

TECHNICAL APPENDIX 9.1: BASELINE NOISE SURVEY

9.1.1 Introduction

9.1.1.1 A baseline noise survey was undertaken to establish the existing ambient noise levels at locations representative of the nearest noise sensitive receptors. Baseline noise monitoring locations are identified on Figure 9.1 in Volume 4.

9.1.1.2 The noise monitoring consisted of attended short term measurements during daytime periods. 15-minute long measurements were taken in three consecutive hours between 10:00 and 17:00, to establish the 18-hour daytime L_{A10} level in accordance with the shortened measurement procedure described in the Calculation of Road Traffic Noise publication (CRTN).

9.1.1.3 The baseline noise level measurements were carried out on 2 August 2018 by Michael Fort (AMIOA) of Ramboll UK.

9.1.1.4 The survey was carried out using Type 1 Sound Level Meters (SLM). The following equipment was used on site:

- Norsonic Sound Level Meter NOR140, serial number 1404236.
- Norsonic calibrator 1251, serial number 32853.

9.1.1.5 Measurements were taken under free field conditions i.e. more than 3m away from reflecting surfaces. All measurements were undertaken at a height of 1.5m above local ground level.

9.1.1.6 The sound level meter had been calibrated to traceable standards within the preceding two years and the calibrator within the previous 12 months; calibration certificates are available upon request. The SLM was field calibrated once it was set up in the measurement positions and on completion of the survey. No significant drift in the calibration was recorded at any time during the survey.

9.1.1.7 The weather conditions during the surveys were dry and still.

RESULTS OF ATTENDED BASELINE SURVEY

9.1.2 Niddry Mains House

9.1.2.1 Results of the baseline monitoring at Niddry House are shown in Table TA9.1.1.

Start time	Duration T	$L_{Aeq,T}$	$L_{A10,T}$	$L_{A90,T}$	$L_{AMax,fast}$
11:07	15 min	46	49	41	58
12:12	15 min	46	49	41	61
13:14	15 min	46	49	41	62

9.1.2.2 The derived 18-hour L_{A10} level is 48 dB.

9.1.2.3 Measurement location was over 6 m away from building façade. Measurement in drive way with direct view of motorway through thin trees. Traffic from motorway audible. Occasional car passing on B8020. Distant construction works and occasional reversing lorries audible from construction site nearby on new housing estate. Birds and wind in trees also audible.

9.1.3 The Myre Farm

9.1.3.1 Results of the baseline monitoring at Myre Farm are shown in Table TA9.1.2.

Table TA9.1.2: Measured Baseline Noise Level at The Myre Farm					
Start time	Duration T	L_{Aeq,T}	L_{A10,T}	L_{A90,T}	L_{AMax,fast}
11:29	15 min	60	60	49	80
12:33	15 min	62	58	48	83
13:35	15 min	63	61	48	82

9.1.3.2 The derived 18-hour L_{A10} level is 59 dB.

9.1.3.3 Measurement were made at the end of a private road to seemingly unoccupied farm. Weather dry and cloudy. Main noise source was M9, with occasional traffic going past on B8020 with approximately one car per minute frequency. Distant aircraft noise audible overhead, also birds and light breeze in trees. Site had clear view of M9.

9.1.4 Duntarvie Castle

9.1.4.1 Results of the baseline monitoring at Duntarvie Castle are shown in Table TA9.1.3.

Table TA9.1.3: Measured Baseline Noise Level at Duntarvie Castle					
Start time	Duration T	L_{Aeq,T}	L_{A10,T}	L_{A90,T}	L_{AMax,fast}
11:50	15 min	63	65	59	69
12:53	15 min	64	67	61	72
13:58	15 min	63	65	58	75

9.1.4.2 The derived 18-hour L_{A10} level is 65 dB.

9.1.4.3 M9 was the main noise source. There was an occasional traffic on B8020. Weather was dry and cloudy. Rustle of trees due to light breeze was audible.