27 Kent Road, Claremont Meadows

DA Acoustic Assessment

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1 INTRODUCTION

This report presents an analysis of noise impacts associated with the proposed residential development at 27 Kent Road, Claremont Meadows.

In this report we will assess:

- Traffic noise impacts on the project site from the surrounding roads.
- Noise emission criteria of mechanical plant to surrounding properties.

Traffic noise intrusion into the development has been assessed in accordance with;

- Penrith City Council DCP
- NSW EPA Road Noise Policy
- NSW Department of Planning's *Development Near Rail Corridors and Busy Roads (Interim Guideline)*
- SEPP Infrastructure 2007

Noise emission criteria from the development will be set based on;

- The Environmental Protection Authority *Industrial Noise Policy*.
- The PEOA Act 1997
- PEOA Act Regulation 2000

The noise assessment is based on the architectural drawings supplied by Universal Property Group, project title 27 Kent Road and 326-330 Caddens Road, Claremont Meadows – Lot 1001 IN DP 1131997 and Lot 14 IN DP 27107, issue 3 and dated 01/12/2016.

2 SITE DESCRIPTION / PROPOSED DEVELOPMENT

The site is located at 27 Kent Road, Claremont Meadows. The development will involve subdividing proposed site into 65 lots to allow for residential development. A 2m high screen is proposed to be constructed along the southern boundary of the site.

Potential noise impacts on the site are primarily traffic noise from surrounding roadways. Roadways in the vicinity of the site are as follows:

- M4 Motorway located approximately 50m to the south which carries high volumes of traffic flow;
- Kent Road to the east which carries low volumes of traffic;
- Caddens Road to the north, which carries low volumes of traffic.

Figure 1 below, which is an aerial photo of the site.

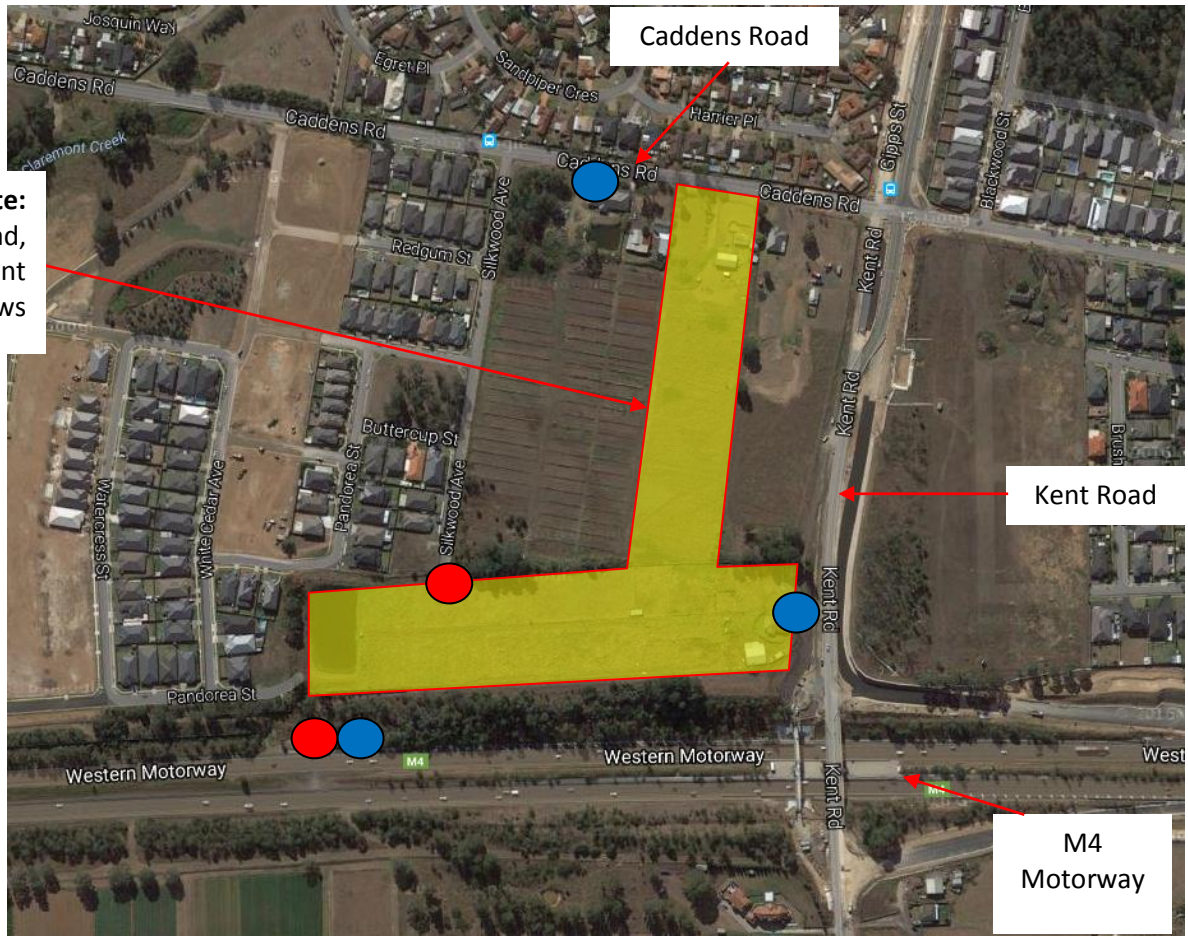


Figure 1 – Site Map

Unattended Noise Measurements

Attended Noise Measurements

3 NOISE DESCRIPTORS

Traffic noise constantly varies in level, due to fluctuations in traffic speed, vehicle types, road conditions and traffic densities. Accordingly, it is not possible to accurately determine prevailing traffic noise conditions by measuring a single, instantaneous noise level. To accurately determine the effects of traffic noise a 15-20 minute measurement interval is utilised. Over this period, noise levels are monitored on a continuous basis and statistical and integrating techniques are used to determine noise description parameters. These parameters are used to measure how much annoyance would be caused by a particular noise source.

In the case of environmental noise, three principle measurement parameters are used, namely L_{10}, L_{90} and L_{eq}.

The L_{10} and L_{90} measurement parameters are statistical levels that represent the average maximum and average minimum noise levels respectively, over the measurement interval.

The L_{10} parameter is commonly used to measure noise produced by a particular intrusive noise source since it represents the average of the loudest noise levels produced by the source.

Conversely, the L_{90} level (which is commonly referred to as the background noise level) represents the noise level heard in the quieter periods during a measurement interval. The L_{90} parameter is used to set the allowable noise level for new, potentially intrusive noise sources since the disturbance caused by the new source will depend on how audible it is above the pre-existing noise environment, particularly during quiet periods, as represented by the L_{90} level.

The L_{eq} parameter represents the average noise energy during a measurement period. This parameter is derived by integrating the noise levels measured over the measurement period. L_{eq} is important in the assessment of traffic noise impact as it closely corresponds with human perception of a changing noise environment; such is the character of traffic noise.

Current practice favours the L_{eq} parameter as a means of measuring traffic noise, whereas the L_{10} parameter has been used in the past and is still incorporated in some codes. For the reasons outlined above, the L_{90} parameter is not used to assess traffic noise intrusion.

4 NOISE INTRUSION ASSESSMENT

Significant noise sources in the vicinity of the site are as follows:

- M4 Motorway located approximately 50m to the south which carries high volumes of traffic flow;
- Kent Road to the east which carries low volumes of traffic;
- Caddens Road to the north, which carries low volumes of traffic.

Noise impacts should comply with the requirements of the Penrith City Council DCP, the NSW Department of Planning's *Development Near Rail Corridors and Busy Roads (Interim Guideline)* and the SEPP Infrastructure 2007, as listed below.

4.1 INTERNAL NOISE CRITIERA

4.1.1 Penrith City Council DCP

Section C12.1 of the Penrith Council DCP states the following regarding traffic noise impacts on residential development:

*"**C. Controls***

1) Road traffic noise criteria including sensitive land uses

a) Council will not grant consent to development, particularly residential development, including subdivisions, unless the impact of traffic noise from freeway, arterial, designated or collector roads complies with the standards and guidelines for road traffic noise prepared by the relevant State Government authorities or agencies, as well as relevant Australian Standards."

In addition, the site is located within the Claremont Meadows Stage 2 south-western precinct. Given this, the controls in part E2 of the DCP apply to this site. Section 2.5.1 of part E2 of the DCP states:

*"**B. Controls***

General

1) Residential development affected by traffic noise associated with Gipps Street, Kent Road, the M4 Motorway, or the Great Western Highway must comply with the NSW Road Noise Policy (Environment Protection Authority)."

4.1.2 NSW EPA Road Noise Policy

Section C10 of the NSW EPA Road Noise Policy references the SEPP Infrastructure and the NSW Department of Planning's 'Development Near Rail Corridors and Busy Roads (Interim Guideline)' with respect to traffic noise impacts on new residential development. It states:

"C10 New residential and other sensitive developments affected by noise from existing roads

Gazetted in late 2007, the Infrastructure SEPP (Department of Planning NSW 2007) is an important planning instrument which facilitates the development of state significant projects. Of particular importance is that for the first time, internal noise levels (based on World Health Organisation guidelines) have been established for new sensitive developments along major road and rail corridors. The Infrastructure SEPP recognises that judicious land use planning, architectural design, building orientation and good internal layout can achieve acceptable acoustic amenity near busy transport corridors.

Supporting guidelines (Department of Planning 2008) have been published which guide development adjacent to railway lines and along motorways, tollways, freeways, transitways and other 'busy' roads. For new residential developments, internal noise levels of 35 dB(A) have been set for bedrooms during the night-time period and 40 dB(A) for other habitable rooms."

4.1.3 NSW Department of Planning's 'Development Near Rail Corridors and Busy Roads (Interim Guideline)'

Section 3.5 of the NSW Department of Planning's 'Development Near Rail Corridors and Busy Roads (Interim Guideline)' states:

"The following provides an overall summary of the assessment procedure to meet the requirements of clauses 87 and 102 of the Infrastructure SEPP. The procedure covers noise at developments for both Road and Rail.

- *If the development is for the purpose of a building for residential use, the consent authority must be satisfied that appropriate measures will be taken to ensure that the following LAeq levels are not exceeded:*

  - *in any bedroom in the building: 35dB(A) at any time 10pm-7am*

  - *anywhere else in the building (other than a garage, kitchen, bathroom or hallway): 40dB(A) at any time."*

4.1.4 SEPP (Infrastructure) 2007

The State Environmental Planning Policy (Infrastructure) 2007 (the 'Infrastructure SEPP') sets out internal noise levels for developments with the potential to be impacted by traffic or rail noise and vibration.

The Infrastructure SEPP defines busy roads that are subject to an acoustic assessment as:

> *"Roads specified in Clause 102 of the Infrastructure SEPP: a freeway, tollway or a transit way or any other road with an average annual traffic (AADT) volume of more than 40,000 vehicles (based on the traffic volume data provided on the website of the RTA).*
>
> *Any other road – with an average annual daily traffic (AADT) volume of more than 20,000 vehicles (based on the traffic volume data published on the website of the RTA).*
>
> *Any other road – with a high level of truck movements or bus traffic."*

The Infrastructure SEPP sets out the following criteria for internal noise levels from airborne traffic noise:

> *"For Clauses 87 (Rail) and 102 (Road):*
>
> *"If the development is for the purpose of a building for residential use, the consent authority must be satisfied that appropriate measures will be taken to ensure that the following LAeq levels are not exceeded:*
>
> *in any bedroom in the building: 35dB(A) at any time 10pm–7am*
>
> *anywhere else in the building (other than a garage, kitchen, bathroom or hallway): 40dB(A) at any time."*

Internal requirements are for residential units and are measured internally with windows closed.

4.1.5 Summary of Noise Intrusion Criteria

This assessment shall be conducted in accordance with the most stringent criteria specified above, which is summarised below:

Table 1 - Internal Noise Level Criteria

Location	Time Period	Criteria
Residential Bedroom/Sleeping Areas	Night (10pm – 7am)	35 dB(A) $L_{eq(9\ hour)}$
Residential Living Areas	Day (7am – 10pm)	40 dB(A) $L_{eq(15\ hour)}$

4.2 TRAFFIC NOISE MONITORING

As part of this investigation, traffic noise from the surrounding perimeter roadways has been measured. The results of these measurements will be used to determine the treatments required to reduce noise levels to within the project acoustic objectives.

Noise levels measurements conducted at the location as detailed in Figure 1 above.

4.2.1 Unattended Noise Measurements

Unattended noise measurements were obtained using an Acoustic Research Laboratories Pty Ltd noise logger. The logger was programmed to store 15-minute statistical noise levels throughout the monitoring period. The noises monitors were calibrated at the beginning and the end of the measurement using a Rion NC-73 calibrator. No significant drift was detected. All measurements were taken on A-weighted fast response mode. There were no significant periods of adverse weather conditions during the measurement period.

The noise monitor was set up facing the M4 Motorway, with a 180 degree view of the road, from the 24th to the 31st May 2016. Refer to Appendix 1 for unmanned noise monitoring data.

4.2.2 Attended Noise Measurements

Attended traffic noise measurements were carried out to supplement the unattended noise monitoring between the hours of 4:00pm-5:30pm on the 31st May 2016. Measurements were undertaken using a Norsonics Type 140 precision sound level analyser, set to A-weighted fast response. The precision sound level analyser was calibrated before and after the measurements using a Norsonics 1251 precision sound level calibrator. No significant drift was recorded.

4.2.3 Traffic Noise Levels

The following table presents the resultant noise levels from undertaken measurements. The noise levels presented below factor in attenuation from the proposed 2m high screen to be constructed along the southern boundary of the site (as shown in the architectural drawings.

Table 2 - Traffic Noise Levels at Proposed Building Facade

Location	7am to 10pm dB(A)	10pm-7am-dB(A)
At Proposed Ground Floor Southern Façade (Facing M4 Motorway)	62dB(A)$L_{eq(15\ hour)}$	59dB(A)$L_{eq(9\ hour)}$
At Proposed Southern Façade (Facing M4 Motorway)	69dB(A)$L_{eq(15\ hour)}$	66dB(A)$L_{eq(9\ hour)}$

4.3 RECOMMENDATIONS

Traffic noise intrusion into the proposed development was assessed using the measured external noise levels reported above as a basis.

Calculations were performed assuming the orientation of windows and the total area of glazing, and taking into account facade transmission loss and room sound absorption characteristics. In this way the likely interior noise levels can be predicted. Acoustic treatment required to ensure compliance with the assessment criteria are detailed in this section.

Internal noise levels will primarily be as a result of noise transfer through the windows and doors as these are relatively light building elements that offer less resistance to the transmission of sound. Noise transfer through the masonry elements will not be significant and need not be considered further.

The constructions necessary to achieve the noise levels are detailed below. The predicted noise levels have been based on the expected level and spectral characteristics of the external noise, the area of building elements exposed to traffic noise, the absorption characteristics of the rooms and the noise reduction performance of the building elements.

Note: all of the acoustic treatments presented below are based on the assumption that a 2m high screen is constructed along the southern boundary of the site as shown in the architectural drawings. Refer to section 4.3.5 for recommendations for the acoustic screen.

4.3.1 Glazed Windows and Doors

The recommended glazing constructions are outlined below in the following table.

Aluminium framed/sliding glass doors and windows will be satisfactory provided they meet the following criteria listed below.

Table 3 - Indicative Glazing Recommendations (Subject to Review Upon Finalisation of Architectural Drawings)

Lot Numbers	Room Type	Facade	Glazing Assembly	Acoustic Seals Required
31-33, 38-42, 44-45, 47-49 & 52-56	Living Room	Ground Floor East, West and South	6.38mm laminated	Yes
		First Floor East, West and South	10.38mm laminated	Yes
		Northern	6mm float	Yes
	Bedroom	Ground Floor East, West and South	6.38mm laminated	Yes
		First Floor East, West and South	10.38mm laminated	Yes
		Northern	6mm float	Yes
34	Living Room	East, West and South	10.38mm laminated	Yes
		Northern	6mm float	Yes
	Bedroom	East, West and South	10.38mm laminated	Yes
		Northern	6mm float	Yes
25-30, 35-37, 43, 46, 50, 51 & 57-58	Living Room	Ground Floor East, West and South	6mm float	Yes
		First Floor East, West and South	6.38mm laminated	Yes
		Northern	6mm float	Yes
	Bedroom	Ground Floor East, West and South	6mm float	Yes
		First Floor East, West and South	6.38mm laminated	Yes
		Northern	6mm float	Yes
1-24	All rooms	All	6mm float	Yes

In addition to meeting the minimum glazing thickness requirements given, the design of the window mullions, perimeter seals and the installation of the windows/doors in the building openings shall not reduce the STC/R_w rating of the glazing assembly below the values nominated in the table below. **Note that mohair type seals will not be acceptable for the windows requiring acoustic seals.**

The window/door suppliers should provide evidence that the systems proposed have been tested in a registered laboratory with the recommended glass thicknesses and comply with the minimum listed STC/R_w requirements. Also, the glazing installer should certify that the window/doors have been constructed and installed in a manner equivalent to the tested samples.

Table 4 - Minimum STC/R_w of Glazing (with Acoustic Seals)

Glazing Assembly	Minimum STC of Installed Window	Acoustic Seals Required
6mm float	29	Yes
6.38mm laminated	31	Yes
10.38mm laminated	35	Yes

4.3.2 External Walls

The proposed masonry wall construction will be acoustically acceptable and will not require any additional treatment. There should not be vents on the internal skin of external walls. All penetrations to the internal skin of external walls should be acoustically sealed.

4.3.3 External Doors

The recommendations for external entry doors into all habitable rooms can be seen in the table below.

Table 5 – Indicative Recommendations for External Entry Doors

Lot Numbers	External Doors
25-58 Doors on East, West or Southern Facades	Doors are to be minimum 45mm thick solid core timber with acoustic seals equal to Raven RP10 to the top and sides and Raven RP38 to the underside of the doors.
Remaining	40mm solid core timber door installed with all gaps minimised.

4.3.4 Roof / Ceiling Construction

The recommended roof/ceiling construction is shown in Figure 2 below. Penetrations in all ceilings (such as for light fittings etc.) must be acoustically treated and sealed gap free with a flexible sealant.

The recommended roof/ceiling construction is shown in Figure 2.

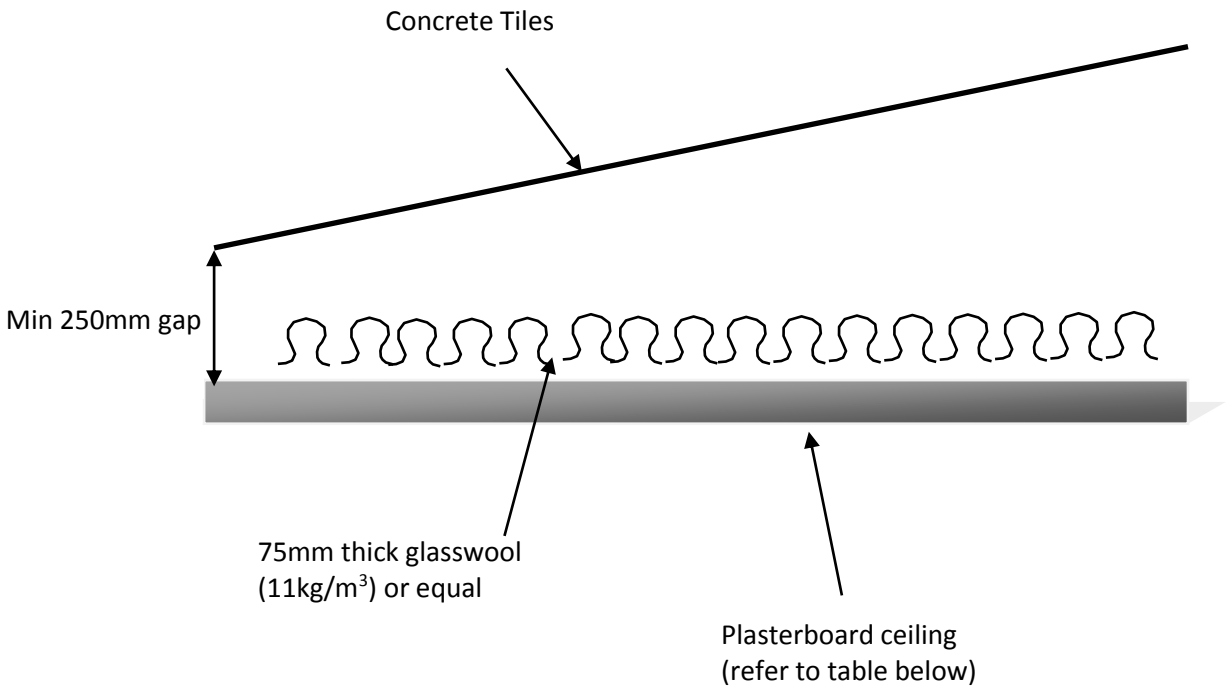


Figure 2 **– Roof / Ceiling Construction**

Table 5 – Indicative Plasterboard Ceiling Requirements

Lot Numbers	Room	Ceiling Construction
32-34, 37-41, 44, 47-48, 53-55 & 58	Top Floor Bedrooms	1 x 16mm plasterboard
	Living Rooms	1 x 16mm plasterboard
All Remaining Lots	Bedrooms & Living Rooms	1 x 13mm plasterboard

4.3.5 Acoustic Screen

This office has been advised that an acoustic screen will be constructed along the southern boundary of the site as shown in the architectural drawings, and that the screen will extend 2m above finished floor level. Recommendations for the acoustic screen are as follows:

- The acoustic screen is to be imperforate (i.e. no holes);
- Suitable construction materials for the acoustic screen are Colorbond metal, lapped and capped timber or minimum 6mm fibre cement.

Provided that this acoustic screen and the acoustic treatments nominated in sections 4.3.1 – 4.3.4 are implemented, external noise impacts on the internal areas of the proposed development with doors and windows closed will comply with the internal criteria presented in section 4.1.

4.3.6 Ventilation Requirements

With respect to natural ventilation of the dwelling, the NSW Department of Planning document "Development near Busy Roads and Rail Corridors - Interim Guideline" dictates that:

- *"If internal noise levels with windows or doors open exceed the criteria by more than 10dB(A), the design of the ventilation for these rooms should be such that occupants can leave windows closed, if they so desire, and also to meet the ventilation requirements of the Building Code of Australia."*

With windows open, the allowable internal noise goal is permitted to be 10dB(A) higher than when the windows are closed (ie – allowable level in bedrooms becomes 45dB(A), and 50dB(A) in living rooms).

For lots 25-65, habitable rooms with glazing on the northern façade will be able to achieve the internal noise goals with northern façade glazing only open.

Bedrooms and living rooms of lots 1-24 will be able to achieve the internal noise goals with windows open.

All other rooms will require to have their windows closed in order to meet the internal noise goals outlined above.

Supplementary fresh air (using either mechanical ventilation or fresh air though one of the other facades) is recommended to these rooms to ensure ventilation requirements of AS1668 are achieved.

Any ventilation system should be acoustically designed to ensure that the acoustic performance of the acoustic treatments outlined above is not reduced and does not exceed Council criteria for noise emission to nearby properties.

5 NOISE EMISSION ASSESSMENT

5.1 BACKGROUND NOISE MONITORING

Measured background noise levels are presented below. Refer to Appendix 2 for background noise logging data. The noise monitor was located further to the north of the site away from the M4 Motorway (see figure 1).

The unattended measurement was conducted from the 24th to the 31st May 2016. The unattended monitoring was conducted using an Acoustic Research Laboratory's noise logger. The logger was set to A-weighted fast response and was programmed to store 15-minute statistical noise levels throughout the monitoring period. The monitor was calibrated at the start and end of the monitoring period using a Rion NC-73 calibrator. No significant drift was noted.

Table 6 – Measured Background Noise Levels

Location	Period/Time	Background Noise Level dB(A) L_{90}
27 Kent Road, Claremont Meadows	Day (7am-6pm)	46
	Evening(6pm-10pm)	46* (51)
	Night(10pm-7am)	44

*The measured evening time background noise level was 51dB(A)L_{90}, however in accordance with the requirements of the Industrial Noise Policy, the lower day time background noise level has been used.

5.2 ACOUSTIC OBJECTIVES

Acoustic objectives will be based on;

- The NSW EPA Industrial Noise Policy
- The Protection of the Environment Operations Act 1997
- The Protection of the Environment Operations Regulation Act 2000

5.2.1 NSW EPA Industrial Noise Policy

The EPA Industrial Noise Policy has two criteria which need to be satisfied namely Intrusiveness and Amenity. These are described below:

- *Intrusiveness Criteria* - This guideline is intended to limit the audibility of noise emissions at residential receivers and requires that noise emissions measured using the L_{eq} descriptor not exceed the background noise level by more than 5 dB(A). Where applicable, the intrusive noise level should be penalised (increased) to account for any annoying characteristics such as tonality.

- *Amenity Criteria* - This guideline is intended to limit the absolute noise level from all "industrial" noise sources such as mechanical plant to a level that is consistent with the general environment.

The EPA's Industrial Noise Policy sets out acceptable noise levels for various localities. Table 2.1 on page 16 of the policy indicates 4 categories to distinguish different residential areas. They are rural, suburban, urban and urban/industrial interface.

Noise levels are to be assessed at the property boundary or nearby dwelling, or at the balcony or façade of an apartment.

5.2.1.1 Intrusiveness Criterion

The guideline is intended to limit the audibility of noise emissions at residential receivers and requires that noise emissions measured using the L_{eq} descriptor do not exceed the background noise level by more than 5dB(A). Where applicable, the intrusive noise level should be penalised (increased) to account for any annoying characteristics such as tonality.

Background noise levels adopted are presented in Section 5.1. Noise emissions from the site should comply with the noise levels presented below when measured at nearby property boundary.

Table 7 – Intrusiveness Noise Emission Goals

Location	Period/Time	Background Noise Level dB(A) L_{90}	Intrusiveness Noise Emission Goal dB(A) $L_{eq(15min)}$ Background + 5dB
27 Kent Road, Claremont Meadows	Day (7am-6pm)	46	51
	Evening(6pm-10pm)	46	51
	Night(10pm-7am)	44	49

5.2.1.2 Amenity Criterion

The guideline is intended to limit the absolute noise level from all noise sources to a level that is consistent with the general environment.

The EPA Industrial noise policy sets out acceptable noise levels for various localities. Table 2.1 on page 16 of the policy indicates 4 categories to distinguish different residential areas. They are rural, suburban, urban and urban/industrial interface. This site is categorised by surrounding receivers as suburban.

For the purposes of this condition:

- Day is defined as the period from 7am to 6pm Monday to Saturday and 8am to 6pm Sundays and Public Holidays;
- Evening is defined as the period from 6pm to 10pm.
- Night is defined as the period from 10pm to 7am Monday to Saturday and 10pm to 8am Sunday and public holidays.

Table 8 - Amenity Noise Emission Goals

Location	Period/Time	Amenity Noise Emission Goal dB(A) $L_{eq(Period)}$
Nearby Residences – Suburban	Day (7am-6pm)	55
	Evening(6pm-10pm)	45
	Night(10pm-7am)	40

5.2.2 Protection of the Environment Operations Act 1997

The Protection of the Environment Operations Act stipulates that a site should not emit “offensive noise” to a residential receiver, where “offensive noise” is defined as background + 5dB(A), once penalties for tonality, intermittence etc have been taken into account.

In our opinion, compliance with the Industrial Noise Policy is satisfactory to demonstrate that a particular noise is not offensive.

5.2.3 Protection of the Environmental Operation Act Regulation 2000

Protection of the Environmental Operations regulation limits the noise levels associated within the operation of domestic air conditioning criteria during night time periods which is presented below:

Protection of the Environmental Operations (Noise Control) Regulation 2000-Sect 52

52 Air Conditioners

(1) A person must not cause or permit an air conditioner to be used on residential premises in such a manner that it emits noise that can be heard within a habitable room in any other residential premises (regardless of whether any door or window to that room is open):

(a) before 8 am or after 10 pm on any Saturday, Sunday or public holiday, or
(b) before 7 am or after 10 pm on any other day.

5.2.4 Mechanical Plant

Mechanical plant items are not typically selected at DA stage.

Detailed review of all external mechanical plant should be undertaken at construction certificate stage (once plant selections and locations are finalised). Acoustic treatments should be determined in order to control plant noise emissions to the levels set out in Section 5.2 of this report.

All plant can be satisfactorily attenuated to levels complying with noise emission criteria through appropriate location and (if necessary) standard acoustic treatments such as noise screens, enclosures, in-duct) treatments (silencers/lined ducting or similar.)

6 CONCLUSION

Noise intrusion impacts on the proposed residential development at 27 Kent Road, Claremont Meadows have been assessed.

Noise intrusion into the proposed development has been assessed against the following documents.

- Penrith City Council DCP
- NSW EPA Road Noise Policy
- NSW Department of Planning's *Development Near Rail Corridors and Busy Roads (Interim Guideline)*
- SEPP Infrastructure 2007

External noise emission criteria has been setup in Section 5 of this report based on the requirements of the following:

- NSW EPA Industrial Noise Policy
- The PEOA Act 1997; and
- PEOA Act Regulation 2000.

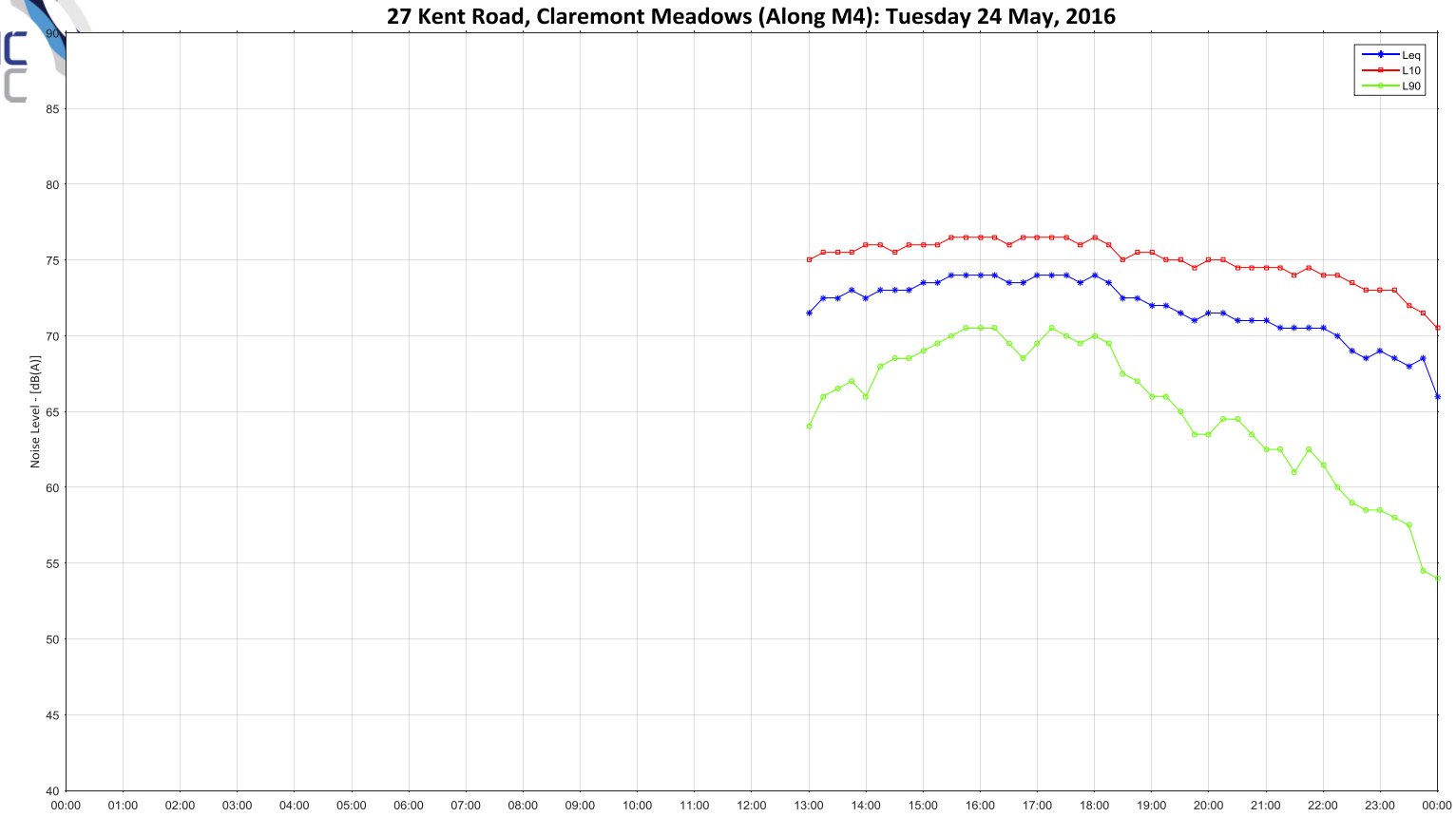
Detailed acoustic treatment will be determined at CC Stage (if required).

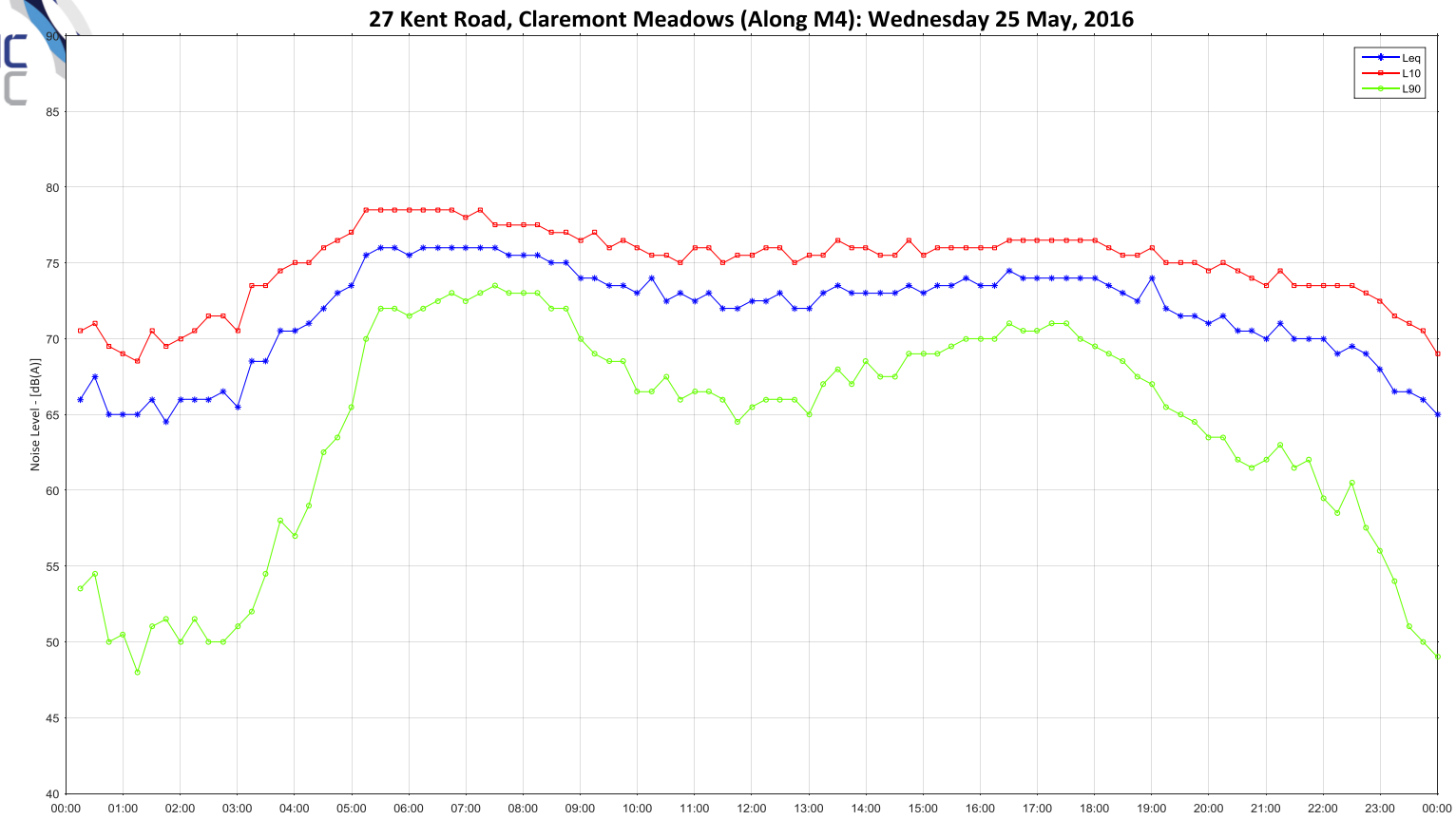
We trust this information is satisfactory. Please contact us should you have any further queries.

Yours faithfully,

Acoustic Logic Consultancy Pty Ltd
Justin Leong

APPENDIX 1 – UNATTENDED NOISE MONITORING DATA ALONG M4 MOTORWAY

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Leq
L10
L90
Noise Level - [dB(A)]
90
85
80
75
70
65
60
55
50
45
40
00:00
01:00
02:00
03:00
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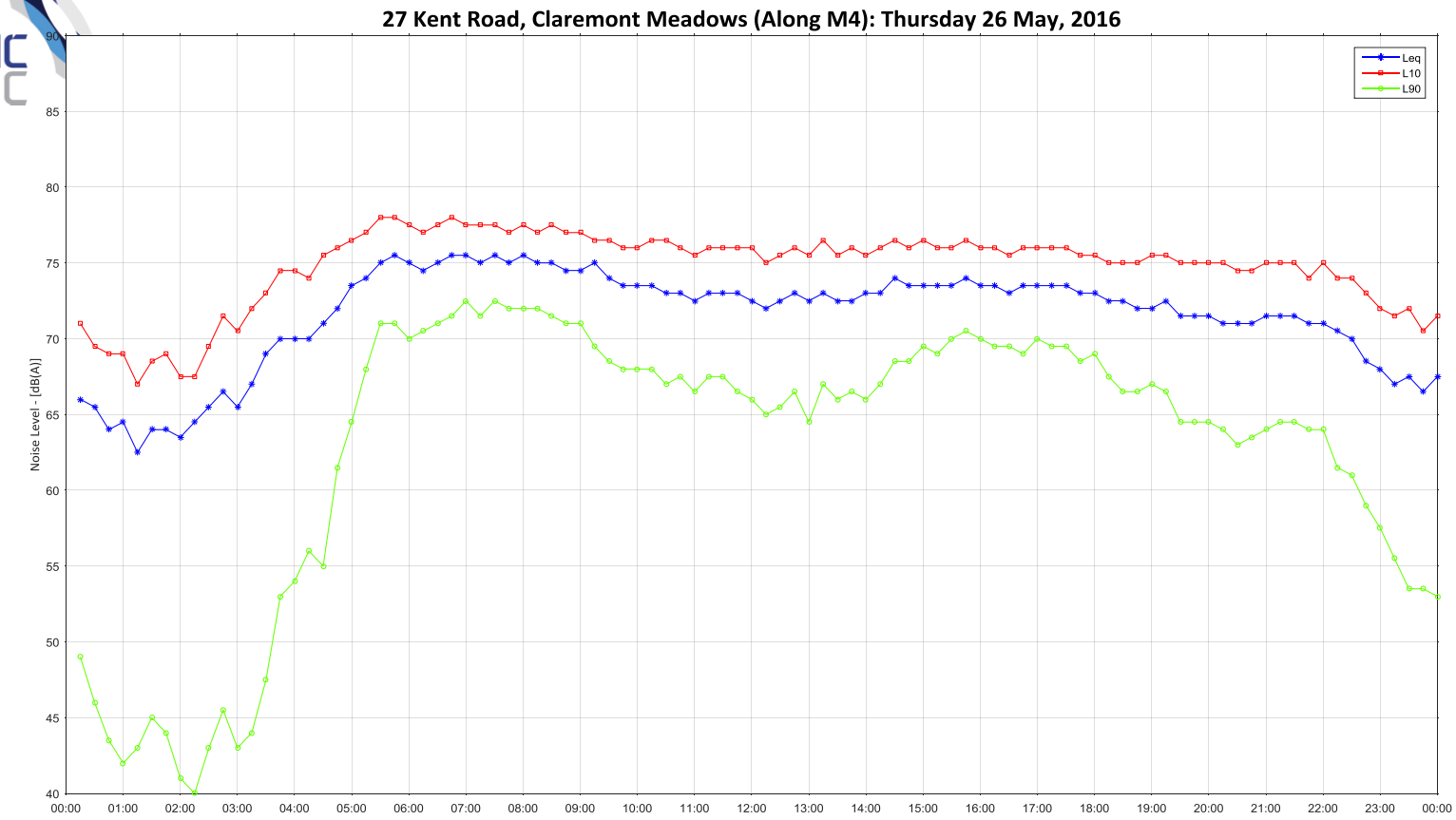

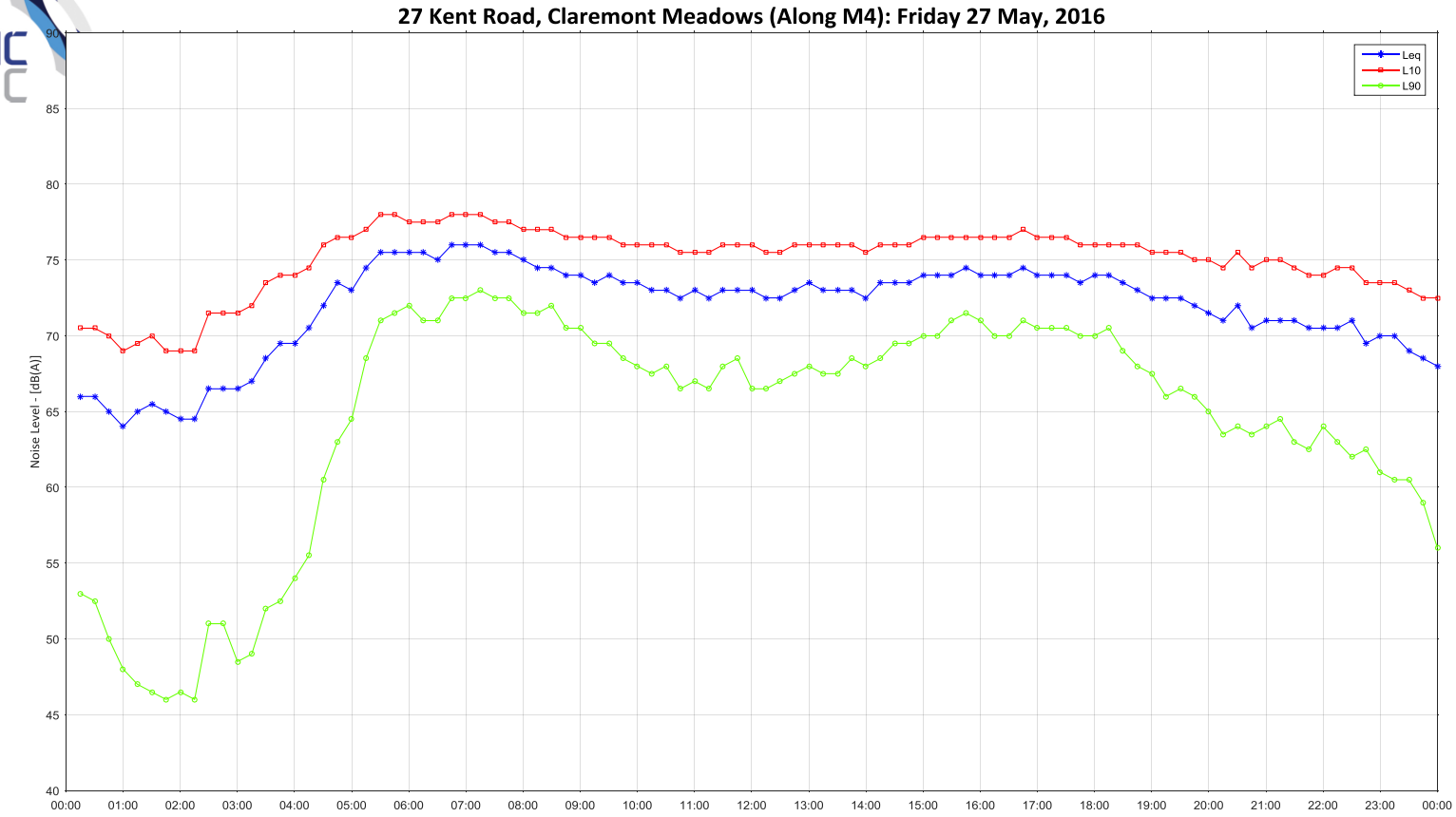
27 Kent Road, Claremont Meadows (Along M4): Friday 27 May, 2016
Noise Level - [dB(A)]
Leq
L10
L90
90
85
80
75
70
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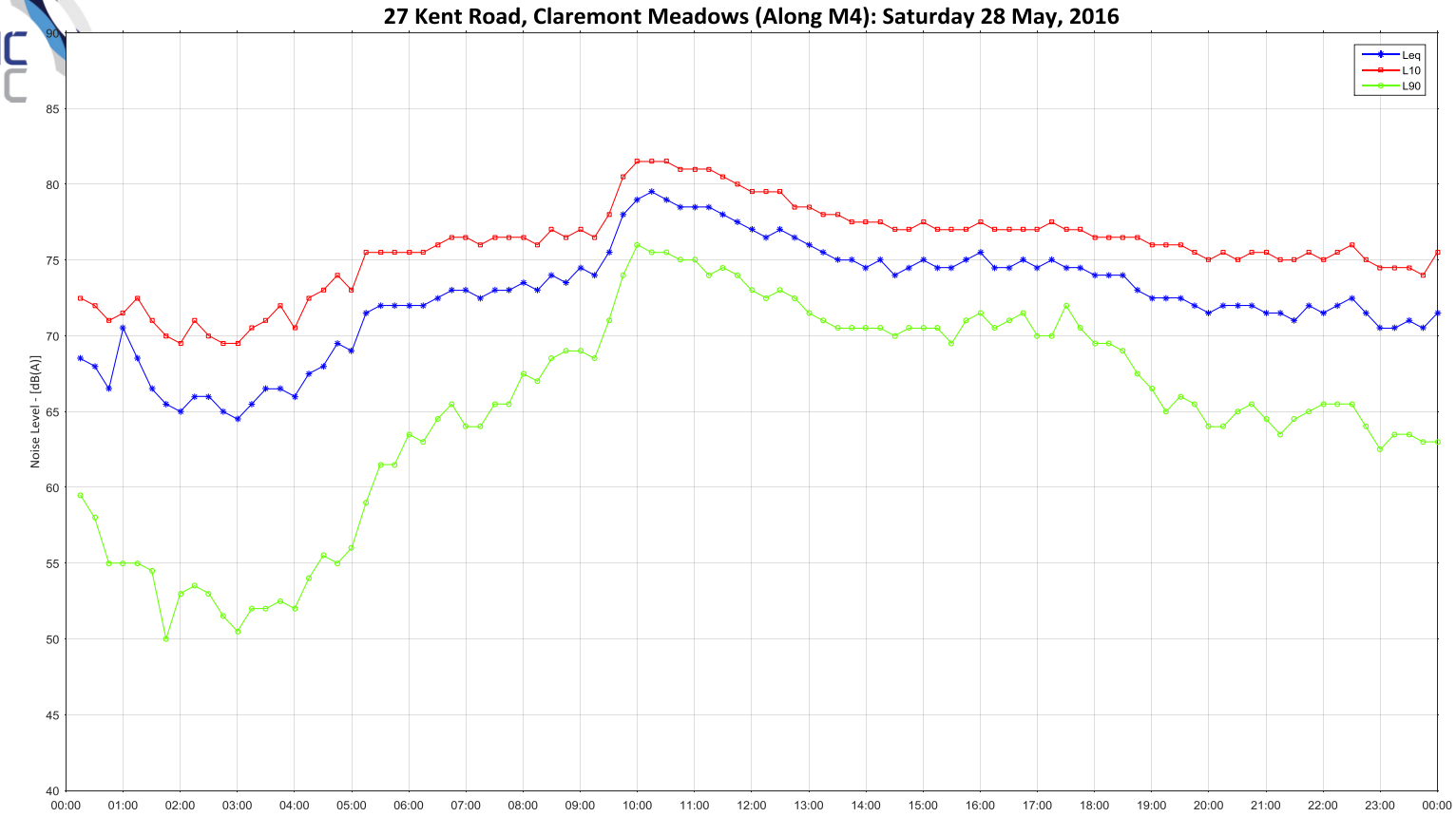
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Leq
L10
L90
90
85
80
75
70
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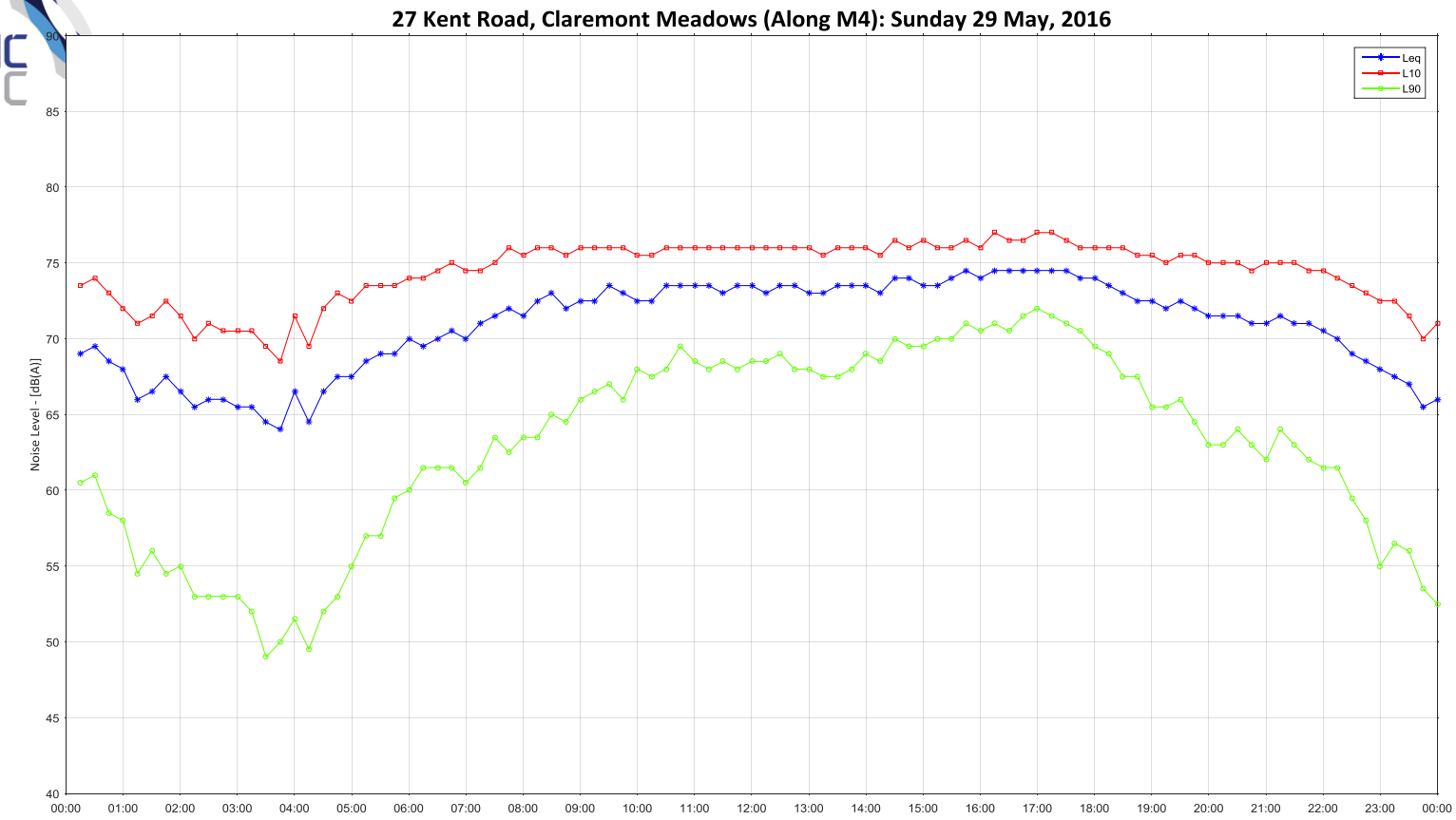

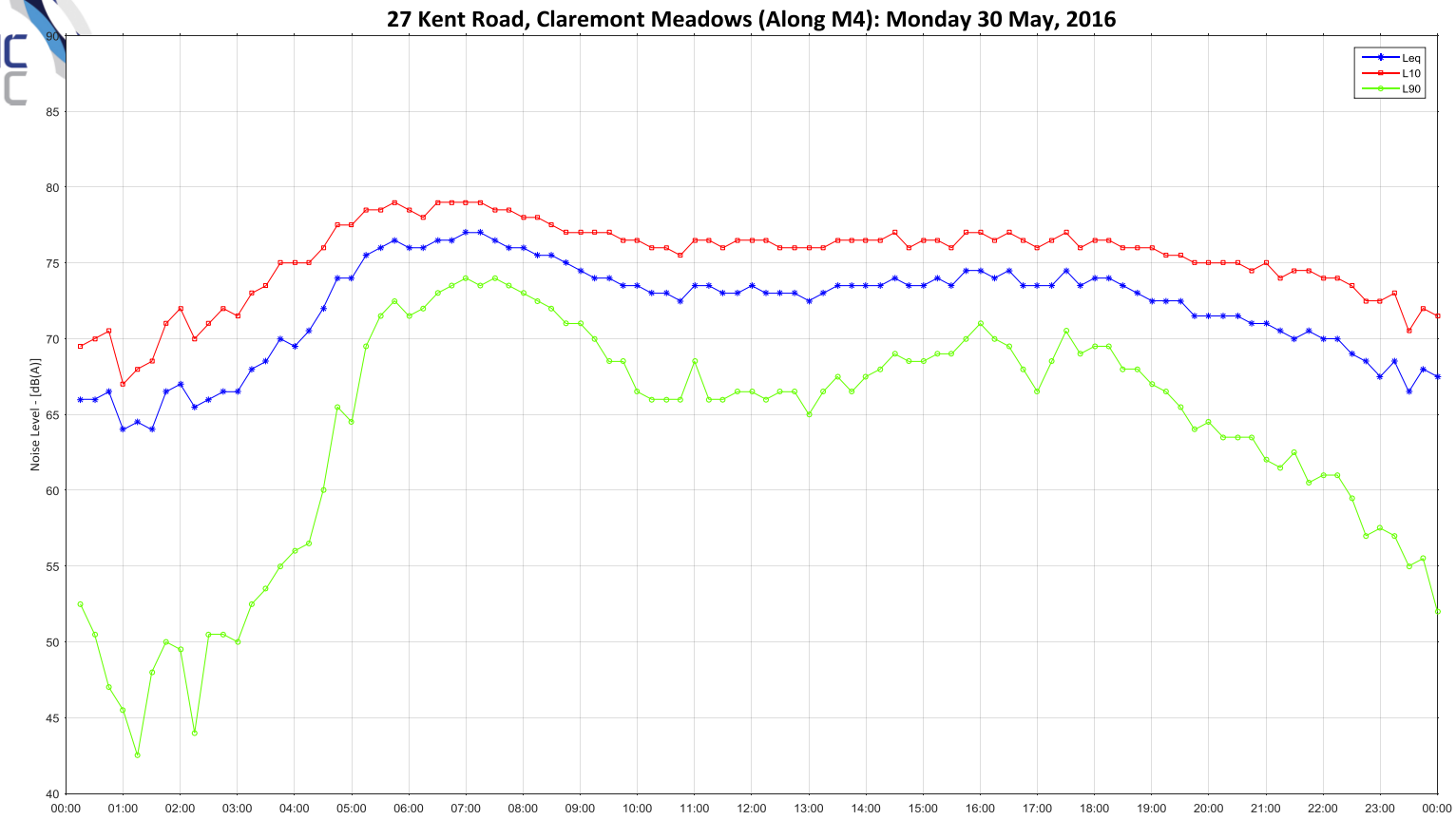
27 Kent Road, Claremont Meadows (Along M4): Monday 30 May, 2016
Noise Level - [dB(A)]
Leq
L10
L90
90
85
80
75
70
65
60
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50
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40
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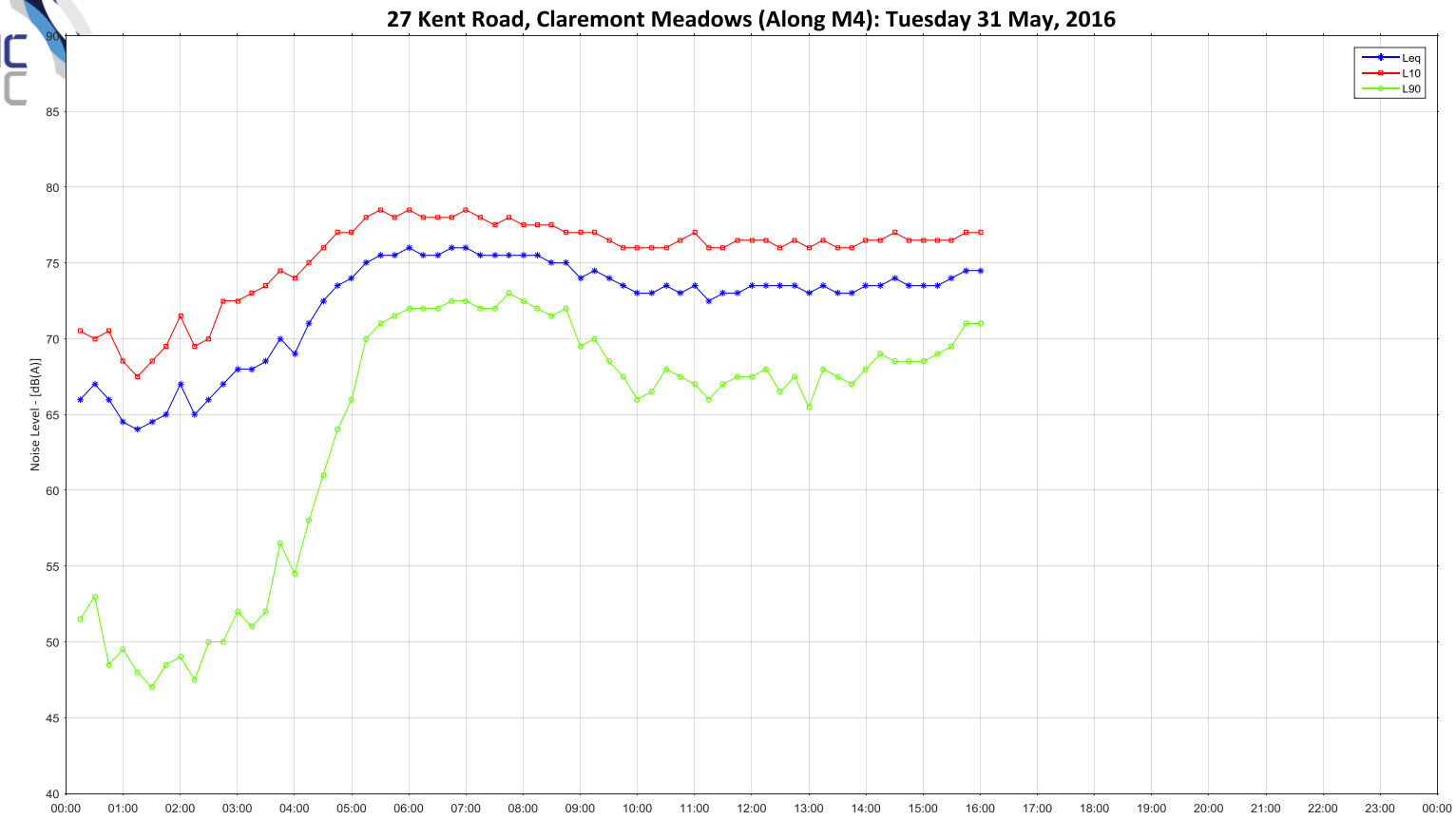
27 Kent Road, Claremont Meadows (Along M4): Tuesday 31 May, 2016
Leq
L10
L90
Noise Level - [dB(A)]
90
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65
60
55
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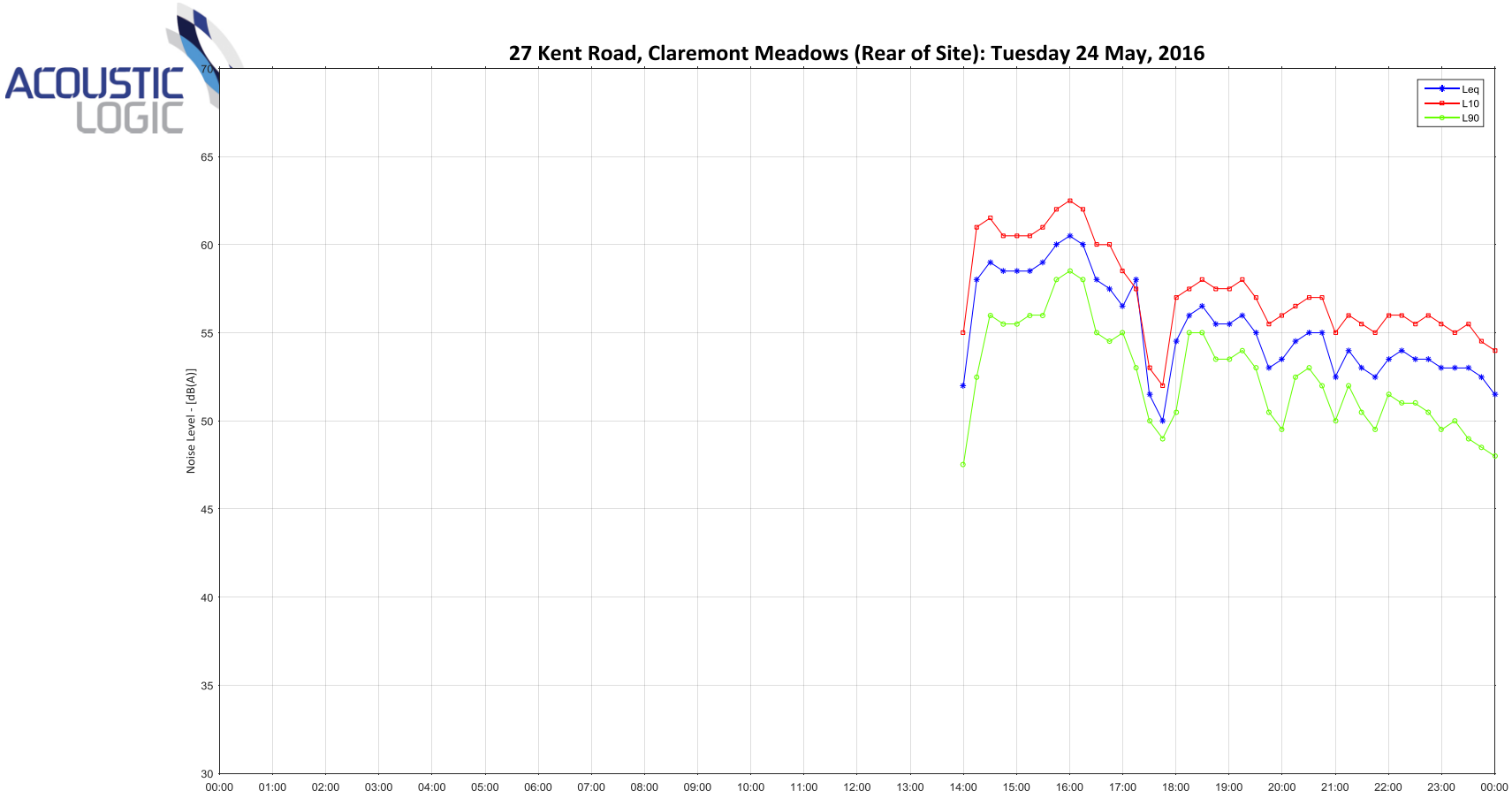
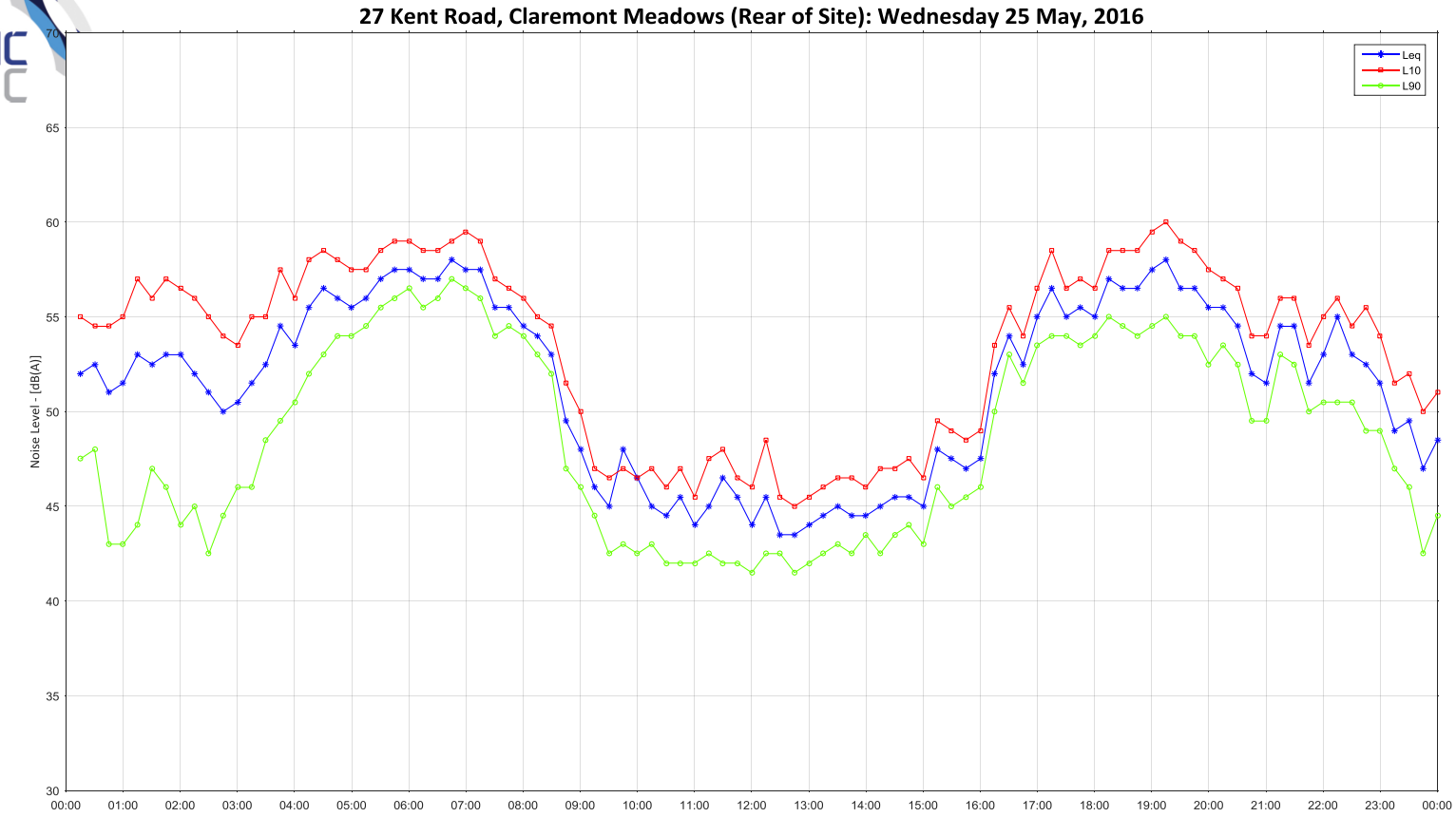
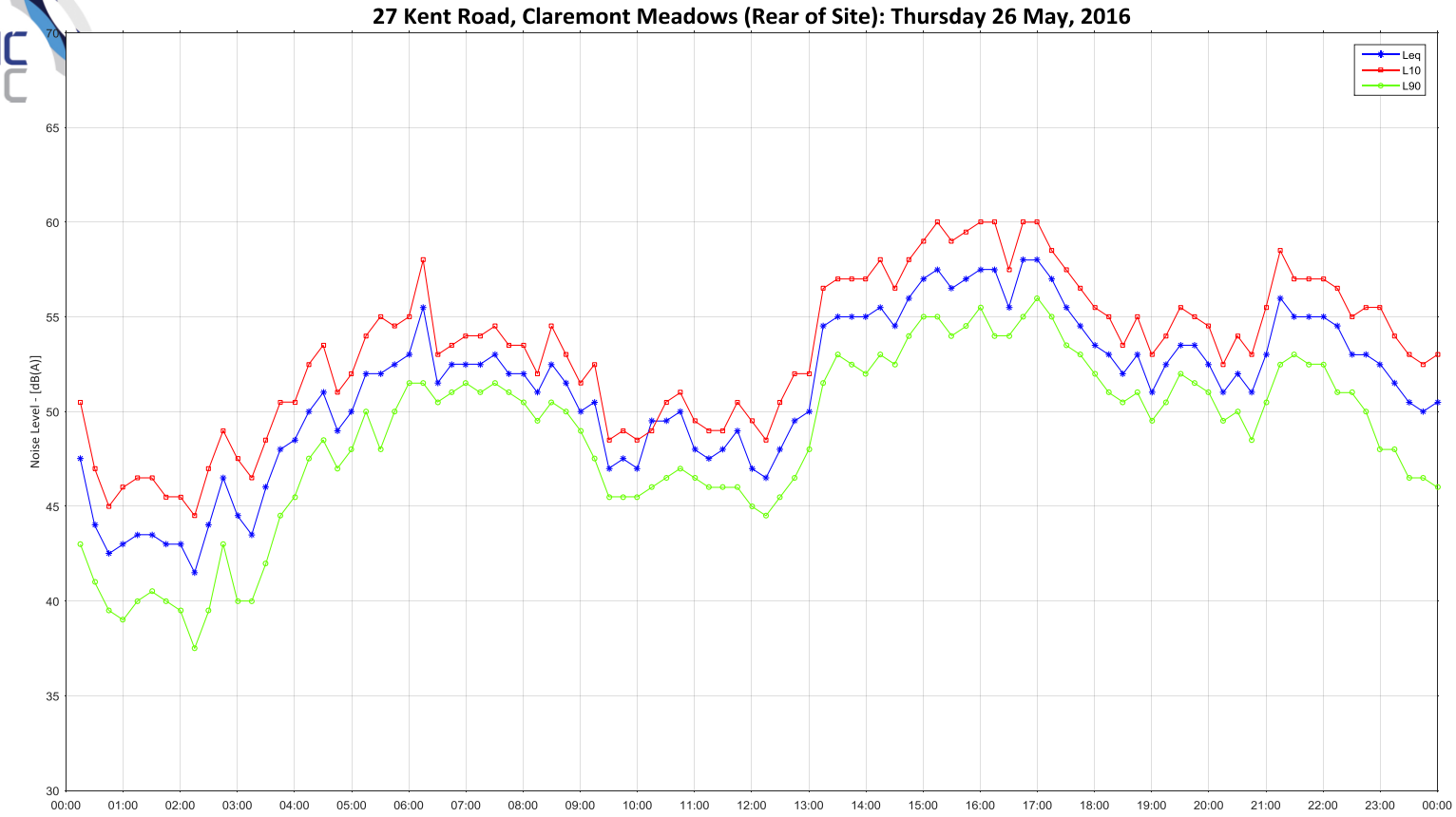
APPENDIX 2 – UNATTENDED BACKGROUND NOISE MONITORING DATA






27 Kent Road, Claremont Meadows (Rear of Site): Thursday 26 May, 2016
Noise Level - [dB(A)]
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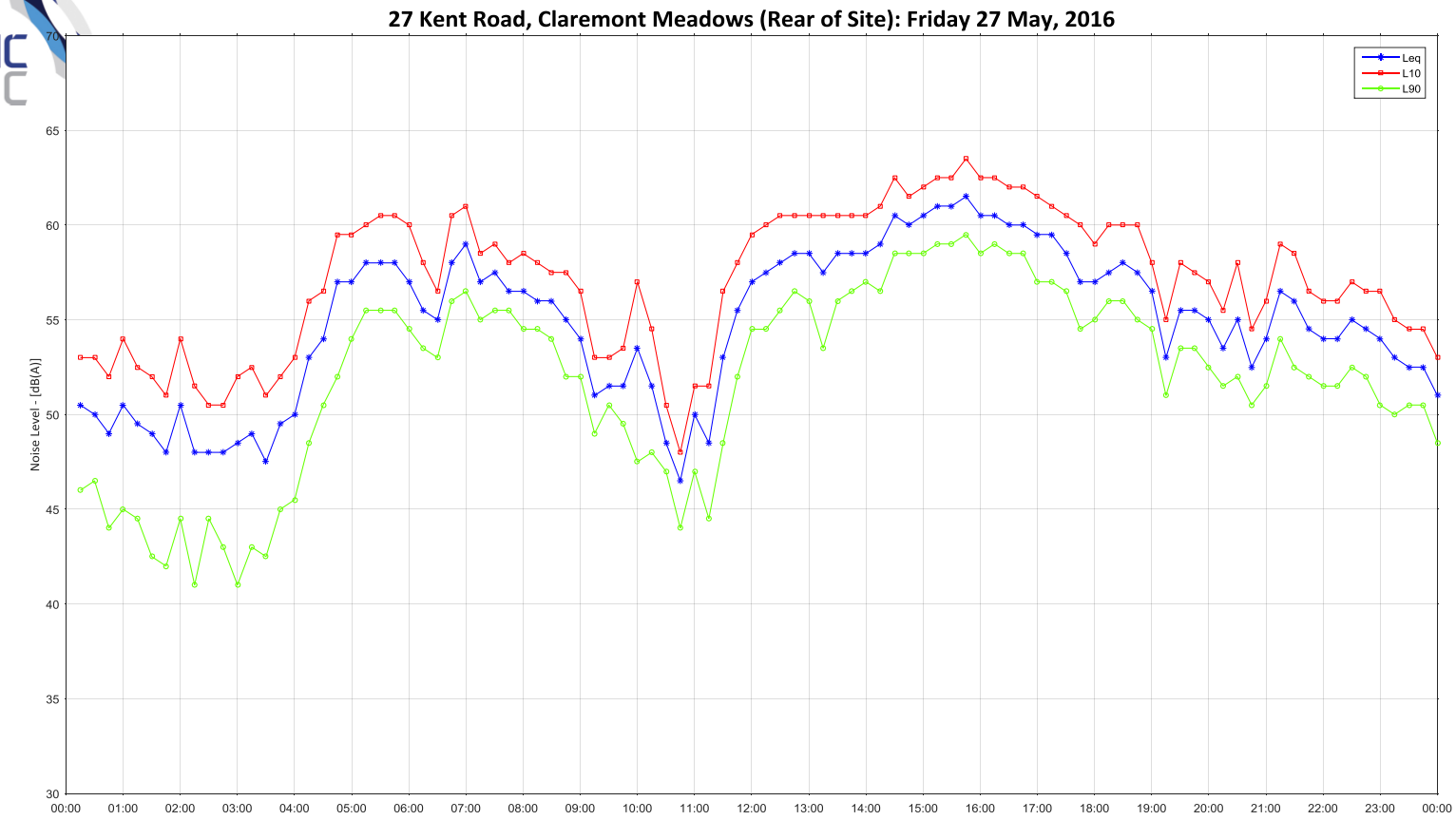
27 Kent Road, Claremont Meadows (Rear of Site): Friday 27 May, 2016
Noise Level - [dB(A)]
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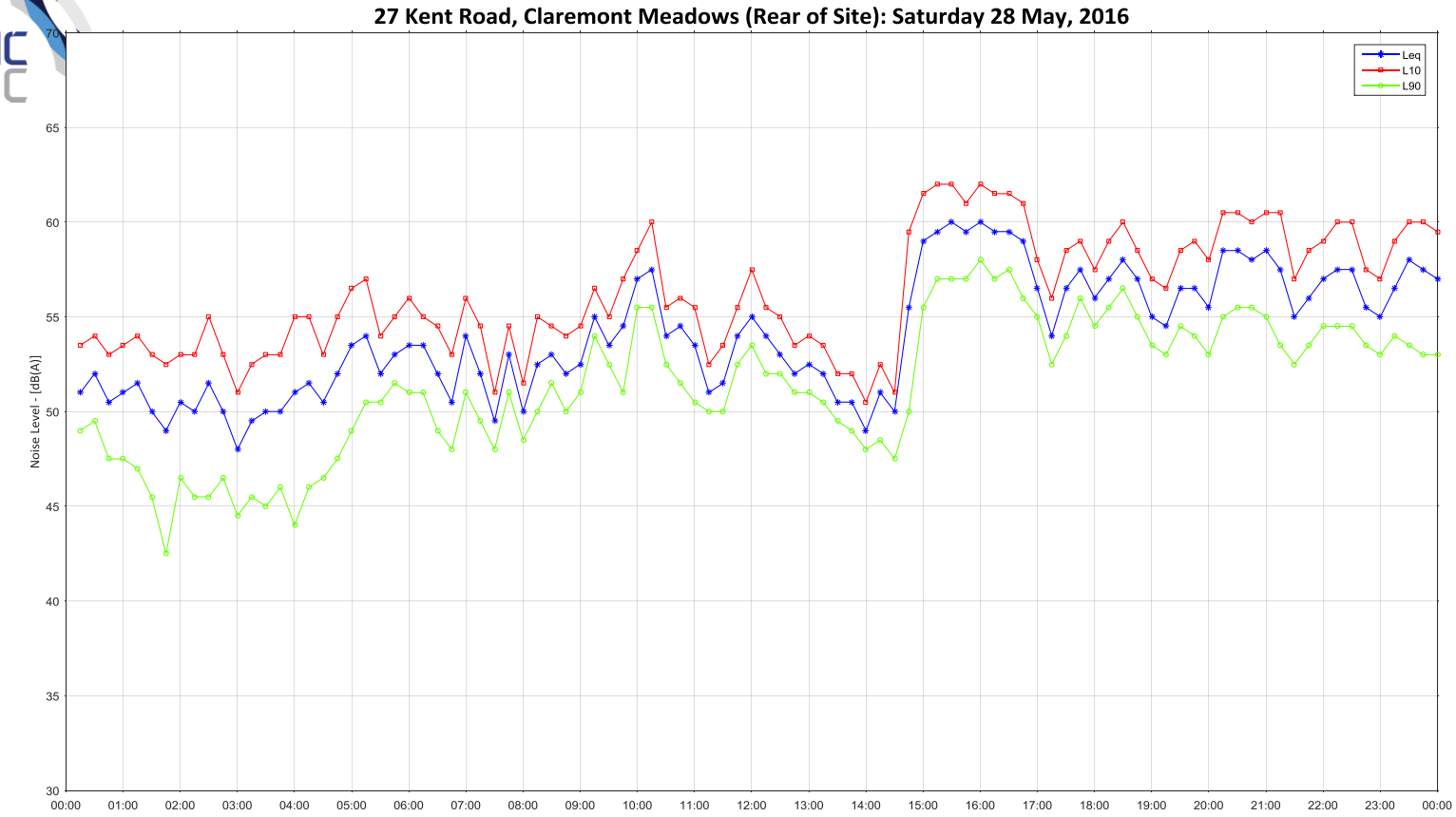

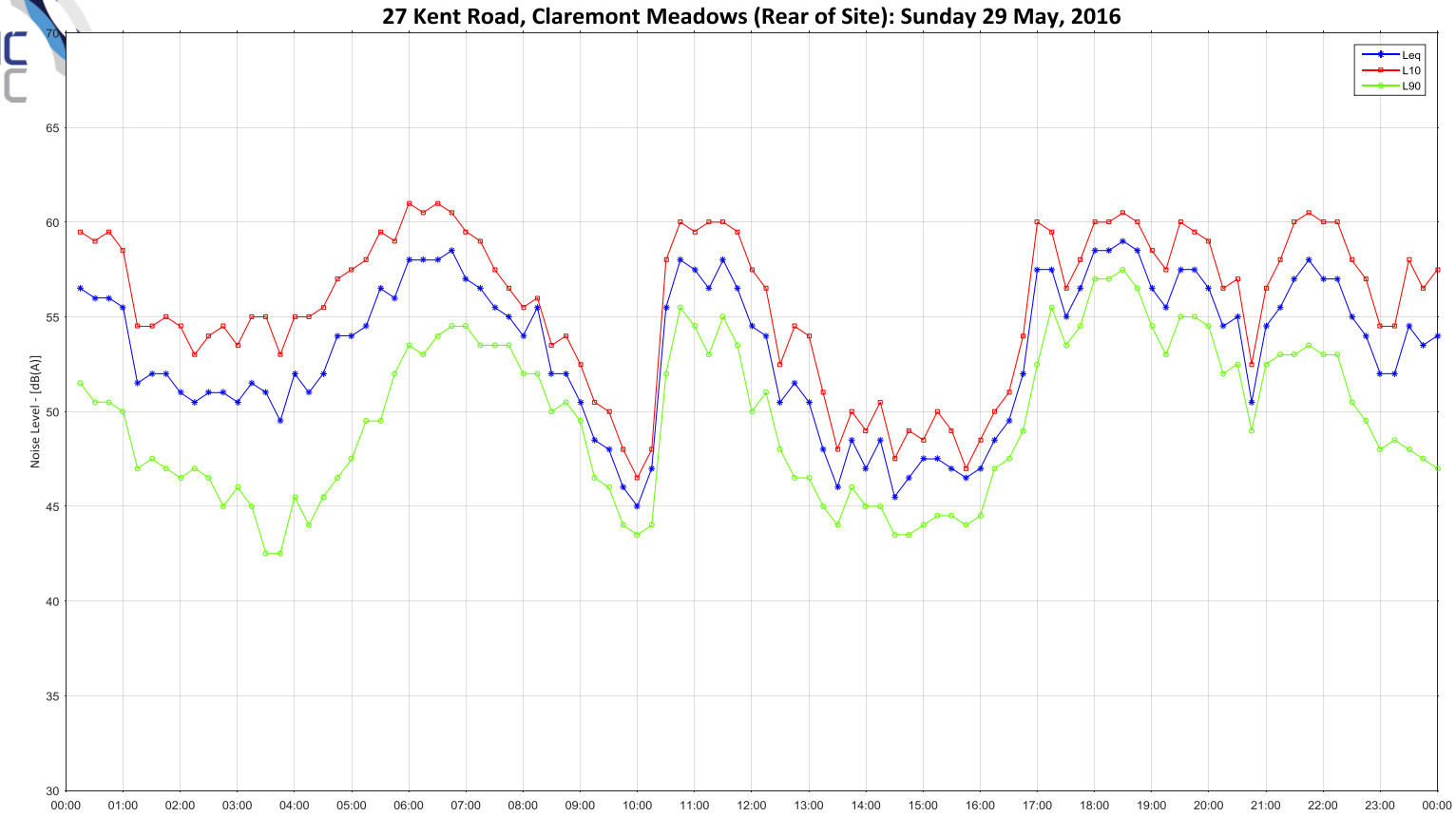
27 Kent Road, Claremont Meadows (Rear of Site): Sunday 29 May, 2016
Noise Level - [dB(A)]
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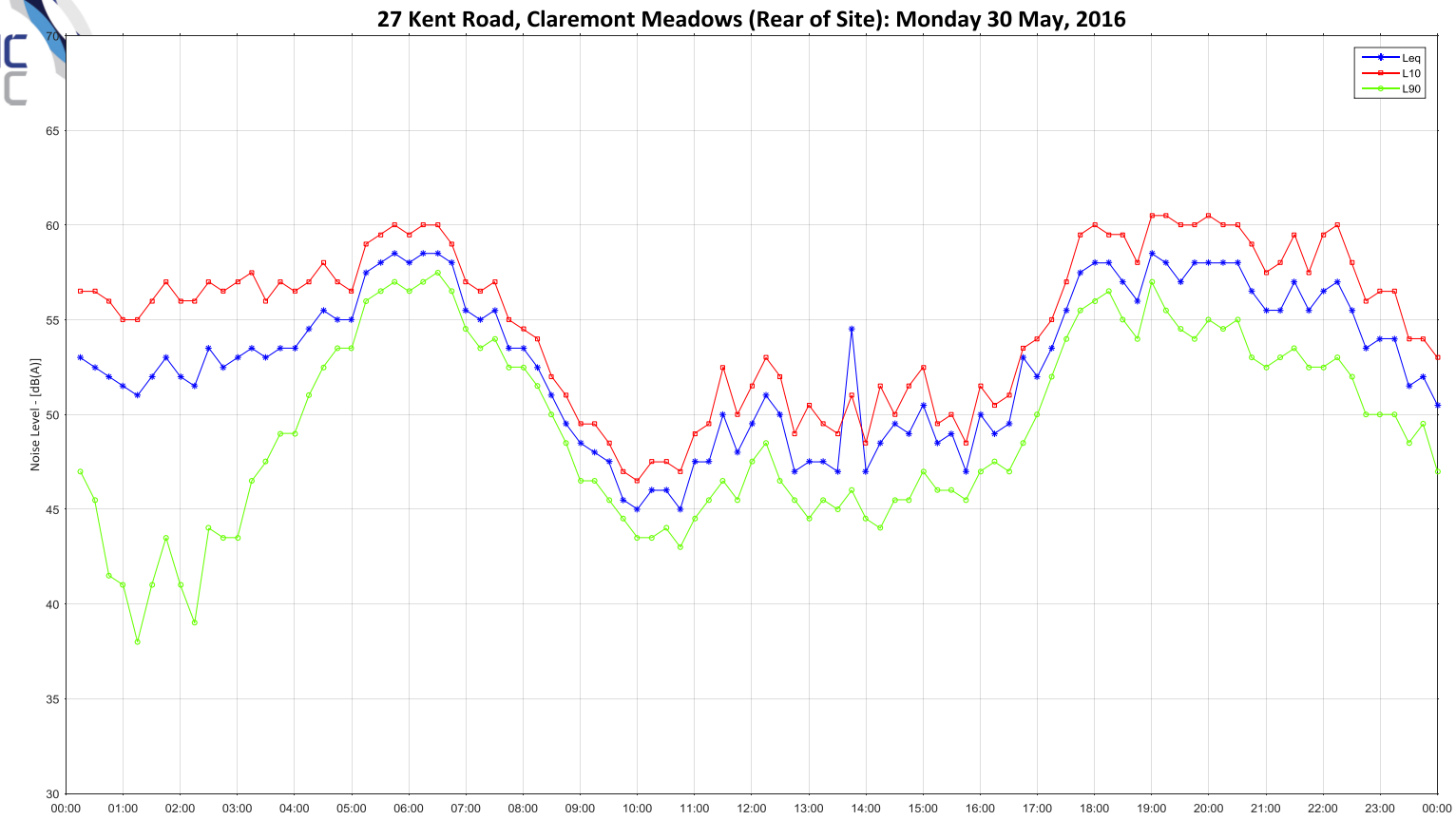
27 Kent Road, Claremont Meadows (Rear of Site): Monday 30 May, 2016
Noise Level - [dB(A)]
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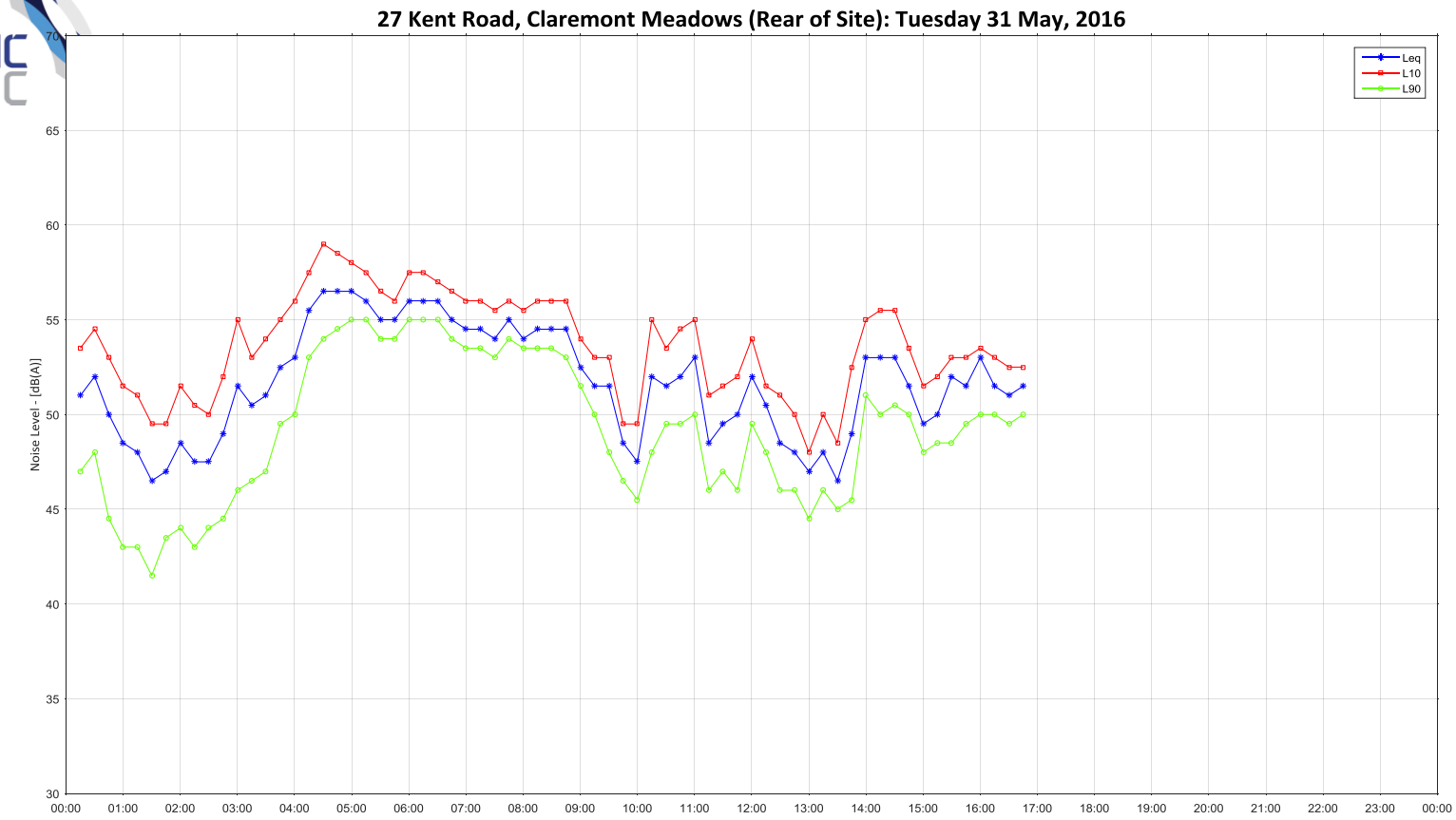
27 Kent Road, Claremont Meadows (Rear of Site): Tuesday 31 May, 2016
Noise Level - [dB(A)]
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