

002	For Approval	MIS	BN	29/07/20
001	DA Package	MIS	BN	10/07/20
REV	DESCRIPTION	DRAWN	APP'D	DATE

Noise Level Legend - $L_{Aeq,1hr}$ in dB(A)					
<div></div> < 45	<div></div> 49-51	<div></div> 55-57	<div></div> 61-63	<div></div> 67-69	
<div></div> 45-47	<div></div> 51-53	<div></div> 57-59	<div></div> 63-65	<div></div> 69-71	
<div></div> 47-49	<div></div> 53-55	<div></div> 59-61	<div></div> 65-67	<div></div> > 71	



Waterloo Integrated  
Station Development

A Joint Venture Project

**JOHN HOLLAND** 


ARCHITECT/ENGINEER


WATERLOO OVER-STATION  
DEVELOPMENT - CUMULATIVE  
ASSESSMENT

CONSTRUCTION NOISE  
EMISSIONS - STRUCTURE  
L11 TO L15, WITH MITIGATION

PROJECT

TITLE





Noise Model  
Construction Noise Modelling Results  
Noise & Vibration

1:200  
SCALE @ A0

46198  
PROJECT NO

ALL-AC-GRM  
DRAWING NO

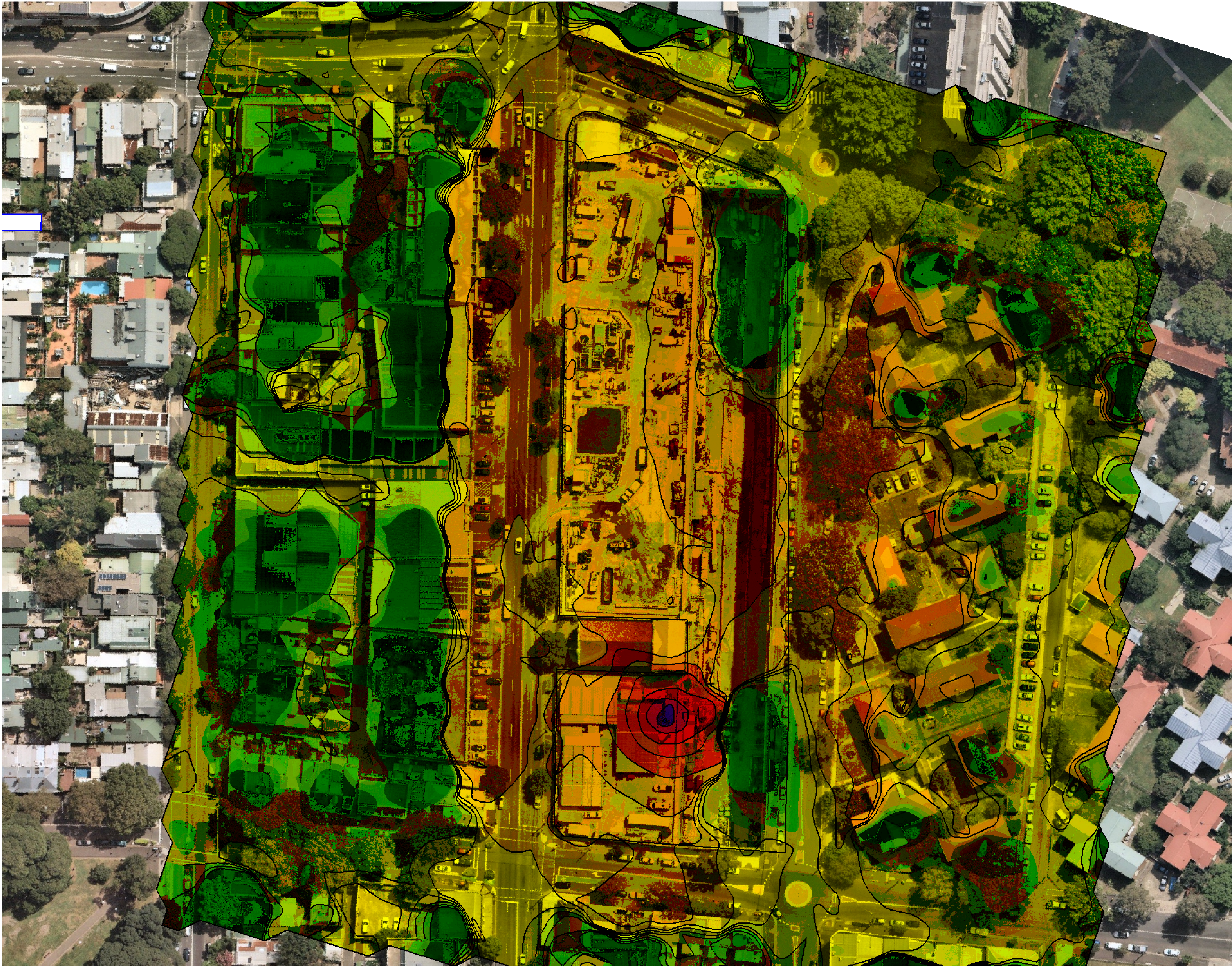
001  
REV

THIS DRAWING HAS BEEN DOCUMENTED IN COLOUR.  
THIS DRAWING IS REQUIRED TO BE PRINTED IN COLOUR.  
FAILING TO DO SO MAY RESULT IN LOSS OF INFORMATION.  
BLACK & WHITE PRINTING MAY BE USED IF SPECIFIC BLACK & WHITE  
DOCUMENTS HAVE BEEN OBTAINED FROM WIG.









002	For Approval				
001	DA Package				
REV	DESCRIPTION	MIS	BN	29/07/20	
		MIS	BN	10/07/20	
		DRAWN	APPD	DATE	

Noise Level Legend - $L_{Aeq,1hr}$ in dB(A)					
<div></div>	< 45	<div></div>	49-51	<div></div>	55-57
<div></div>	45-47	<div></div>	51-53	<div></div>	57-59
<div></div>	47-49	<div></div>	53-55	<div></div>	59-61
<div></div>		<div></div>		<div></div>	61-63
<div></div>		<div></div>		<div></div>	63-65
<div></div>		<div></div>		<div></div>	65-67
<div></div>		<div></div>		<div></div>	67-69
<div></div>		<div></div>		<div></div>	69-71
<div></div>		<div></div>		<div></div>	> 71



Waterloo Integrated  
Station Development  
A Joint Venture Project  
**JOHN HOLLAND**  
**mirvac**


ARCHITECT/CLIENT

WATERLOO OVER-STATION  
DEVELOPMENT - CUMULATIVE  
ASSESSMENT

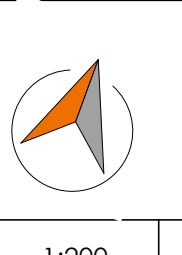
CONSTRUCTION NOISE  
EMISSIONS - STRUCTURE  
L16 TO L20, WITH MITIGATION

PROJECT

TITLE



Stantec



1:200  
SCALE @ A0

46198  
PROJECT NO

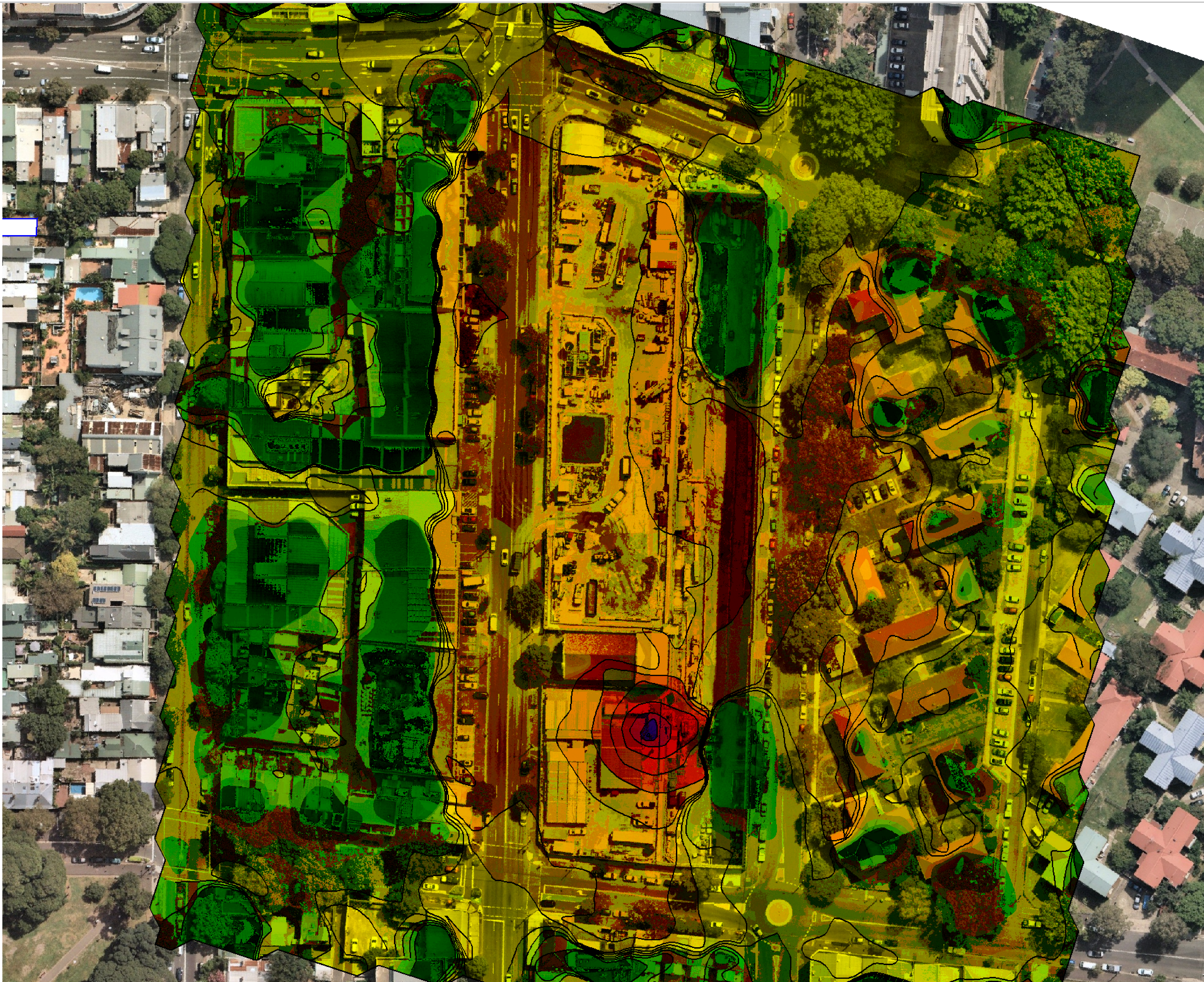
ALL-AC-GRM  
DRAWING NO

001  
REV

Noise Model  
Construction Noise Modelling Results  
Noise & Vibration

THIS DRAWING HAS BEEN DOCUMENTED IN COLOUR.  
THIS DRAWING IS REQUIRED TO BE PRINTED IN COLOUR.  
FAILING TO DO SO MAY RESULT IN LOSS OF INFORMATION.  
BLACK & WHITE PRINTING MAY BE USED IF SPECIFIC BLACK & WHITE  
DOCUMENTS HAVE BEEN OBTAINED FROM WIG.





002	For Approval	MIS	BN	29/07/20
001	DA Package	MIS	BN	10/07/20
REV	DESCRIPTION	DRAWN	APP'D	DATE

Noise Level Legend - $L_{Aeq,1hr}$ in dB(A)					
<span style="color: green;">■</span>	< 45	<span style="color: lightgreen;">■</span>	49-51	<span style="color: yellow;">■</span>	55-57
<span style="color: green;">■</span>	45-47	<span style="color: lightgreen;">■</span>	51-53	<span style="color: yellow;">■</span>	57-59
<span style="color: green;">■</span>	47-49	<span style="color: lightgreen;">■</span>	53-55	<span style="color: yellow;">■</span>	59-61
<span style="color: orange;">■</span>	61-63	<span style="color: orange;">■</span>	63-65	<span style="color: red;">■</span>	65-67
<span style="color: red;">■</span>	67-69	<span style="color: purple;">■</span>	69-71	<span style="color: blue;">■</span>	> 71



Waterloo Integrated  
Station Development

A Joint Venture Project

**JOHN HOLLAND** 


ARCHITECT/ENGINEER

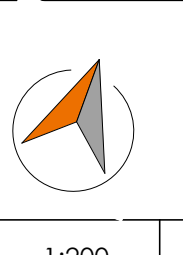
WATERLOO OVER-STATION  
DEVELOPMENT - CUMULATIVE  
ASSESSMENT

CONSTRUCTION NOISE  
EMISSIONS - STRUCTURE  
L21 TO L24, NO MITIGATION

PROJECT

TITLE





Noise Model  
Construction Noise Modelling Results  
Noise & Vibration

1:200  
SCALE @ A0

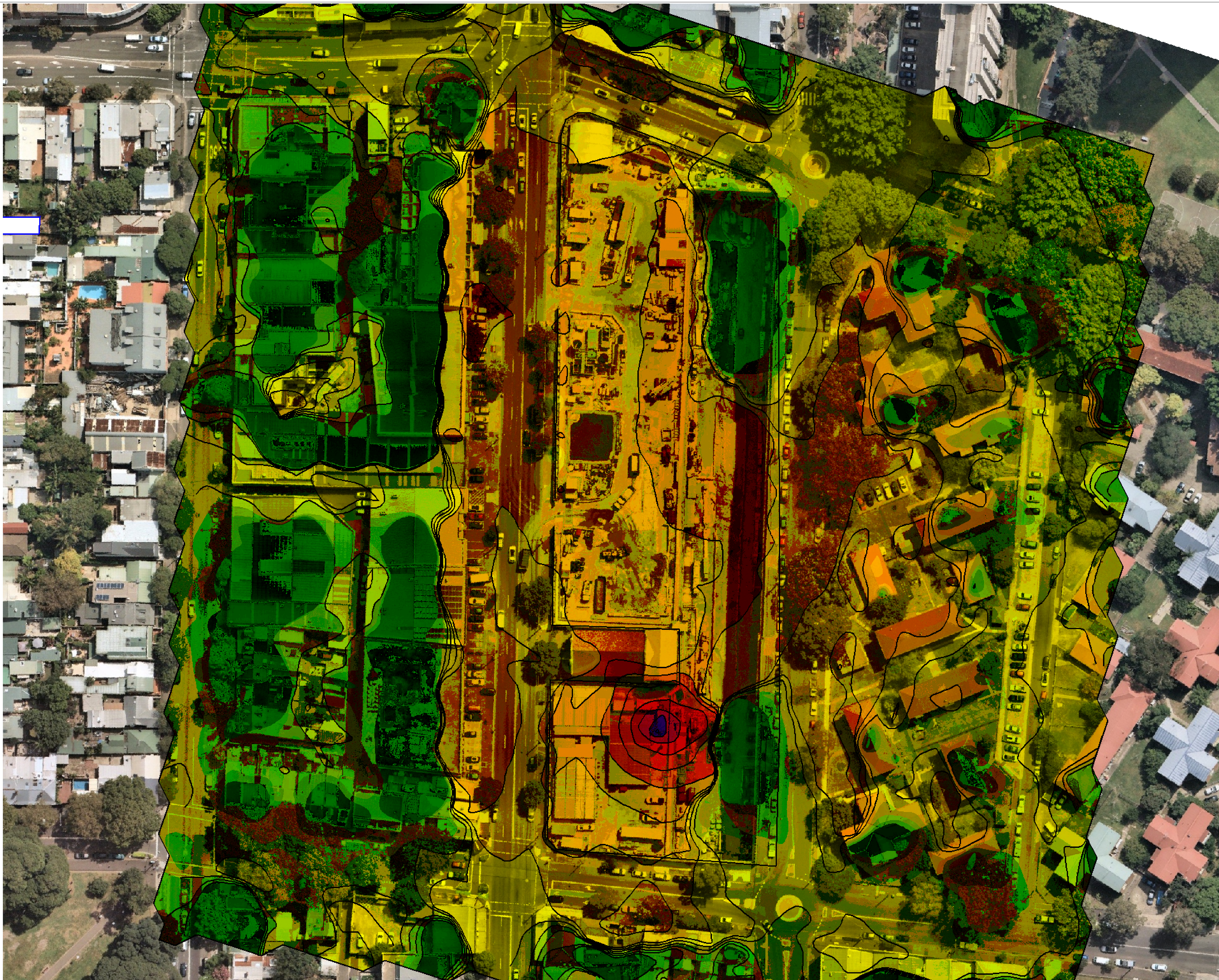
46198  
PROJECT NO

ALL-AC-GRM  
DRAWING NO

001  
REV

THIS DRAWING HAS BEEN DOCUMENTED IN COLOUR.  
THIS DRAWING IS REQUIRED TO BE PRINTED IN COLOUR.  
FAILING TO DO SO MAY RESULT IN LOSS OF INFORMATION.  
BLACK & WHITE PRINTING MAY BE USED IF SPECIFIC BLACK & WHITE  
DOCUMENTS HAVE BEEN OBTAINED FROM WIG.





THIS DRAWING HAS BEEN DOCUMENTED IN COLOUR.  
THIS DRAWING IS REQUIRED TO BE PRINTED IN COLOUR.  
FAILING TO DO SO MAY RESULT IN LOSS OF INFORMATION.  
BLACK & WHITE PRINTING MAY BE USED IF SPECIFIC BLACK & WHITE  
DOCUMENTS HAVE BEEN OBTAINED FROM WIG.

002	For Approval	MIS	BN	29/07/20
001	DA Package	MIS	BN	10/07/20
REV	DESCRIPTION	DRAWN	APPD	DATE

Noise Level Legend - $L_{Aeq,1hr}$ in dB(A)					
<span style="color: green;">■</span>	< 45	<span style="color: yellow;">■</span>	49-51	<span style="color: orange;">■</span>	55-57
<span style="color: green;">■</span>	45-47	<span style="color: yellow;">■</span>	51-53	<span style="color: orange;">■</span>	57-59
<span style="color: green;">■</span>	47-49	<span style="color: yellow;">■</span>	53-55	<span style="color: orange;">■</span>	59-61
<span style="color: red;">■</span>	61-63	<span style="color: red;">■</span>	63-65	<span style="color: red;">■</span>	65-67
<span style="color: purple;">■</span>	67-69	<span style="color: purple;">■</span>	69-71	<span style="color: purple;">■</span>	> 71



Waterloo Integrated  
Station Development  
A Joint Venture Project  
**JOHN HOLLAND**  
**mirvac**


ARCHITECT/CLIENT

WATERLOO OVER-STATION  
DEVELOPMENT - CUMULATIVE  
ASSESSMENT

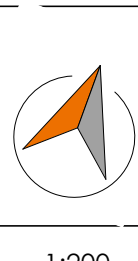
CONSTRUCTION NOISE  
EMISSIONS - STRUCTURE  
L21 TO L24, WITH MITIGATION

PROJECT

TITLE



Stantec



1:200  
SCALE @ A0

46198  
PROJECT NO

ALL-AC-GRM  
DRAWING NO

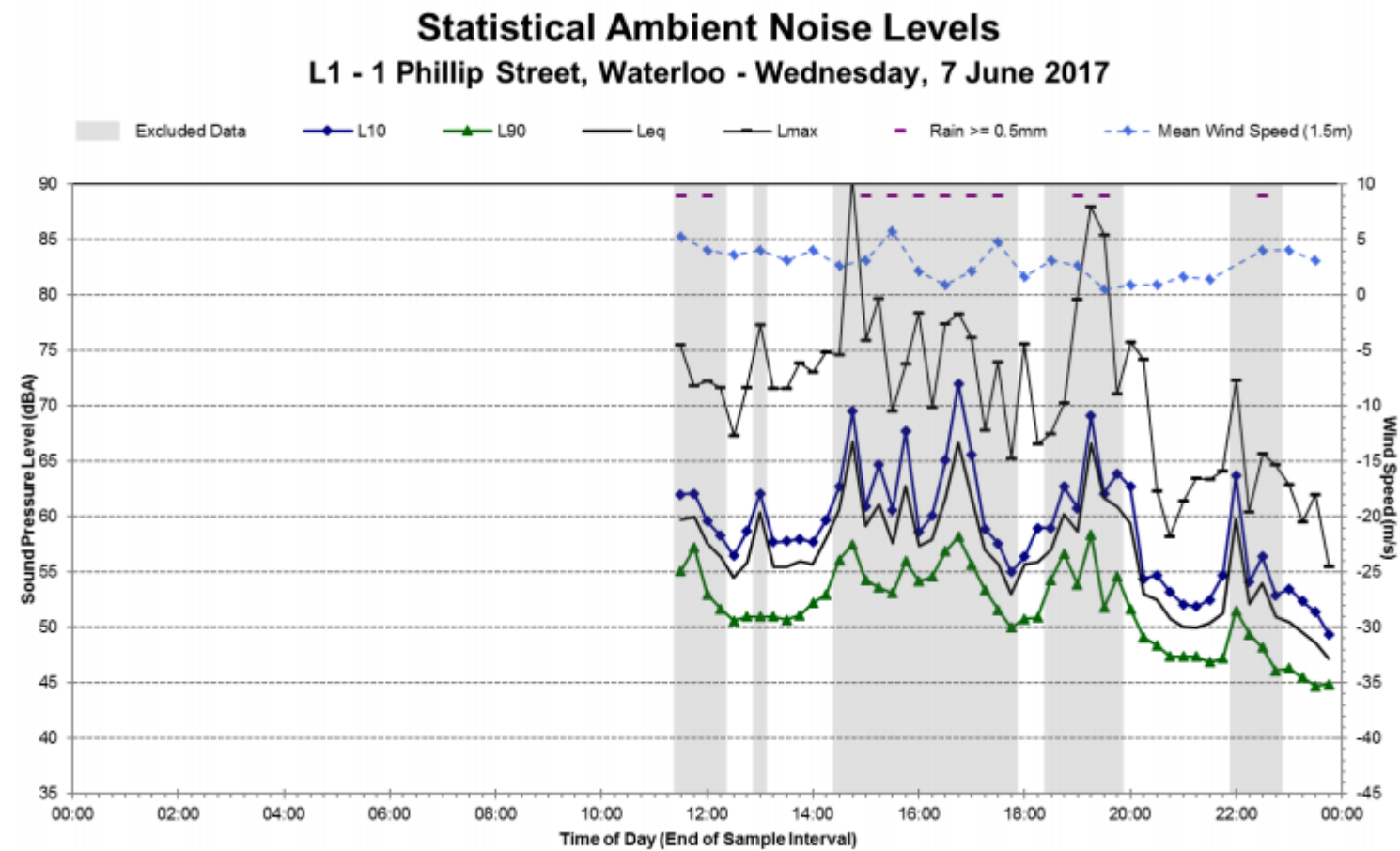
001  
REV

Noise Model  
Construction Noise Modelling Results  
Noise & Vibration

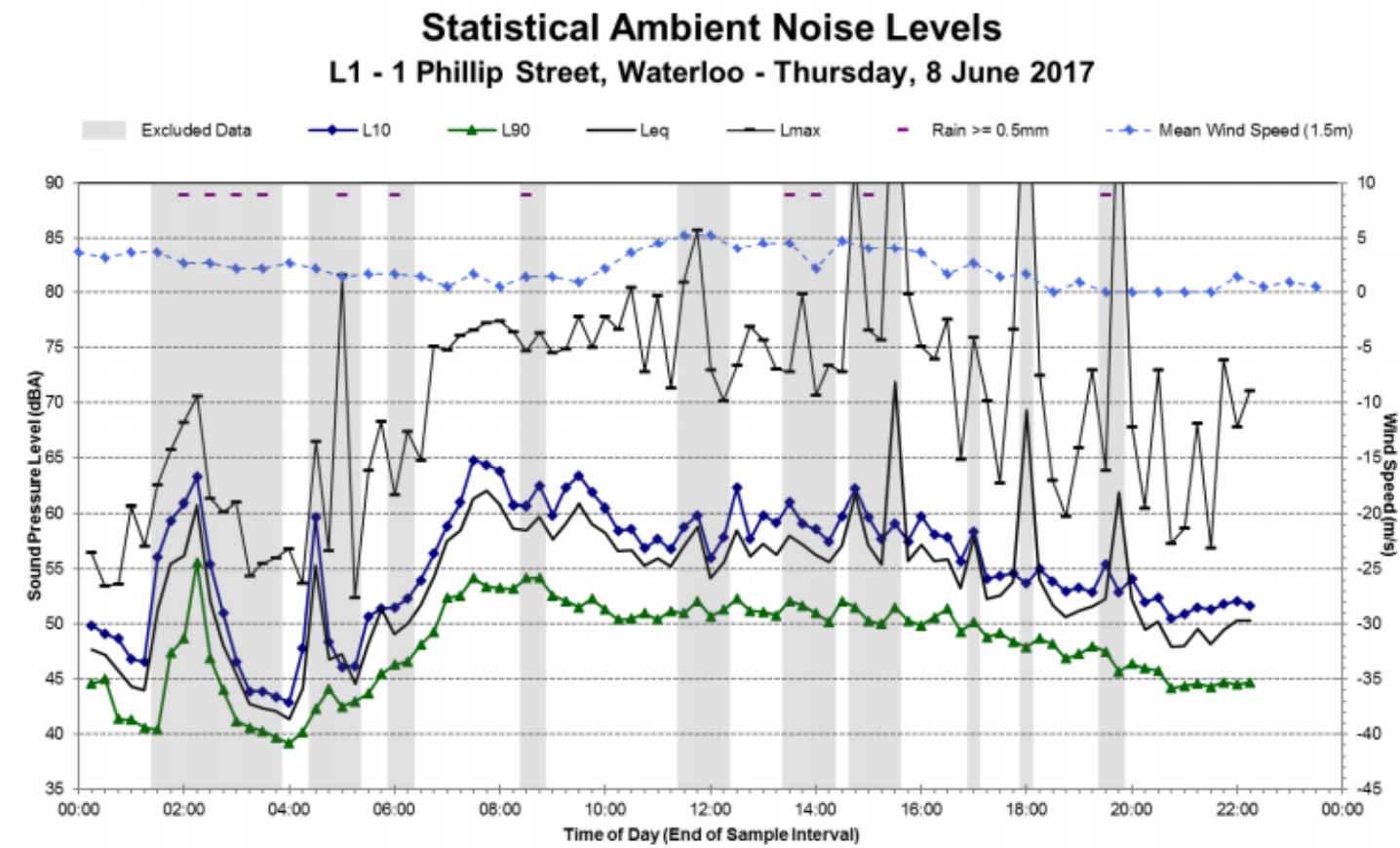


## 12.4 Appendix 4 – Daily Long-Term (Unattended) Survey Results

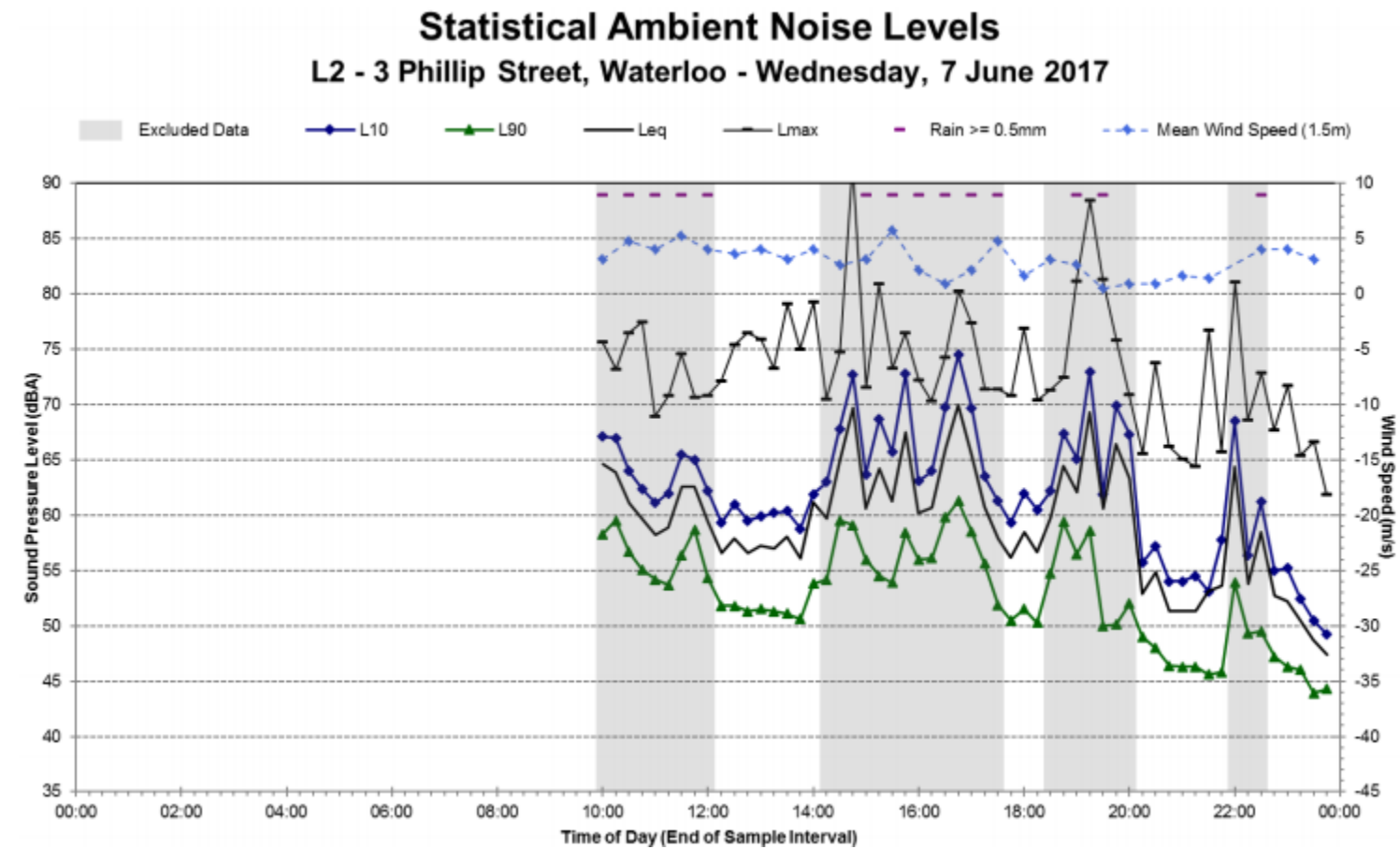
### 12.4.1 Historical Noise Survey Results by SLR Consulting



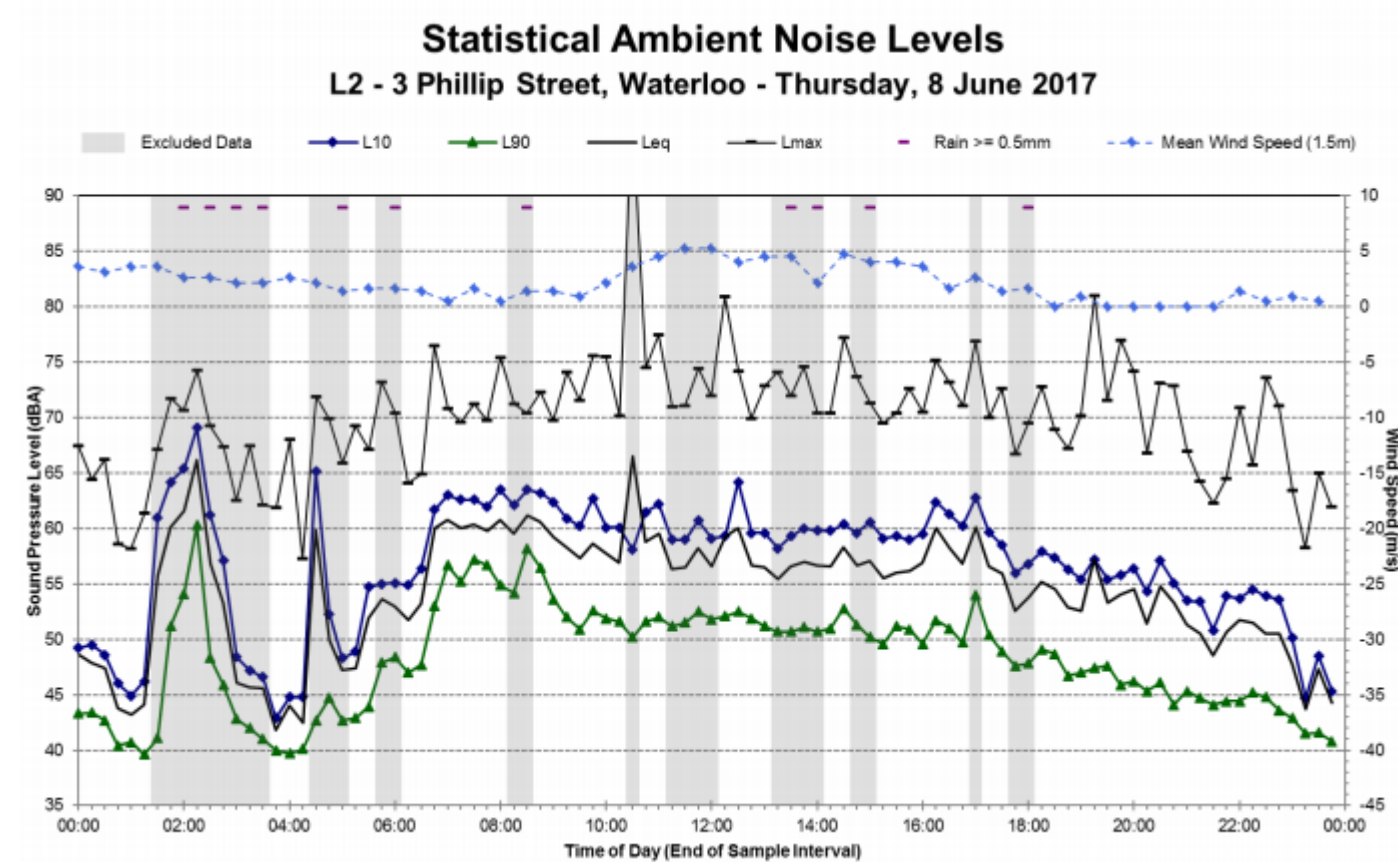




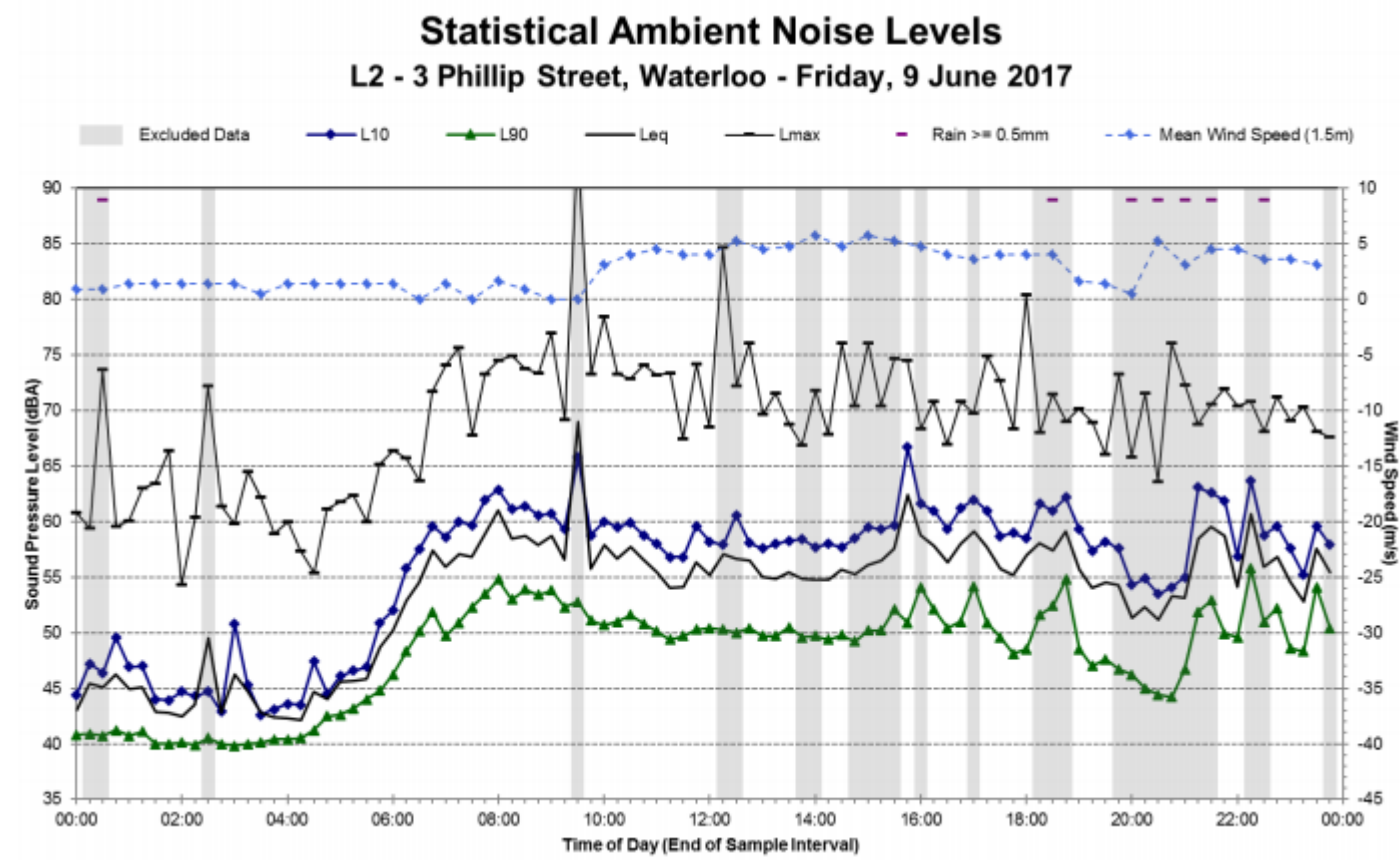




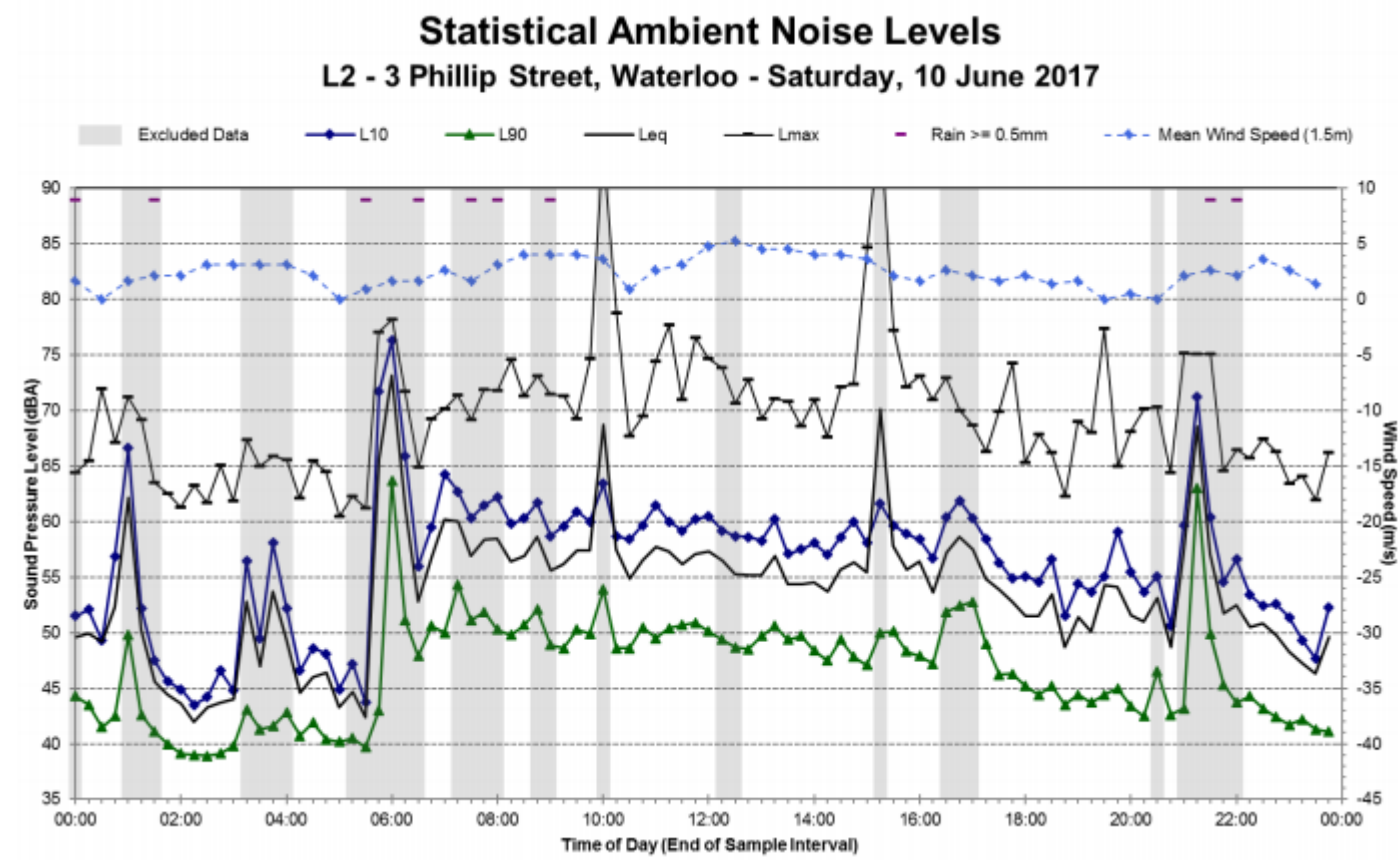






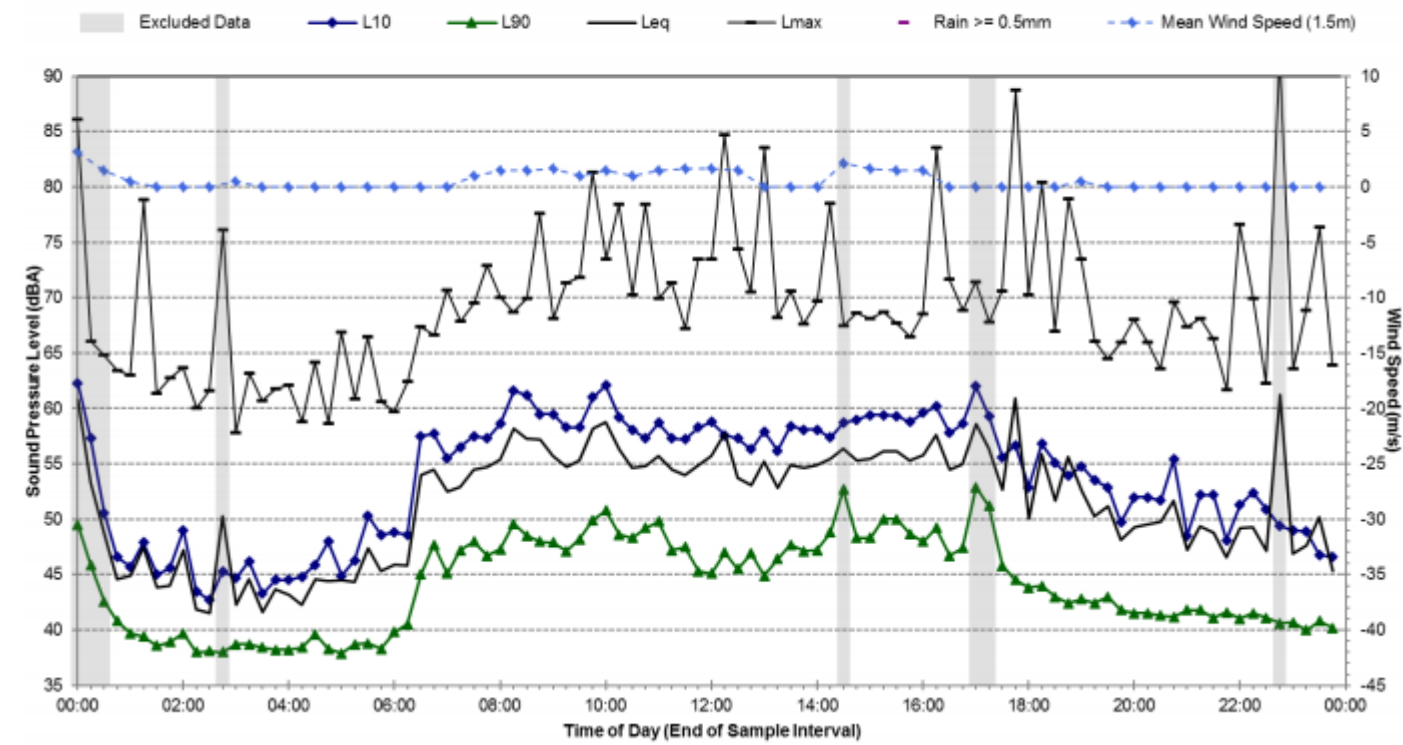




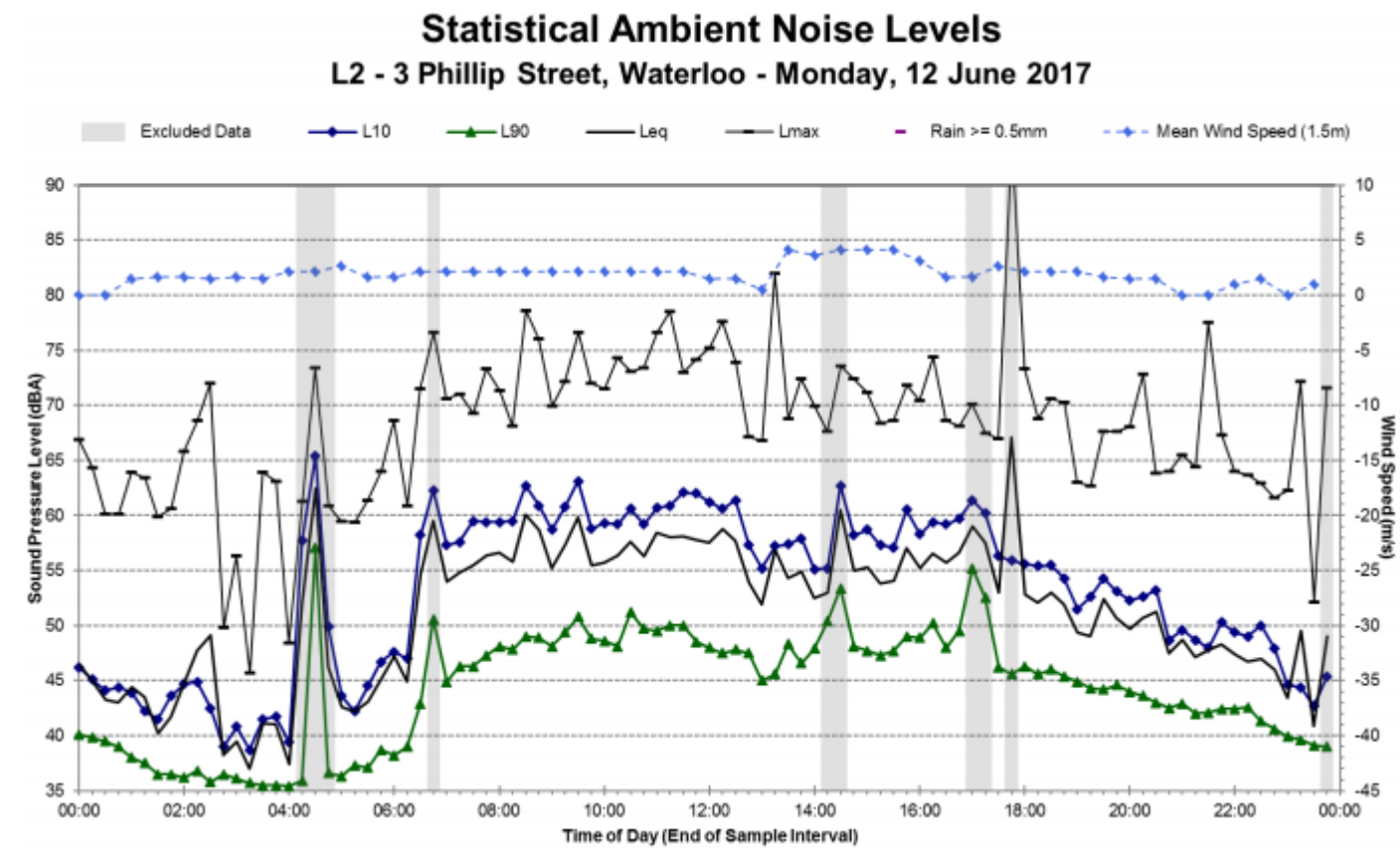




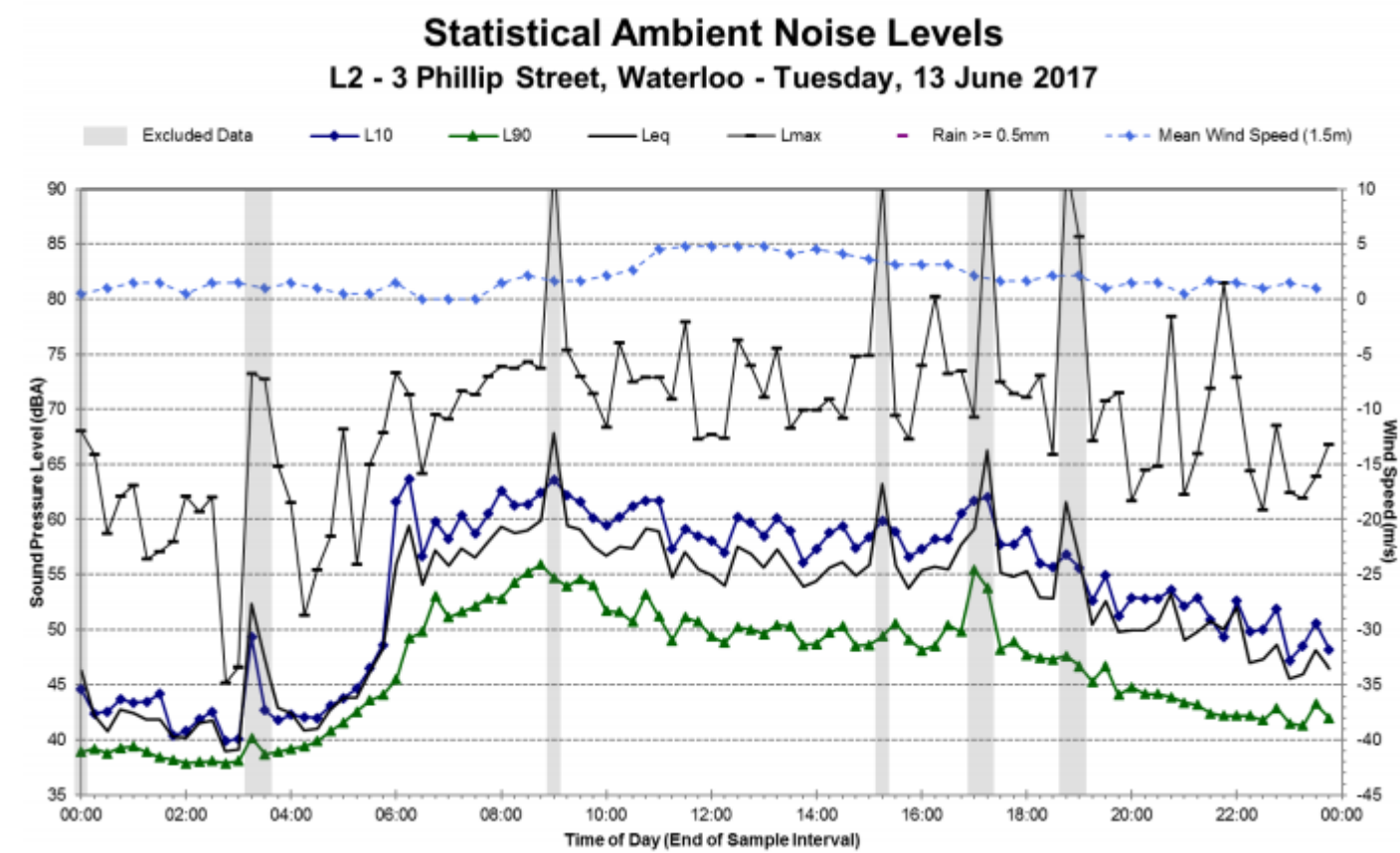
### Statistical Ambient Noise Levels L2 - 3 Phillip Street, Waterloo - Sunday, 11 June 2017





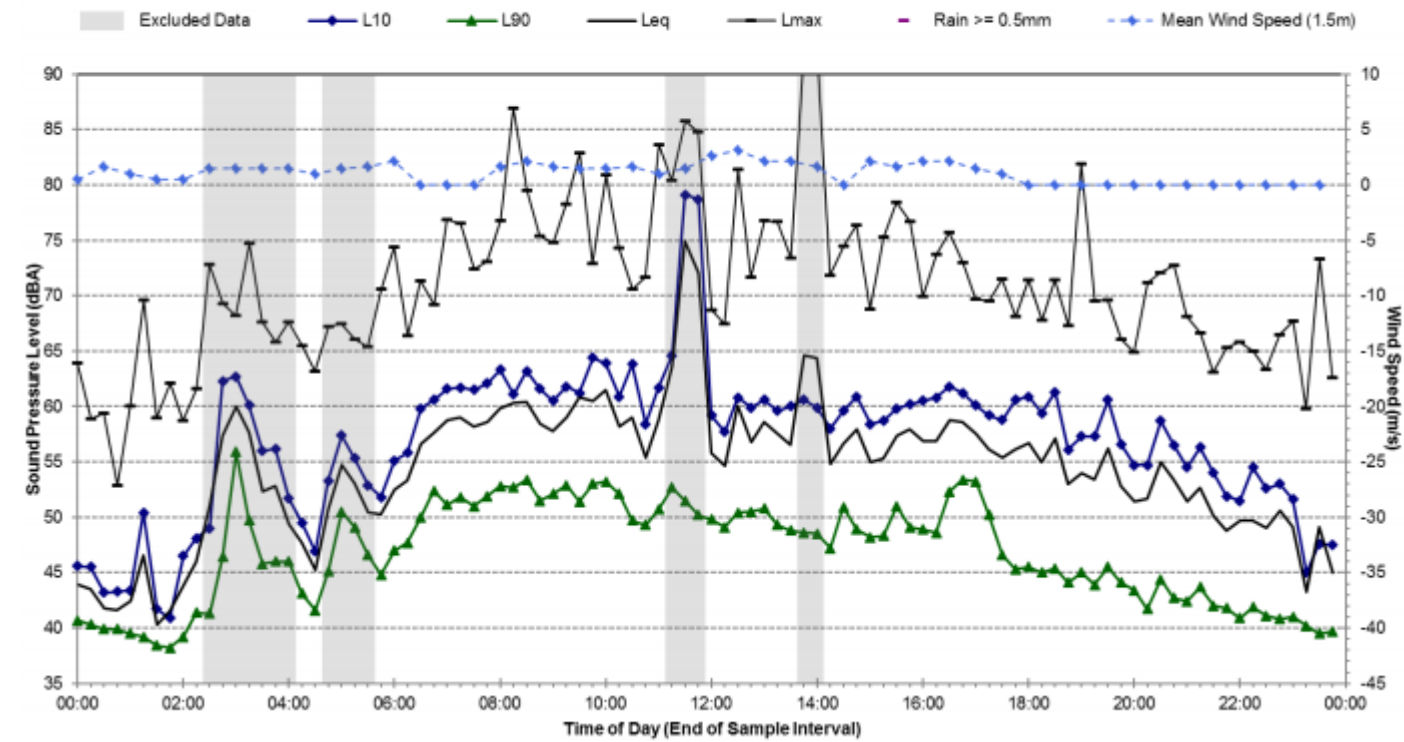




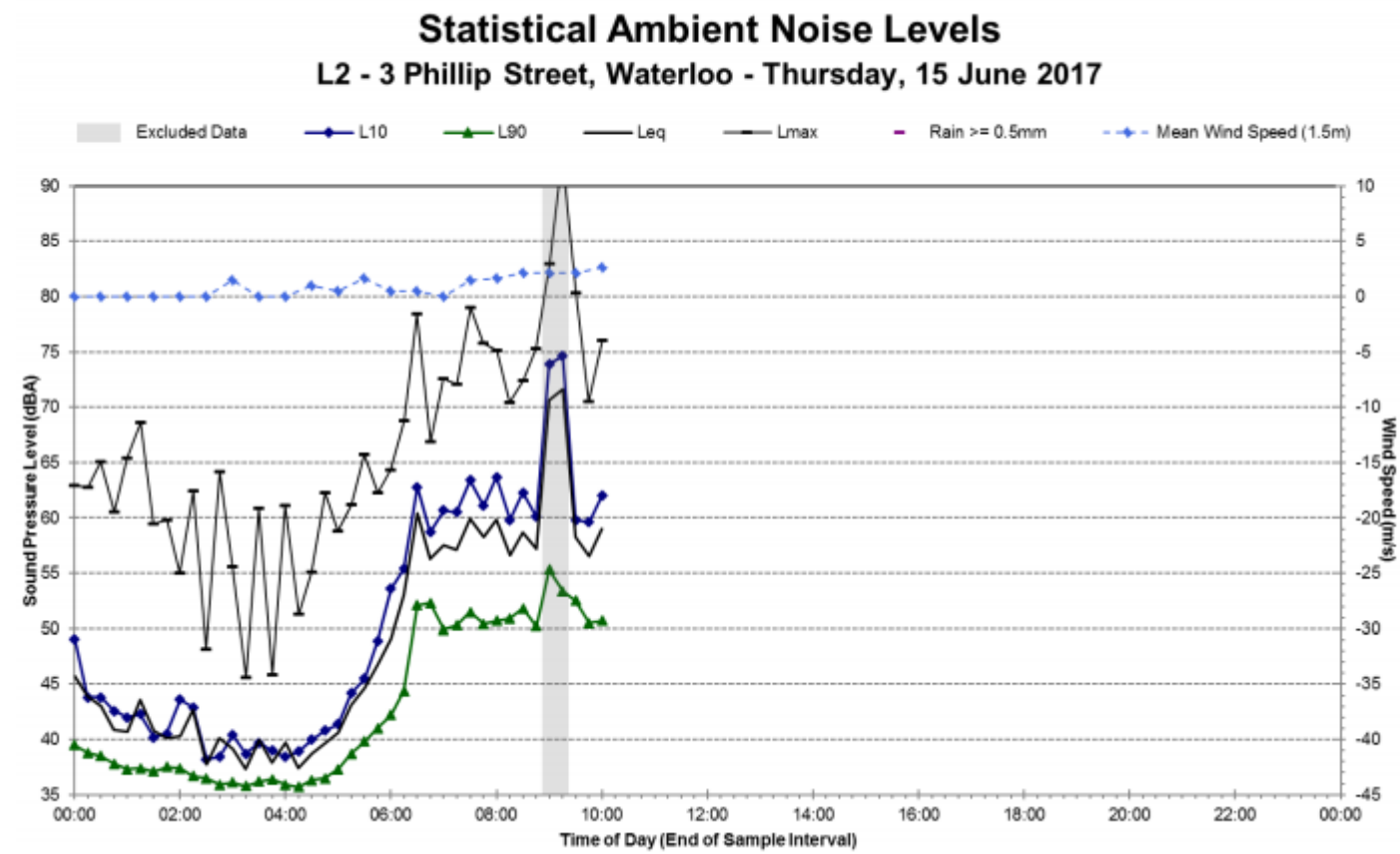




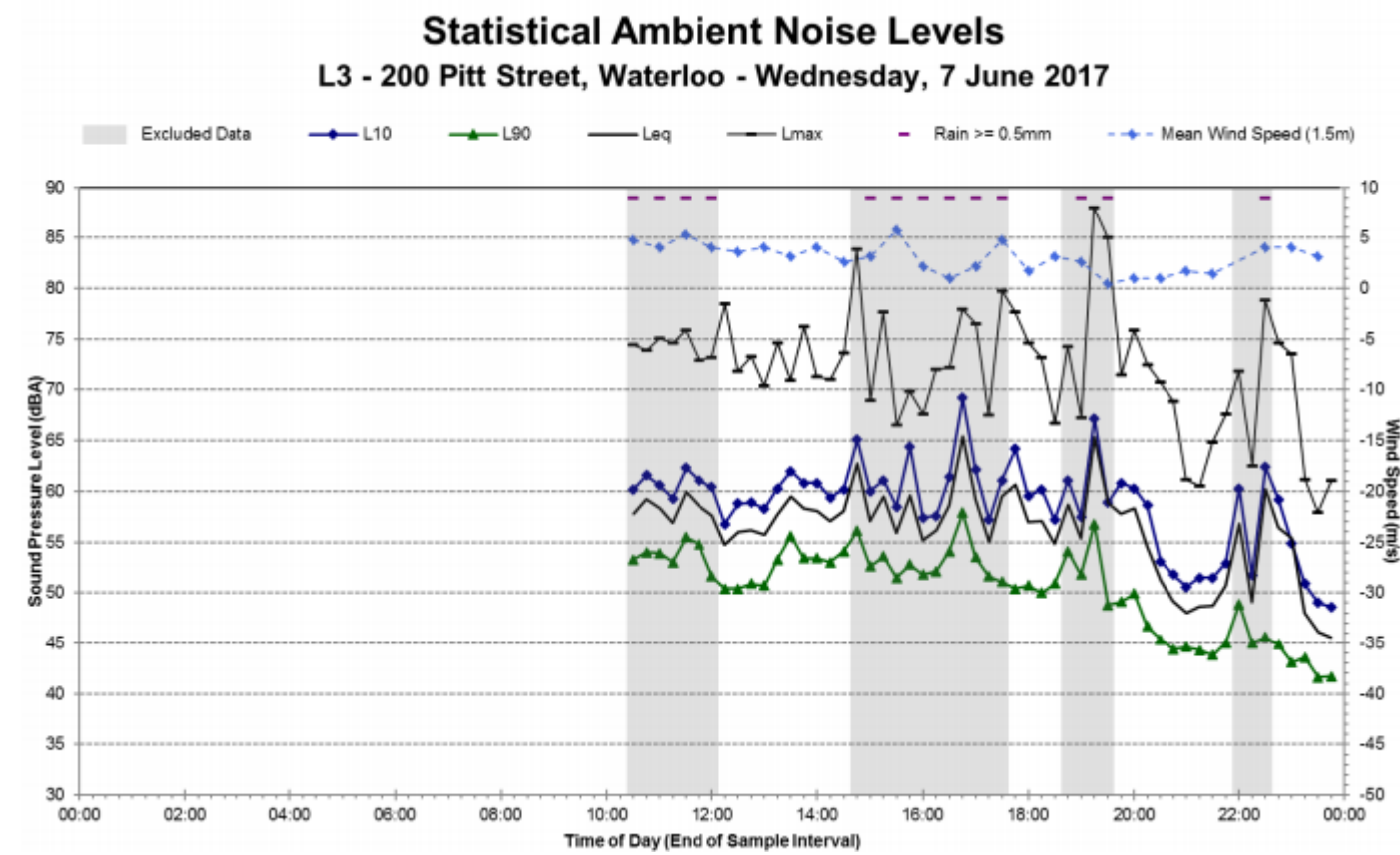
### Statistical Ambient Noise Levels L2 - 3 Phillip Street, Waterloo - Wednesday, 14 June 2017





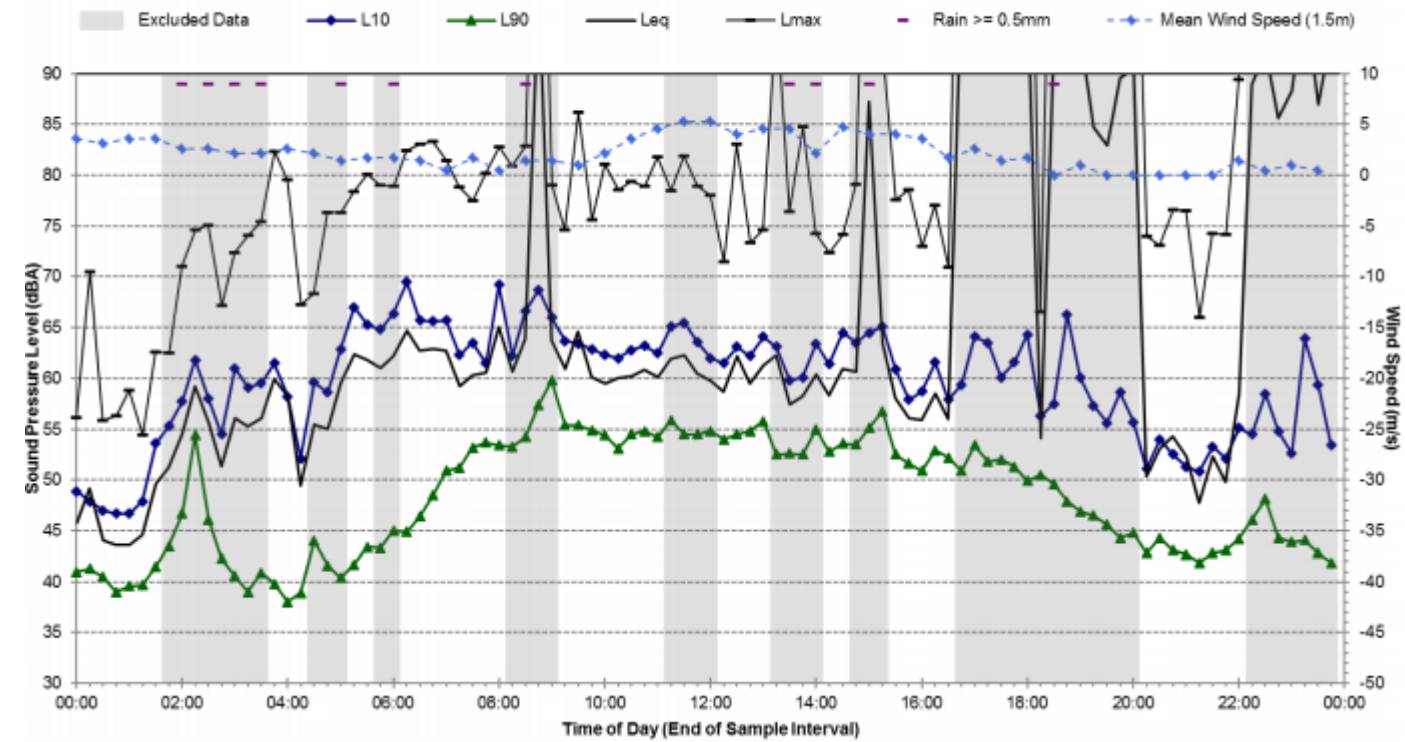




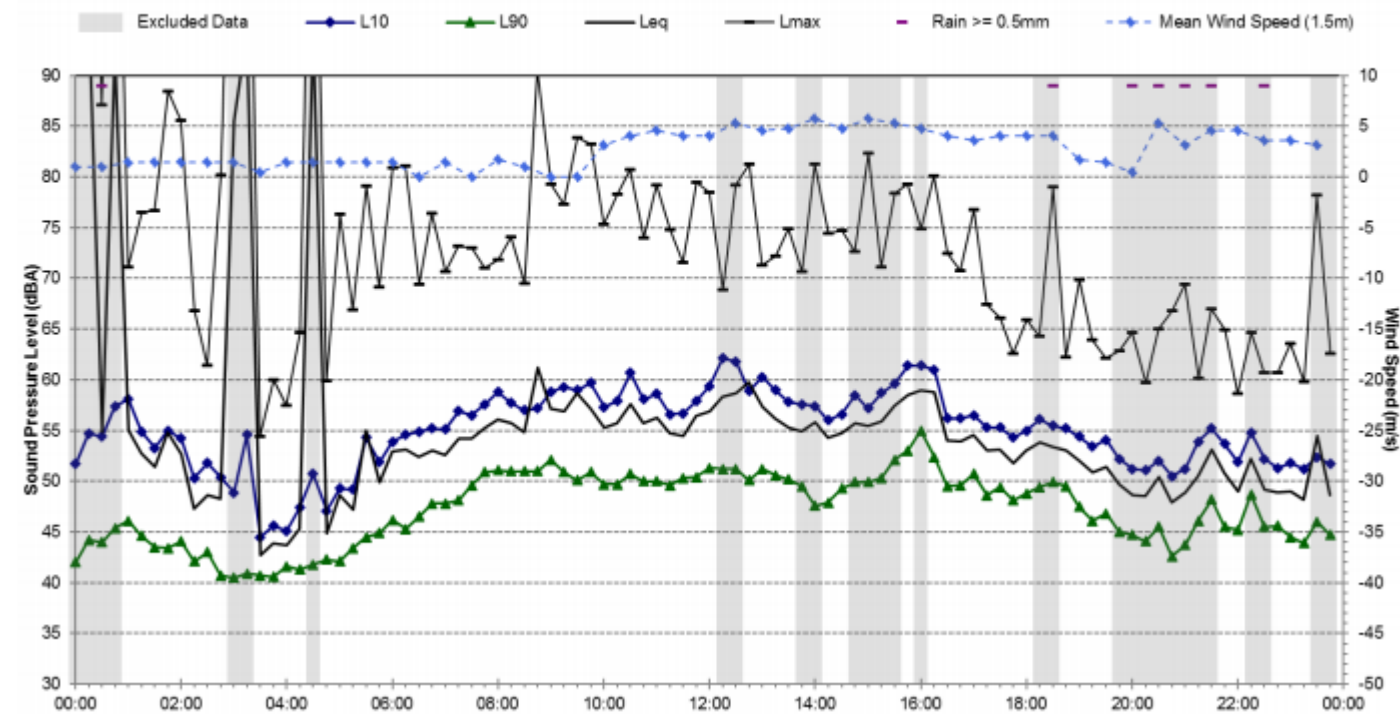




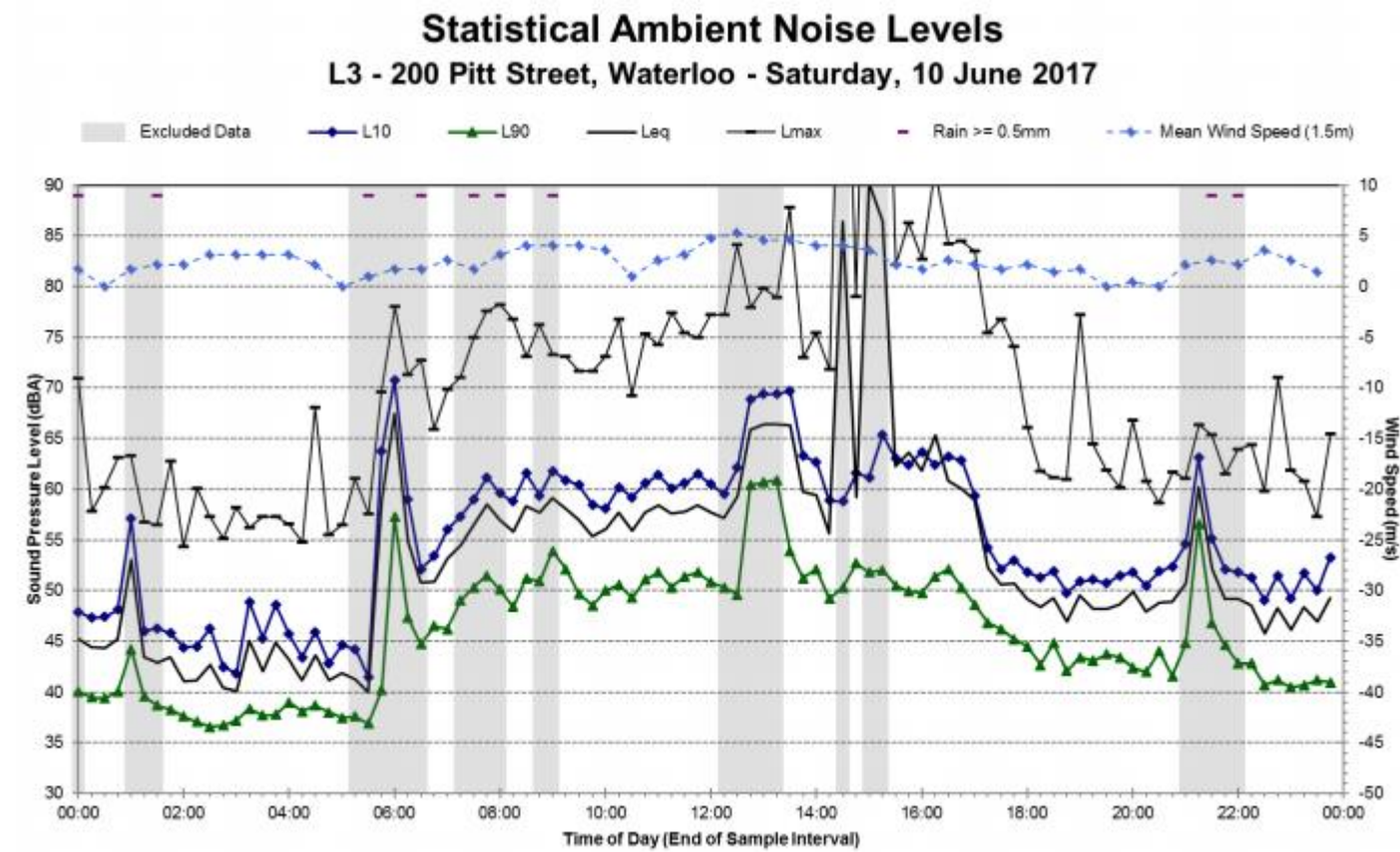
### Statistical Ambient Noise Levels L3 - 200 Pitt Street, Waterloo - Thursday, 8 June 2017



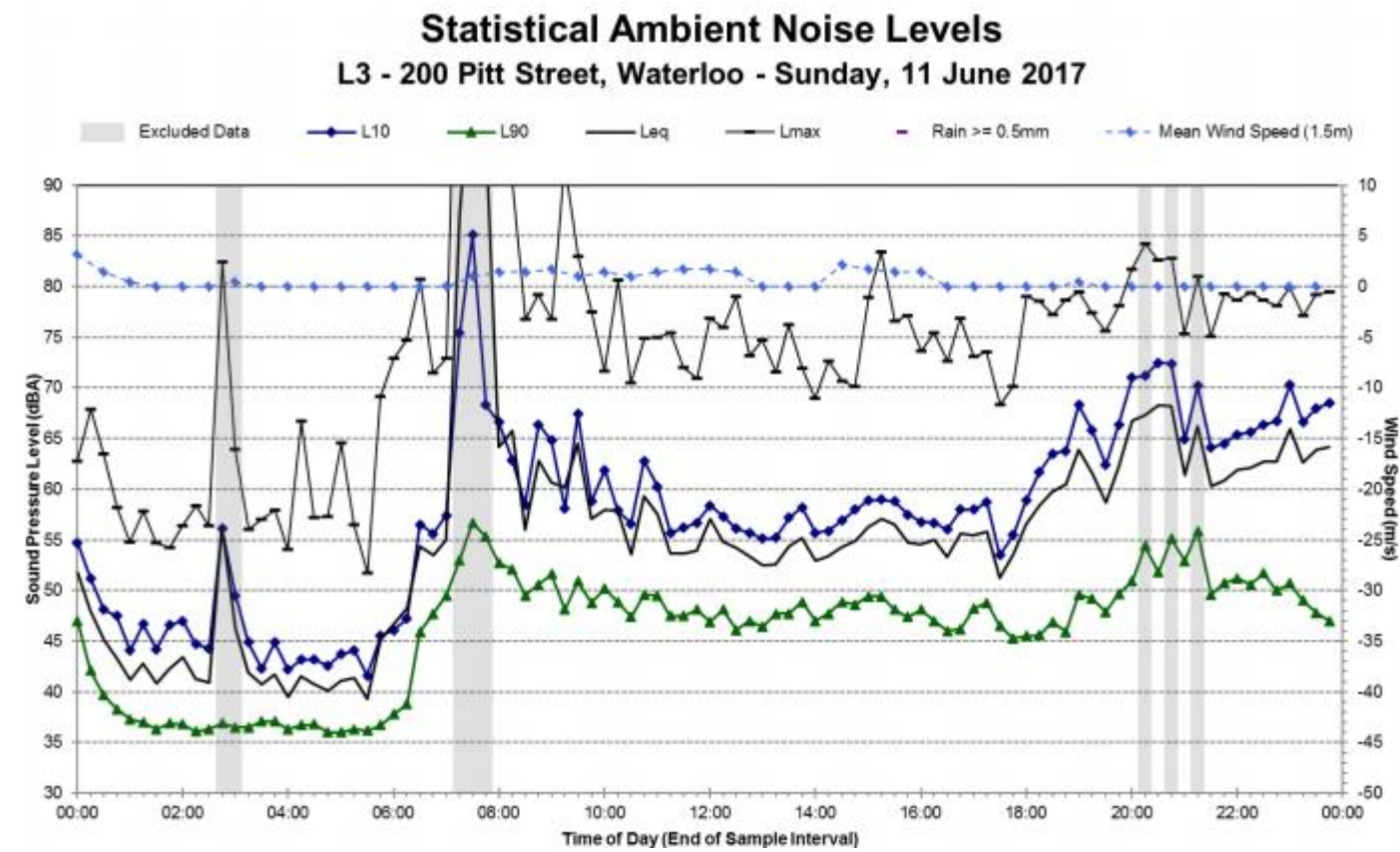
### Statistical Ambient Noise Levels L3 - 200 Pitt Street, Waterloo - Friday, 9 June 2017



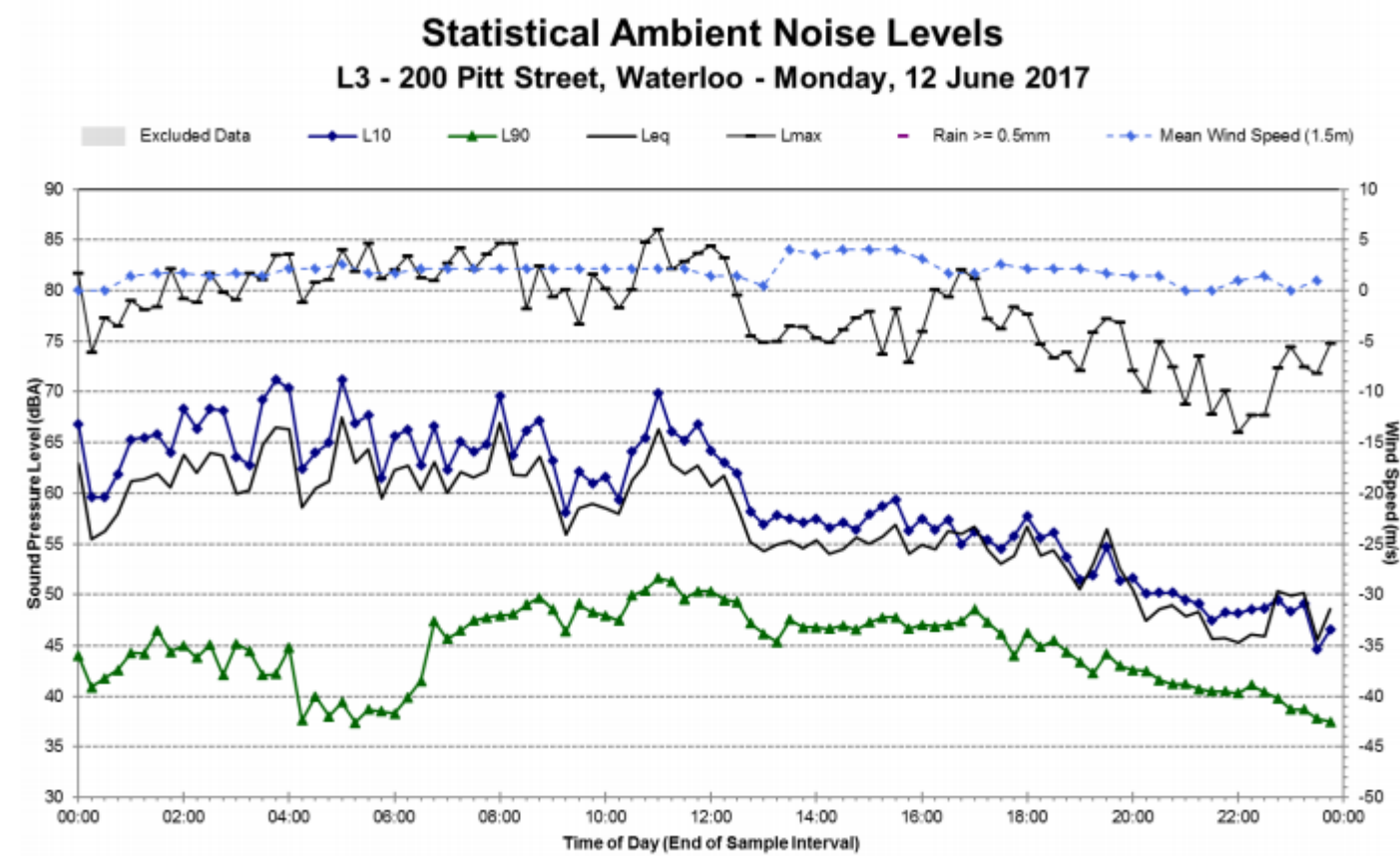




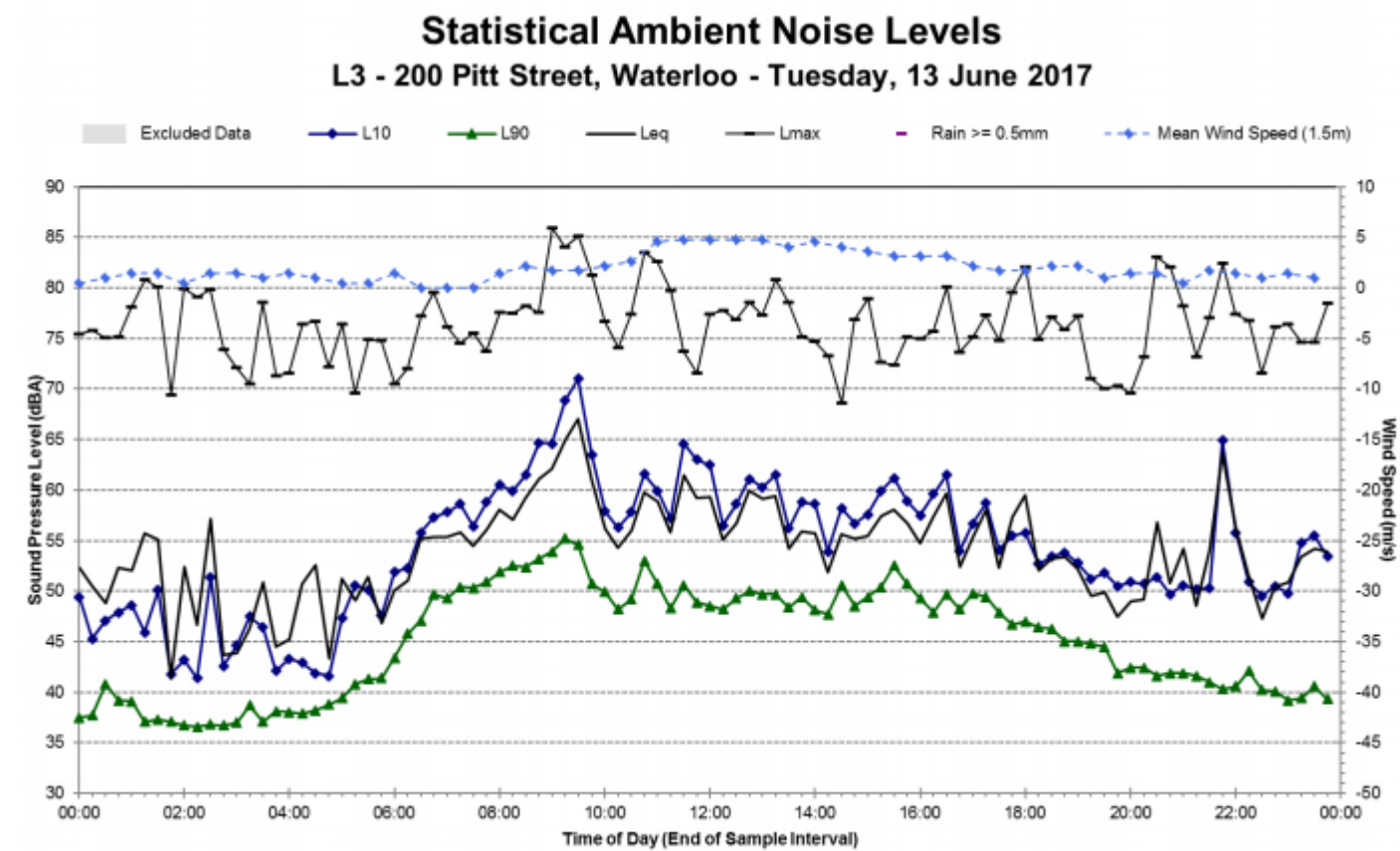




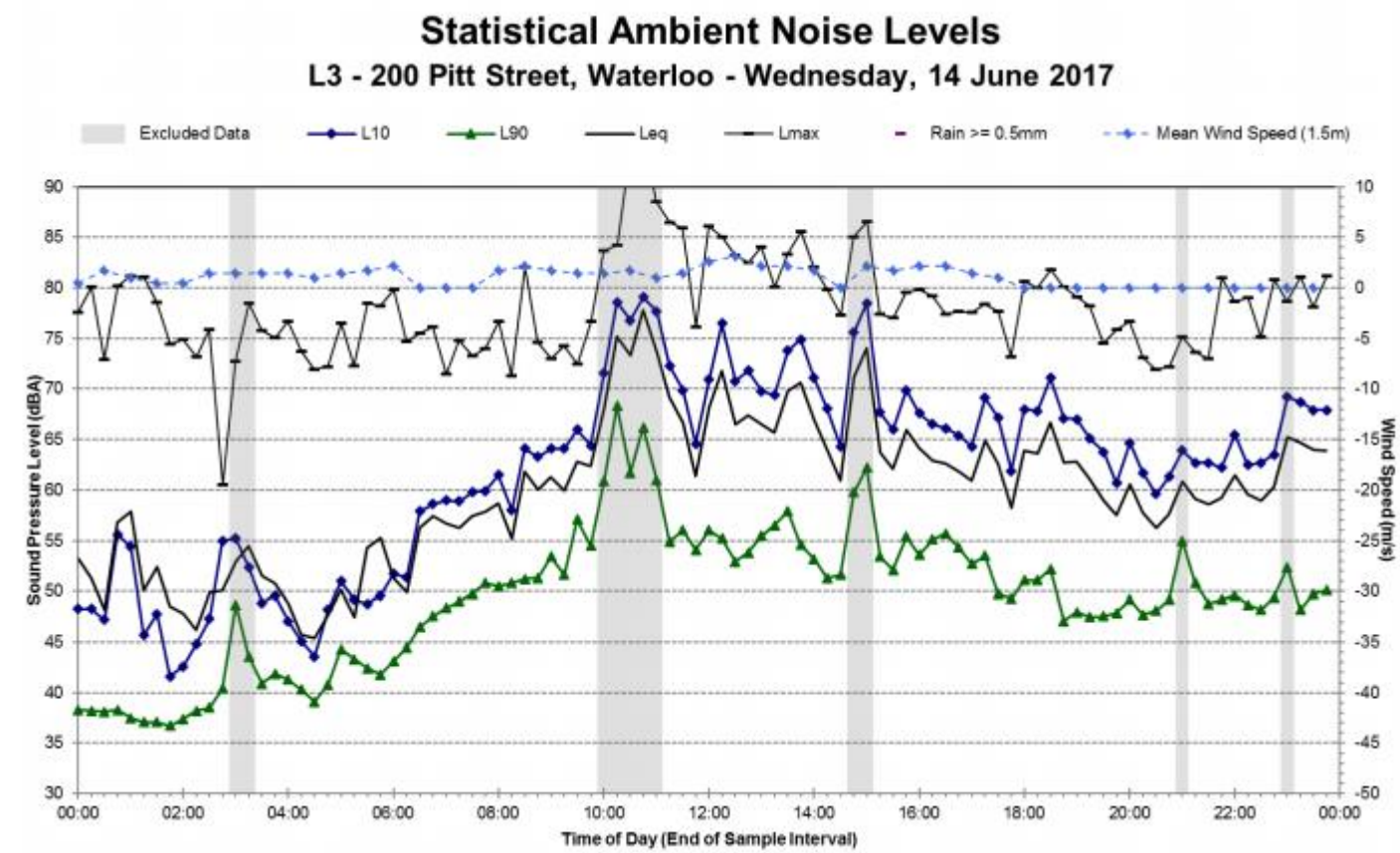




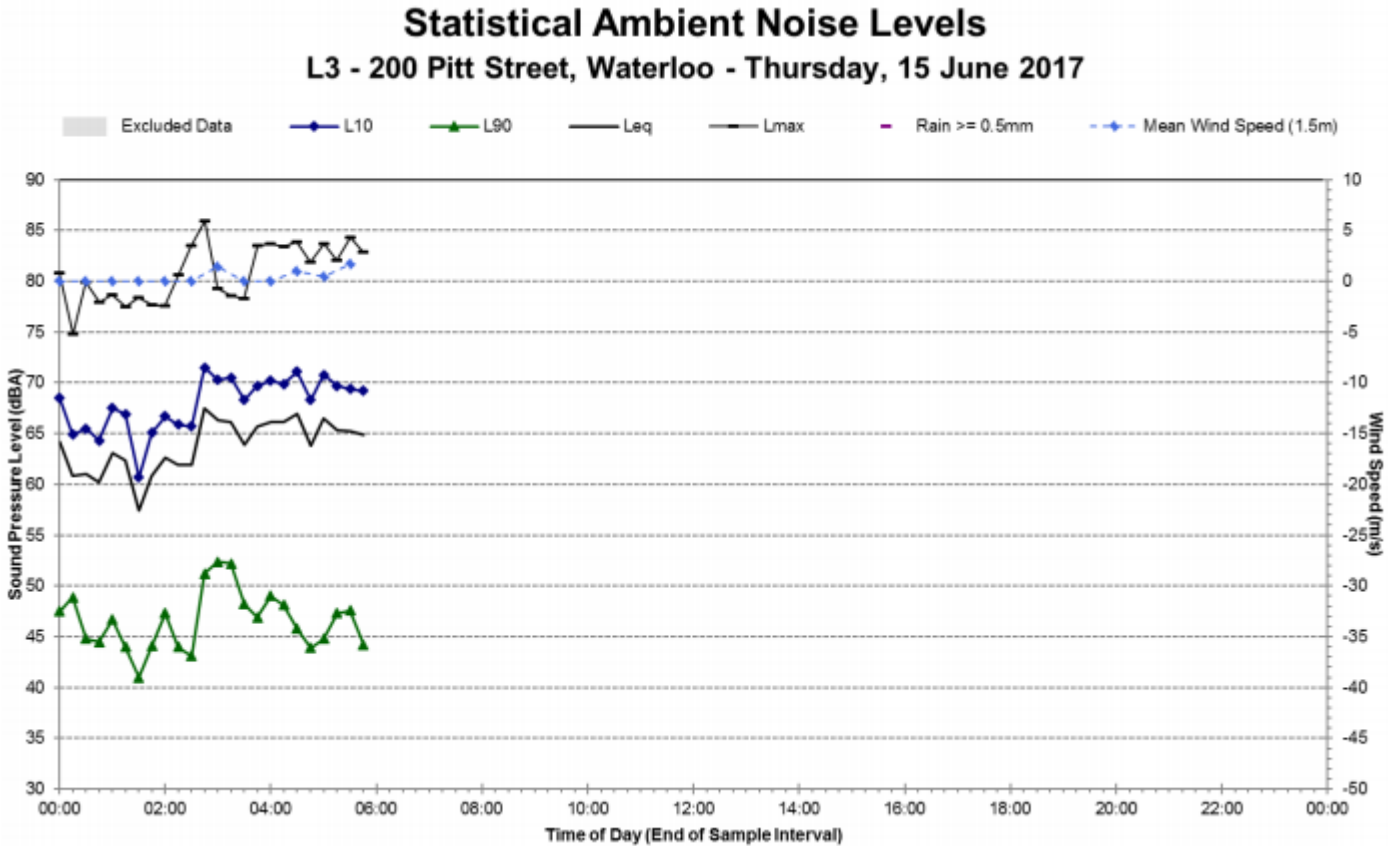




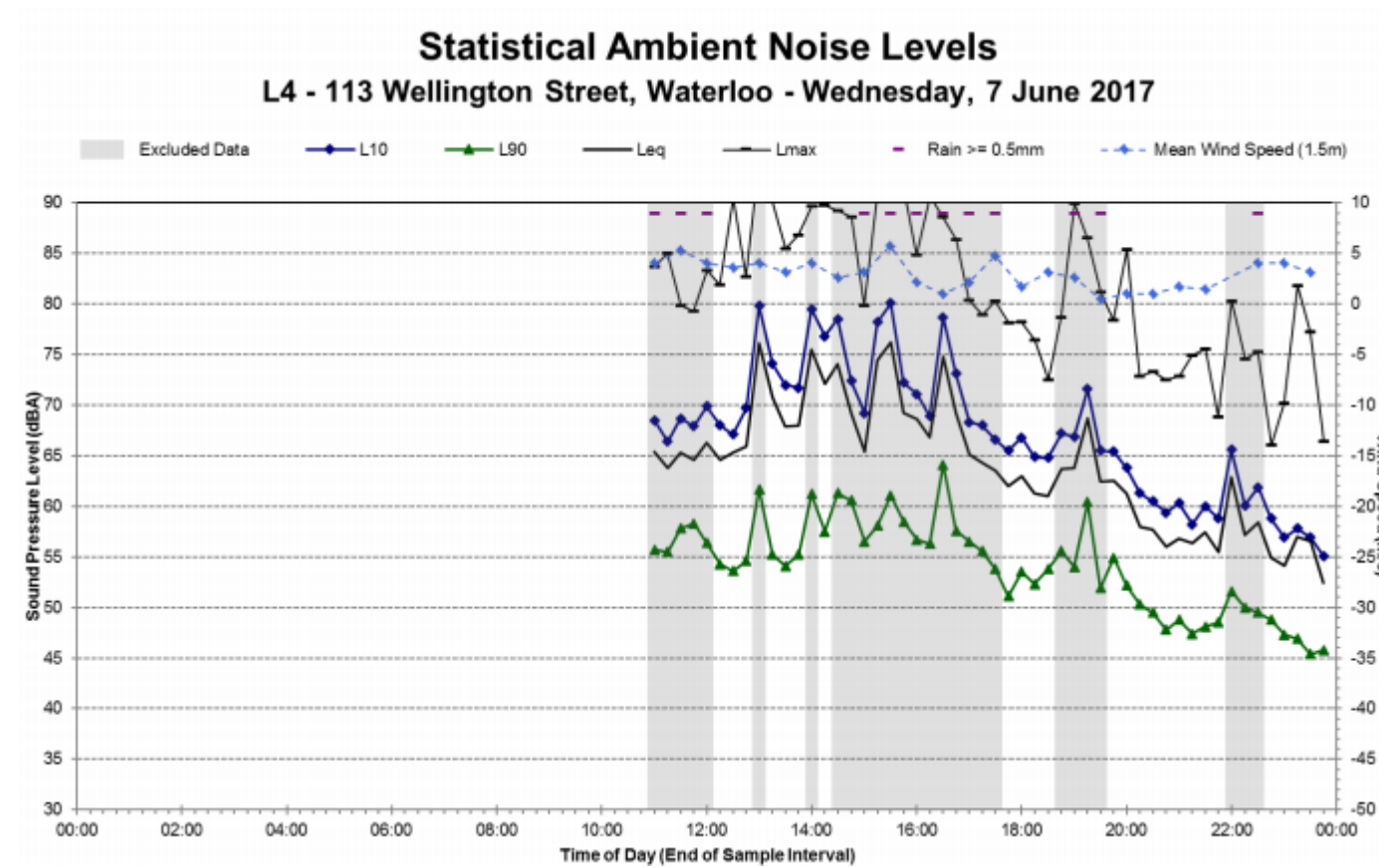




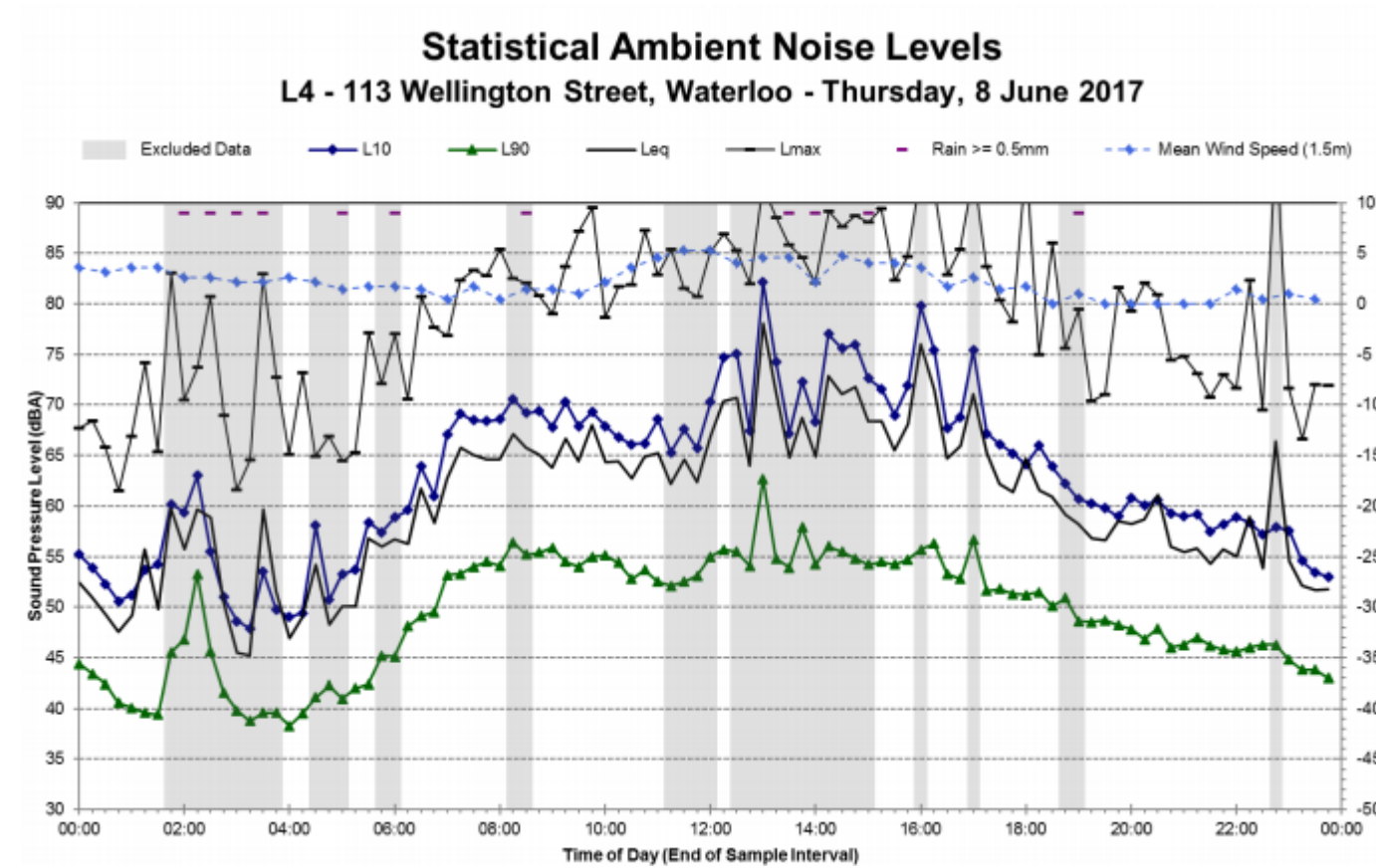




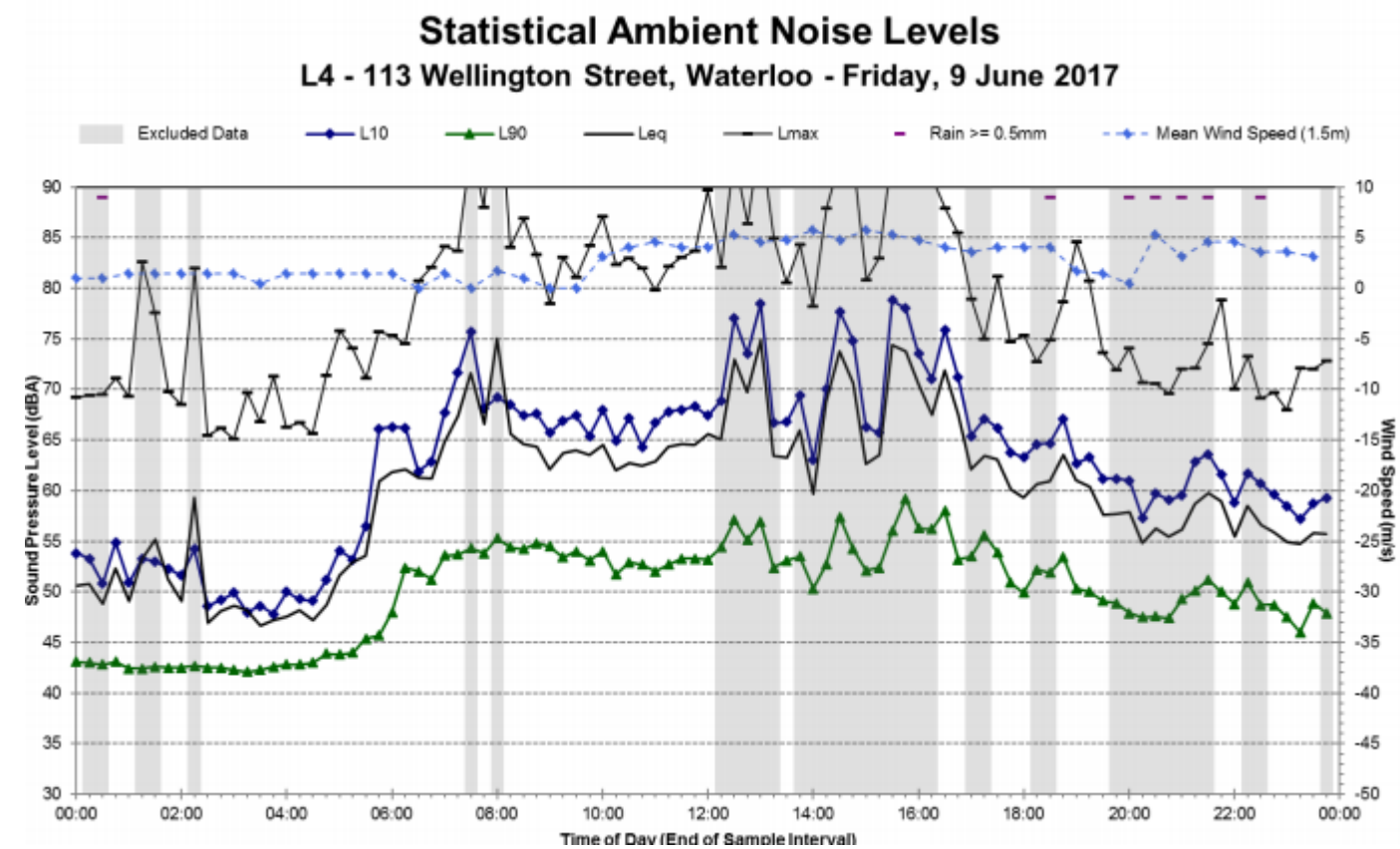




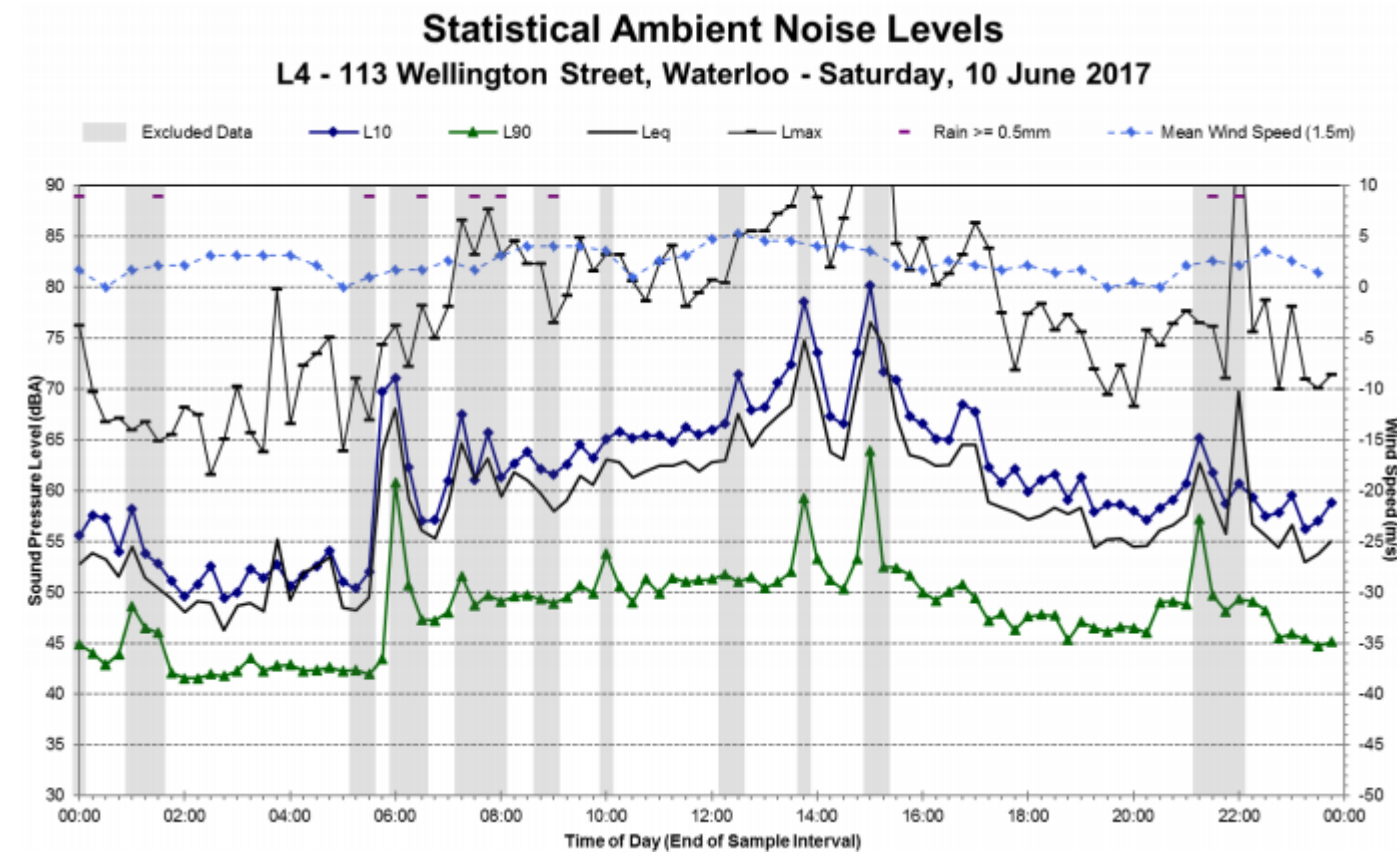


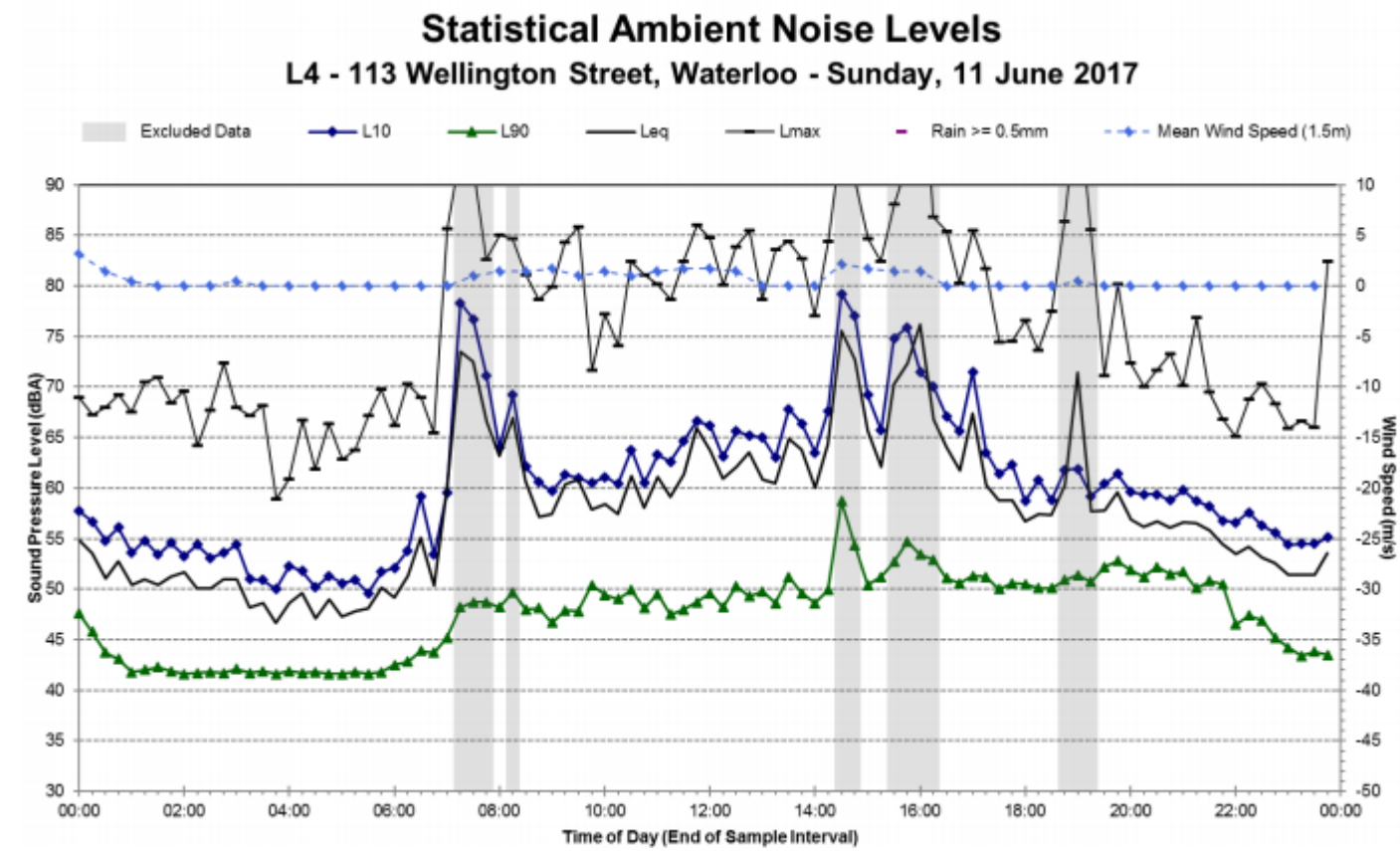




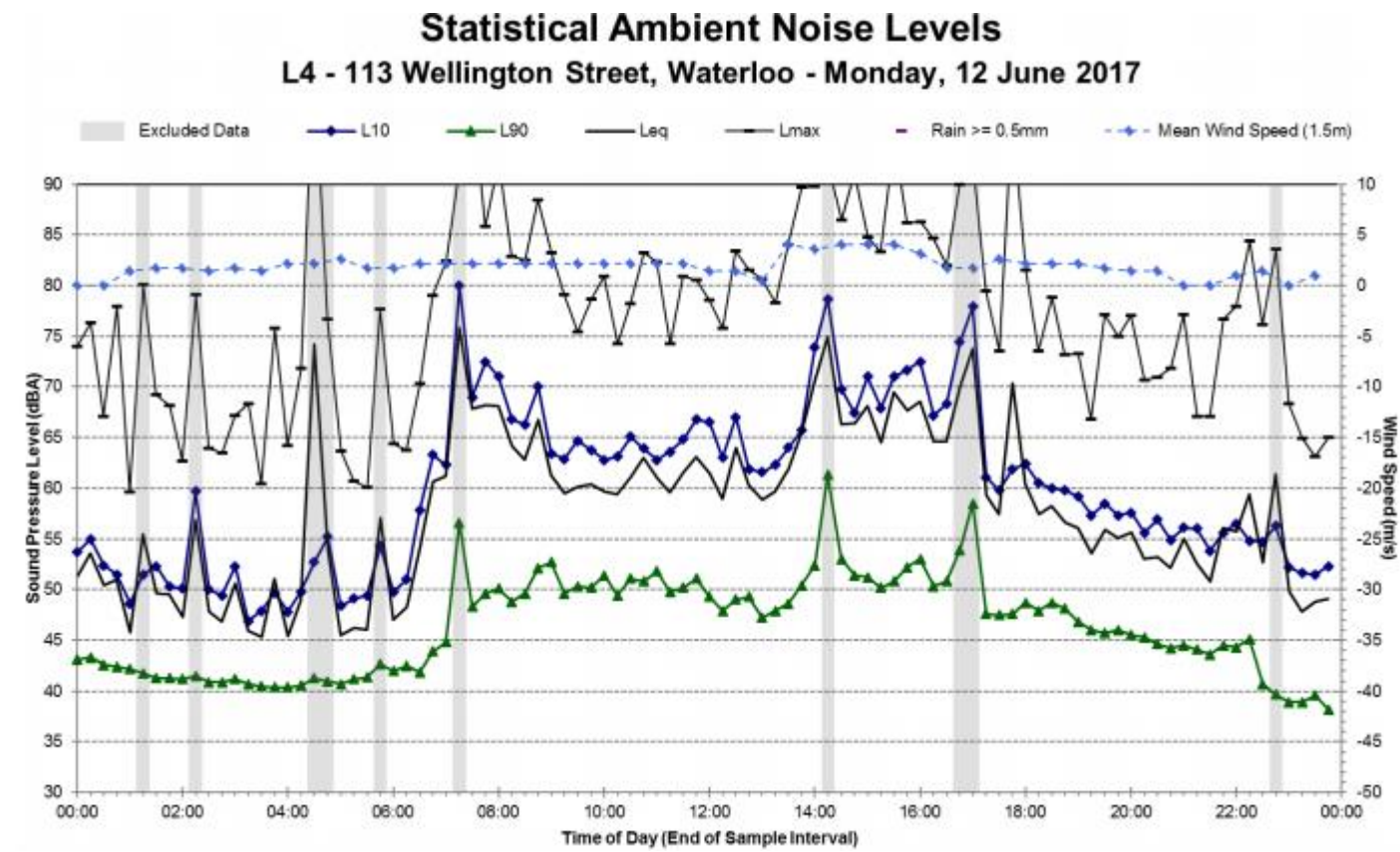


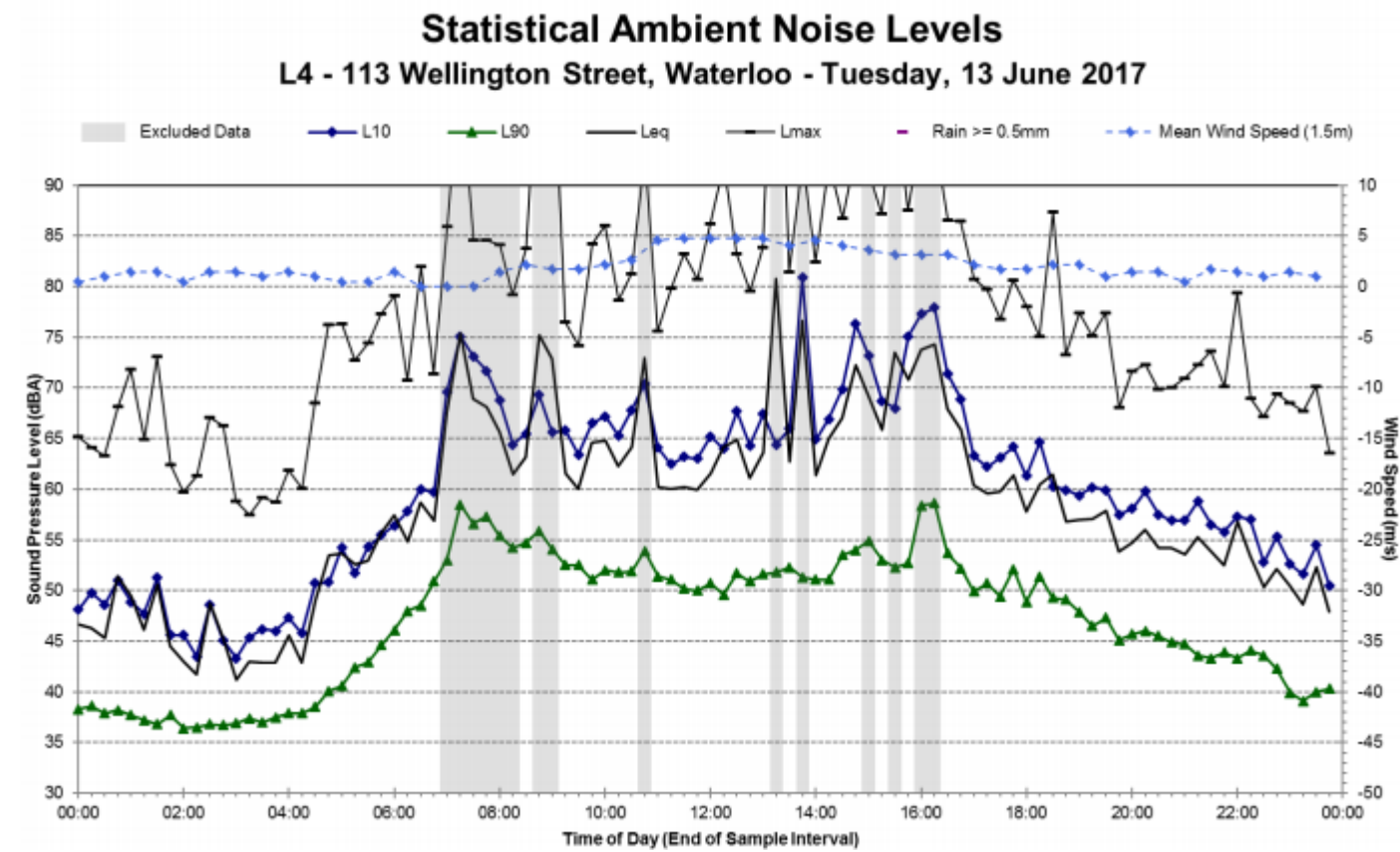




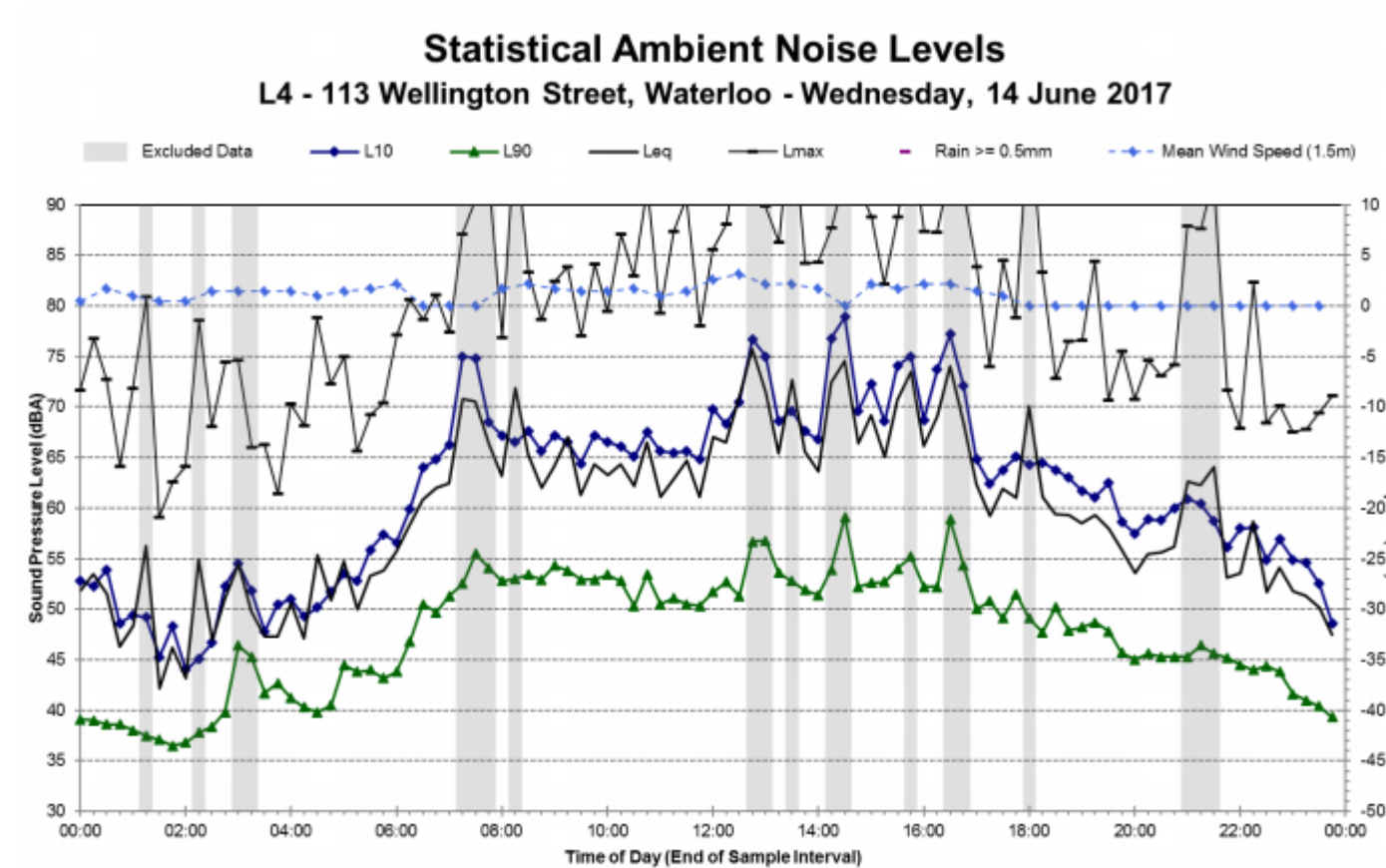


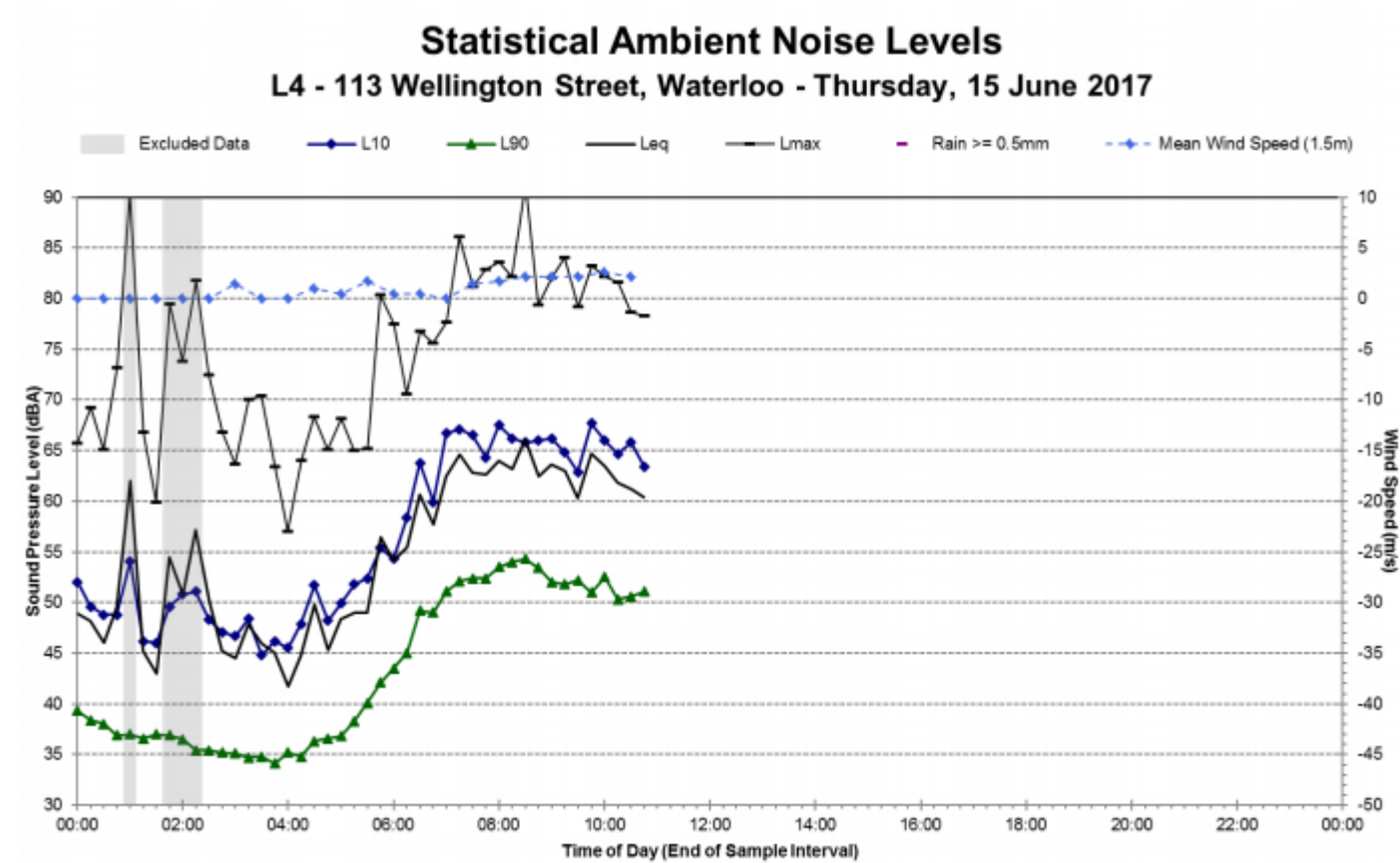




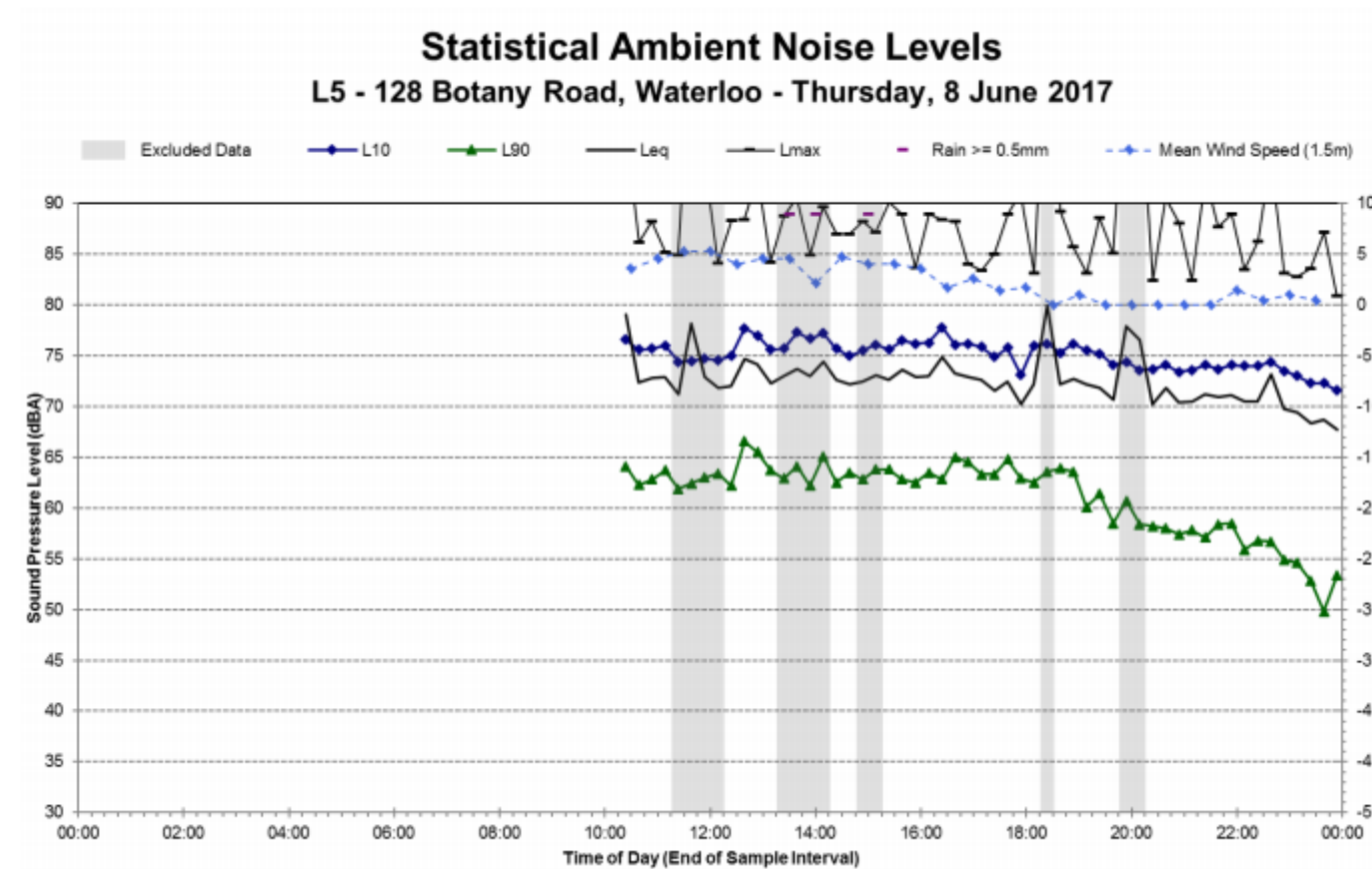


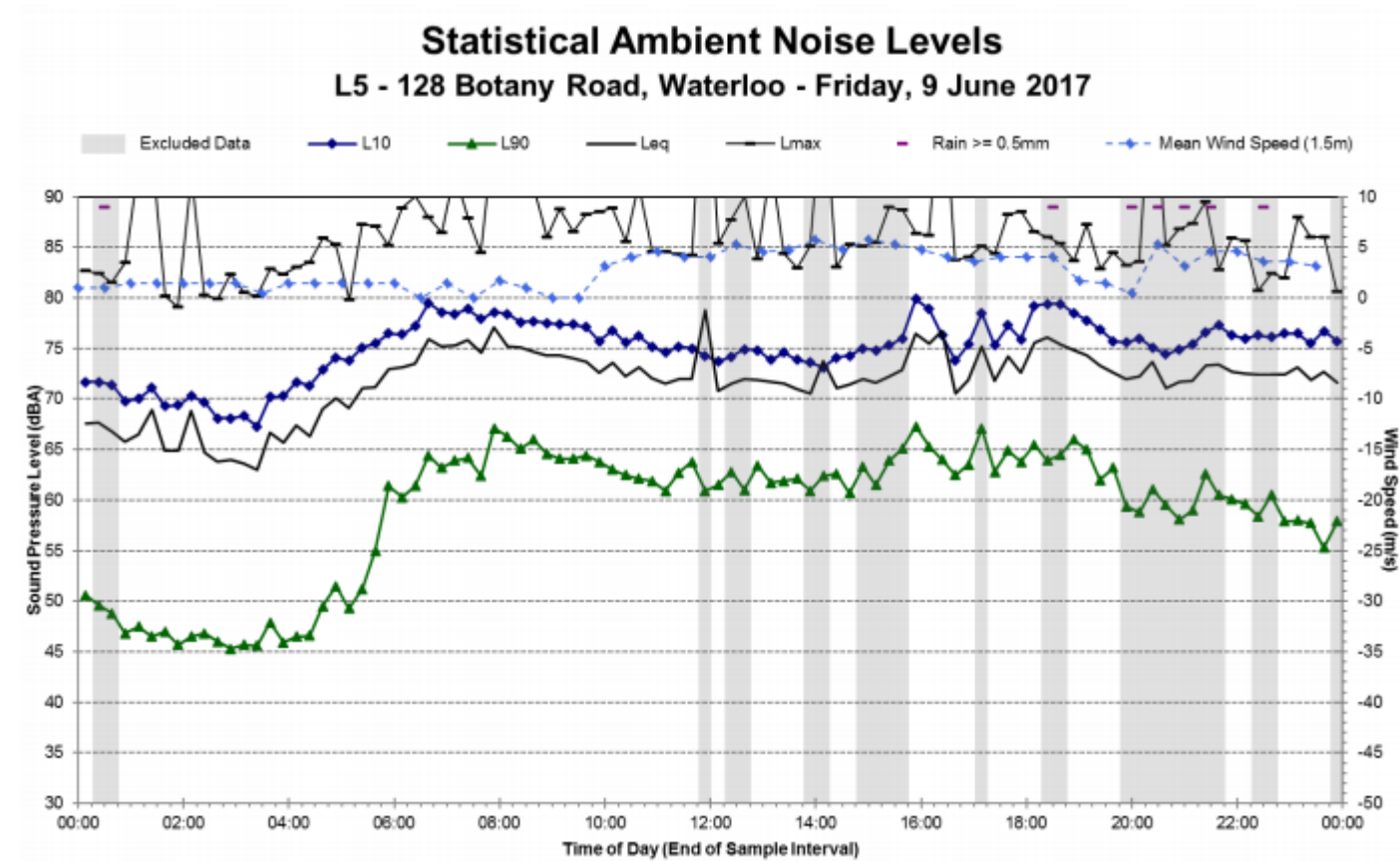




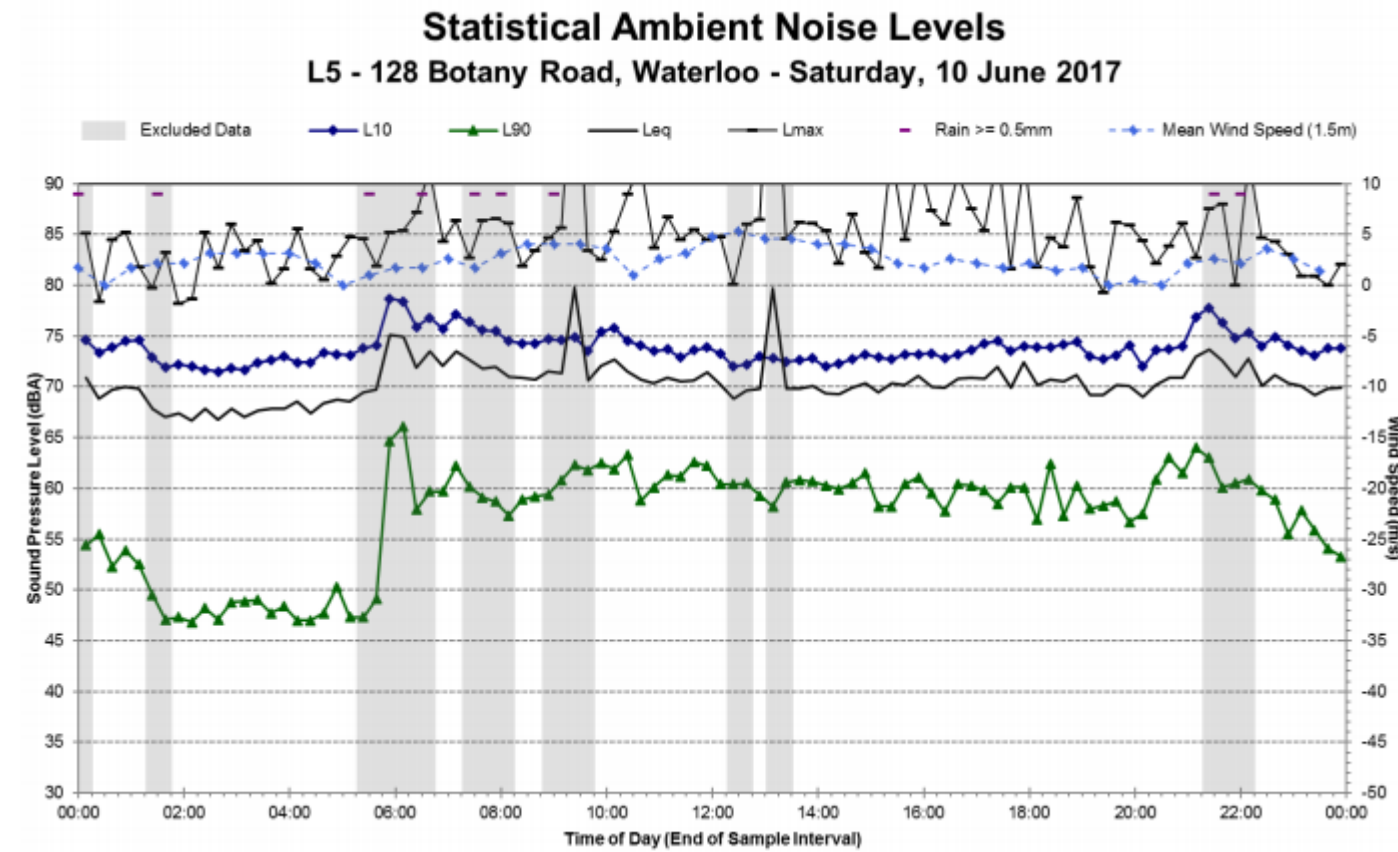


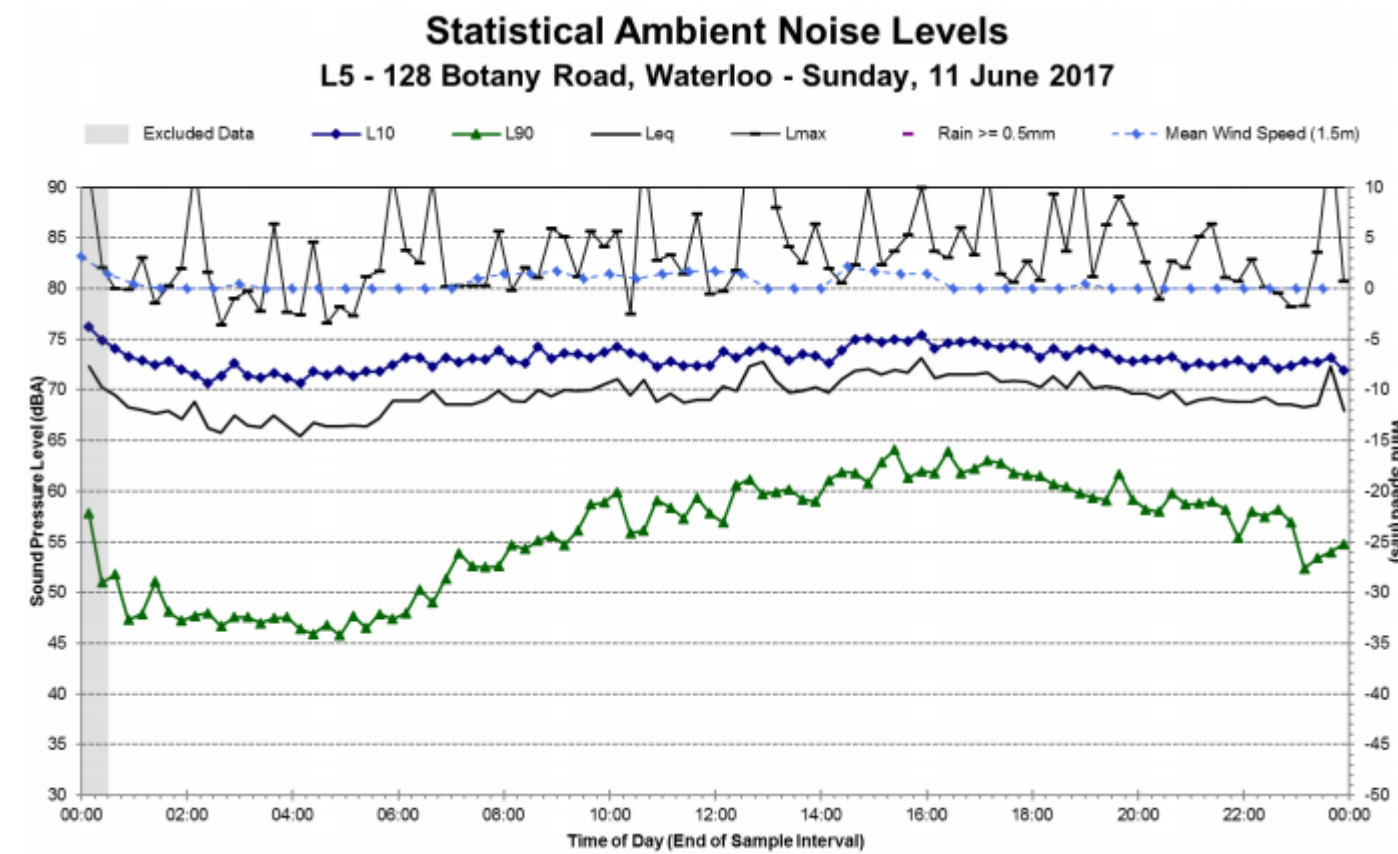




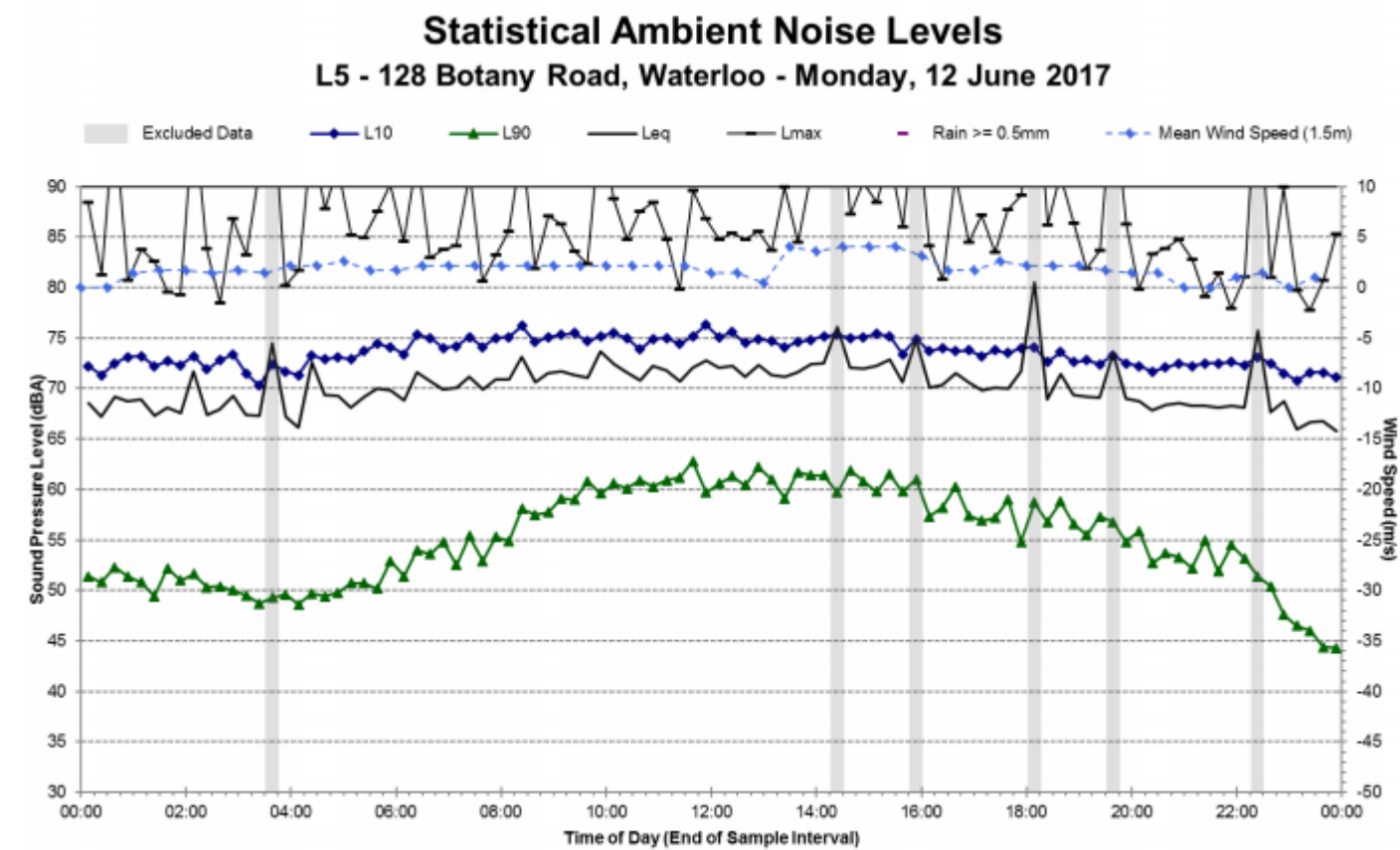


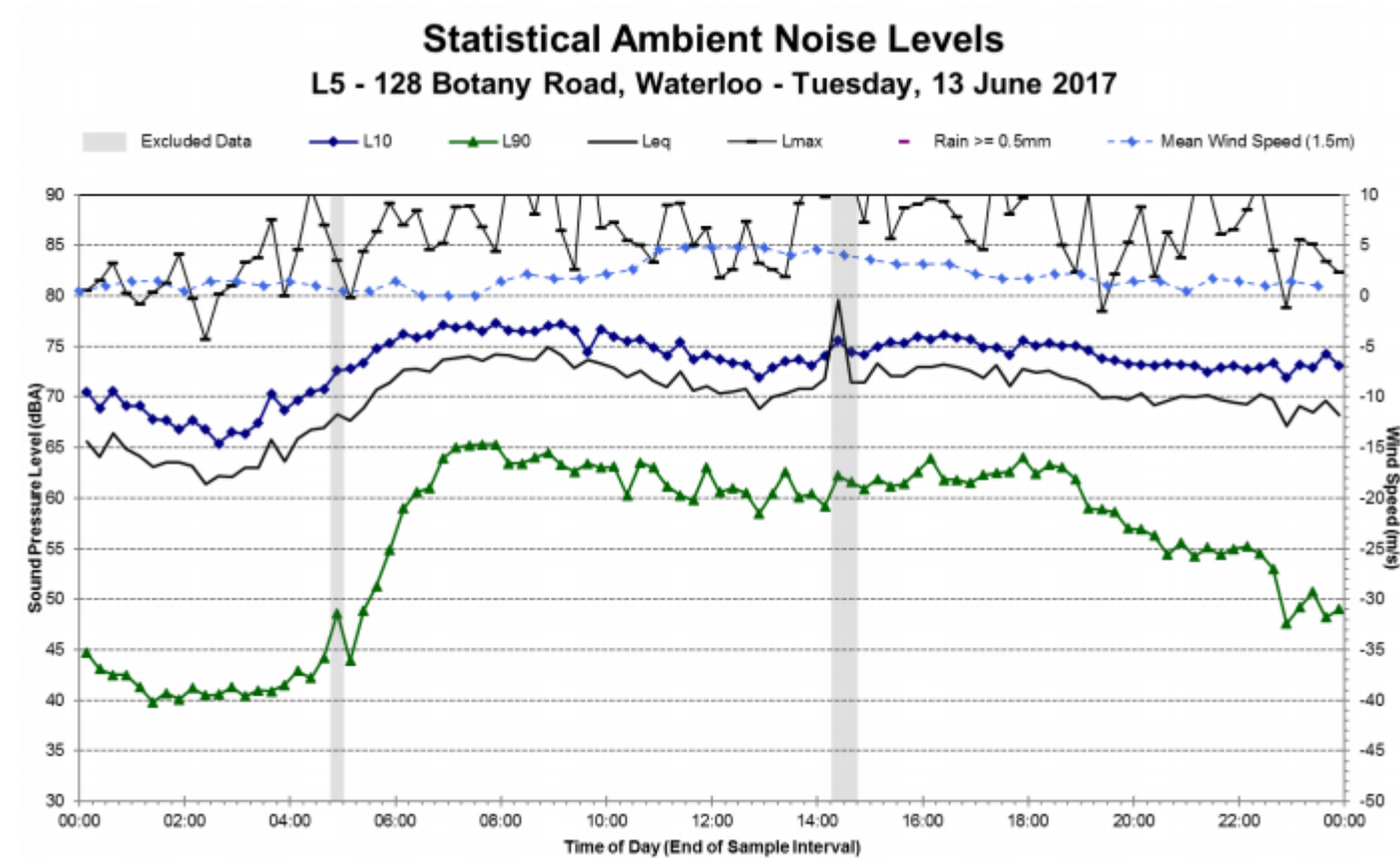




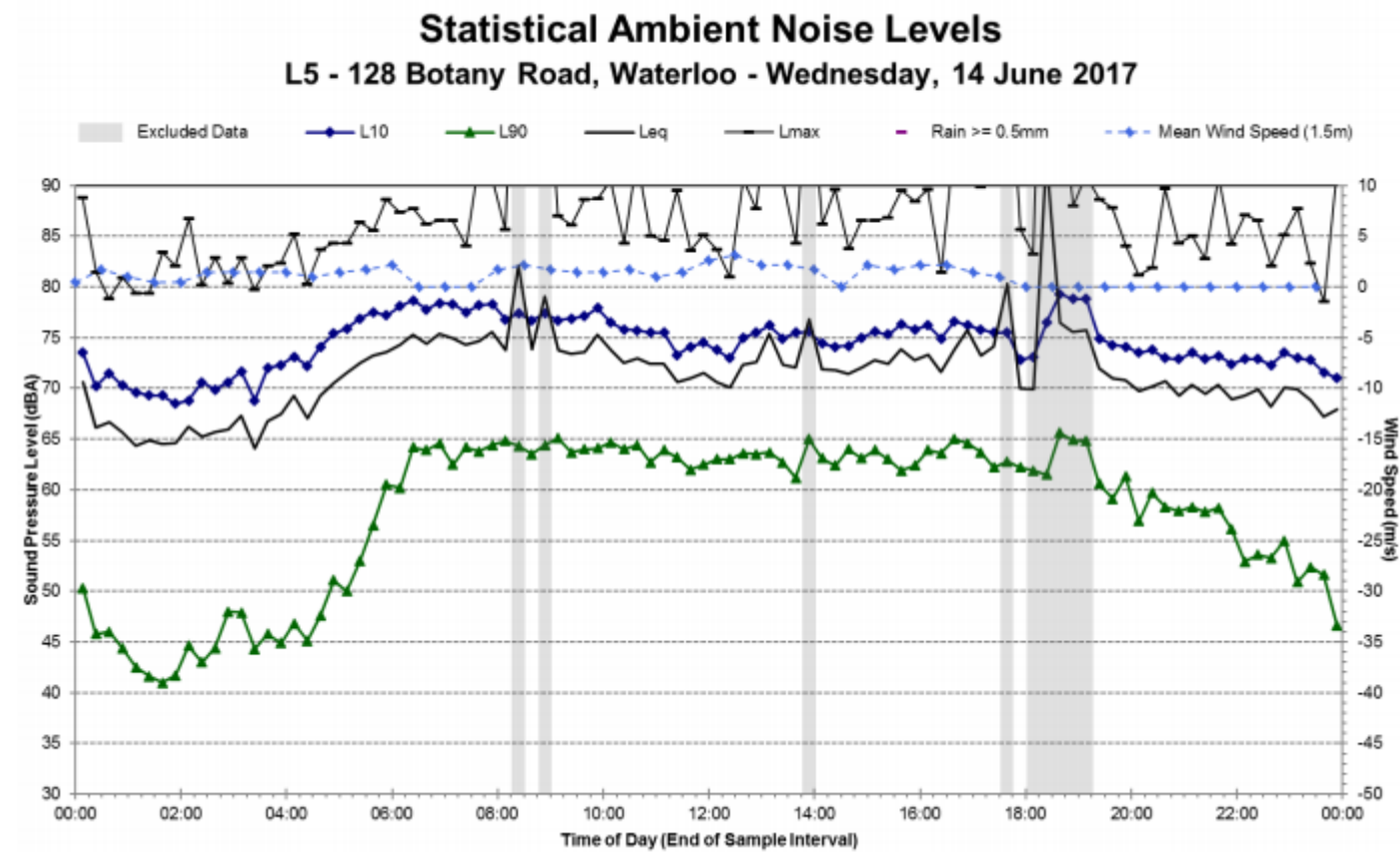


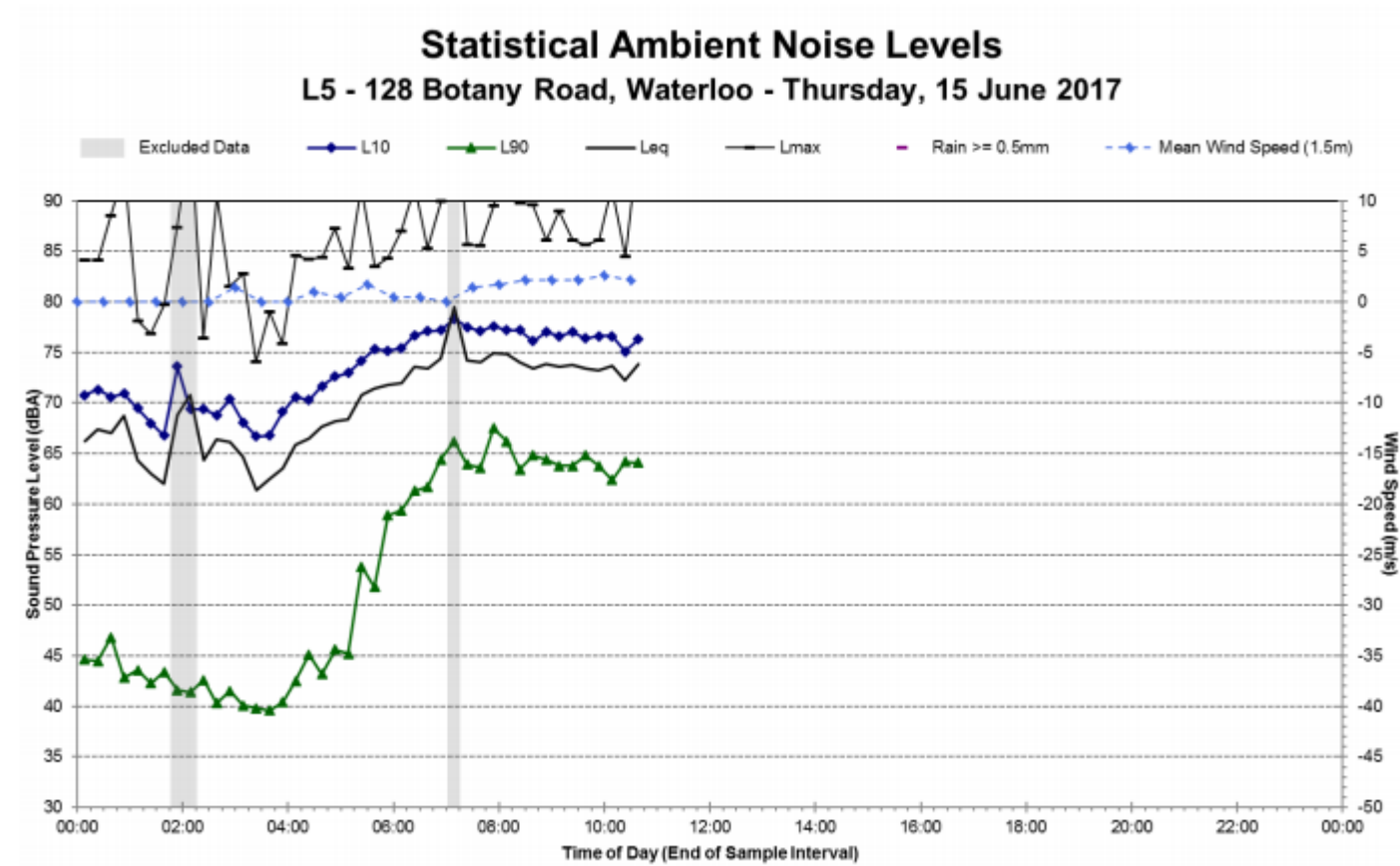






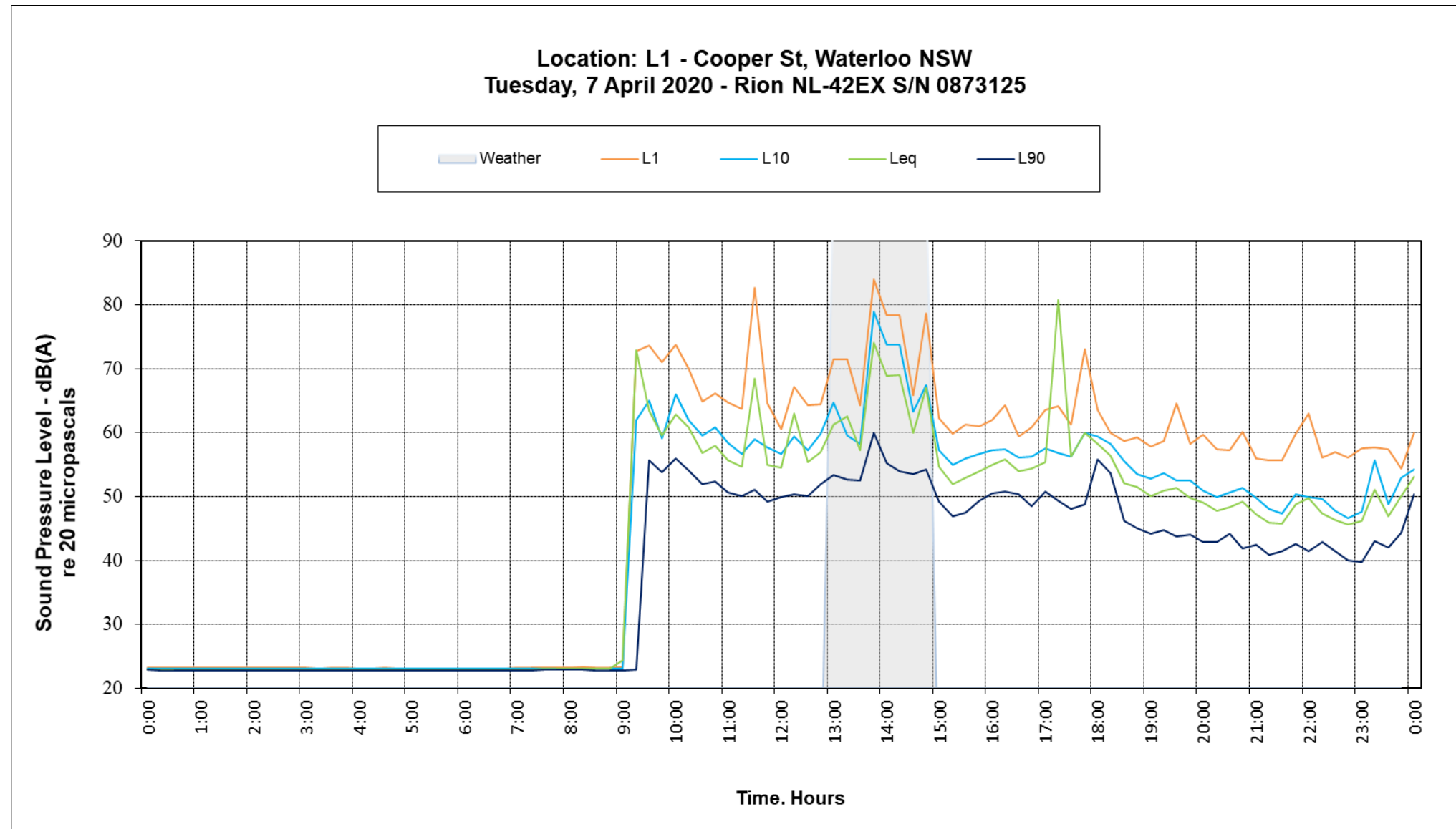


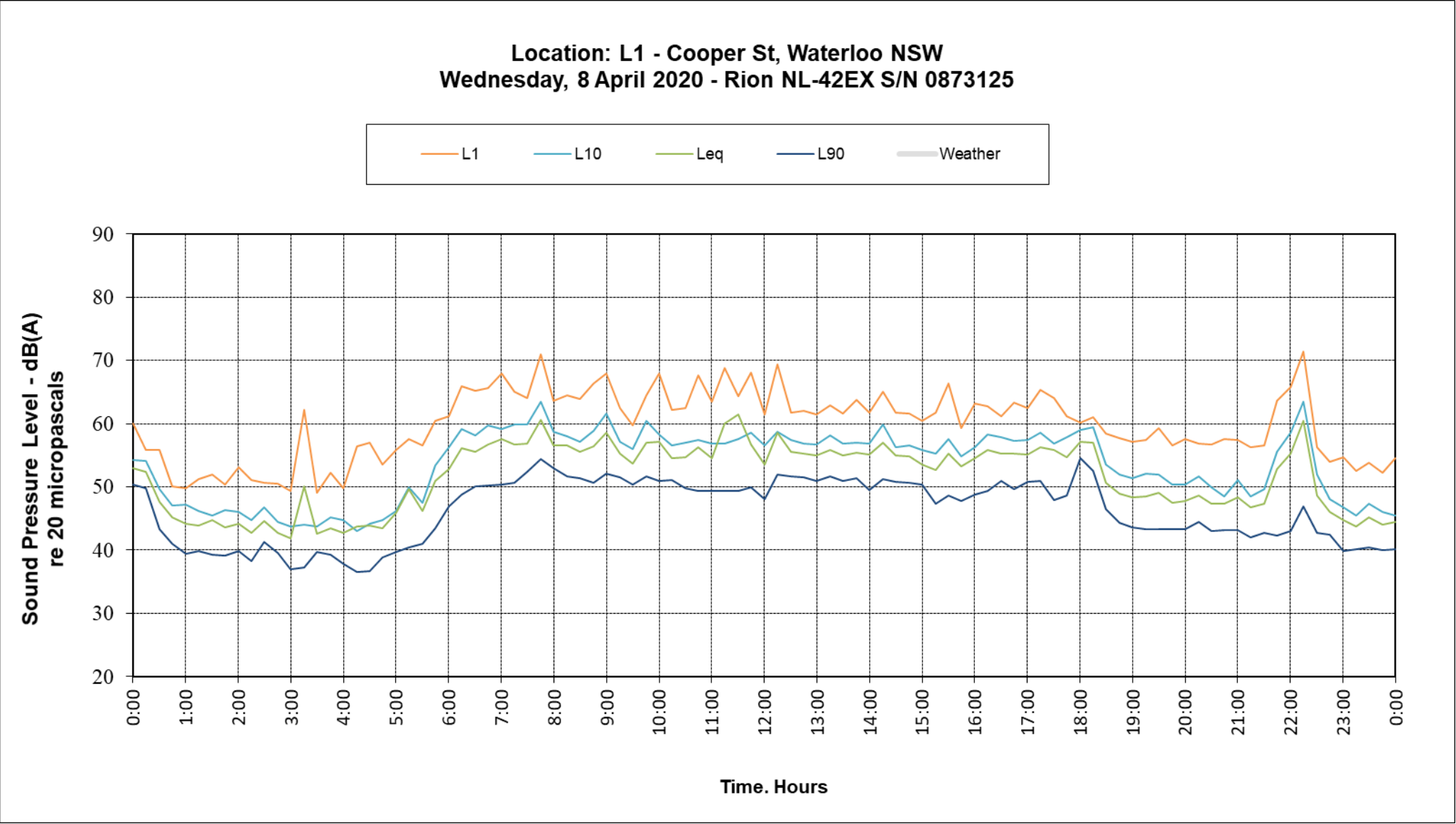




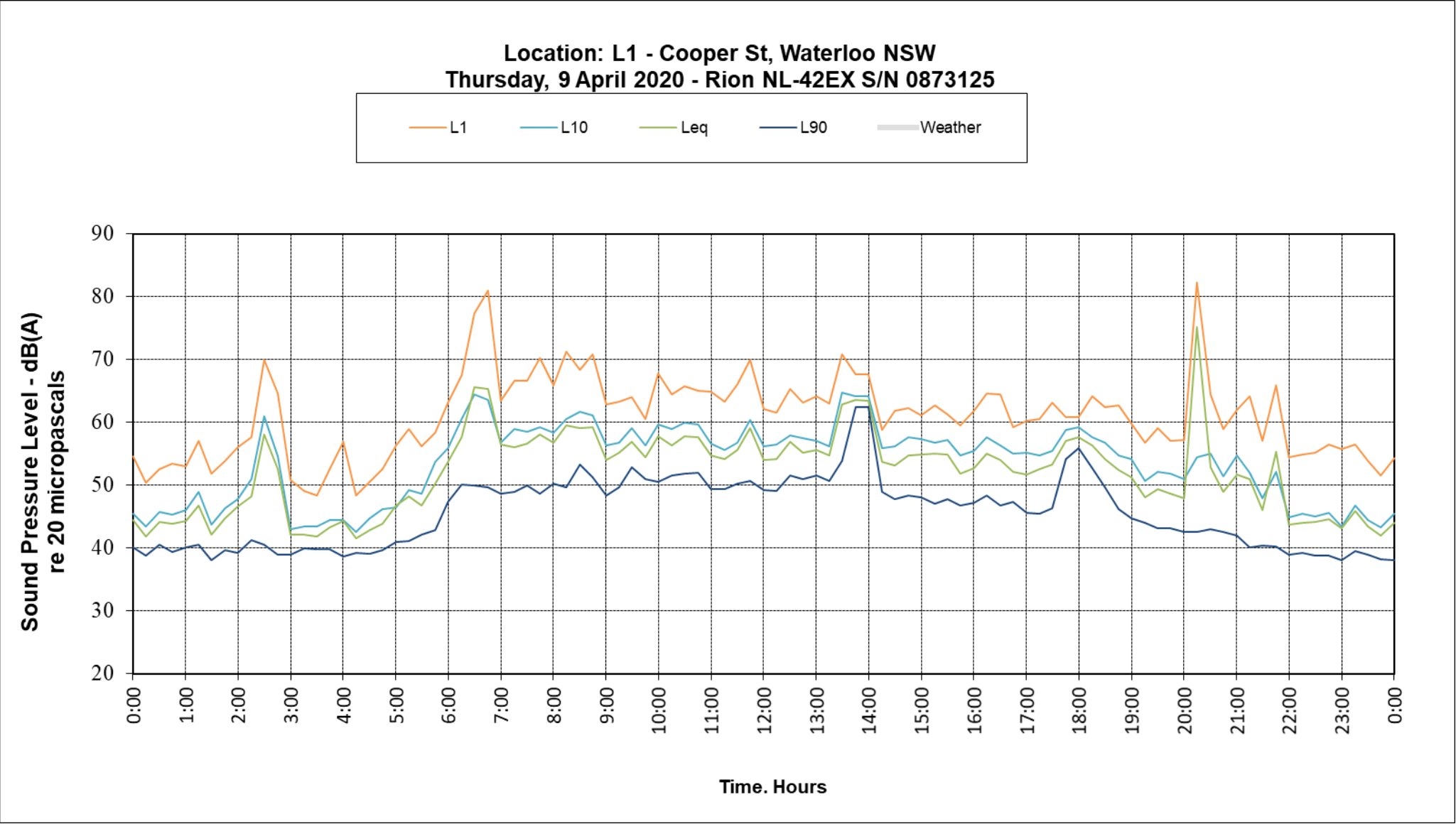


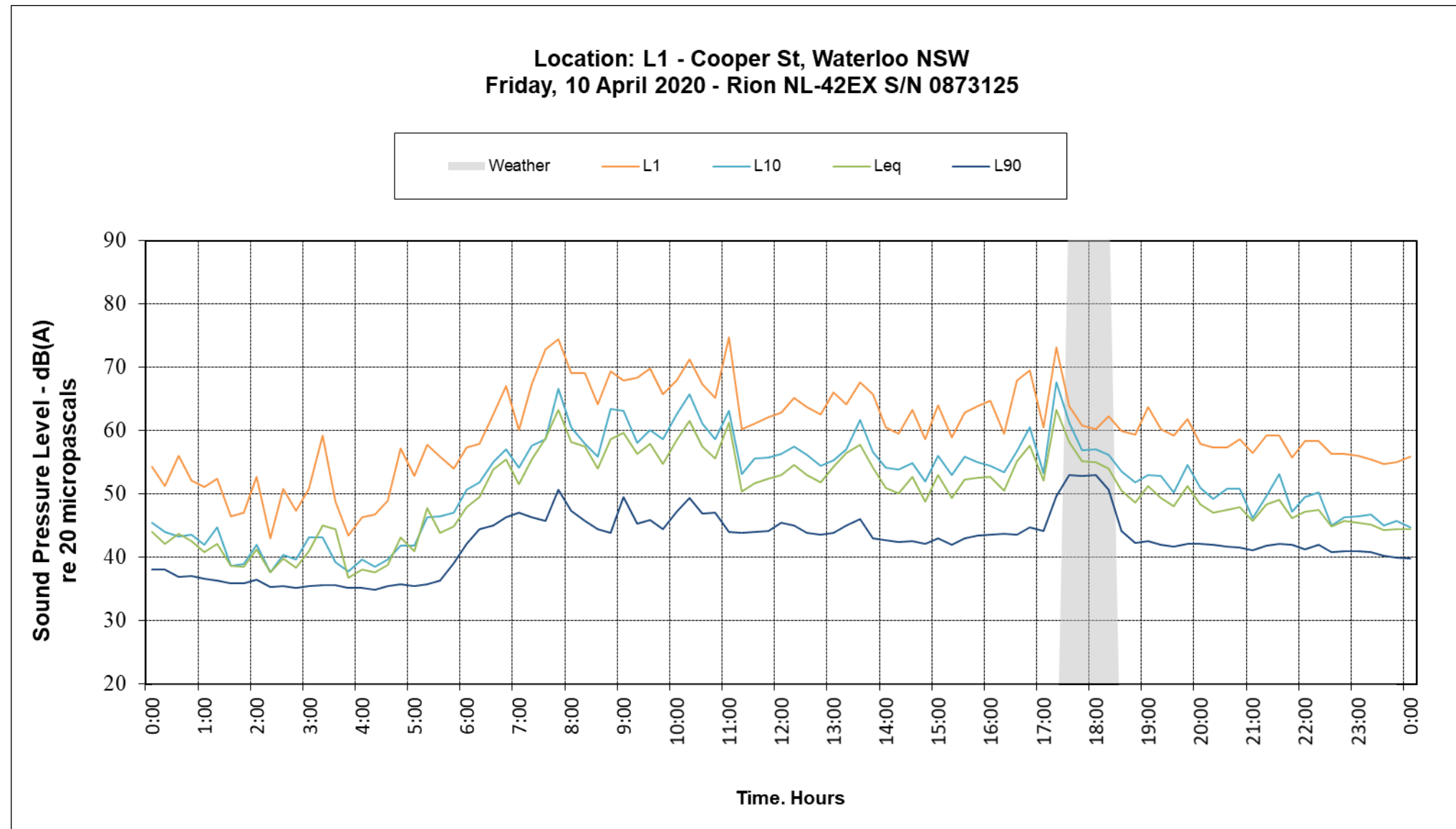
## 12.4.2 Current Noise Survey Results by Stantec Australia



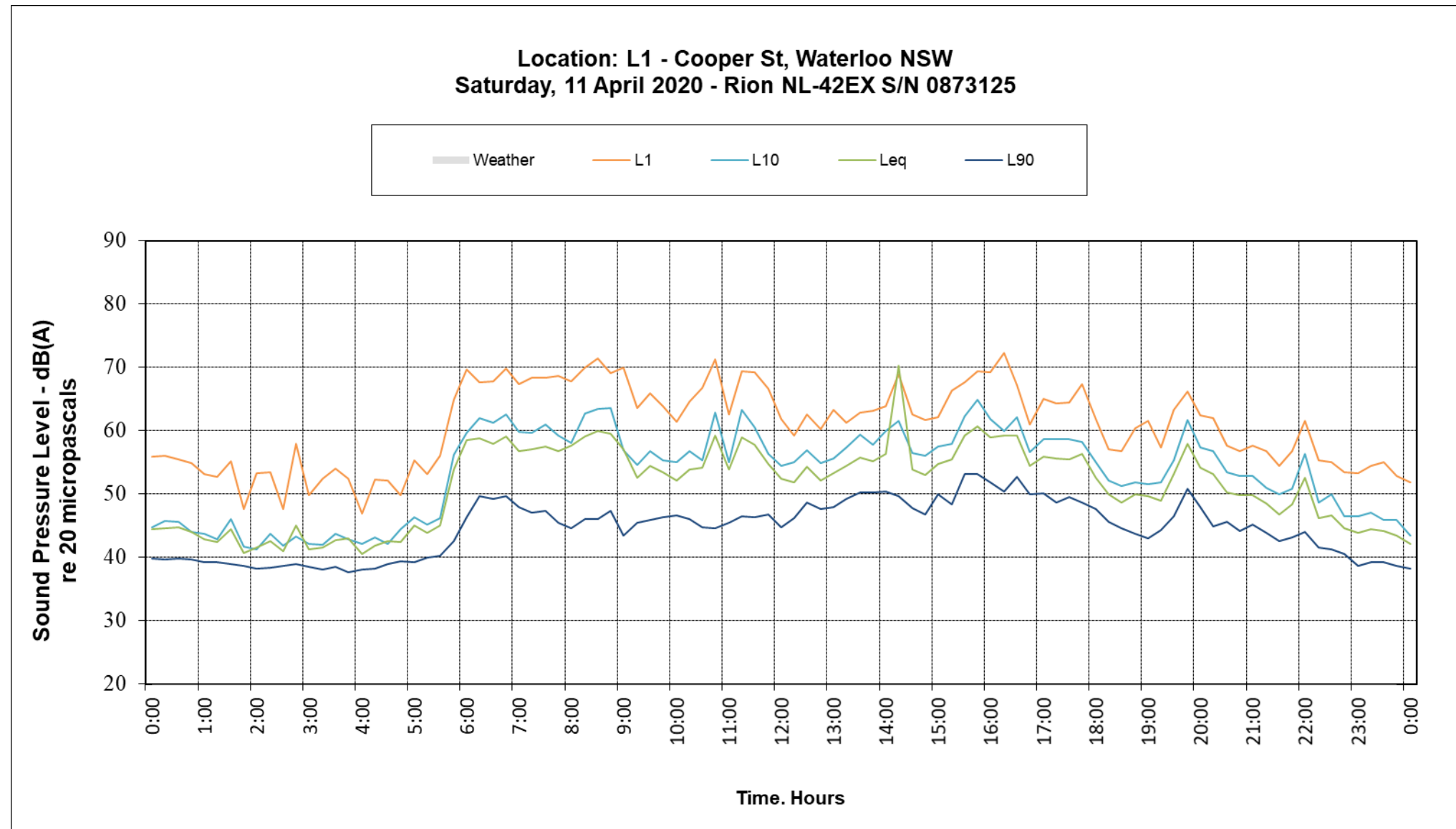


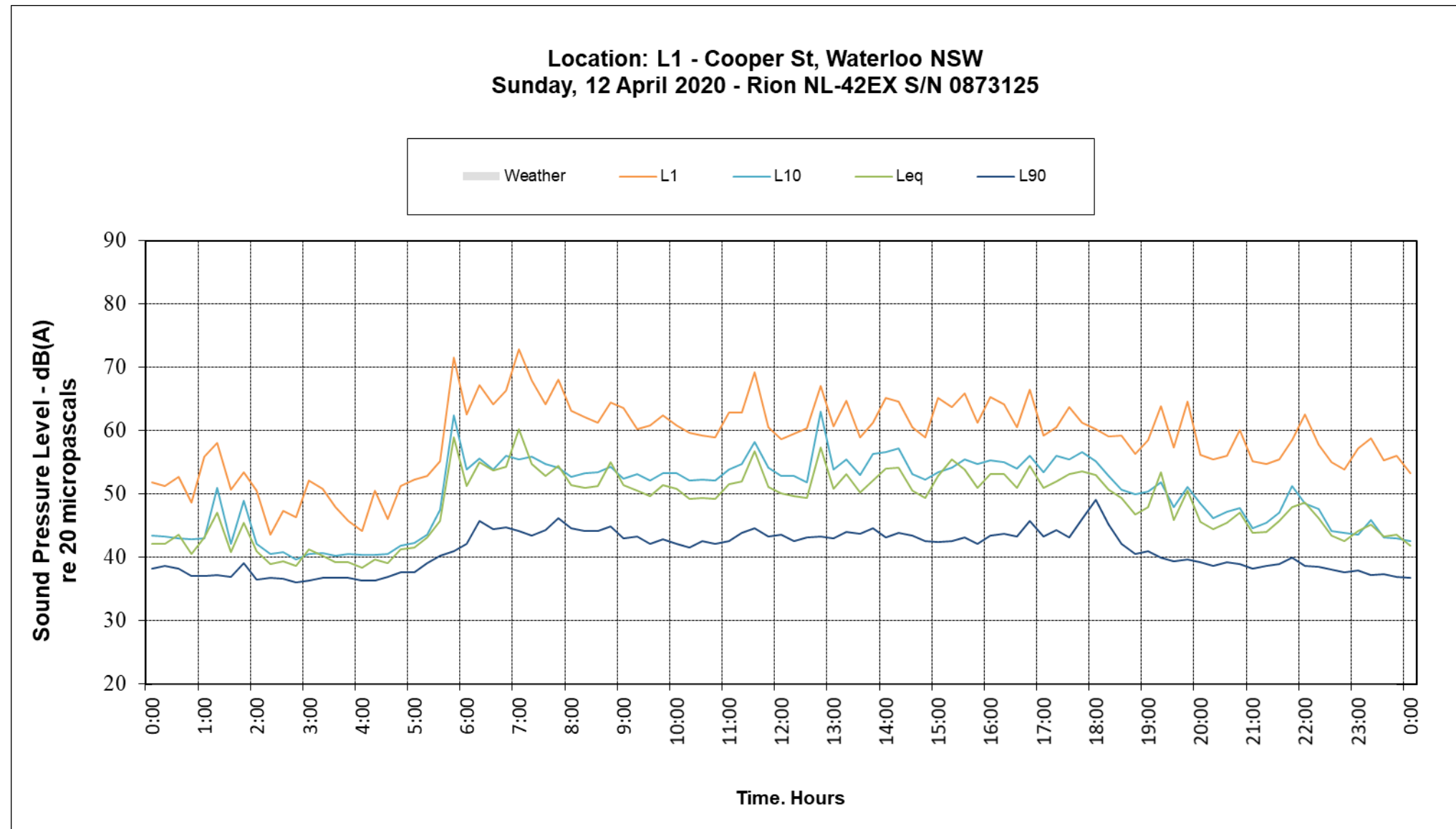




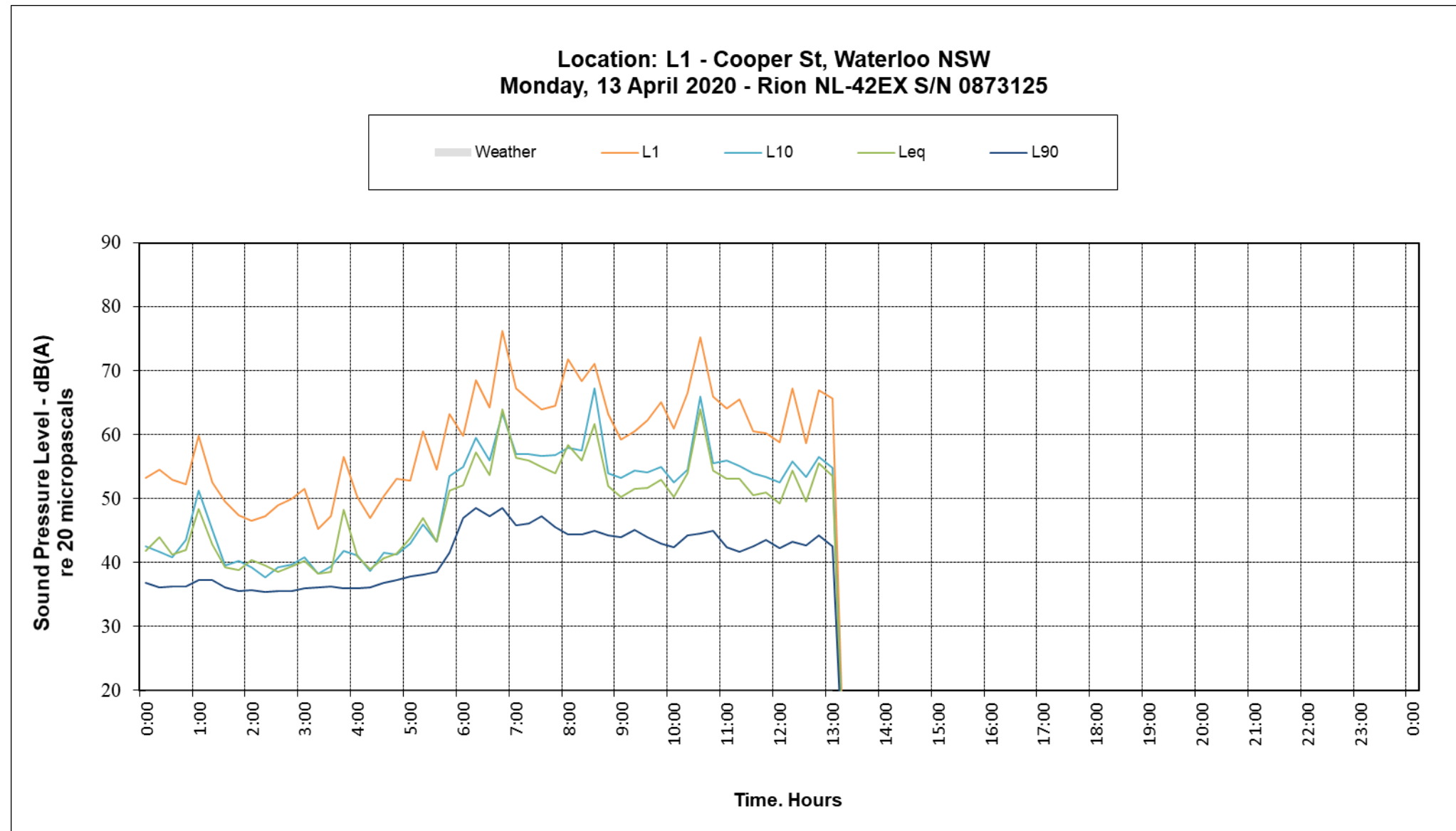


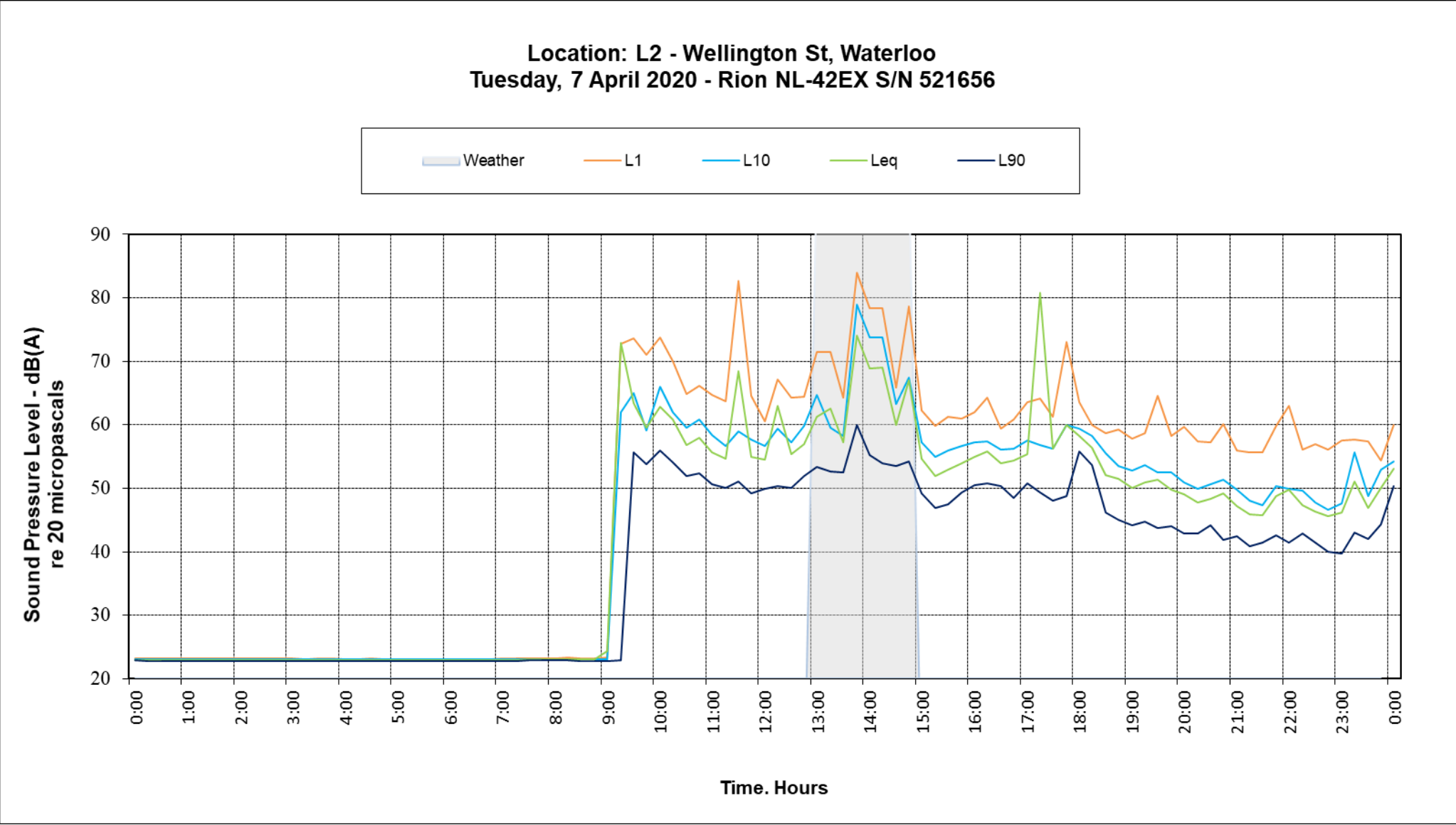




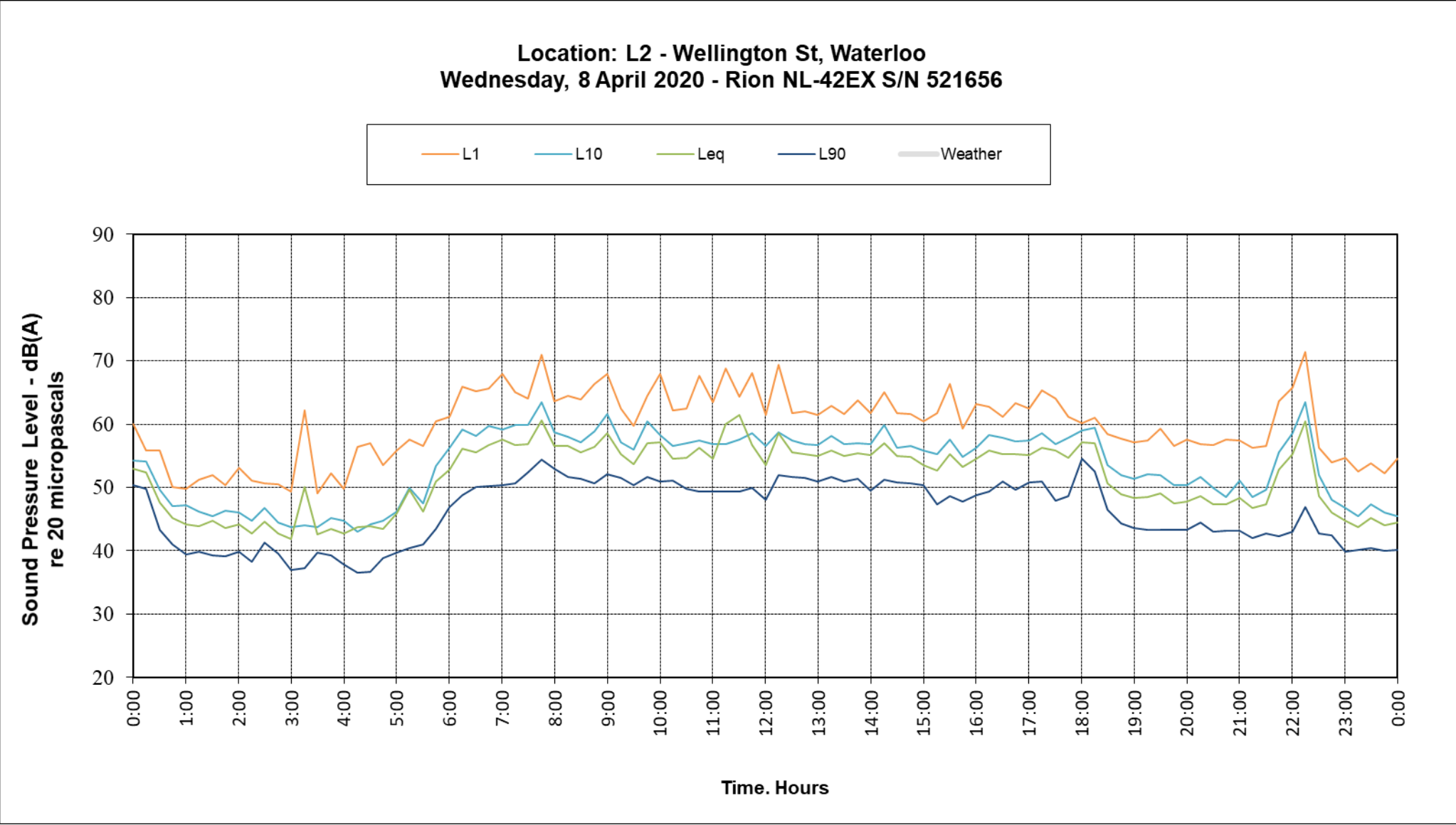


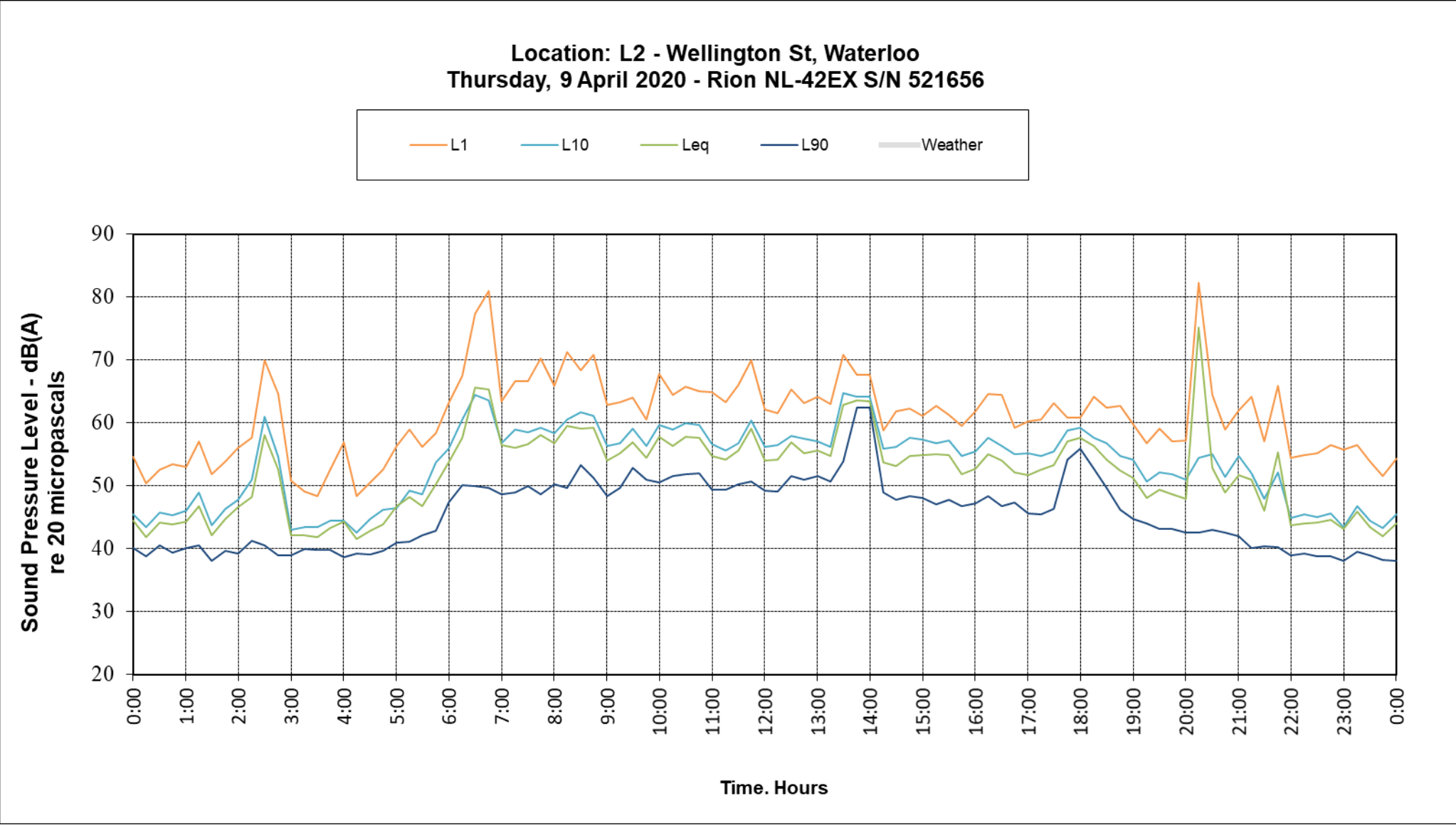




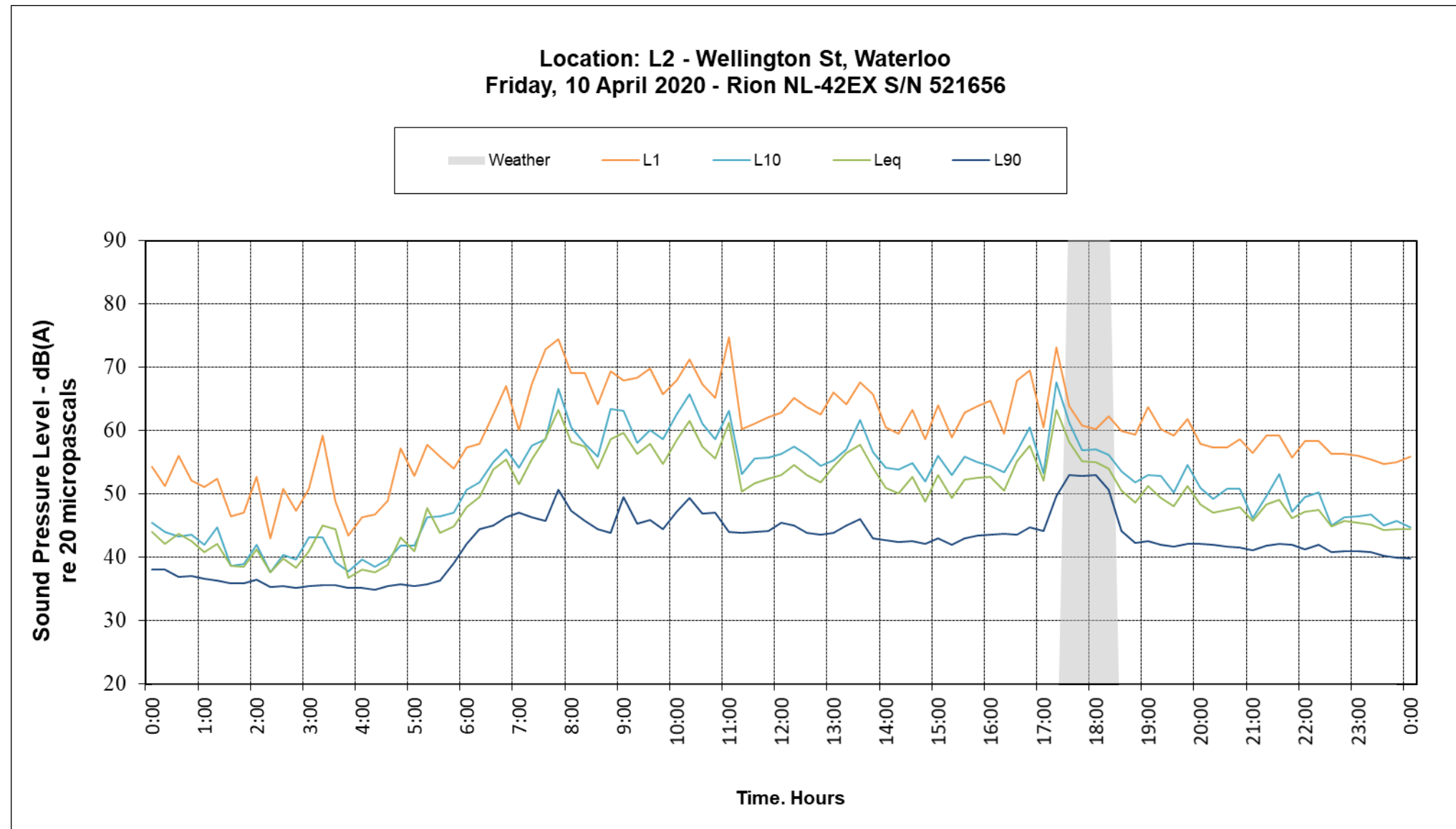


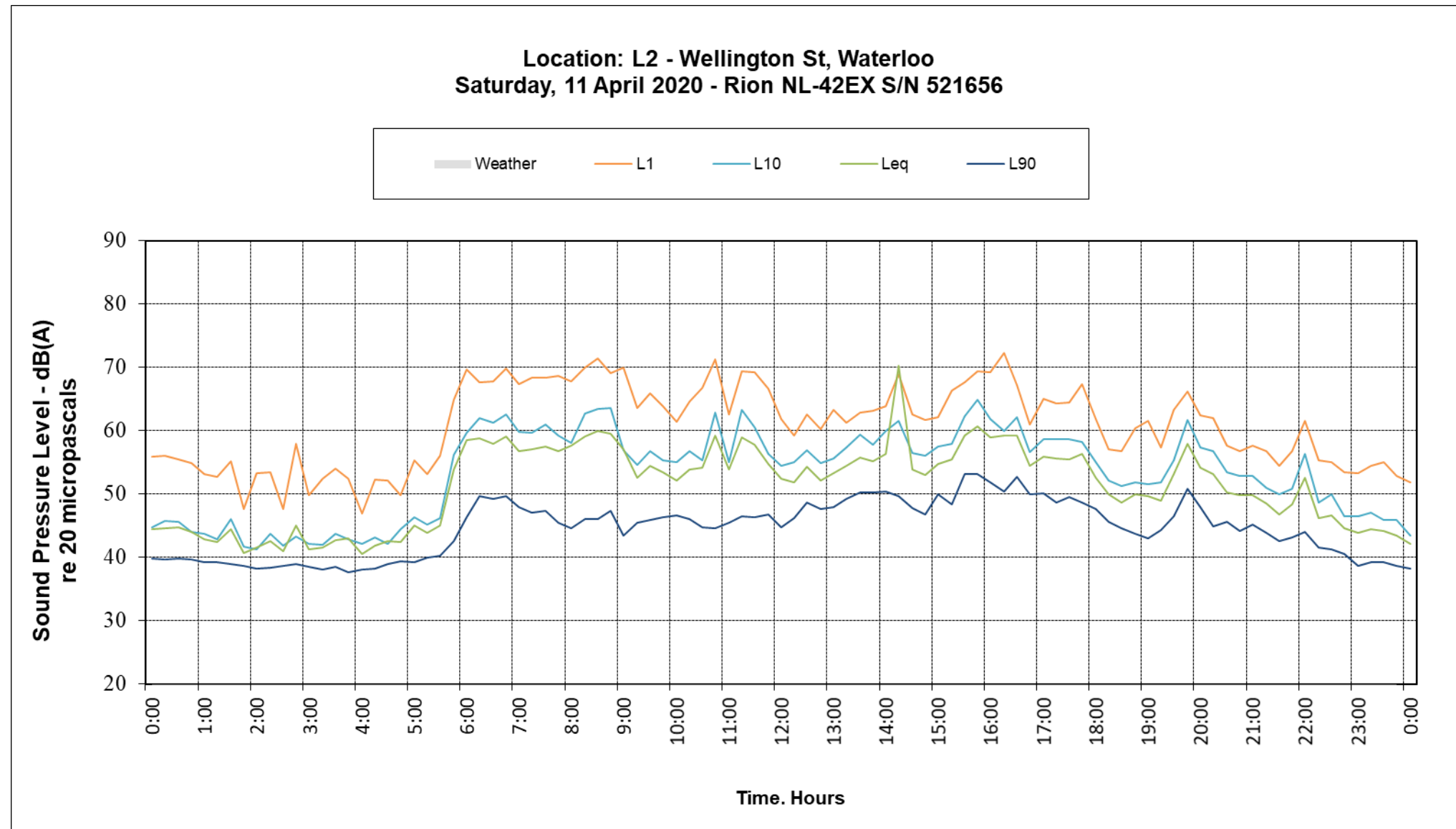




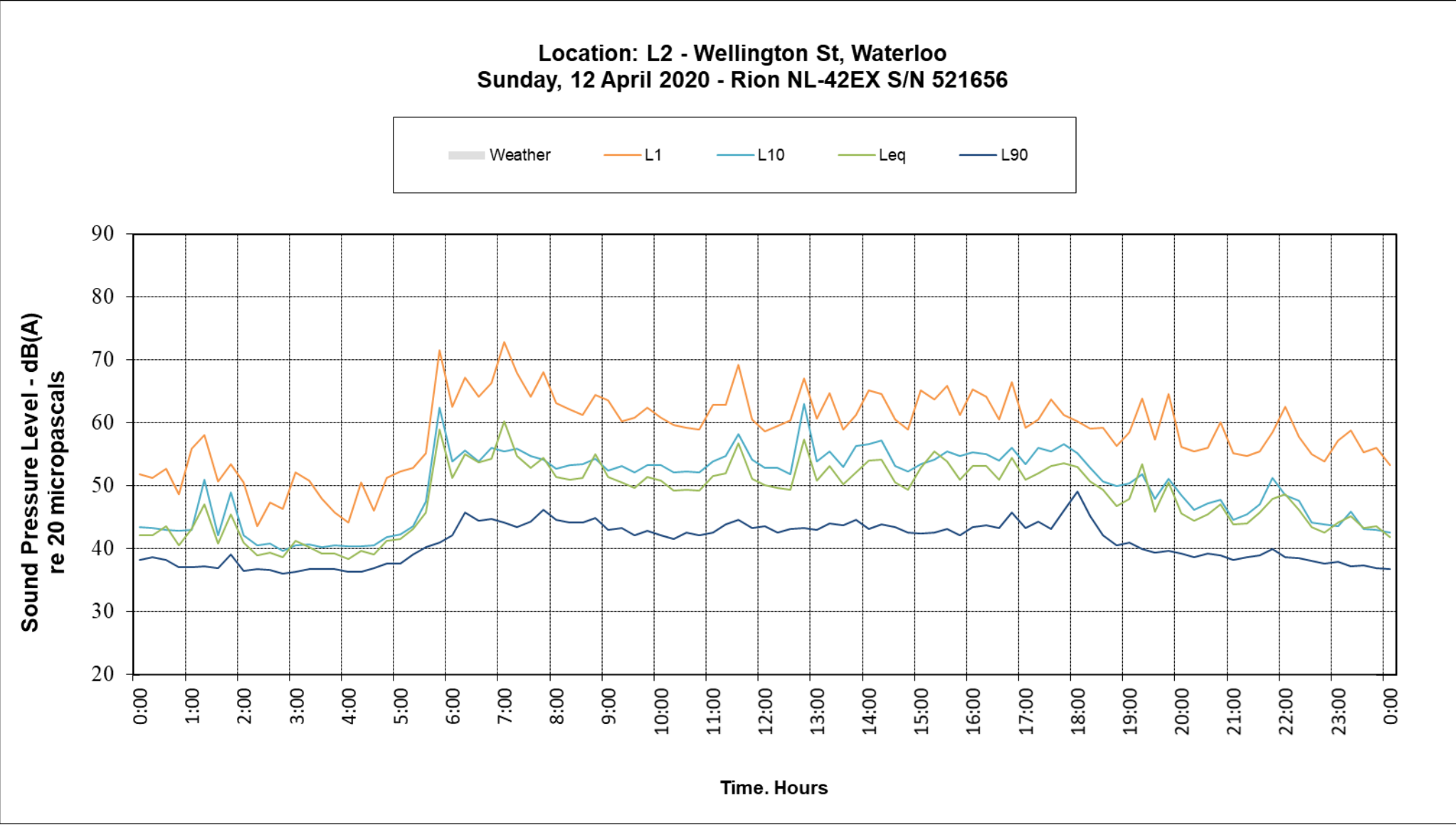


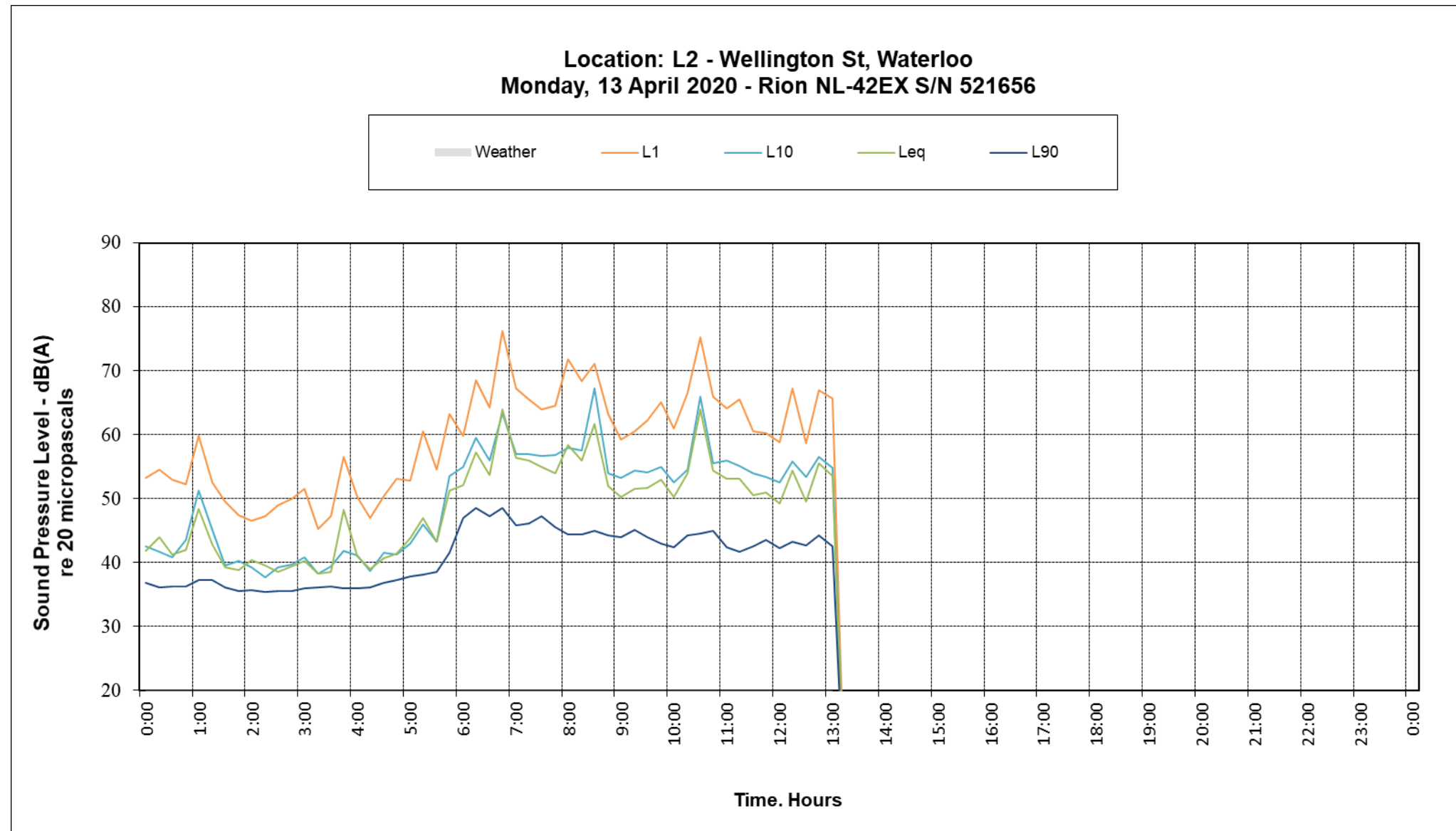




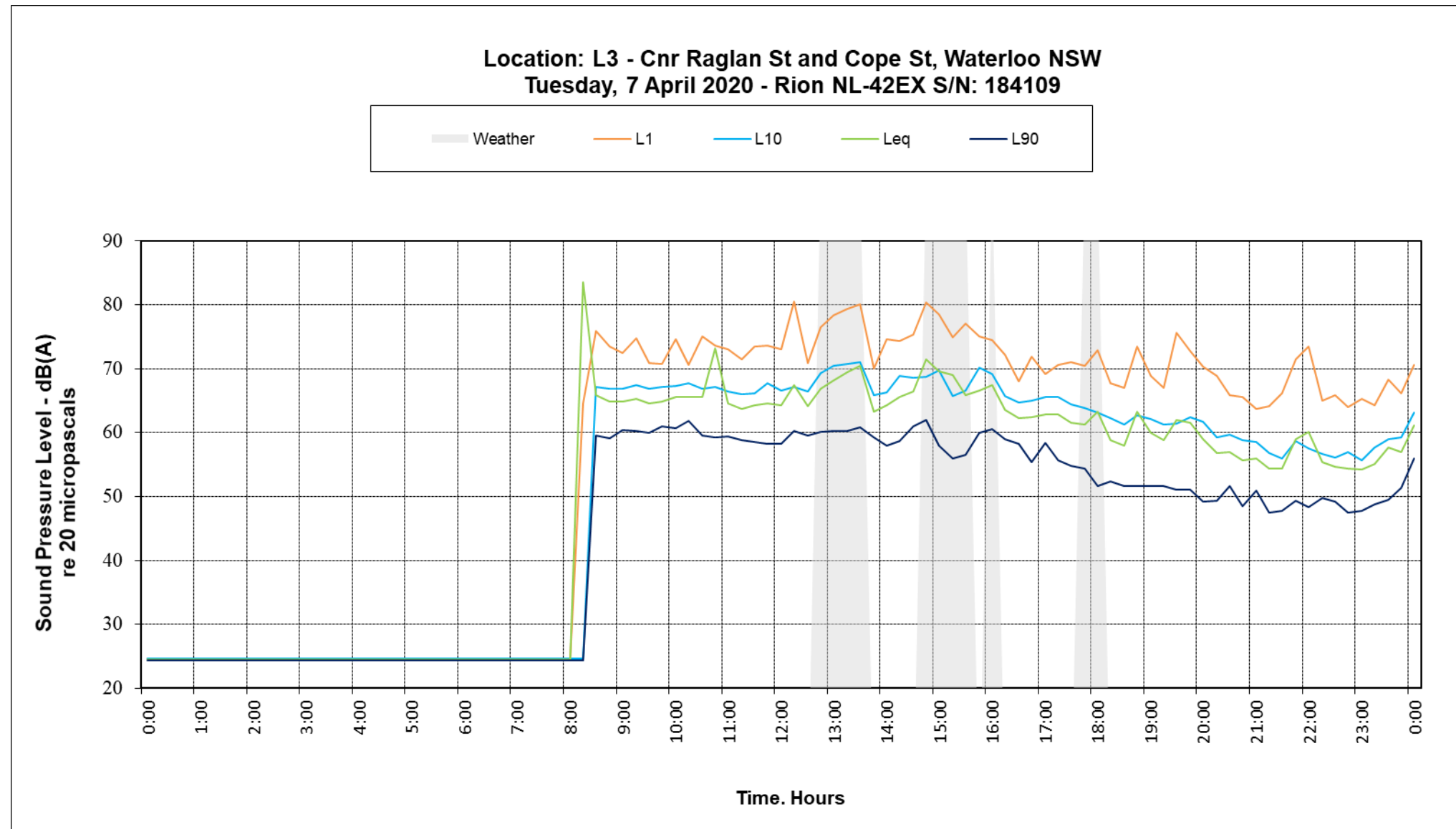




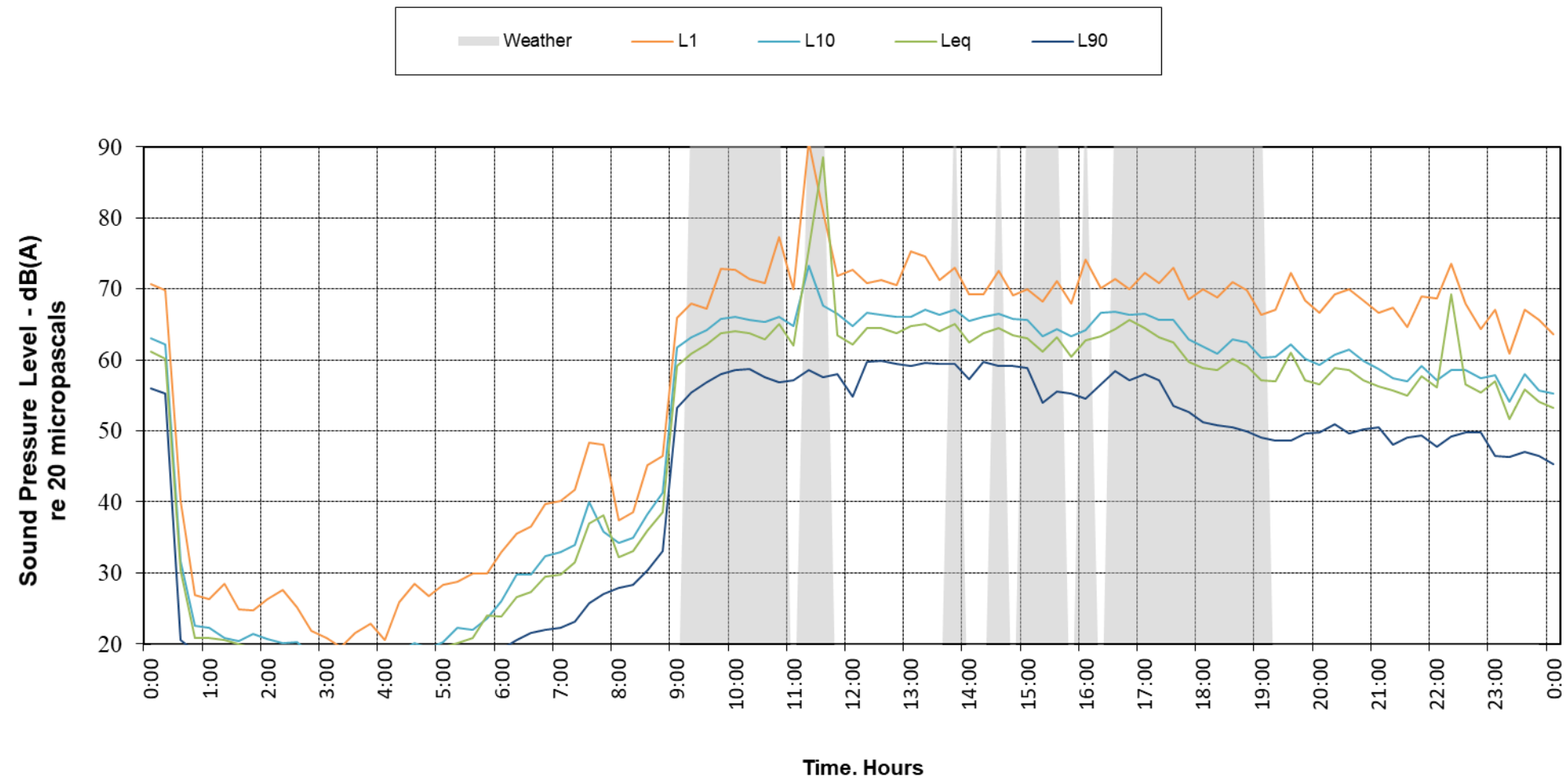


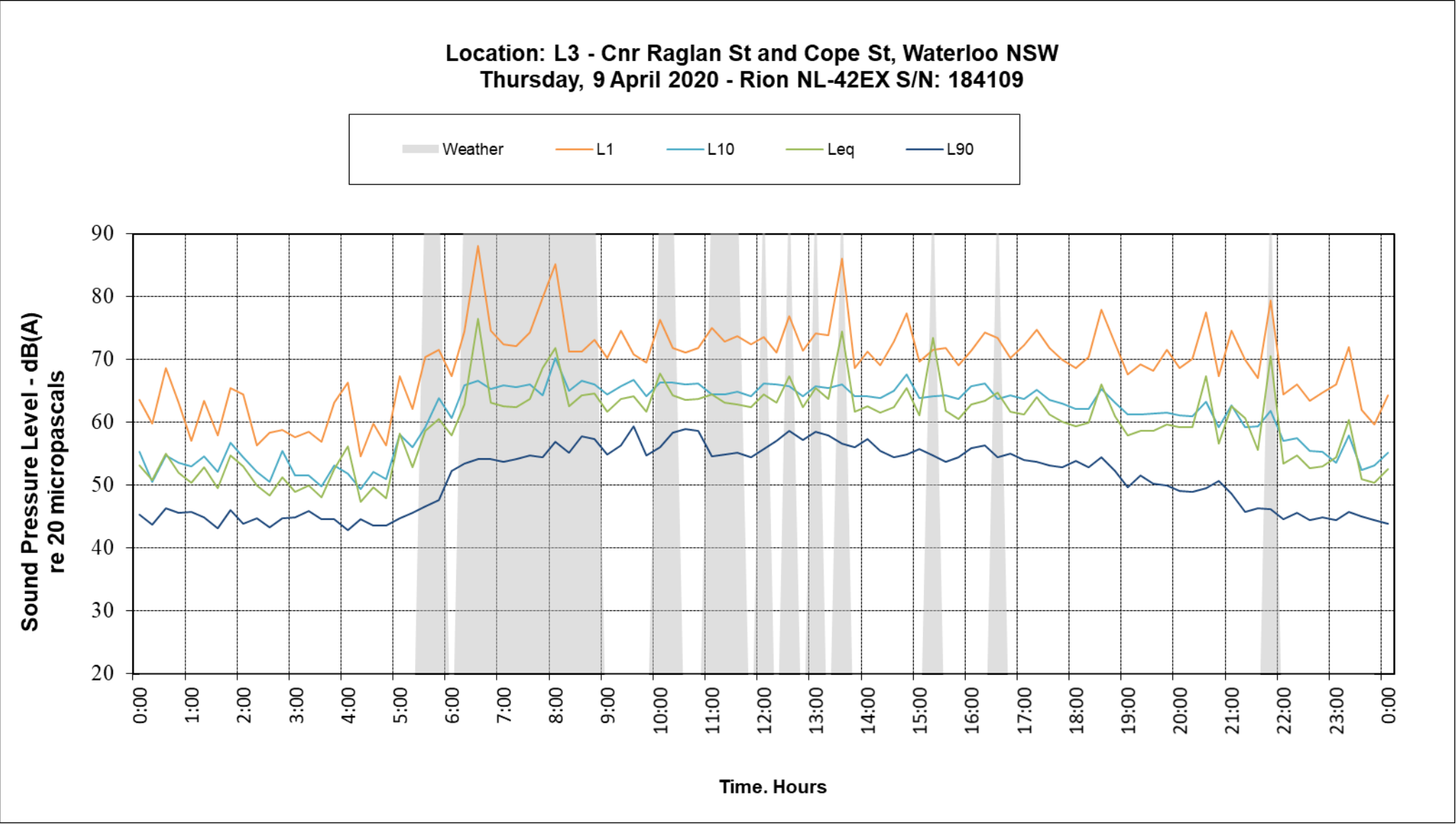




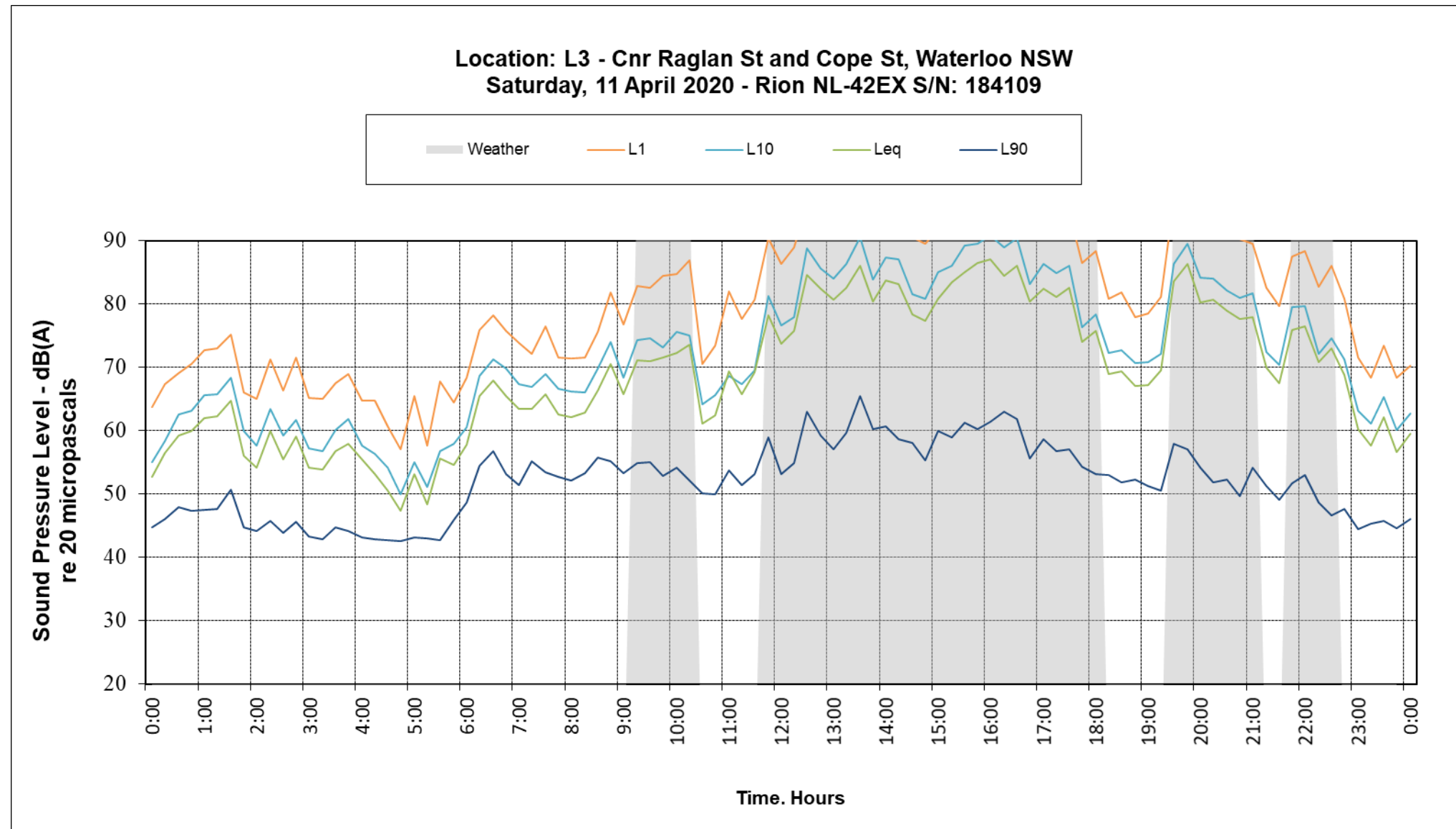


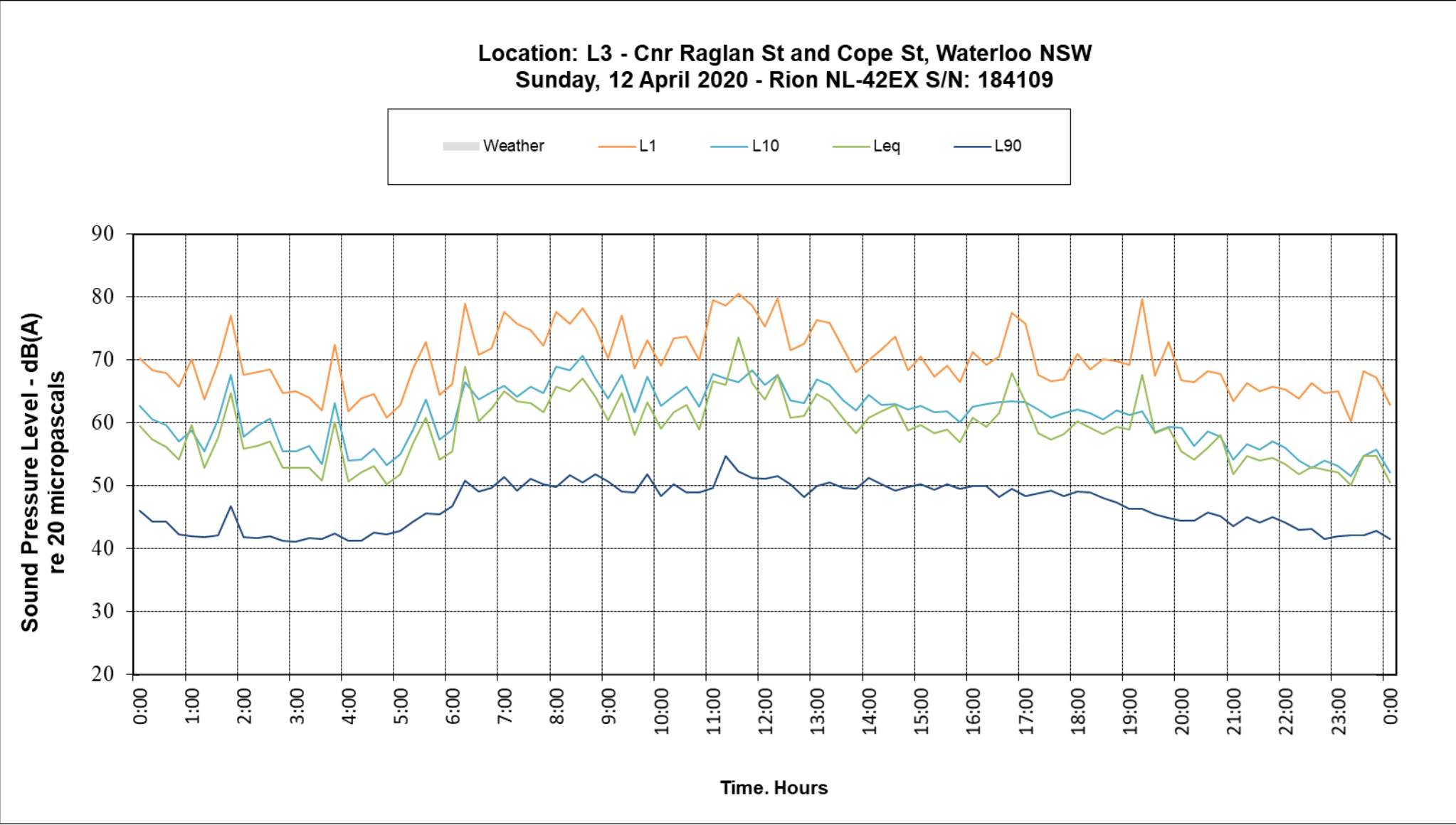
Location: L3 - Cnr Raglan St and Cope St, Waterloo NSW  
 Wednesday, 8 April 2020 - Rion NL-42EX S/N: 184109

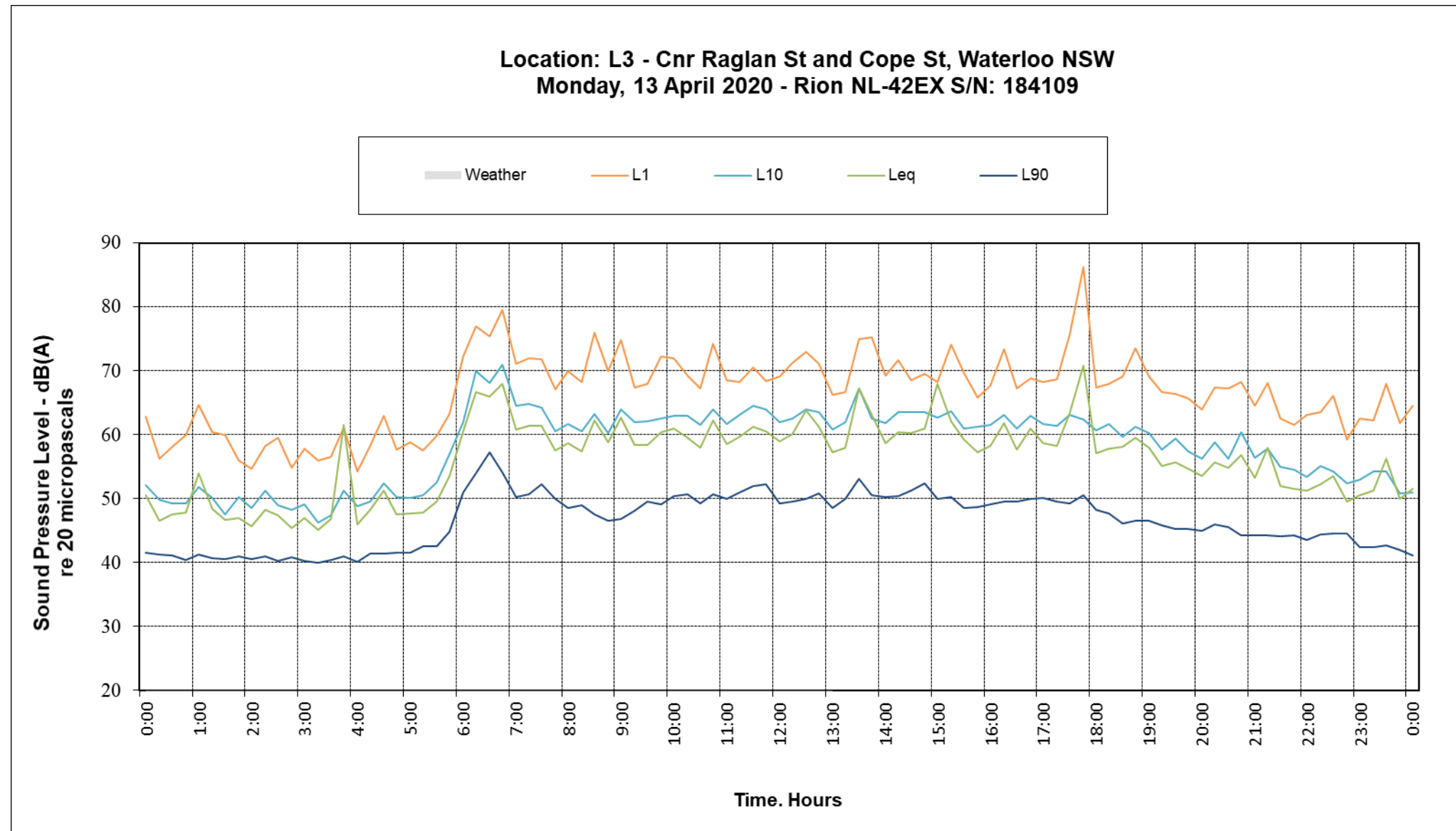




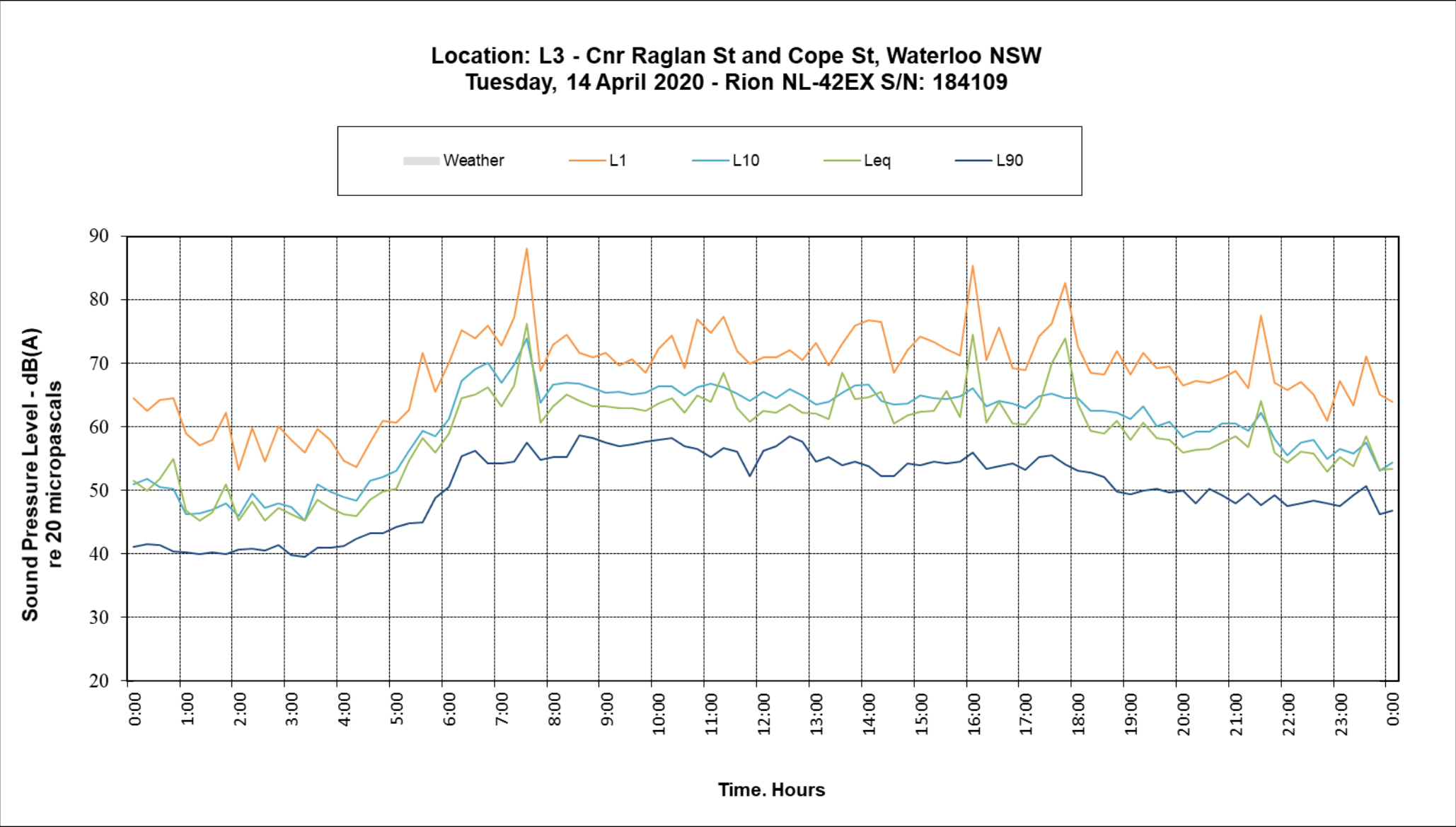


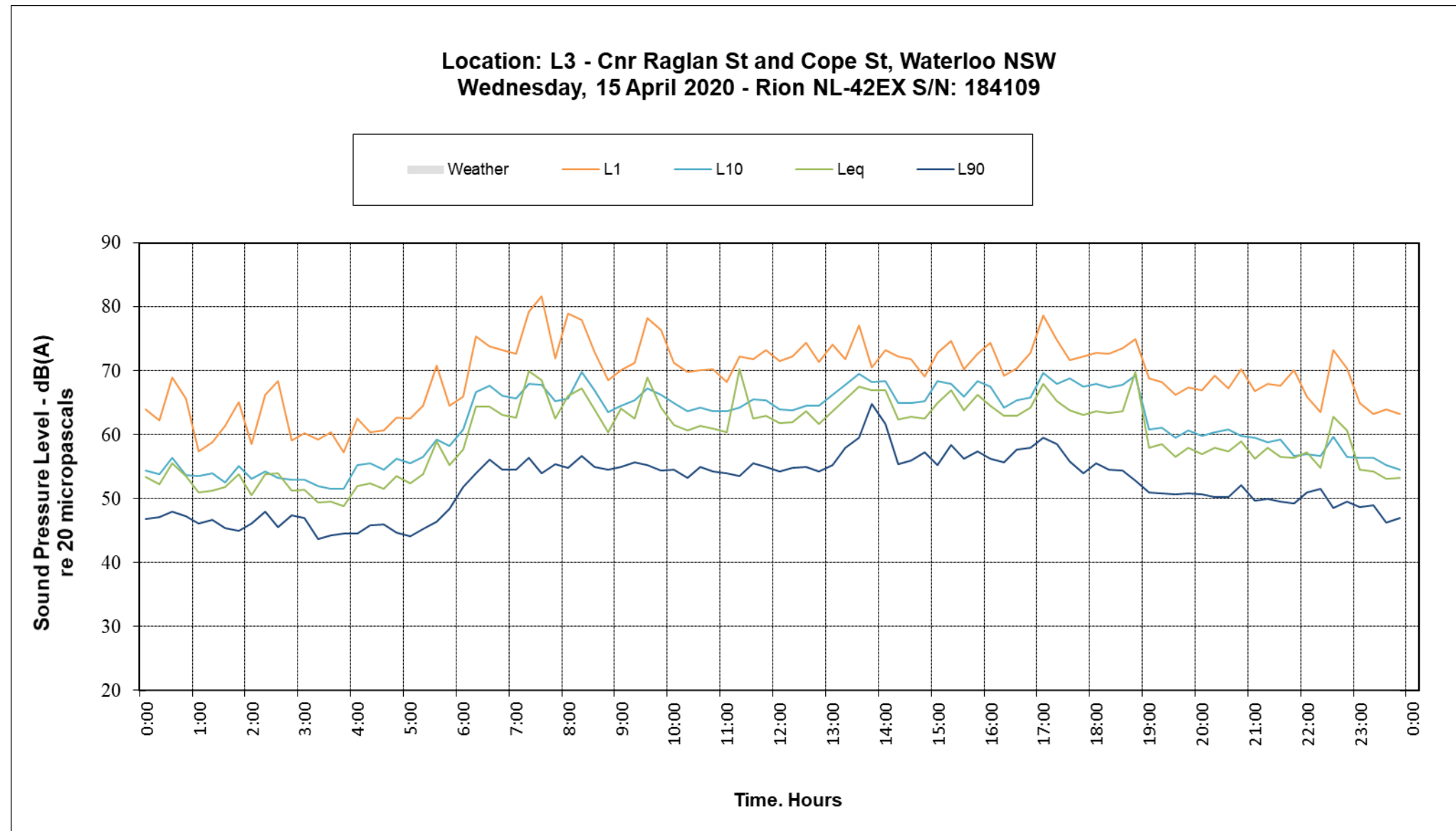


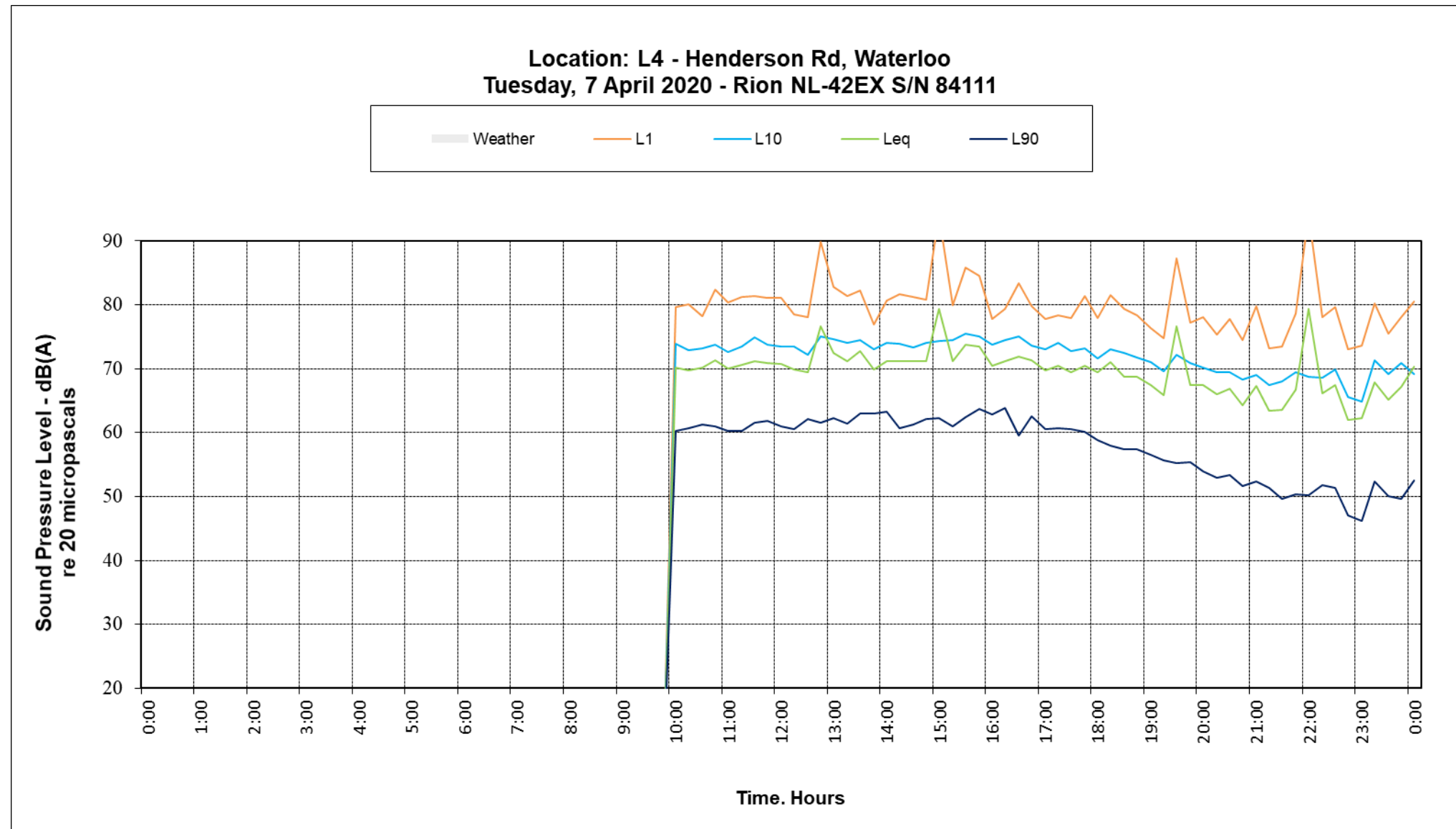






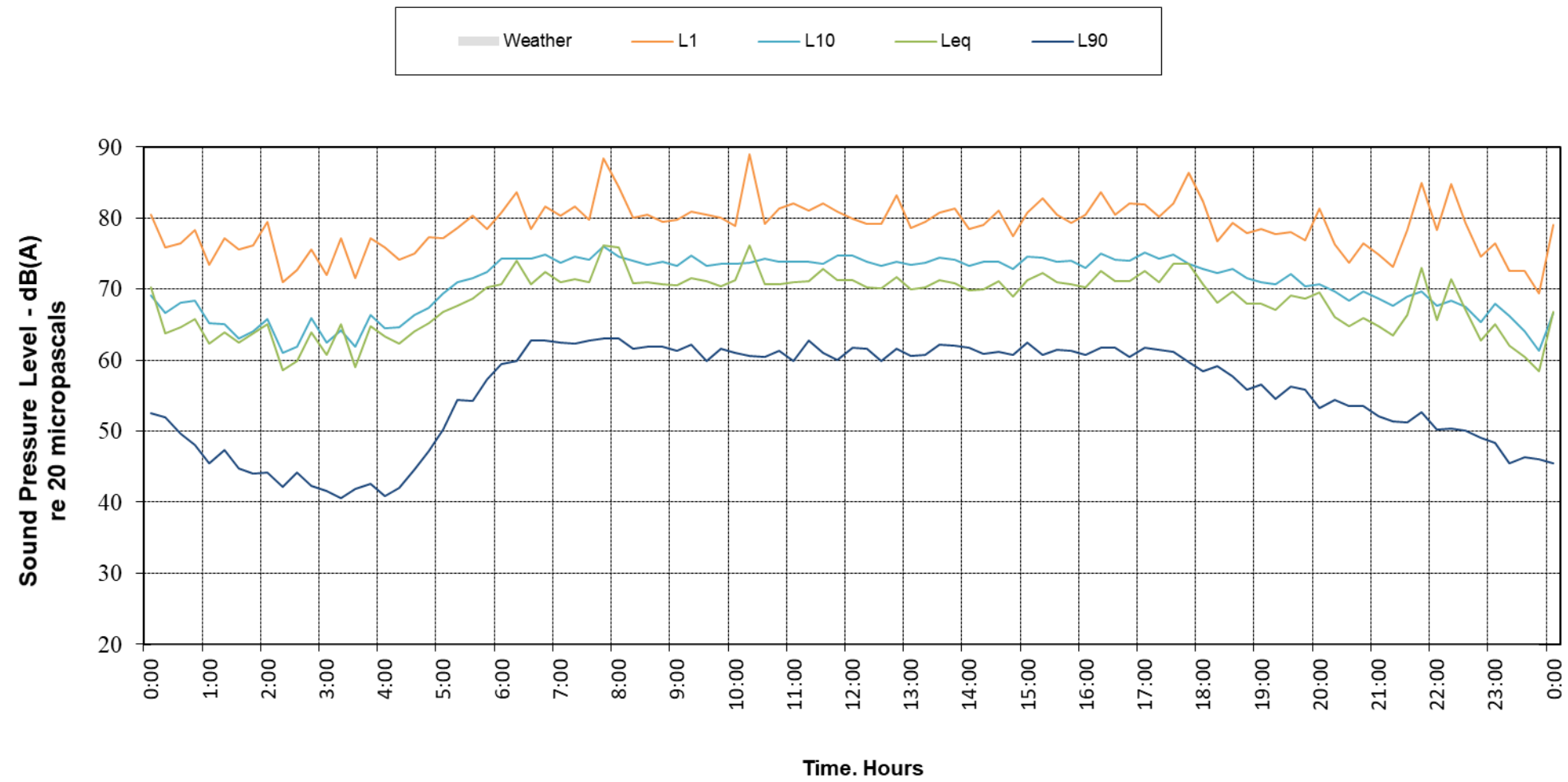


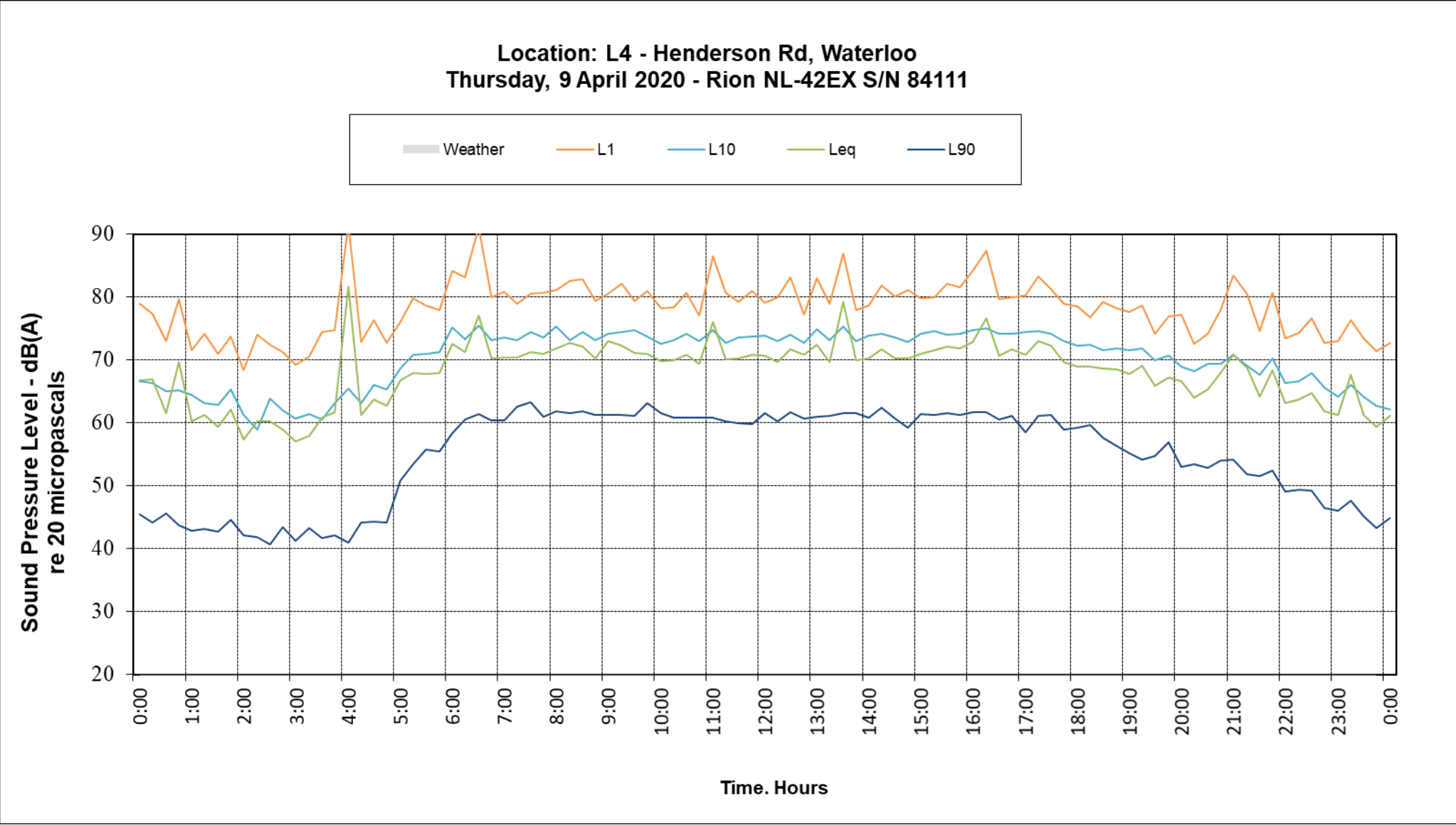


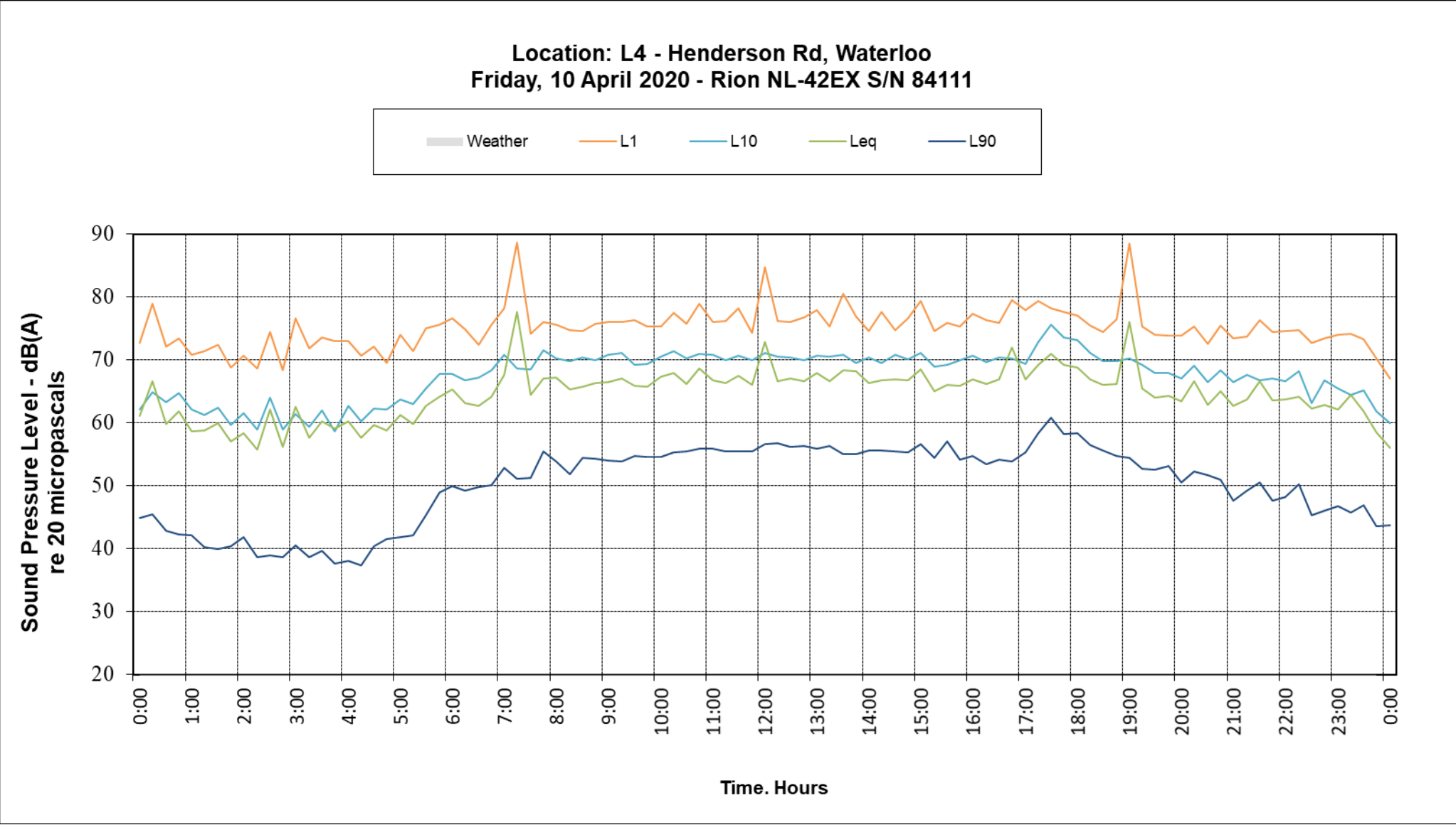




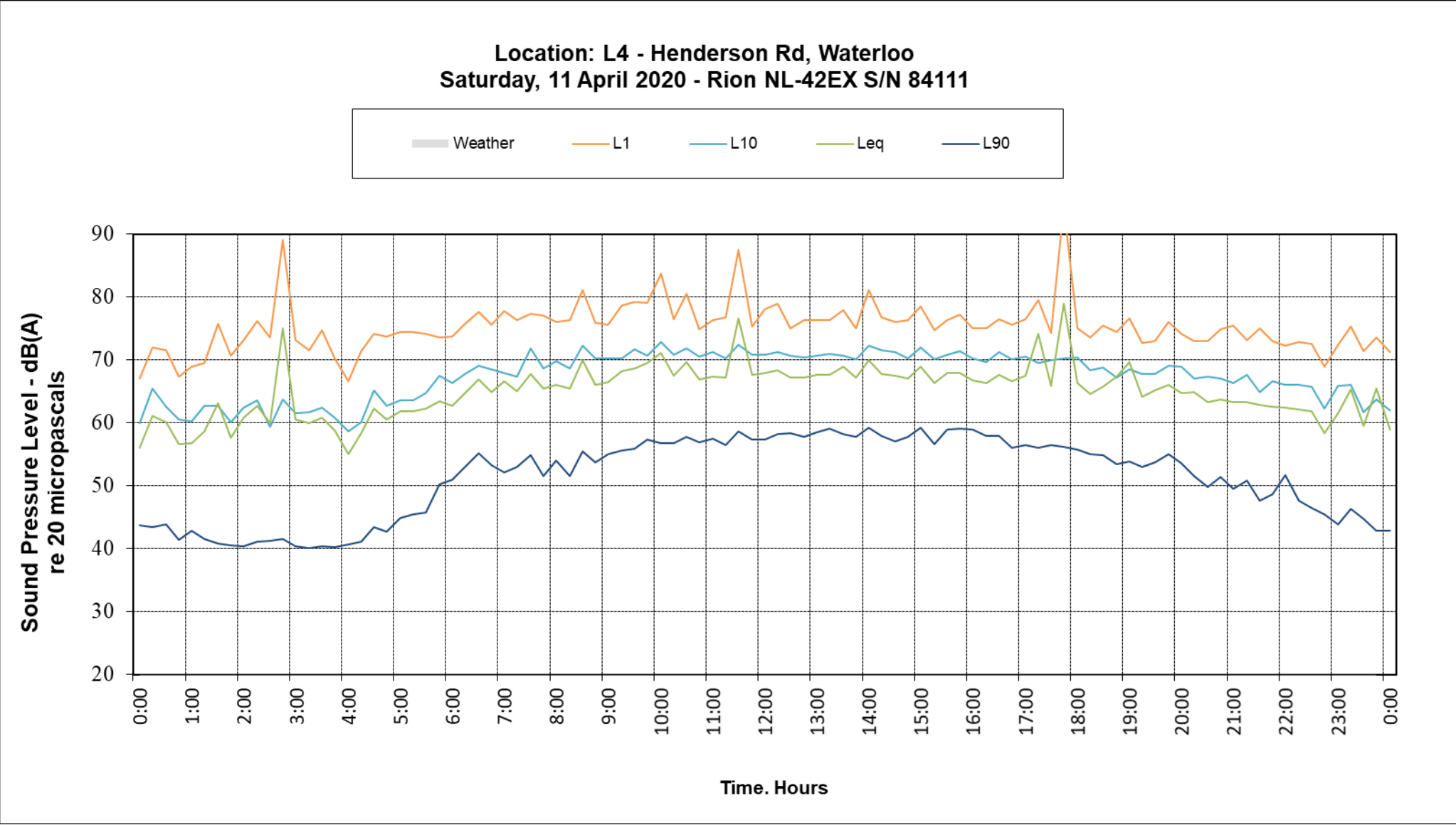
Location: L4 - Henderson Rd, Waterloo  
Wednesday, 8 April 2020 - Rion NL-42EX S/N 84111

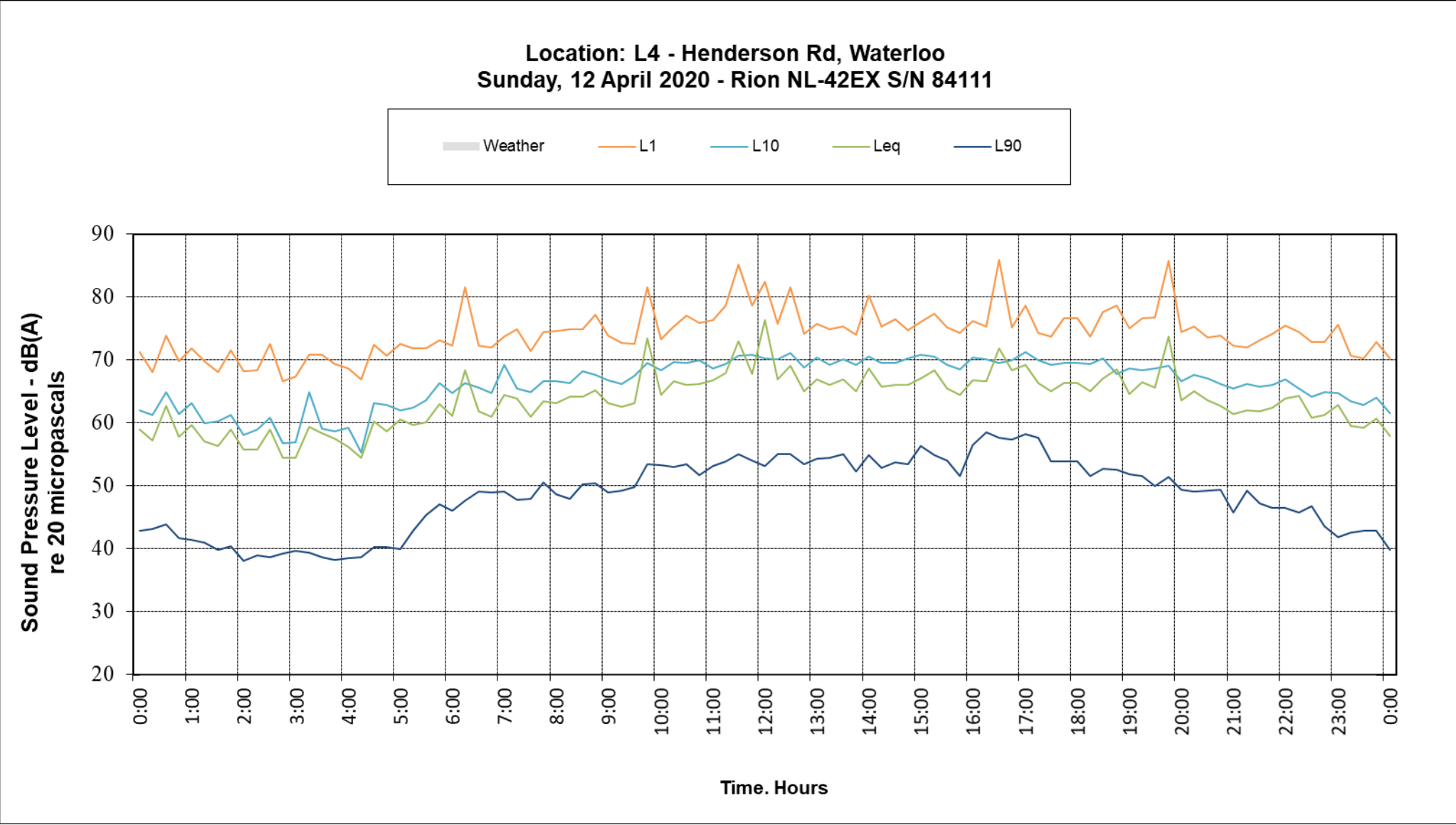


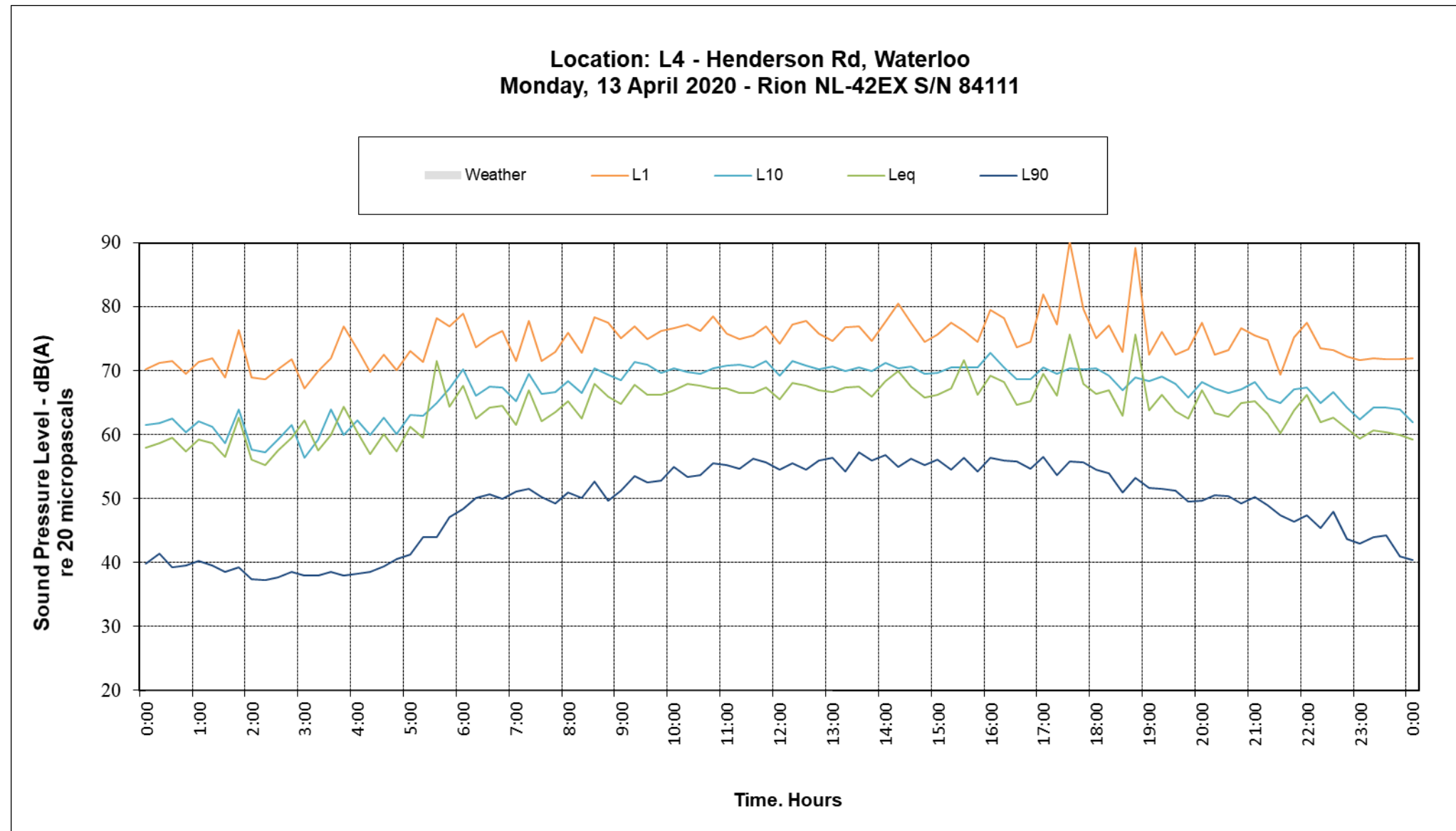




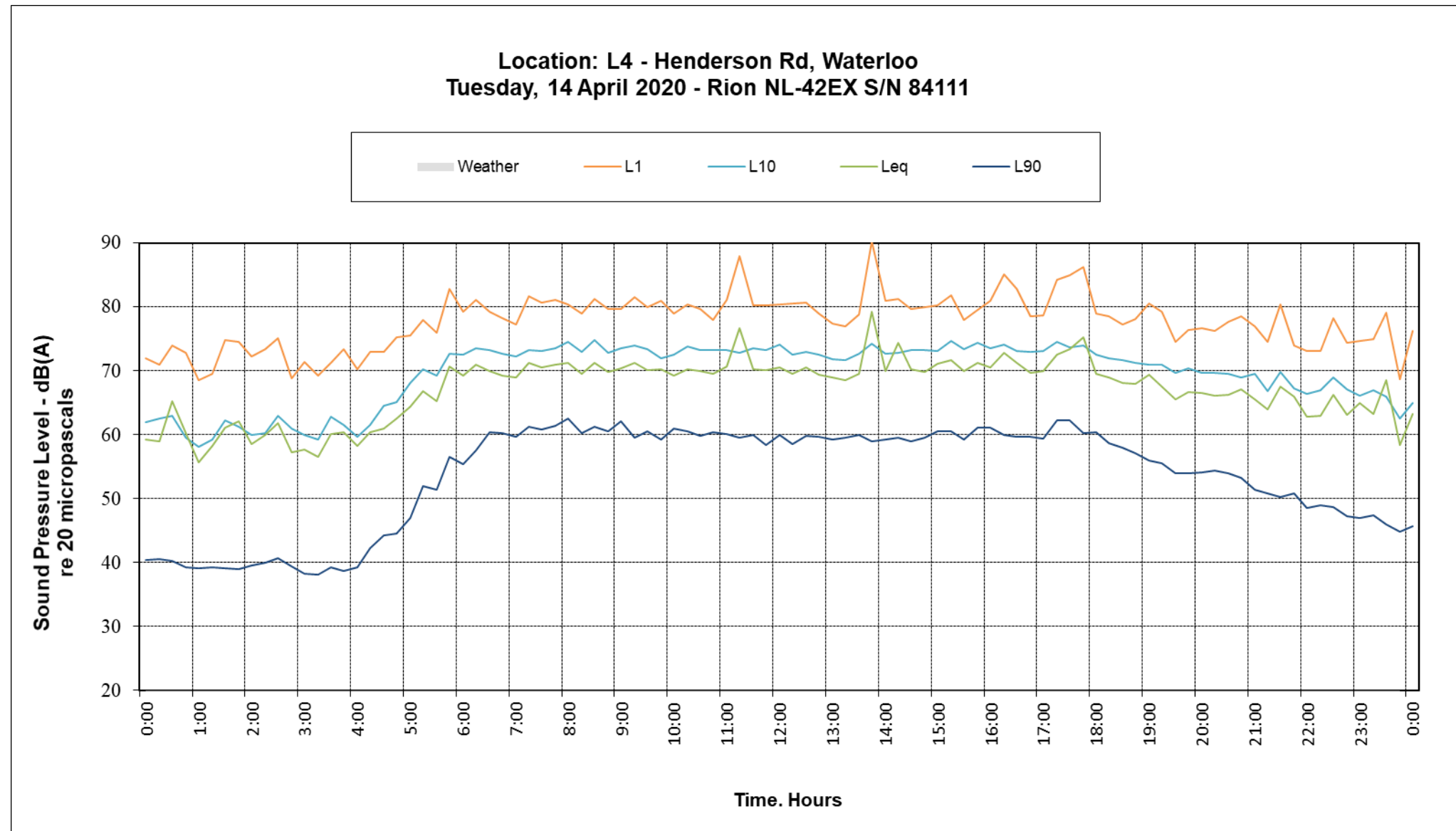


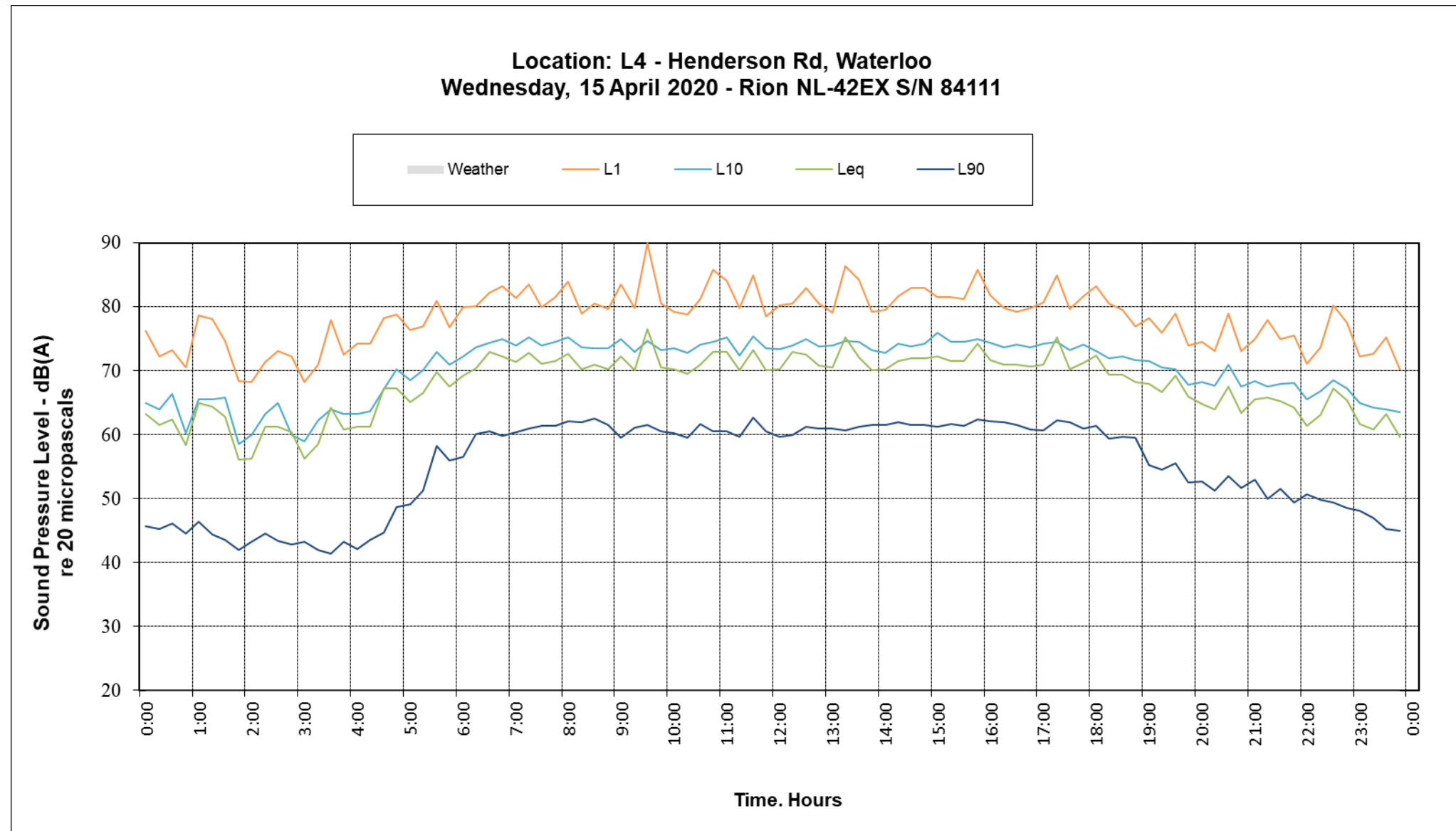


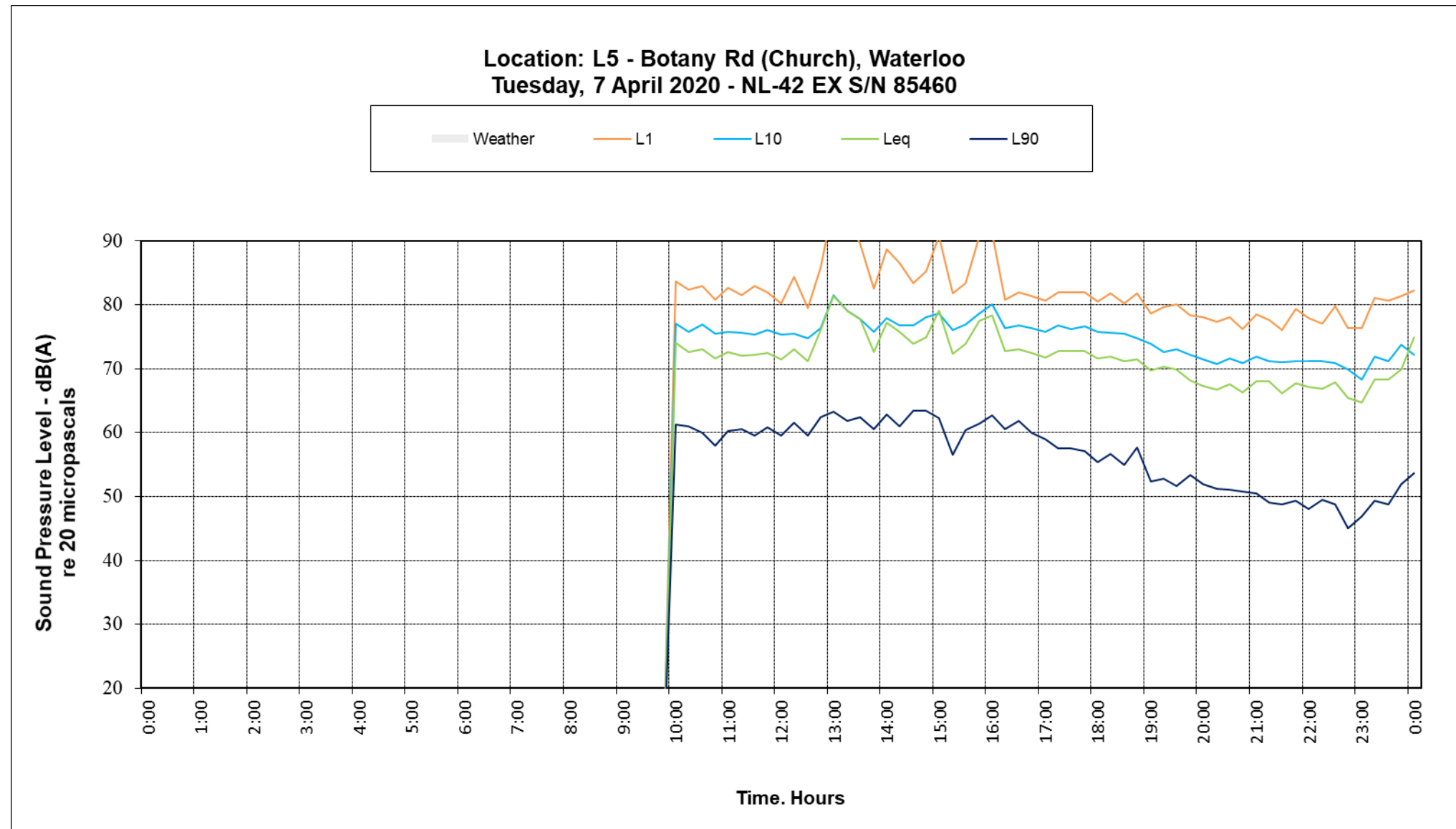














Location: L5 - Botany Rd (Church), Waterloo  
Wednesday, 8 April 2020 - NL-42 EX S/N 85460

