

## Appendix 9.2: Updated Baseline Noise Monitoring

To inform the noise and vibration assessment required for the September 2019 Environmental Statement Addendum for Stag Brewery, Mortlake, a new comprehensive noise survey was undertaken over a five-day period from Thursday 11<sup>th</sup> July to Tuesday 16<sup>th</sup> July 2019, covering a typical weekday and weekend period in order to establish and quantify the existing noise climate at and within the vicinity of the Site.

The long-term (LT) monitoring locations were positioned at the same locations and heights as the 2018 ES. The short-term (ST) locations have been re-positioned to specifically monitor road traffic along Lower Richmond Road and Clifford Avenue, in addition to two CRTN monitoring locations within Chertsey Court and along Williams Lane (re-positioning a ST monitor).

### Baseline Noise Survey

The noise monitoring locations are shown on **Figure 9.1** and described below in **Table 9.2.1**.

Table 9.2.1: Noise Monitoring Locations

Monitoring Location (Refer to Figure 9.1)	Description	Observations and Predominant Noise Sources
LT1	Free-field measurement at the south-western Site boundary overlooking Lower Richmond Road (the A3003). Microphone located approx. 1.2m above ground level (AGL).	Noise climate dominated by constant vehicular traffic on Lower Richmond Road / Mortlake High Street. Although intermittent in comparison, noise from low flying aircraft movements in to Heathrow Airport (located approx. 11km to the west) was significant.
LT2	Façade measurement on the second floor of the former hotel and bottling building at the south-eastern Site boundary overlooking Mortlake High Street. Microphone located approx. 6.0m AGL.	Contributory noise from human activities, distant road noise and distant aircraft also influence the noise climate to some extent.
LT3	Façade measurement on the boundary wall to the north-east of the Site overlooking the River Thames. Microphone located approx. 4.0m AGL.	Noise climate dominated by aircraft noise, as detailed above. Contributory noise from local and distant road traffic and occasional passing cyclists and pedestrians on the footpath over the river.
LT4	Free-field measurement at the south-western boundary of the Site orientated towards Clifford Avenue/Chiswick Bridge (the A316). Microphone located approx. 2.5m AGL.	Noise climate influenced by constant vehicular traffic on Clifford Avenue. Contributory noise from domestic activities at nearby residential dwellings.

Monitoring Location (Refer to Figure 9.1)	Description	Observations and Predominant Noise Sources
ST1	Free-field measurement along Lower Richmond Road (A3003) approx. 3m from carriageway edge. Microphone located approx. 1.2m AGL	Noise climate dominated by road traffic along Lower Richmond Road. Traffic flow was intermittent with periods of idling due to the traffic lights at the Lower Richmond Road / Clifford Avenue junction.
ST2	Free-field measurement along Clifford Avenue approx. 5m from carriageway edge. Microphone located approx. 1.2m AGL	Noise climate dominated by road traffic along Clifford Avenue. Traffic flow was intermittent with periods of idling due to the traffic lights at the Lower Richmond Road / Clifford Avenue junction.
CRTN1	Free-field measurement within Chertsey Court car park approx. 40m from Lower Richmond Road / Clifford Avenue Junction. Microphone located approx. 1.2m AGL	Noise climate in the area dominated by noise from both Lower Richmond Road (A3003) and Clifford Avenue. Occasional cars passing through the Chertsey Court car park and aircraft passing overhead also contributed to the noise climate at this location.
CRTN2	Free-field measurement along Williams Lane approx. 1m from road edge. Microphone located approx. 1.2m AGL	Noise climate in the area dominated by distant road traffic from Lower Richmond Road and the surrounding transport network. Occasional cars passing along Williams Lane and aircraft passing overhead also contributed to the noise climate at this location.

A summary of the measured daytime (07:00 to 23:00) and night-time (23:00 to 07:00) noise levels are presented in **Table 9.2.2**, with full results displayed in graphically (long-term) in time history format below. A summary of attended short-term daytime measurement results are presented in **Table 9.2.3** out of completeness.

Table 9.2.2: Summary of Unattended (Long Term) Baseline Noise Measurements (free-field)

Monitoring Location (Figure 9.1)	Date	Period	L <sub>Aeq,T</sub> dB		L <sub>A10,T</sub> dB		L <sub>A90,T</sub> dB		L <sub>AFmax,5min</sub> dB	
			Range	Ave <sup>1</sup>	Range	Ave <sup>2</sup>	Range	Ave <sup>2</sup> (Mode)	Range	90th Percentile <sup>3</sup>
LT1	Thursday (11/07/2019)	Night (8-hr)	51 – 73	66	45 – 76	67	34 – 63	43 (37)	70 – 87	84
	Friday (12/07/2019)	Day (16-hr)	65 – 81	72	68 – 76	74	50 – 66	60 (60)	75 – 110	86
		Night (8-hr)	54 – 78	66	51 – 74	68	35 – 55	43 (40)	73 – 103	83
	Saturday (13/07/2019)	Day (16-hr)	66 – 77	70	70 – 75	73	46 – 63	56 (57)	76 – 104	84
		Night (8-hr)	35 – 79	66	36 – 74	66	31 – 55	39 (36)	43 – 101	84
	Sunday (14/07/2019)	Day (16-hr)	67 – 82	72	72 – 79	75	41 – 66	57 (59)	78 – 105	86
		Night (8-hr)	45 – 72	66	41 – 76	65	33 – 58	40 (34)	56 – 91	84
	Monday (15/07/2019)	Day (16-hr)	66 – 79	71	70 – 76	75	40 – 66	57 (58)	78 – 103	87
		Night (8-hr)	54 – 77	67	37 – 77	65	33 – 63	40 (36)	72 – 101	85
	LT2	Thursday (11/07/2019)	Night (8-hr)	84 – 70	62	50 – 72	64	33 – 63	45 (37)	64 – 93
Friday (12/07/2019)		Day (16-hr)	64 – 83	69	67 – 73	69	51 – 64	61 (62)	71 – 103	86
		Night (8-hr)	53 – 82	65	54 – 73	64	32 – 58	44 (39)	63 – 102	77
Saturday (13/07/2019)		Day (16-hr)	62 – 82	68	65 – 71	69	49 – 64	59 (59)	69 – 103	85
		Night (8-hr)	37 – 80	64	39 – 69	63	28 – 58	40 (36)	54 – 100	75
Sunday (14/07/2019)		Day (16-hr)	62 – 81	69	66 – 77	69	49 – 65	59 (61)	69 – 101	84
		Night (8-hr)	44 – 69	62	38 – 71	63	31 – 63	41 (63)	58 – 87	78
Monday (15/07/2019)		Day (16-hr)	61 – 75	67	65 – 72	69	45 – 65	59 (62)	69 – 98	85
		Night (8-hr)	37 – 75	63	38 – 73	63	32 – 64	42 (34)	46 – 95	77
LT3		Thursday (11/07/2019)	Night (8-hr)	39 – 64	54	42 – 68	51	32 – 53	40 (37)	48 – 81
	Friday (12/07/2019)	Day (16-hr)	54 – 68	60	57 – 68	63	49 – 57	53 (54)	63 – 94	76
		Night (8-hr)	42 – 63	54	46 – 67	53	36 – 51	43 (41)	49 – 87	74
	Saturday (13/07/2019)	Day (16-hr)	50 – 66	59	51 – 69	60	47 – 55	51 (52)	55 – 86	73
		Night (8-hr)	39 – 52	47	43 – 55	48	61 – 48	40 (39)	46 – 73	60
	Sunday (14/07/2019)	Day (16-hr)	49 – 65	54	51 – 68	55	46 – 54	50 (50)	55 – 87	72
		Night (8-hr)	41 – 57	48	44 – 63	49	37 – 50	42 (38)	47 – 68	64

Monitoring Location (Figure 9.1)	Date	Period	L <sub>Aeq,T</sub> dB		L <sub>A10,T</sub> dB		L <sub>A90,T</sub> dB		L <sub>AFmax,5min</sub> dB	
			Range	Ave <sup>1</sup>	Range	Ave <sup>2</sup>	Range	Ave <sup>2</sup> (Mode)	Range	90th Percentile <sup>3</sup>
LT4	Monday (15/07/2019)	Day (16-hr)	46 – 73	55	49 – 63	54	41 – 53	49 (48)	53 – 92	72
		Night (8-hr)	36 – 65	54	41 – 69	49	29 – 54	37 (34)	44 – 82	72
	Thursday (11/07/2019)	Night (8-hr)	37 – 63	54	39 – 68	48	30 – 51	38 (38)	43 – 80	73
	Friday (12/07/2019)	Day (16-hr)	48 – 68	59	50 – 67	63	45 – 53	49 (50)	60 – 95	76
		Night (8-hr)	37 – 62	54	40 – 67	51	31 – 50	39 (37)	44 – 76	73
	Saturday (13/07/2019)	Day (16-hr)	48 – 62	57	50 – 67	58	44 – 53	48 (48)	53 – 81	74
		Night (8-hr)	36 – 50	44	40 – 53	46	28 – 47	38 (38)	43 – 67	60
	Sunday (14/07/2019)	Day (16-hr)	45 – 63	52	47 – 66	53	43 – 51	47 (48)	51 – 78	67
		Night (8-hr)	38 – 55	46	41 – 57	47	31 – 51	39 (35)	45 – 70	58
	Monday (15/07/2019)	Day (16-hr)	44 – 69	52	46 – 62	52	38 – 52	46 (45)	50 – 94	71
		Night (8-hr)	38 – 55	46	41 – 57	47	31 – 51	39 (35)	45 – 70	58

**Notes:** <sup>1</sup> Logarithmic average over the day/evening/night survey periods; <sup>2</sup> Arithmetic average over the day/evening/night survey periods; <sup>3</sup> The 90th percentile L<sub>AFmax</sub> value (equivalent to the 10th highest measured L<sub>AFmax</sub> level) is presented and considered representative of typical L<sub>AFmax</sub> levels experienced. All figures rounded to nearest whole decibel, only full periods reported.

Table 9.2.3: Summary of Attended (Short Term) Baseline Noise Measurements (free-field)

Monitoring Location (Figure 9.1)	Period	Duration	L <sub>Aeq,T</sub> dB	L <sub>A10,T</sub> dB	L <sub>A90,T</sub> dB	L <sub>AFmax,5min</sub> dB
			Ave <sup>1</sup>	Ave <sup>2</sup>	Ave <sup>2</sup>	Ave <sup>2</sup>
ST1	Day	1-hour	73	74	62	85
ST2	Day	1-hour	70	73	61	78
CRTN1	Day	3-hour	63	65	57	76
CRTN2	Day	3-hour	58	61	45	74

**Notes:** <sup>1</sup> Logarithmic average over the daytime survey periods; <sup>2</sup> Arithmetic average over the daytime survey periods. All figures rounded to nearest whole decibel.

Figures 9.2.1 to 9.2.4 present the time history plots of the long-term noise monitoring locations LT1 to LT4 respectively.

Figure 9.2.1: Time History Plot LT1

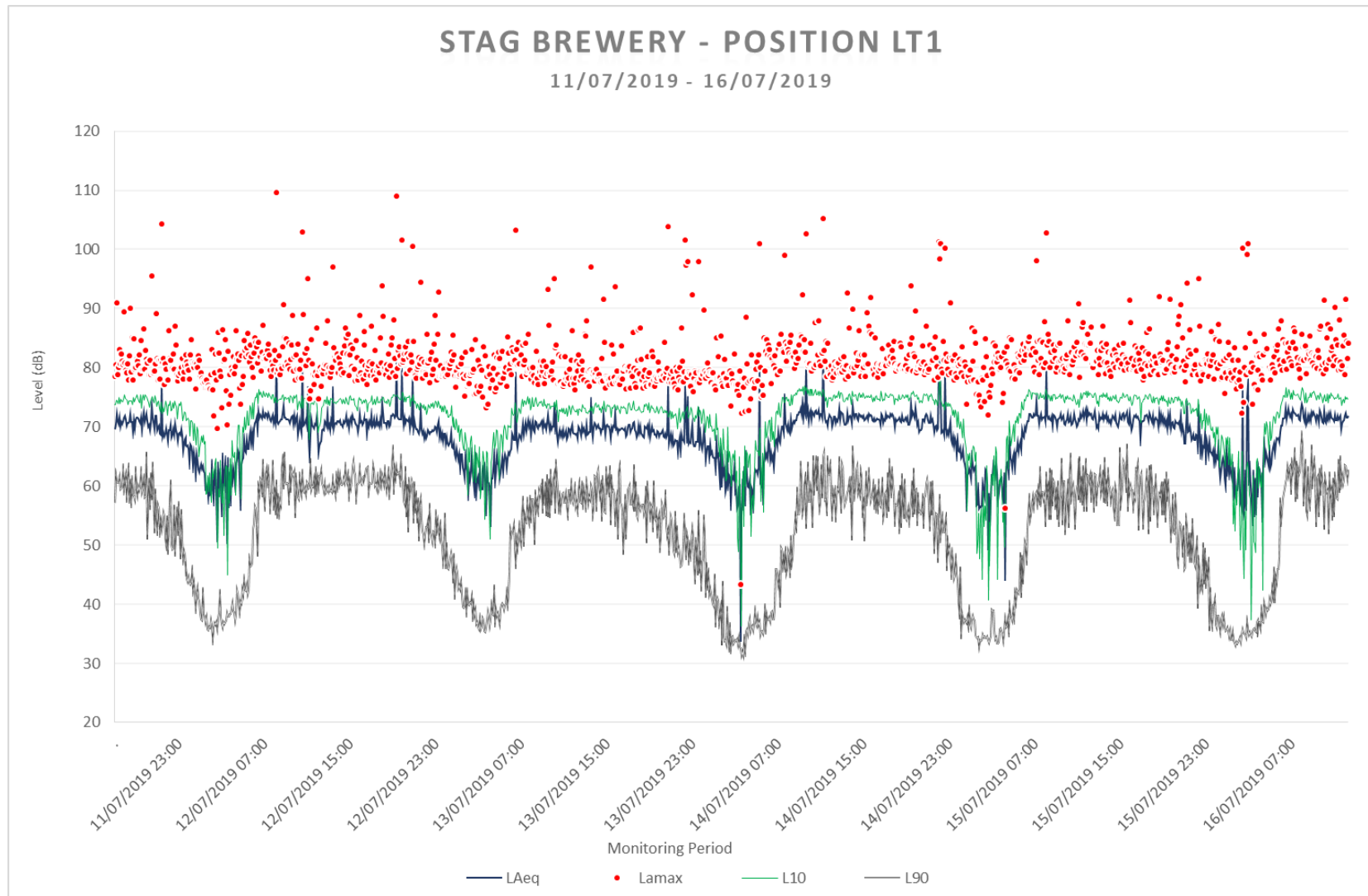


Figure 9.2.2: Time History Plot LT2

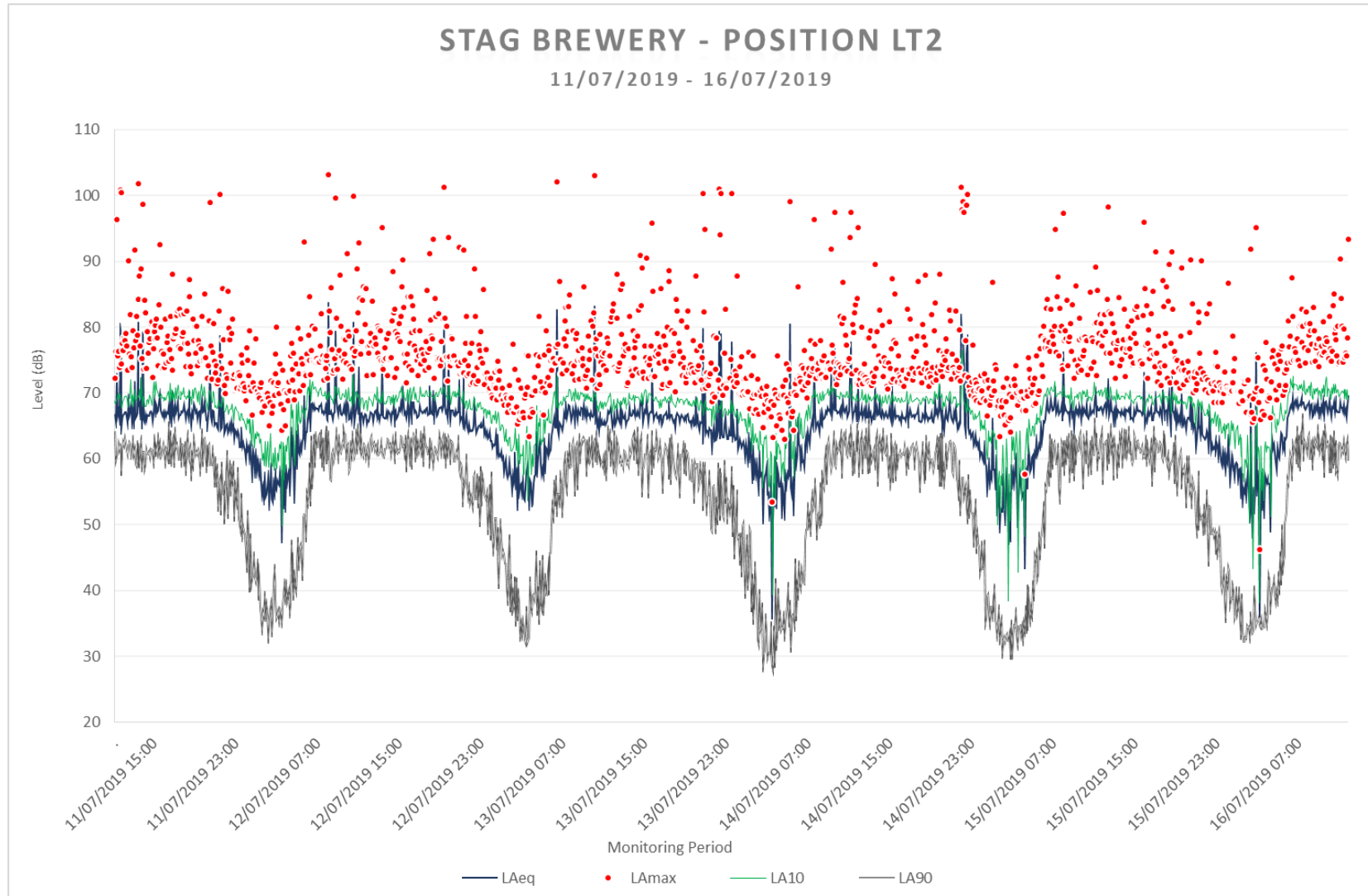


Figure 9.2.3: Time History Plot LT3

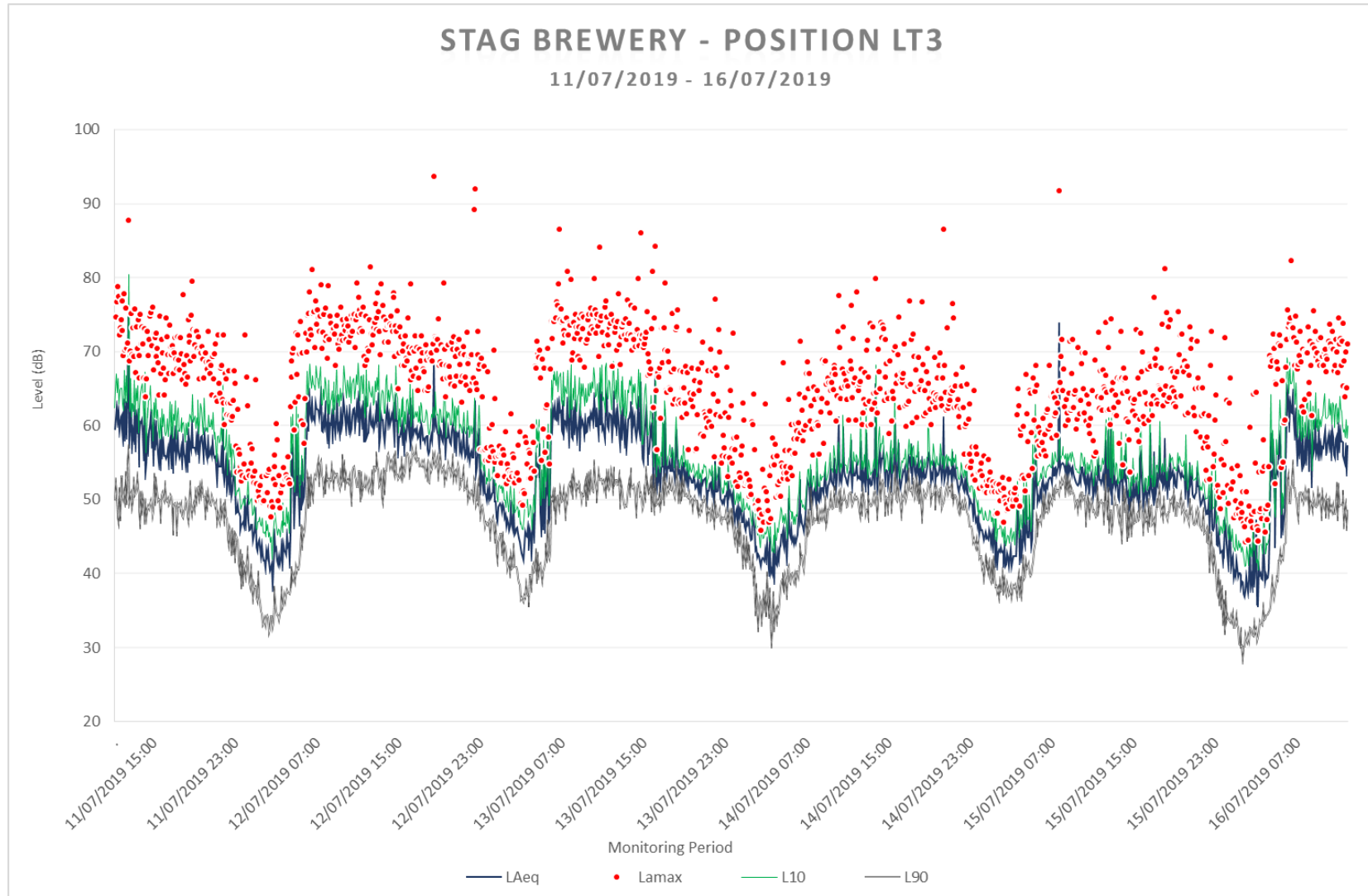




Figure 9.2.4: Time History Plot LT4

