

APPENDIX 11.9: INPUT DATA FOR THE NOISE MODEL OF ROAD MOVEMENTS WITHIN THE SITE

The assessment is based upon the following assumptions:

- ♦ site speed limit = 30 mph (50 kmph)
- ♦ 50% of HGVs go to the Intermodal area
- ♦ 50% of HGVs and all employee, visitor and servicing traffic split between warehouses by the same proportions of the floor space of warehouses

Total Vehicles

Time Period	Mean Hourly 2-way Vehicle Flow		Total Number of Vehicles	
	Cars	HGVs	Cars	HGVs
07:00-23:00	261	164	2089	1312
23:00-07:00	168	106	673	424

Sound Power Levels Calculated Using Equation D6 from BS 5228 part 1, which can be rewritten as:

$$L'_{Aw} = L_{Aw} - 25 + 10 \log(Q) - 10 \log(v)$$

where:

- L'_{Aw} = Sound Power Level per meter of source (dB/m)
- L_{Aw} = Sound Power Level of static source (dB)
- Q = number of vehicles per hour
- v = mean speed (km/h)

	Source Data	
	Cars	HGVs
L_{Aw} (dB)	88	108
v (km/h)	50	50

Between HGV Access and Intermodal Area

Time Period	Mean Hourly 2-way Vehicle Flow	
	Cars	HGVs
07:00-23:00	0	82
23:00-07:00	0	53

Time Period	Sound Power Level, L'_{Aw} (dB/m)	
	Cars	HGVs
07:00-23:00	N/A	85
23:00-07:00	N/A	83

Between HGV or Employee Access and Warehouses

Time Period	Total		R1		R2		Ind-A		Ind-B		Ind-C		Ind-D		Ind-E		Ind-F		Unit
	344,669		119,937		42,456		6,689		21,368		25,548		22,297		65,032		41,342		Floor Area (m ²)
	Mean Hourly 2-way Vehicle Flow		Mean Hourly 2-way Vehicle Flow		Mean Hourly 2-way Vehicle Flow		Mean Hourly 2-way Vehicle Flow		Mean Hourly 2-way Vehicle Flow		Mean Hourly 2-way Vehicle Flow		Mean Hourly 2-way Vehicle Flow		Mean Hourly 2-way Vehicle Flow				
Cars	HGVs	Cars	HGVs	Cars	HGVs	Cars	HGVs	Cars	HGVs	Cars	HGVs	Cars	HGVs	Cars	HGVs	Cars	HGVs		
07:00-23:00	261	82	91	29	32	10	5	2	16	5	19	6	17	5	49	15	31	10	
23:00-07:00	168	53	59	18	21	7	3	1	10	3	12	4	11	3	32	10	20	6	

Time Period	Sound Power Level, L'_{Aw} (dB/m)		Sound Power Level, L'_{Aw} (dB/m)		Sound Power Level, L'_{Aw} (dB/m)		Sound Power Level, L'_{Aw} (dB/m)		Sound Power Level, L'_{Aw} (dB/m)		Sound Power Level, L'_{Aw} (dB/m)		Sound Power Level, L'_{Aw} (dB/m)		Sound Power Level, L'_{Aw} (dB/m)	
	Cars	HGVs	Cars	HGVs	Cars	HGVs	Cars	HGVs	Cars	HGVs	Cars	HGVs	Cars	HGVs	Cars	HGVs
07:00-23:00	66	81	61	76	53	68	58	73	59	74	58	73	63	78	61	76
23:00-07:00	64	79	59	74	51	66	56	71	57	72	56	71	61	76	59	74