

**APPENDIX M**  
**AIR QUALITY INFORMATION**

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## A2 Shore Road – Local Air Quality Assessment



Location for background air quality

Jordanstown

Receptors:

**1-4 Schooner Court at Langley Hall**  
**Belfast High School**  
**31 Shore Road**

Grid Reference

Easting: 337,222

Northing: 384,354



Location for background air quality

Seapark

Receptors:

**132 Shore Road**  
**146 Shore Road**  
**Ravenhill Private Nursing Home**  
**87 Shore Road**  
**19 Whinfield Lane**

Grid Reference

Easting: 338,133

Northing: 385,436

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Background concentrations for 2006						
	CO (mg/m <sup>3</sup> )	Benzene (µg/m <sup>3</sup> )	1,3- butadiene (µg/m <sup>3</sup> )	NO <sub>x</sub> (µg/m <sup>3</sup> )	NO <sub>2</sub> (µg/m <sup>3</sup> )	PM <sub>10</sub> (µg/m <sup>3</sup> )
Jordanstown	0.309	0.672	0.109	21.4	15.84	18.6
Seapark	0.294	0.619	0.101	19.7	14.92	18.1

Background concentrations for 2010						
	CO (mg/m <sup>3</sup> )	Benzene (µg/m <sup>3</sup> )	1,3- butadiene (µg/m <sup>3</sup> )	NO <sub>x</sub> (µg/m <sup>3</sup> )	NO <sub>2</sub> (µg/m <sup>3</sup> )	PM <sub>10</sub> (µg/m <sup>3</sup> )
Jordanstown	0.309	0.636	0.109	17.4	13.6	17.7
Seapark	0.294	0.586	0.101	16.1	12.6	17.2

### Traffic Data – I-4 Schooner Court at Langley Hall

Year	Link	Distance from link centre to receptor (m)	Traffic flow & speed		Traffic composition					
			AADT (combined, veh/day)	Annual average speed (km/h)	Road type (A,B, C,D)	Vehicles <3.5t GVW (LDV)		Vehicles>3.5t GVW (HDV)		
						% passenger cars	% light goods vehicles	% buses and coaches	% rigid HGV	% articulated HGV
2006	409	20	33677	20	D	88.65	7.45	0.95	1.5	1.45
2010 Do-Min	409	20	36920	20	D	88.65	7.45	0.95	1.5	1.45
2010 Do-Som	409	14	36939	50	D	88.65	7.45	0.95	1.5	1.45

### Traffic Data – Belfast High School

Year	Link	Distance from link centre to receptor (m)	Traffic flow & speed		Traffic composition					
			AADT (combined, veh/day)	Annual average speed (km/h)	Road type (A,B, C,D)	Vehicles <3.5t GVW (LDV)		Vehicles>3.5t GVW (HDV)		
						% passenger cars	% light goods vehicles	% buses and coaches	% rigid HGV	% articulated HGV
2006	409	60	33677	20	D	88.65	7.45	0.95	1.5	1.45
2010 Do-Min	409	60	36920	20	D	88.65	7.45	0.95	1.5	1.45
2010 Do-Som	409	54	36939	50	D	88.65	7.45	0.95	1.5	1.45

### Traffic Data – 31 Shore Road

Year	Link	Distance from link centre to receptor (m)	Traffic flow & speed		Traffic composition					
			AADT (combined, veh/day)	Annual average speed (km/h)	Road type (A,B, C,D)	Vehicles <3.5t GVW (LDV)		Vehicles>3.5t GVW (HDV)		
						% passenger cars	% light goods vehicles	% buses and coaches	% rigid HGV	% articulated HGV
2006	417	6.5	32626	20	D	88.65	7.45	0.95	1.5	1.45
2010 Do-Min	417	6.5	35768	20	D	88.65	7.45	0.95	1.5	1.45
2010 Do-Som	417	16	35787	50	D	88.65	7.45	0.95	1.5	1.45

### Traffic Data – I32 Shore Road

Year	Link	Distance from link centre to receptor (m)	Traffic flow & speed		Traffic composition					
			AADT (combined, veh/day)	Annual average speed (km/h)	Road type (A,B, C,D)	Vehicles <3.5t GVW (LDV)		Vehicles>3.5t GVW (HDV)		
						% passenger cars	% light goods vehicles	% buses and coaches	% rigid HGV	% articulated HGV
2006	420	184	6723	20	D	88.65	7.45	0.95	1.5	1.45
2006	426	105	29643	20	D	88.65	7.45	0.95	1.5	1.45
2010 Do-Min	420	184	7370	20	D	88.65	7.45	0.95	1.5	1.45
2010 Do-Min	426	105	32498	20	D	88.65	7.45	0.95	1.5	1.45
2010 Do-Som	420	184	7376	50	D	88.65	7.45	0.95	1.5	1.45
2010 Do-Som	434	40.5	32513	70	D	88.65	7.45	0.95	1.5	1.45

### Traffic Data – I46 Shore Road

Year	Link	Distance from link centre to receptor (m)	Traffic flow & speed		Traffic composition					
			AADT (combined, veh/day)	Annual average speed (km/h)	Road type (A,B, C,D)	Vehicles <3.5t GVW (LDV)		Vehicles>3.5t GVW (HDV)		
						% passenger cars	% light goods vehicles	% buses and coaches	% rigid HGV	% articulated HGV
2006	426	19	29643	20	D	88.65	7.45	0.95	1.5	1.45
2010 Do-Min	426	19	32498	20	D	88.65	7.45	0.95	1.5	1.45
2010 Do-Som	428	75	732	50	D	88.65	7.45	0.95	1.5	1.45
2010 Do-Som	434	122	32513	70	D	88.65	7.45	0.95	1.5	1.45

### Traffic Data – Ravenhill Nursing Private Home

Year	Link	Distance from link centre to receptor (m)	Traffic flow & speed		Traffic composition					
			AADT (combined, veh/day)	Annual average speed (km/h)	Road type (A,B, C,D)	Vehicles <3.5t GVW (LDV)		Vehicles>3.5t GVW (HDV)		
						% passenger cars	% light goods vehicles	% buses and coaches	% rigid HGV	% articulated HGV
2006	428	38	29310	20	D	88.65	7.45	0.95	1.5	1.45
2010 Do-Min	428	38	32133	20	D	88.65	7.45	0.95	1.5	1.45
2010 Do-Som	428	38	732	50	D	88.65	7.45	0.95	1.5	1.45

### Traffic Data – 87 Shore Road

Year	Link	Distance from link centre to receptor (m)	Traffic flow & speed		Traffic composition					
			AADT (combined, veh/day)	Annual average speed (km/h)	Road type (A,B, C,D)	Vehicles <3.5t GVW (LDV)		Vehicles>3.5t GVW (HDV)		
						% passenger cars	% light goods vehicles	% buses and coaches	% rigid HGV	% articulated HGV
2006	428	8	29310	20	D	88.65	7.45	0.95	1.5	1.45
2010 Do-Min	428	8	32133	20	D	88.65	7.45	0.95	1.5	1.45
2010 Do-Som	428	8	732	50	D	88.65	7.45	0.95	1.5	1.45

### Traffic Data – 19 Whinfield Lane

Year	Link	Distance from link centre to receptor (m)	Traffic flow & speed		Traffic composition					
			AADT (combined, veh/day)	Annual average speed (km/h)	Road type (A,B, C,D)	Vehicles <3.5t GVW (LDV)		Vehicles>3.5t GVW (HDV)		
						% passenger cars	% light goods vehicles	% buses and coaches	% rigid HGV	% articulated HGV
2006	-	-	-	-	-	-	-	-	-	-
2010 Do-Min	-	-	-	-	-	-	-	-	-	-
2010 Do-Som	434	69	32513	70	D	88.65	7.45	0.95	1.5	1.45



**Summary**

<b>Name</b>	A2 Shore Road (Base Year)		
<b>Year</b>	2006	<b>Number of links</b>	17
<b>Pollutant</b>	<b>Total emission</b>	<b>Units</b>	
CO	89,295	kg/year	
THC	10,914	kg/year	
NO <sub>x</sub>	31,759	kg/year	
PM <sub>10</sub>	1,287	kg/year	
CO <sub>2</sub>	9,786	tonnes/year	

**All links**

Link number	Link title	Emissions				
		CO (kg/year)	THC (kg/year)	NO <sub>x</sub> (kg/year)	PM <sub>10</sub> (kg/year)	CO <sub>2</sub> (tonnes/year)
1	401	12,534	1,532	4,458	181	1,374
2	402	710	87	252	10	78
3	403	5,312	649	1,889	77	582
4	405	6,097	745	2,168	88	668
5	407	3,315	405	1,179	48	363
6	409	3,267	399	1,162	47	358
7	411	5,220	638	1,857	75	572
8	413	3,701	452	1,316	53	406
9	415	5,905	722	2,100	85	647
10	417	6,574	803	2,338	95	720
11	419	6,535	799	2,324	94	716
12	420	1,606	196	571	23	176
13	422	1,006	123	358	14	110
14	426	10,618	1,298	3,777	153	1,164
15	428	6,781	829	2,412	98	743
16	430	4,735	579	1,684	68	519
17	431	5,381	658	1,914	78	590
18						
19						
20						



**Summary**

<b>Name</b>	A2 Shore Road (Do-minimum)		
<b>Year</b>	2010	<b>Number of links</b>	17
<b>Pollutant</b>	<b>Total emission</b>	<b>Units</b>	
CO	78,337	kg/year	
THC	9,177	kg/year	
NO <sub>x</sub>	25,248	kg/year	
PM <sub>10</sub>	924	kg/year	
CO <sub>2</sub>	9,995	tonnes/year	

**All links**

Link number	Link title	Emissions				
		CO (kg/year)	THC (kg/year)	NO <sub>x</sub> (kg/year)	PM <sub>10</sub> (kg/year)	CO <sub>2</sub> (tonnes/year)
1	401	10,996	1,288	3,544	130	1,403
2	402	623	73	201	7	79
3	403	4,660	546	1,502	55	595
4	405	5,348	627	1,724	63	682
5	407	2,908	341	937	34	371
6	409	2,866	336	924	34	366
7	411	4,579	536	1,476	54	584
8	413	3,247	380	1,046	38	414
9	415	5,180	607	1,670	61	661
10	417	5,767	676	1,859	68	736
11	419	5,733	672	1,848	68	731
12	420	1,408	165	454	17	180
13	422	882	103	284	10	113
14	426	9,315	1,091	3,002	110	1,189
15	428	5,949	697	1,917	70	759
16	430	4,154	487	1,339	49	530
17	431	4,721	553	1,521	56	602
18						
19						
20						



**Summary**

<b>Name</b>	A2 Shore Road (Do-Something)		
<b>Year</b>	2010	<b>Number of links</b>	19
<b>Pollutant</b>	<b>Total emission</b>	<b>Units</b>	
CO	44,555	kg/year	
THC	5,508	kg/year	
NO <sub>x</sub>	24,214	kg/year	
PM <sub>10</sub>	672	kg/year	
CO <sub>2</sub>	8,709	tonnes/year	

**All links**

Link number	Link title	Emissions				
		CO (kg/year)	THC (kg/year)	NO <sub>x</sub> (kg/year)	PM <sub>10</sub> (kg/year)	CO <sub>2</sub> (tonnes/year)
1	401	5,603	700	2,779	81	1,017
2	402	317	40	157	5	58
3	403	2,374	297	1,178	34	431
4	405	2,725	340	1,352	39	495
5	407	1,482	185	735	21	269
6	409	1,460	182	724	21	265
7	411	2,333	292	1,157	34	424
8	413	1,654	207	821	24	300
9	415	2,640	330	1,309	38	479
10	417	2,939	367	1,458	42	534
11	419	2,921	365	1,449	42	530
12	420	718	90	356	10	130
13	422	450	56	223	6	82
14	428	70	9	35	1	13
15	430	126	16	63	2	23
16	431	143	18	71	2	26
17	433	5,474	664	3,412	89	1,198
18	434	8,741	1,061	5,449	142	1,913
19	435	2,384	289	1,486	39	522
20						



**Summary**

<b>Name</b>	A2 Shore Road (Do-minimum)		
<b>Year</b>	2024	<b>Number of links</b>	17
<b>Pollutant</b>	<b>Total emission</b>	<b>Units</b>	
CO	90,327	kg/year	
THC	10,533	kg/year	
NO <sub>x</sub>	20,484	kg/year	
PM <sub>10</sub>	744	kg/year	
CO <sub>2</sub>	11,691	tonnes/year	

**All links**

Link number	Link title	Emissions				
		CO (kg/year)	THC (kg/year)	NO <sub>x</sub> (kg/year)	PM <sub>10</sub> (kg/year)	CO <sub>2</sub> (tonnes/year)
1	401	12,679	1,478	2,875	104	1,641
2	402	718	84	163	6	93
3	403	5,373	627	1,218	44	695
4	405	6,167	719	1,399	51	798
5	407	3,353	391	760	28	434
6	409	3,305	385	749	27	428
7	411	5,280	616	1,197	43	683
8	413	3,744	437	849	31	485
9	415	5,973	697	1,355	49	773
10	417	6,650	775	1,508	55	861
11	419	6,610	771	1,499	54	856
12	420	1,624	189	368	13	210
13	422	1,017	119	231	8	132
14	426	10,741	1,252	2,436	88	1,390
15	428	6,859	800	1,555	56	888
16	430	4,790	559	1,086	39	620
17	431	5,443	635	1,234	45	704
18						
19						
20						



**Summary**

<b>Name</b>	A2 Shore Road (Do-Something)		
<b>Year</b>	2024	<b>Number of links</b>	19
<b>Pollutant</b>	<b>Total emission</b>	<b>Units</b>	
CO	51,401	kg/year	
THC	6,335	kg/year	
NO <sub>x</sub>	20,742	kg/year	
PM <sub>10</sub>	551	kg/year	
CO <sub>2</sub>	10,199	tonnes/year	

**All links**

Link number	Link title	Emissions				
		CO (kg/year)	THC (kg/year)	NO <sub>x</sub> (kg/year)	PM <sub>10</sub> (kg/year)	CO <sub>2</sub> (tonnes/year)
1	401	6,480	807	2,361	66	1,191
2	402	367	46	134	4	67
3	403	2,746	342	1,001	28	505
4	405	3,152	392	1,149	32	580
5	407	1,714	213	625	17	315
6	409	1,689	210	616	17	311
7	411	2,699	336	983	27	496
8	413	1,913	238	697	19	352
9	415	3,053	380	1,112	31	561
10	417	3,399	423	1,239	34	625
11	419	3,378	421	1,231	34	621
12	420	830	103	303	8	153
13	422	520	65	190	5	96
14	428	81	10	30	1	15
15	430	146	18	53	1	27
16	431	166	21	60	2	30
17	433	6,288	761	2,955	74	1,403
18	434	10,042	1,216	4,719	118	2,240
19	435	2,739	332	1,287	32	611
20						