

Appendix 7A: Noise Survey

Contents

7B.	Construction Sound Levels and Assumptions.....	7-1
7B.1	Introduction.....	7-1
7B.2	Proposed Phillips 66 Development Construction Plant.....	7-1
7B.3	Proposed VPI Development Construction Plant	7-3

7B. Construction Sound Levels and Assumptions

7B.1 Introduction

7B.1.1 The construction noise predictions have been undertaken using noise data for items of plant and calculation methodologies from BS 5228-1. As the principal contractor has not yet been appointed, indicative predicted noise levels for construction of the Proposed Developments have been based on similar construction methods used for developments in the UK.

7B.1.2 Facade construction noise levels have been predicted at the NSRs for the following construction activities for each site individually and both sites cumulatively:

- enabling and earthworks;
- foundations (including CFA piling); and
- mechanical and electrical works.

7B.2 Proposed Phillips 66 Development Construction Plant

7B.2.1 A full list of plant associated with each construction phase and associated sound power data from BS 5228 and % on time is presented in Table 7B.1.

Table 7B.1: Indicative construction plant and associated sound power levels (L_{Aw}) used for the Proposed Phillips 66 Development.

Plant Item	Source (BS 5228 table and row reference)	Number in Operation	% On-time	Sound power level L_{Aw} dB
Enabling and Earthworks				
Compressors	C.3.19	2	100	106
Hand Held Pneumatic Breaker	C.1.6	2	100	114
Dump Truck (tipping fill)	C.2.30	1	100	107
Dump Truck (pass-by)	C.2.31	2	100	118
Lorry (delivery and collection)	C.2.34	2	100	111
Tracked Excavator	C.3.23	3	100	101
Concrete Mixer Truck	C.4.20	3	100	113
Wheeled Mobile Telescopic Crane	C.4.38	1	100	106
Tower Crane	C.4.48	1	100	104
Lorry with Lifting Boom	C.4.53	1	100	105

Plant Item	Source (BS 5228 table and row reference)	Number in Operation	% On-time	Sound power level L_{Aw} dB
Diesel Generator for Site Cabins	C.4.76	1	100	89
Diesel Generator for Site Lighting	C.4.86	1	100	93
Road Sweeper	C.4.90	1	100	104
Angle Grinder	C.4.93	1	100	108
Foundations				
Compressors	C.3.19	3	100	108
Dump Truck (tipping fill)	C.2.30	1	100	107
Dump Truck (pass-by)	C.2.31	2	100	118
Lorry (delivery and collection)	C.2.34	5	100	115
CFA Piling Rig	C.3.21	2	100	110
Hand-Held Welder (welding piles)	C.3.31	1	100	101
Generator for Welding	C.3.32	1	100	101
Tracked Excavator	C.3.23	5	100	103
Concrete Mixer Truck	C.4.20	13	100	119
Truck Mounted Concrete Pump and Boom Arm	C.4.29	2	100	111
Wheeled Mobile Telescopic Crane	C.4.38	2	100	109
Tower Crane	C.4.48	1	100	104
Diesel Generator for Site Cabins	C.8.23	2	100	93
Diesel Generator for Site Lighting	C.8.23	1	100	90
Road Sweeper	C.4.90	1	100	104
Angle Grinder	C.4.93	1	100	108
Electric Water Pump	C.11.3	1	100	97
Mechanical and Electrical				
Compressors	C.3.19	3	100	108

Plant Item	Source (BS 5228 table and row reference)	Number in Operation	% On-time	Sound power level L_{Aw} dB
Lorry (delivery and collection)	C.2.34	5	100	115
Wheeled Mobile Telescopic Crane	C.4.38	2	100	109
Tower Crane	C.4.48	1	100	104
Lorry with Lifting Boom	C.4.53	1	100	105
Lifting Platform	C.4.57	1	100	95
Fork Lift Truck	C.4.62	1	100	94
Mini Tracked Excavator	C.4.67	1	100	102
Electric Core Drill (Drilling Concrete)	C.4.69	1	100	113
Concrete Floor Cutter	C.4.73	1	100	112
Hand-Held Circular Saw (Cutting Paving Slabs)	C.4.73	1	100	112
Diesel Generator for Site Cabins	C.4.76	2	100	92
Diesel Generator for Site Lighting	C.4.86	1	100	93
Road Sweeper	C.4.90	1	100	104
Angle Grinder	C.4.93	1	100	108
Hand-Held Cordless Nail Gun	C.4.95	1	100	101
Electric Water Pump	C.11.3	1	100	97

7B.3 Proposed VPI Development Construction Plant

7B.3.1 A full list of plant associated with each construction phase and associated sound power data from BS 5228 and % on time is presented in Table 7B.2.

Table 7B.2: Indicative construction plant and associated sound power levels (L_{Aw}) used for the Proposed VPI Development.

Plant Item	Source (BS 5228 table and row reference)	Number in Operation	% On-time	Sound power level L_{Aw} dB
Enabling and Earthworks				
Compressors	C.3.19	2	100	106
Hand Held Pneumatic Breaker	C.1.6	2	100	114

Plant Item	Source (BS 5228 table and row reference)	Number in Operation	% On-time	Sound power level L_{Aw} dB
Dump Truck (tipping fill)	C.2.30	1	100	107
Dump Truck (pass-by)	C.2.31	2	100	118
Lorry (delivery and collection)	C.2.34	2	100	111
Tracked Excavator	C.3.23	3	100	101
Concrete Mixer Truck	C.4.20	3	100	113
Wheeled Mobile Telescopic Crane	C.4.38	1	100	106
Tower Crane	C.4.48	1	100	104
Lorry with Lifting Boom	C.4.53	1	100	105
Road Sweeper	C.4.90	1	100	104
Angle Grinder	C.4.93	1	100	108
Electric Water Pump	C.11.3	1	100	97
Foundations				
Compressors	C.3.19		100	106
Dump Truck (tipping fill)	C.2.30	2	100	110
Dump Truck (pass-by)	C.2.31	1	100	115
Lorry (delivery and collection)	C.2.34	2	100	111
CFA Piling Rig	C.3.21	2	100	110
Hand-Held Welder (welding piles)	C.3.31	3	100	106
Generator for Welding	C.3.32	3	100	106
Tracked Excavator	C.3.23	1	100	96
Concrete Mixer Truck	C.4.20	1	100	108
Truck Mounted Concrete Pump and Boom Arm	C.4.29	1	100	108
Wheeled Mobile Telescopic Crane	C.4.38	1	100	106
Tower Crane	C.4.48	1	100	104
Road Sweeper	C.4.90	1	100	104

Plant Item	Source (BS 5228 table and row reference)	Number in Operation	% On-time	Sound power level L_{Aw} dB
Angle Grinder	C.4.93	1	100	108
Electric Water Pump	C.11.3	1	100	97
Concrete Vibrating Pokers	C.4.34	2	40	96
Concrete Pump	C.3.26	1	90	103
Mechanical and Electrical				
Compressors	C.3.19	3	100	108
Lorry (delivery and collection)	C.2.34	5	100	115
Wheeled Mobile Telescopic Crane	C.4.38	2	100	109
Tower Crane	C.4.48	1	100	104
Lorry with Lifting Boom	C.4.53	1	100	105
Lifting Platform	C.4.57	1	100	95
Fork Lift Truck	C.4.62	1	100	94
Mini Tracked Excavator	C.4.67	1	100	102
Electric Core Drill (Drilling Concrete)	C.4.69	1	100	113
Concrete Floor Cutter	C.4.73	1	100	112
Hand-Held Circular Saw (Cutting Paving Slabs)	C.4.73	1	100	112
Road Sweeper	C.4.90	2	100	107
Angle Grinder	C.4.93	1	100	108
Hand-Held Cordless Nail Gun	C.4.95	1	100	101
Electric Water Pump	C.11.3	1	100	97
Gas cutter (for cutting steel)	C.1.18	1	4	93