24Acoustics
Pepper Mill Barn
Old Salisbury Lane
Romsey
SO51 0GD

T: 01794 515999
F: 01794 515100
E: info@24acoustics.co.uk

Mr Mark Carrington
Linden Homes Southern
Linden House
14 Bartram Road
Totton
Southampton
SO40 9PP

Date: 13th June 2014
Reference: R5266-4 Rev 0

Dear Mark

RE: Romil Close ('Rosewood'), Southampton- Acoustic Barrier

Thank you for your recent instruction. I am pleased to provide the results of our recent noise survey and assessment on your Rosewood development in West End, Southampton, below.

1.0 INTRODUCTION

1.1 24 Acoustics Ltd has been retained by Linden Homes Southern to undertake a noise survey and provide acoustic consultancy services at their Rosewood site, which is located off Romill Close in West End, Southampton. The assessment has been undertaken in order to provide the evidence necessary to demonstrate that the acoustic barrier between the site and the adjacent M27 motorway is sufficient and compliant with the requirements of Condition 22 of the planning consent.

1.2 This report presents the findings of the assessment following a noise survey undertaken on site on 12 June 2014. All noise levels are presented in dB relative to 20 µPa.

2.0 SITE HISTORY AND RELEVANT PLANNING BACKGROUND

2.1 The site is located off Romill Close in West End, Southampton and, at the time of writing, construction works are nearing completion. Full planning consent for the development (comprising 58 dwellings) was granted by Eastleigh Borough Council in May 2012 (Reference C/11/69687). The planning application was supported by a noise impact assessment by Barnhawk Acoustics (Report Reference 511/1 dated June 2011) which assessed the impact of noise from the adjacent M27 and specified a noise barrier (combination of a barrier and a bund) to mitigate noise levels on the site to an acceptable level.

2.2 Planning Condition 22 of the planning consent relates to noise and states the following:

Before any development is commenced a detailed scheme to supplement the Barnhawk Acoustics Report No 511/1 for protecting the proposed dwellings from noise from the M27, A27 and Hamilton House site must be submitted to and approved in writing by the Local Planning Authority. All works which form part of the scheme approved by the Local Planning Authority must be completed before any the [sic] permitted dwellings is [sic] occupied (unless otherwise agreed by the Local Planning Authority).

Reason: To ensure that acceptable noise levels within the dwellings and the curtilages of the dwellings are not exceeded.

2.3 It is understood that Condition 22 was discharged following the submission of a noise assessment by Alan Saunders Associated (Reference AS7247) in November 2012. This made reference to a 3 m bund and 4 m fence to the eastern side of the site boundary with the M27.

2.4 It is understood that some uncertainty remains regarding the specification of the acoustic barrier between the site and the M27 (in terms of its height and location). 24 Acoustics has therefore undertaken a noise survey on the developed site and compared the measured noise levels to those predicted by Barnhawk Acoustics in the original noise impact assessment which accompanied the planning application. It is considered that by demonstrating that the noise levels on the developed site are no greater than the levels predicted by Barnhawk Acoustics this will demonstrate that the acoustic barrier, as installed is compliant with the intent of the planning consent and is fit for purpose.

2.5 The Barnhawk Acoustics report (Plan BA2) indicated that all properties within the developed site (with the acoustic barrier in place) would fall within Noise Exposure Category B of Planning Policy Guidance 24 (Planning and Noise): 1994. Plot 7 is the nearest property to the M27 and the north-eastern façade of this property is close to the boundary between the two noise exposure categories. It would therefore be expected that the noise level at this location should not exceed the following (which relate to the boundaries between NECs B and C of PPG 24 for road traffic):

- Daytime (07:00- 23:00 hours): 63 dB $L_{Aeq,\ 16\ hour}$
- Night (23:00- 07:00 hours): 57 dB $L_{Aeq,\ 8\ hour}$.

2.6 It should be noted that the Barnhawk predictions apply at first floor level, however, the Noise Exposure Categories of PPG 24 did strictly apply at ground floor level (1.2- 1.5 m above grade).

3.0 NOISE SURVEYS AND NOISE IMPACT ASSESSMENT

3.1 Attended noise surveys were undertaken on the site on Thursday 12 June between 12:30 and 15:30 hours. The measurements were undertaken in free-field conditions near to the north-eastern façade of Plot 7 as shown in Figure 1 overleaf. Measurements were undertaken at 1.5 m and 4 m above local grade level (reflecting the noise level that would be experienced at ground and first floor levels).

3.2 The following instrumentation was used in the surveys:

Rion NL31 Type 1 accuracy sound level meter;
Rion NL32 Type 1 accuracy sound level meter;
Bruel and Kjaer Type 4231 acoustic calibrator.

3.3 The sound level meters were calibrated before and after the surveys in accordance with the manufacturer's instructions. No drift in calibration was recorded. The monitors were fitted with environmental windshields. The weather during the survey was fine and dry with negligible wind and ambient temperatures of approximately 22 degrees C.

3.4 Measurements were undertaken in terms of the overall A-weighted $L_{eq,}$ L_{90} and L_{10} sound pressure levels in dB. An attended survey was undertaken specifically to enable any noise contribution from local sources (particularly- construction related) to be 'paused' out of the survey. The 16 hour $L_{Aeq,\ 16\ hour}$ noise level has been calculated from the average 3 hour L_{A10} sound pressure level using the guidance contained in the Department of Transport Publication 'Calculation of Road Traffic Noise' and that of Planning Policy Guidance 24.

3.5 The results of the surveys at each location are shown graphically in Figures 2 and 3 and are summarised below:

- Side of Plot 7, ground floor level, daytime: 60.5 dB $L_{Aeq,\ 16\ hour}$.
- Side of Plot 7, first floor level, daytime: 63.6 dB $L_{Aeq,\ 16\ hour}$.

3.6 The night-time noise level at both ground and first floor levels has been derived based upon the surveyed level difference between day and night reported in the Barnhawk Acoustics' report. A 5 dBA difference was surveyed between day and night (Location 3 of the Barnhawk Acoustics assessment, shown in the table in Page 7 of the report).

3.7 The derived noise levels at Plot 7 are shown in Table 1 below.

Period	**Location and Noise Level**	
	Ground Floor	**First Floor**
Daytime	60.5 dB $L_{Aeq,\ 16\ hour}$	63.6 dB $L_{Aeq,\ 16\ hour}$
Night Time	55.5 dB $L_{Aeq,\ 8\ hour}$	58.6 dB $L_{Aeq,\ 8\ hour}$

Table 1: Summary of Noise Levels at Plot 7, Rosewood Mill, Southampton

3.8 The assessment indicates that the noise levels on the ground floor will be well within Noise Exposure Category B of PPG 24. Noise levels at first floor level will be approximately 0.6 and 1.6 dBA greater than the levels predicted in the Barnhawk Acoustics report. This is considered within acceptable measurement and modelling tolerances. It should further be noted that the survey location was a public area and not the rear garden of Plot 7. Noise levels in this garden would be lower given the further screening provided by the boundary fence.

3.9 On the above basis it is considered that the noise impact upon the site is acceptable and falls within the spirit of the requirement of the planning consent. It is therefore considered that further works to the site boundary fence to reduce road traffic noise levels from the M27 motorway are not necessary.

I trust the above is of interest to you. Should you have any queries please do not hesitate to contact me.

Yours sincerely,
For 24 Acoustics Ltd

Reuben Peckham BEng MPhil CEng MIOA
Director & Principal Consultant



Project: Rosewood Mill, Southampton	**Description:** Approximate Noise Survey/ Observation Locations		
DWG No: Figure 1	**Scale:** N.T.S.	**Rev:** A	
Date: June 2014	**Drawn By:** RP	**Job No:** 5266-1	

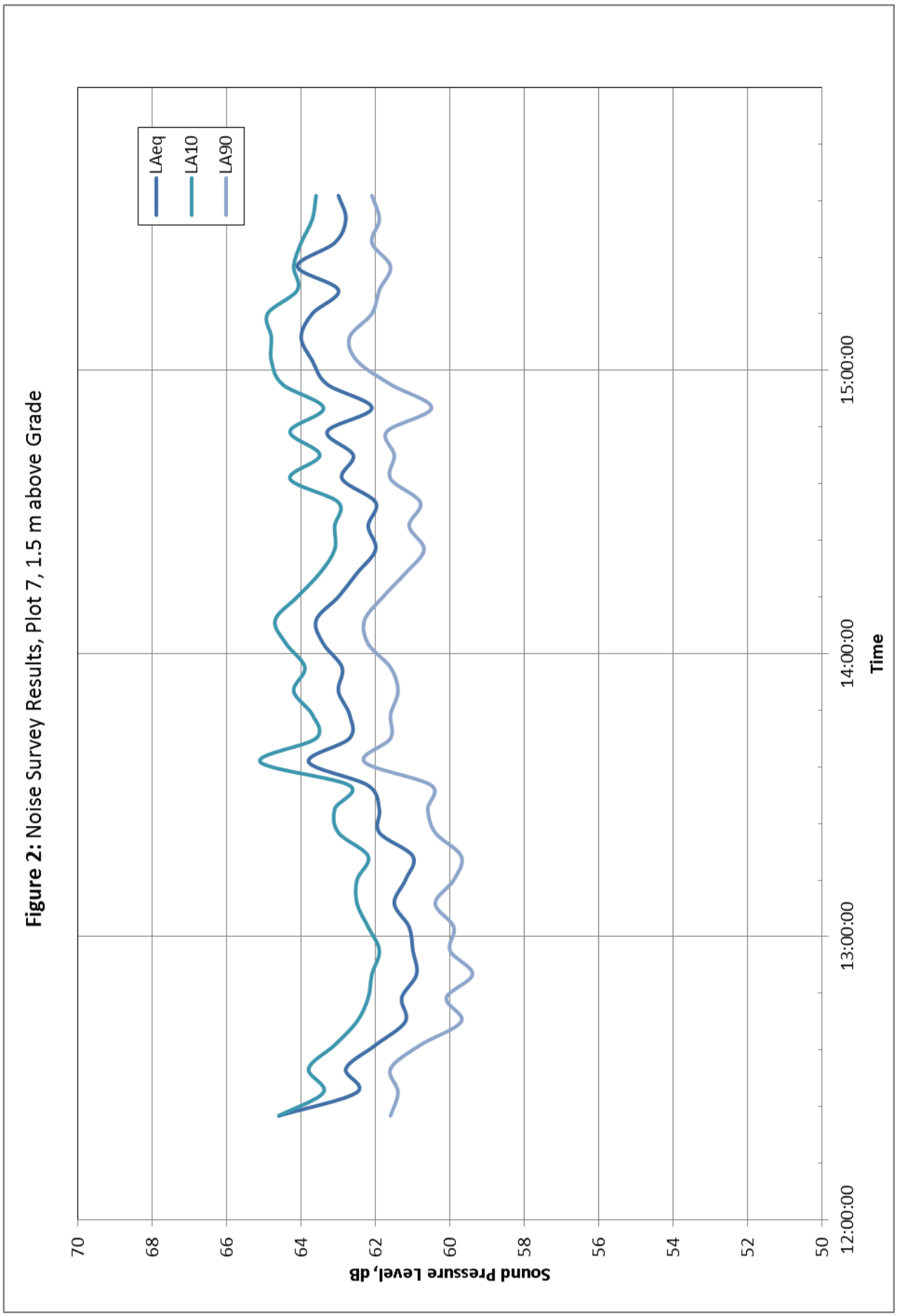

Figure 2: Noise Survey Results, Plot 7, 1.5 m above Grade

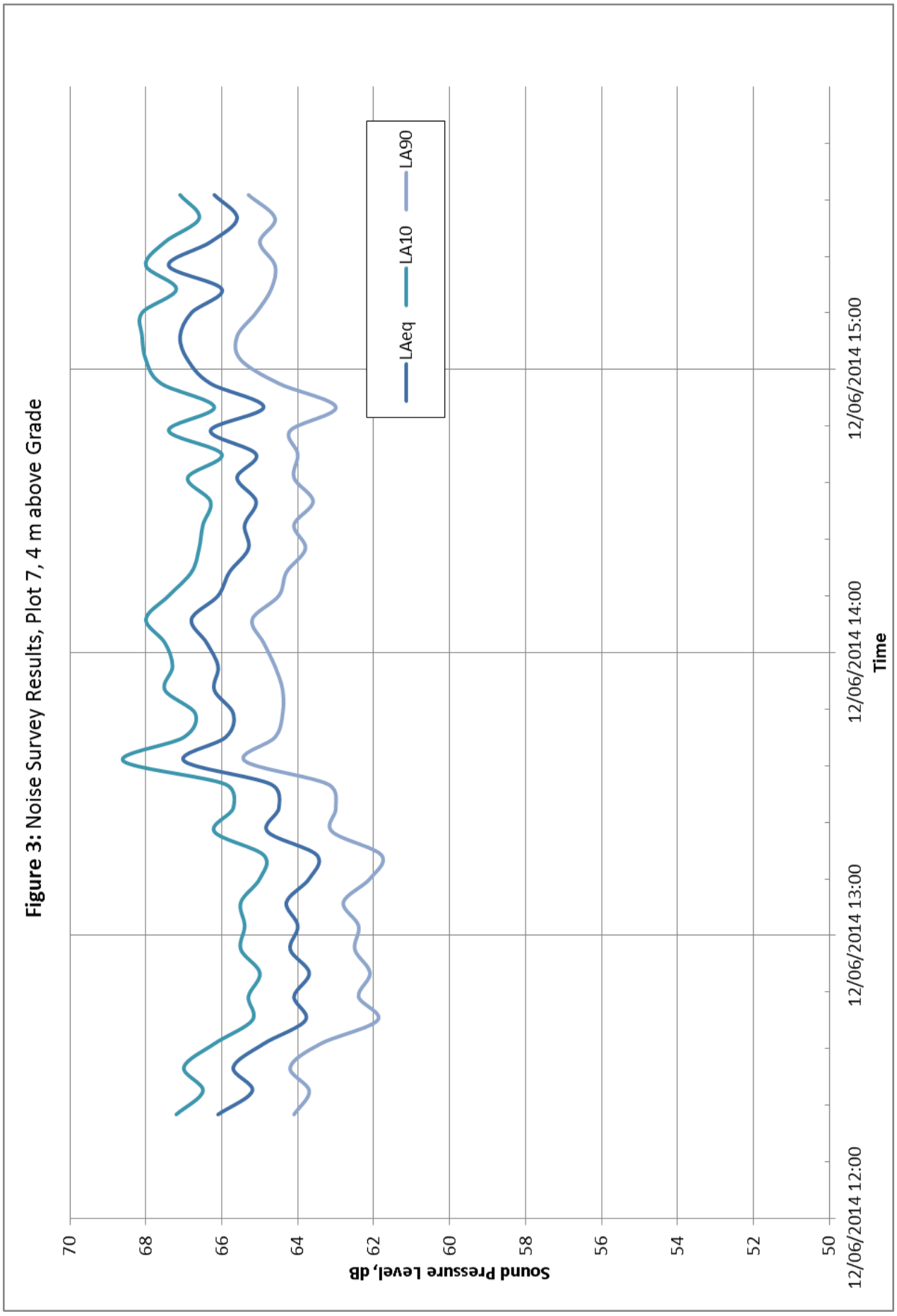

Figure 3: Noise Survey Results, Plot 7, 4 m above Grade