

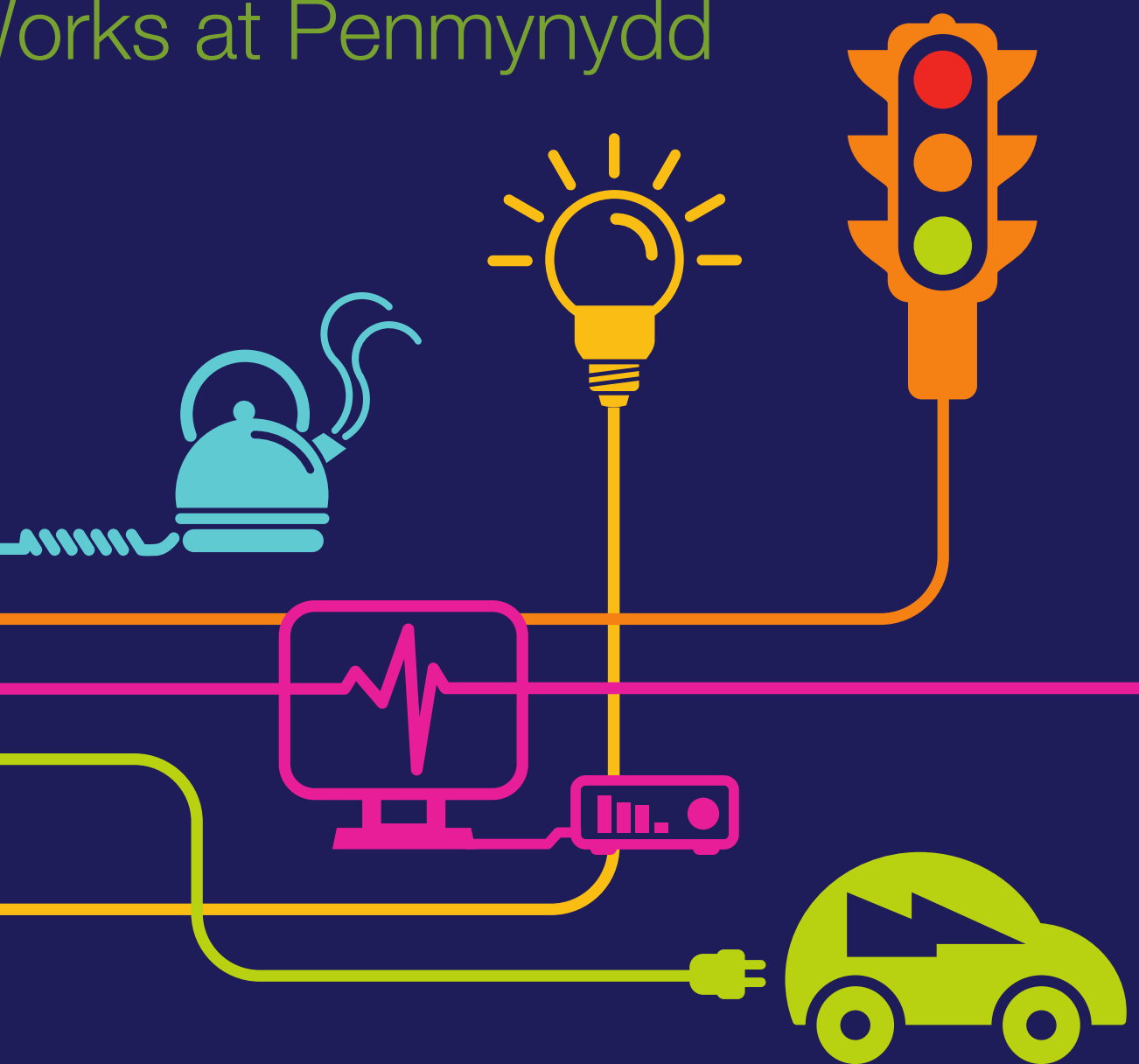
DOCUMENT 5.15.2.5

# Assessment of Noise Effects from Works at Penmynydd Road Construction Compound

## Chapter 15 – Appendix 5

National Grid (North Wales Connection Project)

*Regulation 5(2)(a) including (l) and (m) of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009*





**nationalgrid**

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## **North Wales Connection Project**

### **Volume 5**

# **Document 5.15.2.5 Appendix 15.5 Assessment of Noise Effects from Works at Penmynydd Road Construction Compound**

National Grid  
National Grid House  
Warwick Technology Park  
Gallows Hill  
Warwick  
CV34 6DA

Final September 2018

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# 1 Preparation and Installation of Construction Compound

## 1.1 BS 5228-1 CALC

Preparation and Installation of Construction Compound					
Receptor	Receptor Classification	Receptor Sensitivity	Distance from Plant to Receptor (m)	BS 5228-1 Calc	
				A-Weighted Sound Pressure Level, $L_{Aeq,T}$ dB (at 10 m)	Predicted Noise Level at receptor $L_{Aeq,T}$ dB
R4/01499	Dwelling	Medium	289	88	57
R4/01480	Dwelling	Medium	261	88	58
R4/01602	Dwelling	Medium	469	88	51
R4/01474	Detached	Medium	582	88	49
C4/00245	Workshop / Light Industrial	Very low	415	88	53
C4/00246	Workshop / Light Industrial	Very low	415	88	53
C4/00247	Workshop / Light Industrial	Very low	415	88	53
C4/00248	Workshop / Light Industrial	Very low	415	88	53
C4/00249	Workshop / Light Industrial	Very low	415	88	53
C4/00250	Workshop / Light Industrial	Very low	415	88	53
C4/00251	Commercial	Low	415	88	53
C4/00252	Commercial	Low	415	88	53
C4/00253	Commercial	Low	415	88	53
C4/00254	Commercial	Low	415	88	53
C4/00255	Commercial	Low	415	88	53
C4/00243	Workshop / Light Industrial	Very low	559	88	49
R4/01599	Detached	Medium	451	88	52
R4/01482	Residential	Medium	465	88	51
C4/00256	Commercial	Low	415	88	53
R4/13296	Residential	Medium	567	88	49
C4/13297	Commercial	Low	567	88	49

1.2 DAYTIME

Preparation and Installation of Construction Compound						
Receptor	Receptor Classification	Receptor Sensitivity	Daytime			
			Pre Construction Ambient Noise Level, $L_{Aeq,T}$ dB	Log Sum of Pre Construction Ambient Noise and Predicted Noise Level, $L_{Aeq,T}$ dB	Exceedance of Pre Construction Noise Level, dB	Magnitude of Effect
R4/01499	Dwelling	Medium	51	58	7	Very Low
R4/01480	Dwelling	Medium	60	62	2	Low
R4/01602	Dwelling	Medium	51	54	3	Very Low
R4/01474	Detached	Medium	51	53	2	Very Low
C4/00245	Workshop / Light Industrial	Very low	51	55	4	Very Low
C4/00246	Workshop / Light Industrial	Very low	51	55	4	Very Low
C4/00247	Workshop / Light Industrial	Very low	51	55	4	Very Low
C4/00248	Workshop / Light Industrial	Very low	51	55	4	Very Low
C4/00249	Workshop / Light Industrial	Very low	51	55	4	Very Low
C4/00250	Workshop / Light Industrial	Very low	51	55	4	Very Low
C4/00251	Commercial	Low	51	55	4	Very Low
C4/00252	Commercial	Low	51	55	4	Very Low
C4/00253	Commercial	Low	51	55	4	Very Low
C4/00254	Commercial	Low	51	55	4	Very Low
C4/00255	Commercial	Low	51	55	4	Very Low
C4/00243	Workshop / Light Industrial	Very low	51	53	2	Very Low
R4/01599	Detached	Medium	51	54	3	Very Low
R4/01482	Residential	Medium	48	53	5	Very Low
C4/00256	Commercial	Low	51	55	4	Very Low
R4/13296	Residential	Medium	51	53	2	Very Low
R4/13297	Commercial	Low	51	53	2	Very Low

1.3 WEEKEND

Preparation and Installation of Construction Compound						
Receptor	Receptor Classification	Receptor Sensitivity	Weekend			
			Pre Construction Ambient Noise Level, L <sub>Aeq</sub> dB	Log Sum of Pre Construction Ambient Noise and Predicted Noise Level, L <sub>Aeq</sub> dB	Exceedance of Pre Construction Noise Level, dB	Magnitude of Effect
R4/01499	Dwelling	Medium	50	58	8	Medium
R4/01480	Dwelling	Medium	59	61	2	Low
R4/01602	Dwelling	Medium	50	54	4	Low
R4/01474	Detached	Medium	50	53	3	Low
C4/00245	Workshop / Light Industrial	Very low	50	55	5	Low
C4/00246	Workshop / Light Industrial	Very low	50	55	5	Low
C4/00247	Workshop / Light Industrial	Very low	50	55	5	Low
C4/00248	Workshop / Light Industrial	Very low	50	55	5	Low
C4/00249	Workshop / Light Industrial	Very low	50	55	5	Low
C4/00250	Workshop / Light Industrial	Very low	50	55	5	Low
C4/00251	Commercial	Low	50	55	5	Low
C4/00252	Commercial	Low	50	55	5	Low
C4/00253	Commercial	Low	50	55	5	Low
C4/00254	Commercial	Low	50	55	5	Low
C4/00255	Commercial	Low	50	55	5	Low
C4/00243	Workshop / Light Industrial	Very low	50	53	3	Low
R4/01599	Detached	Medium	50	54	4	Low
R4/01482	Residential	Medium	43	52	9	Low
C4/00256	Commercial	Low	50	55	5	Low
R4/13296	Residential	Medium	50	53	3	Low
C4/13297	Commercial	Low	50	53	3	Low

## 2. General Activities

### 1.4 BS 5228-1 CALC

General Activities					
Receptor	Receptor Classification	Receptor Sensitivity	Distance from Plant to Receptor (m)	BS 5228-1 Calc	
				A-Weighted Sound Pressure Level, $L_{Aeq,T}$ dB (at 10 m)	Predicted Noise Level at receptor $L_{Aeq,T}$ dB
R4/01499	Dwelling	Medium	289	80	49
R4/01480	Dwelling	Medium	261	80	50
R4/01602	Dwelling	Medium	469	80	43
R4/01474	Detached	Medium	582	80	41
C4/00245	Workshop / Light Industrial	Very low	415	80	45
C4/00246	Workshop / Light Industrial	Very low	415	80	45
C4/00247	Workshop / Light Industrial	Very low	415	80	45
C4/00248	Workshop / Light Industrial	Very low	415	80	45
C4/00249	Workshop / Light Industrial	Very low	415	80	45
C4/00250	Workshop / Light Industrial	Very low	415	80	45
C4/00251	Commercial	Low	415	80	45
C4/00252	Commercial	Low	415	80	45
C4/00253	Commercial	Low	415	80	45
C4/00254	Commercial	Low	415	80	45
C4/00255	Commercial	Low	415	80	45
C4/00243	Workshop / Light Industrial	Very low	559	80	41
R4/01599	Detached	Medium	451	80	44
R4/01482	Residential	Medium	465	80	43
C4/00256	Commercial	Low	415	80	45
R4/13296	Residential	Medium	567	80	41
C4/13297	Commercial	Low	567	80	41

1.5 DAYTIME

General Activities						
Receptor	Receptor Classification	Receptor Sensitivity	Daytime			
			Pre Construction Ambient Noise Level, $L_{Aeq,T}$ dB	Log Sum of Pre Construction Ambient Noise and Predicted Noise Level, $L_{Aeq,T}$ dB	Exceedance of Pre Construction Noise Level, dB	Magnitude of Effect
R4/01499	Dwelling	Medium	51	53	2	Very Low
R4/01480	Dwelling	Medium	60	60	0	No Effect
R4/01602	Dwelling	Medium	51	52	1	Very Low
R4/01474	Detached	Medium	51	51	0	No Effect
C4/00245	Workshop / Light Industrial	Very low	51	52	1	Very Low
C4/00246	Workshop / Light Industrial	Very low	51	52	1	Very Low
C4/00247	Workshop / Light Industrial	Very low	51	52	1	Very Low
C4/00248	Workshop / Light Industrial	Very low	51	52	1	Very Low
C4/00249	Workshop / Light Industrial	Very low	51	52	1	Very Low
C4/00250	Workshop / Light Industrial	Very low	51	52	1	Very Low
C4/00251	Commercial	Low	51	52	1	Very Low
C4/00252	Commercial	Low	51	52	1	Very Low
C4/00253	Commercial	Low	51	52	1	Very Low
C4/00254	Commercial	Low	51	52	1	Very Low
C4/00255	Commercial	Low	51	52	1	Very Low
C4/00243	Workshop / Light Industrial	Very low	51	51	0	Very Low
R4/01599	Detached	Medium	51	52	1	Very Low
R4/01482	Residential	Medium	48	49	1	Very Low
C4/00256	Commercial	Low	51	52	1	Very Low
R4/13296	Residential	Medium	51	51	0	Very Low
C4/13297	Commercial	Low	51	51	0	Very Low

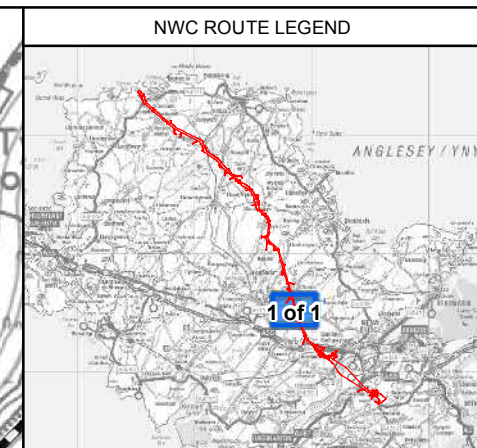
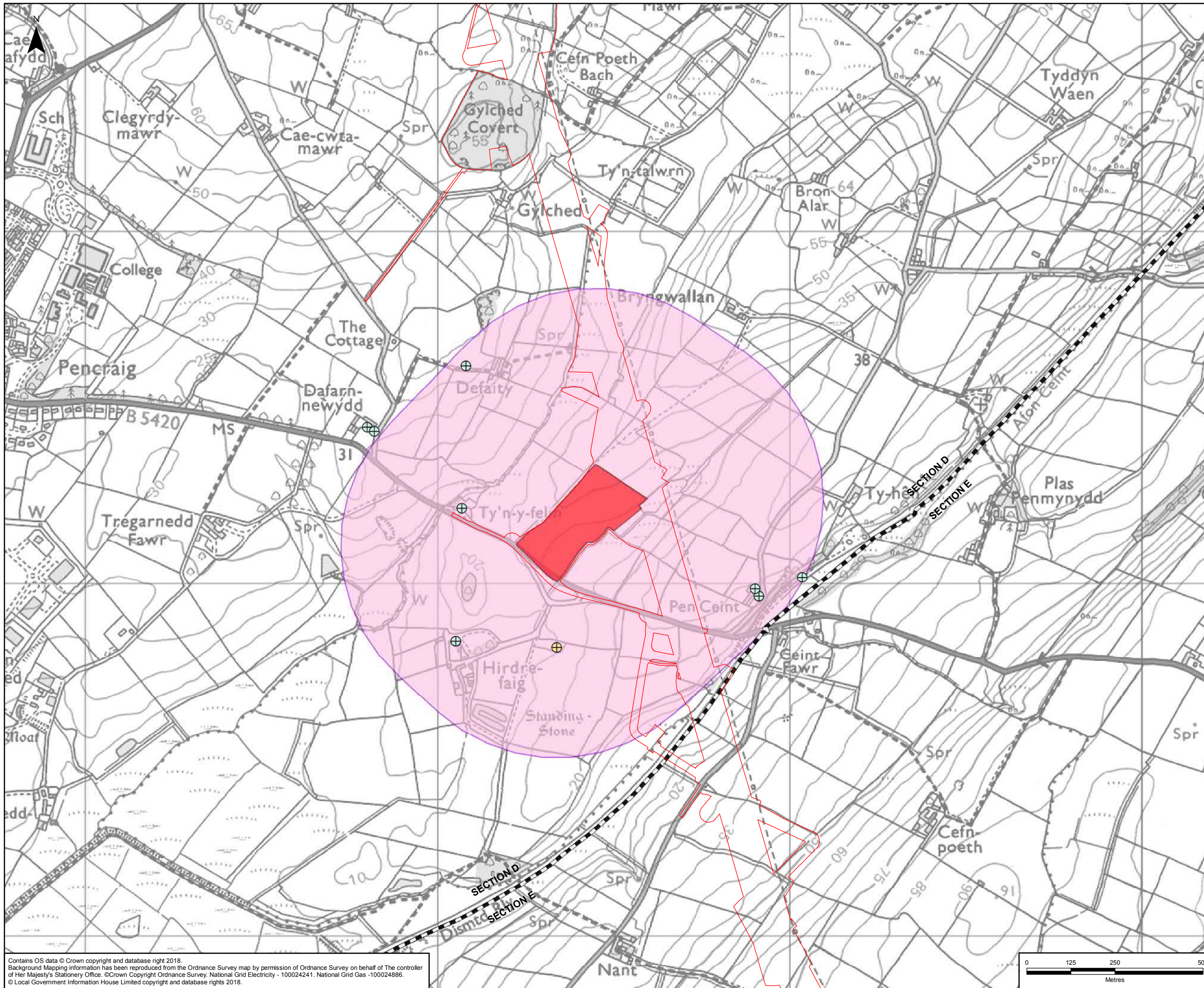
1.6 WEEKEND

General Activities						
Receptor	Receptor Classification	Receptor Sensitivity	Weekend			
			Pre Construction Ambient Noise Level, $L_{Aeq,T}$ dB	Log Sum of Pre Construction Ambient Noise and Predicted Noise Level, $L_{Aeq,T}$ dB	Exceedance of Pre Construction Noise, dB	Magnitude of Effect
R4/01499	Dwelling	Medium	50	52	2	Low
R4/01480	Dwelling	Medium	59	59	0	Very Low
R4/01602	Dwelling	Medium	50	51	1	Very Low
R4/01474	Detached	Medium	50	51	1	Very Low
C4/00245	Workshop / Light Industrial	Very low	50	51	1	Low
C4/00246	Workshop / Light Industrial	Very low	50	51	1	Low
C4/00247	Workshop / Light Industrial	Very low	50	51	1	Low
C4/00248	Workshop / Light Industrial	Very low	50	51	1	Low
C4/00249	Workshop / Light Industrial	Very low	50	51	1	Low
C4/00250	Workshop / Light Industrial	Very low	50	51	1	Low
C4/00251	Commercial	Low	50	51	1	Low
C4/00252	Commercial	Low	50	51	1	Low
C4/00253	Commercial	Low	50	51	1	Low
C4/00254	Commercial	Low	50	51	1	Low
C4/00255	Commercial	Low	50	51	1	Low
C4/00243	Workshop / Light Industrial	Very low	50	51	1	Very Low
R4/01599	Detached	Medium	50	51	1	Very Low
R4/01482	Residential	Medium	43	46	3	Very Low
C4/00256	Commercial	Low	50	51	1	Low
R4/13296	Residential	Medium	50	51	1	Very Low
C4/13297	Commercial	Low	50	51	1	Very Low

## Figures

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**LEGEND**

- ORDER LIMITS
- SECTION OUTLINES

**SIGNIFICANCE OF EFFECT:**

- ⊕ MINOR
- ⊕ NEGLIGIBLE
- CONSTRUCTION COMPOUND
- NOISE STUDY AREA: PENMYNYDD ROAD CONSTRUCTION COMPOUND

A	10/08/2018	ENVIRONMENTAL STATEMENT	JF	SH	PE
Rev	Date	Description	GIS	Chk	App

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Scheme: NORTH WALES CONNECTION PROJECT

Document Number: 5.12.2.5

Document Title: FIGURE A  
SIGNIFICANCE OF EFFECTS FROM WORKS AT  
PENMYNYDD ROAD CONSTRUCTION COMPOUND  
SECTION D

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Document Type:	Scale:	Format:	Sheets:	Rev:
FIGURE	1:10,000	A3	1 of 1	A

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