

M42 Junction 6 Improvement
Scheme Number TR010027
Volume 6

6.3 Environmental Statement
Appendix 6.2 Air Quality Monitoring Report

Regulation 5(2)(a)

Planning Act 2008

Infrastructure Planning (Applications: Prescribed
Forms and Procedure) Regulations 2009

January 2019

Infrastructure Planning

Planning Act 2008

**The Infrastructure Planning
(Applications: Prescribed
Forms and Procedure)
Regulations 2009**

M42 Junction 6 Improvement
Development Consent Order 201[-]

6.3 Environmental Statement
Appendix 6.2 Air Quality Monitoring Report

Regulation Number	Regulation 5(2)(a)
Planning Inspectorate Scheme Reference	TR010027
Application Document Reference	6.3
Author	M42 Junction 6 Improvement Project Team and Highways England

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1	January 2019	DCO Application

Table of contents


Chapter	Pages
1 Determination of Sensitive Air Quality Receptors	4
1.1 Construction phase receptor locations	4
1.2 Survey Results	16
Table 1: Diffusion tube sampling locations	5
Table 2: Monitoring data used in the assessment	16
Table 3: 2016 Annualisation Process	18


1 Determination of sensitive air quality receptors


1.1 Construction phase receptor locations


- 1.1.1 This appendix sets out the details of the air quality measurements undertaken as part of the assessment of the Scheme.
- 1.1.2 Highways England had conducted sampling at eight locations in the vicinity of the Scheme in 2016, and an additional three locations in 2013 and 2014 (see Chapter 6 Air quality [TR010027/APP/6.1]). A nitrogen dioxide diffusion tube survey was set up on the 28th September 2017 at 14 locations in the vicinity of the Scheme, in order to provide model verification and reconfirm the previous data.
- 1.1.3 The details of the sampling locations are set out in **Table 1**.


Table 1: Diffusion tube sampling locations


Site ID	Coordinates		Description	Photographs
	X	Y		
M42_001	418851	287187	Tube located on Cornfield Croft, Chelmund's Cross, B37 6TP	


M42_002	420012	287273	Tube located on B4117/Coventry Road, Coleshill, B46 3 EX	
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M42_003	419849	282926	Tube located adjacent to south bound on slip road from Junction 6 to M42	
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M42_004	419854	282851	Tube located on Old Station Road, Hampton in Arden, B92 0HQ	
M42_005	418505	282884	Tube located on Clock Lane, Bickenhill, B92 0DX	

M42_006	418574	282476	Tube located at junction between Catherine De Barnes Lane and St Peters Lane, Bickenhill, B92 0DN	
M42_007	418662	282416	Tube located on St Peters Lane, Bickenhill, B92 0DP. Tube used as background location.	

M42_008	418533	281791	Tube located near Braceys Nurseries and Garden Centre, B4438/Catherine De Barnes Lane, B92 0DB	
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M42_009	418435	281234	Tube located near Birmingham Dogs Home, B4438/Catherine De Barnes Lane, B92 0DJ	
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M42_010	418082	280449	Tube located on Hampton Lane, Catherine-de-Barnes, B92 0JB	
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M42_011	419251	280628	Tube located on B4102/Solihull Road, B92 0ET	
M42_012	420320	280868	Tube located on High Street, Hampton in Arden, B92 0AA	

M42_013	416857	278508	Tube located on Warwick Road, Solihull, B91 3HJ	
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M42_014	416921	278428	Tube located on Warwick Road, Knowle, Solihull, B91 3HL	
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1.2 Survey Results

1.2.1 The measurement data used in the assessment are shown in **Table 2**. These values were then used to generate a set of equivalent annual mean concentrations based on the calendar year 2016, as detailed in **Table 3**.

Table 2: Monitoring data used in the assessment

Site ID	X	Y	Data capture (%)	Monitored concentration (µg/m ³)					
				28/09/17 – 26/10/17	26/10/17 – 23/11/17	23/11/17 – 21/12/17	21/12/17 – 18/01/18	18/01/18 – 15/02/18	15/02/18 – 15/03/18
M42_001	418851	287187	100%	26.2	40.0	40.4	30.8	35.0	41.1
M42_002	420012	287273	100%	56.2	77.8	72.3	52.8	66.7	48.5
M42_003	419849	282926	100%	35.4	87.9	93.7	66.8	73.4	78.2
M42_004	419854	282851	100%	79.1	52.3	54.6	35.4	41.2	32.2
M42_005	418505	282884	88%	25.2	35.1	46.0	- ^a	34.8	32.3
M42_006	418574	282476	100%	31.4	46.9	44.7	31.1	35.0	33.6
M42_007	418662	282416	88%	18.0	- ^a	34.9	27.0	24.5	26.5
M42_008	418533	281791	100%	29.4	43.8	44.9	30.6	34.0	37.5
M42_009	418435	281234	100%	23.0	32.7	27.8	22.8	27.3	30.3
M42_010	418082	280449	100%	24.6	37.0	34.8	29.9	31.9	30.8

M42_011	419251	280628	100%	20.7	35.0	39.1	22.2	30.5	24.1
M42_012	420320	280868	100%	36.8	45.5	46.4	36.7	41.0	33.9
M42_013	416857	278508	100%	27.8	39.6	33.3	26.3	32.7	35.3
M42_014	416921	278428	100%	21.0	38.1	40.3	36.9	32.5	32.5

^a *Diffusion tube missing*

Table 3: 2016 Annualisation process

Site ID*	X	Y	Period mean (µg/m3)	2016 annualised mean (µg/m3)	Bias adjusted annual mean (µg/m3)
M42_00 1	418851	287187	35.6	34.3	31.2
M42_00 2	420012	287273	62.4	60.1	54.7
M42_00 3	419849	282926	72.6	70.0	63.7
M42_00 4	419854	282851	49.1	47.4	43.1
M42_00 5	418505	282884	34.7	33.0	30.1
M42_00 6	418574	282476	37.1	35.8	32.6
M42_00 7	418662	282416	26.2	26.3	23.9
M42_00 8	418533	281791	36.7	35.4	32.2
M42_00 9	418435	281234	27.3	26.3	24.0
M42_01 0	418082	280449	31.5	30.4	27.6
M42_01 1	419251	280628	28.6	27.6	25.1
M42_01 2	420320	280868	40.1	38.6	35.1
M42_01 3	416857	278508	32.5	31.3	28.5
M42_01 4	416921	278428	33.6	32.3	29.4