

Table 2.6 Results of Nitrogen Dioxide Diffusion Tubes (2010 to 2014)

Site ID	Location	Site Type	Within AQMA? (Y/N)	Annual Mean Concentration ( $\mu\text{g}/\text{m}^3$ ) - Adjusted for Bias <sup>a</sup>					
				2009 (Bias Adjustment Factor = 0.868)	2010 (Bias Adjustment Factor = 0.895)	2011 (Bias Adjustment Factor = 0.782)	2012 (Bias Adjustment Factor = 0.782)	2013 (Bias Adjustment Factor = 0.81)	2014 (Bias Adjustment Factor = 0.81)
1	Main Street (No.38), Bubwith	Roadside	NO	-	-	-	-	20	21
2	Boothferry Road, Jn of Pasture Rd, Goole	Roadside	NO	38	36	34	33	30	32
3	Rosecroft, Rawcliffe Road, Goole	Roadside	NO	-	-	<b>41</b>	36	36	34
4	York Rd (No.10) Bishop Burton	Roadside	NO	-	-	33	35	37	35
5	Boothferry Road, Junction of Airmyn Road, Goole	Roadside	NO	32	36	36	34	36	36
6	Lairgate (No.22), Beverley	Roadside	NO	30	29	30	28	29	31
7	Wednesday Market, Junc of Lord Roberts Rd, Beverley	Roadside	NO	35	35	35	35	35	36

Table 2.6 (cont)

Site ID	Location	Site Type	Within AQMA? (Y/N)	Annual Mean Concentration ( $\mu\text{g}/\text{m}^3$ ) - Adjusted for Bias <sup>a</sup>					
				2009 (Bias Adjustment Factor = 0.868)	2010 (Bias Adjustment Factor = 0.895)	2011 (Bias Adjustment Factor = 0.782)	2012 (Bias Adjustment Factor = 0.782)	2013 (Bias Adjustment Factor = 0.81)	2014 (Bias Adjustment Factor = 0.81)
8	Queensgate (No.1), Beverley (Mar '13 – Dec '13)	Roadside	NO	-	-	-	-	36	36
9	Keldgate (No. 163), Beverley (Feb 13- Feb 14)	Roadside	NO	-	-	-	-	-	<b>44</b>
10	Queensgate (No.16), Beverley	Roadside	NO	36	<b>42</b>	39	38	36	37
11	Victoria Road Roundabout, Beverley	Roadside	NO	28	26	29	27	26	27
12	Wylies Road/Manor Road Roundabout, Beverley	Roadside	NO	-	-	-	22	19	19
13	New Walkergate, Jn of Wilbert Lane, Beverley	Roadside	NO	26	30	30	28	28	27
14	Hengate, Jn of New Walkergate, Beverley	Roadside	NO	29	29	32	30	28	26

Table 2.6 (cont)

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				2009 (Bias Adjustment Factor = 0.868)	2010 (Bias Adjustment Factor = 0.895)	2011 (Bias Adjustment Factor = 0.782)	2012 (Bias Adjustment Factor = 0.782)	2013 (Bias Adjustment Factor = 0.81)	2014 (Bias Adjustment Factor = 0.81)
15	Hengate (No.5A), Beverley	Roadside	NO	34	38	34	34	34	38
16	Keldgate/George Odey Court, Beverley (Aug '13 – Dec '13)	Roadside	NO	-	-	-	-	26	27
17	Swinemoor Lane (No.2), Beverley (Aug '13 – Dec '13)	Roadside	NO	-	-	-	-	31	29
18	Endyke Lane, Junction of Hull Road, Cottingham	Roadside	NO	36	34	33	34	28	30
19	Priory Road/Newgate Street, Cottingham (Mar '13 – Dec '13)	Roadside	NO	-	-	-	-	29	28
20	Front Street (No.45) Middleton-on-the-Wolds	Roadside	NO	-	-	-	<b>41</b>	<b>41</b>	<b>44</b>

Table 2.6 (cont)

Site ID	Location	Site Type	Within AQMA? (Y/N)	Annual Mean Concentration ( $\mu\text{g}/\text{m}^3$ ) - Adjusted for Bias <sup>a</sup>					
				2009 (Bias Adjustment Factor = 0.868)	2010 (Bias Adjustment Factor = 0.895)	2011 (Bias Adjustment Factor = 0.782)	2012 (Bias Adjustment Factor = 0.782)	2013 (Bias Adjustment Factor = 0.81)	2014 (Bias Adjustment Factor = 0.81)
21	Northgate (No.8), Hessle	Roadside	NO	-	-	-	29	30	28
22	A614 Boothferry Road, Howden	Roadside	NO	-	-	-	<b>40</b>	36	36
23	Flatgate (No.5) Howden	Roadside	NO	-	-	35	34	32	32
24	Keldgate (No.51), Beverley	Roadside	NO	28	29	31	28	29	29
25	Northgate (No.8), Cottingham (Apr '13 – Dec '13)	Roadside	NO	-	-	-	-	26	28
26	Albion Court/Grovehill Road Roundabout, Beverley	Roadside	NO	-	-	-	31	31	34
27	Hull Road (No.3), Saltend (Jul 13 – Dec '13)	Roadside	NO	-	-	-	-	34	31

Site ID	Location	Site Type	Within AQMA? (Y/N)	Annual Mean Concentration ( $\mu\text{g}/\text{m}^3$ ) - Adjusted for Bias <sup>a</sup>					
				2009 (Bias Adjustment Factor = 0.868)	2010 (Bias Adjustment Factor = 0.895)	2011 (Bias Adjustment Factor = 0.782)	2012 (Bias Adjustment Factor = 0.782)	2013 (Bias Adjustment Factor = 0.81)	2014 (Bias Adjustment Factor = 0.81)
28	A63/Gibson Lane North, Welton (Aug '13 – Dec '13)	Roadside	NO	-	-	-	-	<u>61</u>	<u>53</u>
29	Newgate Street (Cottingham House), Cottingham (Aug '13 – Dec '13)	Roadside	NO	-	-	-	-	23	22
30	Swinemoor Lane (opposite Barmston Road), Beverley	Roadside	NO	32	29	28	24	28	27
31	Swinemoor Roundabout (Hull Bridge Road West), Beverley	Roadside	NO	28	30	29	27	28	27
32	Swinemoor Roundabout (Swinemoor Lane), Beverley	Roadside	NO	26	28	29	24	23	22

Table 2.6 (cont)

Site ID	Location	Site Type	Withi n AQM A? (Y/N)	Annual Mean Concentration ( $\mu\text{g}/\text{m}^3$ ) - Adjusted for Bias <sup>a</sup>					
				2009 (Bias Adjustment Factor = 0.868)	2010 (Bias Adjustment Factor = 0.895)	2011 (Bias Adjustment Factor = 0.782)	2012 (Bias Adjustment Factor = 0.782)	2013 (Bias Adjustment Factor = 0.81)	2014 (Bias Adjustment Factor = 0.81)
33	Swinemoor Lane (No.9), Beverley (Aug '13 – Dec '13)	Roadside	NO	-	-	-	-	35	34
34	Swinemoor Lane (No.83), Beverley (Aug '13 – Dec '13)	Roadside	NO	-	-	-	-	22	23
35	Dunswell Bridge Lane (Junction with A1174), Dunswell	Roadside	NO	30	25	30	26	26	24
36	A1174 southbound (Dunswell school), Dunswell	Roadside	NO	27	28	33	26	25	27
37	Riverhead (No.2), Driffield	Roadside	NO	-	-	-	-	17	16
38	Eastgate (No.28), Beverley (Aug '13 – Dec '13)	Roadside	NO	-	-	-	-	22	18

Table 2.6 (cont)

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				2009 (Bias Adjustment Factor = 0.868)	2010 (Bias Adjustment Factor = 0.895)	2011 (Bias Adjustment Factor = 0.782)	2012 (Bias Adjustment Factor = 0.782)	2013 (Bias Adjustment Factor = 0.81)	2014 (Bias Adjustment Factor = 0.81)
39	North Bar Without (No.12), Beverley	Roadside	NO	22	27	26	26	25	25
40	North Bar Within (No.14), Beverley	Roadside	NO	27	31	34	30	29	27
41	Railway Street (No.12), Beverley	Roadside	NO	30	31	35	32	30	31
42	Flemingate House, Beverley	Roadside	NO	32	32	35	31	31	30
43	Grovehill Road (No.4), Beverley	Roadside	NO	22	20	22	21	20	20
44	Southgate (No.6), Hornsea (Mar '13 – Dec '13)	Roadside	NO	-	-	-	-	34	32
45	St Augustines Gate (No.38), Hedon	Roadside	NO	28	29	29	28	26	27

Table 2.6 (cont)

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				2009 (Bias Adjustment Factor = 0.868)	2010 (Bias Adjustment Factor = 0.895)	2011 (Bias Adjustment Factor = 0.782)	2012 (Bias Adjustment Factor = 0.782)	2013 (Bias Adjustment Factor = 0.81)	2014 (Bias Adjustment Factor = 0.81)
46	Hazeldene, Main Street, Keyingham (Jul '13 – Dec '13)	Roadside	NO	-	-	-	-	29	27
47	Main Street (No.6), Preston	Roadside	NO	32	34	34	34	33	33
48	Hull Road/Grovehill Road Roundabout	Roadside	NO	27	29	28	26	23	23
49	A165 Well Lane Bypass, Bridlington (Mar '13 – Dec '13)	Roadside	NO	-	-	-	-	28	27
50	Kingsgate Bridlington	Roadside	NO	28	27	29	27	28	28
51	Manor St. Bridlington	Roadside	NO	25	25	27	25	24	24
52	Scarborough Road (No.53), Bridlington	Roadside	NO	-	-	-	-	31	33



Table 2.6 (cont)

Site ID	Location	Site Type	Within AQMA? (Y/N)	Annual Mean Concentration ( $\mu\text{g}/\text{m}^3$ ) - Adjusted for Bias <sup>a</sup>					
				2009 (Bias Adjustment Factor = 0.868)	2010 (Bias Adjustment Factor = 0.895)	2011 (Bias Adjustment Factor = 0.782)	2012 (Bias Adjustment Factor = 0.782)	2013 (Bias Adjustment Factor = 0.81)	2014 (Bias Adjustment Factor = 0.81)
53	Church Hill Road (No.5), Middleton-on-the-Wolds	Roadside	NO	-	-	-	37	42	39
54	Church Hill Road (No.14), Middleton-on-the-Wolds	Roadside	NO	-	-	-	31	29	31
55	Main Street (Mill Farm), Fridaythorpe	Roadside	NO	-	-	-	22	24	27
56	Main Street (No.1 Cross Keys Cottages), Garton-on-the-Wolds	Roadside	NO	-	-	-	23	24	25
57	Scarborough Road (The Saddlers), Langtoft	Roadside	NO	-	-	-	27	28	28
58	Hospital Hill (Blacksmith's Shop), Burton Agnes	Roadside	NO	-	-	-	30	31	26
59	Main Road (The Barn), Haisthorpe	Roadside	NO	-	-	-	20	22	21

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				2009 (Bias Adjustment Factor = 0.868)	2010 (Bias Adjustment Factor = 0.895)	2011 (Bias Adjustment Factor = 0.782)	2012 (Bias Adjustment Factor = 0.782)	2013 (Bias Adjustment Factor = 0.81)	2014 (Bias Adjustment Factor = 0.81)
60	Main Street (No.39), Carnaby	Roadside	NO	-	-	-	24	25	25
61	A1079 West (Rose Cottage Farm), Barmby Moor	Roadside	NO	-	-	-	-	27	26
62	A1079 East (No.3 York Road Cottages), Hayton	Roadside	NO	-	-	-	-	23	26
63	A1079 East (South View), Shiptonthorpe	Roadside	NO	-	-	-	-	31	29
64	A1034 King Street (The Old Garage), Sancton	Roadside	NO	-	-	-	-	20	19
65	Church Street (No.38), North Cave	Roadside	NO	-	-	-	-	25	27
66	Market Place (No.19), South Cave	Roadside	NO	-	-	-	-	32	31
67	Woodgates Lane (No.35), North Ferriby	Roadside	NO	-	-	-	-	39	39

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				2009 (Bias Adjustment Factor = 0.868)	2010 (Bias Adjustment Factor = 0.895)	2011 (Bias Adjustment Factor = 0.782)	2012 (Bias Adjustment Factor = 0.782)	2013 (Bias Adjustment Factor = 0.81)	2014 (Bias Adjustment Factor = 0.81)
68	First Lane/Hull Road, Hessle	Roadside	NO	-	-	-	-	34	33
69	West End (No.54), Walkington	Roadside	NO	-	-	-	-	25	26
70	Welton Road (No.3)/Station Road Roundabout, Brough	Roadside	NO	-	-	-	-	24	28
71	Welton Road (No.58)/Skillings Lane Crossroads, Brough	Roadside	NO	-	-	-	-	27	26
72	A63 West (Melton Grange), Melton	Roadside	NO	-	-	-	-	39	<b>43</b>
73	Wilson Street (No.27), Anlaby	Roadside	NO	-	-	-	-	27	26
74	Wolfeaton Road (No.54), Anlaby	Roadside	NO	-	-	-	-	22	26
75	Main Street (No.92b), Willerby	Roadside	NO	-	-	-	-	22	22


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76	Beverley Road (No.3), Willerby	Roadside	NO	-	-	-	-	28	26
77	Victoria Road (No.94), Beverley	Roadside	NO	-	-	-	-	29	31

In bold, exceedence of the NO<sub>2</sub> annual mean AQS objective of 40 $\mu\text{g}/\text{m}^3$

Underlined, annual mean > 60 $\mu\text{g}/\text{m}^3$ , indicating a potential exceedence of the NO<sub>2</sub> hourly mean AQS objective

<sup>a</sup> Means “annualised” [as in Box 3.2 of TG\(09\) \(http://laqm.defra.gov.uk/technical-guidance/index.html?d=page=38\)](http://laqm.defra.gov.uk/technical-guidance/index.html?d=page=38), if full calendar year data capture is less than 75%

This calculator allows you to predict the annual mean NO<sub>2</sub> concentration for a location ("receptor") that is close to a monitoring site, but nearer or further the kerb than the monitor. The next sheet shows your results on a graph.

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**Enter data into the yellow cells**

<b>Step 1</b>	How far from the KERB was your measurement made (in metres)? (Note 1)	<b>2</b>	metres
<b>Step 2</b>	How far from the KERB is your receptor (in metres)? (Note 1)	<b>40</b>	metres
<b>Step 3</b>	What is the local annual mean background NO <sub>2</sub> concentration (in µg/m <sup>3</sup> )? (Note 2)	<b>14.6166</b>	µg/m <sup>3</sup>
<b>Step 4</b>	What is your measured annual mean NO <sub>2</sub> concentration (in µg/m <sup>3</sup> )? (Note 2)	<b>53</b>	µg/m <sup>3</sup>
<b>Result</b>	The predicted annual mean NO <sub>2</sub> concentration (in µg/m <sup>3</sup> ) at your receptor (Note 3)	<b>26.1</b>	µg/m <sup>3</sup>

**Warning: your receptor is more than 20m further from the kerb than your monitor, treat result with caution**


Note 1: In some cases the term "kerb" may be taken to be the edge of the trafficked road - see the FAQ at <http://laqm2.defra.gov.uk/FAQs/Monitoring/Location/index.htm> for further details. Distances should be measured horizontally from the kerb and assumes that the monitor and receptor have similar elevations. Each distance should be greater than 0.1m and less than 50m (In practice, using a value of 0.1m when the monitor is closer to the kerb than this is likely to be reasonable). The receptor is the location for which you wish to make your prediction. The monitor can either be closer to the kerb than the receptor, or further from the kerb than the receptor. The closer the monitor and the receptor are to each other, the more reliable the prediction will be. When your receptor is further from the kerb than your monitor, it is recommended that the receptor and monitor should be within 20m of each other. When your receptor is closer to the kerb than your monitor, it is recommended that the receptor and monitor should be within 10m of each other.

Note 2: The measurement and the background must be for the same year. The background concentration could come from the national maps published at [www.airquality.co.uk](http://www.airquality.co.uk), or alternatively from a nearby monitor in a background location.

Note 3: The calculator follows the procedure set out in Box 2.3 of LAQM TG(09). The results will have a greater uncertainty than the measured data. More confidence can be placed in results where the distance between the monitor and the receptor is small than where it is large.

Figure 2.5 Predicted annual mean NO<sub>2</sub> Concentration (in µg/m<sup>3</sup>) at tube number 28

This calculator allows you to predict the annual mean NO<sub>2</sub> concentration for a location ("receptor") that is close to a monitoring site, but nearer or further the kerb than the monitor. The next sheet shows your results on a graph.

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**Enter data into the yellow cells**

<b>Step 1</b>	How far from the KERB was your measurement made (in metres)? (Note 1)	<b>5.5</b>	metres
<b>Step 2</b>	How far from the KERB is your receptor (in metres)? (Note 1)	<b>16</b>	metres
<b>Step 3</b>	What is the local annual mean background NO <sub>2</sub> concentration (in µg/m <sup>3</sup> )? (Note 2)	<b>14.6166</b>	µg/m <sup>3</sup>
<b>Step 4</b>	What is your measured annual mean NO <sub>2</sub> concentration (in µg/m <sup>3</sup> )? (Note 2)	<b>43</b>	µg/m <sup>3</sup>
<b>Result</b>	The predicted annual mean NO <sub>2</sub> concentration (in µg/m <sup>3</sup> ) at your receptor (Note 3)	<b>33.7</b>	µg/m <sup>3</sup>

Note 1: In some cases the term "kerb" may be taken to be the edge of the trafficked road - see the FAQ at <http://laqm2.defra.gov.uk/FAQs/Monitoring/Location/index.htm> for further details. Distances should be measured horizontally from the kerb and assumes that the monitor and receptor have similar elevations. Each distance should be greater than 0.1m and less than 50m (In practice, using a value of 0.1m when the monitor is closer to the kerb than this is likely to be reasonable). The receptor is the location for which you wish to make your prediction. The monitor can either be closer to the kerb than the receptor, or further from the kerb than the receptor. The closer the monitor and the receptor are to each other, the more reliable the prediction will be. When your receptor is further from the kerb than your monitor, it is recommended that the receptor and monitor should be within 20m of each other. When your receptor is closer to the kerb than your monitor, it is recommended that the receptor and monitor should be within 10m of each other.

Note 2: The measurement and the background must be for the same year. The background concentration could come from the national maps published at [www.airquality.co.uk](http://www.airquality.co.uk), or alternatively from a nearby monitor in a background location.

Note 3: The calculator follows the procedure set out in Box 2.3 of LAQM TG(09). The results will have a greater uncertainty than the measured data. More confidence can be placed in results where the distance between the monitor and the receptor is small than where it is large.

Figure 2.6 Predicted annual mean NO<sub>2</sub> Concentration (in µg/m<sup>3</sup>) at tube number 72