

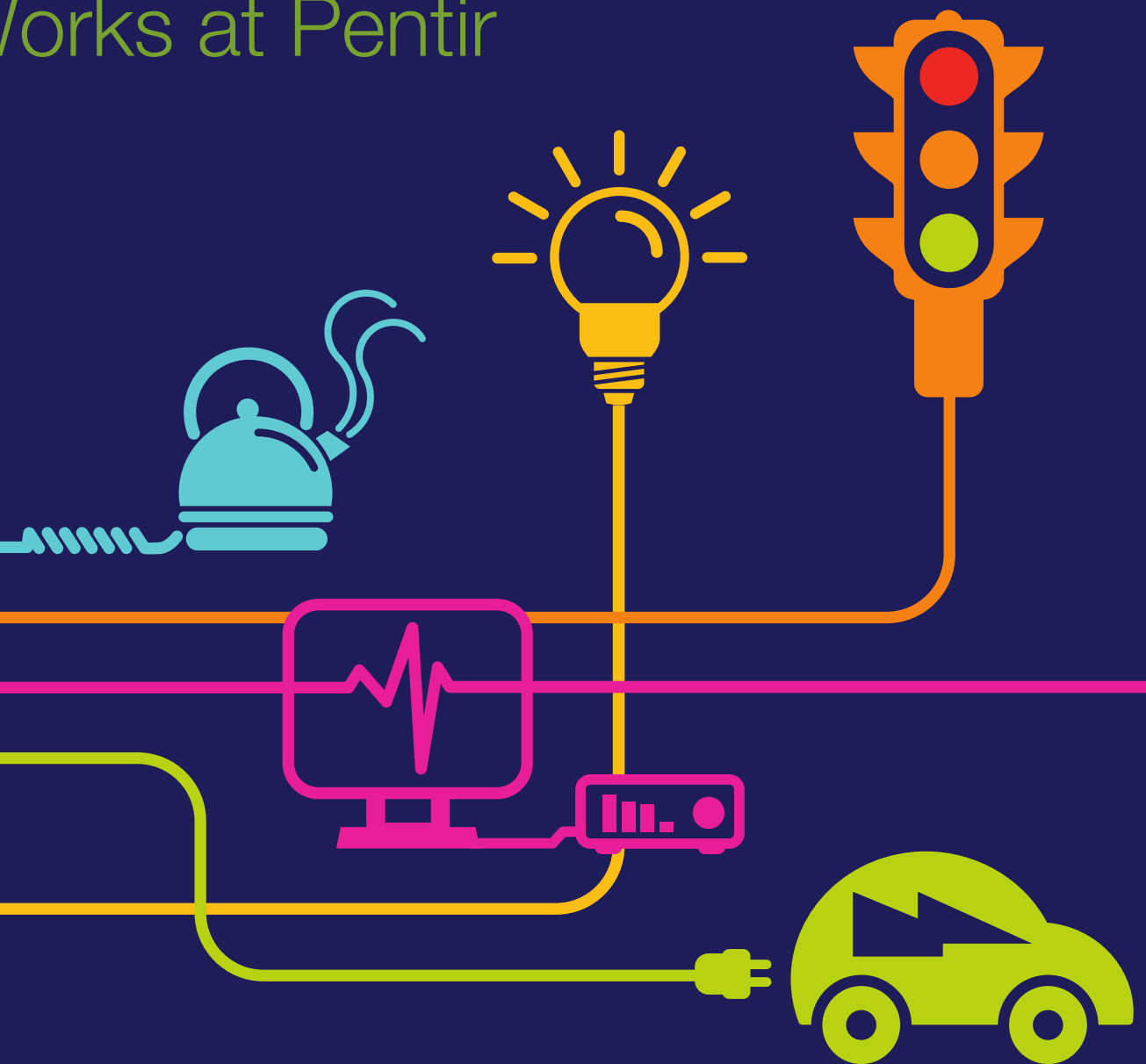
# DOCUMENT 5.15.2.8

## Assessment of Noise Effects from Works at Pentir Substation

### Chapter 15 – Appendix 8

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*







## **North Wales Connection Project**

### **Volume 5**

## **Document 5.15.2.8 Appendix 15.8 Assessment of Noise Effects from Works at Pentir Substation Extension**

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Final September 2018

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# 1. Levelling and Creation of Substation Platform for Construction

## 1.1 BS 5228 CALC

Levelling and Creation of Substation Platform for Construction					
Receptors	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 level of plant at receptor $L_{Aeq,T}$ dB
R5/09355	Detached	Medium	310	87	54
R5/09356	Caravan	Medium	310	87	54
R5/08539	Detached	Medium	530	87	49
R5/08715	Detached	Medium	530	87	49
R5/08574	Detached	Medium	440	87	51
R5/08540	Caravan	Medium	530	87	49
R5/08541	Semi-Detached	Medium	530	87	49
R5/10768	Caravan	Medium	430	87	51
C5/13713	Holiday Let/Accommodation/Short-Term Let Other Than CH01	Medium	460	87	50
R5/10846	Detached	Medium	460	87	50

## 1.2 DAYTIME

Levelling and Creation of Substation Platform for Construction						
Receptors	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, dB	Magnitude of Effect
R5/09355	Detached	Medium	47	55	8	Low
R5/09356	Caravan	Medium	47	55	8	Low
R5/08539	Detached	Medium	47	51	4	Very Low
R5/08715	Detached	Medium	47	51	4	Very Low
R5/08574	Detached	Medium	47	52	5	Very Low
R5/08540	Caravan	Medium	47	51	4	Very Low
R5/08541	Semi-Detached	Medium	47	51	4	Very Low
R5/10768	Caravan	Medium	47	52	5	Very Low
C5/13713	Holiday Let/Accommodation/Short-Term Let Other Than CH01	Medium	47	52	5	Very Low
R5/10846	Detached	Medium	47	52	5	Very Low

## 2. Construction of Equipment Foundations

### 1.3 BS 5228 CALC

Construction of Equipment Foundations					
Receptors	Receptor Classification	Receptor Sensitivity	Distance from Plant to Receptor (m)	BS 5228-1 Calc	
				A-Weighted Sound Pressure Level, L <sub>Aeq,T</sub> dB (at 10 m)	Predicted level of plant at receptor L <sub>Aeq,T</sub> dB
R5/09355	Detached	Medium	310	88	55
R5/09356	Caravan	Medium	310	88	55
R5/08539	Detached	Medium	530	88	50
R5/08715	Detached	Medium	530	88	50
R5/08574	Detached	Medium	440	88	52
R5/08540	Caravan	Medium	530	88	50
R5/08541	Semi-Detached	Medium	530	88	50
R5/10768	Caravan	Medium	430	88	52
C5/13713	Holiday Let/Accommodation/Short-Term Let Other Than CH01	Medium	460	88	51
R5/10846	Detached	Medium	460	88	51

1.4 DAYTIME

Construction of Equipment Foundations						
Receptors	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, dB	Magnitude of Effect
R5/09355	Detached	Medium	47	56	9	Low
R5/09356	Caravan	Medium	47	56	9	Low
R5/08539	Detached	Medium	47	51	4	Very Low
R5/08715	Detached	Medium	47	51	4	Very Low
R5/08574	Detached	Medium	47	53	6	Very Low
R5/08540	Caravan	Medium	47	51	4	Very Low
R5/08541	Semi-Detached	Medium	47	51	4	Very Low
R5/10768	Caravan	Medium	47	53	6	Low
C5/13713	Holiday Let/Accommodation/ Short-Term Let Other Than CH01	Medium	47	53	6	Very Low
R5/10846	Detached	Medium	47	53	6	Very Low

### 3. Removal and Installation of Security Fence

1.5 BS 5228 CALC

Removal and Installation of Security Fence					
Receptors	Receptor Classification	Receptor Sensitivity	Distance from Plant to Receptor (m)	BS 5228-1 Calc	
				A-Weighted Sound Pressure Level, L <sub>Aeq,T</sub> dB (at 10 m)	Predicted level of plant at receptor L <sub>Aeq,T</sub> dB
R5/09355	Detached	Medium	310	95	63
R5/09356	Caravan	Medium	310	95	63
R5/08539	Detached	Medium	530	95	57
R5/08715	Detached	Medium	530	95	57
R5/08574	Detached	Medium	440	95	59
R5/08540	Caravan	Medium	530	95	57
R5/08541	Semi-Detached	Medium	530	95	57
R5/10768	Caravan	Medium	430	95	59
C5/13713	Holiday Let/Accommodation/Short-Term Let Other Than CH01	Medium	460	95	59
R5/10846	Detached	Medium	460	95	59

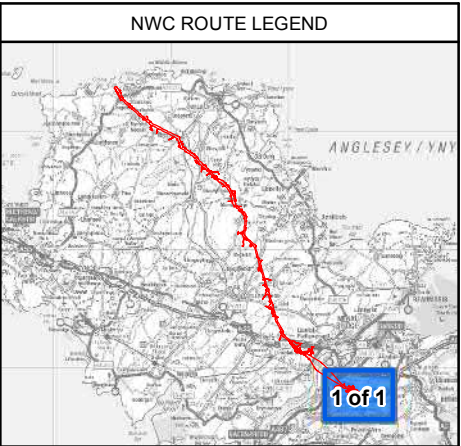
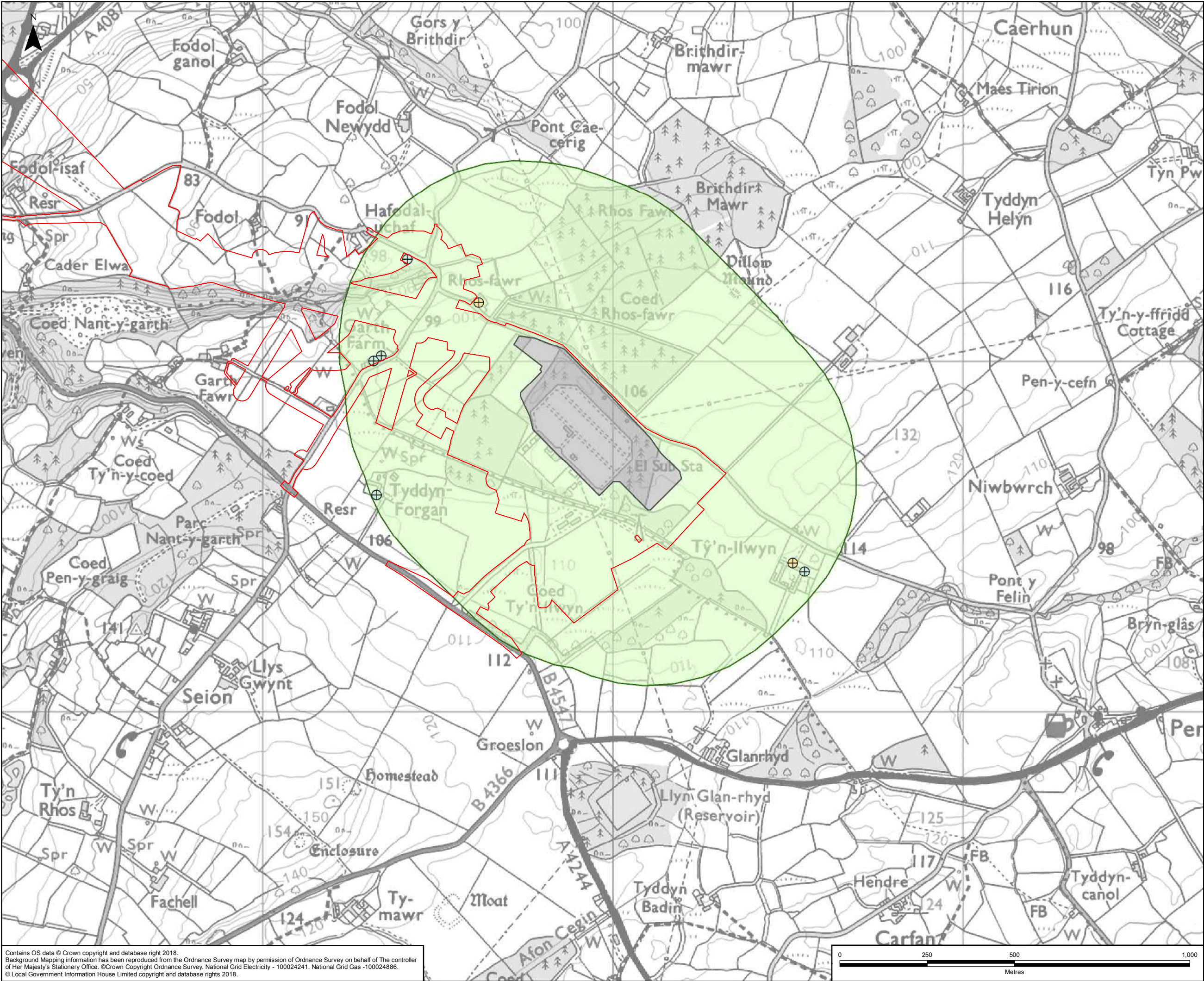
## 1.6 DAYTIME

Removal and Installation of Security Fence						
Receptors	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, dB	Magnitude of Effect
R5/09355	Detached	Medium	47	63	16	Low
R5/09356	Caravan	Medium	47	63	16	Low
R5/08539	Detached	Medium	47	58	11	Very Low
R5/08715	Detached	Medium	47	58	11	Very Low
R5/08574	Detached	Medium	47	59	12	Very Low
R5/08540	Caravan	Medium	47	58	11	Very Low
R5/08541	Semi-Detached	Medium	47	58	11	Very Low
R5/10768	Caravan	Medium	47	60	13	Very Low
C5/13713	Holiday Let/Accommodation/Short-Term Let Other Than CH01	Medium	47	59	12	Very Low
R5/10846	Detached	Medium	47	59	12	Very Low

## Figures

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**LEGEND**

- ORDER LIMITS
- SECTION OUTLINES
- SIGNIFICANCE OF EFFECT:
  - MINOR
  - NEGLECTIBLE
- WORKING AREA: EXISTING & EXTENSION TO PENTIR SUBSTATION
- NOISE STUDY AREA: PENTIR SUBSTATION

A	10/08/2018	ENVIRONMENTAL STATEMENT	JF	SH	PE
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**nationalgrid**

Scheme: NORTH WALES CONNECTION PROJECT

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SIGNIFICANCE OF EFFECTS FROM WORKS AT PENTIR  
SUBSTATION  
SECTION F

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