

CITY AIRPORT DEVELOPMENT PROGRAMME
(CADP1) S73 APPLICATION

ENVIRONMENTAL STATEMENT

VOLUME 2: APPENDICES

DECEMBER 2022



Pell Frischmann

City Airport Development
Programme (CADP1) S73
Application

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Appendix 8.5 Road Traffic Noise

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This appendix details the assumptions and methodology used in the calculation of road traffic noise at London City Airport. The figure listed in Table 8.5.1 below is also provided in this appendix.

Table 8.5.1 Appendix 8.5 Figures

Reference	Description
Figure 8.5.1	Road Traffic Noise Representative Locations

A computer model of the airport and surrounding area has been prepared using the environmental noise prediction software CadnaA (version 2022 MR2). Figure 8.5.1 illustrates the limits of the road traffic noise study area, which extends approximately 1.5 km east and west and 0.5 km north and south of the runway centre, and the representative locations used in the assessment.

The CadnaA computer model implements the methodology set out in CRTN¹ for the calculation of road traffic noise, as specified by DMRB LA111² for the assessment of road traffic noise.

Buildings and building heights have been incorporated into the model using the Environment Agency LIDAR Composite DTM and DSM 2020 datasets and OpenStreetMap building footprints. The road network around the airport includes a complex system of bridges, overpasses and underpasses which are not accurately emulated by the available terrain data. A terrain model has therefore not been implemented in CadnaA. This is a worst-case simplification as the CadnaA model therefore assumes direct horizontal line of sight between the roads and nearest receivers with no screening from terrain. Buildings and barriers within the airport site, or that will be constructed within the airport site, have been included depending on the assessment scenario and based on plans and schedules provided by the airport.

The key road links in the study area have been assessed based on traffic flow information, including average speeds and vehicle mix, provided by Steer, which is summarised in Table 8.5.2 to Table 8.5.3. Where applicable, the traffic flows include construction traffic related to the build-out of the remaining elements of the development.

Reported noise levels include a + 2.5 dB façade correction. It has been assumed that all road surfaces are smooth, mastic asphalt with zero gradient.

¹ Calculation of Road Traffic Noise, Department of Transport (1988).
² Design Manual for Roads and Bridges, LA 111 Noise and Vibration, Highways England (2020).

Table 8.5.2 Traffic flow data, Average Annual Weekday 18-hour

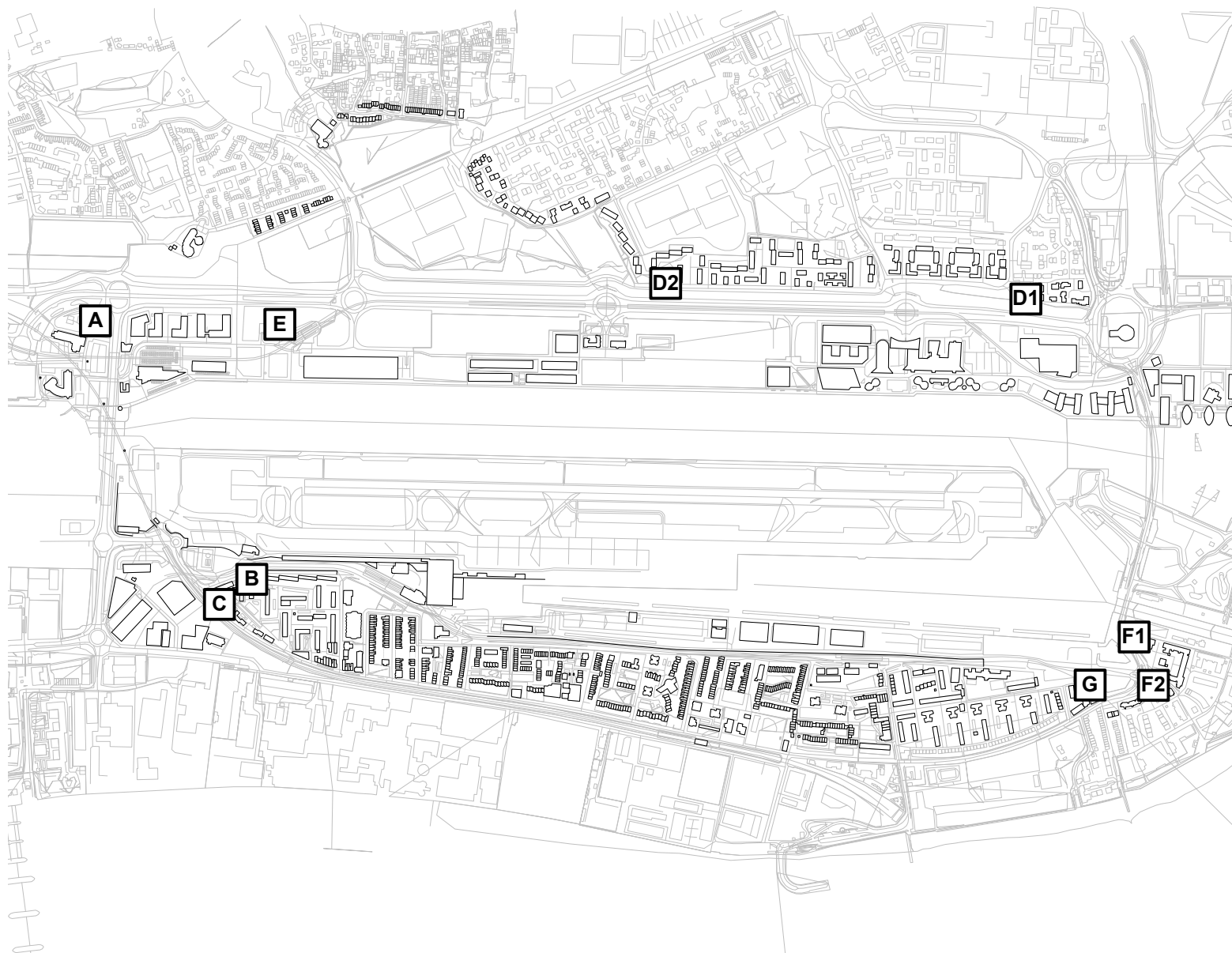
Road Link	Speed (km/h)	2019		2025 DM		2025 DC		2027 DM		2027 DC		2031 DM		2031 DC	
		Count	% HGV	Count	% HGV	Count	% HGV	Count	% HGV	Count	% HGV	Count	% HGV	Count	% HGV
Connaught Bridge (North) (Northbound)	44	9,933	5.8	12,940	6.6	13,362	6.6	13,491	6.3	14,011	6.2	12,763	6.0	13,046	5.9
Connaught Bridge (North) (Southbound)	44	11,025	5.9	14,811	7.3	14,957	7.3	15,911	6.9	16,089	6.9	17,693	6.3	17,889	6.2
Hartmann Road (Western Airport Access)	30	12,144	6.0	9,321	10.4	10,337	9.6	8,910	10.5	11,605	8.8	5,495	10.5	7,459	8.0
Connaught Road (East of Hartmann Road)	33	7,079	11.9	7,523	10.8	7,837	10.6	7,401	10.9	7,753	10.6	5,698	14.2	5,730	14.1
Royal Albert Road (East of Cyprus DLR) (Eastbound)	49	6,769	3.1	11,587	4.7	11,790	4.7	12,181	4.4	12,435	4.4	11,851	3.9	11,851	3.9
Royal Albert Road (East of Cyprus DLR) (Westbound)	49	10,084	6.0	11,003	7.3	11,000	7.3	12,272	6.4	12,275	6.4	14,788	4.9	14,788	4.9
Royal Albert Road (West of Stansfeld Road) (Westbound)	46	7,093	4.9	13,094	6.7	13,307	6.6	13,760	6.3	14,030	6.2	13,400	5.9	13,436	5.9
Royal Albert Road (West of Stansfeld Road) (Eastbound)	46	11,634	6.1	13,719	8.1	13,756	8.1	15,069	7.2	15,120	7.2	17,649	5.9	17,719	5.8
Woolwich Manor Way (South of Roundabout)	41	10,852	1.7	17,711	6.5	18,000	6.5	16,829	7.0	17,142	6.9	16,931	7.2	17,986	6.9
Hartmann Road (Eastern Airport Access)	30	0	0.0	0	0.0	66	28.6	0	0.0	155	35.3	3,724	10.5	5,055	8.0

Table 8.5.3 Traffic flow data, Average Annual Weekend 18-hour

Road Link	Speed (km/h)	2019		2025 DM		2025 DC		2027 DM		2027 DC		2031 DM		2031 DC	
		Count	% HGV	Count	% HGV	Count	% HGV	Count	% HGV	Count	% HGV	Count	% HGV	Count	% HGV
Connaught Bridge (North) (Northbound)	44	7,737	5.8	10,079	6.6	10,408	6.6	10,508	6.3	10,913	6.2	9,941	6.0	10,161	5.9
Connaught Bridge (North) (Southbound)	44	8,587	5.9	11,536	7.3	11,650	7.3	12,393	6.9	12,531	6.9	13,781	6.3	13,933	6.2
Hartmann Road (Western Airport Access)	30	5,088	6.0	4,252	10.4	4,715	9.6	5,113	10.5	6,660	8.8	3,207	10.5	4,353	8.0
Connaught Road (East of Hartmann Road)	33	5,513	11.9	5,860	10.8	6,104	10.6	5,765	10.9	6,039	10.6	4,438	14.2	4,463	14.1
Royal Albert Road (East of Cyprus DLR) (Eastbound)	49	5,272	3.1	9,025	4.7	9,183	4.7	9,488	4.4	9,685	4.4	9,230	3.9	9,231	3.9
Royal Albert Road (East of Cyprus DLR) (Westbound)	49	7,854	6.0	8,570	7.3	8,568	7.3	9,559	6.4	9,561	6.4	11,518	4.9	11,518	4.9
Royal Albert Road (West of Stansfeld Road) (Westbound)	46	5,525	4.9	10,199	6.7	10,365	6.6	10,718	6.3	10,928	6.2	10,437	5.9	10,465	5.9
Royal Albert Road (West of Stansfeld Road) (Eastbound)	46	9,061	6.1	10,686	8.1	10,714	8.1	11,737	7.2	11,777	7.2	13,746	5.9	13,801	5.8
Woolwich Manor Way (South of Roundabout)	41	8,453	1.7	13,795	6.5	14,020	6.5	13,108	7.0	13,352	6.9	13,187	7.2	14,009	6.9
Hartmann Road (Eastern Airport Access)	30	0	0.0	0	0.0	30	28.6	0	0.0	89	35.3	2,174	0.0	2,951	0.0

Legend:

[X] Representative Locations



**Bickerdike
Allen
Partners**
Architecture
Acoustics
Technology

121 Salusbury Road, London, NW6 6RG
Email: mail@bickerdikeallen.com
www.bickerdikeallen.com

T: 0207 625 4411
F: 0207 625 0250

**London City Airport
Extended Operating Hours
Figure 8.5.1**

**Road Traffic Noise
Representative Locations**

Drawn: MP

Checked: DC

Date: November 2022

Scale: 1:12,500 @ A4

Figure Ref.:

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