Welsh Government

M4 Corridor around Newport

Environmental Statement Volume 3: Appendix 13.2

Baseline Sound Monitoring

M4CaN-DJV-ENV-ZG_GEN-AX-EN-0003

At Issue | March 2016

CVJV/AAR
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Longross Court,
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Contents

1 Baseline Sound Monitoring

1.1.1 Baseline sound monitoring was undertaken between Tuesday 23rd June 2015 and Thursday 23rd July 2015. In total, 15 part attended long term, continuous surveys were completed, ranging from 7 to 16 days in duration, and 28 fully attended short term surveys of 3 hours duration were completed during the daytime period. The majority of the survey period fell within school term-time, with the local schools' summer term ending 20th July 2015; the last two surveys to be collected ran into the holiday period by three days, having logged data during term-time for at least one week. Baseline data are provided in this document.

1.1.2 Survey locations were selected to be representative of a range of acoustic environments within the study area. In addition to those representative of residential receptors, locations were also chosen to be representative of nature conservation areas, recreational uses and otherwise noise sensitive locations.

1.1.3 Details of the baseline sound monitoring methodology are provided in Annex A and baseline survey records for each survey location are provided in Annex B.

1.1.4 All instrumentation used during the survey period was field calibrated prior to and immediately following each set of survey measurements and no significant deviation was found. All instrumentation was also within appropriate formal calibration intervals and calibration certificates are provided in Annex C.

1.1.5 Local meteorological conditions varied through the survey period and were logged at Gwaunshonbrown Farm, Pound Hill using a deployed meteorological station co-deployed at this noise survey location. Noise surveys were only carried out when the weather conditions were appropriate or, where weather conditions were not appropriate (following the guidance in BS 7445), data were removed in accordance with best practice. A summary of the day and night meteorological conditions for each survey day is provided in Annex D.

1.1.6 Plans showing the existing M4, the proposed new section of motorway; previous survey locations undertaken by Arup in 2008 and 2011; and the new survey locations used by RPS in 2015 are provided in Figure 1. A list of survey locations identifying their relation to the Scheme and surrounding noise sensitive areas is provided in Annex E.

1.1.7 A summary of the baseline data for each site is provided in Table 1.1 and Table 1.2 below. All levels are rounded to the nearest decibel in accordance with best practice.

Table 1.1: Sound Survey Results Summary

Survey	Location	Period	dB L_{Aeq}	dB L_{Amax}	dB L_{A10}	dB L_{A50}	dB L_{A90}
LT1 (e,p)	The Court, Coal Pit Lane	16hr day	51	70-90	52	49	46
		8hr night	46	62-74	49	44	40
LT2 (e,p)	Gwaunshonbrown Farm, Pound Hill	16hr day	54	72-84	56	53	49
		8hr night	48	64-76	52	47	42
LT3 (e)	6 Church Crescent	16hr day	54	74-78	56	52	49
		8hr night	49	67-78	53	47	43
LT4 (e)	6 Nant-Y-Moor Close	16hr day	57	72-83	59	57	54
		8hr night	52	68-76	56	51	45
LT5 (p)	36 Manor Park, Duffryn	16hr day	52	73-97	54	47	40
		8hr night	50	70-77	54	38	33
LT6 (p)	ABP Office Block, Newport	16hr day	55	79-88	58	50	44
		8hr night	52	75-88	54	46	41
LT7 (p)	Rose Cottage, Hart Farm, Picked Lane	16hr day	47	79-88	47	42	37
		8hr night	41	68-75	43	36	33
LT8 (p)	Permitted development north of Queen's Way	16hr day	53	73-91	56	51	45
		8hr night	49	69-78	52	45	40
LT9 (p)	Grangefield, NP26 3DF	16hr day	53	86-91	51	38	32
		8hr night	48	70-82	50	34	29
LT10 (p)	Well Cottages, Llandevenny	16hr day	50	75-88	51	46	40
		8hr night	49	72-88	48	41	35
LT11 (p)	11 Blenheim Close, Magor	16hr day	50	74-98	50	44	39
		8hr night	46	69-79	47	41	37
LT12 (p)	12 Queens Gardens, Magor	16hr day	43	73-81	45	40	37
		8hr night	42	63-73	46	39	35
LT13 (e,p)	15 Quarry Rise - rear garden	16hr day	53	67-88	53	49	44
		8hr night	47	59-71	50	45	41
LT14 (e,p)	24 Fford Maes Y Graig, Undy	16hr day	52	79-87	55	49	45
		8hr night	50	61-72	53	48	43
LT15 (e,p)	Court Farm, S of Green Farm, Llanfihangel	16hr day	61	77-84	64	61	55
		8hr night	55	72-86	59	53	48

e) representative of locations near the existing M4
p) representative of location near the proposed new section of motorway

Table 1.2: Sound Survey Results Summary - Short Term

Survey	Location	dB LAeq	dB LAmax	dB LA10	dB LA50	dB LA90
ST1 (e,p)	Castleton Rise, Castleton	67	88-96	71	58	45
ST2 (p)	Ty'n-y-brwyn	48	69-76	49	40	38
ST3 (e,p)	Little Orchard nr Berryhill Farm	59	70-74	62	57	51
ST4 (p)	Church Lane, Coedkernew	54	75-84	55	42	37
ST5 (p)	Kidwelly Close, Duffryn	48	68-74	51	37	33
ST6 (p)	Orchard Farm, Lighthouse Road	67	87-92	71	53	41
ST7 (p)	Wales Coast Path	42	68-73	44	40	38
ST8 (p)	Disused road adjoining Traston Road, Newport	49	74-86	50	46	44
ST9 (p)	Broad Street Common nr Pye Corner	51	73-80	53	42	38
ST10 (p)	Solutia Nature Reserve	44	58-90	43	40	36
ST11 (p)	Broad Street Common nr Moorbarn Farm	59	83-84	54	47	41
ST12 (p)	Layby, North Row Road towards Redwich	58	81-83	57	50	45
ST13 (e,p)	Magor, St Brides Rd & Netherwent View	58	77-92	60	54	52
ST14 (e,p)	Magor, Redwick Rd & Blenheim Ave	57	76-79	61	49	40
ST15 (e)	36 Western Avenue - rear garden	63	69-75	64	63	61
ST16 (e)	Near Rear garden of 96 Highcross Road, Newport	53	71-80	54	52	51
ST17 (e)	Allt-Yr-Yn Avenue	58	73-82	62	56	53
ST18 (e)	Footpath behind Goodrich Crescent	53	69-79	54	51	49
ST19 (e)	Land at end of Pant Road	60	80-84	62	58	56
ST20 (e)	Layby east of Pillmawr Farm	Survey aborted for safety reasons				
ST21 (e)	16 Harrogate Road - rear garden	63	69-79	64	63	61
ST22 (e)	140 Beaufort Road - rear garden	63	69-79	64	63	61
ST23 (e)	rear of Christchurch Road	69	76-78	70	68	66
ST24 (e)	Land off Royal Oak Hill	66	75-80	67	66	64
ST25 (e)	27 Blossom Close - rear garden	57	68-86	59	57	55
ST26 (e)	Land adj. to 89 Waltwood Park Drive	59	66-71	61	59	57
ST27	nr Waun-arw, NW of Magor	56	67-72	58	55	52

Survey	Location	dB LAeq	dB LAmax	dB LA10	dB LA50	dB LA90
(e)						
ST28 (p)	Magor Marsh Reserve (western Boundary)	52	70-76	54	49	45
ST29 (p)	Land off Watch House Parade	61	73-79	63	60	57

e) representative of locations near the existing M4
p) representative of location near the proposed scheme

1.1.8 From the short measurement procedure in Paragraph 43 of CRTN, the $L_{A10,18hr}$ metric can be calculated from the linear average of the three 1-hour $L_{A10,1hr}$ measurements, by subtracting 1 dB.

Figures

Legend

Limit of Permanent and Temporary Works for New Section of Motorway

Current survey locations:

- Sx - Single short term survey location
- Ex - Repeated short term survey location
- Lx - Long term survey location
- Lx no data - Long term survey location (no data)

Current survey locations:

- STx - Short term survey location
- LTx - Long term survey location

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Appendix 13.2 - Baseline Sound Monitoring

Noise Survey Locations

Figure: 1a	Revision:
Date: March 2016	Status: AT ISSUE
Drawn: AVG	Checked: AT

Scale: A3@ 1: 12,500
0 125 250 m

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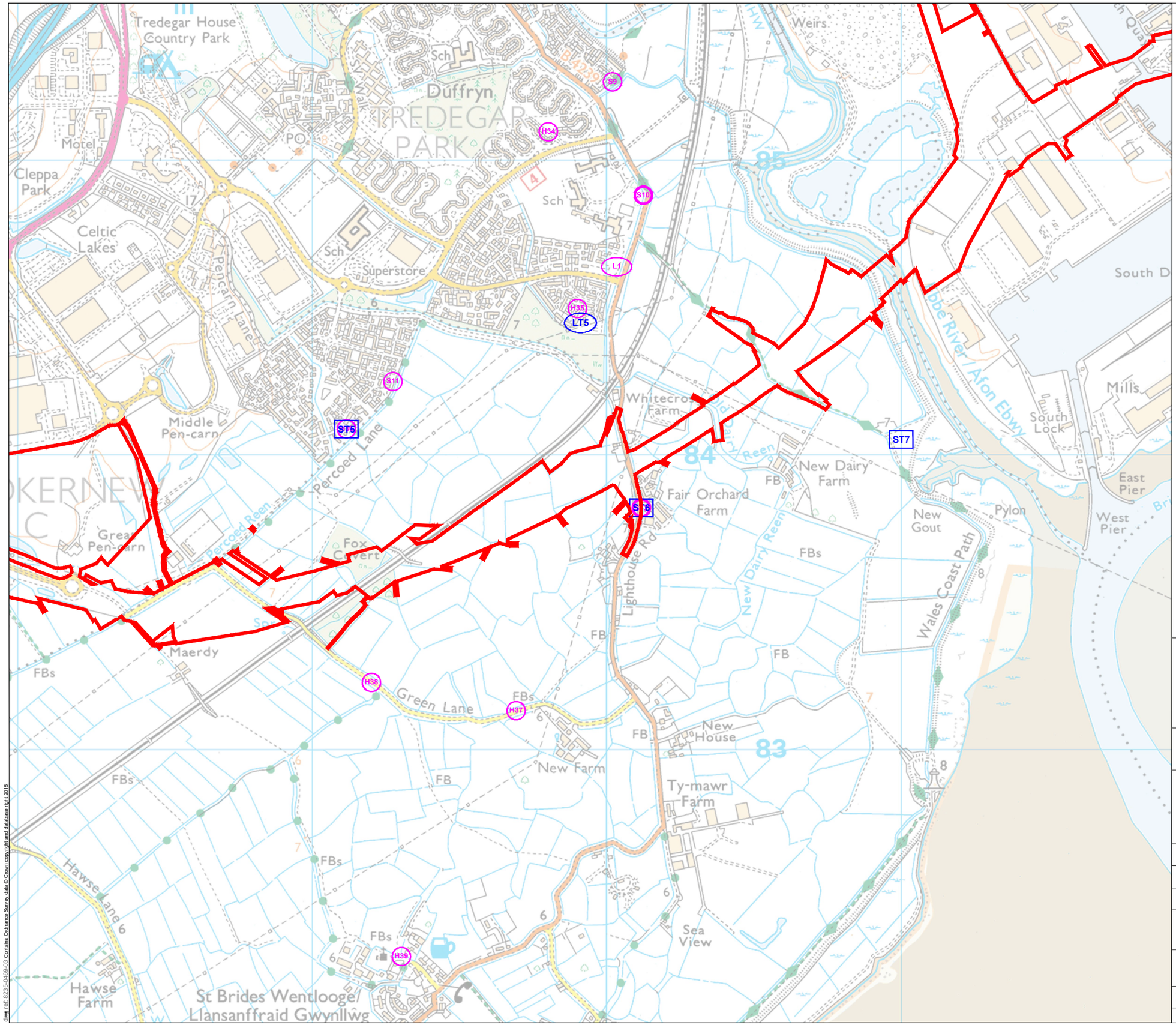
dwg ref:8235-0469-03



Legend

- Limit of Permanent and Temporary Works for New Section of Motorway

Current survey locations:

- Sx - Single short term survey location
- Ex - Repeated short term survey location
- Lx - Long term survey location
- Lx no data - Long term survey location (no data)

Current survey locations:

- STx - Short term survey location
- LTx - Long term survey location

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Appendix 13.2 - Baseline Sound Monitoring

Noise Survey Locations

Figure: 1b	Revision:
Date: March 2016	Status: AT ISSUE
Drawn: AVG	Checked: AT

Scale: A3@ 1: 12,500

0 125 250 m

N

dwg ref:8235-0469-03

Legend

Limit of Permanent and Temporary Works for New Section of Motorway

Current survey locations:

- Sx - Single short term survey location
- Ex - Repeated short term survey location
- Lx - Long term survey location
- Lx no data - Long term survey location (no data)

Current survey locations:

- STx - Short term survey location
- LTx - Long term survey location

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Appendix 13.2 - Baseline Sound Monitoring

Noise Survey Locations

Figure: 1c	Revision:
Date: March 2016	Status: AT ISSUE
Drawn: AVG	Checked: AT

Scale: A3@ 1: 12,500
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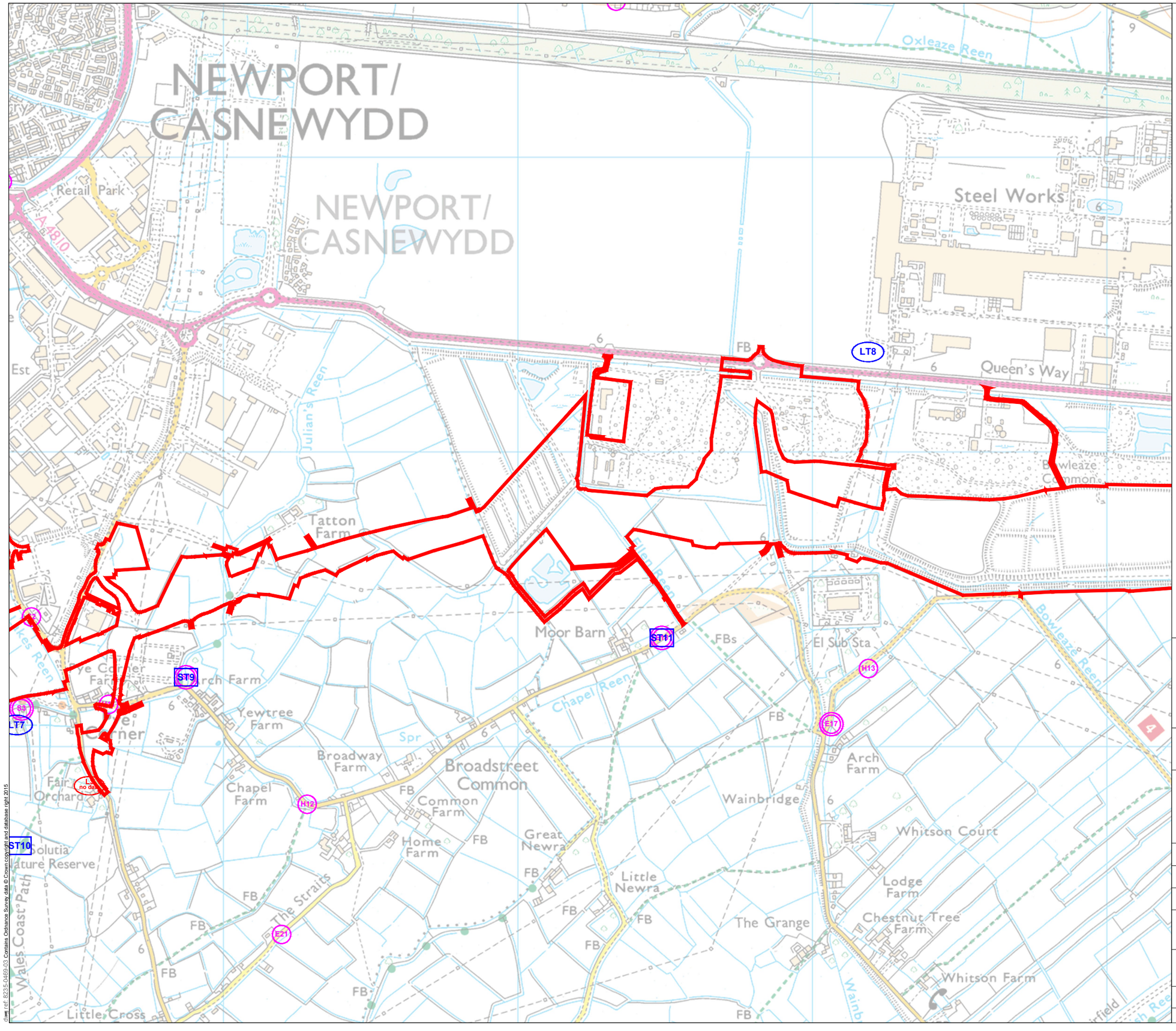

Legend

- Limit of Permanent and Temporary Works for New Section of Motorway

Current survey locations:

- Sx - Single short term survey location
- Ex - Repeated short term survey location
- Lx - Long term survey location
- Lx no data - Long term survey location (no data)

Current survey locations:

- STx - Short term survey location
- LTx - Long term survey location

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Appendix 13.2 - Baseline Sound Monitoring

Noise Survey Locations

Figure: 1d	Revision:
Date: March 2016	Status: AT ISSUE
Drawn: AVG	Checked: AT

Scale: A3@ 1: 12,500
0 125 250 m

N

dwg ref:8235-0469-03

Legend

Limit of Permanent and Temporary Works for New Section of Motorway

Current survey locations:

- Sx - Single short term survey location
- Ex - Repeated short term survey location
- Lx - Long term survey location
- Lx (no data) - Long term survey location (no data)

Current survey locations:

- STx - Short term survey location
- LTx - Long term survey location

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Appendix 13.2 - Baseline Sound Monitoring

Noise Survey Locations

Figure: 1e	Revision:
Date: March 2016	Status: AT ISSUE
Drawn: AVG	Checked: AT

Scale: A3@ 1: 12,500
0 125 250 m

N

dwg ref:8235-0469-03

Legend

Limit of Permanent and Temporary Works for New Section of Motorway

Current survey locations:

- Sx - Single short term survey location
- Ex - Repeated short term survey location
- Lx - Long term survey location
- Lx no data - Long term survey location (no data)

Current survey locations:

- STx - Short term survey location
- LTx - Long term survey location

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Appendix 13.2 - Baseline Sound Monitoring

Noise Survey Locations

Figure: 1f	Revision:
Date: March 2016	Status: AT ISSUE
Drawn: AVG	Checked: AT

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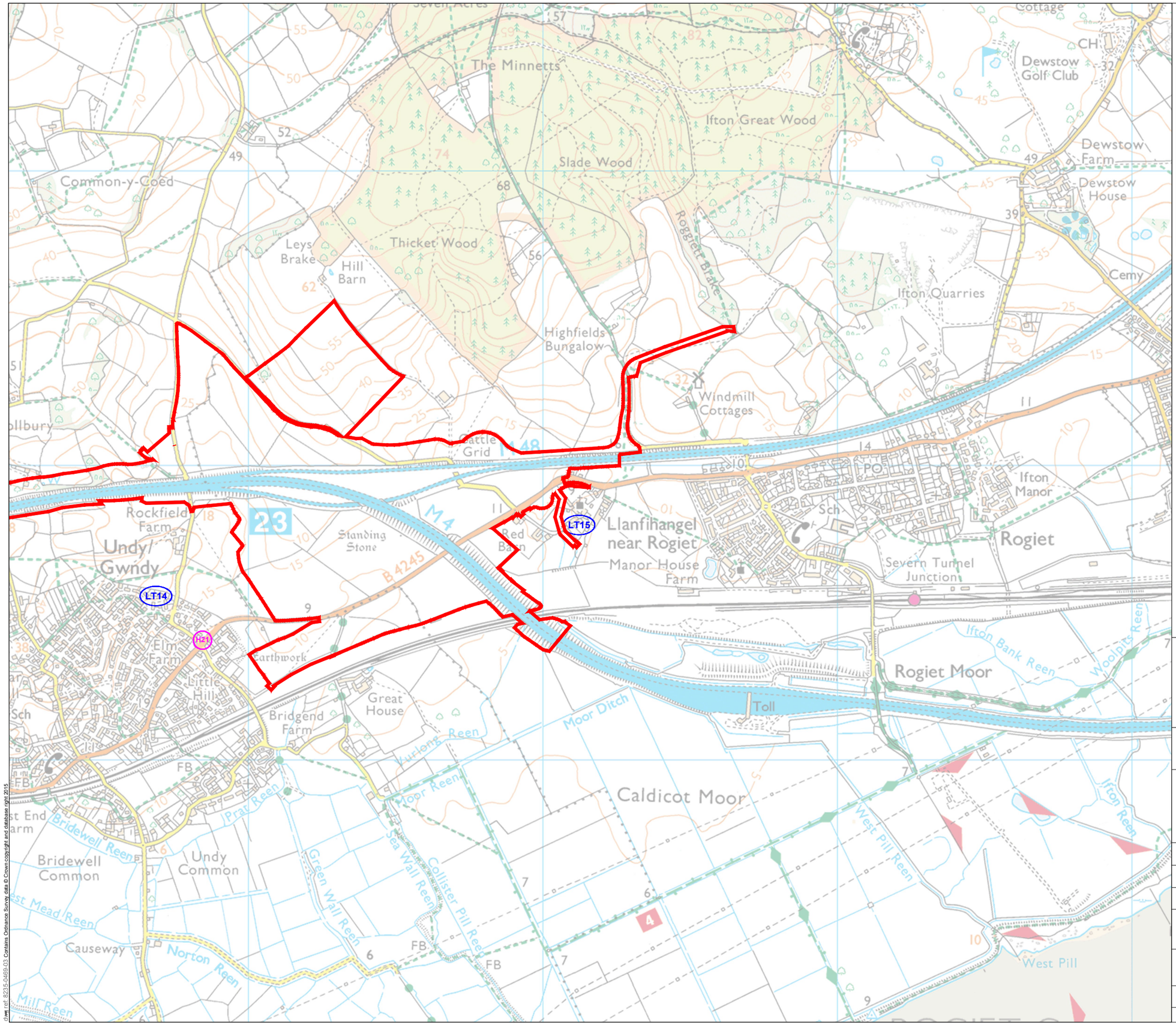

Legend

- Limit of Permanent and Temporary Works for New Section of Motorway

Current survey locations:

- Sx - Single short term survey location
- Ex - Repeated short term survey location
- Lx - Long term survey location
- Lx no data - Long term survey location (no data)

Current survey locations:

- STx - Short term survey location
- LTx - Long term survey location

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Appendix 13.2 - Baseline Sound Monitoring

Noise Survey Locations

Figure: 1g	Revision:
Date: March 2016	Status: AT ISSUE
Drawn: AVG	Checked: AT

Scale: A3@ 1: 12,500

0 125 250 m

N

dwg ref:8235-0469-03

Legend

Limit of Permanent and Temporary Works for New Section of Motorway

Current survey locations:

- Sx - Single short term survey location
- Ex - Repeated short term survey location
- Lx - Long term survey location
- Lx no data - Long term survey location (no data)

Current survey locations:

- STx - Short term survey location
- LTx - Long term survey location

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Appendix 13.2 - Baseline Sound Monitoring

Noise Survey Locations

Figure: 1h	Revision:
Date: March 2016	Status: AT ISSUE
Drawn: AVG	Checked: AT

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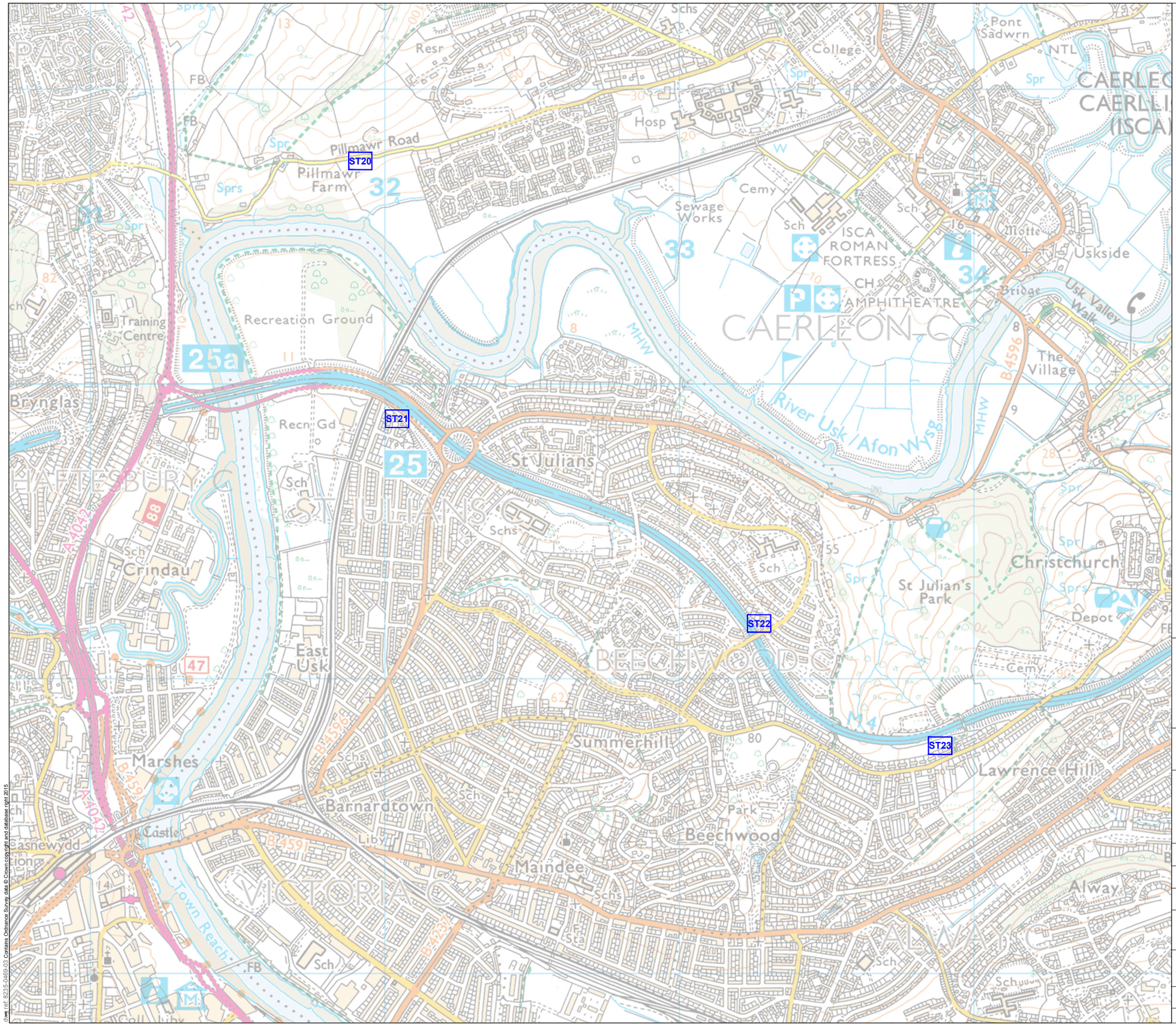

Legend

Limit of Permanent and Temporary Works for New Section of Motorway

Current survey locations:

- Sx - Single short term survey location
- Ex - Repeated short term survey location
- Lx - Long term survey location
- Lx no data - Long term survey location (no data)

Current survey locations:

- STx - Short term survey location
- LTx - Long term survey location

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Appendix 13.2 - Baseline Sound Monitoring

Noise Survey Locations

Figure: 1i	Revision:
Date: March 2016	Status: AT ISSUE
Drawn: AVG	Checked: AT

Scale: A3@ 1: 12,500
0 125 250 m

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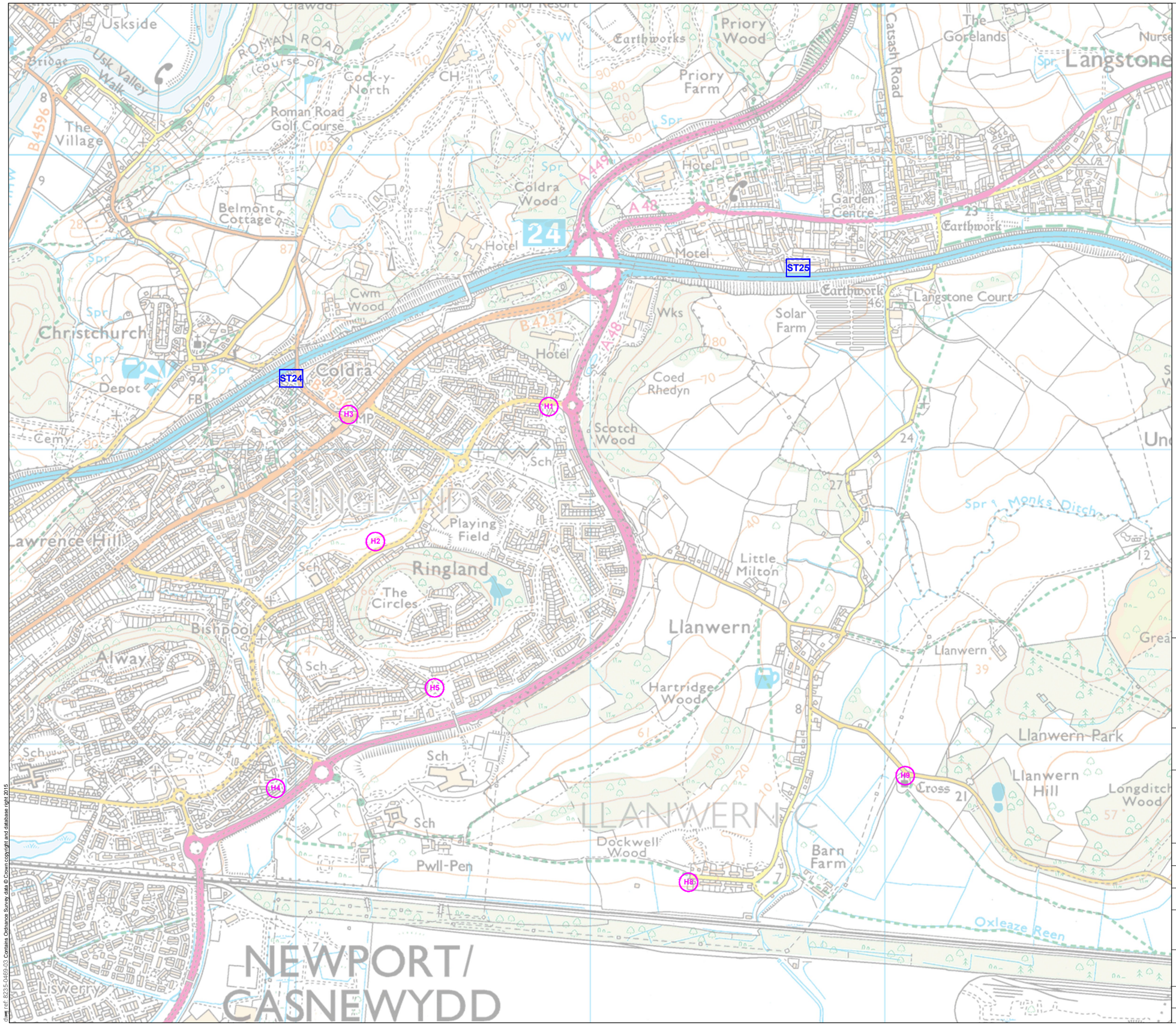
dwg ref:8235-0469-03



Legend

Limit of Permanent and Temporary Works for New Section of Motorway

Current survey locations:

- Sx - Single short term survey location
- Ex - Repeated short term survey location
- Lx - Long term survey location
- Lx no data - Long term survey location (no data)

Current survey locations:

- STx - Short term survey location
- LTx - Long term survey location

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Appendix 13.2 - Baseline Sound Monitoring

Noise Survey Locations

Figure: 1j	Revision:
Date: March 2016	Status: AT ISSUE
Drawn: AVG	Checked: AT

Scale: A3@ 1: 12,500

0 125 250 m

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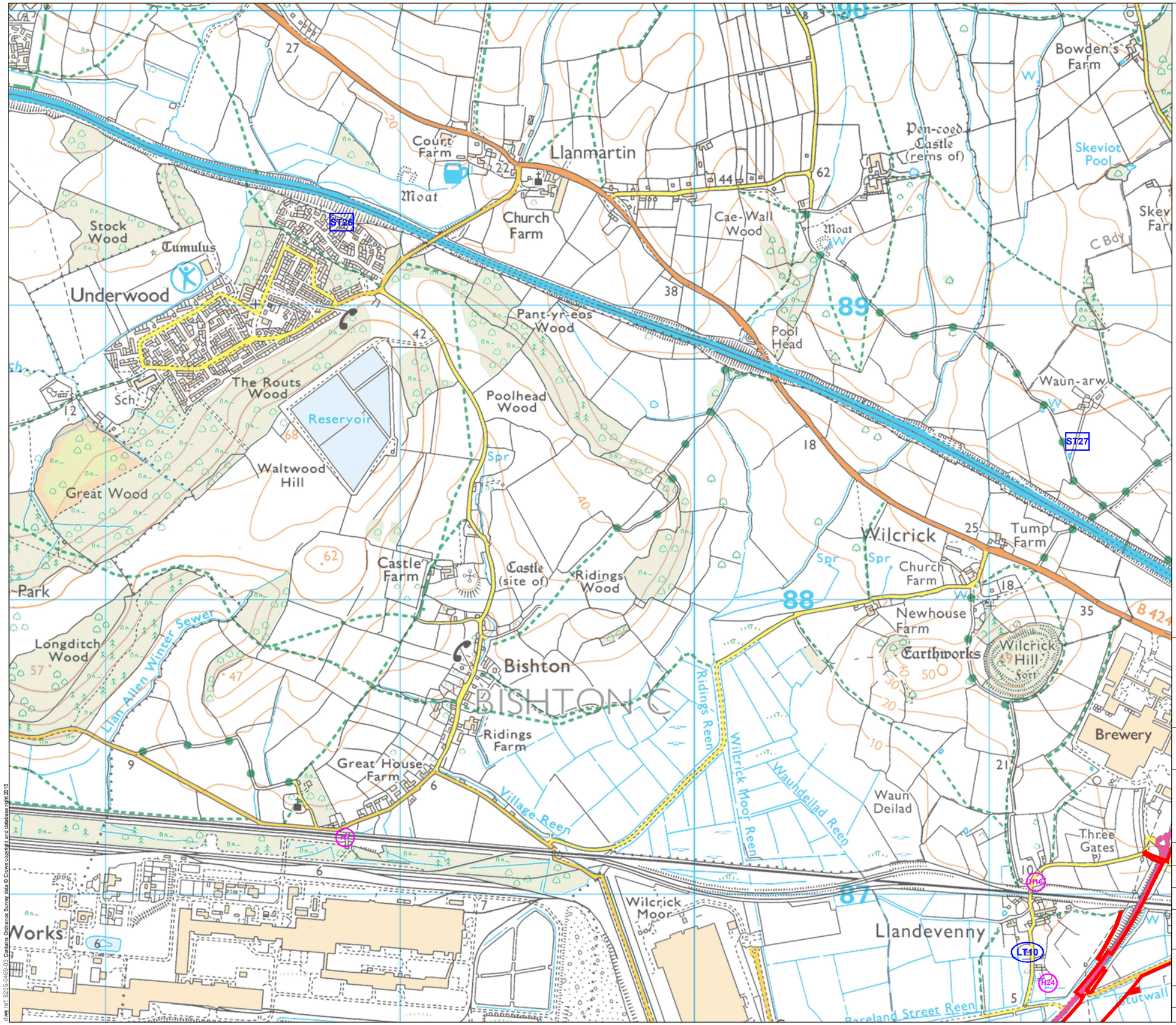
dwg ref:8235-0469-03



Legend

Limit of Permanent and Temporary Works for New Section of Motorway

Current survey locations:

- Sx - Single short term survey location
- Ex - Repeated short term survey location
- Lx - Long term survey location
- Lx no data - Long term survey location (no data)

Current survey locations:

- STx - Short term survey location
- LTx - Long term survey location

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Appendix 13.2 - Baseline Sound Monitoring

Noise Survey Locations

Figure: 1k	Revision:
Date: March 2016	Status: AT ISSUE
Drawn: AVG	Checked: AT

Scale: A3@ 1: 12,500
0 125 250 m

N

dwg ref:8235-0469-03

Annexes

Annex A: Baseline Sound Monitoring Methodology

Contract Name: M4CaN

Contract Number: 2500340

Sub-contractor: RPS

Risk Assessment / Method Statement Number: 009

Method Statement Title: Baseline Noise Surveys

Issue	Date	Author	Checked	Description of the amendment
01	21/5/15 29	Patrick Hoyle - RPS	Kath Sanders	

For Method Statements prepared by a Sub-contractor for his activity. Completion of this form it indicates that CVJV has checked the content, but this does not relieve the contractor / sub-contractor of any of their responsibility for Health & Safety and the Environment. This remains the responsibility of the organisation carrying out the task described. ALL REVIEWS CARRIED OUT MUST BE DATED.

CVJV Limited Approval: _____ **Date:** 2/6/15
(Project Manager or nominated person)

External Approval: _____(If required) **Date:**_____
(e.g. Client, Designer etc.)

Receipt Acknowledgements: _____ **Date:**_____
(Sub-contractor/Supervisor/Manager)

Distribution:

Name	Company	Position
Clare Russell	RPS	

RAMS Review Record:

Date	Reviewer	Comments/Reason for review
Review date	*Reviewer's name*	

Subcontractor Method Statement Evaluation Sheet

When reviewing the SHE Method Statement of a Sub Contractor, the following should be considered to evaluate the information. The list is not exhaustive and supervisors/engineers should use their own experience in completing the form.

Project	**M4CaN**
Method Statement Title	**Base Line Noise Surveys**
RAMS Ref.	**009**

			YES	NO
1.		Has the work activity been identified?	✓	
2.		Check that all foreseeable risks to health, safety and the environment have been assessed via a structured risk assessment procedure:		
	(a)	Process been identified i.e. are all the specific hazards identified?	✓	
	(b)	Are the persons who are at risk identified?	✓	
	(c)	Have the risks been quantified i.e. High/Med/Low or 1, 2, 3 etc?	✓	
	(d)	Have effective control measures been put into place?	✓	
3.		Check that adequate health, safety and environment arrangements have been specified in the Method Statement:		
	(a)	Supervisor in charge of operations named?	✓	
	(b)	Has a person(s) been appointed to take charge of SHE issues?	✓	
	(c)	Has communication with the Principal Contractor been established?	✓	
	(d)	Has information, instruction and training been given due regard?	✓	
	(e)	Are emergency arrangements detailed inc. rescue from height / confined space etc?	✓	
4.		Check that the Method Statement is compatible with the HASEMP and addresses the following:		
	(a)	Are emergency plans (including fire and environmental emergency) compatible?	.	
	(b)	Are measures for site security, storage and waste management as required?		
	(c)	Are Site SHE rules being given due consideration?		
	(d)	Has the scope/description of work been adequately identified?	✓	
	(e)	Is the sequence of operations clearly detailed in logical steps?		
	(f)	Do these steps have hold points for key requirements such as the issue of permits?	.	
	(g)	Do these steps cover all the activity from start to finish?		
	(h)	Is plant and equipment needed for the activity clearly detailed?		
	(i)	If lifting operations are included, is reference made to the Lifting Plan & Permit To Lift?		
	(f)	Is interface & coordination with other activities / operations covered?		
5.		Check that the Method Statement is compatible with the work of other contractors:		
	(a)	Are there any specific hazards required e.g. requirements for noise, COSHH, manual handling, welfare etc.		
	(b)	If there are specific hazards such as COSHH, manual handling, noise, vibration etc. are there separate and suitable assessments?		
6.		Check that all Permits below have been identified as hold points stating that the permits must be in place before that activity can commence		
	(a)	Permit to Dig		
	(b)	Confined Space Permit		
	(c)	Hot work Permit		
	(d)	Permit to Work Adjacent or Under H/V Overhead Cables		
	(e)	Permit to work on Electrical Equipment		
	(f)	Other permits (e.g. access permit from client), licences or consents		

Use the answers to the above questions to determine if further investigation will be required. On completion of the evaluation, the form **MUST** then be appended to the Method Statement. This form **MUST** be signed by both parties: CVJV and the subcontractor.

Signed	**Signed**
Name KATH SANDERS	**Name**
Position in M4CaN CVJV SHE-Q MANAGER.	**Position in Subcontractor**
Date 29/5/15.	**Date**

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Quality Management

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Authorised by:	Phil Evans BSc (Hons), MSc, MIOA, FGS	Senior Director - Acoustics		
Date of issue:	26 May 2015		**Revision number:**	0
Project number	JAE 8201			
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M4CaN: Baseline Noise Surveys Method Statement

Introduction

Background

1.1 Short-term attended and long-term unattended baseline noise surveys are to be undertaken at various locations between (following existing and proposed alignments) and around Junctions 23 and 29 of the M4, around South Wales and South Newport. However, no survey works are proposed on highways land but they will be in adjacent public access or consented private access areas, and the surveys will be carried out in short duration site visits. No hazardous plant, tools or processes are required or involved. Additional walk over surveys may be undertaken to evaluate the topography of specific areas to inform the modelling and assessment process. In addition to this, the existing M4 through Newport will be driven with a passenger videoing the route in each direction.

1.2 Proposed survey locations have been chosen to represent noise sensitive receptors which may be affected by noise from traffic on the new alignment and changes in traffic flow on the existing M4. The survey locations are identified in Table 1.1 below, and are presented in figures at the end of this document. Long-term unattended surveys include the ID prefix 'LT' and short-term

survey locations include the ID prefix 'ST'. A total of 15 LT and 27 ST surveys are proposed. In addition to the baseline noise surveys, there will be a data logging meteorological station installed at one of the survey locations to record weather parameters during the surveys.

Table 1.1 Proposed Baseline Survey Locations

ID	Location	OS Co-ordinates		Survey for: E= Ecological Assessment R = Human (Residential/ Recreational Amenity) Assessment
		Northing	Easting	
LT1	The Court, Coal Pit Lane	183610	324550	R
LT2	Gwaunshonbrown Farm, Pound Hill	184500	326120	R, E
LT3	8 Church Crescent	184400	327430	R, E
LT4	6 Nant-Y-Moor Close	184665	327435	R
LT5	36 Manor Park, Duffryn	184450	329910	R
LT6	ABP Office Block, Newport	185600	331900	R
LT7	Rose Cottage, Hart Farm, Picked Lane	185075	334290	R
LT8	Permitted development north of Queen's Way	186380	336730	R
LT9	Grangefield, NP26 3DF	184931	338874	R
LT10	Well Cottages, Llandevenny	186805	341130	R, E
LT11	11 Blenheim Close, Magor	187200	341985	R
LT12	12 Queens Gardens, Magor	187410	342040	R, E
LT13	15 Quarry Rise - rear garden	187635	343000	R
LT14	24 Fford Maes Y Graig, Undy	187560	343685	R
LT15	Court Farm, S of Green Farm, Llanfihangel near Rogiet	187805	345125	R
ST1	Castleton Rise, Castleton	183350	325330	R
ST2	Ty'n-y-brwyn	183860	326700	R
ST3	Little Orchard nr Berryhill Farm	184290	326860	R
ST4	Church Lane, Coedkernew	183377	327482	R
ST5	Kidwelly Close, Duffryn	184090	329115	R
ST6	Orchard Farm, Lighthouse Road	183823	330117	R
ST7	Wales Coast Path	184055	331000	R, E
ST8	Disused road adjoining Traston Road, Newport	186280	333800	R
ST9	Broad Street Common nr Pye Corner	185238	334871	R, E
ST10	Solutia Nature Reserve	184670	334305	E
ST11	Broad Street Common nr Moorbarn Farm	185372	336488	R, E
ST12	Layby, North Row Road towards Redwich	185326	340041	R
ST13	Magor, St Brides Rd & Netherwent View	187600	342315	R
ST14	Magor, Redwick Rd & Blenheim Ave	187165	342370	R
ST15	36 Western Avenue - rear garden	187575	328380	R
ST16	Near Rear garden of 96 Highcross Road, Newport	188080	328290	R

ID	Location	OS Co-ordinates		Survey for: E= Ecological Assessment R = Human (Residential/ Recreational Amenity) Assessment
		Northing	Easting	
ST17	Allt-Yr-Yn Avenue	188230	329310	R
ST18	Land at rear of Allt-Yr-Yn Crescent	189165	330225	R
ST19	Land at end of Pant Road	189660	330620	R
ST20	Layby east of Pillmawr Farm	190760	331915	R
ST21	16 Harrogate Road - rear garden	189885	332040	R
ST22	140 Beaufort Road - rear garden	189190	333270	R
ST23	rear of Christchurch Road	188775	333885	R
ST24	23 Royal Oak Drive - rear garden	189330	335155	R
ST25	27 Blossom Close - rear garden	189620	336705	R
ST26	Land adj. to 89 Waltwood Park Drive	189285	338800	R
ST27	nr Waun-arw, NW of Magor	188540	341300	R
ST28	Magor Marsh Reserve (western Boundary)	186680	342280	R, E

1.3 All of the LT surveys are to be undertaken on private land, the majority of which will be in the gardens of private dwellings; this is with the exceptions of LT6, which is to be located at an office block (ABP Office Block, Newport Docks), and LT8, which is to be located on open land at the site of a permitted residential development (land west of Llanwern Steelworks and north of Queen's Way).

1.4 The majority of the ST surveys are to be undertaken on publically accessible land on footpaths, with the exception of the following locations which are in the rear gardens of private dwellings: ST15, ST21, ST22, ST24 and ST25.

Objectives

1.5 The objective of the baseline noise surveys is to provide robust data on the existing noise climate at noise sensitive receptor locations which will be used to analyse the baseline situation in the absence of the Scheme, and to appraise historic baseline data to determine if any of the data is still representative such that it may be reused in the current baseline analysis.

1.6 Following analysis of the newly acquired and historic baseline data, representative baseline noise levels will be determined for noise sensitive receptor locations which will be used to validate results of noise modelling and for the determination of likely adverse effects arising from the Scheme.

Scope of the Surveys

1.7 The baseline noise surveys are to be undertaken at 43 locations and are to be carried out between 1st June 2015 and 1st August 2015. All survey work is to be undertaken during daylight hours.

Survey Methodology

Personnel

1.8 The personnel who may be undertaking the surveying, or attending site, are:

- Phil Evans BSc (Hons) MSc MIOA FGS, Senior Director – Acoustics, experienced acoustic surveyor;
- Stephen Scott MEng MIOA, Senior Acoustic Consultant, experienced acoustic surveyor;
- Susan Hirst BSc (Hons) MIOA, Senior Acoustic Consultant, experienced acoustic surveyor;
- Patrick Hoyle BSc (Hons) AMIOA, Acoustic Consultant, experienced acoustic surveyor;
- Peter Barling BSc (Hons) AMIOA, Assistant Acoustic Consultant, experienced acoustic surveyor; and
- Mark Fenton BSc (Hons), Assistant Acoustic Consultant, experienced acoustic surveyor.

Authority to Survey and Compensation

1.9 For those survey locations which are to be on private land, letters will be send to the owners/ occupiers requesting their co-operation in allowing the surveys to take place. These surveys will not commence without confirmed consent.

Baseline Survey Procedures

Short-term Attended Surveys

1.10 ST attended surveys will be undertaken following the guidance contained in the Calculation of Road Traffic Noise (CRTN) [1] 'Shortened Measurement Procedure'. This procedure involves carrying out sets of measurements at a given location over three consecutive hours between 10:00 and 17:00 hours.

1.11 Prior to each measurement wind speed and direction will be measured using a hand held anemometer to ensure that the direction and magnitude of the wind is acceptable in accordance with the requirements of the CRTN shortened measurement procedure. No short-term attended surveys are to be carried out within 24 hours of significant rainfall, where practicable.

Long-term Unattended Surveys

1.12 LT unattended surveys will be undertaken following the guidance contained in British Standard (BS) 7445 'Description and measurement of environmental noise, Part 2: Guide to the acquisition of data pertinent to land use' [2].

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1 Department of Transport. Calculation of Road Traffic Noise. HMSO. 1988.

2 British Standards Institution. British Standard 7445-2:1991 Description and measurement of environmental noise - Part 2: Guide to the acquisition of data pertinent to land use.

1.13 LT unattended surveys will be approximately a week in duration. Meteorological conditions will be recorded at the beginning and end of each LT survey.

Equipment

1.14 ST attended surveys will be carried out using microphones and wind shields mounted on tripods, with the sound level meter hand held.

1.15 LT unattended survey equipment will consist of a sound level meter housed in a weather-proof box, a photograph of this equipment setup is provided in Figure 2.2 (approx. box dimensions: 43 x 33 x 16 cm, weighing approx. 5 kg with all equipment inside). Equipment is powered by internal rechargeable batteries; mains power is not required.

1.16 The microphone and windshield will be mounted in one of the following three ways: with an integral pole attached to the side of the weatherproof box, on a separate pole which will be attached to a fence or similar structure or on a tripod pegged into soft ground or tied to the weather proof box or a solid structure. If façade mounting is required then the microphone will be mounted from a suitable window using a hinged frame.

1.17 The following photographs show LT unattended survey equipment set up with the three mounting options described above:

Pole attached to the box

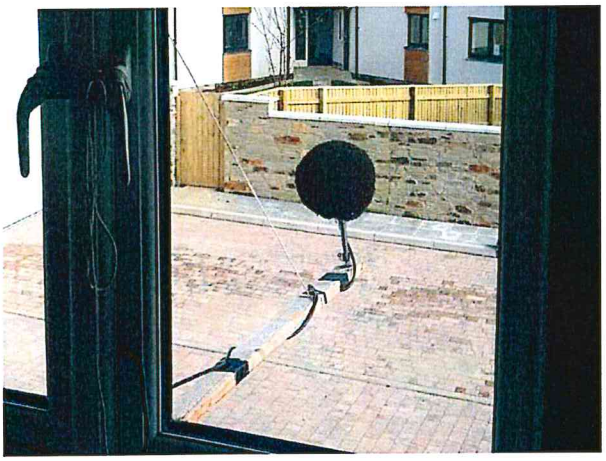
Upright Pole

The microphone and windshield will be attached to a metal pole approximately 1.5 m to 4 m in length. The pole will then be secured to a solid upright structure, using a combination of cable ties and gaffer tape. Alternatively, the pole will extend directly from the environmental case.

Tripod

The tripod is a standard camera type tripod, which stands approximately 1.5 m tall. The tripod will be left freestanding in locations where it is unlikely to fall over and will not constitute a trip hazard. The feet of the tripod will be pegged into soft ground, the tripod will be counter weighted, or the tripod will be attached to a solid structure using cable ties or gaffer tape.

Hinged Frame



The sound level meter is located internally with the microphone cable running through the window to the microphone. The hinged frame is secured against the external sill, within the window aperture, and tied off to the window handle or suitable alternative internal point.

Welfare Arrangements

1.18 No survey work will be carried out on the live highway and will be short in duration; as such, personnel are to use publically available local facilities as necessary.

Health and Safety and PPE

1.19 Risks to the personnel undertaking the surveying have been identified in the risk assessment and are considered negligible subject to existing safety measures. All personnel undertaking survey work are to carry out the works in accordance with the safety measures identified in the risk assessment and safety measures detailed in the safe systems of work document.

1.20 Risk to the general public and local residents is minimal with the exception of low risk trip hazards presented by LT unattended equipment. Every effort will be made to install the equipment in such a way that minimises or eliminates trip hazards; however the requirements of acoustic surveying sometimes demand that equipment is located centrally in an open area to avoid acoustically reflective surfaces. In such cases, the risks will be clearly explained to the resident by the

personnel installing the equipment and, where the risk is deemed to be unacceptable, an alternative installation location will be agreed.

Authority and Review Procedures

1.21 All risk assessments, safe systems of work documents and other RPS authored documents relating to noise and vibration are reviewed and authorised by a discipline director, in this case Phil Evans, Senior Director – Acoustics.

1.22 This method statement will be reviewed and amended as required.

M4CAN Proposed Baseline Noise Survey Locations
Notes: proposed location co-ords to be updated with actual co-ords once surveys undertaken, if differing by more than 5 m in either axis.

ID	Location	OS Co-ordinates		E= Ecological Receptor R = Human (Residential/ Recreational Amenity) Receptor	Comments	Need to notify Land Owner?
		Northing	Easting			
LT1	The Court, Coal Pit Lane	183610	324550	R	Exact location tbc (front/ rear)	Yes
LT2	Gwaunshonbrown Farm, Pound Hill	184500	326120	R, E (Badger sett ~330 m to W, dormice to W,S,E)	Front garden, towards M4	Yes
LT3	8 Church Crescent	184400	327430	R, E (Gwent Wildlife Trust Reserve, Great Traston Meadows)	Rear garden.	Yes
LT4	6 Nant-Y-Moor Close	184665	327435	R	Rear garden.	Yes
LT5	36 Manor Park, Duffryn	184450	329910	R	Rear Garden - also rep. of park to S.	Yes
LT6	ABP Office Block, Newport	185600	331900	R	Southern façade	Yes
LT7	Rose Cottage, Hart Farm, Picked Lane	185075	334290	R	Rear garden	Yes
LT8	Permitted development north of Queen's Way	186380	336730	R	Near culvert/ stream but far enough away that culvert not dominan	Yes
LT9	Grangefield, NP26 3DF	184931	338874	R	Representative of farms to W	Yes
LT10	Well Cottages, Llandevenny	186805	341130	R, E (Badger sett ~270 m to E)	Rear garden/ garden to SW. Rep. of Magor reserve to east.	Yes
LT11	11 Blenheim Close, Magor	187200	341985	R	Rear garden.	Yes
LT12	12 Queens Gardens, Magor	187410	342040	R, E (Badger sett ~300 m to SE)	In garden of an end of row house.	Yes
LT13	15 Quarry Rise - rear garden	187635	343000	R	In rear garden of house with garden facing towards M4.	Yes
LT14	24 Fford Maes Y Graig, Undy	187560	343685	R	Rear garden.	Yes
LT15	Court Farm, S of Green Farm, Llanfihangel near Rogie	187805	345125	R	Exact location tbc.	Yes
ST1	Castleton Rise, Castleton	183350	325330	R		No (publically accessible)
ST2	Ty'n-y-brwyn	183860	326700	R		No (publically accessible)
ST3	Little Orchard nr Berryhill Farm	184290	326860	R	May be better to survey near bus stop on other side of road?	No (publically accessible)
ST4	Church Lane, Coedkernew	183377	327482	R	Grass verge at junction.	No (publically accessible)
ST5	Kidwelly Close, Duffryn	184090	329115	R	On grass near south eastern boundary of houses.	No (publically accessible)
ST6	Orchard Farm, Lighthouse Road	183823	330117	R		No (publically accessible)
ST7	Wales Coast Path	184055	331000	R, E (Representative of RSPB Newport Wetlands)		No (publically accessible)
ST8	Disused road adjoining Traston Road, Newport	186280	333800	R		No (publically accessible)
ST9	Broad Street Common nr Pye Corner	185238	334871	R, E (Badger sett ~120 m to NNW)	Verge near junction.	No (publically accessible)
ST10	Solutia Nature Reserve	184670	334305	E	Park between pylons. Use map/ GPS to identify location.	No (publically accessible)
ST11	Broad Street Common nr Moorbarn Farm	185372	336488	R, E (Badger sett ~1 km to E, & 550 m to NW)	S side of road? Possible parking in layby/ field access to east.	No (publically accessible)
ST12	Layby, North Row Road towards Redwich	185326	340041	R		No (publically accessible)
ST13	Magor, St Brides Rd & Netherwent View	187600	342315	R		No (publically accessible)
ST14	Magor, Redwick Rd & Blenheim Ave	187165	342370	R		No (publically accessible)
ST15	36 Western Avenue - rear garden	187575	328380	R		Yes
ST16	Near Rear garden of 96 Highcross Road, Newport	188080	328290	R		No (publically accessible)
ST17	Allt-Yr-Yn Avenue	188230	329310	R	Possibly NW of position if local road dominant?	No (publically accessible).
ST18	Land at rear of Allt-Yr-Yn Crescent	189165	330225	R		No (publically accessible)
ST19	Land at end of Pant Road	189660	330620	R	representative of rear gardens on Pant Road	No (publically accessible)
ST20	Layby east of Pillmawr Farm	190760	331915	R	Possibly park/ measure near to barn access.	No (publically accessible)
ST21	16 Harrogate Road - rear garden	189885	332040	R		Yes
ST22	140 Beaufort Road - rear garden	189190	333270	R		Yes
ST23	rear of Christchurch Road	188775	333885	R		No (publically accessible)
ST24	23 Royal Oak Drive - rear garden	189330	335155	R		Yes
ST25	27 Blossom Close - rear garden	189620	336705	R		Yes
ST26	Land adj. to 89 Waltwood Park Drive	189285	338800	R		No (publically accessible)
ST27	nr Waun-arw, NW of Magor	188540	341300	R		No (publically accessible)
ST28	Magor Marsh Reserve (western Boundary)	186680	342280	R, E	On footpath on western boundary of reserve.	No (publically accessible)

Safe Systems of Work Document

	Ref: PD/SSOW/017B Issue No. 4b Date Issued: 1.7.2010 Date Amended: 20.5.2015 Amended by: Patrick Hoyle Amendments: Minor changes to make SSOW project specific.
Activity: Attended and unattended baseline noise surveys requiring the setting up of equipment, attendance during some of the monitoring and subsequent removal of the equipment.	**Level of Risk:** Generally low as not on live highway but marginally dependant on site and time of day/ year - see risk assessment.
Training required: RPS induction Client / managing agent induction Risk Assessment CSCS Card Manual handling course RPS H&S Training	**Plant & Tools required:** Torch and spare batteries. Non-powered hand tools (screwdrivers, spanner, retractable knife, cable ties, mallet, ground pegs, self-amalgamating tape, electrical tape, duct tape). Survey equipment (weatherproof cases, data logging meteorological station, sound level meters, sealed lead acid batteries, tripods, microphone mounting poles). Camera. Hand held GPS.
Safety Equipment required: First Aid Kit Antibacterial hand wipes Torch for night works Mobile phone	**Personal Protective Equipment required:** Safety footwear appropriate for the conditions Hi visibility jacket/waistcoat Cold/ wet weather clothing Suncream Sunglasses Ear protection/ hard hat/ gloves appropriate for the task/ safety glasses as required.
Specific control legislation, standards: The Health and Safety at Work etc Act 1974 The Management of Health and Safety at Work Regulations 1999 Construction Design and Management Regulations Control of Substances Hazardous to Health Regulations Control of Asbestos at Work Regulations	
Additional Reference Documentation: GGG01 – Personal Hygiene Precautions GGG03 – Hard Hats PD/RA/021 and GG/SSOW/021- Lone Working PD/RA/017- General site visits/surveys PD/RA/004 and GG/SSOW/004 – Adverse Weather Conditions RA & SSOW Protocol Lone Working Policy Personal safety	
RPS Contacts for Advice & Guidance:	

If advice or guidance is required then your Line Manager should be contacted. If further advice is required, this is available from your Divisional specialist or the P&D Health & Safety Manager

Principal Health and Safety Considerations:

To ensure the health, safety and welfare of employees whilst carrying out planning site visits or surveys.

Authorisation, communication, reporting and recording requirements:

Authorisation for the activity should be given by the Project Manager.
Information from the client relevant to the survey **PRIOR** to starting work, including services, COSHH, Asbestos, Legionella registers
All accidents should be reported in accordance with the RPS Accident Reporting Procedure.

General Control Measures:

- Ensure your mobile phone is charged before going on site.
- Ensure you have the appropriate personal protective equipment for the job.
- Ensure you have details of any health and safety hazards on the site, from the client or the local authority. This would include information on any potential vagrants or squatters as well as the structure of the building, where appropriate.
- Ensure you carry a means of identification at all times. Your RPS Consultants card should be sufficient.
- Do not use lifts at night unless the building is occupied and there is an alarm fitted to the lift.
- Be aware of Legionella – stagnant water.
- Buildings pre 1984- be aware of asbestos.
- Control area where working of other people may be affected.

Prior to survey:

When carrying out surveys, particularly in un-occupied premises, questions should be asked of the client (managing agent), prior to commencing work, regarding the condition of the property and any known hazards on site. i.e., services still on, condemned etc. Plan/schedule should be drawn up prior to starting work, so that both parties are aware of when the surveys are taking place and then ensure that any necessary precautions are taken. Any known hazards should be included in the plan and on the 'on-site' risk assessment. Site plans of the building should also be obtained if possible, where appropriate.

On arrival:

- Ensure you park in a safe place either on a local road or public/private car park.
- Do not park in dark areas where there is no security or road lighting.
- Do not park in alleyways or other high-risk areas.

Brownfield/Contaminated Land:

- Identify likely risk of contamination.
- Avoid contaminated areas; if possible do not let other staff enter the area.
- Establish whether COSHH assessment has been undertaken (check with client, 3rd party or local authority).
- Call appropriate specialist if necessary.
- Identify substances if possible.
- Avoid eating or drinking on site unless in approved areas.
- Wash hands before handling food. Use anti-bacterial hand wipes
- Wash suspicious substances on skin or clothing with proprietary cleaner (soapy water).
- Use appropriate PPE (e.g. gloves, disposable protective clothing).

- Ensure correct disposal of Asbestos.
- If unexploded ordnance is suspected on the site, ring RPS Chepstow for advice. If unexploded ordnance is found on site, call the Police who will notify the Bomb Squad.
- Identify the risk of Weil's disease and ensure all staff recognise the symptoms and report to a doctor if concerned.

DO NOT SMOKE OR ALLOW NAKED FLAME

Greenfield Sites:

- Take care on uneven ground. Look out for rabbit holes, molehills etc.
- Look out for hidden hazards not already notified by the client.
- Do not go into boggy areas.
- Be aware of possible confrontation with landowners, mineral or quarrying activities; establish rights of way and/or property ownership beforehand.
- Avoid eating or drinking on site unless in approved areas.
- Wash hands before handling food. Use anti-bacterial hand wipes
- Avoid trespass.
- Wear appropriate PPE.

Derelict/Unstable Buildings:

- Only go into derelict buildings with the client or landowners permission.
- Comply with the client/landowner's set procedures.
- Establish whether the building or structure is condemned or entry is prohibited for some reason (see client or local authority).
- Do not go into/disturb areas where you suspect asbestos may be present. (unless qualified to do so).
- If using ladders/steps ensure they are safe, fixed/stable and in good repair.
- Do not go onto roofs if poor access, no hand/guard rails, bad weather, unstable flooring.
- Establish whether services connected- if damaged cables, fractured pipes, water leaks etc do not continue- notify client.
- Do not go near plant/machinery that is in operation or un-used/poor condition.
- Be aware of hazards such as rats, pigeons and bats as these can cause disease. Use anti bacterial hand wipes.
- Be aware of possible confrontation with vagrants, squatters etc.
- Leave building immediately if in doubt.
- Be aware of discarded needles - if injured seek medical advice immediately

**ALWAYS WEAR THE APPROPRIATE PPE for above (boots/hat/clothing/masks/gloves/overalls).

Trafficked Areas:

- Ensure that you are vigilant and look out for traffic in and around the area whilst examining documents or making notes, and whilst moving around site.
- Wear visible clothing at all times.

Animals, Rats, Birds, Bats, Insects etc.

- Keep away from domestic and farm animals.
- Do not go into fields where there is livestock present, especially horses, bulls, cows with young etc.
- Contact the landowner for advice and assistance if entry to a field containing livestock is required.
- Avoid contact with droppings, waste - use appropriate PPE.
- If bitten, cut, stung - seek medical advice

Town Centres/Urban Sites: • Wear visible clothing. • Avoid conspicuous behaviour such as standing with a clipboard taking notes. • Do not take photographs of private property without explanation. • Be polite and diplomatic if questioned. • Do not get into arguments or discussions. If necessary refer them to the client or local authority.
Noise: • Assess the noise level on the site. • Conform to the site signs and requirements for PPE. • Wear earplugs or ear defenders where advised for excessive noise.(ensure correct type).

Authority

Reviewed and amended by: Patrick Hoyle Position: Consultant	Signed: 
Authorised by: Phil Evans Position: Senior Director - Acoustics	Signed: 

RPS Brighton – Risk Assessment Summary

Project reference: JAE8201	**Project Title:** M4 CAN	**Your name:** Patrick Hoyle	**Date RA prepared: 20/05/2015**
Location of site: Various locations between and around J23 and J29 M4, South Wales to South of Newport. No survey work on M4 itself. Short-term surveys >5 m <15 m from carriageway edge but not on highway land, where appropriate. Long term survey locations to be agreed with residents/ occupiers, though indicative locations provided in detailed information. Refer to figures showing survey locations and detailed information which provides OS co-ordinates.		**Date of proposed site visit:** June – July 2015	
Description of task/activity (refer to method statement if applicable):	Short-term attended surveys in accordance with CRTN shortened measurement procedure. Setting up and collecting long term unattended surveys.		

A Risk Assessment must be carried out before you start work on site. It should be prepared before you go on site to allow you to check the appropriate control measures are in place; however, take it with you to site because you must review it when you arrive on site before you start work, so that you can check the situation is as you expected and the controls have been put in place.

1. Start by identifying the hazards you will face. The following pro-forma table lists some of the routine hazards our teams come across, but this is not all inclusive and there may be other hazards, which you must add to the table.
2. Then, make a judgement on what the risk* of harm will be with control measures that are already in place. The risk of harm is a function of the severity of the hazard (the *potential* for harm) x the *likelihood* of that potential being realised under these specific circumstances. It is important to remember that this first part of the assessment should be of the risk as it stands now, not as you think it will be when any necessary additional control measures are in place.
3. If the risk is unacceptable then additional control measures must be put in place to reduce the risk, and the risk of harm must be assessed again. Only if the final level of risk is "negligible" or "as low as reasonably practicable" should you start work. You must check when you reach site that these safety measures have been put in place before starting work and sign this off in the final column of the table.

* The level of risk can be described in several ways: some assessors classify the risks as "high", "medium" or "low"; however, these are relative and RPS Brighton prefers the classification of risks as either "negligible", "as low as reasonably practicable" (ALARP), or "unacceptably high". The logic here is that if it is reasonably practicable to reduce the risk further, it should be done! Not to reduce the risk further when it is clearly practicable to do so is unacceptable.

Significant Hazards (delete any examples not applicable & specify any additional)	**Existing safety measures incorporated into the work (including relevant Safe Systems of Work) (summarise)**	**Risk of harm[1] with existing safety measures (tick)**			**Additional safety measures needed to reduce risk to ALARP (summarise)**	**What did the risk reduce to?**			**Consultant to review RA on site, including that measures in place (sign-off)**
		Negligible	**ALARP[2] (acceptable)**	**Unacceptably high**		**Negligible**	**ALARP[3] (acceptable)**	**Unacceptably high**	
A. TRAVEL, WELFARE, WEATHER & ENVIRONMENT									
Driving an extended distance or duration	Staff to follow RPS UK Driver's Handbook advice and GG/SSW001.	☐	☒	☐		☐	☐	☐	
Tiredness/fatigue	Take appropriate rest breaks. Ensure snacks and drinks are available if required.	☒	☐	☐		☐	☐	☐	
Lone working	Lone working not allowed on active sites.	☐	☒	☐		☐	☐	☐	
Sunburn	Use sun cream as required.	☒	☐	☐		☐	☐	☐	
Temp extremes	If high temperatures forecasted take sunhat, wear loose clothing, and ensure plenty of drinking water is available. Take wet/ cold weather clothing in case of emergencies.	☒	☐	☐		☐	☐	☐	

[1] The Risk Assessment should cover both the risk of harm to RPS Brighton's project staff and the risk to other people; the score category should be whichever is the highest risk.
[2] ALARP = As Low As is Reasonably Practicable
[3] ALARP = As Low As is Reasonably Practicable

RPS Brighton – Risk Assessment Summary

Significant Hazards (delete any examples not applicable & specify any additional)	Existing safety measures incorporated into the work (including relevant Safe Systems of Work) (summarise)	Risk of harm[1] with existing safety measures (tick)			Additional safety measures needed to reduce risk to ALARP (summarise)	What did the risk reduce to?			Consultant to review RA on site, including that measures in place (sign-off)
		Negligible	ALARP[2] (acceptable)	Unacceptably high		Negligible	ALARP[3] (acceptable)	Unacceptably high	
B. GENERAL HAZARDS ON SITE (see PD/SSOW/017)									
General Public	Act courteously and professionally at all times. Do not get involved in discussions or arguments. Refer to client or local authority as necessary.	☐	☒	☐		☐	☐	☐	
Attack by animals	Do not enter areas where livestock are present. Do not approach dogs or other animals. Retreat to vehicle if necessary.	☐	☒	☐		☐	☐	☐	
Traffic on roads	Wear hi-vis vest or jacket when undertaking work adjacent to roads. No works to be undertaken within 5m of live traffic.	☐	☒	☐		☐	☐	☐	
Site traffic/plant	Wear hi-vis vest or jacket. Keep to pedestrian walkways where available. Be aware of all traffic and mobile plant whilst moving around site.	☐	☒	☐		☐	☐	☐	
Tripping and falling	Wear safety boots. Be aware of rabbit holes and uneven ground on greenfield sites.	☐	☒	☐		☐	☐	☐	
Unstable structures	Do not access derelict or unstable structures.	☒	☐	☐		☐	☐	☐	
Falling objects	Wear hard hat in designated areas.	☒	☐	☐		☐	☐	☐	
C. PHYSICAL HAZARDS ON SITE									
Working at heights	No works to be undertaken at height.	☒	☐	☐		☐	☐	☐	
Manual handling	Follow manual handling procedures identified during training.	☐	☒	☐		☐	☐	☐	
Noise	Wear ear protection in designated ear protection zones.	☐	☒	☐		☐	☐	☐	
D. CHEMICAL / BIOLOGICAL HAZARDS ON SITE									
Asbestos in buildings on open sites	- If you will be working inside a building constructed or refurbished before 2000, you must ask the building "duty holder" (under the Control of Asbestos Regulations 2012) if asbestos is present, or ask your client to obtain this information from the building duty holder. - If you will be working on an outside site where there is a reasonable chance that asbestos could be present (e.g. on a tip, other waste site, or construction/demolition site), you must ask the client if asbestos is present. - Record the result of this check here (you must select one box): ☒ I will be working inside a building, but the building was constructed or refurbished in 2000 or later; or I will be working on an outside site where there is little reasonable likelihood of asbestos being present. No further action required. ☐ I will be working inside a building constructed or refurbished before 2000, or I will be working on an outside site where there is a reasonable chance that asbestos could be present, but the client / duty holder states that asbestos is not present. No further action is required. ☐ I will be working inside a building constructed or refurbished before 2000, or I will be working on an outside site where there is a reasonable chance that asbestos could be present, and client / duty holder states that asbestos is or may be present. Further information and an asbestos-specific risk assessment is required. See your Operational Director for more details before proceeding. Staff should not be sent into affected areas. A copy of the Regulations, together with information and guidance on asbestos can be found on the P&D H&S intranet site, together with details of an 'Asbestos Awareness' internal training course.								
Biological hazards (e.g. Weil's, Tetanus, etc)	Avoid contact with animal faeces. Use anti-bacterial hand wipes as appropriate.	☐	☒	☐		☐	☐	☐	

RPS Brighton – Risk Assessment Summary

Significant Hazards (delete any examples not applicable & specify any additional)	Existing safety measures incorporated into the work (including relevant Safe Systems of Work) (summarise)	Risk of harm[1] with existing safety measures (tick)			Additional safety measures needed to reduce risk to ALARP (summarise)	What did the risk reduce to?			Consultant to review RA on site, including that measures in place (sign-off)
		Negligible	ALARP[2] (acceptable)	Unacceptably high		Negligible	ALARP[3] (acceptable)	Unacceptably high	
E. OTHER HAZARDS									
No other foreseeable risks		☐	☐	☐		☐	☐	☐	

Management review

Risk Assessment reviewed by Project Director*: **Signature:** _____ **Print name:** P.S. EVANS **Date:** 26.5.15.

This review refers only to the situation assessed above at the time of review. If circumstances change significantly, you must carry out a fresh Risk Assessment. There may be situations where the change in circumstance is not found until you reach site: you must reassess the risks based on your RA training, calling the Projector Director to obtain feedback/review of the Risk Assessment if you judge you need to.*

**In the absence of the PD, another Director can sign-off the Risk Assessment if he is satisfied that he fully understands the risks involved and the measures likely to control those risks.*

Circulation to appropriate employees (To be re-circulated if the Risk Assessment is amended)

- I am appropriately qualified to carry out the task.
- I have received appropriate training to carry out the task.
- I am suitably experienced to carry out the task.
- I have received, read and understood the Risk Assessment and Safe Systems of Work (SSW) documents and any client specific safety instructions provided.
- I have been issued with the necessary plant and tools required for the task.
- I have been issued with all the necessary safety equipment and personal protective equipment required for the task.
- It is my responsibility to ensure that I, and anyone working under my supervision, follow the SSW and use the plant tools and safety equipment provided, without risk to my own health and safety or to the health and safety of others.

Signature: _____ **Print name:** _____ **Date:** _____

Signature: _____ **Print name:** _____ **Date:** _____

Signature: _____ **Print name:** _____ **Date:** _____

Signature: _____ **Print name:** _____ **Date:** _____

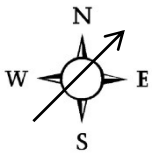
Signature: _____ **Print name:** _____ **Date:** _____

Annex B: Baseline Sound Monitoring Survey Report Forms

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	LT1 The Court Coral Pit Lane				
Personnel (start/end)	PH	PB	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991	
Purpose of Monitoring	Baseline				
SLM ID (ID/make/model/serial number)	# 24 Rion NL-31 352030		**Calibrator at Start** (Cal. ID/Cal. Level)	#14 Rion NC-74 110118	94.0 dB
Sample period **Dynamic Range** **Weighting**	100ms 20-110 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	93.9 dB
Filename	0001		**Memory Card ID**	~	
Start Date	25/06/15		**End Date**	03/07/15	
Start Time	16:30		**End Time**	10:00	
Microphone Height	2.1 m		**Façade / Free-field**	Free-field	
Photo taken identifying location with equipment installed?				Yes	

BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	0.5 m/s 1 m/s 0.2 m/s		**Wind Speed & Direction** (make 3 wind speed measurements and average)	 2 m/s 	
Precipitation	None		**Precipitation**	None	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	4		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	2	
Temperature	21 ºC		**Temperature**	18 ºC	
Relative Humidity	40 %		**Relative Humidity**	50 %	
Subjective Description (fog/visibility/ground conditions)	Dry ground, clear, gentle breeze.		**Subjective Description** (fog/visibility/ground conditions)	Dry, clear, sunny.	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

On grass next to a fence approximately 50 m from house.
Soft ground falling away to road.

Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

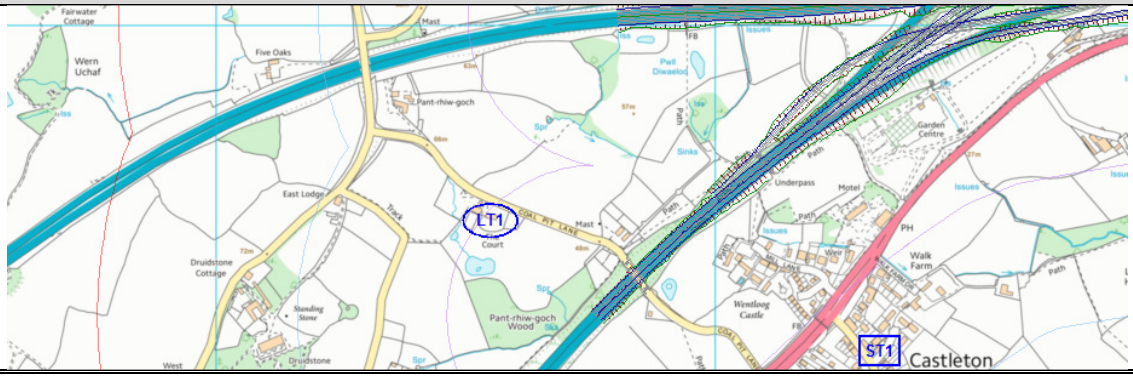
Dominant – Road traffic.
Other – Aircraft noise, distant dog barking, bird song, waterfall trickling approximately 60 m left of the house.

Residents having extension put in – some construction noise is expected.

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Road traffic.
Other – Light construction, lawn mower, vehicle movement, people talking, bird song.

Survey location



BASELINE SOUND MONITORING SURVEY REPORT FORM

	LT1 The Court Coral Pit Lane					
Period	**Start**	**End**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
18hr day	26/06/2015 06:00	03/07/2015 00:00	51	70-90	52	46
16hr day	26/06/2015 07:00	02/07/2015 23:00	51	70-90	52	46
8 hr night	25/06/2015 23:00	03/07/2015 07:00	46	62-74	49	40

	18 hour day 06:00 – 00:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Tuesday	26/06/2015 06:00	18:00:00	57.4	90.0	55.5	47.1
Wednesday	27/06/2015 06:00	18:00:00	48.2	70.3	50.2	43.4
Thursday	28/06/2015 06:00	18:00:00	51.4	70.3	53.8	45.6
Friday	29/06/2015 06:00	18:00:00	49.8	74.0	51.4	46.2
Saturday	30/06/2015 06:00	18:00:00	49.4	74.5	51.0	46.6
Sunday	01/07/2015 06:00	18:00:00	49.8	77.2	52.4	45.2
Monday	02/07/2015 06:00	18:00:00	49.9	75.0	52.3	45.1

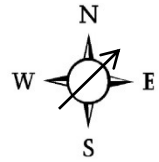
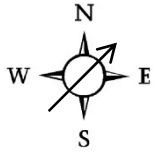
	16 hour day 07:00 – 23:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Tuesday	26/06/2015 07:00	16:00:00	57.9	90.0	56.1	47.7
Wednesday	27/06/2015 07:00	16:00:00	48.5	70.3	50.3	44.2
Thursday	28/06/2015 07:00	16:00:00	51.7	70.3	53.9	47.0
Friday	29/06/2015 07:00	16:00:00	50.0	74.0	51.5	46.7
Saturday	30/06/2015 07:00	16:00:00	49.5	74.5	51.0	46.8
Sunday	01/07/2015 07:00	16:00:00	49.7	77.2	52.1	45.7
Monday	02/07/2015 07:00	16:00.00	50.1	75.0	52.5	45.6

	8 hour night 23:00 – 07:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Wednesday	25/06/2015 23:00	08:00:00	46.5	73.7	50.1	38.9
Thursday	26/06/2015 23:00	08:00:00	45.3	69.2	47.7	40.8
Friday	27/06/2015 23:00	08:00:00	45.7	61.6	49.2	40.8
Saturday	28/06/2015 23:00	08:00:00	45.5	65.3	48.4	39.7
Sunday	29/06/2015 23:00	08:00:00	45.1	66.0	48.3	38.2
Monday	30/06/2015 23:00	08:00:00	48.7	72.0	52.0	41.8
Tuesday	01/07/2015 23:00	08:00:00	44.1	65.5	47.6	38.3
Wednesday	02/07/2015 23:00	08:00:00	50.8	73.8	51.3	42.5

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	LT2 Gwaunshonbrown Farm, Pound Hill N:51º 33.243' W:003º 04.006'				
Personnel (start/end)	PH	PB	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991	
Purpose of Monitoring	Baseline				
SLM ID (ID/make/model/serial number)	# 113 Rion NL-52 43380		**Calibrator at Start** (Cal. ID/Cal. Level)	#14 Rion NC-74 110118	94.0 dB
Sample period **Dynamic Range** **Weighting**	100ms 20-130 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	93.9 dB
Filename	0002/9902		**Memory Card ID**	~	
Start Date	23/06/15		**End Date**	03/07/15	
Start Time	18:15		**End Time**	10:00	
Microphone Height	1.5 m		**Façade / Free-field**	Free-field	
Photo taken identifying location with equipment installed?				Yes	

BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	2.5 m/s 1.6 m/s 3 m/s		**Wind Speed & Direction** (make 3 wind speed measurements and average)	- 2 m/s -	
Precipitation	None		**Precipitation**	None	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	1		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	8	
Temperature	20 ºC		**Temperature**	22 ºC	
Relative Humidity	40 %		**Relative Humidity**	50 %	
Subjective Description (fog/visibility/ground conditions)	Dry ground, clear, warm, breezy.		**Subjective Description** (fog/visibility/ground conditions)	Sunny, warm, clear.	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

At edge of back garden on top of hill. Soft ground falling away to M4.
In long grass.

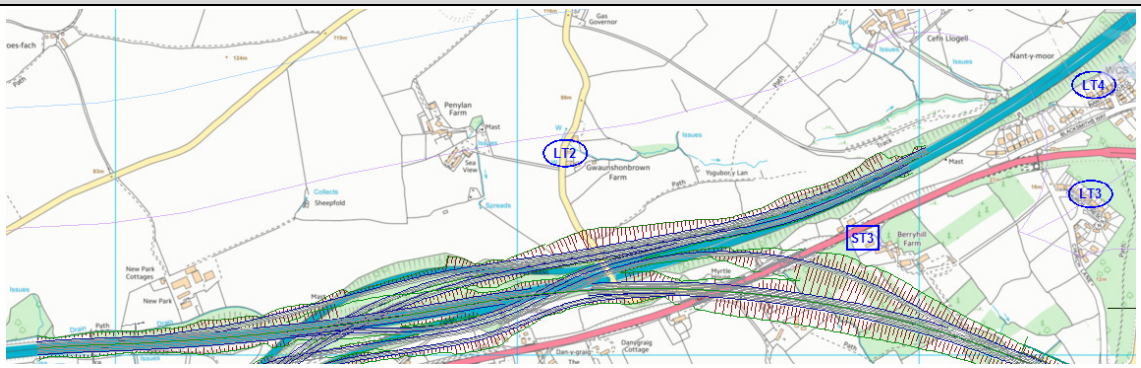
Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Road traffic (M4).
Other – Aircraft noise, bird song, grass rustling in wind.

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Road traffic .
Other – Grass rustling in wind, bird song.

Survey location



BASELINE SOUND MONITORING SURVEY REPORT FORM

	LT2 Gwaunshonbrown Farm, Pound Hill					
Period	**Start**	**End**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
18hr day	24/06/2015 06:00	03/07/2015 00:00	54	72-84	56	48
16hr day	24/06/2015 07:00	02/07/2015 23:00	54	72-84	56	49
8 hr night	23/06/2015 23:00	03/07/2015 07:00	48	64-76	52	42

	18 hour day 06:00 – 00:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Wednesday	24/06/2015 06:00	18:00:00	54.3	83.8	55.3	48.3
Thursday	25/06/2015 06:00	18:00:00	52.2	74.6	54.3	48.9
Friday	26/06/2015 06:00	18:00:00	55.2	74.6	57.6	50.6
Saturday	27/06/2015 06:00	18:00:00	51.7	74.1	54.6	45.2
Sunday	28/06/2015 06:00	18:00:00	56.4	74.4	58.9	50.7
Monday	29/06/2015 06:00	18:00:00	52.7	72.2	55.5	47.5
Thursday	02/07/2015 06:00	18:00:00	52.4	75.7	55.6	45.6

	16 hour day 07:00 – 23:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Wednesday	24/06/2015 07:00	16:00:00	54.6	83.8	55.5	48.7
Thursday	25/06/2015 07:00	16:00:00	52.4	74.6	54.4	49.4
Friday	26/06/2015 07:00	16:00:00	55.4	74.6	57.7	51.5
Saturday	27/06/2015 07:00	16:00:00	52.0	74.1	54.7	46.6
Sunday	28/06/2015 07:00	16:00:00	56.7	74.4	59.0	52.2
Monday	29/06/2015 07:00	16:00:00	53.0	72.2	55.7	48.2
Thursday	02/07/2015 07:00	00:00.0	52.7	75.7	55.9	46.1

	8 hour night 23:00 – 07:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Tuesday	23/06/2015 23:00	08:00:00	47.5	75.7	51.1	39.4
Wednesday	24/06/2015 23:00	08:00:00	47.6	64.1	50.8	40.9
Thursday	25/06/2015 23:00	08:00:00	49.9	67.5	53.9	42.7
Friday	26/06/2015 23:00	08:00:00	47.7	67.8	50.6	41.6
Saturday	27/06/2015 23:00	08:00:00	48.9	65.3	52.3	43.1
Sunday	28/06/2015 23:00	08:00:00	47.7	70.5	50.5	42.3
Wednesday	01/07/2015 23:00	08:00:00	46.9	65.0	50.4	40.5
Thursday	02/07/2015 23:00	08:00:00	50.1	71.7	53.8	43.5

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	LT3 6 Church Crescent N:51º 33.14' W:003º 05.54.1'				
Personnel (start/end)	PH	PB	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991	
Purpose of Monitoring	Baseline				
SLM ID (ID/make/model/serial number)	# 20 Rion NL-31 341534		**Calibrator at Start** (Cal. ID/Cal. Level)	#14 Rion NC-74 110118	94.0 dB
Sample period **Dynamic Range** **Weighting**	100ms 20-130 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	94.0 dB
Filename	0003		**Memory Card ID**	~	
Start Date	25/06/15		**End Date**	03/07/15	
Start Time	17:15		**End Time**	09:00	
Microphone Height	2 m		**Façade / Free-field**	Free-field	
Photo taken identifying location with equipment installed?				Yes	

BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	0.5 m/s 1 m/s 0 m/s		**Wind Speed & Direction** (make 3 wind speed measurements and average)	- 0 m/s -	
Precipitation	None		**Precipitation**	None	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	5		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	1	
Temperature	21 ºC		**Temperature**	20 ºC	
Relative Humidity	35 %		**Relative Humidity**	50 %	
Subjective Description (fog/visibility/ground conditions)	Dry ground, clear, warm.		**Subjective Description** (fog/visibility/ground conditions)	Sunny, warm, clear.	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

In back garden 30 m from large trees.
A48 40-50 m away.

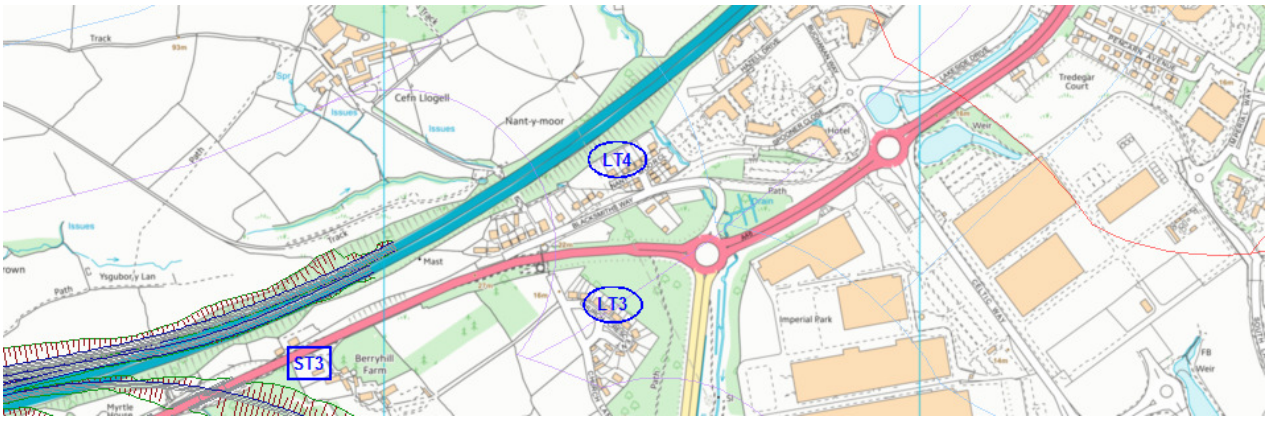
Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Road traffic.
Other – Bird song, foliage rustling in wind, lawn mower approximately 40 m away in neighbour's garden.

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Road traffic.
Other –Bird song.

Survey location



BASELINE SOUND MONITORING SURVEY REPORT FORM

	LT3 6 Church Crescent					
Period	**Start**	**End**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
18hr day	26/06/2015 06:00	03/07/2015 00:00	54	74-78	56	48
16hr day	26/06/2015 07:00	02/07/2015 23:00	54	74-78	56	49
8 hr night	25/06/2015 23:00	03/07/2015 07:00	49	67-78	53	43

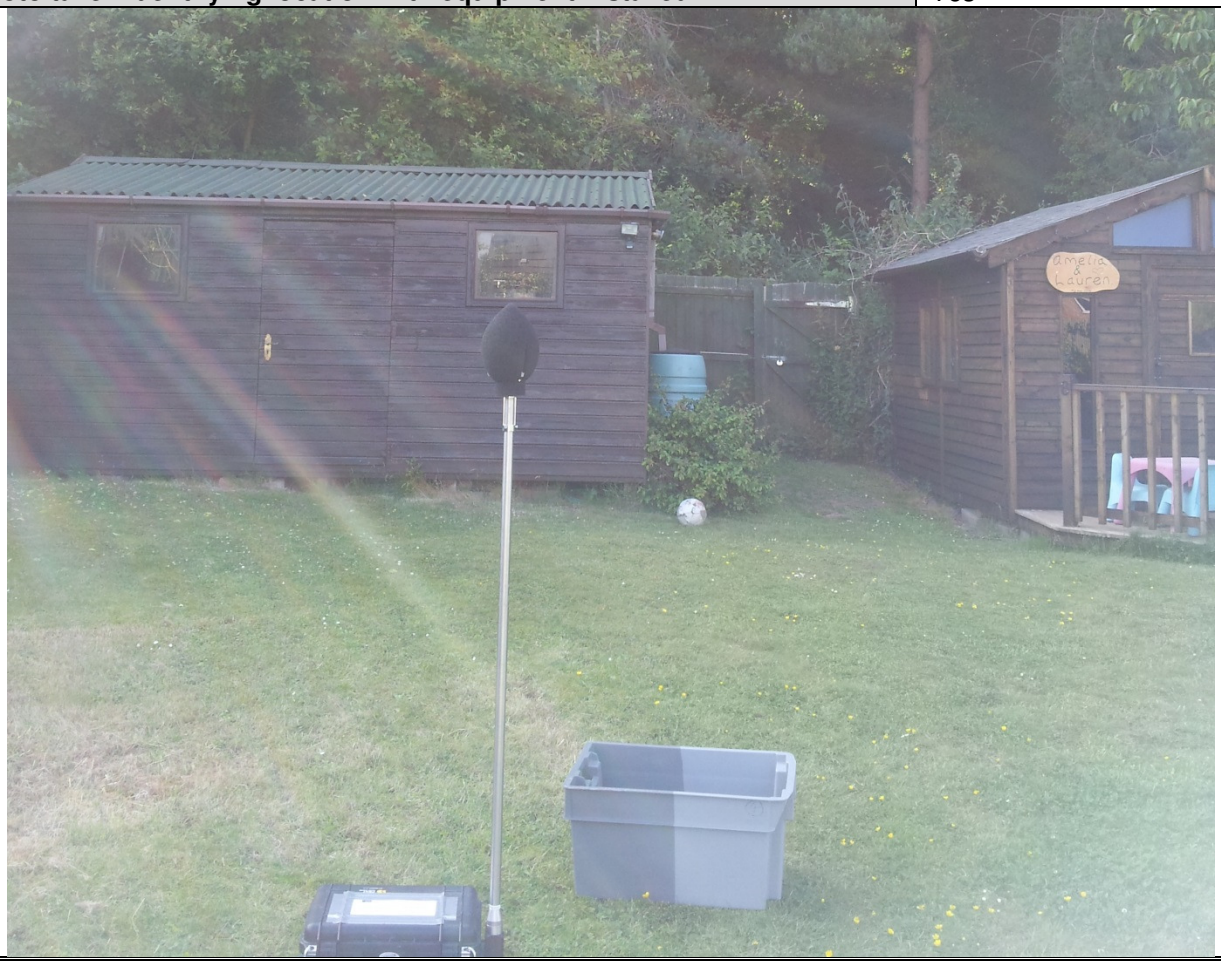
	18 hour day 06:00 – 00:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Friday	26/06/2015 06:00	18:00:00	54.0	76.9	56.7	49.7
Saturday	27/06/2015 06:00	18:00:00	53.4	76.2	55.6	47.6
Sunday	28/06/2015 06:00	18:00:00	54.4	77.7	57.5	48.1
Monday	29/06/2015 06:00	18:00:00	52.3	77.3	55.5	46.5
Tuesday	30/06/2015 06:00	18:00:00	51.9	78.4	54.2	47.2
Wednesday	01/07/2015 06:00	18:00:00	54.1	76.9	57.2	48.9
Thursday	02/07/2015 06:00	18:00:00	54.8	73.8	57.2	50.5

	16 hour day 07:00 – 23:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Friday	26/06/2015 07:00	16:00:00	54.3	76.9	56.9	50.2
Saturday	27/06/2015 07:00	16:00:00	53.7	76.2	55.8	48.8
Sunday	28/06/2015 07:00	16:00:00	54.7	77.7	57.6	49.2
Monday	29/06/2015 07:00	16:00:00	52.4	77.3	55.6	47.1
Tuesday	30/06/2015 07:00	16:00:00	51.8	78.4	54.1	47.1
Wednesday	01/07/2015 07:00	16:00:00	54.0	76.9	57.0	49.2
Thursday	02/07/2015 07:00	00:00.0	55.0	73.8	57.4	51.0

	8 hour night 23:00 – 07:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Thursday	25/06/2015 23:00	08:00:00	46.7	67.0	50.1	40.5
Friday	26/06/2015 23:00	08:00:00	49.1	72.2	51.8	43.3
Saturday	27/06/2015 23:00	08:00:00	47.0	72.8	50.1	40.9
Sunday	28/06/2015 23:00	08:00:00	49.6	71.6	53.2	42.3
Monday	29/06/2015 23:00	08:00:00	48.9	69.3	52.3	41.8
Tuesday	30/06/2015 23:00	08:00:00	53.0	71.2	56.5	47.2
Wednesday	01/07/2015 23:00	08:00:00	48.7	77.6	52.4	40.8
Thursday	02/07/2015 23:00	08:00:00	52.9	74.1	56.1	46.5

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	LT4 6 Nant-y-Moor Close N:51º 33' 22.6" W:003º 02'.53.1"				
Personnel (start/end)	PH	MF	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991	
Purpose of Monitoring	Baseline				
SLM ID (ID/make/model/serial number)	# 115 Rion NL-52 943366		**Calibrator at Start** (Cal. ID/Cal. Level)	#14 Rion NC-74 110118	94.0 dB
Sample period **Dynamic Range** **Weighting**	100ms 20-130 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	93.9 dB
Filename	0004		**Memory Card ID**	~	
Start Date	24/06/15		**End Date**	13/07/15	
Start Time	18:20		**End Time**	11:10	
Microphone Height	1.5 m		**Façade / Free-field**	Free-field	
Photo taken identifying location with equipment installed?				Yes	



BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	0.5 m/s 1 m/s 0.3 m/s		**Wind Speed & Direction** (make 3 wind speed measurements and average)	0 m/s 0.1 m/s 0.2 m/s	
Precipitation	None		**Precipitation**	None	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	3		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	8	
Temperature	22 ºC		**Temperature**	21 ºC	
Relative Humidity	40 %		**Relative Humidity**	61 %	
Subjective Description (fog/visibility/ground conditions)	Dry ground, clear, warm.		**Subjective Description** (fog/visibility/ground conditions)	Cloudy, dry.	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

Middle at end of back garden. M4 approximately 20 m above garden. Trees and soft ground intervening.

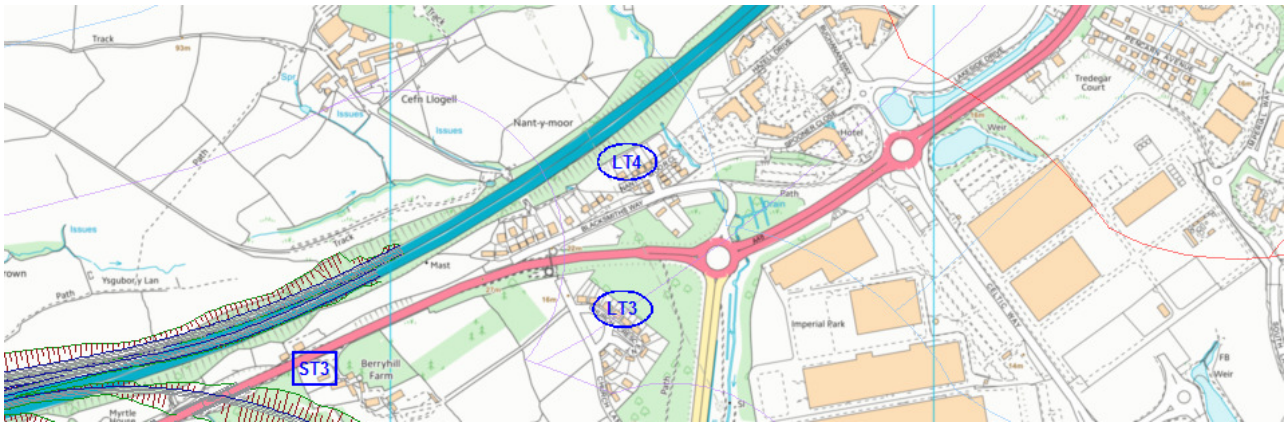
Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Road traffic (M4).
Other – Bird song, dogs barking, loud music from next door.

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Road traffic
Other –Bird song, distant drilling noise from one of the houses

Survey location



BASELINE SOUND MONITORING SURVEY REPORT FORM

	LT4 6 Nant-y-Moor Close					
Period	**Start**	**End**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
18hr day	25/06/2015 06:00	01/07/2015 00:00	57	72-83	59	53
16hr day	25/06/2015 07:00	30/06/2015 23:00	57	72-83	59	54
8 hr night	24/06/2015 23:00	30/06/2015 07:00	52	68-76	56	45

	18 hour day 06:00 – 00:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Thursday	25/06/2015 06:00	18:00:00	56.3	75.5	58.2	52.2
Friday	26/06/2015 06:00	18:00:00	57.7	72.9	59.5	54.6
Saturday	27/06/2015 06:00	18:00:00	56.2	74.2	58.4	51.2
Sunday	28/06/2015 06:00	18:00:00	58.8	73.3	61.2	53.2
Monday	29/06/2015 06:00	18:00:00	56.9	82.9	58.9	51.8
Tuesday	30/06/2015 06:00	18:00:00	55.7	71.9	57.6	52.4

	16 hour day 07:00 – 23:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Thursday	25/06/2015 07:00	16:00:00	56.3	75.5	58.2	52.9
Friday	26/06/2015 07:00	16:00:00	58.0	72.9	59.6	55.4
Saturday	27/06/2015 07:00	16:00:00	56.5	74.2	58.5	52.4
Sunday	28/06/2015 07:00	16:00:00	59.2	73.3	61.3	54.9
Monday	29/06/2015 07:00	16:00:00	57.1	82.9	59.0	52.8
Tuesday	30/06/2015 07:00	16:00:00	55.8	71.9	57.6	52.7

	8 hour night 23:00 – 07:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Wednesday	24/06/2015 23:00	08:00:00	53.1	75.9	56.7	44.6
Thursday	25/06/2015 23:00	08:00:00	52.4	75.9	55.9	44.2
Friday	26/06/2015 23:00	08:00:00	52.1	72.6	55.0	46.2
Saturday	27/06/2015 23:00	08:00:00	50.9	70.1	54.1	44.6
Sunday	28/06/2015 23:00	08:00:00	53.0	72.1	56.8	44.5
Monday	29/06/2015 23:00	08:00:00	52.5	67.9	56.2	44.5

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	LT5 36 Manor Park, Duffryn N:51º 33' 27.1" W:003º 00'.73.7"				
Personnel (start/end)	PH	PB	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991	
Purpose of Monitoring	Baseline				
SLM ID (ID/make/model/serial number)	# 22 Rion NL-32 240668		**Calibrator at Start** (Cal. ID/Cal. Level)	#14 Rion NC-74 110118	94.0 dB
Sample period **Dynamic Range** **Weighting**	100ms 20-110 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	93.5 dB
Filename	0005		**Memory Card ID**	~	
Start Date	24/06/15		**End Date**	02/07/15	
Start Time	10:00		**End Time**	09:20	
Microphone Height	2.5 m		**Façade / Free-field**	Free-field	
Photo taken identifying location with equipment installed?				Yes	

BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	0 m/s 0.2 m/s 0.3 m/s		**Wind Speed & Direction** (make 3 wind speed measurements and average)	0 m/s - -	
Precipitation	None		**Precipitation**	None	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	1		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	8	
Temperature	23 ºC		**Temperature**	22 ºC	
Relative Humidity	55 %		**Relative Humidity**	50 %	
Subjective Description (fog/visibility/ground conditions)	Dry ground, clear, warm, still.		**Subjective Description** (fog/visibility/ground conditions)	Cloudy, dry, mild.	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

In back garden. Soft ground, trees visible between main source, generally flat.
Directly below pylons.

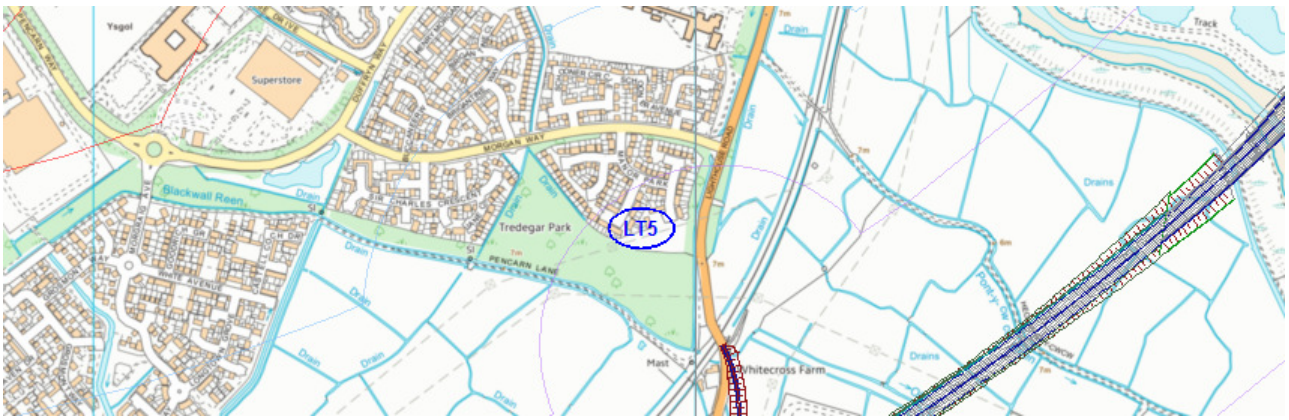
Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Road traffic
Other – Bird song, dog barking, cutting/gardening noise, corona discharge from pylons.
Can't here aeroplanes but vapour trails overhead.

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Road traffic.
Other –Bird song, distant road traffic, train noise.

Survey location



BASELINE SOUND MONITORING SURVEY REPORT FORM

	LT5 36 Manor Park, Duffryn					
Period	**Start**	**End**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
18hr day	25/06/2015 06:00	02/07/2015 00:00	52	73-97	54	39
16hr day	25/06/2015 07:00	01/07/2015 23:00	52	73-97	54	40
8 hr night	24/06/2015 23:00	02/07/2015 07:00	50	70-77	54	33

	18 hour day 06:00 – 00:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Thursday	25/06/2015 06:00	18:00:00	50.1	77.9	52.8	38.9
Friday	26/06/2015 06:00	18:00:00	51.5	82.3	54.9	41.6
Saturday	27/06/2015 06:00	18:00:00	57.3	96.8	52.8	39.1
Sunday	28/06/2015 06:00	18:00:00	52.5	91.4	55.4	42.6
Monday	29/06/2015 06:00	18:00:00	49.2	73.4	52.5	37.3
Tuesday	30/06/2015 06:00	18:00:00	50.2	75.3	53.0	37.1
Wednesday	01/07/2015 06:00	18:00:00	53.4	86.6	55.3	39.3

	16 hour day 07:00 – 23:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Thursday	25/06/2015 07:00	16:00:00	50.3	77.9	53.1	39.2
Friday	26/06/2015 07:00	16:00:00	51.8	82.3	55.1	42.3
Saturday	27/06/2015 07:00	16:00:00	57.8	96.8	53.0	40.6
Sunday	28/06/2015 07:00	16:00:00	52.6	91.4	55.3	44.9
Monday	29/06/2015 07:00	16:00:00	49.3	73.4	52.6	38.3
Tuesday	30/06/2015 07:00	16:00:00	50.4	75.3	53.1	38.4
Wednesday	01/07/2015 07:00	00:00.0	53.8	86.6	55.6	39.5

	8 hour night 23:00 – 07:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Wednesday	24/06/2015 23:00	08:00:00	51.1	76.7	52.4	34.2
Thursday	25/06/2015 23:00	08:00:00	50.0	74.0	55.2	34.9
Friday	26/06/2015 23:00	08:00:00	49.8	70.8	54.8	36.3
Saturday	27/06/2015 23:00	08:00:00	51.5	72.4	57.0	30.5
Sunday	28/06/2015 23:00	08:00:00	49.6	75.3	52.8	31.2
Monday	29/06/2015 23:00	08:00:00	48.1	70.2	52.7	28.6
Tuesday	30/06/2015 23:00	08:00:00	49.4	77.3	51.4	35.2
Wednesday	01/07/2015 23:00	08:00:00	49.4	74.0	52.3	33.9

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	LT6 ABP Office block, Newport N:51º 33' 57.1" W:002º 59'.3.5"				
Personnel (start/end)	PB	MF	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991	
Purpose of Monitoring	Baseline				
SLM ID (ID/make/model/serial number)	# 22 Rion NL-32 240668		**Calibrator at Start** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	94.0 dB
Sample period **Dynamic Range** **Weighting**	100ms 20-110 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	93.8 dB
Filename	0006		**Memory Card ID**	~	
Start Date	02/07/15		**End Date**	10/07/15	
Start Time	11:15		**End Time**	15:00	
Microphone Height	2 m		**Façade / Free-field**	Façade	
Photo taken identifying location with equipment installed?				Yes	

BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	- 2 m/s -	N W E S	**Wind Speed & Direction** (make 3 wind speed measurements and average)	1.1 m/s 1.5 m/s 2.5 m/s	N W E S
Precipitation	Very light		**Precipitation**	None	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	8		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	2	
Temperature	22 ºC		**Temperature**	22 ºC	
Relative Humidity	60 %		**Relative Humidity**	37 %	
Subjective Description (fog/visibility/ground conditions)	Clear, about to rain.		**Subjective Description** (fog/visibility/ground conditions)	Clear, dry, sunny.	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

On fire escape 1 m from wall, approximately 5 m above the ground.

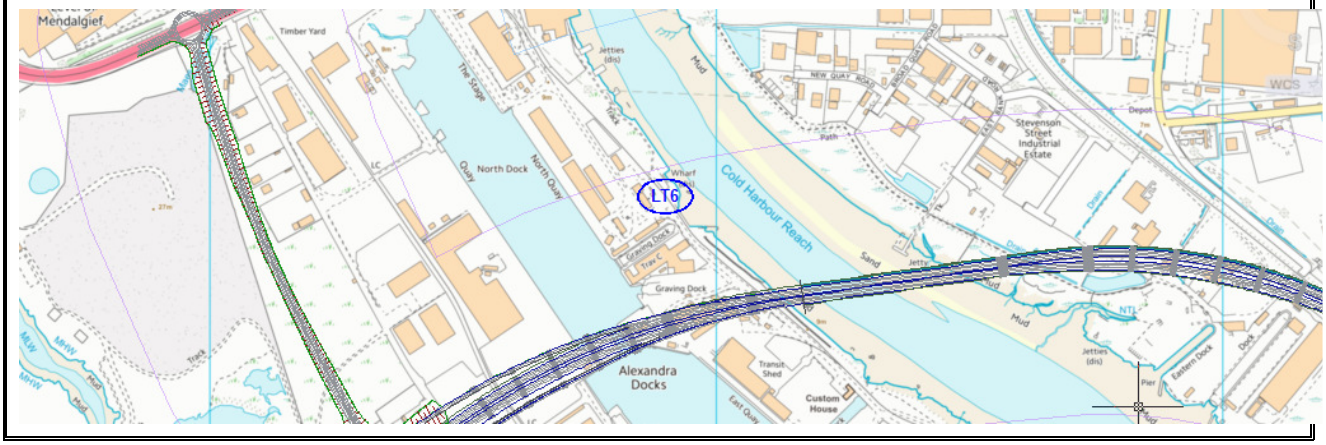
Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Site traffic (HGVs and cars).
Other – Industrial metal clanging noise, reversing alarms, seagulls.

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Site traffic (HGVs and cars).
Other – Industrial metal clanging noise, seagulls.

Survey location



BASELINE SOUND MONITORING SURVEY REPORT FORM

	LT6 ABP Office block, Newport					
Period	**Start**	**End**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
18hr day	03/07/2015 06:00	10/07/2015 00:00	55	79-88	58	44
16hr day	03/07/2015 07:00	09/07/2015 23:00	55	79-88	58	44
8 hr night	02/07/2015 23:00	10/07/2015 07:00	52	75-88	54	41

	18 hour day 06:00 – 00:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Friday	03/07/2015 06:00	18:00:00	57.0	83.7	60.0	45.9
Saturday	04/07/2015 06:00	18:00:00	51.8	88.4	52.9	36.9
Sunday	05/07/2015 06:00	18:00:00	50.7	79.4	52.2	41.4
Monday	06/07/2015 06:00	18:00:00	57.3	87.6	60.5	48.5
Tuesday	07/07/2015 06:00	18:00:00	57.0	80.0	60.4	47.1
Wednesday	08/07/2015 06:00	18:00:00	55.7	83.0	58.9	42.6
Thursday	09/07/2015 06:00	18:00:00	55.4	86.4	58.7	42.3

	16 hour day 07:00 – 23:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Friday	03/07/2015 07:00	16:00:00	57.0	83.7	60.0	46.1
Saturday	04/07/2015 07:00	16:00:00	51.1	80.4	52.6	37.6
Sunday	05/07/2015 07:00	16:00:00	50.9	79.4	52.4	41.9
Monday	06/07/2015 07:00	16:00:00	57.6	87.6	60.7	48.7
Tuesday	07/07/2015 07:00	16:00:00	57.2	80.0	60.5	47.9
Wednesday	08/07/2015 07:00	16:00:00	56.0	83.0	59.1	42.6
Thursday	09/07/2015 07:00	16:00:00	55.5	86.4	58.8	42.5

	8 hour night 23:00 – 07:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Thursday	02/07/2015 23:00	08:00:00	53.1	80.2	55.3	40.4
Friday	03/07/2015 23:00	08:00:00	52.1	88.4	52.7	43.1
Saturday	04/07/2015 23:00	08:00:00	48.2	75.3	50.4	36.8
Sunday	05/07/2015 23:00	08:00:00	51.6	78.1	55.1	39.4
Monday	06/07/2015 23:00	08:00:00	54.6	79.4	57.9	45.7
Tuesday	07/07/2015 23:00	08:00:00	51.1	77.9	53.4	41.5
Wednesday	08/07/2015 23:00	08:00:00	51.8	82.4	53.7	40.2
Thursday	09/07/2015 23:00	08:00:00	51.8	76.6	54.3	42.0

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	LT7 Stray Leaves, Hart Farm, Picked Lane				
Personnel (start/end)	PB	MF	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991	
Purpose of Monitoring	Baseline				
SLM ID (ID/make/model/serial number)	# 113 Rion NL-52 943364		**Calibrator at Start** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	94.0 dB
Sample period **Dynamic Range** **Weighting**	100ms 20-130 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#14 Rion NC-74 110118	94.0 dB
Filename	0007		**Memory Card ID**	~	
Start Date	17/07/15		**End Date**	24/07/15	
Start Time	10:00		**End Time**	10:10	
Microphone Height	1.5 m		**Façade / Free-field**	Façade	
Photo taken identifying location with equipment installed?				Yes	

BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	- 0 m/s -		**Wind Speed & Direction** (make 3 wind speed measurements and average)	- 0 m/s -	
Precipitation	None		**Precipitation**	Raining	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	6		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	8	
Temperature	26ºC		**Temperature**	15 ºC	
Relative Humidity	70 %		**Relative Humidity**	80 %	
Subjective Description (fog/visibility/ground conditions)	Hot, humid		**Subjective Description** (fog/visibility/ground conditions)	Cloudy, raining, wet ground	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

Rear garden of Stray Leaves Farm, 1 m away from outbuilding.

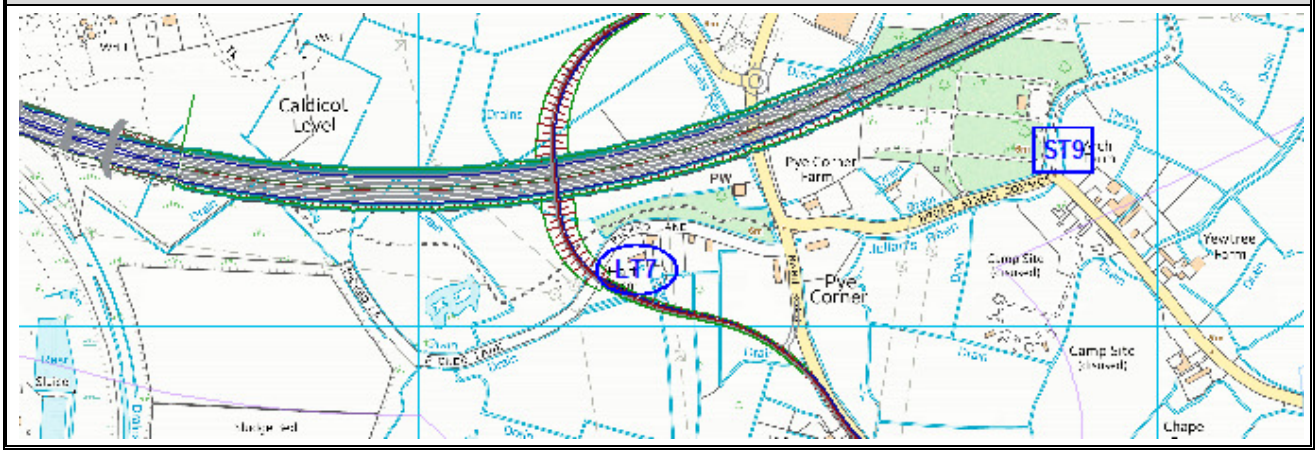
Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Distant road traffic.
Other – Bird song, refuge collection.

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Distant road traffic, rain.
Other – Bird song.

Survey location



BASELINE SOUND MONITORING SURVEY REPORT FORM

	LT7 Stray Leaves, Hart Farm, Picked Lane					
Period	**Start**	**End**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
18hr day	18/07/2015 06:00	24/07/2015 00:00	46	79-88	47	36
16hr day	18/07/2015 07:00	23/07/2015 23:00	47	79-88	47	37
8 hr night	17/07/2015 23:00	24/07/2015 07:00	41	68-75	43	33

	18 hour day 06:00 – 00:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Saturday	18/07/2015 06:00	18:00:00	48.1	84.1	46.0	34.6
Sunday	19/07/2015 06:00	18:00:00	45.9	81.1	46.4	35.0
Monday	20/07/2015 06:00	18:00:00	45.3	79.3	48.9	38.1
Tuesday	21/07/2015 06:00	18:00:00	46.5	82.2	49.4	37.3
Wednesday	22/07/2015 06:00	18:00:00	46.4	80.9	45.9	36.6
Thursday	23/07/2015 06:00	18:00:00	45.8	87.7	44.4	33.8

	16 hour day 07:00 – 23:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Saturday	18/07/2015 07:00	16:00:00	48.5	84.1	46.3	35.2
Sunday	19/07/2015 07:00	16:00:00	46.1	81.1	46.5	35.6
Monday	20/07/2015 07:00	16:00:00	45.5	79.3	49.1	38.2
Tuesday	21/07/2015 07:00	16:00:00	46.7	82.2	49.6	37.9
Wednesday	22/07/2015 07:00	16:00:00	46.6	80.9	46.0	37.8
Thursday	23/07/2015 07:00	16:00:00	46.1	87.7	44.1	34.4

	8 hour night 23:00 – 07:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Friday	17/07/2015 23:00	08:00:00	40.0	68.3	41.6	33.8
Saturday	18/07/2015 23:00	08:00:00	40.3	75.0	42.3	31.9
Sunday	19/07/2015 23:00	08:00:00	40.5	69.2	43.0	31.4
Monday	20/07/2015 23:00	08:00:00	41.6	71.0	44.3	35.3
Tuesday	21/07/2015 23:00	08:00:00	40.7	74.0	43.0	31.7
Wednesday	22/07/2015 23:00	08:00:00	41.1	71.3	43.7	33.8
Thursday	23/07/2015 23:00	08:00:00	41.7	67.9	46.5	31.3

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	LT8 TATA North of Queens Way				
Personnel (start/end)	MF	MF	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991	
Purpose of Monitoring	Baseline				
SLM ID (ID/make/model/serial number)	# 116 Rion NL-52 943367		**Calibrator at Start** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	94.0 dB
Sample period **Dynamic Range** **Weighting**	100ms 20-130 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#14 Rion NC-74 110118	94.1 dB
Filename	0008		**Memory Card ID**	~	
Start Date	15/07/15		**End Date**	23/07/15	
Start Time	10:30		**End Time**	15:35	
Microphone Height	1.5 m		**Façade / Free-field**	Free-field	
Photo taken identifying location with equipment installed?				Yes	

BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	0.2 m/s 0.4 m/s 0.5 m/s		**Wind Speed & Direction** (make 3 wind speed measurements and average)	0.2 m/s 0 m/s 0.5 m/s	
Precipitation	None		**Precipitation**	None	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	8		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	6	
Temperature	15ºC		**Temperature**	19 ºC	
Relative Humidity	63 %		**Relative Humidity**	56 %	
Subjective Description (fog/visibility/ground conditions)	Cloudy, dry.		**Subjective Description** (fog/visibility/ground conditions)	Cloudy, dry, slight breeze.	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

Approximately 45 m from Queens way.
Approximately 2 m from TATA boundary fence.
Soft ground.

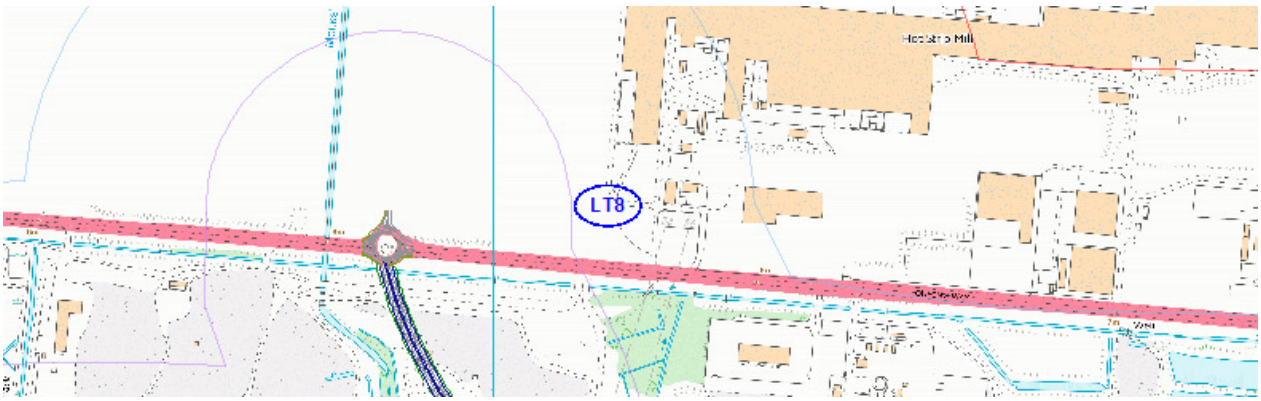
Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Road traffic.
Other – Construction noise to the west, moving plant to east on TATA site, bird song.

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Road traffic.
Other – Construction noise to the west (piling), moving plant to east on TATA site, bird song.

Survey location



BASELINE SOUND MONITORING SURVEY REPORT FORM

	LT8 TATA North of Queens Way					
Period	**Start**	**End**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
18hr day	16/07/2015 06:00	23/07/2015 00:00	53	73-91	56	44
16hr day	16/07/2015 07:00	22/07/2015 23:00	53	73-91	56	45
8 hr night	15/07/2015 23:00	23/07/2015 07:00	49	69-78	52	40

	18 hour day 06:00 – 00:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Thursday	16/07/2015 06:00	18:00:00	53.3	73.3	56.6	46.1
Friday	17/07/2015 06:00	18:00:00	54.5	78.3	57.9	44.3
Saturday	18/07/2015 06:00	18:00:00	49.9	77.4	53.0	41.1
Sunday	19/07/2015 06:00	18:00:00	49.8	90.6	51.8	41.5
Monday	20/07/2015 06:00	18:00:00	54.6	87.7	58.1	44.2
Tuesday	21/07/2015 06:00	18:00:00	54.4	80.4	57.7	44.0
Wednesday	22/07/2015 06:00	18:00:00	53.6	81.9	56.9	43.8

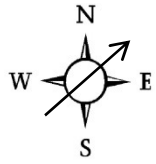
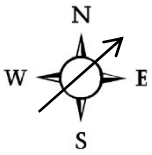
	16 hour day 07:00 – 23:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Thursday	16/07/2015 07:00	16:00:00	53.6	73.3	56.8	46.9
Friday	17/07/2015 07:00	16:00:00	54.7	78.3	57.9	45.5
Saturday	18/07/2015 07:00	16:00:00	50.0	77.4	53.0	41.9
Sunday	19/07/2015 07:00	16:00:00	49.8	90.6	51.8	41.4
Monday	20/07/2015 07:00	16:00:00	54.9	87.7	58.3	45.8
Tuesday	21/07/2015 07:00	16:00:00	54.6	80.4	57.8	45.9
Wednesday	22/07/2015 07:00	16:00:00	53.9	81.9	57.1	45.1

	8 hour night 23:00 – 07:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Wednesday	15/07/2015 23:00	08:00:00	48.6	71.1	51.8	43.4
Thursday	16/07/2015 23:00	08:00:00	50.5	72.5	54.4	42.5
Friday	17/07/2015 23:00	08:00:00	47.8	74.6	51.3	38.6
Saturday	18/07/2015 23:00	08:00:00	46.6	77.3	49.4	37.8
Sunday	19/07/2015 23:00	08:00:00	49.7	76.5	52.9	42.9
Monday	20/07/2015 23:00	08:00:00	49.9	68.9	54.3	39.1
Tuesday	21/07/2015 23:00	08:00:00	48.4	73.2	52.3	37.8
Wednesday	22/07/2015 23:00	08:00:00	49.5	77.8	52.9	38.6

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	LT9 Grangefield NP26 3DF N:51º 33' 25.8" W:002º 52'.59.2"				
Personnel (start/end)	PH	PB	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991	
Purpose of Monitoring	Baseline				
SLM ID (ID/make/model/serial number)	# 116 Rion NL-52 943367		**Calibrator at Start** (Cal. ID/Cal. Level)	#14 Rion NC-74 110118	94.0 dB
Sample period **Dynamic Range** **Weighting**	100ms 20-130 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	93.9 dB
Filename	0009		**Memory Card ID**	~	
Start Date	25/06/15 Restarted on 01/07/15 13:10		**End Date**	03/07/15	
Start Time	15:25		**End Time**	12:05	
Microphone Height	1.5 m		**Façade / Free-field**	Free-field	
Photo taken identifying location with equipment installed?				Yes	

BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	1.7 m/s 2 m/s 2.2 m/s		**Wind Speed & Direction** (make 3 wind speed measurements and average)	- 5 m/s -	
Precipitation	None		**Precipitation**	None	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	5		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	2	
Temperature	25 ºC		**Temperature**	20 ºC	
Relative Humidity	40 %		**Relative Humidity**	60 %	
Subjective Description (fog/visibility/ground conditions)	Clear, dry ground.		**Subjective Description** (fog/visibility/ground conditions)	Clear, dry, sunny.	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

Front garden on grass. Flat soft ground.

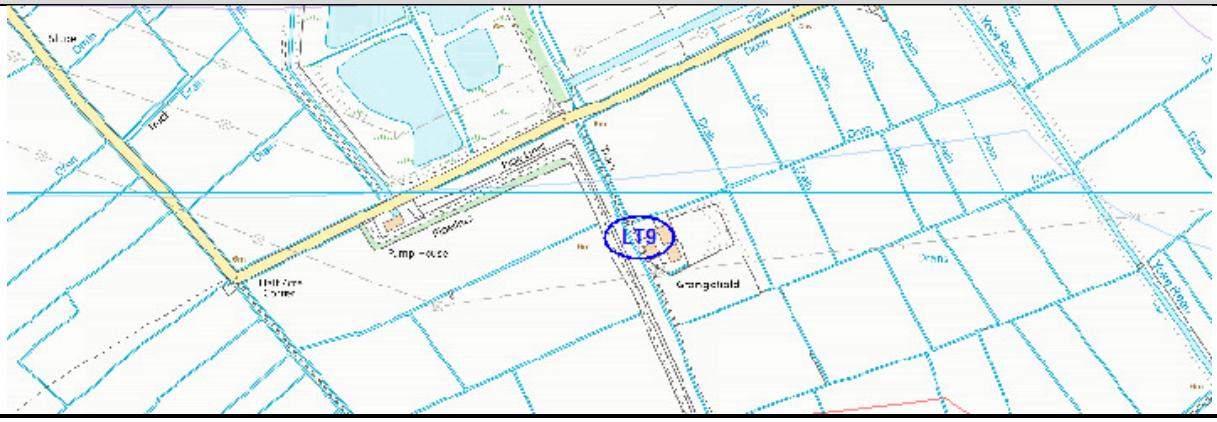
Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Distant road traffic.
Other – Aircraft noise, sheep.

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Distant road traffic.
Other – Dogs barking, garden strimmer, bird song.

Survey location



BASELINE SOUND MONITORING SURVEY REPORT FORM

	LT9 Grangefield NP26 3DF					
Period	**Start**	**End**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
18hr day	26/06/2015 06:00	03/07/2015 00:00	53	86-91	51	32
16hr day	26/06/2015 07:00	02/07/2015 23:00	53	86-91	51	32
8 hr night	25/06/2015 23:00	03/07/2015 07:00	48	70-82	50	29

	18 hour day 06:00 – 00:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Friday	26/06/2015 06:00	18:00:00	51.1	89.6	52.0	35.0
Saturday	27/06/2015 06:00	18:00:00	51.9	90.9	52.4	31.5
Sunday	28/06/2015 06:00	18:00:00	53.6	90.3	51.9	34.7
Monday	29/06/2015 06:00	18:00:00	57.8	86.2	55.8	28.8
Tuesday	30/06/2015 06:00	18:00:00	54.5	89.8	46.3	29.1
Wednesday	02/07/2015 06:00	18:00:00	50.5	90.5	47.3	32.0

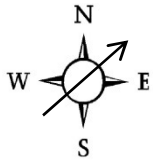
	16 hour day 07:00 – 23:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Friday	26/06/2015 07:00	16:00:00	51.0	89.6	51.6	35.1
Saturday	27/06/2015 07:00	16:00:00	52.0	90.9	51.9	31.8
Sunday	28/06/2015 07:00	16:00:00	54.0	90.3	51.9	35.9
Monday	29/06/2015 07:00	16:00:00	58.2	86.2	56.1	29.8
Tuesday	30/06/2015 07:00	16:00:00	54.7	89.8	45.6	29.2
Wednesday	02/07/2015 07:00	16:00:00	50.9	90.5	47.1	31.7

	8 hour night 23:00 – 07:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Thursday	25/06/2015 23:00	08:00:00	50.9	75.9	54.8	29.1
Friday	26/06/2015 23:00	08:00:00	50.2	80.3	53.5	31.7
Saturday	27/06/2015 23:00	08:00:00	46.5	69.7	50.6	23.9
Sunday	28/06/2015 23:00	08:00:00	47.3	75.8	47.4	29.5
Monday	29/06/2015 23:00	08:00:00	48.6	81.9	48.2	22.0
Tuesday	30/06/2015 23:00	08:00:00	47.3	76.5	48.5	29.1
Wednesday	01/07/2015 23:00	08:00:00	45.1	80.9	47.3	30.0
Thursday	02/07/2015 23:00	08:00:00	45.9	74.1	47.7	34.3

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	LT10 Well Cottages				
Personnel (start/end)	PB	MF	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991	
Purpose of Monitoring	Baseline				
SLM ID (ID/make/model/serial number)	# 116 Rion NL-52 943367		**Calibrator at Start** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	94.0 dB
Sample period **Dynamic Range** **Weighting**	100ms 20-130 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	93.9 dB
Filename	0010		**Memory Card ID**	~	
Start Date	03/07/15		**End Date**	13/07/15	
Start Time	12:30		**End Time**	17:45	
Microphone Height	1.5 m		**Façade / Free-field**	Free-field	
Photo taken identifying location with equipment installed?				Yes	

BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	- 2 m/s -		**Wind Speed & Direction** (make 3 wind speed measurements and average)	0.3 m/s 0.8 m/s 1 m/s	
Precipitation	None		**Precipitation**	None	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	2		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	7	
Temperature	20 ºC		**Temperature**	17 ºC	
Relative Humidity	60 %		**Relative Humidity**	72 %	
Subjective Description (fog/visibility/ground conditions)	Clear, dry ground, sunny, warm		**Subjective Description** (fog/visibility/ground conditions)	Cloudy, slightly damp	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

Rear garden of Well Cottages.

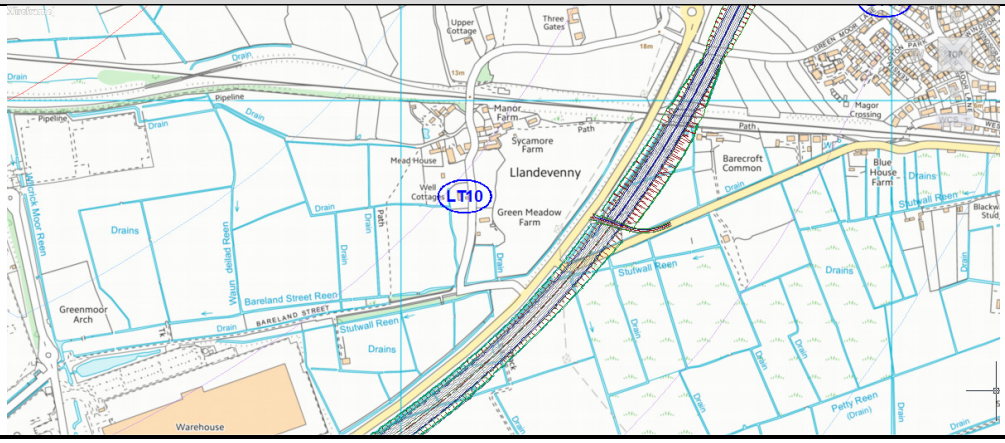
Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Distant road traffic.
Other – Dogs barking, trees and bushes rustling, bird song.

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Distant road traffic.
Other – Dogs barking, bird song. Homeowner mentioned she hears wind turbine noise.

Survey location



BASELINE SOUND MONITORING SURVEY REPORT FORM

	LT10 Well Cottages					
Period	**Start**	**End**	**LAeq**	**LAmax**	**LA10**	**LA90**
18hr day	04/07/2015 06:00	13/07/2015 00:00	50	75-88	51	40
16hr day	04/07/2015 07:00	12/07/2015 23:00	50	75-88	51	40
8 hr night	03/07/2015 23:00	13/07/2015 07:00	49	72-88	48	35

	18 hour day 06:00 – 00:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Saturday	04/07/2015 06:00	18:00:00	48.4	85.1	50.2	37.1
Sunday	05/07/2015 06:00	18:00:00	48.8	77.1	50.6	37.4
Monday	06/07/2015 06:00	18:00:00	51.4	82.2	53.2	43.6
Tuesday	07/07/2015 06:00	18:00:00	52.0	75.3	55.0	44.8
Wednesday	08/07/2015 06:00	18:00:00	48.7	79.9	50.5	40.4
Thursday	09/07/2015 06:00	18:00:00	50.6	87.5	52.0	39.7
Friday	10/07/2015 06:00	18:00:00	50.7	83.4	49.8	39.7
Saturday	11/07/2015 06:00	18:00:00	52.3	88.2	49.9	39.8
Sunday	12/07/2015 06:00	18:00:00	48.1	80.2	50.3	37.8

	16 hour day 07:00 – 23:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Saturday	04/07/2015 07:00	16:00:00	47.9	78.1	50.2	37.6
Sunday	05/07/2015 07:00	16:00:00	48.6	77.1	50.7	38.0
Monday	06/07/2015 07:00	16:00:00	51.6	82.2	53.4	44.3
Tuesday	07/07/2015 07:00	16:00:00	52.3	75.3	55.2	45.5
Wednesday	08/07/2015 07:00	16:00:00	48.9	79.9	50.6	40.6
Thursday	09/07/2015 07:00	16:00:00	50.8	87.5	52.1	39.7
Friday	10/07/2015 07:00	16:00:00	50.9	83.4	49.9	40.0
Saturday	11/07/2015 07:00	16:00:00	51.3	87.4	50.0	39.9
Sunday	12/07/2015 07:00	16:00:00	48.2	80.2	50.5	38.8

	8 hour night 23:00 – 07:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Friday	03/07/2015 23:00	08:00:00	49.2	78.7	48.7	31.2
Saturday	04/07/2015 23:00	08:00:00	48.3	85.1	46.7	28.6
Sunday	05/07/2015 23:00	08:00:00	47.1	72.2	49.9	35.4
Monday	06/07/2015 23:00	08:00:00	52.8	86.2	50.5	40.2
Tuesday	07/07/2015 23:00	08:00:00	47.2	72.1	49.3	40.7
Wednesday	08/07/2015 23:00	08:00:00	48.0	72.3	48.8	36.5
Thursday	09/07/2015 23:00	08:00:00	51.1	86.3	48.5	36.3
Friday	10/07/2015 23:00	08:00:00	51.9	88.2	47.5	34.8
Saturday	11/07/2015 23:00	08:00:00	46.1	73.4	47.7	38.3
Sunday	12/07/2015 23:00	08:00:00	46.9	73.0	47.2	32.8

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	LT11 Blenheim Close				
Personnel (start/end)	PB	PB	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991	
Purpose of Monitoring	Baseline				
SLM ID (ID/make/model/serial number)	# 19 Rion NL-32 630463		**Calibrator at Start** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	94.0 dB
Sample period **Dynamic Range** **Weighting**	100ms 20-110 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#33 Rion NC-74 34472822	93.7 dB
Filename	0011		**Memory Card ID**	~	
Start Date	30/06/15		**End Date**	08/07/15	
Start Time	14:10		**End Time**	09:10	
Microphone Height	1.5 m		**Façade / Free-field**	Free-field	
Photo taken identifying location with equipment installed?				No	

NO PHOTO

BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	- - -		**Wind Speed & Direction** (make 3 wind speed measurements and average)	- - -	
Precipitation	None		**Precipitation**	None	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	0		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	7	
Temperature	28 ºC		**Temperature**	20 ºC	
Relative Humidity	60 %		**Relative Humidity**	50 %	
Subjective Description (fog/visibility/ground conditions)	Clear, dry ground, sunny, warm		**Subjective Description** (fog/visibility/ground conditions)	Cloudy, dry	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

Rear garden of Blenheim Close.

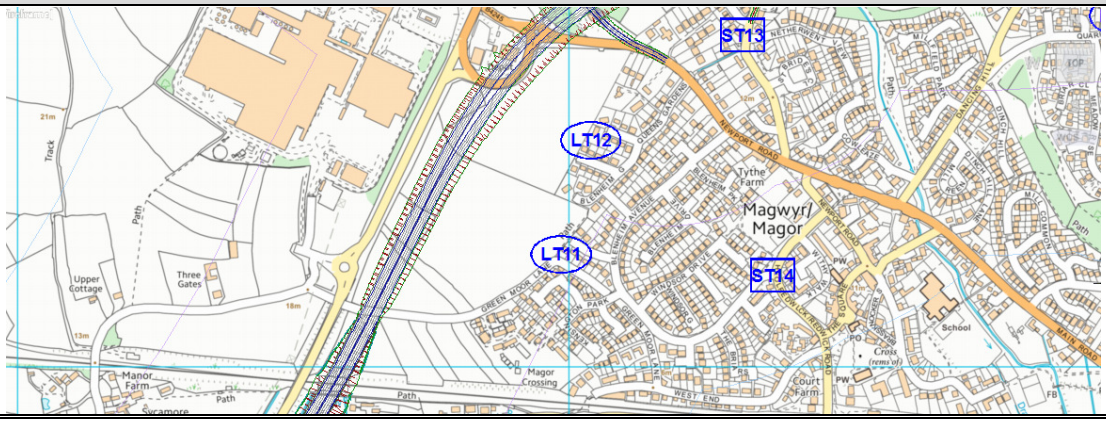
Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Trains, bird song, aircraft, people talking in houses.

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Trains, bird song, aircraft.

Survey location



BASELINE SOUND MONITORING SURVEY REPORT FORM

	LT11 Blenheim Close					
Period	**Start**	**End**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
18 hr day	01/07/2015 06:00	08/07/2015 00:00	50	74-98	50	39
16 hr day	01/07/2015 07:00	07/07/2015 23:00	50	74-98	50	39
8 hr night	30/06/2015 23:00	08/07/2015 07:00	46	69-79	47	37

	18 hour day 06:00 – 00:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Wednesday	01/07/2015 06:00	18:00:00	59.1	95.3	49.8	36.4
Thursday	02/07/2015 06:00	18:00:00	47.1	78.0	49.9	39.5
Friday	03/07/2015 06:00	18:00:00	48.1	97.7	48.0	37.4
Saturday	04/07/2015 06:00	18:00:00	49.9	89.8	50.4	38.6
Sunday	05/07/2015 06:00	18:00:00	46.7	74.9	49.3	37.6
Monday	06/07/2015 06:00	18:00:00	48.0	74.4	50.2	39.5
Tuesday	07/07/2015 06:00	18:00:00	50.4	77.2	52.4	44.7

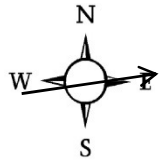
	16 hour day 07:00 – 23:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Wednesday	01/07/2015 07:00	16:00:00	59.6	95.3	49.9	36.2
Thursday	02/07/2015 07:00	16:00:00	47.3	78.0	50.3	39.4
Friday	03/07/2015 07:00	16:00:00	48.4	97.7	48.3	37.4
Saturday	04/07/2015 07:00	16:00:00	50.2	89.8	50.6	40.0
Sunday	05/07/2015 07:00	16:00:00	47.0	74.9	49.6	37.8
Monday	06/07/2015 07:00	16:00:00	48.0	74.4	50.3	39.9
Tuesday	07/07/2015 07:00	16:00:00	50.4	77.2	52.5	45.2

	8 hour night 23:00 – 07:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Tuesday	30/06/2015 23:00	08:00:00	45.0	74.6	45.6	35.2
Wednesday	01/07/2015 23:00	08:00:00	46.7	71.0	48.5	37.5
Thursday	02/07/2015 23:00	08:00:00	45.4	69.6	46.7	40.3
Friday	03/07/2015 23:00	08:00:00	45.5	79.4	44.2	31.0
Saturday	04/07/2015 23:00	08:00:00	40.5	69.1	42.1	34.7
Sunday	05/07/2015 23:00	08:00:00	47.3	71.6	48.2	36.8
Monday	06/07/2015 23:00	08:00:00	48.4	75.0	49.4	37.0
Tuesday	07/07/2015 23:00	08:00:00	49.0	73.1	49.9	41.2

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	LT12 12 Queens Gardens, Magor N: 51º 34.955' W: 002º 50.273				
Personnel (start/end)	PH	PB	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991	
Purpose of Monitoring	Baseline				
SLM ID (ID/make/model/serial number)	# 112 Rion NL-52 943363		**Calibrator at Start** (Cal. ID/Cal. Level)	#14 Rion NC-74 110118	94.0 dB
Sample period **Dynamic Range** **Weighting**	100ms 20-130 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	93.9 dB
Filename	0012		**Memory Card ID**	~	
Start Date	24/06/15 Restarted on 01/07/15 12:30		**End Date**	03/07/15	
Start Time	11:00		**End Time**	11:30	
Microphone Height	1.5 m		**Façade / Free-field**	Free-field	
Photo taken identifying location with equipment installed?				Yes	

BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	2.2 m/s 1.1 m/s 1.1 m/s		**Wind Speed & Direction** (make 3 wind speed measurements and average)	- - -	
Precipitation	None		**Precipitation**	Naone	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	2		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	2	
Temperature	22 ºC		**Temperature**	20 ºC	
Relative Humidity	40 %		**Relative Humidity**	60 %	
Subjective Description (fog/visibility/ground conditions)	Clear, dry ground, sunny, warm, gentle breeze		**Subjective Description** (fog/visibility/ground conditions)	Cloudy, dry, gentle breeze	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

Middle of garden. Soft ground, mostly flat.

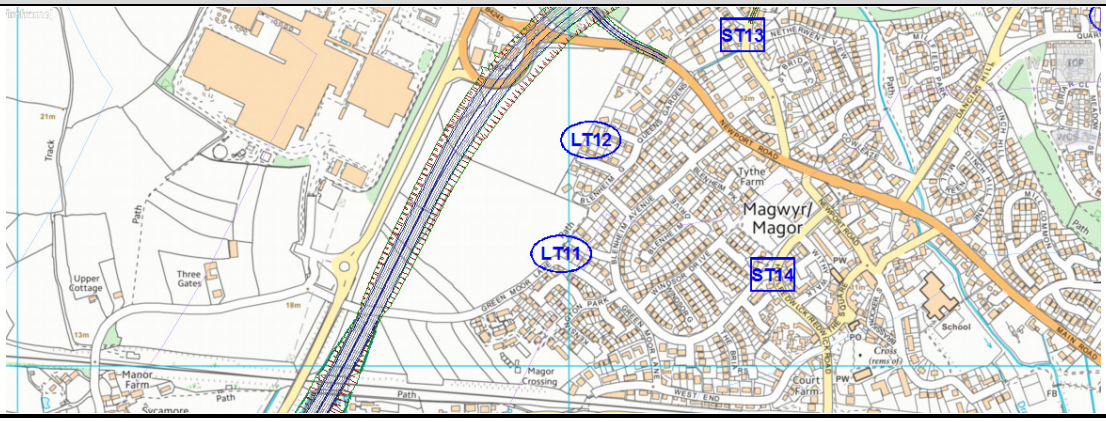
Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Distant road traffic.
Other – Aircraft noise, bird song, grass cutting in distance.

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Distant road traffic.
Other – Aircraft noise, bird song, trees and bushes rustling.

Survey location



BASELINE SOUND MONITORING SURVEY REPORT FORM

	LT12 12 Queens Gardens, Magor					
Period	**Start**	**End**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
16hr day	25/06/2015 07:00	02/07/2015 23:00	43	73-81	45	37
8 hr night	24/06/2015 23:00	03/07/2015 07:00	42	63-73	46	35

	18 hour day 06:00 – 00:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Thursday	25/06/2015 06:00	18:00:00	41.0	74.1	43.3	35.3
Friday	26/06/2015 06:00	18:00:00	43.6	73.9	46.2	38.7
Saturday	27/06/2015 06:00	18:00:00	42.9	80.6	44.4	34.6
Sunday	28/06/2015 06:00	18:00:00	44.2	72.7	46.8	38.9
Monday	29/06/2015 06:00	18:00:00	43.5	74.6	44.3	36.3
Thursday	02/07/2015 06:00	18:00:00	44.2	75.6	47.5	36.1

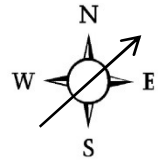
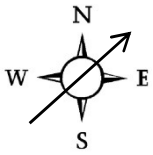
	16 hour day 07:00 – 23:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Thursday	25/06/2015 07:00	16:00:00	40.2	74.1	41.7	35.4
Friday	26/06/2015 07:00	16:00:00	43.6	73.9	46.3	38.8
Saturday	27/06/2015 07:00	16:00:00	43.1	80.6	44.4	35.7
Sunday	28/06/2015 07:00	16:00:00	44.4	72.7	46.8	39.6
Monday	29/06/2015 07:00	16:00:00	43.7	74.6	44.4	36.2
Thursday	02/07/2015 07:00	16:00:00	44.2	75.6	47.6	36.0

	8 hour night 23:00 – 07:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Wednesday	24/06/2015 23:00	08:00:00	43.7	67.7	47.3	36.3
Thursday	25/06/2015 23:00	08:00:00	39.4	73.0	41.5	32.6
Friday	26/06/2015 23:00	08:00:00	43.2	70.0	46.0	36.8
Saturday	27/06/2015 23:00	08:00:00	38.1	62.5	41.0	28.8
Sunday	28/06/2015 23:00	08:00:00	41.1	68.8	45.2	32.8
Monday	29/06/2015 23:00	08:00:00	45.0	68.2	48.9	36.6
Wednesday	01/07/2015 23:00	08:00:00	40.4	70.4	42.3	34.3
Thursday	02/07/2015 23:00	08:00:00	48.7	67.7	51.9	43.3

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	LT13 15 Quarry Rise				
Personnel (start/end)	PH	PB	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991	
Purpose of Monitoring	Baseline				
SLM ID (ID/make/model/serial number)	# 112 Rion NL-52 943363		**Calibrator at Start** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	94.0 dB
Sample period **Dynamic Range** **Weighting**	100ms 20-130 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	93.9 dB
Filename	0013		**Memory Card ID**	~	
Start Date	03/07/15		**End Date**	13/07/15	
Start Time	11:40		**End Time**	18:15	
Microphone Height	1.5 m		**Façade / Free-field**	Free-field	
Photo taken identifying location with equipment installed?				Yes	

BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	- 3 m/s -		**Wind Speed & Direction** (make 3 wind speed measurements and average)	0.5 m/s 1.2 m/s 2.2 m/s	
Precipitation	None		**Precipitation**	None	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	2		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	8	
Temperature	20 ºC		**Temperature**	20 ºC	
Relative Humidity	60 %		**Relative Humidity**	65 %	
Subjective Description (fog/visibility/ground conditions)	Clear, dry ground, sunny		**Subjective Description** (fog/visibility/ground conditions)	Cloudy, dry, gentle wind	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

Rear garden of 15 Quarry Rise.

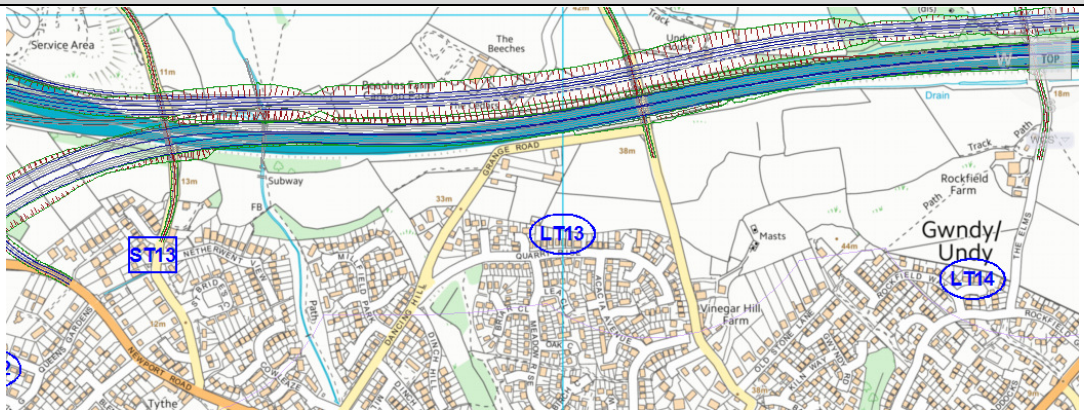
Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Distant road traffic.
Other – Aircraft noise, bird song, road traffic (Quarry Rise).

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Distant road traffic.
Other – Aircraft noise, bird song, trees and bushes rustling, road traffic (Quarry Rise).

Survey location



BASELINE SOUND MONITORING SURVEY REPORT FORM

	LT13 15 Quarry Rise					
Period	**Start**	**End**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
18hr day	04/07/2015 06:00	13/07/2015 00:00	52	67-88	53	44
16hr day	04/07/2015 07:00	12/07/2015 23:00	53	67-88	53	44
8 hr night	03/07/2015 23:00	13/07/2015 07:00	47	59-71	50	41

	18 hour day 06:00 – 00:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Saturday	04/07/2015 06:00	18:00:00	50.3	69.9	53.5	42.5
Sunday	05/07/2015 06:00	18:00:00	50.3	78.9	54.3	41.3
Monday	06/07/2015 06:00	18:00:00	43.8	67.3	45.5	39.5
Tuesday	07/07/2015 06:00	18:00:00	53.8	70.1	56.4	48.9
Wednesday	08/07/2015 06:00	18:00:00	58.4	79.2	59.4	47.9
Thursday	09/07/2015 06:00	18:00:00	49.4	73.4	53.1	42.6
Friday	10/07/2015 06:00	18:00:00	63.1	88.4	50.1	40.2
Saturday	11/07/2015 06:00	18:00:00	51.0	73.5	53.5	45.2
Sunday	12/07/2015 06:00	18:00:00	51.8	67.4	54.7	45.7

	16 hour day 07:00 – 23:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Saturday	04/07/2015 07:00	16:00:00	50.7	67.0	53.7	43.3
Sunday	05/07/2015 07:00	16:00:00	50.5	78.9	54.5	41.1
Monday	06/07/2015 07:00	16:00:00	43.9	67.3	45.5	40.2
Tuesday	07/07/2015 07:00	16:00:00	54.1	70.1	56.5	49.7
Wednesday	08/07/2015 07:00	16:00:00	58.8	79.2	59.7	50.0
Thursday	09/07/2015 07:00	16:00:00	49.4	73.4	53.2	42.4
Friday	10/07/2015 07:00	16:00:00	63.6	88.4	48.7	40.1
Saturday	11/07/2015 07:00	16:00:00	51.3	73.5	53.6	46.3
Sunday	12/07/2015 07:00	16:00:00	52.2	67.4	54.8	46.8

	8 hour night 23:00 – 07:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Friday	03/07/2015 23:00	08:00:00	46.9	65.4	50.3	40.0
Saturday	04/07/2015 23:00	08:00:00	47.4	70.7	49.7	43.2
Sunday	05/07/2015 23:00	08:00:00	47.3	61.2	50.3	42.6
Monday	06/07/2015 23:00	08:00:00	45.0	67.7	50.3	37.2
Tuesday	07/07/2015 23:00	08:00:00	50.2	68.9	53.6	44.0
Wednesday	08/07/2015 23:00	08:00:00	47.7	66.1	51.2	42.6
Thursday	09/07/2015 23:00	08:00:00	48.5	59.3	51.6	43.5
Friday	10/07/2015 23:00	08:00:00	45.0	66.1	47.4	41.2
Saturday	11/07/2015 23:00	08:00:00	45.5	63.3	48.4	40.5
Sunday	12/07/2015 23:00	08:00:00	45.3	64.0	48.7	38.9

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	LT14 24 Fford Maes Y Graig, Undy				
Personnel (start/end)	PB	PB	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991	
Purpose of Monitoring	Baseline				
SLM ID (ID/make/model/serial number)	# 21 Rion NL-32 240644		**Calibrator at Start** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	94.0 dB
Sample period **Dynamic Range** **Weighting**	100ms 20-110 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	93.8 dB
Filename	0014		**Memory Card ID**	~	
Start Date	03/07/15		**End Date**	13/07/15	
Start Time	09:40		**End Time**	09:20	
Microphone Height	2.5 m		**Façade / Free-field**	Free-field	
Photo taken identifying location with equipment installed?				Yes	

BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	- 0 m/s -		**Wind Speed & Direction** (make 3 wind speed measurements and average)	- 0 m/s -	
Precipitation	none		**Precipitation**	Very light	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	0		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	7	
Temperature	20 ºC		**Temperature**	20 ºC	
Relative Humidity	50 %		**Relative Humidity**	50 %	
Subjective Description (fog/visibility/ground conditions)	Clear, dry ground, sunny		**Subjective Description** (fog/visibility/ground conditions)	Cloudy, gentle wind	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

Rear garden of 24 Fford Maes.
Hard ground between equipment and house.
Soft ground between equipment and road.

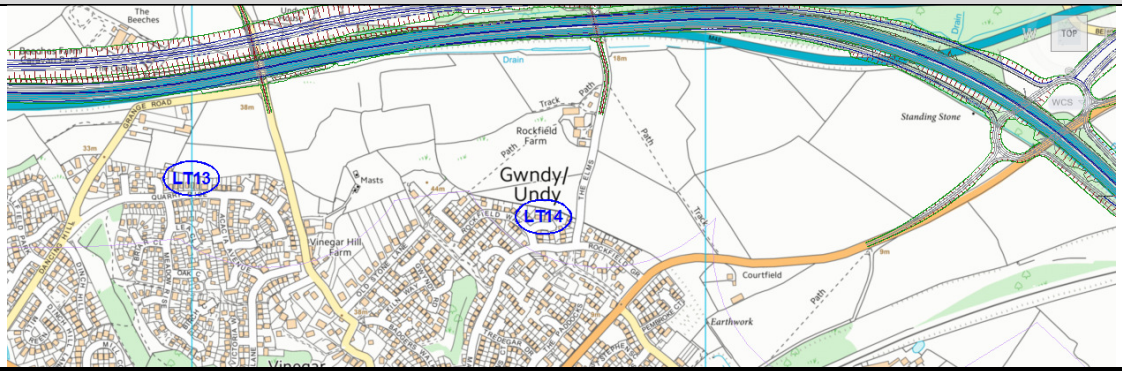
Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Distant road traffic.
Other – Bird song, distant lawn mower, people talking.

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Distant road traffic.
Other – Bird song.

Survey location



BASELINE SOUND MONITORING SURVEY REPORT FORM

	LT14 24 Fford Maes Y Graig, Undy					
Period	**Start**	**End**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
18hr day	01/07/2015 06:00	08/07/2015 00:00	52	79-87	55	45
16hr day	01/07/2015 07:00	07/07/2015 23:00	52	79-87	55	45
8 hr night	30/06/2015 23:00	07/07/2015 07:00	50	61-72	53	43

	18 hour day 06:00 – 00:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Wednesday	01/07/2015 06:00	18:00:00	53.2	80.8	58.0	41.9
Thursday	02/07/2015 06:00	18:00:00	51.6	86.5	55.7	42.2
Friday	03/07/2015 06:00	18:00:00	57.2	79.8	59.0	54.2
Saturday	04/07/2015 06:00	18:00:00	50.6	79.6	53.6	41.0
Sunday	05/07/2015 06:00	18:00:00	50.4	78.5	53.5	42.9
Monday	06/07/2015 06:00	18:00:00	46.5	86.1	48.2	42.5
Tuesday	07/07/2015 06:00	18:00:00	52.5	83.0	55.2	46.9

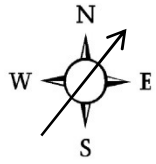
	16 hour day 07:00 – 23:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Wednesday	01/07/2015 07:00	16:00:00	52.7	80.8	57.4	42.0
Thursday	02/07/2015 07:00	16:00:00	51.4	86.5	55.4	42.4
Friday	03/07/2015 07:00	16:00:00	57.3	79.8	59.0	54.6
Saturday	04/07/2015 07:00	16:00:00	51.0	79.6	53.8	42.2
Sunday	05/07/2015 07:00	16:00:00	50.3	78.5	53.3	42.9
Monday	06/07/2015 07:00	16:00:00	46.7	86.1	48.4	43.1
Tuesday	07/07/2015 07:00	16:00:00	52.9	83.0	55.4	47.8

	8 hour night 23:00 – 07:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Tuesday	30/06/2015 23:00	08:00:00	54.6	71.7	57.8	49.4
Wednesday	01/07/2015 23:00	08:00:00	42.7	64.6	44.9	36.6
Thursday	02/07/2015 23:00	08:00:00	55.5	67.0	58.4	49.9
Friday	03/07/2015 23:00	08:00:00	50.9	65.8	53.9	42.5
Saturday	04/07/2015 23:00	08:00:00	51.9	71.1	54.7	44.7
Sunday	05/07/2015 23:00	08:00:00	46.9	60.5	50.9	41.3
Monday	06/07/2015 23:00	08:00:00	44.8	68.7	48.2	39.0

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	LT15 Court Farm				
Personnel (start/end)	PB	MF	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991	
Purpose of Monitoring	Baseline				
SLM ID (ID/make/model/serial number)	# 113 Rion NL-52 943364		**Calibrator at Start** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	94.0 dB
Sample period **Dynamic Range** **Weighting**	100ms 20-110 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	93.9 dB
Filename	0015		**Memory Card ID**	~	
Start Date	03/07/15		**End Date**	14/07/15	
Start Time	11:00		**End Time**	17:45	
Microphone Height	1.5 m		**Façade / Free-field**	Free-field	
Photo taken identifying location with equipment installed?				Yes	

BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	- 3 m/s -		**Wind Speed & Direction** (make 3 wind speed measurements and average)	0.3 m/s 0 m/s 0.5 m/s	
Precipitation	None		**Precipitation**	Light rain	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	2		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	8	
Temperature	20 ºC		**Temperature**	20 ºC	
Relative Humidity	60 %		**Relative Humidity**	70 %	
Subjective Description (fog/visibility/ground conditions)	Clear, dry ground, sunny		**Subjective Description** (fog/visibility/ground conditions)	Cloudy, slightly damp, gentle wind	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

Grass patch rear of entrance opposite the house.
Soft ground between equipment and road.

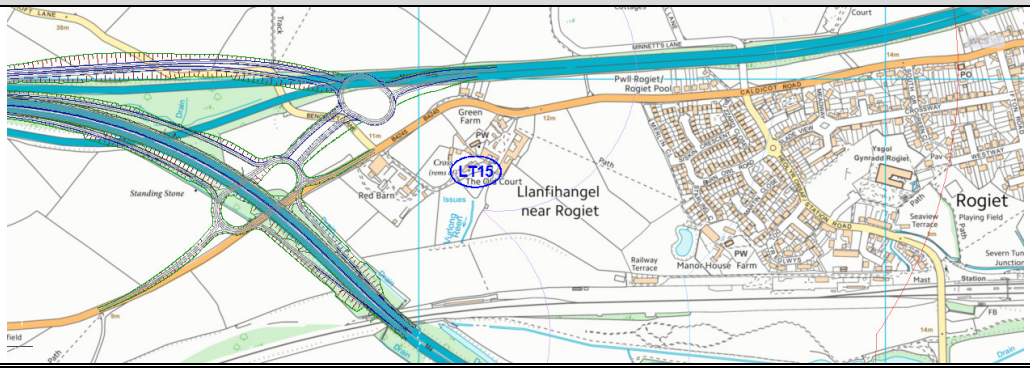
Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Road traffic.
Other – Bird song, aircraft noise, wind rustle.

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Road traffic.
Other – Bird song.

Survey location



BASELINE SOUND MONITORING SURVEY REPORT FORM

	LT15 Court Farm					
Period	**Start**	**End**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
18hr day	04/07/2015 06:00	11/07/2015 00:00	61	77-84	64	54
16hr day	04/07/2015 07:00	10/07/2015 23:00	61	77-84	64	55
8 hr night	03/07/2015 23:00	11/07/2015 07:00	55	72-86	59	48

	18 hour day 06:00 – 00:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Saturday	04/07/2015 06:00	18:00:00	60.5	79.7	63.3	55.1
Sunday	05/07/2015 06:00	18:00:00	60.6	78.0	64.0	46.8
Monday	06/07/2015 06:00	18:00:00	62.2	79.7	64.4	56.8
Tuesday	07/07/2015 06:00	18:00:00	63.0	77.5	65.2	58.3
Wednesday	08/07/2015 06:00	18:00:00	60.1	82.2	63.5	54.3
Thursday	09/07/2015 06:00	18:00:00	61.0	77.0	64.2	51.4
Friday	10/07/2015 06:00	18:00:00	60.0	83.5	63.0	54.8

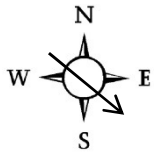
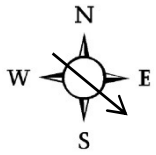
	16 hour day 07:00 – 23:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Saturday	04/07/2015 07:00	16:00:00	60.8	79.7	63.4	55.6
Sunday	05/07/2015 07:00	16:00:00	61.0	78.0	64.2	48.3
Monday	06/07/2015 07:00	16:00:00	62.3	79.7	64.5	57.6
Tuesday	07/07/2015 07:00	16:00:00	63.3	77.5	65.3	59.4
Wednesday	08/07/2015 07:00	16:00:00	59.9	82.2	63.3	54.5
Thursday	09/07/2015 07:00	16:00:00	61.2	77.0	64.3	51.2
Friday	10/07/2015 07:00	16:00:00	60.3	83.5	63.2	55.1

	8 hour night 23:00 – 07:00					
	Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
Friday	03/07/2015 23:00	08:00:00	51.3	71.8	55.4	40.7
Saturday	04/07/2015 23:00	08:00:00	52.0	72.4	55.8	44.8
Sunday	05/07/2015 23:00	08:00:00	58.1	76.3	62.5	50.3
Monday	06/07/2015 23:00	08:00:00	58.4	71.7	61.8	51.6
Tuesday	07/07/2015 23:00	08:00:00	58.7	71.9	62.3	52.2
Wednesday	08/07/2015 23:00	08:00:00	54.9	76.5	58.8	47.2
Thursday	09/07/2015 23:00	08:00:00	54.7	76.1	57.4	49.0
Friday	10/07/2015 23:00	08:00:00	55.8	85.8	58.5	50.1

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	ST1 Castleton Rise, Castleton				
Personnel (start/end)	MF	MF	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991	
Purpose of Monitoring	Baseline				
SLM ID (ID/make/model/serial number)	# 114R (loan) Rion NL-52 620880		**Calibrator at Start** (Cal. ID/Cal. Level)	#33 Rion NC-74 34472822	94.0 dB
Sample period **Dynamic Range** **Weighting**	100ms 20-130 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#33 Rion NC-74 34472822	94.1 dB
Filename	101		**Memory Card ID**	16GB	
Start Date	30/06/15		**End Date**	30/06/15	
Start Time	10:00		**End Time**	13:00	
Microphone Height	1.5 m		**Façade / Free-field**	Façade	
Photo taken identifying location with equipment installed?				Yes	

BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	0 m/s 1.3 m/s 2 m/s		**Wind Speed & Direction** (make 3 wind speed measurements and average)	0 m/s 1.3 m/s 2 m/s	
Precipitation	None		**Precipitation**	None	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	0		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	0	
Temperature	19 ºC		**Temperature**	25 ºC	
Relative Humidity	17 %		**Relative Humidity**	13 %	
Subjective Description (fog/visibility/ground conditions)	Dry, clear and sunny.		**Subjective Description** (fog/visibility/ground conditions)	Dry, clear and sunny.	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

2 m from wall on corner of Castleton Rise.
1.5 m from road Castleton Rise/Marshfield Road.
Hard ground (tarmac).

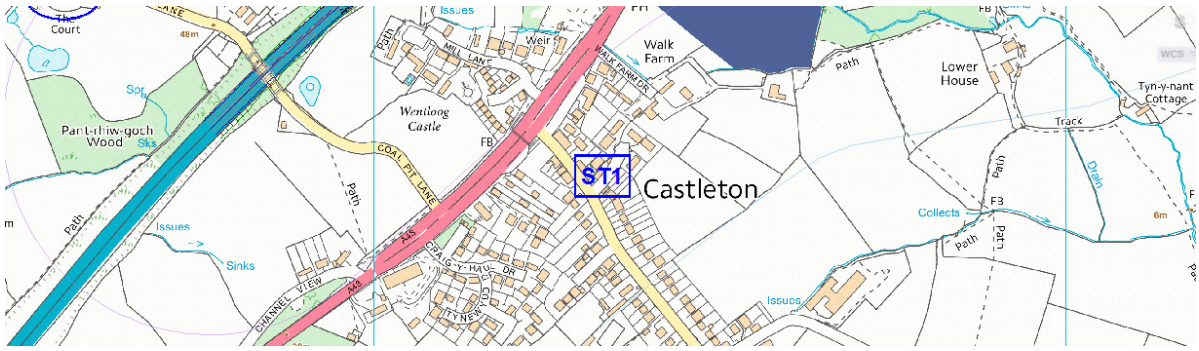
Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Road traffic from Marshfield Road.
Other – Aircraft noise, distant lawn mower, dogs barking, bird song and intermittent drilling from nearby house (started at 11:10 finished 11:20).

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Road traffic from Marshfield Road.
Other – Aircraft noise, dogs barking, bird song.

Survey location



BASELINE SOUND MONITORING SURVEY REPORT FORM

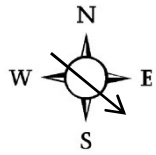
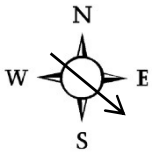
	ST1 Castleton Rise, Castleton			
Period	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
3 hr day	67	88-96	71	45
18 hr day	-	-	70	-

Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
30/06/2015 10:00	01:00:00	66.8	87.7	71.2	45.2
30/06/2015 11:00	01:00:00	66.3	94.1	70.3	45.5
30/06/2015 12:00	01:00:00	67.1	96.0	71.4	43.7

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	ST2 Ty'n-y-brwn			
Personnel (start/end)	MF	MF	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991
Purpose of Monitoring	Baseline			
SLM ID (ID/make/model/serial number)	# 114R (loan) Rion NL-52 620880		**Calibrator at Start** (Cal. ID/Cal. Level)	#33 Rion NC-74 34472822 — 94.0 dB
Sample period **Dynamic Range** **Weighting**	100ms 20-110 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#33 Rion NC-74 34472822 — 94.0 dB
Filename	102		**Memory Card ID**	16GB
Start Date	30/06/15		**End Date**	30/06/15
Start Time	14:00		**End Time**	17:00
Microphone Height	1.5 m		**Façade / Free-field**	Free-field
Photo taken identifying location with equipment installed?				Yes

BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	0 m/s 0.8 m/s 1.5 m/s		**Wind Speed & Direction** (make 3 wind speed measurements and average)	0 m/s 1.5 m/s 2 m/s	
Precipitation	None		**Precipitation**	None	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	0		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	0	
Temperature	27 ºC		**Temperature**	27 ºC	
Relative Humidity	30 %		**Relative Humidity**	27 %	
Subjective Description (fog/visibility/ground conditions)	Dry, clear and sunny.		**Subjective Description** (fog/visibility/ground conditions)	Dry, clear and sunny.	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

Equipment on grass with farmland to the north.
Access road 2 m to the south.
Soft ground.

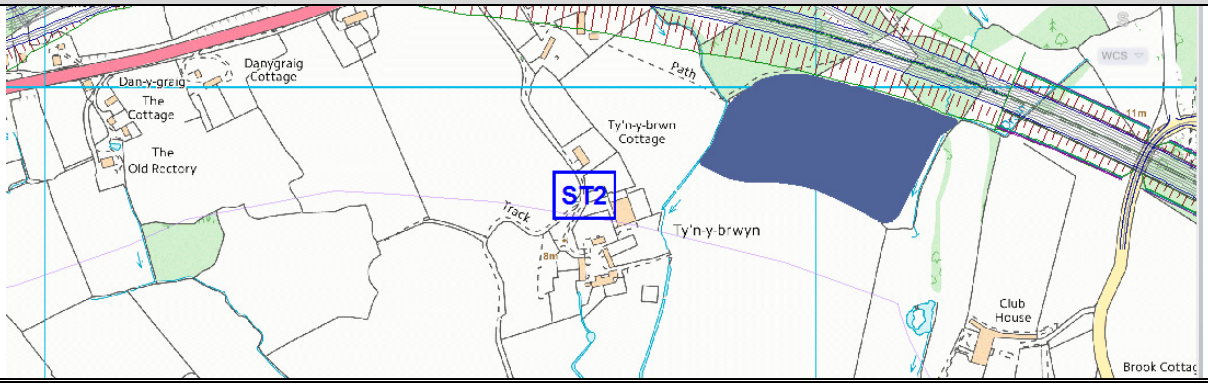
Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Distant road traffic.
Other – Aircraft noise, bird song, cars driving through access road, farm machinery.

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Same as above

Survey location



BASELINE SOUND MONITORING SURVEY REPORT FORM

	ST2 Ty'n-y-brwn			
Period	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
3 hr day	48	69-76	49	38
18 hr day	-	-	48	-

Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
30/06/2015 14:00	01:00:00	52.4	76.4	53.4	37.2
30/06/2015 15:00	01:00:00	46	69.4	48.5	37.7
30/06/2015 16:00	01:00:00	46.4	71	45.6	38

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	ST3 Little Orchard				
Personnel (start/end)	MF	MF	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991	
Purpose of Monitoring	Baseline				
SLM ID (ID/make/model/serial number)	# 114R (loan) Rion NL-52 620880		**Calibrator at Start** (Cal. ID/Cal. Level)	#33 Rion NC-74 34472822	94.0 dB
Sample period **Dynamic Range** **Weighting**	100ms 20-110 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#33 Rion NC-74 34472822	94.0 dB
Filename	103		**Memory Card ID**	16GB	
Start Date	01/07/15		**End Date**	01/07/15	
Start Time	09:45		**End Time**	13:00	
Microphone Height	1.5 m		**Façade / Free-field**	Free-field	
Photo taken identifying location with equipment installed?				Yes	

BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	0 m/s 0.1 m/s 0.2 m/s	N W E S	**Wind Speed & Direction** (make 3 wind speed measurements and average)	0 m/s 0.2 m/s 0.3 m/s	N W E S
Precipitation	Light rain for 5 mins		**Precipitation**	Very light rain intermittent	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	8		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	8	
Temperature	23 ºC		**Temperature**	24 ºC	
Relative Humidity	65 %		**Relative Humidity**	66 %	
Subjective Description (fog/visibility/ground conditions)	Light drizzle at the start of survey but dry ground. Cloudy humid		**Subjective Description** (fog/visibility/ground conditions)	Dry ground, cloudy and humid	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

On grass verge.
Approx 15 m south of A46.
Approx 20 m north or orchard cottage.

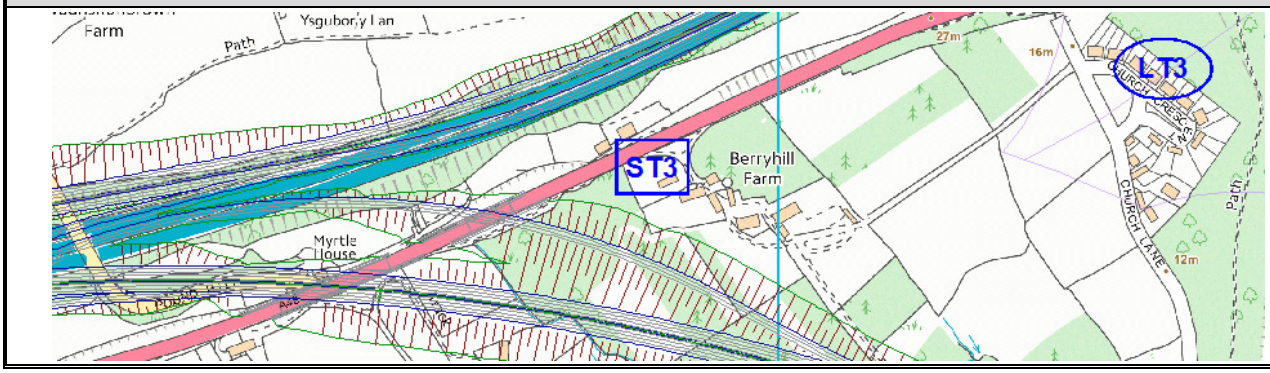
Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Road traffic (A46).
Other – Aircraft noise, bird song, cars entering and leaving access road to cottages.

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Same as above

Survey location



BASELINE SOUND MONITORING SURVEY REPORT FORM

	ST3 Little Orchard			
Period	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
3 hr day	59	70-74	62	51
18 hr day	-	-	61	-

Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
01/07/2015 10:00	01:00:00	58.4	69.9	61.8	50.2
01/07/2015 11:00	01:00:00	58.5	73.5	61.9	51.5
01/07/2015 12:00	01:00:00	59	71.8	62.3	51.5

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	ST4 Church Lane				
Personnel (start/end)	MF	MF	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991	
Purpose of Monitoring	Baseline				
SLM ID (ID/make/model/serial number)	# 114R (loan) Rion NL-52 620880		**Calibrator at Start** (Cal. ID/Cal. Level)	#33 Rion NC-74 34472822	94.0 dB
Sample period **Dynamic Range** **Weighting**	100ms 20-110 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#33 Rion NC-74 34472822	94.0 dB
Filename	104		**Memory Card ID**	16GB	
Start Date	01/07/15		**End Date**	01/07/15	
Start Time	13:45		**End Time**	16:45	
Microphone Height	1.5 m		**Façade / Free-field**	Free-field	
Photo taken identifying location with equipment installed?				Yes	

BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	0 m/s 0.1 m/s 0.3 m/s		**Wind Speed & Direction** (make 3 wind speed measurements and average)	0 m/s 0.2 m/s 0.3 m/s	
Precipitation	None		**Precipitation**	None	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	7		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	4	
Temperature	26 ºC		**Temperature**	30 ºC	
Relative Humidity	68 %		**Relative Humidity**	44 %	
Subjective Description (fog/visibility/ground conditions)	Cloudy, hot, humid, slight breeze		**Subjective Description** (fog/visibility/ground conditions)	Hot, dry, slight breeze	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

On grass verge.
Approx 8 m east of Church Lane.
Fields to the north, south and east.

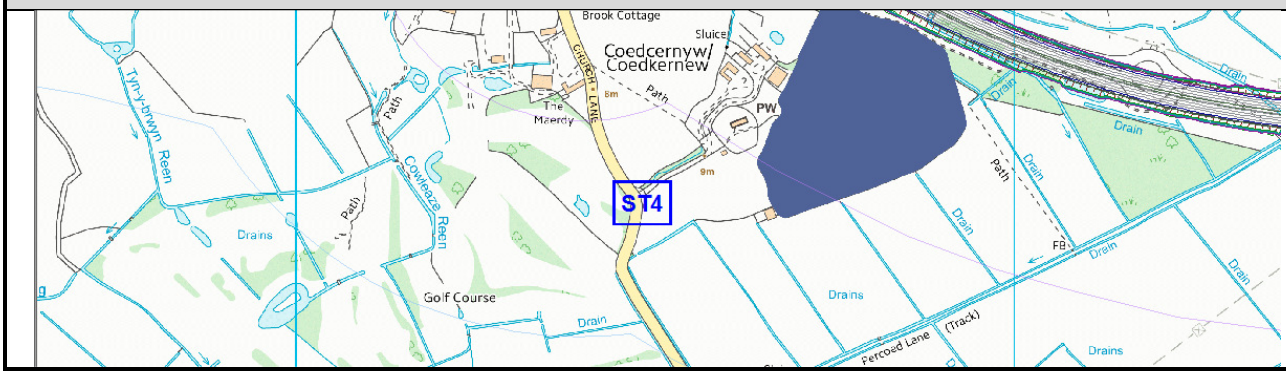
Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Road traffic (on church lane).
Other – Bird song, cars entering and leaving access road to north east, railway noise, train horns, golf ball hits, distant garden strimmer and distant lorry reversing noise.

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Same as above

Survey location



BASELINE SOUND MONITORING SURVEY REPORT FORM

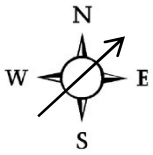
	ST4 Church Lane			
Period	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
3 hr day	54	75-84	55	37
18 hr day	-	-	54	-

Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
01/07/2015 13:45	01:00:00	52.8	76.6	53.4	37.1
01/07/2015 14:45	01:00:00	53.3	74.9	55.8	35.1
01/07/2015 15:45	00:59:49	54.9	83.9	57.2	39.3

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	ST5 End of Kidwelly Close, Duffryn N 51º 33' 04.1" W 003º 01' 24.5"				
Personnel (start/end)	PH	PH	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991	
Purpose of Monitoring	Baseline				
SLM ID (ID/make/model/serial number)	# 21 Rion NL-32 240644		**Calibrator at Start** (Cal. ID/Cal. Level)	#14 Rion NC-74 110118	94.0 dB
Sample period **Dynamic Range** **Weighting**	100ms 20-110 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#14 Rion NC-74 110118	94.0 dB
Filename	1105		**Memory Card ID**	~	
Start Date	25/06/15		**End Date**	25/06/15	
Start Time	10:00		**End Time**	15:00	
Microphone Height	1.5 m		**Façade / Free-field**	Free-field	
Photo taken identifying location with equipment installed?				Yes	

BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	0.1 m/s 0.3 m/s 0.5 m/s		**Wind Speed & Direction** (make 3 wind speed measurements and average)	1.5 m/s 1.1 m/s 1.2 m/s	
Precipitation	None		**Precipitation**	None	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	6		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	6	
Temperature	22 ºC		**Temperature**	25 ºC	
Relative Humidity	50 %		**Relative Humidity**	30 %	
Subjective Description (fog/visibility/ground conditions)	Clear, dry ground, still.		**Subjective Description** (fog/visibility/ground conditions)	Clear, dry ground, gentle breeze.	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

On edge of semi constructed footpath, facing centre of cul-de-sac road.
Trees and soft ground to the south east.

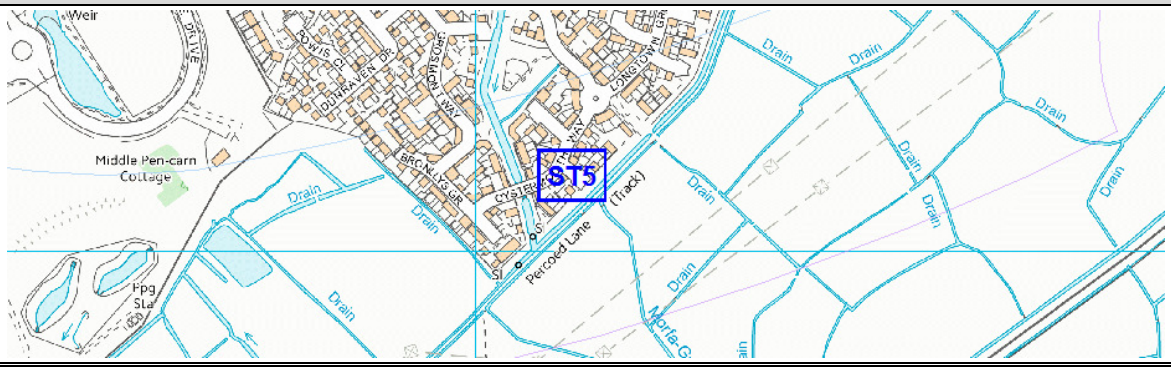
Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Train noise.
Other – Aircraft noise, local vehicle movements, low level of coronal discharge, Birds, industrial. banging/tipping noise, Children playing in and around houses.

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Train noise.
Other – Aircraft noise, local vehicle movements, low level of coronal discharge, Birds, industrial. banging/tipping noise, trees and bushes rustling, car doors shutting, residents talking.

Survey location



BASELINE SOUND MONITORING SURVEY REPORT FORM

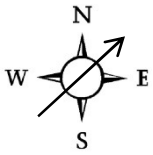
	ST5 End of Kidwelly Close, Duffryn			
Period	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
3 hr day	48	68-74	51	33
18 hr day	-	-	50	-

Time	**Measurment Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
25/06/2015 10:01	01:00:00	49.2	67.9	52.5	32.6
25/06/2015 11:01	01:00:00	47.9	67.7	51.6	32.3
25/06/2015 12:01	01:00:00	47.4	73.8	50	32.8

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	ST6 Orchard Farm, Lighthouse Road N 51º 32' 56.1" W 003º 01' 33.5"				
Personnel (start/end)	PB	PB	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991	
Purpose of Monitoring	Baseline				
SLM ID (ID/make/model/serial number)	# 100 Rion NA-28 1291243		**Calibrator at Start** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	94.0 dB
Sample period **Dynamic Range** **Weighting**	100ms 20-110 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	94.0 dB
Filename	0006		**Memory Card ID**	~	
Start Date	01/07/15		**End Date**	01/07/15	
Start Time	14:03		**End Time**	17:03	
Microphone Height	1.5 m		**Façade / Free-field**	Free-field	
Photo taken identifying location with equipment installed?				Yes	

BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	- 0 m/s -		**Wind Speed & Direction** (make 3 wind speed measurements and average)	- 2 m/s -	
Precipitation	None		**Precipitation**	None	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	7		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	4	
Temperature	24 ºC		**Temperature**	25 ºC	
Relative Humidity	60 %		**Relative Humidity**	60 %	
Subjective Description (fog/visibility/ground conditions)	Hot, humid.		**Subjective Description** (fog/visibility/ground conditions)	Hot, humid.	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

3.5 m from lighthouse Road just south of Orchard Farm.
Hard ground between equipment and road.

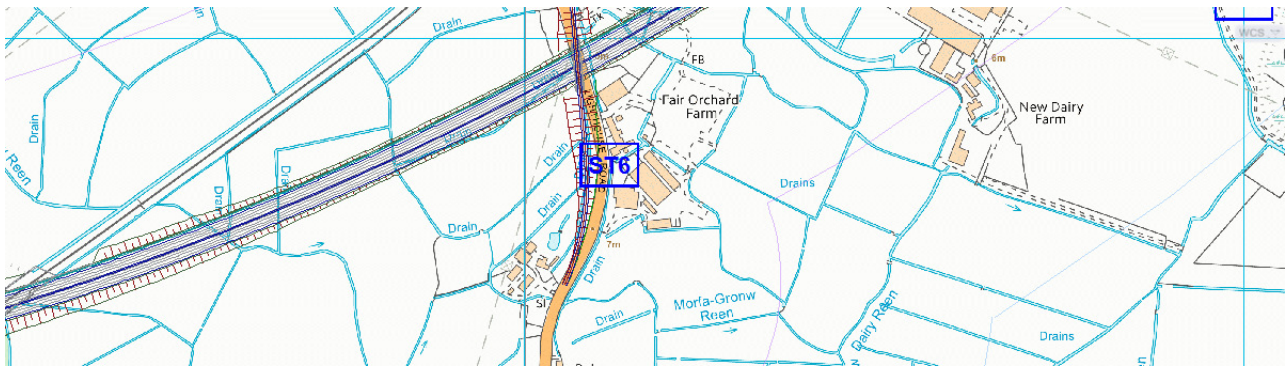
Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Road traffic (Lighthouse Road).
Other – Bird song, train noise.

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Road traffic (Lighthouse Road).
Other – Bird song, train noise, distant reversing alarm.

Survey location



BASELINE SOUND MONITORING SURVEY REPORT FORM

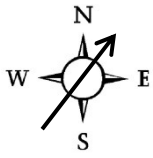
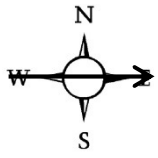
	ST6 Orchard Farm, Lighthouse Road			
Period	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
3 hr day	67	87-92	71	41
18 hr day	-	-	70	-

Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
01/07/2015 14:03	01:00:00	66.1	91.9	69.9	37.9
01/07/2015 15:03	01:00:00	66.1	87.8	70.3	40.7
01/07/2015 16:03	01:00:00	67.7	86.8	72.7	43.6

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	ST7 Wales Coast Path N 51º 33' 04.2" W 002º 59' 47.6"				
Personnel (start/end)	PH	PH	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991	
Purpose of Monitoring	Baseline				
SLM ID (ID/make/model/serial number)	# 21 Rion NL-32 240644		**Calibrator at Start** (Cal. ID/Cal. Level)	#14 Rion NC-74 110118	94.0 dB
Sample period **Dynamic Range** **Weighting**	100ms 20-110 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#14 Rion NC-74 110118	94.0 dB
Filename	1107		**Memory Card ID**	~	
Start Date	24/06/15		**End Date**	24/06/15	
Start Time	13:32		**End Time**	16:32	
Microphone Height	1.7 m		**Façade / Free-field**	Free-field	
Photo taken identifying location with equipment installed?				Yes	

BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	3 m/s 3.8 m/s 4 m/s		**Wind Speed & Direction** (make 3 wind speed measurements and average)	4 m/s 3.2 m/s 2.2 m/s	
Precipitation	None		**Precipitation**	None	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	7		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	7	
Temperature	22 ºC		**Temperature**	22 ºC	
Relative Humidity	40 %		**Relative Humidity**	45 %	
Subjective Description (fog/visibility/ground conditions)	Clear, dry ground, breezy.		**Subjective Description** (fog/visibility/ground conditions)	Clear, dry ground, breezy.	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

Just off path beyond manure pile. Soft ground, generally flat.

Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

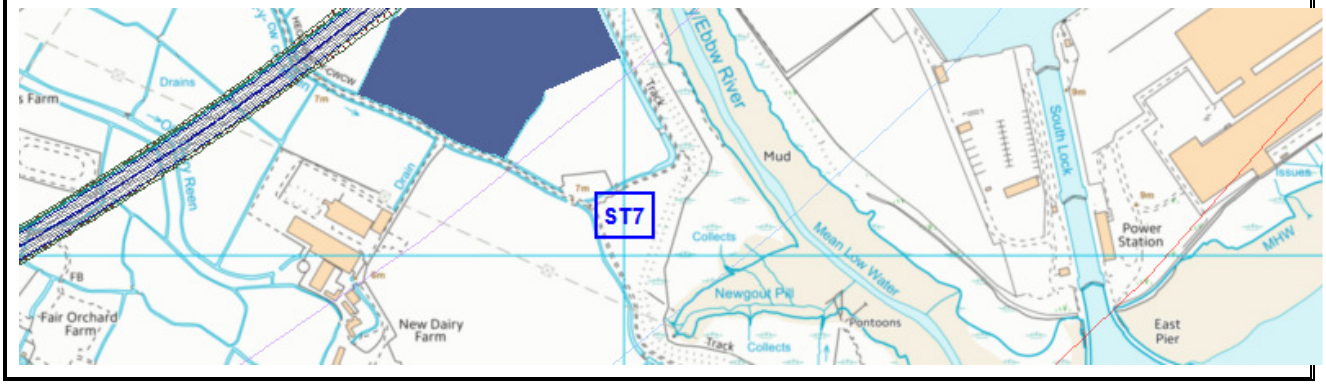
Dominant – Farm machinery (tractor movements etc.).
Other – Bird song, train noise, train horns, aircraft noise, low level corona discharge, cows, voices.

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

As above

Paused for when talking to farmer.

Survey location



BASELINE SOUND MONITORING SURVEY REPORT FORM

	ST7 Wales Coast Path			
Period	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
3 hr day	42	68-73	44	38
18 hr day	-	-	43	-

Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
24/06/2015 12:36	01:00:00	41	67.7	43	36.9
24/06/2015 13:36	01:00:00	42.5	69.6	44.7	38
24/06/2015 14:36	01:00:00	43.4	72.5	45.2	39.3

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	ST8 Disused road adjoining, Traston Road, Newport				
Personnel (start/end)	MF	MF	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991	
Purpose of Monitoring	Baseline				
SLM ID (ID/make/model/serial number)	# 114R (loan) Rion NL-32 620880		**Calibrator at Start** (Cal. ID/Cal. Level)	#33 Rion NC-74 34472822	94.0 dB
Sample period **Dynamic Range** **Weighting**	100ms 20-130 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#33 Rion NC-74 34472822	94.0 dB
Filename	108		**Memory Card ID**	16 GB	
Start Date	02/07/15		**End Date**	02/07/15	
Start Time	10:00		**End Time**	10:00	
Microphone Height	1.5 m		**Façade / Free-field**	Free-field	
Photo taken identifying location with equipment installed?				Yes	

BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	0 m/s 0.1 m/s 0 m/s		**Wind Speed & Direction** (make 3 wind speed measurements and average)	- 0 m/s -	
Precipitation	None		**Precipitation**	Patch of light rain towards end 11:55 – 12:10	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	8		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	8	
Temperature	19 ºC		**Temperature**	19 ºC	
Relative Humidity	69 %		**Relative Humidity**	69 %	
Subjective Description (fog/visibility/ground conditions)	Cloudy, dry, slight breeze		**Subjective Description** (fog/visibility/ground conditions)	Cloudy, dry, slight breeze	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

On tarmac on the disused road approx. 3 m from Traston Road.
Bushes and farmland to the south and east.
Traston Road to the north.
Sports field to the south west.

Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

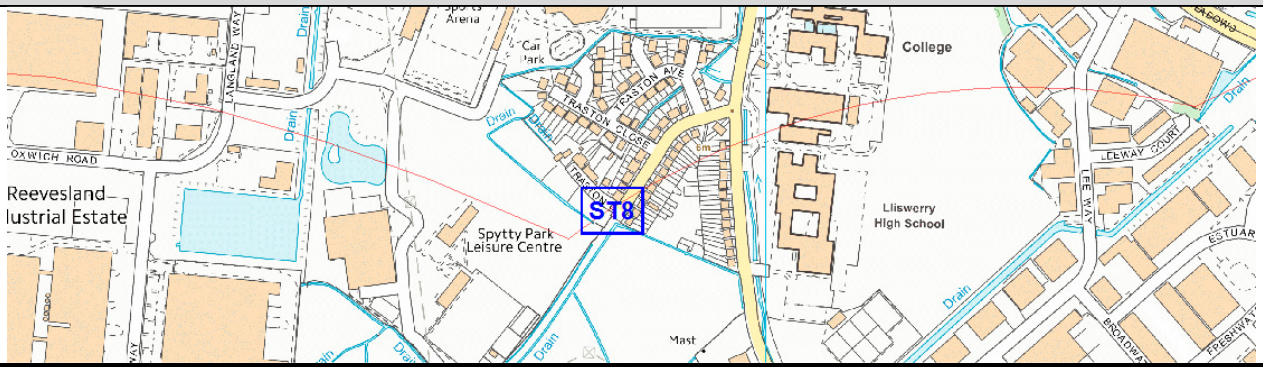
Dominant – Farm machinery (possibly wind turbines).
Distant road traffic.

Other – Bird song, cars entering and leaving Traston Road, aircraft noise, unknown horn sound.

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Same as above

Survey location



BASELINE SOUND MONITORING SURVEY REPORT FORM

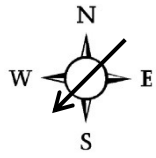
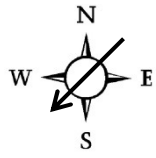
	ST8 Disused road adjoining, Traston Road, Newport			
Period	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
3 hr day	49	74-86	50	44
18 hr day	-	-	49	-

Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
02/07/2015 10:00	01:00:00	49.7	79.7	49.9	43.1
02/07/2015 11:00	01:00:00	50.6	85.6	50	45.2
02/07/2015 12:00	01:00:00	47.2	73.5	49.2	42.2

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	ST9 Broad Street Common near Rye Corner				
Personnel (start/end)	MF	MF	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991	
Purpose of Monitoring	Baseline				
SLM ID (ID/make/model/serial number)	# 114R (loan) Rion NL-32 620880		**Calibrator at Start** (Cal. ID/Cal. Level)	#33 Rion NC-74 34472822	94.0 dB
Sample period **Dynamic Range** **Weighting**	100ms 20-110 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#33 Rion NC-74 34472822	94.0 dB
Filename	109		**Memory Card ID**	16 GB	
Start Date	03/07/15		**End Date**	03/07/15	
Start Time	09:44		**End Time**	13:00	
Microphone Height	1.5 m		**Façade / Free-field**	Free-field	
Photo taken identifying location with equipment installed?				Yes	

BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	1.1 m/s 2 m/s 2.2 m/s		**Wind Speed & Direction** (make 3 wind speed measurements and average)	0.3 m/s 1.2 m/s 2 m/s	
Precipitation	None		**Precipitation**	Patch of light rain towards end 11:55 – 12:10	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	2		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	2	
Temperature	18 ºC		**Temperature**	24 ºC	
Relative Humidity	64 %		**Relative Humidity**	35 %	
Subjective Description (fog/visibility/ground conditions)	dry, sunny, breezy		**Subjective Description** (fog/visibility/ground conditions)	dry, sunny, clear	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

On 1 m raised grassed verge, 5 m east of unnamed road off Broad Street Common.
Broad Street Common is approx. 10 m to the south.
Fields to the east.

Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

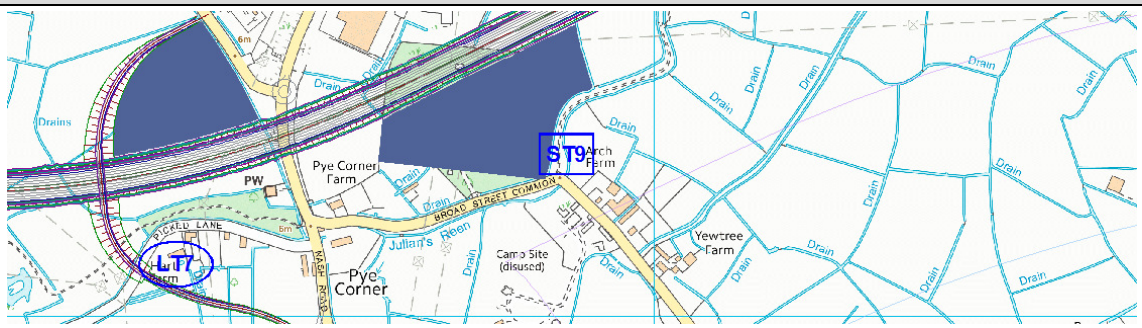
Dominant – Distant road traffic.

Other – Bird song, road traffic on Broad Street Common, Farm vehicles working in nearby fields, trees and bushes rustling.

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Same as above

Survey location



BASELINE SOUND MONITORING SURVEY REPORT FORM

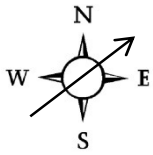
	ST9 Broad Street Common near Rye Corner			
Period	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
3 hr day	51	73-80	53	38
18 hr day	-	-	52	-

Start	Valid Time	L_{Aeq} (dB)	L_{AFmax} (dB)	L_{A10} (dB)	L_{A90} (dB)
03/07/2015 10:00	01:00:00	49.4	72.8	50.5	38.1
03/07/2015 11:00	01:00:00	50.3	76.4	53	37.8
03/07/2015 12:00	01:00:00	54.5	79.7	55.9	37.9

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	ST10 Solutia Nature Reserve N 51º 33' 26.9" W 002º 56' 48.4"			
Personnel (start/end)	PB	PB	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991
Purpose of Monitoring	Baseline			
SLM ID (ID/make/model/serial number)	# 100 Rion NA-28 12912943		**Calibrator at Start** (Cal. ID/Cal. Level)	#33 Rion NC-74 34472822 — 94.0 dB
Sample period **Dynamic Range** **Weighting**	1 hr 20-110 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#33 Rion NC-74 34472822 — 94.0 dB
Filename	0110		**Memory Card ID**	~
Start Date	09/07/15		**End Date**	09/07/15
Start Time	10:35		**End Time**	13:35
Microphone Height	1.5 m		**Façade / Free-field**	Free-field
Photo taken identifying location with equipment installed?				Yes

BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	- 0 m/s -		**Wind Speed & Direction** (make 3 wind speed measurements and average)	- 2 m/s -	
Precipitation	None		**Precipitation**	None	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	4		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	4	
Temperature	22 ºC		**Temperature**	24 ºC	
Relative Humidity	50 %		**Relative Humidity**	50 %	
Subjective Description (fog/visibility/ground conditions)	Warm, Clear, patchy cloud.		**Subjective Description** (fog/visibility/ground conditions)	Warm, Clear, patchy cloud.	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

Middle of nature reserve.
Soft ground.

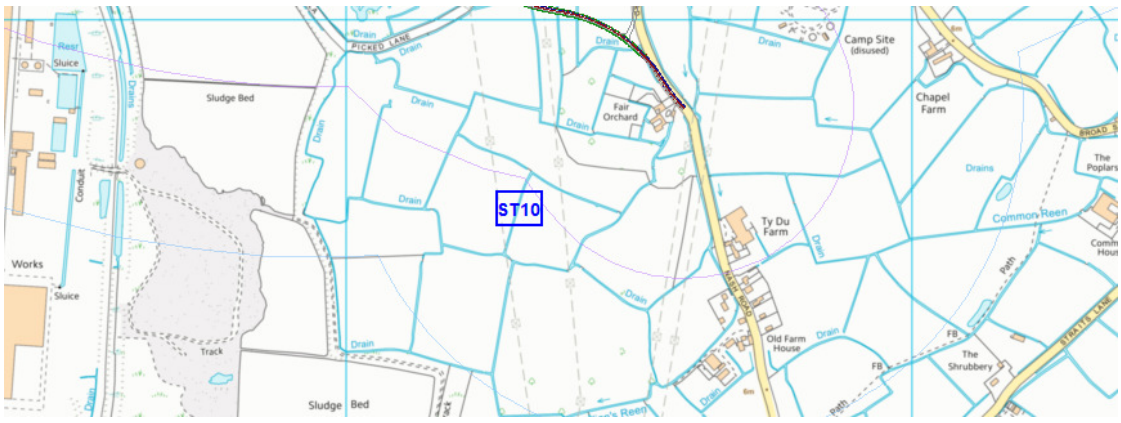
Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Distant road traffic.
Other – Bird song, aircraft noise, local road noise, insects, distant industrial noise (maybe construction noise).

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Same as above

Survey location



BASELINE SOUND MONITORING SURVEY REPORT FORM

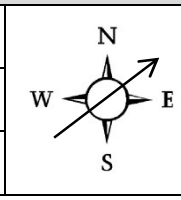
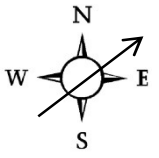
	ST10 Solutia Nature Reserve			
Period	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
3 hr day	44	58-90	43	36
18 hr day	-	-	42	-

Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
09/07/2015 10:35	01:00:00	49.8	89.5	40.9	31.7
09/07/2015 11:35	01:00:00	41.2	57.8	43.1	37.9
09/07/2015 12:35	01:00:00	42.4	63.4	44.5	38.9

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	ST11 Broad Street N 51º 33' 47.2" W 002º 56' 7.9"				
Personnel (start/end)	PB	PB	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991	
Purpose of Monitoring	Baseline				
SLM ID (ID/make/model/serial number)	# 100 Rion NA-28 12912943		**Calibrator at Start** (Cal. ID/Cal. Level)	#33 Rion NC-74 34472822	94.0 dB
Sample period **Dynamic Range** **Weighting**	1 hr 20-110 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#33 Rion NC-74 34472822	94.0 dB
Filename	0110		**Memory Card ID**	~	
Start Date	09/07/15		**End Date**	09/07/15	
Start Time	14:00		**End Time**	17:00	
Microphone Height	1.5 m		**Façade / Free-field**	Free-field	
Photo taken identifying location with equipment installed?				Yes	

BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	- 3 m/s -		**Wind Speed & Direction** (make 3 wind speed measurements and average)	- 3 m/s -	
Precipitation	None		**Precipitation**	None	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	5		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	5	
Temperature	24 ºC		**Temperature**	24 ºC	
Relative Humidity	50 %		**Relative Humidity**	50 %	
Subjective Description (fog/visibility/ground conditions)	Sunny, clear, warm, dry.		**Subjective Description** (fog/visibility/ground conditions)	Sunny, clear, warm, dry.	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

3.5 m from side of Broad Street Common.

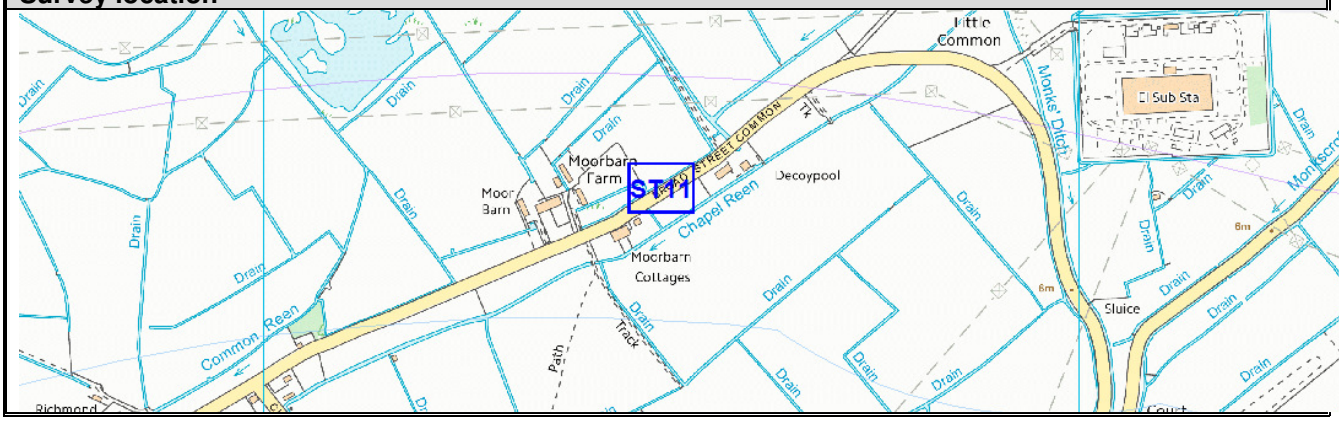
Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Road traffic.
Other – A few loud tractors going past, farm machinery noise, bird song, aircraft noise, wind rustle.

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Same as above

Survey location



BASELINE SOUND MONITORING SURVEY REPORT FORM

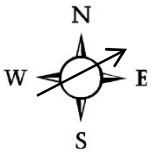
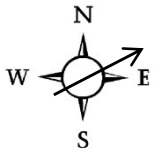
	ST11 Broad Street			
Period	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
3 hr day	59	83-84	54	41
18 hr day	-	-	53	-

Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
09/07/2015 13:54	01:00:00	60.3	84	56.7	45
09/07/2015 14:54	01:00:00	58.6	82.8	52.4	36.1
09/07/2015 15:54	01:00:00	57.4	82.5	54.1	43

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	ST12 Layby, North Row Road towards Redwich				
Personnel (start/end)	MF	MF	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991	
Purpose of Monitoring	Baseline				
SLM ID (ID/make/model/serial number)	# 114R (loan) Rion NL-52 620880		**Calibrator at Start** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	94.0 dB
Sample period **Dynamic Range** **Weighting**	100ms 20-130 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	94.0 dB
Filename	112		**Memory Card ID**	16GB	
Start Date	07/07/15		**End Date**	07/07/15	
Start Time	10:00		**End Time**	13:00	
Microphone Height	1.5 m		**Façade / Free-field**	Free-field	
Photo taken identifying location with equipment installed?				Yes	

BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	2.5 m/s 4 m/s 5 m/s (gusts of 7 m/s)		**Wind Speed & Direction** (make 3 wind speed measurements and average)	3 m/s 4 m/s 6 m/s	
Precipitation	Minimal		**Precipitation**	None	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	7		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	4	
Temperature	17 ºC		**Temperature**	18 ºC	
Relative Humidity	72 %		**Relative Humidity**	50 %	
Subjective Description (fog/visibility/ground conditions)	Dry ground, cloudy, windy, occasional drops of rain		**Subjective Description** (fog/visibility/ground conditions)	Dry ground, cloudy, windy, occasional drops of rain	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

On small stony earth mound on layby approx. 3.5 m south west of North Row Road.
Fields to the north, south, east and west.

Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Distant road traffic, trees and bushes rustling.

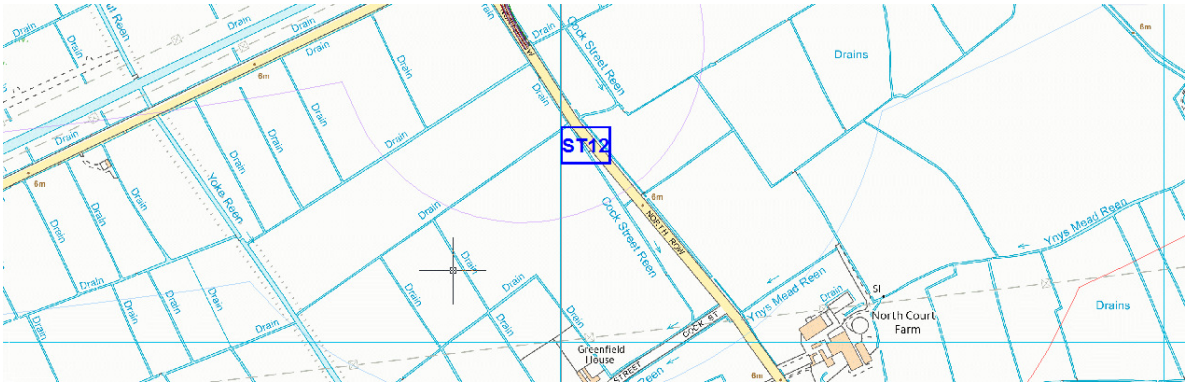
Other – Aircraft noise, traffic on North Row Road, bird song .

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Same as above

Tripod fell over (11:03) erected back up seconds after tripod fell over and data has been removed.

Survey location



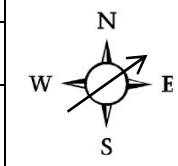
	ST12 Layby, North Row Road towards Redwich			
Period	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
3 hr day	58	81-83	57	45
18 hr day	-	-	56	-

Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
07/07/2015 10:00	01:00:00	58.2	93.8	83.2	38.5
07/07/2015 11:04	00:57:00	58.1	93.4	81.8	42.4
07/07/2015 12:00	01:00:00	58.3	93.9	80.6	41.1

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	ST13 Nether went View and St Brides Roads, Magor				
Personnel (start/end)	MF	MF	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991	
Purpose of Monitoring	Baseline				
SLM ID (ID/make/model/serial number)	# 114R (loan) Rion NL-52 620880		**Calibrator at Start** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	94.0 dB
Sample period **Dynamic Range** **Weighting**	100ms 20-130 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	94.0 dB
Filename	113		**Memory Card ID**	16 GB	
Start Date	07/07/15		**End Date**	07/07/15	
Start Time	13:50		**End Time**	16:50	
Microphone Height	1.5 m		**Façade / Free-field**	Free-field	
Photo taken identifying location with equipment installed?				Yes	

BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	1.5 m/s 2.5 m/s 4.5 m/s (gusts of 6 m/s)		**Wind Speed & Direction** (make 3 wind speed measurements and average)	1.5 m/s 3 m/s 4.5 m/s	
Precipitation	None		**Precipitation**	Occasional very light rain	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	5		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	5	
Temperature	24 ºC		**Temperature**	20 ºC	
Relative Humidity	40 %		**Relative Humidity**	45 %	
Subjective Description (fog/visibility/ground conditions)	Dry ground, cloudy, breezy slightly cloudy		**Subjective Description** (fog/visibility/ground conditions)	Dry ground, cloudy, breezy slightly cloudy	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

On grass verge on the corner or Netherwent View.
Approx 3.5 m from Netherwent View and St Brides Road.

Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

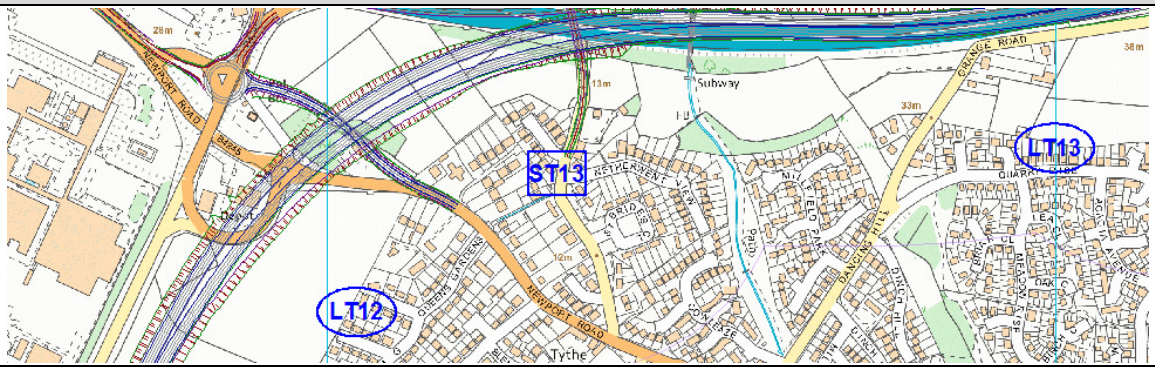
Dominant – Distant road traffic (M4).

Other – Traffic on St Brides Road, bird song, trees and bushes rustling, dogs barking, police siren.

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Same as above

Survey location



BASELINE SOUND MONITORING SURVEY REPORT FORM

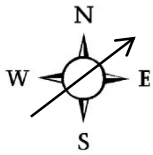
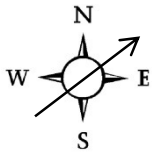
	ST13 Nether went View and St Brides Roads, Magor			
Period	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
3 hr day	58	77-92	60	52
18 hr day	-	-	59	-

Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
07/07/2015 13:47	01:00:00	58.1	91.9	58.6	51.5
07/07/2015 14:47	01:00:00	57.9	77.4	60.2	51.7
07/07/2015 15:47	01:00:00	57.6	78.9	60.3	51.7

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	ST14 Magor, Redwick Road and Blenheim Avenue			
Personnel (start/end)	PB	PB	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991
Purpose of Monitoring	Baseline			
SLM ID (ID/make/model/serial number)	# 16 Rion NL-32 320122		**Calibrator at Start** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090 94.0 dB
Sample period **Dynamic Range** **Weighting**	100ms 20-130 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090 94.0 dB
Filename	01014		**Memory Card ID**	~
Start Date	29/07/15		**End Date**	29/07/15
Start Time	10:30		**End Time**	13:30
Microphone Height	2 m		**Façade / Free-field**	Free-field
Photo taken identifying location with equipment installed?				Yes

BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	- 2 m/s -		**Wind Speed & Direction** (make 3 wind speed measurements and average)	- 2 m/s -	
Precipitation	None		**Precipitation**	None	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	0		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	0	
Temperature	20 ºC		**Temperature**	23 ºC	
Relative Humidity	50 %		**Relative Humidity**	50 %	
Subjective Description (fog/visibility/ground conditions)	Clear, hot, sunny, light wind.		**Subjective Description** (fog/visibility/ground conditions)	Clear, hot, sunny, light wind.	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

Grass verge adjacent road.
Soft ground between junction.

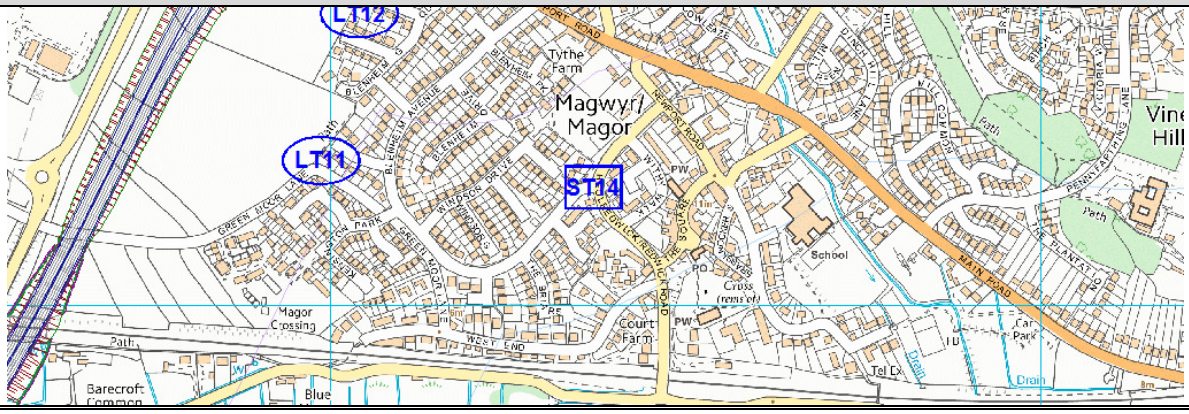
Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Road traffic, including buses, HGVs and tractors.
Other – Bird song, people talking, aircraft noise, bus stop nearby, buses idling.

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Same as above

Survey location



BASELINE SOUND MONITORING SURVEY REPORT FORM

	ST14 Magor, Redwick Road and Blenheim Avenue			
Period	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
3 hr day	57	76-79	61	40
18 hr day	-	-	60	-

Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
30/06/2015 10:30	01:00:00	57.4	78.4	60.8	39.6
30/06/2015 11:30	01:00:00	57.9	78.6	61.9	40.9
30/06/2015 12:30	01:00:00	56.8	75.9	61.1	38.7

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	ST15 36 Western Avenue				
Personnel (start/end)	MF	MF	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991	
Purpose of Monitoring	Baseline				
SLM ID (ID/make/model/serial number)	# 114R (loan) Rion NL-52 620880		**Calibrator at Start** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	94.0 dB
Sample period **Dynamic Range** **Weighting**	100ms 20-130 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	94.1 dB
Filename	115		**Memory Card ID**	16GB	
Start Date	13 /07/15		**End Date**	13/07/15	
Start Time	14:10		**End Time**	17:10	
Microphone Height	1.5 m		**Façade / Free-field**	Free-field	
Photo taken identifying location with equipment installed?				Yes	

BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	0 m/s 0.1 m/s 0.3 m/s	N W E S	**Wind Speed & Direction** (make 3 wind speed measurements and average)	0 m/s 0.1 m/s 0.3 m/s	N W E S
Precipitation	Light rain		**Precipitation**	Light rain	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	8		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	8	
Temperature	16 ºC		**Temperature**	16 ºC	
Relative Humidity	75 %		**Relative Humidity**	75 %	
Subjective Description (fog/visibility/ground conditions)	Cloudy, damp, light rain at start.		**Subjective Description** (fog/visibility/ground conditions)	Cloudy, damp, light rain.	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

Rear garden of 36 Western Avenue approx. 15 m from house.
Ground damp but not soaked (no puddled water).

Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

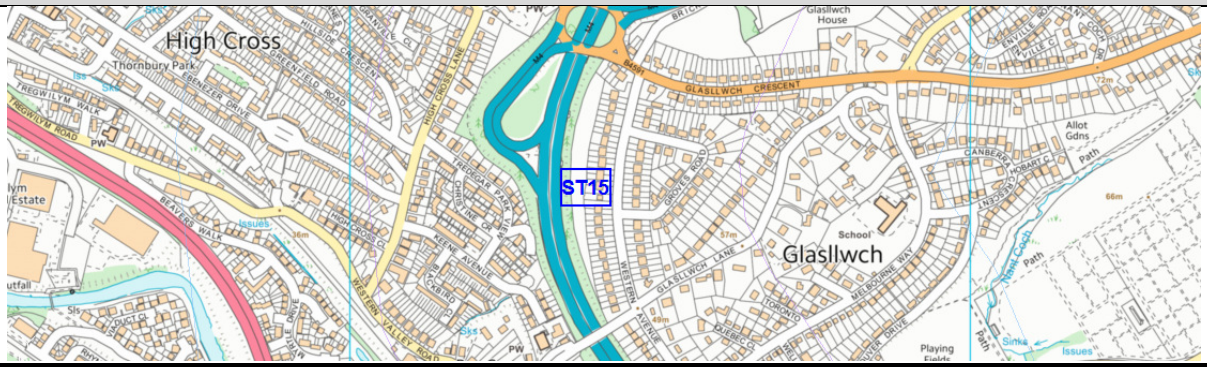
Dominant – Road traffic (M4).

Other – Aircraft noise, road traffic (Western Avenue), police sirens.

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Same as above
Note: Light rain at start then patches of rain throughout

Survey location



BASELINE SOUND MONITORING SURVEY REPORT FORM

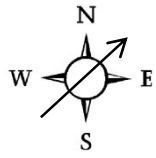
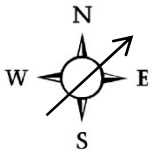
	ST15 36 Western Avenue			
Period	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
3 hr day	63	69-75	64	61
18 hr day	-	-	63	-

Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
13/07/2015 14:10	01:00:00	62.6	74.9	63.7	61.3
13/07/2015 15:10	01:00:00	62.9	70	63.8	61.6
13/07/2015 16:10	01:00:00	62.4	69.2	63.3	61.4

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	ST16 Near rear garden of 96 Highcross Road, Newport N 51º 35' 13.4" W 3º 2' 10.6"				
Personnel (start/end)	PB	PB	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991	
Purpose of Monitoring	Baseline				
SLM ID (ID/make/model/serial number)	# 100 Rion NA-28 1291243		**Calibrator at Start** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	94.0 dB
Sample period **Dynamic Range** **Weighting**	100ms 20-110 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	94.0 dB
Filename	0116		**Memory Card ID**	~	
Start Date	07/07/15		**End Date**	07/07/15	
Start Time	12:04		**End Time**	15:04	
Microphone Height	1.5 m		**Façade / Free-field**	Free-field	
Photo taken identifying location with equipment installed?				Yes	

BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	- 3 m/s -		**Wind Speed & Direction** (make 3 wind speed measurements and average)	- 2 m/s -	
Precipitation	None		**Precipitation**	Light rain	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	3		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	3	
Temperature	20 ºC		**Temperature**	20 ºC	
Relative Humidity	60 %		**Relative Humidity**	60 %	
Subjective Description (fog/visibility/ground conditions)	Clear, hot, sunny, windy.		**Subjective Description** (fog/visibility/ground conditions)	Clear, hot, sunny, light wind.	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

Footpath adjacent Highcross Road.

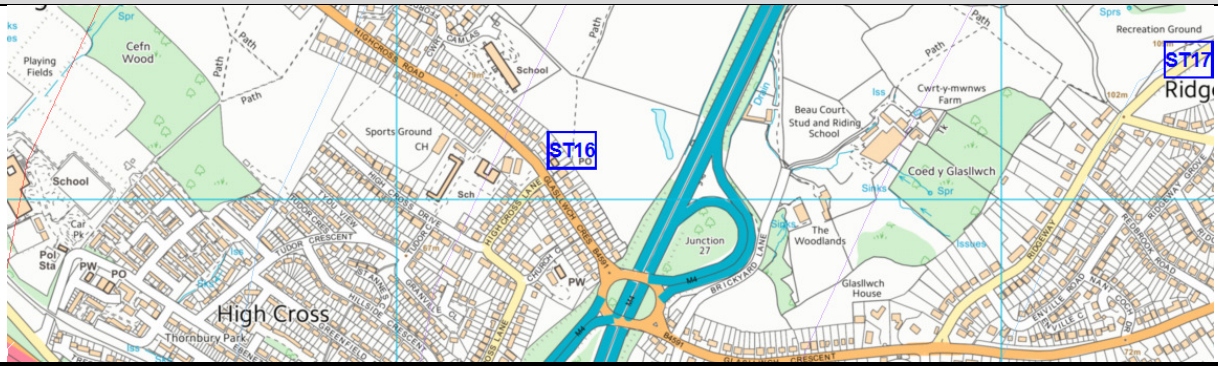
Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Road traffic (M4).
Other – Road traffic (local), bird song, insects, wind rustle, distant sirens, aircraft noise.

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Same as above

Survey location



BASELINE SOUND MONITORING SURVEY REPORT FORM

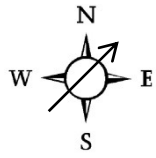
	ST16 Near rear garden of 96 Highcross Road, Newport			
Period	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
3 hr day	53	71-80	54	51
18 hr day	-	-	53	-

Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
07/07/2015 12:03	01:00:00	52.8	79.9	53.9	50.2
07/07/2015 13:03	01:00:00	53.4	70.5	54.8	51.5
07/07/2015 14:03	01:00:00	52.9	77.2	54	50.8

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	ST17 Allt-Yr-Yn Avenue				
Personnel (start/end)	MF	MF	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991	
Purpose of Monitoring	Baseline				
SLM ID (ID/make/model/serial number)	# 114R (loan) Rion NL-52 620880		**Calibrator at Start** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	94.0 dB
Sample period **Dynamic Range** **Weighting**	100ms 20-130 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	94.0 dB
Filename	117		**Memory Card ID**	16GB	
Start Date	08/07/15		**End Date**	08/07/15	
Start Time	10:00		**End Time**	13:00	
Microphone Height	1.5 m		**Façade / Free-field**	Free-field	
Photo taken identifying location with equipment installed?				Yes	

BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	1.2 m/s 2.6 m/s 3.8 m/s		**Wind Speed & Direction** (make 3 wind speed measurements and average)	0.8 m/s 2.2 m/s 4.1 m/s	
Precipitation	Light rain before survey		**Precipitation**	Light drizzle during survey	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	6		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	7	
Temperature	16 ºC		**Temperature**	18 ºC	
Relative Humidity	65 %		**Relative Humidity**	70 %	
Subjective Description (fog/visibility/ground conditions)	Slightly damp but drying quickly, cloudy.		**Subjective Description** (fog/visibility/ground conditions)	Slightly damp but drying quickly, cloudy.	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

On grass verge approx 1 m high and approx. 5 m north of Allt-Yr-Yn Avenue.

Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

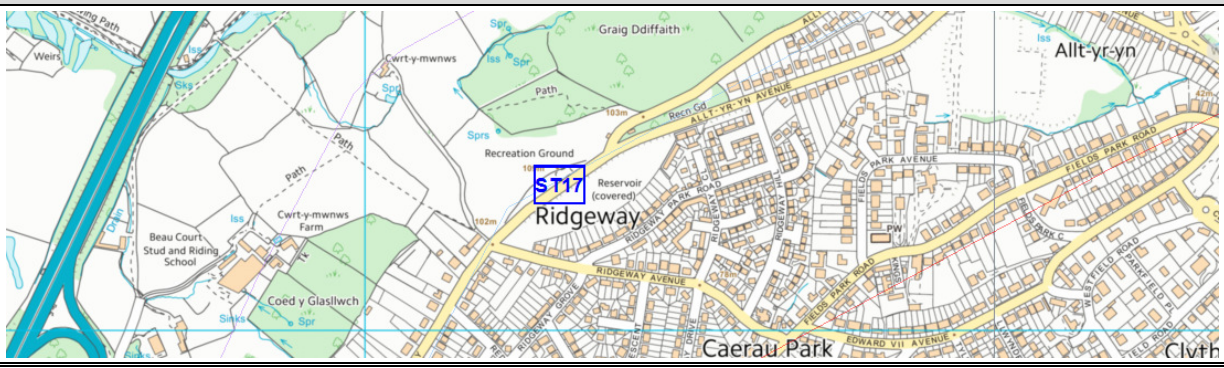
Dominant – Road traffic (M4).

Other – Aircraft noise, road traffic (Allt-Yr-Yn Avenue), bird song, lorry reversing noise, trees and bushes rustling.

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Note: Light drizzle 11:40-11:45 12:30-12:35
Gusts of 5 m/s

Survey location



BASELINE SOUND MONITORING SURVEY REPORT FORM

	ST15 36 Western Avenue			
Period	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
3 hr day	58	73-82	62	53
18 hr day	-	-	61	-

Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
08/07/2015 10:00	01:00:00	58.2	72.7	61.4	53.7
08/07/2015 11:00	01:00:00	58.7	81.5	61.8	53.4
08/07/2015 12:00	01:00:00	58.2	76.6	61.3	53.3

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	Alt ST18 Footpath behind Goodrich Crescent				
Personnel (start/end)	MF	MF	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991	
Purpose of Monitoring	Baseline				
SLM ID (ID/make/model/serial number)	# 114R (loan) Rion NL-52 620880		**Calibrator at Start** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	94.0 dB
Sample period **Dynamic Range** **Weighting**	100ms 20-130 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	94.1 dB
Filename	118		**Memory Card ID**	16GB	
Start Date	08/07/15		**End Date**	08/07/15	
Start Time	14:10		**End Time**	17:10	
Microphone Height	1.5 m		**Façade / Free-field**	Free-field	
Photo taken identifying location with equipment installed?				Yes	

BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	0.1m/s 0.3 m/s 0.5 m/s		**Wind Speed & Direction** (make 3 wind speed measurements and average)	0 m/s 0.2 m/s 0.4 m/s	
Precipitation	None		**Precipitation**	None	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	5		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	4	
Temperature	17 ºC		**Temperature**	18 ºC	
Relative Humidity	70 %		**Relative Humidity**	64 %	
Subjective Description (fog/visibility/ground conditions)	Dry, gentle breeze		**Subjective Description** (fog/visibility/ground conditions)	Dry, gentle breeze	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

On tarmacked footpath behind Goodrich Crescent approx. 4 m east of still river.

Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

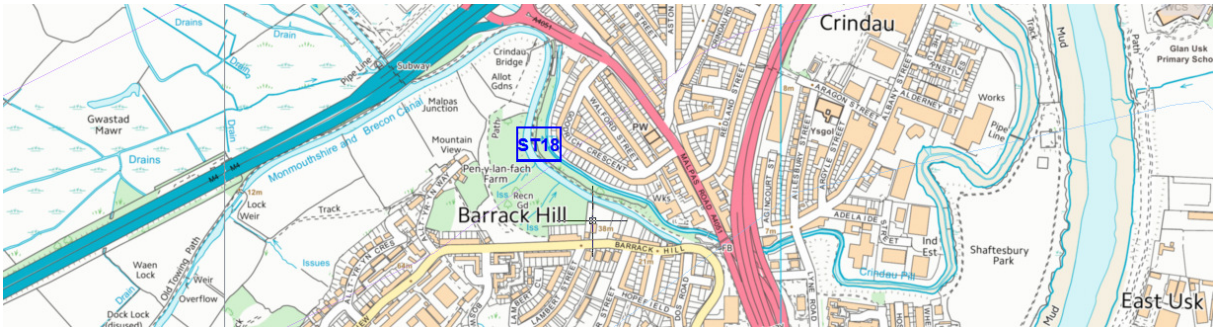
Dominant – Road traffic (M4).

Other – Bird song, People walking and talking, dogs barking.

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Same as above

Survey location



BASELINE SOUND MONITORING SURVEY REPORT FORM

	Alt ST18 Footpath behind Goodrich Crescent			
Period	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
3 hr day	53	69-79	54	49
18 hr day	-	-	53	-

Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
08/07/2015 14:11	01:00:00	53.3	79.1	53.8	48.7
08/07/2015 15:11	01:00:00	53.0	68.7	54.8	49.7
08/07/2015 16:11	01:00:00	52.3	78.2	54.5	48.0

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	ST19 Land off Pant Road				
Personnel (start/end)	MF	MF	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991	
Purpose of Monitoring	Baseline				
SLM ID (ID/make/model/serial number)	# 114R (loan) Rion NL-52 620880		**Calibrator at Start** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	94.0 dB
Sample period **Dynamic Range** **Weighting**	100ms 20-130 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	94.0 dB
Filename	119		**Memory Card ID**	16GB	
Start Date	15/07/15		**End Date**	15/07/15	
Start Time	12:30		**End Time**	15:30	
Microphone Height	1.5 m		**Façade / Free-field**	Free-field	
Photo taken identifying location with equipment installed?				Yes	

BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	0.1m/s 0.2 m/s 0.2 m/s		**Wind Speed & Direction** (make 3 wind speed measurements and average)	0.1m/s 0.2 m/s 0.2 m/s	
Precipitation	None		**Precipitation**	None	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	7		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	7	
Temperature	23 ºC		**Temperature**	23 ºC	
Relative Humidity	59 %		**Relative Humidity**	59 %	
Subjective Description (fog/visibility/ground conditions)	Dry, cloudy, gentle breeze		**Subjective Description** (fog/visibility/ground conditions)	Dry, cloudy, gentle breeze	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

On concrete at land off Pant Road approx. 3m from walls to the west and east.
Approx 15 m from M4 (approx 4 m above monitoring position).

Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

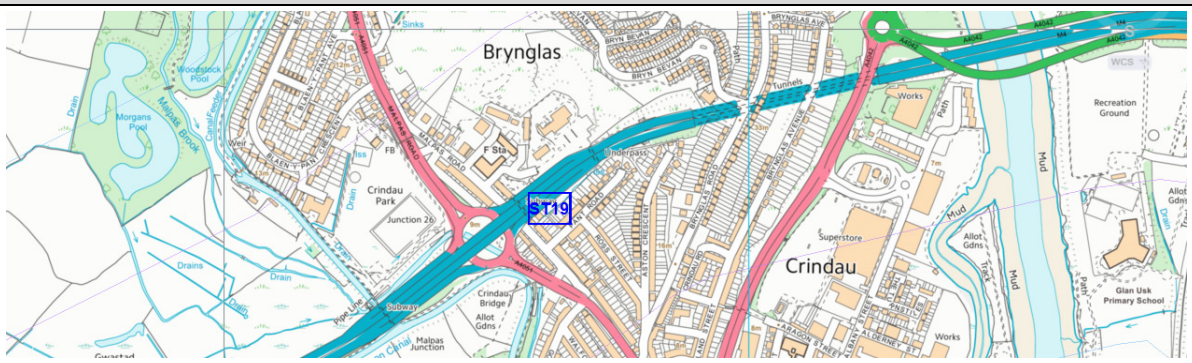
Dominant – Road traffic (M4).

Other – Bird song, People walking and talking, dogs barking, nearby house hammering intermittently.

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Same as above

Survey location



BASELINE SOUND MONITORING SURVEY REPORT FORM

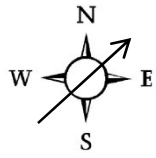
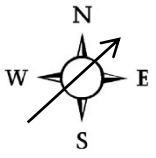
	ST19 Land off Pant Road			
Period	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
3 hr day	60	80-84	62	56
18 hr day	-	-	61	-

Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
15/07/2015 12:31	01:00:00	59.9	83.5	61.7	55.2
15/07/2015 13:31	01:00:00	60.1	79.7	62.2	55.6
15/07/2015 14:31	01:00:00	59.9	80.8	61.8	55.9

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	ST21 16 Harrogate Road N 51º 36' 12" W 2º 58' 58.5"				
Personnel (start/end)	MF	MF	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991	
Purpose of Monitoring	Baseline				
SLM ID (ID/make/model/serial number)	# 100 Rion NA-28 1291243		**Calibrator at Start** (Cal. ID/Cal. Level)	#33 Rion NC-74 34472822	94.0 dB
Sample period **Dynamic Range** **Weighting**	100ms 20-110 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#33 Rion NC-74 34472822	94.0 dB
Filename	0121		**Memory Card ID**	~	
Start Date	08/07/15		**End Date**	08/07/15	
Start Time	13:51		**End Time**	16:51	
Microphone Height	1.5 m		**Façade / Free-field**	Free-field	
Photo taken identifying location with equipment installed?				Yes	

BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	- 2 m/s -		**Wind Speed & Direction** (make 3 wind speed measurements and average)	- 2 m/s -	
Precipitation	None		**Precipitation**	None	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	3		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	2	
Temperature	20 ºC		**Temperature**	22 ºC	
Relative Humidity	50 %		**Relative Humidity**	50 %	
Subjective Description (fog/visibility/ground conditions)	Clear, warm, sunny.		**Subjective Description** (fog/visibility/ground conditions)	Clear, warm, sunny, light wind.	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

NW corner of rear garden.
Soft and hard ground between garden and road.

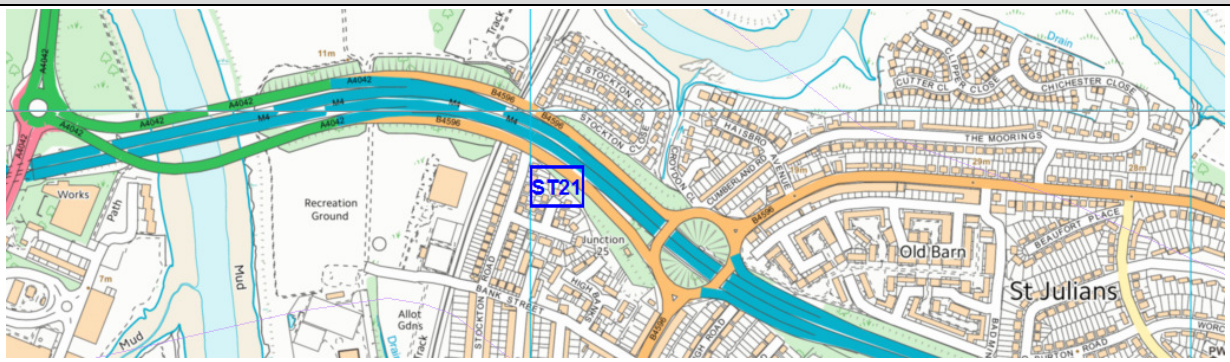
Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Road traffic (M4).
Other – Road traffic (local), bird song, wind rustle, sirens, faint water fountain noise.

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Same as above

Survey location



BASELINE SOUND MONITORING SURVEY REPORT FORM

	ST21 16 Harrogate Road			
Period	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
3 hr day	63	69-79	64	61
18 hr day	-	-	63	-

Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
08/07/2015 13:51	01:00:00	63.2	79.3	64.8	61.1
08/07/2015 14:51	01:00:00	63.1	71.7	64.6	61.3
08/07/2015 15:51	01:00:00	62.5	69	64	60.6

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	ST22 140 Beaufort Road (rear garden)			
Personnel (start/end)	MF	MF	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991
Purpose of Monitoring	Baseline			
SLM ID (ID/make/model/serial number)	# 114R (loan) Rion NL-52 620880		**Calibrator at Start** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090 — 94.0 dB
Sample period **Dynamic Range** **Weighting**	100ms 20-130 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090 — 94.0 dB
Filename	122		**Memory Card ID**	16GB
Start Date	14/07/15		**End Date**	14/07/15
Start Time	14:00		**End Time**	17:00
Microphone Height	1.5 m		**Façade / Free-field**	Free-field
Photo taken identifying location with equipment installed?				Yes

BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	0 m/s 0.1 m/s 0.2 m/s		**Wind Speed & Direction** (make 3 wind speed measurements and average)	0 m/s 0.1 m/s 0.2 m/s	
Precipitation	None		**Precipitation**	None	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	6		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	6	
Temperature	17 ºC		**Temperature**	17 ºC	
Relative Humidity	76 %		**Relative Humidity**	76 %	
Subjective Description (fog/visibility/ground conditions)	Dry, cloudy, gentle breeze.		**Subjective Description** (fog/visibility/ground conditions)	Dry, cloudy, gentle breeze.	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

140 Beaufort Road rear garden on grass. Approximately 20 m from M4.

Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

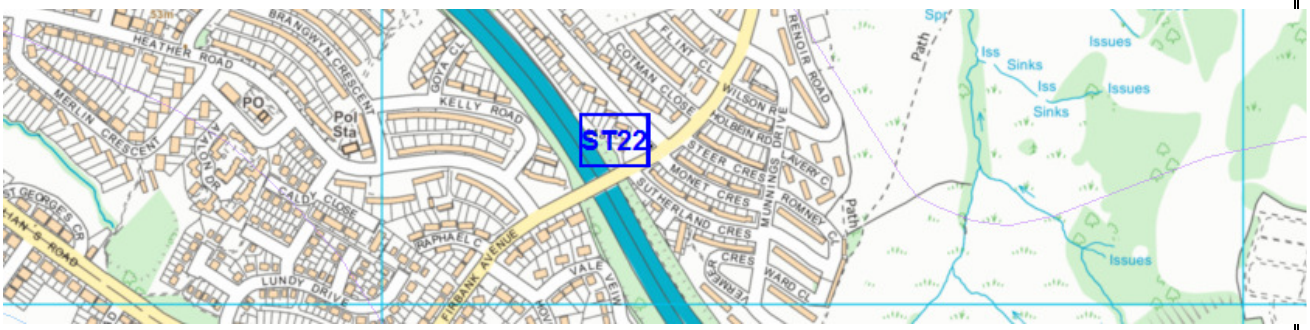
Dominant – Road traffic (M4).

Other – Bird song.

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Same as above

Survey location



BASELINE SOUND MONITORING SURVEY REPORT FORM

	ST22 140 Beaufort Road (rear garden)			
Period	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
3 hr day	63	69-79	64	61
18 hr day	-	-	63	-

Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
08/07/2015 13:51	01:00:00	63.2	79.3	64.8	61.1
08/07/2015 14:51	01:00:00	63.1	71.7	64.6	61.3
08/07/2015 15:51	01:00:00	62.5	69	64	60.6

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	ST23 rear of Christchurch Road				
Personnel (start/end)	MF	MF	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991	
Purpose of Monitoring	Baseline				
SLM ID (ID/make/model/serial number)	# 114R (loan) Rion NL-52 620880		**Calibrator at Start** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	94.0 dB
Sample period **Dynamic Range** **Weighting**	100ms 20-130 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	94.0 dB
Filename	123		**Memory Card ID**	16GB	
Start Date	10/07/15		**End Date**	10/07/15	
Start Time	10:40		**End Time**	13:40	
Microphone Height	1.5 m		**Façade / Free-field**	Free-field	
Photo taken identifying location with equipment installed?				Yes	

BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	0 m/s 1.2 m/s 0.5 m/s		**Wind Speed & Direction** (make 3 wind speed measurements and average)	- 0.5 m/s -	
Precipitation	None		**Precipitation**	None	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	3		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	3	
Temperature	22 ºC		**Temperature**	22 ºC	
Relative Humidity	55 %		**Relative Humidity**	55 %	
Subjective Description (fog/visibility/ground conditions)	Dry, sunny, slight breeze.		**Subjective Description** (fog/visibility/ground conditions)	Dry, sunny, slight breeze.	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

On grassland to the north of Christchurch Road. Approximately 25 m from M4.

Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Dominant – Road traffic (M4).

Other – Bird song, sirens, dogs barking, people talking.

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Same as above

Survey location

BASELINE SOUND MONITORING SURVEY REPORT FORM

	ST23 rear of Christchurch Road			
Period	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
3 hr day	69	76-78	70	66
18 hr day	-	-	69	-

Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
10/07/2015 10:40	01:00:00	68.5	77.5	70	66.3
10/07/2015 11:40	01:00:00	68.6	78.1	70.1	66.7
10/07/2015 12:40	01:00:00	68.4	76.2	69.9	66.2

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	Alt ST24 Land off Royal Oak Hill				
Personnel (start/end)	MF	MF	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991	
Purpose of Monitoring	Baseline				
SLM ID (ID/make/model/serial number)	# 114R (loan) Rion NL-52 620880		**Calibrator at Start** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	94.0 dB
Sample period **Dynamic Range** **Weighting**	100ms 20-130 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	94.0 dB
Filename	124		**Memory Card ID**	16GB	
Start Date	16/07/15		**End Date**	16/07/15	
Start Time	10:20		**End Time**	13:20	
Microphone Height	1.5 m		**Façade / Free-field**	Free-field	
Photo taken identifying location with equipment installed?				Yes	

BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	0 m/s 0.1 m/s -		**Wind Speed & Direction** (make 3 wind speed measurements and average)	- 0 m/s -	
Precipitation	None		**Precipitation**	None	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	8		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	8	
Temperature	18 ºC		**Temperature**	18 ºC	
Relative Humidity	62 %		**Relative Humidity**	62 %	
Subjective Description (fog/visibility/ground conditions)	Dry, cloudy, gentle breeze		**Subjective Description** (fog/visibility/ground conditions)	Dry, cloudy, gentle breeze	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

On grass verge west of Royal Oak Hill, approximately 30 m from M4.

Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

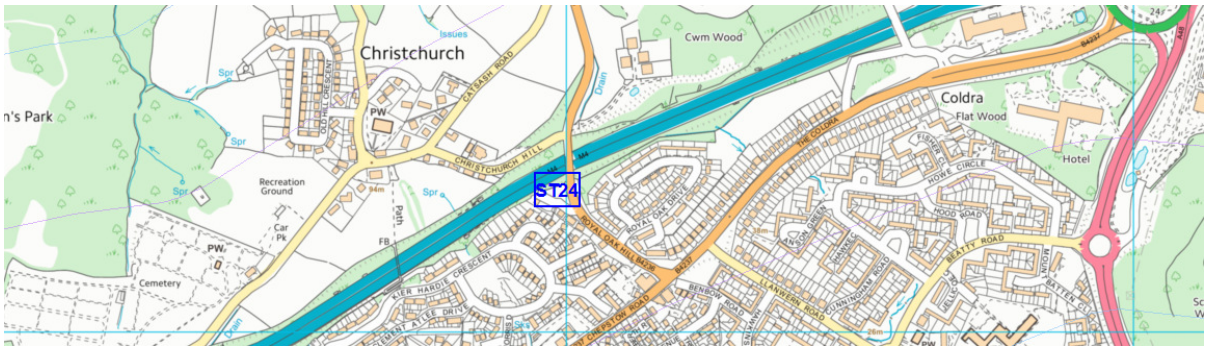
Dominant – Road traffic (M4).

Other – Road traffic (Royal Oak Hill).

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Same as above

Survey location



BASELINE SOUND MONITORING SURVEY REPORT FORM

	Alt ST24 Land off Royal Oak Hill			
Period	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
3 hr day	66	75-80	67	64
18 hr day	-	-	66	-

Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
16/07/2015 10:18	01:00:00	66	75	67.5	63.7
16/07/2015 11:18	01:00:00	65.8	75.1	67.2	63.9
16/07/2015 12:18	01:00:00	65.9	79.7	67.3	64.1

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	ST25 27 Blossom Close (rear garden)				
Personnel (start/end)	MF	MF	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991	
Purpose of Monitoring	Baseline				
SLM ID (ID/make/model/serial number)	# 114R (loan) Rion NL-52 620880		**Calibrator at Start** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	94.0 dB
Sample period **Dynamic Range** **Weighting**	100ms 20-130 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	94.0 dB
Filename	125		**Memory Card ID**	16GB	
Start Date	09/07/15		**End Date**	09/07/15	
Start Time	10:00		**End Time**	13:00	
Microphone Height	1.5 m		**Façade / Free-field**	Free-field	
Photo taken identifying location with equipment installed?				Yes	

BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	0.1 m/s 0.2 m/s 0.4 m/s		**Wind Speed & Direction** (make 3 wind speed measurements and average)	0.1 m/s 0.2 m/s 0.4 m/s	
Precipitation	None		**Precipitation**	None	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	3		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	3	
Temperature	22 ºC		**Temperature**	22 ºC	
Relative Humidity	46 %		**Relative Humidity**	46 %	
Subjective Description (fog/visibility/ground conditions)	Dry, sunny, gentle breeze		**Subjective Description** (fog/visibility/ground conditions)	Dry, sunny, gentle breeze	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

In rear garden of 27 Blossom Close, on pebbled ground, approximately 1 m above ground level of house. Approximately 20 m from end of garden. Heavily planted garden which is on an approximately 30 degree upwards slope.

Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

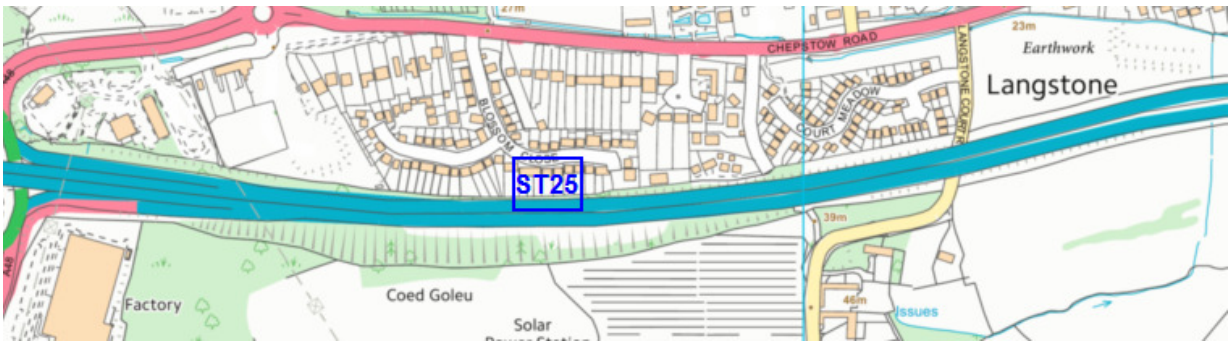
Dominant – Road traffic (M4).

Other – Bird song, dogs barking, car horns, recycling collecting at the front of house.

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Same as above

Survey location



BASELINE SOUND MONITORING SURVEY REPORT FORM

	ST25 27 Blossom Close (rear garden)			
Period	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
3 hr day	57	68-86	59	55
18 hr day	-	-	58	-

Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
09/07/2015 10:00	01:00:00	56.6	69	58.4	53.9
09/07/2015 11:00	01:00:00	57.2	68.3	59	54.4
09/07/2015 12:00	01:00:00	58.3	86.4	59.7	55.5

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	ST26 Land adjacent to Waltwood Park Drive				
Personnel (start/end)	MF	MF	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991	
Purpose of Monitoring	Baseline				
SLM ID (ID/make/model/serial number)	# 114R (loan) Rion NL-52 620880		**Calibrator at Start** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	94.0 dB
Sample period **Dynamic Range** **Weighting**	100ms 20-130 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	93.9 dB
Filename	126		**Memory Card ID**	16GB	
Start Date	09/07/15		**End Date**	09/07/15	
Start Time	13:50		**End Time**	16:50	
Microphone Height	1.5 m		**Façade / Free-field**	Free-field	
Photo taken identifying location with equipment installed?				Yes	

BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	0.1 m/s 0.5 m/s 1.2 m/s	N W E S	**Wind Speed & Direction** (make 3 wind speed measurements and average)	- 0.5 m/s -	N W E S
Precipitation	None		**Precipitation**	None	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	5		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	5	
Temperature	22 ºC		**Temperature**	22 ºC	
Relative Humidity	44 %		**Relative Humidity**	44%	
Subjective Description (fog/visibility/ground conditions)	Dry, sunny, slight breeze.		**Subjective Description** (fog/visibility/ground conditions)	Dry, sunny, slight breeze.	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

On grassland adjacent to Waltwood Park Drive.

Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

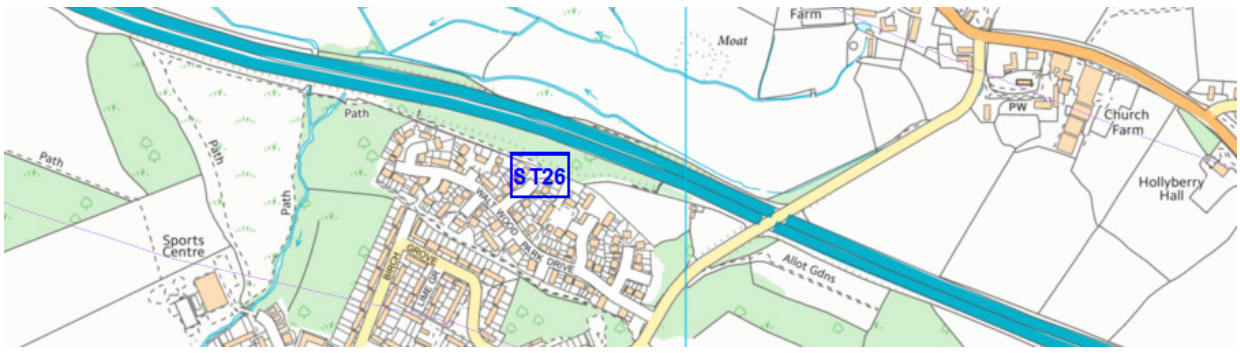
Dominant – Road traffic (M4).

Other – Bird song, aircraft noise, drilling from nearby house.

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Same as above

Survey location



BASELINE SOUND MONITORING SURVEY REPORT FORM

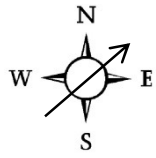
	ST26 Land adjacent to Waltwood Park Drive			
Period	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
3 hr day	59	66-71	61	57
18 hr day	-	-	60	-

Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
09/07/2015 13:49	01:00:00	59	66	60.7	56.6
09/07/2015 14:49	01:00:00	59	70.3	60.7	56.6
09/07/2015 15:49	01:00:00	58.7	71.4	60.2	56.6

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	ST27 Near Waun-arw, NW of Magor				
Personnel (start/end)	MF	MF	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991	
Purpose of Monitoring	Baseline				
SLM ID (ID/make/model/serial number)	# 114R (loan) Rion NL-52 620880		**Calibrator at Start** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	94.0 dB
Sample period **Dynamic Range** **Weighting**	100ms 20-130 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	94.0 dB
Filename	127		**Memory Card ID**	16GB	
Start Date	16/07/15		**End Date**	16/07/15	
Start Time	13:55		**End Time**	16:55	
Microphone Height	1.5 m		**Façade / Free-field**	Free-field	
Photo taken identifying location with equipment installed?				Yes	

BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	1.5 m/s 2.3 m/s 3 m/s		**Wind Speed & Direction** (make 3 wind speed measurements and average)	1.5 m/s 2.3 m/s 3 m/s	
Precipitation	None		**Precipitation**	None	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	4		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	4	
Temperature	23 ºC		**Temperature**	23 ºC	
Relative Humidity	55 %		**Relative Humidity**	55 %	
Subjective Description (fog/visibility/ground conditions)	Dry, sunny, slightly windy.		**Subjective Description** (fog/visibility/ground conditions)	Dry, sunny, slightly windy.	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

On grass approximately 3 m from track to the east and approximately 15 m from pond to the south.

Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

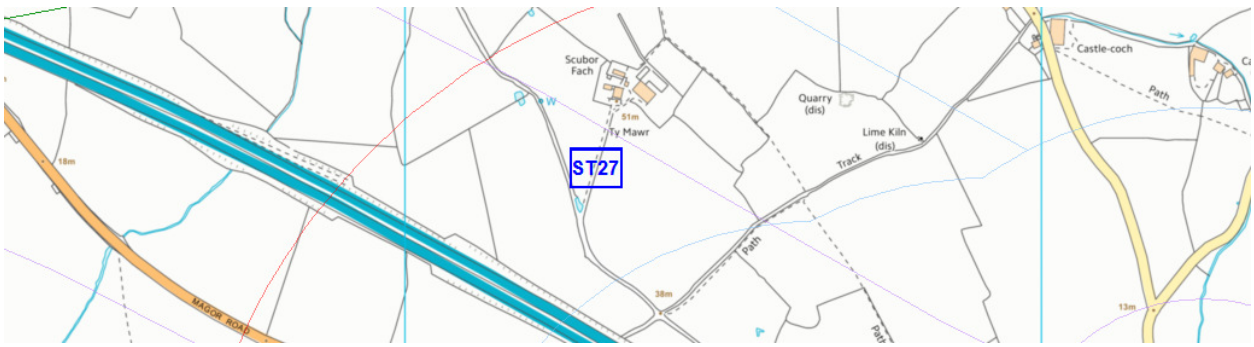
Dominant – Road traffic (M4).

Other – Bird song, occasional car driving to farm on the track, horse walking past.

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Same as above

Survey location



BASELINE SOUND MONITORING SURVEY REPORT FORM

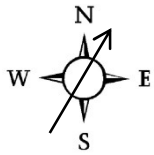
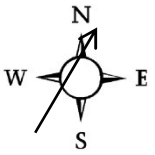
	ST5 End of Kidwelly Close, Duffryn			
Period	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
3 hr day	56	67-72	58	52
18 hr day	-	-	57	-

Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
16/07/2015 13:55	01:00:00	56	72	58.1	52.7
16/07/2015 14:55	01:00:00	56	71.5	58.4	52.1
16/07/2015 15:55	01:00:00	54.6	67.2	56.6	51.8

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	ST28 Magor Marsh Reserve (Western Boundary)				
Personnel (start/end)	PB	PB	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991	
Purpose of Monitoring	Baseline				
SLM ID (ID/make/model/serial number)	# 100 Rion NA-28 12912943		**Calibrator at Start** (Cal. ID/Cal. Level)	#33 Rion NC-74 34472822	94.0 dB
Sample period **Dynamic Range** **Weighting**	1 hr 20-110 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#33 Rion NC-74 34472822	94.0 dB
Filename	0128		**Memory Card ID**	~	
Start Date	08/07/15		**End Date**	08/07/15	
Start Time	10:02		**End Time**	10:02	
Microphone Height	1.5 m		**Façade / Free-field**	Free-field	
Photo taken identifying location with equipment installed?				Yes	

BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	- 3 m/s -		**Wind Speed & Direction** (make 3 wind speed measurements and average)	- 3 m/s -	
Precipitation	None		**Precipitation**	None	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	7		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	6	
Temperature	20 ºC		**Temperature**	20 ºC	
Relative Humidity	50 %		**Relative Humidity**	50%	
Subjective Description (fog/visibility/ground conditions)	Clear, dry, sunny, windy		**Subjective Description** (fog/visibility/ground conditions)	Clear, dry, sunny, windy	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

On lane, mix of hard and soft ground to road.

Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

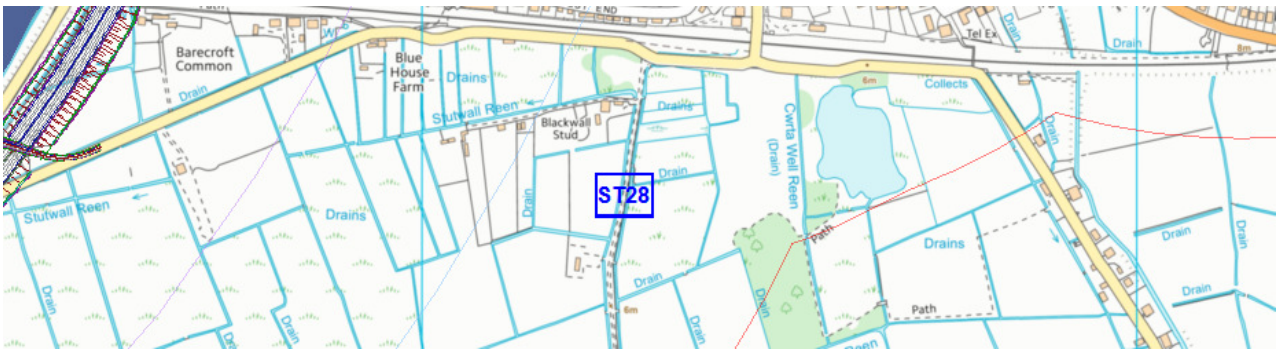
Dominant – Distant road traffic.

Other – Cars driving on lane, bird song, insects, distant industrial noise (metal clanging, engines etc.), wind rustle, distant sirens, helicopter.

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Same as above

Survey location



BASELINE SOUND MONITORING SURVEY REPORT FORM

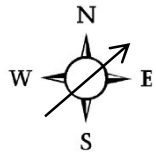
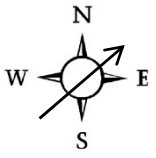
	ST28 Magor Marsh Reserve (Western Boundary)			
Period	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
3 hr day	52	70-76	54	45
18 hr day	-	-	53	-

Start	**Valid Time**	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
08/07/2015 10:02	01:00:00	51.9	75.9	53.9	44.0
08/07/2015 11:02	01:00:00	52.0	70.7	54.8	46.8
08/07/2015 12:02	01:00:00	51.2	69.8	54.5	45.6

BASELINE SOUND MONITORING SURVEY REPORT FORM

Location (ID/Address/Coordinates)	ST29 Land off Watch House Parade				
Personnel (start/end)	MF	MF	**Relevant Guidance BS / ISO Standard**	BS 7445-1:2003 BS 7445-2:1991	
Purpose of Monitoring	Baseline				
SLM ID (ID/make/model/serial number)	# 114R (loan) Rion NL-52 620880		**Calibrator at Start** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	94.0 dB
Sample period **Dynamic Range** **Weighting**	100ms 20-130 dB AF		**Calibrator at End** (Cal. ID/Cal. Level)	#15 Rion NC-74 110090	94.0 dB
Filename	129		**Memory Card ID**	16GB	
Start Date	14/07/15		**End Date**	14/07/15	
Start Time	10:00		**End Time**	13:00	
Microphone Height	1.5 m		**Façade / Free-field**	Free-field	
Photo taken identifying location with equipment installed?				Yes	

BASELINE SOUND MONITORING SURVEY REPORT FORM

Weather at Start			Weather at End		
Wind Speed & Direction (make 3 wind speed measurements and average)	0.3 m/s 1.4 m/s 2 m/s		**Wind Speed & Direction** (make 3 wind speed measurements and average)	0.3 m/s 1.4 m/s 2 m/s	
Precipitation	Light mist of rain		**Precipitation**	Light mist of rain	
Cloud Cover (0% = 0 oktas) (100% = 8 oktas)	8		**Cloud Cover** (0% = 0 oktas) (100% = 8 oktas)	8	
Temperature	18 ºC		**Temperature**	18 ºC	
Relative Humidity	77 %		**Relative Humidity**	77 %	
Subjective Description (fog/visibility/ground conditions)	Dry ground, cloudy, slightly windy		**Subjective Description** (fog/visibility/ground conditions)	Dry ground, cloudy, slightly windy	

Description of site
(location of equipment, general surroundings, nature of ground between noise sensitive receptor and sound source e.g. hard/soft ground, topography, intervening features)

On grass verge off Watch House Parade.
Approx 20 m from 2 m high wooden fence which is screening A48.

Description of sound environment at start of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

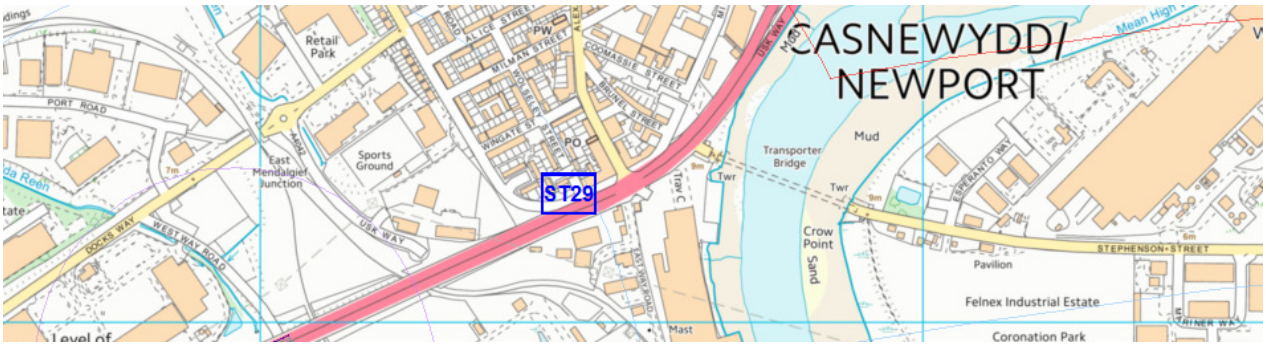
Dominant – Road traffic (A48).

Other – Bird song, police siren, people walking and talking, car horns.

Description of sound environment at end of survey
(general observations on principal environmental and natural sound sources, including which sources are dominant, if baseline surveying for introduction of new source then consider the character of the existing sound environment compared to the character of the new source)

Same as above

Survey location



BASELINE SOUND MONITORING SURVEY REPORT FORM

	ST29 Land off Watch House Parade			
Period	**L_{Aeq} (dB)**	**L_{AFmax} (dB)**	**L_{A10} (dB)**	**L_{A90} (dB)**
3 hr day	61	73-79	63	57
18 hr day	-	-	62	-

Start	Valid Time	L_{Aeq} (dB)	L_{AFmax} (dB)	L_{A10} (dB)	L_{A90} (dB)
14/07/2015 10:00	01:00:00	60.4	74	62.7	56.5
14/07/2015 11:00	01:00:00	60.8	73	63.3	56.9
14/07/2015 12:00	01:00:00	60.8	79.4	63.1	56.8

Annex C: Calibration Certificates

CERTIFICATE OF CALIBRATION

Date of Issue: 10 February 2014 **Certificate Number: TCRT14/1047**

Issued by:
ANV Measurement Systems
Beaufort Court
17 Roebuck Way
Milton Keynes MK5 8HL
Telephone 01908 642846 Fax 01908 642814
E-Mail: info@noise-and-vibration.co.uk
Web: www.noise-and-vibration.co.uk
Acoustics Noise and Vibration Ltd trading as ANV Measurement Systems

Approved Signatory

M. Breslin [ ] K. Mistry [ ]

Customer	RPS Planning, Transport and Environment 6-7 Lovers Walk Preston Park Brighton BN1 6AH
Order No.	2014-011
Test Procedure	Procedure TP 1 Calibration of Sound Calibrators
Description	Acoustic Calibrator

Identification	*Manufacturer*	*Instrument*	*Model*	*Serial No.*
	Rion	Calibrator	NC-74	00110118

The calibrator has been tested as specified in Annex B of IEC 60942:2003. As public evidence was available from a testing organisation (PTB) responsible for approving the results of pattern evaluation tests, to demonstrate that the model of sound calibrator fully conformed to the reqirements for pattern evaluation decribed in Annex A of IEC 60942:2003, the sound calibrator tested is considered to conform to all the class 1 requirements of IEC 60942:2003.

ANV Job No.	TRAC14/02032	
Date Received	06 February 2014	
Date Calibrated	10 February 2014	
Previous Certificate	*Dated*	23 September 2011
	Certificate No.	CAL091140
	Laboratory	ANV Measurement Systems

CERTIFICATE OF CALIBRATION

Measurements

The sound pressure level generated by the calibrator in its WS2 configuration was measured five times by the Insert Voltage Method using a microphone as detailed below. The mean of the results obtained is shown below. It is corrected to the standard atmospheric pressure of 101.3 kPa (1013 mBar) using original manufacturers information.

Test Microphone	*Manufacturer*	*Type*
	Brüel & Kjær	4134

Results

The level of the calibrator output under the conditions outlined above was

94.01 ± 0.10 dB rel 20 µPa

Functional Tests and Observations

The frequency of the sound produced was	1002.2 Hz	±	0.13 Hz
The total distortion was	1.18 %	±	6.8 % of Reading

During the measurements environmental conditions were

Temperature	22	to	23	°C
Relative Humidity	34	to	41	%
Barometric Pressure	98.0	to	98.1	kPa

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with UKAS requirements.

The uncertainties refer to the measured values only with no account being taken of the ability of the instrument to maintain its calibration.

A small correction factor may need to be applied to the sound pressure level quoted above if the device is used to calibrate a sound level meter which is fitted with a free-field response microphone. See manufacturers handbook for details.

..... END .....

Note:

Calibrator adjusted prior to calibration?	NO	
Initial Level	N/A	dB
Initial Frequency	N/A	Hz

Additional Comments

None

Calibrated by: A Patel

CERTIFICATE OF CALIBRATION

ISSUED BY AV CALIBRATION

Date of issue 11 September 2013 Certificate N° 1309403

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Fax: +44 (0)1462 638601
Email: lab@avcalib.co.uk
www.avcalibration.co.uk
Acoustics Noise and Vibration Ltd trading as AV Calibration

Signed

G. Parry [ ] B. Baker [ ]

CLIENT RPS Group plc
6 - 7 Lover's Walk
Brighton
BN1 6AH

F.A.O. Patrick Hoyle

ORDER No 2013-090 Job No TRAC13/09201/01

DATE OF RECEIPT 04 September 2013

PROCEDURE AV Calibration Engineer's Handbook section 2

IDENTIFICATION Sound Calibrator Rion type NC-74 serial number 00110090 with one-inch housing and adapter type NC-74-002 for half-inch microphone

CALIBRATED ON 11 September 2013

The measurements detailed herein are traceable to units of measurement realised at the National Physical Laboratory.

CERTIFICATE OF CALIBRATION

ISSUED BY AV CALIBRATION

Certificate N° 1309403

MEASUREMENTS

The sound pressure level generated by the Sound Calibrator in its half-inch configuration was measured three times using a B&K type 4134 microphone with the protective grid in position. The microphone sensitivity was traceable to National Standards.

RESULTS

The mean level of the calibrator output, corrected to the standard atmospheric pressure of 101.3 kPa using manufacturers' data, was

93.91 ± 0.13 dB rel 20 µPa

The fundamental frequency of the sound output was 1002 Hz ± 0.06 %, and its total distortion was (1.28 ± 0.09) %.

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor *k*=2, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with the *Guide to the Expression of Uncertainty in Measurement* published by the International Organisation for Standards (ISO).

During the measurements the laboratory environmental conditions were:

Temperature: 22 to 23 ºC
Atmospheric pressure: 101.5 to 101.6 kPa
Relative humidity: 39 to 49 %

NOTE
The instrument was labelled "RPS # 15"

CERTIFICATE OF CALIBRATION

ISSUED BY AV CALIBRATION

Date of issue 13 September 2013 Certificate N° 1309414

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Acoustics Noise and Vibration Ltd trading as AV Calibration

Signed

G. Parry [ ] B. Baker [ ]

CLIENT RPS Group PLC
6-7 Lover's Walk
Brighton
BN1 6AH

F.A.O. Patrick Hoyle

ORDER No 2013-090 Job No TRAC13/09201/05

DATE OF RECEIPT 04 September 2013

PROCEDURE AV Calibration Engineer's Handbook section 3

IDENTIFICATION Sound level meter Rion type NL-32 serial No 00320122 connected via a preamplifier type NH-21 serial No 03843 to a half-inch microphone type UC-53A serial No 102720 fitted with a foam windshield type WS-10. Associated calibrator Rion type NC-74 serial No 34472822 with a one-inch housing and adapter type NC-74-002 for half-inch microphone.

CALIBRATED ON 13 September 2013

CERTIFICATE OF CALIBRATION

ISSUED BY AV CALIBRATION

Certificate N° 1309414

The sound level meter was set to frequency weighting A and adjusted to read 93.8 dB (corresponding to 93.8 dB at standard atmospheric pressure) in response to the sound calibrator supplied. This reading was derived from the Calibration Certificate No. 1309404 supplied by this laboratory and manufacturers' information on the free-field response of the sound level meter when fitted with the windshield.

The sound level meter was then tested, and its overall sensitivity adjusted as required.

An acoustic calibration at 1kHz was performed by application of a standard sound calibrator, whilst the tests at 125Hz and 8kHz were performed by the electrostatic actuator method.

At the end of the test, the sound calibrator was reapplied to the sound level meter and the meter reading was recorded.

RESULTS

The sound level meter was found to conform to the type 1 requirements of BS EN 60651:1994* and BS EN 60804:1994* for those tests carried out.

The self-generated noise recorded was:

8.1 dB (A) 12.4 dB (C) 20.3 dB (Lin)

The sound level meter reading obtained at the end of the test in response to the sound calibrator was 93.8 dB (corresponding to 93.8 dB at standard atmospheric pressure). This reading, corrected for ambient pressure, should be used henceforth to set up the sound level meter for field use.

The expanded level uncertainty of the Laboratory's 1 kHz sound calibrator used during this verification is ± 0.22 dB; that of the calibrator supplied with the sound level meter is ± 0.23 dB.

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with the *Guide to the Expression of Uncertainty in Measurement* published by the International Organisation for Standards (ISO).

All measurement data are held at AV Calibration for a period of at least six years.

Typical case reflection factors specified by the manufacturer have been used for this verification.

The reference range, linearity range and primary indicator range specified by the manufacturer have been used. *See note 5 Below.*

The Rion NL-32 sound level meter design has successfully undergone pattern evaluation at Physikalisch-Technische Bundesanstalt (PTB). It was found to meet the requirements of BS EN 60651* and BS EN 60804* and was granted pattern approval as a Type 1 sound level meter.

No component of uncertainty for manufacturer-specified corrections has been included in the uncertainty budget and, in accordance with amendments to the standards, the measured values obtained during the verification have not been extended by any measurement uncertainty when assessing conformance to the standard.

CERTIFICATE OF CALIBRATION

ISSUED BY AV CALIBRATION

Certificate N°	1309414
Page 3 of 4 Pages	

NOTES

*1 BS EN 60651:1994 and BS EN 60804:1994 were formerly numbered BS 5969:1981 and BS 6698:1986 respectively.

2 No suitable microphone frequency response information was supplied with the instrument. It was therefore measured by this laboratory using the electrostatic actuator method.

3 The instrument was tested with integral software as received.

4 The NL-32 does not have a "max hold" function available when operating with time weighting I. The results recorded for the test of time weighting I are therefore the highest instantaneous reading shown on the display. Whilst these results meet the requirements of the standard, those for response to a single tone burst in particular may give a misleading impression of the accuracy of time weighting I on this instrument.

5 After consultation with the manufacturer and their European agents, it has been established that the specifications given in the standard English-language handbook for the NL-32 are both incomplete and incorrect. An addendum to the handbook based on the PTB tests has been provided by Rion, and this revised specification has been used for the purposes of the present verification. For information, extracts from the addendum have been appended as page 4 of this certificate.

6 Asset RPS#16

CERTIFICATE OF CALIBRATION

ISSUED BY AV CALIBRATION

Certificate N° 1309414

The following data supplied by Rion are included for completeness:

Addendum to the NL-32 Instruction Manual

Errata (page 133):

- Total range: 23 to 137 dB(A).
- Linearity range (on 30 - 120 dB reference range): 99 dB (28 to 127).

Additional information

- Primary indicator range (on 30 - 120 dB reference range): 32 - 111 dB, allowing a crest factor of 10 for Impulse time weighting.
- Pulse range: > 63 dB
- Measurement range for various LEVEL settings: See table below.

Measurement ranges				
Measurement range for various "LEVEL" range settings (dB) * Frequency weighting A-, C- and Lin.				
"LEVEL" Setting (dB)	Time weighting			Leq
	Fast/Slow	Impulse	Peak	
20 - 80	23 - 80 **	23 - 70 **	50 - 90	23 - 87 **
20 - 90	23 - 90 **	23 - 80 **	50 - 100	23 - 97 **
20 - 100	23 - 100 **	23 - 90 **	50 - 110	23 - 107 **
20 - 110	23 - 110 **	23 - 100 **	50 - 120	23 - 117 **
30 - 120	28 - 120 **	28 - 110 **	50 - 130	28 - 127 **
40 - 130	38 - 130	38 - 120	50 - 140	38 - 137
* For time weighting Fast and Slow a crest factor 3, and for time weighting Impulse a crest factor 10, is taken into account. ** The lower limit of the measurement range is 30 dB(C) for C-weighting and 35 dB(Lin) for Lin weighting.				

CERTIFICATE OF CALIBRATION

ISSUED BY AV CALIBRATION

Date of issue 13 September 2013 Certificate N° 1309415

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Email: lab@avcalib.co.uk
www.avcalibration.co.uk
Acoustics Noise and Vibration Ltd trading as AV Calibration

Signed

G. Parry [ ] B. Baker [✓]

CLIENT RPS Group PLC
6-7 Lover's Walk
Brighton
BN1 6AH

F.A.O. Patrick Hoyle

ORDER No 2013-090 Job No TRAC13/09201/06

DATE OF RECEIPT 04 September 2013

PROCEDURE AV Calibration Engineer's Handbook section 3

IDENTIFICATION Sound level meter Rion type NL-32 serial No 00630463 connected via a preamplifier type NH-21 serial No 08161 to a half-inch microphone type UC-53A serial No 304767 fitted with a foam windshield type WS-10. Associated calibrator Rion type NC-74 serial No 34472822 with a one-inch housing and adapter type NC-74-002 for half-inch microphone.

CALIBRATED ON 13 September 2013

CERTIFICATE OF CALIBRATION

ISSUED BY AV CALIBRATION

Certificate N° 1309415

The sound level meter was set to frequency weighting A and adjusted to read 93.8 dB (corresponding to 93.8 dB at standard atmospheric pressure) in response to the sound calibrator supplied. This reading was derived from the Calibration Certificate No. 1309404 supplied by this laboratory and manufacturers' information on the free-field response of the sound level meter when fitted with the windshield.

The sound level meter was then tested, and its overall sensitivity adjusted as required.

An acoustic calibration at 1kHz was performed by application of a standard sound calibrator, whilst the tests at 125Hz and 8kHz were performed by the electrostatic actuator method.

At the end of the test, the sound calibrator was reapplied to the sound level meter and the meter reading was recorded.

RESULTS

The sound level meter was found to conform to the type 1 requirements of BS EN 60651:1994* and BS EN 60804:1994* for those tests carried out.

The self-generated noise recorded was:

9.8 dB (A) 14.9 dB (C) 21.5 dB (Lin)

The sound level meter reading obtained at the end of the test in response to the sound calibrator was 93.8 dB (corresponding to 93.8 dB at standard atmospheric pressure). This reading, corrected for ambient pressure, should be used henceforth to set up the sound level meter for field use.

The expanded level uncertainty of the Laboratory's 1 kHz sound calibrator used during this verification is ± 0.22 dB; that of the calibrator supplied with the sound level meter is ± 0.23 dB.

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with the *Guide to the Expression of Uncertainty in Measurement* published by the International Organisation for Standards (ISO).

All measurement data are held at AV Calibration for a period of at least six years.

Typical case reflection factors specified by the manufacturer have been used for this verification.

The reference range, linearity range and primary indicator range specified by the manufacturer have been used. *See note 5 Below.*

The Rion NL-32 sound level meter design has successfully undergone pattern evaluation at Physikalisch-Technische Bundesanstalt (PTB). It was found to meet the requirements of BS EN 60651* and BS EN 60804* and was granted pattern approval as a Type 1 sound level meter.

No component of uncertainty for manufacturer-specified corrections has been included in the uncertainty budget and, in accordance with amendments to the standards, the measured values obtained during the verification have not been extended by any measurement uncertainty when assessing conformance to the standard.

CERTIFICATE OF CALIBRATION

ISSUED BY AV CALIBRATION

NOTES

*1 BS EN 60651:1994 and BS EN 60804:1994 were formerly numbered BS 5969:1981 and BS 6698:1986 respectively.

2 No suitable microphone frequency response information was supplied with the instrument. It was therefore measured by this laboratory using the electrostatic actuator method.

3 The instrument was tested with integral software as received.

4 The NL-32 does not have a "max hold" function available when operating with time weighting I. The results recorded for the test of time weighting I are therefore the highest instantaneous reading shown on the display. Whilst these results meet the requirements of the standard, those for response to a single tone burst in particular may give a misleading impression of the accuracy of time weighting I on this instrument.

5 After consultation with the manufacturer and their European agents, it has been established that the specifications given in the standard English-language handbook for the NL-32 are both incomplete and incorrect. An addendum to the handbook based on the PTB tests has been provided by Rion, and this revised specification has been used for the purposes of the present verification. For information, extracts from the addendum have been appended as page 4 of this certificate.

6 Asset RPS#19

CERTIFICATE OF CALIBRATION

ISSUED BY AV CALIBRATION

Certificate N° 1309415

The following data supplied by Rion are included for completeness:

Addendum to the NL-32 Instruction Manual

Errata (page 133):

- Total range: 23 to 137 dB(A).
- Linearity range (on 30 - 120 dB reference range): 99 dB (28 to 127).

Additional information

- Primary indicator range (on 30 - 120 dB reference range): 32 - 111 dB, allowing a crest factor of 10 for Impulse time weighting.
- Pulse range: > 63 dB
- Measurement range for various LEVEL settings: See table below.

Measurement ranges

Measurement range for various "LEVEL" range settings (dB) *
Frequency weighting A-, C- and Lin.

"LEVEL" Setting (dB)	Time weighting			Leq
	Fast/Slow	Impulse	Peak	
20 - 80	23 - 80 **	23 - 70 **	50 - 90	23 - 87 **
20 - 90	23 - 90 **	23 - 80 **	50 - 100	23 - 97 **
20 - 100	23 - 100 **	23 - 90 **	50 - 110	23 - 107 **
20 - 110	23 - 110 **	23 - 100 **	50 - 120	23 - 117 **
30 - 120	28 - 120 **	28 - 110 **	50 - 130	28 - 127 **
40 - 130	38 - 130	38 - 120	50 - 140	38 - 137

* For time weighting Fast and Slow a crest factor 3, and for time weighting Impulse a crest factor 10, is taken into account.
** The lower limit of the measurement range is 30 dB(C) for C-weighting and 35 dB(Lin) for Lin weighting.

CERTIFICATE OF CALIBRATION

ISSUED BY AV CALIBRATION

Date of issue 03 December 2014 Certificate N° 1412573

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Signed

G. Parry [ ] B. Baker [ ]

Acoustics Noise and Vibration Ltd trading as AV Calibration

CLIENT RPS Planning & Development Ltd
6 - 7 Lovers Walk
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BN1 6AH

F.A.O. Peter Barling

ORDER No 2014-145 Job No TRAC14/11309/02

DATE OF RECEIPT 25 November 2014

PROCEDURE AV Calibration Engineer's Handbook section 3

IDENTIFICATION Sound level meter Rion type NL-31 serial No 00341534 connected via extension lead type EC-04 and preamplifier type NH-21 serial No 10801 to a half-inch microphone type UC-53A serial No 306052 fitted with a foam windshield type WS-03.

CALIBRATED ON 03 December 2014

CERTIFICATE OF CALIBRATION

ISSUED BY AV CALIBRATION

Certificate N° 1412573

The sound level meter was set to frequency weighting A and adjusted to read correctly in response to a laboratory sound calibrator. This reading took into account manufacturers' information on the free-field response of the sound level meter when fitted with the windshield.

The sound level meter was then tested, and its overall sensitivity adjusted as required.

An acoustic calibration at 1kHz was performed by application of a standard sound calibrator, whilst the tests at 125Hz and 8kHz were performed by the electrostatic actuator method.

RESULTS

The sound level meter was found to conform to the type 1 requirements of BS EN 60651:1994* and BS EN 60804:1994* for those tests carried out.

The self-generated noise recorded was:

16.3 dB (A) 22.2 dB (C) 27.5 dB (Lin)

The expanded level uncertainty of the Laboratory's 1 kHz sound calibrator used during this verification is ± 0.22 dB.

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with the *Guide to the Expression of Uncertainty in Measurement* published by the International Organisation for Standards (ISO).

All measurement data are held at AV Calibration for a period of at least six years.

The case reflection factors have been taken as zero, since an extension lead has been used for this verification.

The reference range, linearity range and primary indicator range specified by the manufacturer have been used. *See note 5 Below.*

The Rion NL-31 sound level meter design has successfully undergone pattern evaluation at Physikalisch-Technische Bundesanstalt (PTB). It was found to meet the requirements of BS EN 60651* and BS EN 60804* and was granted pattern approval as a Type 1 sound level meter.

No component of uncertainty for manufacturer-specified corrections has been included in the uncertainty budget and, in accordance with amendments to the standards, the measured values obtained during the verification have not been extended by any measurement uncertainty when assessing conformance to each standard.

CERTIFICATE OF CALIBRATION

ISSUED BY AV CALIBRATION

NOTES

*1 BS EN 60651:1994 and BS EN 60804:1994 were formerly numbered BS 5969:1981 and BS 6698:1986 respectively.

2 No suitable microphone frequency response information was supplied with the instrument. It was therefore measured by this laboratory using the electrostatic actuator method.

3 The instrument was tested with integral software as received.

4 The NL-31 does not have a "max hold" function available when operating with time weighting I. The results recorded for the test of time weighting I are therefore the highest instantaneous reading shown on the display. Whilst these results meet the requirements of the standard, those for response to a single tone burst in particular may give a misleading impression of the accuracy of time weighting I on this instrument.

5 After consultation with the manufacturer and their European agents, it has been established that the specifications given in the standard English-language handbook for the NL-31 are both incomplete and incorrect. An addendum to the handbook based on the PTB tests has been provided by Rion, and this revised specification has been used for the purposes of the present verification. For information, extracts from the addendum have been appended as page 4 of this certificate.

6 This verification follows repairs carried out on the battery compartment.

7 The meter was labelled "RPS#20".

CERTIFICATE OF CALIBRATION

ISSUED BY AV CALIBRATION

Certificate N° 1412573

The following data supplied by Rion are included for completeness:

Addendum to the NL-31 Instruction Manual

Errata (page 133):

- Total range: 23 to 137 dB(A).
- Linearity range (on 30 - 120 dB reference range): 99 dB (28 to 127).

Additional information

- Primary indicator range (on 30 - 120 dB reference range): 32 - 111 dB, allowing a crest factor of 10 for Impulse time weighting.
- Pulse range: > 63 dB
- Measurement range for various LEVEL settings: See table below.

Measurement ranges

Measurement range for various "LEVEL" range settings (dB) *
Frequency weighting A-, C- and Lin.

"LEVEL" Setting (dB)	Time weighting			Leq
	Fast/Slow	Impulse	Peak	
20 - 80	23 - 80 **	23 - 70 **	50 - 90	23 - 87 **
20 - 90	23 - 90 **	23 - 80 **	50 - 100	23 - 97 **
20 - 100	23 - 100 **	23 - 90 **	50 - 110	23 - 107 **
20 - 110	23 - 110 **	23 - 100 **	50 - 120	23 - 117 **
30 - 120	28 - 120 **	28 - 110 **	50 - 130	28 - 127 **
40 - 130	38 - 130	38 - 120	50 - 140	38 - 137

* For time weighting Fast and Slow a crest factor 3, and for time weighting Impulse a crest factor 10, is taken into account.
** The lower limit of the measurement range is 30 dB(C) for C-weighting and 35 dB(Lin) for Lin weighting.

END

CERTIFICATE OF CALIBRATION

ISSUED BY AV CALIBRATION

Date of issue 23 February 2015 Certificate N° 1502104

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Acoustics Noise and Vibration Ltd trading as AV Calibration

CLIENT	RPS Planning & Development Ltd 6-7 Lovers Walk Brighton East Sussex BN1 6AH
F.A.O.	Peter Barling
ORDER No	2015 009 Job No TRAC15/02037/03
DATE OF RECEIPT	03 February 2015
PROCEDURE	AV Calibration Engineer's Handbook section 3
IDENTIFICATION	Sound level meter Rion type NL-32 serial No 00240644 connected via a preamplifier type NH-21 serial No 13938 to a half-inch microphone type UC-53A serial No 311314 fitted with a foam windshield type WS-10. Associated calibrator Brüel & Kjær type 4231 serial No 2665087 with a one-inch housing and adapter type UC 0210 for half-inch microphone.
CALIBRATED ON	23 February 2015
PREVIOUS CALIBRATION	Calibrated on 19 February 2013, Certificate No. 1302053 issued by this laboratory.

The measurements detailed herein are traceable to units of measurement realised at the National Physical Laboratory.

CERTIFICATE OF CALIBRATION

ISSUED BY AV CALIBRATION

Certificate N° 1502104

The sound level meter was set to frequency weighting A and adjusted to read 93.9 dB (corresponding to 93.9 dB at standard atmospheric pressure) in response to the sound calibrator supplied. This reading was derived from the Calibration Certificate No. 1502102 supplied by this laboratory and manufacturers' information on the free-field response of the sound level meter when fitted with the windshield.

The sound level meter was then tested, and its overall sensitivity adjusted as required.

An acoustic calibration at 1kHz was performed by application of a standard sound calibrator, whilst the tests at 125Hz and 8kHz were performed by the electrostatic actuator method.

At the end of the test, the sound calibrator was reapplied to the sound level meter and the meter reading was recorded.

RESULTS

The sound level meter was found to conform to the type 1 requirements of BS EN 60651:1994* and BS EN 60804:1994* for those tests carried out.

The self-generated noise recorded was:

15.1 dB (A) 23.1 dB (C) 28.1 dB (Lin)

The sound level meter reading obtained at the end of the test in response to the sound calibrator was 93.9 dB (corresponding to 93.9 dB at standard atmospheric pressure). This reading, corrected for ambient pressure, should be used henceforth to set up the sound level meter for field use.

The expanded level uncertainty of the Laboratory's 1 kHz sound calibrator used during this verification is ± 0.24 dB; that of the calibrator supplied with the sound level meter is ± 0.24 dB.

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with the *Guide to the Expression of Uncertainty in Measurement* published by the International Organisation for Standards (ISO).

All measurement data are held at AV Calibration for a period of at least six years.

Typical case reflection factors specified by the manufacturer have been used for this verification.

The reference range, linearity range and primary indicator range specified by the manufacturer have been used. *See note 5 Below.*

The Rion NL-32 sound level meter design has successfully undergone pattern evaluation at Physikalisch-Technische Bundesanstalt (PTB). It was found to meet the requirements of BS EN 60651* and BS EN 60804* and was granted pattern approval as a Type 1 sound level meter.

No component of uncertainty for manufacturer-specified corrections has been included in the uncertainty budget and, in accordance with amendments to the standards, the measured values obtained during the verification have not been extended by any measurement uncertainty when assessing conformance to each standard.

CERTIFICATE OF CALIBRATION

ISSUED BY AV CALIBRATION

NOTES

*1 BS EN 60651:1994 and BS EN 60804:1994 were formerly numbered BS 5969:1981 and BS 6698:1986 respectively.

2 No suitable microphone frequency response information was supplied with the instrument. It was therefore measured by this laboratory using the electrostatic actuator method.

3 The instrument was tested with integral software as received.

4 The NL-32 does not have a "max hold" function available when operating with time weighting I. The results recorded for the test of time weighting I are therefore the highest instantaneous reading shown on the display. Whilst these results meet the requirements of the standard, those for response to a single tone burst in particular may give a misleading impression of the accuracy of time weighting I on this instrument.

5 After consultation with the manufacturer and their European agents, it has been established that the specifications given in the standard English-language handbook for the NL-32 are both incomplete and incorrect. An addendum to the handbook based on the PTB tests has been provided by Rion, and this revised specification has been used for the purposes of the present verification. For information, extracts from the addendum have been appended as page 4 of this certificate.

6 The measurement uncertainty for the output level of each sound calibrator used has been increased slightly to take into account the unusually low atmospheric pressure at the time the verification was carried out.

7 The meter was labelled "RPS#21".

CERTIFICATE OF CALIBRATION

ISSUED BY AV CALIBRATION

Certificate N° 1502104

The following data supplied by Rion are included for completeness:

Addendum to the NL-32 Instruction Manual

Errata (page 133):

- Total range: 23 to 137 dB(A).
- Linearity range (on 30 - 120 dB reference range): 99 dB (28 to 127).

Additional information

- Primary indicator range (on 30 - 120 dB reference range): 32 - 111 dB, allowing a crest factor of 10 for Impulse time weighting.
- Pulse range: > 63 dB
- Measurement range for various LEVEL settings: See table below.

Measurement ranges				
Measurement range for various "LEVEL" range settings (dB) * Frequency weighting A-, C- and Lin.				
"LEVEL" Setting (dB)	Time weighting			Leq
	Fast/Slow	Impulse	Peak	
20 - 80	23 - 80 **	23 - 70 **	50 - 90	23 - 87 **
20 - 90	23 - 90 **	23 - 80 **	50 - 100	23 - 97 **
20 - 100	23 - 100 **	23 - 90 **	50 - 110	23 - 107 **
20 - 110	23 - 110 **	23 - 100 **	50 - 120	23 - 117 **
30 - 120	28 - 120 **	28 - 110 **	50 - 130	28 - 127 **
40 - 130	38 - 130	38 - 120	50 - 140	38 - 137

* For time weighting Fast and Slow a crest factor 3, and for time weighting Impulse a crest factor 10, is taken into account.
** The lower limit of the measurement range is 30 dB(C) for C-weighting and 35 dB(Lin) for Lin weighting.

END

CERTIFICATE OF CALIBRATION

ISSUED BY AV CALIBRATION

Date of issue 30 June 2014 Certificate N° 1406336

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Signed

G. Parry [ ] B. Baker [✓]

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F.A.O. Patrick Hoyle

ORDER No N/A Job No TRAC14/06176/01

DATE OF RECEIPT 19 June 2014

PROCEDURE AV Calibration Engineer's Handbook section 3

IDENTIFICATION Sound level meter Rion type NL-32 serial No 00240668 connected via a preamplifier type NH-21 serial No 13938 to a half-inch microphone type UC-53A serial No 311314 fitted with a foam windshield type WS-10.

CALIBRATED ON 30 June 2014

CERTIFICATE OF CALIBRATION

ISSUED BY AV CALIBRATION

Certificate N° 1406336

The sound level meter was set to frequency weighting A and adjusted to read correctly in response to a laboratory sound calibrator. This reading took into account manufacturers' information on the free-field response of the sound level meter when fitted with the windshield.

The sound level meter was then tested, and its overall sensitivity adjusted as required.

An acoustic calibration at 1kHz was performed by application of a standard sound calibrator, whilst the tests at 125Hz and 8kHz were performed by the electrostatic actuator method.

RESULTS

The sound level meter was found to conform to the type 1 requirements of BS EN 60651:1994* and BS EN 60804:1994* for those tests carried out.

The self-generated noise recorded was:

8.6 dB (A) 13.3 dB (C) 20.8 dB (Lin)

The expanded level uncertainty of the Laboratory's 1 kHz sound calibrator used during this verification is ± 0.22 dB.

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with the *Guide to the Expression of Uncertainty in Measurement* published by the International Organisation for Standards (ISO).

All measurement data are held at AV Calibration for a period of at least six years.

Typical case reflection factors specified by the manufacturer have been used for this verification.

The reference range, linearity range and primary indicator range specified by the manufacturer have been used. *See note 5 Below.*

The Rion NL-32 sound level meter design has successfully undergone pattern evaluation at Physikalisch-Technische Bundesanstalt (PTB). It was found to meet the requirements of BS EN 60651* and BS EN 60804* and was granted pattern approval as a Type 1 sound level meter.

No component of uncertainty for manufacturer-specified corrections has been included in the uncertainty budget and, in accordance with amendments to the standards, the measured values obtained during the verification have not been extended by any measurement uncertainty when assessing conformance to each standard.

CERTIFICATE OF CALIBRATION

ISSUED BY AV CALIBRATION

Certificate N° 1406336

NOTES

*1 BS EN 60651:1994 and BS EN 60804:1994 were formerly numbered BS 5969:1981 and BS 6698:1986 respectively.

2 No suitable microphone frequency response information was supplied with the instrument. It was therefore measured by this laboratory using the electrostatic actuator method.

3 The instrument was tested with integral software as received.

4 The NL-32 does not have a "max hold" function available when operating with time weighting I. The results recorded for the test of time weighting I are therefore the highest instantaneous reading shown on the display. Whilst these results meet the requirements of the standard, those for response to a single tone burst in particular may give a misleading impression of the accuracy of time weighting I on this instrument.

5 After consultation with the manufacturer and their European agents, it has been established that the specifications given in the standard English-language handbook for the NL-32 are both incomplete and incorrect. An addendum to the handbook based on the PTB tests has been provided by Rion, and this revised specification has been used for the purposes of the present verification. For information, extracts from the addendum have been appended as page 4 of this certificate.

6 The instrument was labelled "RPS#22"

CERTIFICATE OF CALIBRATION

ISSUED BY AV CALIBRATION

Certificate N° 1406336

The following data supplied by Rion are included for completeness:

Addendum to the NL-32 Instruction Manual

Errata (page 133):

- Total range: 23 to 137 dB(A).
- Linearity range (on 30 - 120 dB reference range): 99 dB (28 to 127).

Additional information

- Primary indicator range (on 30 - 120 dB reference range): 32 - 111 dB, allowing a crest factor of 10 for Impulse time weighting.
- Pulse range: > 63 dB
- Measurement range for various LEVEL settings: See table below.

Measurement ranges

Measurement range for various "LEVEL" range settings (dB) *
Frequency weighting A-, C- and Lin.

"LEVEL" Setting (dB)	Time weighting			Leq
	Fast/Slow	Impulse	Peak	
20 - 80	23 - 80 **	23 - 70 **	50 - 90	23 - 87 **
20 - 90	23 - 90 **	23 - 80 **	50 - 100	23 - 97 **
20 - 100	23 - 100 **	23 - 90 **	50 - 110	23 - 107 **
20 - 110	23 - 110 **	23 - 100 **	50 - 120	23 - 117 **
30 - 120	28 - 120 **	28 - 110 **	50 - 130	28 - 127 **
40 - 130	38 - 130	38 - 120	50 - 140	38 - 137

* For time weighting Fast and Slow a crest factor 3, and for time weighting Impulse a crest factor 10, is taken into account.
** The lower limit of the measurement range is 30 dB(C) for C-weighting and 35 dB(Lin) for Lin weighting.

CERTIFICATE OF CALIBRATION

ISSUED BY AV CALIBRATION

Date of issue 03 December 2014 Certificate N° 1412572

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F.A.O. Peter Barling

ORDER No 2014-145 Job No TRAC14/11309/01

DATE OF RECEIPT 25 November 2014

PROCEDURE AV Calibration Engineer's Handbook section 3

IDENTIFICATION Sound level meter Rion type NL-31 serial No 00352030 connected via extension lead type EC-04 and preamplifier type NH-21 serial No 14664 to a half-inch microphone type UC-53A serial No 315083 fitted with a foam windshield type WS-03.

CALIBRATED ON 03 December 2014

The measurements detailed herein are traceable to units of measurement realised at the National Physical Laboratory.

CERTIFICATE OF CALIBRATION

ISSUED BY AV CALIBRATION

Certificate N° 1412572

The sound level meter was set to frequency weighting A and adjusted to read correctly in response to a laboratory sound calibrator. This reading took into account manufacturers' information on the free-field response of the sound level meter when fitted with the windshield.

The sound level meter was then tested, and its overall sensitivity adjusted as required.

An acoustic calibration at 1kHz was performed by application of a standard sound calibrator, whilst the tests at 125Hz and 8kHz were performed by the electrostatic actuator method.

RESULTS

The sound level meter was found to conform to the type 1 requirements of BS EN 60651:1994* and BS EN 60804:1994* for those tests carried out.

The self-generated noise recorded was:

14.6 dB (A) 23.3 dB (C) 26.6 dB (Lin)

The expanded level uncertainty of the Laboratory's 1 kHz sound calibrator used during this verification is ± 0.22 dB.

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with the *Guide to the Expression of Uncertainty in Measurement* published by the International Organisation for Standards (ISO).

All measurement data are held at AV Calibration for a period of at least six years.

The case reflection factors have been taken as zero, since an extension lead has been used for this verification.

The reference range, linearity range and primary indicator range specified by the manufacturer have been used. *See note 5 Below.*

The Rion NL-31 sound level meter design has successfully undergone pattern evaluation at Physikalisch-Technische Bundesanstalt (PTB). It was found to meet the requirements of BS EN 60651* and BS EN 60804* and was granted pattern approval as a Type 1 sound level meter.

No component of uncertainty for manufacturer-specified corrections has been included in the uncertainty budget and, in accordance with amendments to the standards, the measured values obtained during the verification have not been extended by any measurement uncertainty when assessing conformance to each standard.

CERTIFICATE OF CALIBRATION

ISSUED BY AV CALIBRATION

Certificate N° 1412572

NOTES

*1 BS EN 60651:1994 and BS EN 60804:1994 were formerly numbered BS 5969:1981 and BS 6698:1986 respectively.

2 No suitable microphone frequency response information was supplied with the instrument. It was therefore measured by this laboratory using the electrostatic actuator method.

3 The instrument was tested with integral software as received.

4 The NL-31 does not have a "max hold" function available when operating with time weighting I. The results recorded for the test of time weighting I are therefore the highest instantaneous reading shown on the display. Whilst these results meet the requirements of the standard, those for response to a single tone burst in particular may give a misleading impression of the accuracy of time weighting I on this instrument.

5 After consultation with the manufacturer and their European agents, it has been established that the specifications given in the standard English-language handbook for the NL-31 are both incomplete and incorrect. An addendum to the handbook based on the PTB tests has been provided by Rion, and this revised specification has been used for the purposes of the present verification. For information, extracts from the addendum have been appended as page 4 of this certificate.

6 The meter was labelled "RPS #24".

CERTIFICATE OF CALIBRATION

ISSUED BY AV CALIBRATION

Certificate N° 1412572

The following data supplied by Rion are included for completeness:

Addendum to the NL-31 Instruction Manual

Errata (page 133):

- Total range: 23 to 137 dB(A).
- Linearity range (on 30 - 120 dB reference range): 99 dB (28 to 127).

Additional information

- Primary indicator range (on 30 - 120 dB reference range): 32 - 111 dB, allowing a crest factor of 10 for Impulse time weighting.
- Pulse range: > 63 dB
- Measurement range for various LEVEL settings: See table below.

Measurement ranges

Measurement range for various "LEVEL" range settings (dB) *
Frequency weighting A-, C- and Lin.

"LEVEL" Setting (dB)	Time weighting			Leq
	Fast/Slow	Impulse	Peak	
20 - 80	23 - 80 **	23 - 70 **	50 - 90	23 - 87 **
20 - 90	23 - 90 **	23 - 80 **	50 - 100	23 - 97 **
20 - 100	23 - 100 **	23 - 90 **	50 - 110	23 - 107 **
20 - 110	23 - 110 **	23 - 100 **	50 - 120	23 - 117 **
30 - 120	28 - 120 **	28 - 110 **	50 - 130	28 - 127 **
40 - 130	38 - 130	38 - 120	50 - 140	38 - 137

* For time weighting Fast and Slow a crest factor 3, and for time weighting Impulse a crest factor 10, is taken into account.
** The lower limit of the measurement range is 30 dB(C) for C-weighting and 35 dB(Lin) for Lin weighting.

END

CERTIFICATE OF CALIBRATION

ISSUED BY AV CALIBRATION

Date of issue 11 September 2013 Certificate N° 1309404

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F.A.O. Patrick Hoyle

ORDER No 2013-090 Job No TRAC13/09201/04

DATE OF RECEIPT 04 September 2013

PROCEDURE AV Calibration Engineer's Handbook section 2

IDENTIFICATION Sound Calibrator Rion type NC-74 serial number 34472822 with one-inch housing and adapter type NC-74-002 for half-inch microphone

CALIBRATED ON 11 September 2013

The measurements detailed herein are traceable to units of measurement realised at the National Physical Laboratory.

CERTIFICATE OF CALIBRATION

ISSUED BY AV CALIBRATION

Certificate N° 1309404

MEASUREMENTS

The sound pressure level generated by the Sound Calibrator in its half-inch configuration was measured three times using a B&K type 4134 microphone with the protective grid in position. The microphone sensitivity was traceable to National Standards.

RESULTS

The mean level of the calibrator output, corrected to the standard atmospheric pressure of 101.3 kPa using manufacturers' data, was

93.99 ± 0.13 dB rel 20 µPa

The fundamental frequency of the sound output was 1002 Hz ± 0.06 %, and its total distortion was (1.57 ± 0.11) %.

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor *k*=2, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with the *Guide to the Expression of Uncertainty in Measurement* published by the International Organisation for Standards (ISO).

During the measurements the laboratory environmental conditions were:

Temperature: 23 to 24 °C
Atmospheric pressure: 101.4 to 101.5 kPa
Relative humidity: 43 to 53 %

NOTE
The instrument was labelled "# 33"

CERTIFICATE OF CALIBRATION

Date of Issue: 07 August 2014 **Certificate Number: TCRT14/1249**

Issued by:
ANV Measurement Systems
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E-Mail: info@noise-and-vibration.co.uk
Web: www.noise-and-vibration.co.uk
Acoustics Noise and Vibration Ltd trading as ANV Measurement Systems

Approved Signatory

M. Breslin [ ] K. Mistry [ ]

Customer	RPS Planning, Transport and Environment 6-7 Lovers Walk Preston Park Brighton BN1 6AH
Order No.	2014-092
Description	Sound Level Meter / Pre-amp / Microphone / Associated Calibrator

Identification

Manufacturer	*Instrument*	*Type*	*Serial No. / Version*
Rion	Sound Level Meter	NA-28	01291243
Rion	Firmware		1.9
Rion	Pre Amplifier	NH-23	81275
Rion	Microphone	UC-59	01685
Rion	Calibrator	NC-74	34536109
	Calibrator adaptor type if applicable		NC-74-002

Performance Class 1

Test Procedure TP 2.SLM 61672-3 TPS-49

Procedures from IEC 61672-3:2006 were used to perform the periodic tests.

Type Approved to IEC 61672-1:2002 Yes Approval Number 21.21/07.01

If YES above there is public evidence that the SLM has successfully completed the applicable pattern evaluation tests of IEC 61672-2:2003

Date Received 05 August 2014 ANV Job No. TRAC14/08135

Date Calibrated 07 August 2014

The sound level meter submitted for testing has successfully completed the class 1 periodic tests of IEC 61672-3:2006, for the environmental conditions under which the tests were performed. As public evidence was available, from an independent testing organisation responsible for approving the results of pattern evaluation tests performed in accordance with IEC 61672-2:2003, to demonstrate that the model of sound level meter fully conformed to the requirements in IEC 61672-1:2002, the sound level meter submitted for testing conforms to the class 1 requirements of IEC 61672-1:2002.

Previous Certificate	*Dated*	*Certificate No.*	*Laboratory*
	31 July 2012	TCRT12/1138	ANV Measurement Systems

CERTIFICATE OF CALIBRATION

Sound Level Meter Instruction manual and data used to adjust the sound levels indicated.

SLM instruction manual title	Sound Level Meter	NA-28	
SLM instruction manual ref / issue		06-11	
SLM instruction manual source		Manufacturer	
Internet download date if applicable		N/A	
Case corrections available		Yes	
Uncertainties of case corrections		Yes	
Source of case data		Manufacturer	
Wind screen corrections available		Yes	
Uncertainties of wind screen corrections		Yes	
Source of wind screen data		Manufacturer	
Mic pressure to free field corrections		Yes	
Uncertainties of Mic to F.F. corrections		Yes	
Source of Mic to F.F. corrections		Manufacturer	
Total expanded uncertainties within the requirements of IEC 61672-1:2002		Yes	
Specified or equivalent Calibrator		Specified	
Customer or Lab Calibrator		Lab Calibrator	
Calibrator adaptor type if applicable		NC-74-002	
Calibrator cal. date		06 August 2014	
Calibrator cert. number		UCRT14/1184	
Calibrator cal cert issued by Lab		ANV Measurement Systems	
Calibrator SPL @ STP		93.99 dB	Calibration reference sound pressure level
Calibrator frequency		1001.80 Hz	Calibration check frequency
Reference level range		20 - 120 dB	

Accessories used or corrected for during calibration - Wind Shield
Note - if a pre-amp extension cable is listed then it was used between the SLM and the pre-amp.

Environmental conditions during tests	Start	End	
Temperature	22.64	22.94	± 0.20 °C
Humidity	37.8	38.6	± 3.00 %RH
Ambient Pressure	100.45	100.45	± 0.03 kPa

Response to associated Calibrator at the environmental conditions above.

Initial indicated level	93.9 dB		Adjusted indicated level	94.0	dB
The uncertainty of the associated calibrator supplied with the sound level meter ±				0.10	dB

Self Generated Noise — This test is currently not performed by this Lab.

Microphone installed (if requested by customer) = Less Than	N/A	dB	A Weighting
Uncertainty of the microphone installed self generated noise ±	N/A	dB	

Microphone replaced with electrical input device - UR = Under Range indicated

Weighting	A			C			Z		
	8.8	dB	UR	13.1	dB	UR	20.0	dB	UR
Uncertainty of the electrical self generated noise ±							0.12	dB	

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with UKAS requirements.

For the test of the frequency weightings as per paragraph 12. of IEC 61672-3:2006 the Actual microphone free field response was used.

The acoustical frequency tests of a frequency weighting as per paragraph 11 of IEC 61672-3:2006 were carried out using an electrostatic actuator.

..... END .....

Calibrated by: A Patel

Additional Comments

None

MEASUREMENT SYSTEMS

1/2

CERTIFICATE OF CONFORMANCE

Date of Issue	**28 January 2015**
Customer	**RPS Planning, Transport and Environment**
Certificate Number	**CONF011524**

	Manufacturer	**Type**	**Serial Number**
Sound Level Meter	Rion	NL-52	00943363
Preamplifier	Rion	NH-25	43379
Microphone	Rion	UC-59	07157

This is to certify that the instrument was tested and calibrated at the Manufacturer's factory according to their specification and that the product satisfied all the relevant requirements of the following Standards:

IEC 61672-1:2002 Class 1.

The instrument also received a functional check by ANV Measurement Systems prior to despatch in the UK, in accordance with our standard procedures.

Signed Amrat C Patel.... Position.Laboratory Manager Date.28th January 2015

Amrat C Patel

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MEASUREMENT SYSTEMS

CERTIFICATE OF CONFORMANCE

113

Date of Issue	**28 January 2015**
Customer	**RPS Planning, Transport and Environment**
Certificate Number	**CONF011525**

	Manufacturer	**Type**	**Serial Number**
Sound Level Meter	Rion	NL-52	00943364
Preamplifier	Rion	NH-25	43380
Microphone	Rion	UC-59	07158

This is to certify that the instrument was tested and calibrated at the Manufacturer's factory according to their specification and that the product satisfied all the relevant requirements of the following Standards:

IEC 61672-1:2002 Class 1.

The instrument also received a functional check by ANV Measurement Systems prior to despatch in the UK, in accordance with our standard procedures.

Signed. Amrat C Patel Position.Laboratory Manager Date.28th January 2015

Amrat C Patel

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MEASUREMENT SYSTEMS

CERTIFICATE OF CONFORMANCE

115

Date of Issue	**28 January 2015**
Customer	**RPS Planning, Transport and Environment**
Certificate Number	**CONF011527**

	Manufacturer	Type	Serial Number
Sound Level Meter	Rion	NL-52	00943366
Preamplifier	Rion	NH-25	43382
Microphone	Rion	UC-59	07160

This is to certify that the instrument was tested and calibrated at the Manufacturer's factory according to their specification and that the product satisfied all the relevant requirements of the following Standards:

IEC 61672-1:2002 Class 1.

The instrument also received a functional check by ANV Measurement Systems prior to despatch in the UK, in accordance with our standard procedures.

Signed. Amrat C Patel ..... Position.Laboratory Manager Date.28th January 2015

Amrat C Patel

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MEASUREMENT SYSTEMS

CERTIFICATE OF CONFORMANCE 116

Date of Issue	**28 January 2015**
Customer	**RPS Planning, Transport and Environment**
Certificate Number	**CONF011528**

	Manufacturer	Type	Serial Number
Sound Level Meter	Rion	NL-52	00943367
Preamplifier	Rion	NH-25	43383
Microphone	Rion	UC-59	07161

This is to certify that the instrument was tested and calibrated at the Manufacturer's factory according to their specification and that the product satisfied all the relevant requirements of the following Standards:

IEC 61672-1:2002 Class 1.

The instrument also received a functional check by ANV Measurement Systems prior to despatch in the UK, in accordance with our standard procedures.

Signed..Amrat C Patel..... Position.Laboratory Manager Date.28th January 2015

Amrat C Patel

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Annex D: Meteorological Data

	Day 07:00-23:00				Night 23:00-07:00			
Date	Temperature ℃	Wind Speed m/s	Direction (Degrees)	Rainfall mm	Temperature ℃	Wind Speed m/s	Wind Direction (Degrees)	Rainfall mm
23/06/2015	18.0	1.6	78.0	~	12.3	1.1	116.9	~
24/06/2015	17.3	1.6	60.3	~	12.7	0.9	120.0	~
25/06/2015	18.6	1.7	81.3	~	14.0	1.1	16.3	~
26/06/2015	16.6	1.9	57.8	0.8	12.6	1.2	113.1	0.0
27/06/2015	18.2	1.8	87.8	0.0	14.5	1.4	53.8	0.8
28/06/2015	15.6	2.5	48.4	2.6	12.8	0.5	86.9	0.0
29/06/2015	18.7	1.5	66.3	0.0	14.7	0.4	68.8	0.0
30/06/2015	23.1	1.7	271.3	0.8	20.8	1.7	225.6	0.0
01/07/2015	22.8	1.6	159.7	0.8	15.6	1.3	68.1	0.0
02/07/2015	16.6	1.2	75.6	4.0	11.5	1.6	142.5	0.0
03/07/2015	20.5	2.7	253.1	0.6	19.1	2.1	222.5	0.6
04/07/2015	19.2	2.4	59.1	0.0	13.1	0.8	151.3	0.0
05/07/2015	16.0	2.0	90.6	2.0	12.1	0.9	71.9	0.0
06/07/2015	16.5	2.5	48.4	0.2	16.0	3.0	26.9	2.6
07/07/2015	16.2	3.2	55.9	1.0	13.1	2.4	59.4	3.8
08/07/2015	15.7	2.7	108.8	0.0	12.2	0.9	120.6	0.0
09/07/2015	17.5	1.6	97.8	0.0	12.1	1.3	126.9	0.0
10/07/2015	19.1	2.0	80.3	0.0	14.8	1.2	73.8	0.2
11/07/2015	17.4	2.4	60.0	0.0	14.6	2.6	35.0	3.0
12/07/2015	16.8	2.4	53.4	4.6	15.1	1.3	66.9	0.8
13/07/2015	16.3	2.9	46.9	7.6	15.0	1.5	68.8	0.2
14/07/2015	16.7	1.3	57.5	2.6	15.9	1.2	75.0	1.6
15/07/2015	16.3	1.5	188.1	0.0	12.2	2.2	197.5	0.0
16/07/2015	17.8	1.9	256.3	0.4	17.9	1.5	53.8	0.8
17/07/2015	16.5	2.7	54.7	0.4	11.3	0.7	108.8	0.0
18/07/2015	17.0	2.0	55.0	0.0	13.3	0.8	71.3	0.2
19/07/2015	17.3	2.3	55.6	0.2	13.0	1.0	154.4	0.0
20/07/2015	17.7	3.0	52.2	2.8	14.2	2.1	38.1	0.0
21/07/2015	18.0	3.2	51.4	0.2	14.7	0.9	50.6	0.4
22/07/2015	16.1	2.0	76.6	0.6	11.7	1.3	118.8	0.0
23/07/2015	15.8	1.5	70.0	0.0	13.0	0.8	147.5	2.8
24/07/2015	11.9	1.3	161.3	~	~	~	~	~

Annex E: Survey Locations

7-day Surveys		Distance to M4 (m)					
Survey	Location	Existing	Proposed	Dominant Source		Area 1	Area 2
LT1	The Court, Coal Pit Lane	350	350	both	Residential	Coal Pit Lane	Castleton
LT2	Gwaunshonbrown Farm, Pound Hill	285	255	both	Residential	Pound Hill	Marshfield
LT3	6 Church Crescent	285	447	Existing	Residential	Church Crescent / Church Lane	Bassaleg
LT4	6 Nant-Y-Moor Close	55	720	Existing	Residential	Nant-Y-Moor Close / Blacksmiths Way	Nant-Y-Moor
LT5	36 Manor Park, Duffryn	2070	500	Proposed	Residential	Manor Park / Morgan Way / Sir Charles Crescent	Duffryn
LT6	ABP Office Block, Newport	3540	230	Proposed	Docks	Alexandra Docks	Newport
LT7	Rose Cottage, Hart Farm, Picked Lane	3830	115	Proposed	Residential	Picked Lane	Pye Corner
LT8	Permitted development north of Queen's Way	3250	600	Proposed	Industrial / permitted residential	Queens Way	Newport
LT9	Grangefield, NP26 3DF	4100	665	Proposed	Residential	Grangefield 1200 m South of Queens Way	Newport/Whitson
LT10	Well Cottages, Llandevenny	1340	250	Proposed	Residential	Wells Cottages	Llandevenny
LT11	11 Blenheim Close, Magor	630	250	Proposed	Residential	Green Moor Lane / Blenheim Close and Avenue/Kensington Park	Magor
LT12	12 Queens Gardens, Magor	420	175	Proposed	Residential	Queens Gardens / Blenheim Gardens	Magor
LT13	15 Quarry Rise - rear garden	170	170	both	Residential	Quarry Rise	Undy
LT14	24 Fford Maes Y Graig, Undy	345	345	both	Residential	Rockfield Way (Ffordd Maes Y Graig)	Undy
LT15	Court Farm, S of Green Farm, Llanfihangel near Rogiet	340	340	both	Residential	Llanfihangel	Rogiet

3hr day Surveys		Distance from (m)					
Survey	Location	Existing M4	Proposed M4	Dominant M4 Sou	Land	Area 1	Area 2
ST1	Castleton Rise, Castleton	675	675	both	Residential	Castleton Rise / Marshfield Rd	Castleton
ST2	Ty'n-y-brwyn	480	260	Proposed	Residential	Ty'n-y-brwyn	Marshfield
ST3	Little Orchard nr Berryhill Farm	120	167	both	Residential	Little Orchard	Coedkernew
ST4	Church Lane, Coedkernew	1200	415	Proposed	Residential	Church Lane	Coedkernew
ST5	Kidwelly Close, Duffryn	1660	480	Proposed	Residential	Oystermouth Way / Kidwelly Close	Duffryn
ST6	Orchard Farm, Lighthouse Road	2670	120	Proposed	Residential	Lighthouse Road	Duffryn
ST7	Wales Coast Path	3310	435	Proposed	Farm Land	Wales Coast Path	St Brides
ST8	Disused road adjoining Traston Road, Newport	2495	1075	Proposed	Residential	Traston Road / Traston Lane	Newport
ST9	Broad Street Common nr Pye Corner	3700	195	Proposed	Farm Land	Near Arch Farm, Broad Street Common	Pye Corner
ST10	Solutia Nature Reserve	4145	530	Proposed	Nature Reserve	Solutia Nature Reserve	Pye Corner
ST11	Broad Street Common nr Moorbarn Farm	4200	420	Proposed	Residential	Broad Street Common nr Moorbarn Farm	Broadstreet Common
ST12	Layby, North Row Road towards Redwich	3155	475	Proposed	Farm Land	North Row Road	Redwich
ST13	Magor, St Brides Rd & Netherwent View	185	160	both	Residential	St Brides Rd / Netherwent View	Magor
ST14	Magor, Redwick Rd & Blenheim Ave	615	600	both	Residential	Redwick Rd / Blenheim Ave	Magor
ST15	36 Western Avenue - rear garden	45	3845	Existing	Residential	Western Avenue	Glasllwch
ST16	Near Rear garden of 96 Highcross Road, Newport	175	4290	Existing	Residential	Highcross Road	High Cross
ST17	Allt-Yr-Yn Avenue	635	3770	Existing	Residential	Allt-Yr-Yn Avenue	Ridgeway
ST18	Footpath behind Goodrich Crescent	245	4180	Existing	Residential	Goodrich Crescent	Barrack Hill
ST19	Land at end of Pant Road	20	4490	Existing	Residential	Pant Road	Newport
ST20	Layby east of Pillmawr Farm	Survey aborted		-	-	-	-
ST21	16 Harrogate Road - rear garden	40	4445	Existing	Residential	Harrogate Rd / Scarborough Rd / Stockton Rd	Newport
ST22	140 Beaufort Road - rear garden	20	3720	Existing	Residential	Beaufort Road / Constable Drive	Newport
ST23	rear of Christchurch Road	30	3430	Existing	Residential	Christchurch Road	Caerleon
ST24	Land off Royal Oak Hill	20	3570	Existing	Residential	Royal Oak Hill / Royal Oak Drive	Caerleon
ST25	27 Blossom Close - rear garden	20	3800	Existing	Residential	Blossom Close	Langstone
ST26	Land adj. to 89 Waltwood Park Drive	50	3530	Existing	Residential	Waltwood Park Drive	Llanmartin
ST27	nr Waun-arw, NW of Magor	190	1100	Existing	Farm Land/Residential	Waunawr	Magor
ST28	Magor Marsh Reserve (western Boundary)	1100	755	Proposed	Farm Land	Magor Marsh Reserve (western Boundary)	Magor
ST29	Land off Watch House Parade	2970	915	Proposed	Residential	Watch House Parade	Newport