

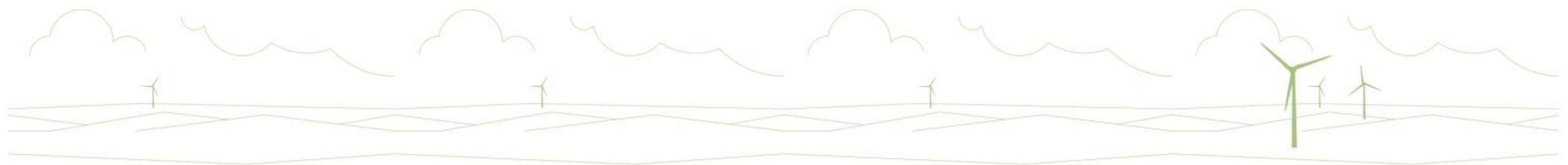


Technical Appendix 9.3

Baseline Noise Survey

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9.1 Measurement Location A: Mollin Farm

Site Information	
Location	Mollin Farm
Equipment Installation Location	OS Grid Reference
	X Y
	305248 53003
Installation	Microphone tripod mounted at 1.2m height. Windscreen and secondary windscreen installed. Secondary battery case connected.
Measurement Location	Installed on grass approximately 4.5m from façade of barn and 11m from façade of dwelling. Flue/extract pipe observed on roof of barn. Appears to be heating for barn and not active at time of installation.
Ambient Sound	Birdsong and noise from distant livestock and occasional distant agricultural machinery observed. Occasional distant shouts could be heard from sheep pens to the north east of the dwelling. Sporadic noise associated with farming activities can be expected e.g. from yard to the north.

Monitoring Information			
WSP Measurement System Reference	Fusion 2 (calibrator 01dB-Stell Cal 21, serial number:34254632)		
System Timeclock	Install	Collection	Significant Drift
	BST +0s	BST +3s	No
Acoustic Calibration	Install	Collection	Significant Drift?
	-0.38	-0.37dB	No
Measurement times	Start	End	
	14:50 7 Aug 2020	07:20 8 Sept 2020	



Figure 9.3.1: Measurement Location Plan



Photograph 9.3.1: Installed Measurement Location Looking South East



Photograph 9.3.2: Installed Measurement Location Looking South West

9.2 Measurement Location B: Burrancehill Cottage

Site Information	
Location	Burrancehill Cottage
Equipment Installation Location	OS Grid Reference
	X Y
	304235 591234
Installation	Microphone tripod mounted at 1.2m height. WS-15 windscreen installed.
Measurement Location	Installed on gravel approx. 4.5m from south facing aspect of dwelling and 2.5m from hawthorn hedgerow.
Ambient Sound	Birdsong, and distant livestock were the main sources of sound. Occasionally just audible road traffic noise was observed from the direction of the A701. It was noted by the owner of the property that there were construction works being undertaken at the dwelling during the daytime hours only, but these fell outside the ETSU-R-97 quite daytime assessment hours. There were no works being undertaken at time of equipment install.

Monitoring Information			
WSP Measurement System Reference	Rion H (calibrator Rion NC-74, serial number: 35173440)		
System Timedclock	Install	Collection	Significant Drift
	BST +0s	BST -9s	No
Acoustic Calibration	Install	Collection	Significant Drift?
	0.0dB	-0.2dB	No
Measurement times	Start	End	
	13:10 7 Aug 2020	15:20 18 Aug 2020	
	16:10 18 Aug 2020	08:50 3 Sept 2020	



Figure 9.3.2: Measurement Location Plan



Photograph 9.3.3: Installed Measurement Location Looking North West.



Photograph 9.3.4: Installed Measurement Location Looking South.

9.3 Measurement Location C: Lamphitt

Site Information	
Location	Lamphitt
Equipment Installation Location	OS Grid Reference
	X Y
	299946 589743
Installation	Microphone tripod mounted at 1.2m height. WS-15 windscreen installed.
Measurement Location	Installed on grass approximately 5m from north east facing aspect of barn. Measurement Location selected to be screened from and at distance from watercourse by barn.
Ambient Sound	Birdsong, and distant sound of running water in watercourse. Watercourse is to the west of the residential dwelling and the barn. Measurement Location screened from watercourse by the barn such the measured levels are lower than those present at the external amenity spaces of the dwelling. Ambient sound at all other locations adjacent to the dwelling were influenced by the watercourse to a greater degree.

Monitoring Information			
WSP Measurement System Reference	Rion G (calibrator Rion NC-74, serial number: 35173440)		
System Timedclock	Install	Collection	Significant Drift
	BST +0s	BST +6s	No
Acoustic Calibration	Install	Collection	Significant Drift?
	0.0dB	-0.1dB	No
Measurement times	Start	End	
	11:40 7 Aug 2020	17:10 18 Aug 2020 &	
	17:40 18 Aug 2020	16:30 3 Sept 2020	



Figure 9.3.3: Measurement Location Plan



Photograph 9.3.5: Installed Measurement Location Looking South



Photograph 9.3.6: Installed Measurement Location looking North West

9.4 Measurement Location D: Glenview

Site Information	
Location	Glenview
Equipment Installation Location	OS Grid Reference
	X Y
	297221 591642
Installation	Microphone tripod mounted at 1.2m height. Windscreen and secondary windscreens installed. Secondary battery case attached.
Measurement Location	Installed on grass approximately 8.5m from façade of dwelling conservatory and 3m from eastern boundary fence/hedge of garden. Hedge is comprised of conifer trees. No boiler flue on aspect closest to installation location.
Ambient Sound	Distant livestock, birdsong, and sound of trickling water from a water feature in the garden. This was noted to be 6m away from monitoring location. Option to install equipment on north east side of dwelling, but this would have been impacted to a greater degree by the sound of a running water in a stream to the north east of the property. Generally, distant sound of watercourses present across the property, but at a low level.

Monitoring Information			
WSP Measurement System Reference	Duo 4 (calibrator 01dB-Stell Cal 21, serial number: 34924015)		
System Timeclock	Install	Collection	Significant Drift
	BST + 0s	BST +5s	No
Acoustic Calibration	Install	Collection	Significant Drift?
	+0.33	-0.67dB	No
Measurement times	Start	End	
	10:30 7 Aug 2020	12:00 9 Sept 2020	



Figure 9.3.4: Measurement Location Plan



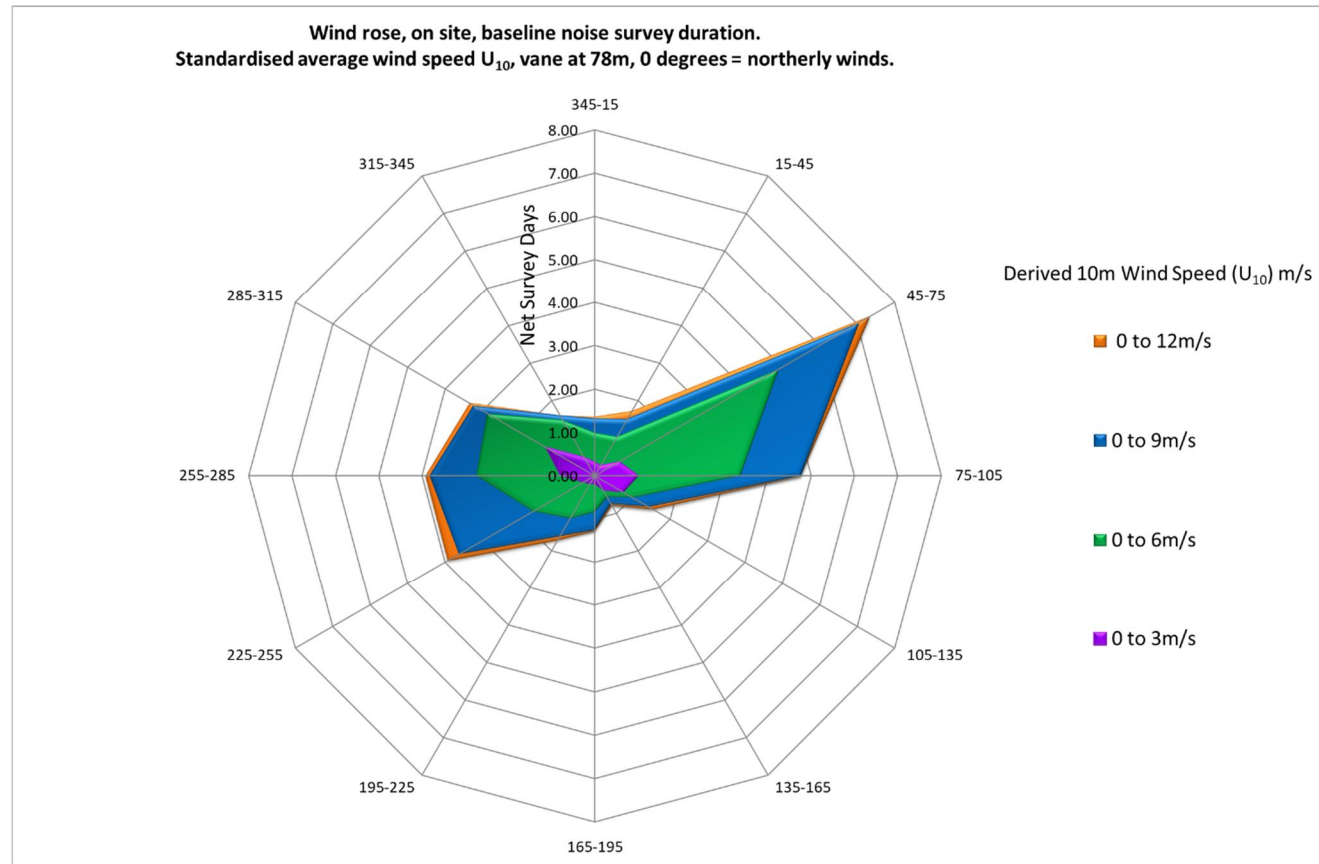
Photograph 9.3.7: Installed Measurement Location Looking North.



Photograph 9.3.8: Installed Measurement Location Looking South.

Wind Directions During Baseline Noise Survey

1. The following radar plot presents the proportion of the time that winds from different directions arose over the course of the baseline noise survey. The plot considers only the meteorological conditions during the ETSU-R-97 defined quiet daytime and night-time periods as utilised in the completed noise assessment.
2. The analysis considers the prevailing conditions for the period of the baseline noise survey, from its commencement to its conclusion.
3. The data is split into different wind speed ranges, based on average wind speeds at a standardised 10m height (U_{10}). The wind direction was taken from the vane installed at 78m height.



Plot 9.3.1: Wind Directions during Baseline Noise Survey

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