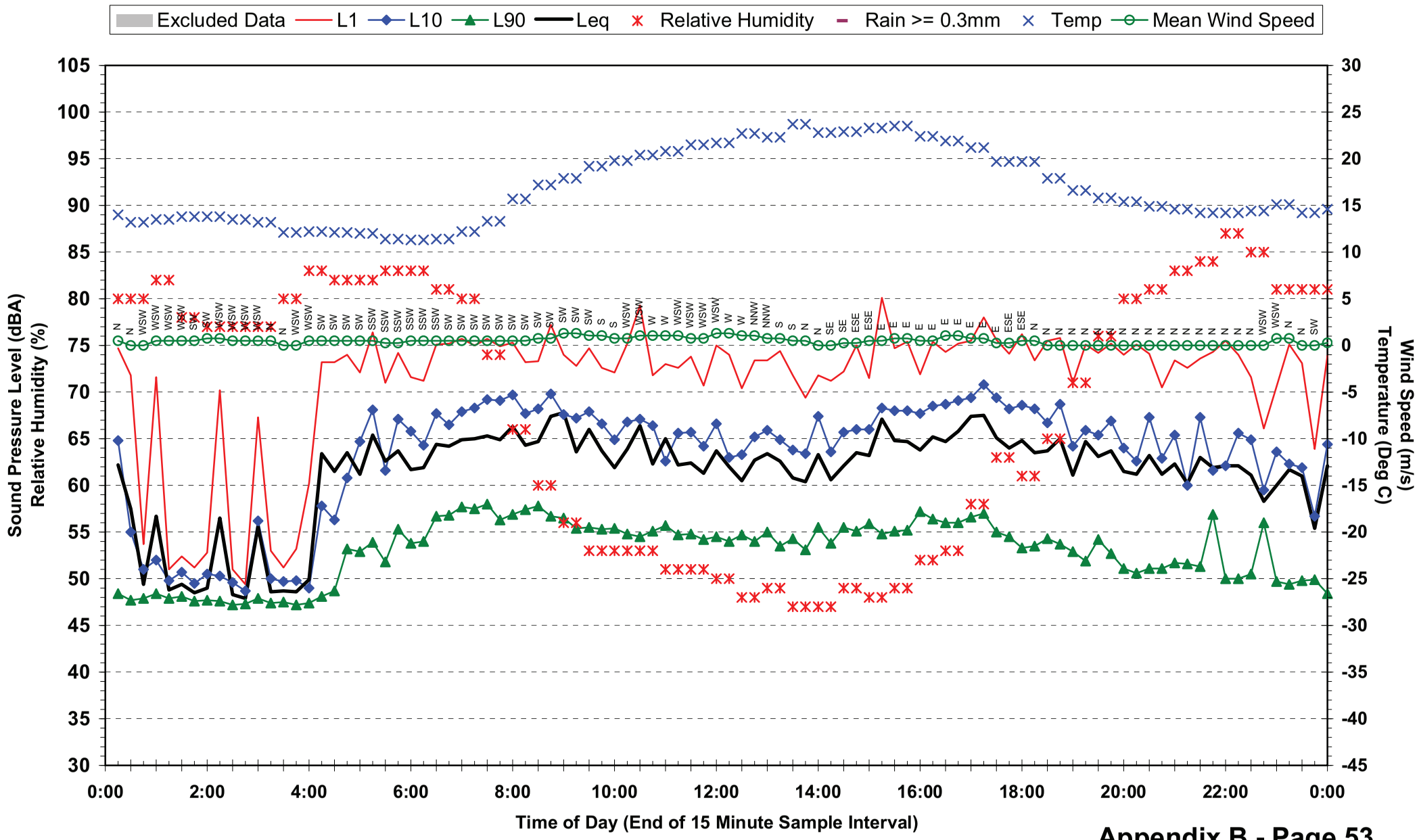
## Statistical Ambient Noise Levels
## Location 5 - St Andrews War Memorial Hospital - Monday 17 May 2010



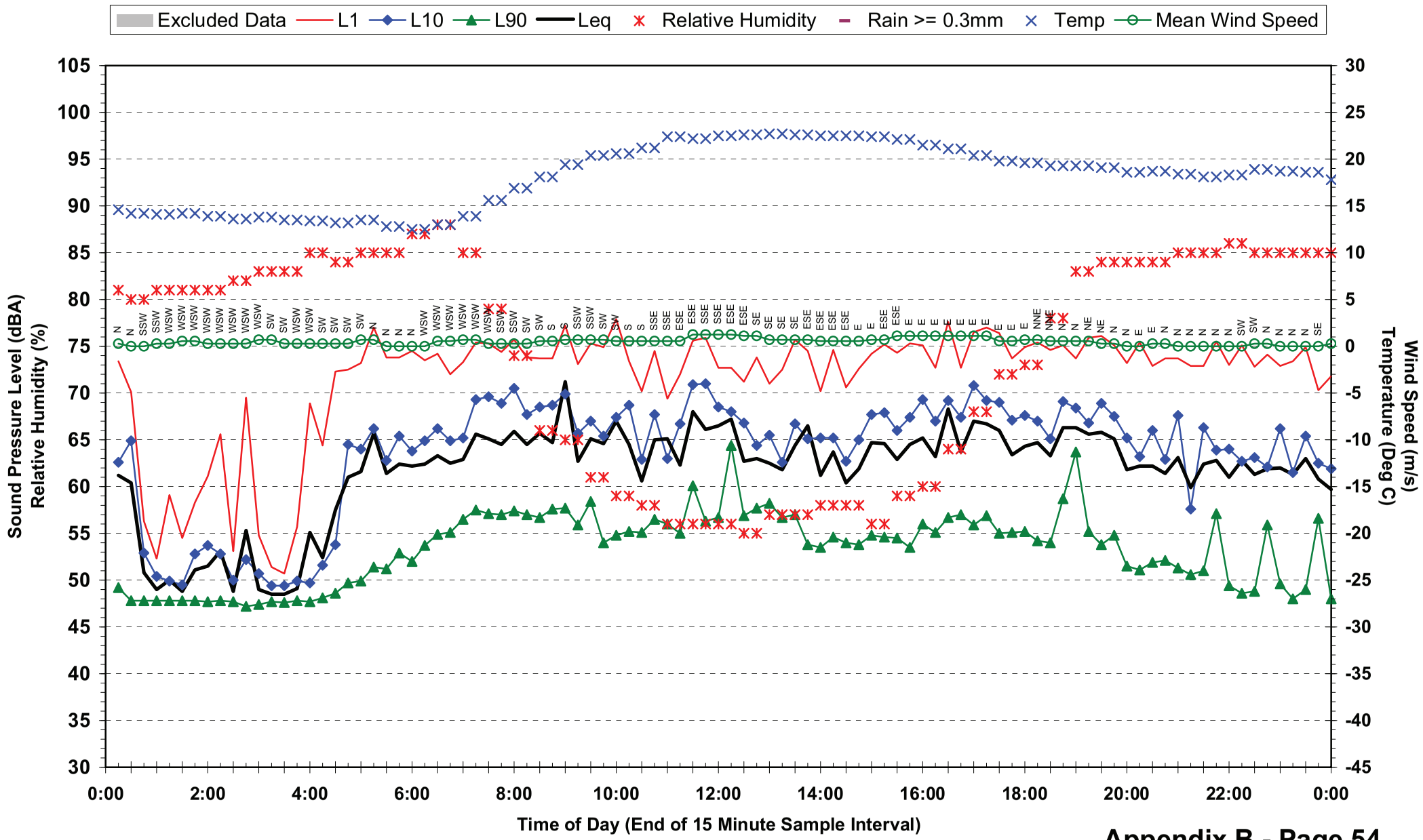
## Statistical Ambient Noise Levels
## Location 6 - Parkland Cres - Tuesday 18 May 2010



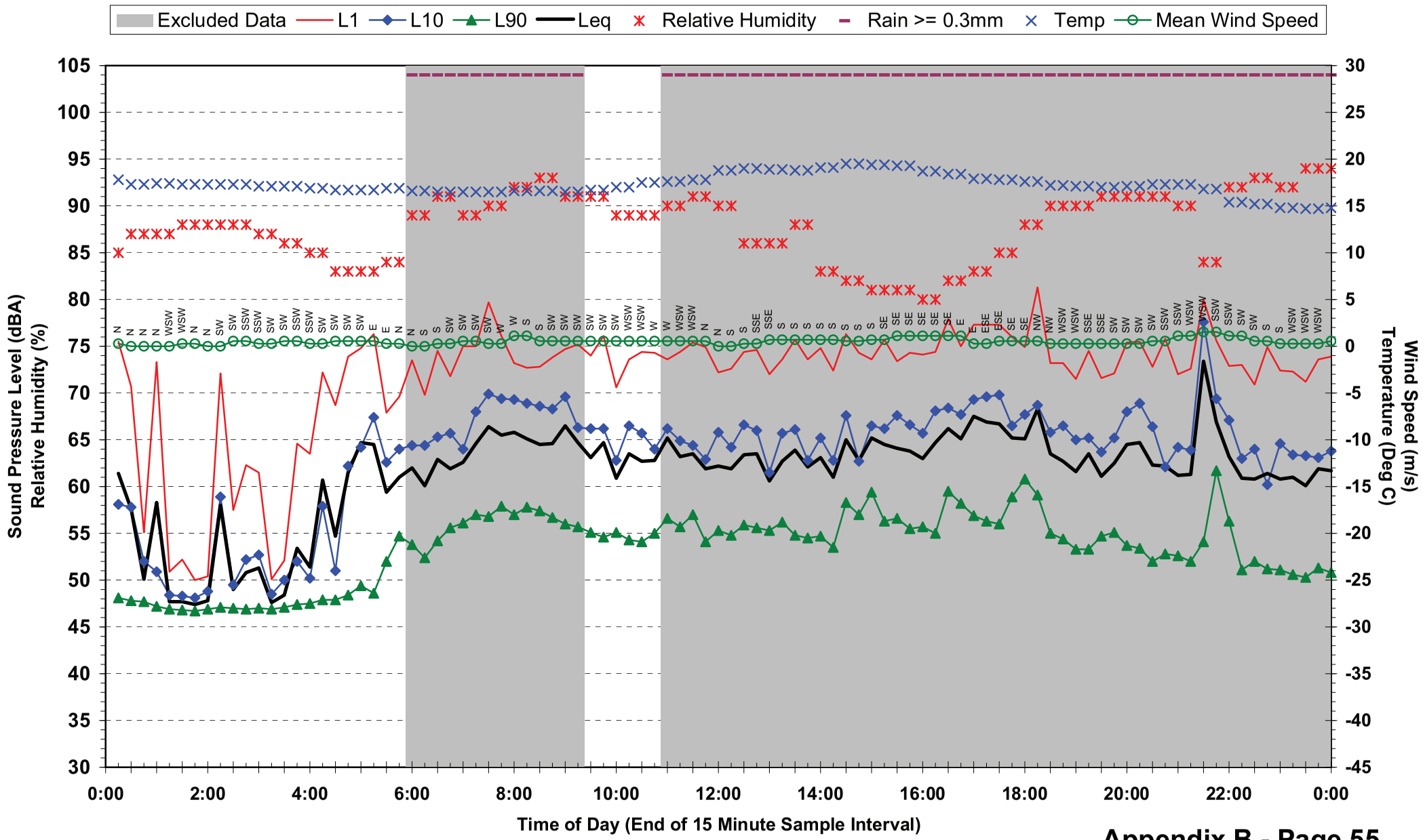
## Statistical Ambient Noise Levels
## Location 6 - Parkland Cres - Wednesday 19 May 2010



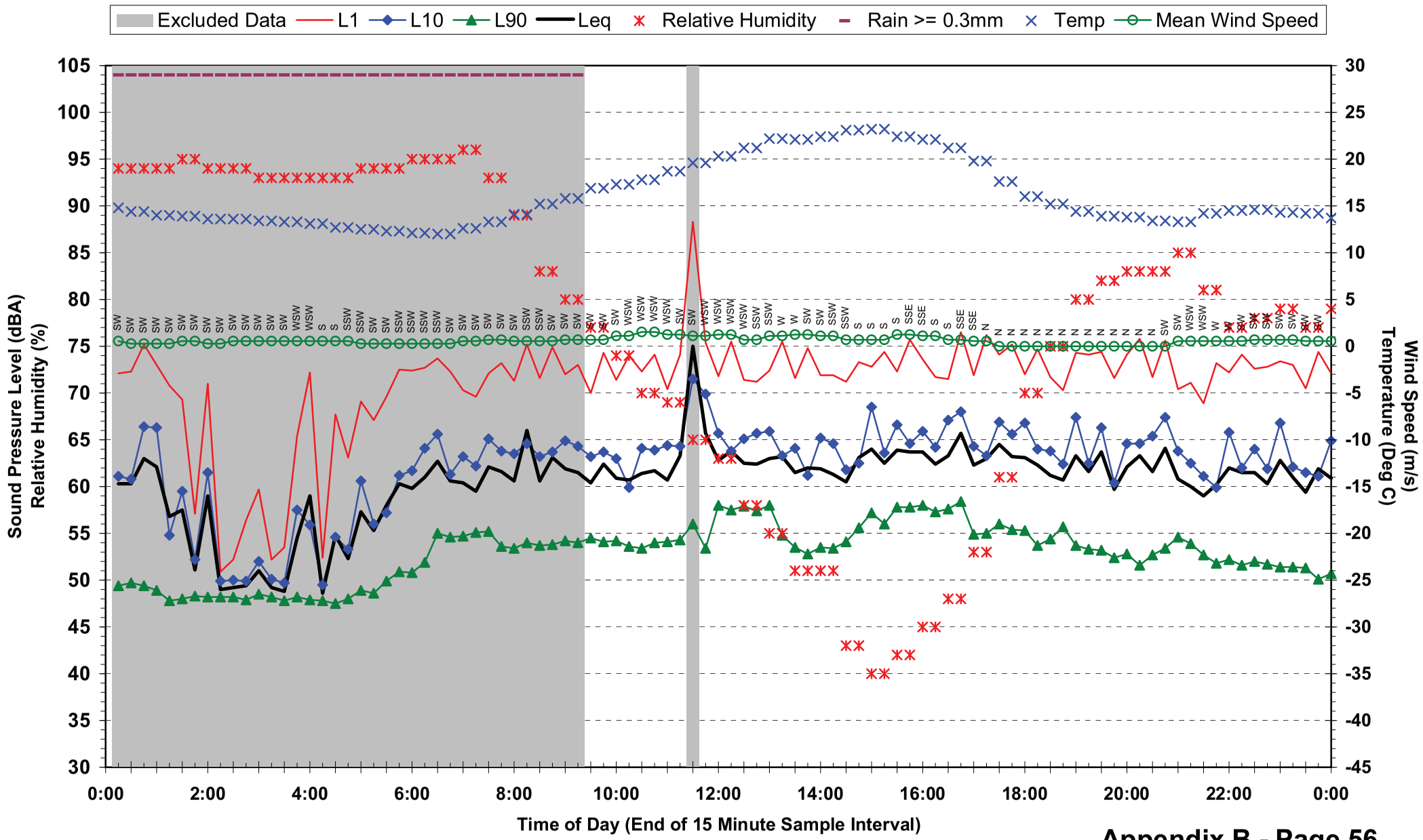
## Statistical Ambient Noise Levels
## Location 6 - Parkland Cres - Thursday 20 May 2010



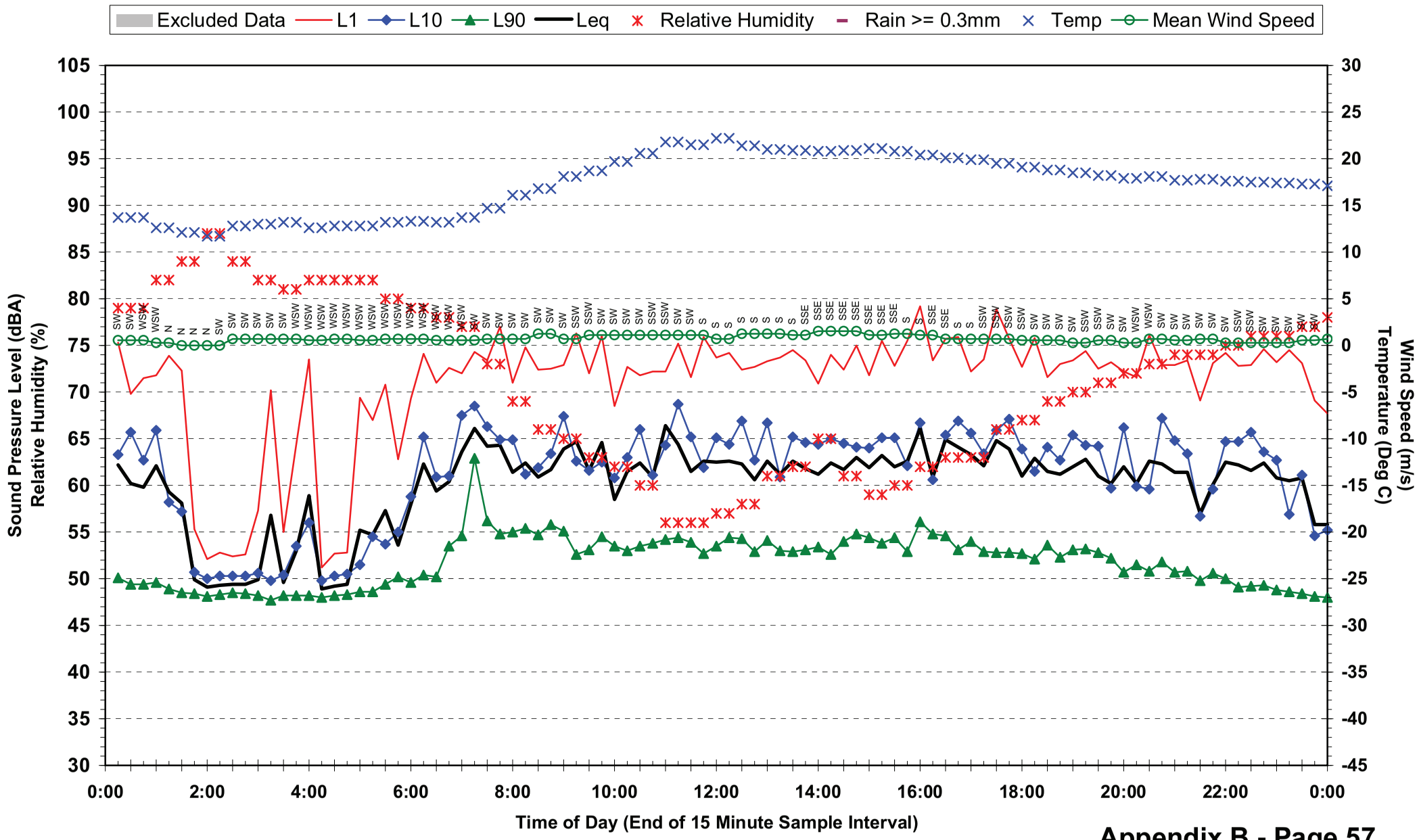
## Statistical Ambient Noise Levels
## Location 6 - Parkland Cres - Friday 21 May 2010



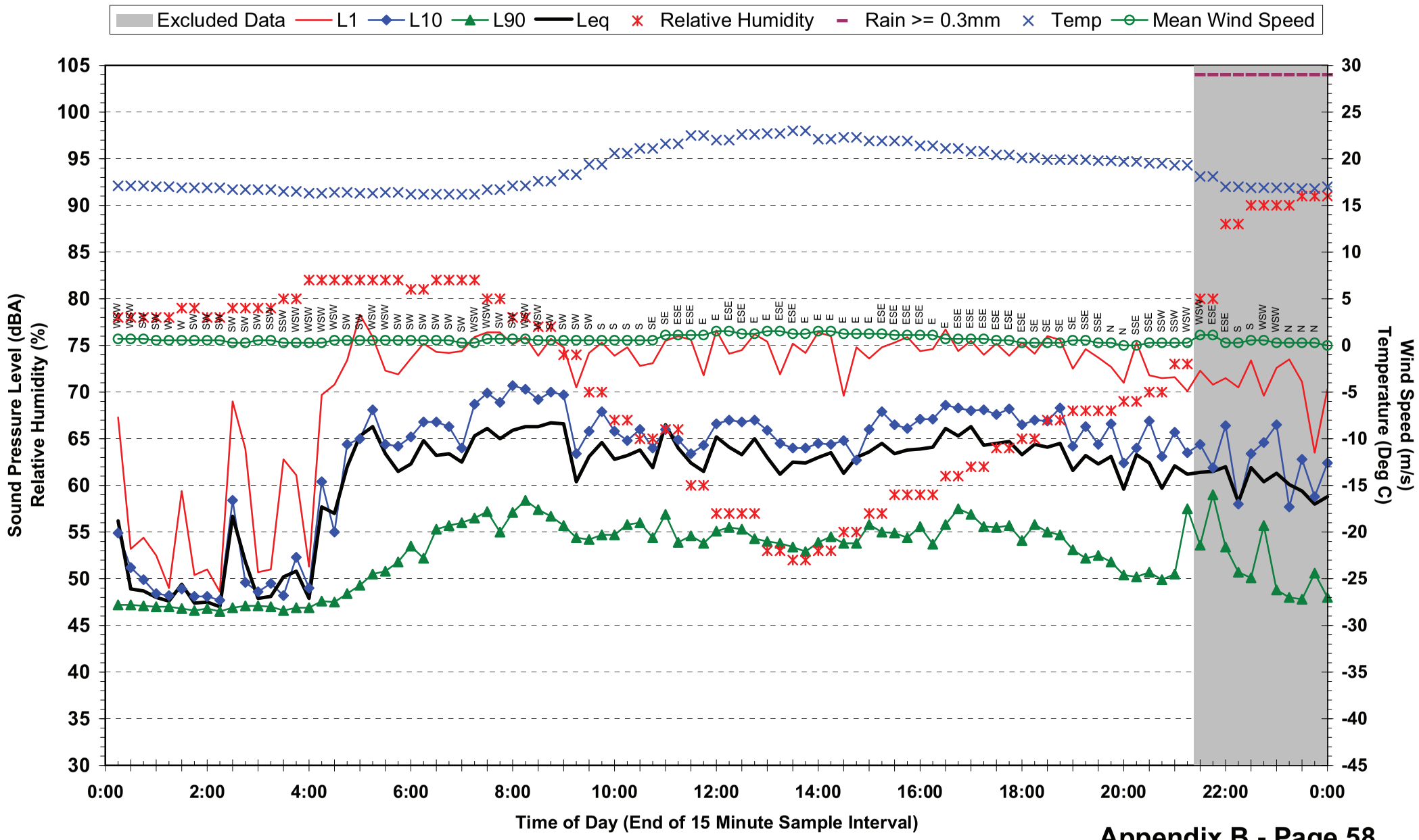
## Statistical Ambient Noise Levels
## Location 6 - Parkland Cres - Saturday 22 May 2010



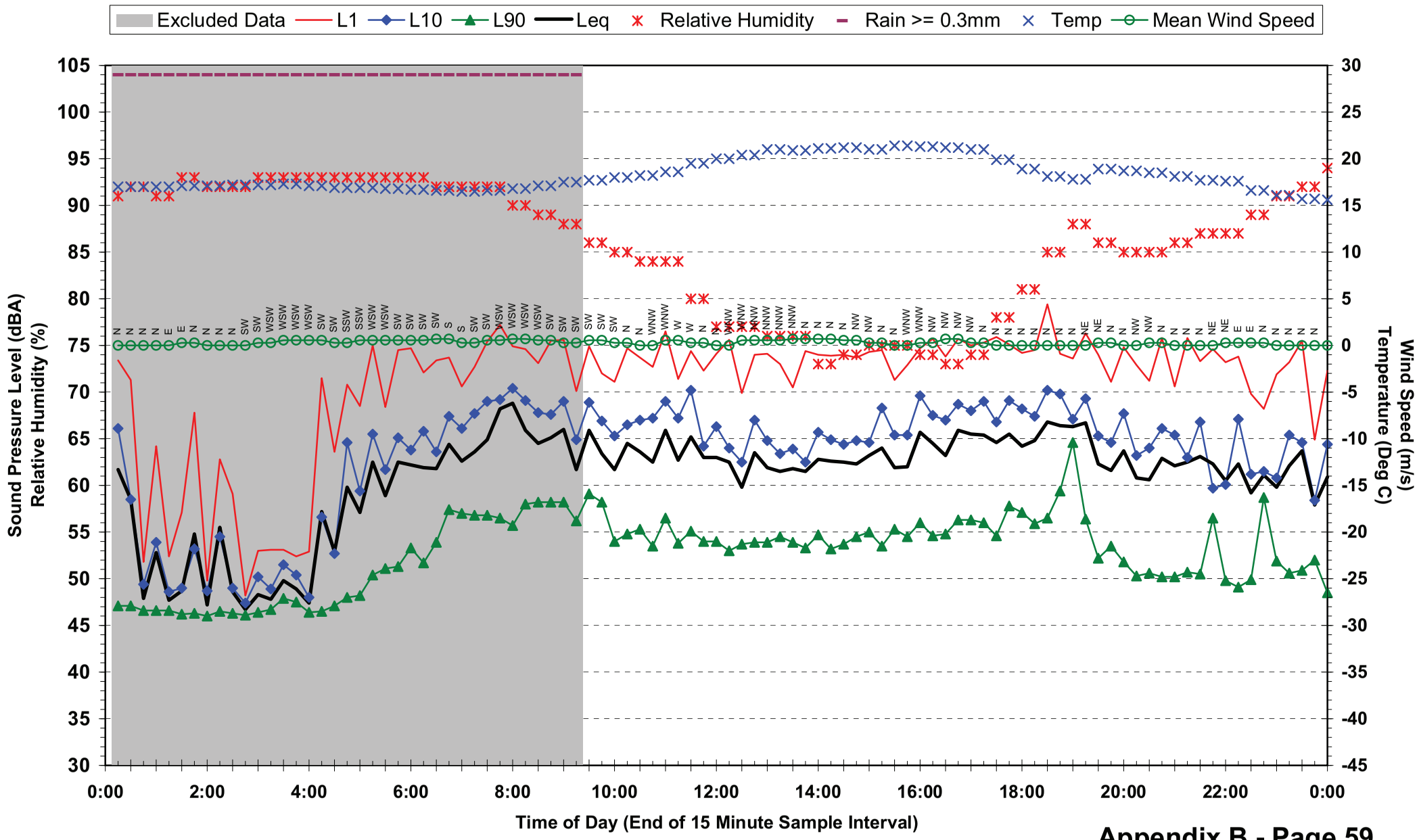
## Statistical Ambient Noise Levels
## Location 6 - Parkland Cres - Sunday 23 May 2010



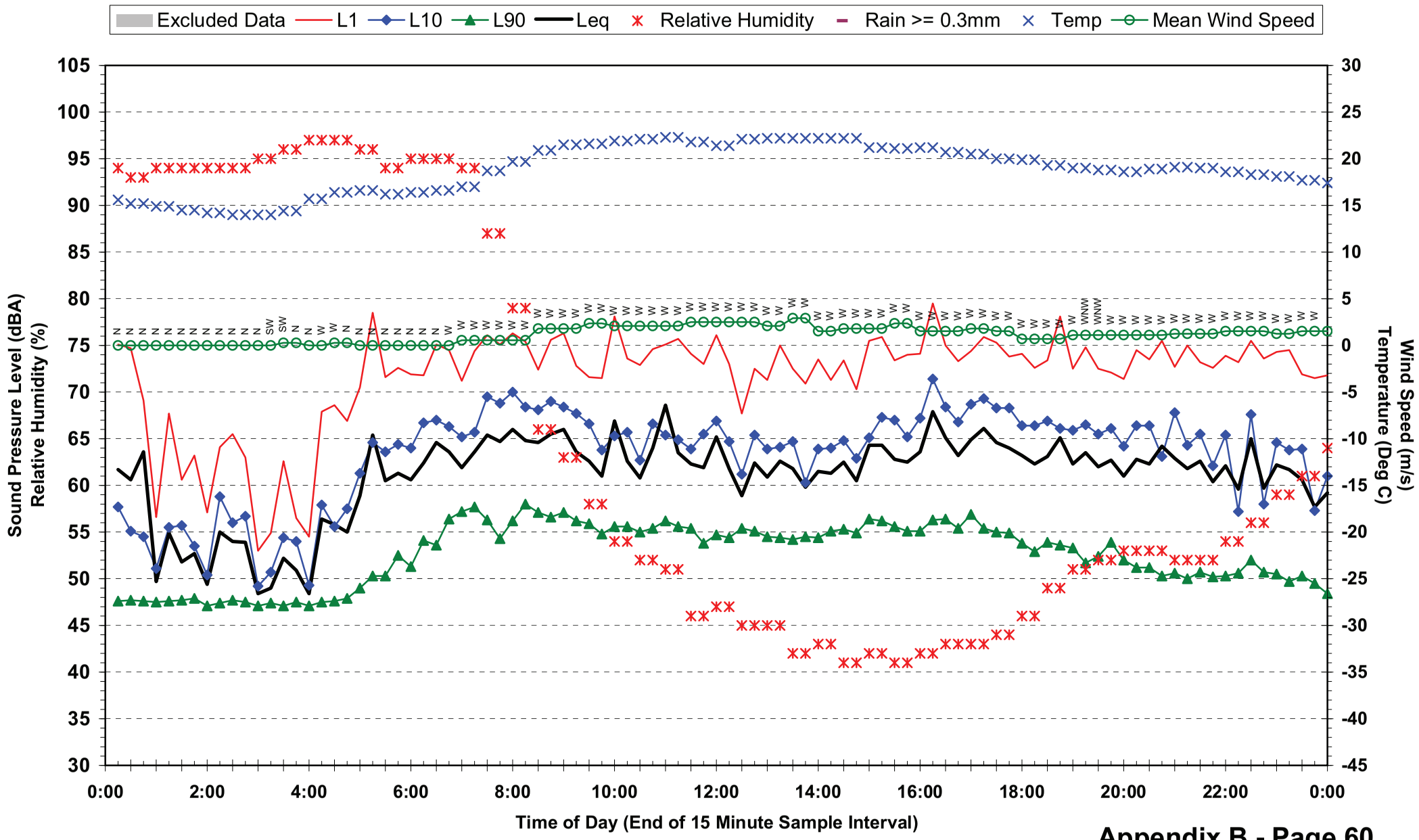
## Statistical Ambient Noise Levels
## Location 6 - Parkland Cres - Monday 24 May 2010



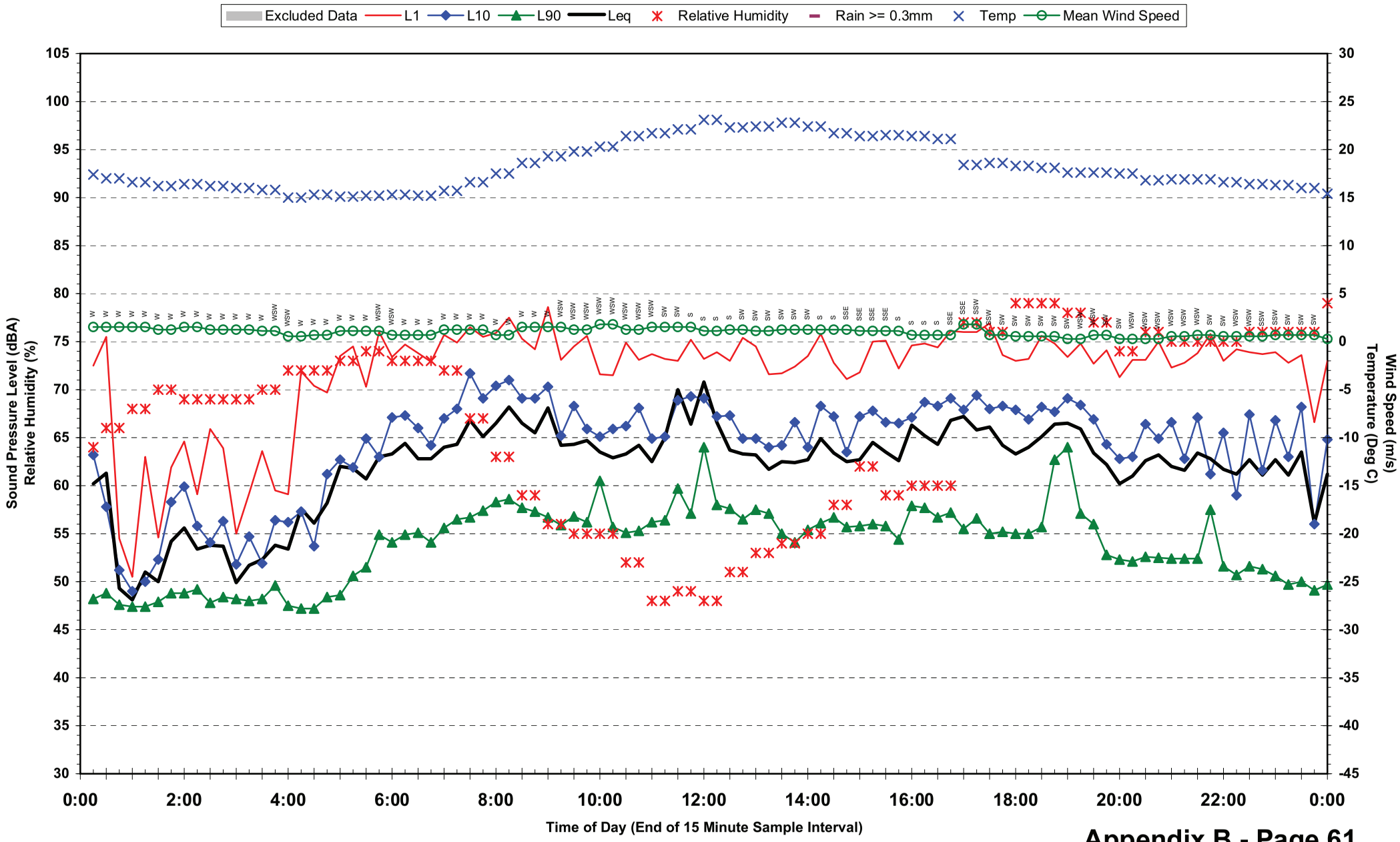
## Statistical Ambient Noise Levels
## Location 6 - Parkland Cres - Tuesday 25 May 2010

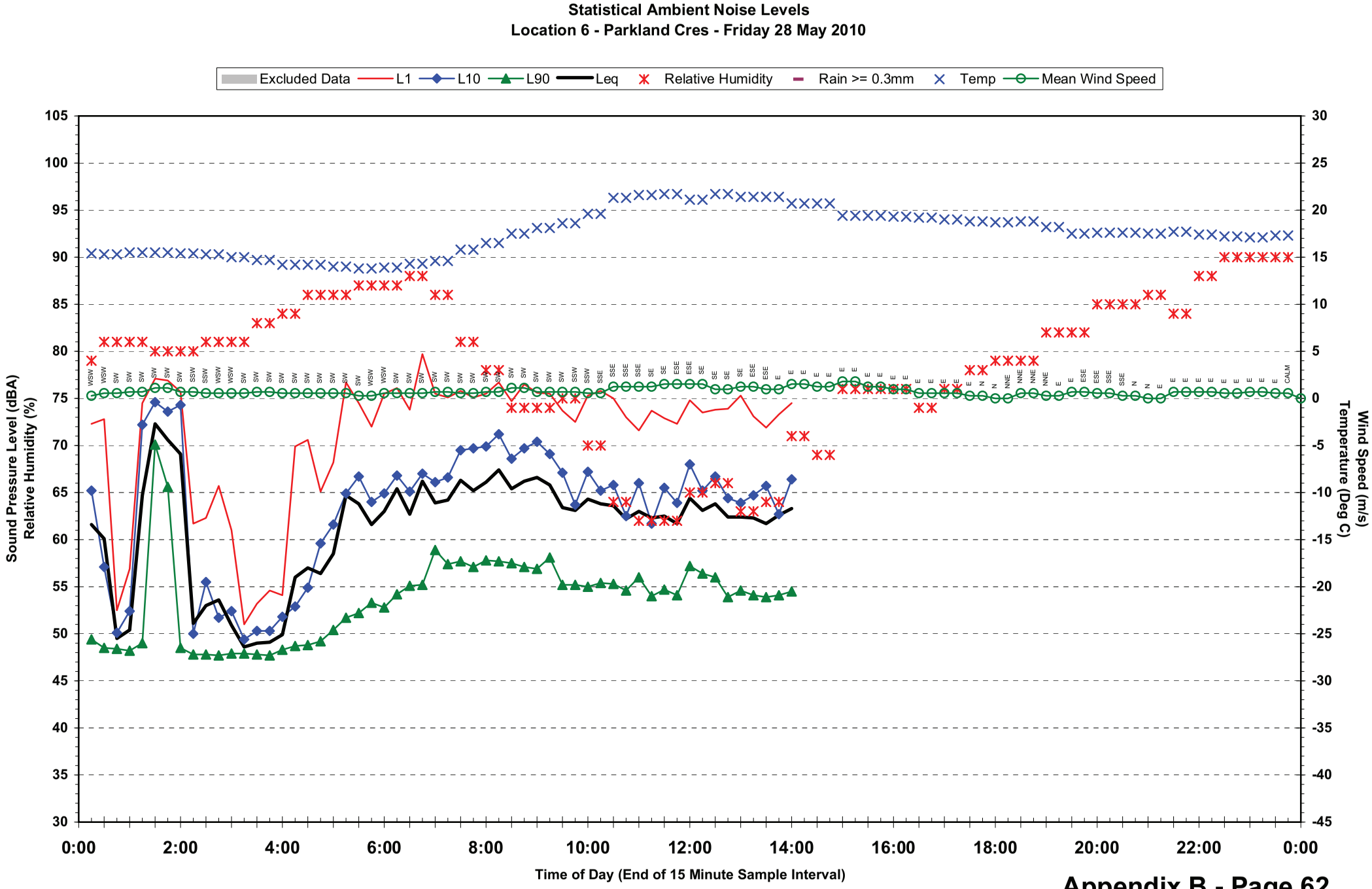


## Statistical Ambient Noise Levels
## Location 6 - Parkland Cres - Wednesday 26 May 2010

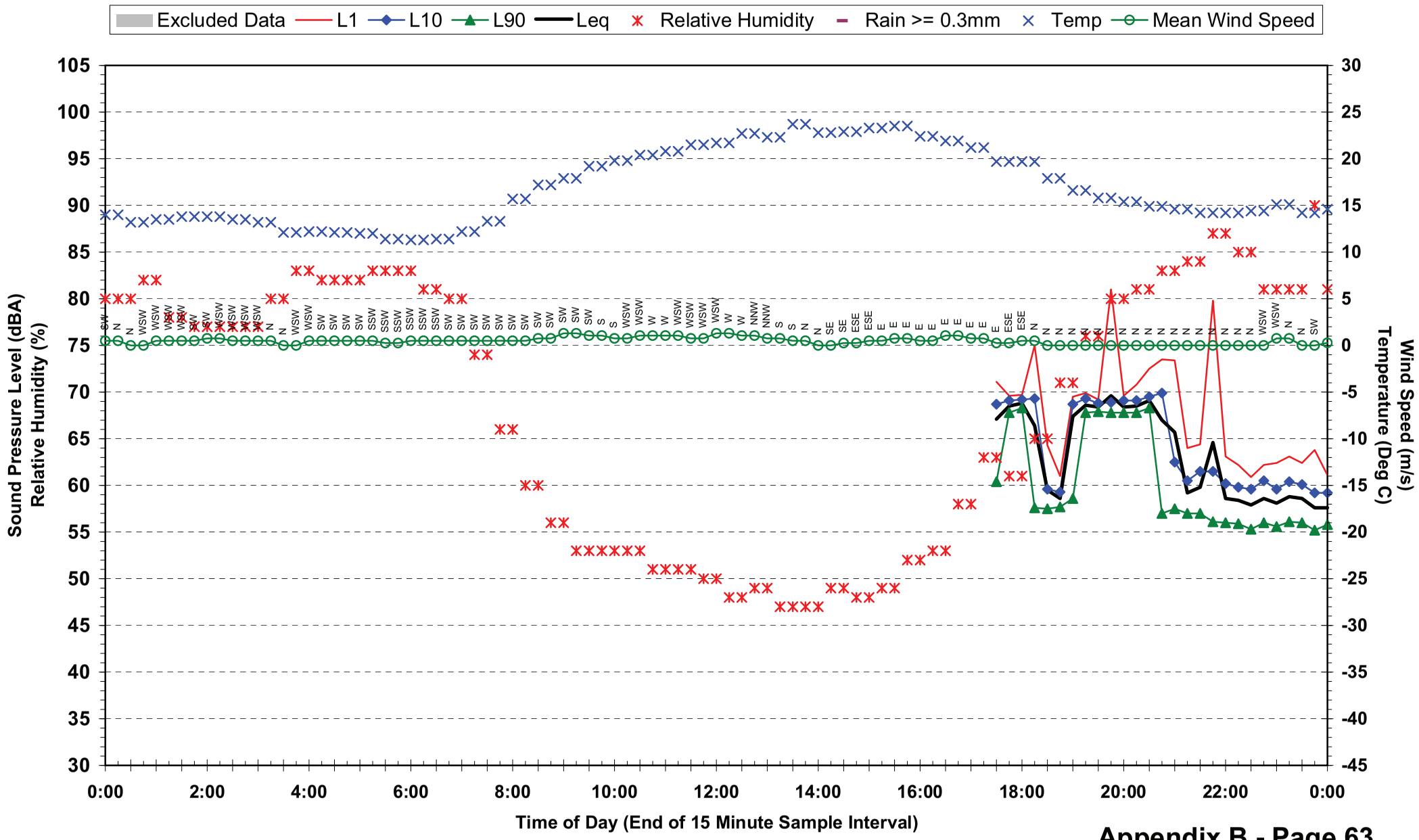


**Statistical Ambient Noise Levels**
**Location 6 - Parkland Cres - Thursday 27 May 2010**

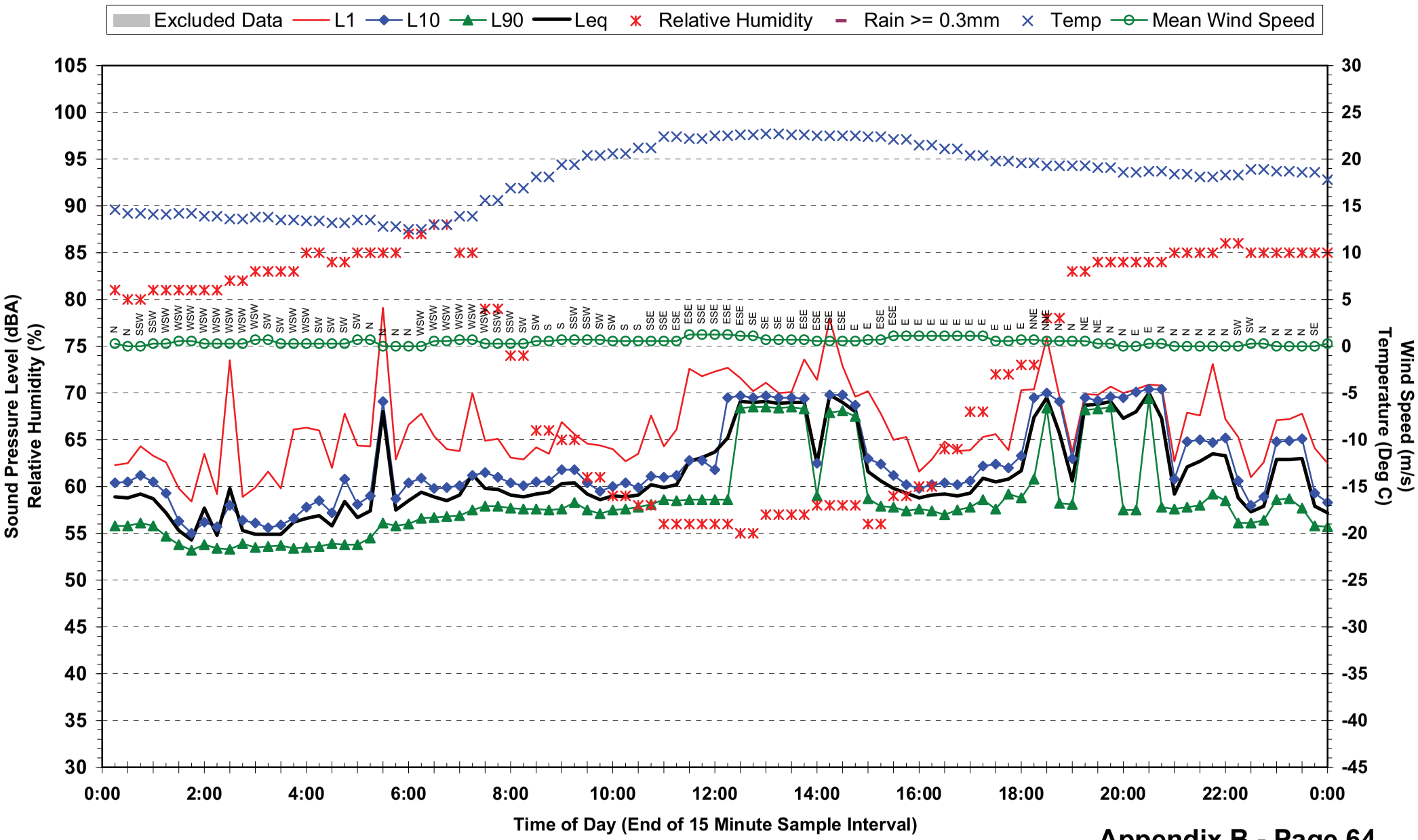



Statistical Ambient Noise Levels
Location 6 - Parkland Cres - Friday 28 May 2010
Excluded Data
L1
L10
L90
Leq
Relative Humidity
Rain >= 0.3mm
Temp
Mean Wind Speed
Sound Pressure Level (dBA)
Relative Humidity (%)
Wind Speed (m/s)
Temperature (Deg C)
Time of Day (End of 15 Minute Sample Interval)
0:00
2:00
4:00
6:00
8:00
10:00
12:00
14:00
16:00
18:00
20:00
22:00
0:00

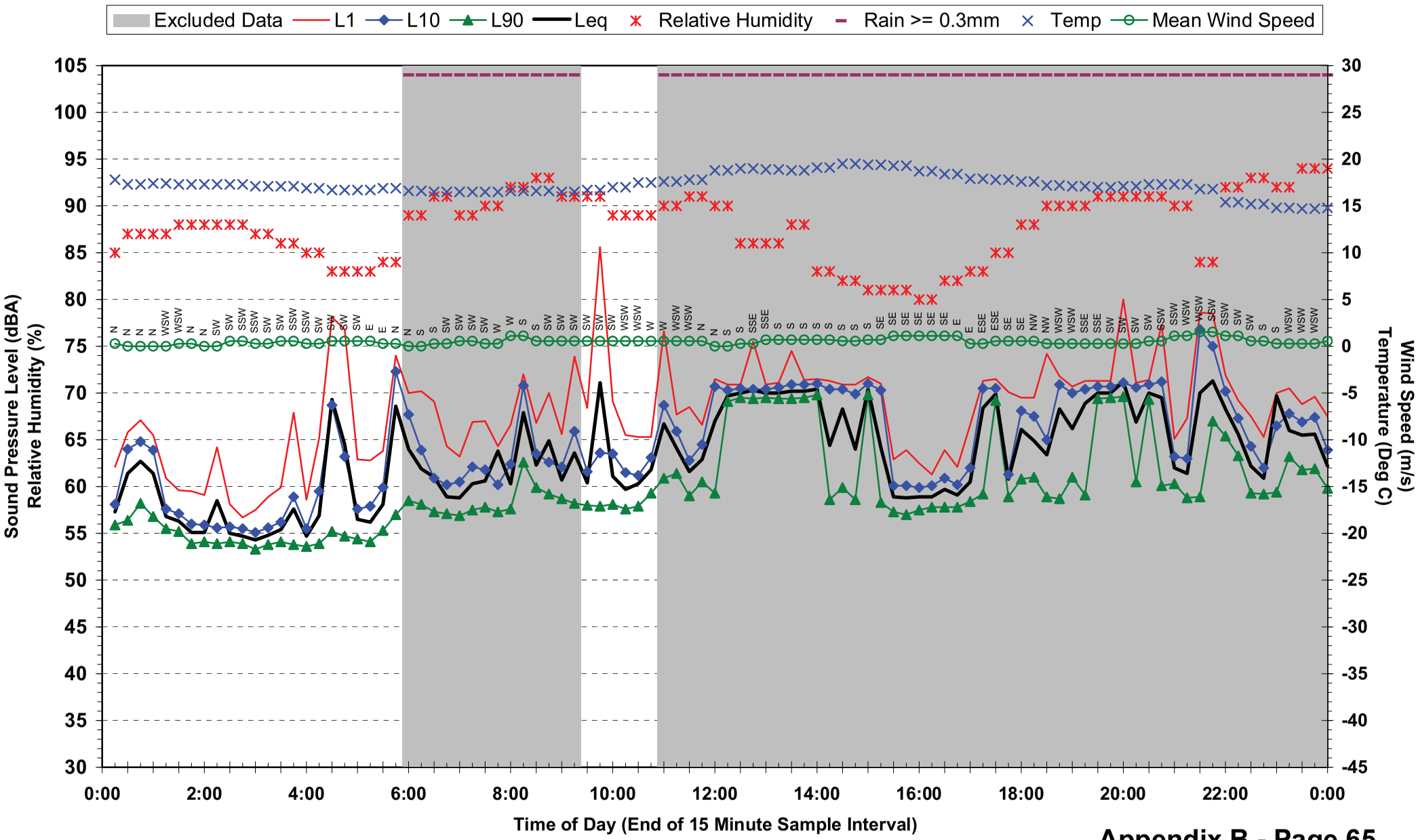
## Statistical Ambient Noise Levels
## Location 7 - 191 George St - Wednesday 19 May 2010



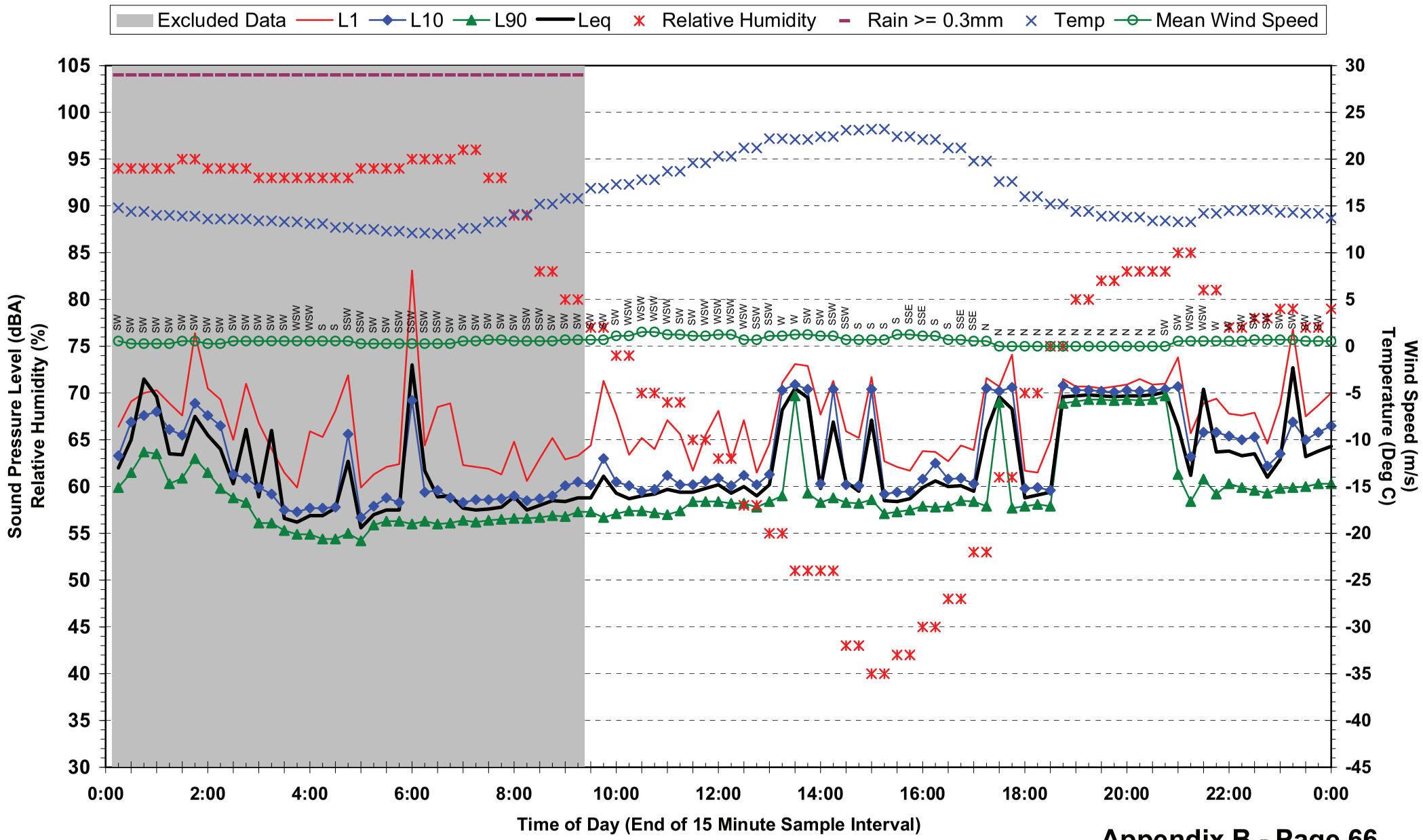
## Statistical Ambient Noise Levels
## Location 7 - 191 George St - Thursday 20 May 2010



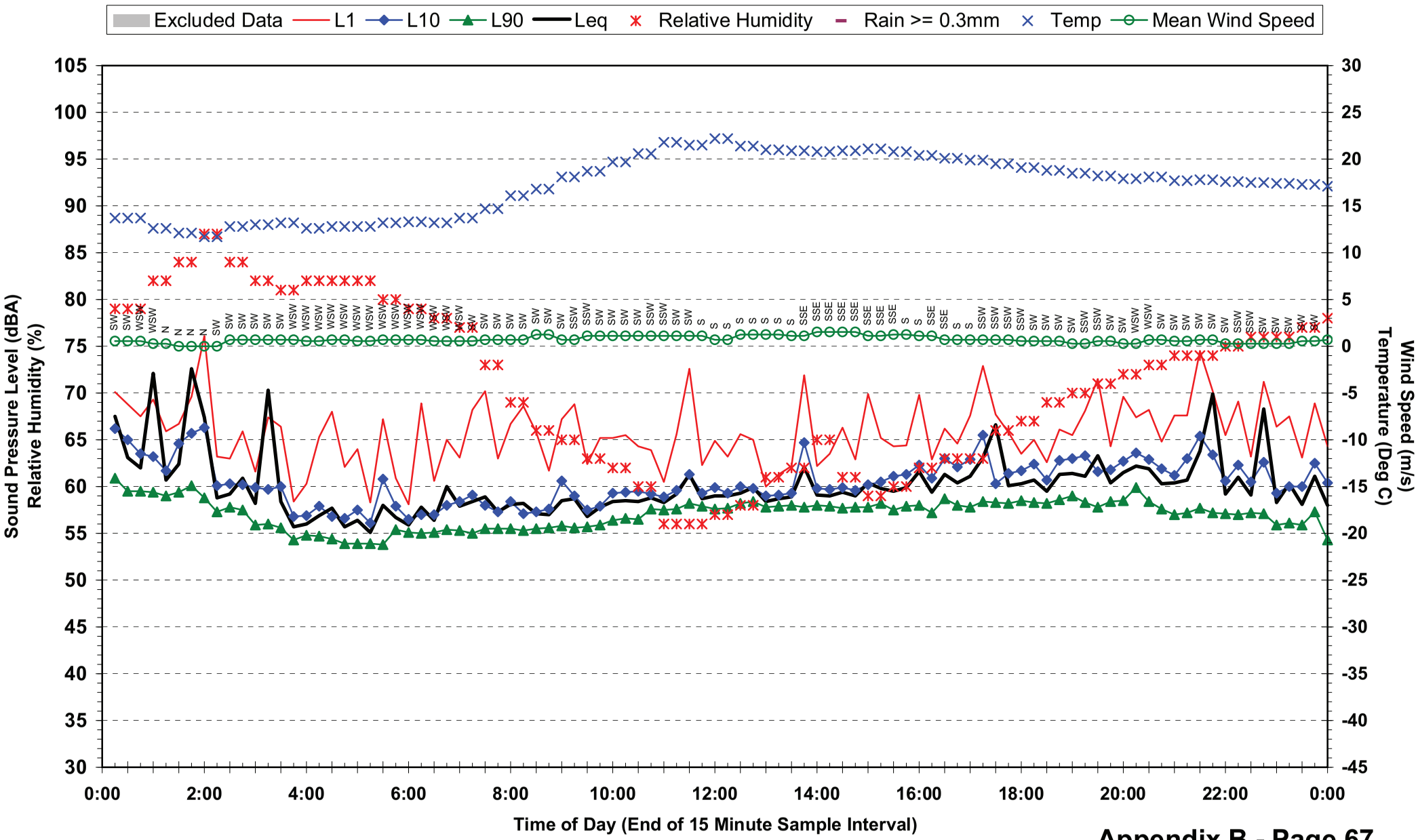
## Statistical Ambient Noise Levels
## Location 7 - 191 George St - Friday 21 May 2010



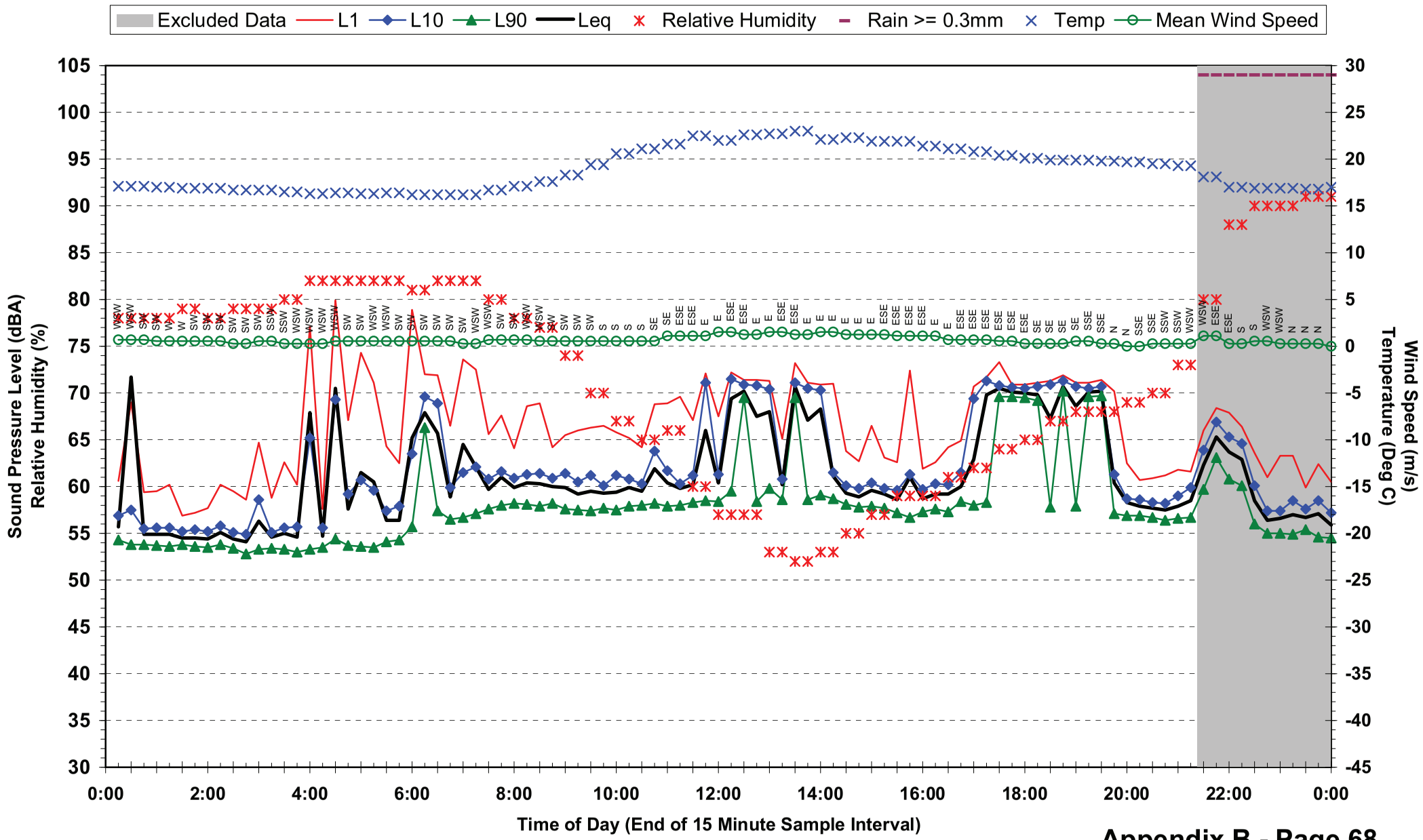
## Statistical Ambient Noise Levels
## Location 7 - 191 George St - Saturday 22 May 2010



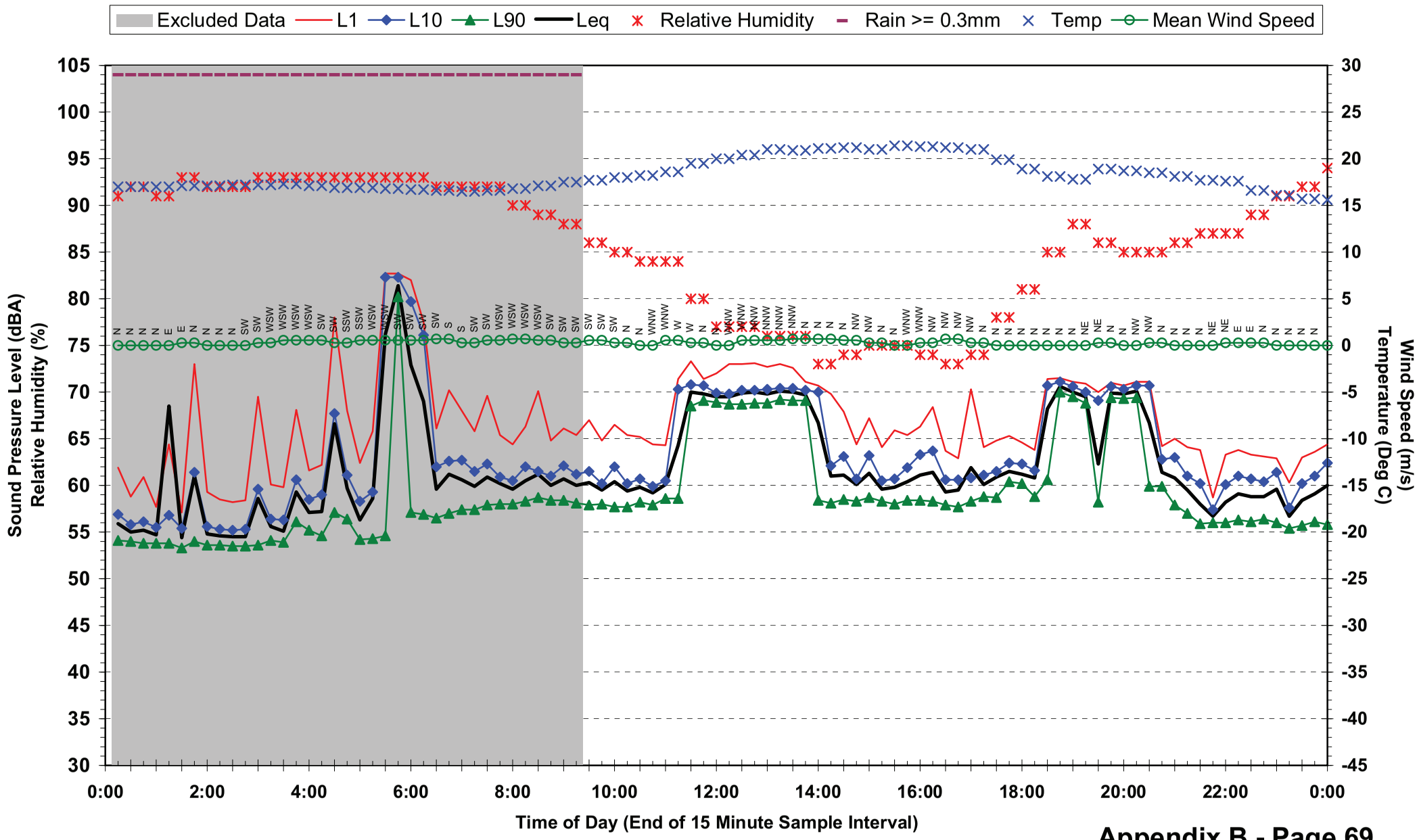
## Statistical Ambient Noise Levels
## Location 7 - 191 George St - Sunday 23 May 2010



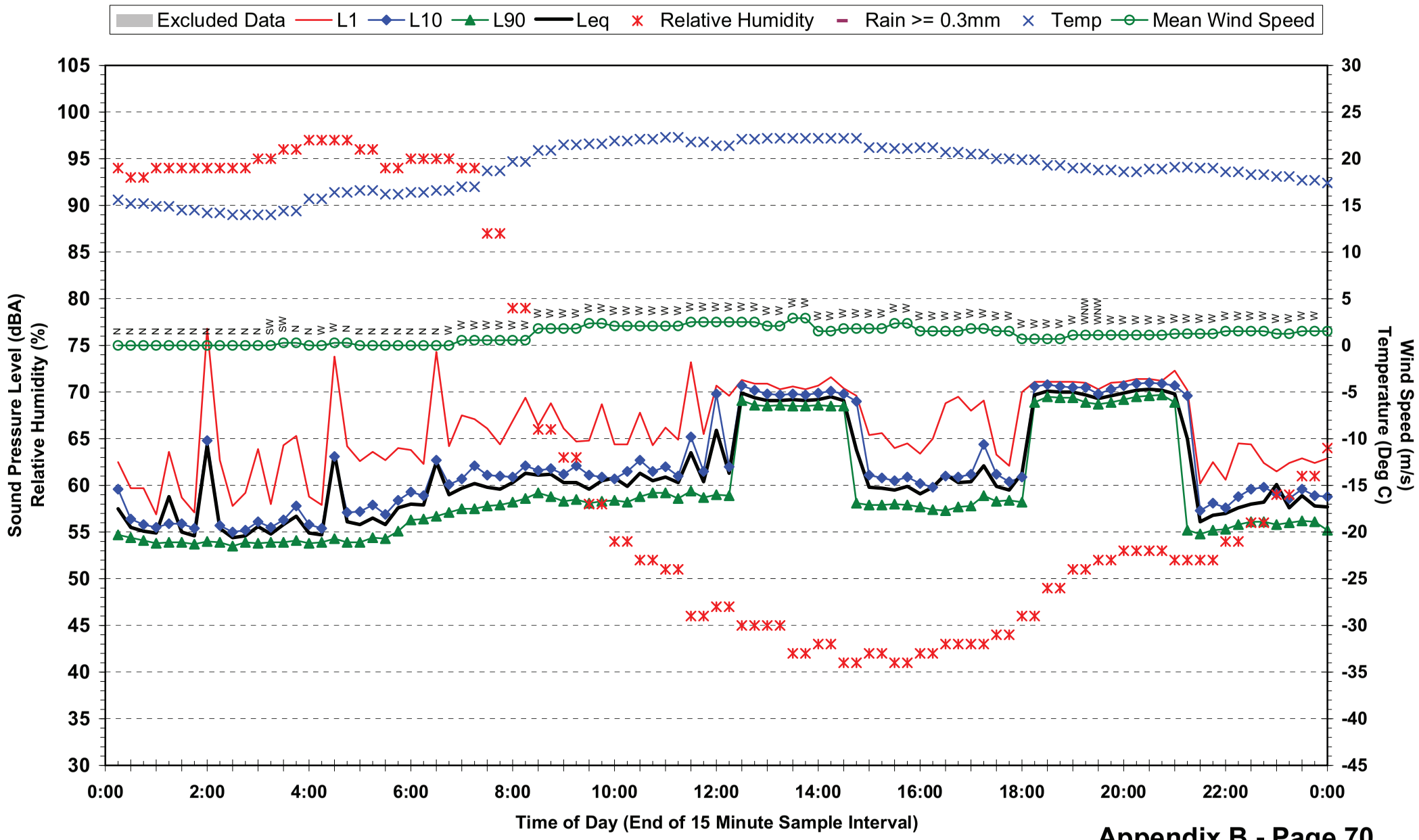
## Statistical Ambient Noise Levels
## Location 7 - 191 George St - Monday 24 May 2010



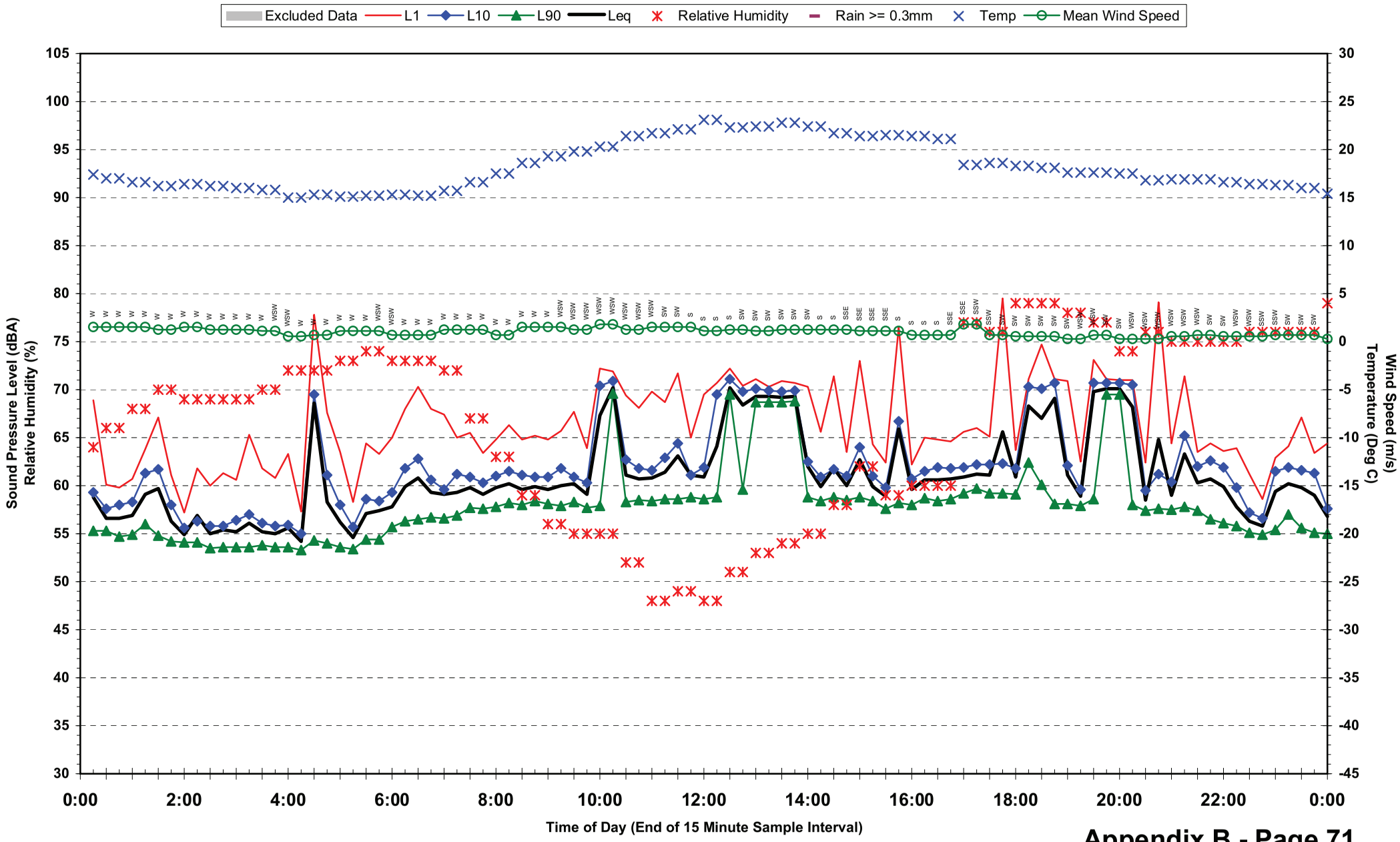
## Statistical Ambient Noise Levels
## Location 7 - 191 George St - Tuesday 25 May 2010



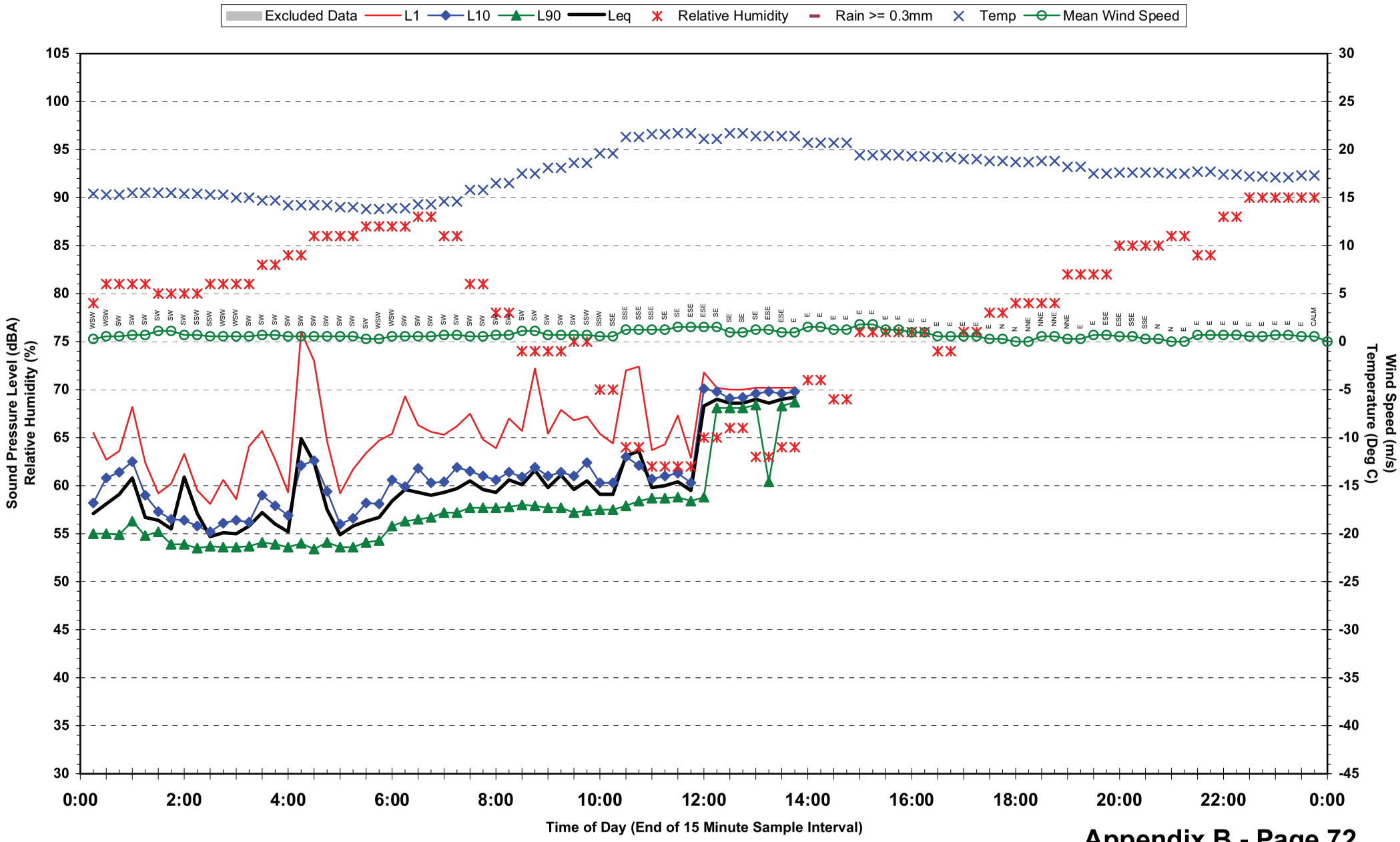
## Statistical Ambient Noise Levels
## Location 7 - 191 George St - Wednesday 26 May 2010



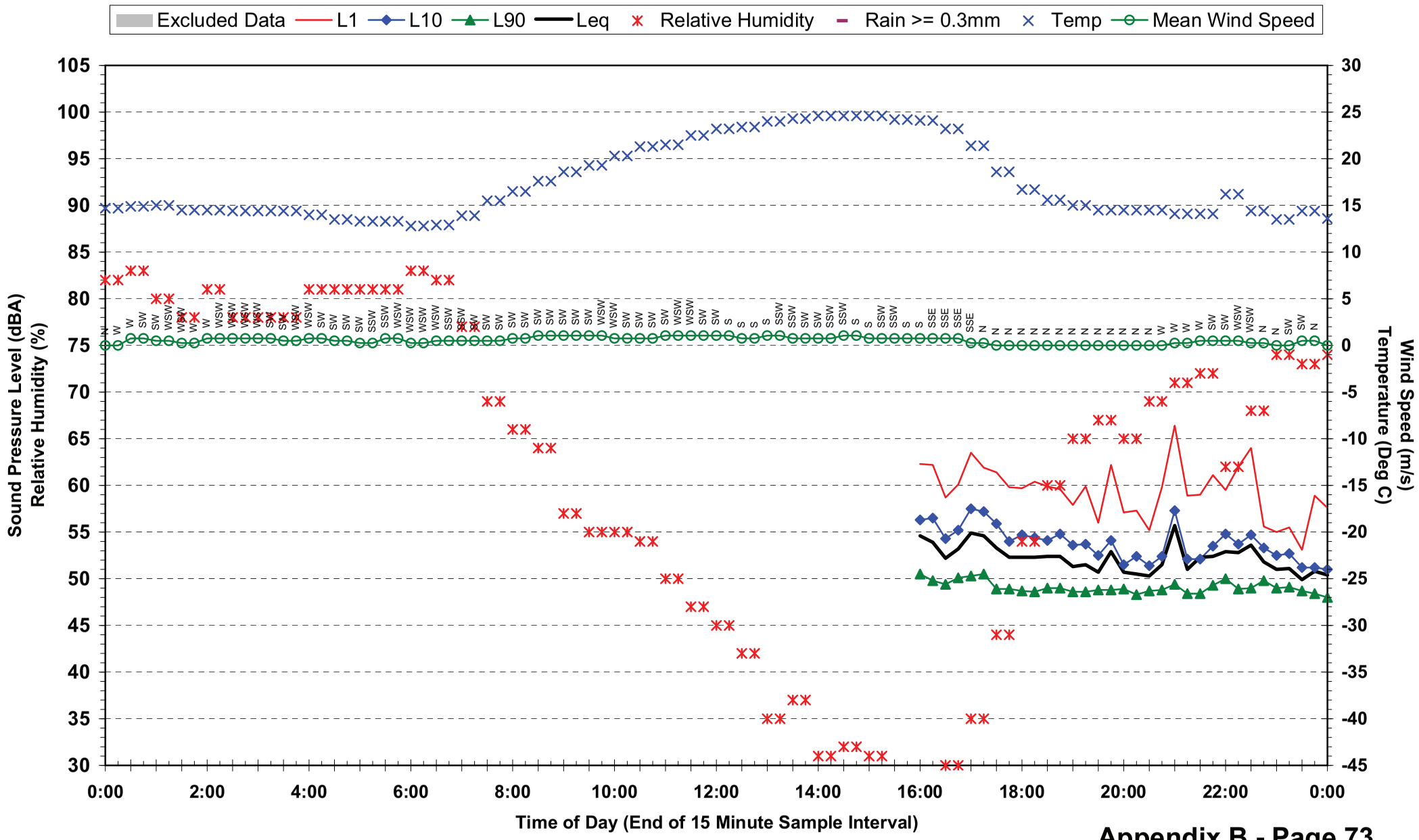
**Statistical Ambient Noise Levels**
**Location 7 - 191 George St - Thursday 27 May 2010**



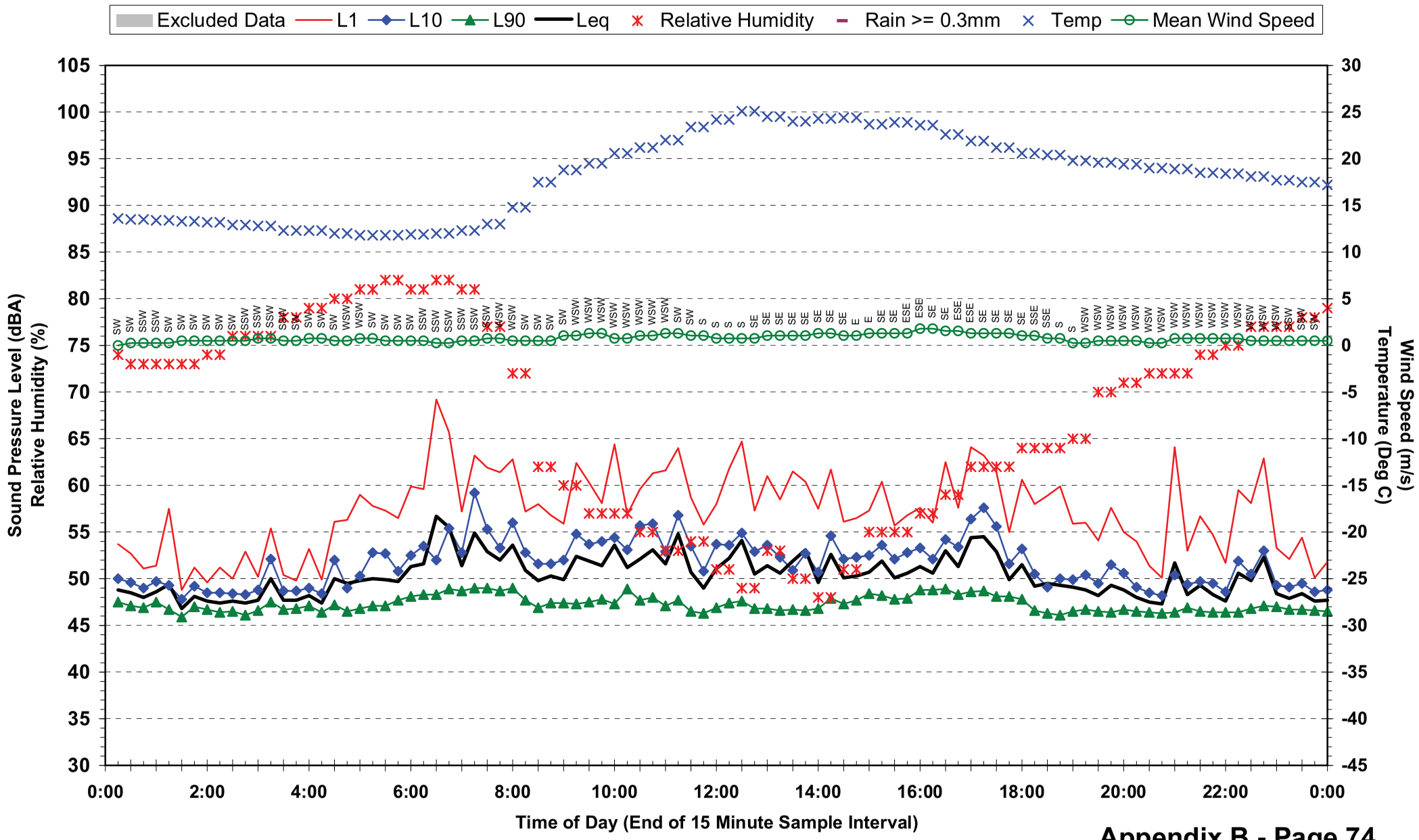
**Statistical Ambient Noise Levels**
**Location 7 - 191 George St - Friday 28 May 2010**



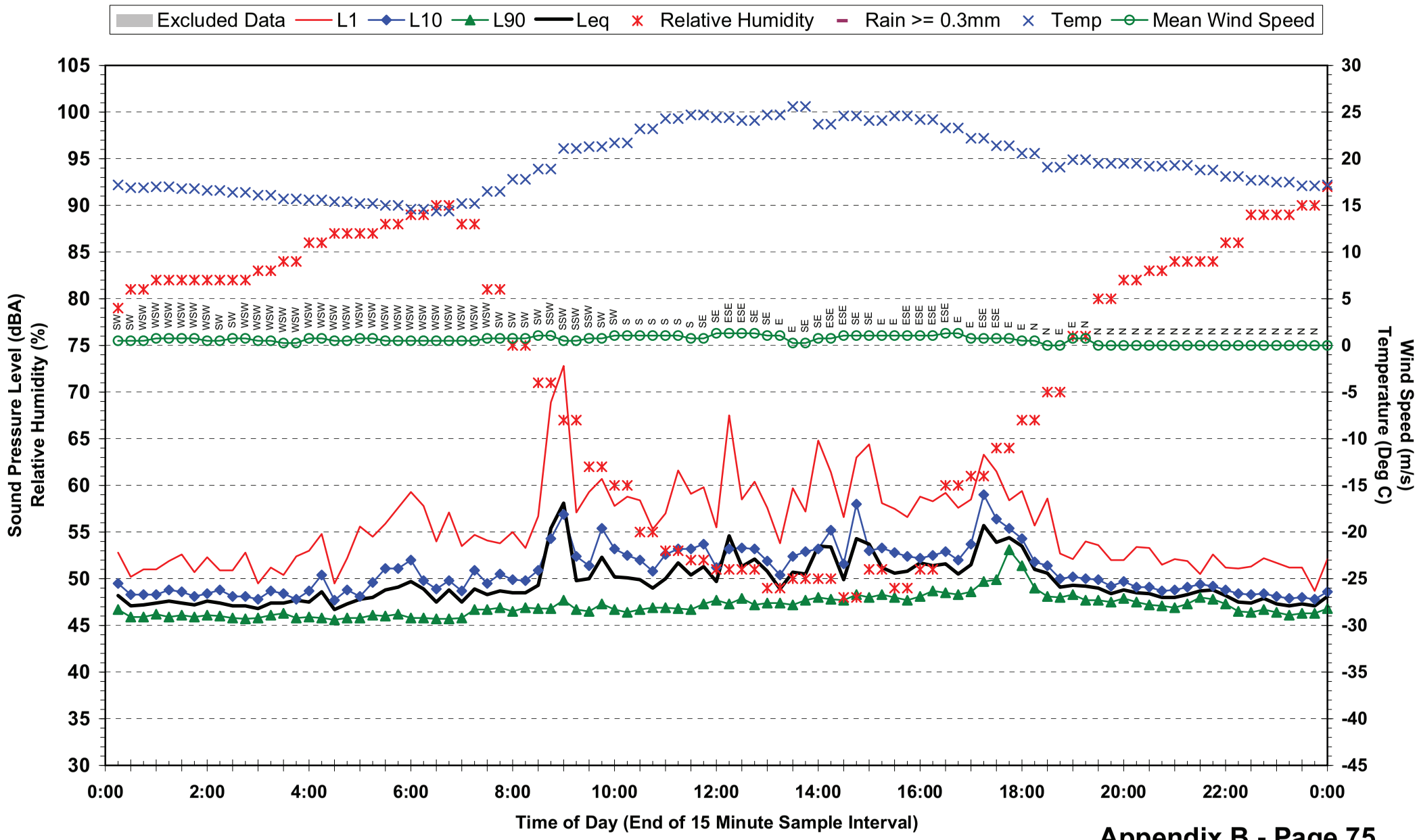
## Statistical Ambient Noise Levels
## Location 8 - QUT Gardens Point - Friday 7 May 2010



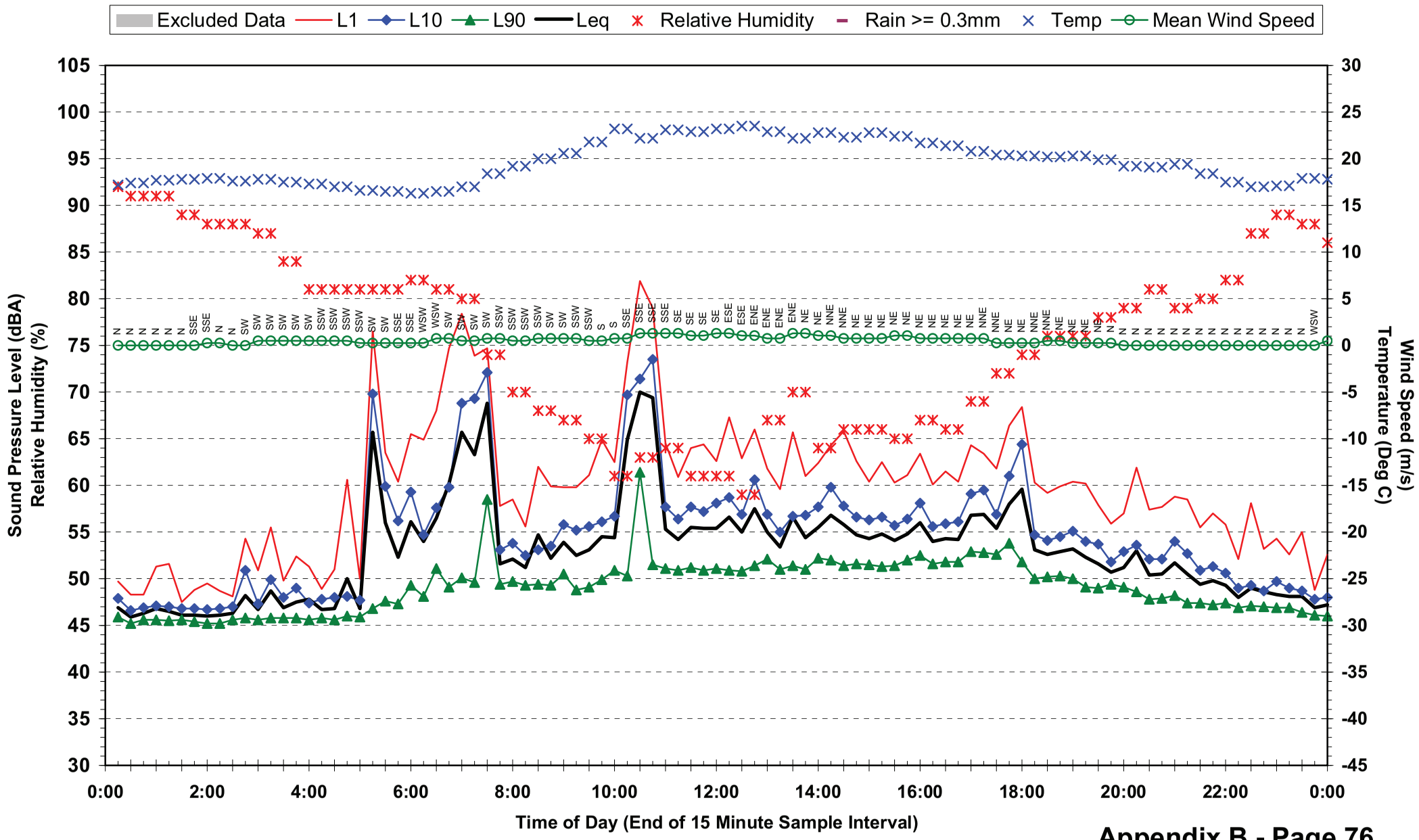
## Statistical Ambient Noise Levels
## Location 8 - QUT Gardens Point - Saturday 8 May 2010



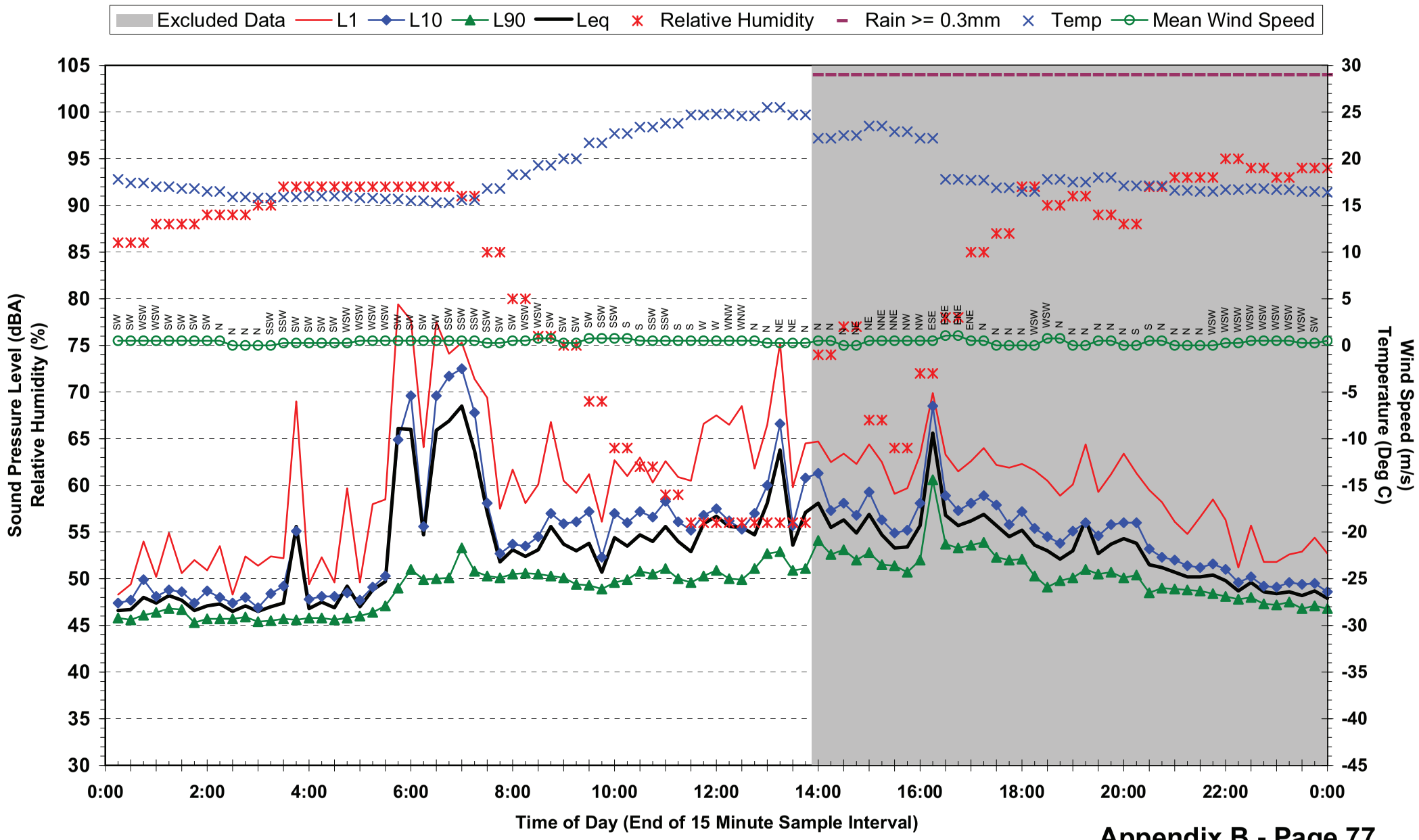
## Statistical Ambient Noise Levels
## Location 8 - QUT Gardens Point - Sunday 9 May 2010



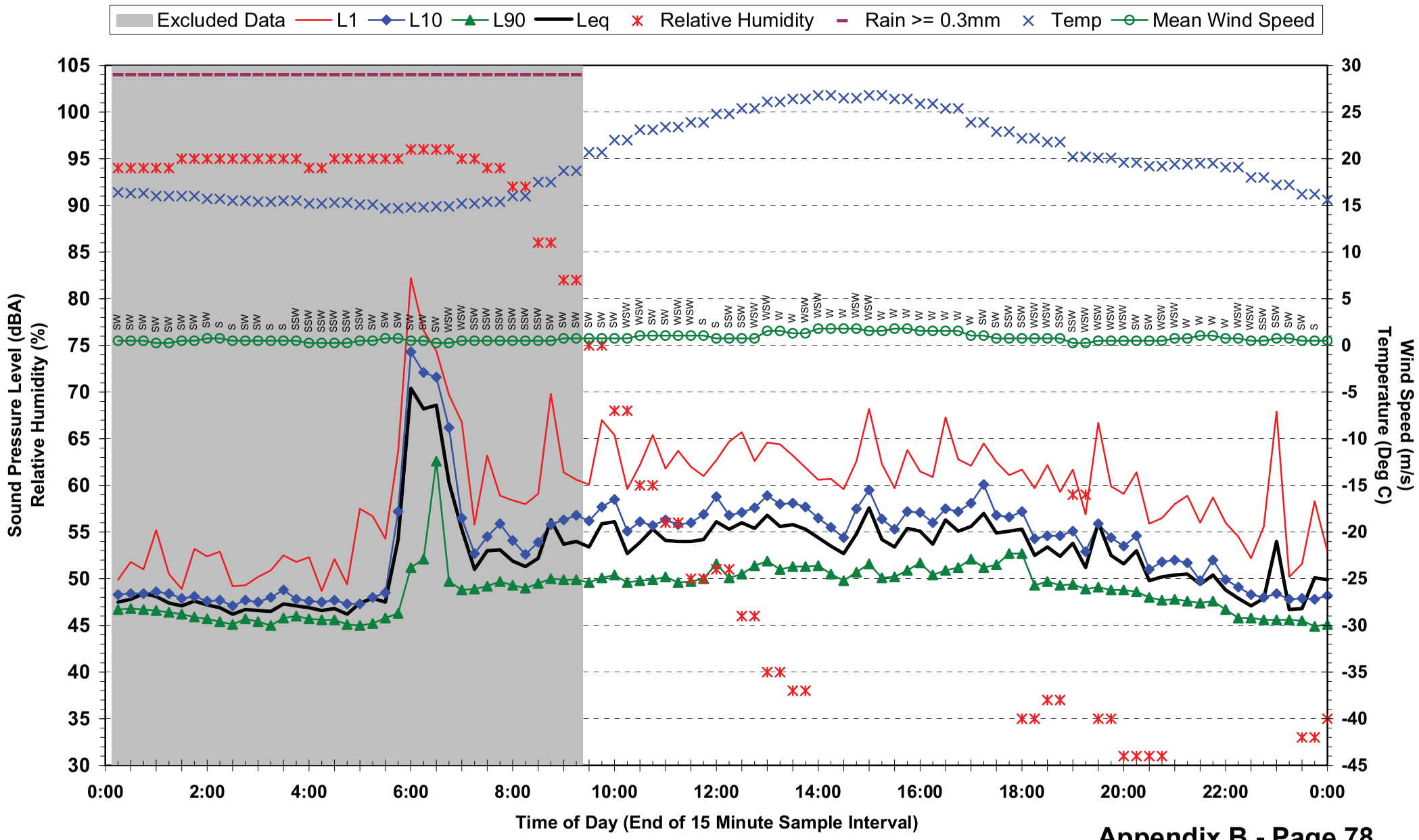
## Statistical Ambient Noise Levels
## Location 8 - QUT Gardens Point - Monday 10 May 2010



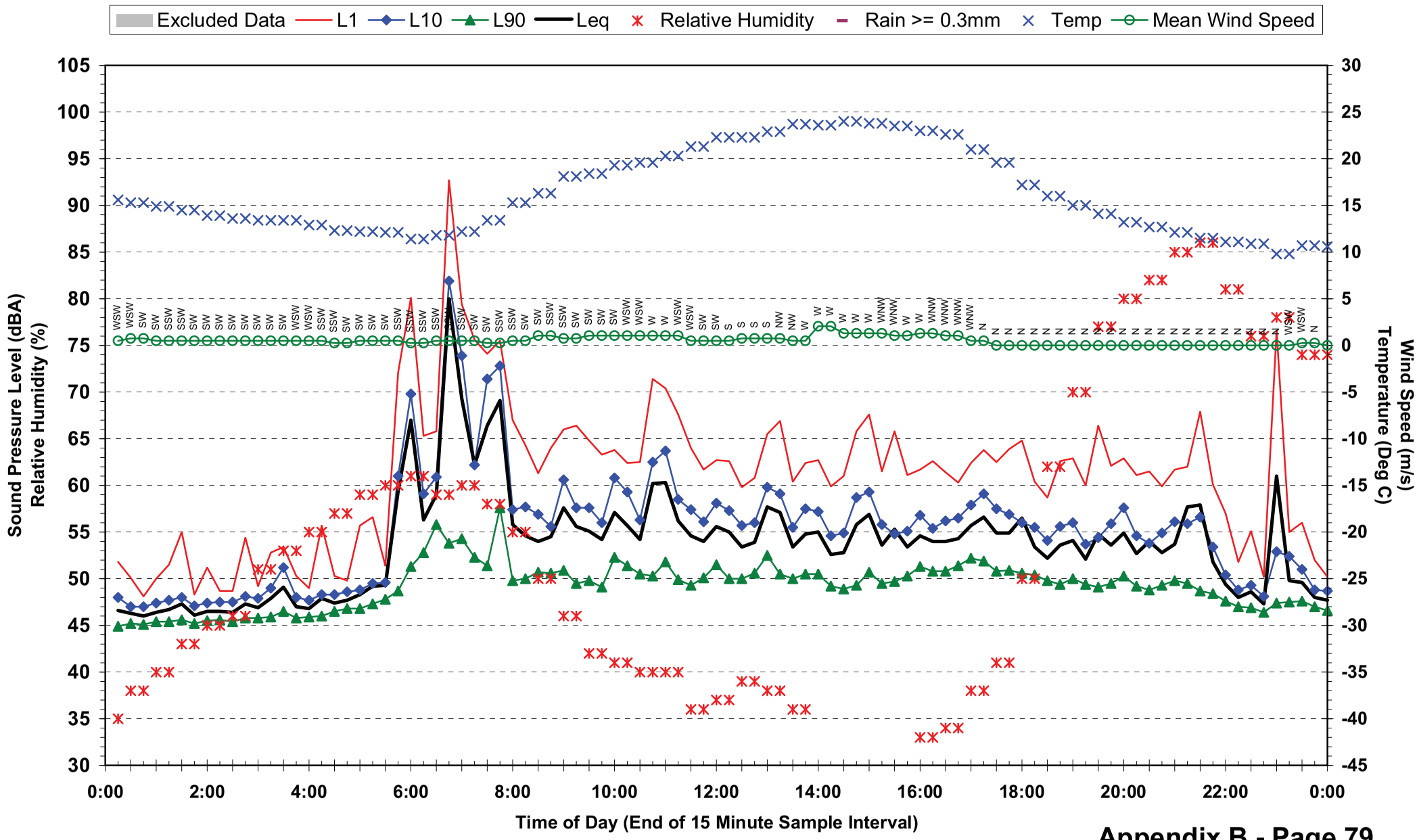
## Statistical Ambient Noise Levels
## Location 8 - QUT Gardens Point - Tuesday 11 May 2010



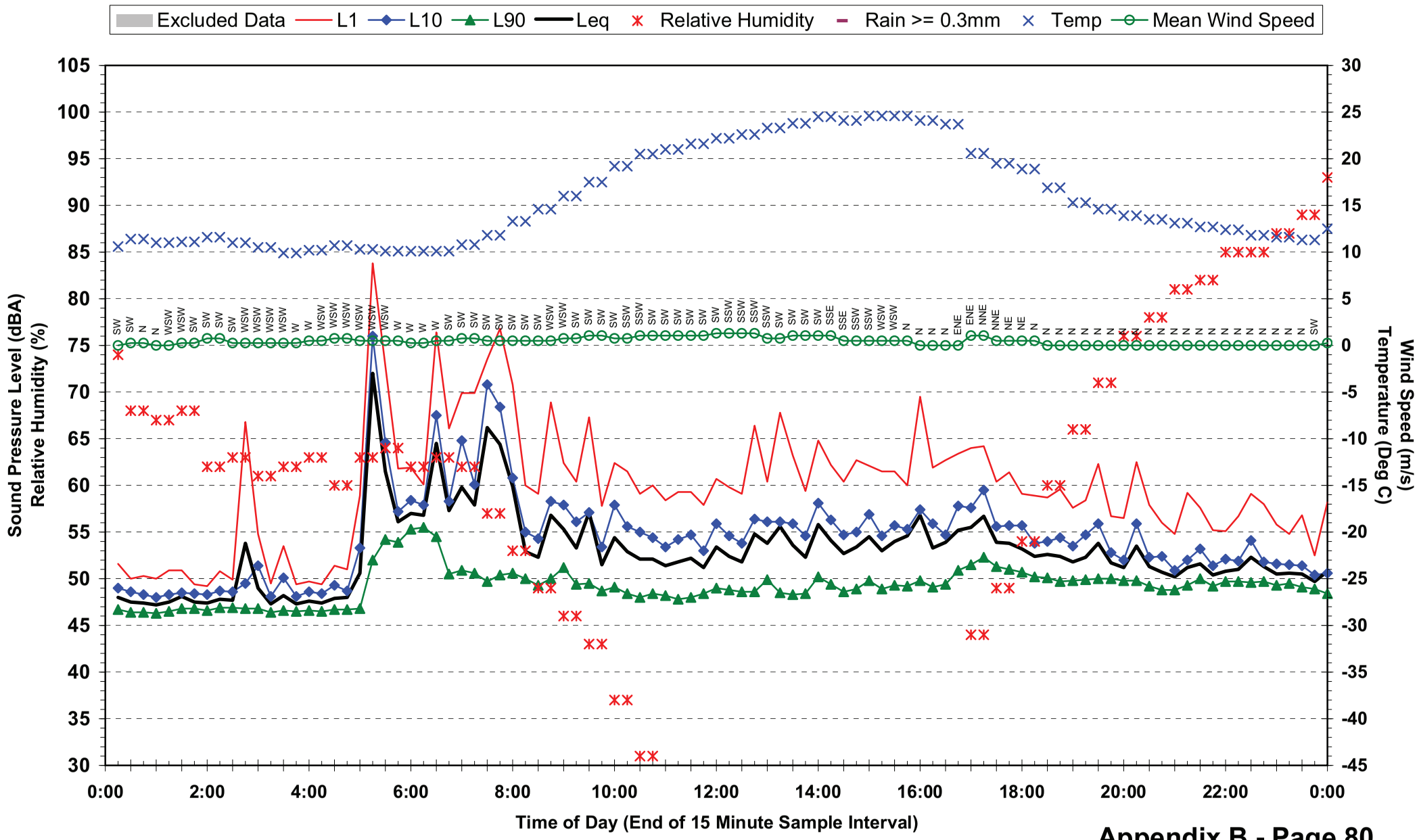
## Statistical Ambient Noise Levels
## Location 8 - QUT Gardens Point - Wednesday 12 May 2010



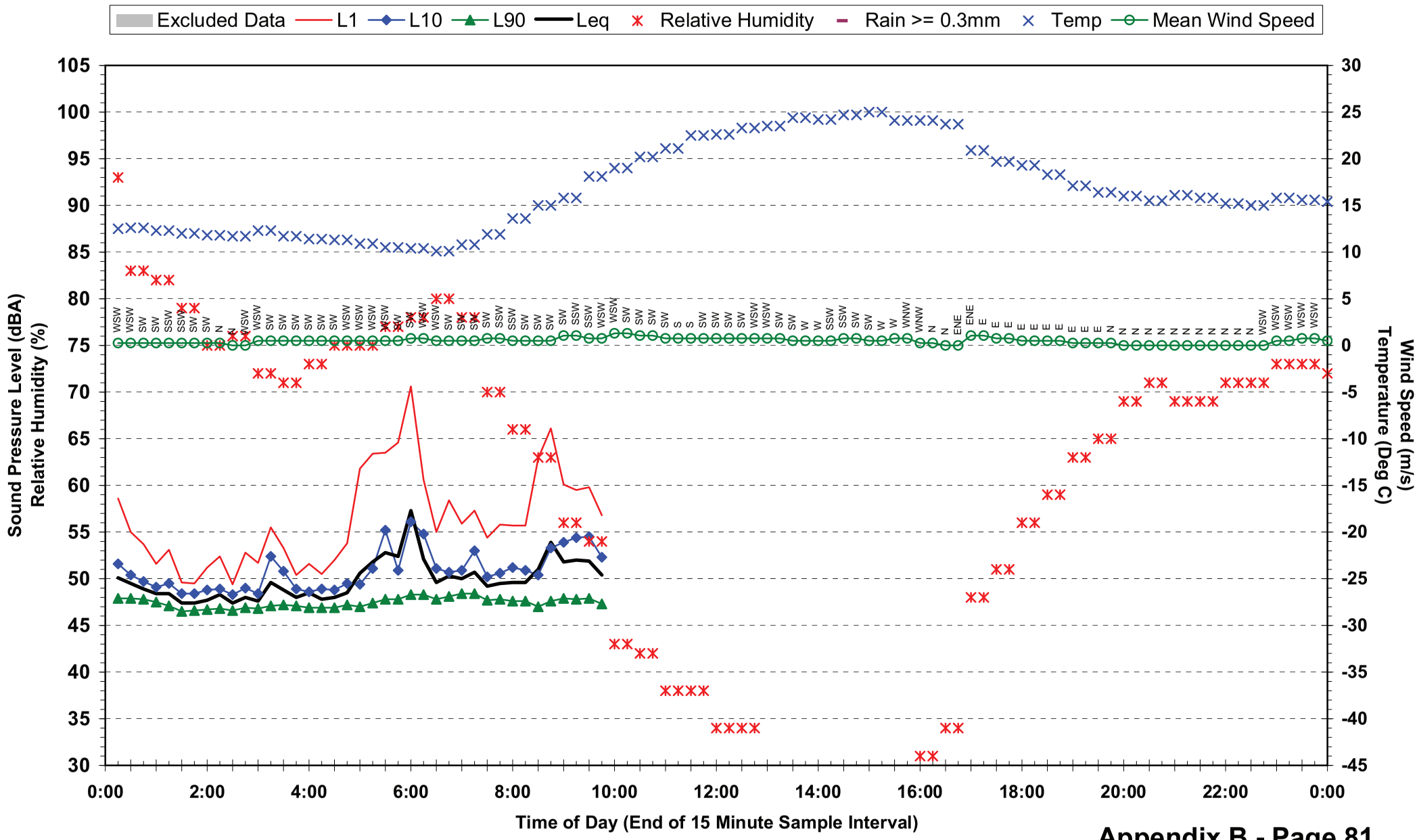
## Statistical Ambient Noise Levels
## Location 8 - QUT Gardens Point - Thursday 13 May 2010



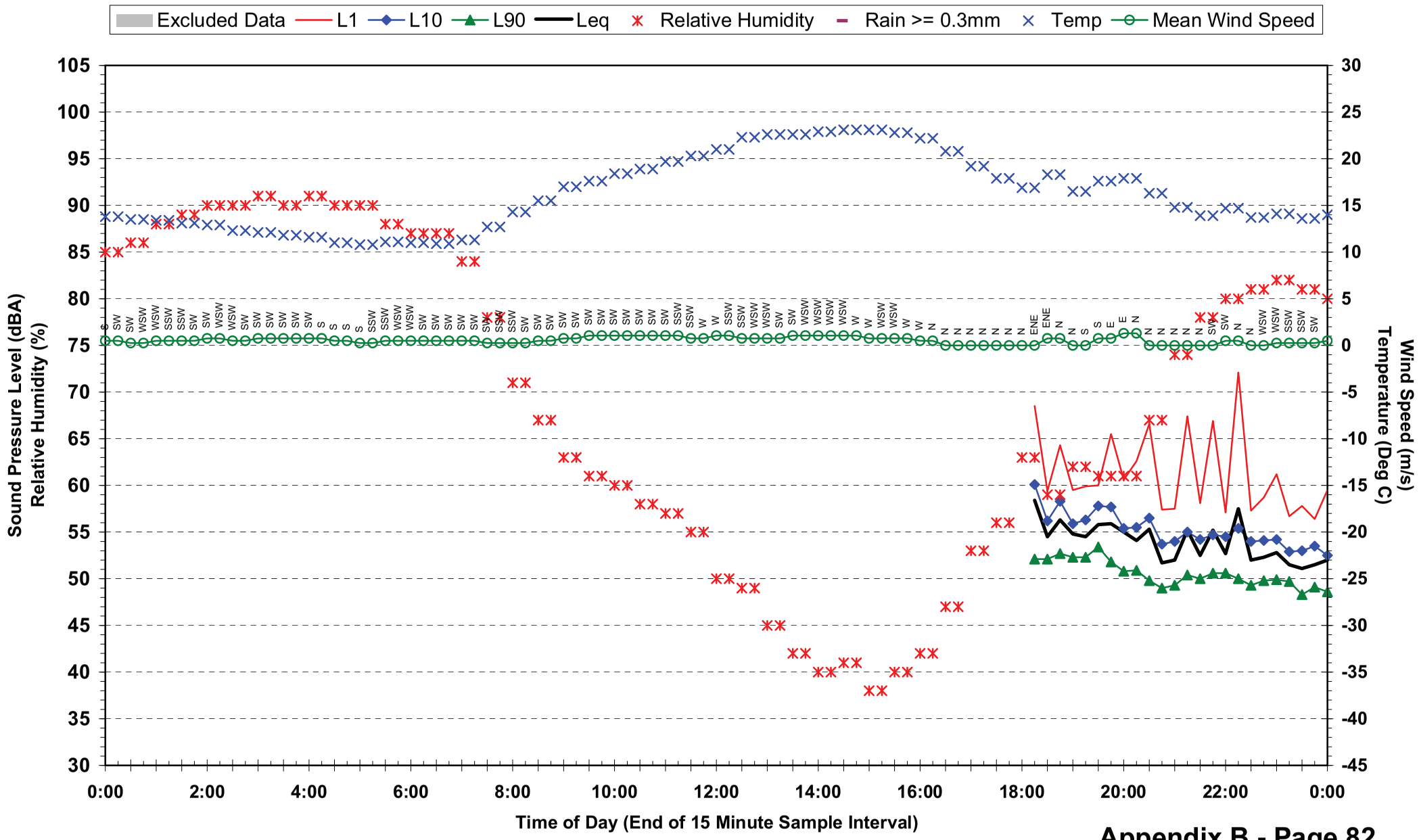
## Statistical Ambient Noise Levels
## Location 8 - QUT Gardens Point - Friday 14 May 2010



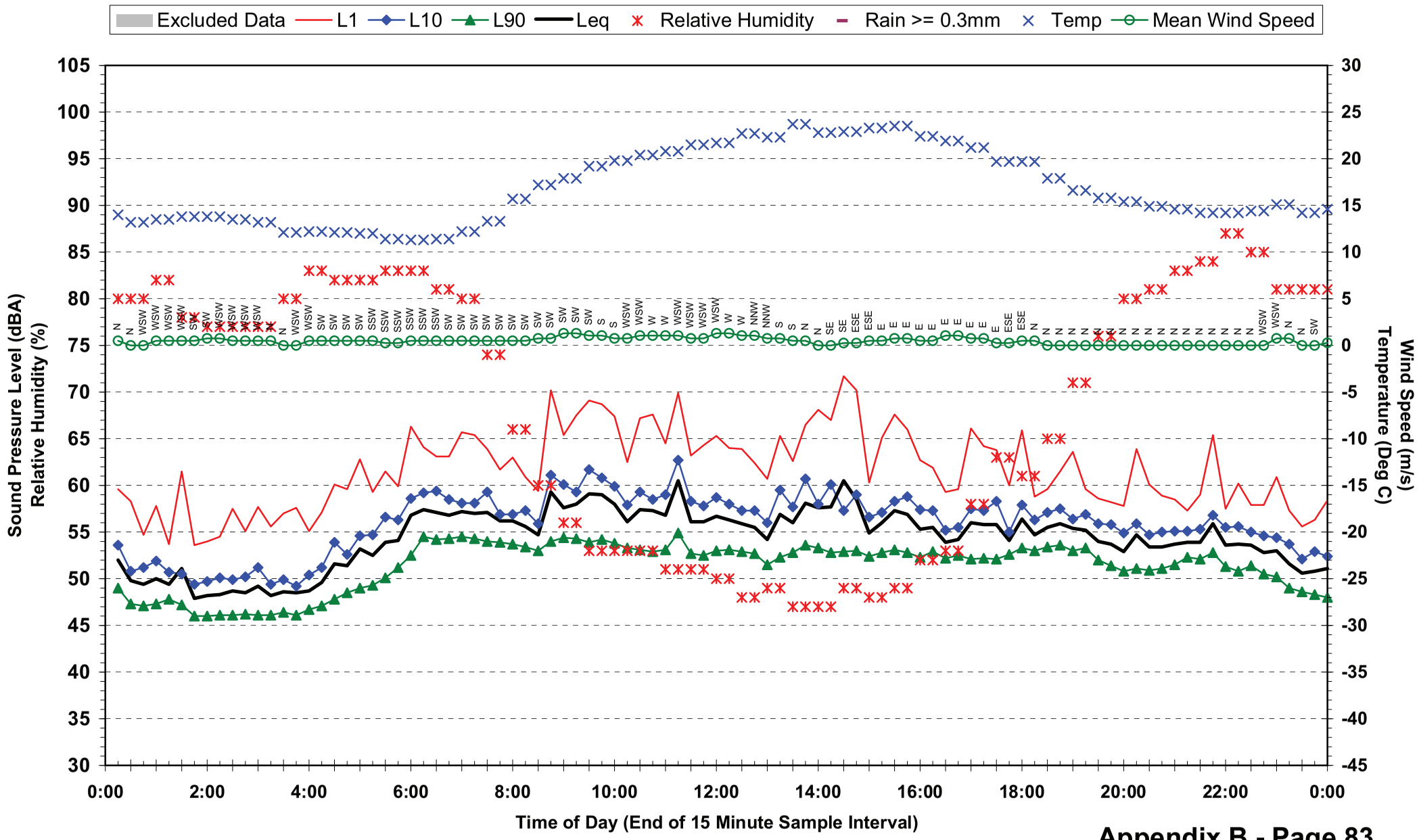
## Statistical Ambient Noise Levels
## Location 8 - QUT Gardens Point - Saturday 15 May 2010



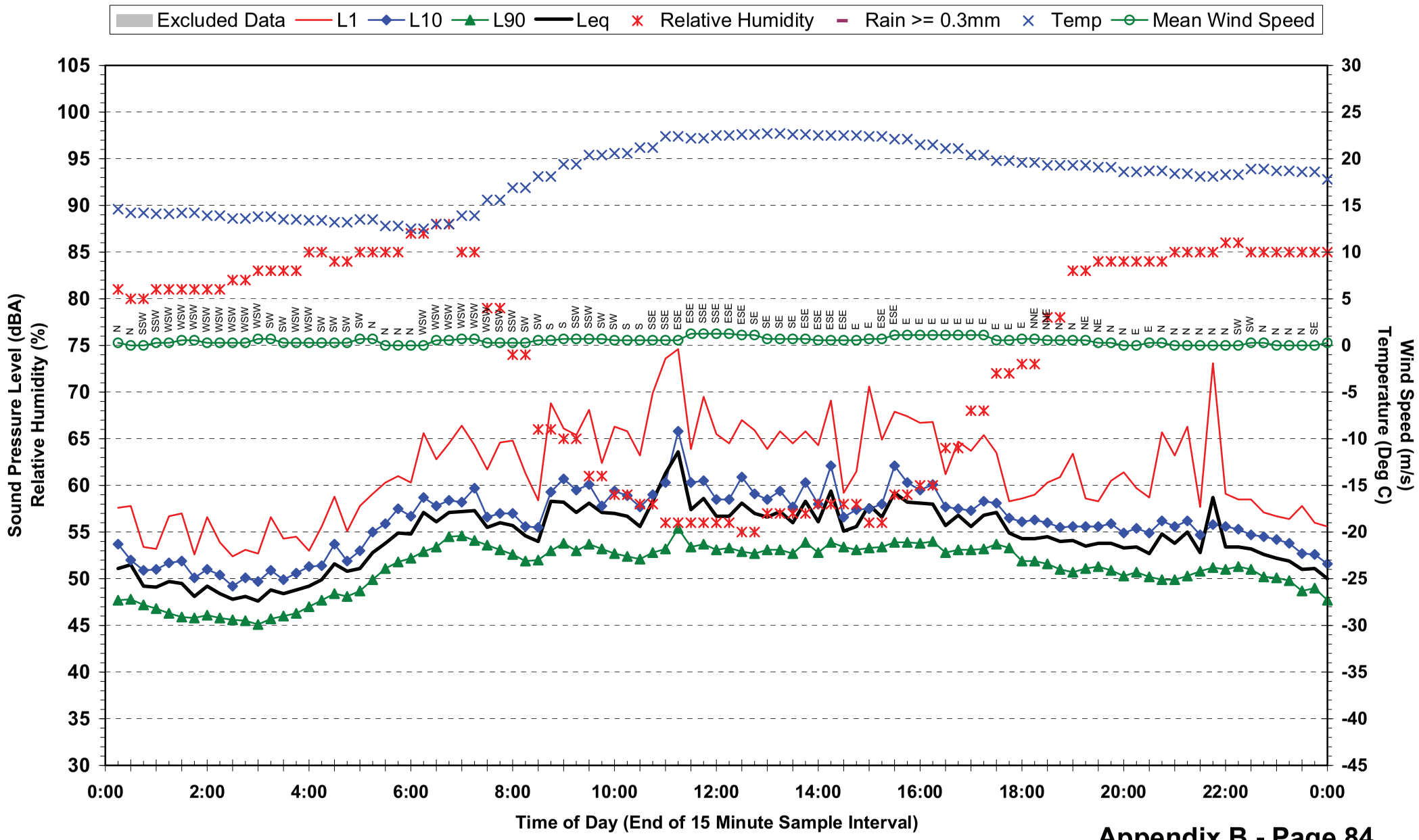
## Statistical Ambient Noise Levels
## Location 9 - 58 Leopard St - Tuesday 18 May 2010



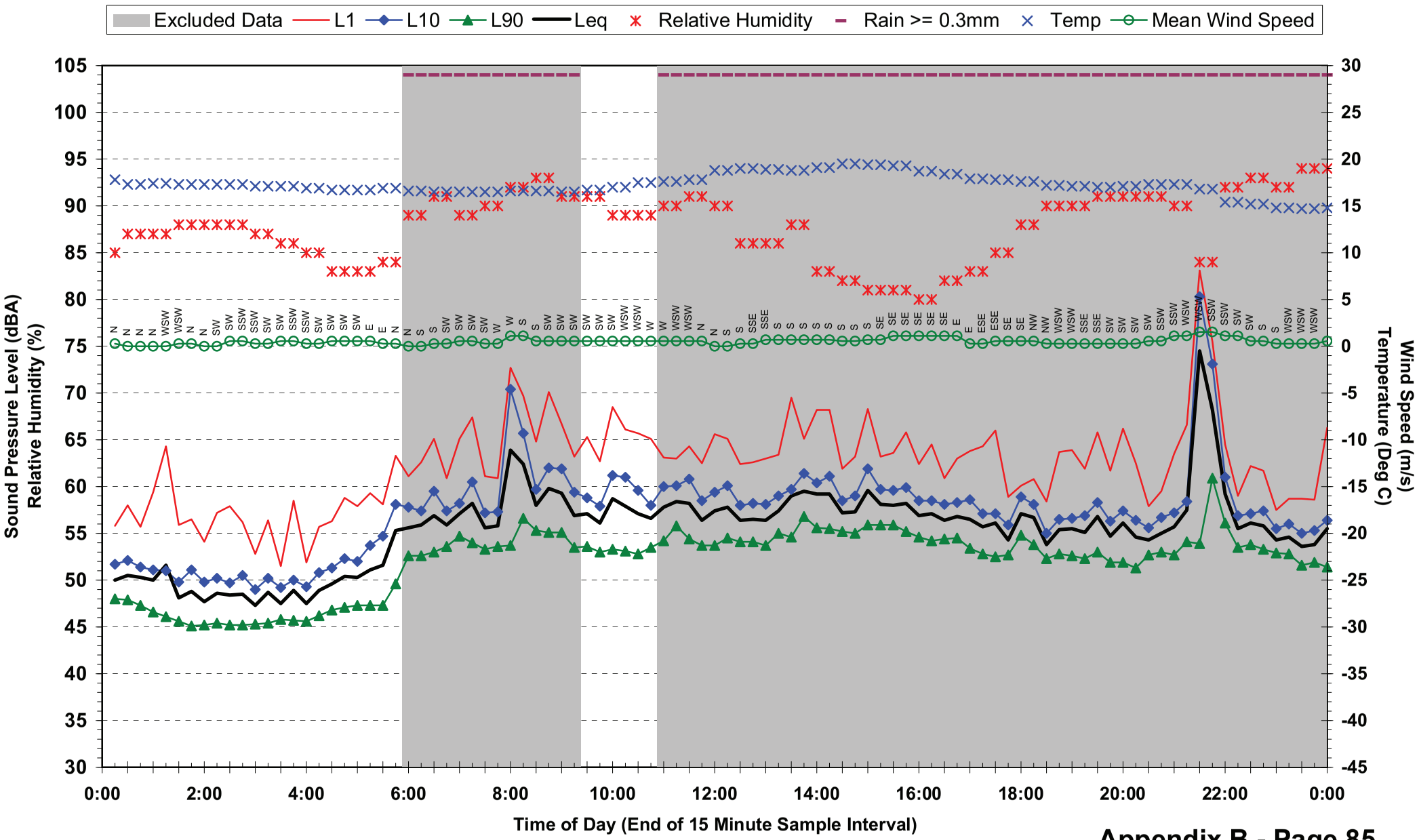
## Statistical Ambient Noise Levels
## Location 9 - 58 Leopard St - Wednesday 19 May 2010



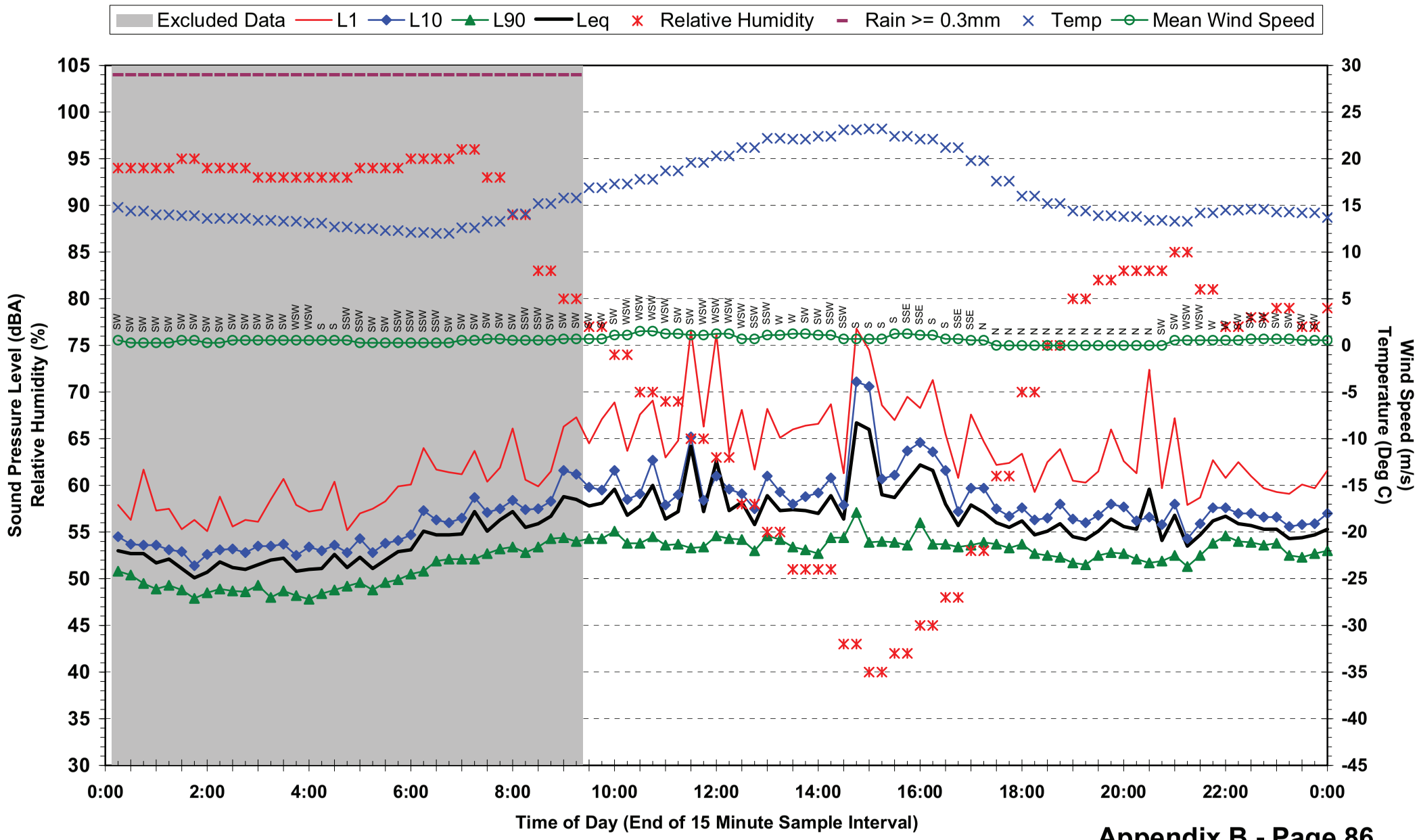
## Statistical Ambient Noise Levels
## Location 9 - 58 Leopard St - Thursday 20 May 2010



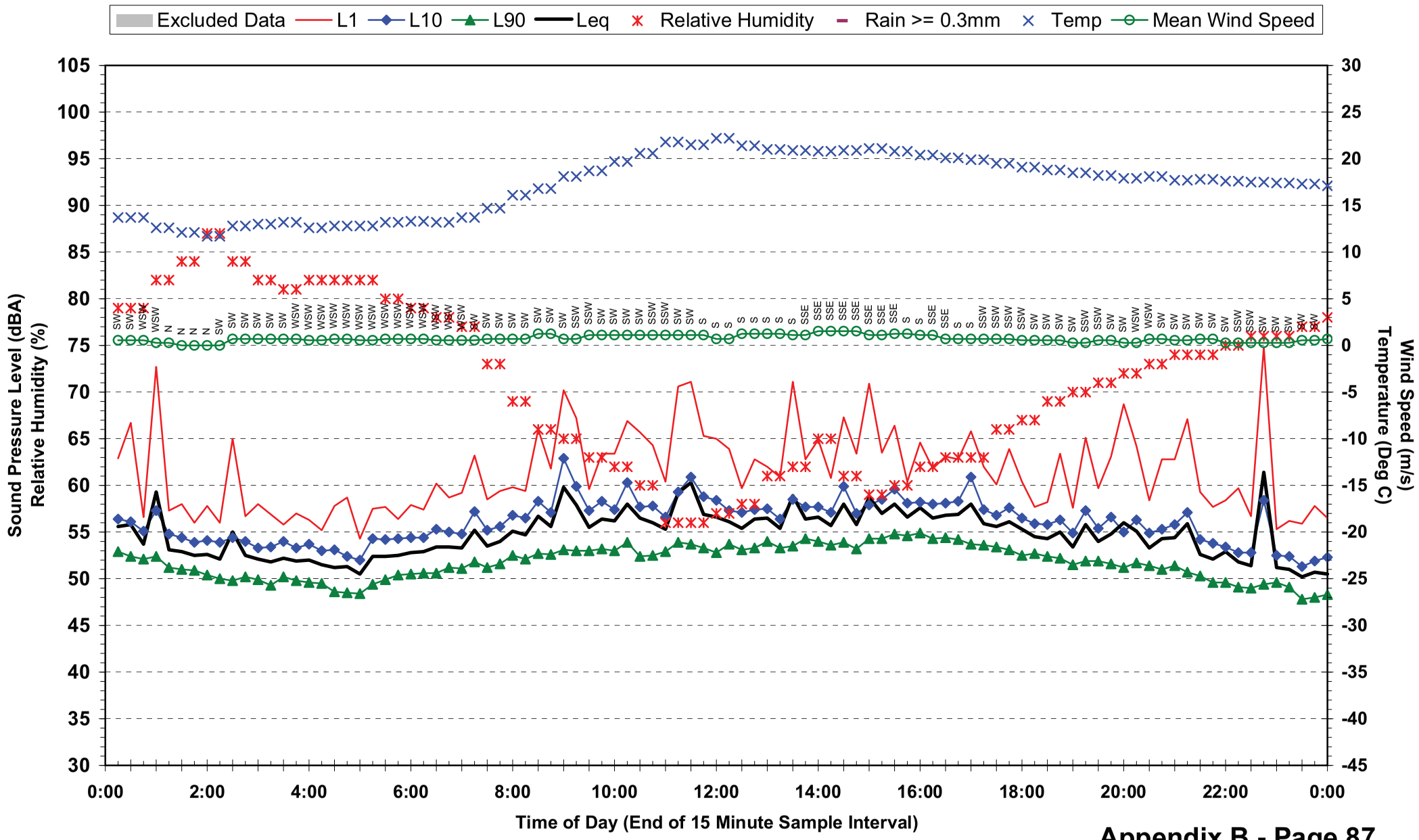
## Statistical Ambient Noise Levels
## Location 9 - 58 Leopard St - Friday 21 May 2010



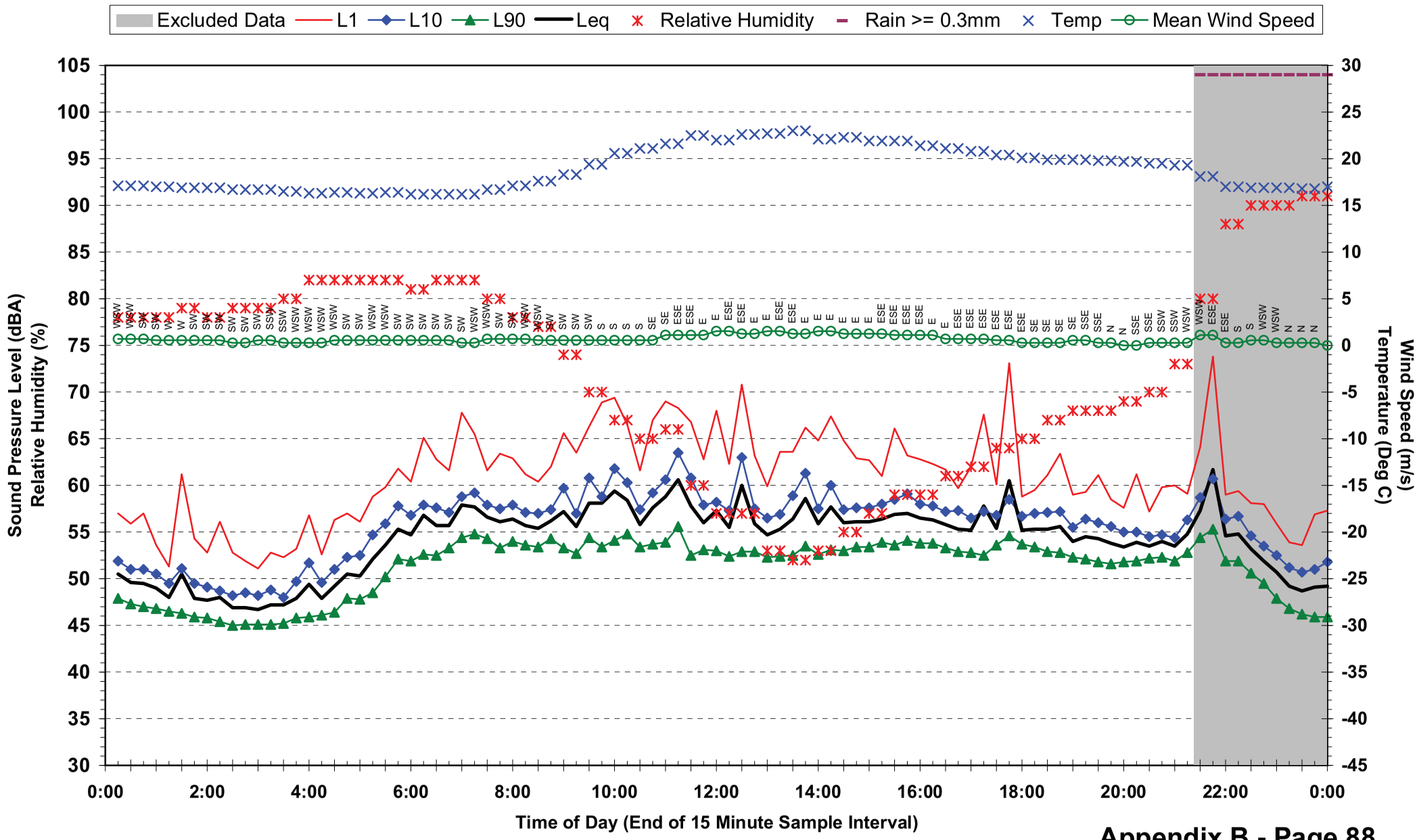
## Statistical Ambient Noise Levels
## Location 9 - 58 Leopard St - Saturday 22 May 2010



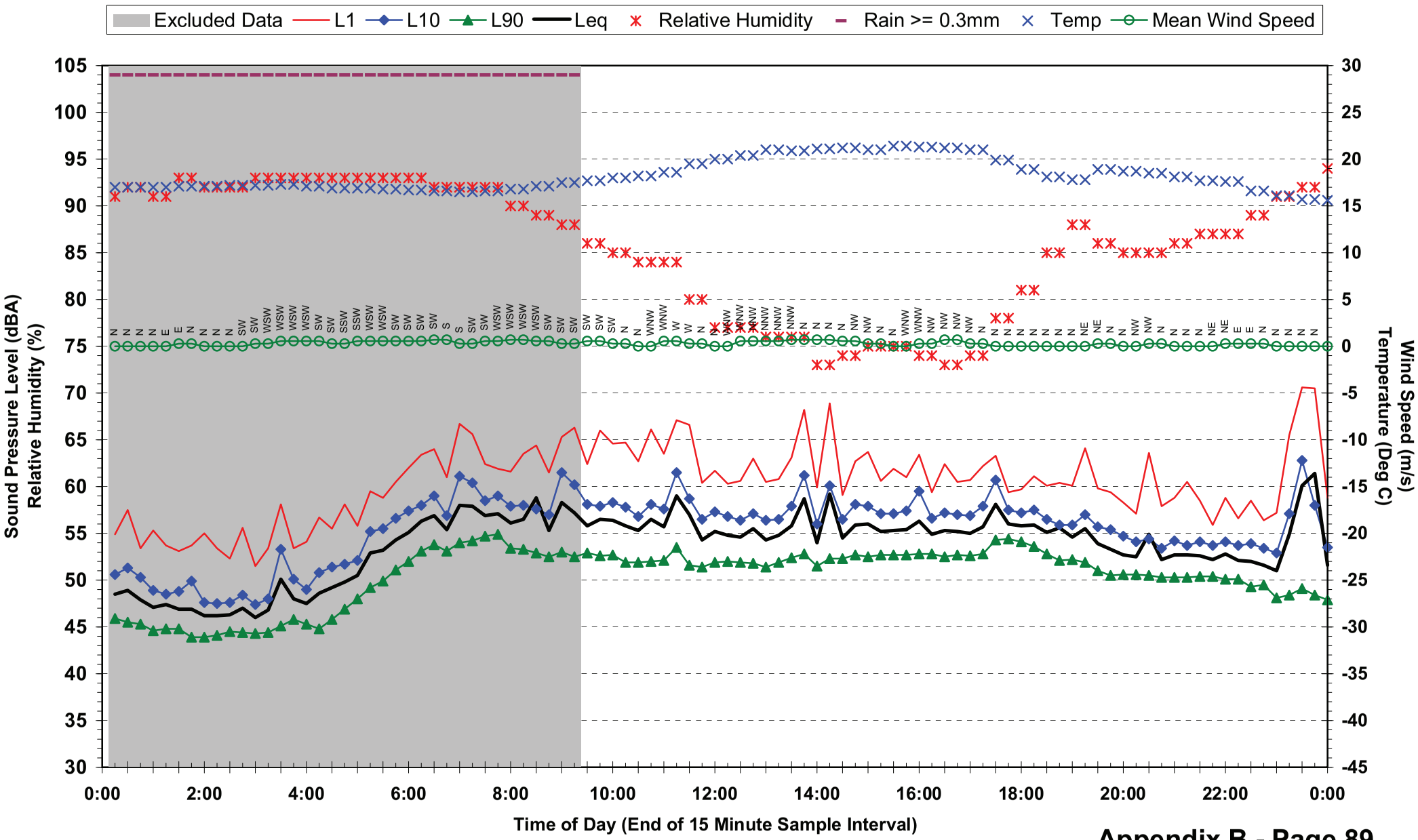
## Statistical Ambient Noise Levels
## Location 9 - 58 Leopard St - Sunday 23 May 2010



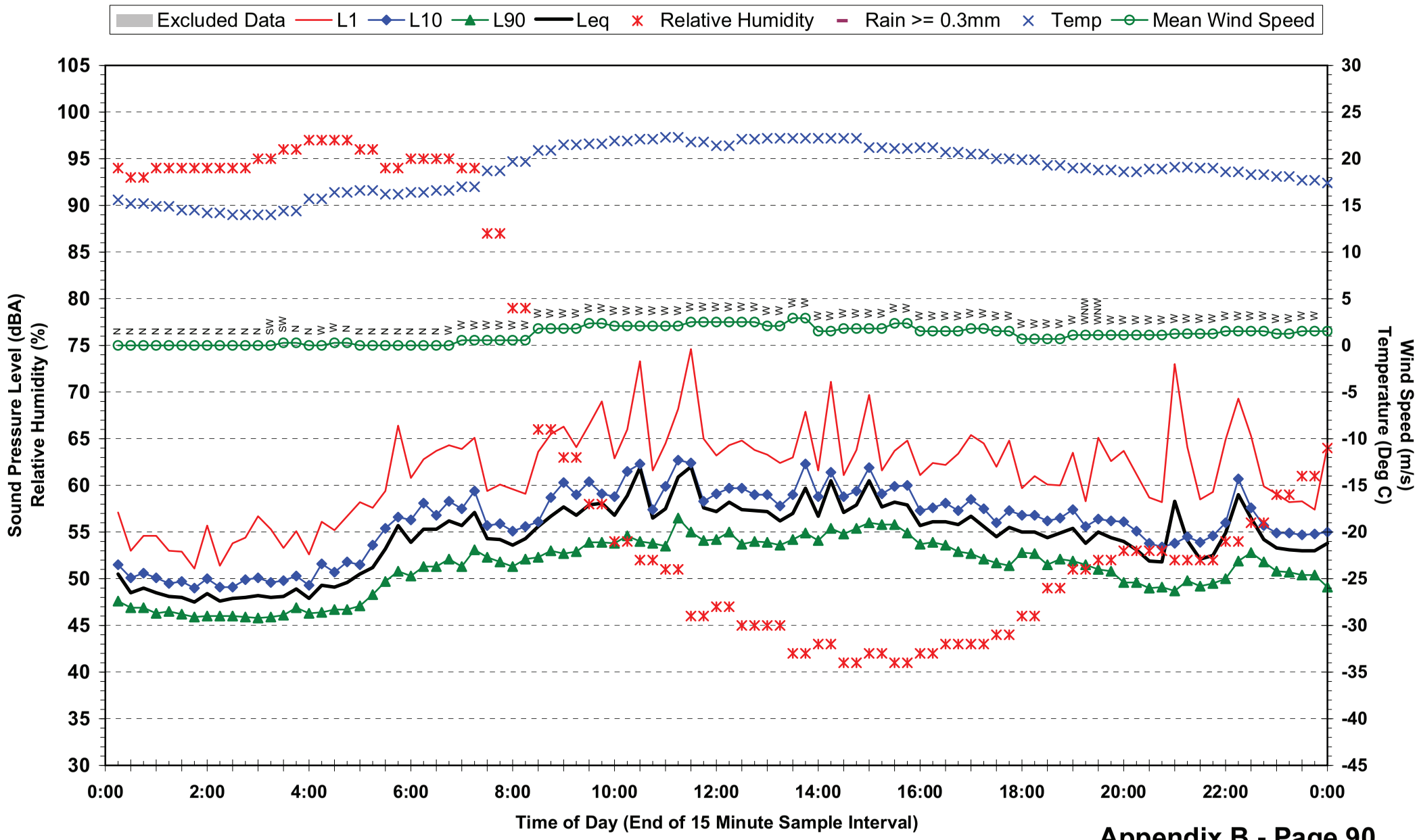
## Statistical Ambient Noise Levels
## Location 9 - 58 Leopard St - Monday 24 May 2010



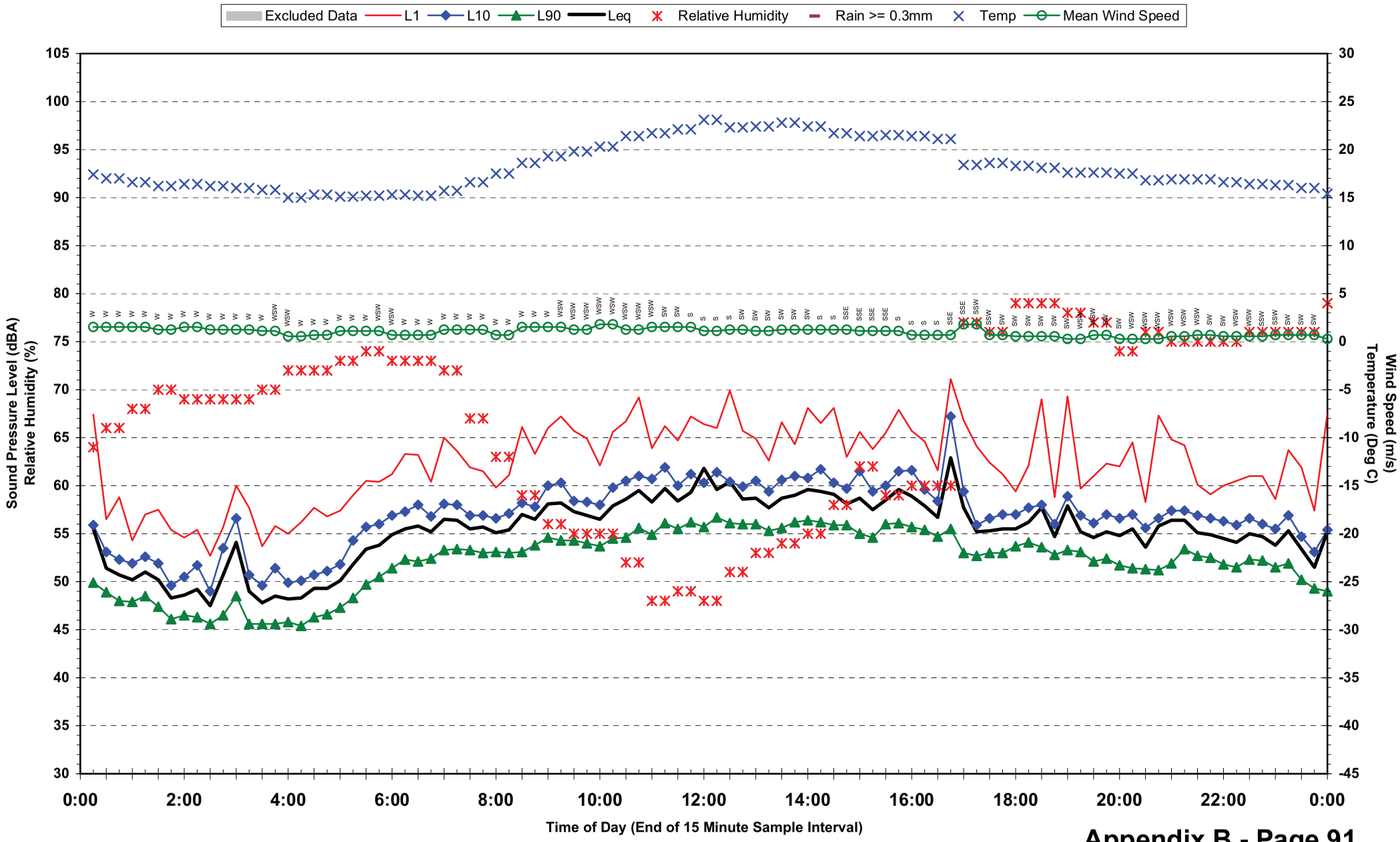
## Statistical Ambient Noise Levels
## Location 9 - 58 Leopard St - Tuesday 25 May 2010



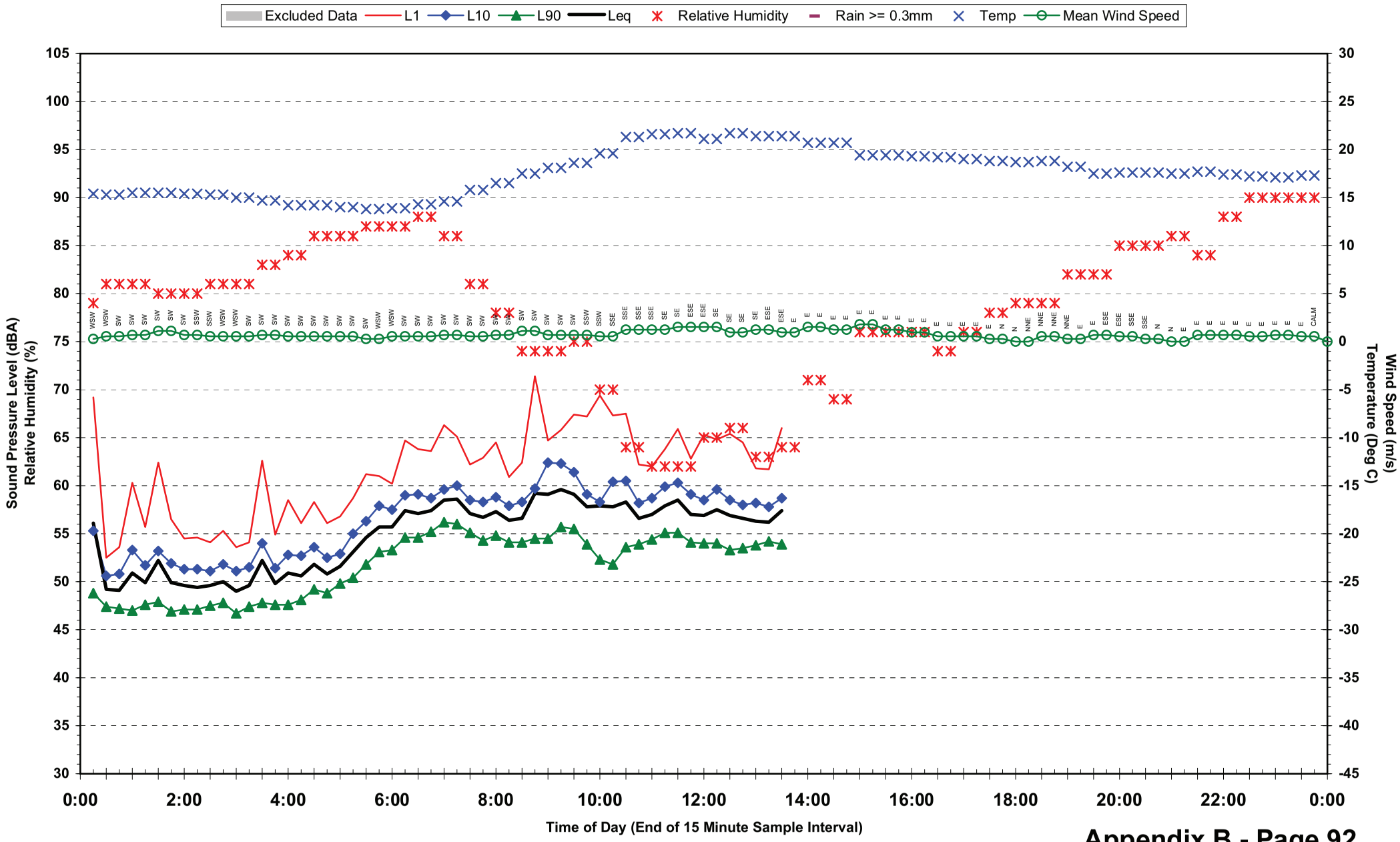
## Statistical Ambient Noise Levels
## Location 9 - 58 Leopard St - Wednesday 26 May 2010



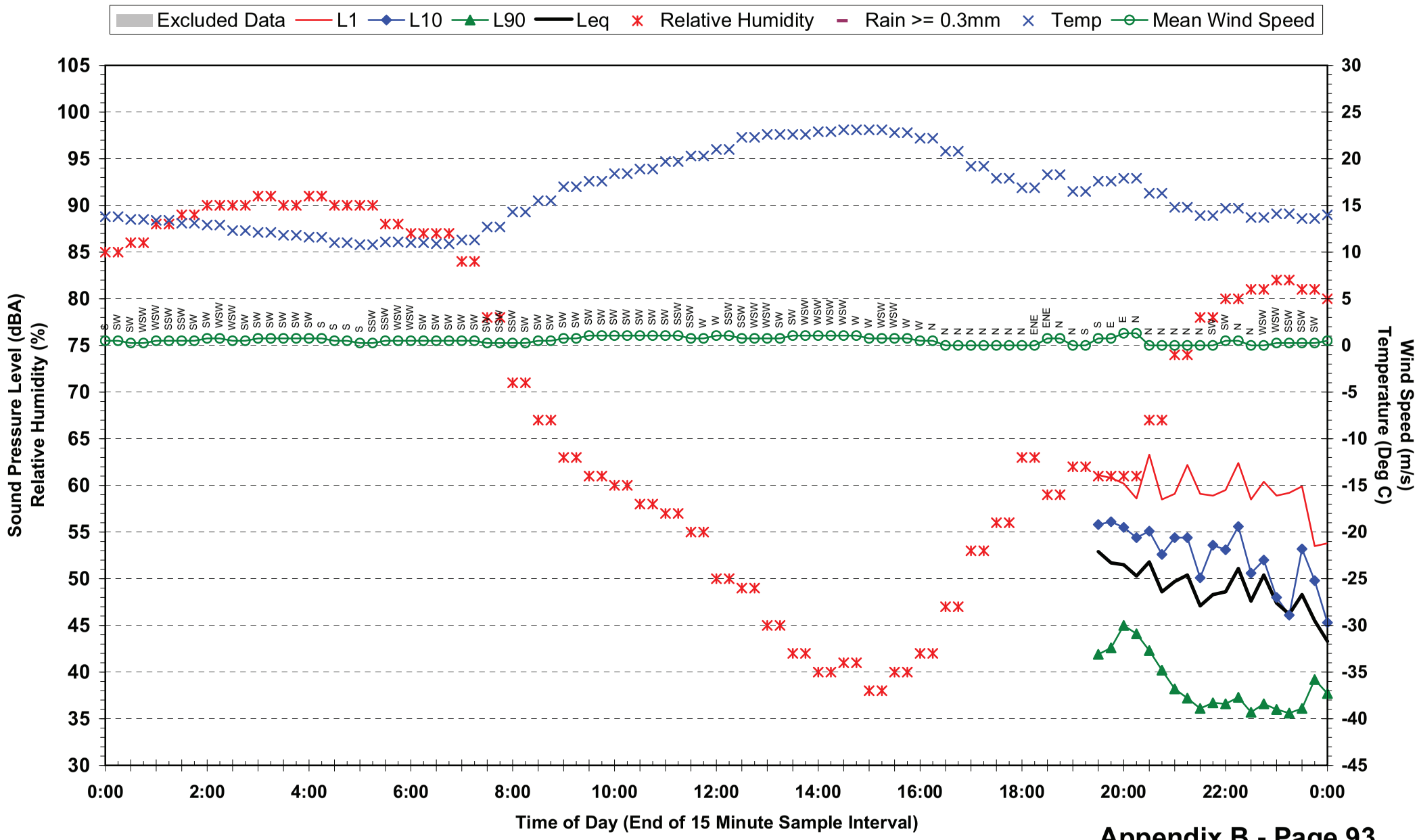
**Statistical Ambient Noise Levels**
**Location 9 - 58 Leopard St - Thursday 27 May 2010**



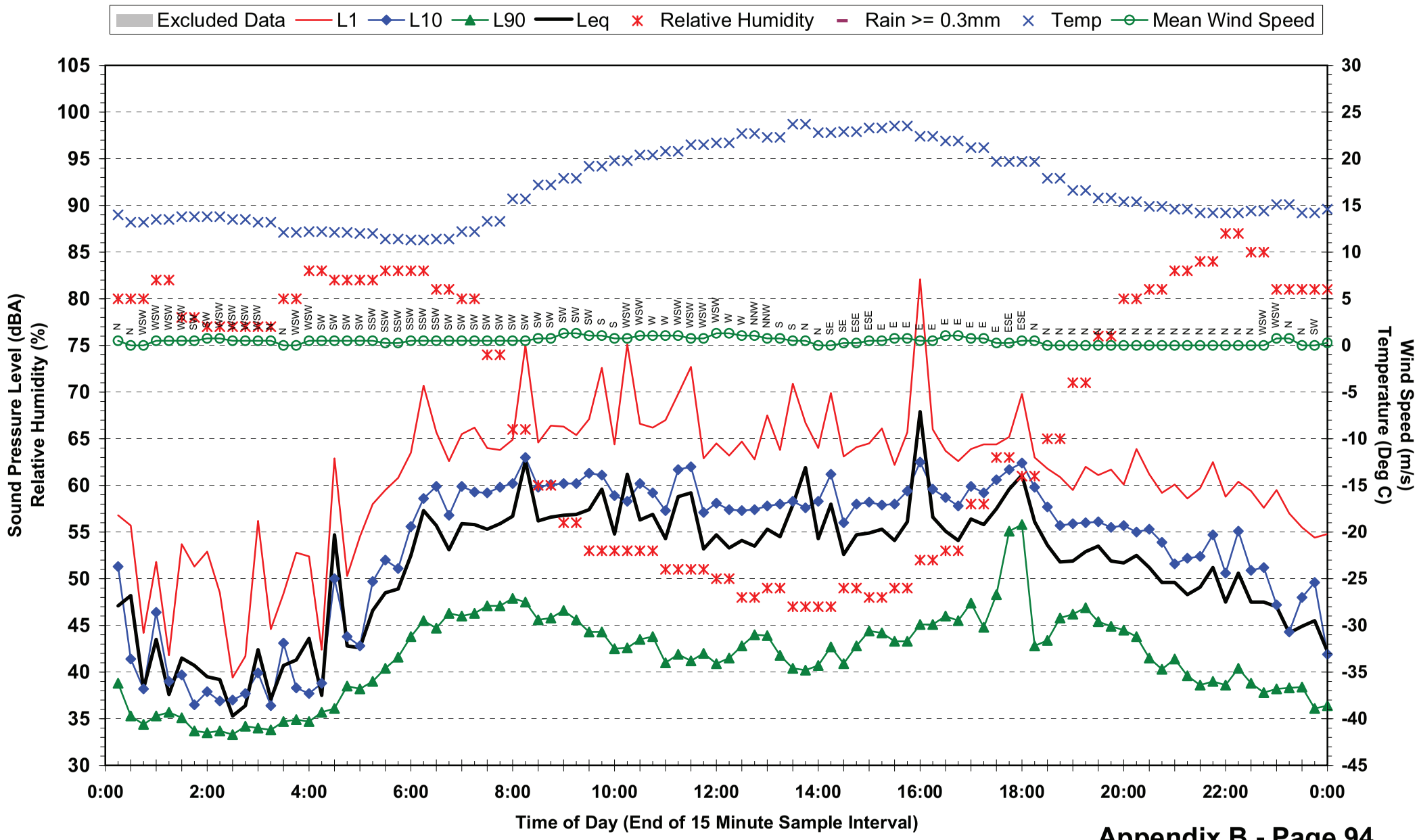
**Statistical Ambient Noise Levels**
**Location 9 - 58 Leopard St - Friday 28 May 2010**



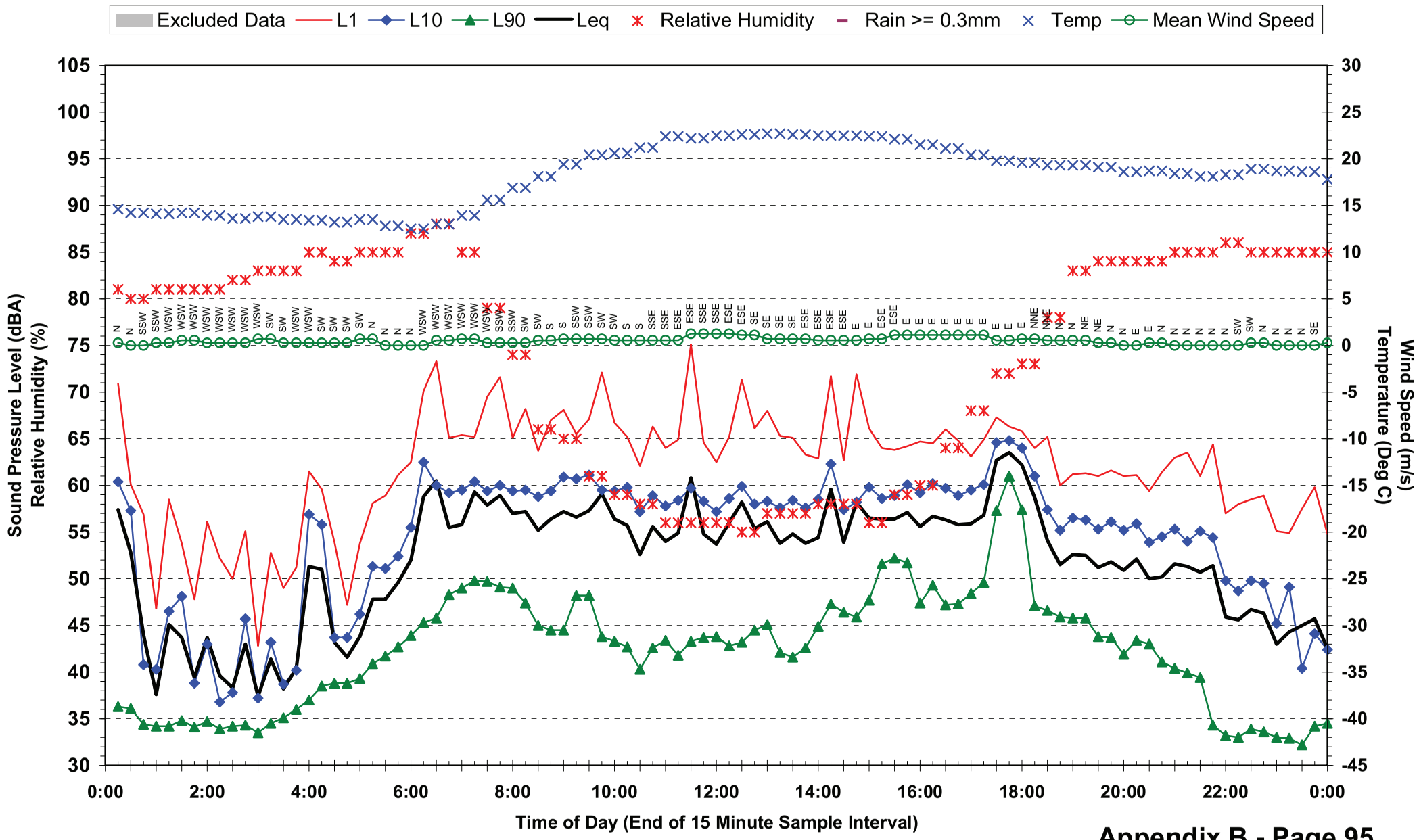
## Statistical Ambient Noise Levels
## Location 10 - 143 Park Rd - Tuesday 18 May 2010



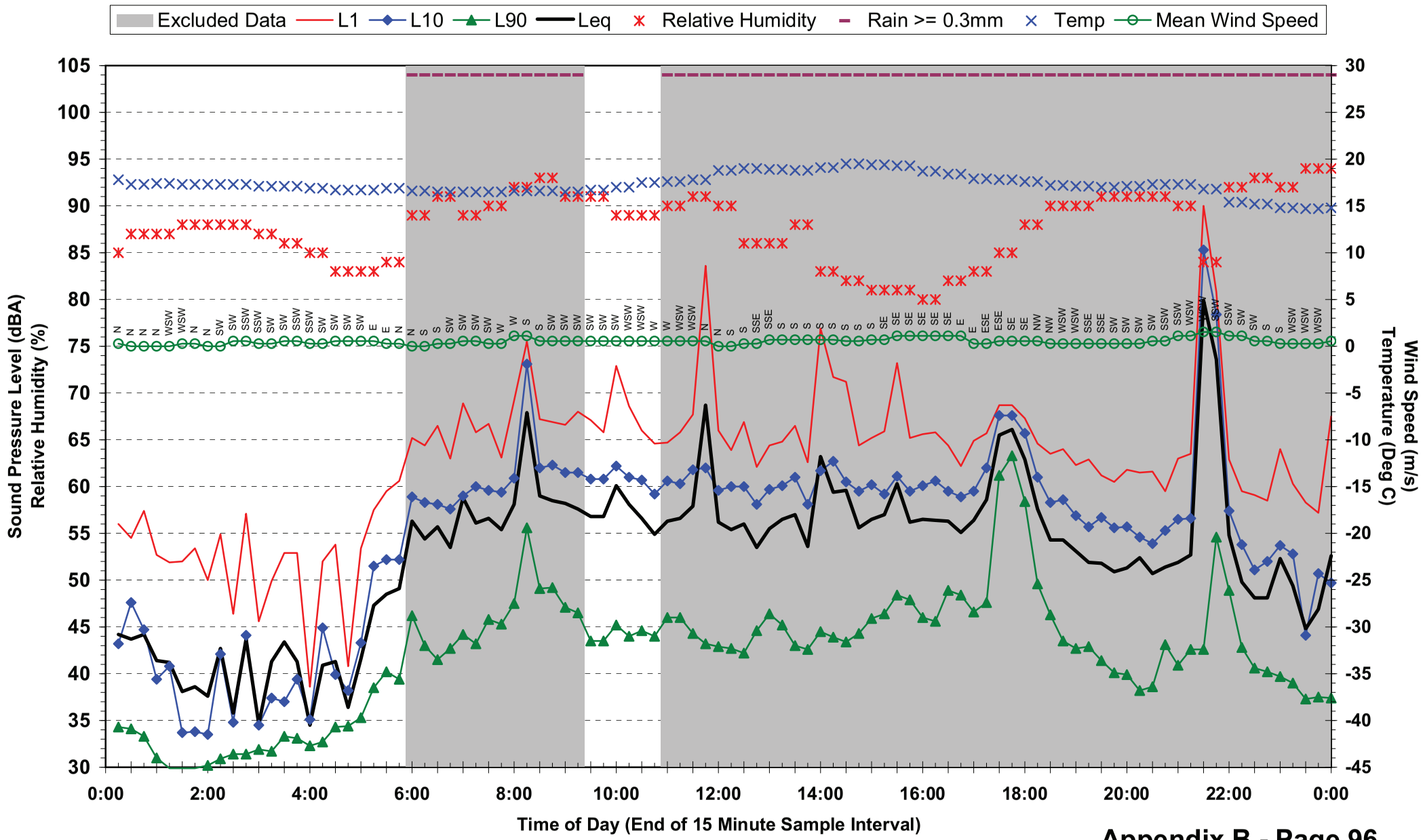
## Statistical Ambient Noise Levels
## Location 10 - 143 Park Rd - Wednesday 19 May 2010



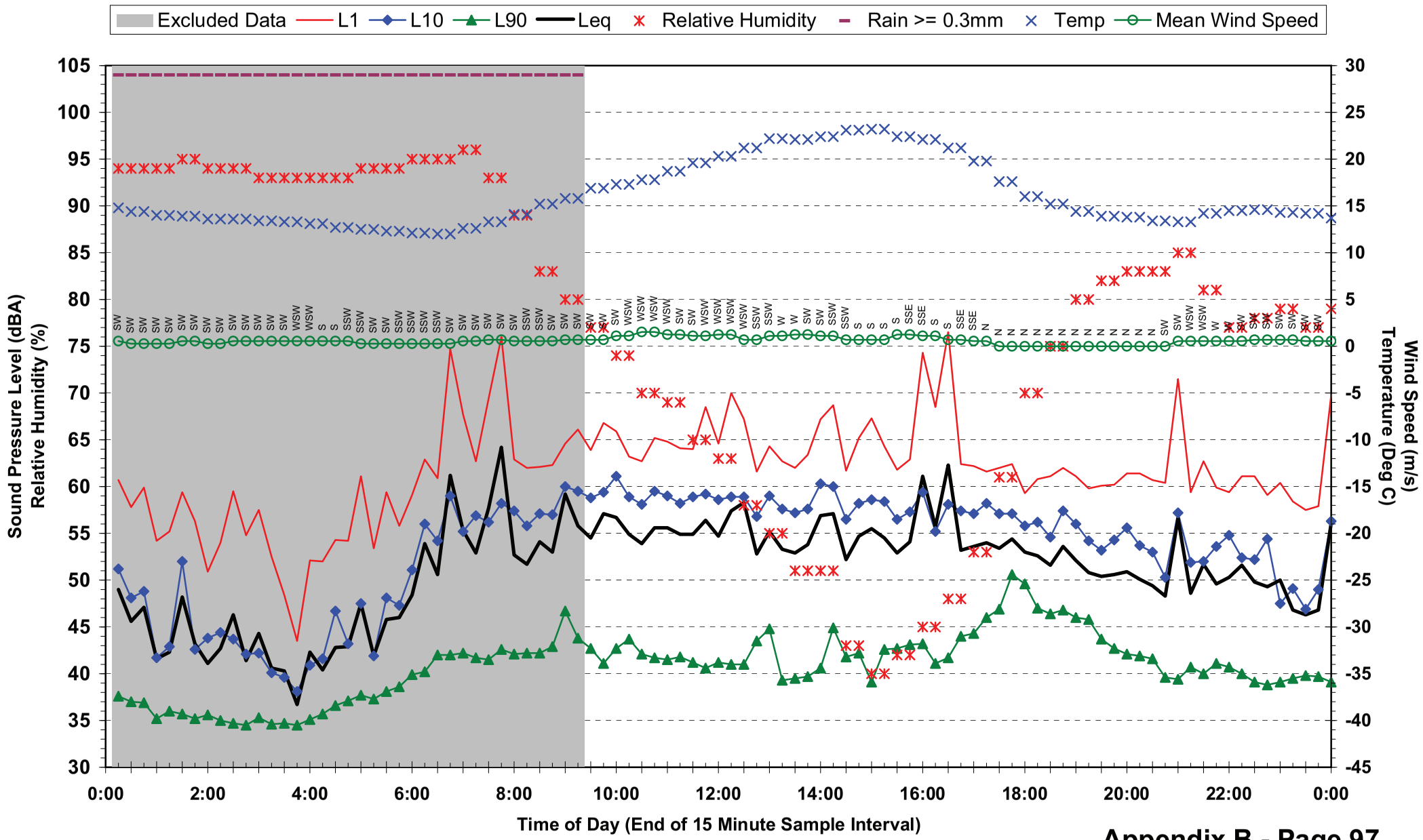
## Statistical Ambient Noise Levels
## Location 10 - 143 Park Rd - Thursday 20 May 2010



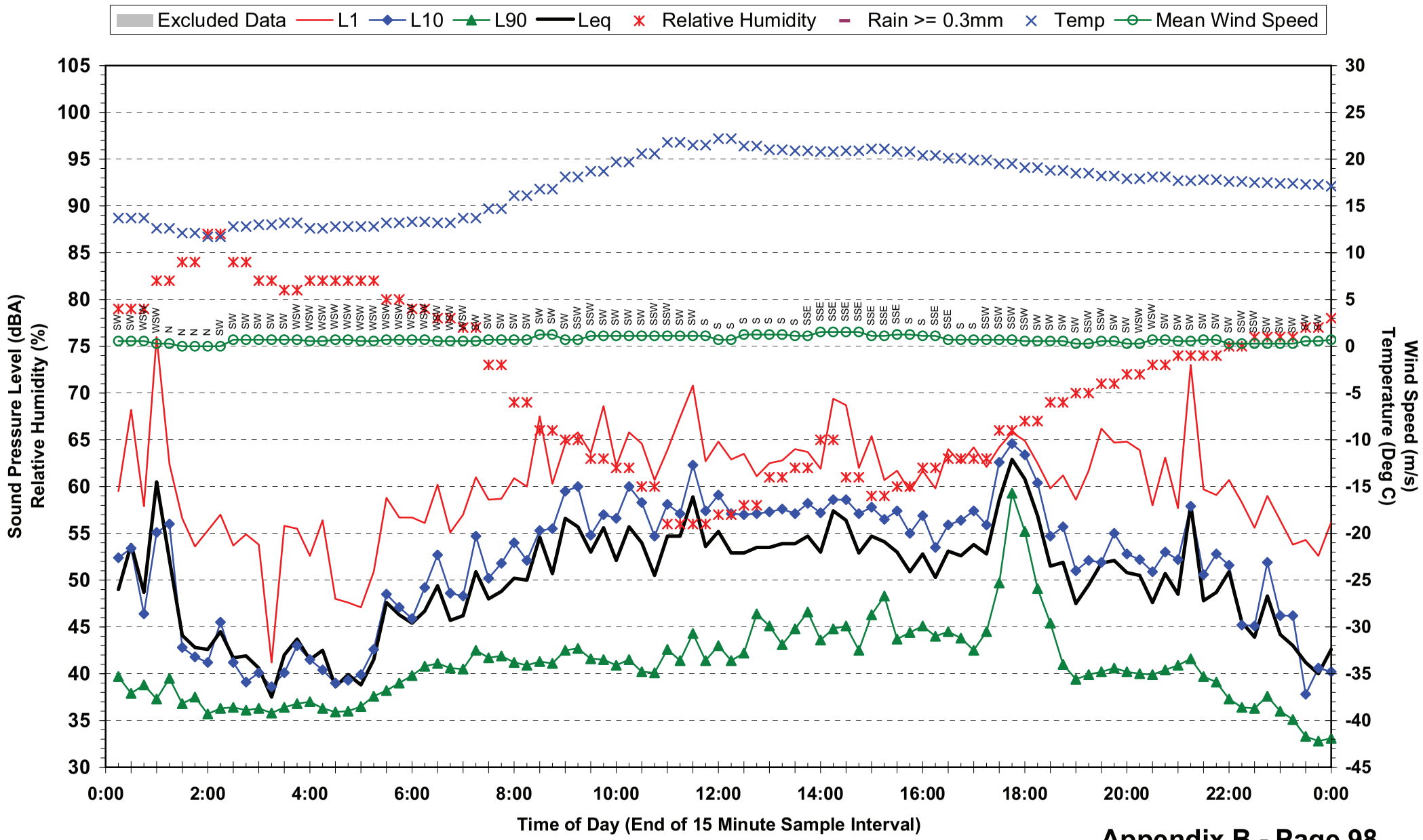
## Statistical Ambient Noise Levels
## Location 10 - 143 Park Rd - Friday 21 May 2010



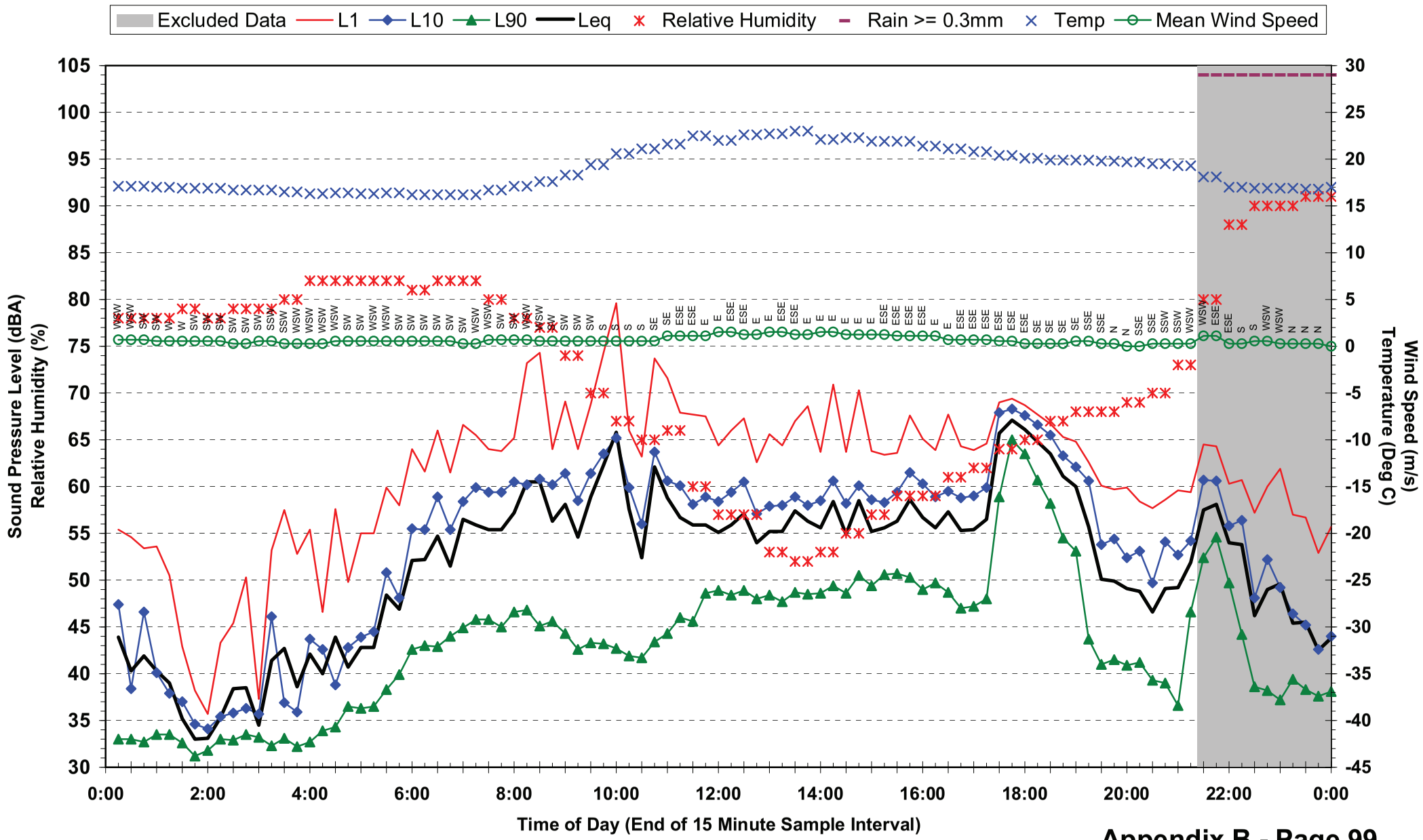
## Statistical Ambient Noise Levels
## Location 10 - 143 Park Rd - Saturday 22 May 2010



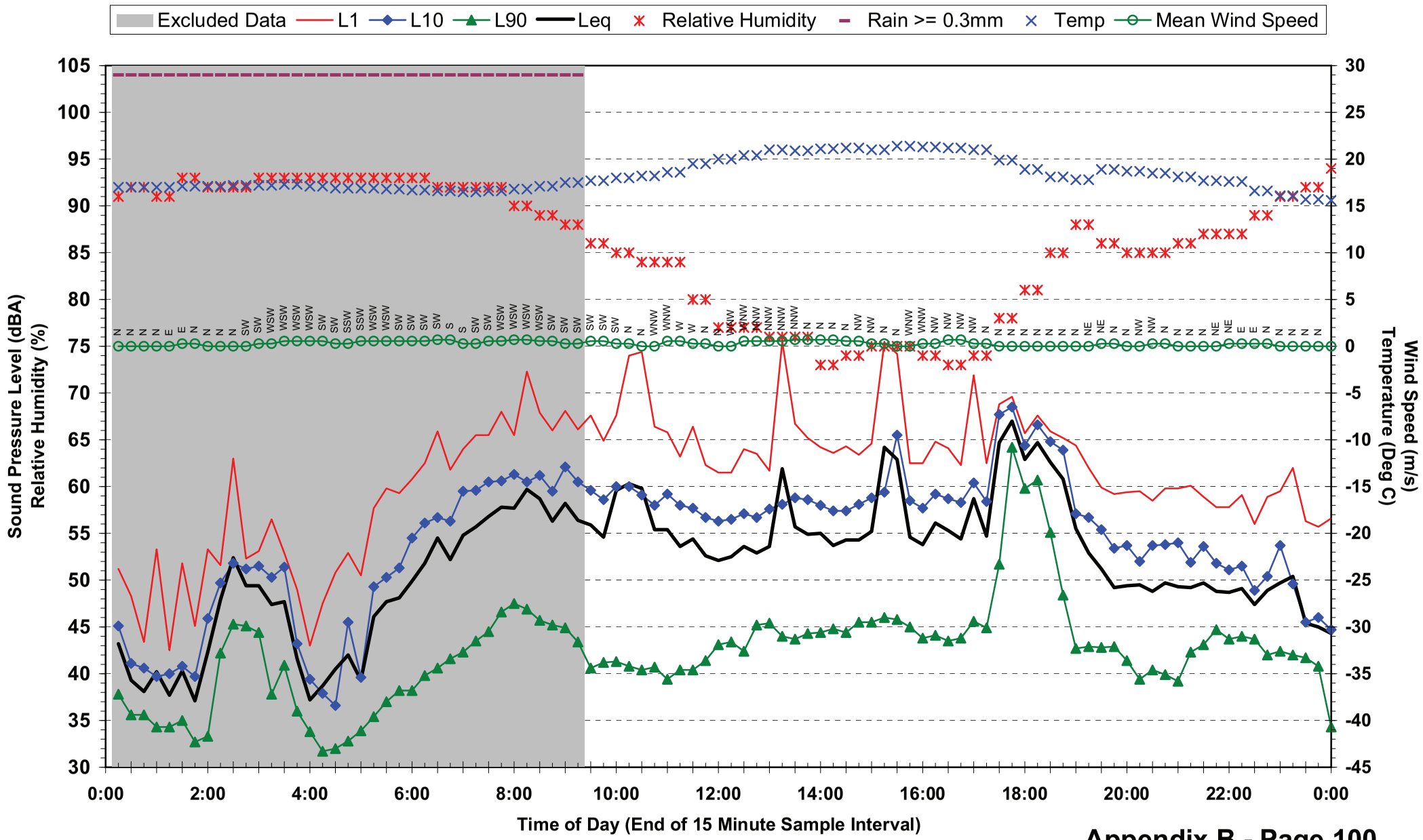
## Statistical Ambient Noise Levels
## Location 10 - 143 Park Rd - Sunday 23 May 2010



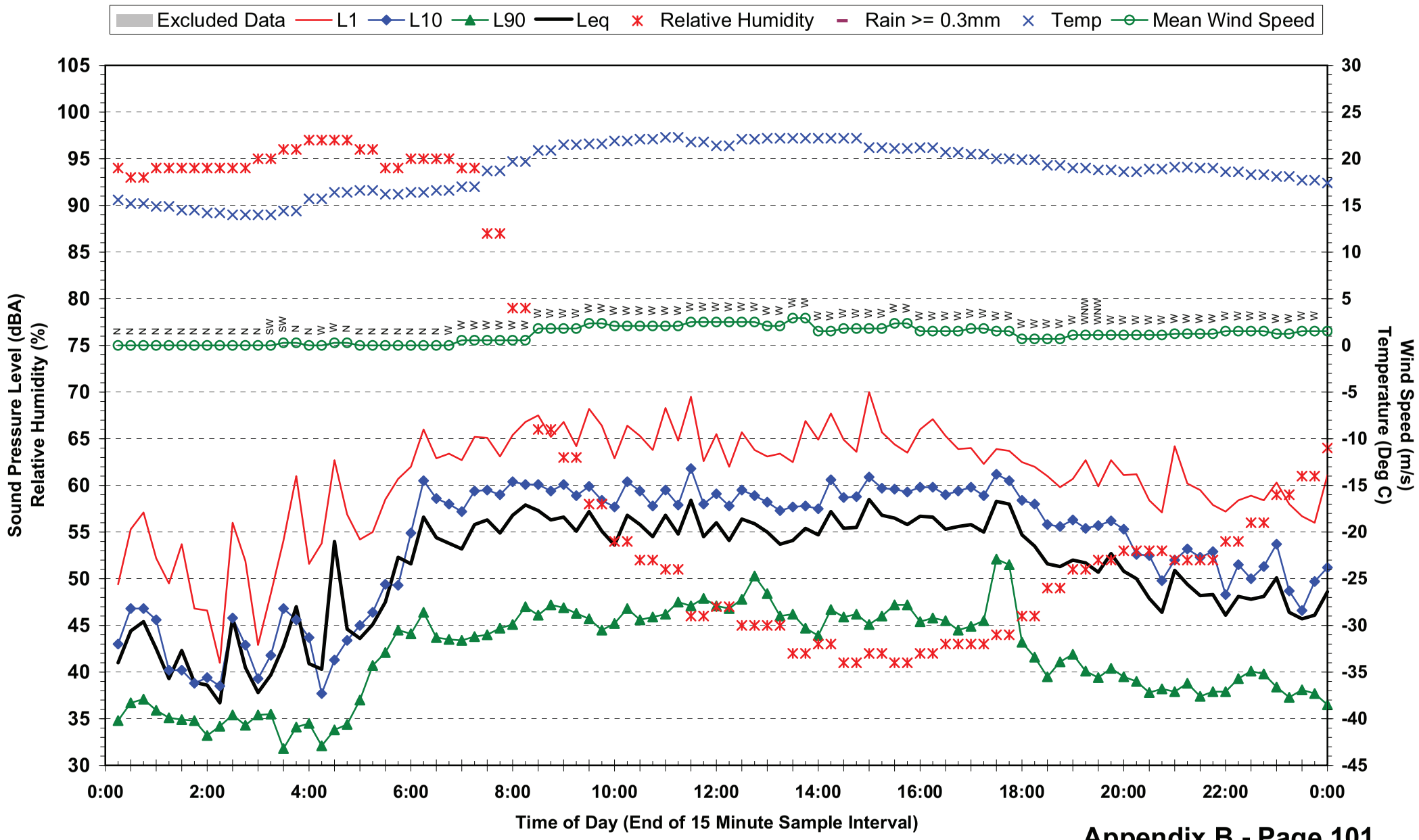
## Statistical Ambient Noise Levels
## Location 10 - 143 Park Rd - Monday 24 May 2010



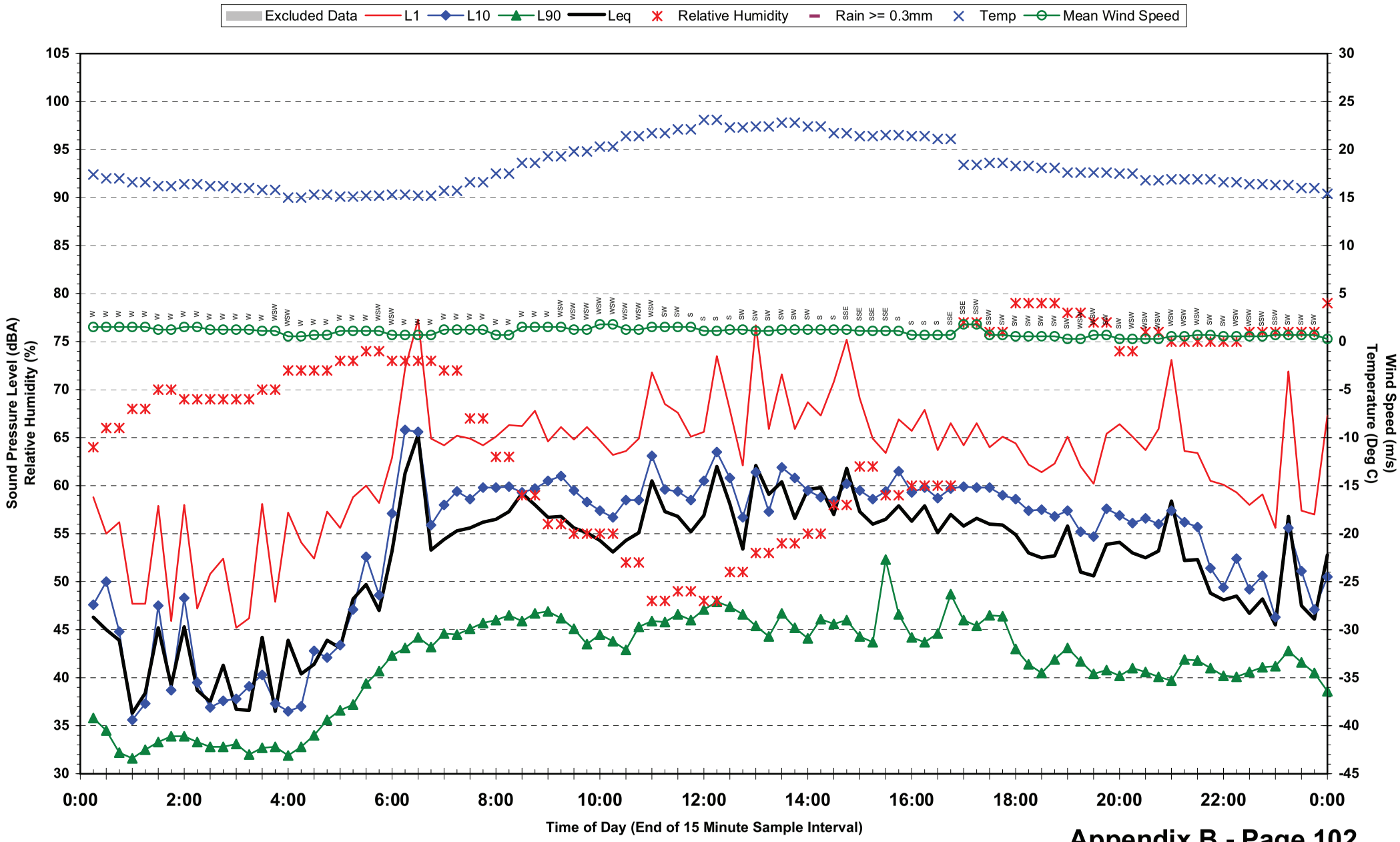
## Statistical Ambient Noise Levels
## Location 10 - 143 Park Rd - Tuesday 25 May 2010



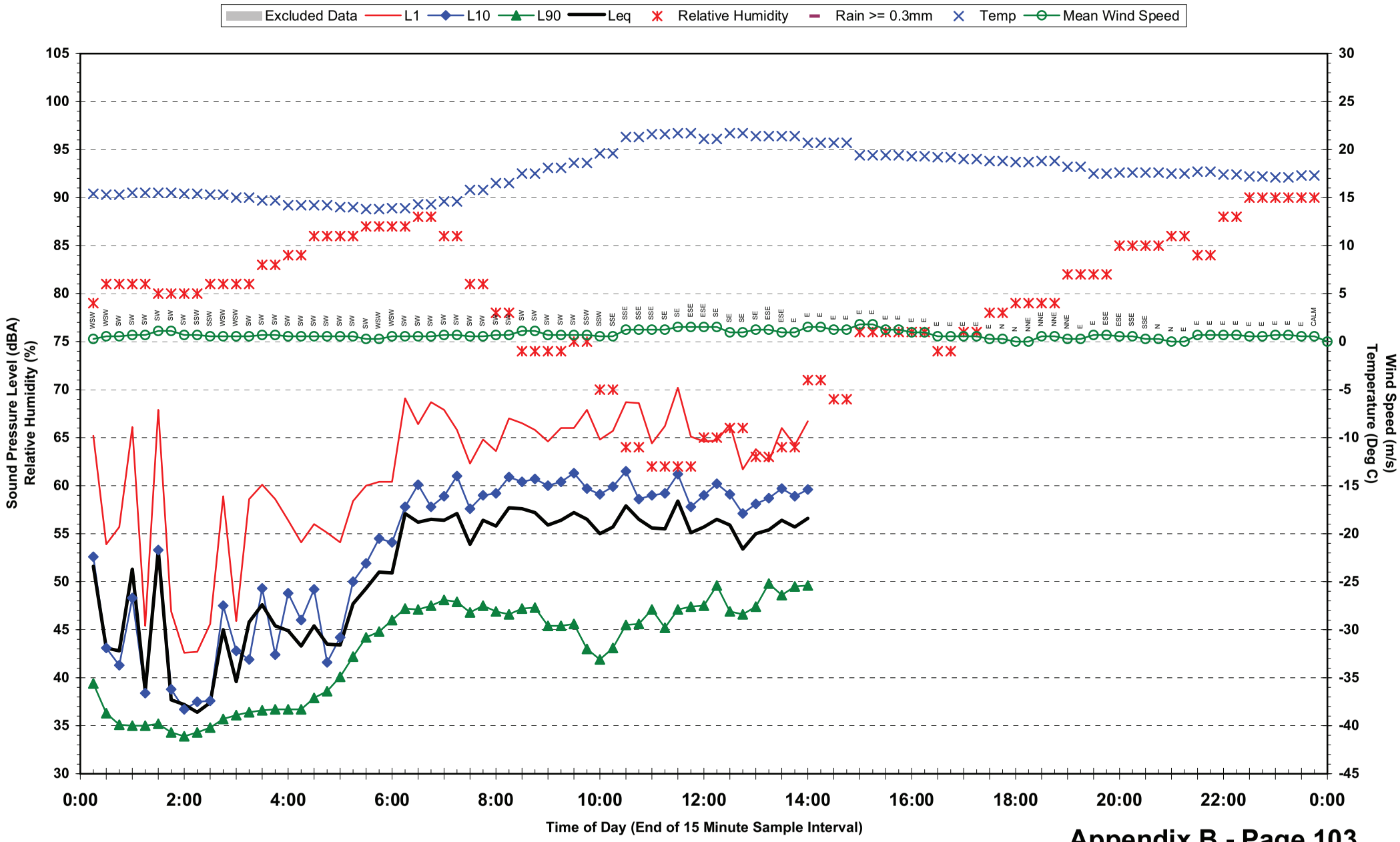
## Statistical Ambient Noise Levels
## Location 10 - 143 Park Rd - Wednesday 26 May 2010



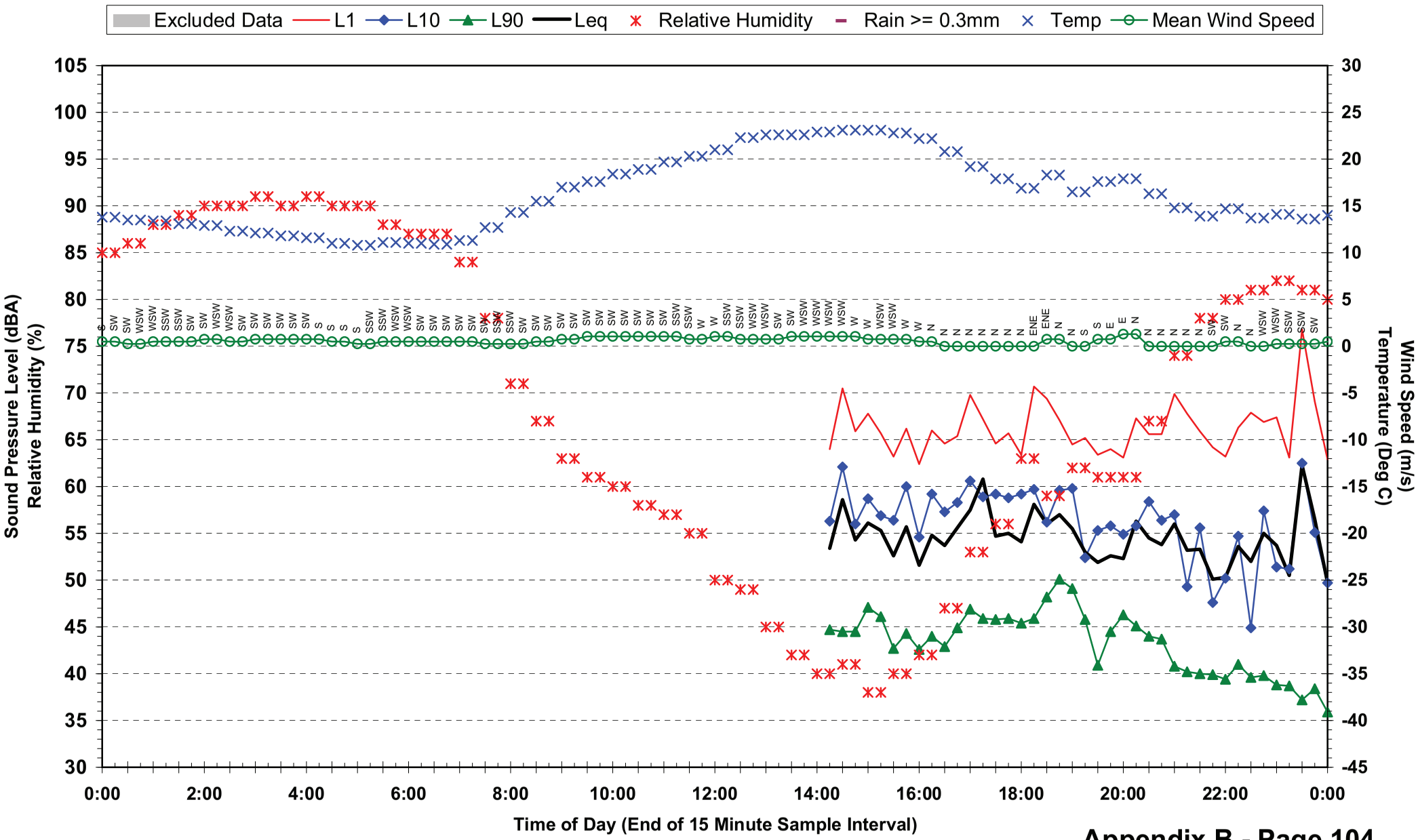
**Statistical Ambient Noise Levels**
**Location 10 - 143 Park Rd - Thursday 27 May 2010**



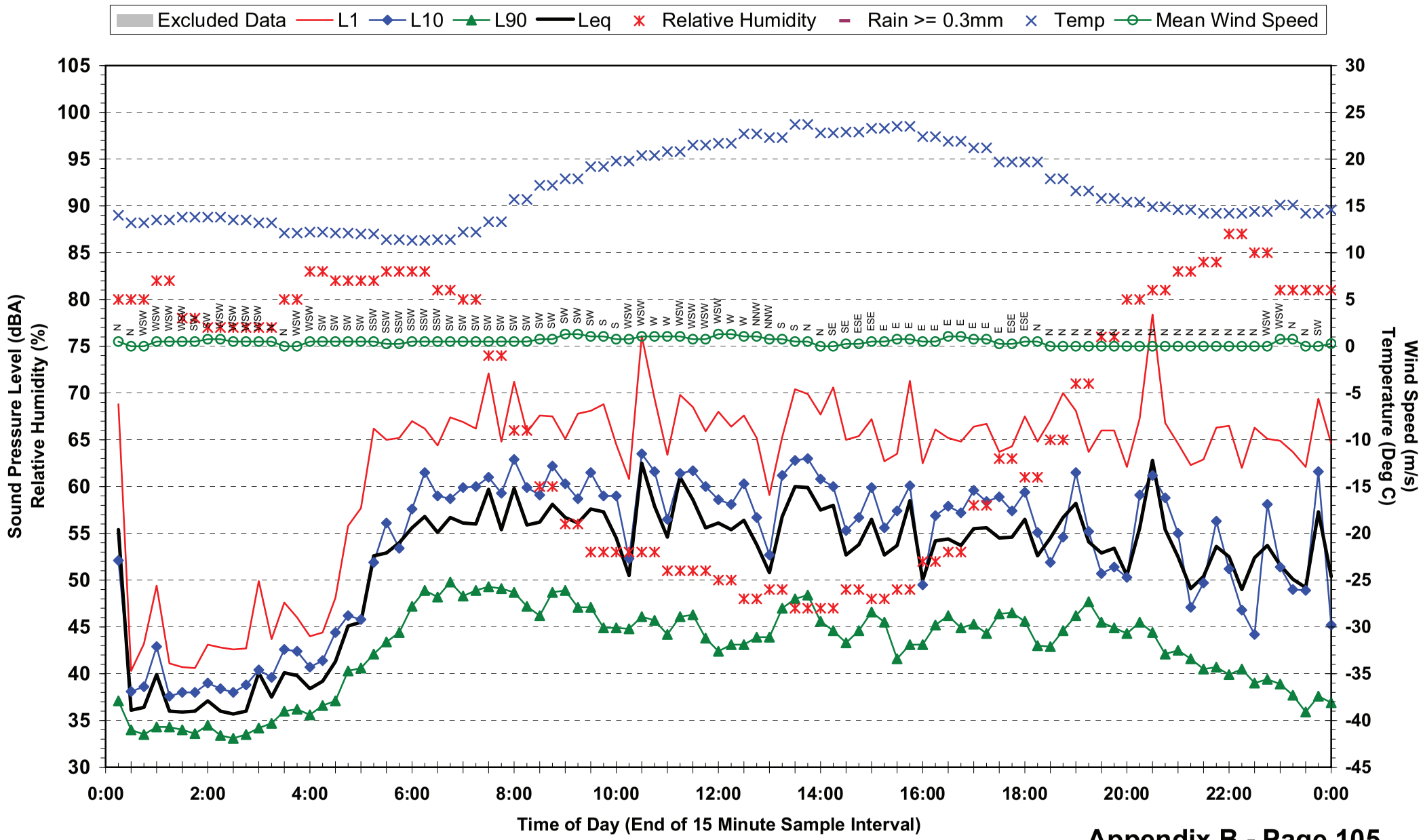
**Statistical Ambient Noise Levels**
**Location 10 - 143 Park Rd - Friday 28 May 2010**



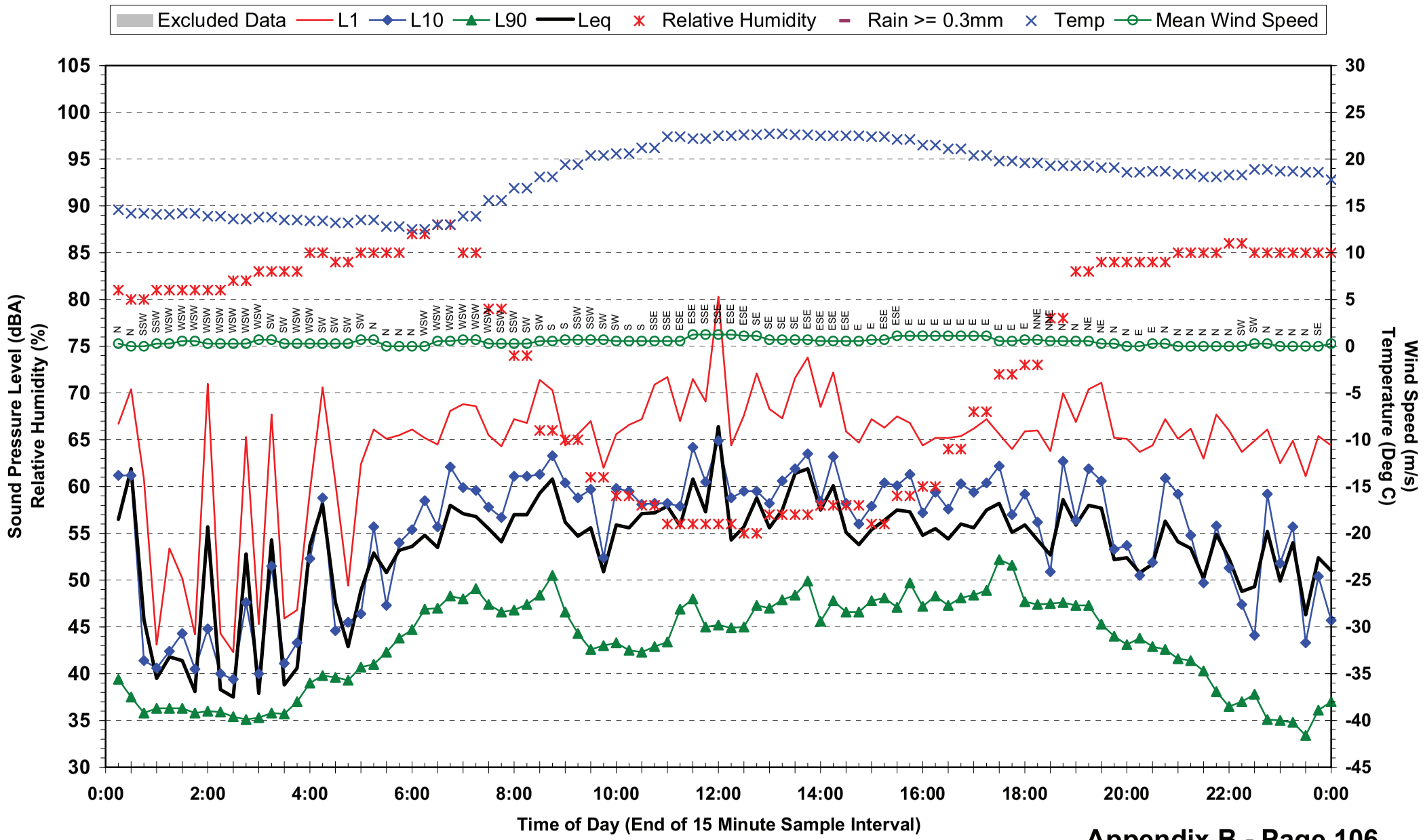
## Statistical Ambient Noise Levels
## Location 11 - Dutton Park State School - Tuesday 18 May 2010



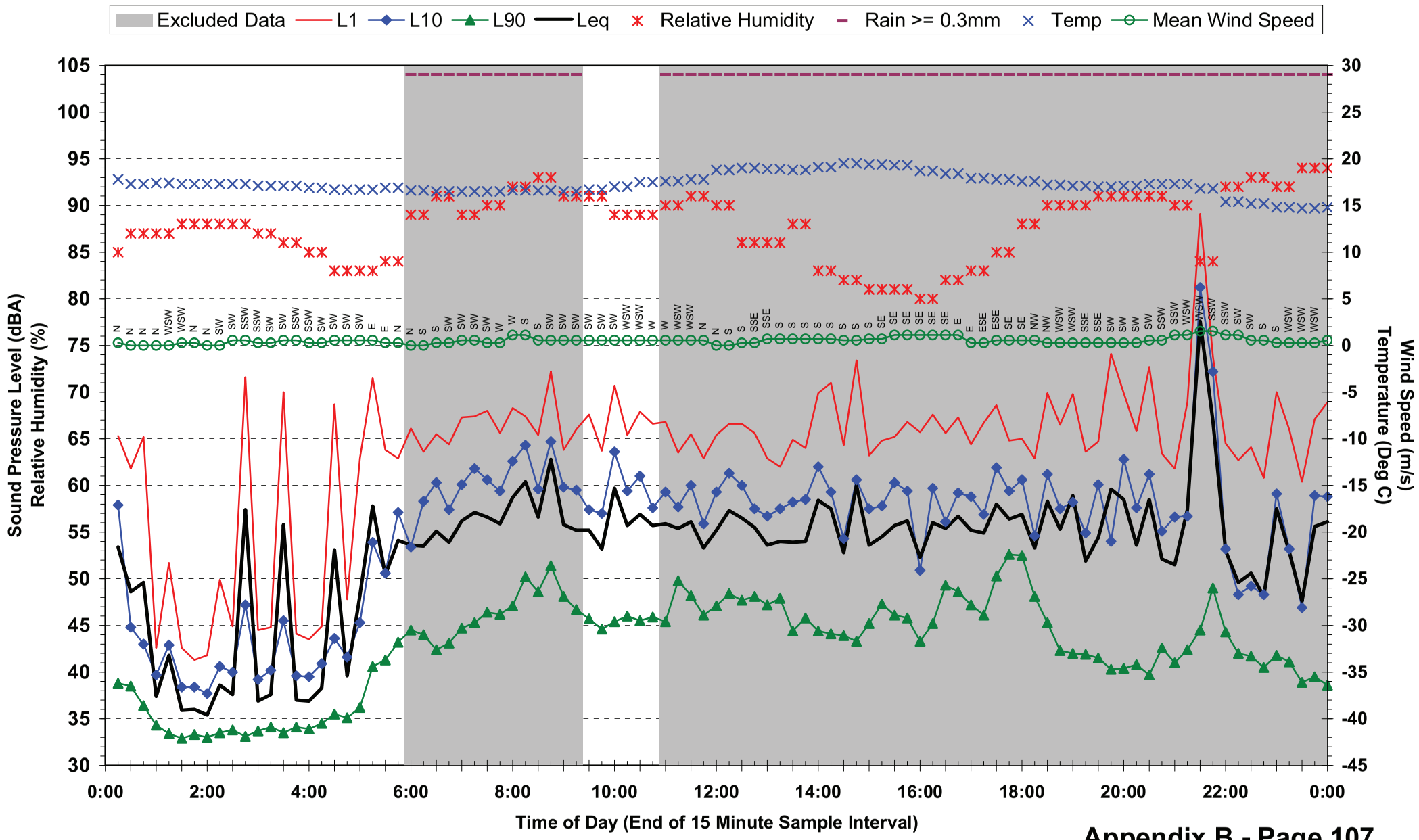
## Statistical Ambient Noise Levels
## Location 11 - Dutton Park State School - Wednesday 19 May 2010



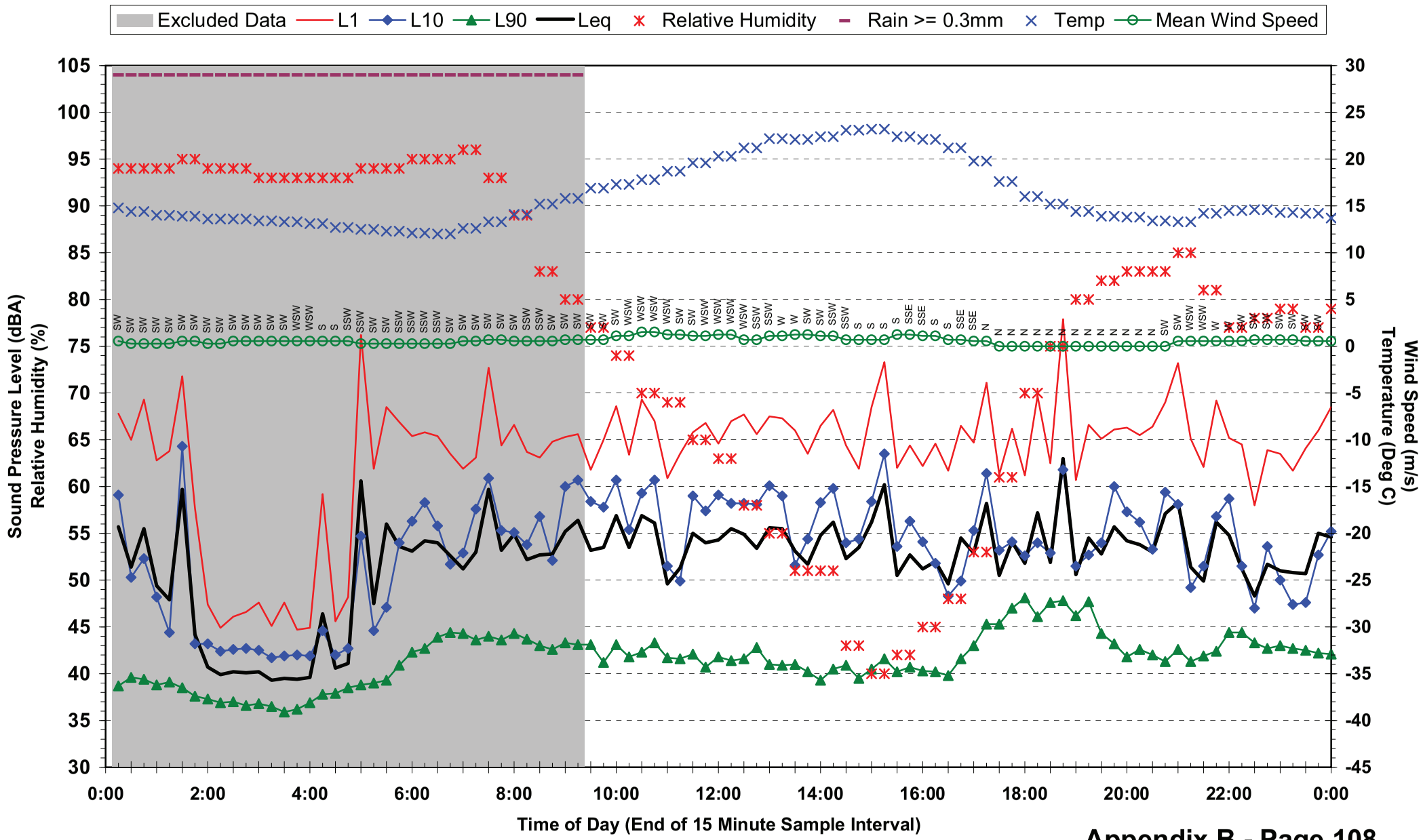
## Statistical Ambient Noise Levels
## Location 11 - Dutton Park State School - Thursday 20 May 2010



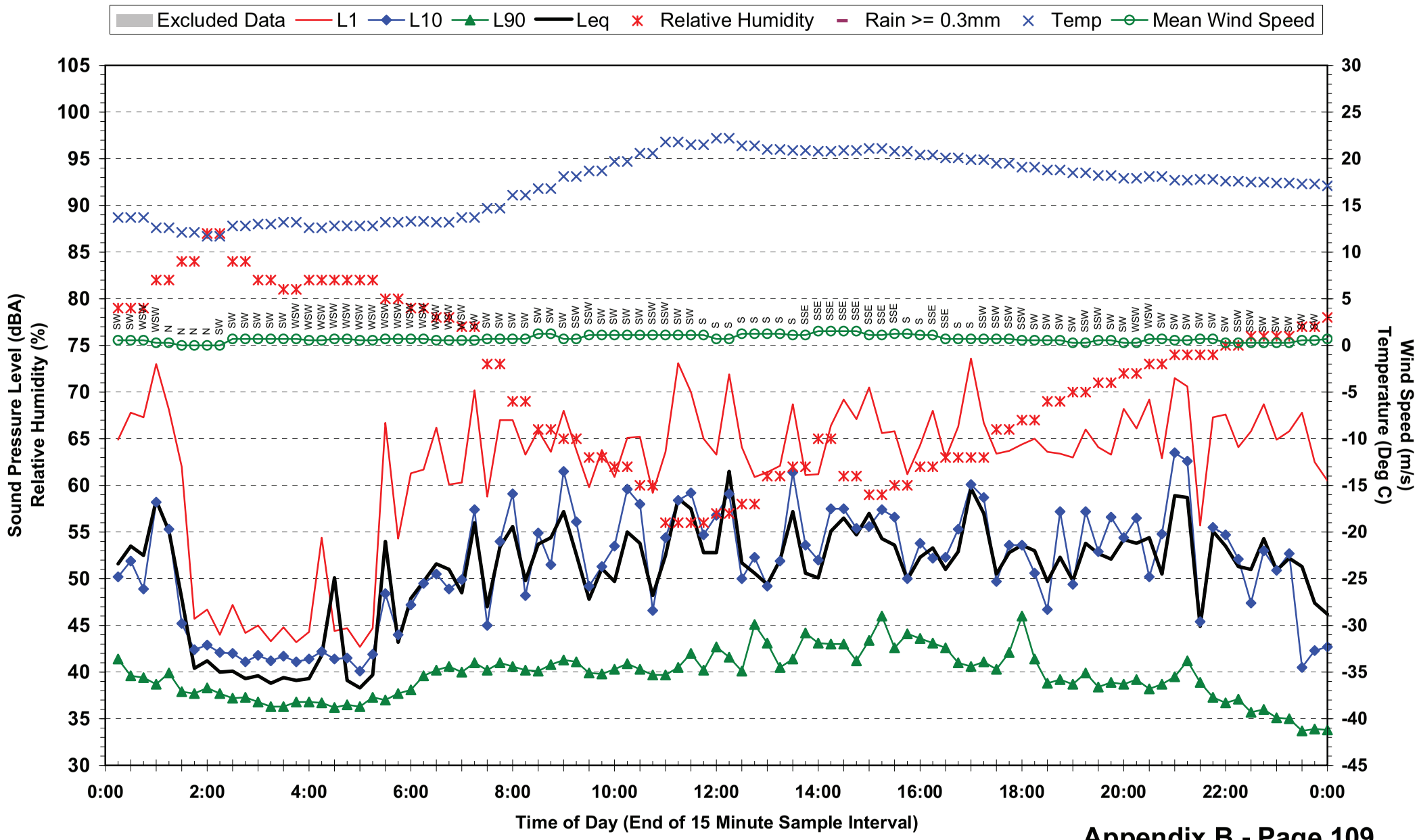
## Statistical Ambient Noise Levels
## Location 11 - Dutton Park State School - Friday 21 May 2010



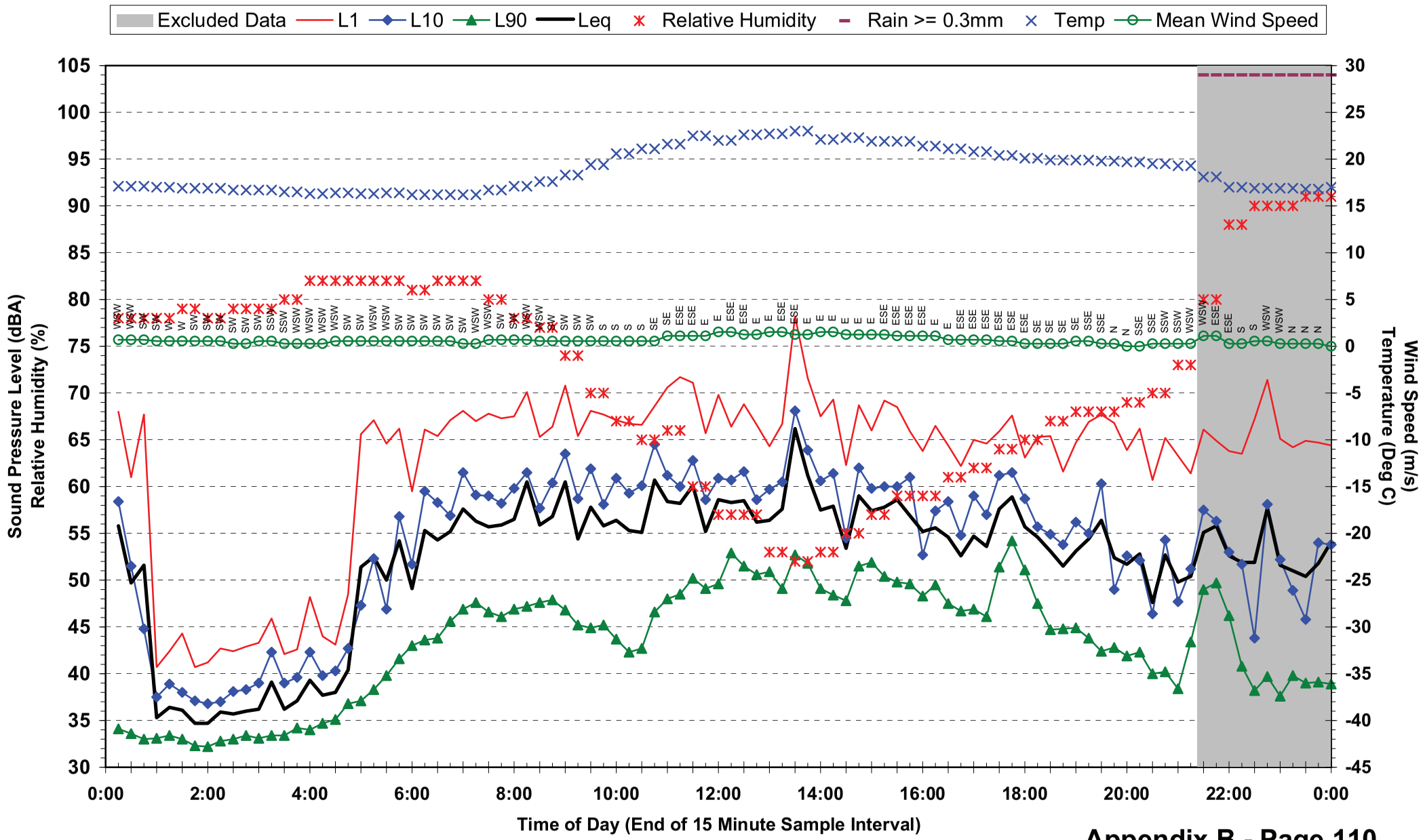
## Statistical Ambient Noise Levels
## Location 11 - Dutton Park State School - Saturday 22 May 2010



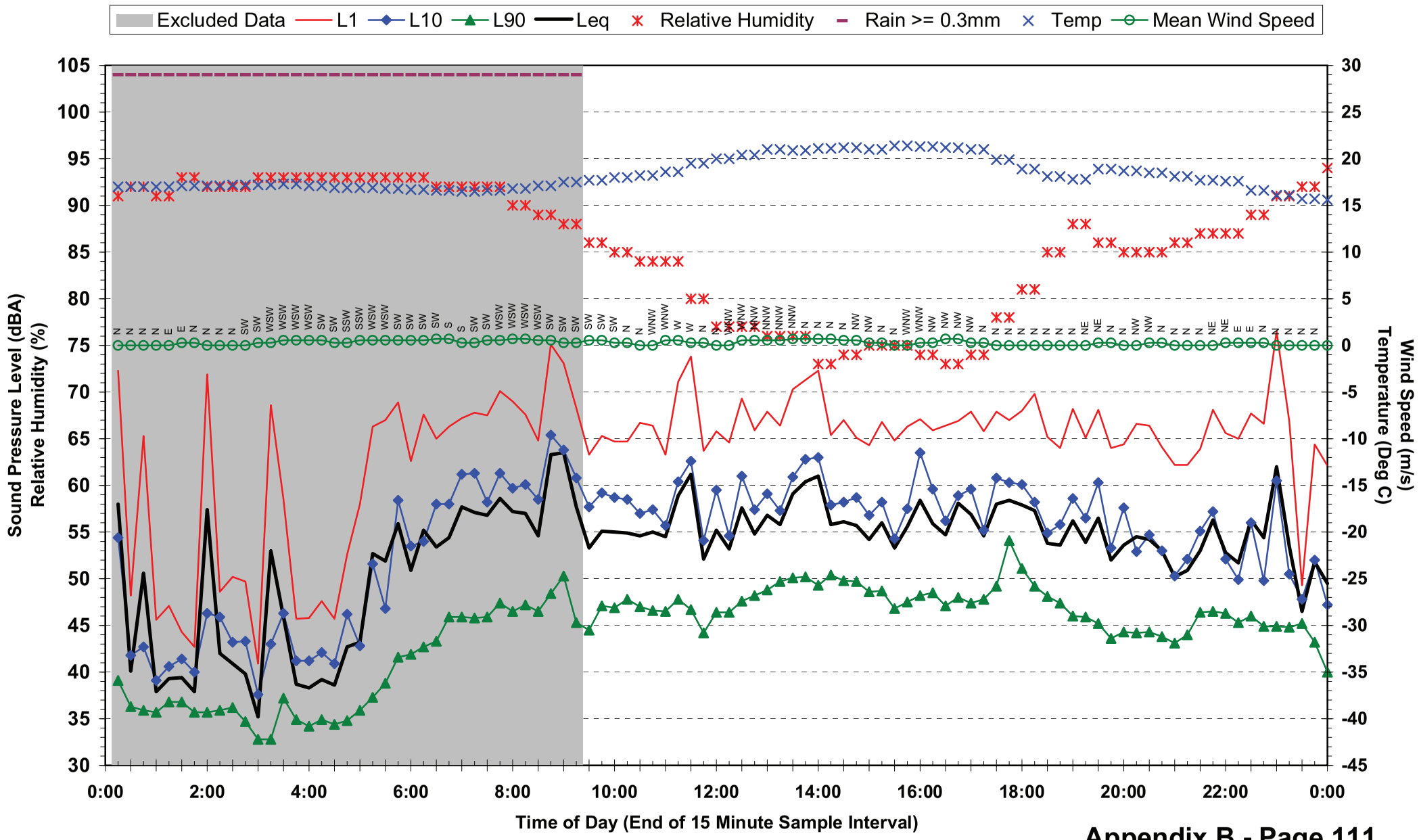
## Statistical Ambient Noise Levels
## Location 11 - Dutton Park State School - Sunday 23 May 2010



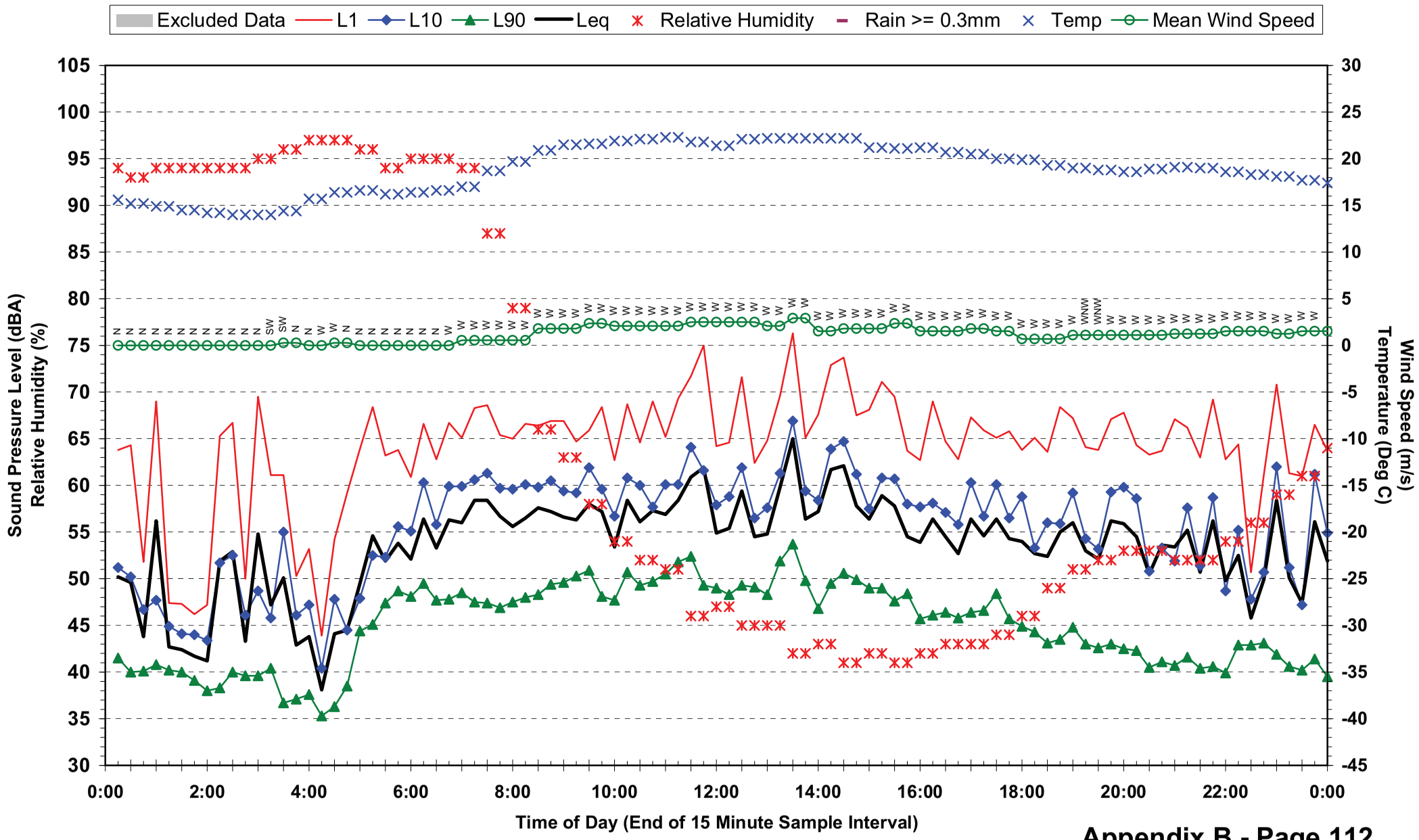
## Statistical Ambient Noise Levels
## Location 11 - Dutton Park State School - Monday 24 May 2010



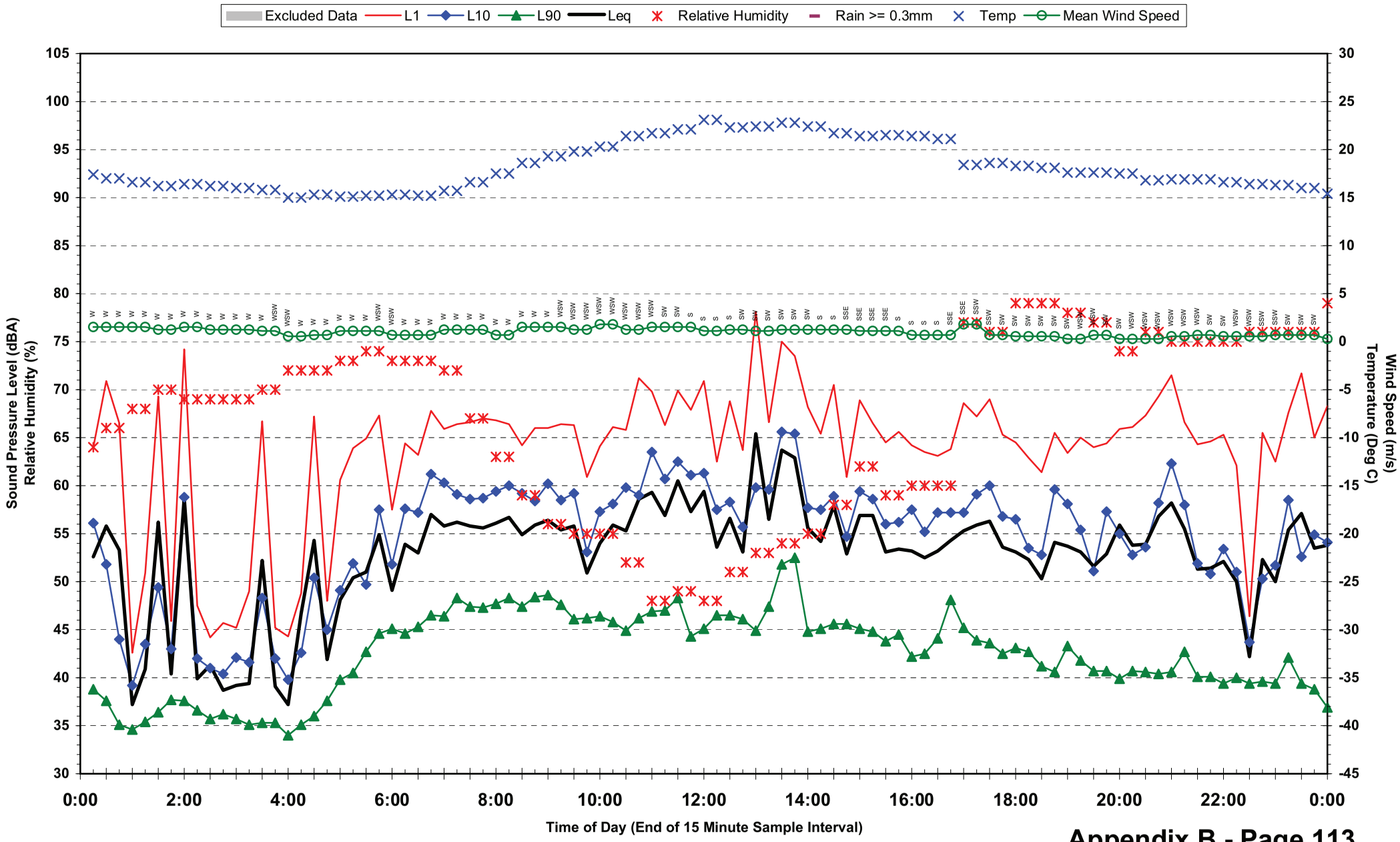
## Statistical Ambient Noise Levels
## Location 11 - Dutton Park State School - Tuesday 25 May 2010



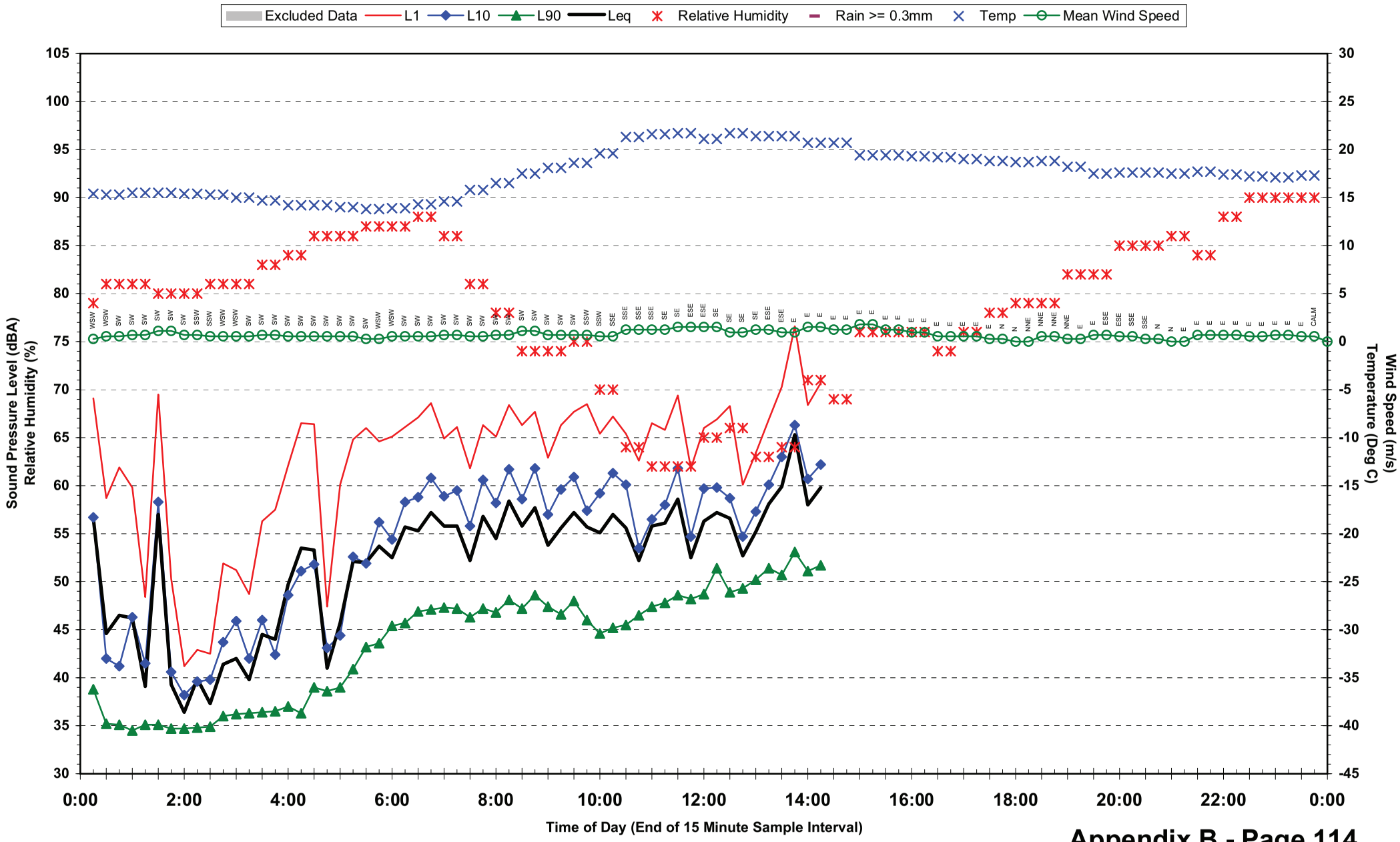
## Statistical Ambient Noise Levels
## Location 11 - Dutton Park State School - Wednesday 26 May 2010



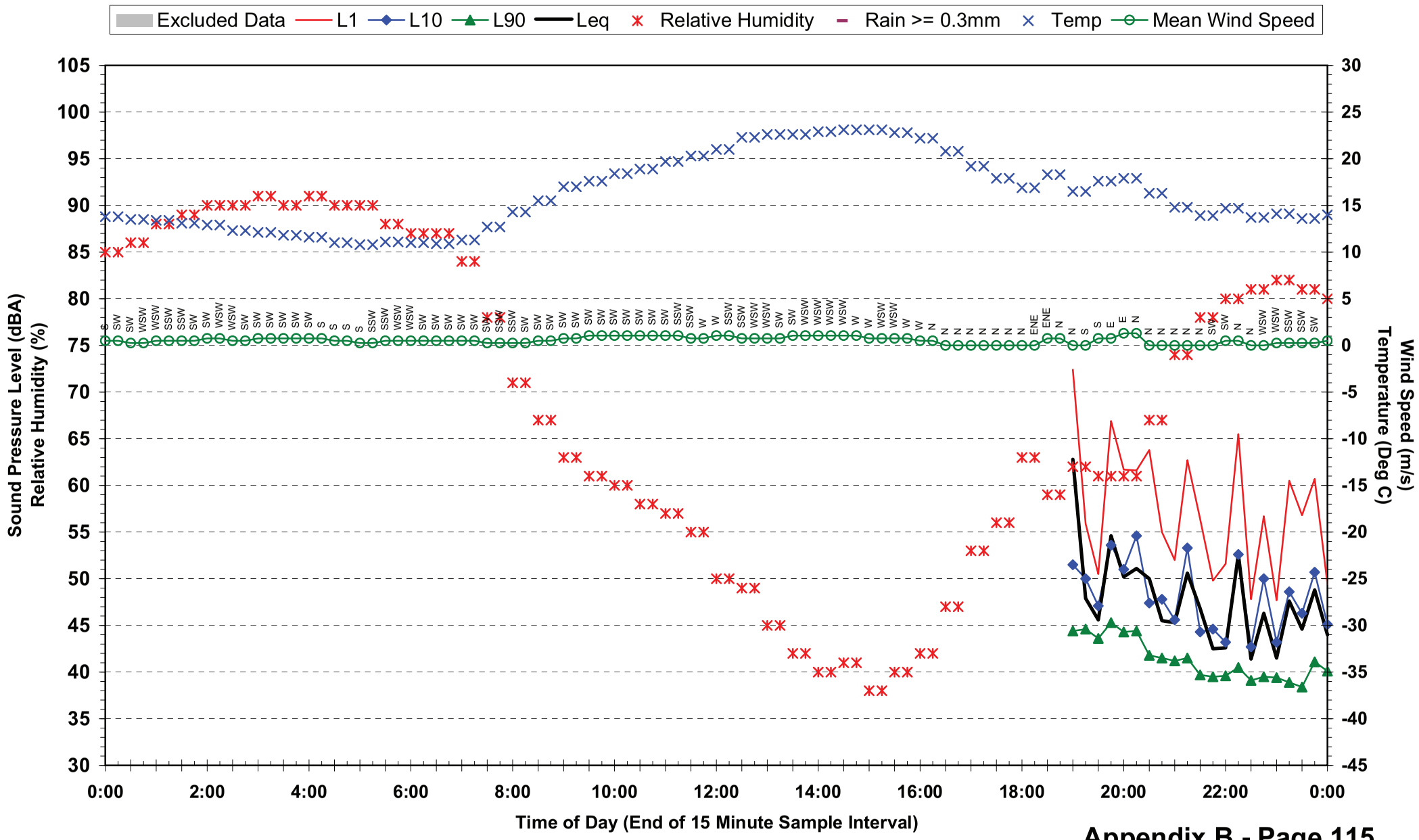
**Statistical Ambient Noise Levels**
**Location 11 - Dutton Park State School - Thursday 27 May 2010**



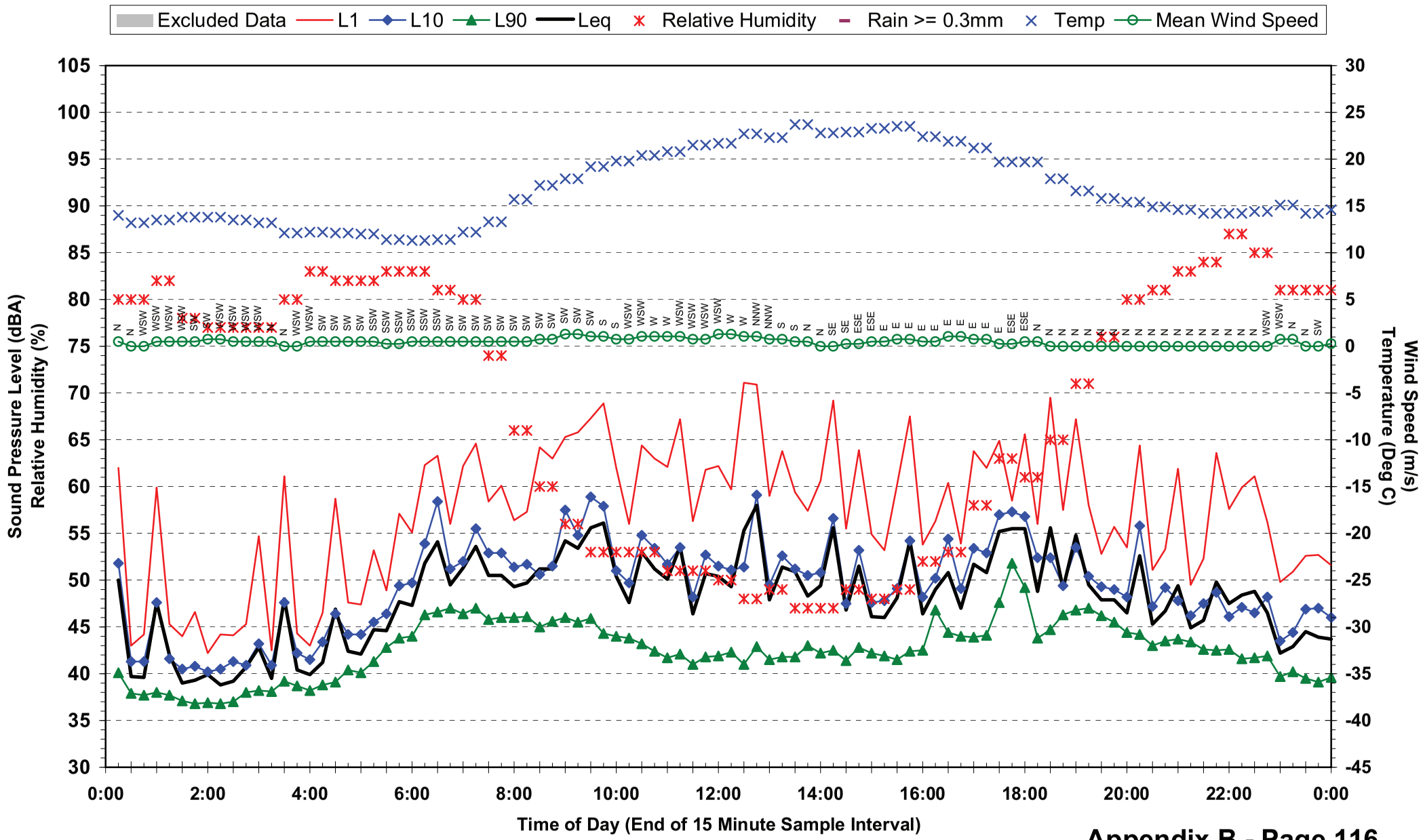
**Statistical Ambient Noise Levels**
**Location 11 - Dutton Park State School - Friday 28 May 2010**



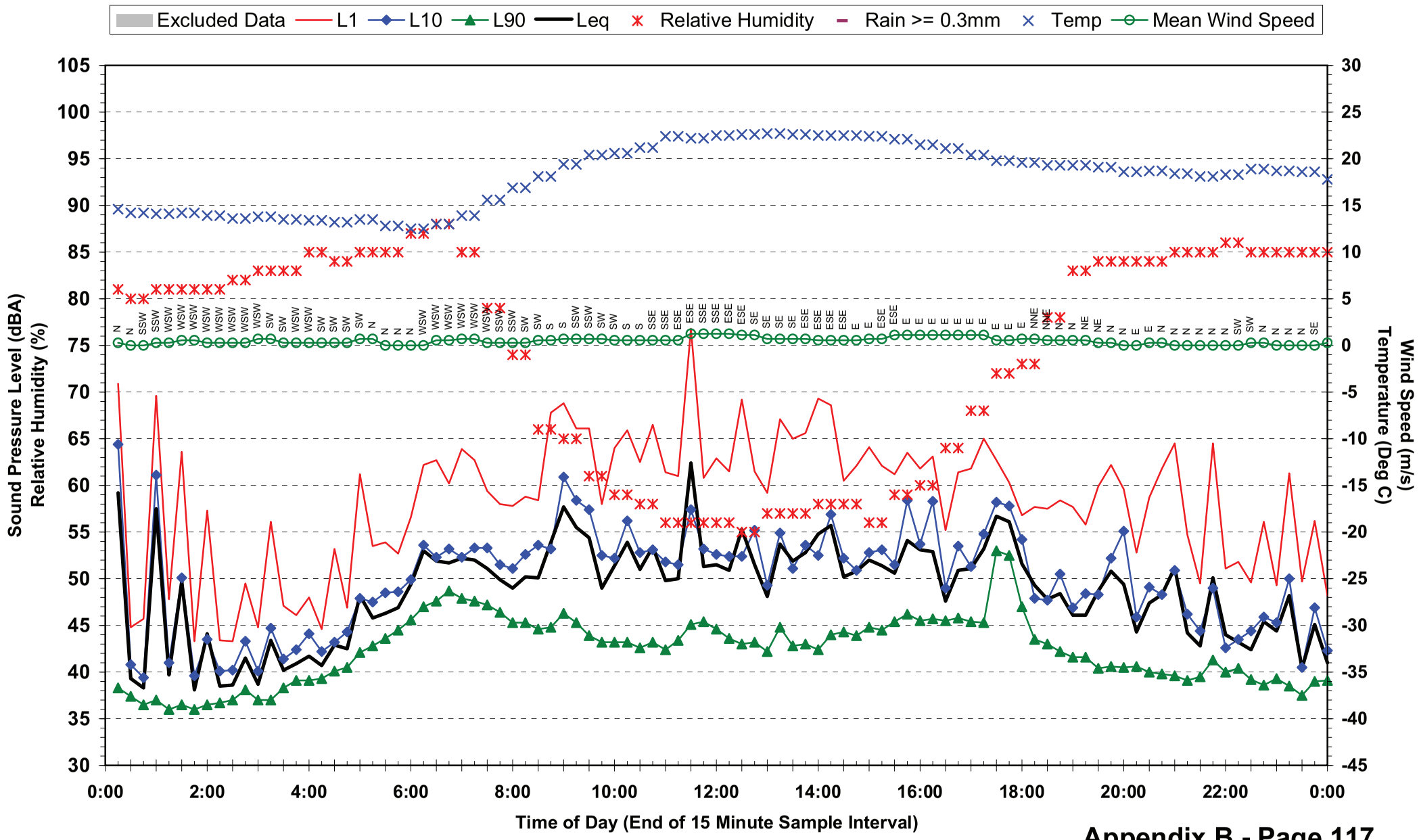
## Statistical Ambient Noise Levels
## Location 12 - 19 Dutton St - Tuesday 18 May 2010



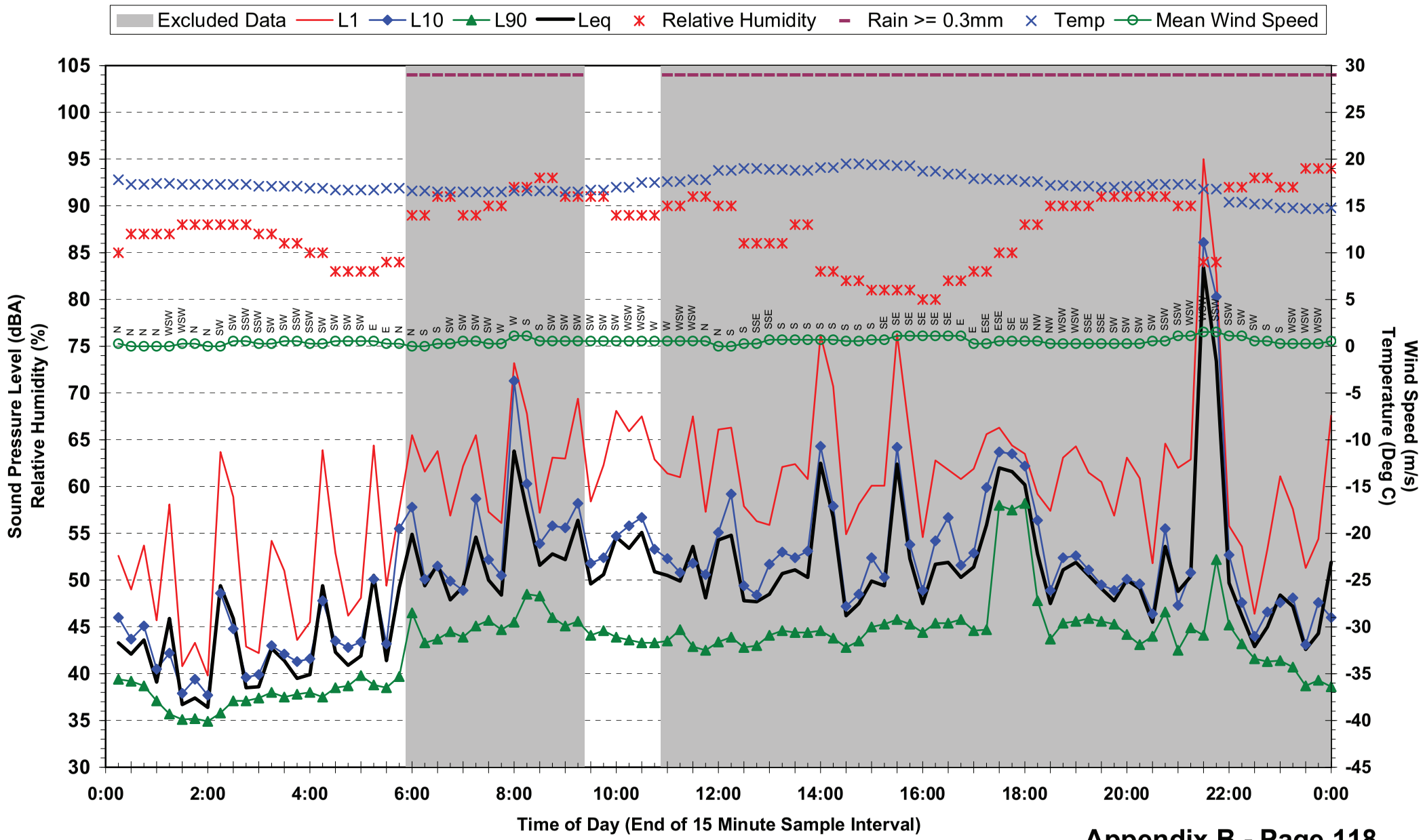
## Statistical Ambient Noise Levels
## Location 12 - 19 Dutton St - Wednesday 19 May 2010



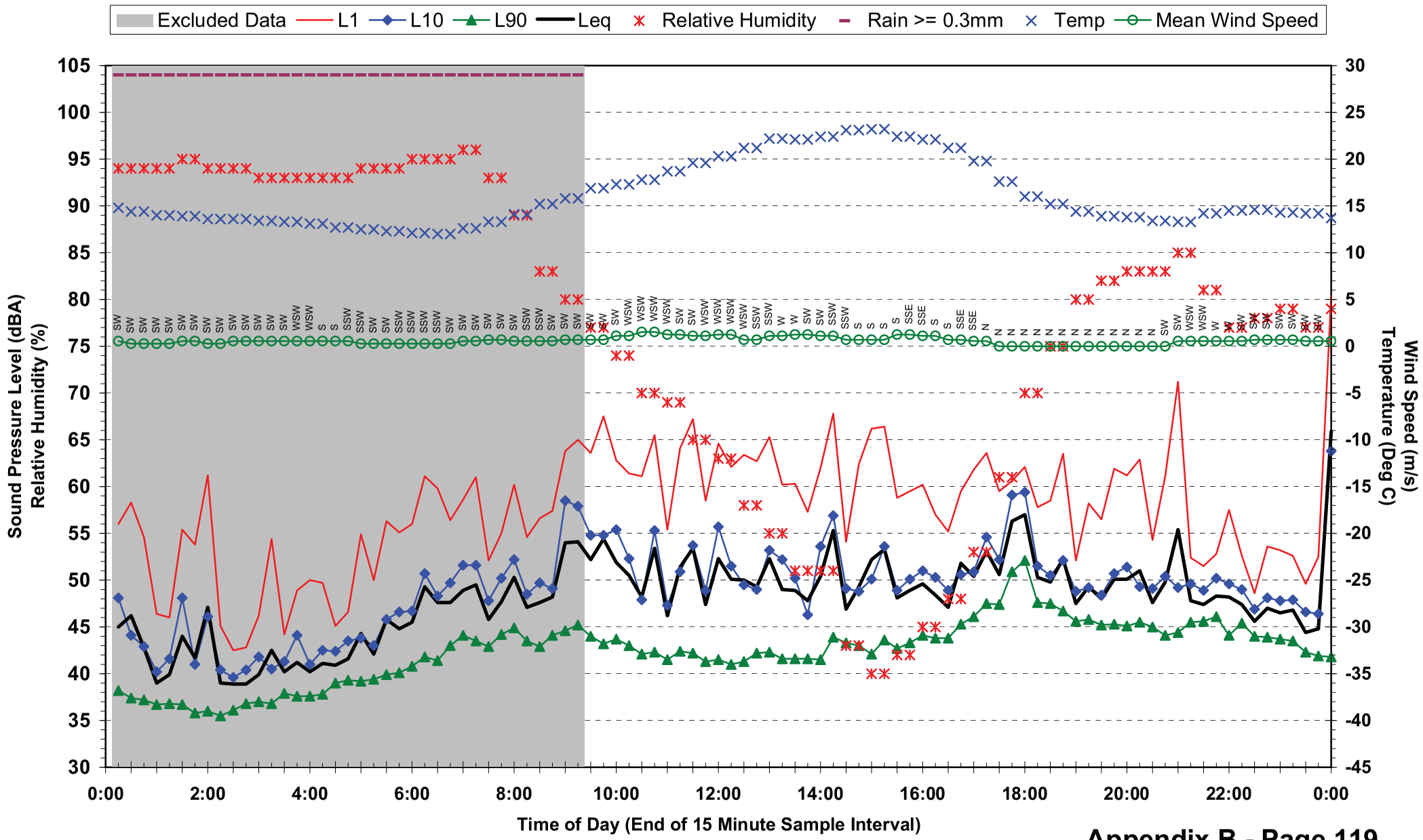
## Statistical Ambient Noise Levels
## Location 12 - 19 Dutton St - Thursday 20 May 2010



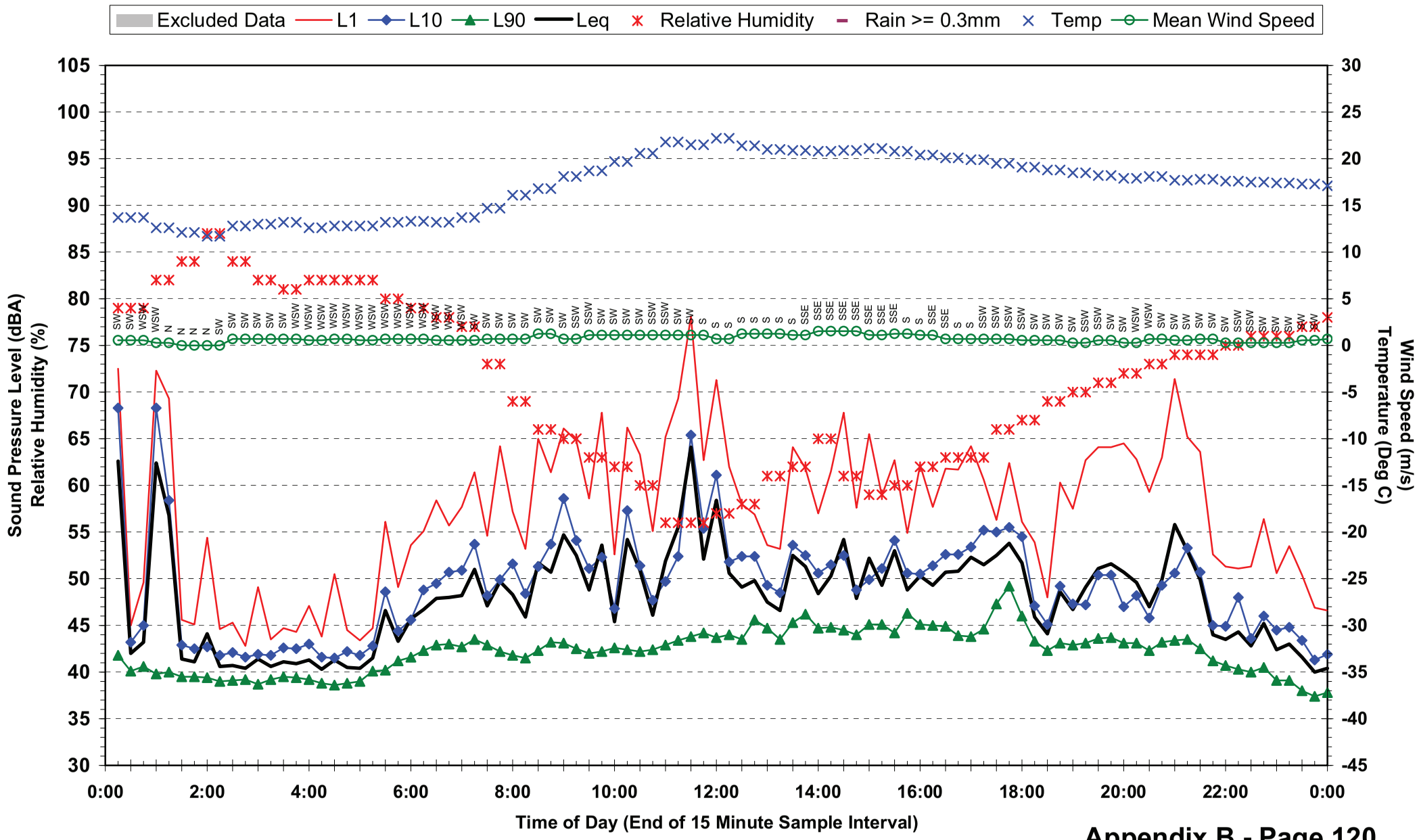
## Statistical Ambient Noise Levels
## Location 12 - 19 Dutton St - Friday 21 May 2010



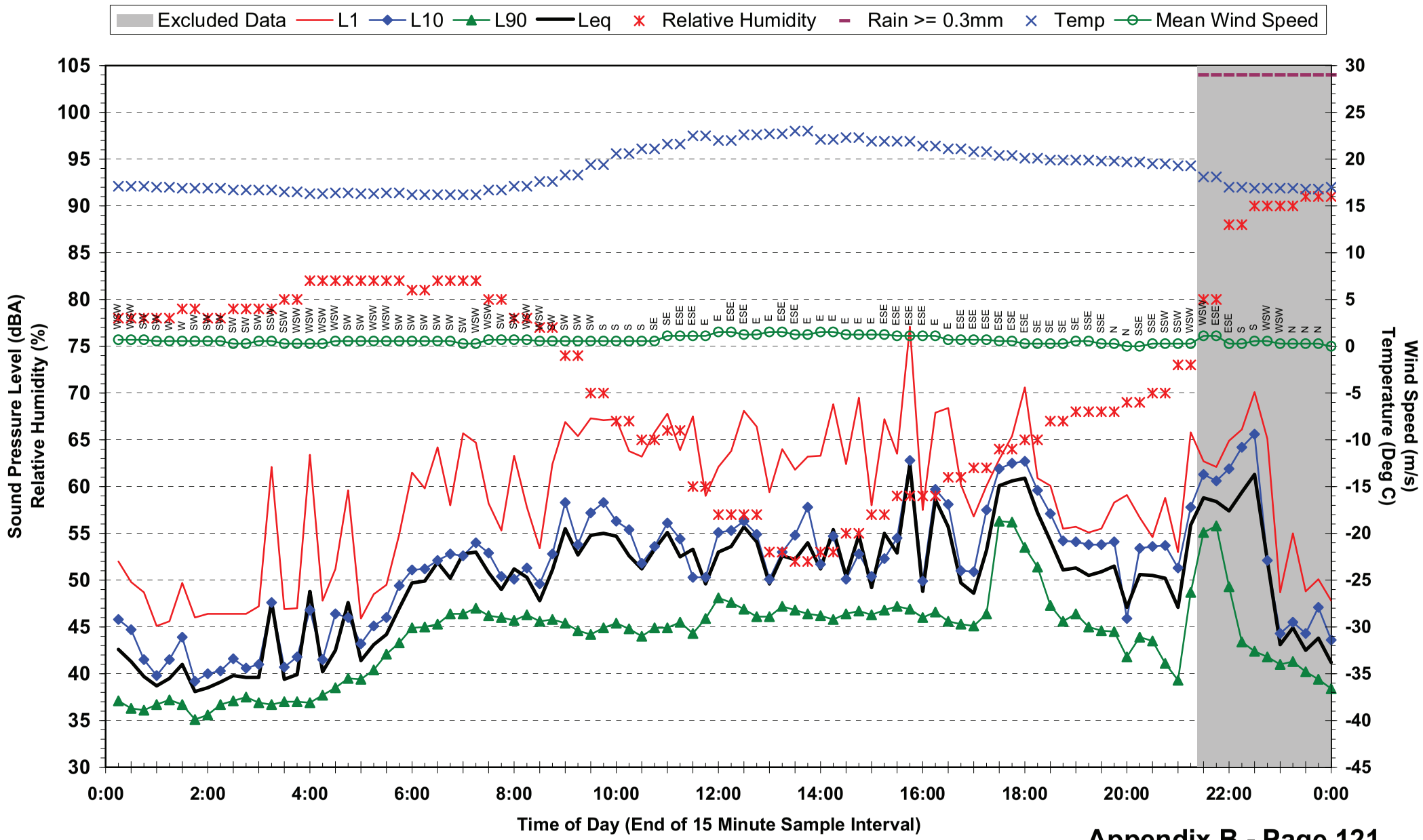
## Statistical Ambient Noise Levels
## Location 12 - 19 Dutton St - Saturday 22 May 2010



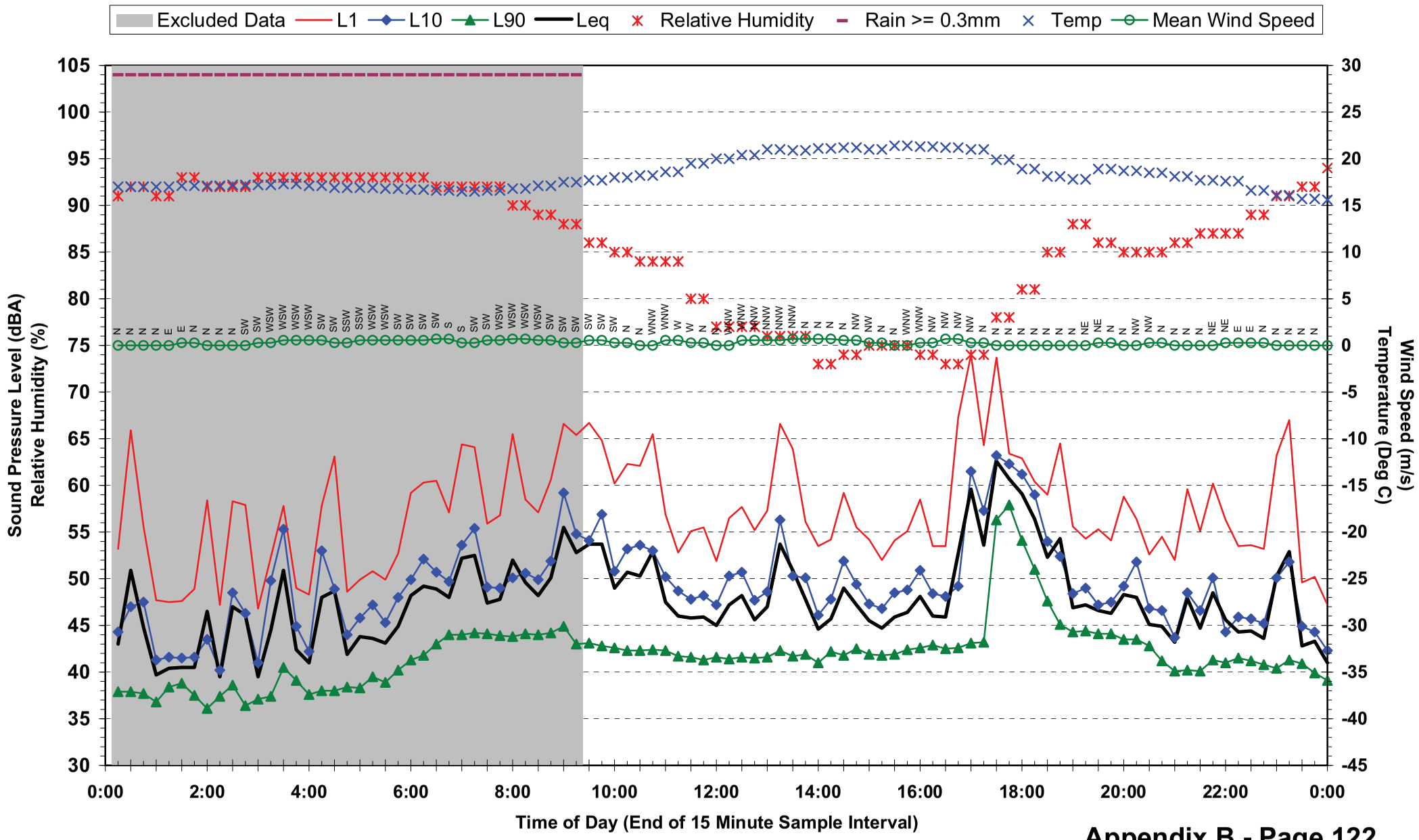
## Statistical Ambient Noise Levels
## Location 12 - 19 Dutton St - Sunday 23 May 2010



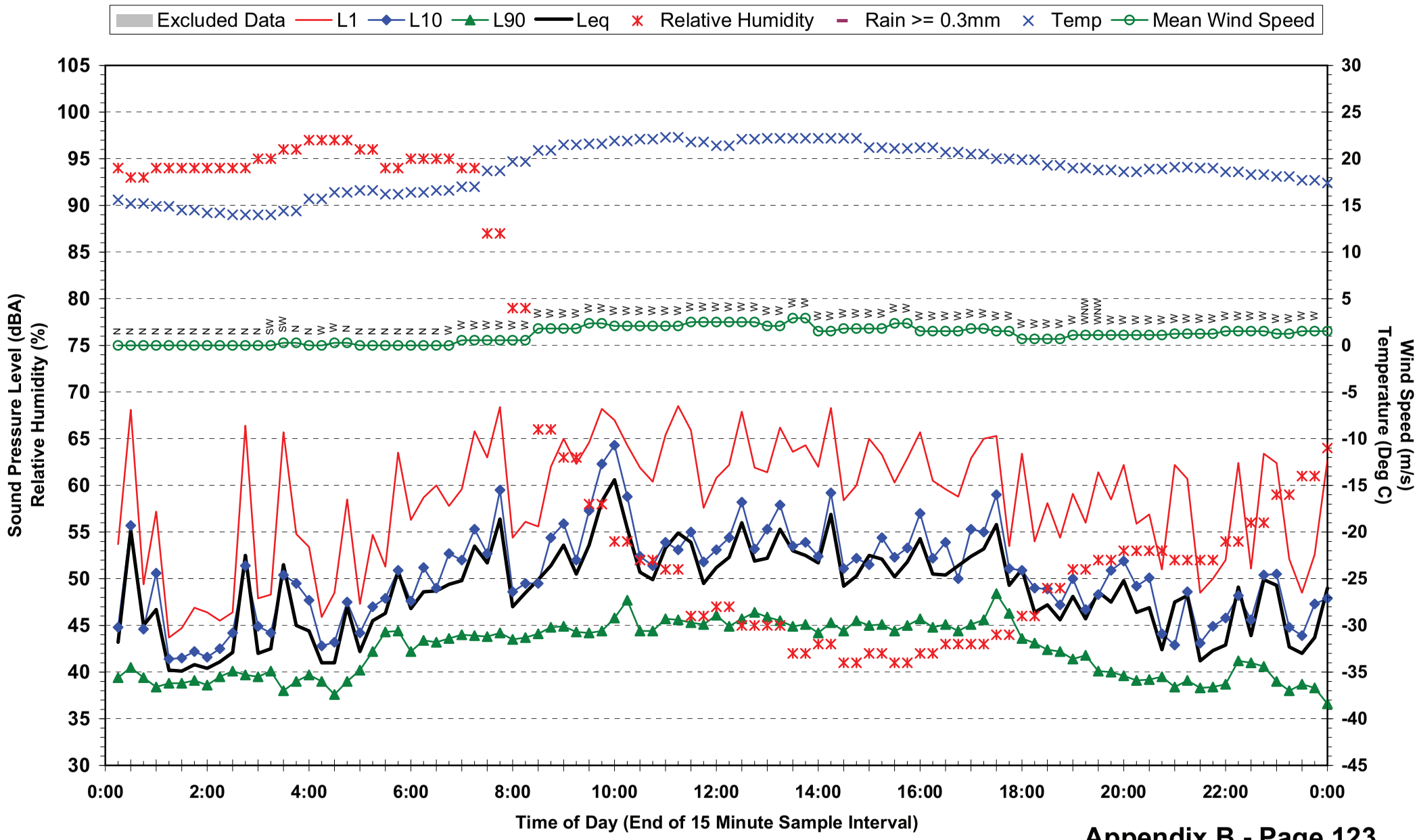
## Statistical Ambient Noise Levels
## Location 12 - 19 Dutton St - Monday 24 May 2010



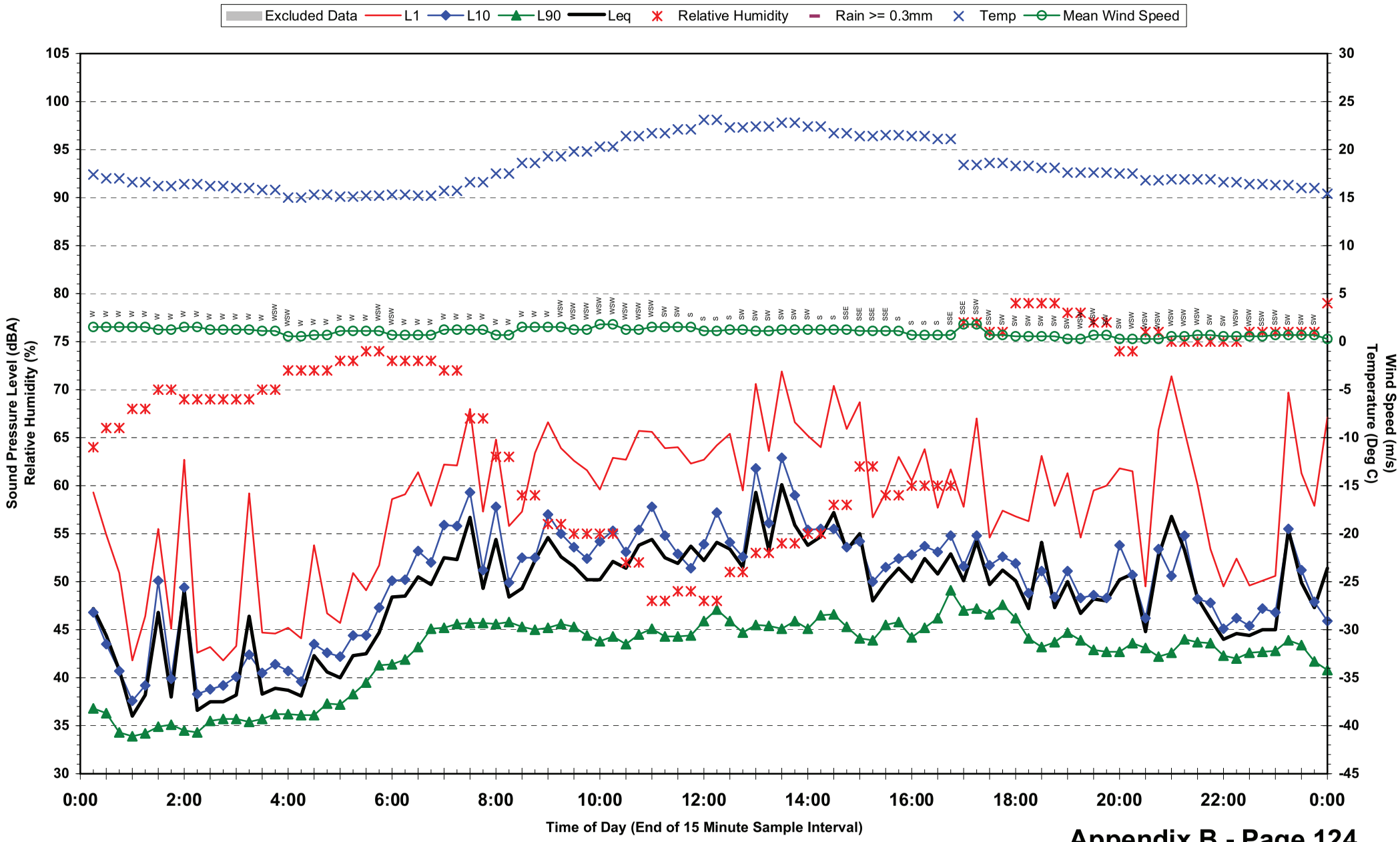
## Statistical Ambient Noise Levels
## Location 12 - 19 Dutton St - Tuesday 25 May 2010



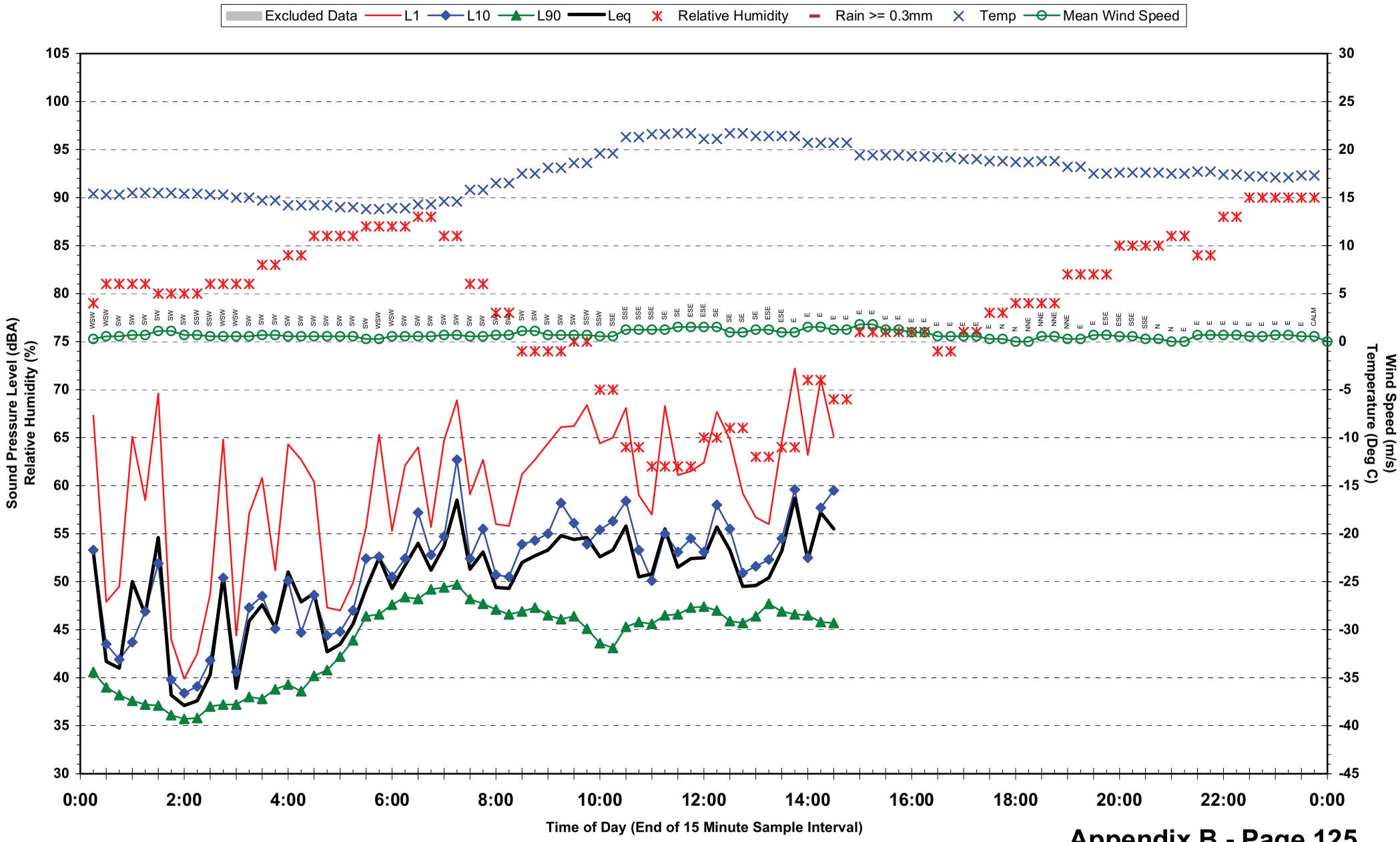
## Statistical Ambient Noise Levels
## Location 12 - 19 Dutton St - Wednesday 26 May 2010



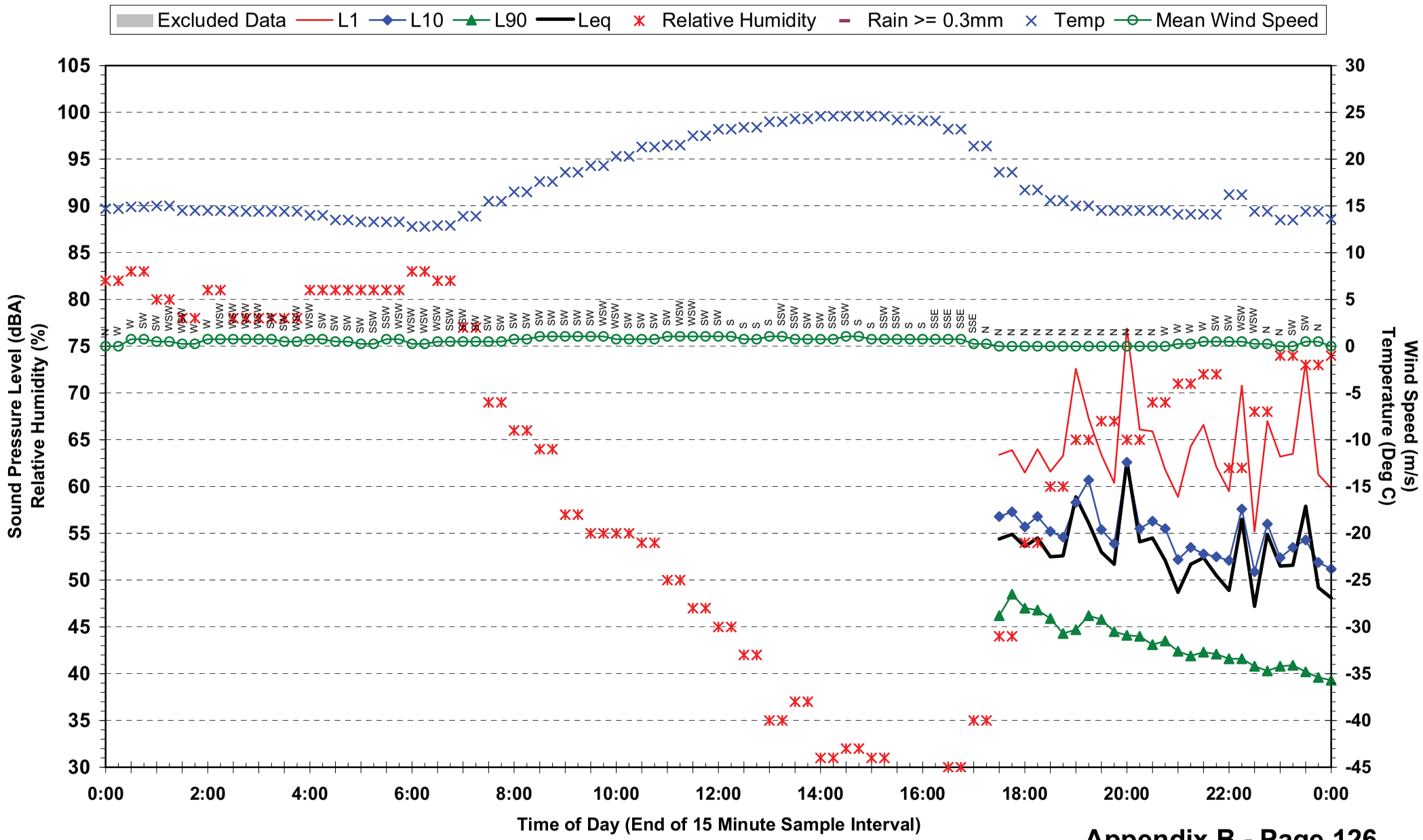
**Statistical Ambient Noise Levels**
**Location 12 - 19 Dutton St - Thursday 27 May 2010**



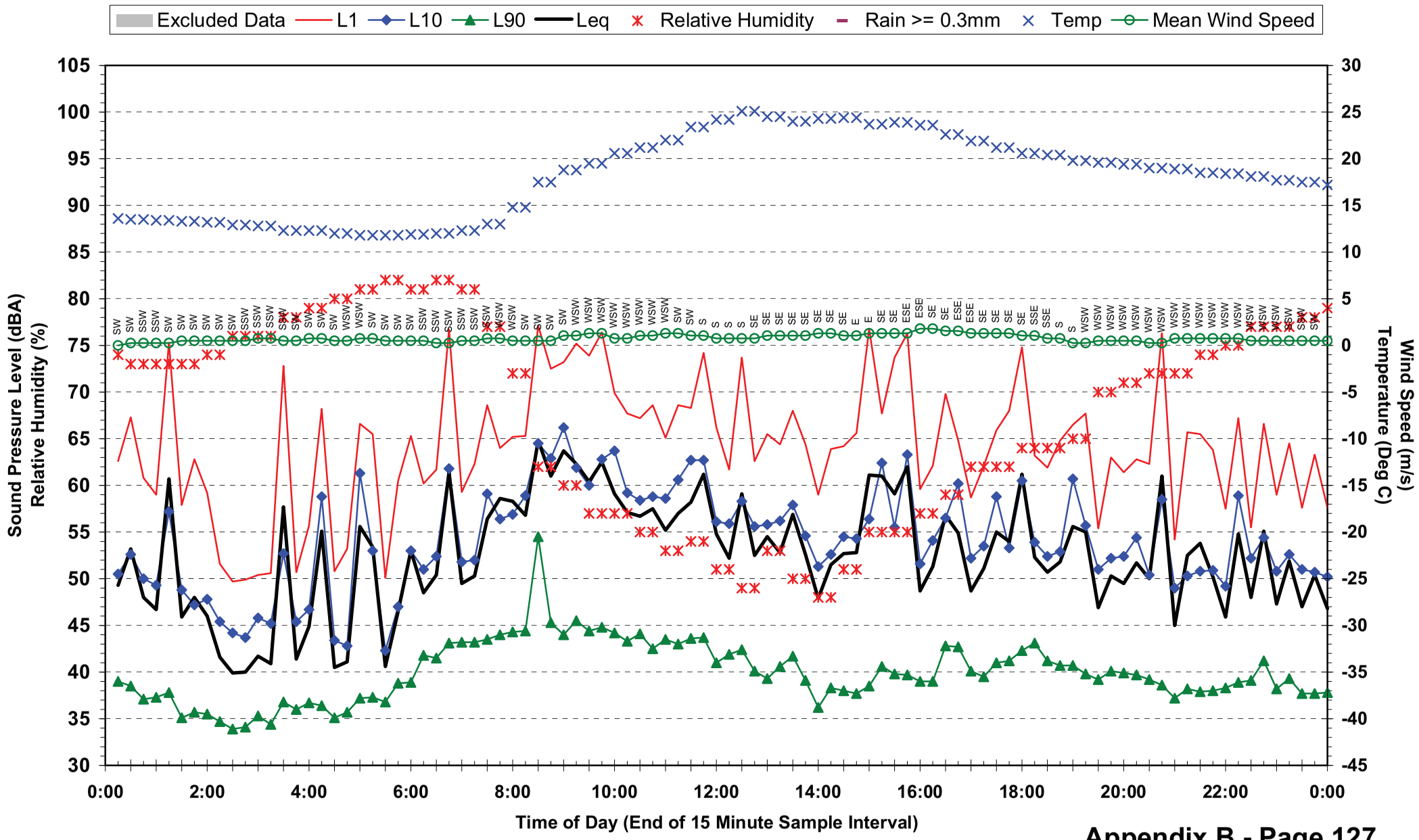
**Statistical Ambient Noise Levels**
**Location 12 - 19 Dutton St - Friday 28 May 2010**



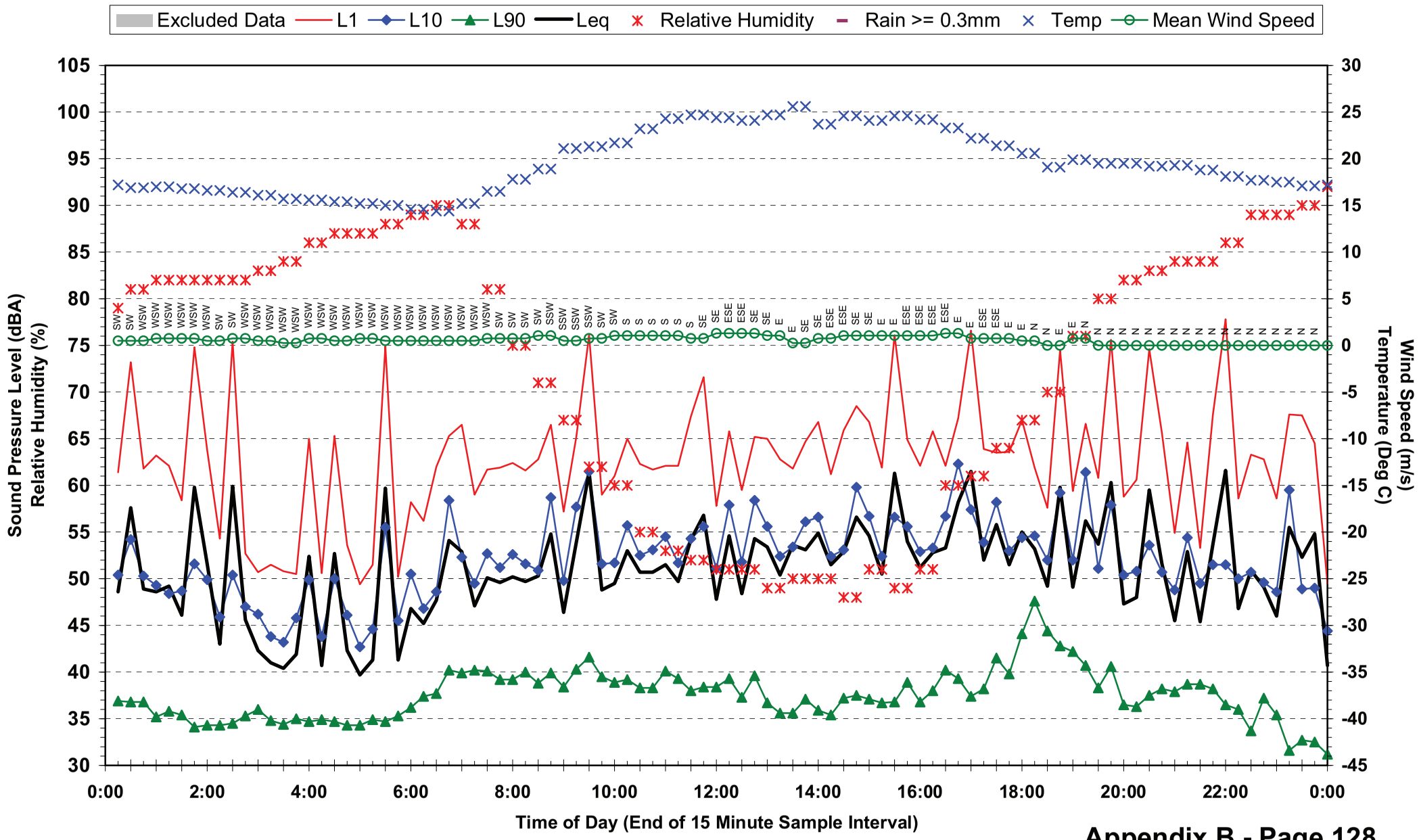
## Statistical Ambient Noise Levels
## Location 13 - 4 Fenton St - Friday 7 May 2010



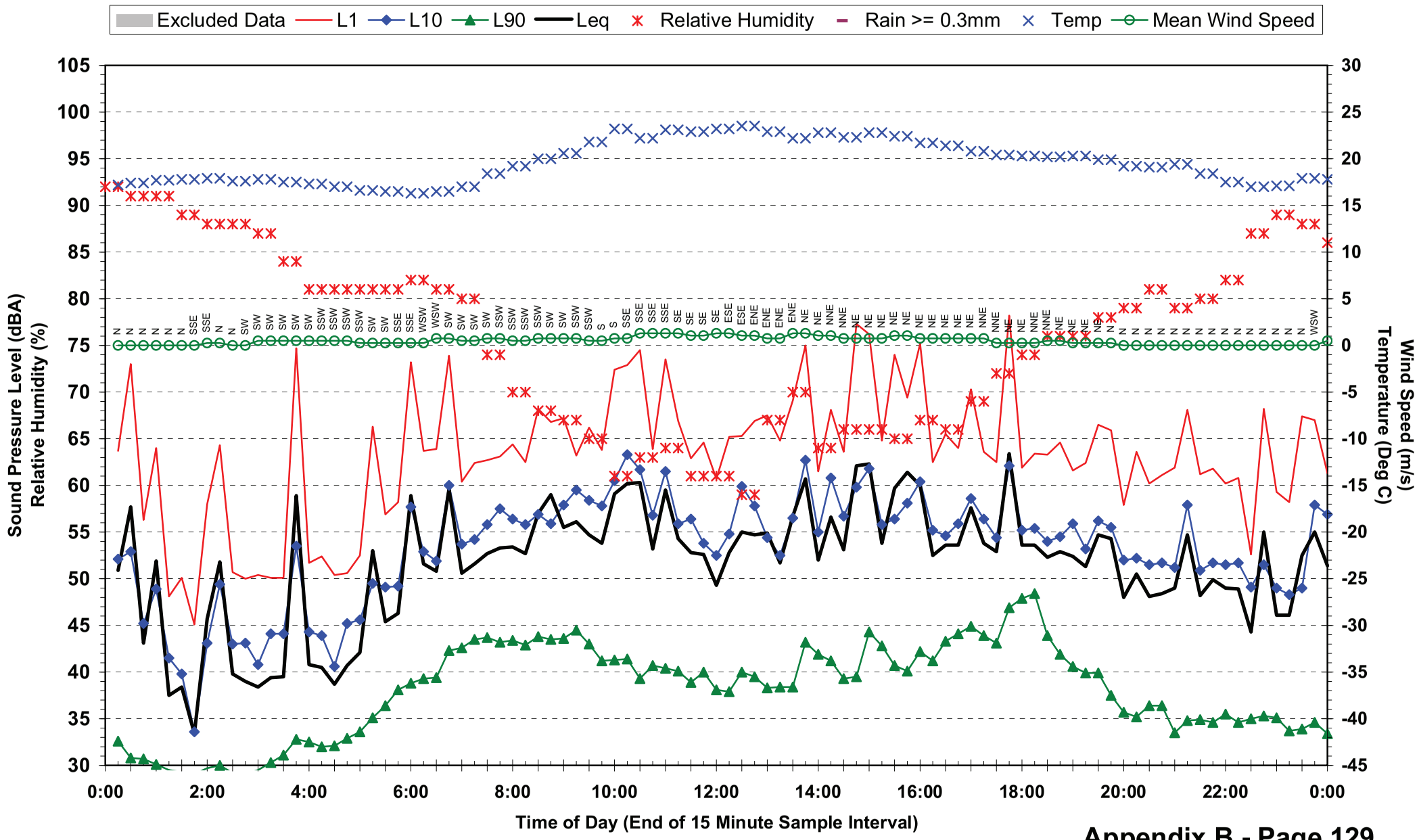
## Statistical Ambient Noise Levels
## Location 13 - 4 Fenton St - Saturday 8 May 2010



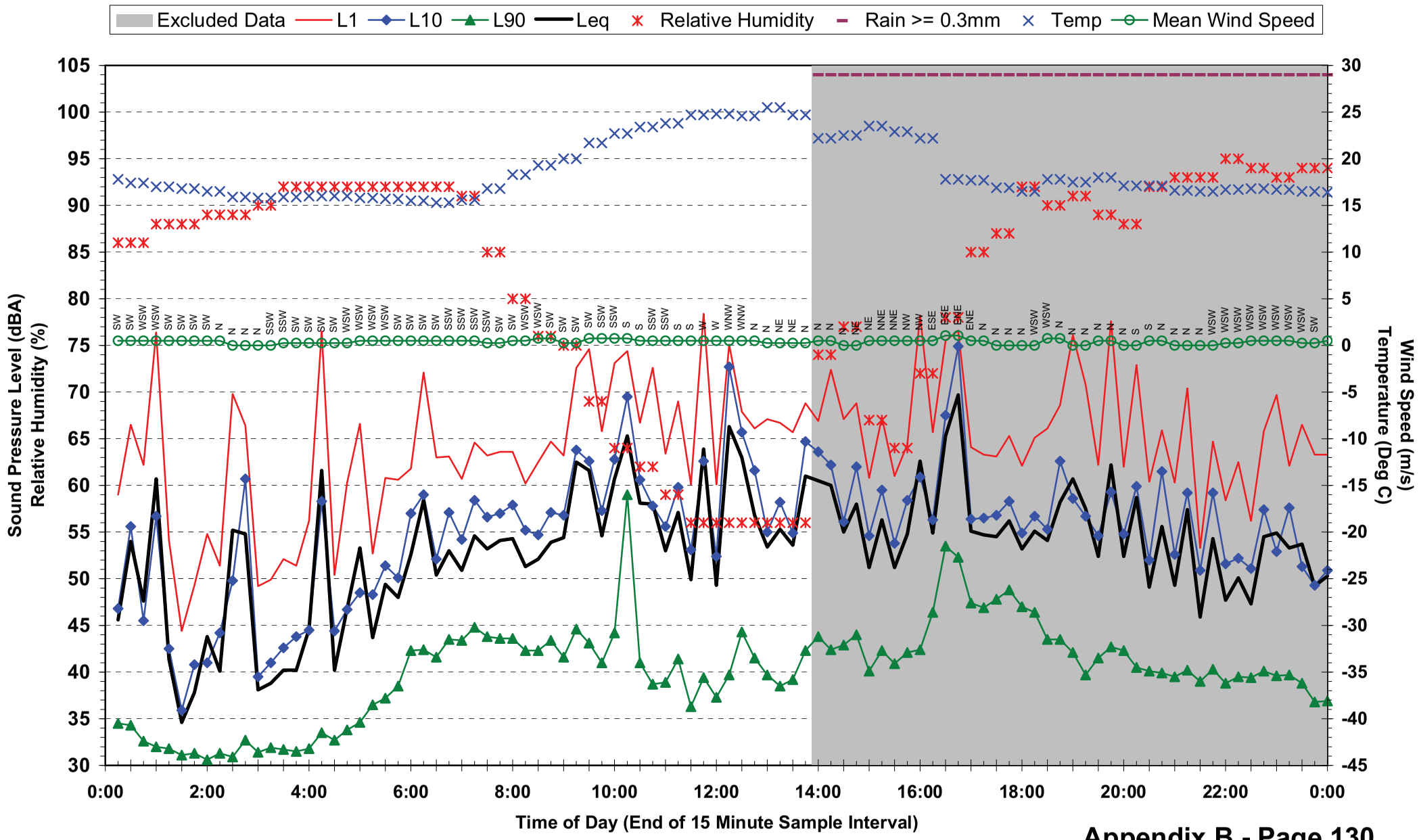
## Statistical Ambient Noise Levels
## Location 13 - 4 Fenton St - Sunday 9 May 2010



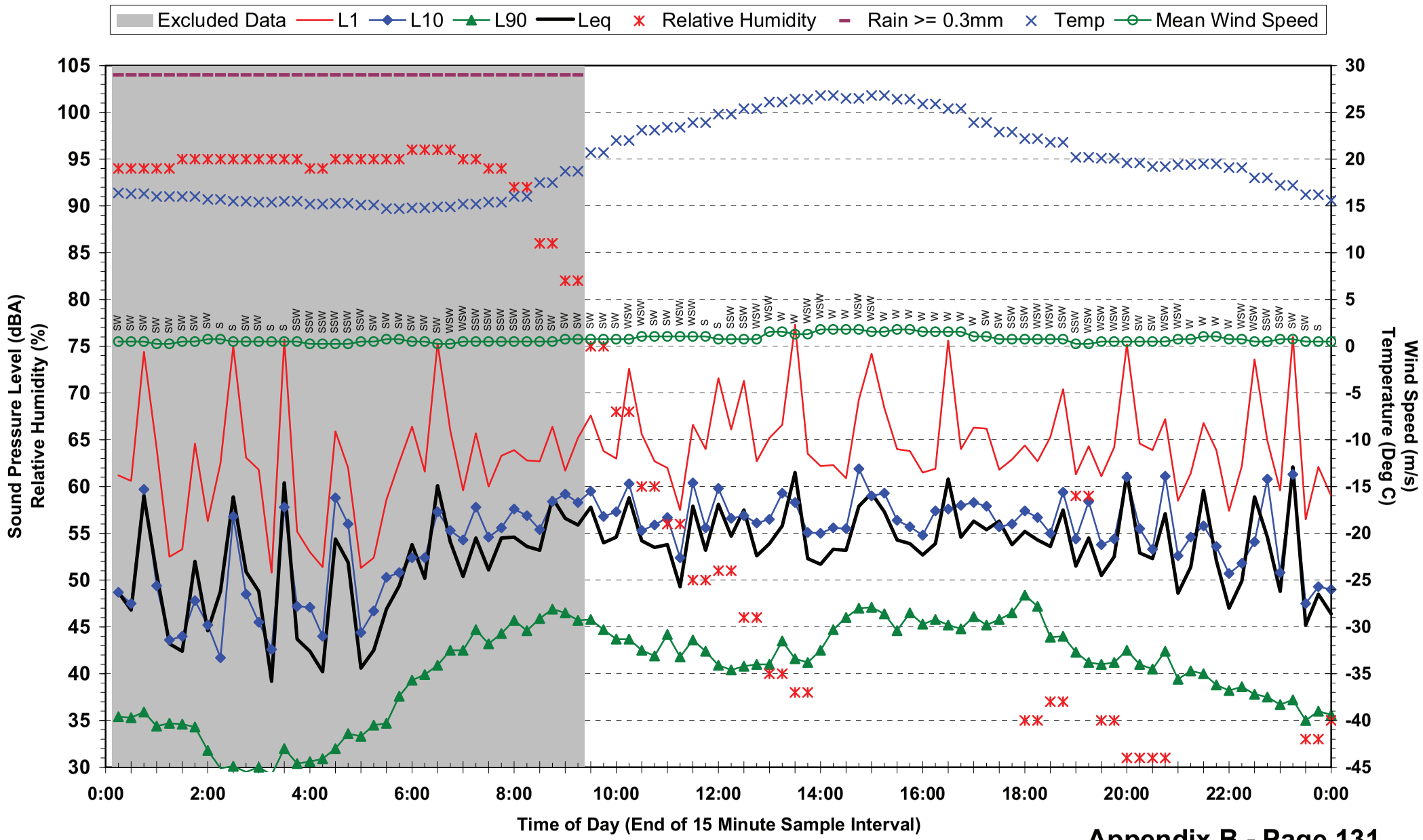
## Statistical Ambient Noise Levels
## Location 13 - 4 Fenton St - Monday 10 May 2010



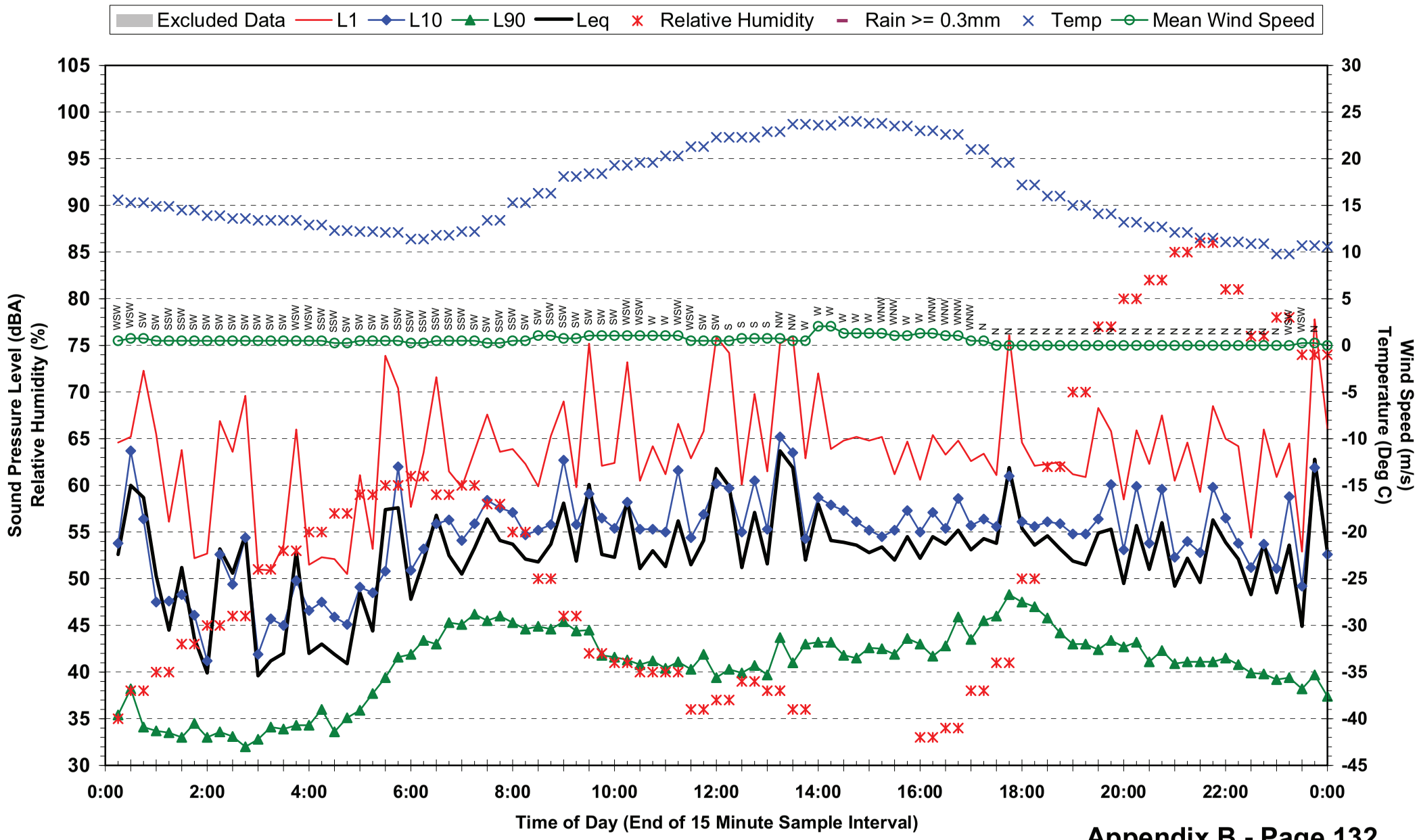
## Statistical Ambient Noise Levels
## Location 13 - 4 Fenton St - Tuesday 11 May 2010



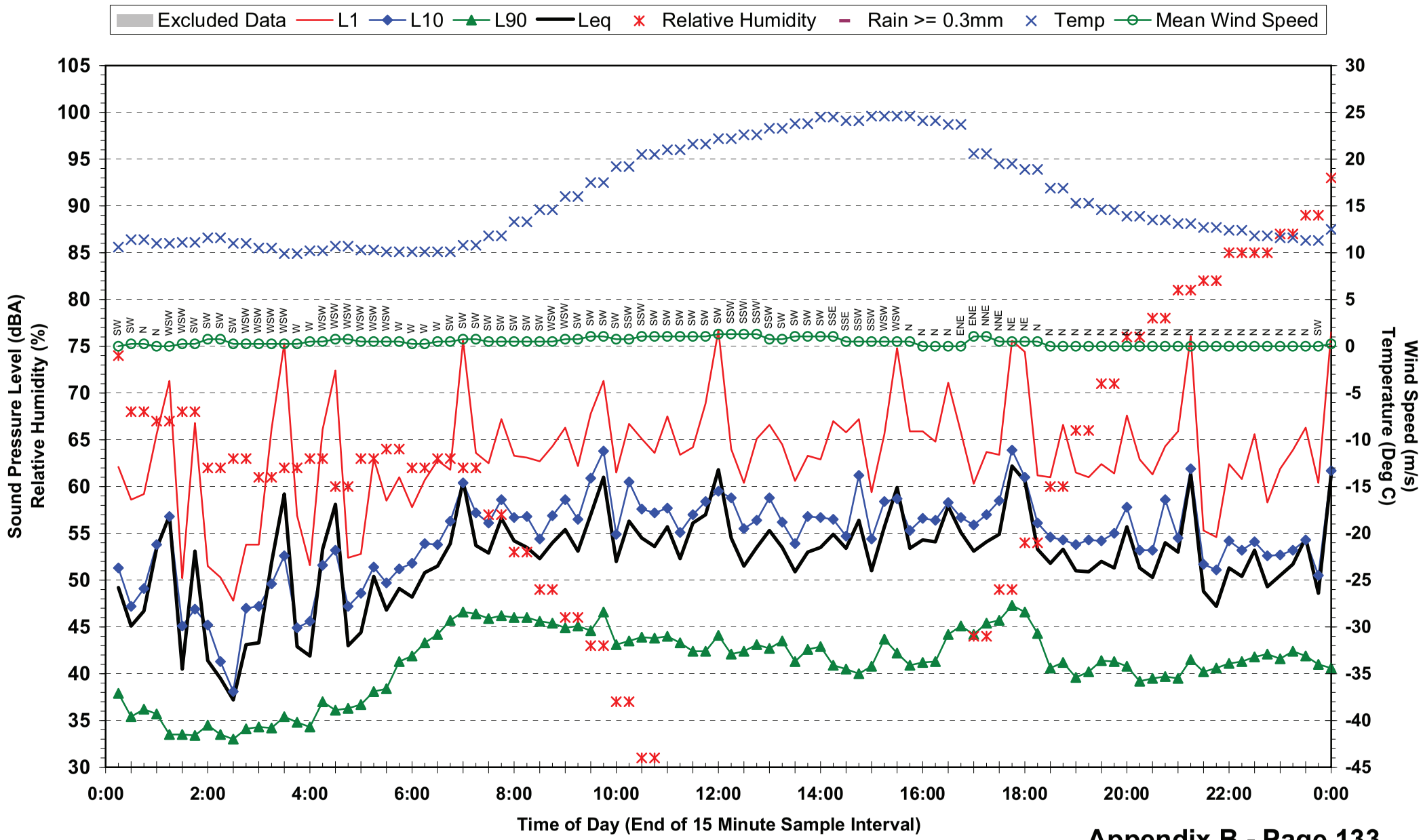
## Statistical Ambient Noise Levels
## Location 13 - 4 Fenton St - Wednesday 12 May 2010



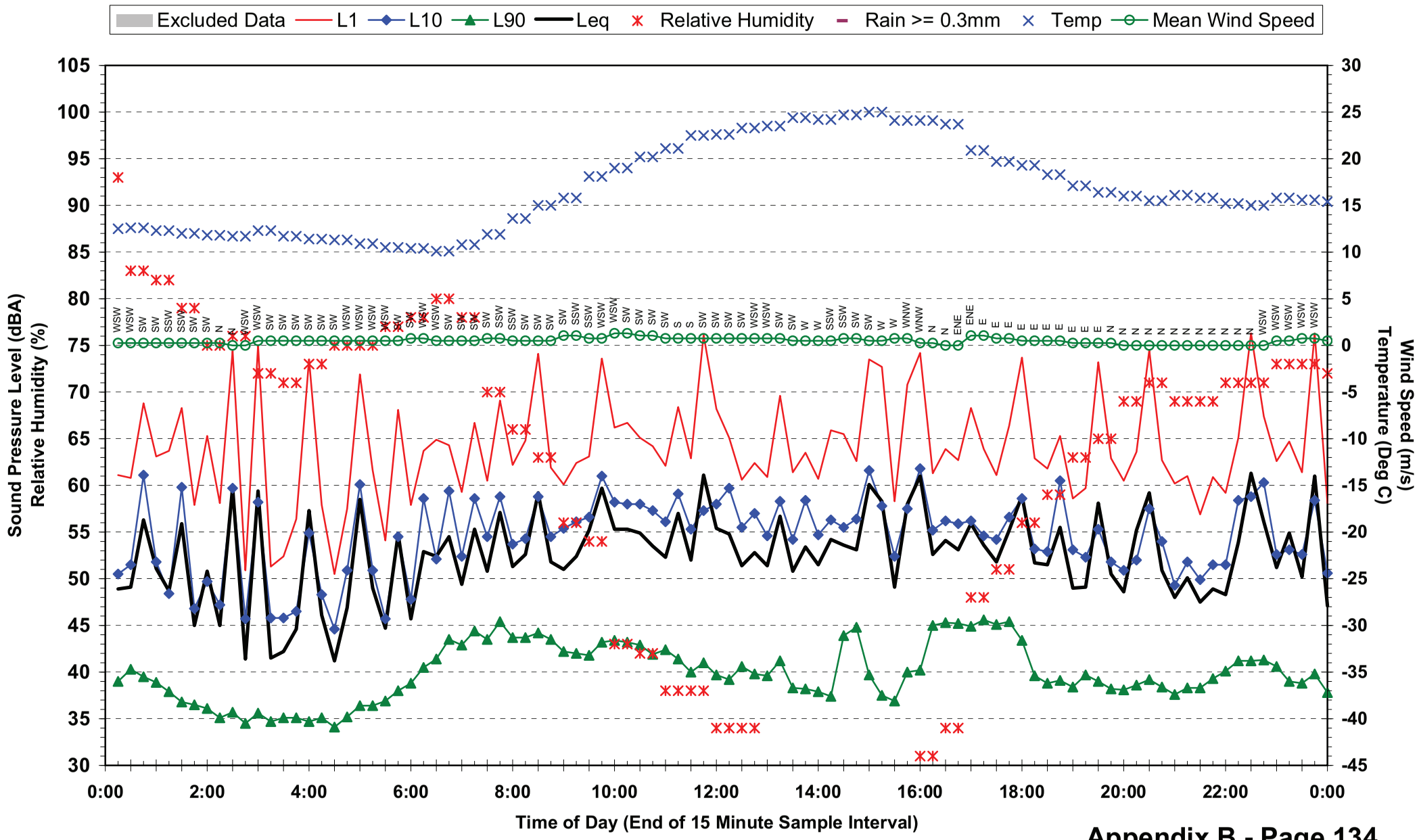
## Statistical Ambient Noise Levels
## Location 13 - 4 Fenton St - Thursday 13 May 2010



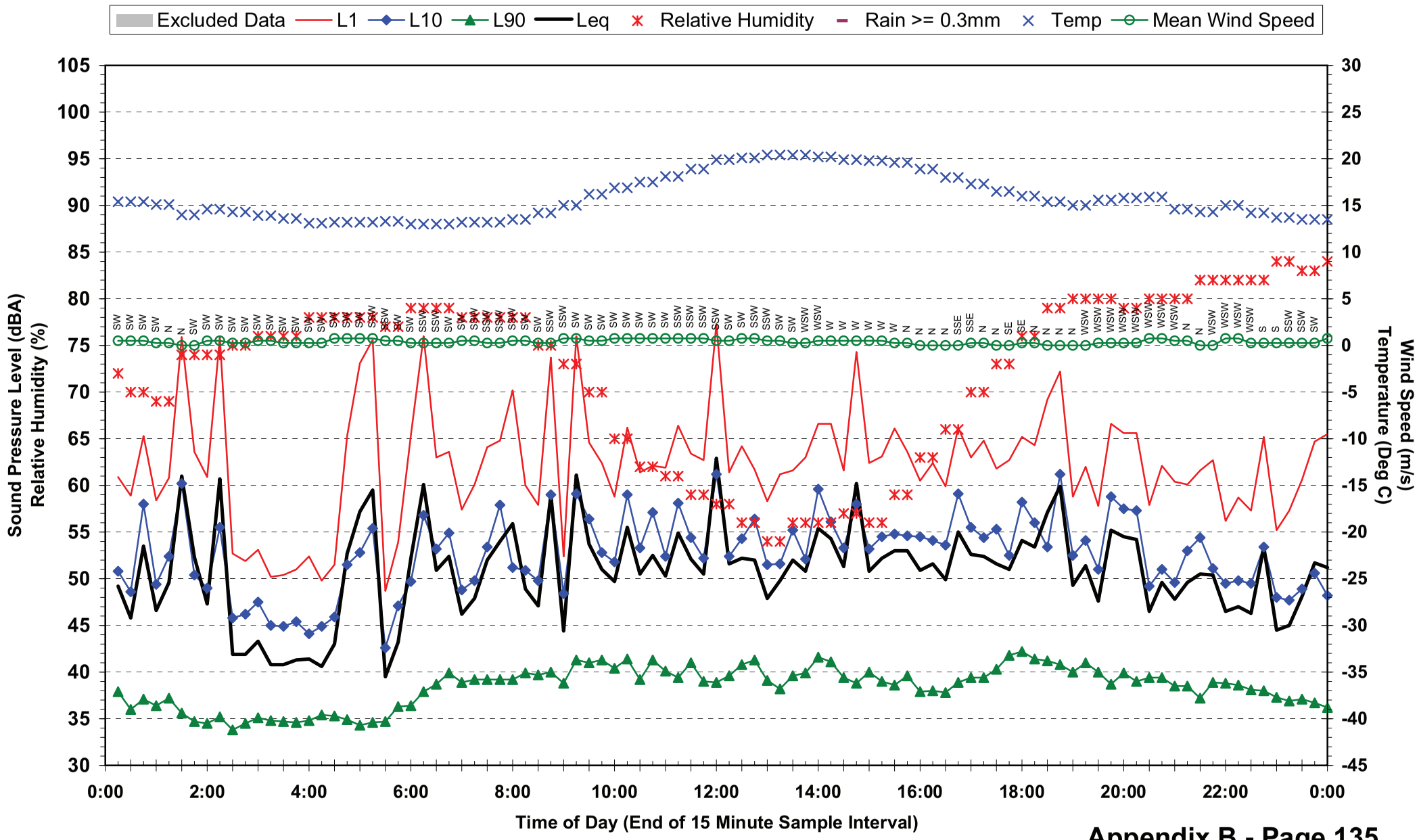
## Statistical Ambient Noise Levels
## Location 13 - 4 Fenton St - Friday 14 May 2010



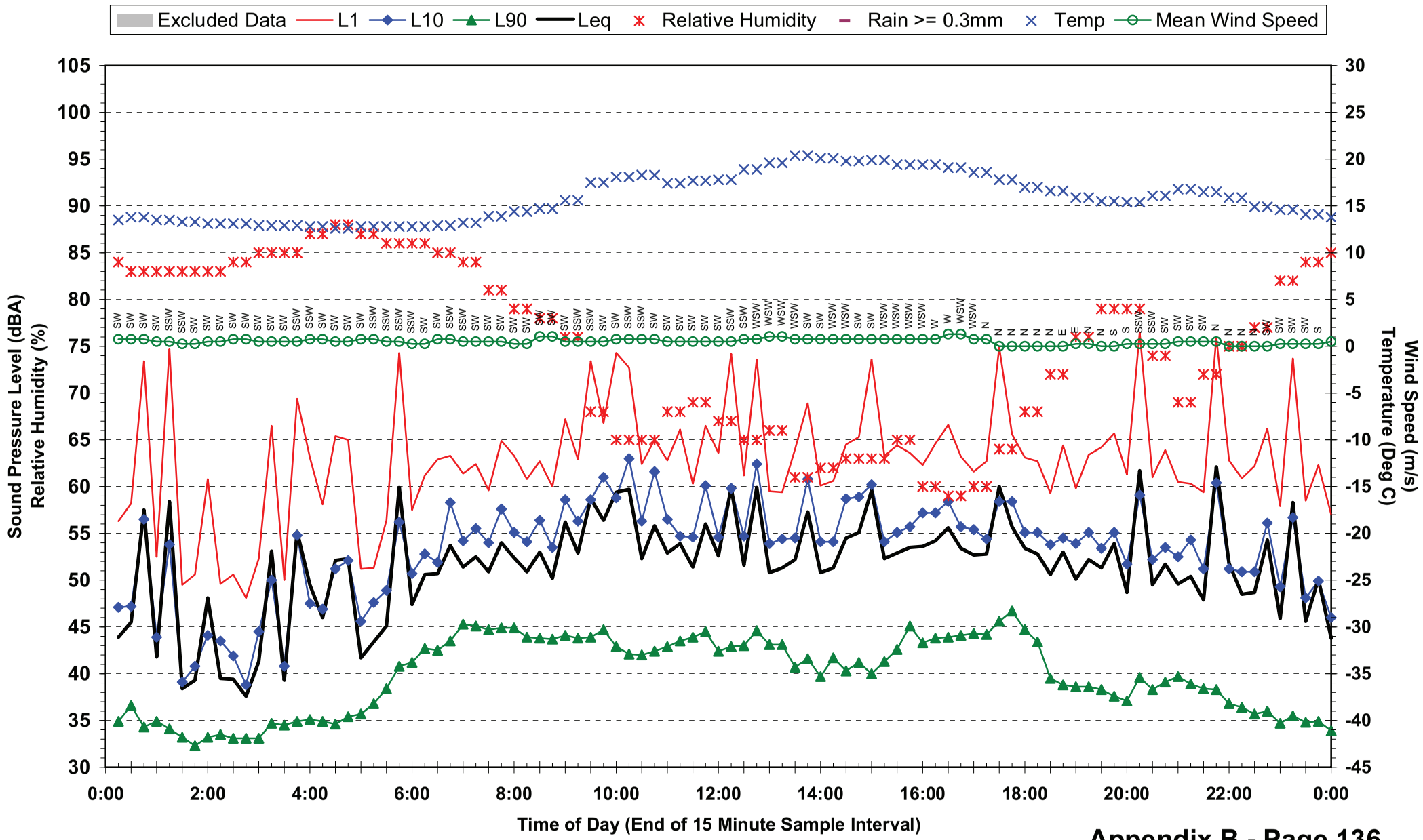
## Statistical Ambient Noise Levels
## Location 13 - 4 Fenton St - Saturday 15 May 2010



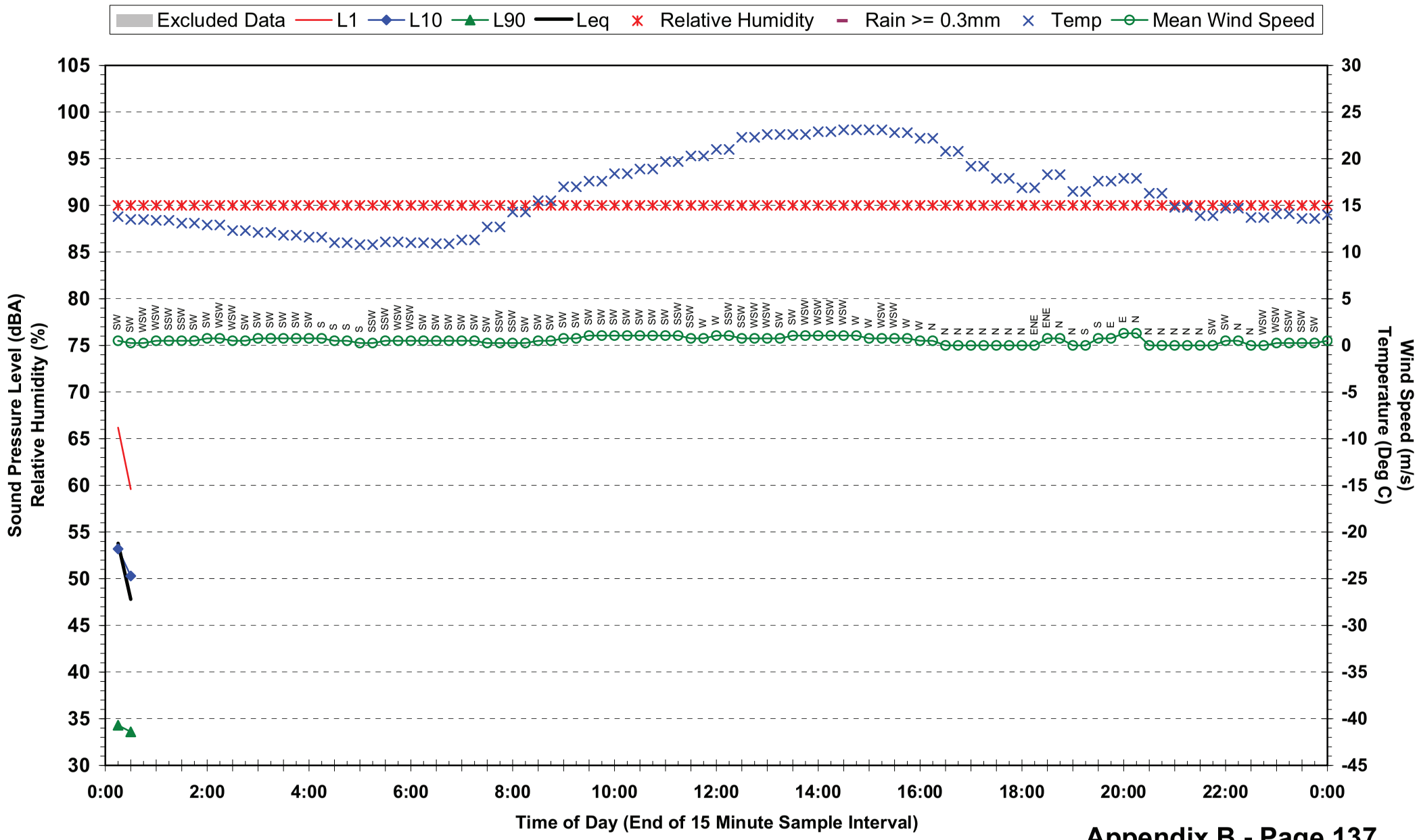
## Statistical Ambient Noise Levels
## Location 13 - 4 Fenton St - Sunday 16 May 2010



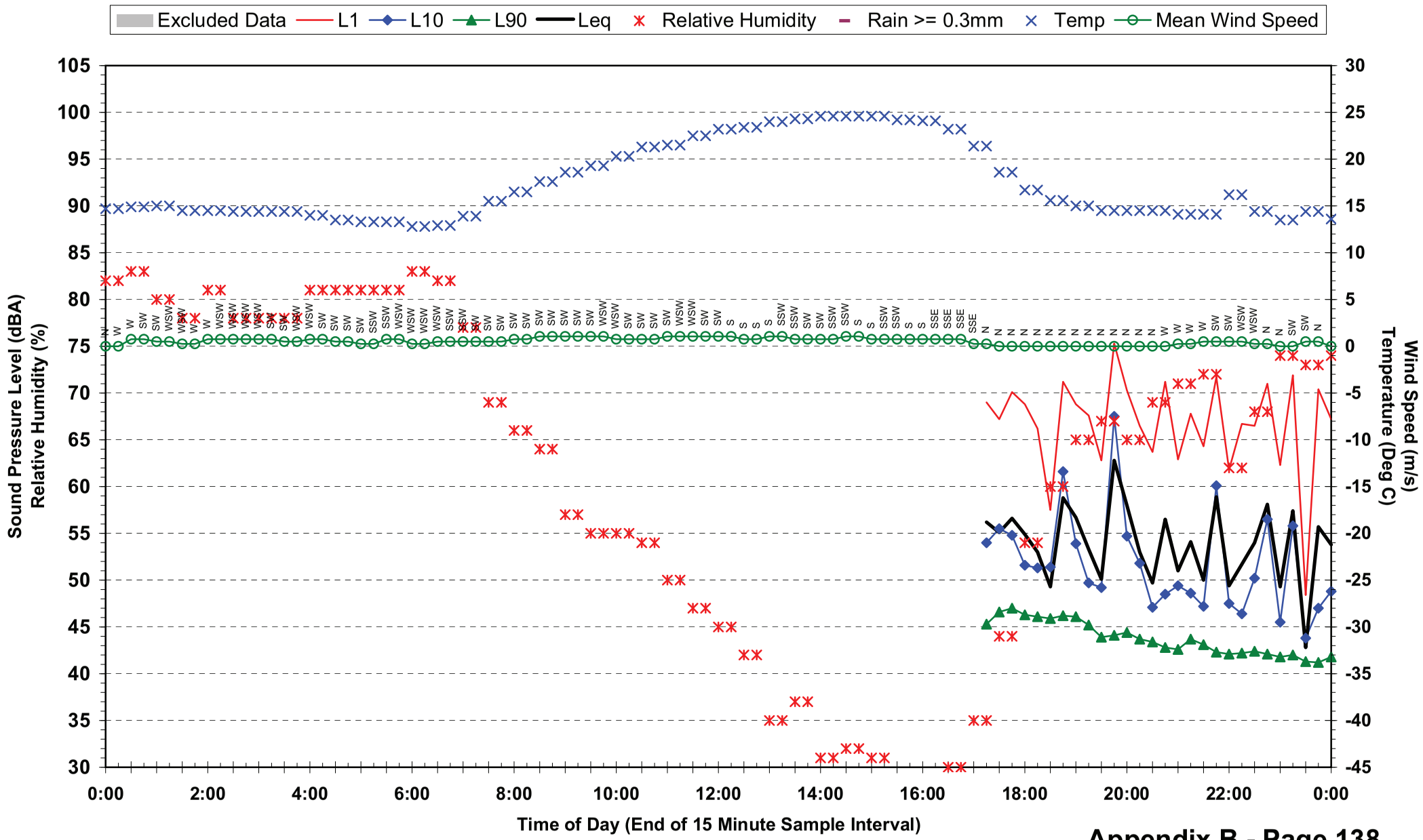
## Statistical Ambient Noise Levels
## Location 13 - 4 Fenton St - Monday 17 May 2010



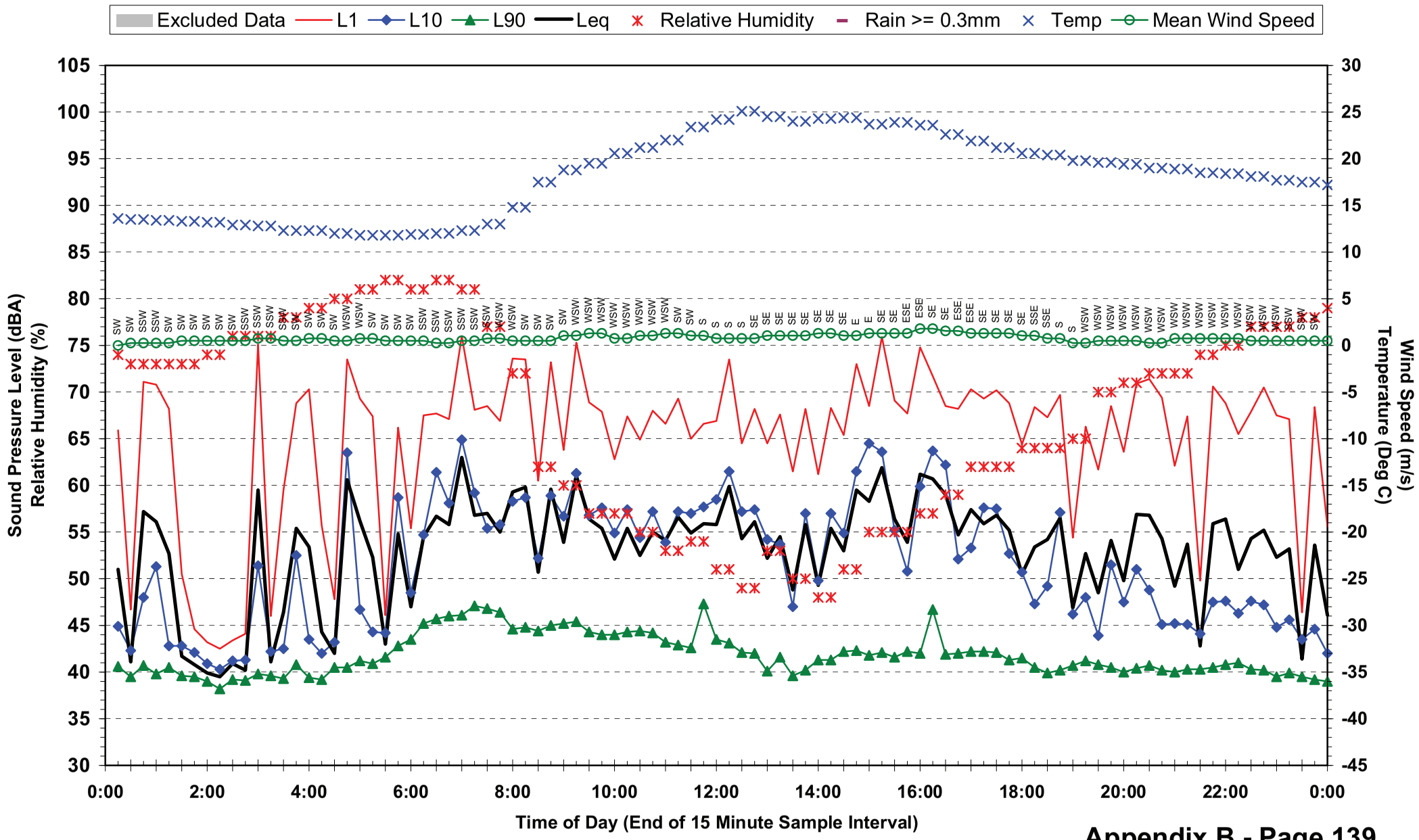
## Statistical Ambient Noise Levels
## Location 13 - 4 Fenton St - Tuesday 18 May 2010



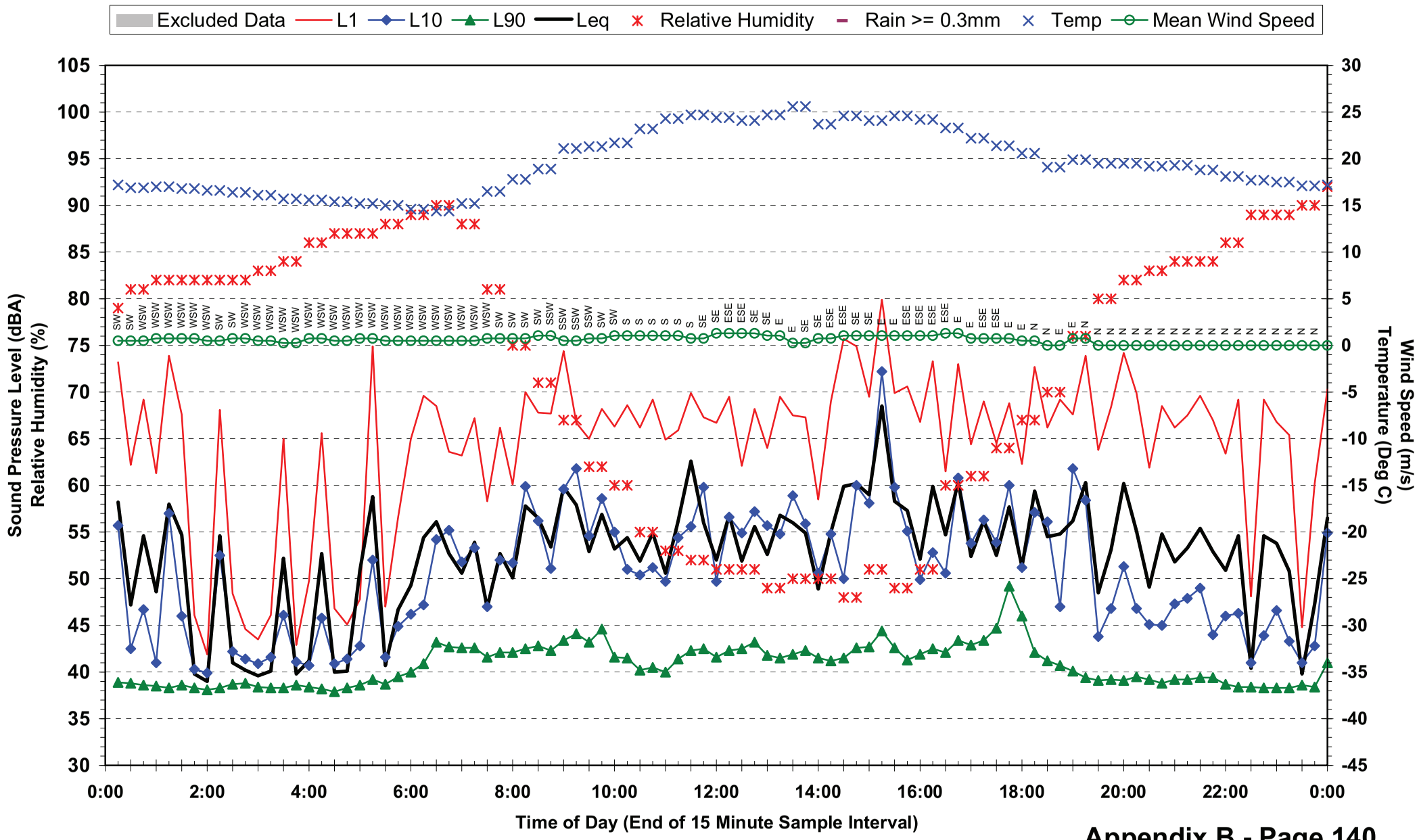
## Statistical Ambient Noise Levels
## Location 14 - 17 Lagonda St - Friday 7 May 2010



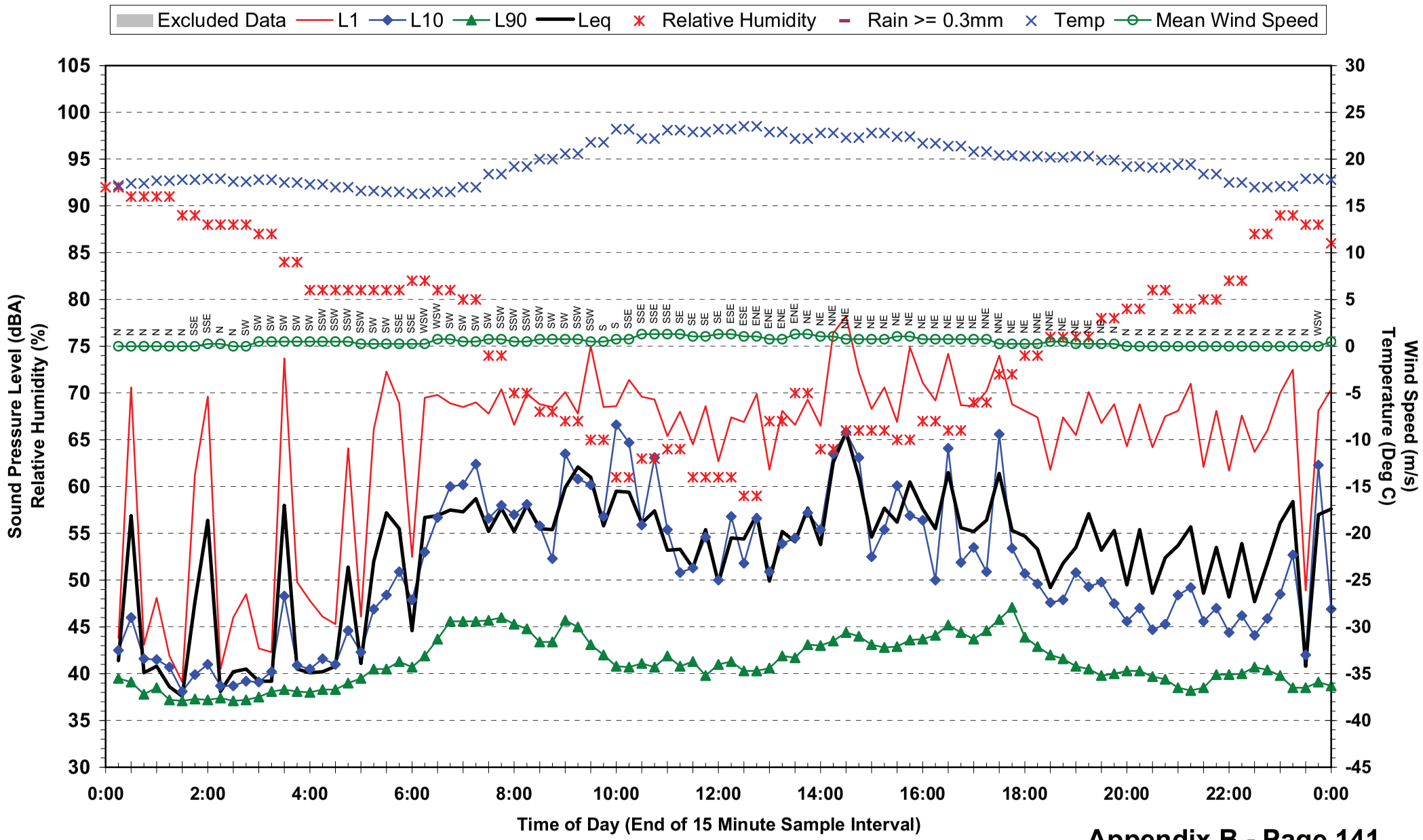
## Statistical Ambient Noise Levels
## Location 14 - 17 Lagonda St - Saturday 8 May 2010



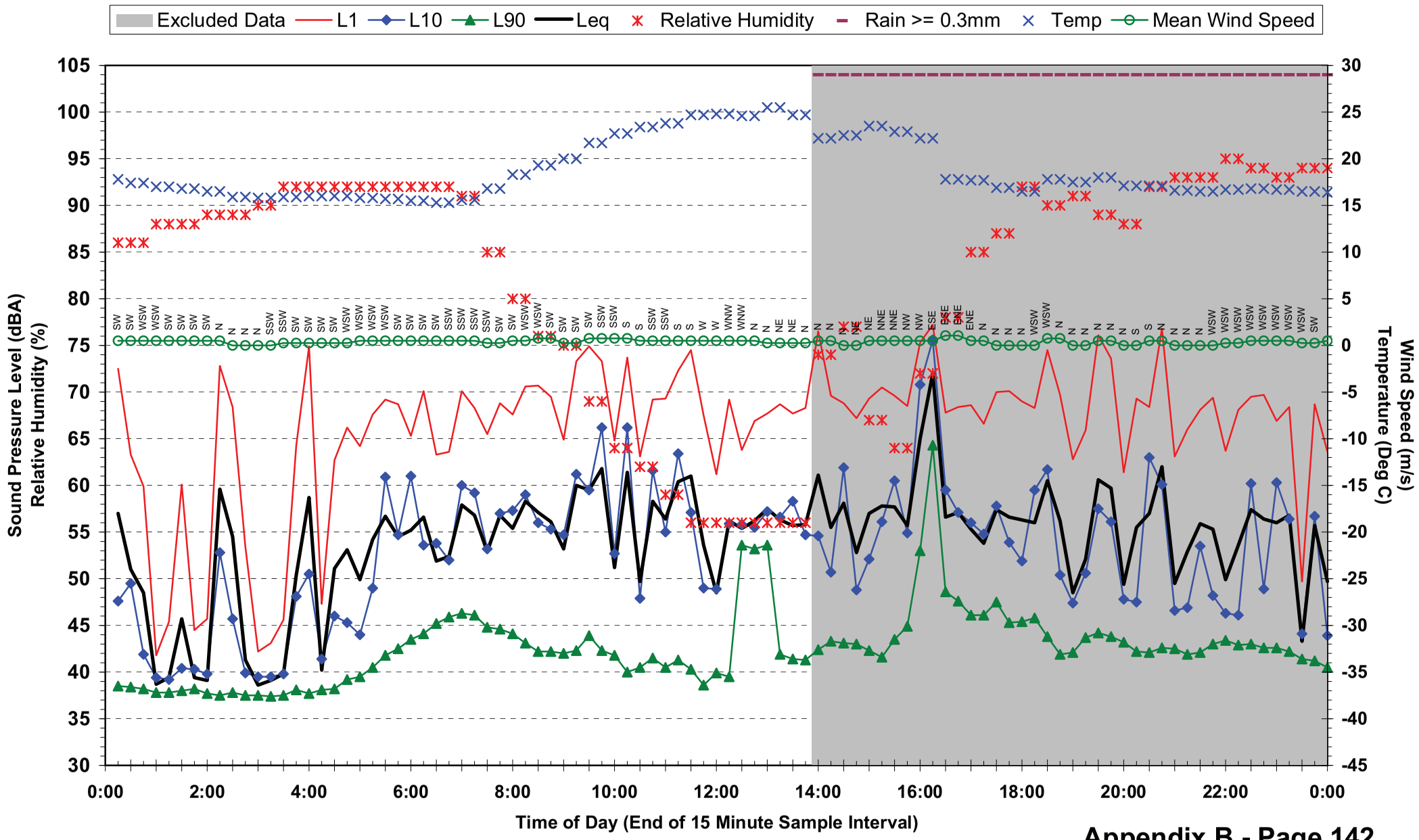
## Statistical Ambient Noise Levels
## Location 14 - 17 Lagonda St - Sunday 9 May 2010



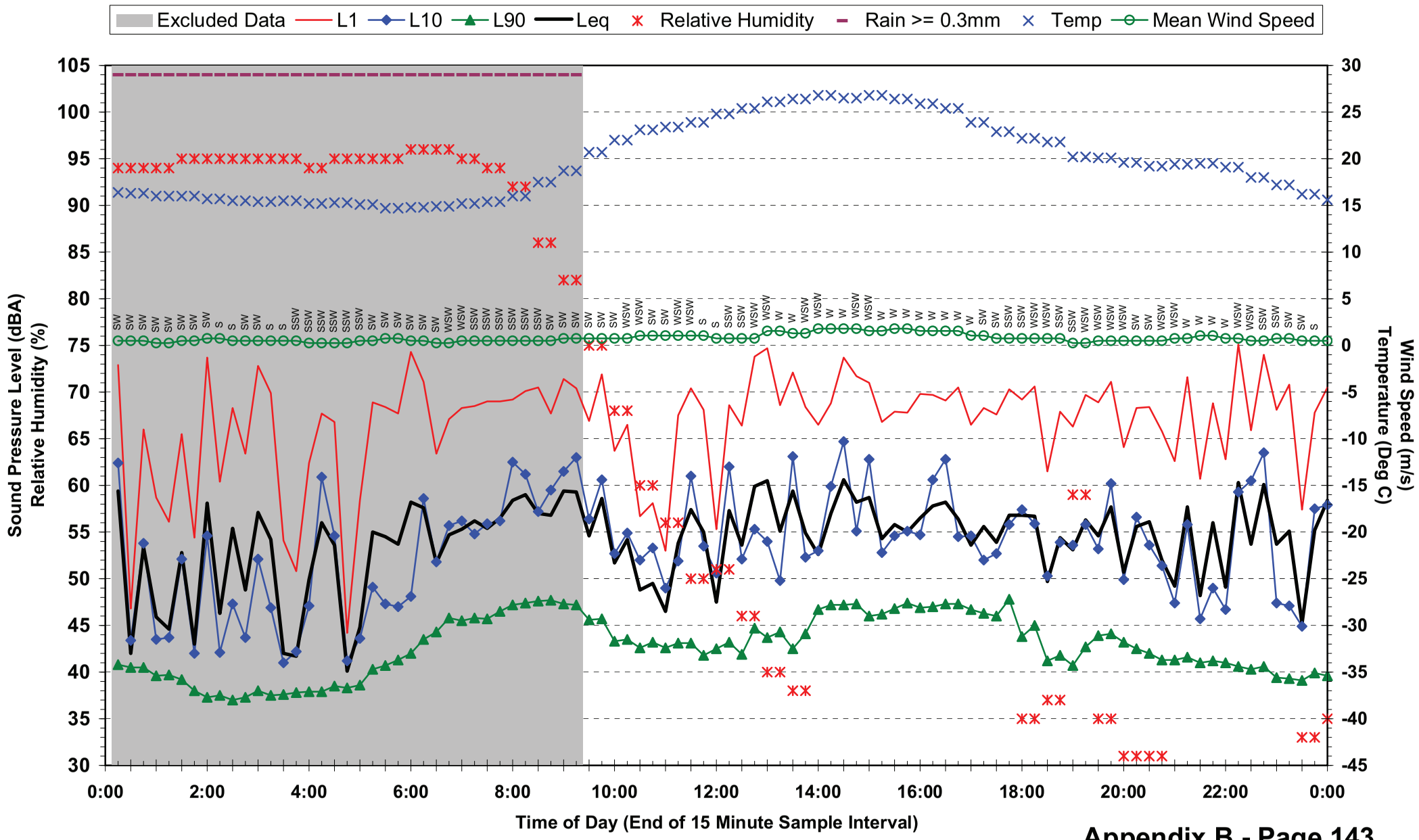
## Statistical Ambient Noise Levels
## Location 14 - 17 Lagonda St - Monday 10 May 2010



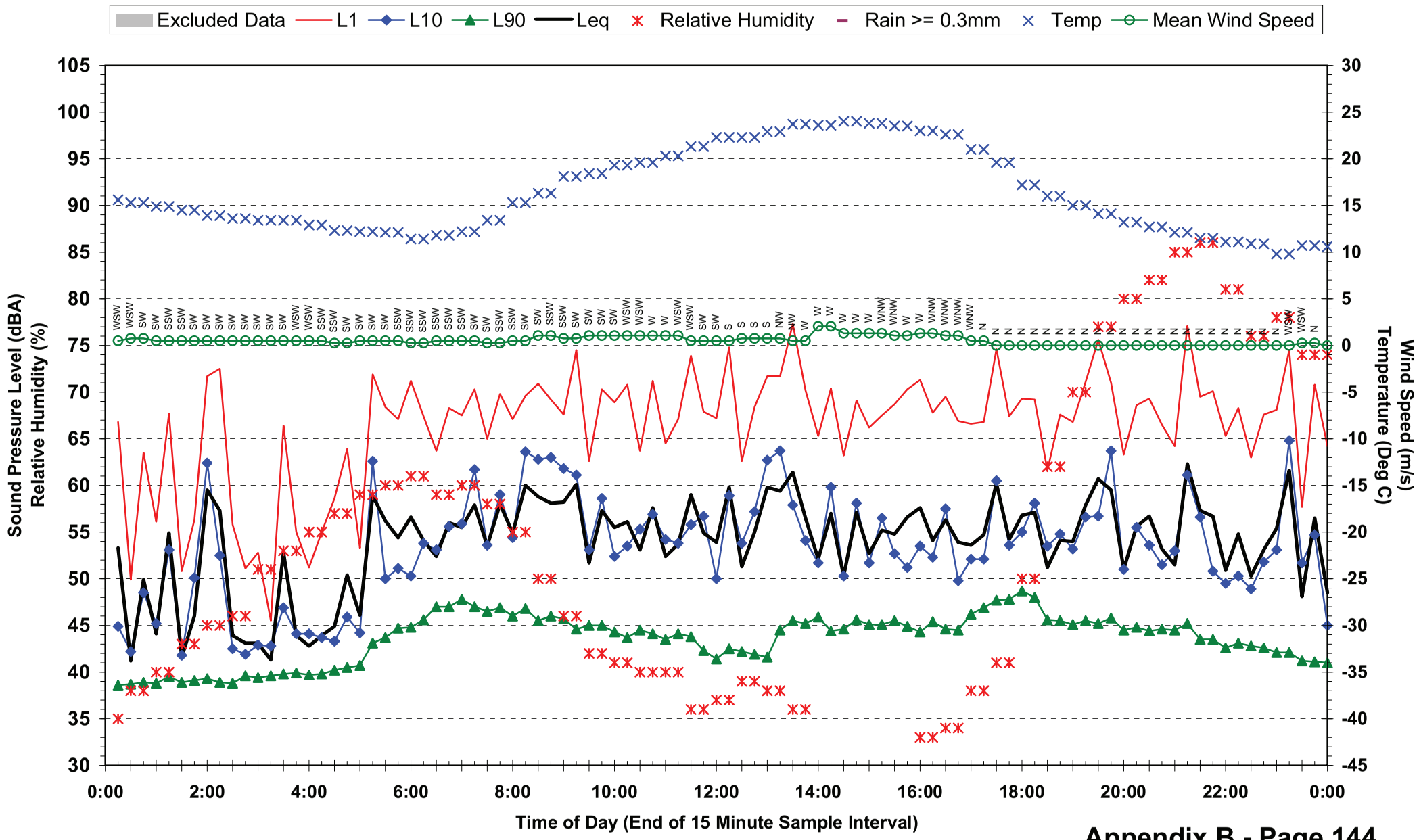
## Statistical Ambient Noise Levels
## Location 14 - 17 Lagonda St - Tuesday 11 May 2010



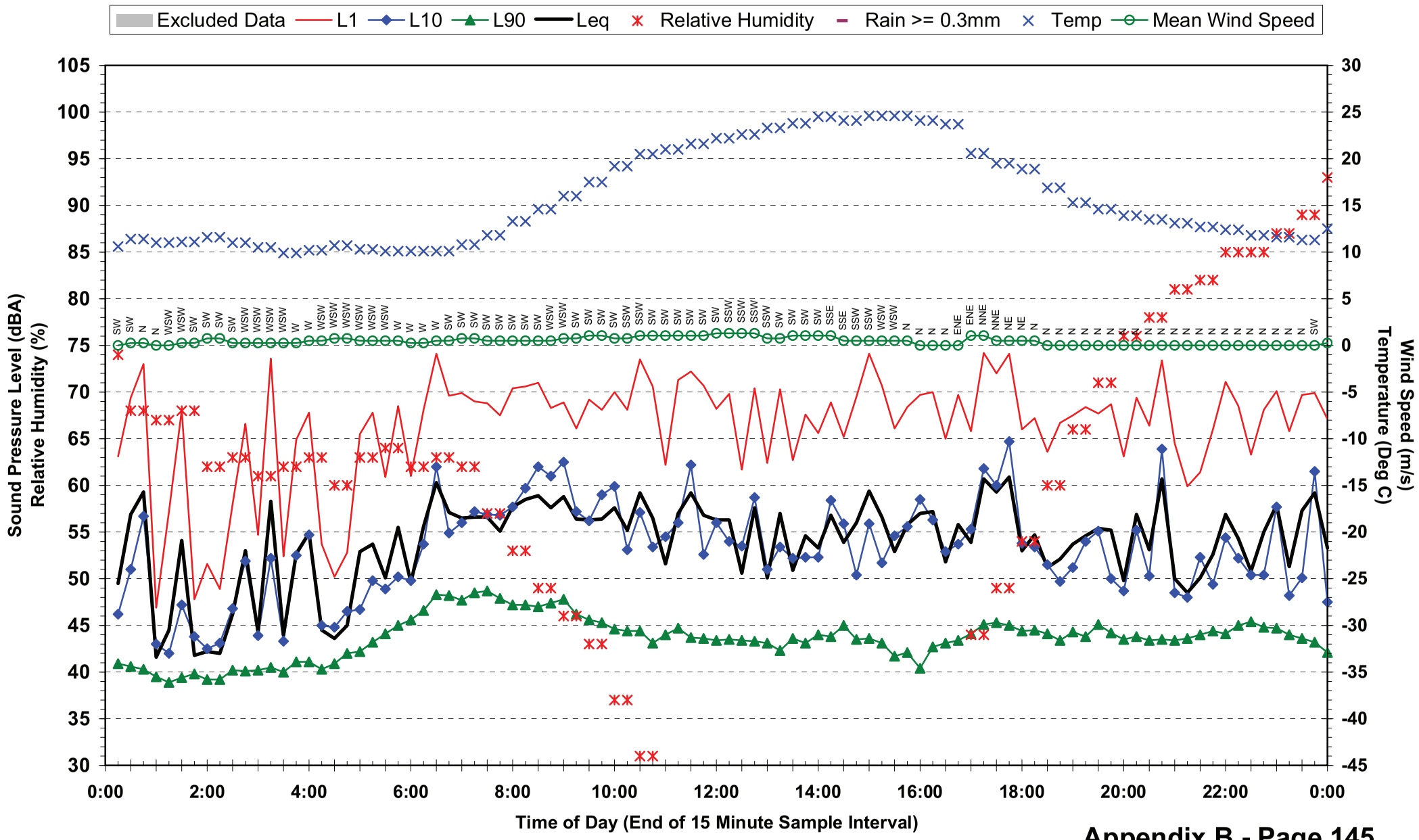
## Statistical Ambient Noise Levels
## Location 14 - 17 Lagonda St - Wednesday 12 May 2010



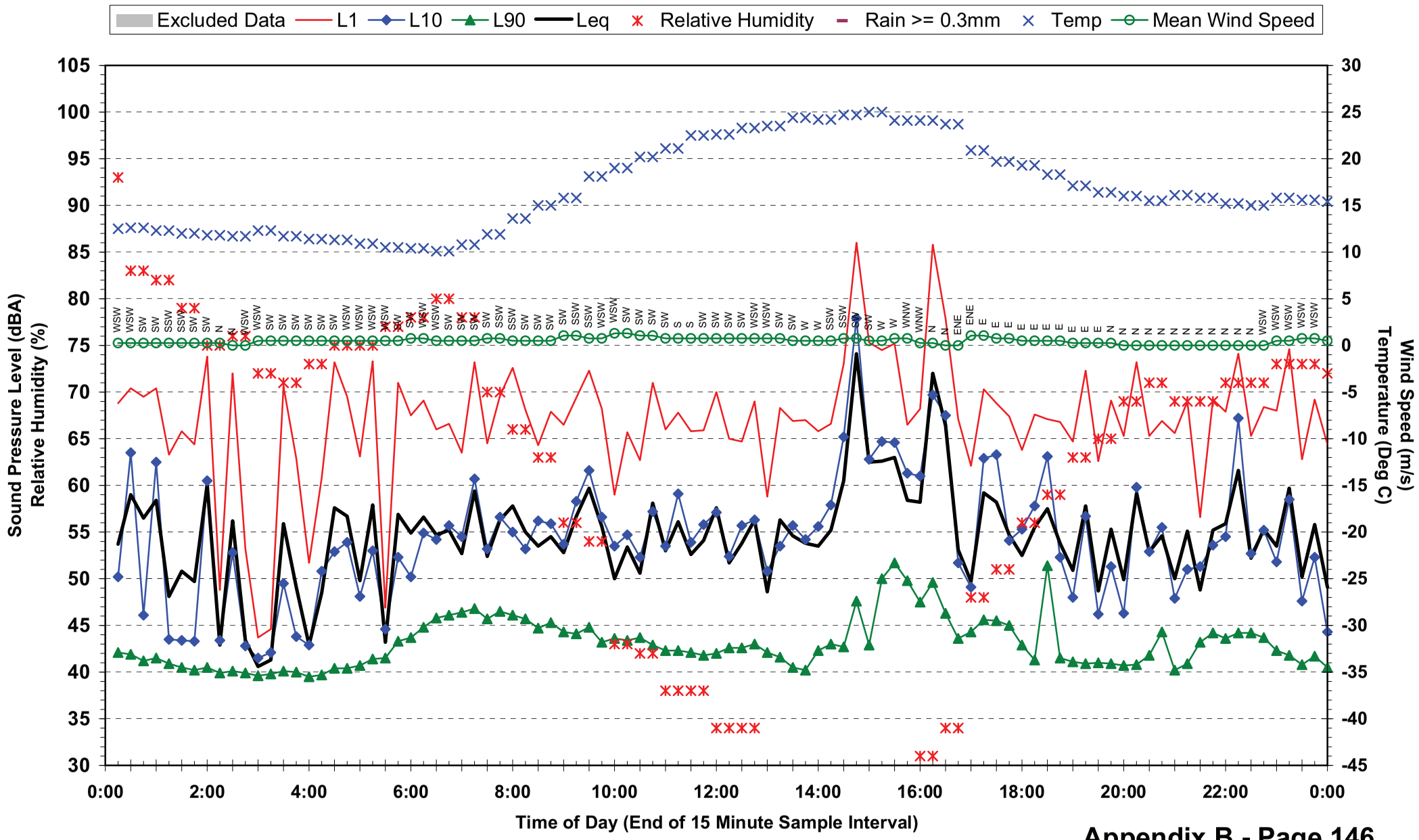
## Statistical Ambient Noise Levels
## Location 14 - 17 Lagonda St - Thursday 13 May 2010



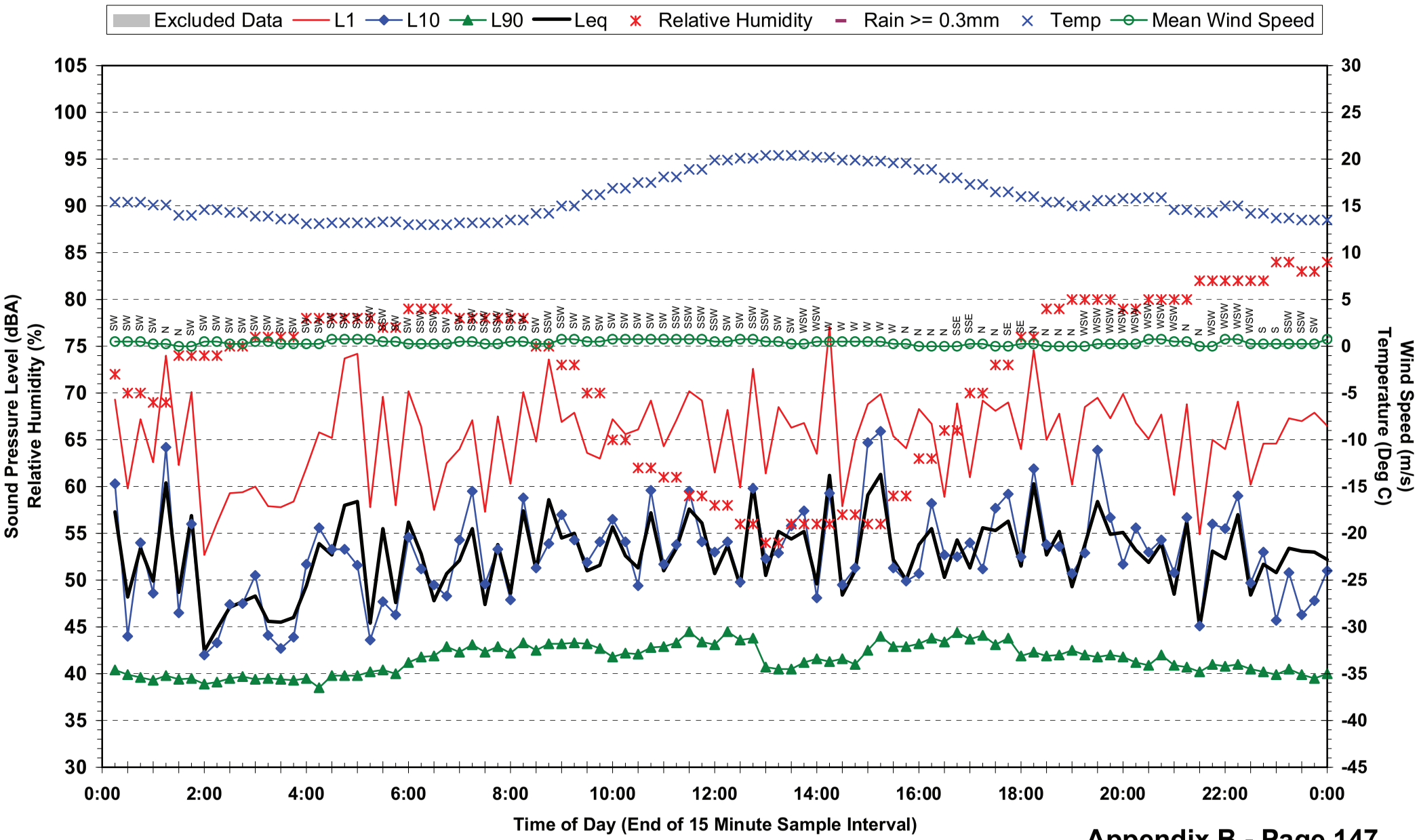
## Statistical Ambient Noise Levels
## Location 14 - 17 Lagonda St - Friday 14 May 2010



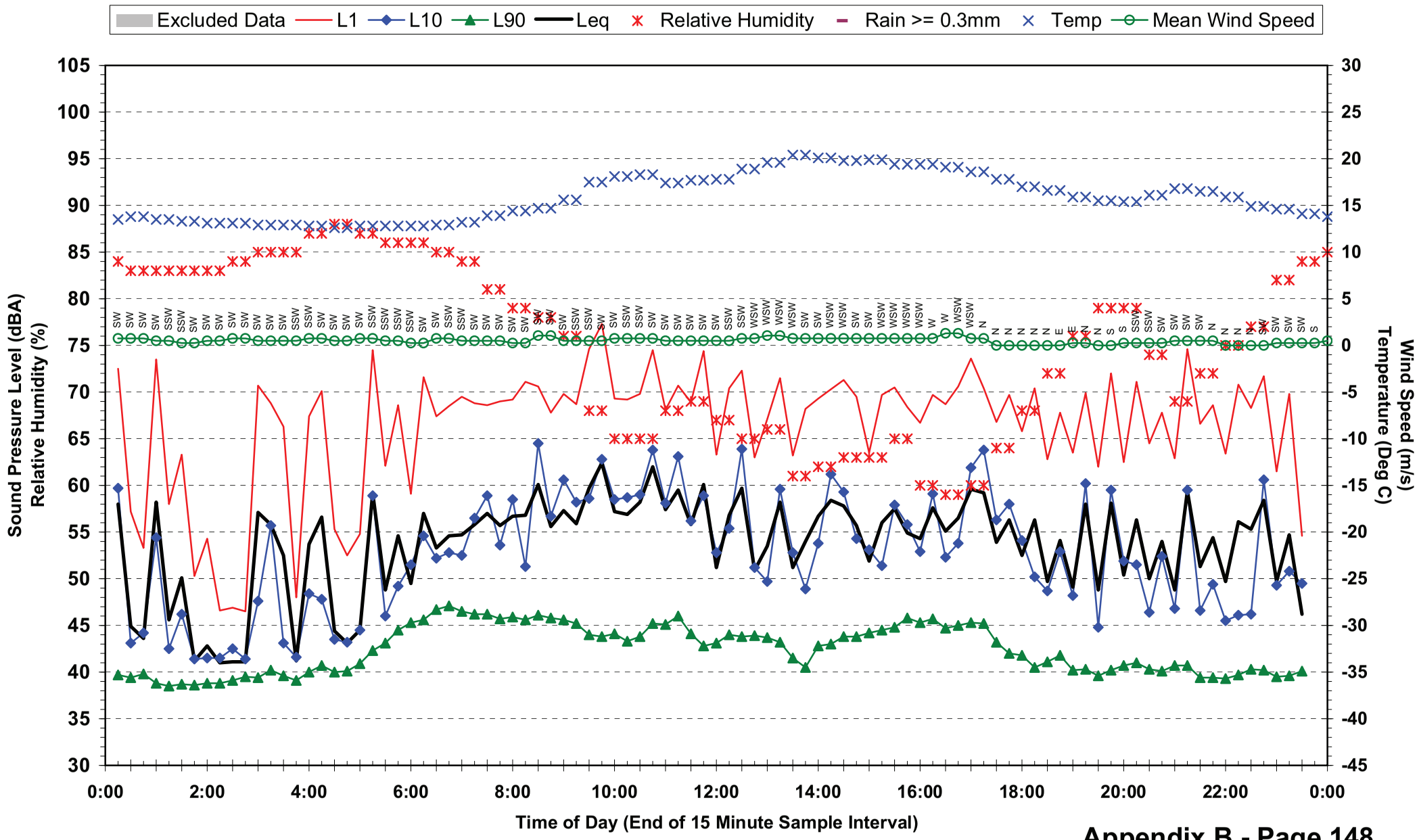
## Statistical Ambient Noise Levels
## Location 14 - 17 Lagonda St - Saturday 15 May 2010



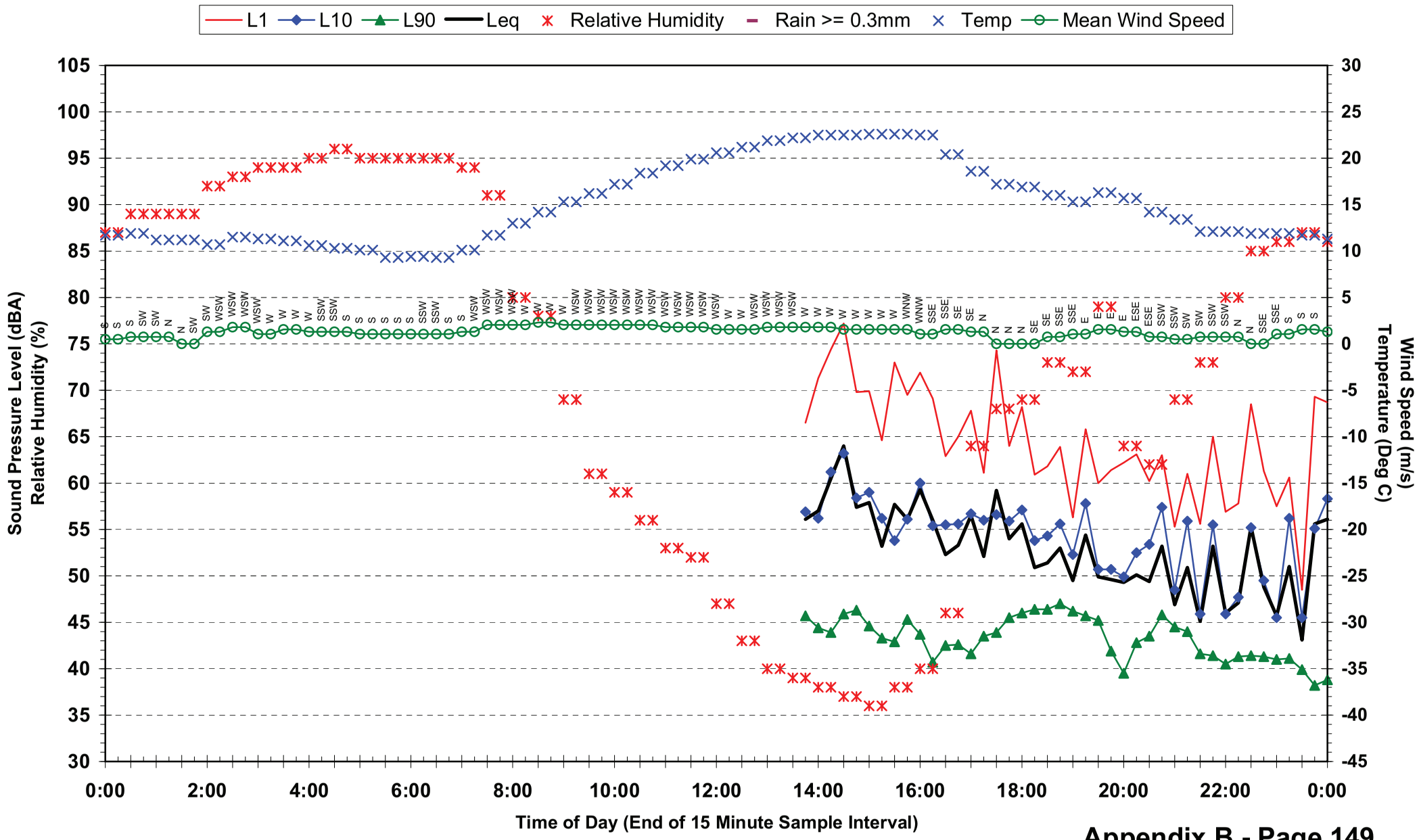
## Statistical Ambient Noise Levels
## Location 14 - 17 Lagonda St - Sunday 16 May 2010



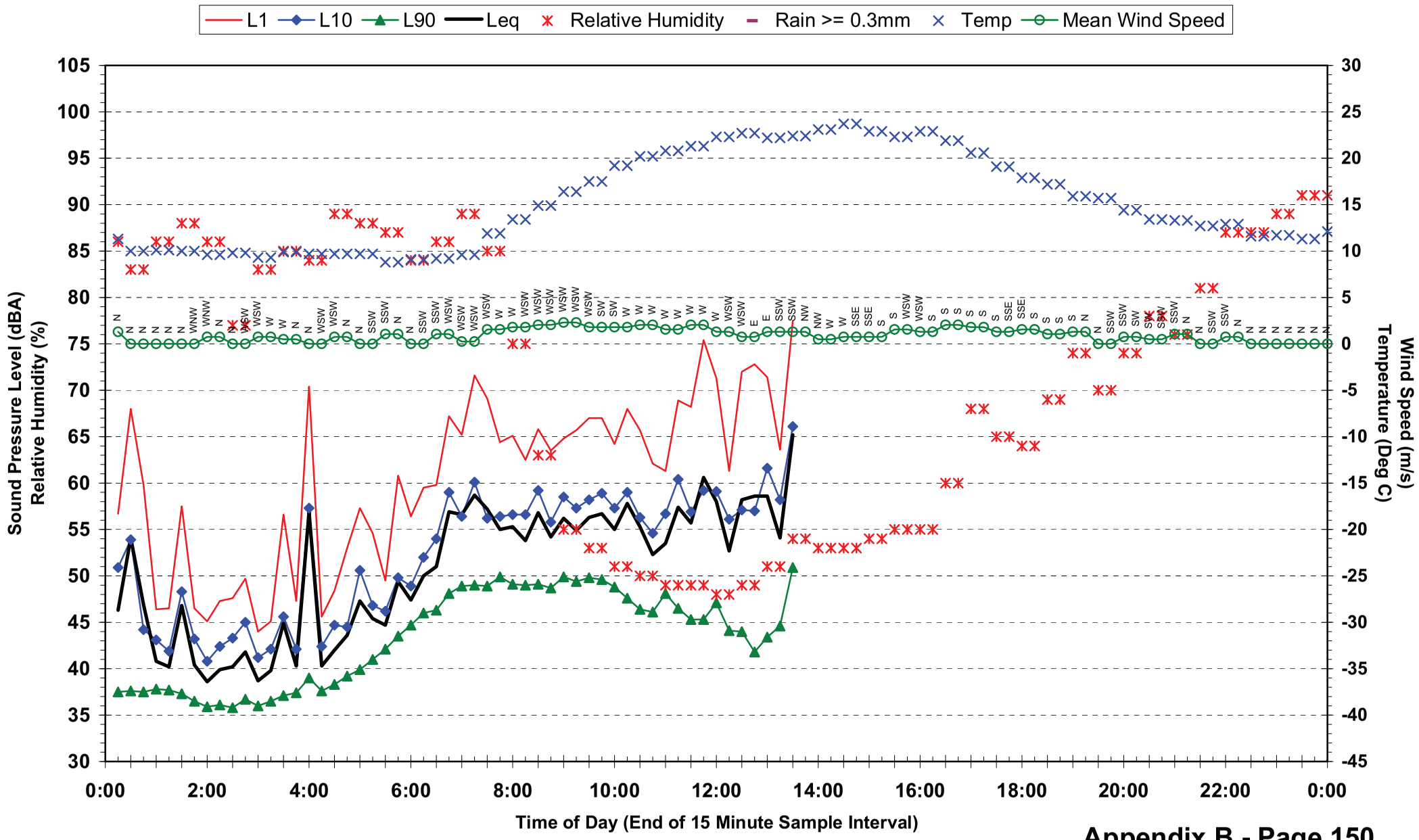
## Statistical Ambient Noise Levels
## Location 14 - 17 Lagonda St - Monday 17 May 2010



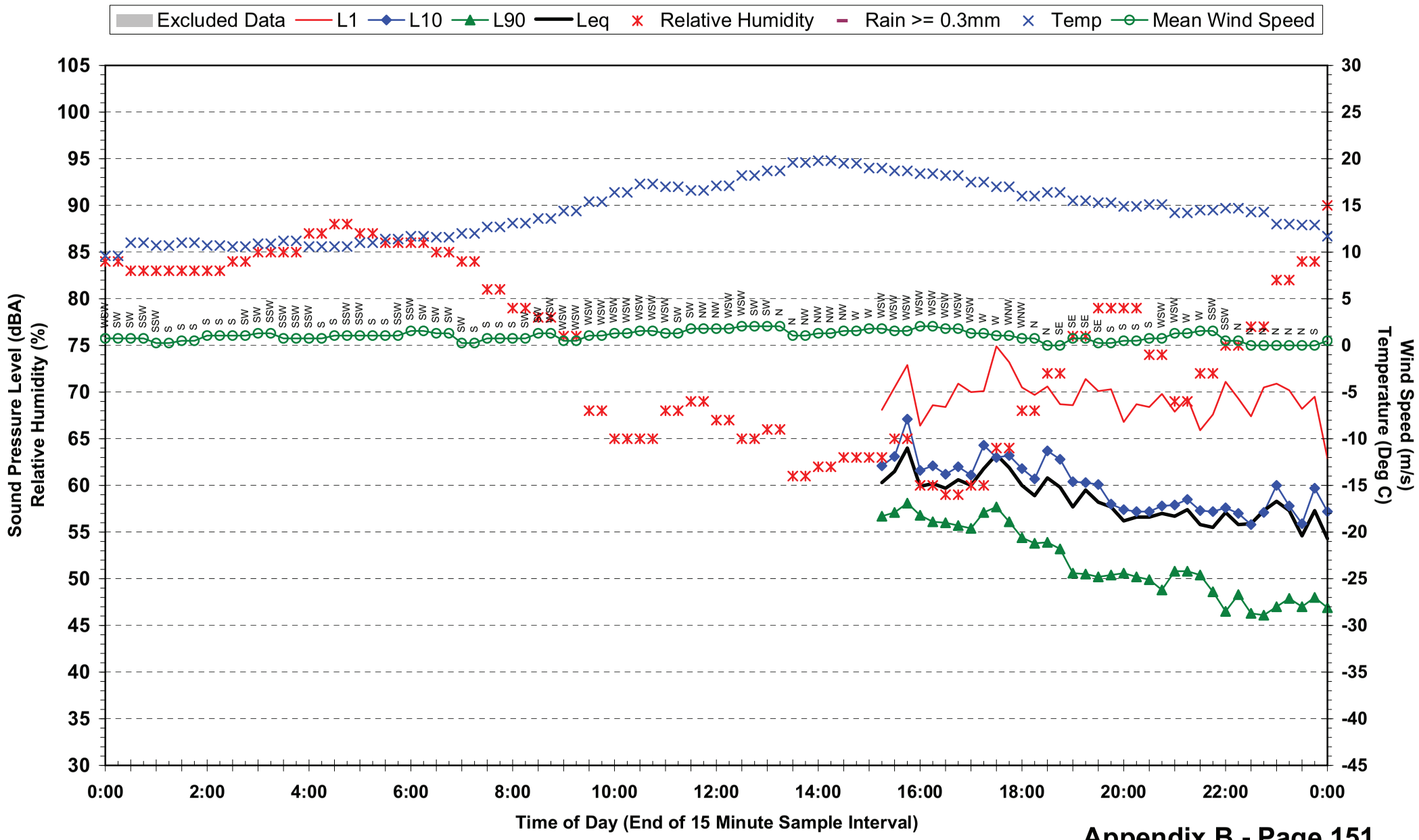
## Statistical Ambient Noise Levels
## Location 15 - Yeronga State High School - Tuesday 18 May 2010



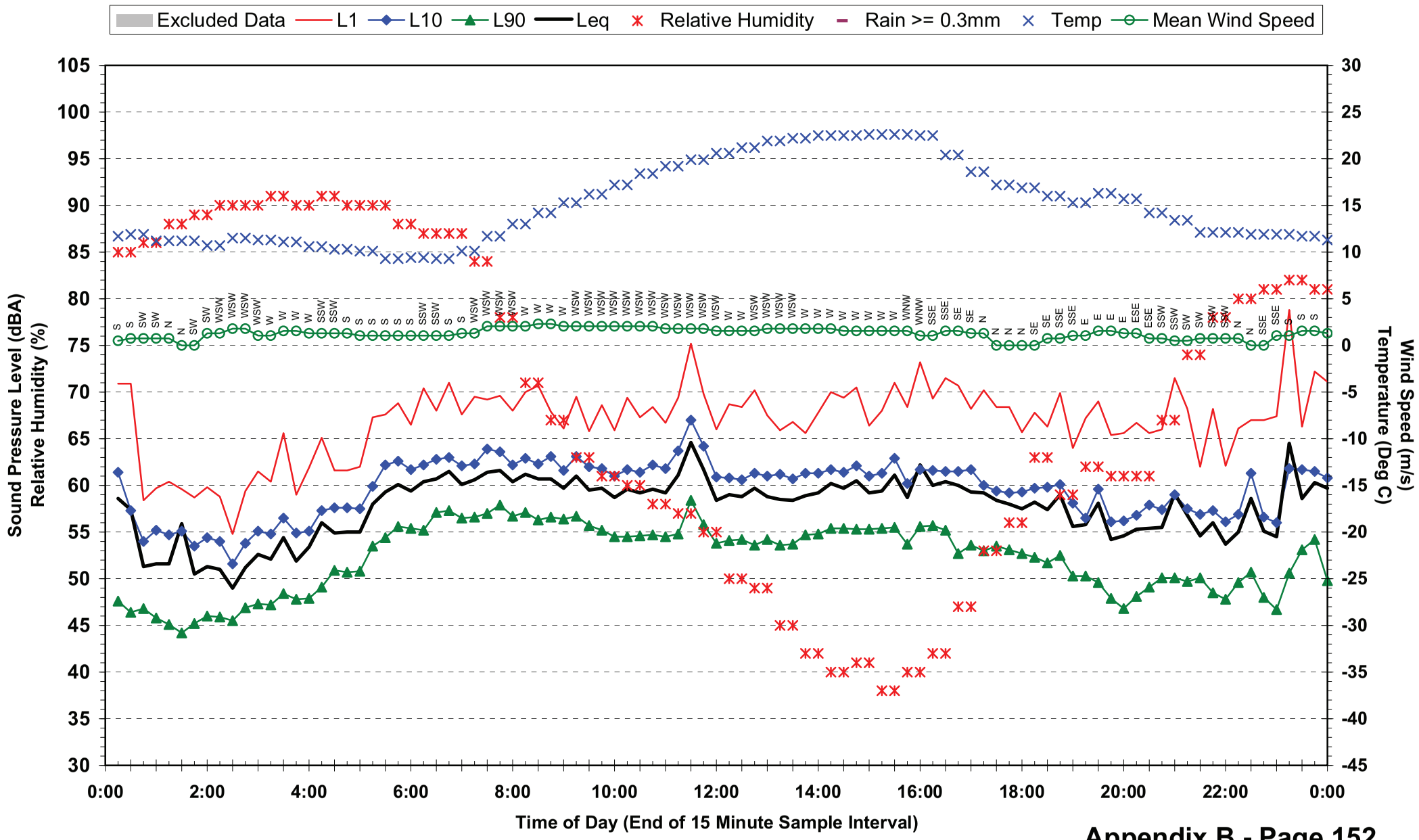
## Statistical Ambient Noise Levels
## Location 15 - Yeronga State High School - Wednesday 19 May 2010



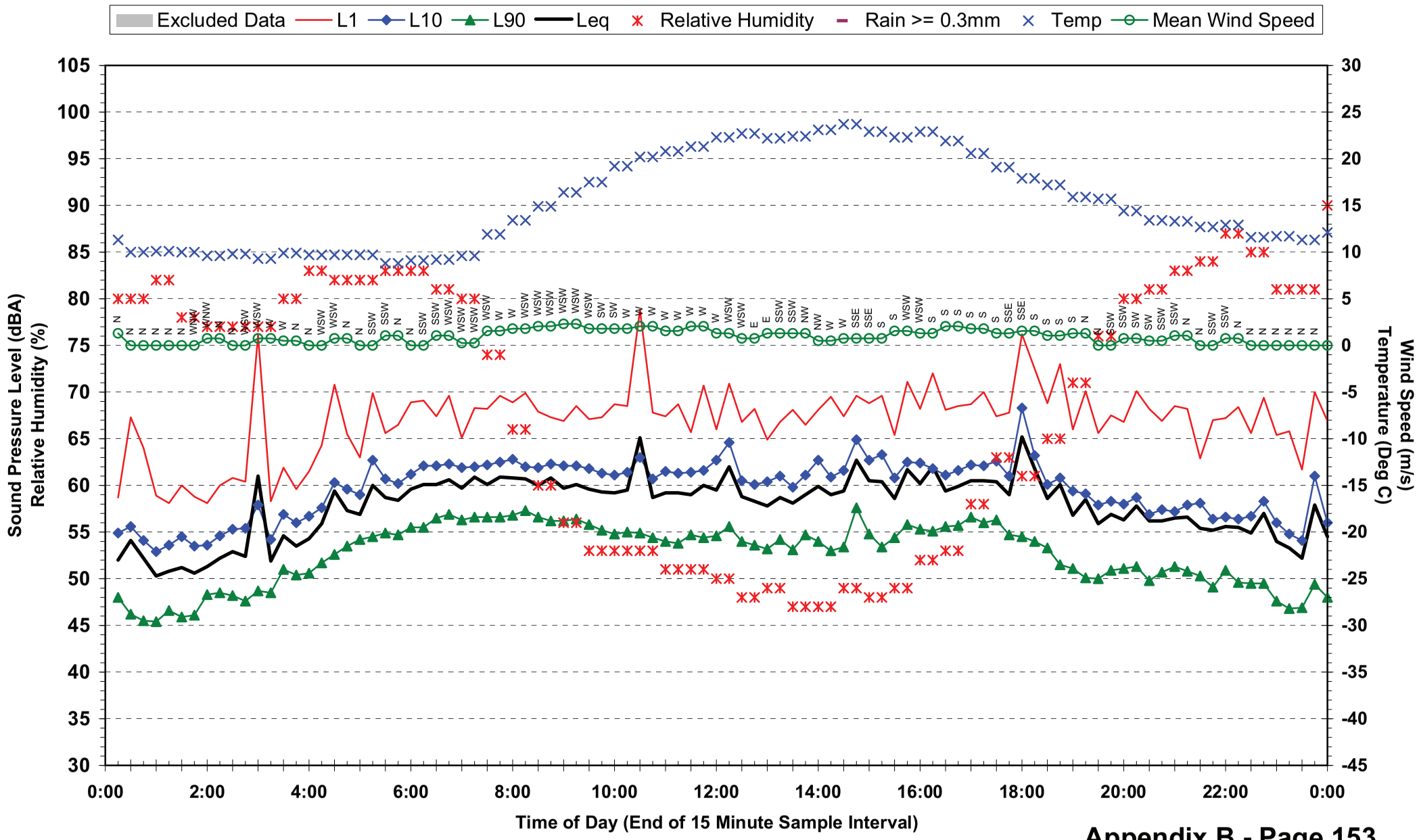
## Statistical Ambient Noise Levels
## Location 15 - 1223 Ipswich Mwy - Monday 17 May 2010



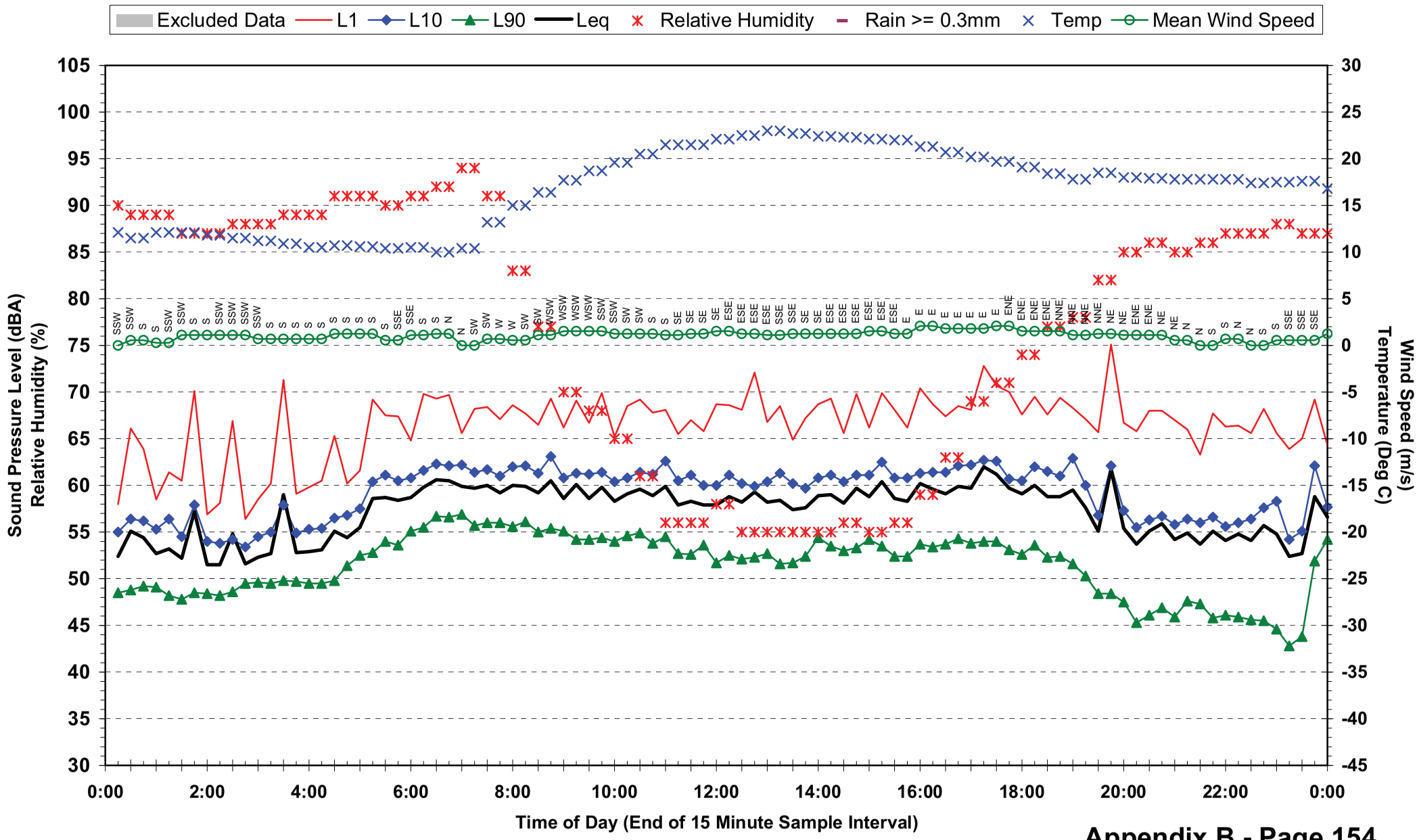
## Statistical Ambient Noise Levels
## Location 15 - 1223 Ipswich Mwy - Tuesday 18 May 2010



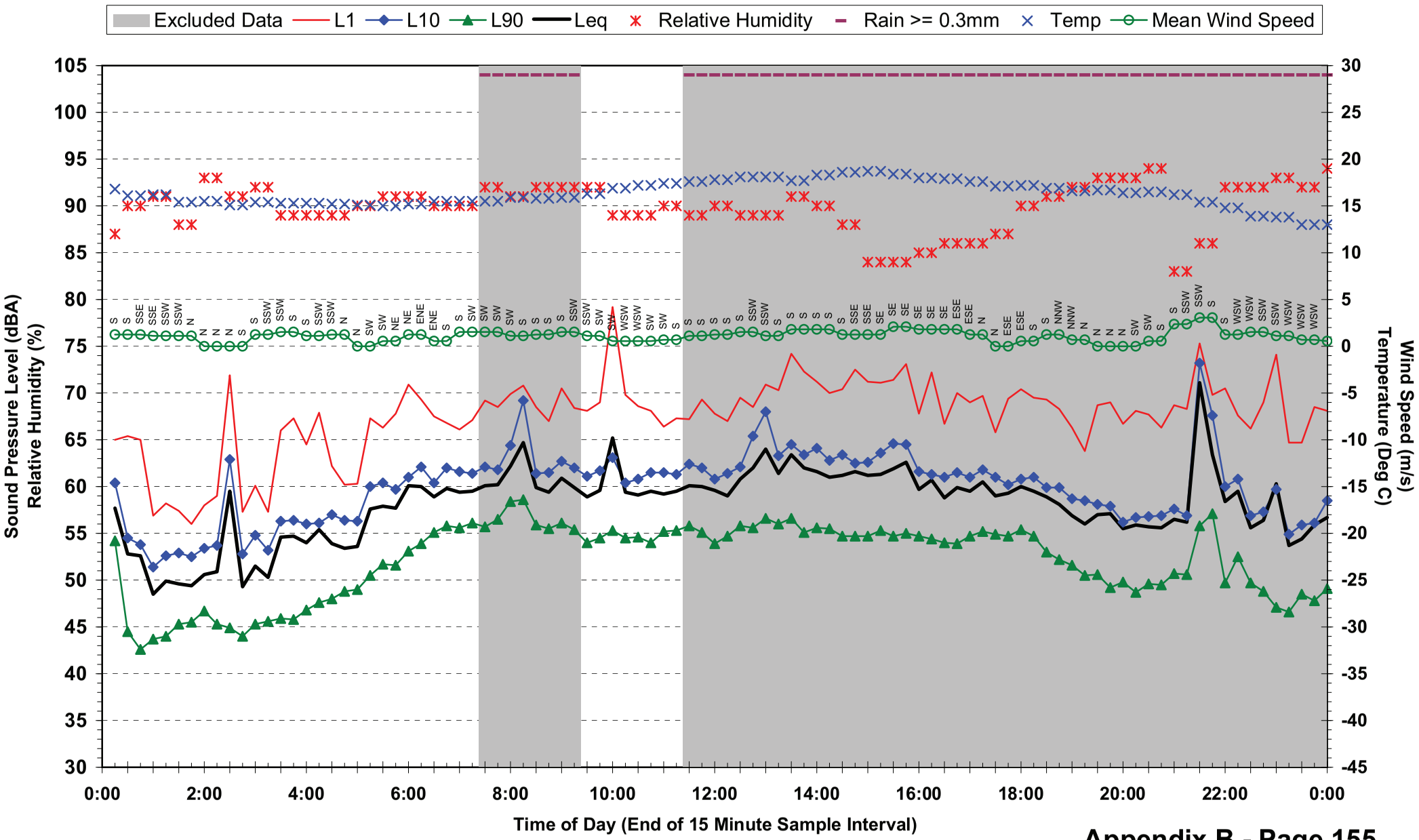
## Statistical Ambient Noise Levels
## Location 15 - 1223 Ipswich Mwy - Wednesday 19 May 2010



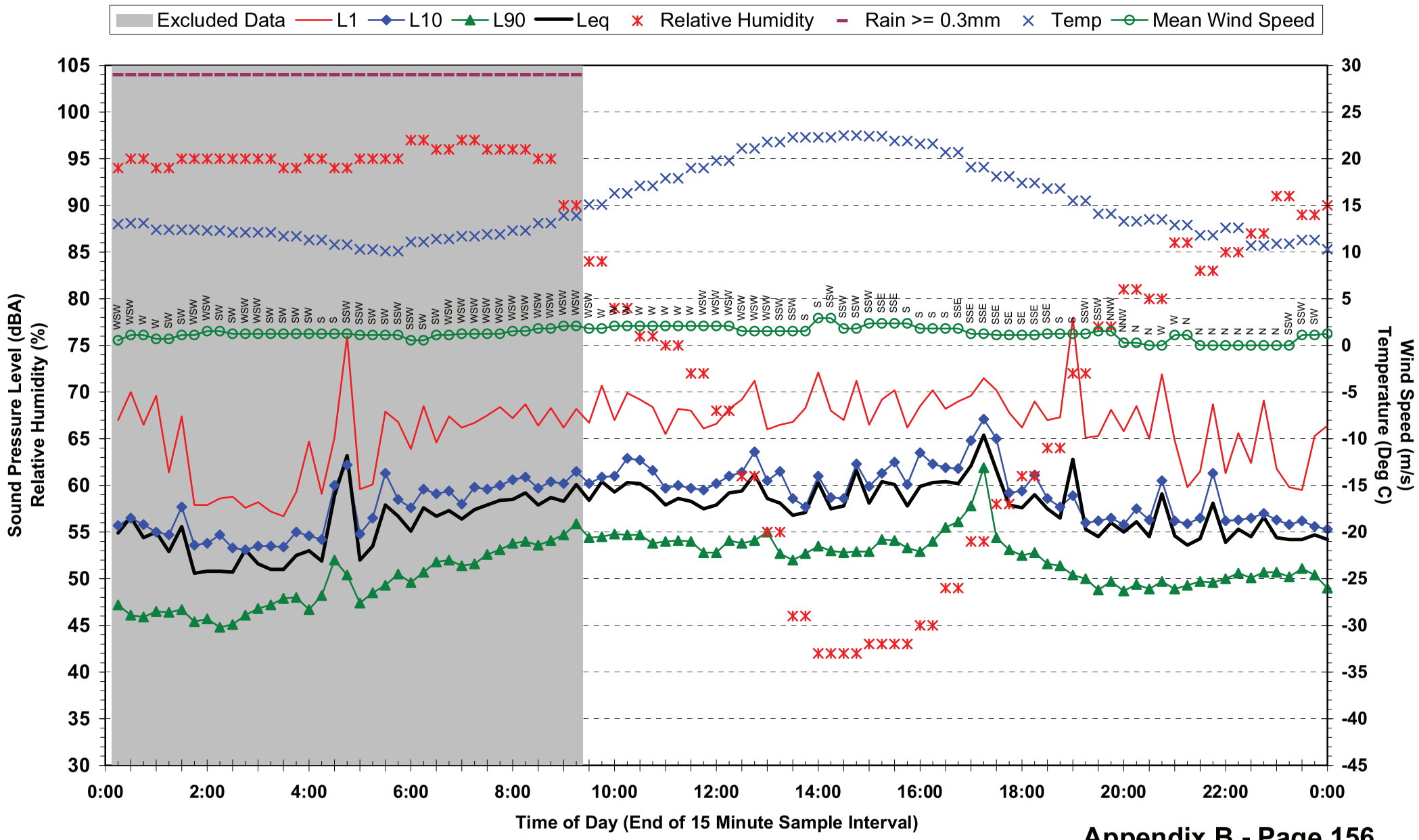
## Statistical Ambient Noise Levels
## Location 15 - 1223 Ipswich Mwy - Thursday 20 May 2010



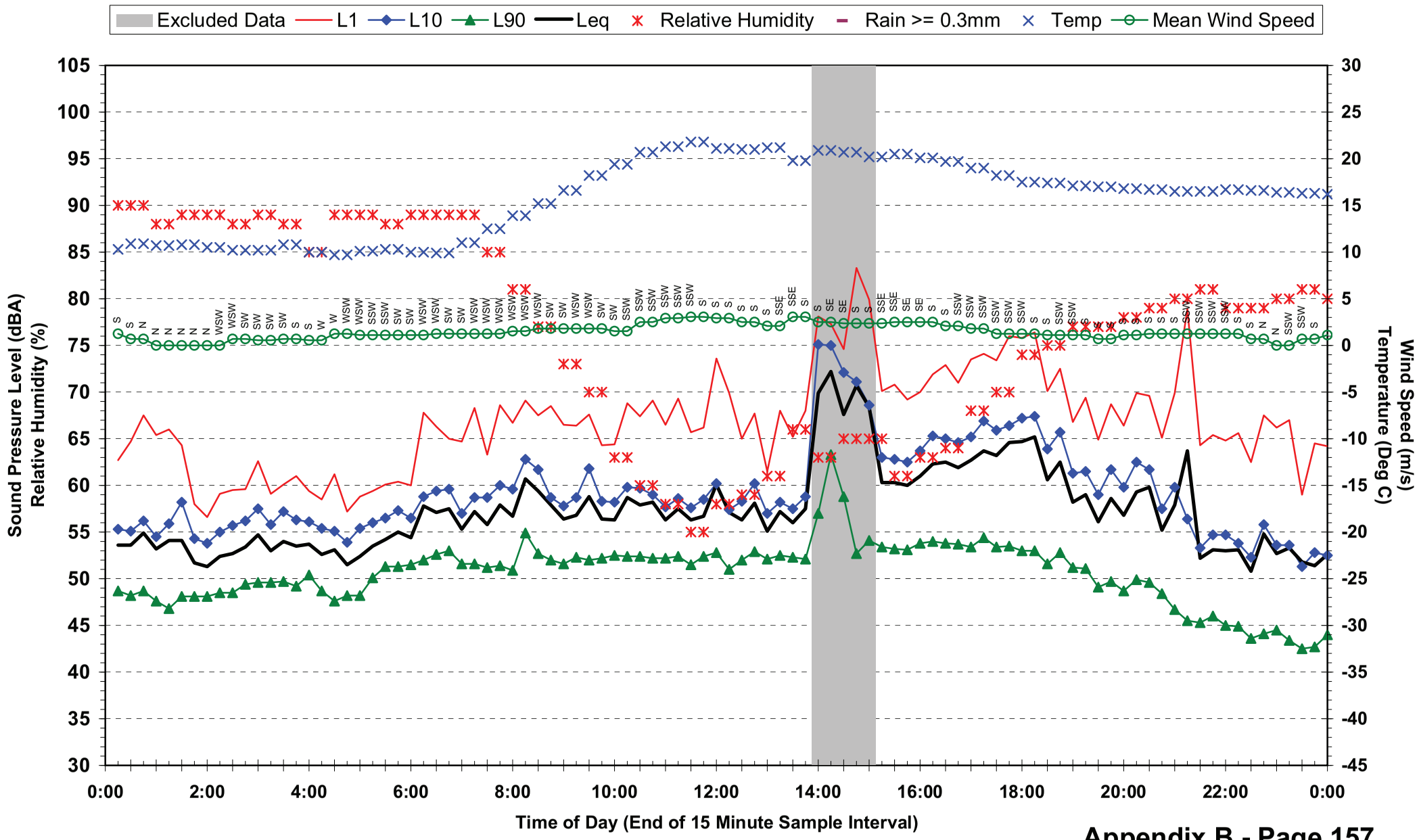
## Statistical Ambient Noise Levels
## Location 15 - 1223 Ipswich Mwy - Friday 21 May 2010



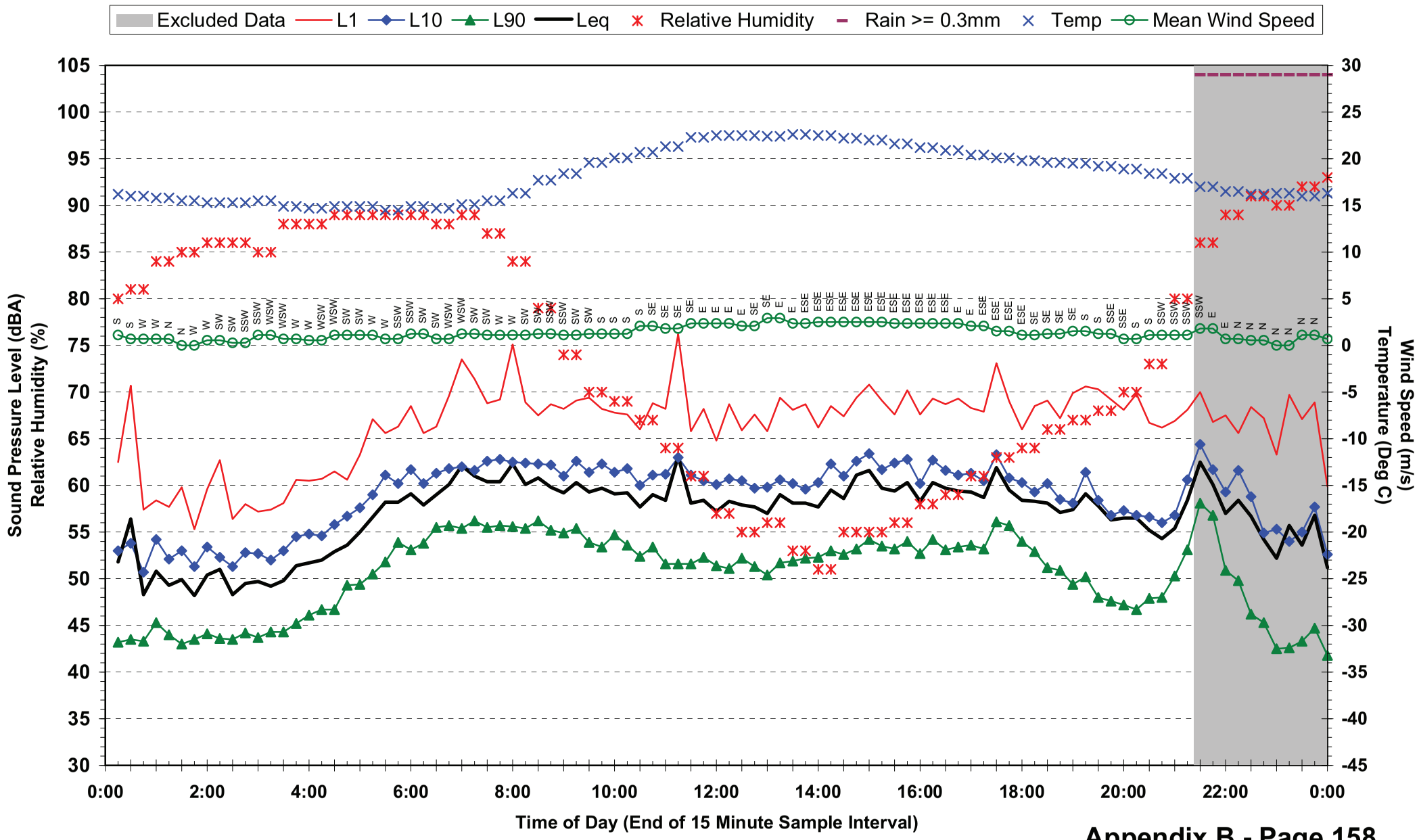
## Statistical Ambient Noise Levels
## Location 15 - 1223 Ipswich Mwy - Saturday 22 May 2010



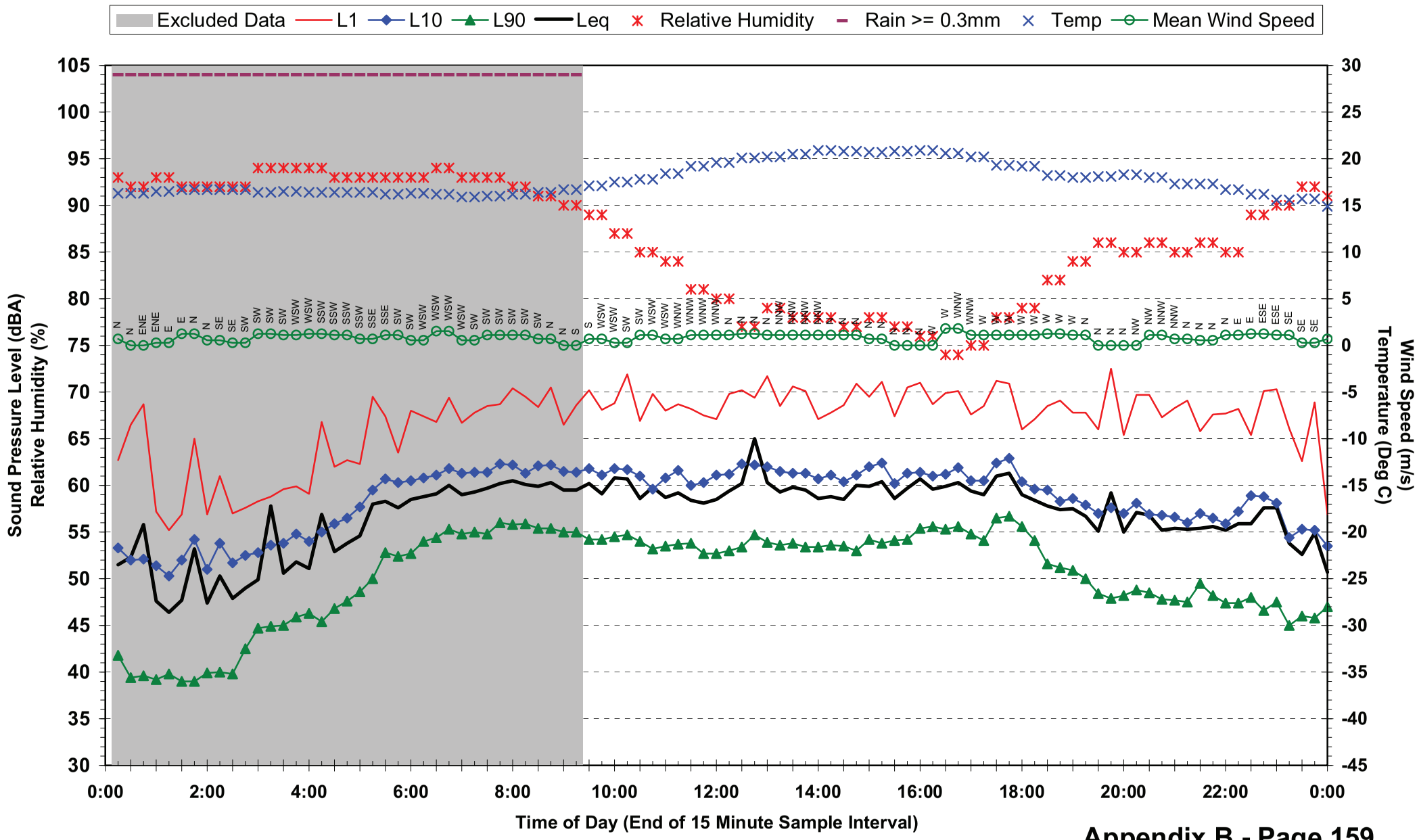
## Statistical Ambient Noise Levels
## Location 15 - 1223 Ipswich Mwy - Sunday 23 May 2010



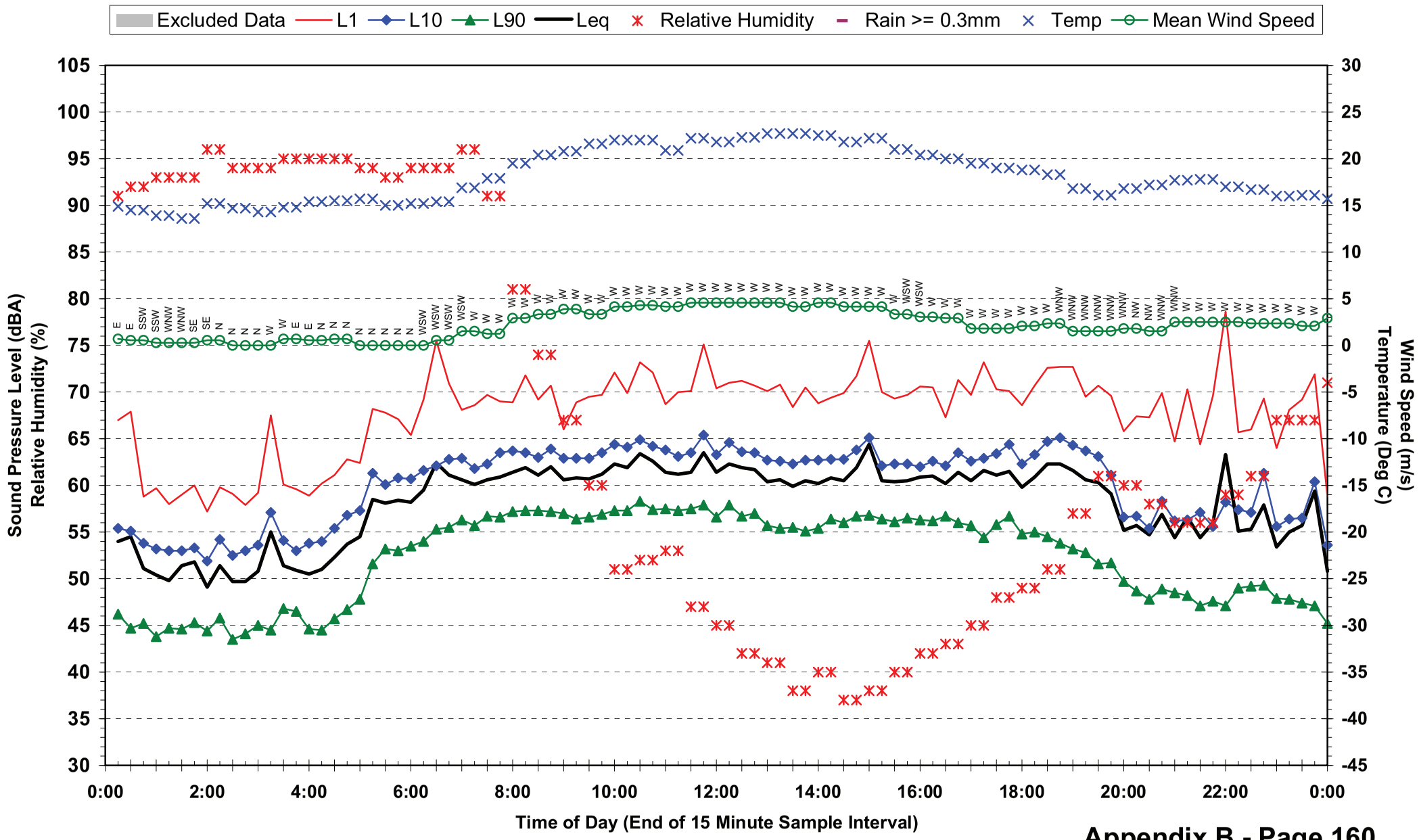
## Statistical Ambient Noise Levels
## Location 15 - 1223 Ipswich Mwy - Monday 24 May 2010



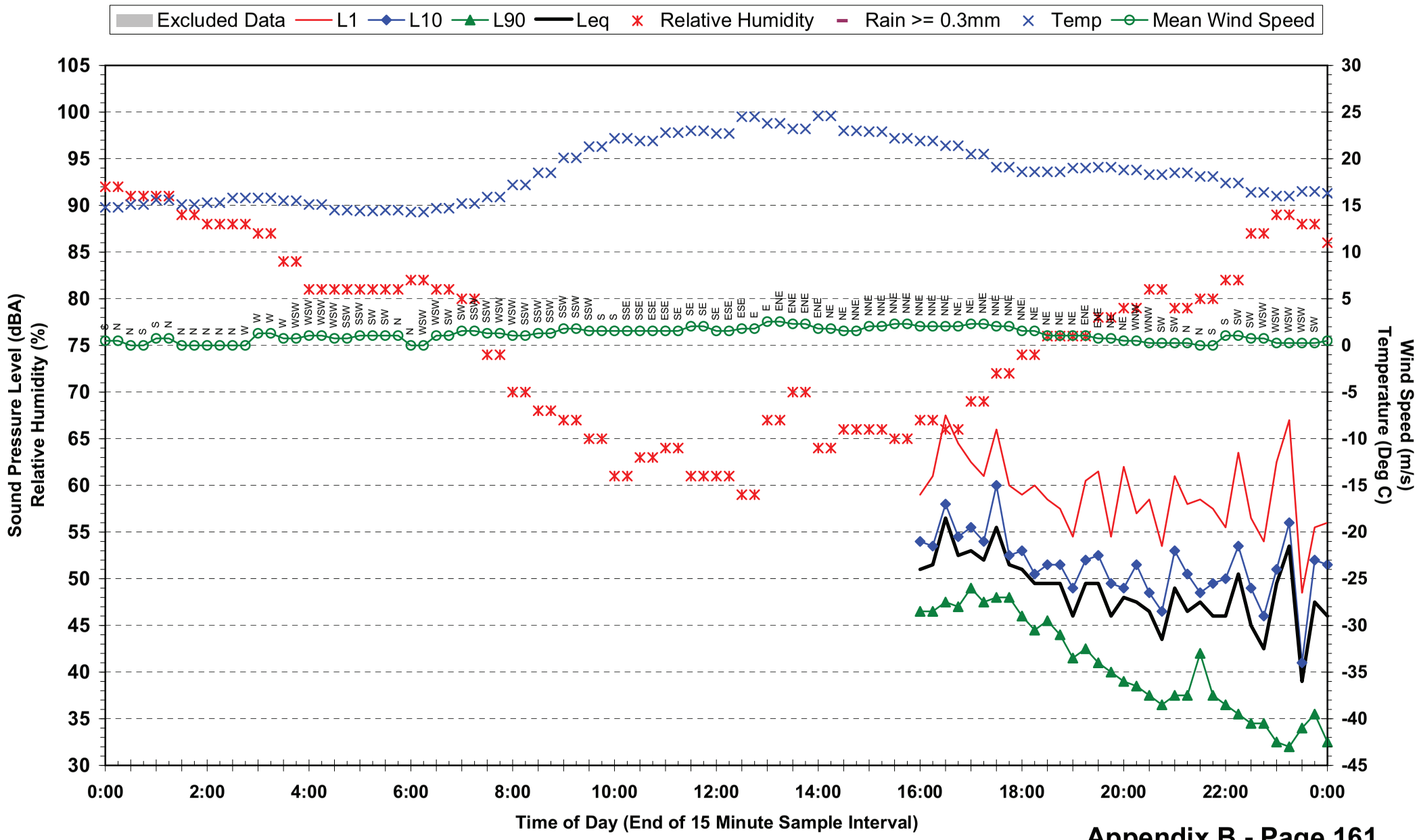
## Statistical Ambient Noise Levels
## Location 15 - 1223 Ipswich Mwy - Tuesday 25 May 2010



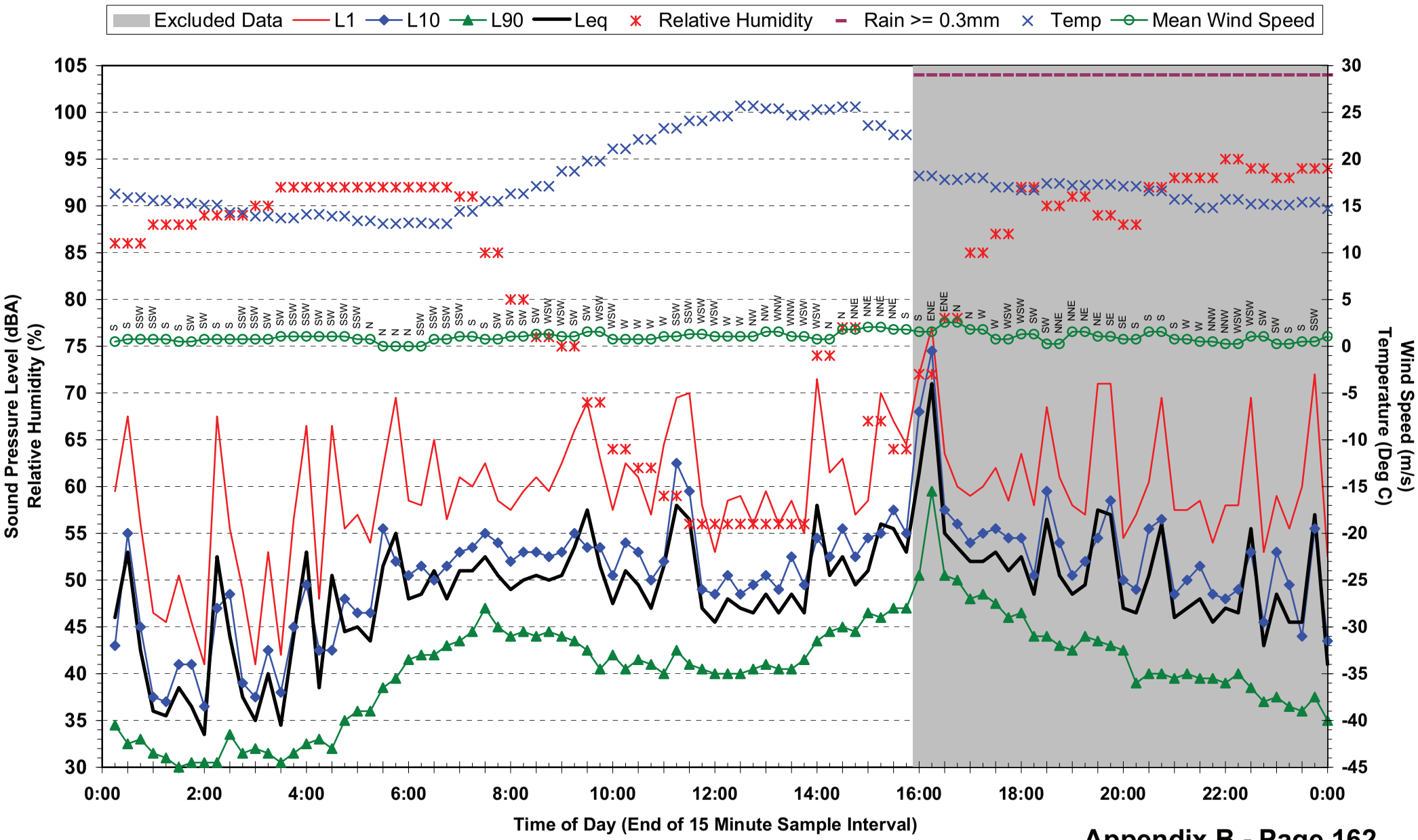
## Statistical Ambient Noise Levels
## Location 15 - 1223 Ipswich Mwy - Wednesday 26 May 2010



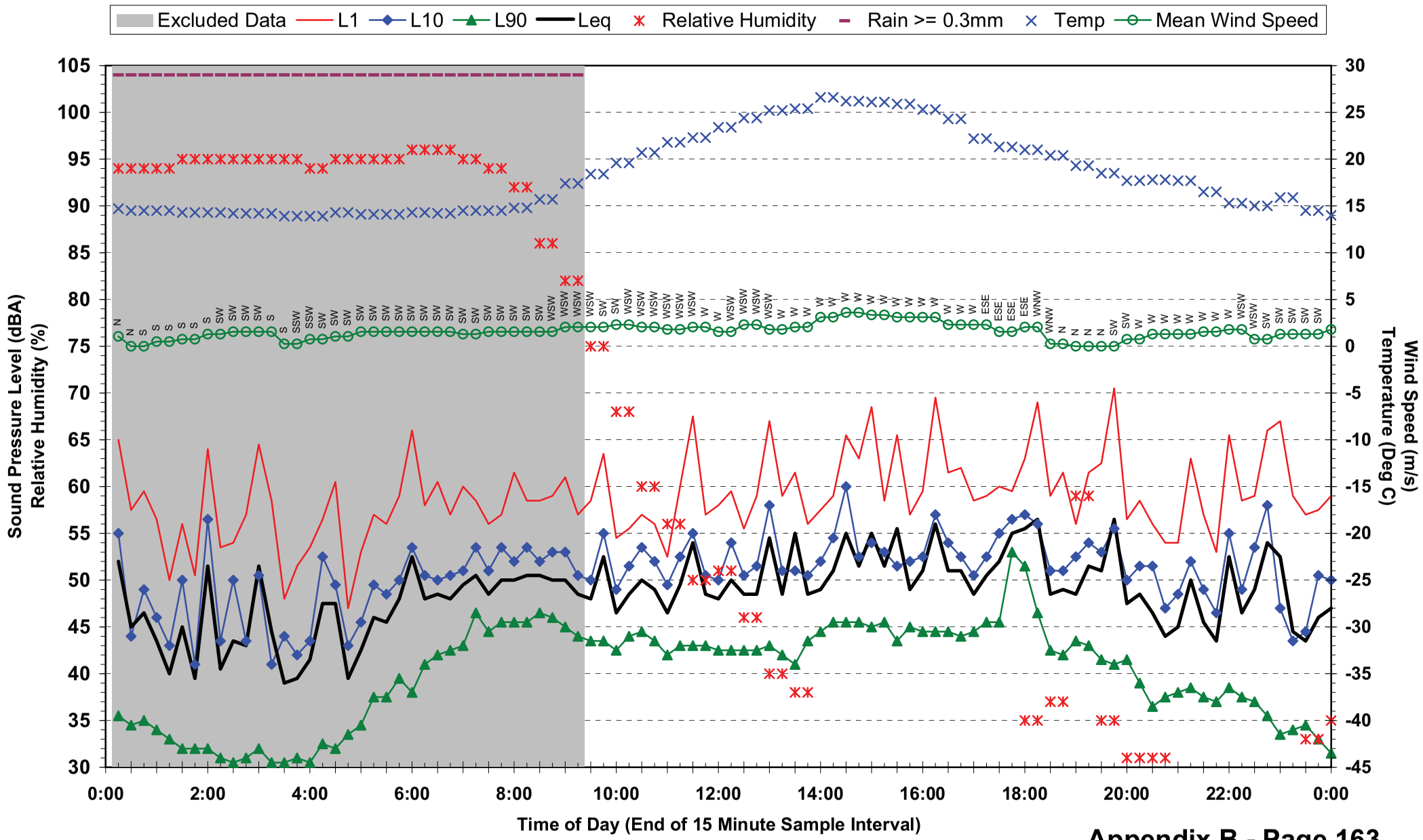
## Statistical Ambient Noise Levels
## Location 16 - 3 Cardross St - Monday 10 May 2010



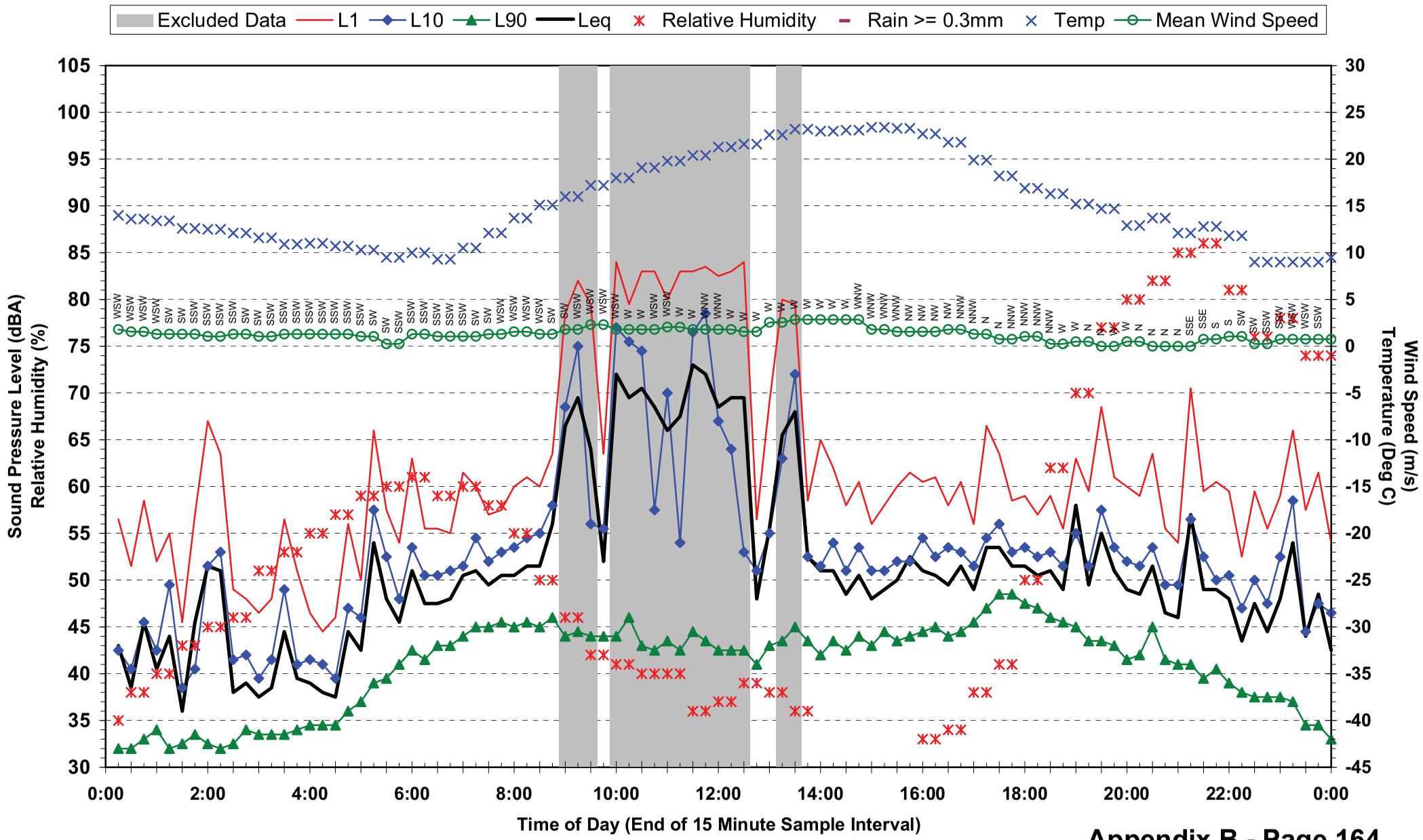
## Statistical Ambient Noise Levels
## Location 16 - 3 Cardross St - Tuesday 11 May 2010



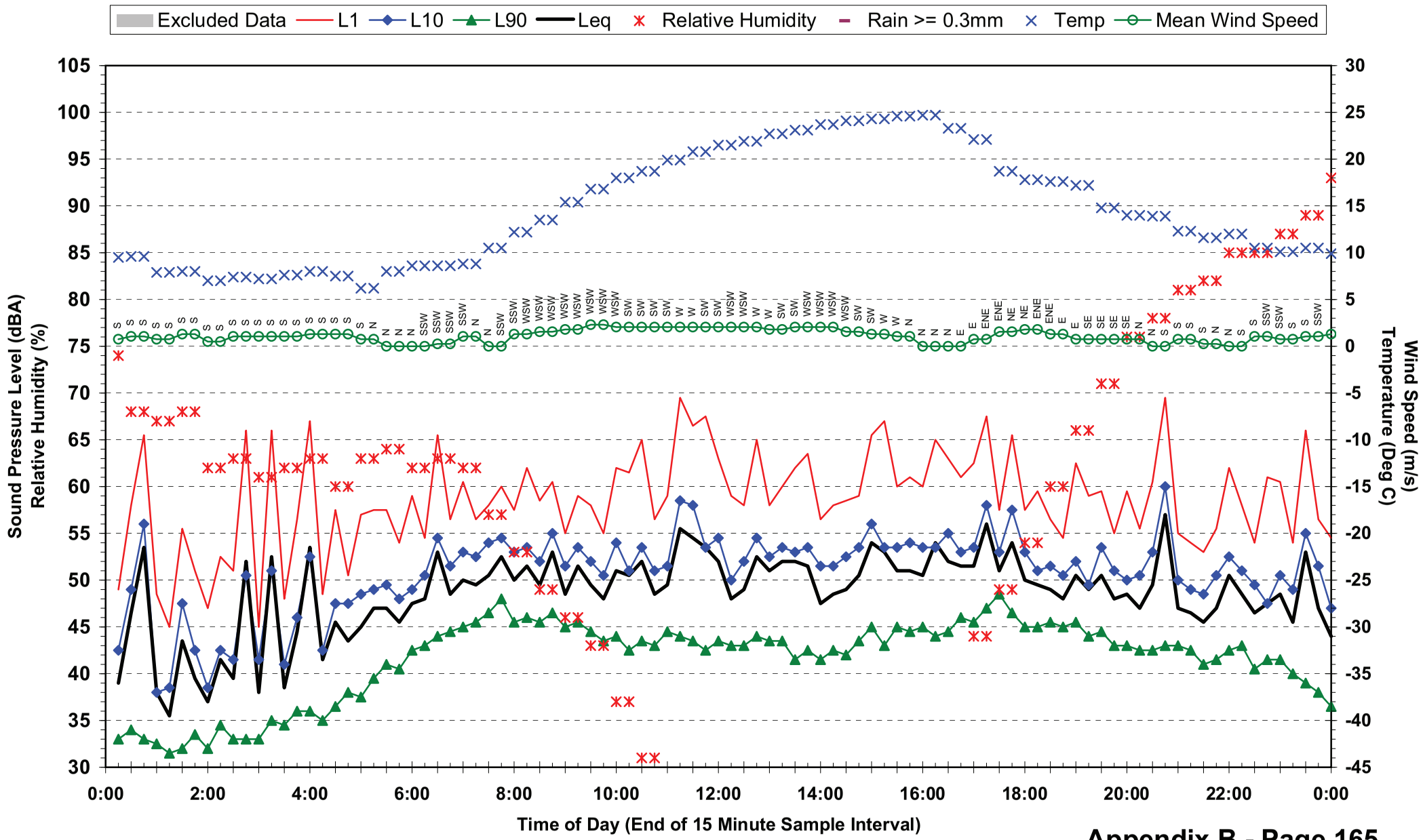
## Statistical Ambient Noise Levels
## Location 16 - 3 Cardross St - Wednesday 12 May 2010



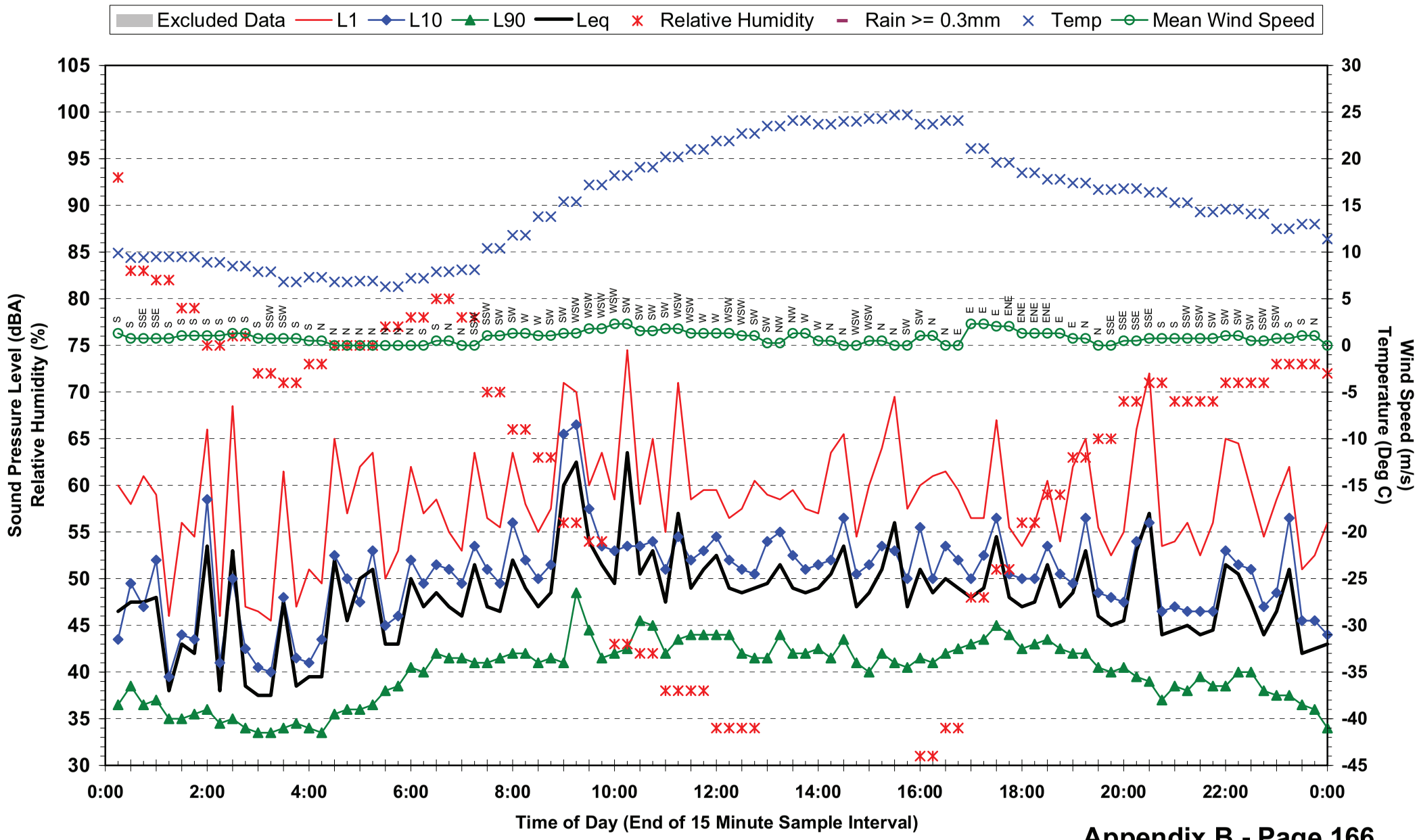
## Statistical Ambient Noise Levels
## Location 16 - 3 Cardross St - Thursday 13 May 2010



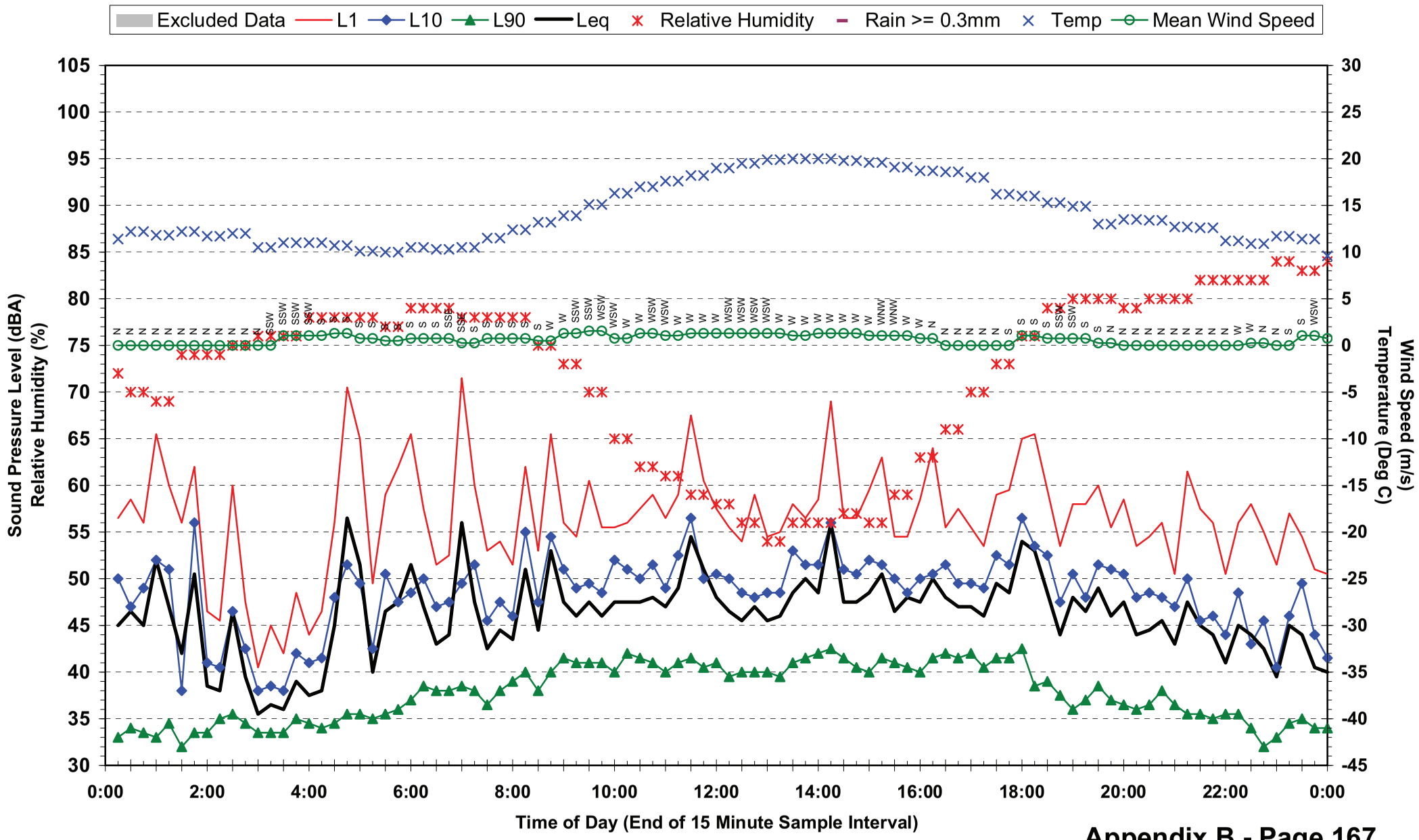
## Statistical Ambient Noise Levels
## Location 16 - 3 Cardross St - Friday 14 May 2010



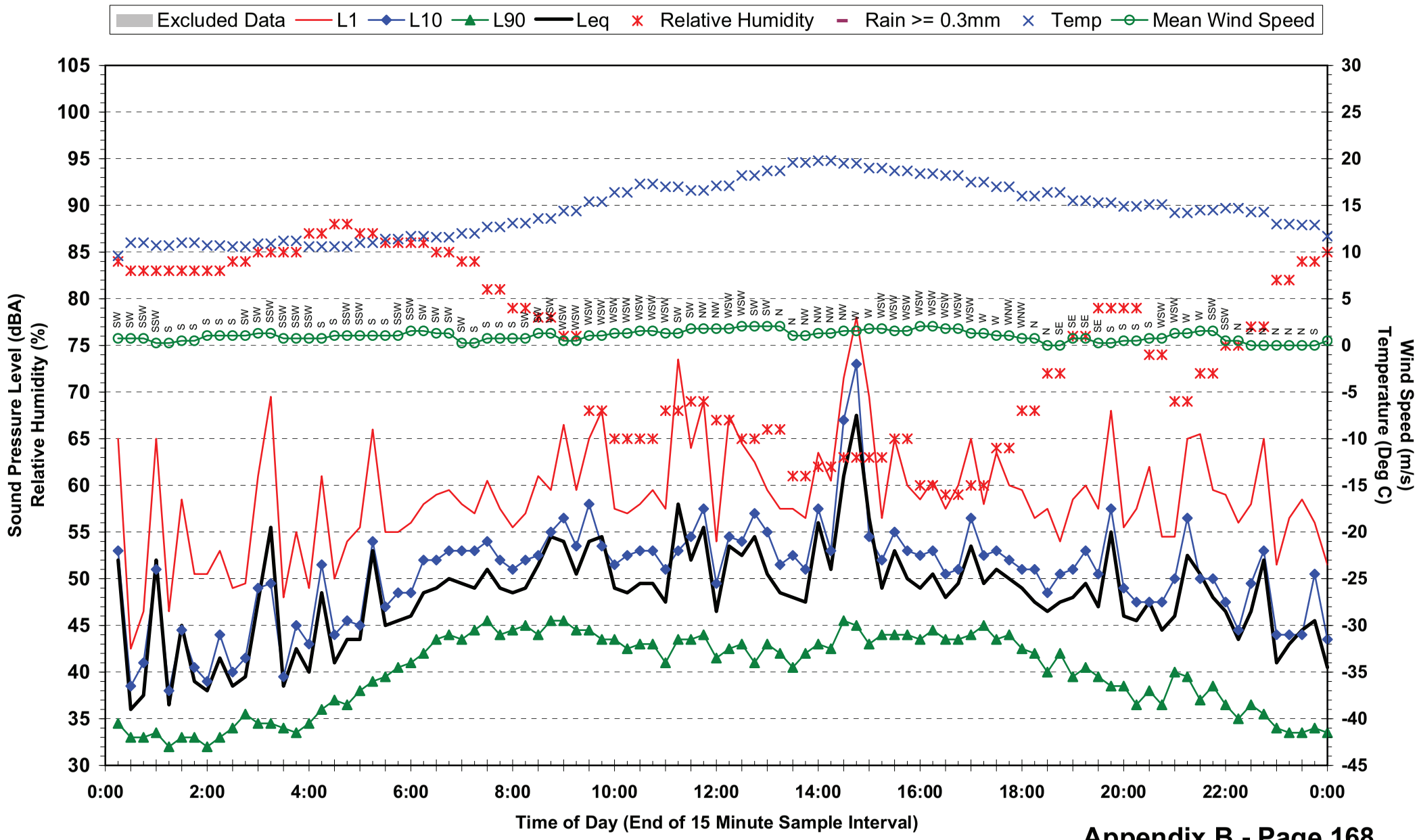
## Statistical Ambient Noise Levels
## Location 16 - 3 Cardross St - Saturday 15 May 2010



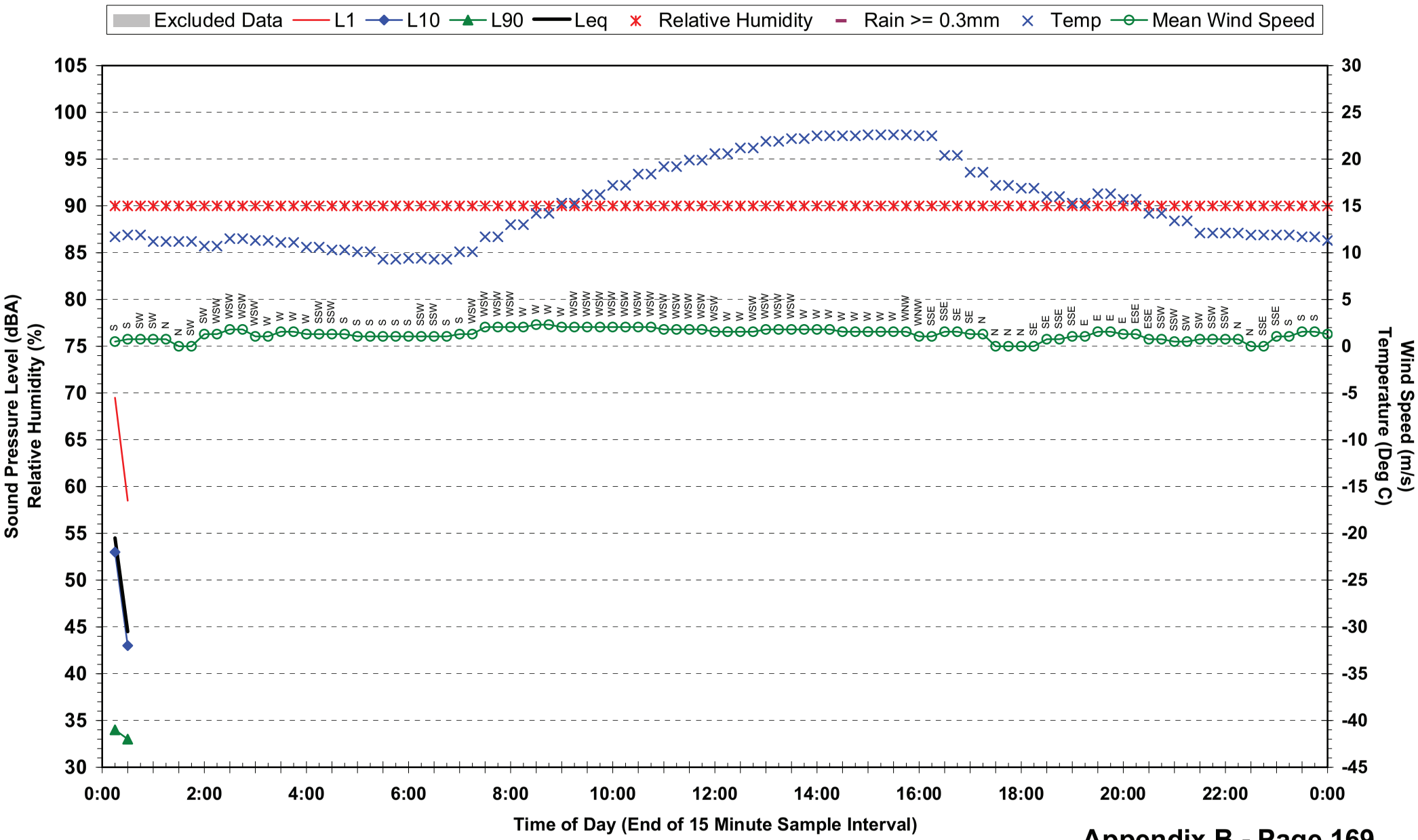
## Statistical Ambient Noise Levels
## Location 16 - 3 Cardross St - Sunday 16 May 2010



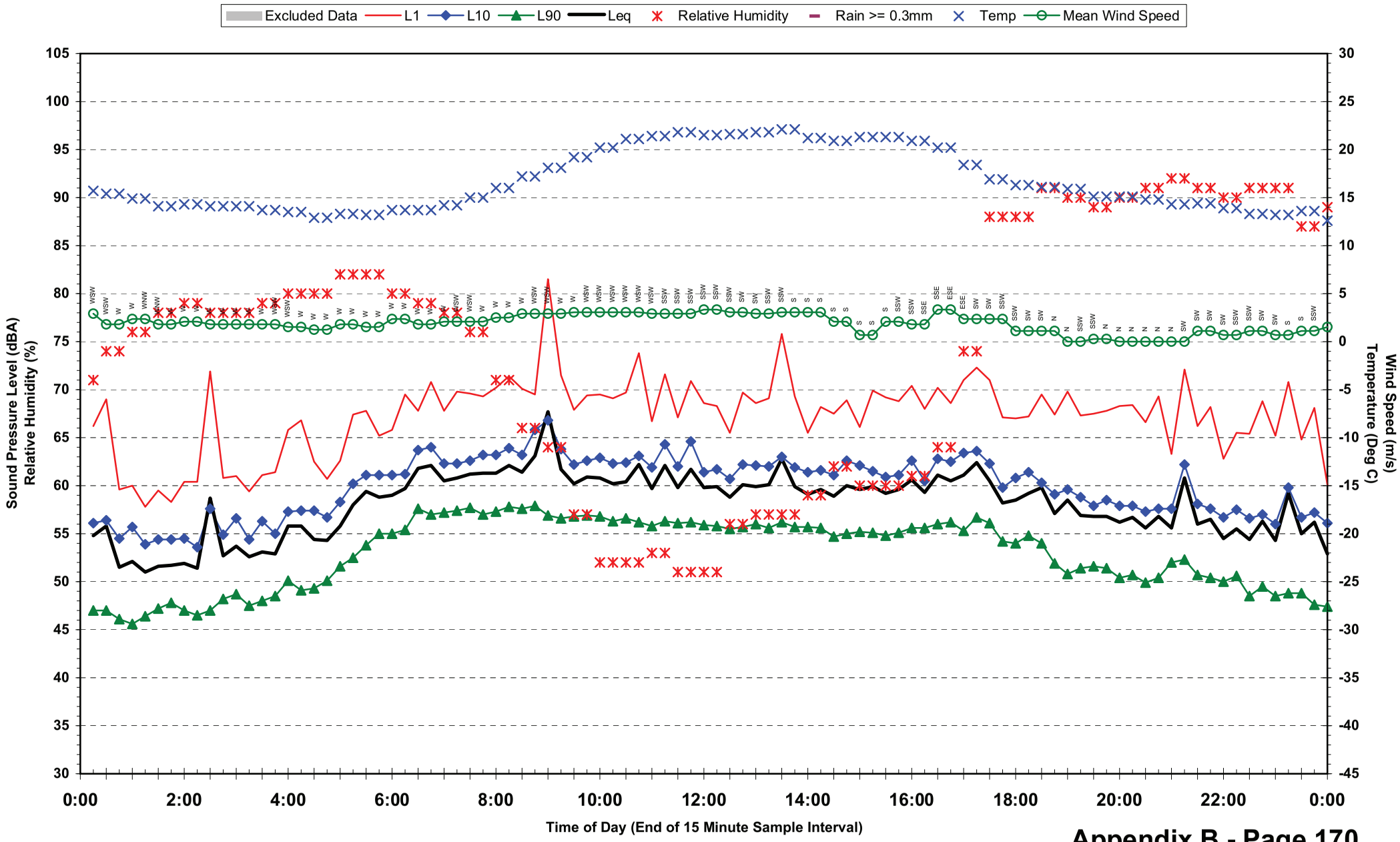
## Statistical Ambient Noise Levels
## Location 16 - 3 Cardross St - Monday 17 May 2010



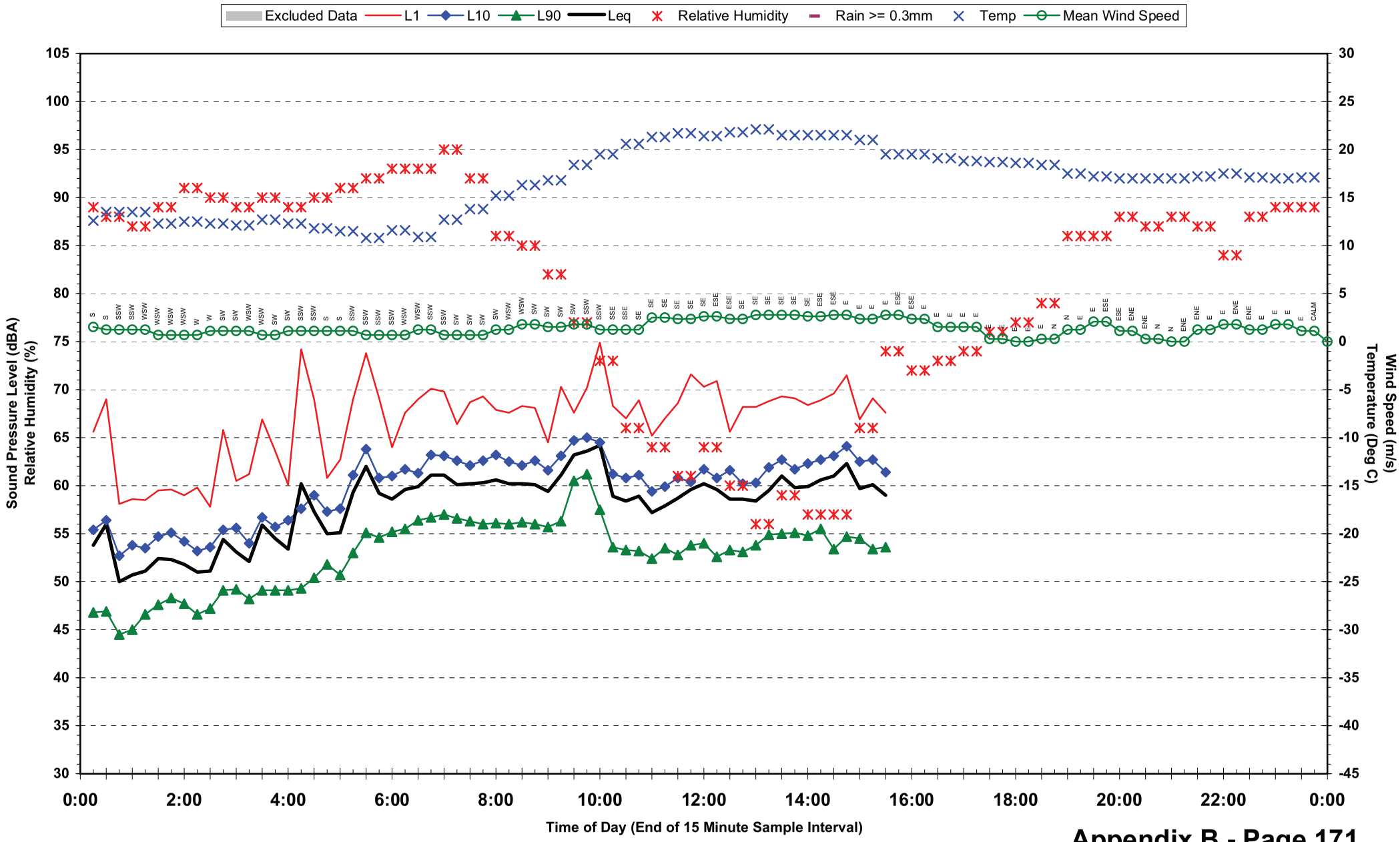
## Statistical Ambient Noise Levels
## Location 16 - 3 Cardross St - Tuesday 18 May 2010



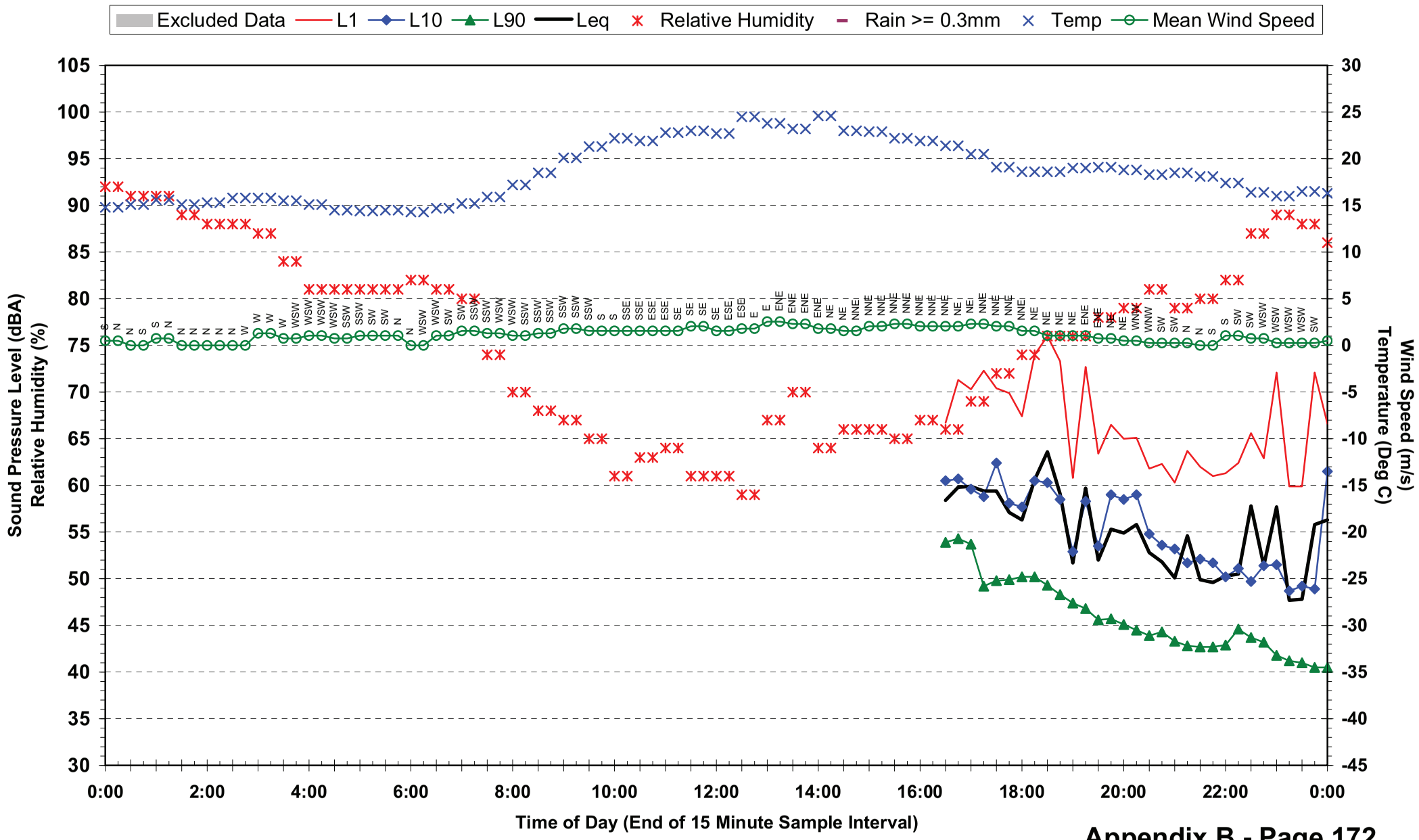
**Statistical Ambient Noise Levels**
**Location 17 - 1223 Ipswich Mwy - Thursday 27 May 2010**



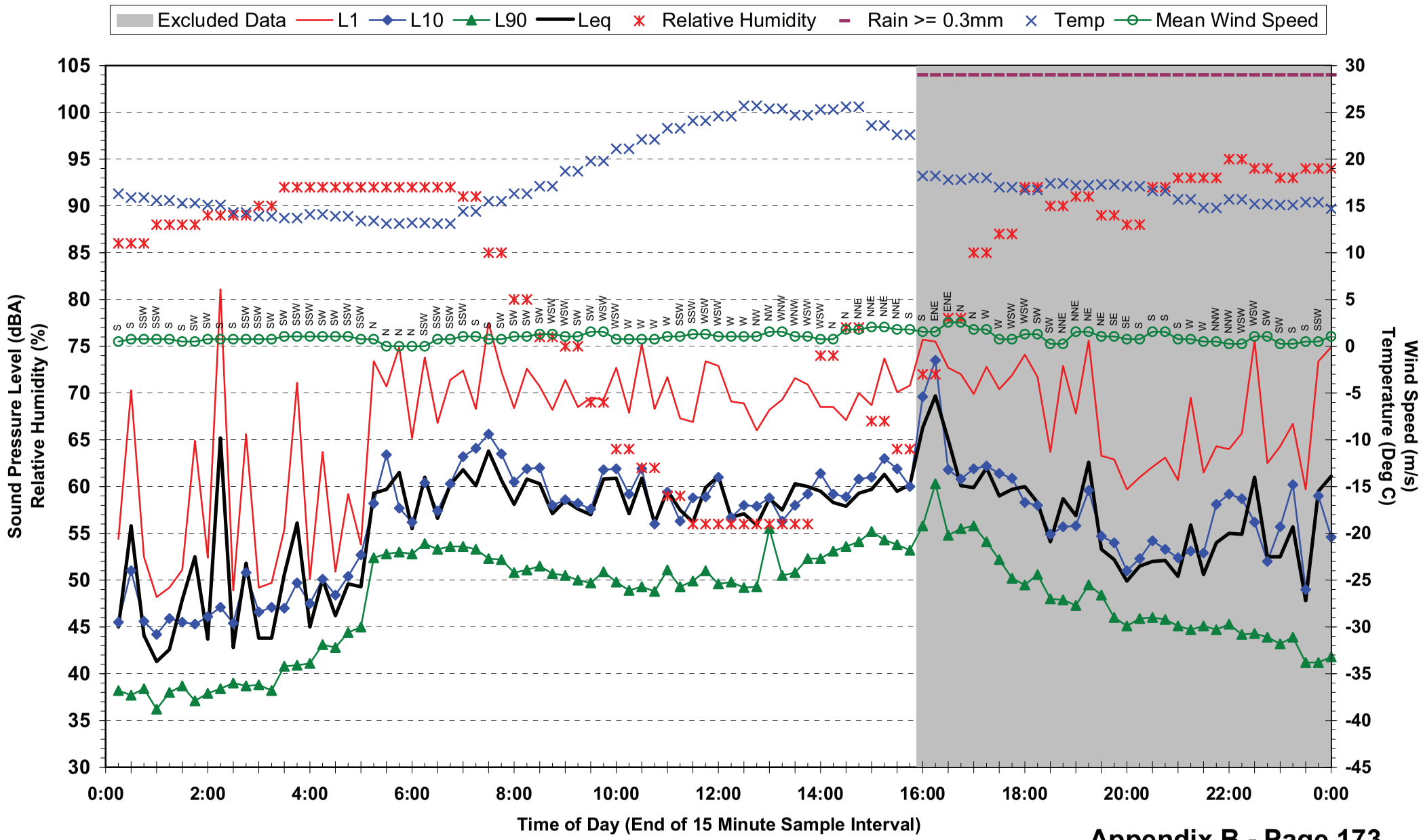
**Statistical Ambient Noise Levels**
**Location 17 - 1223 Ipswich Mwy - Friday 28 May 2010**



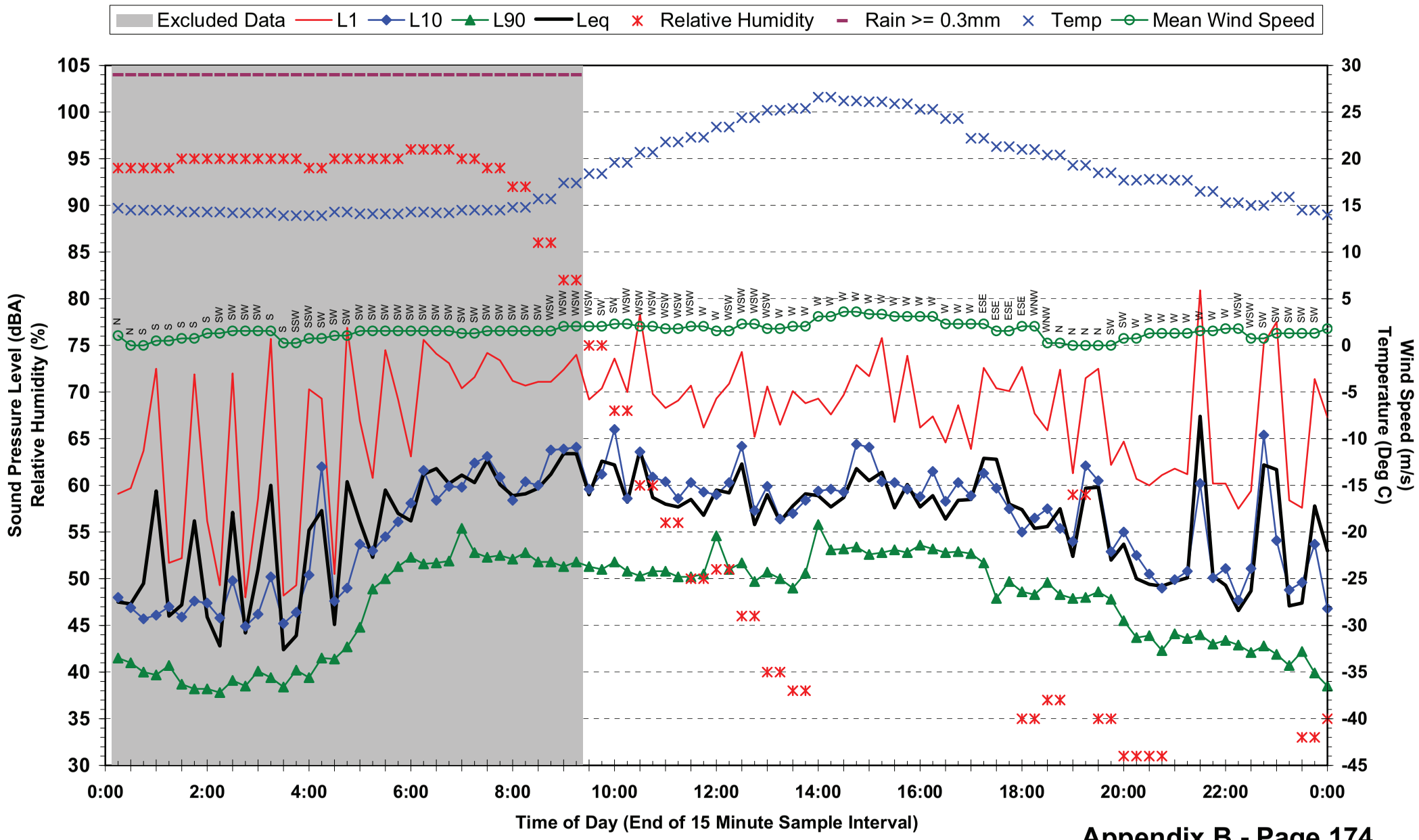
## Statistical Ambient Noise Levels
## Location 18 - 2/59 Brooke St - Monday 10 May 2010



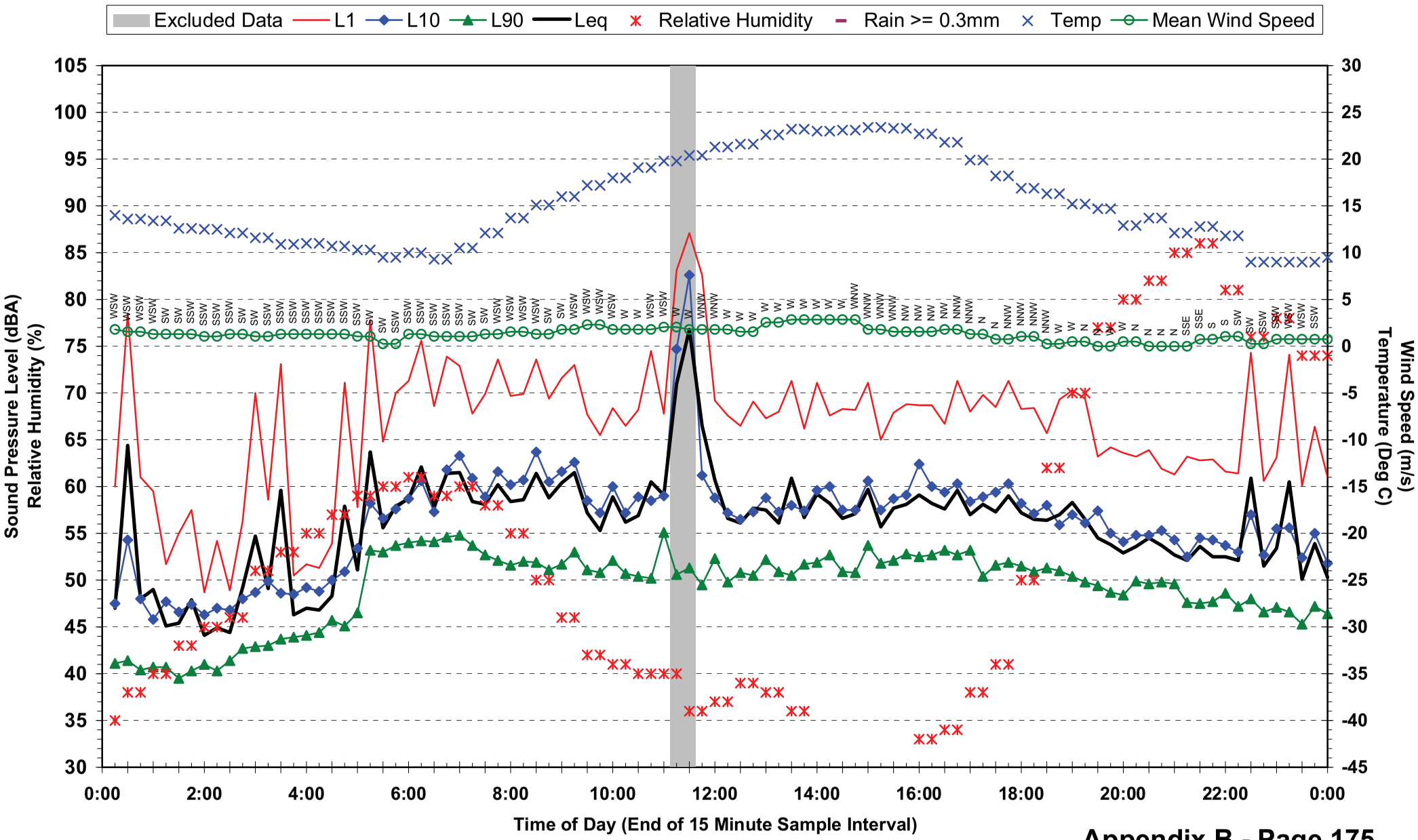
## Statistical Ambient Noise Levels
## Location 18 - 2/59 Brooke St - Tuesday 11 May 2010



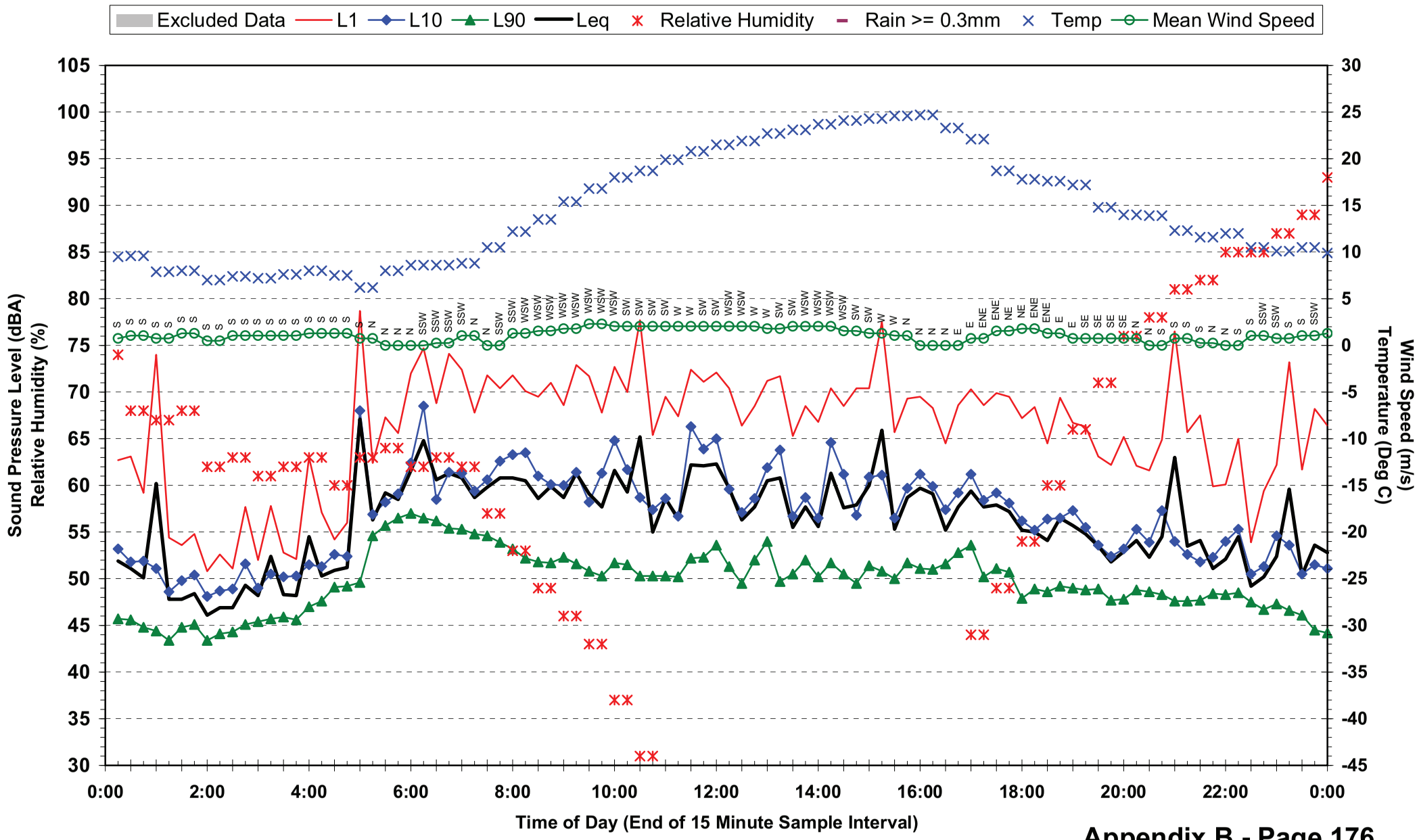
## Statistical Ambient Noise Levels
## Location 18 - 2/59 Brooke St - Wednesday 12 May 2010



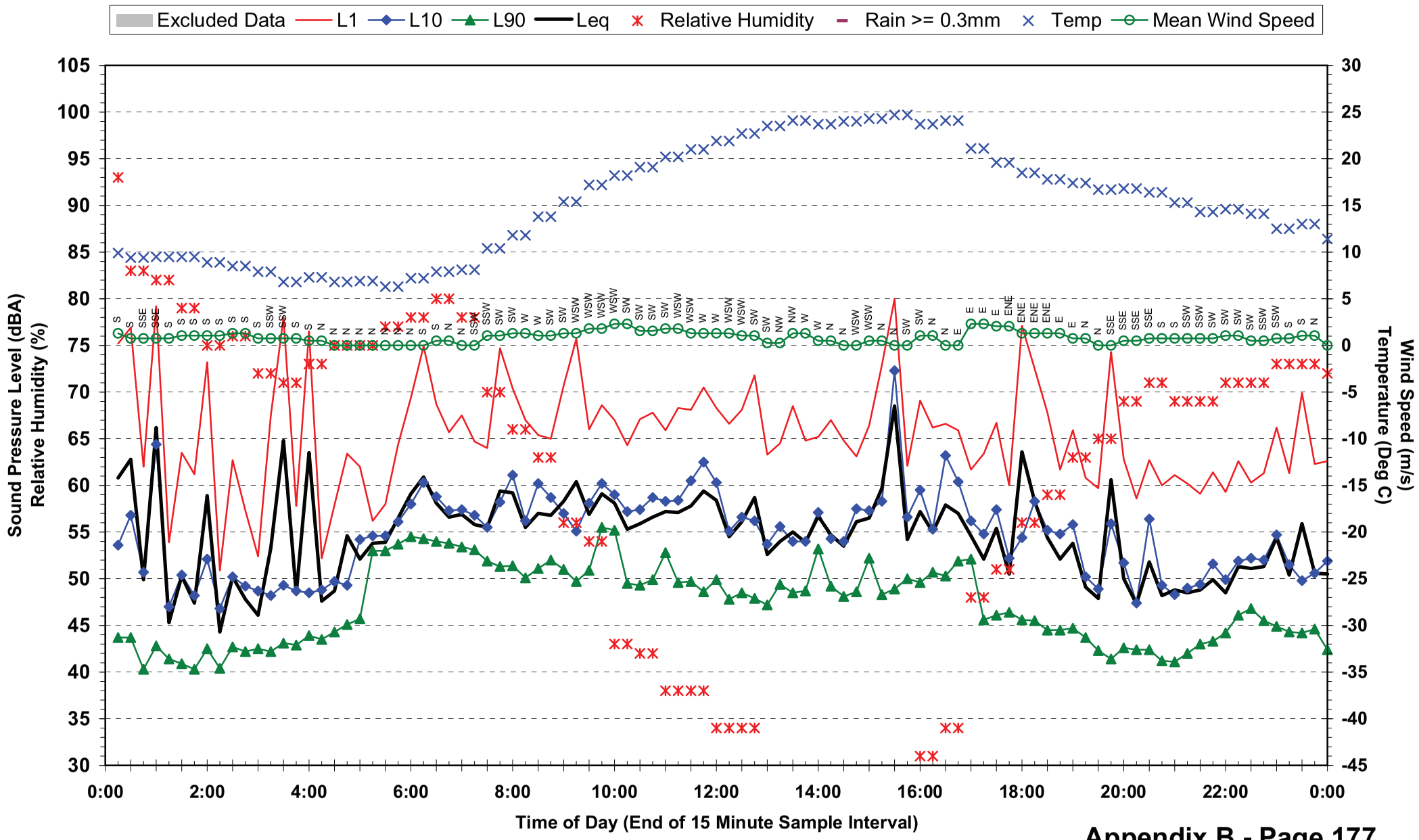
## Statistical Ambient Noise Levels
## Location 18 - 2/59 Brooke St - Thursday 13 May 2010



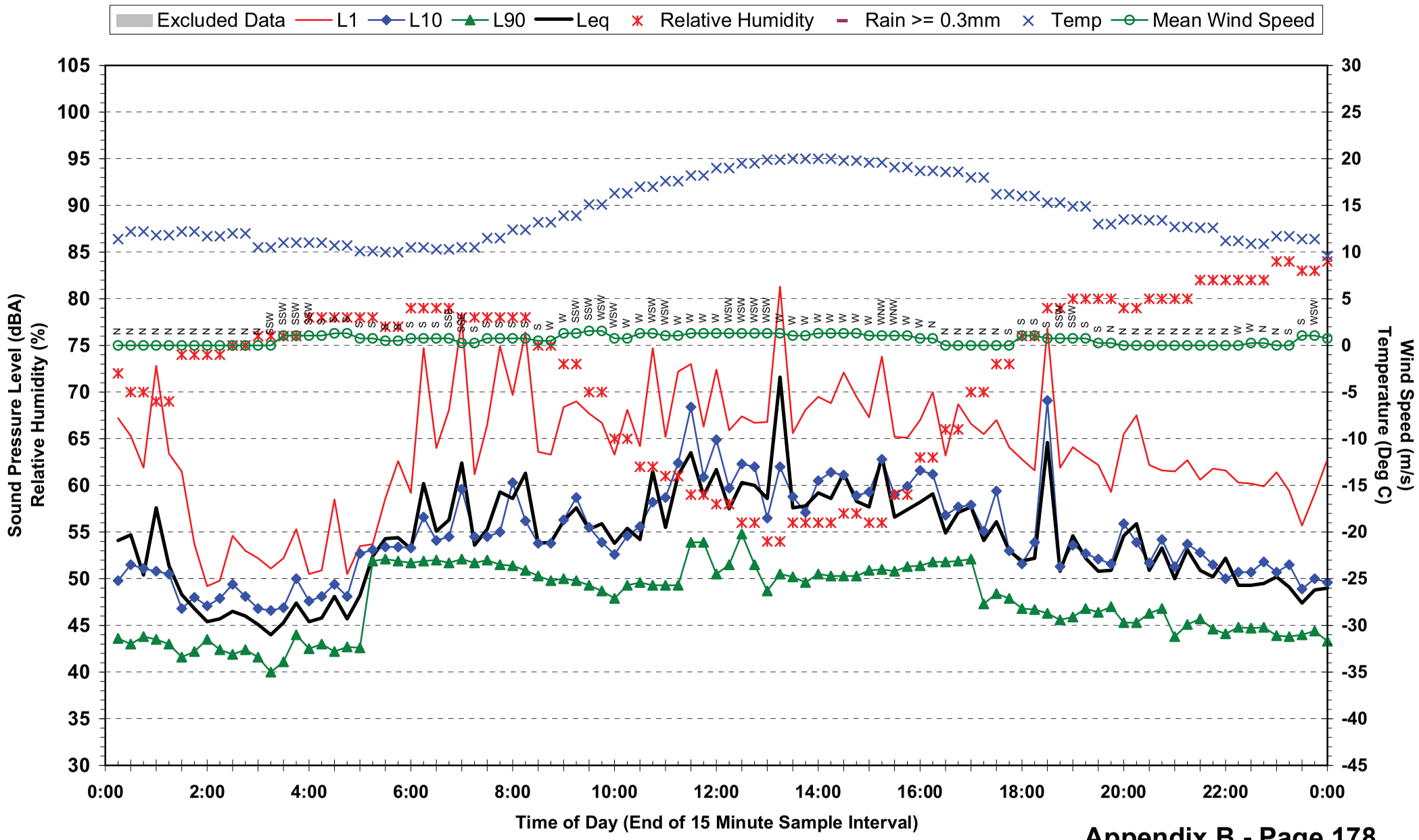
## Statistical Ambient Noise Levels
## Location 18 - 2/59 Brooke St - Friday 14 May 2010



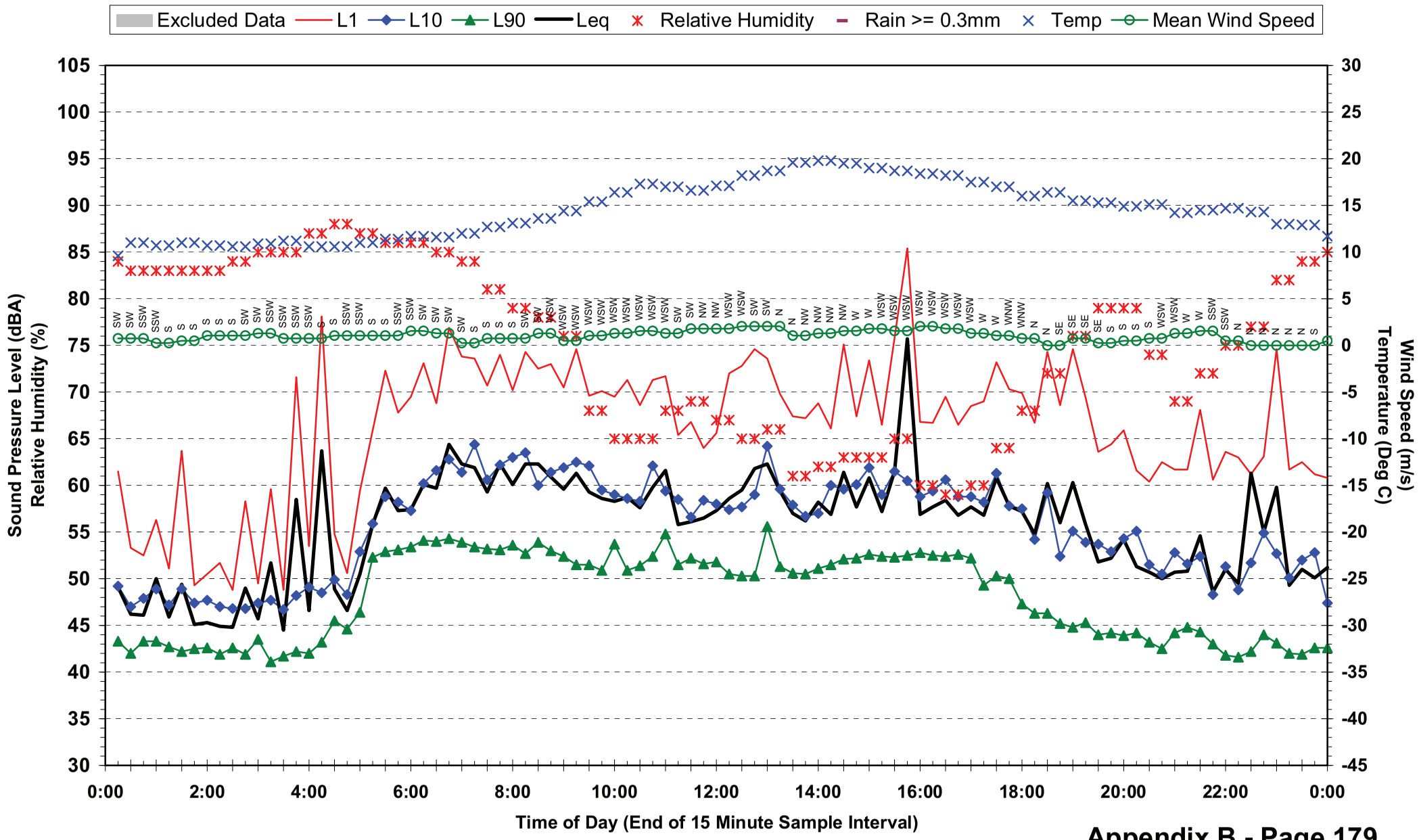
## Statistical Ambient Noise Levels
## Location 18 - 2/59 Brooke St - Saturday 15 May 2010



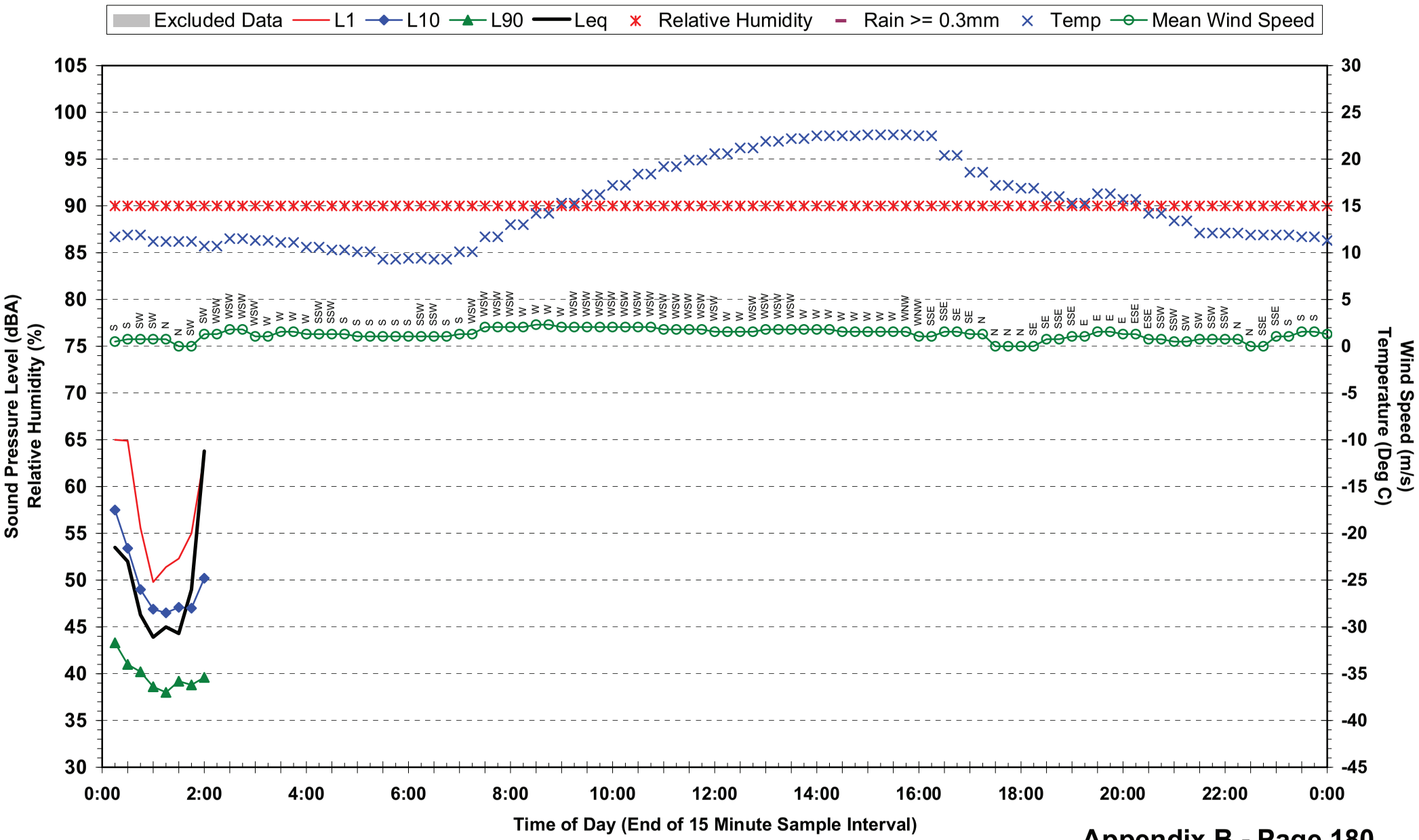
## Statistical Ambient Noise Levels
## Location 18 - 2/59 Brooke St - Sunday 16 May 2010



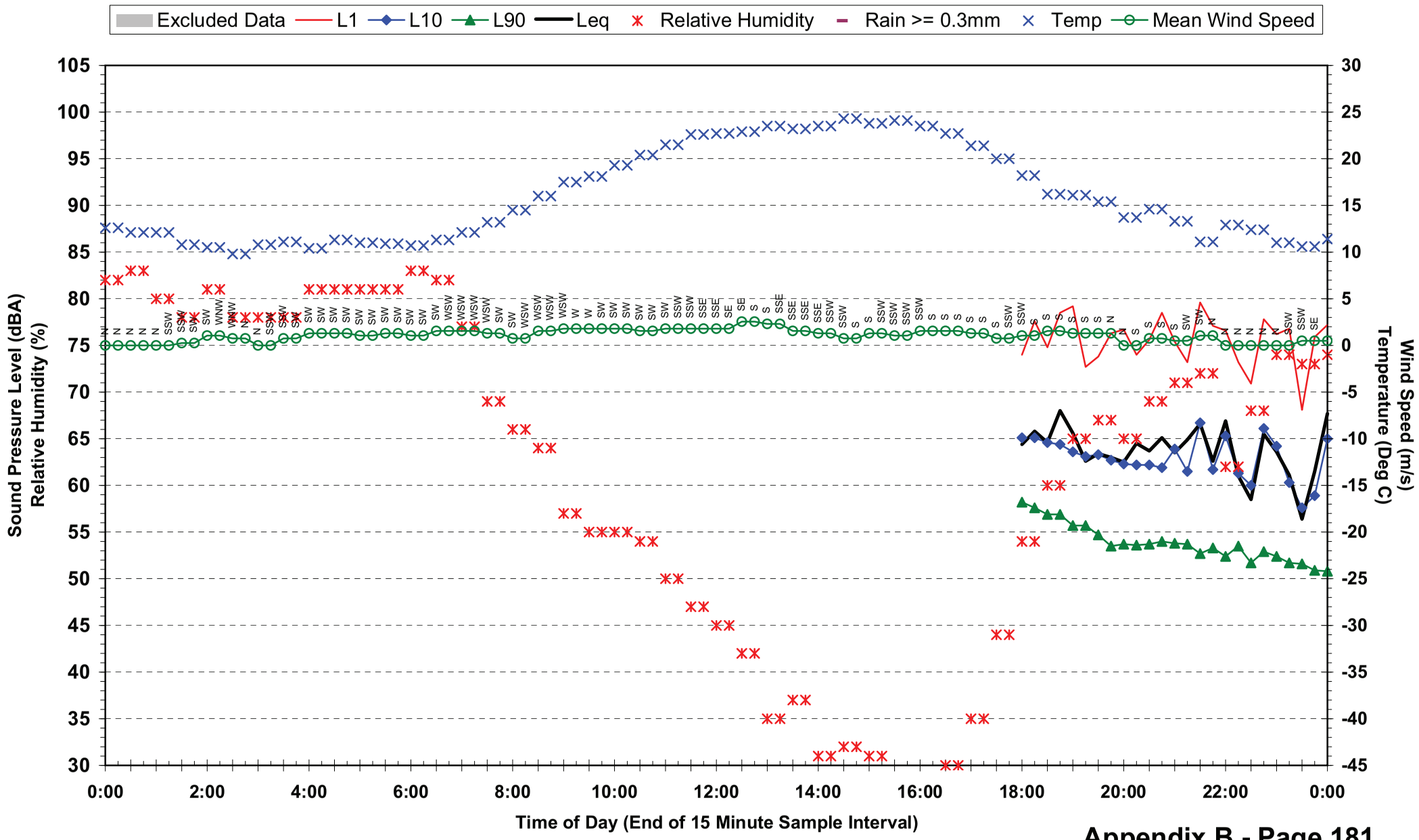
## Statistical Ambient Noise Levels
## Location 18 - 2/59 Brooke St - Monday 17 May 2010



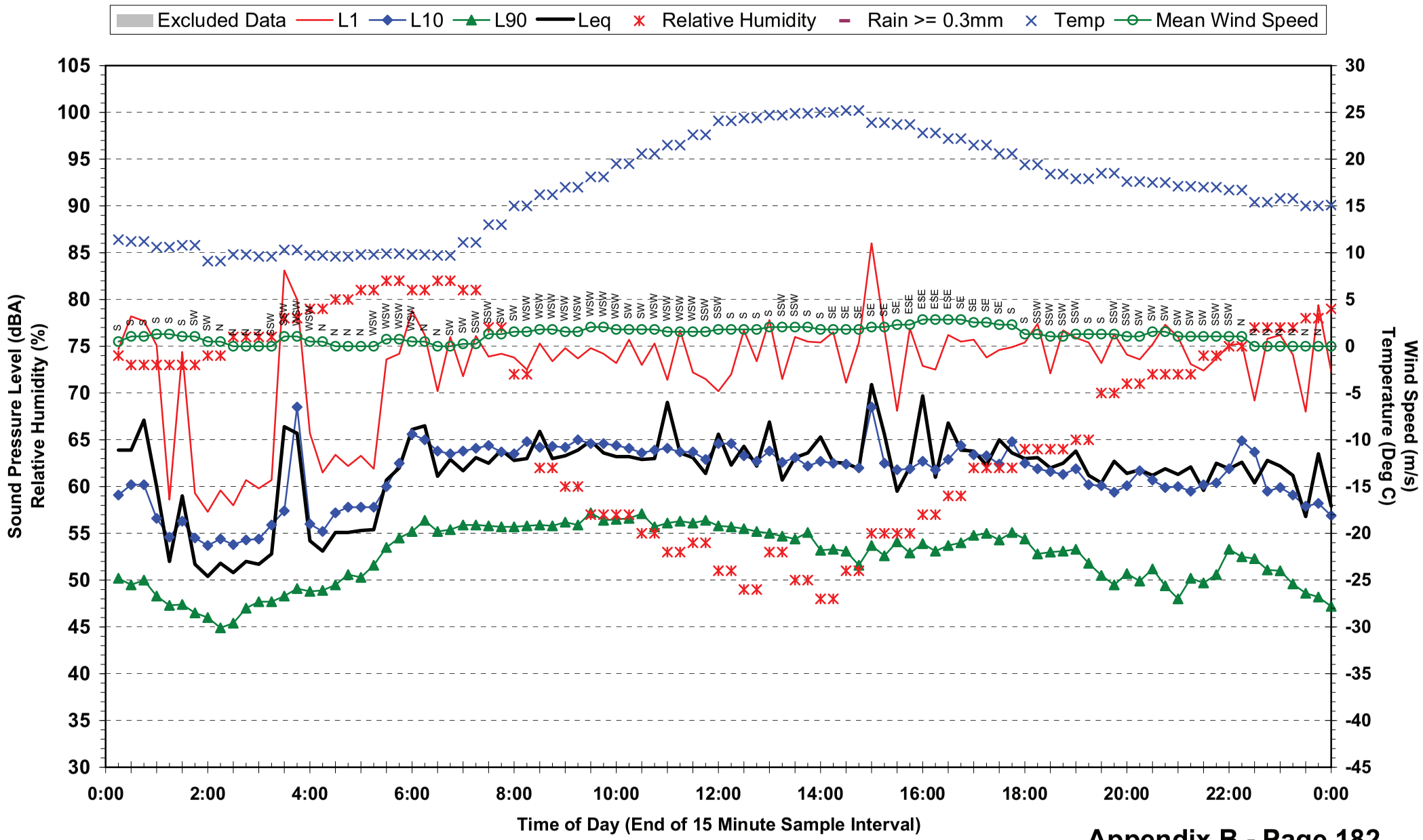
## Statistical Ambient Noise Levels
## Location 18 - 2/59 Brooke St - Tuesday 18 May 2010



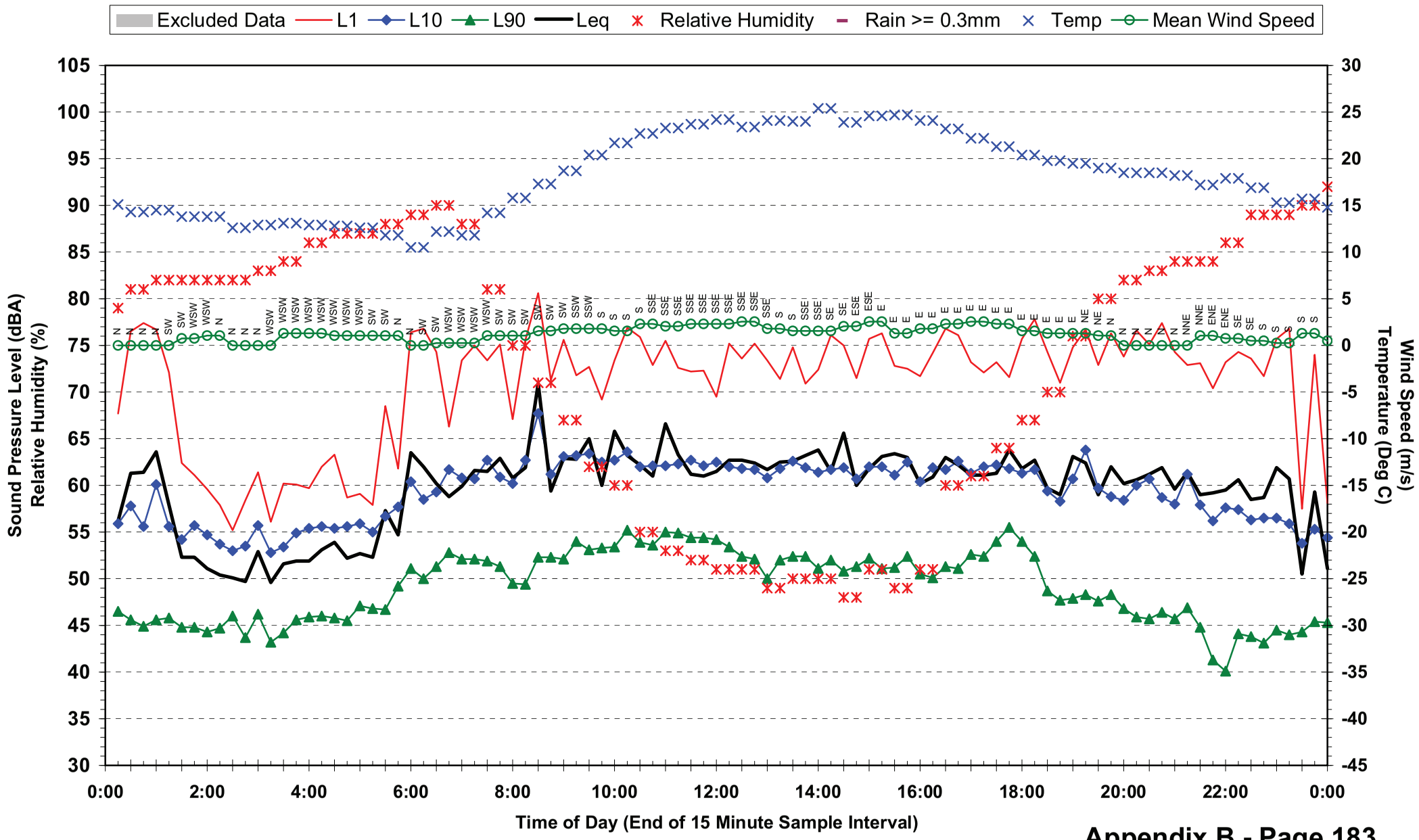
## Statistical Ambient Noise Levels
## Location 19 - Nyanda State High School - Friday 7 May 2010



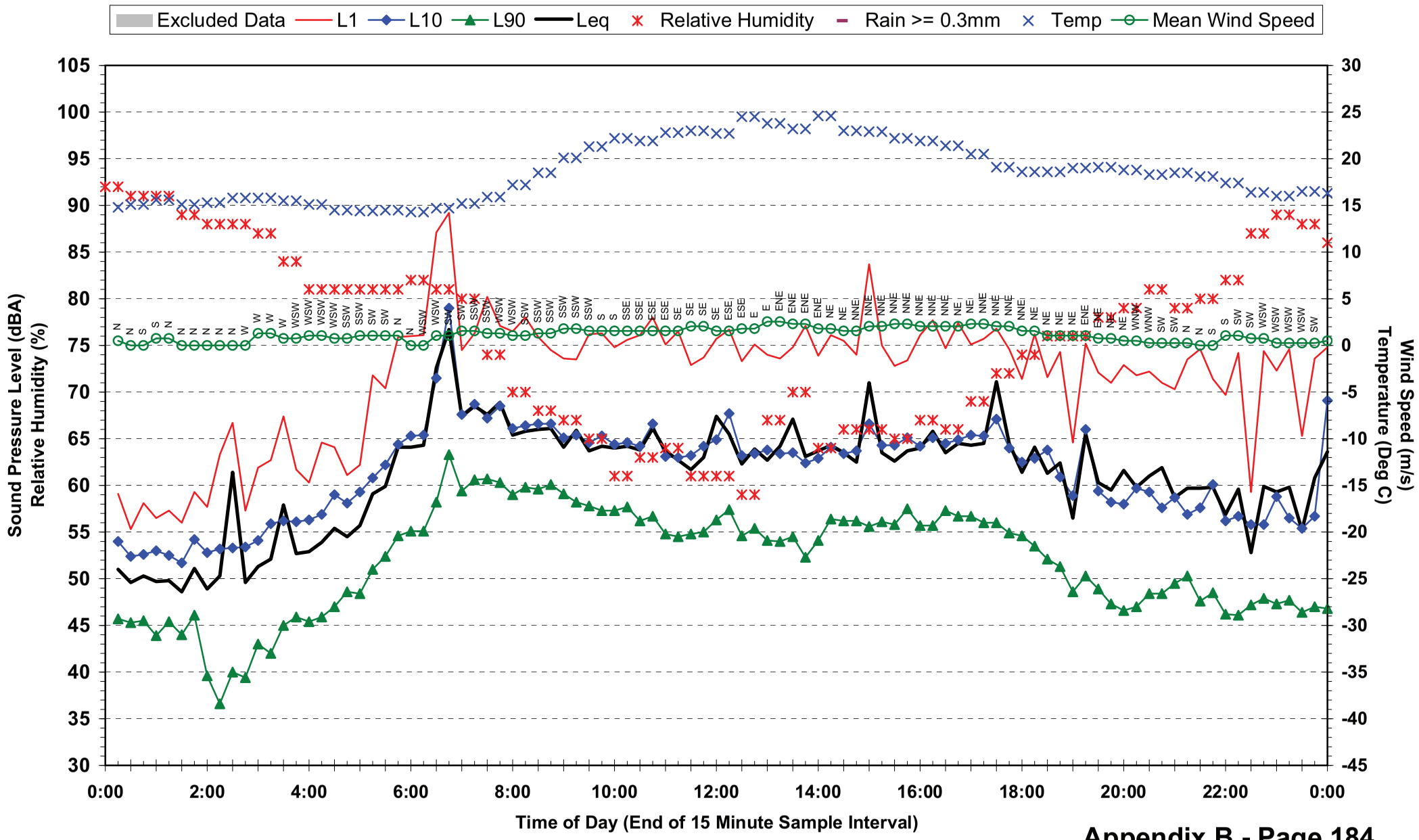
## Statistical Ambient Noise Levels
## Location 19 - Nyanda State High School - Saturday 8 May 2010



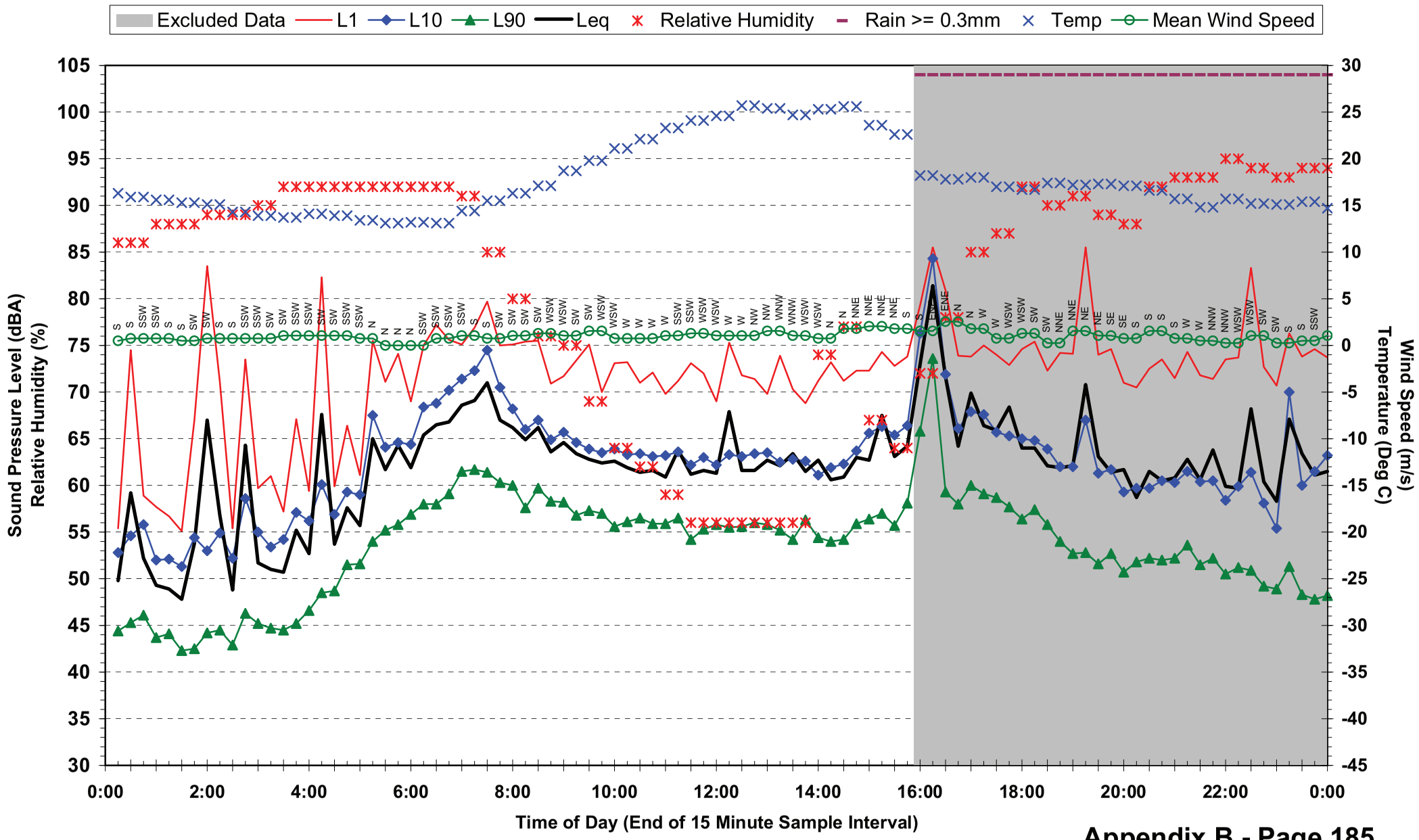
## Statistical Ambient Noise Levels
## Location 19 - Nyanda State High School - Sunday 9 May 2010



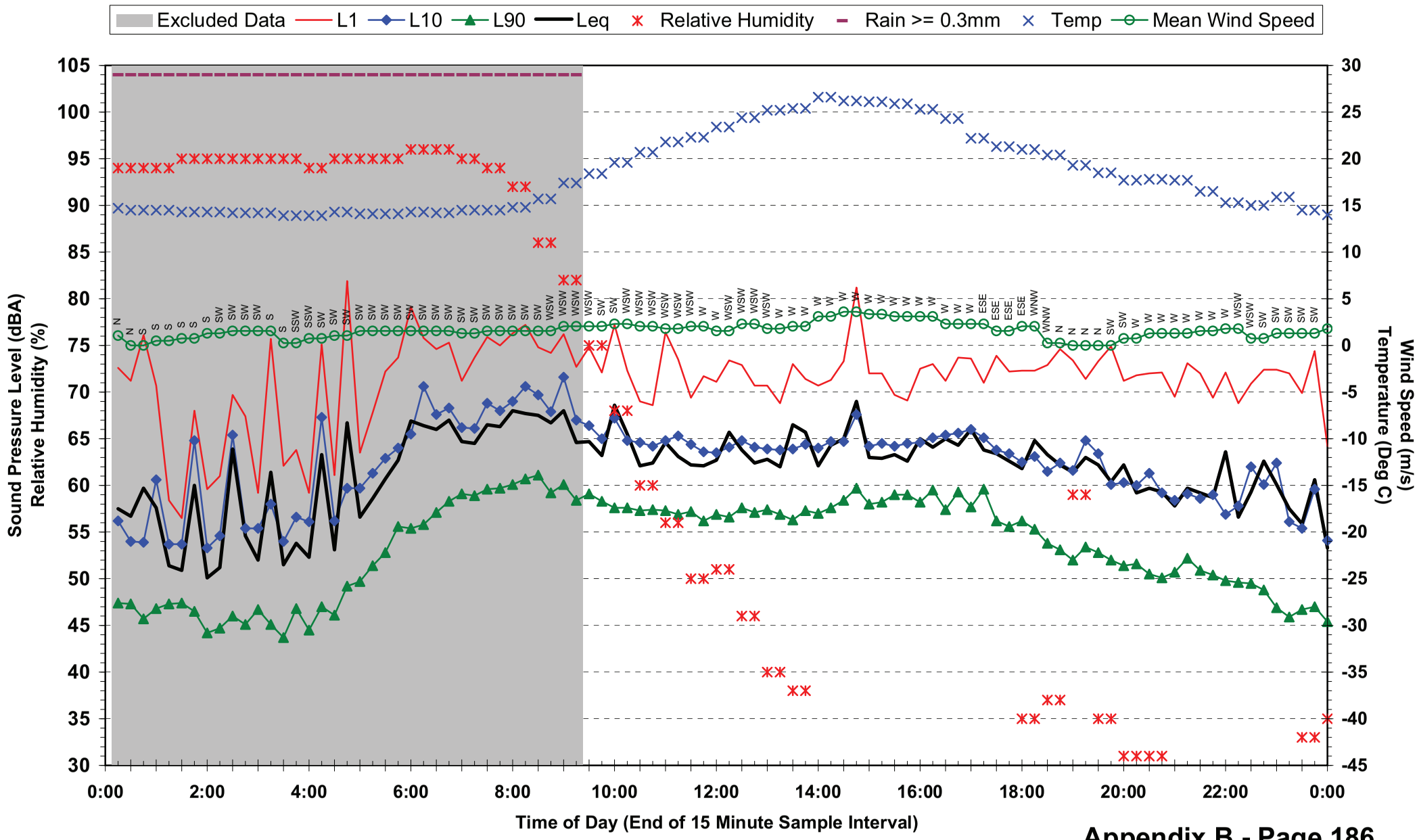
## Statistical Ambient Noise Levels
## Location 19 - Nyanda State High School - Monday 10 May 2010



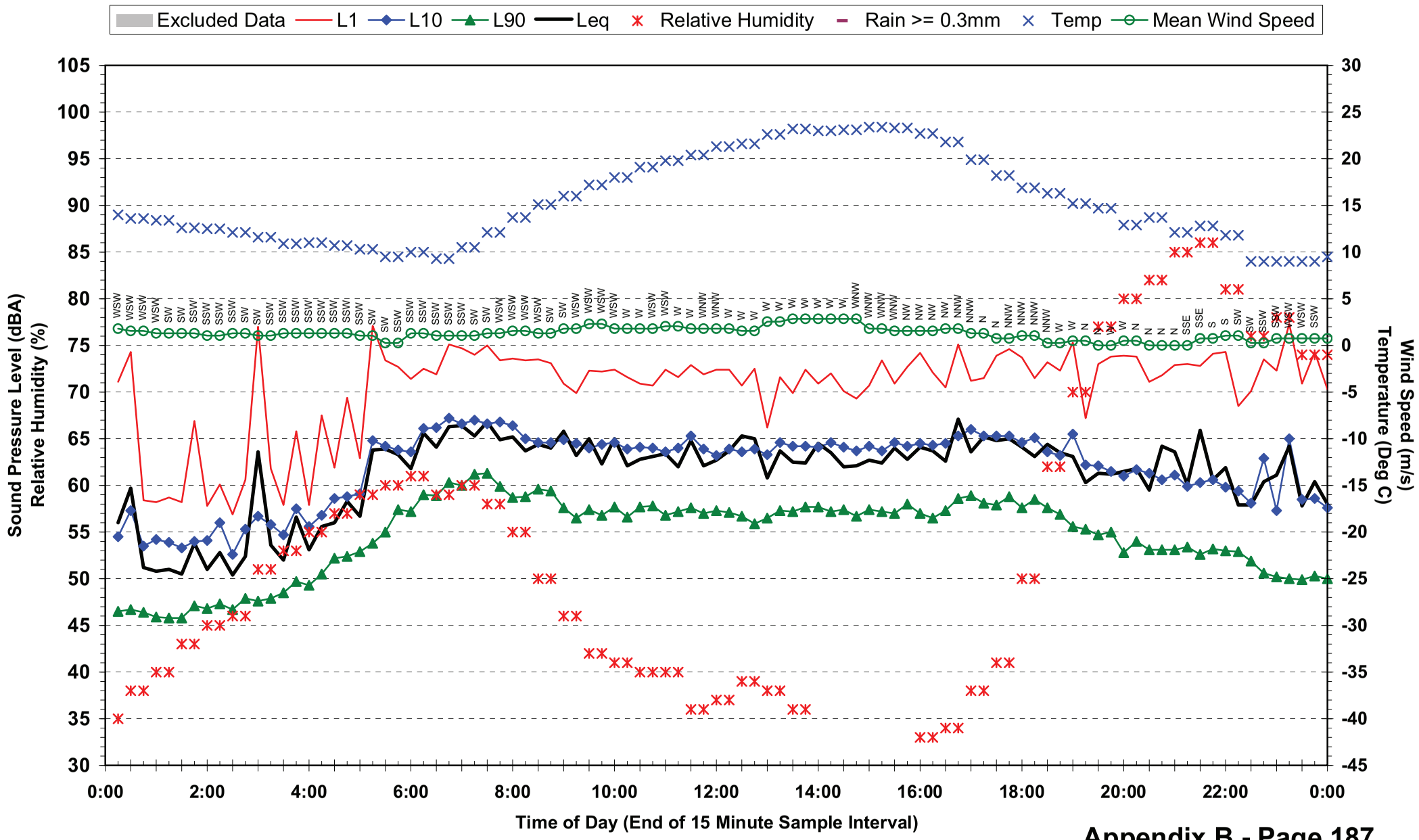
## Statistical Ambient Noise Levels
## Location 19 - Nyanda State High School - Tuesday 11 May 2010



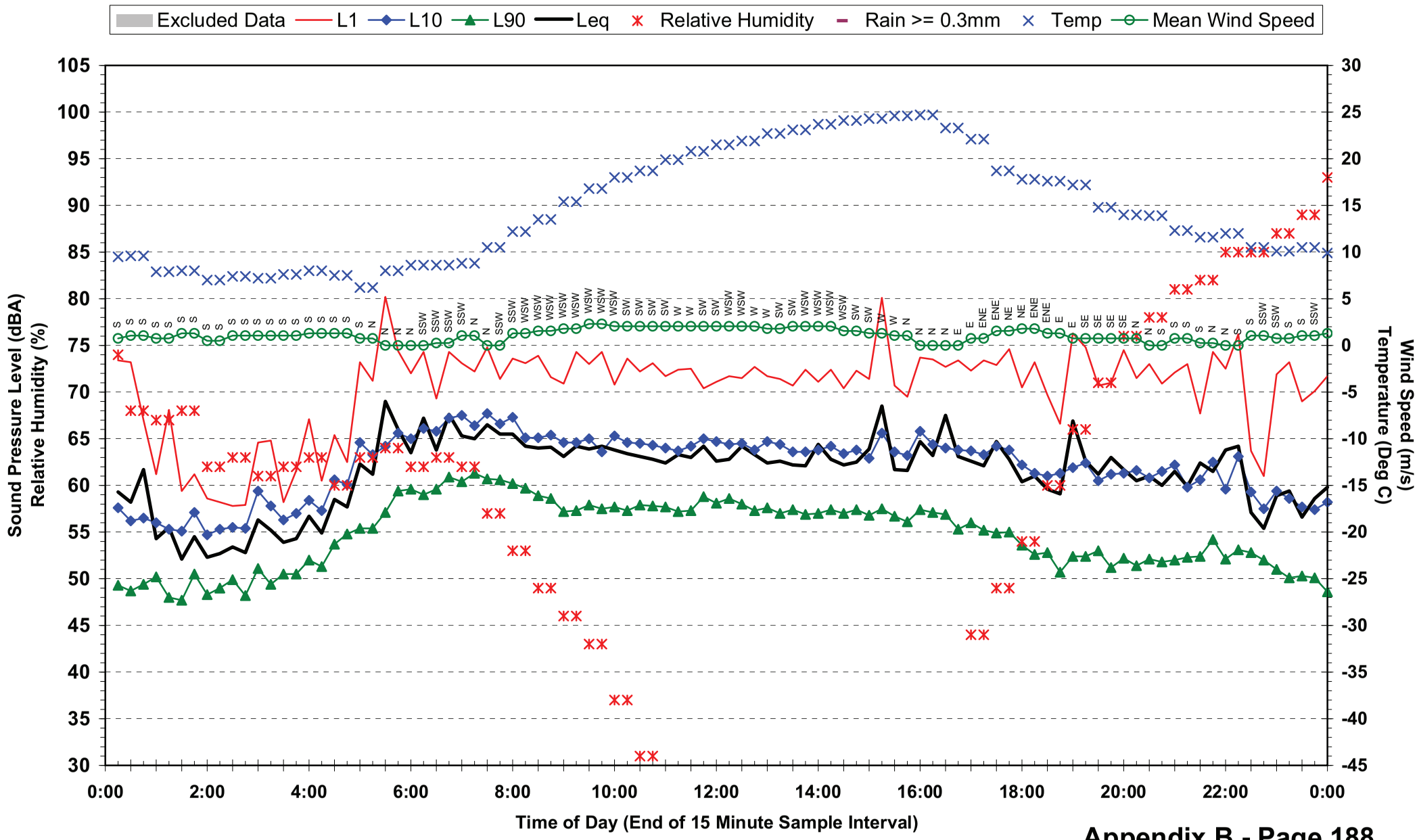
## Statistical Ambient Noise Levels
## Location 19 - Nyanda State High School - Wednesday 12 May 2010



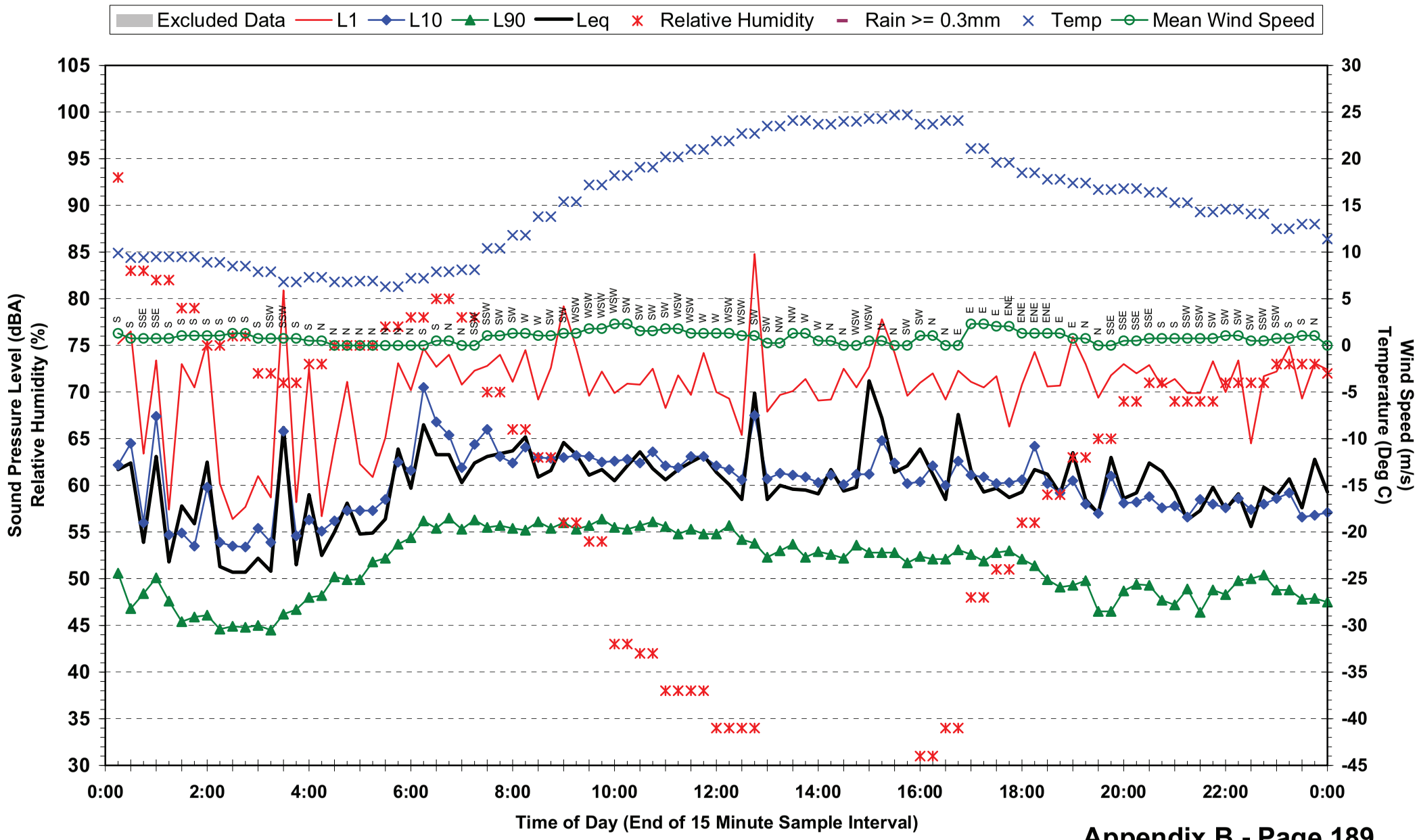
## Statistical Ambient Noise Levels
## Location 19 - Nyanda State High School - Thursday 13 May 2010



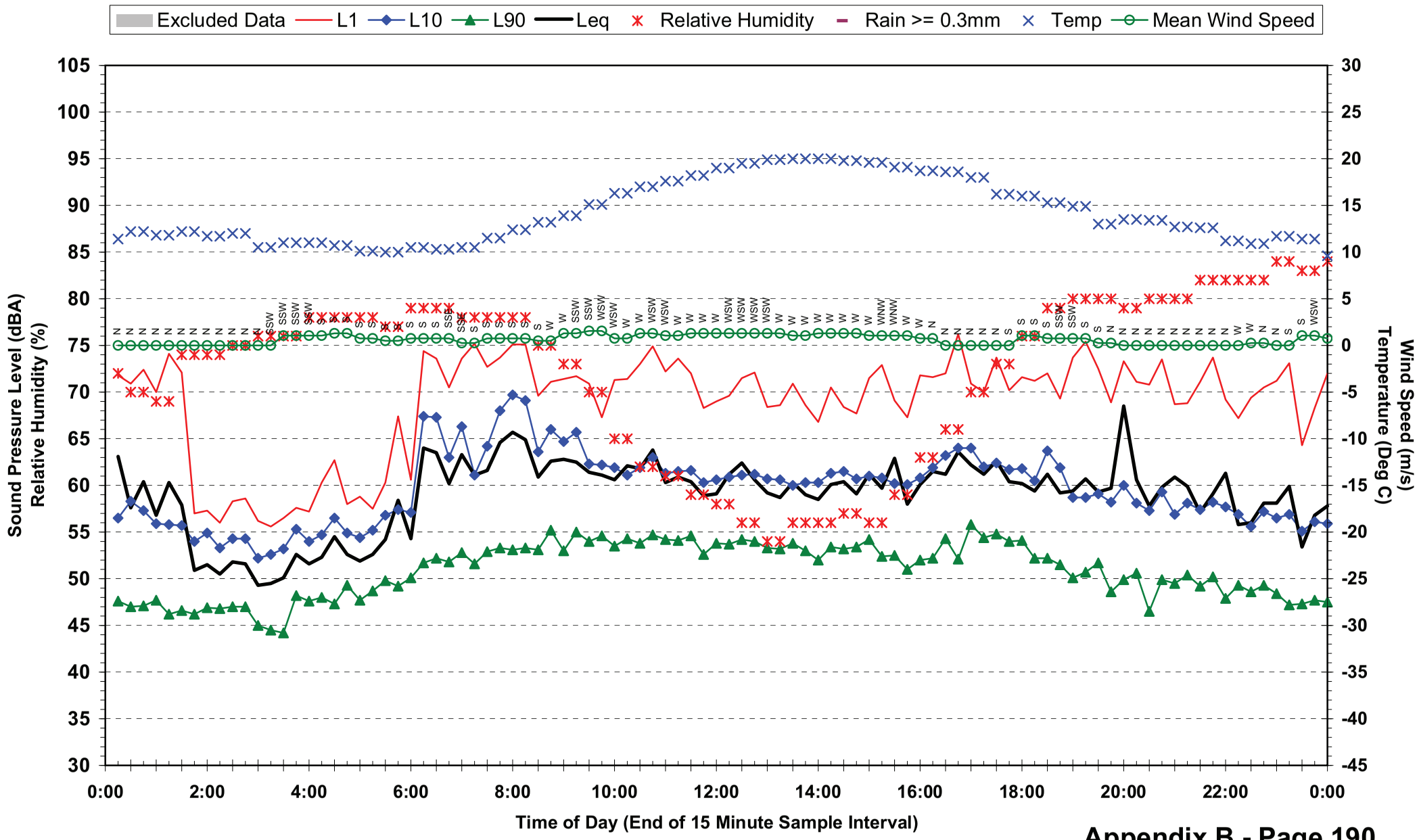
## Statistical Ambient Noise Levels
## Location 19 - Nyanda State High School - Friday 14 May 2010



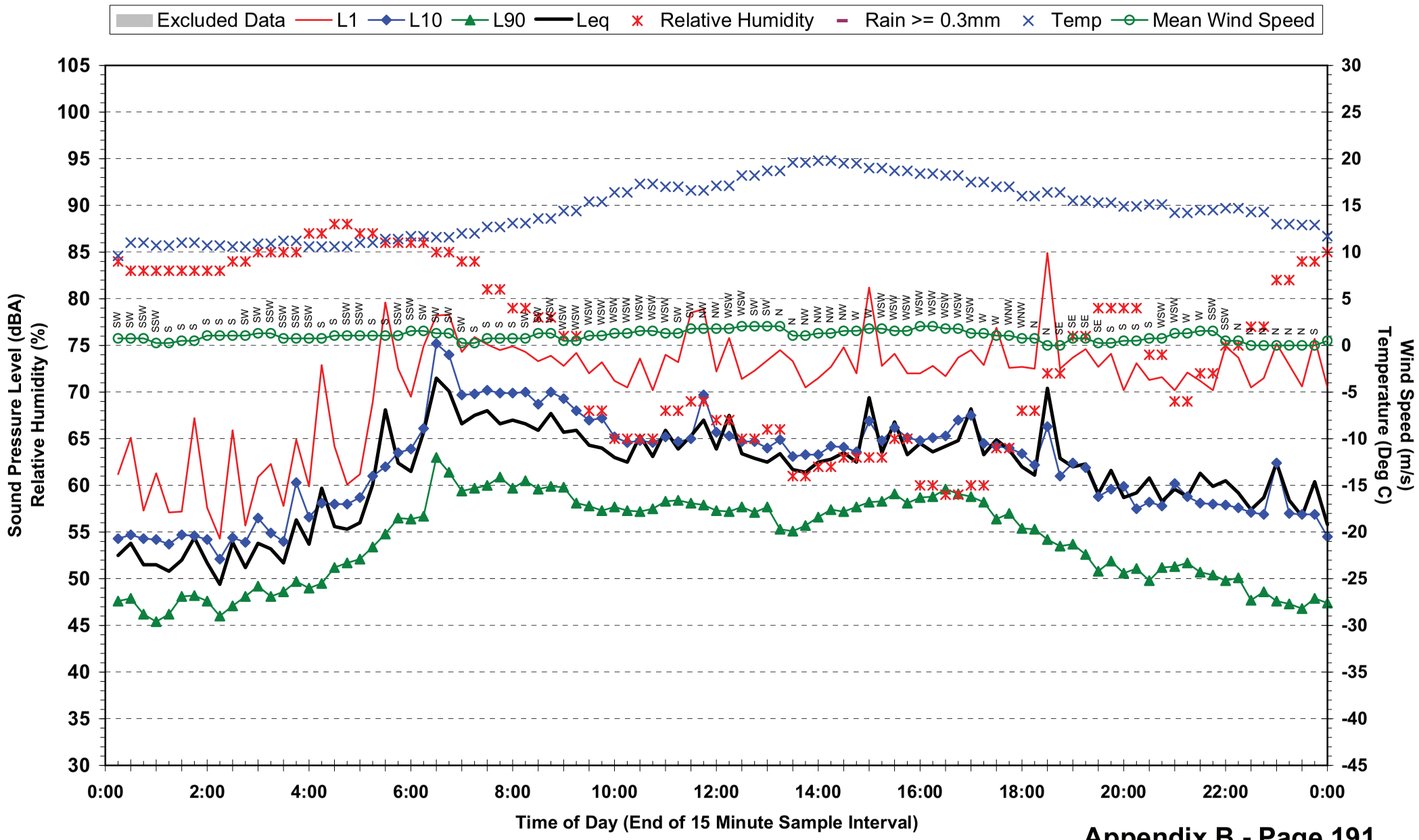
## Statistical Ambient Noise Levels
## Location 19 - Nyanda State High School - Saturday 15 May 2010



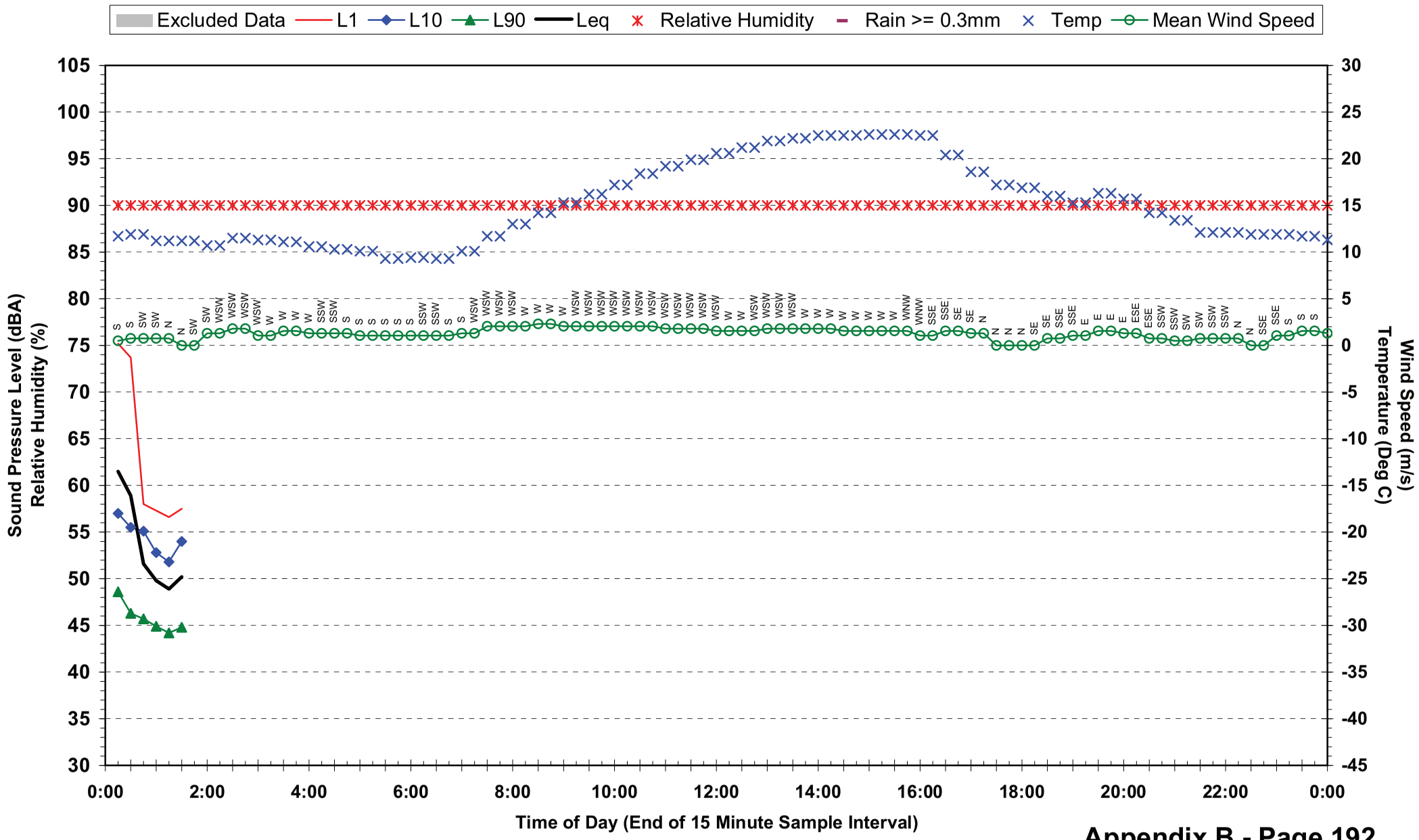
## Statistical Ambient Noise Levels
## Location 19 - Nyanda State High School - Sunday 16 May 2010



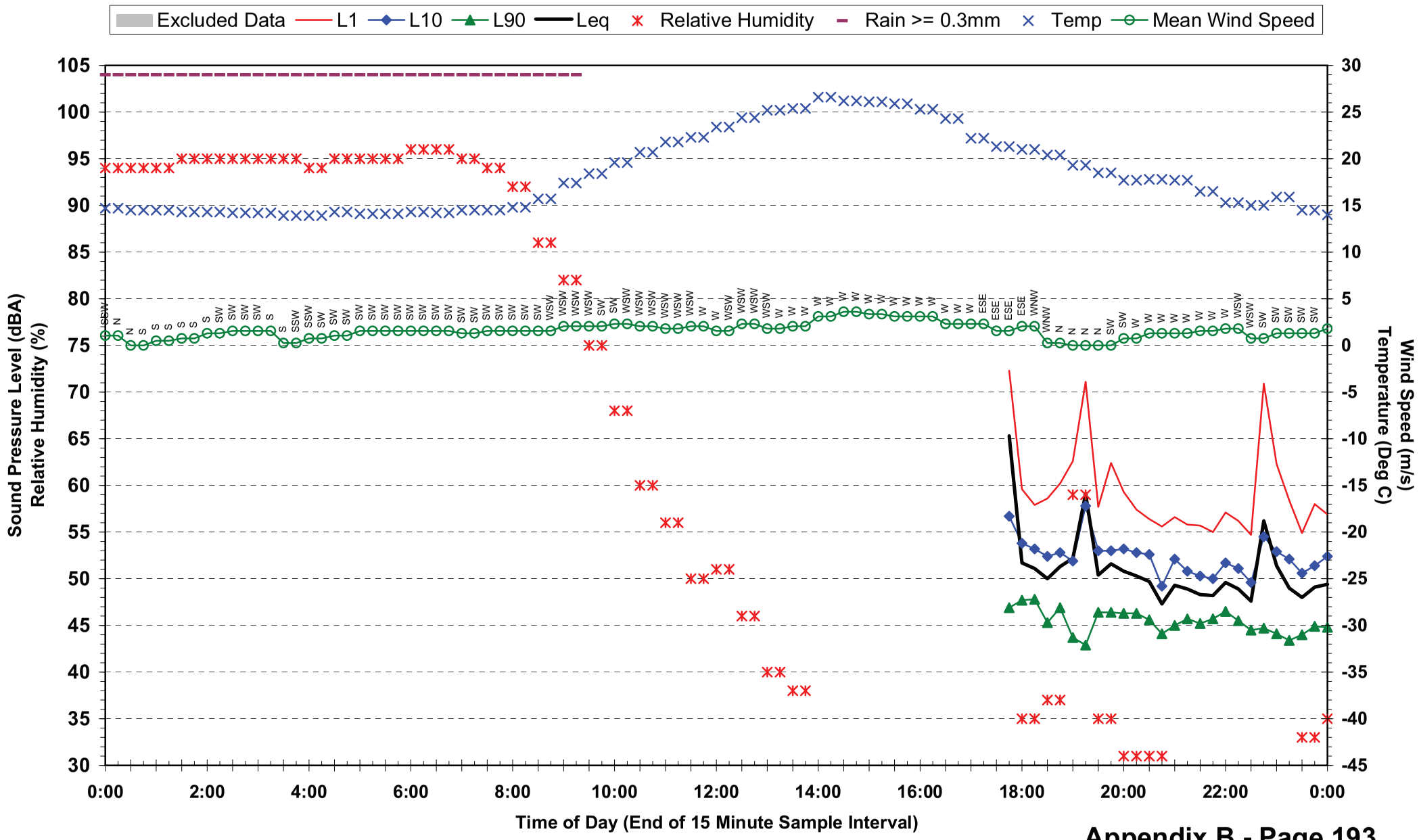
## Statistical Ambient Noise Levels
## Location 19 - Nyanda State High School - Monday 17 May 2010



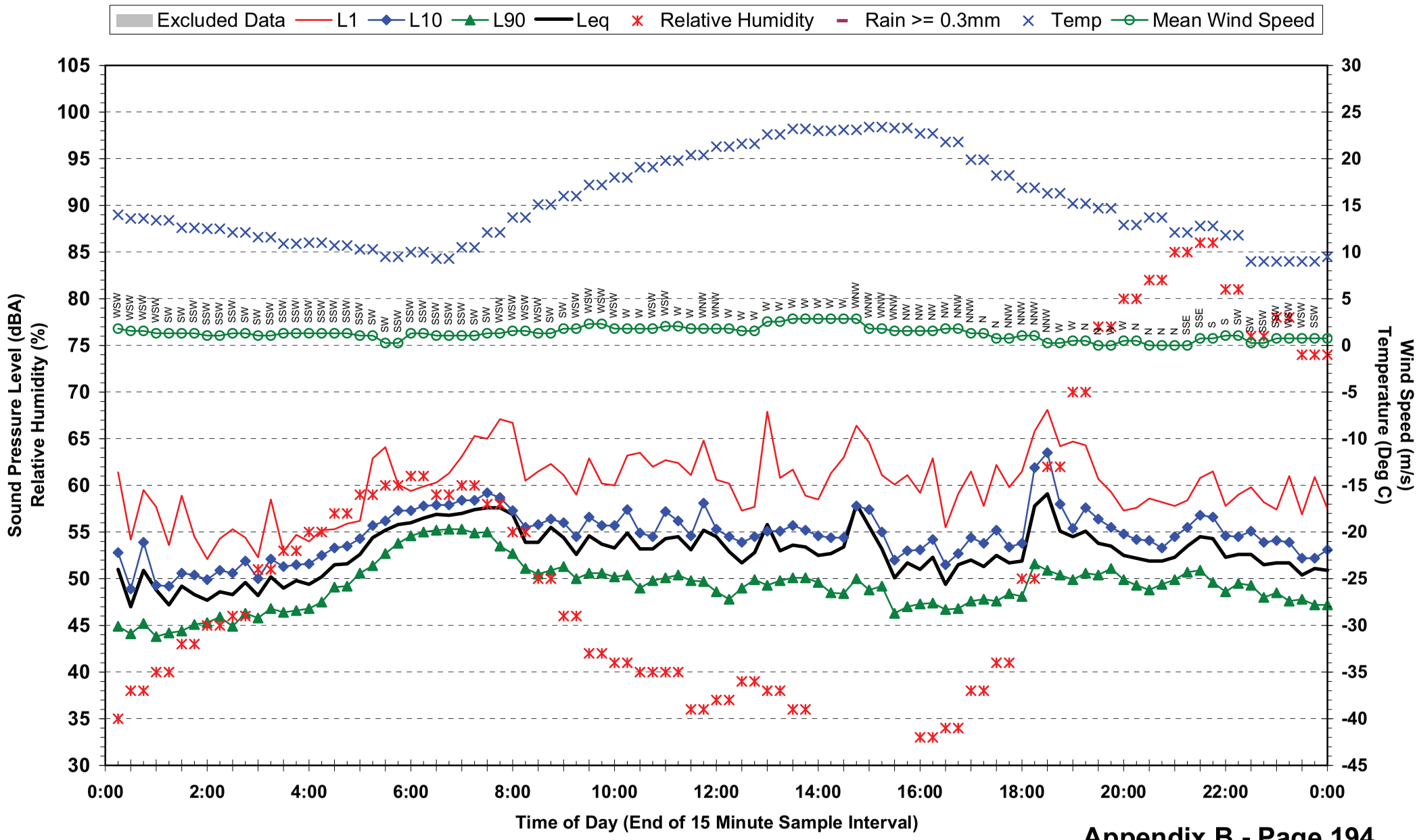
## Statistical Ambient Noise Levels
## Location 19 - Nyanda State High School - Tuesday 18 May 2010



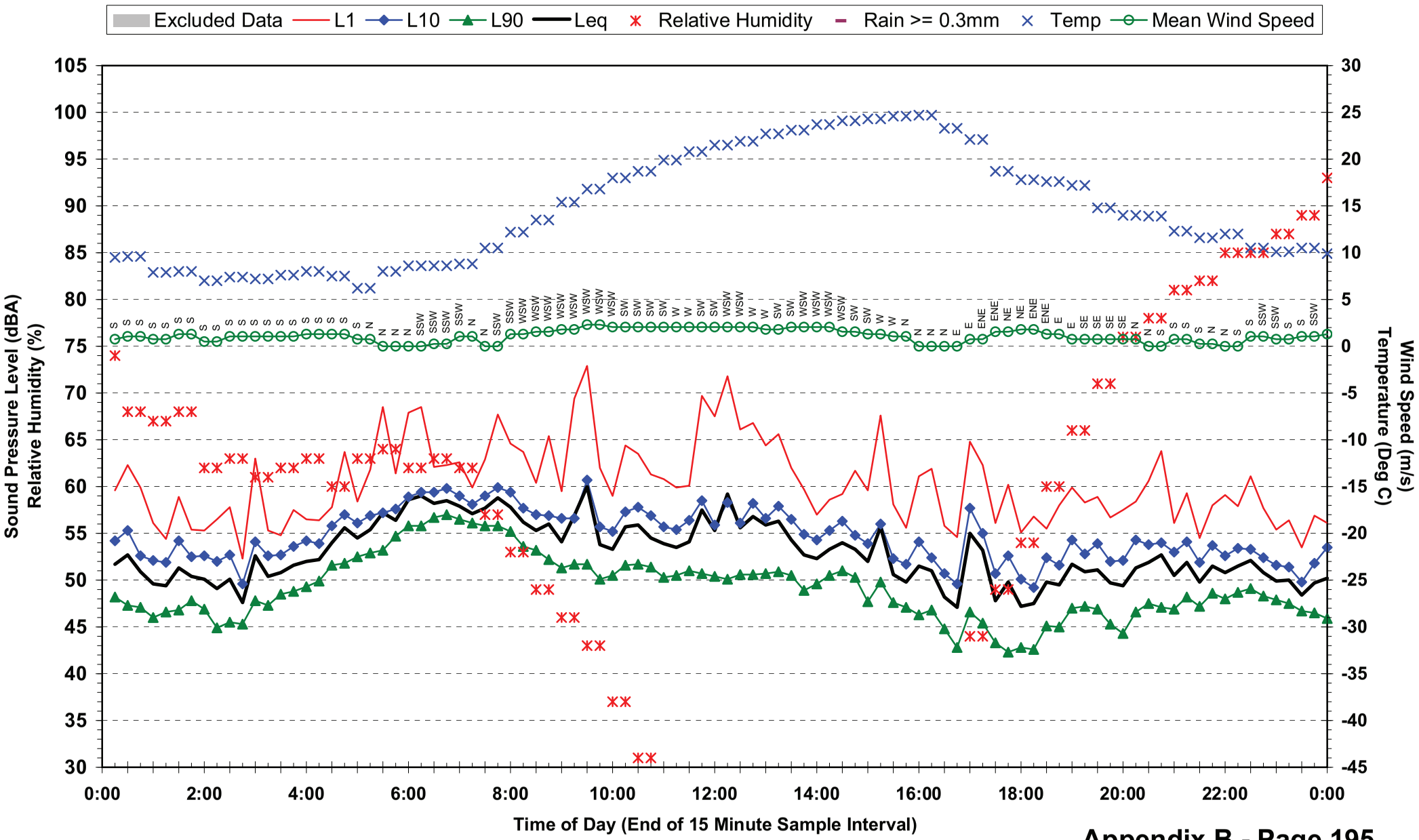
## Statistical Ambient Noise Levels
## Location 20 - 14 Bellevue Ave - Wednesday 12 May 2010



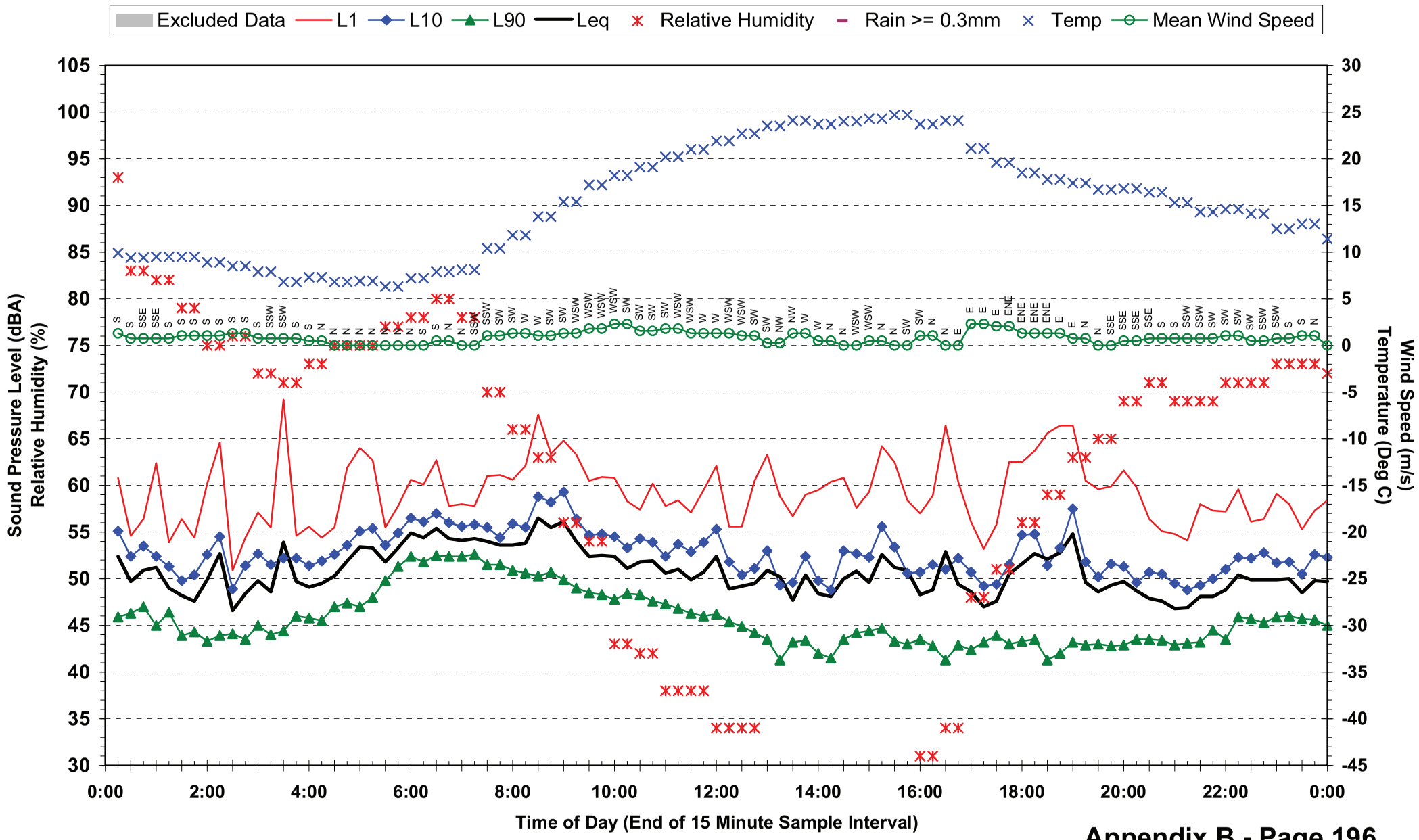
## Statistical Ambient Noise Levels
## Location 20 - 14 Bellevue Ave - Thursday 13 May 2010



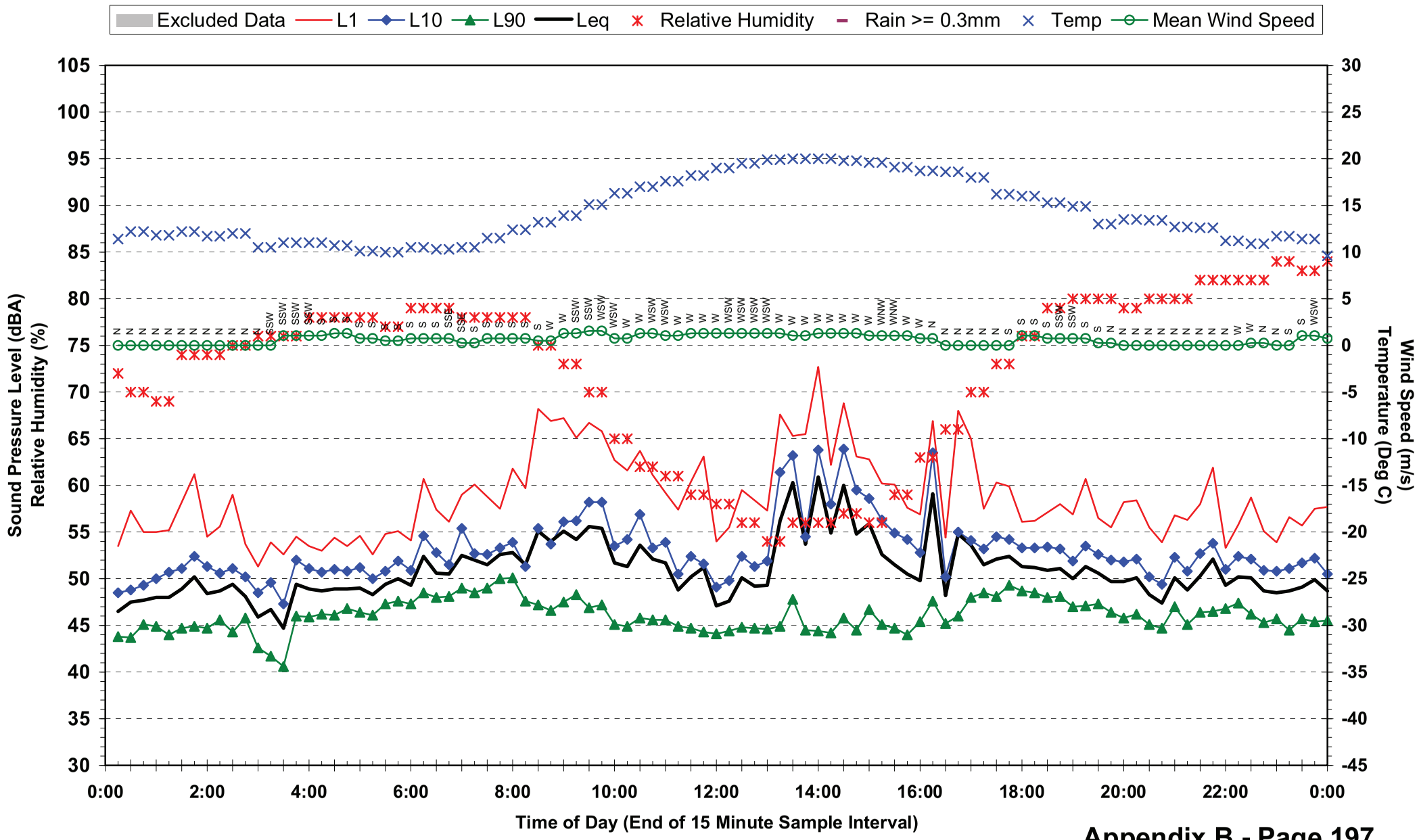
## Statistical Ambient Noise Levels
## Location 20 - 14 Bellevue Ave - Friday 14 May 2010



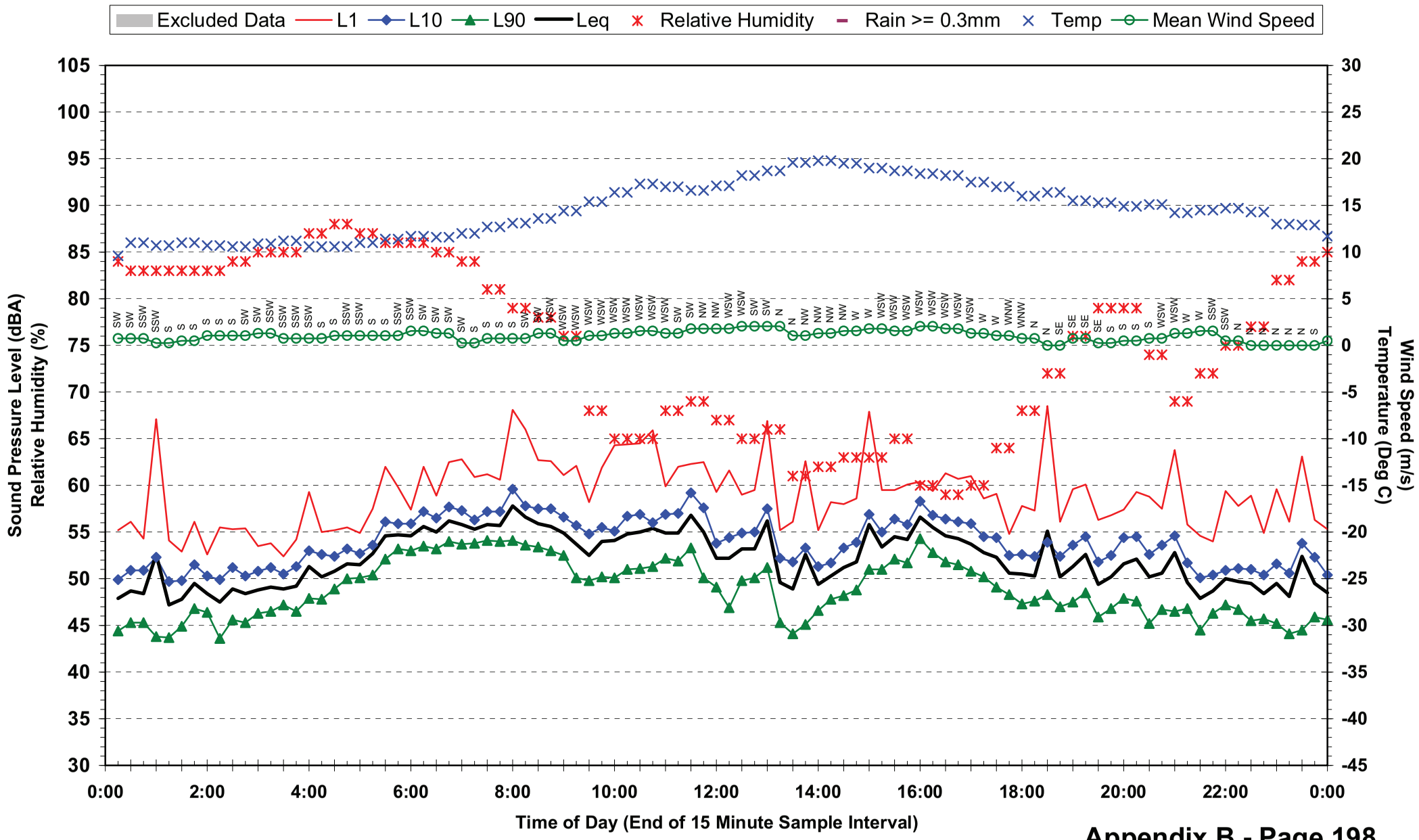
## Statistical Ambient Noise Levels
## Location 20 - 14 Bellevue Ave - Saturday 15 May 2010



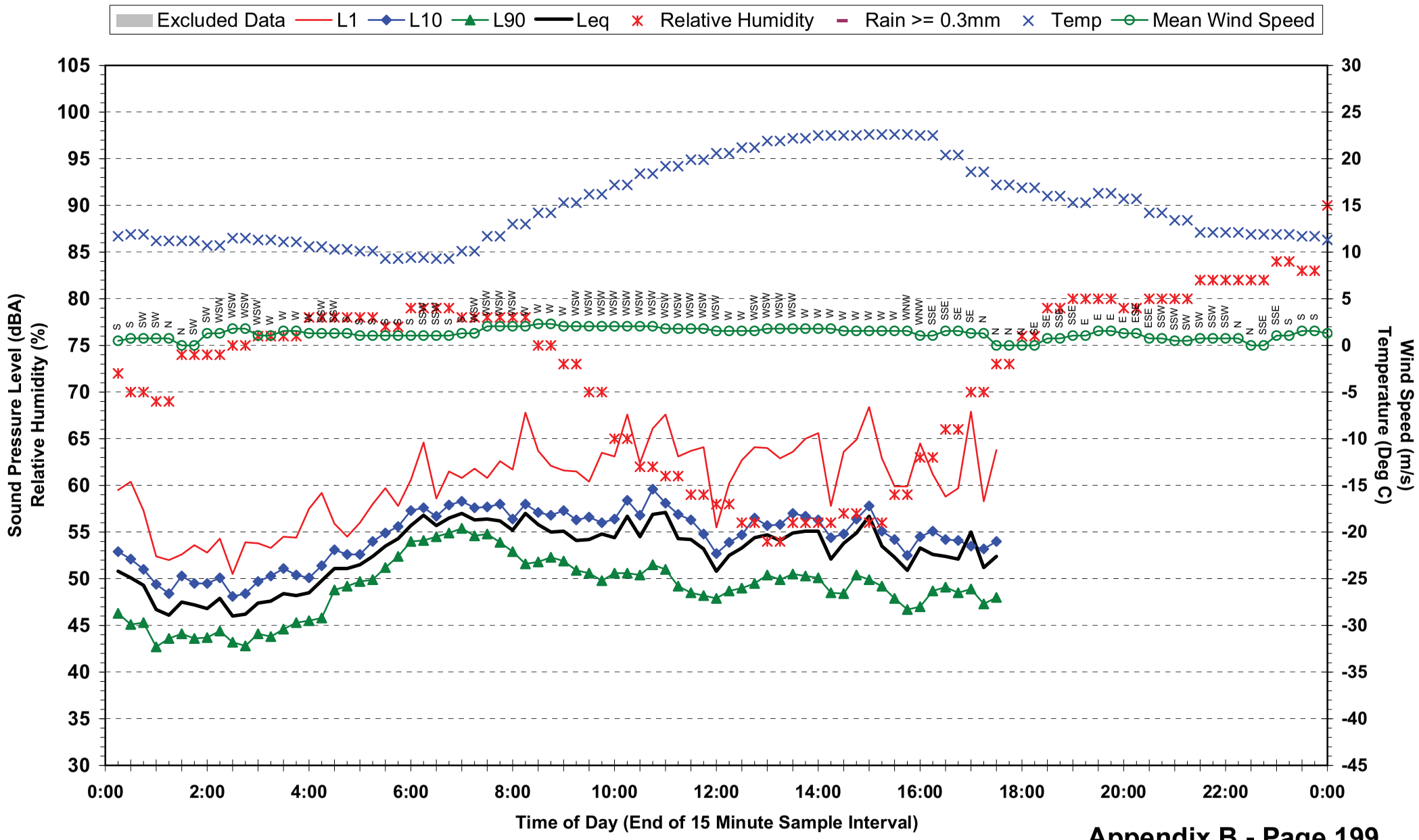
## Statistical Ambient Noise Levels
## Location 20 - 14 Bellevue Ave - Sunday 16 May 2010



## Statistical Ambient Noise Levels
## Location 20 - 14 Bellevue Ave - Monday 17 May 2010



## Statistical Ambient Noise Levels
## Location 20 - 14 Bellevue Ave - Tuesday 18 May 2010



**Vibration Monitoring Locations**

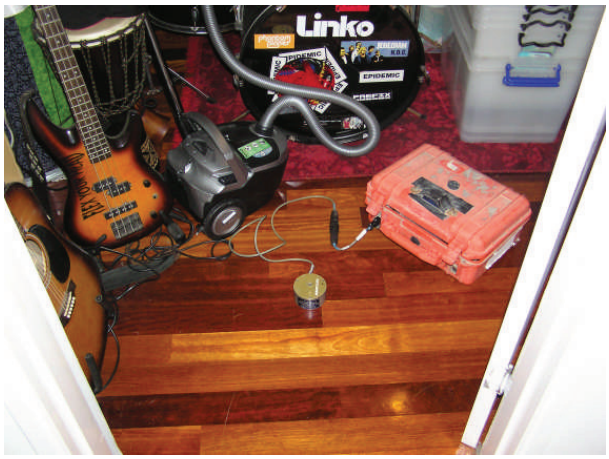
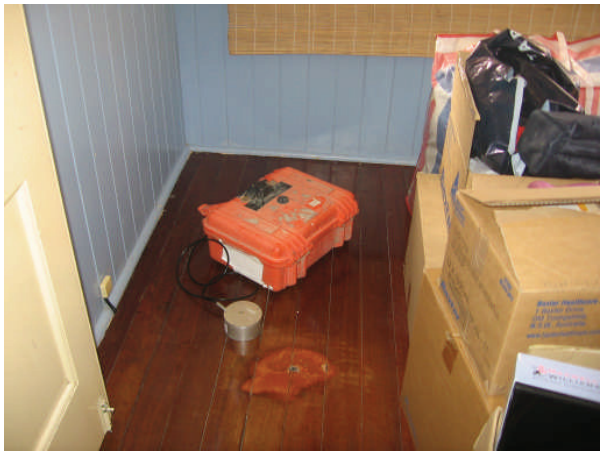
## CRR Vibration Monitoring Locations

| Monitoring Location | Address | Comments | Photo |
|---|---|---|---|
| 1 | 19 Chalk St | Living room on first floor, wooden floor.<br>Minimate Vibration Logger S/N: BE12060 | |
| 2 | Brisbane Girls Grammar School | Ground Level in Science Lab preparation room. Linoleum matt on concrete.<br>Minimate Vibration Logger S/N: BE8757 | |
| 3 | St Andrews War Memorial Hospital | Level 2 next to room with vibration sensitive equipment (MRI-system). Linoleum matt on concrete.<br>Minimate Vibration Logger S/N: BE12060 | |

**CRR Vibration Monitoring Locations**

| Monitoring Location | Address | Comments | Photo |
|---|---|---|---|
| 4 | 3 Parkland Crescent | In lunch room of small office (personnel to avoid being closer than 1 m from vibration sensor) on ground level. Linoleum matt on concrete.<br>Minimate Vibration Logger S/N: BE6513 | |
| 5 | Queensland University of Technology (QUT) | Ground Level next to vibration sensitive equipment (electron microscope). Linoleum matt on concrete.<br>Minimate Vibration Logger S/N: BE12060 | |
| 6 | 58 Leopard St | Used living space on ground floor under Queenslander. Concrete slab on ground.<br>Minimate Vibration Logger S/N: BE12060 | |

## CRR Vibration Monitoring Locations

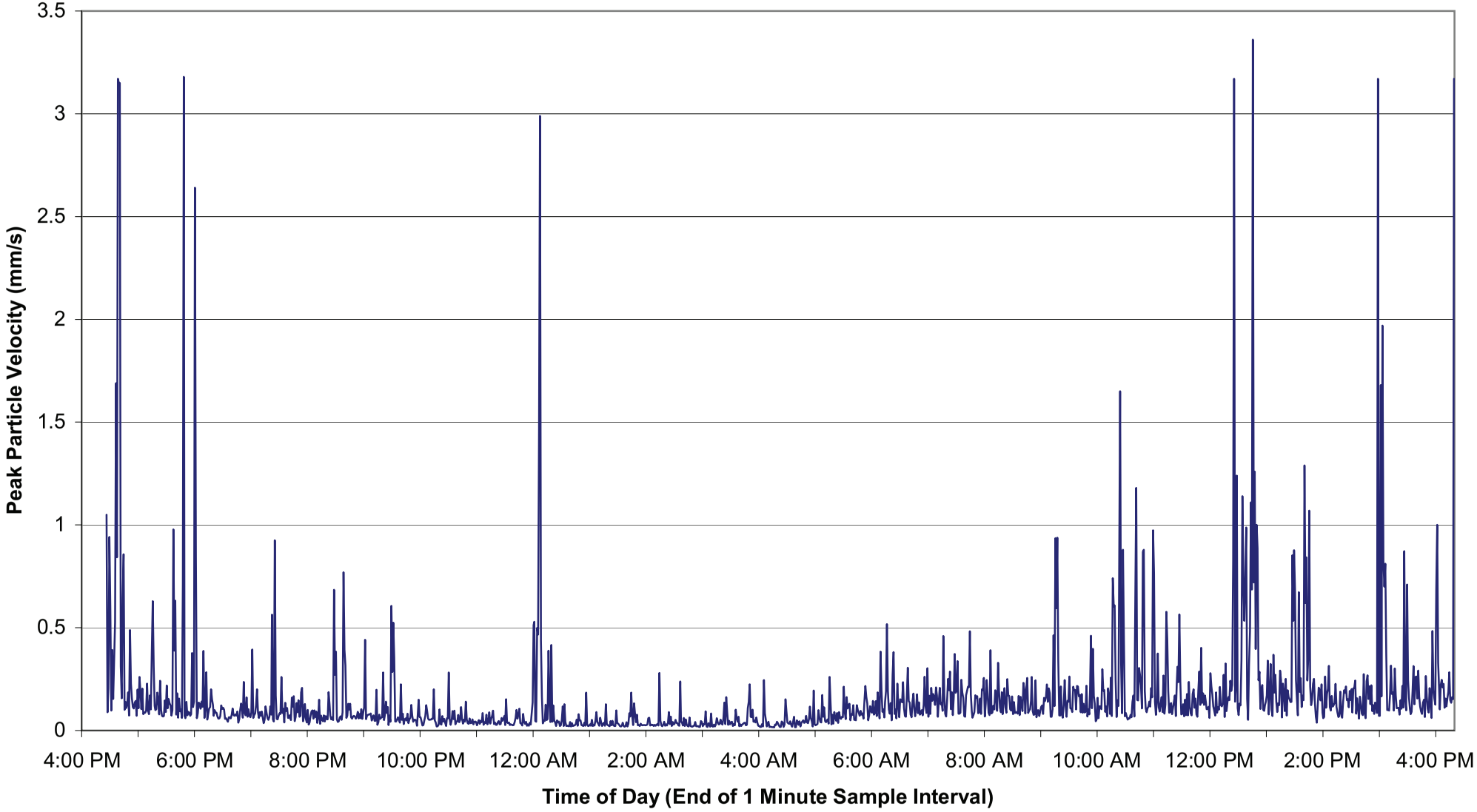
| Monitoring Location | Address | Comments | Photo |
|---|---|---|---|
| 7 | 46 Ross St | Spare room on first floor, wooden floor.<br>Minimate Vibration Logger S/N: BE8757 |  |
| 8 | 19 Dutton St | Under staircase from entrance on ground floor. Tiled floor.<br>Minimate Vibration Logger S/N: BE6513 | |
| 9 | 4 Fenton St | Spare room on first floor, wooden floor.<br>Minimate Vibration Logger S/N: BE12060 |  |

**CRR Vibration Monitoring Locations**

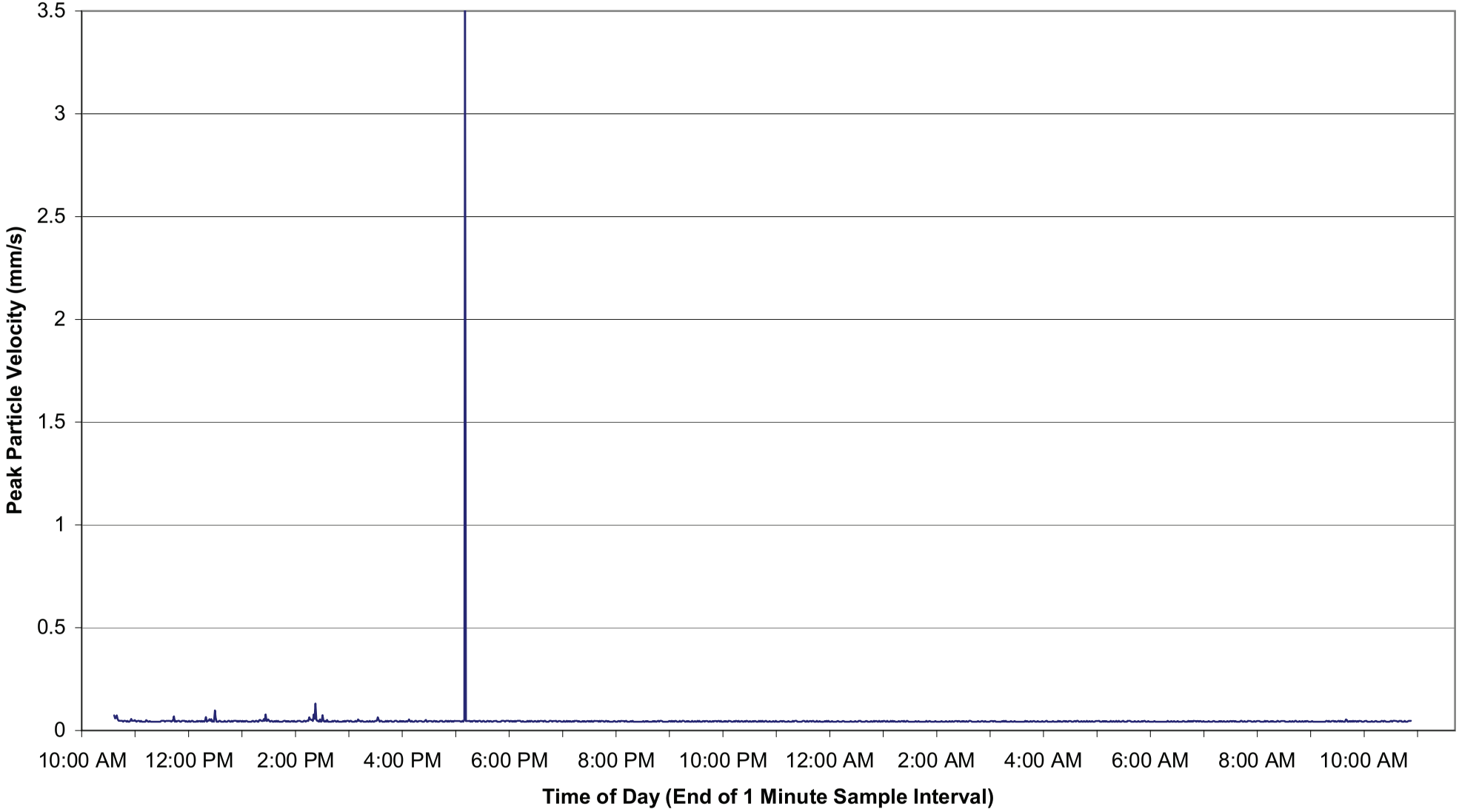
| Monitoring Location | Address | Comments | Photo |
|---|---|---|---|
| 10 | 17 Lagonda St | Bedroom on ground floor, polished concrete floor.<br>Minimate Vibration Logger S/N: BE6513 | |
| 11 | 1223 Ipswich Mwy | First floor. Linoleum matt on wooden floor.<br>Minimate Vibration Logger S/N: BE12060 | |

**Graphical Presentation of Ambient Vibration Levels**

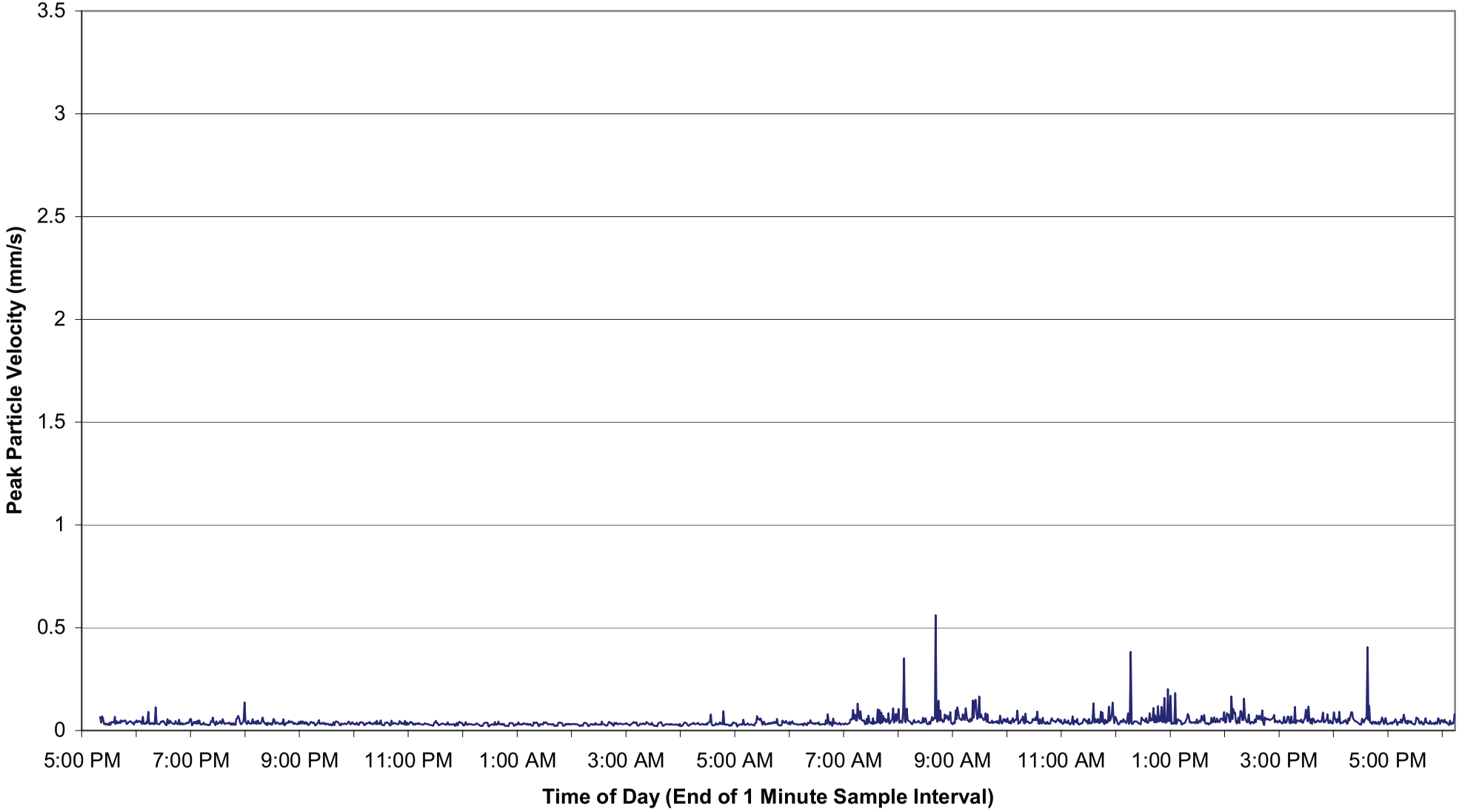
**Ambient Vibration Levels**
**Location 1 - 19 Chalk Street - 24 May and 25 May 2010**



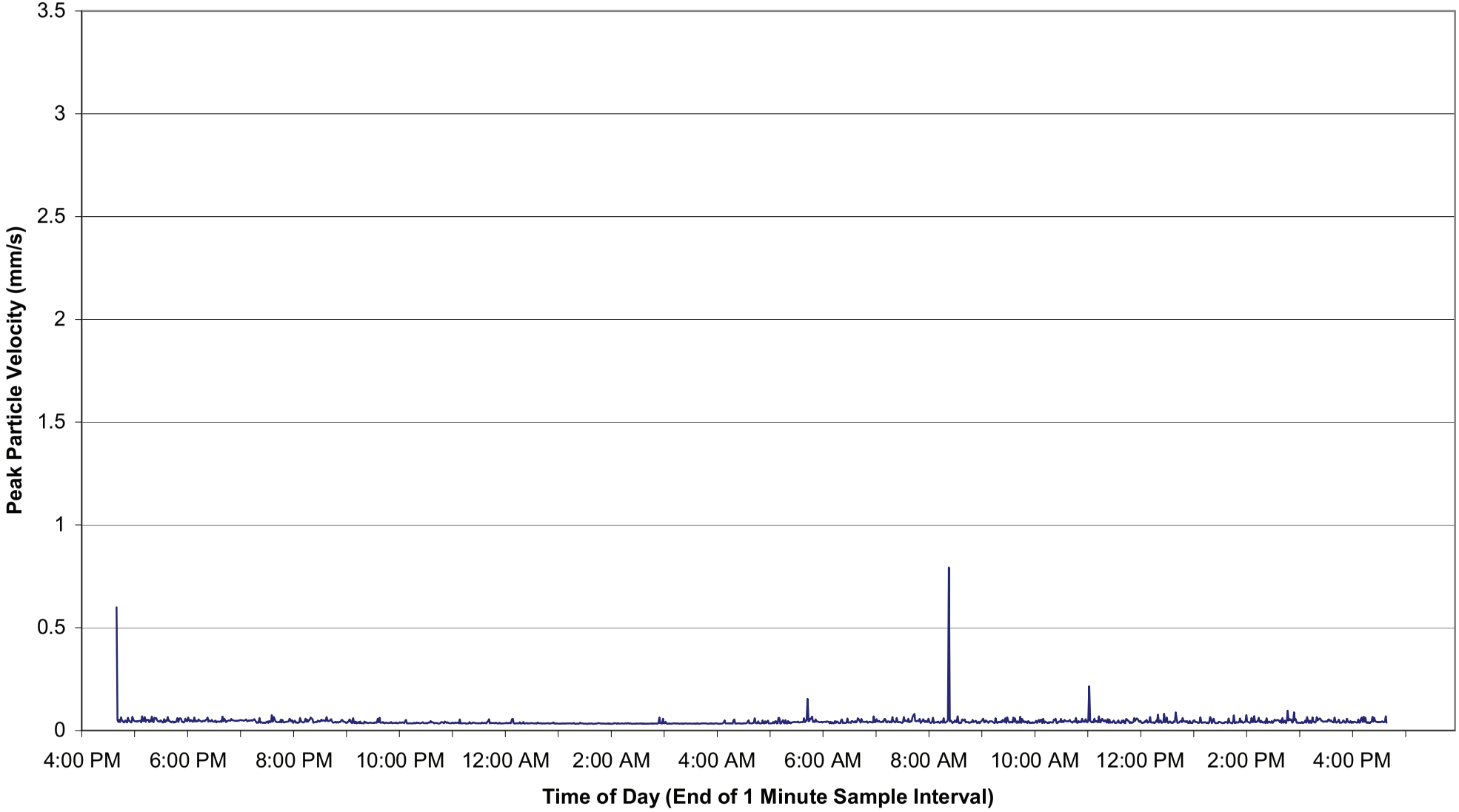
**Ambient Vibration Levels**
**Location 2 - Brisbane Girls Grammar School - 15 July and 16 July 2010**



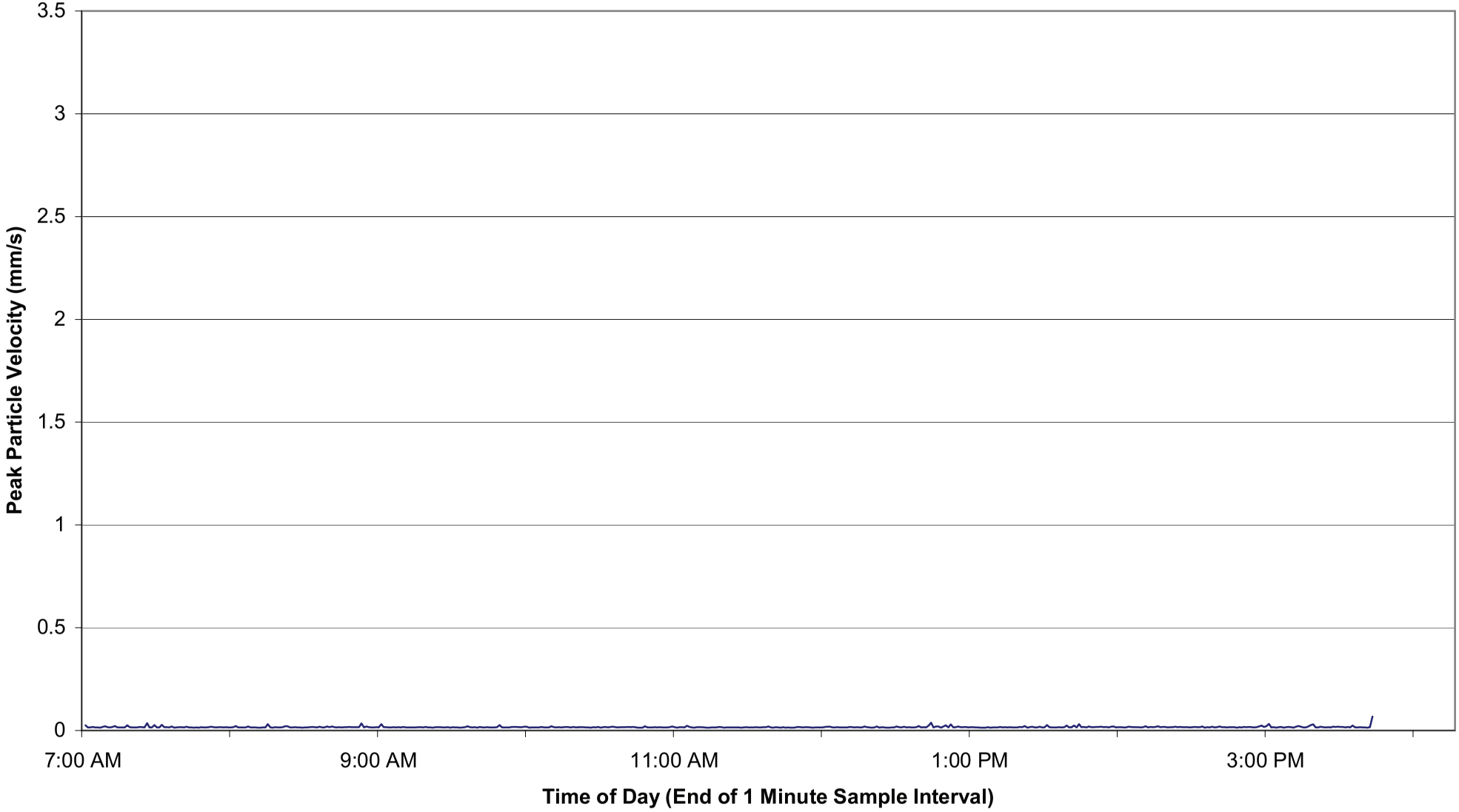
**Ambient Vibration Levels**
**Location 3 - St Andrews Hospital - 11 May and 12 May 2010**



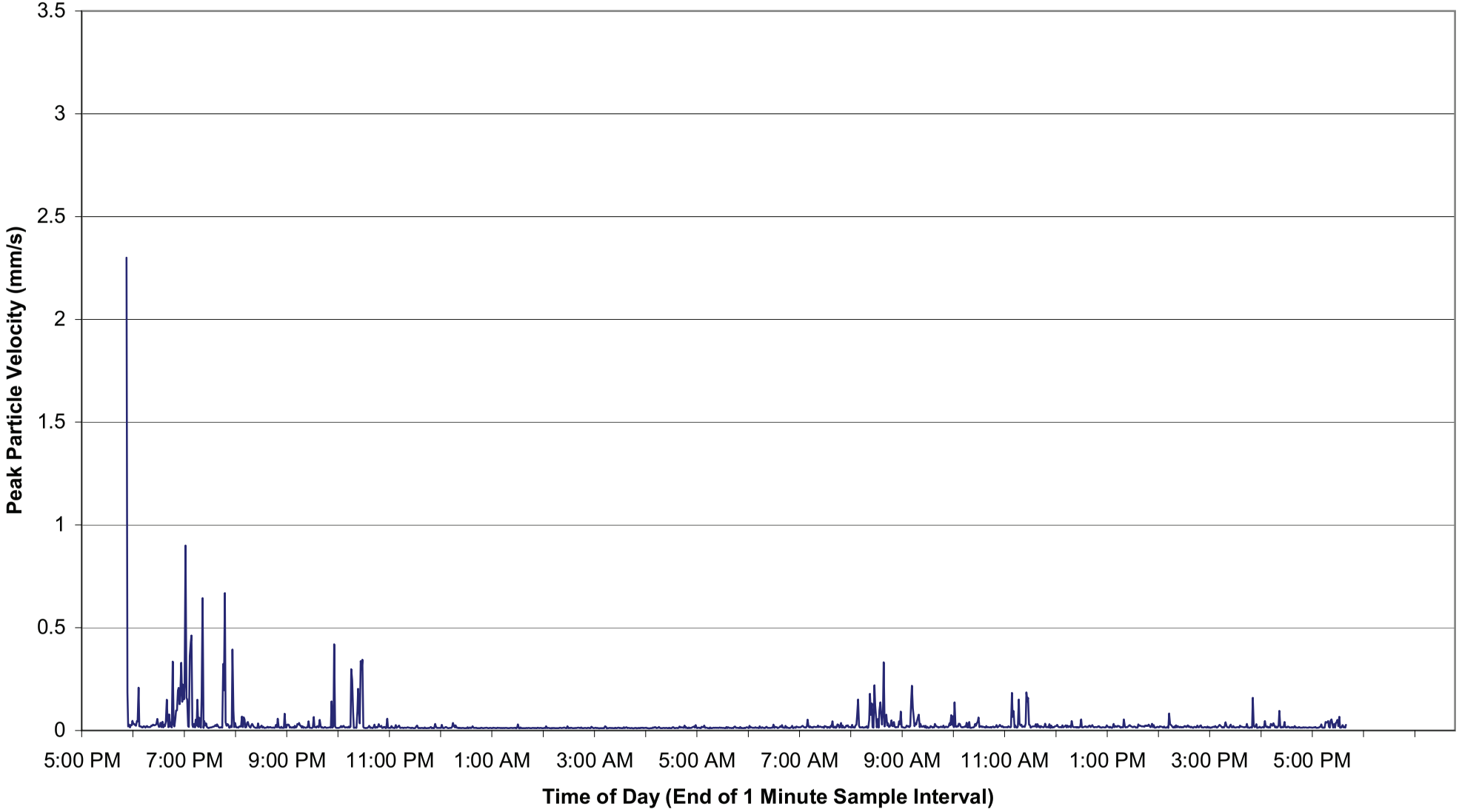
**Ambient Vibration Levels**
**Location 4 - 3 Parkland Crescent - 18 May and 19 May 2010**



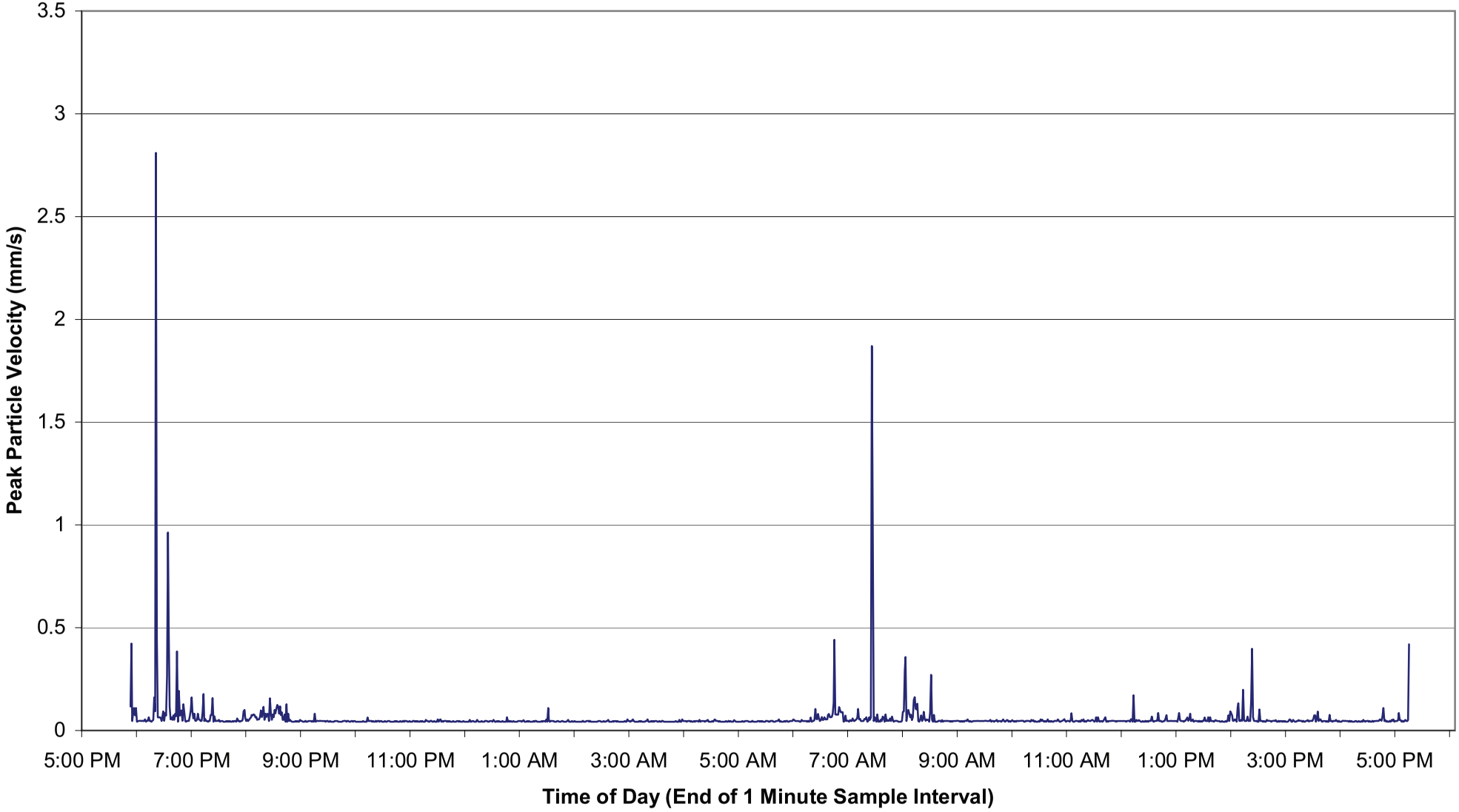
**Ambient Vibration Levels**
**Location 5 - Queensland University of Technology - 8 May 2010**



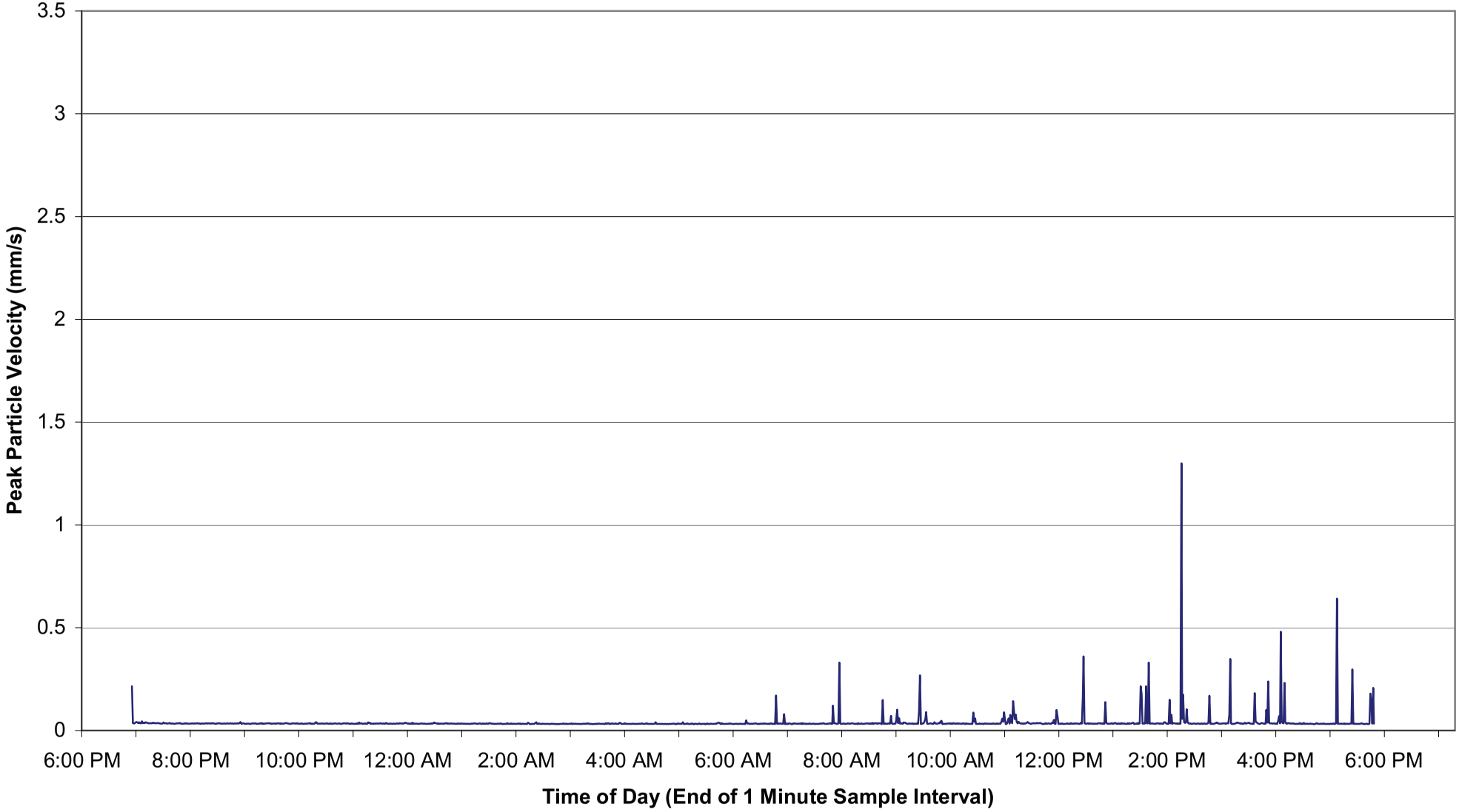
**Ambient Vibration Levels**
**Location 6 - 58 Leopard Street - 18 May and 19 May 2010**



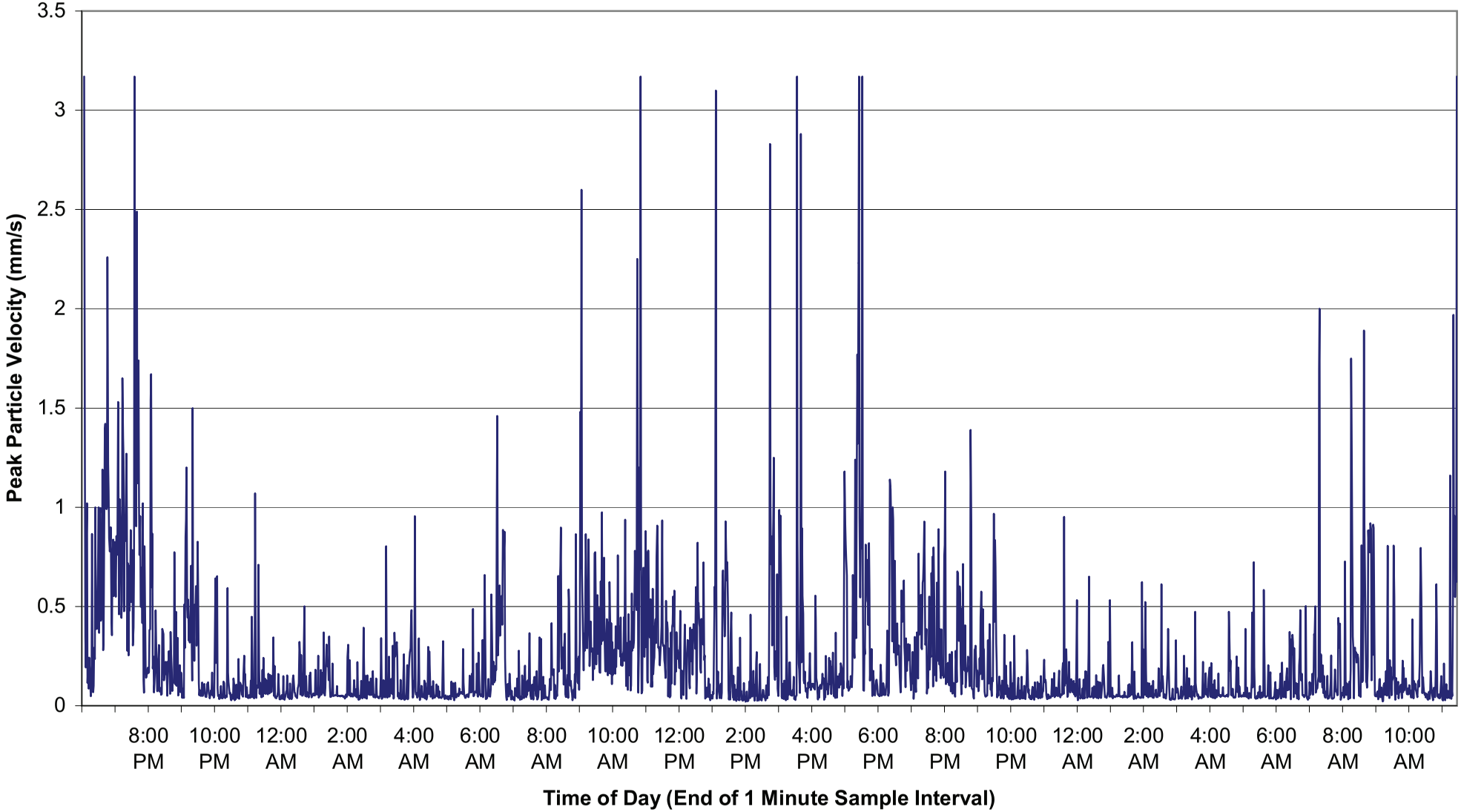
**Ambient Vibration Levels**
**Location 7 - 46 Ross Street - 11 May and 12 May 2010**



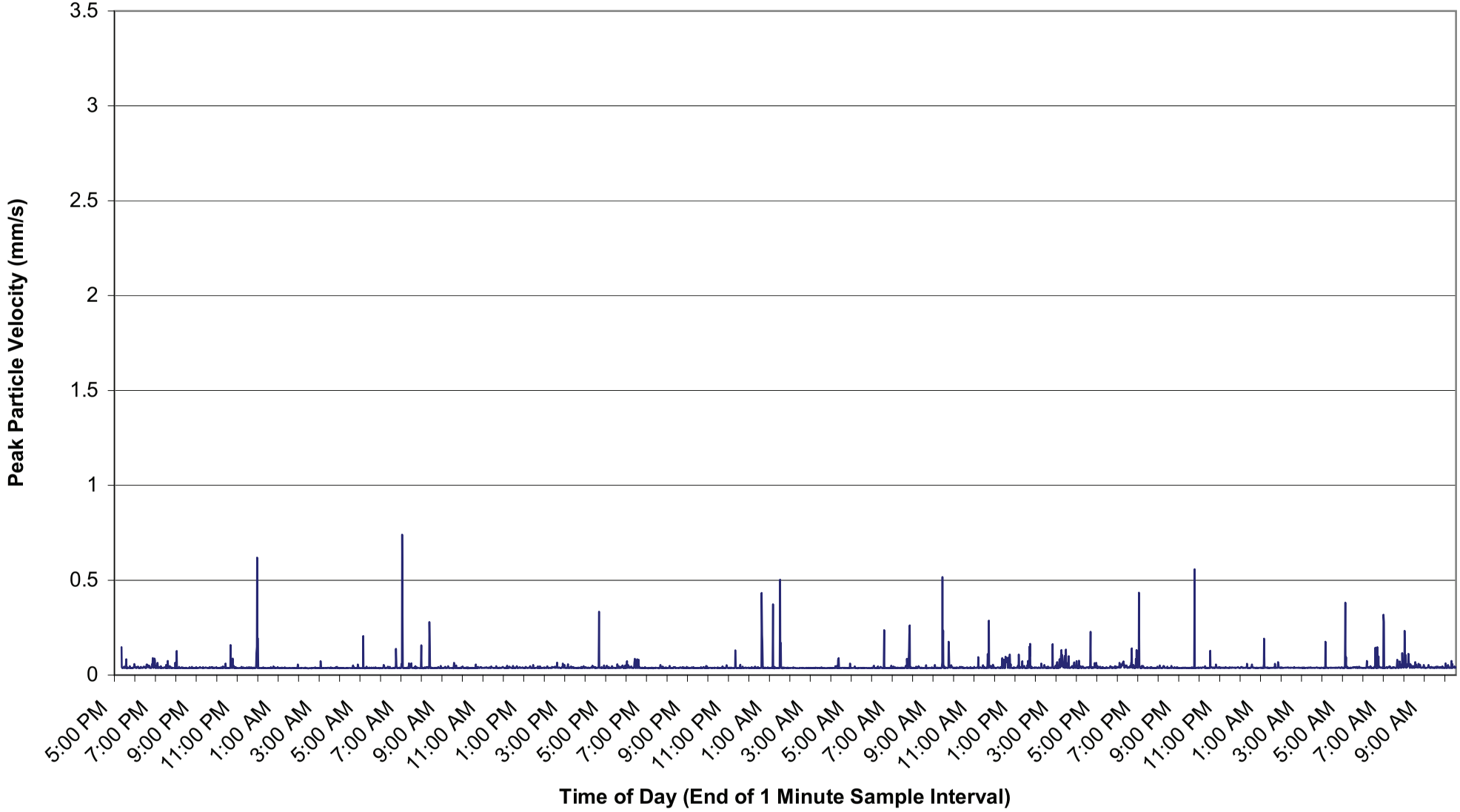
**Ambient Vibration Levels**
**Location 8 - 19 Dutton Street - 10 May and 11 May 2010**



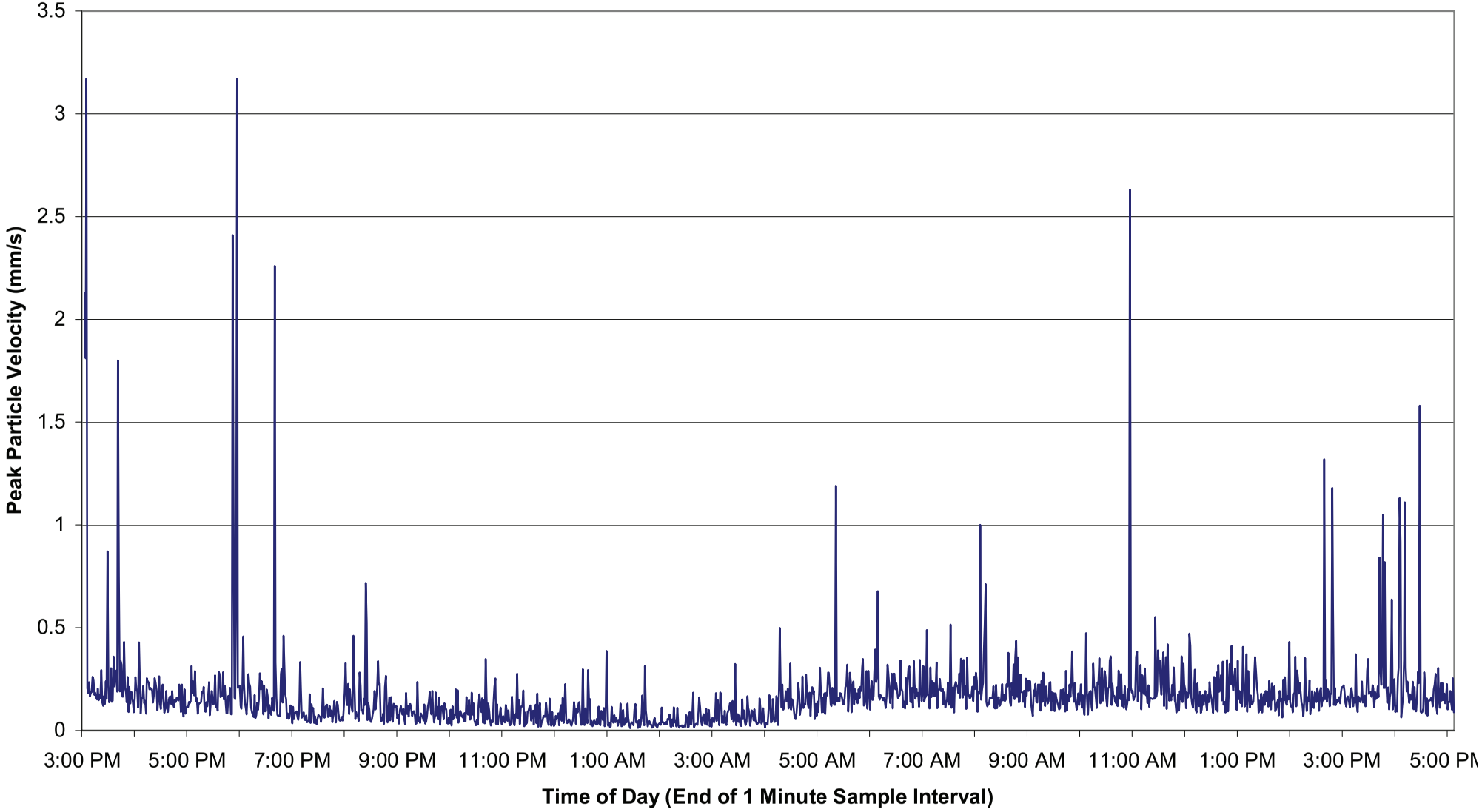
**Ambient Vibration Levels**
**Location 9 - 4 Fento Street - 13 May and 15 May 2010**



## Ambient Vibration Levels
## Location 10 - 17 Lagonda Street - 7 May and 10 May 2010



**Ambient Vibration Levels**
**Location 11 - 1223 Ipswich Motorway - 17 May and 18 May 2010**



**Special Noise and Vibration Sensitive Receivers**

## Special Noise and Vibration Sensitive Receivers

| Receiver Type | Facility | Location |
|---|---|---|
| Medical, Health Care | Royal Brisbane and Women's Hospital | Butterfield Street, Herston |
| | Royal Children's Hospital | Herston Road, Herston |
| | Yeronga Veterinary Surgery | 17 Railway Road, Fairfield |
| | Fairfield Dental Practice | 174 Fairfield Road, Fairfield |
| | Highgate Hill Veterinary Surgery | 188 Annerley Road, Dutton Park |
| | Abardeen Medical Clinic | 470 Main Street, Kangaroo Point |
| | CBD 7 Day Medical Centre | 245 Albert Street, Brisbane |
| | Brisbane Dental Hospital and College | 168 Turbot Street, Brisbane |
| | St Andrews Hospital | 457 Wickham Tce, Spring Hill |
| Child care | Grosvenor Hall Child Care Centre (also heritage listed) | 156 School Road, Yeronga |
| Place of Worship | St Fabians Church | Wilkie Street, Yeerongpilly |
| | Fairfield Christian Family | 51 Cross Street, Fairfield |
| | Iglesia Evangelica Pentecostal | 75 Brougham Street, Fairfield |
| | Roman Catholic Archdiocese of Brisbane Church | 72 Victoria St, Fairfield |
| | St Nicholas Russian Orthodox Cathedral | 344 Vulture Street, Woolloongabba |
| | Holy Trinity Anglican Church (also heritage listed) | 68 Hawthorne Street, Woolloongabba |
| | Brisbane Australia Temple | 200 River Terrace, Kangaroo Point |
| | St Marys Anglican Church of Australia | 449 Main Street, Kangaroo Point |
| | Ann Street Presbyterian Church (also heritage listed) | 141 Ann Street, Brisbane |
| | Uniting Church in Australia | 120 Ann Street, Brisbane |
| | St Alban Liberal Catholic Church | 351 Wickham Terrace, Spring Hill |
| Education | St Joseph's Church & School (also heritage listed) | 24 Leopard Street, Kangaroo Point |
| | Dutton Park State School | 112 Annerley Rd, Dutton Park |
| | Queensland University of Technology | 2 George Street, Brisbane |
| | Brisbane Grammar School | Gregory Terrace, Spring Hill |
| | Brisbane Girls Grammar School | Gregory Terrace, Spring Hill |
| | St Joseph's College | 285 Gregory Terrace, Spring Hill |
| | Embassy CES, Brisbane (Martin College on Level 4) | 119 Charlotte Street, Brisbane |
| | Sarina Russo Schools Australia | 82 Ann Street, Brisbane |
| | Women's Health Queensland Wide | 165 Gregory Terrace, Spring Hill |
| | St Josephs Christian Brothers College | 309 Gregory Terrace, Spring Hill |
| | Yeronga Institute of TAFE Salisbury Campus | Villa Street, Yeronga |
| | Nyanda State High School | Fairlie Terrace, Salisbury |
| Heritage | RNA Showgrounds | Gregory Terrace, Bowen Hills |
| | Old Museum Building | Bowen Bridge Road, Fortitude Valley |
| | Centenary Aquatic Centre | 400 Gregory Terrace, Spring Hill |
| | Dutton Park Cemetery | Annerley Road, Dutton Park |
| | Boggo Road Gaol | Boggo Rd, Dutton Park |
| | Brisbane City Hall | 64 Adelaide Street, Brisbane |

**Special Noise and Vibration Sensitive Receivers**

| | | |
|---|---|---|
| | Yeerongpilly Railway Station | Wilkie Street, Yeerongpilly |
| | Rocklea Railway Station | Brooke Street, Rocklea |
| | Salisbury Railway Station | Dollis Street, Salisbury |
| Hotel | Albert Park Motel | 551 Wickham Terrace, Spring Hill |
| | Chalk Hotel | 735 Stanley Street, Woolloongabba |
| | Southern Cross Serviced Apartments and Motel | 715 Main Street, Kangaroo Point |
| | Kangaroo Point Paramount Motel | 649 Main Street, Kangaroo Point |
| | City Star Motor Inn | 650 Main Street, Kangaroo Point |
| | Kangaroo Motel | 624 Main Street, Kangaroo Point |
| | Econo Inn | 528 Main Street, Kangaroo Point |
| | Carrington | 16 Albert Street, Brisbane |
| | Quay West Suites Brisbane | 132 Alice Street, Brisbane |
| | Oaks 212 Margaret | 212 Margaret Street, Brisbane |
| | Oaks River City Apartments | 79 Albert Street, Brisbane |
| | Quest River Park Central | 120 Mary Street, Brisbane |
| | The Sebel Suites Brisbane | 95 Charlotte Street, Brisbane |
| | Oaks Charlotte Towers | 128 Charlotte Street, Brisbane |
| | DB Reef Tower | 123 Albert Street, Brisbane |
| | M on Mary Apartment Hotel | 70 Mary Street, Brisbane |
| | Oaks Festival Towers | 108 Albert Street, Brisbane |
| | Royal Albert Boutique Hotel Brisbane | 167 Albert Street, Brisbane |
| | Crest Hotel | 2 Roma Street, Brisbane |
| | City Park Serviced Apartments | 251 Gregory Terrace, Spring Hill |
| Commercial, vibration sensitive equipment | Eco-Science Precinct | Boggo Rd, Dutton Park |

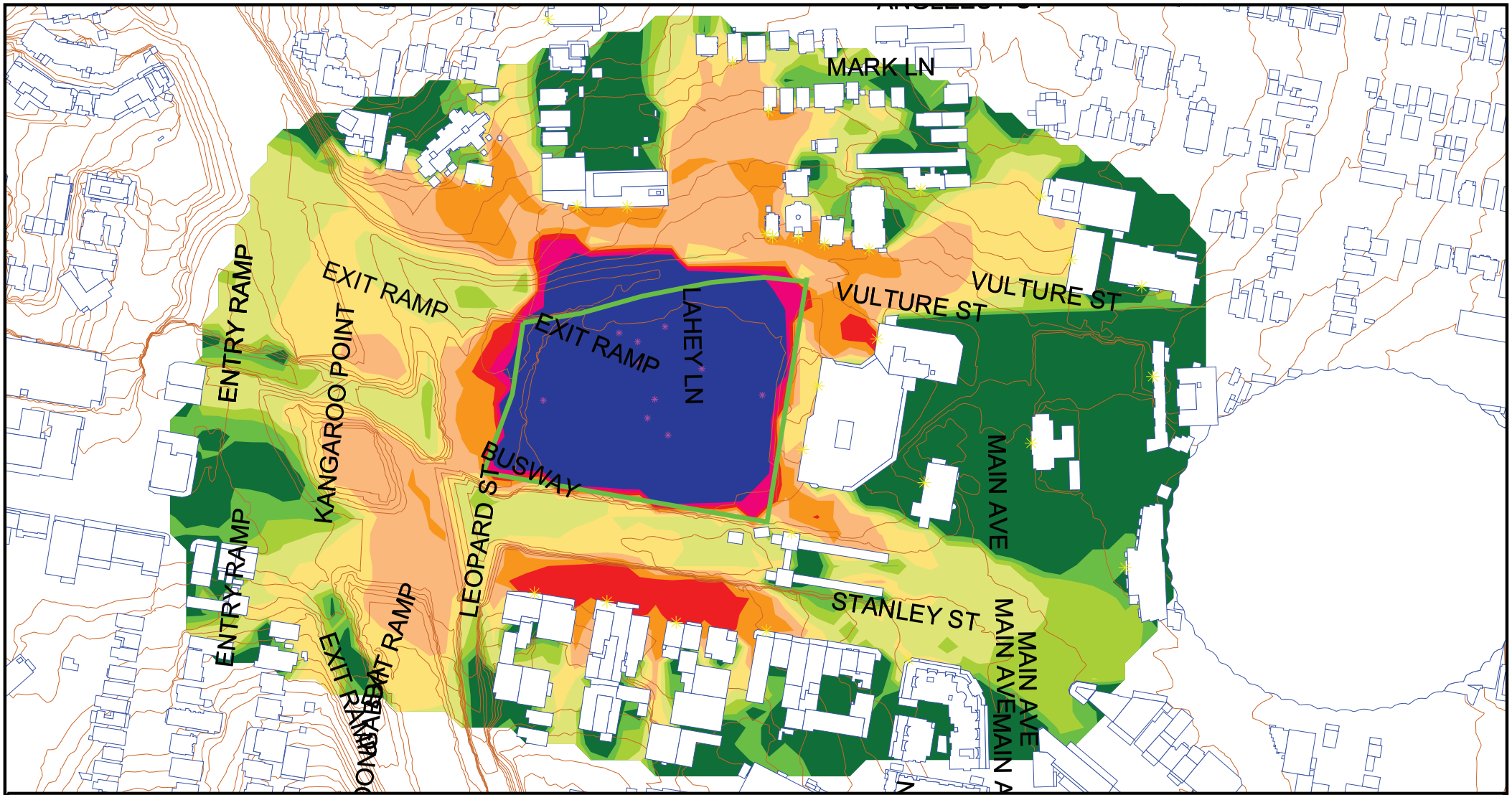
**Detailed Tunnel Worksites Construction Programme**

| ELEMENT | DESCRIPTION | PLANT LOCATIONS | DURATION (WKS) | MAJOR PLANT | | | | | | | | | | | | | | | | | | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Drill Jumbo | Pilling rig | 150t Cranes | 60-100t crane | 3.5 m3 Front End Loader | 5 m3 Front End Loader | Excavator 5 tonne | Excavator 20 tonne | Excavator 35 tonne | Scissor Lift | Temp. Ventilation | Shaft hoist | Shaft Lift | Compressor | Generator | Pump | Bulldozer D4 | Compaction plant (roller) | |
| NG PLATFORM FOR INITIAL ON (NEAR LAND-BRIDGE); N FOR TROUGH | EXCAVATE SOFT GROUND DOWN TO PLATFORM LEVEL (MAINTAINING BATTERED SLOPE WHERE APPLICABLE) USING EXCAVATORS AND TRUCKS | AT SURFACE, WITHIN HOARDINGS | 4 | | | | | | 2 | 2 | 3 | 3 | | | | | 1 | 1 | | 1 | | EXCAVATION IN SOFT GROUND TO ESTABLIS APPROX. LEVEL OF CURRENT QR-CORRIDOR EXPECTED TO BE REQUIRED (ROCK BREAKE WILL ROLL INTO ITEMS D-E |
| IGS ON SITE | MOBILIZE PLANT, SURVEY, SETUP GUIDE WALLS, PREPARE HARDSTAND AND INITIAL CAGES, SETUP PILING PLATFORM | AT SURFACE, WITHIN HOARDINGS | 4 | | 2 | 1 | 2 | | 2 | | | | | | | | 1 | 1 | | 1 | | MINOR EXCAVATION ASSOCIATED WITH FOR |
| LL; GANTRY | INSTALL PILES , ERECT GANTRY CRANE AND CAST CAPPING BEAM | AT SURFACE, WITHIN HOARDINGS | 4 | | 2 | 1 | 2 | | 2 | 2 | 1 | | | | 1 | 1 | 1 | 1 | 1 | 1 | | PILING WORKS - MINOR EXCAVATION ASSOC FOR ITEM A CONTINUE |
| ORTAL SHAFT - SAY 30x20; | EXCAVATE SOFT GROUND DOWN TO ROCKHEAD USING EXCAVATORS AND TRUCKS, HARD ROCK EXCAVATION DOWN TO INVERT LEVEL (SEQUENCE OF DRILL HOLES, BLAST, EXCAVATE MATERIAL WITH TWO BLASTS PER DAY) | AT SURFACE, WITHIN HOARDINGS; DRILL RIG AND PORTION OF EXCAVATOR FLEET IN SHAFT | 5 | 1 | | | | | 2 | 2 | 2 | 2 | | | 1 | 1 | 1 | | | 1 | | EXCAVATION IN SOFT/MIXED GROUND, TRAN LAGGING IN BETWEEN PILES; INSTALLATION EXCAVATION PROCEEDS. NOISE SOURCES A EXCAVATION CONTINUE LOWER AS THE EXC |
| CUT AND COVER BOX 50M = 200 PILES (1 S) | INSTALL PILES (EXCAVATE PILE HOLE, INSTALL REINFORCEMENT CAGE, FILL PILE VOID WITH CONCRETE) AND CAST CAPPING BEAM | AT SURFACE, WITHIN HOARDINGS | 9 | | 2 | 1 | 2 | | 2 | 2 | 1 | | | | 1 | 1 | 1 | 1 | | 1 | | PILING WORKS - EXCAVATION ASSOCIATED W |
| FOR DIVE STRUCTURE + CUT AY 15M DEEP | EXCAVATE SOFT GROUND DOWN TO ROCKHEAD USING EXCAVATORS AND TRUCKS, HARD ROCK EXCAVATION DOWN TO INVERT LEVEL (SEQUENCE OF DRILL HOLES, BLAST, EXCAVATE MATERIAL WITH TWO BLASTS PER DAY) | AT SURFACE, WITHIN HOARDINGS; DRILL RIG AND PORTION OF EXCAVATOR FLEET IN SHAFT | 5 | 3 | | 1 | 1 | | 5 | 2 | 3 | 3 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | | EXCAVATION IN SOFT/MIXED GROUND, TRAN LAGGING IN BETWEEN PILES; INSTALLATION EXCAVATION PROCEEDS. NOISE SOURCES A EXCAVATION CONTINUE LOWER AS THE EXC |
| ESTABLISHMENT | UTILITY DIVERSIONS, HOARDING AND GATES ERECTED, TRAFFIC MANAGEMENT INSTALLED, OFFICES AND STORES ESTABLISHED | AT SURFACE, WITHIN HOARDINGS WHERE ERECTED | 6 | | | | 1 | | | 1 | 1 | 2 | | | | | | | | | | MINOR EXCAVATIONS ASSOCIATED WITH UT DEMOLITION OF PLATFORM, BAGGAGE HAND |
| IGS ON SITE | MOBILIZE PLANT, SURVEY, SETUP GUIDE WALLS, PREPARE HARDSTAND AND INITIAL CAGES, SETUP PILING PLATFORM | AT SURFACE, WITHIN HOARDINGS | 4 | | 1 | | 1 | | | 1 | 1 | | | | | | | | | | | MINOR EXCAVATION ASSOCIATED WITH FOR |
| PILES | INSTALL PILES (EXCAVATE PILE HOLE, INSTALL REINFORCEMENT CAGE, FILL PILE VOID WITH CONCRETE AND CAST CAPPING BEAM | AT SURFACE, WITHIN HOARDINGS | 8 | | 1 | | 1 | | | 1 | 1 | | | | | | | | | | | PILING WORKS |
| ATION LEVEL | EXCAVATE SOFT GROUND DOWN TO ROCKHEAD USING EXCAVATORS AND TRUCKS, HARD ROCK EXCAVATION DOWN TO INVERT LEVEL (SEQUENCE OF DRILL HOLES, BLAST, EXCAVATE MATERIAL WITH TWO BLASTS PER DAY) | AT SURFACE, WITHIN HOARDINGS; DRILL RIG AND PORTION OF EXCAVATOR FLEET IN SHAFT | 12 | 1 | | | 1 | 2 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | SEQUENCE OF DRILL, BLAST, MUCK-OUT. HO AND LOADING INTO TRUCKS. SOURCES OF N EXCAVATION ADVANCE TO LOWER ELEVATIO PROCEEDS. FELs AT SURFACE LOADING TRU |
| ESTABLISHMENT | UTILITY DIVERSIONS, HOARDING AND GATES ERECTED, TRAFFIC MANAGEMENT INSTALLED, OFFICES AND STORES ESTABLISHED | AT SURFACE, WITHIN HOARDINGS WHERE ERECTED | 10 | | | | 1 | | | 1 | 1 | 2 | | | | | | | | | | MINOR EXCAVATIONS ASSOCIATED WITH UT DEMOLITION OF SECTIONS OF PLATFORM, R ACCESS TO PLATFORM 3 |
| IGS ON SITE | MOBILIZE PLANT, SURVEY, SETUP GUIDE WALLS, PREPARE HARDSTAND AND INITIAL CAGES, SETUP PILING PLATFORM | AT SURFACE, WITHIN HOARDINGS | 4 | | 1 | | 1 | | | 1 | 1 | | | | | | | | | | | MINOR EXCAVATION ASSOCIATED WITH FOR |
| PILES | INSTALL PILES (EXCAVATE PILE HOLE, INSTALL REINFORCEMENT CAGE, FILL PILE VOID WITH CONCRETE AND CAST CAPPING BEAM | AT SURFACE, WITHIN HOARDINGS | 6 | | 1 | | 1 | | | 1 | 1 | | | | | | | | | | | PILING WORKS |
| ATION LEVEL | EXCAVATE SOFT GROUND DOWN TO ROCKHEAD USING EXCAVATORS AND TRUCKS, HARD ROCK EXCAVATION DOWN TO INVERT LEVEL (SEQUENCE OF DRILL HOLES, BLAST, EXCAVATE MATERIAL WITH TWO BLASTS PER DAY) | AT SURFACE, WITHIN HOARDINGS; DRILL RIG AND PORTION OF EXCAVATOR FLEET IN SHAFT | 20 | 1 | | | 1 | 2 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | SEQUENCE OF DRILL, BLAST, MUCK-OUT. HO AND LOADING INTO TRUCKS. SOURCES OF N EXCAVATION ADVANCE TO LOWER ELEVATIO PROCEEDS. FELs AT SURFACE LOADING TRU |
| ESTABLISHMENT | UTILITY DIVERSIONS, HOARDING AND GATES ERECTED, TRAFFIC MANAGEMENT INSTALLED, OFFICES AND STORES ESTABLISHED | AT SURFACE, WITHIN HOARDINGS WHERE ERECTED | 6 | | | | 1 | | | 1 | 1 | | | | | | | | | | | MINOR EXCAVATIONS ASSOCIATED WITH UT ARRANGEMENT OF ACCESS ROADS |
| IGS ON SITE | MOBILIZE PLANT, SURVEY, SETUP GUIDE WALLS, PREPARE HARDSTAND AND INITIAL CAGES, SETUP PILING PLATFORM | AT SURFACE, WITHIN HOARDINGS | 4 | | 2 | 1 | 2 | | 1 | 1 | 1 | | | | | | 1 | 1 | | | | MINOR EXCAVATION ASSOCIATED WITH FOR |
| LL; GANTRY | INSTALL PILES (EXCAVATE PILE HOLE, INSTALL REINFORCEMENT CAGE, FILL PILE VOID WITH CONCRETE). | AT SURFACE, WITHIN HOARDINGS | 4 | | 2 | 1 | 2 | | 1 | 1 | 1 | | | | | | 1 | 1 | 1 | | | PILING WORKS |
| TIC SHED | ERRECT SHED OVER EXCAVATION SITE, ERECT GANTRY CRANE AND CAST CAPPING BEAM | AT SURFACE, WITHIN HOARDINGS | 6 | | | 1 | 2 | | 2 | 1 | 1 | 1 | | | | | 1 | 1 | 1 | | | CONSTRUCTION WORKS ASSOCIATED WITH FOUNDATIONS, STRUCTURE. |
| ATION LEVEL | EXCAVATE SOFT GROUND DOWN TO ROCKHEAD USING EXCAVATORS AND TRUCKS, HARD ROCK EXCAVATION DOWN TO INVERT LEVEL (SEQUENCE OF DRILL HOLES, BLAST, EXCAVATE MATERIAL WITH TWO BLASTS PER DAY) | AT SURFACE, WITHIN SHED; DRILL RIG AND PORTION OF EXCAVATOR FLEET IN SHAFT | 10 | 2 | | | 1 | 2 | 4 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | | | SEQUENCE OF DRILL, BLAST, MUCK-OUT. HO AND LOADING INTO TRUCKS. SOURCES OF N EXCAVATION ADVANCE TO LOWER ELEVATIO PROCEEDS. FELs AT SURFACE LOADING TRU WITHIN ACOUSTIC SHED |

| ELEMENT | DESCRIPTION | PLANT LOCATIONS | DURATION (WKS) | MAJOR PLANT | | | | | | | | | | | | | | | | | | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Drill Jumbo | Pilling rig | 150t Cranes | 60-100t crane | 3.5 m3 Front End Loader | 5 m3 Front End Loader | Excavator 5 tonne | Excavator 20 tonne | Excavator 35 tonne | Scissor Lift | Temp. Ventilation | Shaft hoist | Shaft Lift | Compressor | Generator | Pump | Bulldozer D4 | Compaction plant (roller) | |
| - MARY STREET | LOCATE SURVICES, PROVIDE ALTERNATIVE ROUTES, RE-LOCATE SERVICES UNDER MARY STREET SHAFT | AT SURFACE, WITHIN HOARDINGS WHERE ERECTED | 10 | | | | | 1 | | 1 | 1 | | | | | | 1 | 1 | 1 | | | MINOR EXCAVATIONS ASSOCIATED WITH UT ARRANGEMENT OF ROADS, FOOTPATHS; ER |
| ESTABLISHMENT | UTILITY DIVERSIONS, HOARDING AND GATES ERECTED, TRAFFIC MANAGEMENT INSTALLED, OFFICES AND STORES ESTABLISHED | AT SURFACE, WITHIN HOARDINGS WHERE ERECTED | 10 | | | | | 1 | | 1 | 1 | | | | | | 1 | 1 | 1 | | | MINOR EXCAVATIONS ASSOCIATED WITH ER REARRANGEMENT OF FOOTPATHS |
| S | ESTABLISH PLANT TO SITE, SETUP ALIMAK, LIFTS, CHUTES, ETC ON BUILDING, HOIST PLANT TO HEIGHT, ESTABLISH BARRICADE AND DEMOLISH FLOOR BY FLOOR | AT SURFACE, WITHIN HOARDINGS | 10 | | | | 1 | | | 1 | 1 | 2 | | | | | 1 | 1 | | | | DEMOLITION OF 2-STOREY BUILDING. |
| IGS ON SITE | MOBILIZE PLANT, SURVEY, SETUP GUIDE WALLS, PREPARE HARDSTAND AND INITIAL CAGES, SETUP PILING PLATFORM | AT SURFACE, WITHIN HOARDINGS | 4 | | 1 | | 2 | 1 | | 1 | 1 | | | | | | 1 | 1 | | | | MINOR EXCAVATION ASSOCIATED WITH FOR |
| LL; SHED; GANTRY | INSTALL PILES (EXCAVATE PILE HOLE, INSTALL REINFORCEMENT CAGE, FILL PILE VOID WITH CONCRETE). | AT SURFACE, WITHIN HOARDINGS | 6 | | 1 | | 2 | 1 | | 1 | 1 | | | | | | 1 | 1 | 1 | | | PILING WORKS |
| REET SITE | REMAINING UTILITY DIVERSIONS, HOARDING AND GATES ERECTED, TRAFFIC MANAGEMENT INSTALLED, OFFICES AND STORES ESTABLISHED | AT SURFACE, WITHIN HOARDINGS WHERE ERECTED | 2 | | | | | 1 | | 1 | 1 | | | | | | 1 | 1 | 1 | | | MINOR EXCAVATIONS ASSOCIATED WITH FU DIVERSIONS/PROTECTION WORKS; ERECTIO REARRANGEMENT OF FOOTPATHS |
| MARY STREET | INSTALL PILES (EXCAVATE PILE HOLE, INSTALL REINFORCEMENT CAGE, FILL PILE VOID WITH CONCRETE) | AT SURFACE, WITHIN HOARDINGS | 2 | | 1 | | 2 | 1 | | 1 | 1 | | | | | | 1 | 1 | 1 | | | PILING WORKS |
| AB 50% MARY STREET | SURFACES CLEANED, REINFORCEMENT AND FORMWORK SET UP, CONCRETE TRUCKED IN. ROAD AND UTILITIES RE-ESTABLISHED ABOVE TOP-SLAB | AT SURFACE, WITHIN HOARDINGS | 6 | | | | 2 | 1 | | 1 | 1 | 1 | | | | | 1 | 1 | 1 | | | MINOR EXCAVATIONS ASSOCIATED WITH CA CONSTRUCTION. FORMING UP AND STEEL FI DELIVERY AND INSTALLATION OF PRE-CAST SLAB. BACKFILL AND PAVEMENT CONSTRUC |
| REET SITE | REMAINING UTILITY DIVERSIONS, HOARDING AND GATES ERECTED, TRAFFIC MANAGEMENT INSTALLED, OFFICES AND STORES ESTABLISHED | AT SURFACE, WITHIN HOARDINGS WHERE ERECTED | 2 | | | | | 1 | | 1 | 1 | | | | | | 1 | 1 | 1 | | | MINOR EXCAVATIONS ASSOCIATED WITH FU DIVERSIONS/PROTECTION WORKS; ERECTIO REARRANGEMENT OF FOOTPATHS |
| MARY STREET | INSTALL PILES (EXCAVATE PILE HOLE, INSTALL REINFORCEMENT CAGE, FILL PILE VOID WITH CONCRETE) | AT SURFACE, WITHIN HOARDINGS | 2 | | 1 | | 2 | 1 | | 1 | 1 | | | | | | 1 | 1 | 1 | | | PILING WORKS |
| AB 50% MARY STREET | SURFACES CLEANED, REINFORCEMENT AND FORMWORK SET UP, CONCRETE TRUCKED IN. ROAD AND UTILITIES RE-ESTABLISHED ABOVE TOP-SLAB | AT SURFACE, WITHIN HOARDINGS | 6 | | | | 2 | 1 | | 1 | 1 | 1 | | | | | 1 | 1 | 1 | | | MINOR EXCAVATIONS ASSOCIATED WITH CA CONSTRUCTION. FORMING UP AND STEEL FI DELIVERY AND INSTALLATION OF PRE-CAST SLAB. BACKFILL AND PAVEMENT CONSTRUC |
| TIC SHED | ERECT SHED OVER EXCAVATION SITE, ERECT GANTRY CRANE AND CAST CAPPING BEAM | AT SURFACE, WITHIN HOARDINGS | 4 | | | | 1 | | | 1 | 1 | 1 | | | | | 1 | 1 | 1 | | | CONSTRUCTION WORKS ASSOCIATED WITH FOUNDATIONS, STRUCTURE. |
| ATION LEVEL | EXCAVATE SOFT GROUND DOWN TO ROCKHEAD USING EXCAVATORS AND TRUCKS, HARD ROCK EXCAVATION DOWN TO INVERT LEVEL (SEQUENCE OF DRILL HOLES, BLAST, EXCAVATE MATERIAL WITH TWO BLASTS PER DAY) | AT SURFACE, WITHIN SHED; DRILL RIG AND PORTION OF EXCAVATOR FLEET IN SHAFT | 20 | 2 | | | 1 | 2 | | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | SEQUENCE OF DRILL, BLAST, MUCK-OUT, HO AND LOADING INTO TRUCKS. SOURCES OF N EXCAVATION ADVANCE TO LOWER ELEVATIO PROCEEDS. FELs AT SURFACE LOADING TRU WITHIN ACOUSTIC SHED |
| ESTABLISHMENT | UTILITY DIVERSIONS, HOARDING AND GATES ERECTED, TRAFFIC MANAGEMENT INSTALLED, OFFICES AND STORES ESTABLISHED | AT SURFACE, WITHIN HOARDINGS WHERE ERECTED | 6 | | | | 1 | | 1 | 1 | 1 | 1 | | | | | 1 | 1 | | | | MINOR EXCAVATIONS ASSOCIATED WITH UT ARRANGEMENT OF ROADS, FOOTPATHS; ER |
| S | ESTABLISH PLANT TO SITE, SETUP ALIMAK, LIFTS, CHUTES, ETC ON BUILDING, HOIST PLANT TO HEIGHT, ESTABLISH BARRICADE AND DEMOLISH FLOOR BY FLOOR | AT SURFACE, WITHIN HOARDINGS | 20 | | | 1 | 2 | | 2 | 1 | 1 | 2 | 1 | | 1 | 1 | 2 | 2 | 1 | | | DEMOLITION OF 10-STOREY HOTEL BUILDING NORTH OF SITE TO BE RETAINED IF POSSIBL |
| IGS ON SITE | MOBILIZE PLANT, SURVEY, SETUP GUIDE WALLS, PREPARE HARDSTAND AND INITIAL CAGES, SETUP PILING PLATFORM | AT SURFACE, WITHIN HOARDINGS | 4 | | 2 | 1 | 2 | | 1 | 1 | 1 | | | | | | 1 | 1 | | | | MINOR EXCAVATION ASSOCIATED WITH FOR |
| LL; GANTRY | INSTALL PILES (EXCAVATE PILE HOLE, INSTALL REINFORCEMENT CAGE, FILL PILE VOID WITH CONCRETE). | AT SURFACE, WITHIN HOARDINGS | 4 | | 2 | 1 | 2 | | 1 | 1 | 1 | | | | | | 1 | 1 | 1 | | | PILING WORKS |
| TIC SHED | ERECT SHED OVER EXCAVATION SITE, ERECT GANTRY CRANE AND CAST CAPPING BEAM | AT SURFACE, WITHIN HOARDINGS | 6 | | | 1 | 2 | | 2 | 1 | 1 | 1 | | | | | 1 | 1 | 1 | | | CONSTRUCTION WORKS ASSOCIATED WITH FOUNDATIONS, STRUCTURE. |
| ATION LEVEL | EXCAVATE SOFT GROUND DOWN TO ROCKHEAD USING EXCAVATORS AND TRUCKS, HARD ROCK EXCAVATION DOWN TO INVERT LEVEL (SEQUENCE OF DRILL HOLES, BLAST, EXCAVATE MATERIAL WITH TWO BLASTS PER DAY) | AT SURFACE, WITHIN SHED; DRILL RIG AND PORTION OF EXCAVATOR FLEET IN SHAFT | 10 | 2 | | | 1 | 2 | 4 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | | | SEQUENCE OF DRILL, BLAST, MUCK-OUT, HO AND LOADING INTO TRUCKS. SOURCES OF N EXCAVATION ADVANCE TO LOWER ELEVATIO PROCEEDS. FELs AT SURFACE LOADING TRU WITHIN ACOUSTIC SHED |
| ESTABLISHMENT | UTILITY DIVERSIONS, HOARDING AND GATES ERECTED, TRAFFIC MANAGEMENT INSTALLED, OFFICES AND STORES ESTABLISHED | AT SURFACE, WITHIN HOARDINGS WHERE ERECTED | 6 | | | | 1 | 1 | | 1 | 1 | | | | | | 1 | 1 | 1 | | | MINOR EXCAVATIONS ASSOCIATED WITH UT ARRANGEMENT OF ACCESS ROADS |
| PRINT | ESTABLISH PLANT TO SITE, SETUP ALIMAK, LIFTS, CHUTES, ETC ON BUILDING, HOIST PLANT TO HEIGHT, ESTABLISH BARRICADE AND DEMOLISH FLOOR BY FLOOR, MAINTAIN SUPPORT TO BASEMENT STRUCTURE | AT SURFACE, WITHIN HOARDINGS | 6 | | | | 2 | | 2 | 2 | 2 | 4 | 1 | | | | 2 | 2 | 1 | 1 | | DEMOLITION OF GO-PRINT. |
| TO BUSWAY LEVEL (BOX T OF CONSTRUCTION SITE) | OPEN EXCAVATION; CONSTRUCTION OF SLURRY WALLS FOR GROUNDWATER CUT-OFF; INSTALLATION OF ANCHORS, SLOPE COVER AS THE EXCAVATION PROCEEDS | AT SURFACE, WITHIN HOARDINGS (NOTE THAT LEVEL PROGRESSIVELY DESCENDS TOWARDS EXISTING BUSWAY LEVEL) | 8 | 1 | | 1 | 2 | 2 | 4 | 2 | 2 | 4 | | | | | 1 | 1 | 1 | 1 | | OPEN EXCAVATION IN SOFT/MIXED GROUND EXPECTED. GROUND TREATMENT WORKS (F AND ANCHOR INSTALLATION |
| IGS ON SITE | MOBILIZE PLANT, SURVEY, SETUP GUIDE WALLS, PREPARE HARDSTAND AND INITIAL CAGES, SETUP PILING PLATFORM | AT SURFACE, WITHIN HOARDINGS (SITE LEVEL AT APPROX. BUSWAY LEVEL) | 4 | | 4 | 1 | 4 | 2 | 2 | 2 | 2 | | | | | | 2 | 2 | 1 | | | MINOR EXCAVATION ASSOCIATED WITH FOR |
| LES 750 DIA SOUTH OF SEF OF BUSWAY AND ALONG STATION BOX | INSTALL PILES (EXCAVATE PILE HOLE, INSTALL REINFORCEMENT CAGE, FILL PILE VOID WITH CONCRETE). | AT SURFACE, WITHIN HOARDINGS (SITE LEVEL AT APPROX. BUSWAY LEVEL) | 7 | | 4 | 1 | 4 | 2 | 2 | 2 | 2 | | | | | | 2 | 2 | 1 | | | PILING WORKS |
| IL | EXCAVATE SOFT GROUND DOWN TO ROCKHEAD USING EXCAVATORS AND TRUCKS, HARD ROCK EXCAVATION DOWN TO | WITHIN SHAFT; WITHIN SITE HOARDINGS | 5 | 1 | | 2 | 2 | 2 | 4 | 2 | 2 | 4 | 1 | 2 | 1 | 1 | 2 | 2 | 2 | 1 | | SEQUENCE OF DRILL, BLAST, MUCK-OUT, HO AND LOADING INTO TRUCKS. SOURCES OF N EXCAVATION ADVANCE TO LOWER ELEVATIO |

| ELEMENT | DESCRIPTION | PLANT LOCATIONS | DURATION (WKS) | MAJOR PLANT | | | | | | | | | | | | | | | | | | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Drill Jumbo | Pilling rig | 150t Cranes | 60-100t crane | 3.5 m3 Front End Loader | 5 m3 Front End Loader | Excavator 5 tonne | Excavator 20 tonne | Excavator 35 tonne | Scissor Lift | Temp. Ventilation | Shaft hoist | Shaft Lift | Compressor | Generator | Pump | Bulldozer D4 | Compaction plant (roller) | |
| ESTABLISHMENT | UTILITY DIVERSIONS, HOARDING AND GATES ERECTED, TRAFFIC MANAGEMENT INSTALLED, OFFICES AND STORES ESTABLISHED | AT SURFACE, WITHIN HOARDINGS WHERE ERECTED | 6 | | | 1 | 1 | | 1 | 2 | 1 | | | | | | 1 | 1 | | 1 | | ROAD DIVERSIONS TO NORTH AND SOUTH T PERIOD TO ALLOW FOR PILING TO BE COMP AND PETER DOHERTY RD |
| IGS ON SITE - NORTHERN | MOBILIZE PLANT, SURVEY, SETUP GUIDE WALLS, PREPARE HARDSTAND AND INITIAL CAGES, SETUP PILING PLATFORM | AT SURFACE, WITHIN HOARDINGS | 4 | | 3 | 1 | 2 | | 1 | 2 | 1 | | | | | | 1 | 1 | 1 | | | MINOR EXCAVATION ASSOCIATED WITH FOR |
| IGS ON SITE - SOUTHERN | MOBILIZE PLANT, SURVEY, SETUP GUIDE WALLS, PREPARE HARDSTAND AND INITIAL CAGES, SETUP PILING PLATFORM | AT SURFACE, WITHIN HOARDINGS | 4 | | 3 | | 2 | | 1 | 2 | 1 | | | | | | 1 | 1 | | | | MINOR EXCAVATION ASSOCIATED WITH FOR |
| THROUGH CENTRE SECTION | OPEN EXCAVATION IN CENTRE SECTION OF SITE; INSTALL ANCHORS AS REQUIRED - SOME PILES TO BE PITCHED FROM SURFACE LEVEL | AT SURFACE, WITHIN HOARDINGS | 7 | 2 | | | | | | | | | | | | | | | | | | OPEN EXCAVATION IN SOFT/MIXED GROUND REQUIRED |
| ORTHERN ENTRANCE | INSTALL PILES (EXCAVATE PILE HOLE, INSTALL REINFORCEMENT CAGE, FILL PILE VOID WITH CONCRETE). | AT SURFACE, WITHIN HOARDINGS | 12 | | 3 | 1 | 2 | | 1 | 2 | 1 | | | | | | 1 | 1 | 1 | | | PILING WORKS |
| OUTHERN ENTRANCE | INSTALL PILES (EXCAVATE PILE HOLE, INSTALL REINFORCEMENT CAGE, FILL PILE VOID WITH CONCRETE). | AT SURFACE, WITHIN HOARDINGS | 12 | | 3 | | 2 | | 1 | 2 | 1 | | | | | | 1 | 1 | | | | PILING WORKS |
| LATFORM BOX | INSTALL PILES (EXCAVATE PILE HOLE, INSTALL REINFORCEMENT CAGE, FILL PILE VOID WITH CONCRETE). | AT SURFACE, WITHIN HOARDINGS | 9 | | 3 | 1 | 4 | | 2 | 2 | 2 | | | | | | 2 | 2 | 1 | | | PILING WORKS |
| M | SURFACES CLEANED, REINFORCEMENT AND FORMWORK SET UP, CONCRETE TRUCKED IN AND PLACED | AT SURFACE, WITHIN HOARDINGS | 7 | | | 1 | 4 | 2 | 2 | 2 | 2 | 2 | | | | | 2 | 2 | 1 | | | MINOR EXCAVATIONS ASSOCIATED WITH CA FORMING UP AND STEEL FIXING FOR CAPPIN |
| W CAPPING BEAM | OPEN EXCAVATION TO ALLOW FOR CONSTRUCTION OF TOP-SLAB, AND TO ALLOW FOR HEADROOM UNDER COMPLETED SLAB FOR EXCAVATION | AT SURFACE, WITHIN HOARDINGS | 3 | 1 | | 1 | 2 | | 2 | 2 | 2 | 2 | | | | | 2 | 2 | 1 | | | MINOR EXCAVATIONS ASSOCIATED WITH TO |
| AB | SURFACES CLEANED, REINFORCEMENT AND FORMWORK SET UP, CONCRETE TRUCKED IN. ROAD AND UTILITIES RE-ESTABLISHED ABOVE TOP-SLAB WHERE APPROPRIATE. | AT SURFACE, WITHIN HOARDINGS | 12 | | | 1 | 4 | 2 | 2 | 2 | 2 | 2 | | | | | 2 | 2 | 1 | | | FORMING UP AND STEEL FIXING FOR CAPPIN INSTALLATION OF PRE-CAST BEAM. CASTING |
| IATION LEVEL BENEATH TOP HORS AS EXCAVATION | EXCAVATE SOFT GROUND DOWN TO ROCKHEAD USING EXCAVATORS AND TRUCKS, HARD ROCK EXCAVATION DOWN TO INVERT LEVEL (SEQUENCE OF DRILL HOLES, BLAST, EXCAVATE MATERIAL WITH TWO BLASTS PER DAY) | UNDER TOP-SLAB, ACCESSED VIA HATCHES TO NORTH AND SOUTH (PRINCIPAL SITE TO SOUTH) | 25 | 3 | | 1 | 2 | 2 | 4 | 2 | 2 | 4 | 4 | 4 | 2 | 2 | 2 | 2 | 2 | 1 | | EXCAVATION IN SOFT/MIXED GROUND, TRAN LAGGING IN BETWEEN PILES; INSTALLATION EXCAVATION PROCEEDS. NOISE SOURCES A EXCAVATION CONTINUE LOWER AS THE EXC COVERED OVER BY TOP-SLAB |
| ESTABLISHMENT | UTILITY DIVERSIONS, HOARDING AND GATES ERECTED, TRAFFIC MANAGEMENT INSTALLED, OFFICES AND STORES ESTABLISHED | AT SURFACE, WITHIN HOARDINGS | 6 | | | | 1 | 1 | | 1 | | | | | | | 1 | 1 | | | | MINOR EXCAVATIONS ASSOCIATED WITH UT ARRANGEMENT OF ACCESS ROADS |
| IG ON SITE | MOBILIZE PLANT, SURVEY, SETUP GUIDE WALLS, PREPARE HARDSTAND AND INITIAL CAGES, SETUP PILING PLATFORM | AT SURFACE, WITHIN HOARDINGS | 4 | | 1 | 1 | 1 | 1 | | 1 | | | | | | | | | | | | MINOR EXCAVATION ASSOCIATED WITH FOR |
| | INSTALL PILES (EXCAVATE PILE HOLE, INSTALL REINFORCEMENT CAGE, FILL PILE VOID WITH CONCRETE). | AT SURFACE, WITHIN HOARDINGS | 14 | | 1 | 1 | 1 | 1 | | 1 | | | | | | | 1 | 1 | | | | PILING WORKS |
| SAY 30M DEEP - 0.5M/DAY | EXCAVATE SOFT GROUND DOWN TO ROCKHEAD USING EXCAVATORS AND TRUCKS, HARD ROCK EXCAVATION DOWN TO INVERT LEVEL (SEQUENCE OF DRILL HOLES, BLAST, EXCAVATE MATERIAL WITH TWO BLASTS PER DAY) | WITHIN SHAFT, WITHIN SITE HOARDINGS | 12 | | | 1 | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | SEQUENCE OF DRILL, BLAST, MUCK-OUT, HO AND LOADING INTO TRUCKS. SOURCES OF N EXCAVATION ADVANCE TO LOWER ELEVATIO PROCEEDS. FELs AT SURFACE LOADING TRU WITHIN SHAFT |
| ESTABLISHMENT | UTILITY DIVERSIONS, HOARDING AND GATES ERECTED, TRAFFIC MANAGEMENT INSTALLED, OFFICES AND STORES ESTABLISHED | AT SURFACE, WITHIN HOARDINGS WHERE ERECTED | 6 | | | | 1 | 2 | | 1 | 1 | | | | | | 1 | 1 | | | | MINOR EXCAVATIONS ASSOCIATED WITH UT ARRANGEMENT OF ACCESS ROADS |
| | ESTABLISH PLANT TO SITE, ESTABLISH BARRICADE AND DEMOLISH FLOOR BY FLOOR | AT SURFACE, WITHIN HOARDINGS | 6 | | | | 1 | 2 | 4 | 2 | 3 | 3 | | | | | 2 | 2 | | 1 | | DEMOLITIONS OF LOW-RISE RESIDENCES |
| REET (CONSTRUCTION Y - FINAL TAILING TOWARDS END OF | HOARDING AND GATES ERECTED, NEW ROAD ALIGNMENT ESTABLISHED (PARTLY CONCURRENT WITH P-2, AND #A) | AT SURFACE, WITHIN HOARDINGS WHERE ERECTED | 6 | | | | 1 | 2 | 4 | 2 | 3 | 3 | | | | | 2 | 2 | | | | ROAD DIVERSIONS TO WILKIE STREET TO BE TO ALLOW FOR PILING/TROUGH EXCAVATIO |
| IGS ON SITE; PREPARE SURVEY ETC. | MOBILIZE PLANT, SURVEY, SETUP GUIDE WALLS, PREPARE HARDSTAND AND INITIAL CAGES, SETUP PILING PLATFORM | AT SURFACE, WITHIN HOARDINGS | 4 | | 3 | 1 | 1 | 2 | 2 | 2 | | | | | | | 1 | 1 | | | | MINOR EXCAVATION ASSOCIATED WITH FOR |
| E WALL - PILES AT 2/00 WALL; 110 PILES - 1/DAY, 3 | INSTALL PILES (EXCAVATE PILE HOLE, INSTALL REINFORCEMENT CAGE, FILL PILE VOID WITH CONCRETE). | AT SURFACE, WITHIN HOARDINGS | 6 | | 3 | 1 | 1 | 2 | 2 | 2 | | | | | | | 1 | 1 | 1 | | | PILING WORKS; PILES ALONGSIDE QR-CORR DURING WEEKEND POSSESSIONS |
| OUGH TO SOUTH OF PILING LENGTH - IN CONJUNCTION | EXCAVATE SOFT GROUND DOWN TO ROCKHEAD USING EXCAVATORS AND TRUCKS, HARD ROCK EXCAVATION DOWN TO INVERT LEVEL (SEQUENCE OF DRILL HOLES, BLAST, EXCAVATE MATERIAL WITH TWO BLASTS PER DAY) | AT SURFACE, WITHIN HOARDINGS | 10 | | | 1 | 1 | 2 | 1 | | 3 | 3 | | | 1 | 1 | 1 | 1 | 1 | | | OPEN EXCAVATION IN SOFT/MIXED GROUND REQUIRED |
| TION IN OPEN TROUGH #C ABOVE) | SOIL ANCHORS INSTALLED AS EXCAVATION PROCEEDS | AT SURFACE, WITHIN HOARDINGS | 2 | 3 | | 1 | 1 | | 3 | 2 | | | 3 | | | | 1 | 1 | 1 | | | INSTALLATION OF ANCHORS WITHIN OPEN T |
| TROUGH, INSTALLING XCAVATION PROCEEDS - AY OWING #C, #D ABOVE | EXCAVATE SOFT GROUND DOWN TO ROCKHEAD USING EXCAVATORS AND TRUCKS, HARD ROCK EXCAVATION DOWN TO INVERT LEVEL (SEQUENCE OF DRILL HOLES, BLAST, EXCAVATE MATERIAL WITH TWO BLASTS PER DAY) | WITHIN SHAFT, WITHIN SITE HOARDINGS | 16 | | | 1 | 1 | 2 | 1 | | 3 | 3 | | | 1 | 1 | 1 | 1 | 1 | | | SEQUENCE OF DRILL, BLAST, MUCK-OUT, HO AND LOADING INTO TRUCKS. SOURCES OF N EXCAVATION ADVANCE TO LOWER ELEVATIO PROCEEDS. FELs AT SURFACE LOADING TRU WITHIN SHAFT |
| NCHORS, AND SHOTCRETE ORT OF ITEM #E ABOVE | ROCK/SOIL ANCHORS INSTALLED AS EXCAVATION PROCEEDS | WITHIN SHAFT, WITHIN SITE HOARDINGS | 10 | 3 | | 1 | 1 | | 3 | 2 | | | 3 | | | | 1 | 1 | 1 | | | INSTALLATION OF ANCHORS WITHIN WALLED |

**Work Sites Construction – Noise Contours**




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes

Contours are interpolated. Check calculations for exact levels.

Signs and symbols

- Building
- Elevation line
- Proposed Noise Barrier
- Point source
- Point receiver

**20-2524 Cross River Rail Project**

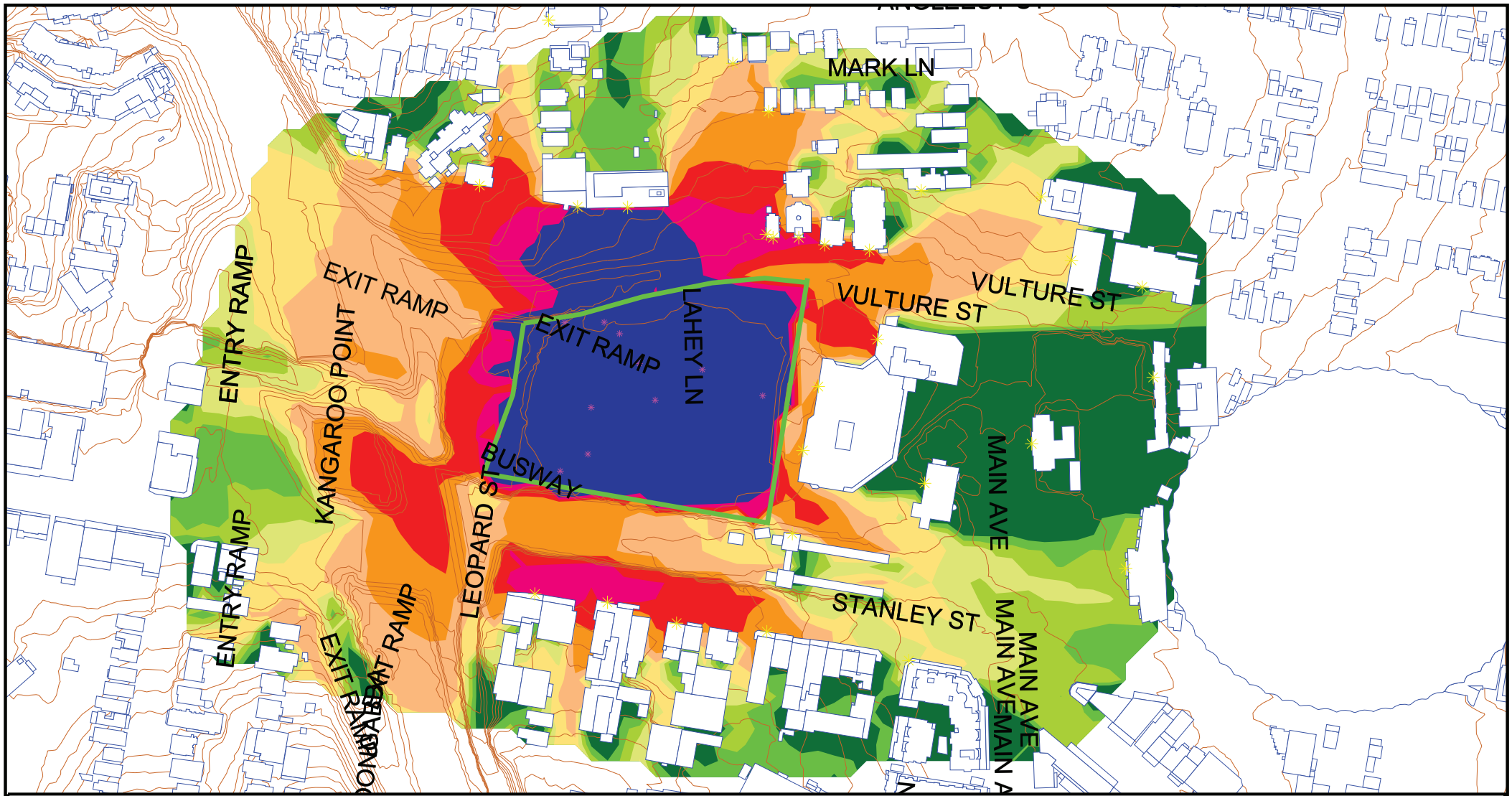
Woolloongabba Station - Scenario 1 Demolition
Predicted Daytime LA10 Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

N

Scale 1:3500

0 25 50 100 m

SLR
global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes

Contours are interpolated. Check calculations for exact levels.

Signs and symbols

- Building
- Elevation line
- Proposed Noise Barrier
- Point source
- Point receiver

**20-2524 Cross River Rail Project**

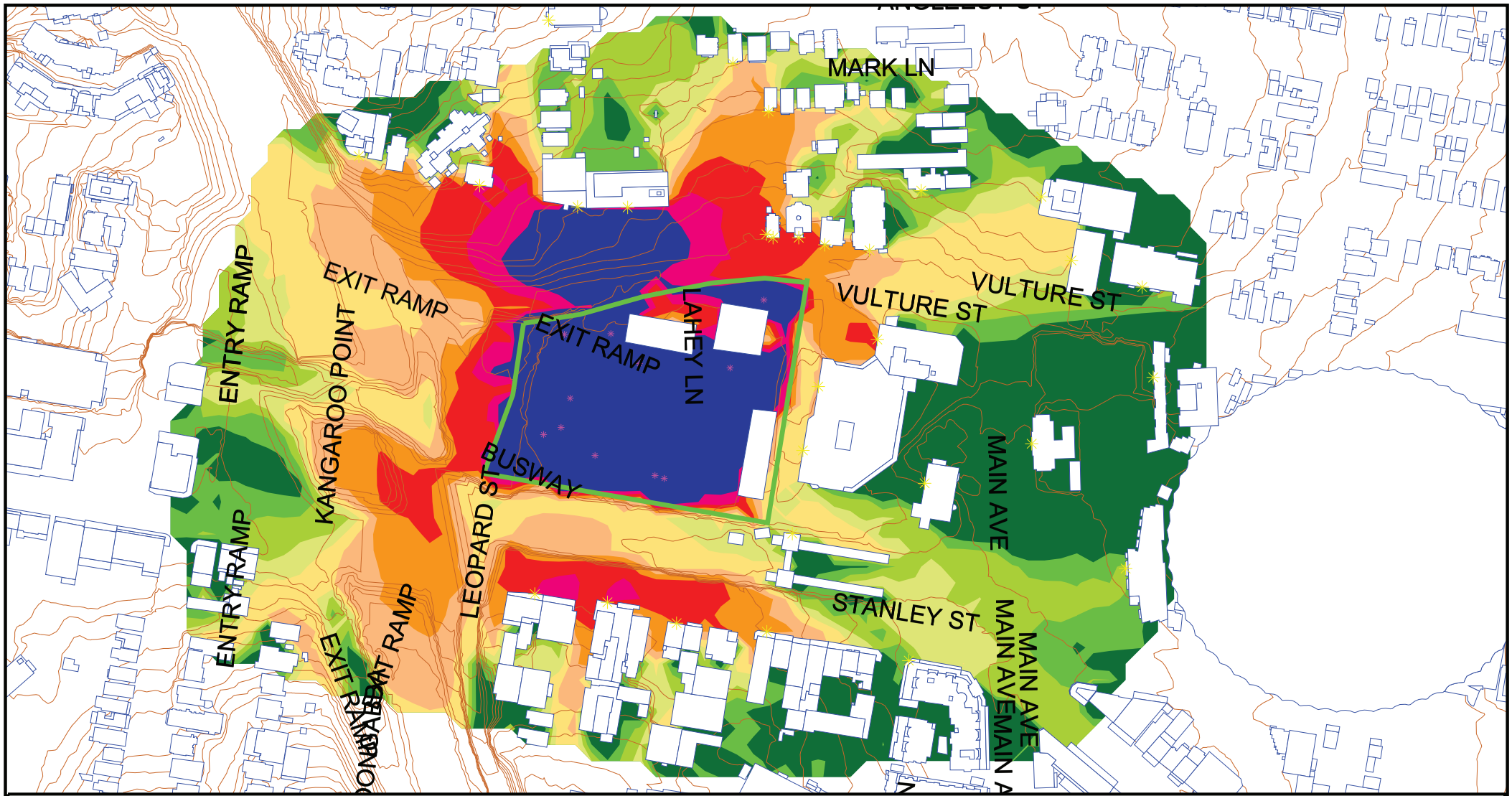
Woolloongabba Station - Scenario 2 Pile Installation
Predicted Daytime LA10 Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

N

Scale 1:3500

0 25 50 100 m

SLR
global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes

Contours are interpolated. Check calculations for exact levels.

Signs and symbols

- Building
- Elevation line
- Proposed Noise Barrier
- Point source
- Point receiver

**20-2524 Cross River Rail Project**

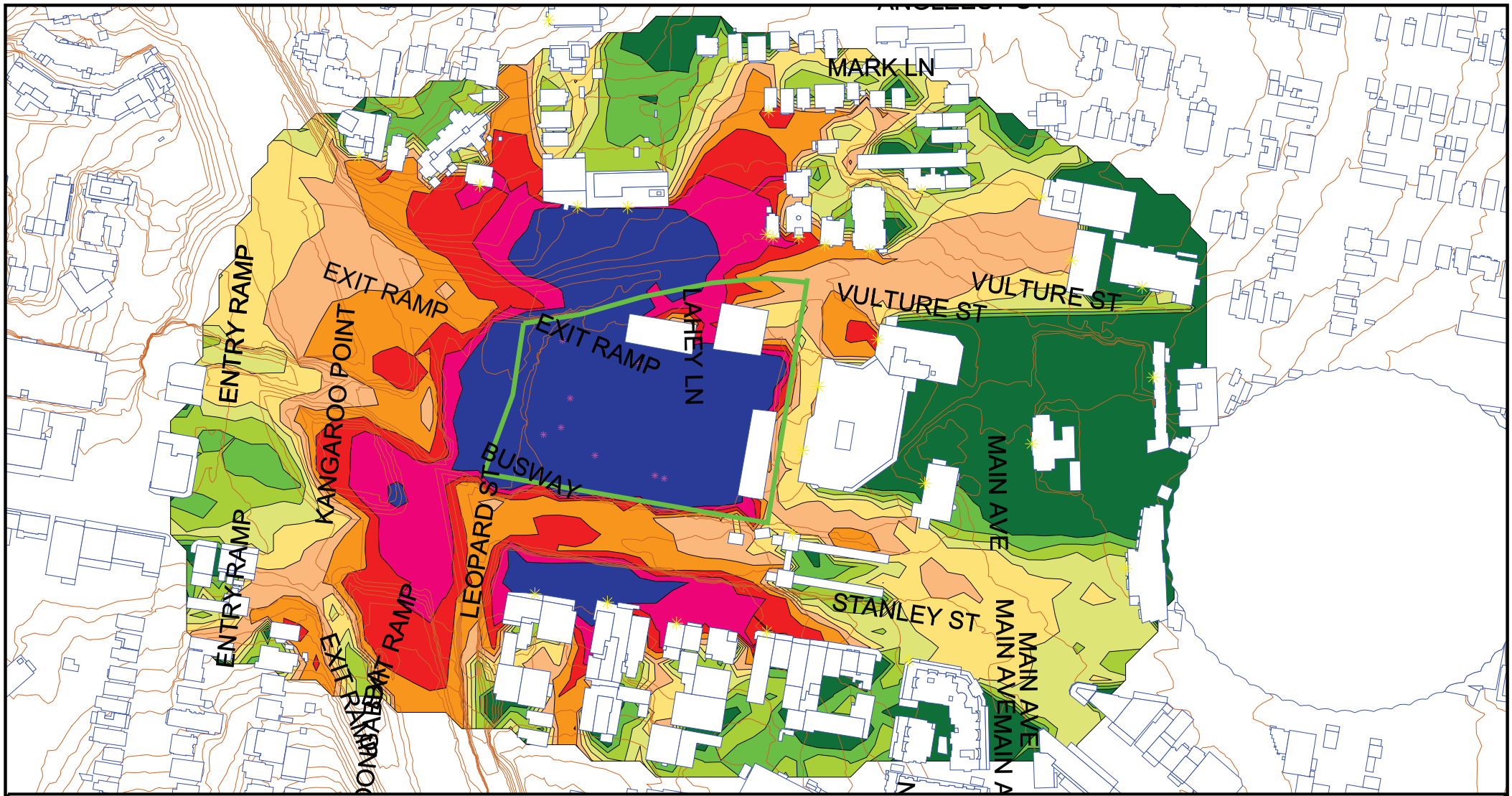
Woolloongabba Station - Scenario 3 Shaft Excavation
Predicted Daytime LA10 Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

N

Scale 1:3500

0 25 50 100 m

SLR
global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes

Contours are interpolated. Check calculations for exact levels.

Signs and symbols

- Building
- Elevation line
- Proposed Noise Barrier
- Point source
- Point receiver

**20-2524 Cross River Rail Project**

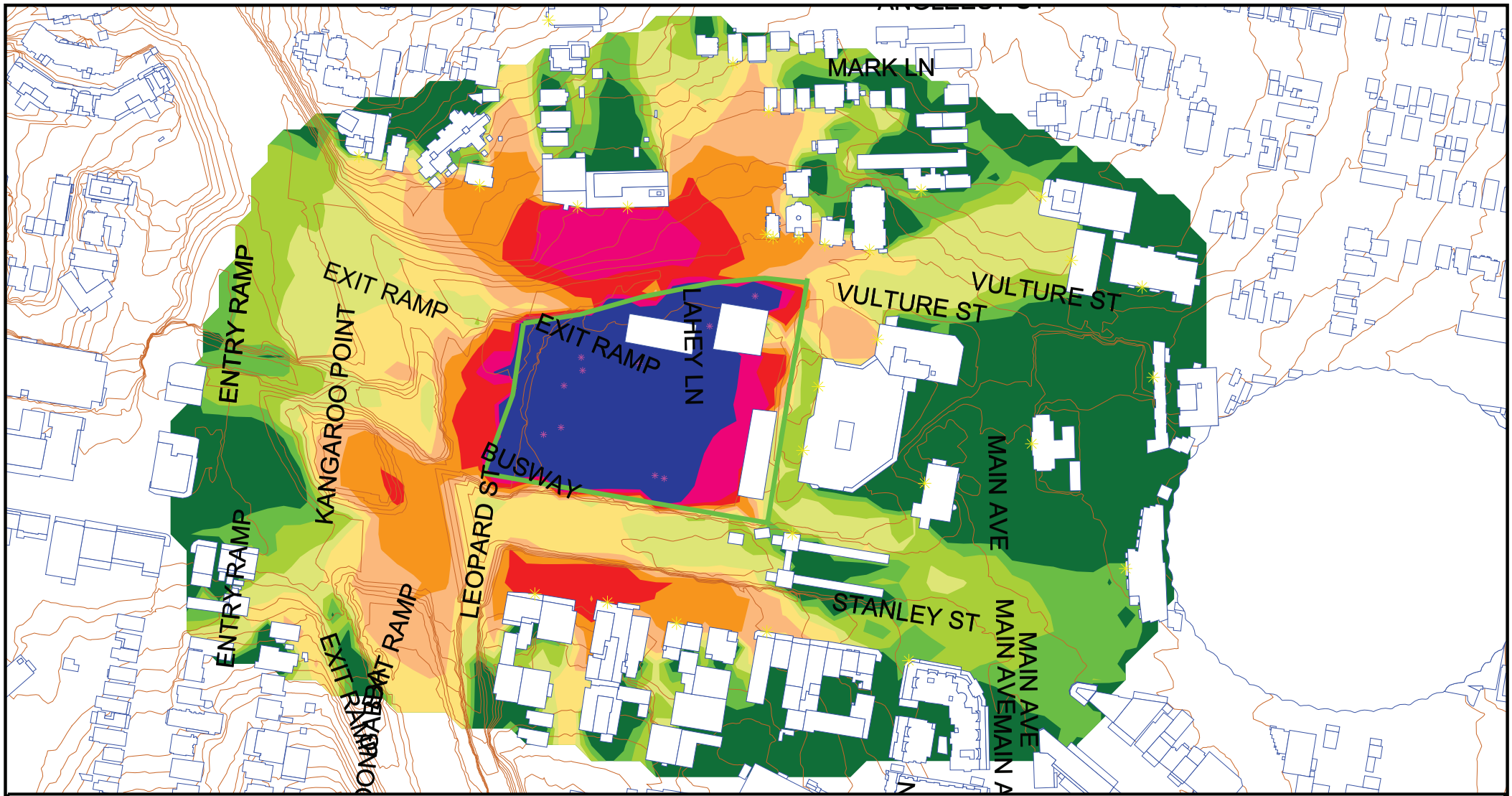
Woolloongabba Station - Scenario 3 Shaft Excavation
Predicted Night-time LAmax Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

N

Scale 1:3500

0 25 50 100 m

SLR
global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes

Contours are interpolated. Check calculations for exact levels.

Signs and symbols

- Building
- Elevation line
- Proposed Noise Barrier
- Point source
- Point receiver

**20-2524 Cross River Rail Project**

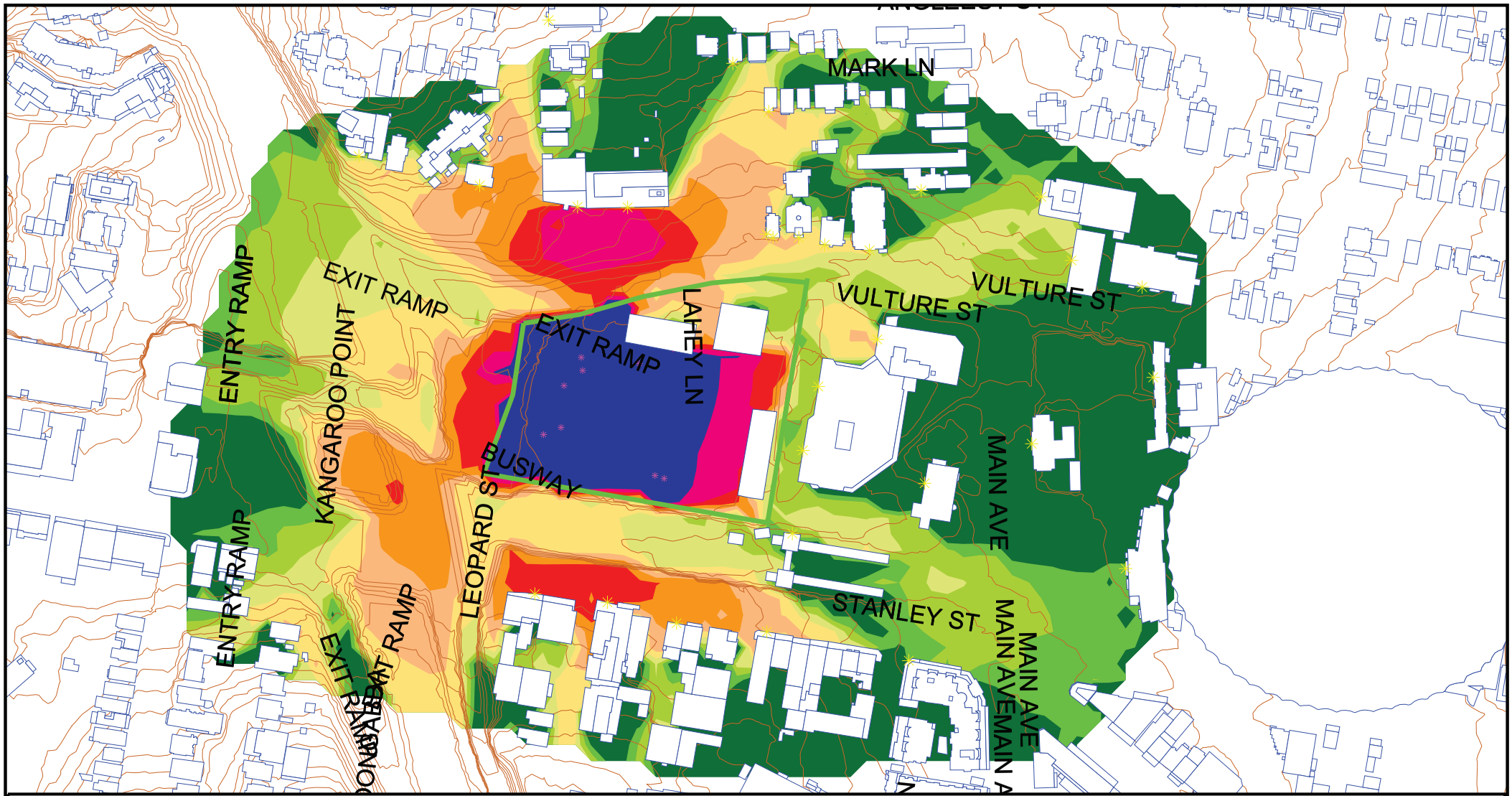
Woolloongabba Station - Scenario 4 TBM Support
Predicted Daytime LAeq Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

N

Scale 1:3500

0 25 50 100 m

SLR
global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes

Contours are interpolated. Check calculations for exact levels.

Signs and symbols

- Building
- Elevation line
- Proposed Noise Barrier
- Point source
- Point receiver

**20-2524 Cross River Rail Project**

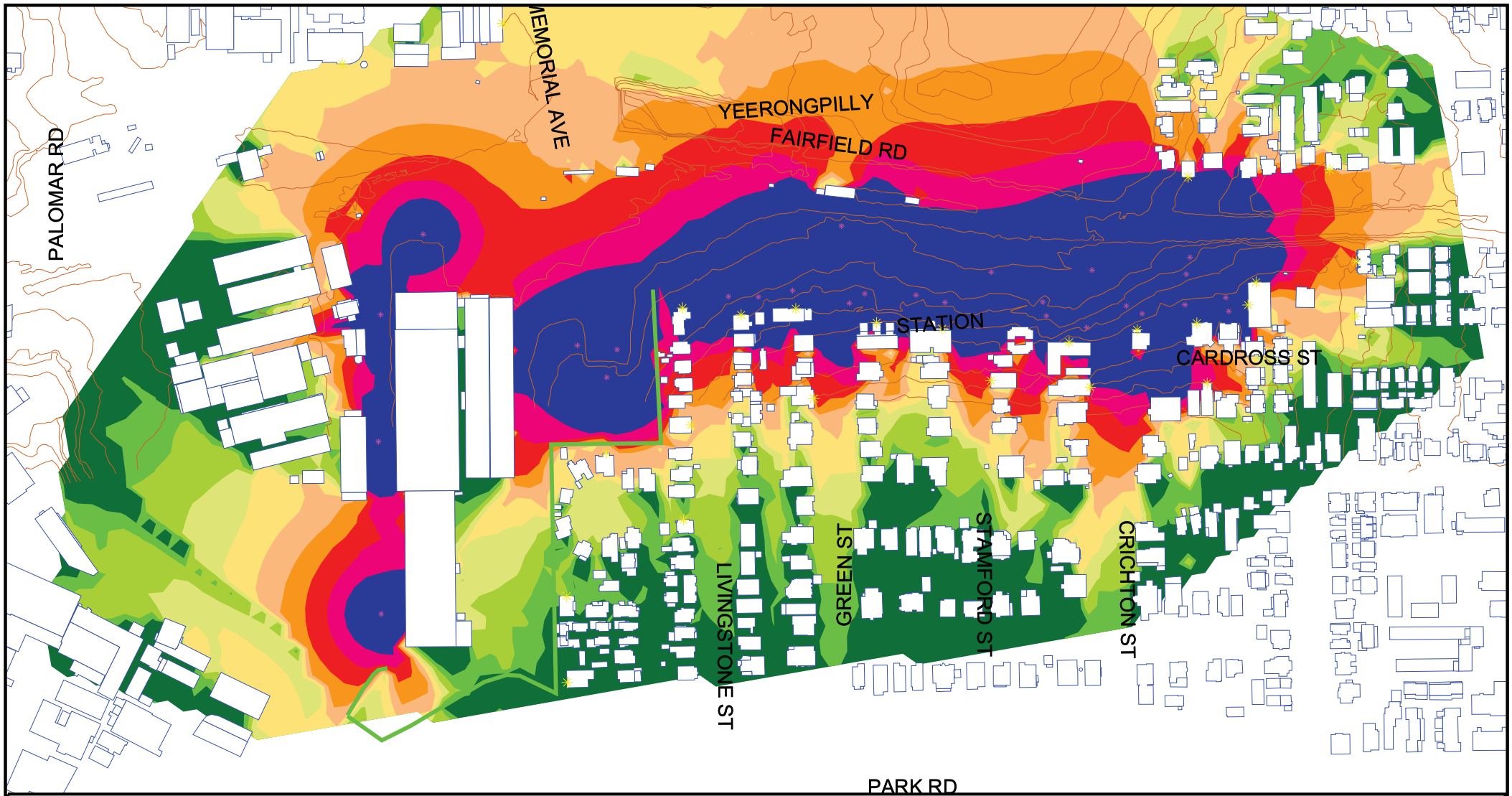
Woolloongabba Station - Scenario 4 TBM Support
Predicted Night-time LAeq Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

N

Scale 1:3500

0 25 50 100 m

SLR
global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes

Contours are interpolated. Check calculations for exact levels.

Signs and symbols

- Building
- Elevation line
- Proposed Noise Barrier
- Point source
- Point receiver

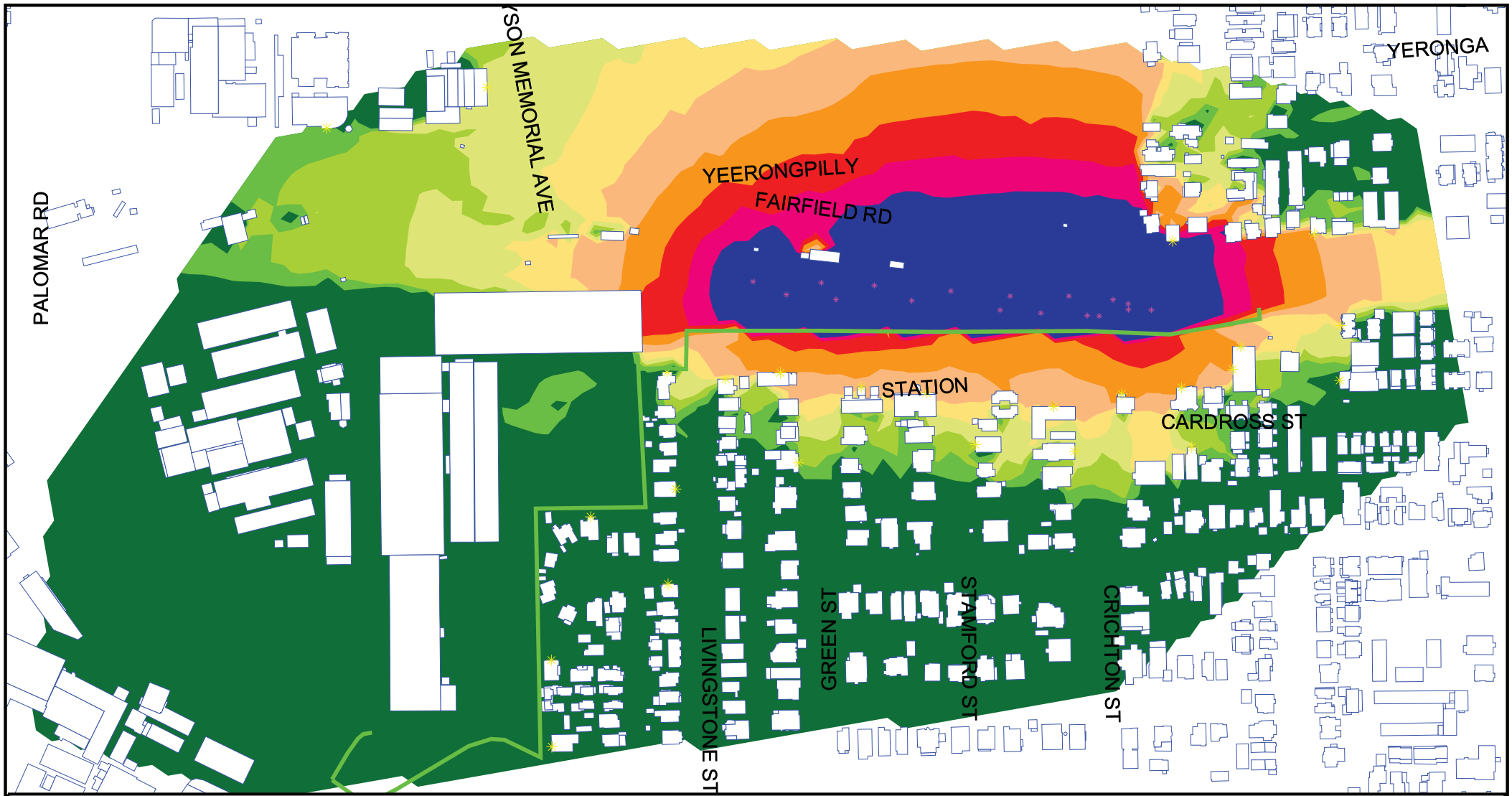
**20-2524 Cross River Rail Project**

Southern Portal - Scenario 1 Demolition
Predicted Daytime LA10 Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:4000

0 25 50 100 m

SLR global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes

Contours are interpolated. Check calculations for exact levels.

Signs and symbols

- Building
- Elevation line
- Proposed Noise Barrier
- Point source
- Point receiver

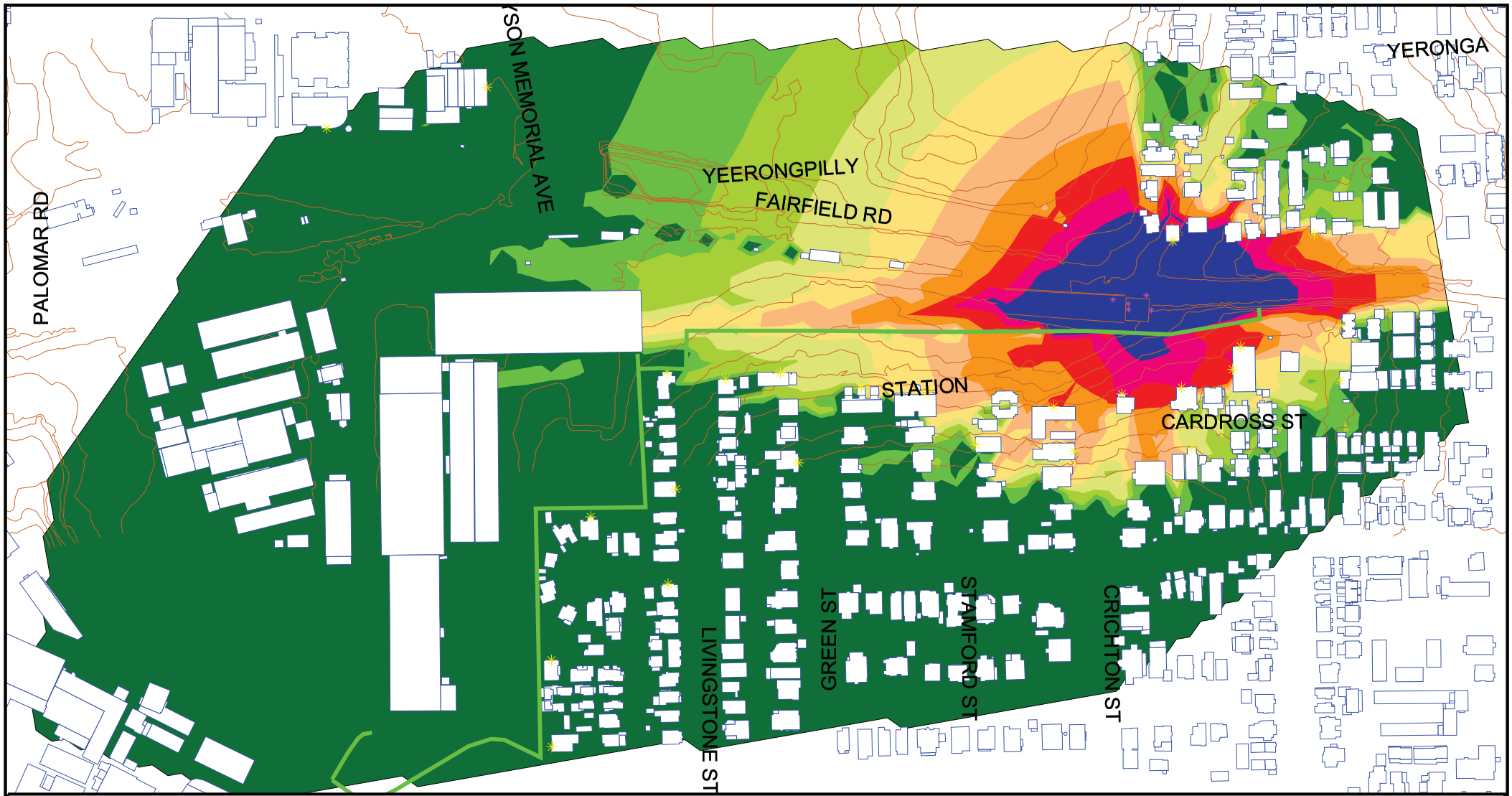
**20-2524 Cross River Rail Project**

Southern Portal - Scenario 2 Pile Installation
Predicted Daytime LA10 Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:4000

0 25 50 100 m

SLR global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes

Contours are interpolated. Check calculations for exact levels.

Signs and symbols

- Building
- Elevation line
- Proposed Noise Barrier
- Point source
- Point receiver

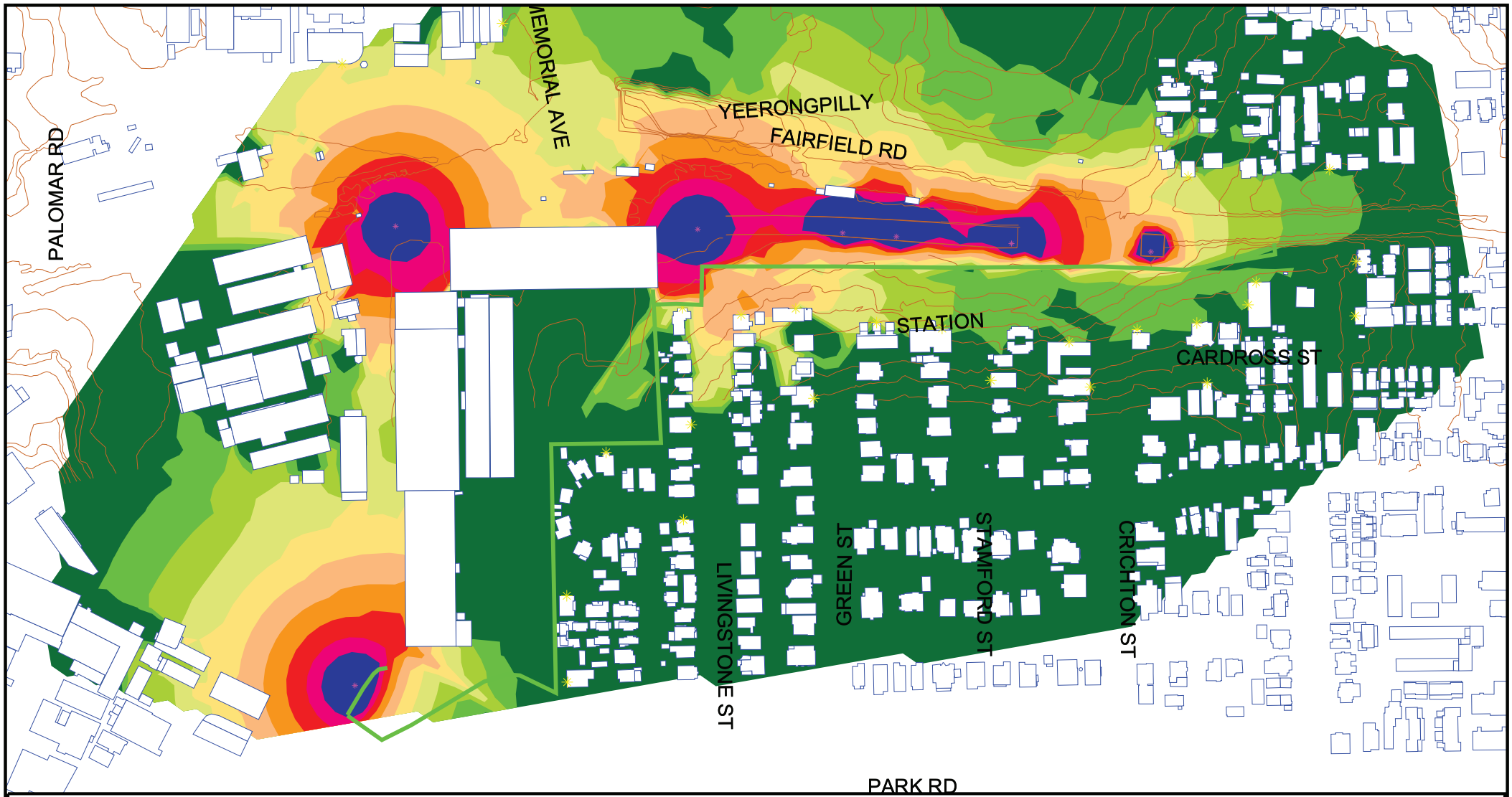
**20-2524 Cross River Rail Project**

Southern Portal - Scenario 2 Pile Installation
Predicted Night-time LAmax Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:4000

0 25 50 100 m

SLR global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes

Contours are interpolated. Check calculations for exact levels.

Signs and symbols
- Building
- Elevation line
- Proposed Noise Barrier
- Point source
- Point receiver

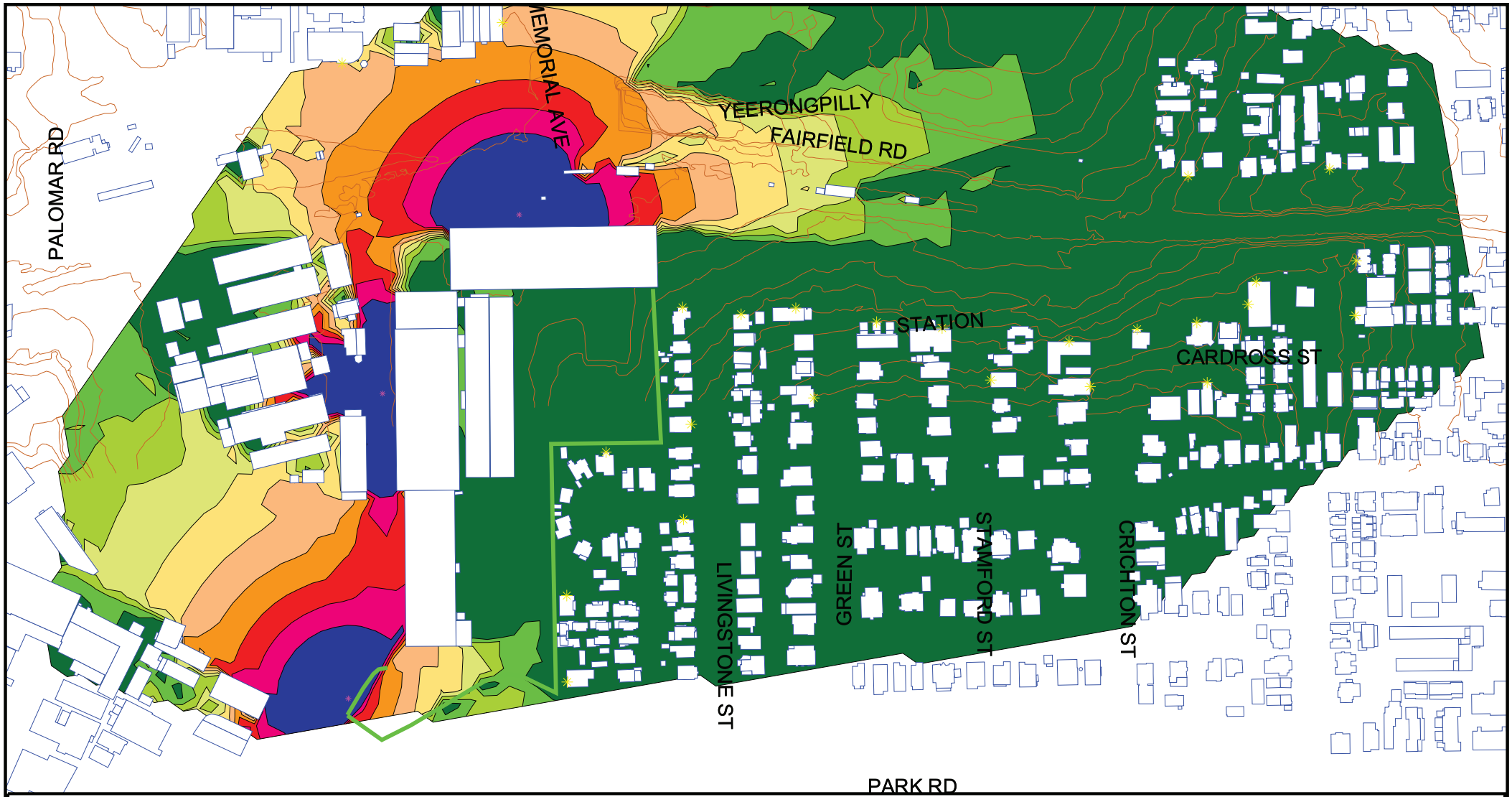
**20-2524 Cross River Rail Project**

Southern Portal - Scenario 3 TBM Support
Predicted Day & Night-time LAeq Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:4000

0 25 50 100 m

SLR global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes

Contours are interpolated. Check calculations for exact levels.

Signs and symbols

- Building
- Elevation line
- Proposed Noise Barrier
- Point source
- Point receiver

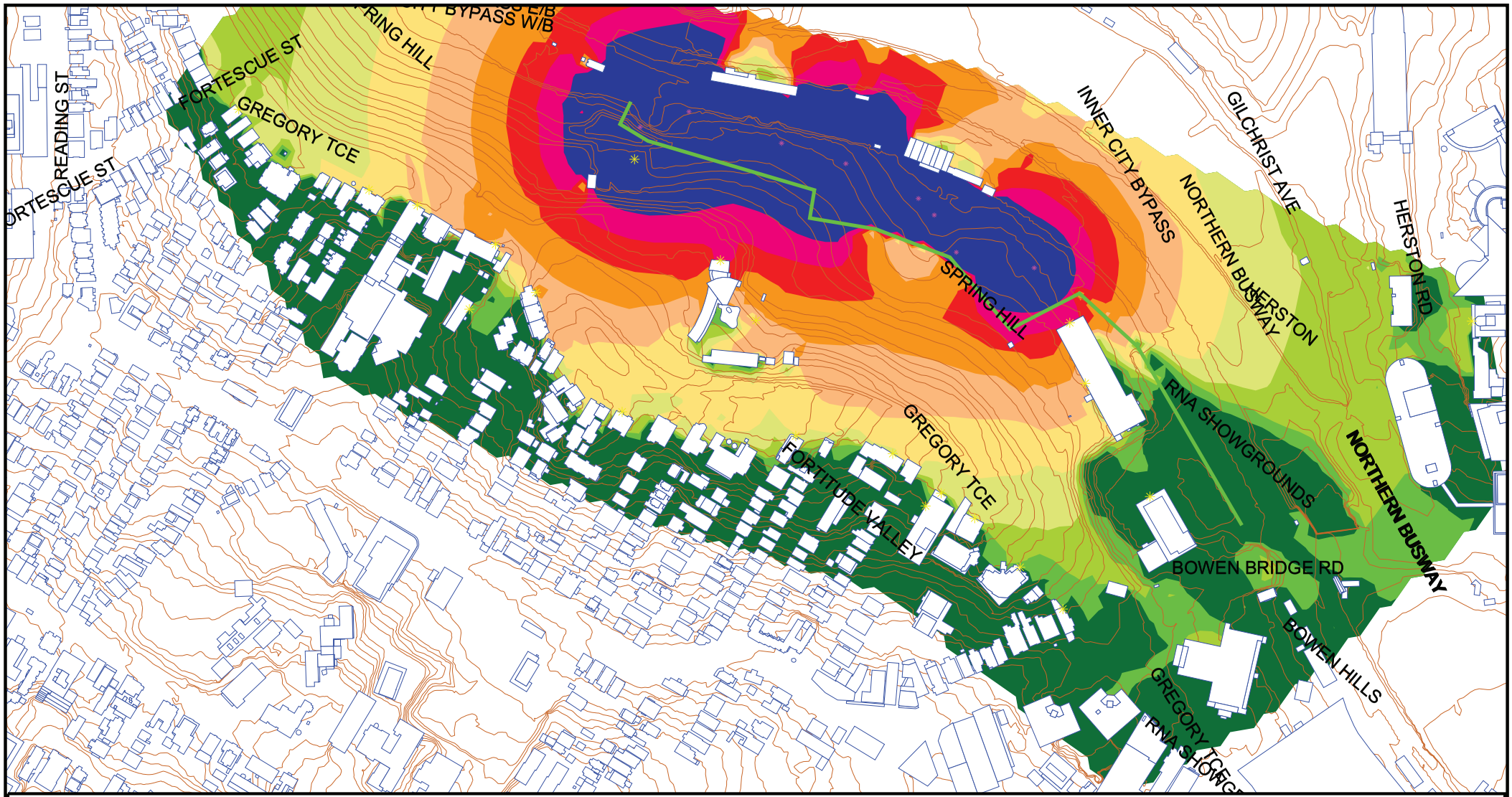
**20-2524 Cross River Rail Project**

Southern Portal - Scenario 4 Spoil Truck Movements
Predicted Night-time LAmax Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:4000

0 25 50 100 m

SLR global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes

Contours are interpolated. Check calculations for exact levels.

Signs and symbols

- Building
- Elevation line
- Proposed Noise Barrier
- Point source
- Point receiver

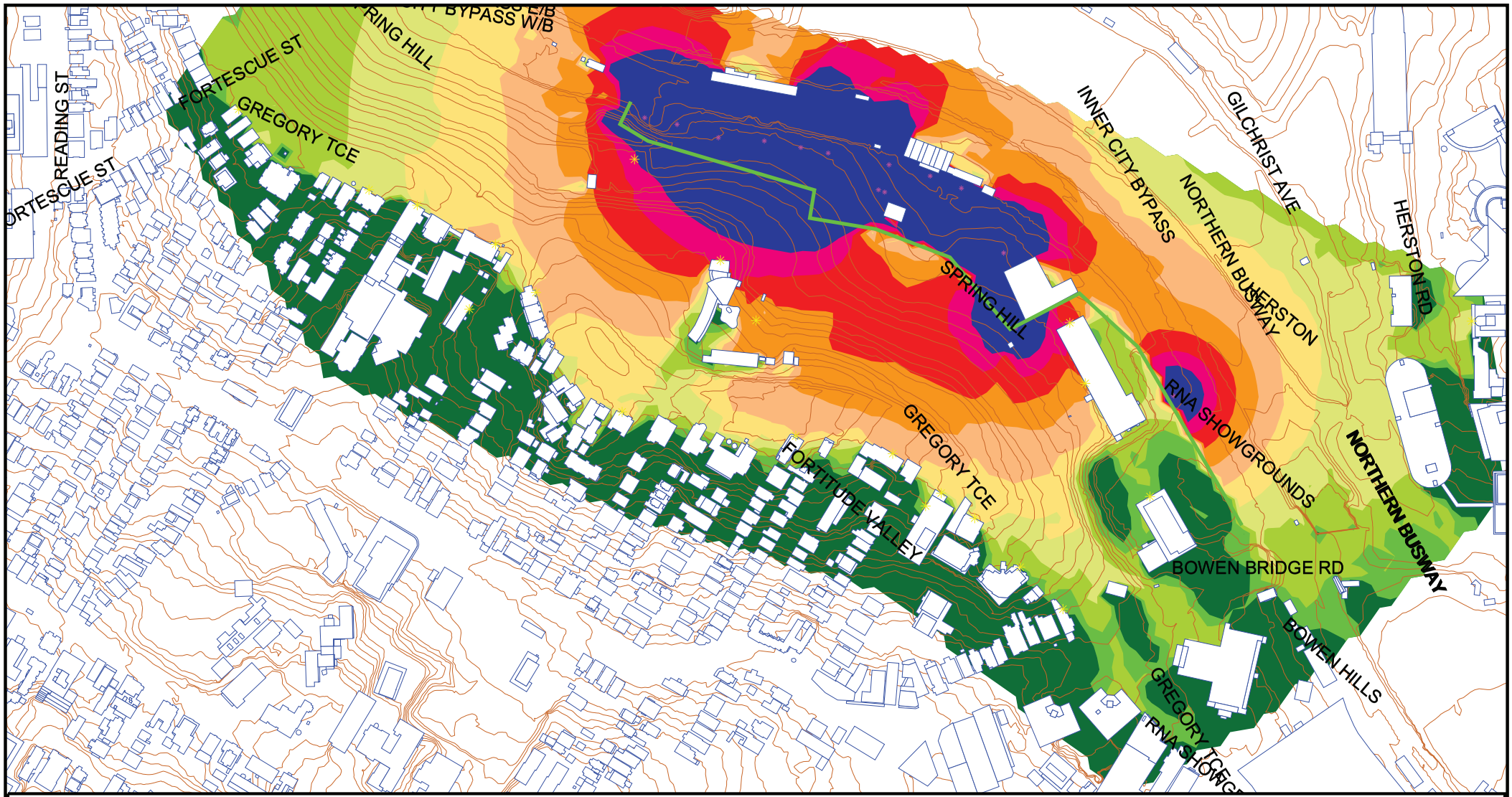
**20-2524 Cross River Rail Project**

Northern Portal - Scenario 1 Site Establishment
Predicted Daytime LA10 Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:4500

0 25 50 100 m

SLR
global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes

Contours are interpolated. Check calculations for exact levels.

Signs and symbols

- Building
- Elevation line
- Proposed Noise Barrier
- Point source
- Point receiver

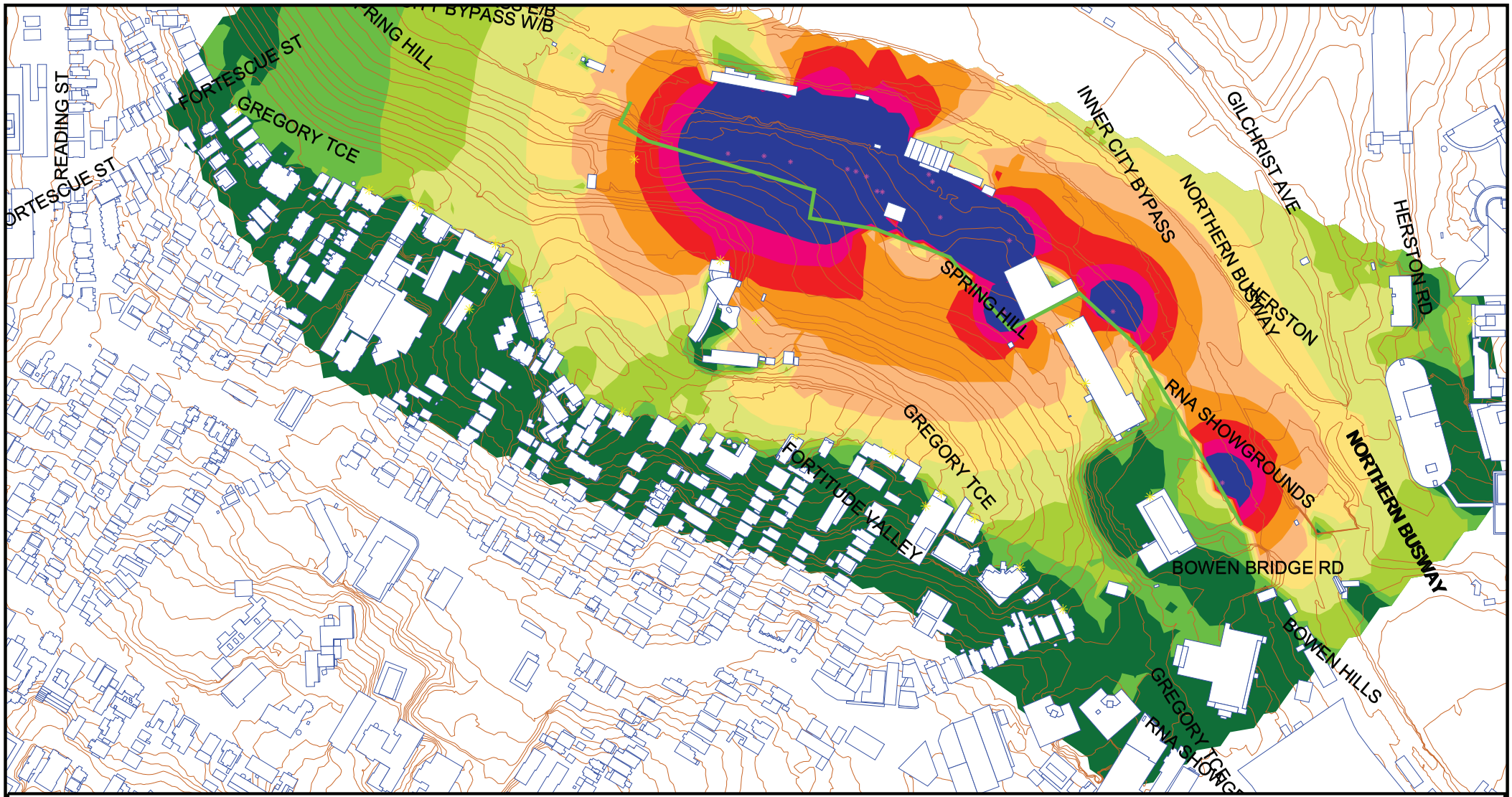
# 20-2524 Cross River Rail Project

Northern Portal - Scenario 2 Trough Excavation
Predicted Daytime LA10 Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:4500

0 25 50 100 m

SLR global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes

Contours are interpolated. Check calculations for exact levels.

Signs and symbols

- Building
- Elevation line
- Proposed Noise Barrier
- Point source
- Point receiver

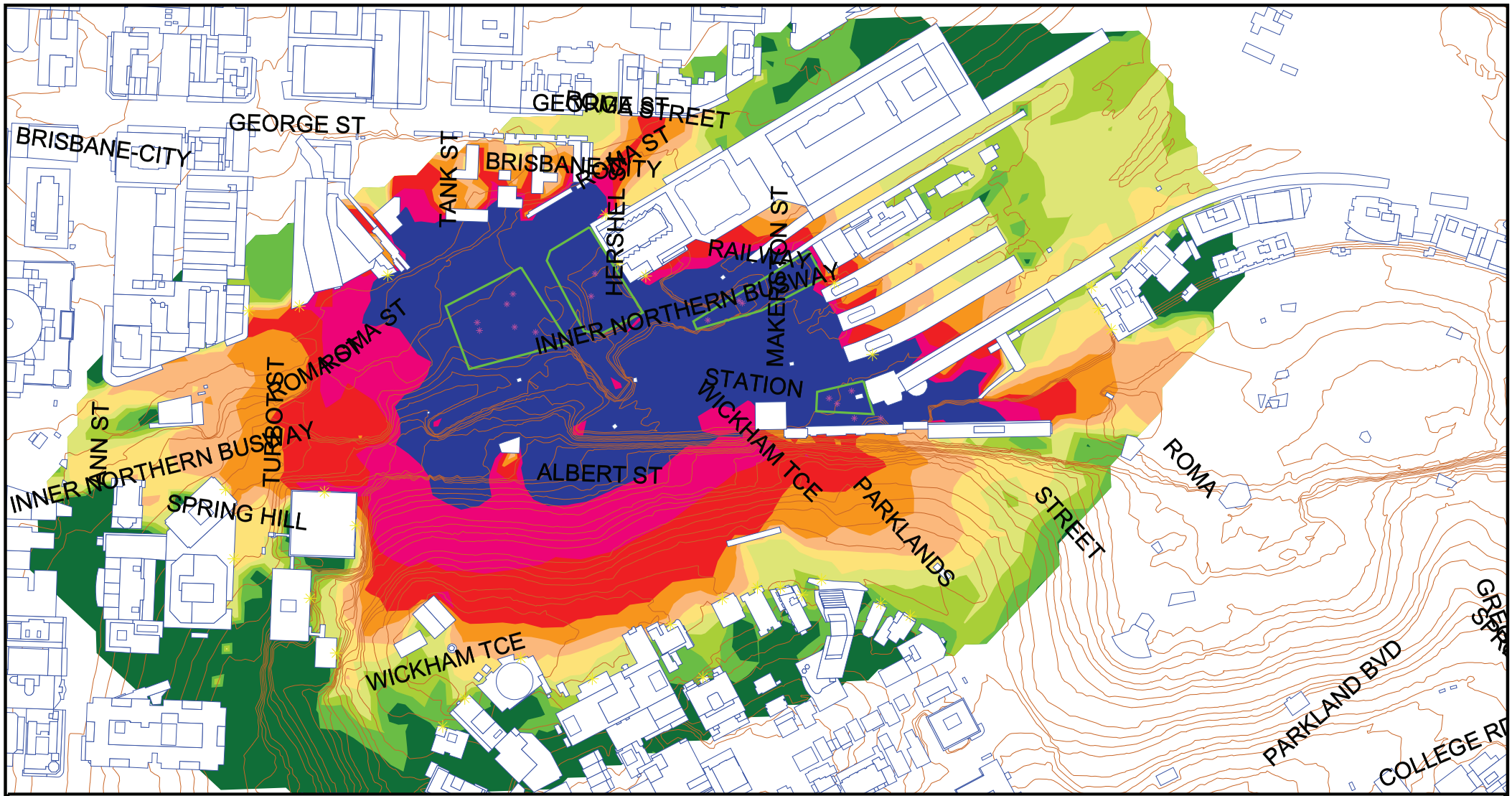
**20-2524 Cross River Rail Project**

Northern Portal - Scenario 3 TBM Disassembly
Predicted Daytime LA10 Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:4500

0 25 50 100 m

SLR
global environmental solutions




Noise Level dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes:

Contours are interpolated. Check facade calculations for exact levels.

Signs and symbols

- Building
- Proposed Noise Barrier
- Elevation line
- Point source
- Point receiver

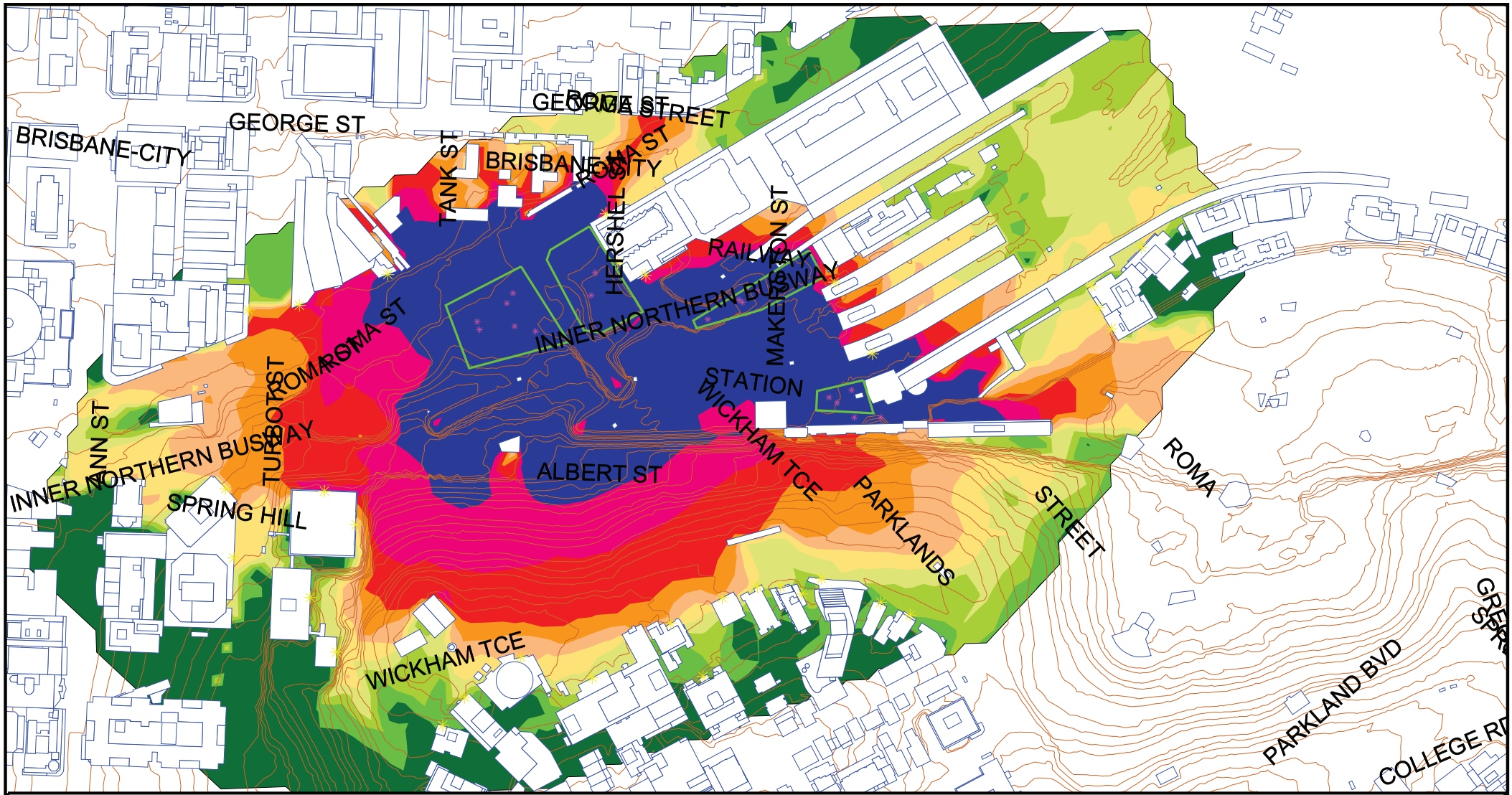
**20-2524 Cross River Rail Project**

Roma Street Station - Scenario 1 Site Establishment
Predicted Daytime LA10 Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:2500

0 12.5 25 50 m

SLR global environmental solutions




Noise Level dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes

Contours are interpolated. Check facade calculations for exact levels.

Signs and symbols

- Building
- Proposed Noise Barrier
- Elevation line
- Point source
- Point receiver

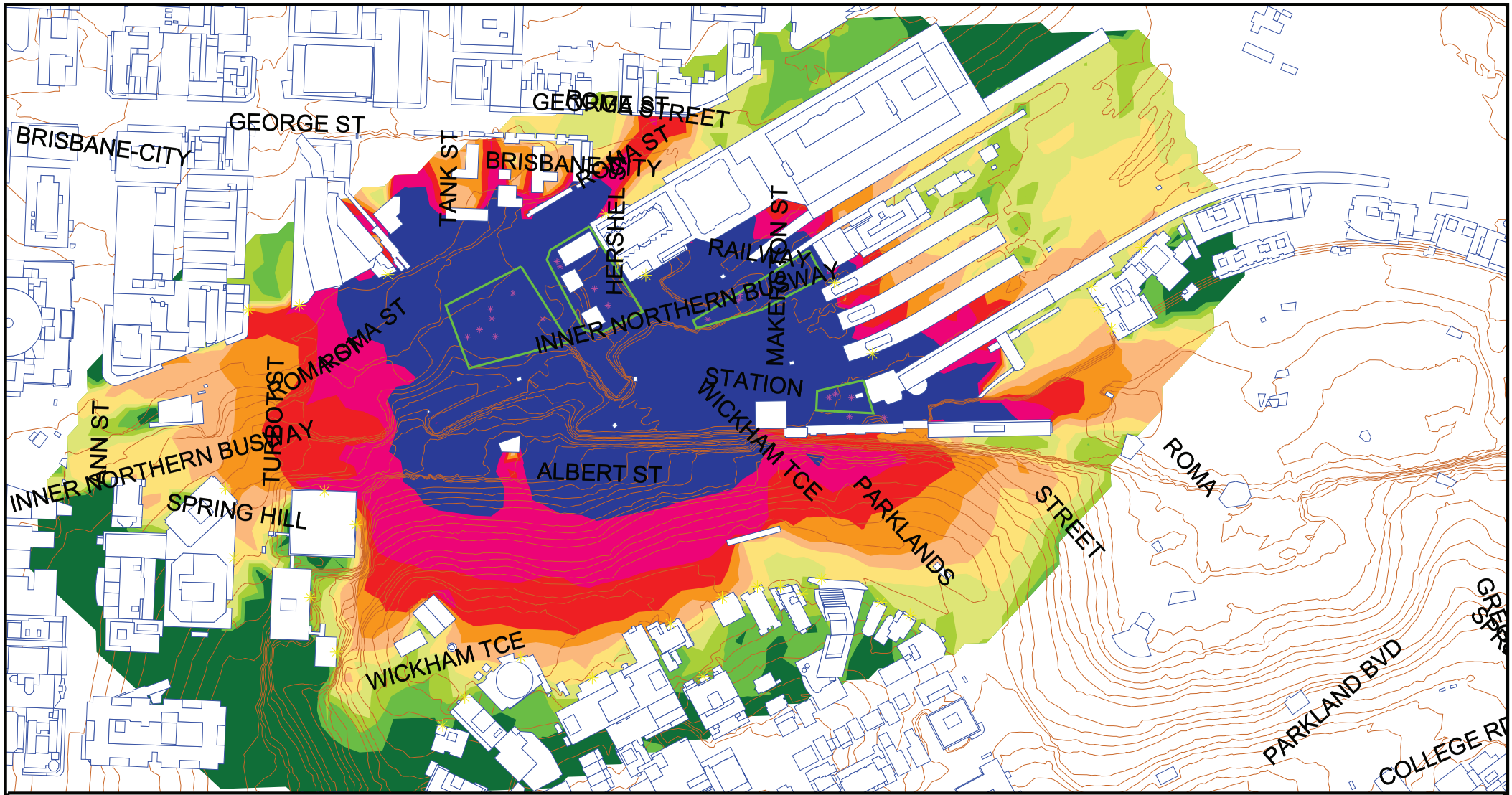
**20-2524 Cross River Rail Project**

Roma Street Station - Scenario 1 Site Establishment
Predicted Night-time LAmax Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:2500

0 12.5 25 50 m

SLR global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes:
Noise levels are in the free-field

Contours are interpolated. Check facade calculations for exact levels.

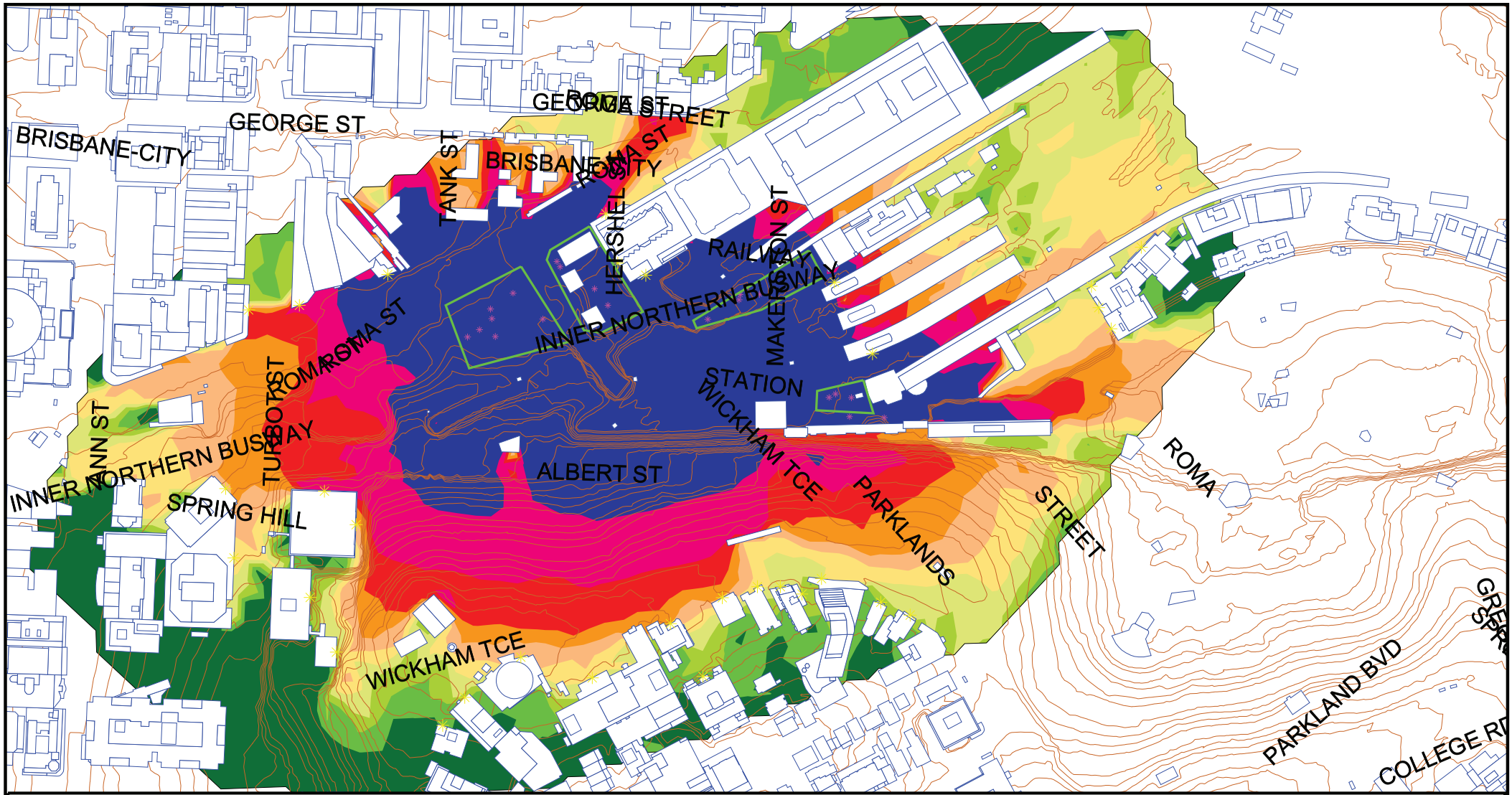
Signs and symbols
- Building
- Proposed Noise Barrier
- Elevation line
- Point source
- Point receiver

**20-2524 Cross River Rail Project**

Roma Street Station - Scenario 2 Piling
Predicted Daytime LA10 Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:2500
0 12.5 25 50 m

SLR
global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes:

Contours are interpolated. Check facade calculations for exact levels.

Signs and symbols

- Building
- Proposed Noise Barrier
- Elevation line
- Point source
- Point receiver

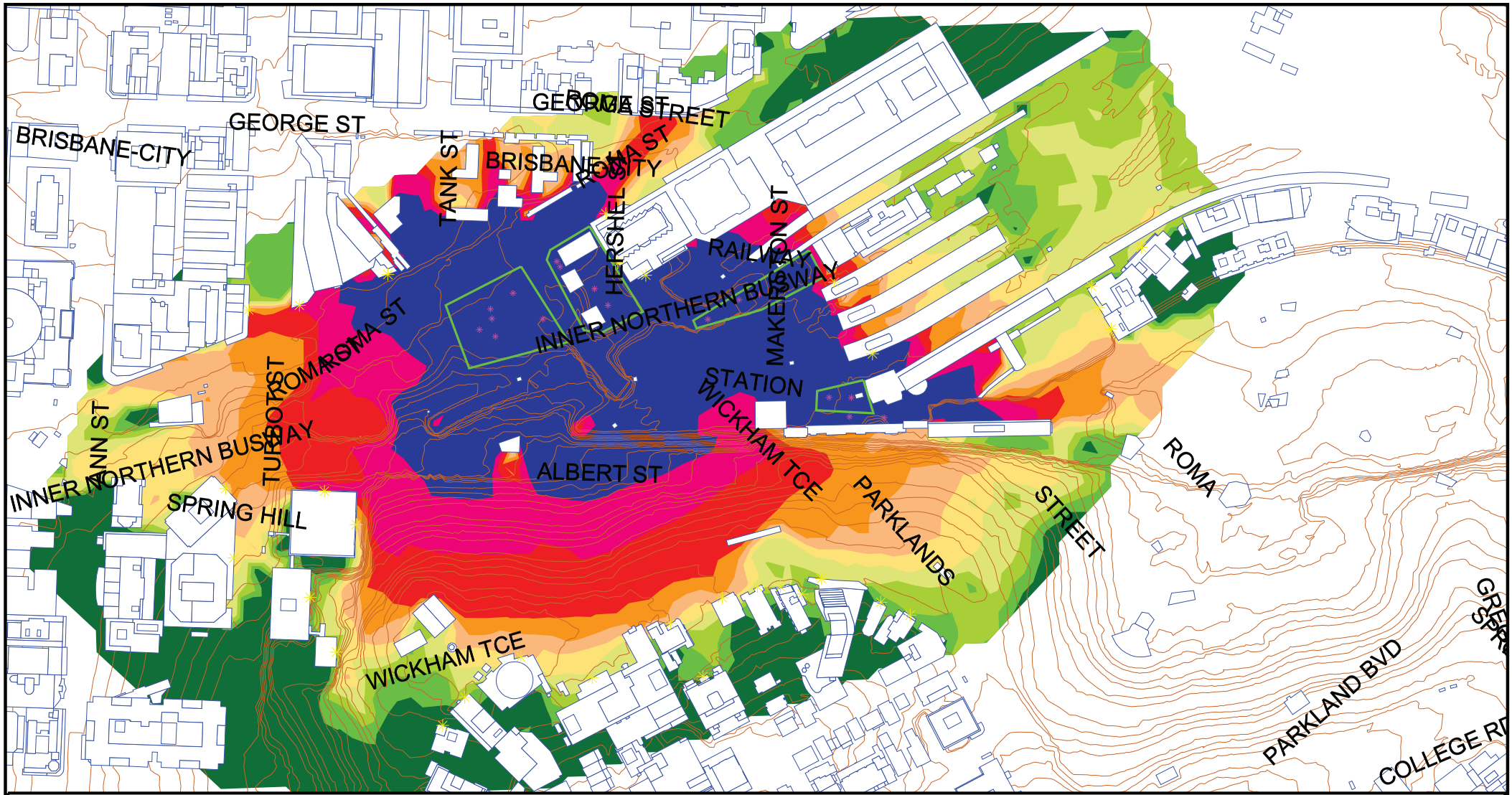
**20-2524 Cross River Rail Project**

Roma Street Station - Scenario 2 Piling
Predicted Night-time LAmax Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:2500

0 12.5 25 50 m

SLR
global environmental solutions




Noise Level dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes:

Contours are interpolated. Check facade calculations for exact levels.

Signs and symbols

- Building
- Proposed Noise Barrier
- Elevation line
- Point source
- Point receiver

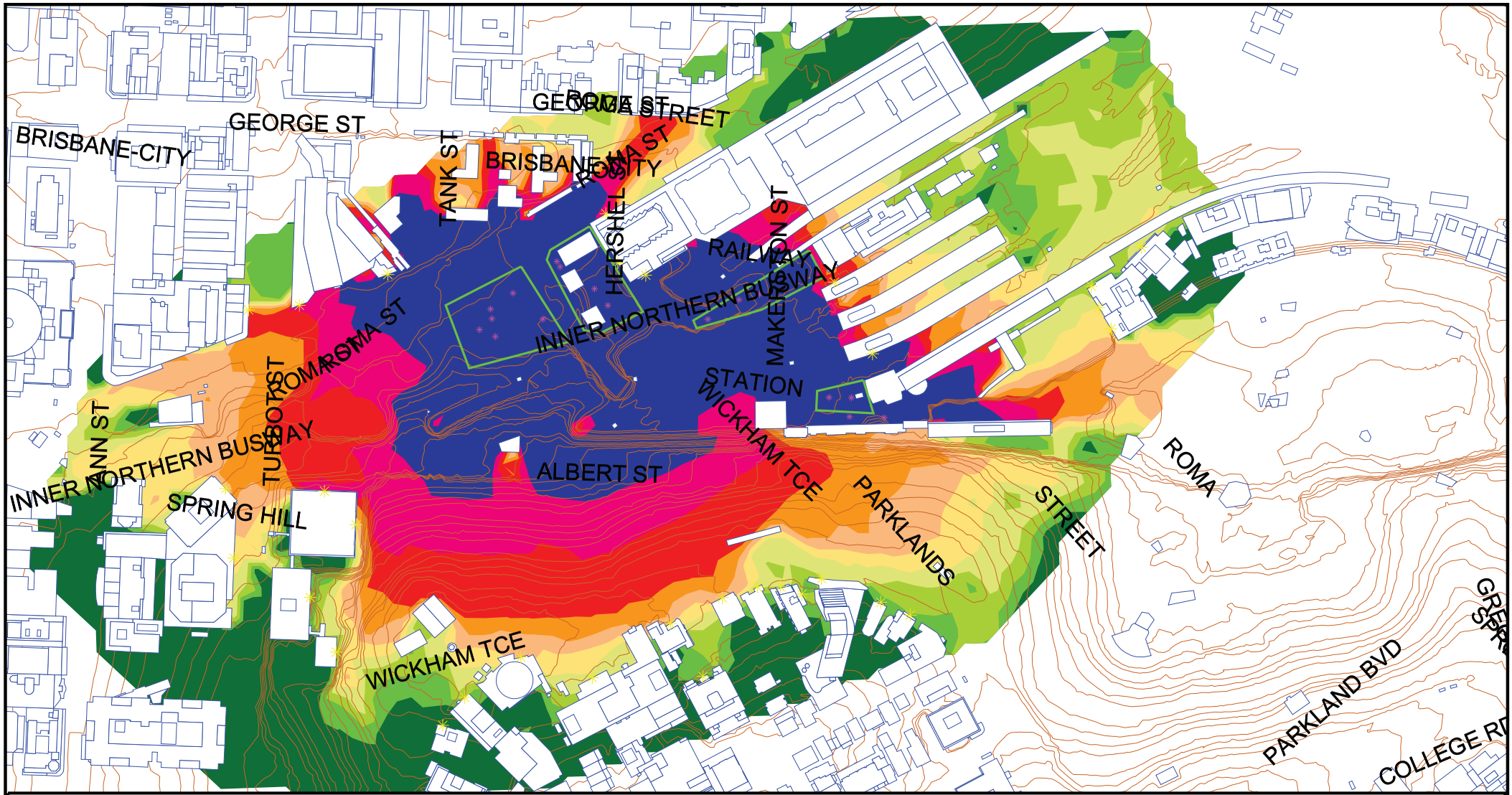
**20-2524 Cross River Rail Project**

Roma Street Station - Scenario 3 Excavation
Predicted Daytime LA10 Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:2500

0 12.5 25 50 m

SLR global environmental solutions




Noise Level dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes:

Contours are interpolated. Check facade calculations for exact levels.

Signs and symbols

- Building
- Proposed Noise Barrier
- Elevation line
- Point source
- Point receiver

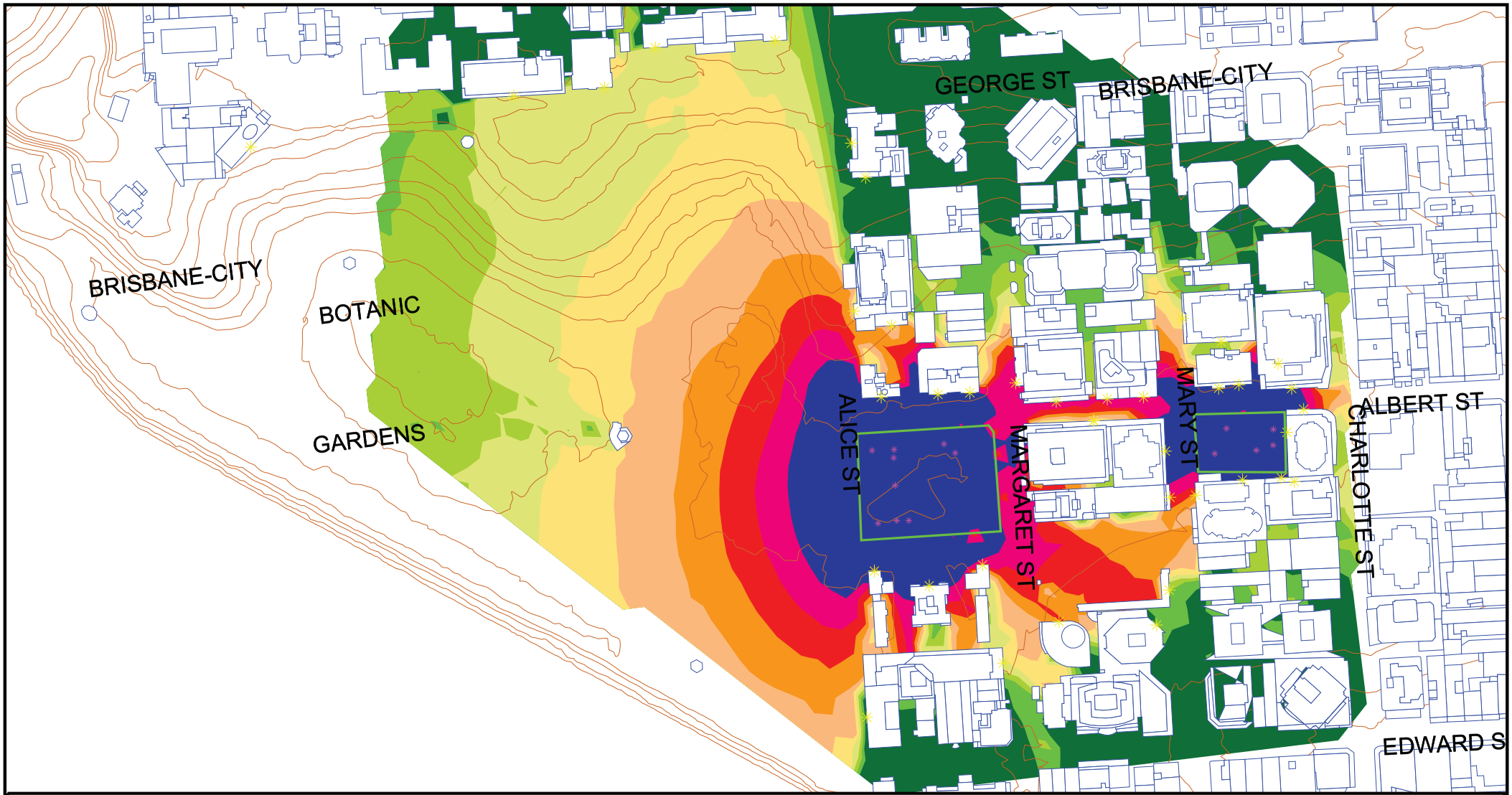
**20-2524 Cross River Rail Project**

Roma Street Station - Scenario 3 Excavation
Predicted Night-time LAmax Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:2500

0 12.5 25 50 m

SLR global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes:
Noise levels are in the free-field

Contours are interpolated. Check facade calculations for exact levels.

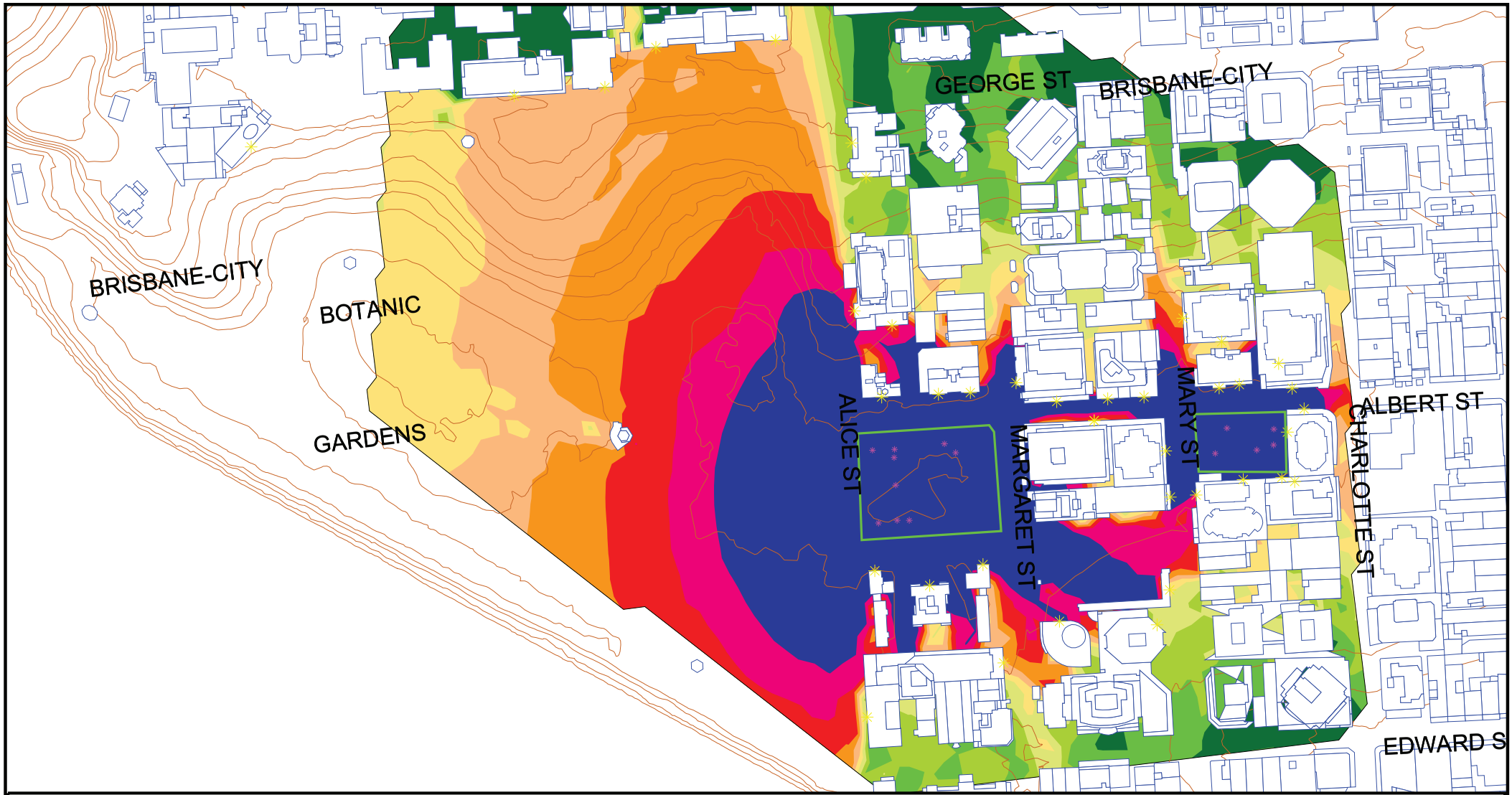
Signs and symbols
- Building
- Proposed Noise Barrier
- Elevation line
- Point source
- Point receiver

**20-2524 Cross River Rail Project**

Albert Street Station - Scenario 1 Demolition
Predicted Daytime LA10 Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:2500
0 12.5 25 50 m

SLR
global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes:

Contours are interpolated. Check facade calculations for exact levels.

Signs and symbols

- Building
- Proposed Noise Barrier
- Elevation line
- Point source
- Point receiver

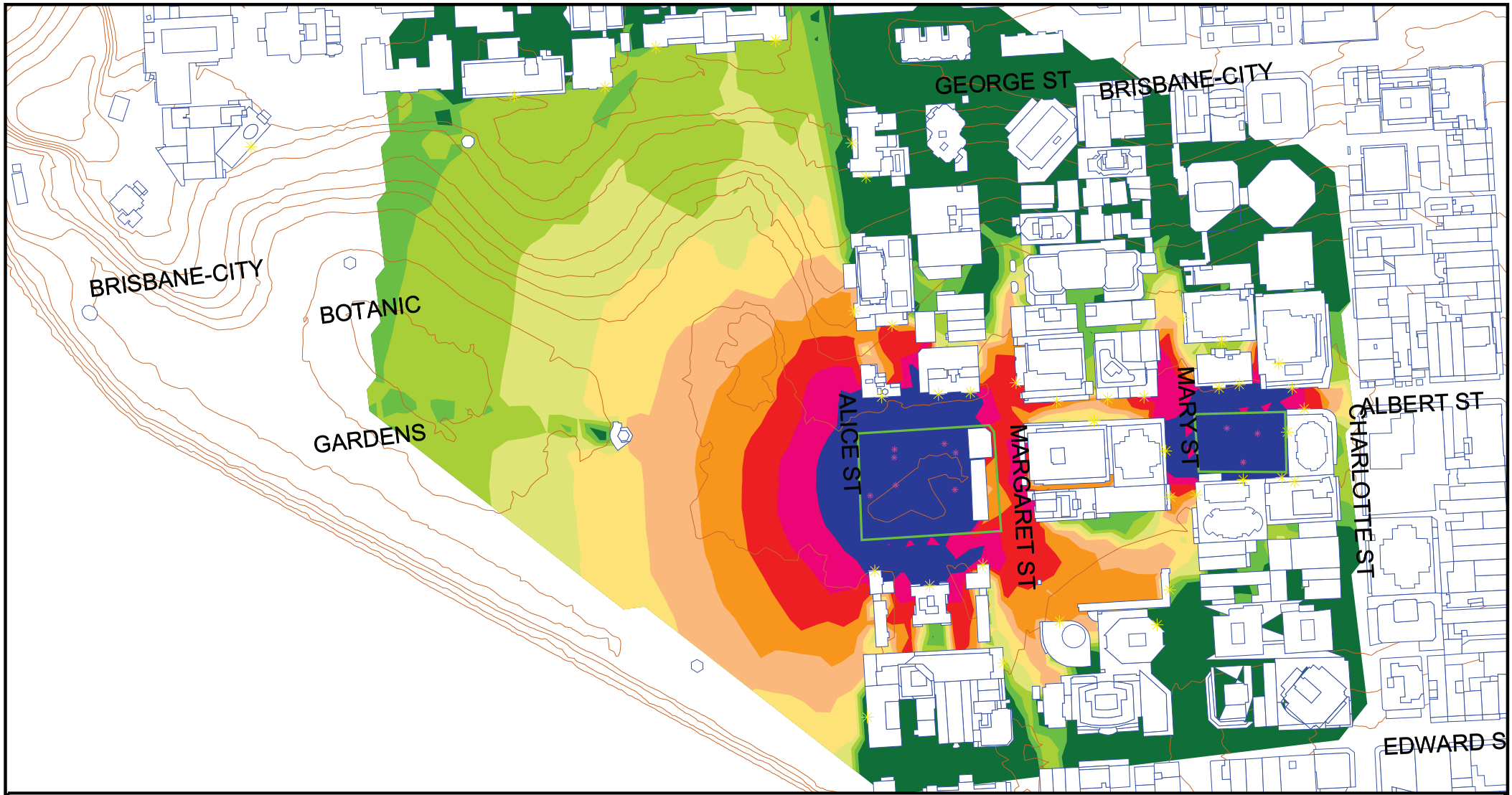
**20-2524 Cross River Rail Project**

Albert Street Station - Scenario 1 Demolition
Predicted Night-time LAmax Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:2500

0 12.5 25 50 m

SLR
global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes:

Contours are interpolated. Check facade calculations for exact levels.

Signs and symbols

- Building
- Proposed Noise Barrier
- Elevation line
- Point source
- Point receiver

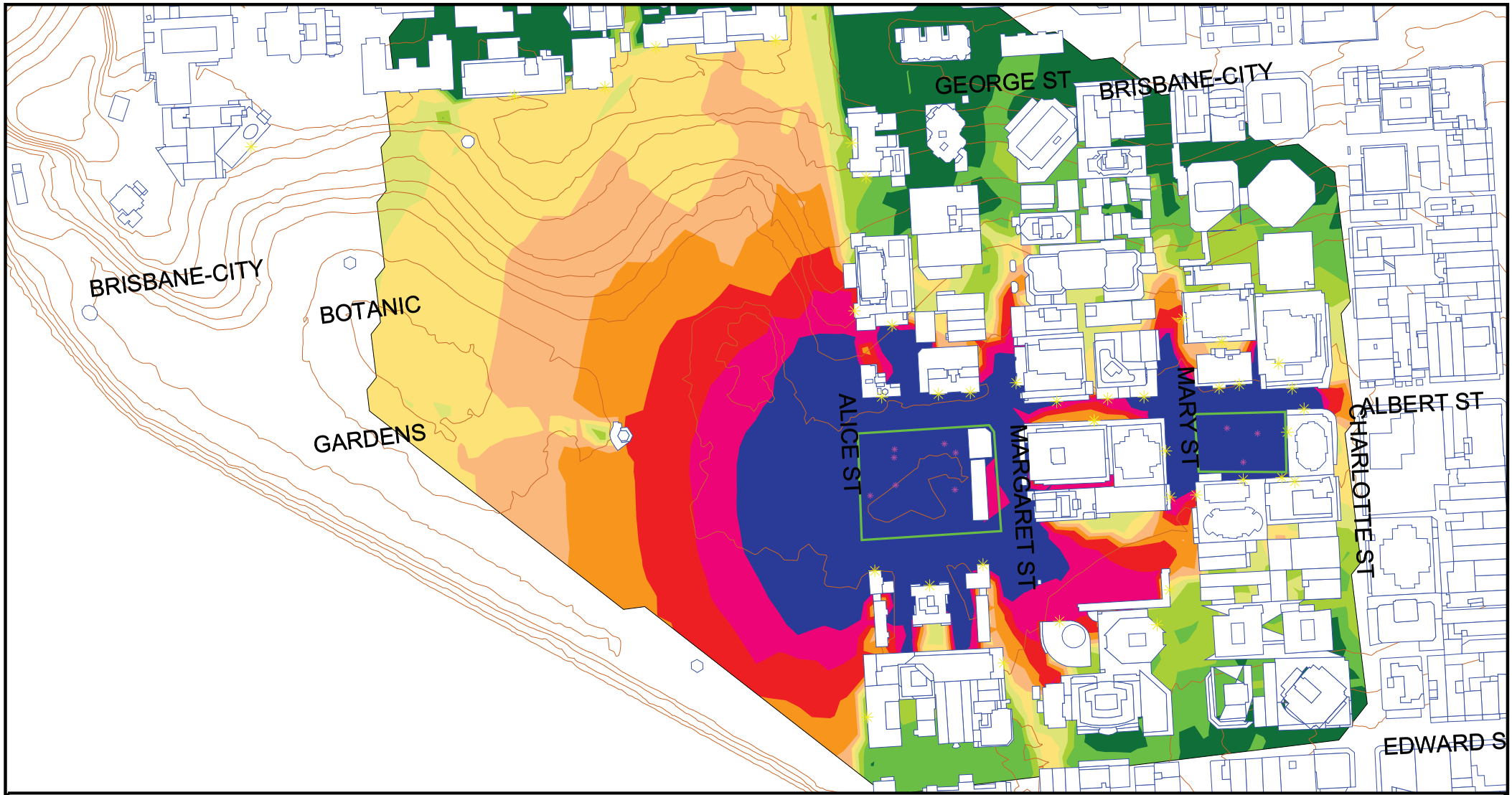
**20-2524 Cross River Rail Project**

Albert Street Station - Scenario 2 Piling
Predicted Daytime LA10 Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:2500

0 12.5 25 50 m

SLR
global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes:

Contours are interpolated. Check facade calculations for exact levels.

Signs and symbols

- Building
- Proposed Noise Barrier
- Elevation line
- Point source
- Point receiver

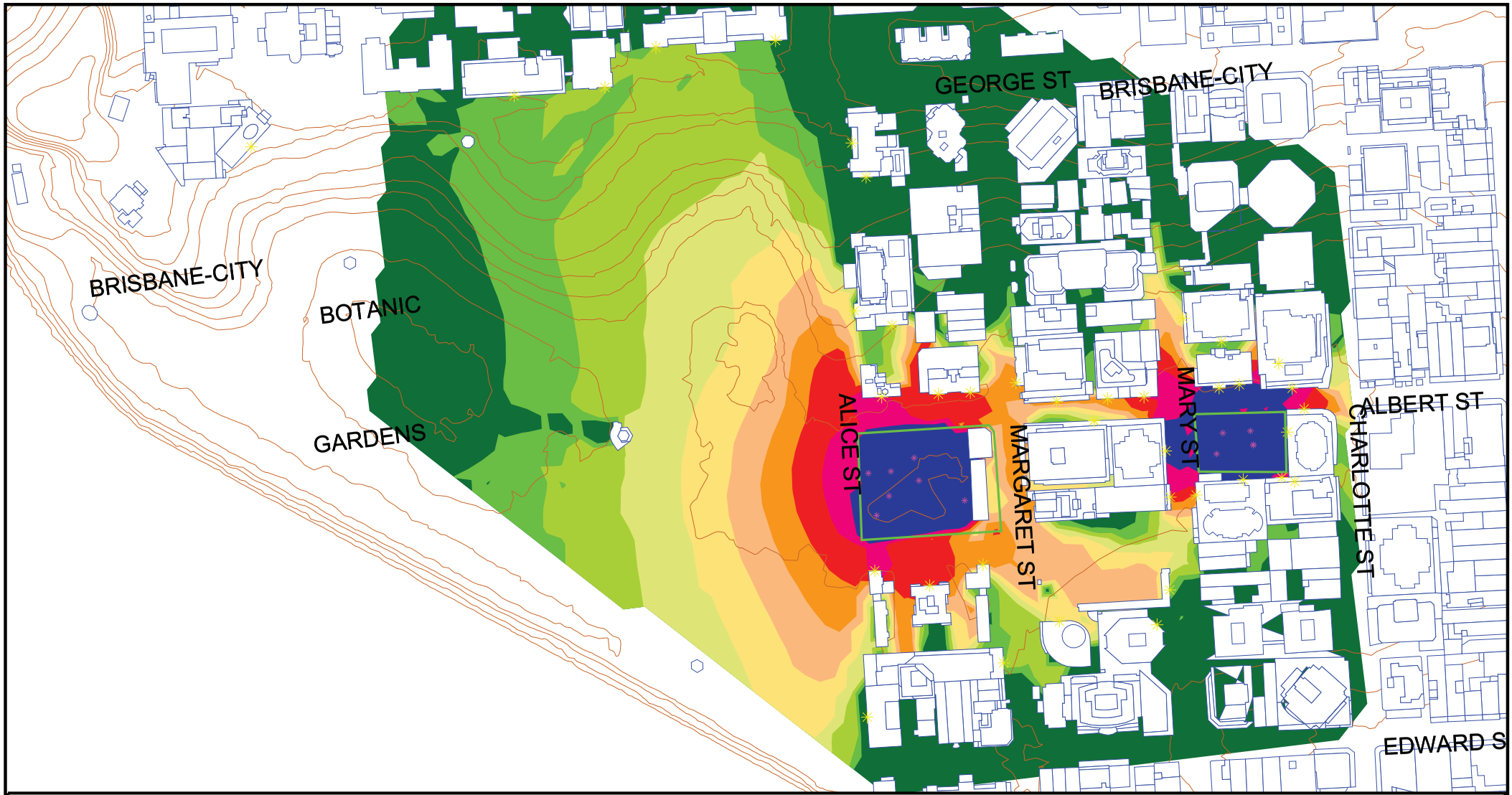
**20-2524 Cross River Rail Project**

Albert Street Station - Scenario 2 Piling
Predicted Night-time LAmax Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:2500

0 12.5 25 50 m

SLR
global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes:

Contours are interpolated. Check calculations for exact levels.

Signs and symbols

- Building
- Proposed Noise Barrier
- Elevation line
- Point source
- Point receiver

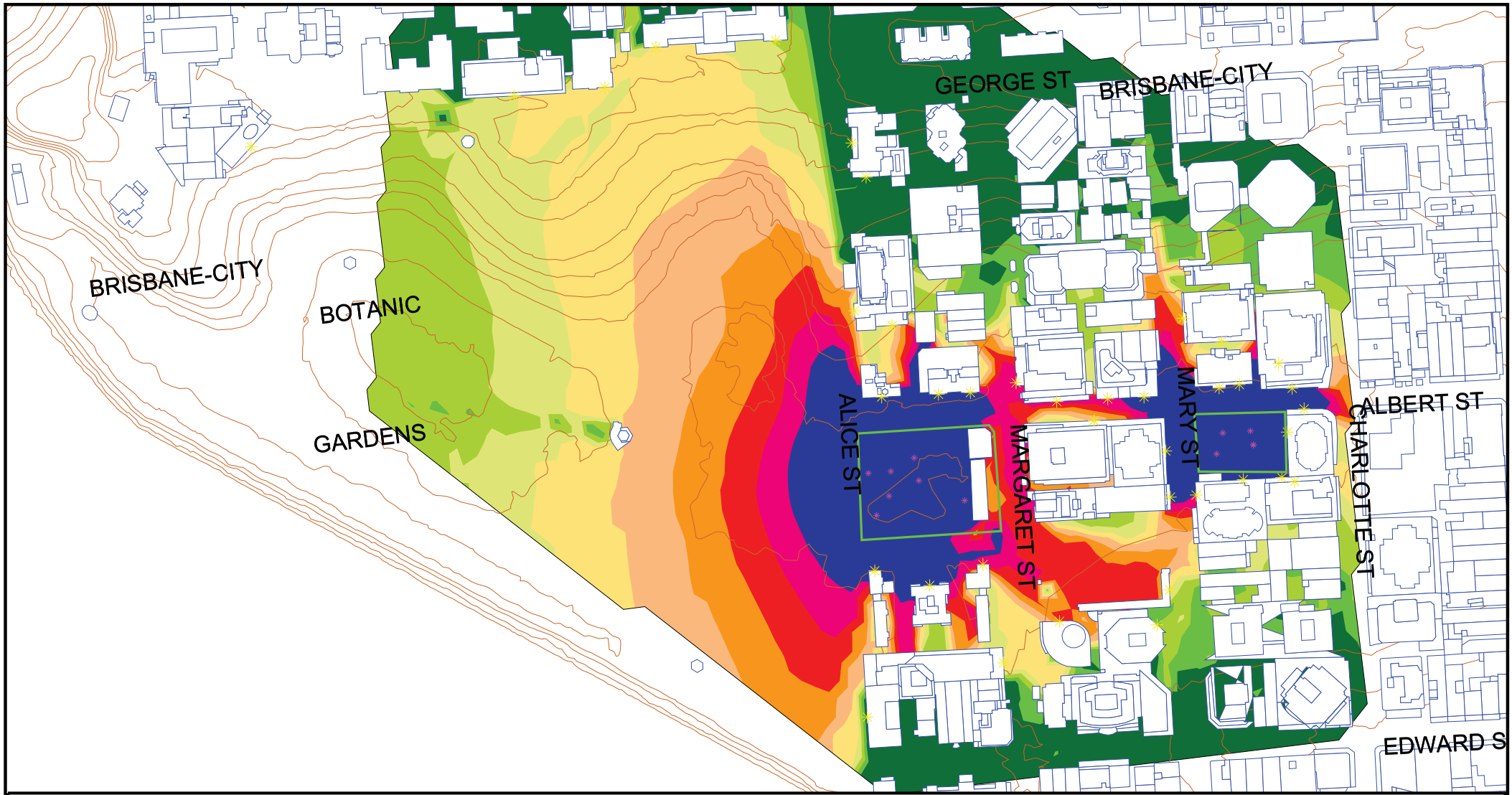
**20-2524 Cross River Rail Project**

Albert Street Station - Scenario 3 Shaft Excavation
Predicted Daytime LA10 Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:2500

0 12.5 25 50 m

SLR
global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes:

Contours are interpolated. Check calculations for exact levels.

Signs and symbols

- Building
- Proposed Noise Barrier
- Elevation line
- Point source
- Point receiver

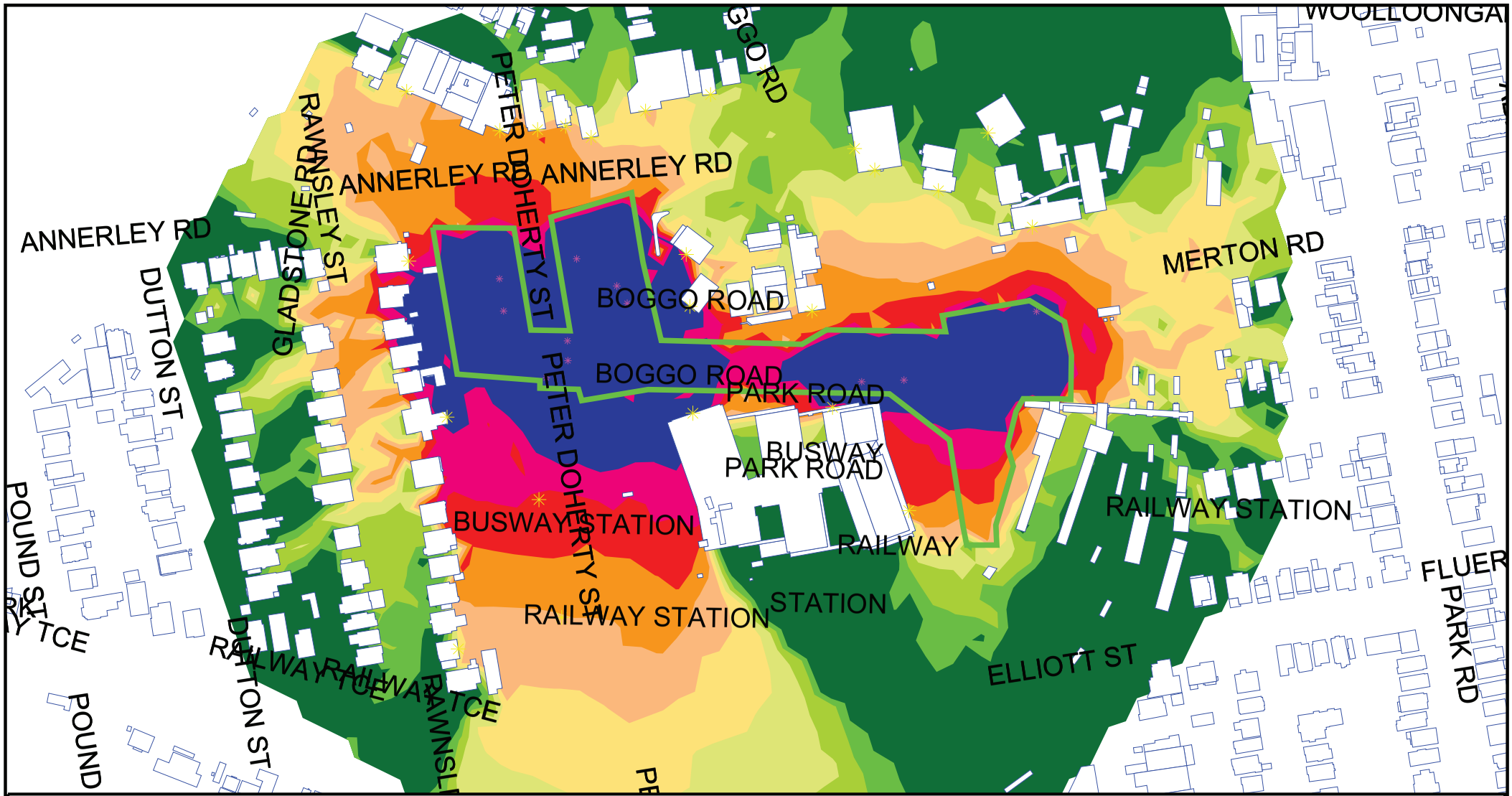
**20-2524 Cross River Rail Project**

Albert Street Station - Scenario 3 Shaft Excavation
Predicted Night-time LAmax Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:2500

0 12.5 25 50 m

SLR
global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes

Contours are interpolated. Check calculations for exact levels.

Signs and symbols

- Building
- Elevation line
- Proposed Noise Barrier
- Point source
- Point receiver

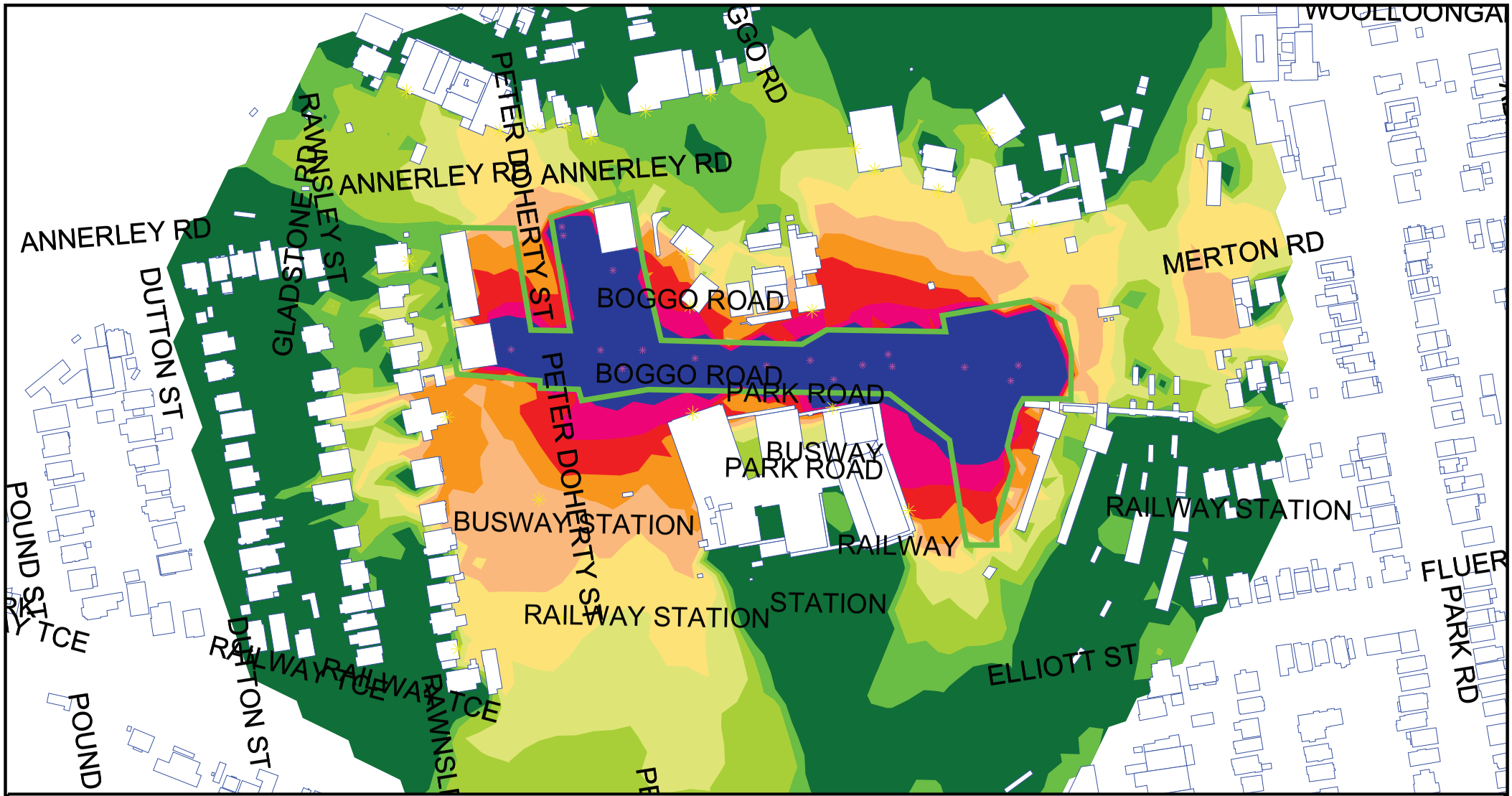
**20-2524 Cross River Rail Project**

Boggo Road Station - Scenario 1 Pile Installation
Predicted Daytime LA10 Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:3000

0 25 50 100 m

SLR
global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes

Contours are interpolated. Check calculations for exact levels.

Signs and symbols

- Building
- Elevation line
- Proposed Noise Barrier
- Point source
- Point receiver

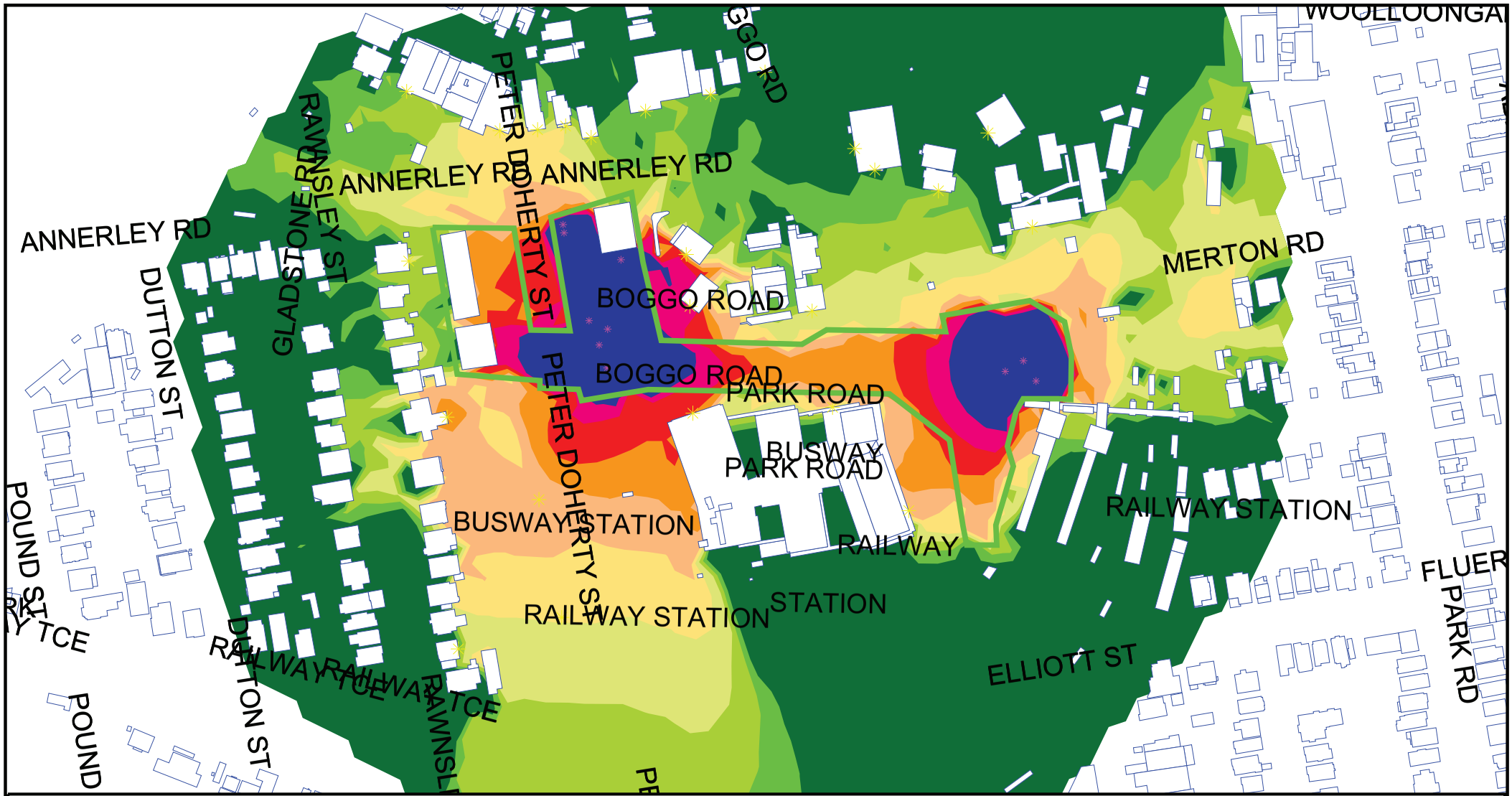
**20-2524 Cross River Rail Project**

Boggo Road Station - Scenario 2 Excavation to Slab Level
Predicted Daytime LA10 Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:3000

0 25 50 100 m

SLR
global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes

Contours are interpolated. Check calculations for exact levels.

Signs and symbols

- Building
- Elevation line
- Proposed Noise Barrier
- Point source
- Point receiver

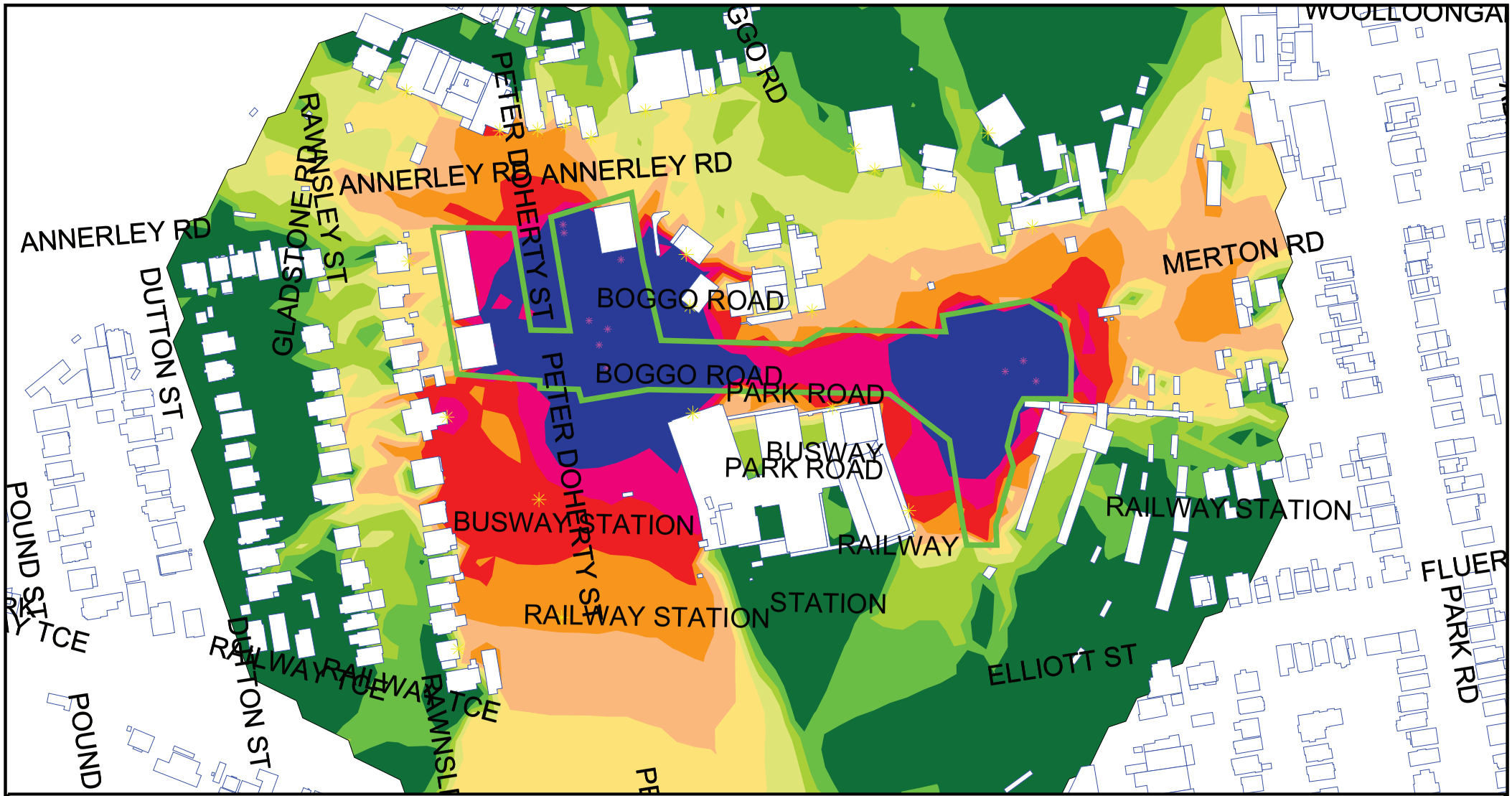
**20-2524 Cross River Rail Project**

Boggo Road Station - Scenario 2 Excavation to Slab Level
Predicted Daytime LA10 Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:3000

0 25 50 100 m

SLR global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes

Contours are interpolated. Check calculations for exact levels.

Signs and symbols

- Building
- Elevation line
- Proposed Noise Barrier
- Point source
- Point receiver

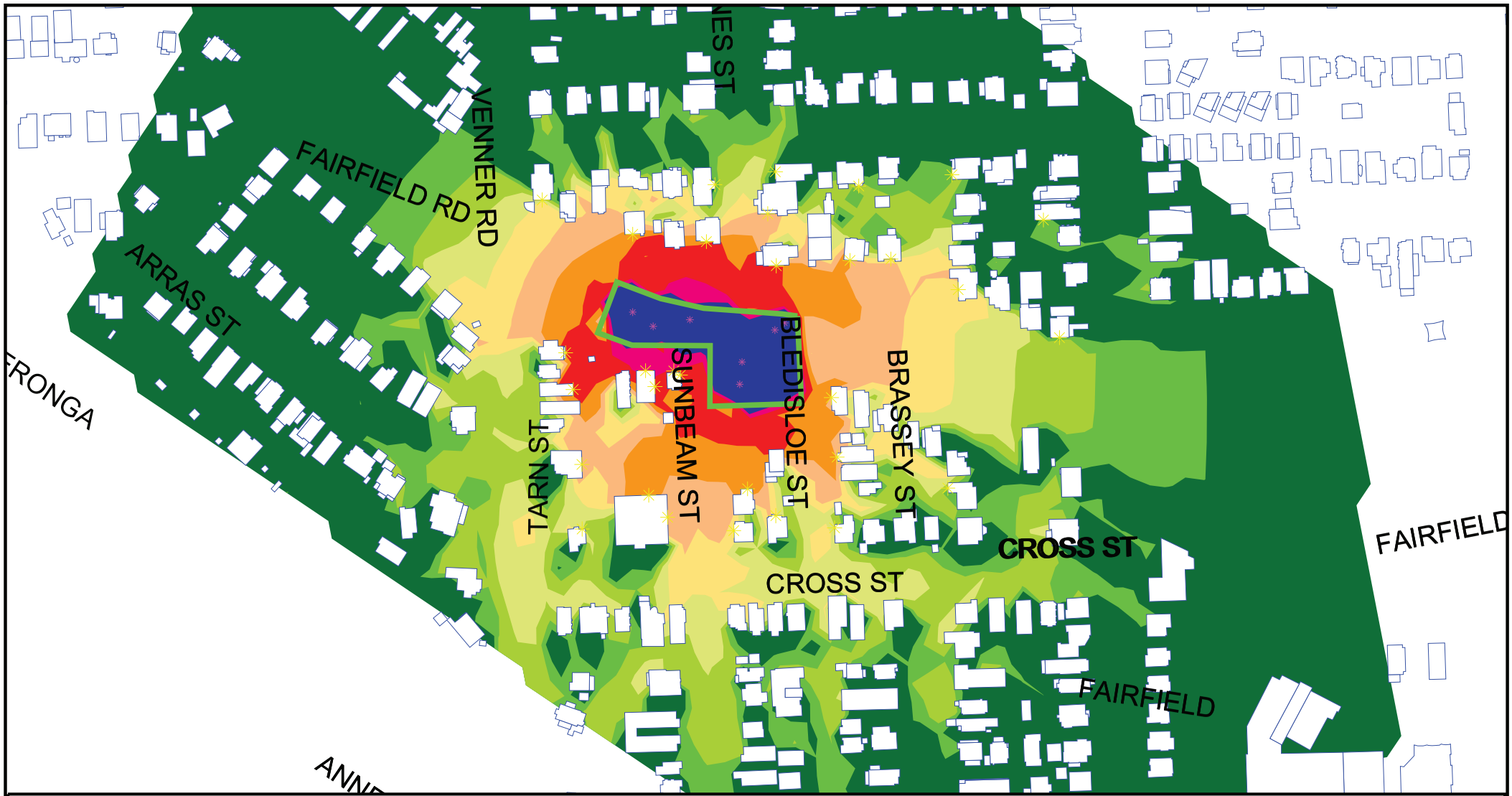
**20-2524 Cross River Rail Project**

Boggo Road Station - Scenario 3 Shaft Excavation
Predicted Night-time LAmax Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:3000

0 25 50 100 m

SLR
global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes

Contours are interpolated. Check calculations for exact levels.

Signs and symbols
- Building
- Elevation line
- Proposed Noise Barrier
- Point source
- Point receiver

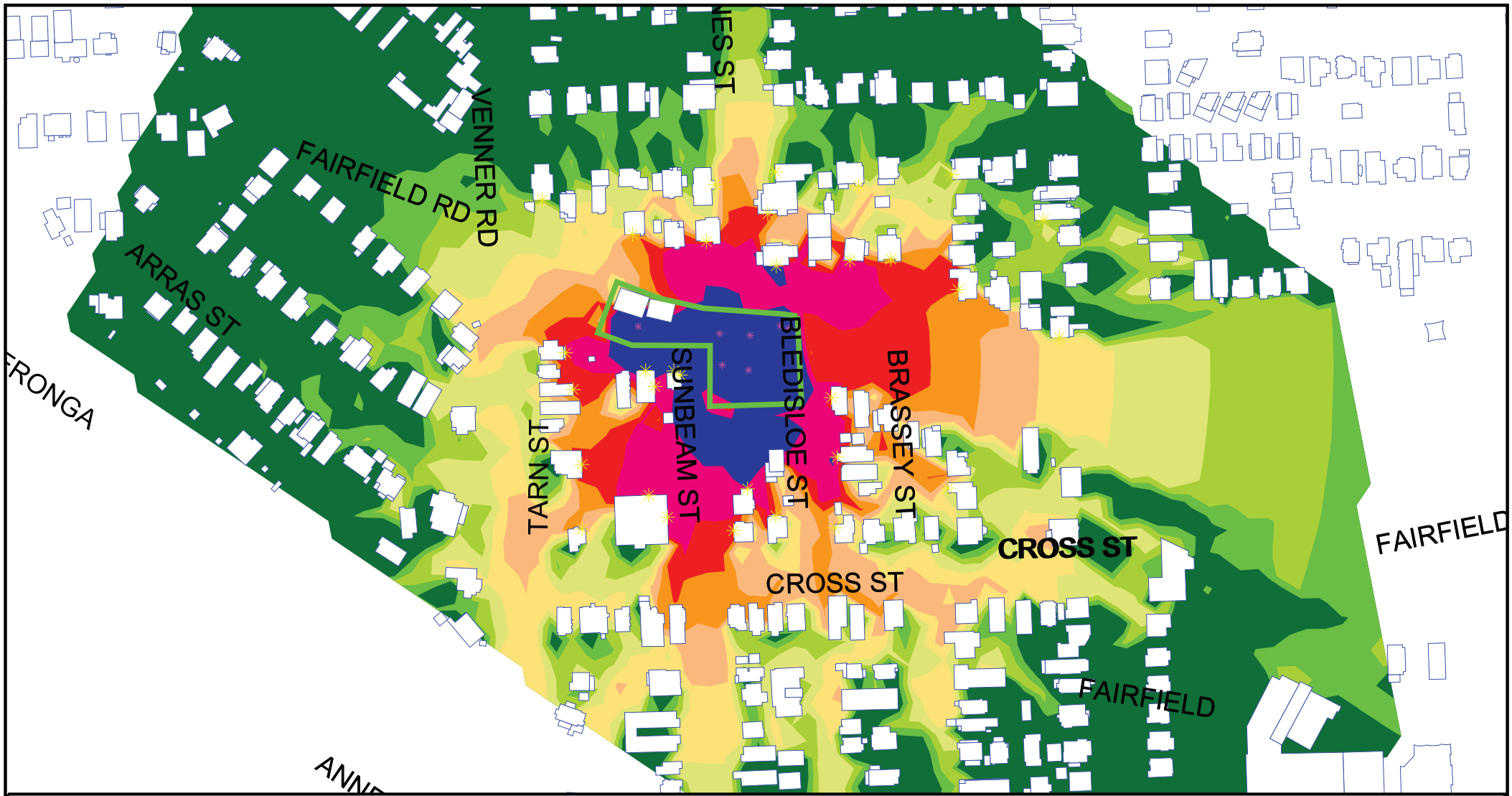
**20-2524 Cross River Rail Project**

Southern Ventilation Building - Scenario 1 Site Establishment
Predicted Daytime LA10 Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:3000

0 25 50 100 m

SLR global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes

Contours are interpolated. Check calculations for exact levels.

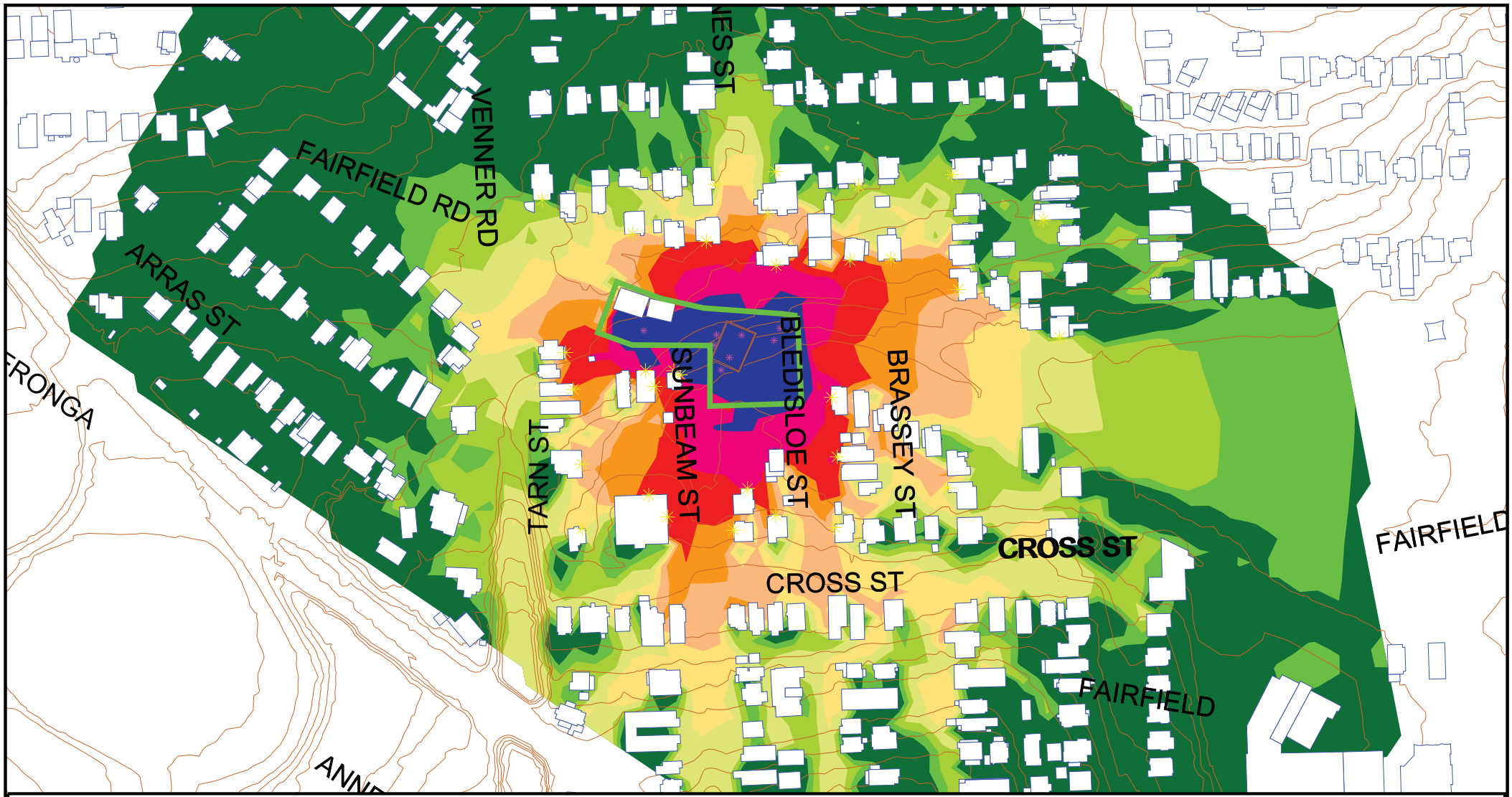
Signs and symbols
- Building
- Elevation line
- Proposed Noise Barrier
- Point source
- Point receiver

**20-2524 Cross River Rail Project**

Southern Ventilation Building - Scenario 2 Pile Installation
Predicted Daytime LA10 Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:3000
0 25 50 100 m

SLR global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes

Contours are interpolated. Check calculations for exact levels.

Signs and symbols

- Building
- Elevation line
- Proposed Noise Barrier
- Point source
- Point receiver

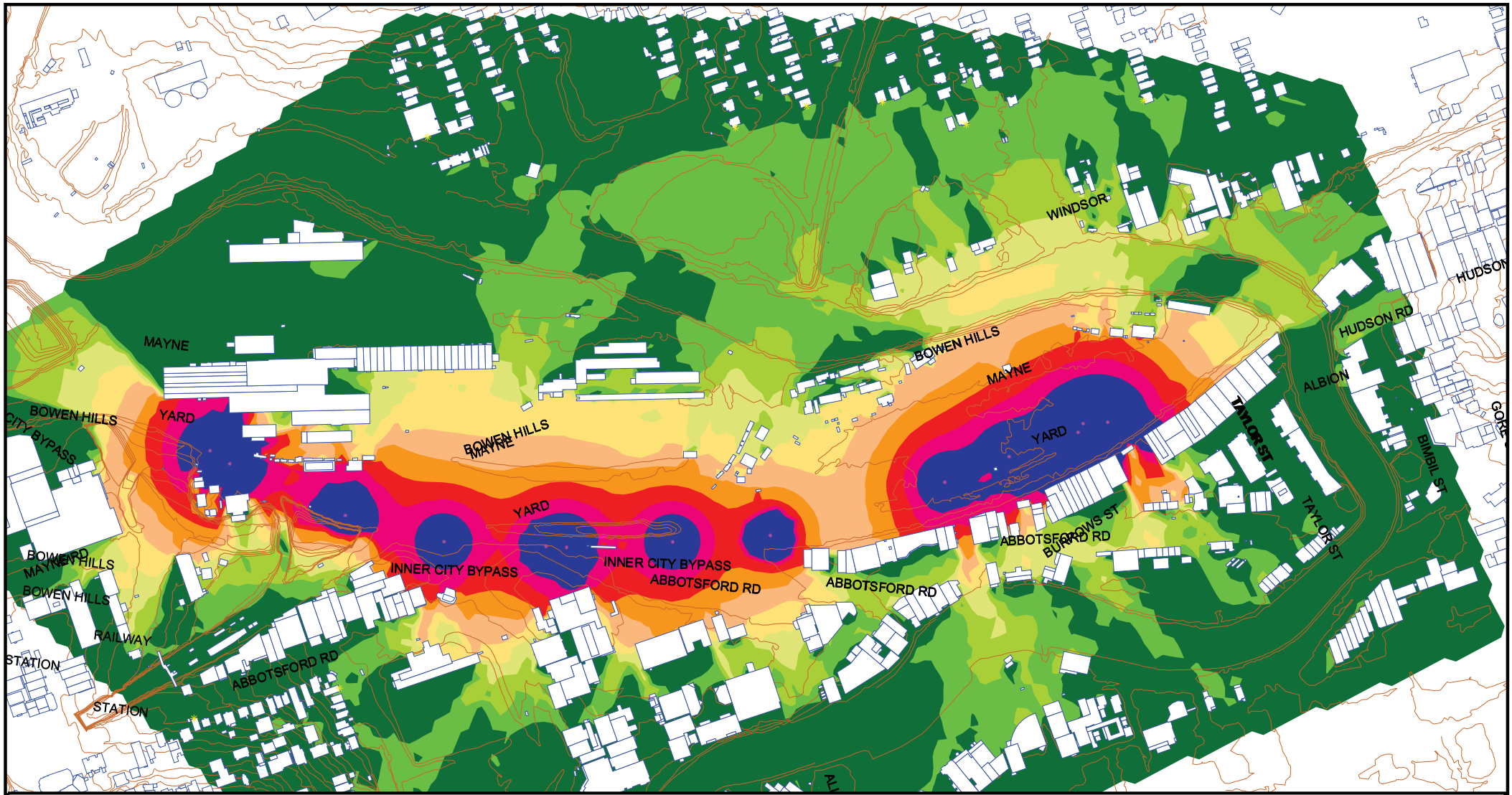
**20-2524 Cross River Rail Project**

Southern Ventilation Building - Scenario 3 Shaft Excavation
Predicted Daytime LA10 Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:3000

0 25 50 100 m

SLR global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes:

Contours are interpolated. Check facade calculations for exact levels.

Signs and symbols

- Building
- Proposed Noise Barrier
- Elevation line
- Point source
- Point receiver

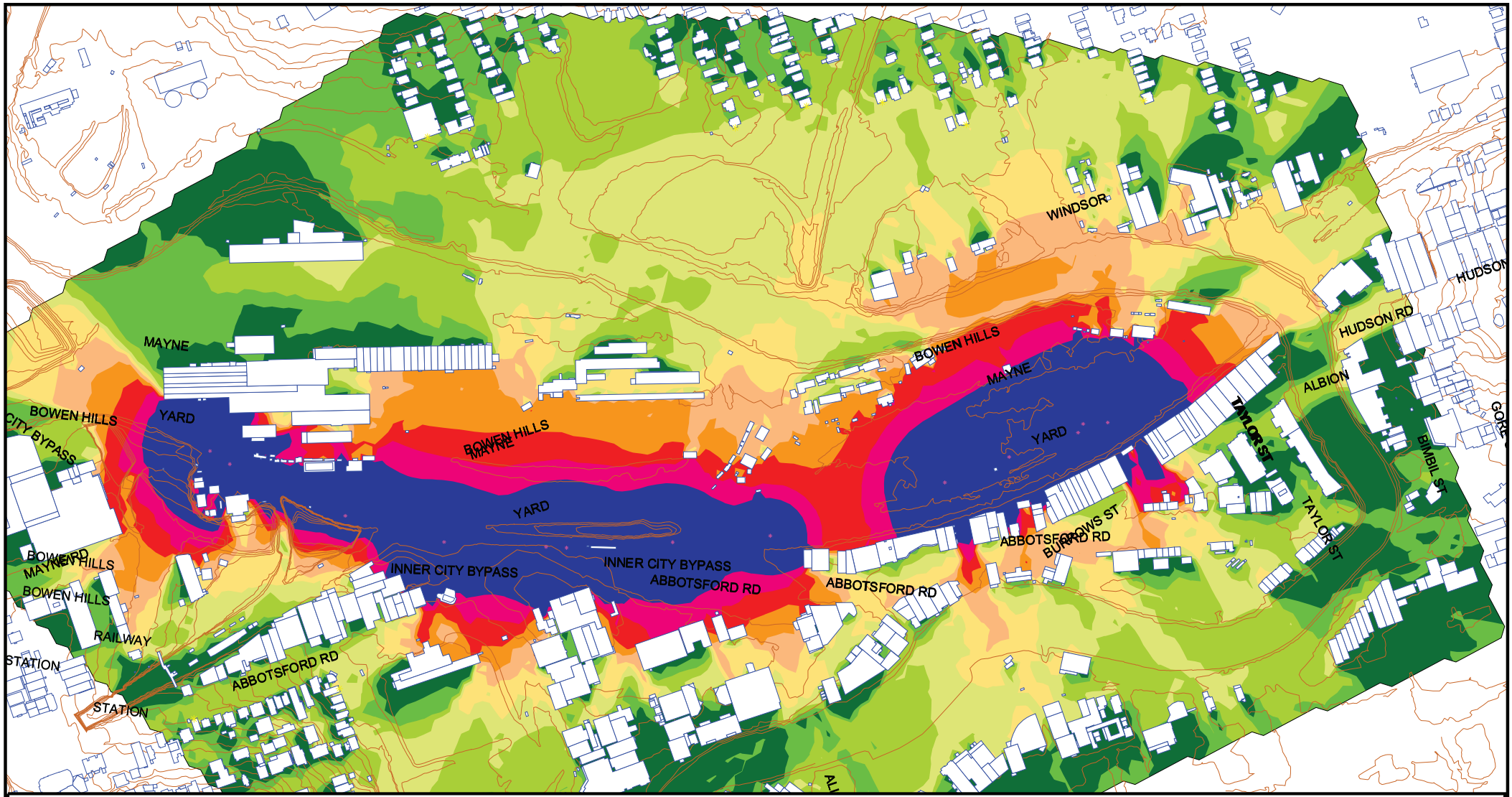
# 20-2524 Cross River Rail Project

Mayne Yard - Scenario 1 Piling
Predicted LAeq Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:4500

0 25 50 100 m

SLR
global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes:

Contours are interpolated. Check facade calculations for exact levels.

Signs and symbols

- Building
- Proposed Noise Barrier
- Elevation line
- Point source
- Point receiver

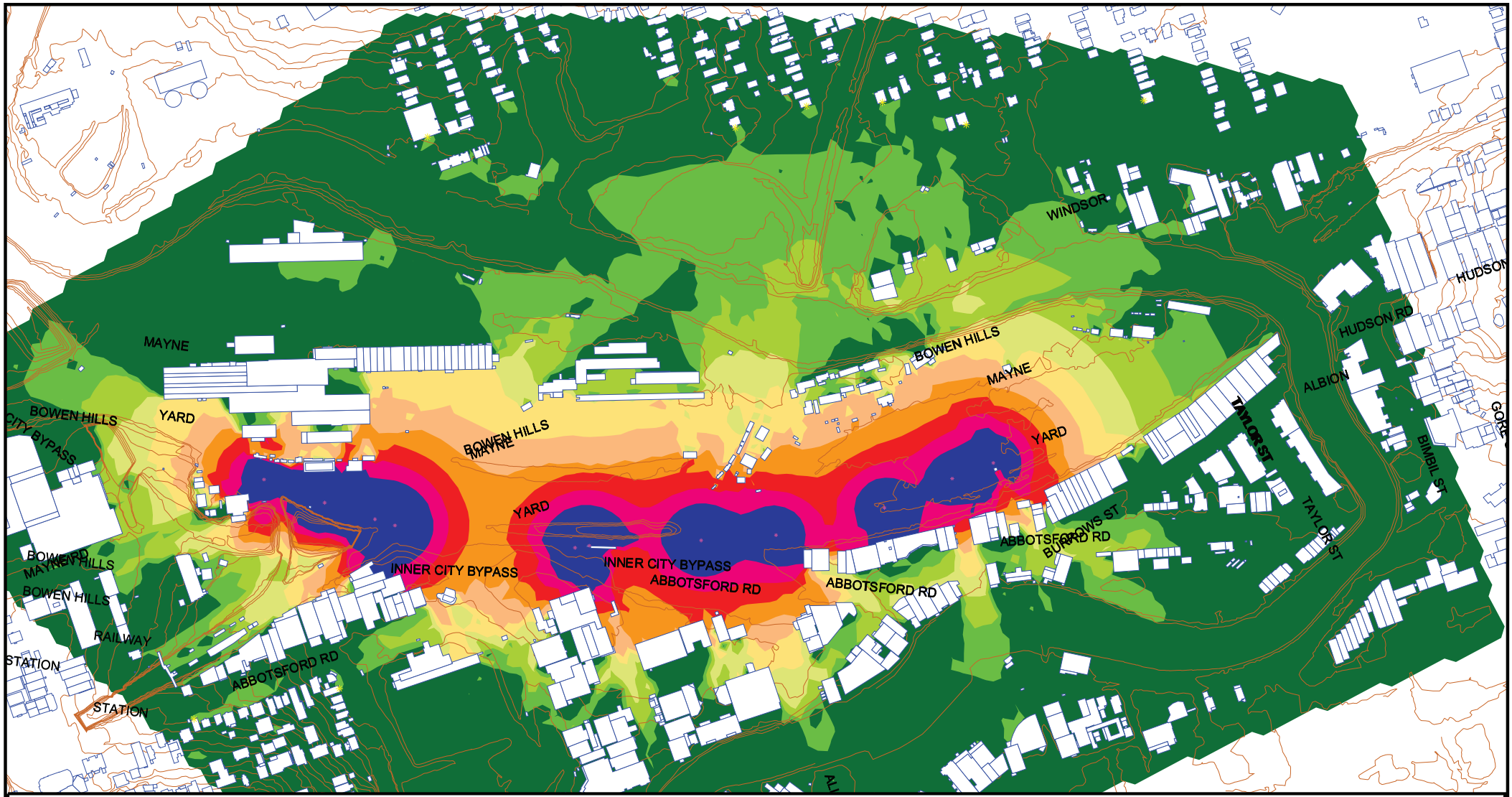
# 20-2524 Cross River Rail Project

Mayne Yard - Scenario 1 Piling
Predicted LAmax Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:4500

0 25 50 100 m

SLR
global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes:

Contours are interpolated. Check facade calculations for exact levels.

Signs and symbols

- Building
- Proposed Noise Barrier
- Elevation line
- Point source
- Point receiver

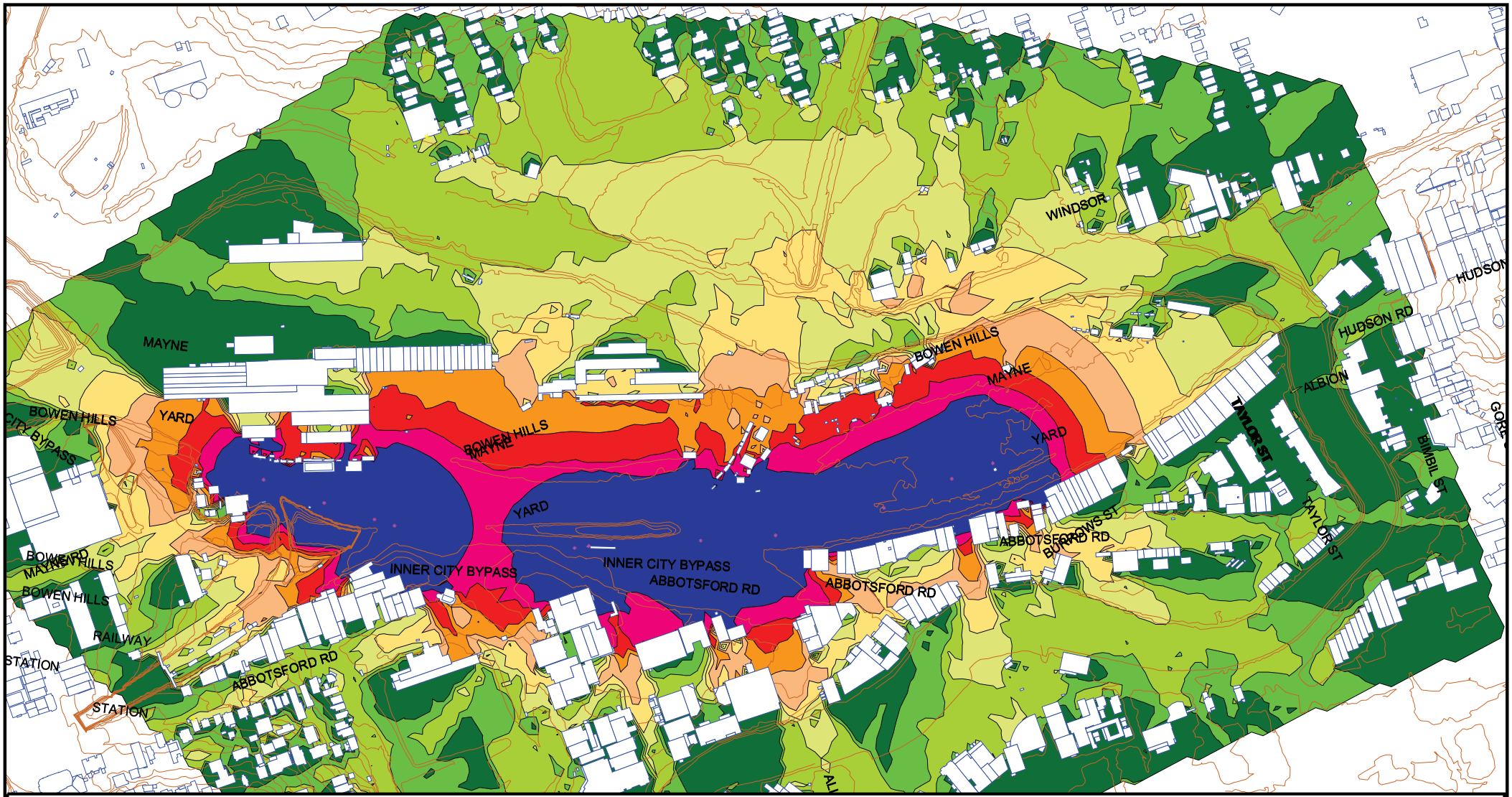
# 20-2524 Cross River Rail Project

Mayne Yard - Scenario 2 Viaduct Construction
Predicted LAeq Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:4500

0 25 50 100 m

SLR
global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes:

Contours are interpolated. Check facade calculations for exact levels.

Signs and symbols

- Building
- Proposed Noise Barrier
- Elevation line
- Point source
- Point receiver

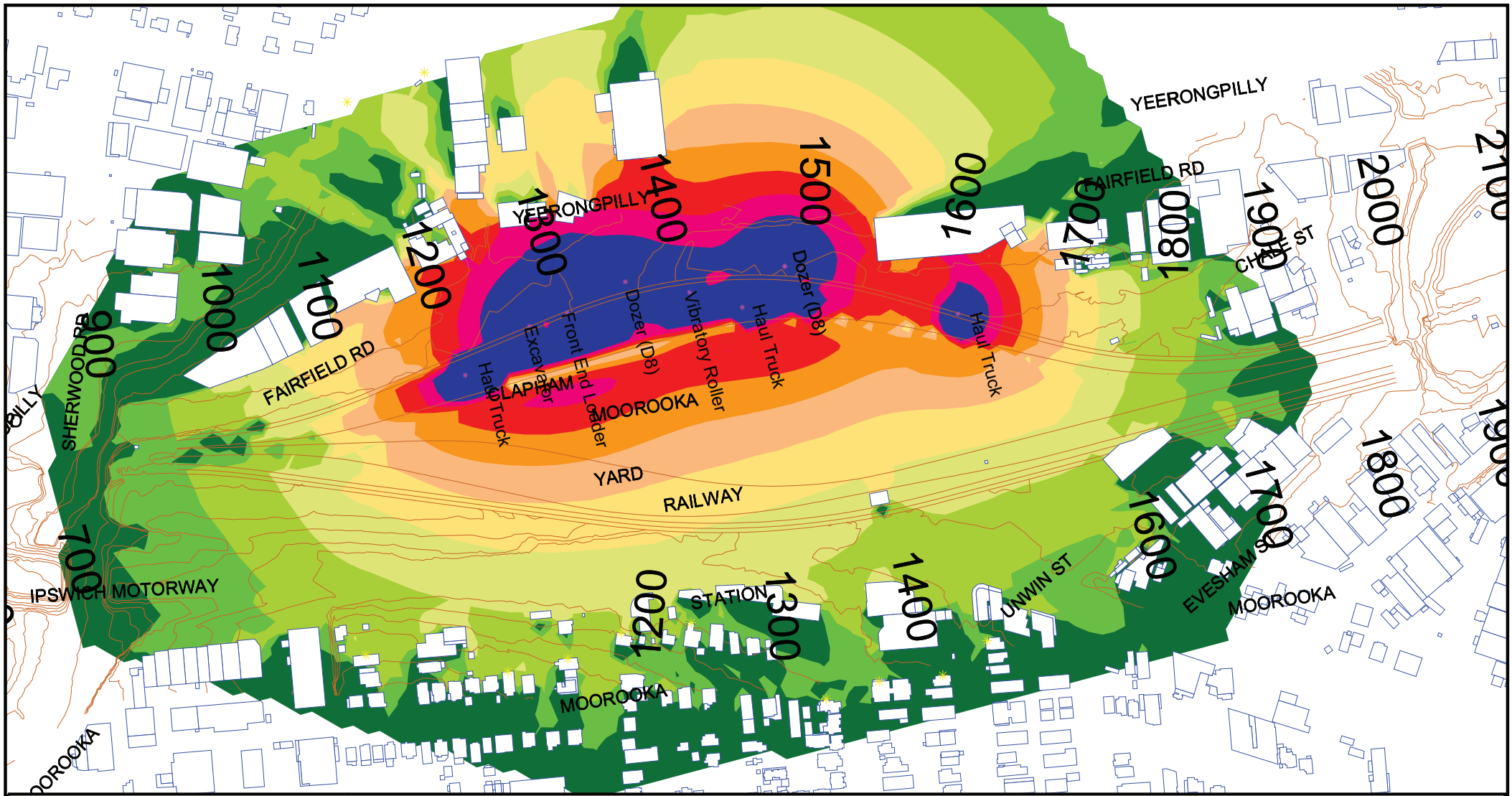
# 20-2524 Cross River Rail Project

Mayne Yard - Scenario 2 Viaduct Construction
Predicted LAmax Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:4500

0 25 50 100 m

SLR
global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes:

Contours are interpolated. Check calculations for exact levels.

Signs and symbols

- Building
- Elevation line
- Proposed Noise Barrier
- Point source
- Point receiver

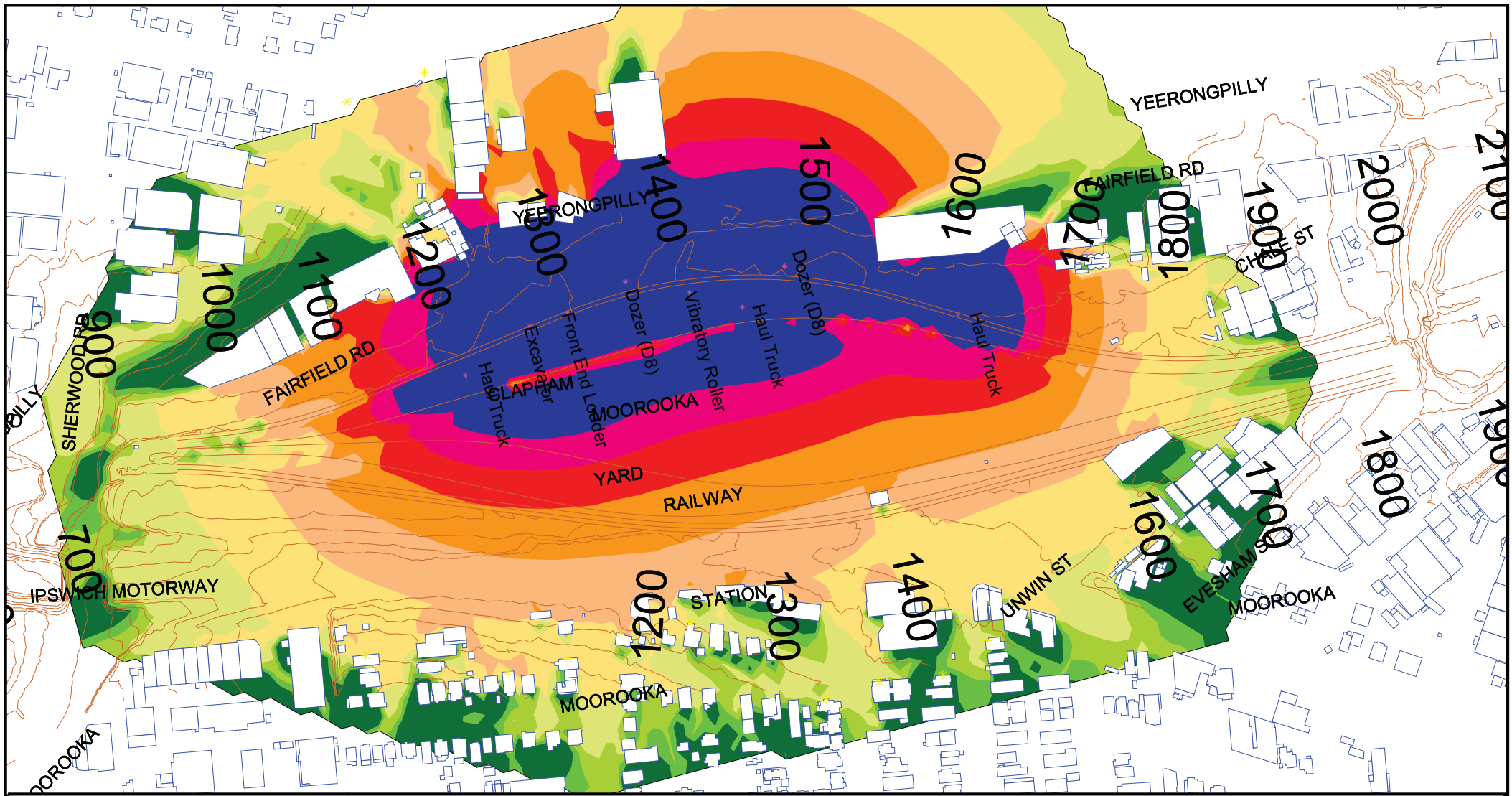
**20-2524 Cross River Rail Project**

Clapham Yard - Scenario 1 Earthworks
Predicted LAeq Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:4500

0 25 50 100 m

SLR
global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes:

Contours are interpolated. Check calculations for exact levels.

Signs and symbols

- Building
- Elevation line
- Proposed Noise Barrier
- Point source
- Point receiver

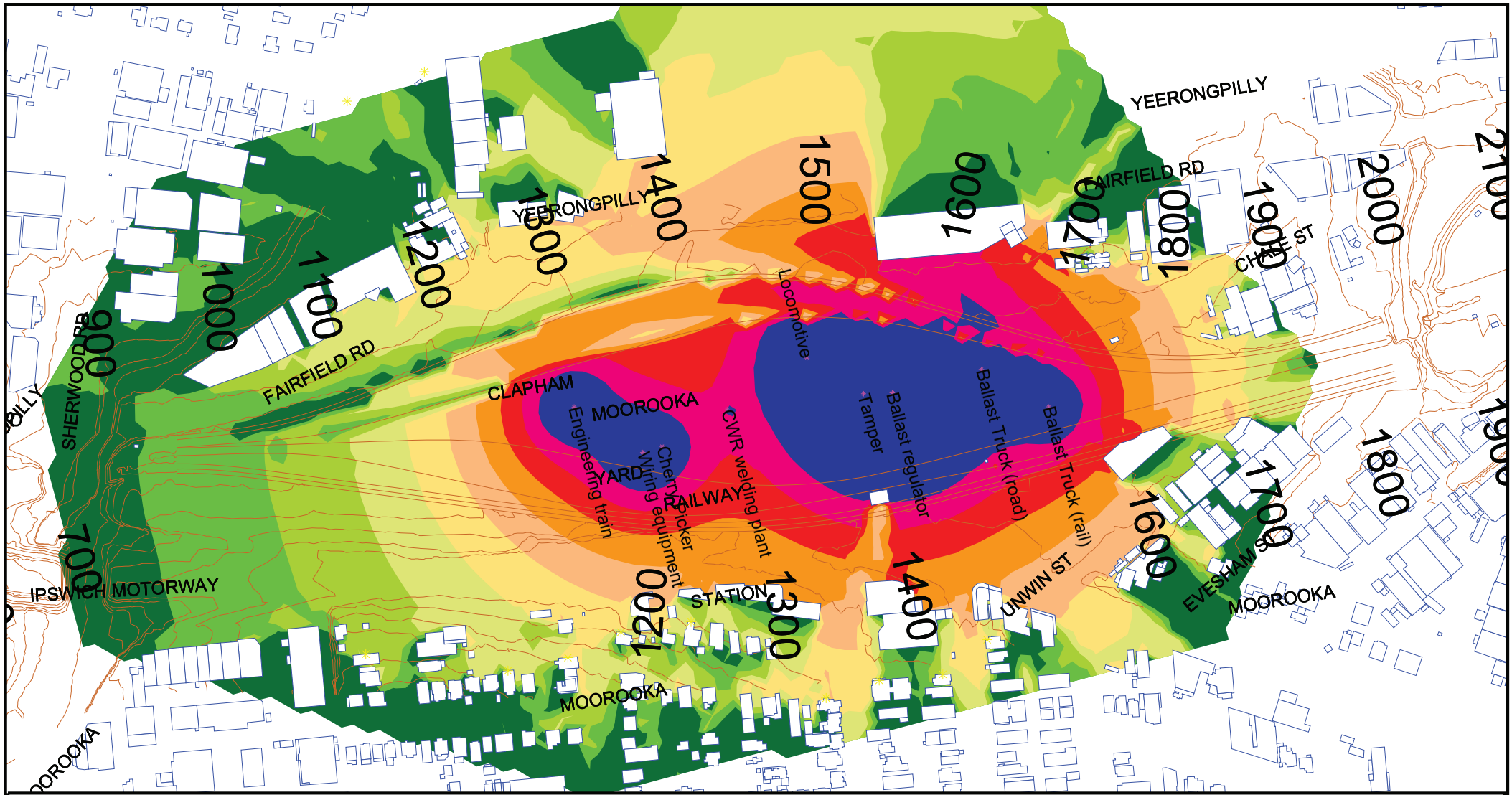
**20-2524 Cross River Rail Project**

Clapham Yard - Scenario 1 Earthworks
Predicted LAmax Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:4500

0 25 50 100 m

SLR
global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes:

Contours are interpolated. Check calculations for exact levels.

Signs and symbols

- Building
- Elevation line
- Proposed Noise Barrier
- Point source
- Point receiver

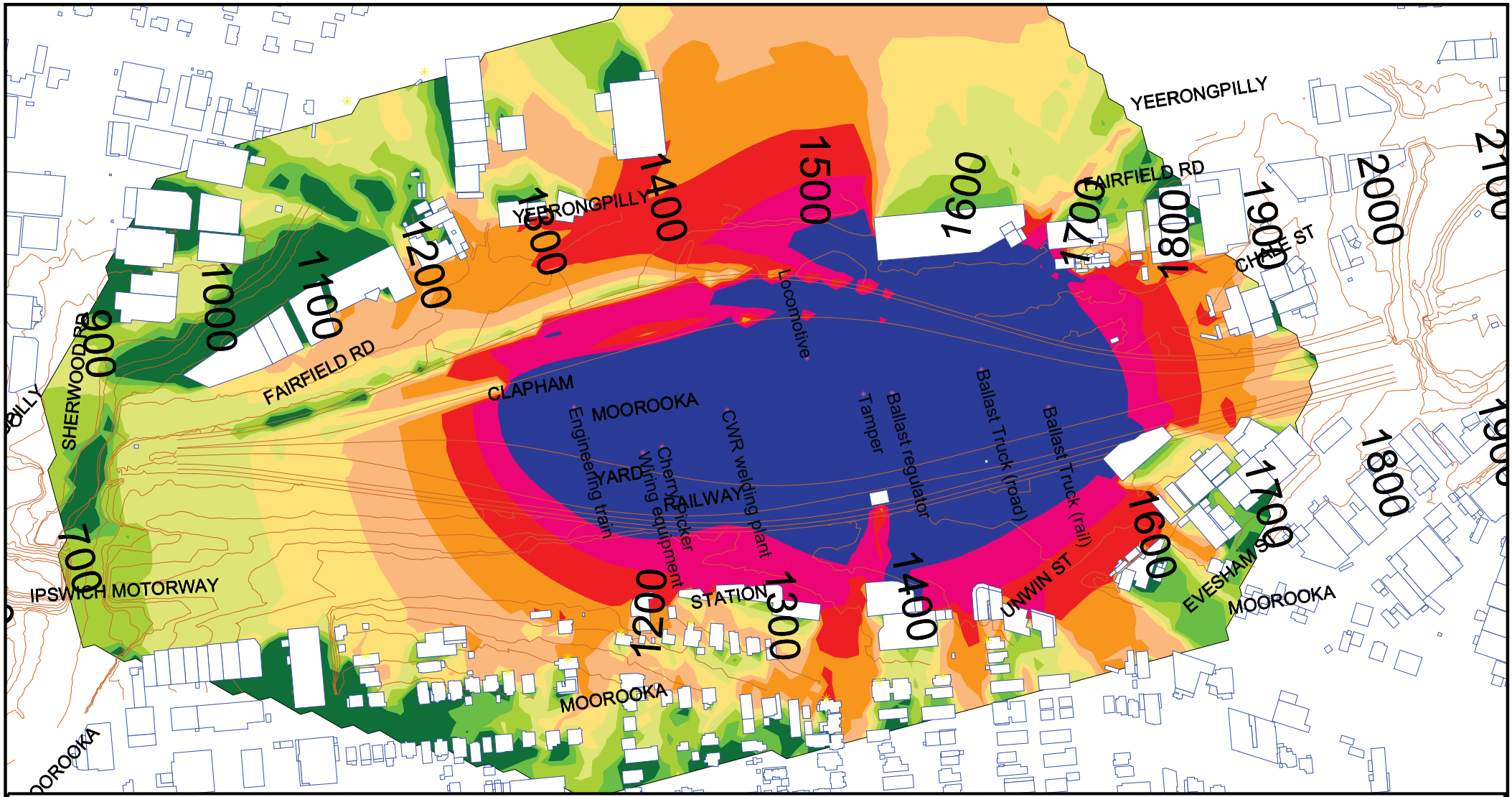
**20-2524 Cross River Rail Project**

Clapham Yard - Scenario 2 Track Construction
Predicted LAeq Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:4500

0 25 50 100 m

SLR global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes:

Contours are interpolated. Check calculations for exact levels.

Signs and symbols

- Building
- Elevation line
- Proposed Noise Barrier
- Point source
- Point receiver

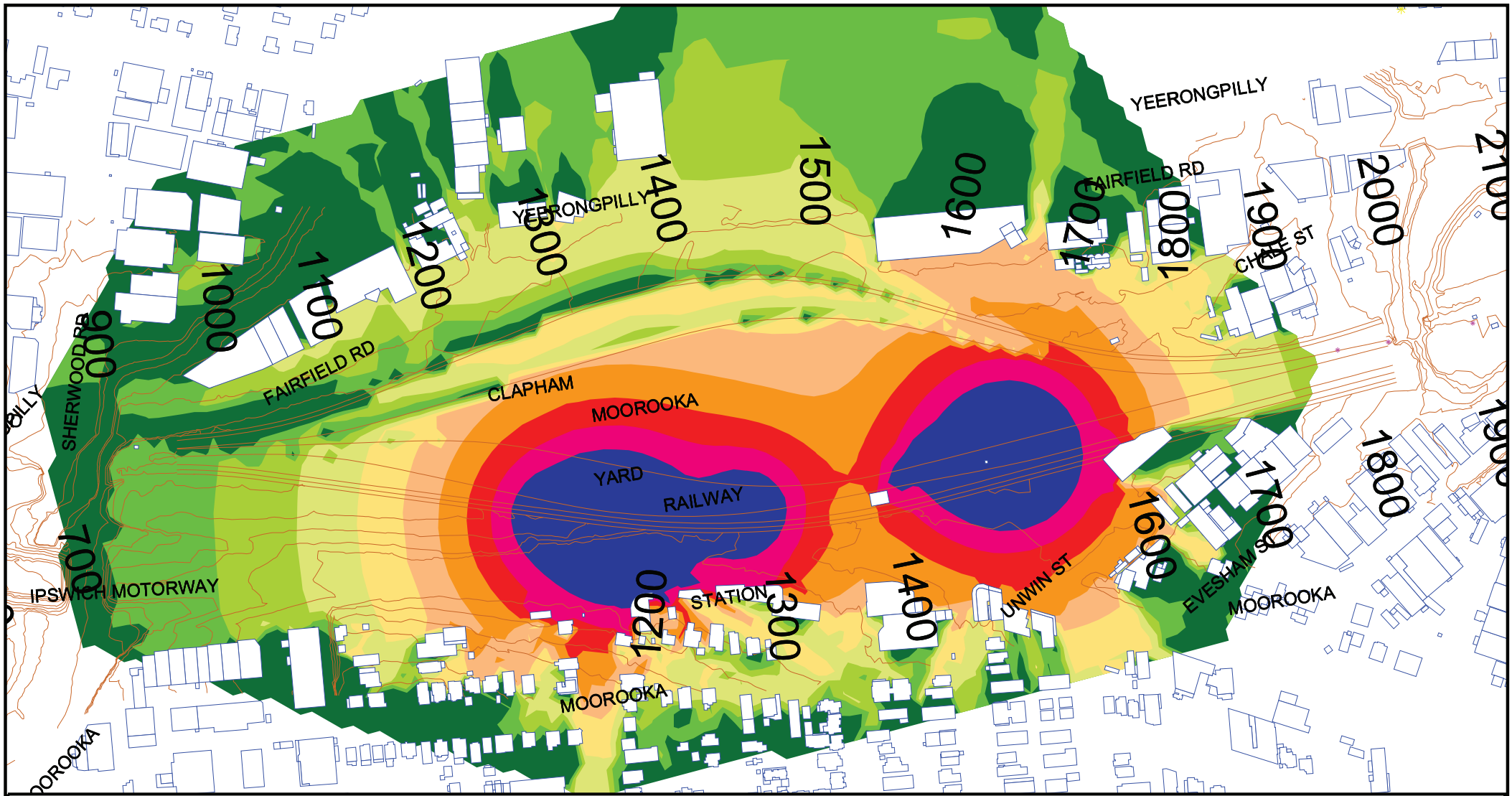
**20-2524 Cross River Rail Project**

Clapham Yard - Scenario 2 Track Construction
Predicted LAmax Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:4500

0 25 50 100 m

SLR global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes:

Contours are interpolated. Check calculations for exact levels.

Signs and symbols

- Building
- Elevation line
- Proposed Noise Barrier
- Point source
- Point receiver

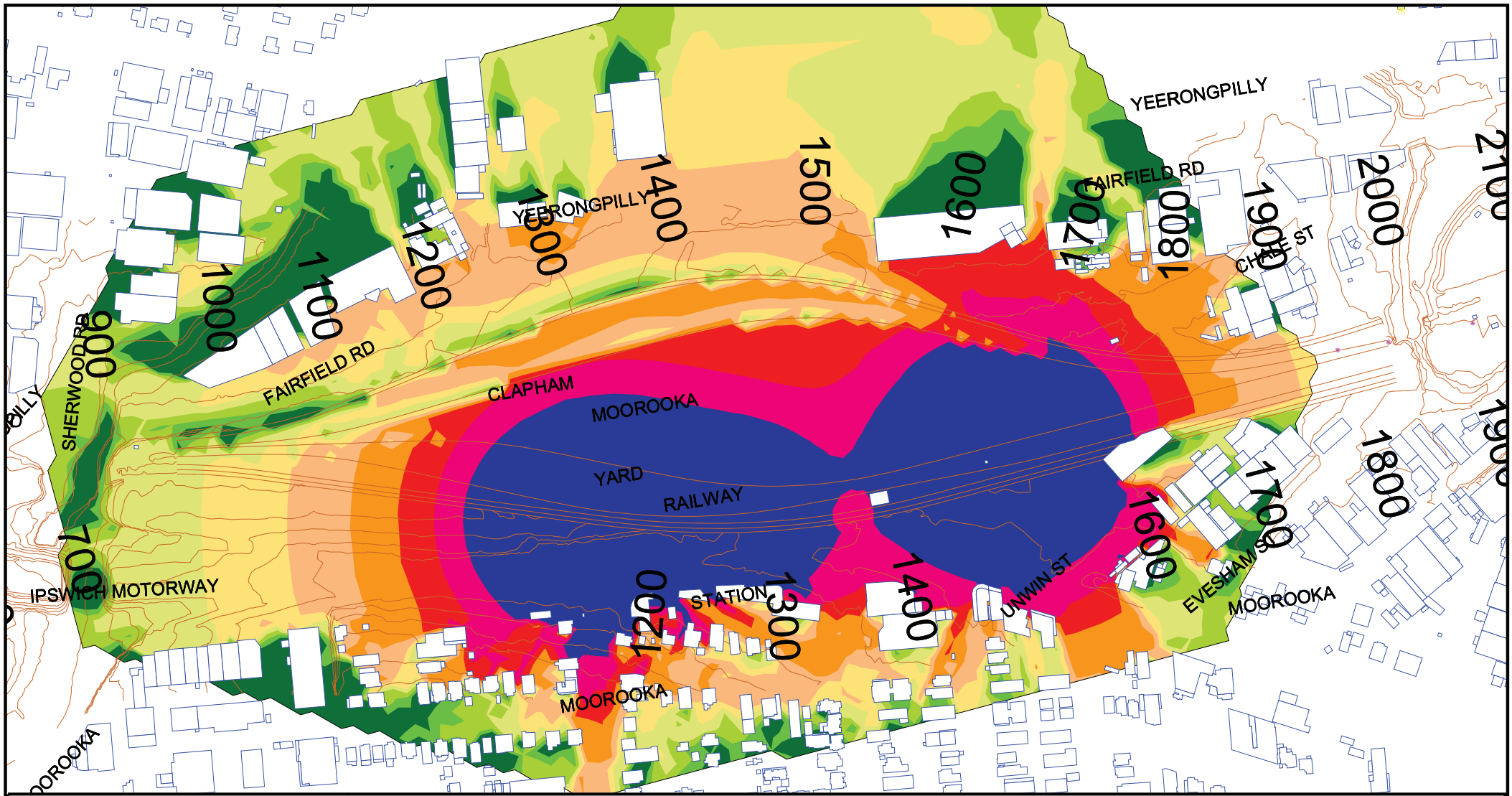
**20-2524 Cross River Rail Project**

Clapham Yard - Scenario 3 Flyover Construction
Predicted LAeq Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:4500

0 25 50 100 m

SLR global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes:

Contours are interpolated. Check calculations for exact levels.

Signs and symbols

- Building
- Elevation line
- Proposed Noise Barrier
- Point source
- Point receiver

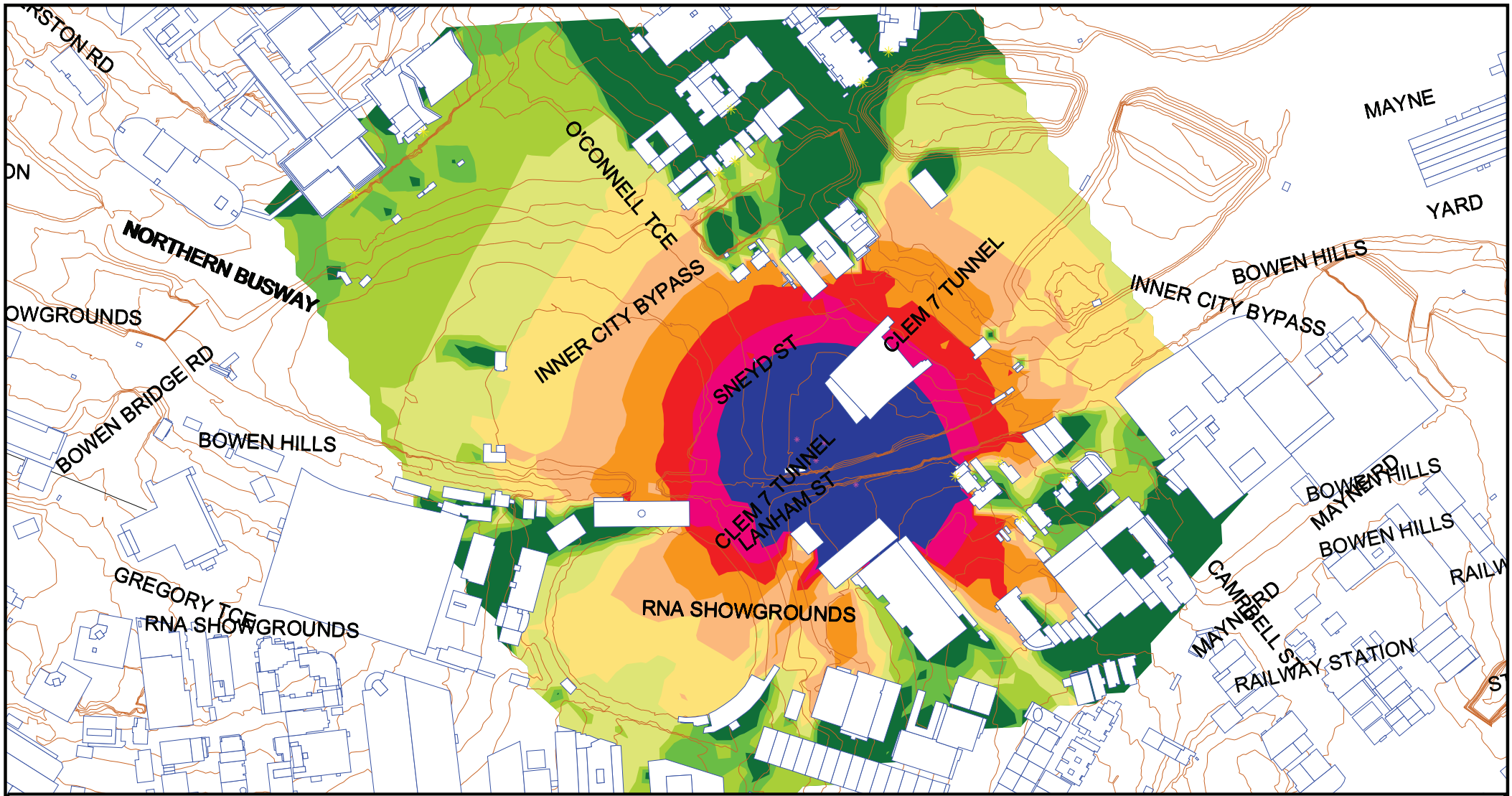
**20-2524 Cross River Rail Project**

Clapham Yard - Scenario 3 Flyover Construction
Predicted LAmax Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:4500

0 25 50 100 m

SLR global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes:

Contours are interpolated. Check calculations for exact levels.

Signs and symbols

- Building
- Elevation line
- Proposed Noise Barrier
- Point source
- Point receiver

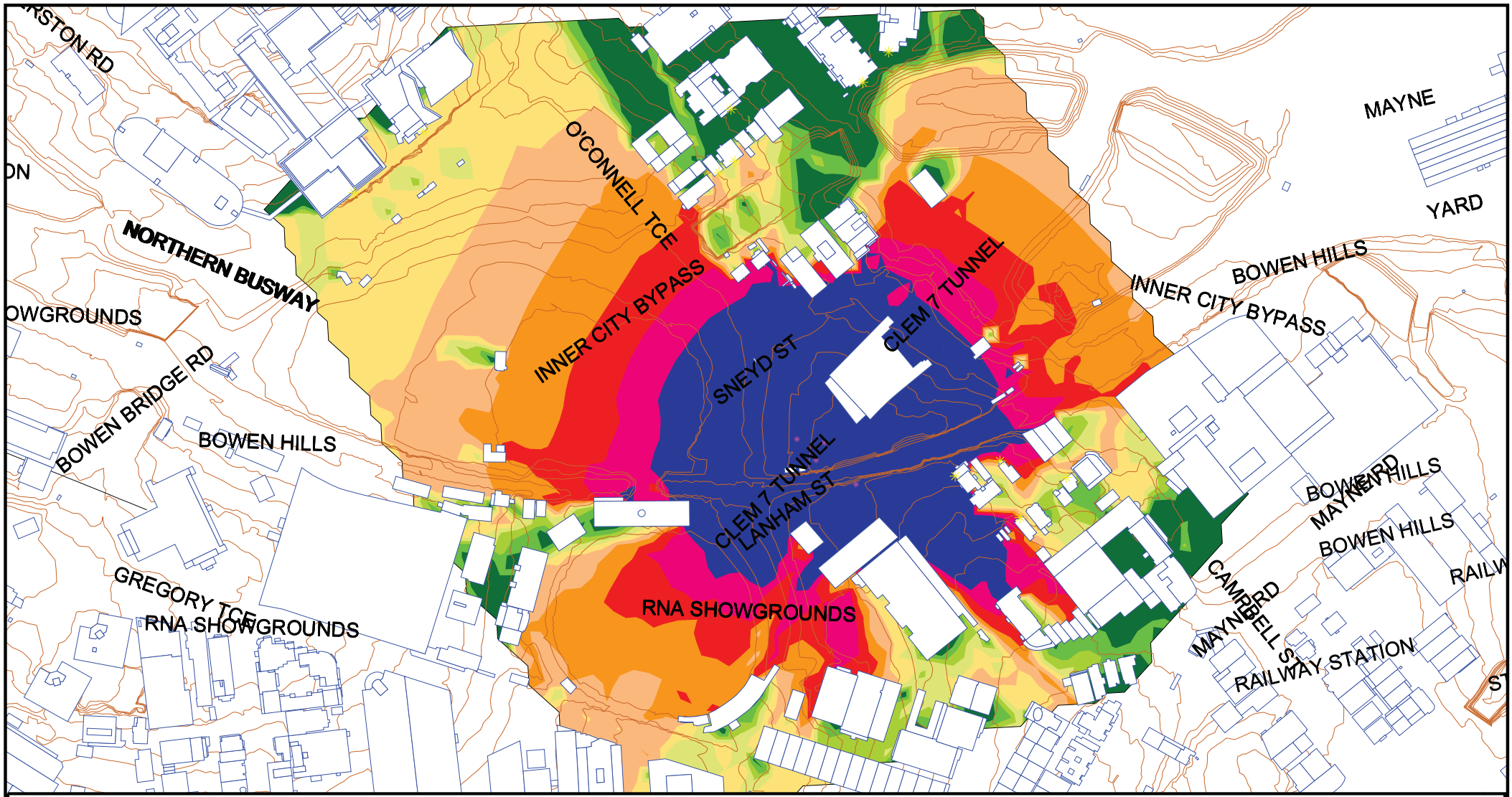
**20-2524 Cross River Rail Project**

Exhibition Station - Scenario 1 Pile Installation
Predicted LAeq Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:4000

0 25 50 100 m

SLR
global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes:

Contours are interpolated. Check calculations for exact levels.

Signs and symbols

- Building
- Elevation line
- Proposed Noise Barrier
- Point source
- Point receiver

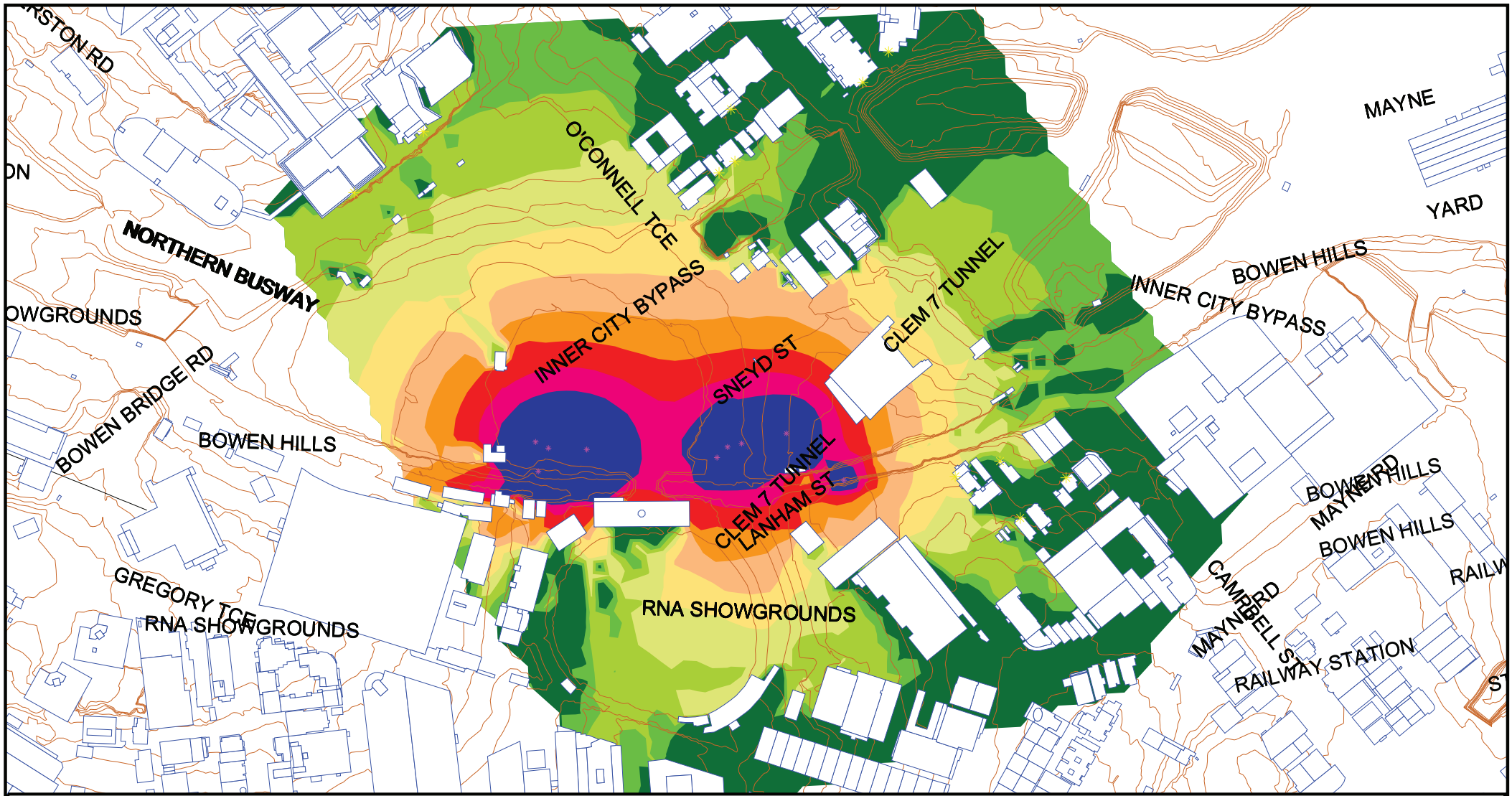
**20-2524 Cross River Rail Project**

Exhibition Station - Scenario 1 Pile Installation
Predicted LAmax Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:4000

0 25 50 100 m

SLR
global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes:

Contours are interpolated. Check calculations for exact levels.

Signs and symbols

- Building
- Elevation line
- Proposed Noise Barrier
- Point source
- Point receiver

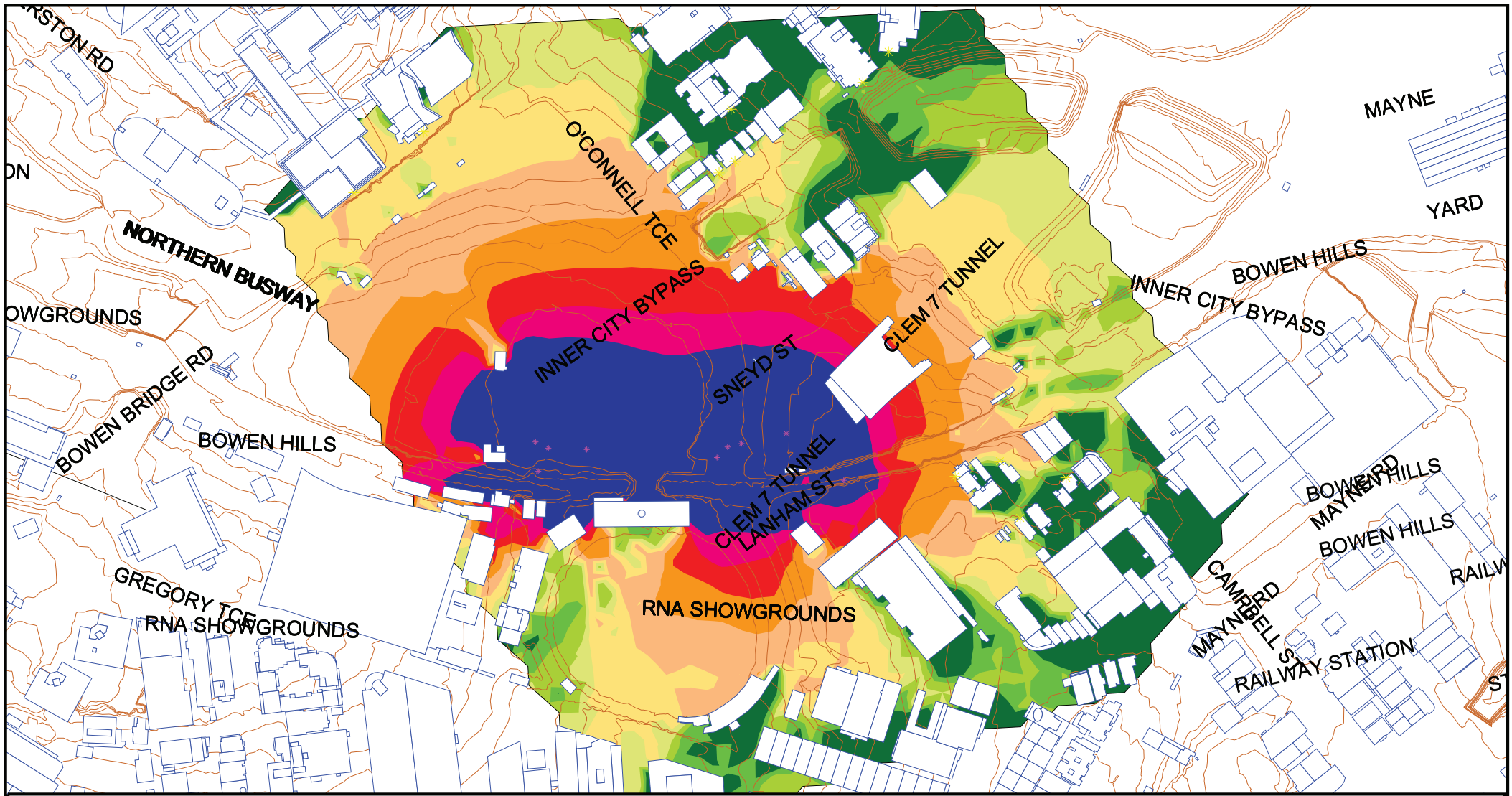
**20-2524 Cross River Rail Project**

Exhibition Station - Scenario 2 Station Construction
Predicted LAeq Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:4000

0 25 50 100 m

SLR
global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes:

Contours are interpolated. Check calculations for exact levels.

Signs and symbols

- Building
- Elevation line
- Proposed Noise Barrier
- Point source
- Point receiver

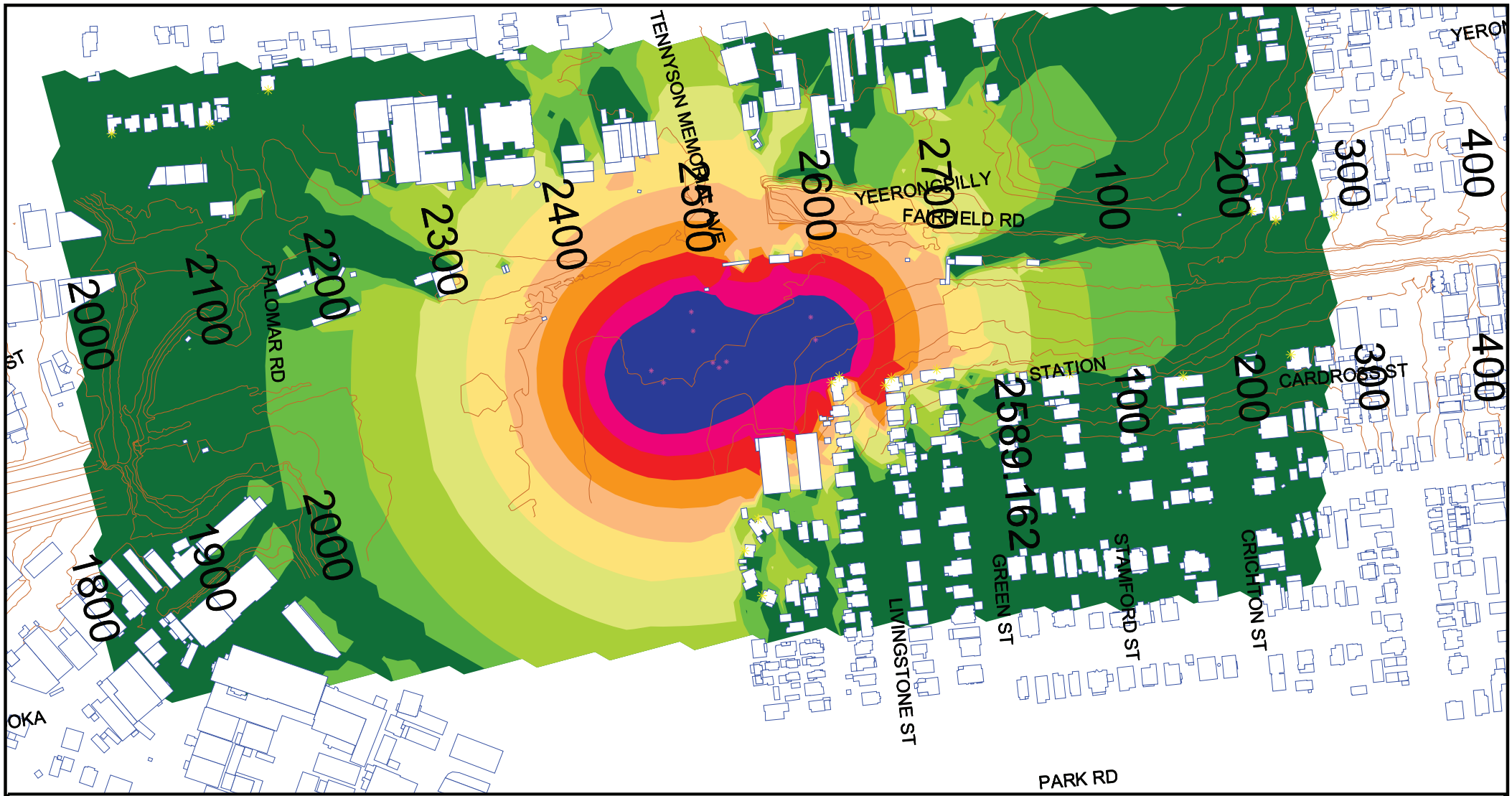
**20-2524 Cross River Rail Project**

Exhibition Station - Scenario 2 Station Construction
Predicted LAmax Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:4000

0 25 50 100 m

SLR
global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes:

Contours are interpolated. Check calculations for exact levels.

Signs and symbols

- Building
- Elevation line
- Proposed Noise Barrier
- Point source
- Point receiver

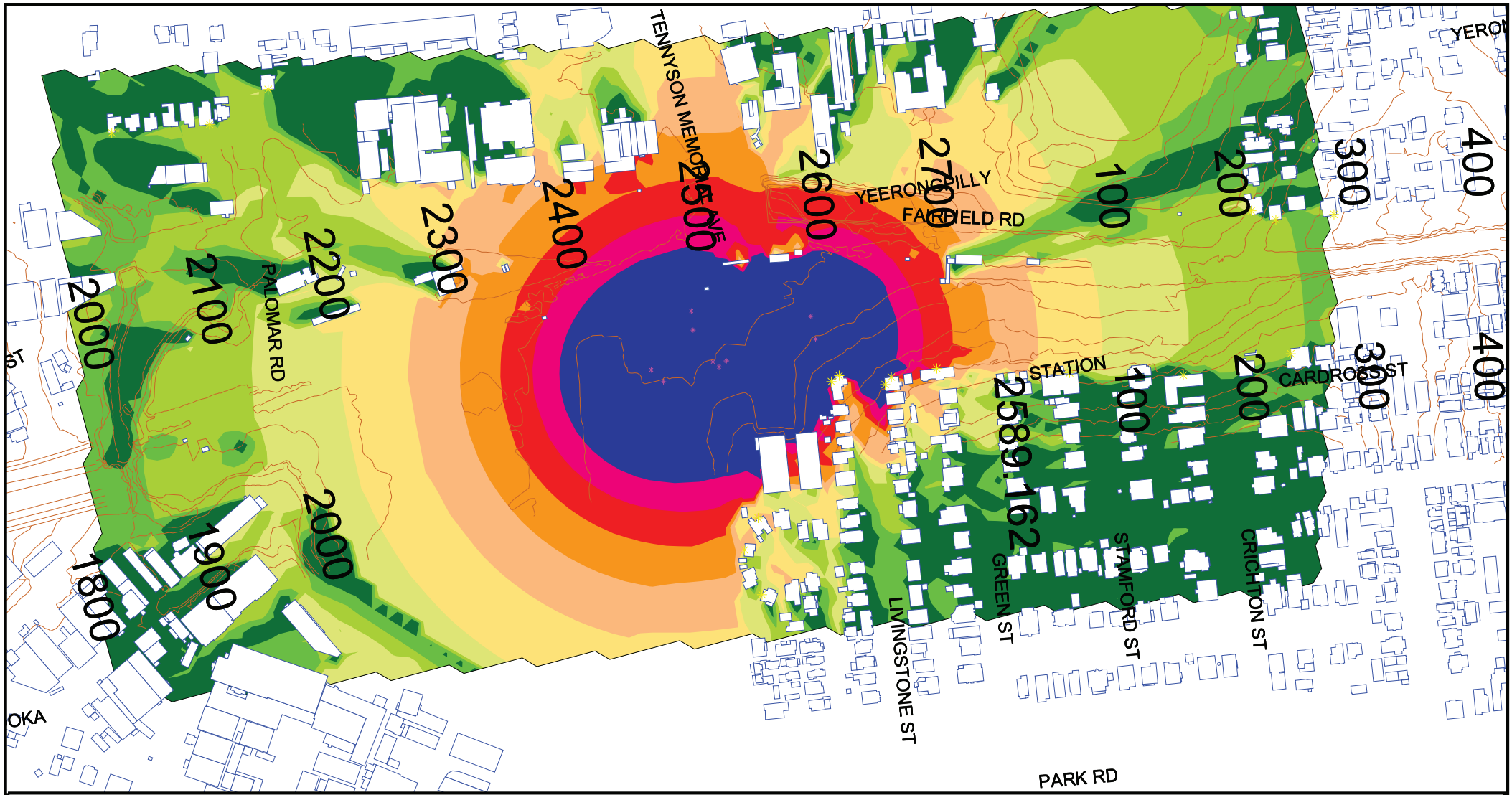
**20-2524 Cross River Rail Project**

Yeerongpilly Station - Scenario 1 Construction
Predicted LAmax Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:4500

0 25 50 100 m

SLR global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes:

Contours are interpolated. Check calculations for exact levels.

Signs and symbols

- Building
- Elevation line
- Proposed Noise Barrier
- Point source
- Point receiver

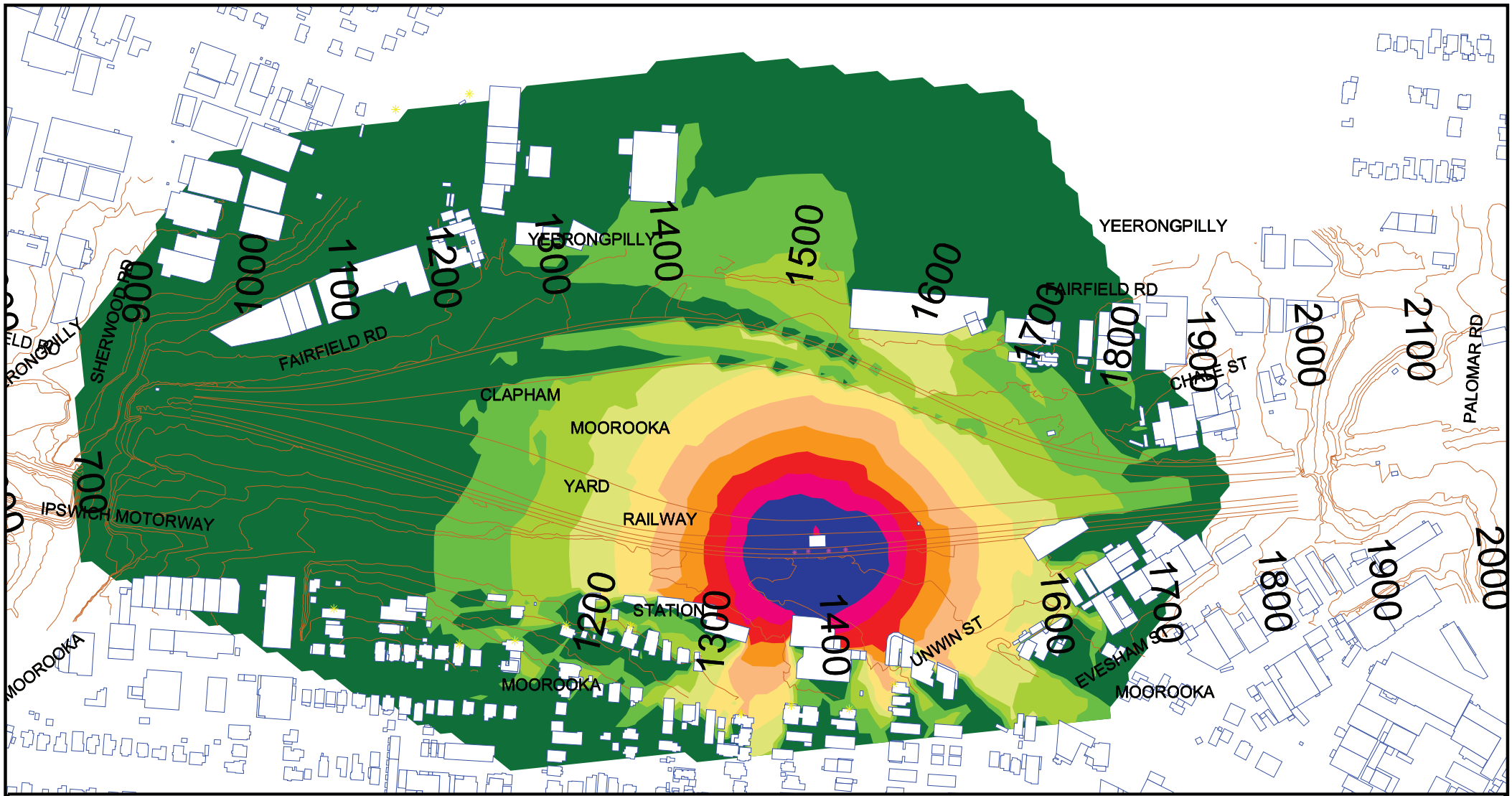
**20-2524 Cross River Rail Project**

Yeerongpilly Station - Scenario 1 Construction
Predicted LAmax Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:4500

0 25 50 100 m

SLR global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes:

Contours are interpolated. Check facade calculations for exact levels.

Signs and symbols

- Building
- Proposed Noise Barrier
- Elevation line
- Point source
- Point receiver

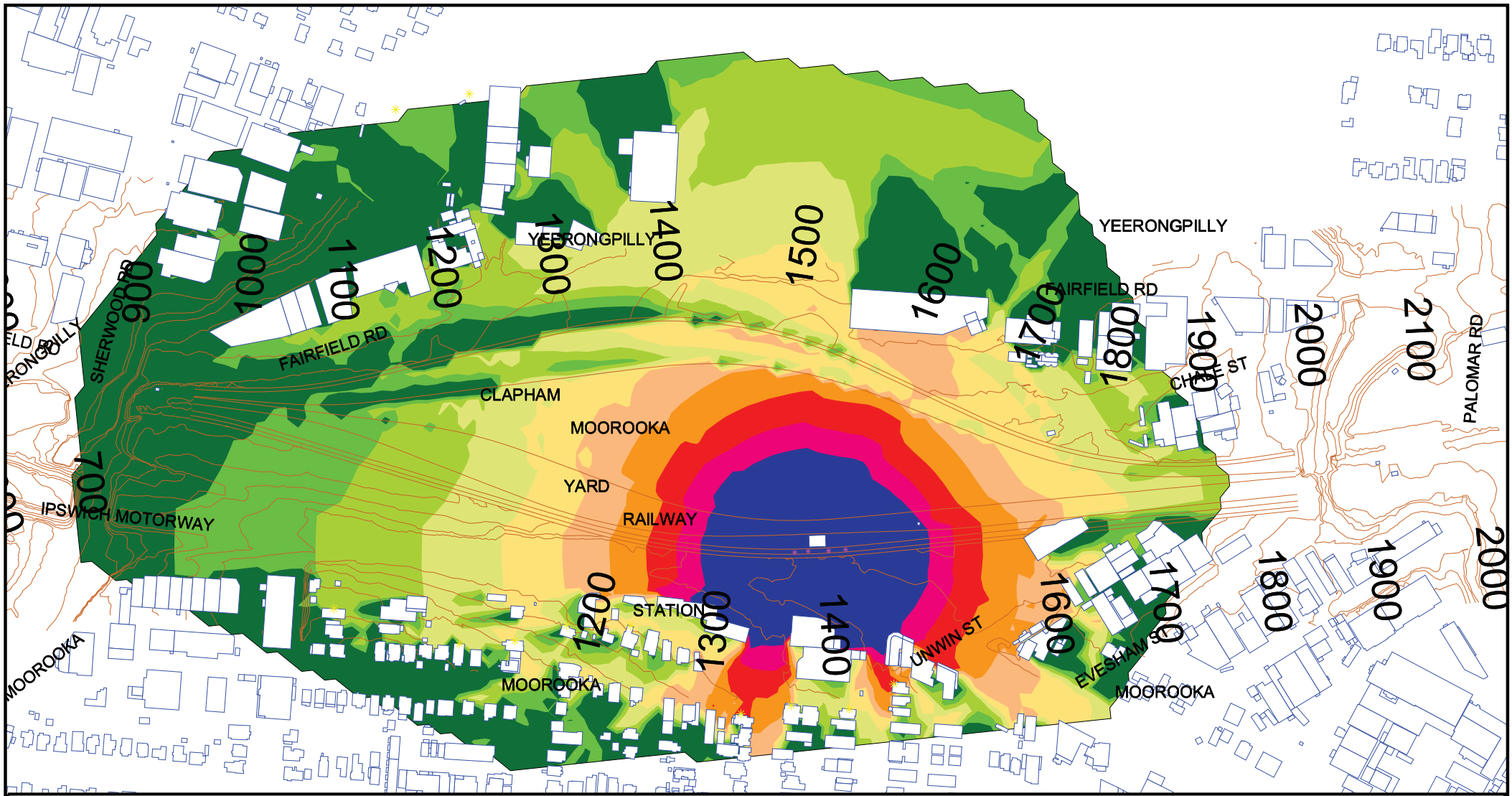
**20-2524 Cross River Rail Project**

Moorooka Station - Scenario 1 Construction
Predicted LAeq Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:3500

0 25 50 100 m

SLR global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes:

Contours are interpolated. Check facade calculations for exact levels.

Signs and symbols

- Building
- Proposed Noise Barrier
- Elevation line
- Point source
- Point receiver

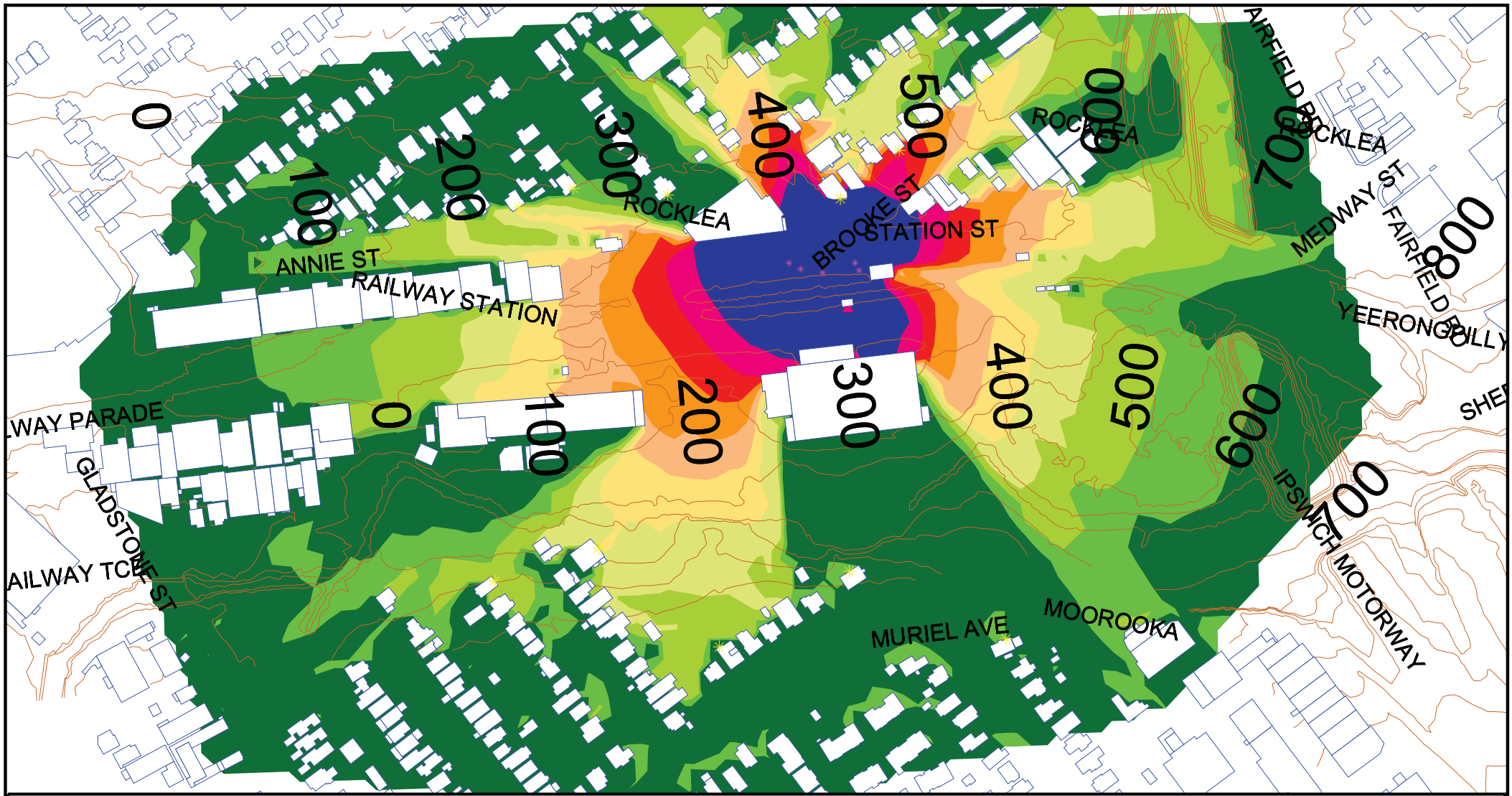
**20-2524 Cross River Rail Project**

Moorooka Station - Scenario 1 Construction
Predicted LAmax Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:3500

0 25 50 100 m

SLR global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes:

Contours are interpolated. Check facade calculations for exact levels.

Signs and symbols

- Building
- Proposed Noise Barrier
- Elevation line
- Point source
- Point receiver

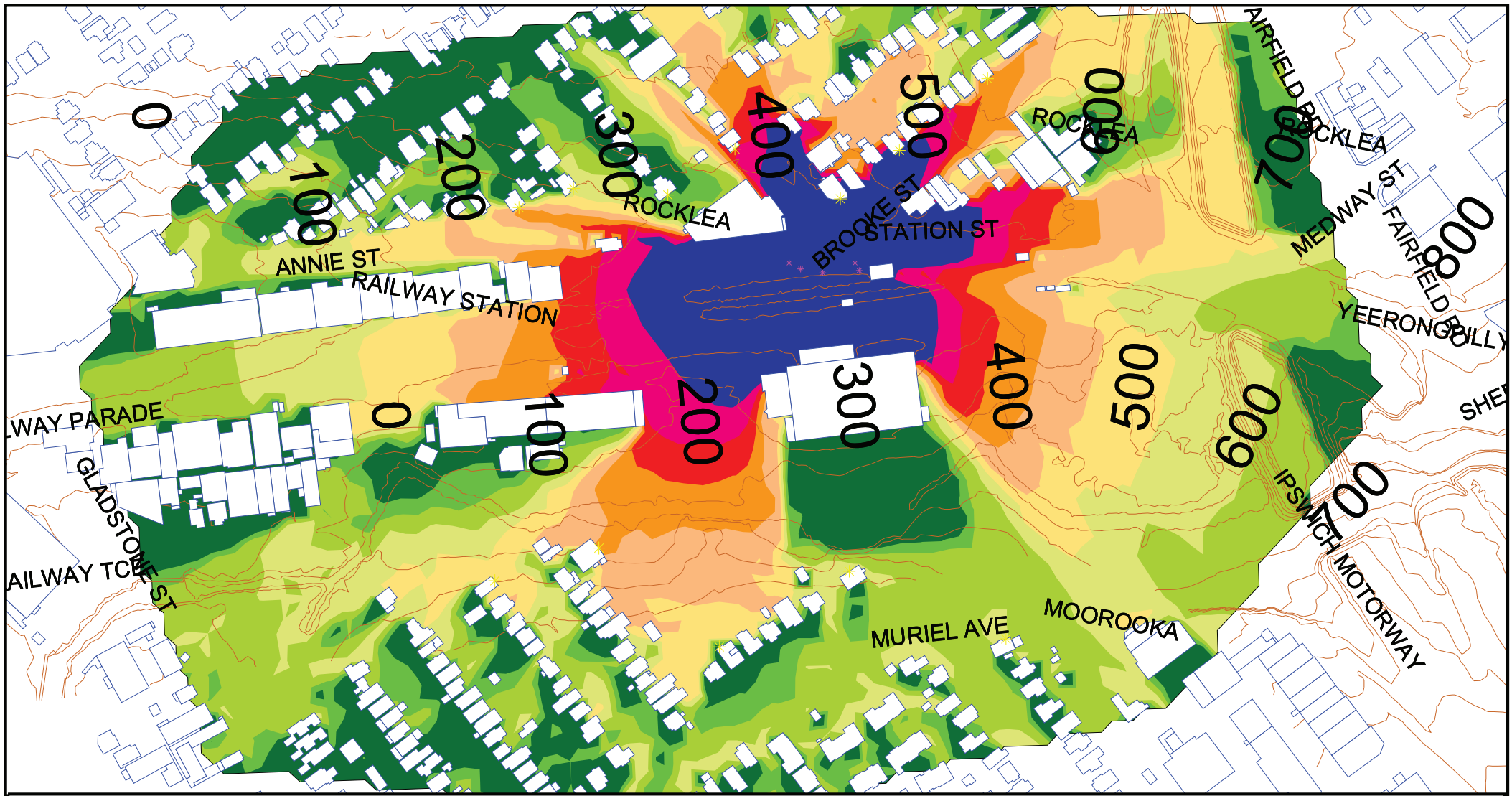
**20-2524 Cross River Rail Project**

Rocklea Station - Scenario 1 Construction
Predicted LAeq Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:2500

0 12.5 25 50 m

SLR
global environmental solutions




Noise Level
dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes:

Contours are interpolated. Check facade calculations for exact levels.

Signs and symbols

- Building
- Proposed Noise Barrier
- Elevation line
- Point source
- Point receiver

**20-2524 Cross River Rail Project**

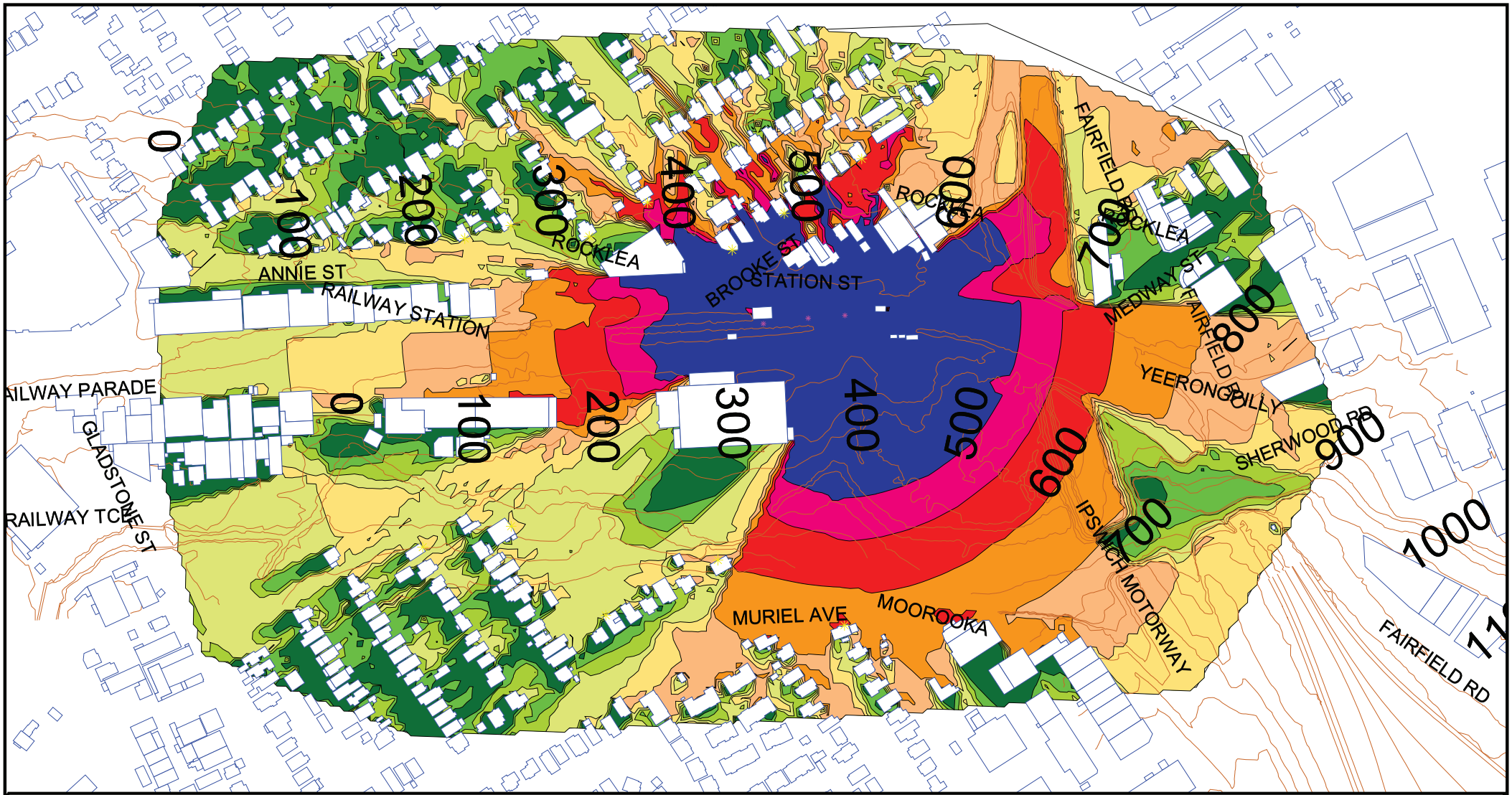
Rocklea Station - Scenario 1 Construction
Predicted LAmax Construction Noise Levels
Grid Noise Maps - 2 m Above Ground Level

Scale 1:2500

0 12.5 25 50 m

SLR
global environmental solutions

**Surface Track Work – Noise Contours**




LA10(18hour) dBA

| | |
|---|---|
| | <= 50 |
| 50 < | <= 53 |
| 53 < | <= 56 |
| 56 < | <= 59 |
| 59 < | <= 62 |
| 62 < | <= 65 |
| 65 < | <= 68 |
| 68 < | <= 71 |
| 71 < | <= 74 |
| 74 < | |

Notes:

Contours are interpolated. Check facade calculations for exact levels.

Signs and symbols

- Building
- Proposed Noise Barrier
- Elevation line
- Point source
- Point receiver

**20-2524 Cross River Rail Project**

Trackwork LAmax Noise Level "Footprint"
Grid Noise Maps - 2 m Above Ground Level

Scale 1:3000

0 25 50 100 m

SLR global environmental solutions