

2018 Air Quality Annual Status Report (ASR)

In fulfilment of Part IV of the
Environment Act 1995
Local Air Quality Management

01/06/2018

Ref: RA/CDC/2018

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Executive Summary: Air Quality in Our Area

Air Quality in Craven District

Air pollution is associated with a number of adverse health impacts. It is recognised as a contributing factor in the onset of heart disease and cancer. Additionally, air pollution particularly affects the most vulnerable in society: children and older people, and those with heart and lung conditions. There is also often a strong correlation with equalities issues, because areas with poor air quality are also often in the less affluent areas^{1,2}.

The annual health cost to society of the impacts of particulate matter alone in the UK is estimated to be around £16 billion³.

With no major industrial processes in the district the main contributing factor to the air quality of Craven is from the road network. The district is served by transport links of both strategic and historic importance. It contains the key trunk routes of the A65 linking the conurbations of West Yorkshire to the Dales and further afield to the Lake District and the A59 linking Harrogate to the east of the district to Pendle in the west. The main pollutants linked with traffic are Nitrogen Oxides, also referred to as NOx.

Craven District Council has been committed to meeting its responsibility to provide an air quality assessment of the district through its ongoing NOx diffusion tube monitoring program. Throughout the period of monitoring, results across the district have consistently returned annual running mean values below the government's air quality objective of 40µg/m³. As a result the Council has not at any time identified the need to progress to more in-depth analysis, proceed to detailed assessments or needed to progress to declaring an AQMA anywhere in the district.

¹ Environmental equity, air quality, socioeconomic status and respiratory health, 2010

² Air quality and social deprivation in the UK: an environmental inequalities analysis, 2006

³ Defra. Abatement cost guidance for valuing changes in air quality, May 2013

Actions to Improve Air Quality

In addition to the nitrogen dioxide (NO₂) monitoring the Council has smoke control areas within the district and a detailed inspection process monitoring all permitted processes within our area.

Craven has no other pollutant areas of concern that would fall into the need for an Air Quality Management Area (AQMA).

Conclusions and Priorities

Craven District Council has been committed to meeting its responsibility to provide an air quality assessment of the district through its ongoing nitrogen dioxide (NO₂) diffusion tube monitoring program. Monitoring results across the district have consistently returned both monthly and annual running mean values below the government's air quality objective of 40µg/m³. Indeed, monitoring over the past 10 years has pointed to results remaining below the national objective with an overall downward trend of NO₂ levels right across the district. As a result the Council has not at any time identified the need to progress to more in-depth analysis, proceed to detailed assessments or needed to progress to declaring an AQMA anywhere in the district.

Local Engagement and How to get involved

We will be looking to engage with the public, Councillors and local businesses to address concerns in relation to Air Quality within our area. We will use the Council web site to encourage views and comments and how the public can make a difference.

Enforcing the smoke control areas and the industries within our district that may adversely affect the quality of air and both members of the public and employees to ensure best available techniques are used to control emissions,

Seek out new businesses and activities that could or may impact in the air quality in our communities to ensure compliance and take appropriate action.

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1 Local Air Quality Management

This report provides an overview of air quality in Craven District during 2017/18. It fulfils the requirements of Local Air Quality Management (LAQM) as set out in Part IV of the Environment Act (1995) and the relevant Policy and Technical Guidance documents.

The LAQM process places an obligation on all local authorities to regularly review and assess air quality in their areas, and to determine whether or not the air quality objectives are likely to be achieved. Where an exceedance is considered likely the local authority must declare an Air Quality Management Area (AQMA) and prepare an Air Quality Action Plan (AQAP) setting out the measures it intends to put in place in pursuit of the objectives. This Annual Status Report (ASR) is an annual requirement showing the strategies employed by Craven District to improve air quality and any progress that has been made.

Certain areas of Craven have been designated Smoke Control Areas since the 1970's. This is to prevent air pollution and the resulting ill health caused by the burning of coal and wood.

In these areas it is an offence to:

- Emit smoke from the chimney of a building;
- Use solid fuel, fixed boiler or industrial plant unless they are made for smoke control areas (please see related internet links for a list of exempted appliances);
- Sell and deliver solid fuel that is not suitable for smoke control areas (please see related internet links for a list of authorised fuels).

2 Actions to Improve Air Quality

2.1 Air Quality Management Areas

Air Quality Management Areas (AQMAs) are declared when there is an exceedance or likely exceedance of an air quality objective. After declaration, the authority must prepare an Air Quality Action Plan (AQAP) within 12-18 months setting out measures it intends to put in place in pursuit of compliance with the objectives.

Craven District currently does not have any AQMAs. See Local Air Quality Management Policy Guidance (PG 16). For reference, a map of Craven District's monitoring locations is available in Appendix A.

2.2 Progress and Impact of Measures to address Air Quality in Craven District

No data or ASR was submitted to DEFRA after 2014 but re-commenced in 2017 due to changes within the council; however, Craven District expects the following measures to be completed over the course of the next reporting year. In addition to the nitrogen dioxide (NO₂) monitoring the Council has smoke control areas within the district and a detailed inspection process monitoring all permitted processes within our area. With no major industrial processes in the district the main contributing factor to the air quality of Craven is from the road network. The district is served by transport links of both strategic and historic importance. It contains the key trunk routes of the A65 linking the conurbations of West Yorkshire to the Dales and further afield to the Lake District and the A59 linking Harrogate to the east of the district to Pendle in the west.

We are working towards the measures stated below in Table 2.1 and issues identified above will help to contribute towards compliance.

Table 2.1 – Progress on Measures to Improve Air Quality

Measure No.	Measure	EU Category	EU Classification	Organisations involved and Funding Source	Planning Phase	Implementation Phase	Key Performance Indicator	Reduction in Pollutant / Emission from Measure	Progress to Date	Estimated / Actual Completion Date	Comments / Barriers to implementation
1	Reduce emissions from CDC taxis	Traffic Management	Testing Vehicle Emissions Age restrictions on vehicles	N/A	-	-	Reduced vehicle emissions	Taxi vehicles	Implementation on-going	On-Going	
2	Reduce car use by staff and local businesses	Alternatives	Promotion of cycling	N/A	-	-	Reduced vehicle emissions	Traffic	Implementation on-going	On-Going	
3	IPPC controls	Environmental Permits	Measures to reduce pollution through IPPC Permits going beyond BAT	N/A	-	-		VOC	Implementation on-going	On-Going	
4	Reduce car emissions from staff cars	Alternatives to private vehicle use	Car & lift sharing schemes	N/A	-	-	Reduced vehicle emissions	Traffic	Implementation on-going	On-Going	
5	Reduce smoke and burning of rubbish	Smoke control areas	Enforcement	N/A	-	-			Implementation on-going	On-Going	
6	CDC policy	Promoting Travel Alternatives	Encourage / Facilitate home-working	N/A	-	-	Traffic reduction	Traffic	Implementation on-going	On-Going	
7	Planning Policy	Guidance on development	Air quality guidance on development	N/A	-	-	Possible air quality impact caused by development	Traffic control measures	Implementation on-going	On-Going	

2.3 PM_{2.5} – Local Authority Approach to Reducing Emissions and/or Concentrations

As detailed in Policy Guidance LAQM.PG16 (Chapter 7), local authorities are expected to work towards reducing emissions and/or concentrations of PM_{2.5} (particulate matter with an aerodynamic diameter of 2.5µm or less). There is clear evidence that PM_{2.5} has a significant impact on human health, including premature mortality, allergic reactions, and cardiovascular diseases.

Craven District does not undertake any monitoring of PM_{2.5} and has thorough rigorous enforcement and checks of IPPC. The permits are used to identify possible sources and these will be controlled using best available technique to reduce concentrations of PM_{2.5}.

Craven District Council proactively monitors PM_{2.5} levels in the surrounding areas to gauge the levels in its own District.

Monitoring of PM_{2.5} is undertaken in neighbouring areas such as 'Leeds Centre', 'Leeds Headingley', 'York Bootham and York Fishergate'. These areas are far more urbanized and have a greater number of permitted processes, greater volumes of traffic etc. The monitoring results from these locations regularly show PM_{2.5} levels to be low, it can therefore be assumed that levels in the Craven District which is rural, less industrialized and has a reduced flow of road traffic are low.

3 Air Quality Monitoring Data and Comparison with Air Quality Objectives and National Compliance

3.1 Summary of Monitoring Undertaken

3.1.1 Automatic Monitoring Sites

This section sets out what monitoring has taken place and how it compares with objectives.

Craven District does not undertake any monitoring from Automatic (continuous) Monitoring or Non-Automatic Monitoring Sites.

3.1.2 Craven District undertook non- automatic (passive) monitoring of NO₂ at 5 sites during 2017.

Maps showing the location of the monitoring sites are provided in Appendix A.

The air quality monitoring results presented in this section are, where relevant, adjusted for bias, “animalisation” and distance correction.

3.1.2 Nitrogen Dioxide (NO₂)

Table A.2 compares the ratified and air quality objective of 40µg/m³. Adjusted monitored NO₂ annual mean concentrations for the past 12 months for diffusion tubes, the current 2017/18 dataset of monthly mean values is provided.

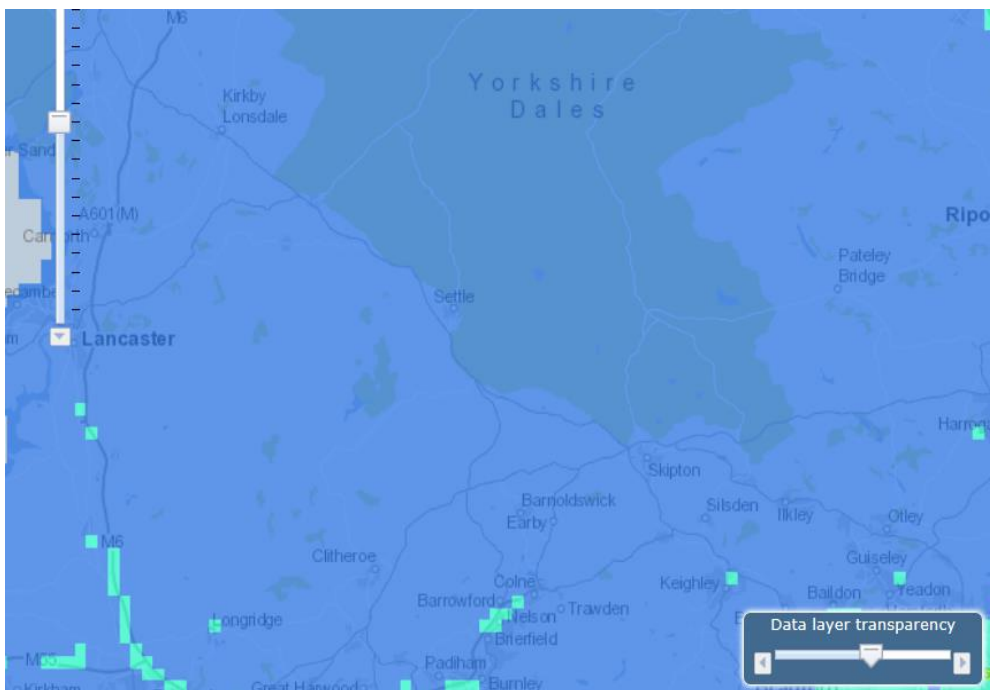
No exceedances of the air quality objectives were recorded considering annual means greater than 60µg/m³, Particulate Matter (PM₁₀).

3.1.3 Particulate Matter (PM_{2.5})

Craven District Council also proactively assesses the UK Ambient Air Quality Interactive Map on the DEFRA website to see if levels for PM_{2.5} have changed in neighbouring areas.

This chart taken from the UK Ambient Air Quality Interactive Map (07/03/16) shows that the Craven District is not affected by high levels of PM_{2.5}, neither are the direct surrounding areas such as Silsden, Barnoldswick and Kirkby Lonsdale.

Figure 1 UK Ambient Air Quality Interactive Map



PM_{2.5} background concentration

Annual mean ($\mu\text{g m}^{-3}$)

- < 5
- 5 - 10
- 10 - 12.5
- 12.5 - 15
- 15 - 20
- 20 - 25
- 25 - 30
- > 30

Figure 2 Smoke control areas Skipton

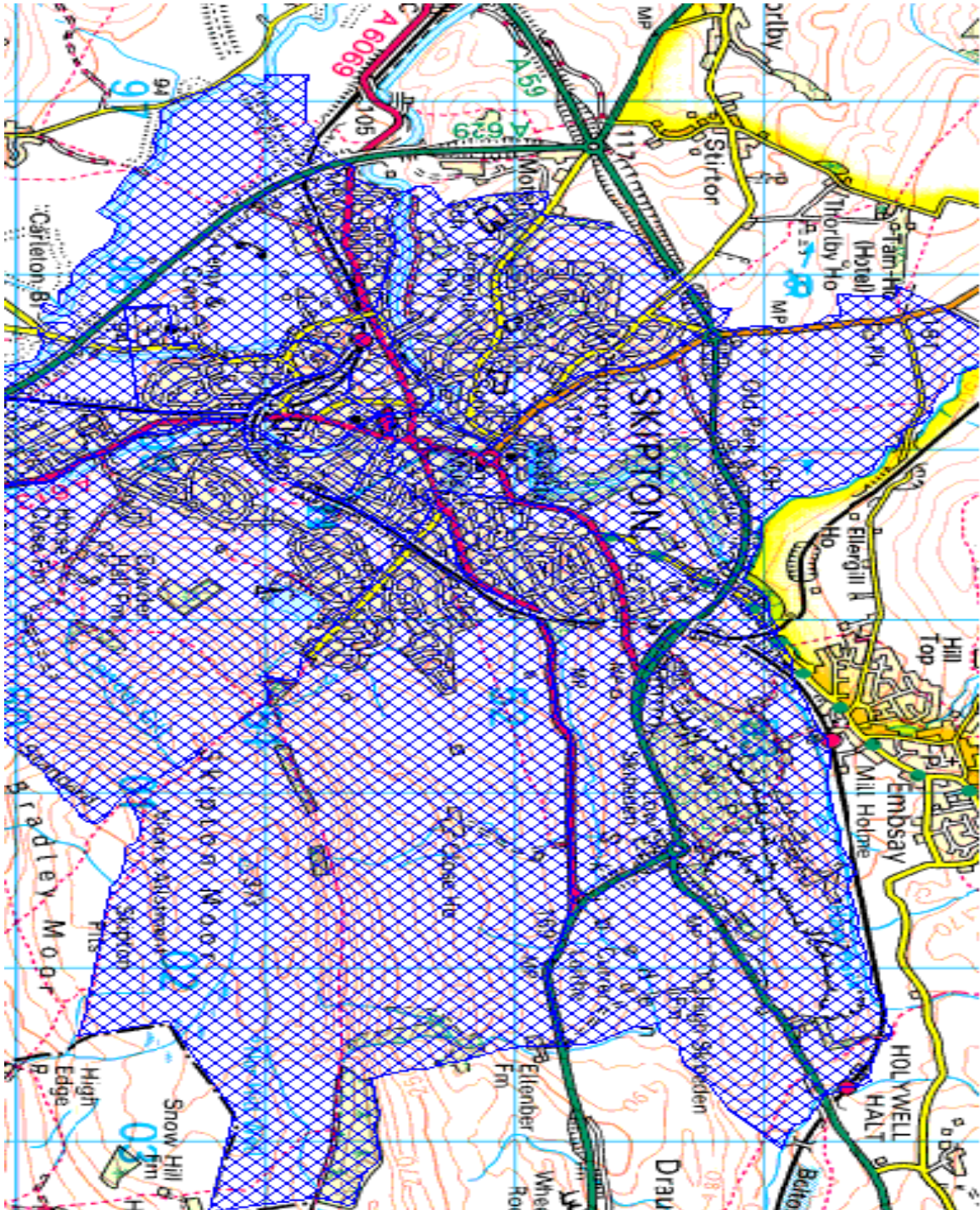


Table A.1 – Details of Non-Automatic Monitoring Sites

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA?	Distance to Relevant Exposure (m) ⁽¹⁾	Distance to kerb of nearest road (m) ⁽²⁾	Tube collocated with a Continuous Analyser?	Height (m)
DT1	Station Road Bentham	Roadside	366749	469197	NO ₂	NO	0.85	1.37	YES	2
DT2	Duke Street Settle	Roadside	381959	463625	NO ₂	NO	0.56	1.21	YES	3
DT3	New Market Street, Skipton	Roadside	399138	451611	NO ₂	NO	0.47	1.40	YES	2.78
DT4	High Street Cross hills	Roadside	400628	444998	NO ₂	NO	1.42	1.66	YES	2.55
DT5	Craven Street	Roadside	398801	451179	NO ₂	NO	None	1.5	YES	2.46

Notes:

(1) 0m if the monitoring site is at a location of exposure (e.g. installed on/adjacent to the façade of a residential property).

(2) N/A if not applicable.

Table A.2 – Annual Mean NO₂ Monitoring Results

Nitrogen Dioxide Survey (Results in ug/m ³)													
Site No.	Craven DC	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17
		Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17
1	Station Road Bentham	0	0	24	23	18	20	17	19	20	21	0	22
	Running Mean			8	12	13	14	15	15	16	16		15
		Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17
1b	Duke Street, Settle	0	0	31	30	27	21	22	24	28	27	29	34
	Running Mean			10	15	17	18	19	19	20	21	21	23
		Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17
2	Newmarket Street, Skipton	0	0	40	38	26	27	27	30	31	0	22	41
	Running Mean				26	25	25	26	26	26		23	23
		Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17
2b	Craven Street, Skipton	0	0	30	28	23	19	18	20	24	23	25	33
	Running Mean			28	27	25	25	24	24	26	22	21	20
		Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17
3	High Street, Cross hills	0	0	40	36	33	29	18	30	35	29	27	35
	Running Mean			13	19	22	23	22	23	25	25	23	26

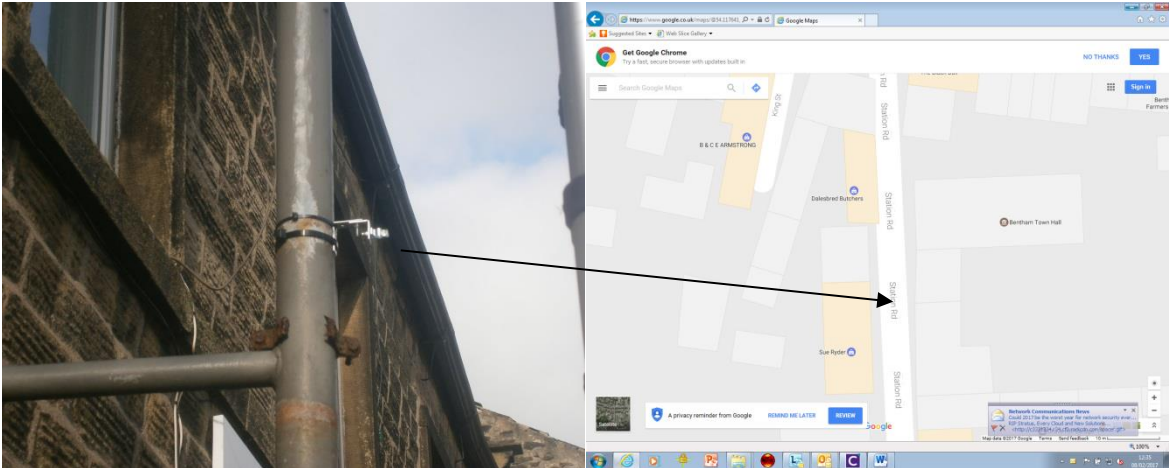
- Diffusion tube data has been bias corrected (confirm by selecting in box)
 Animalisation has been conducted where data capture is <75% (confirm by selecting in box)
 If applicable, all data has been distance corrected for relevant exposure (confirm by selecting in box)

Table below summarizes results, outcomes and any actions taken over the previous 10 years prior to suspension of the NO₂ tubes (2002-2012)

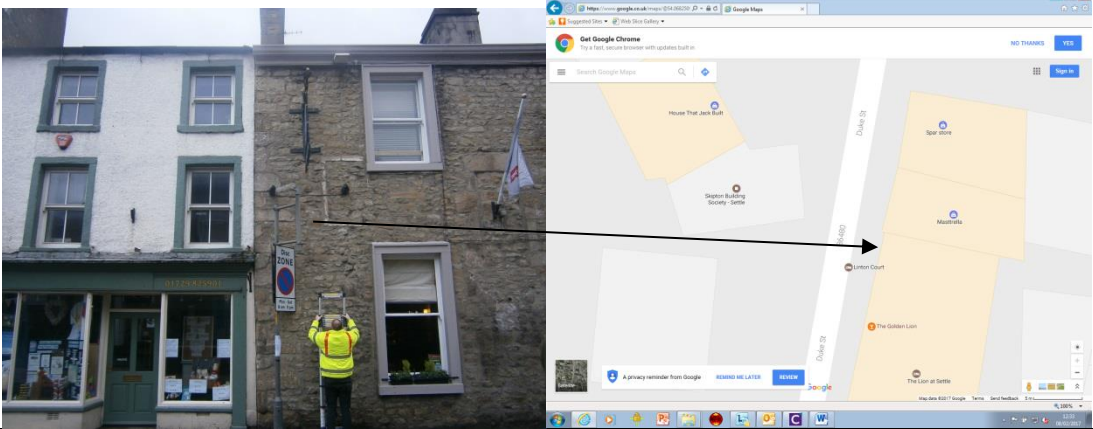
Nitrogen dioxide (NO ₂)					
Year					
USA	Progress Report	Date Submitted	Outcome (All locations)	AQMA Declared	Action Taken
2002		June 2003	Objective not exceeded	No	Ongoing Monitoring
	2003	Nov 2004	Objective not exceeded	No	Ongoing monitoring
	2004	June 2005	Objective not exceeded	No	Ongoing monitoring
2005		June 2006	Objective not exceeded	No	Ongoing monitoring
	2006	April 2007	Objective not exceeded	No	Ongoing monitoring
	2007	June 2008	Objective not exceeded	No	Ongoing monitoring
2008		June 2009	Objective not exceeded	No	Ongoing monitoring
	2009	May 2010	Objective not exceeded	No	Ongoing monitoring
	2010	May 2011	Objective not exceeded	No	Ongoing monitoring
2011		May 2012	Objective not exceeded	No	Ongoing monitoring
	2012	May 2013	Objective not exceeded	No	Monitoring Suspended
2017		Dec - 1017	Objective not exceeded	No	Ongoing monitoring

Appendix A: Map(s) of Monitoring Locations

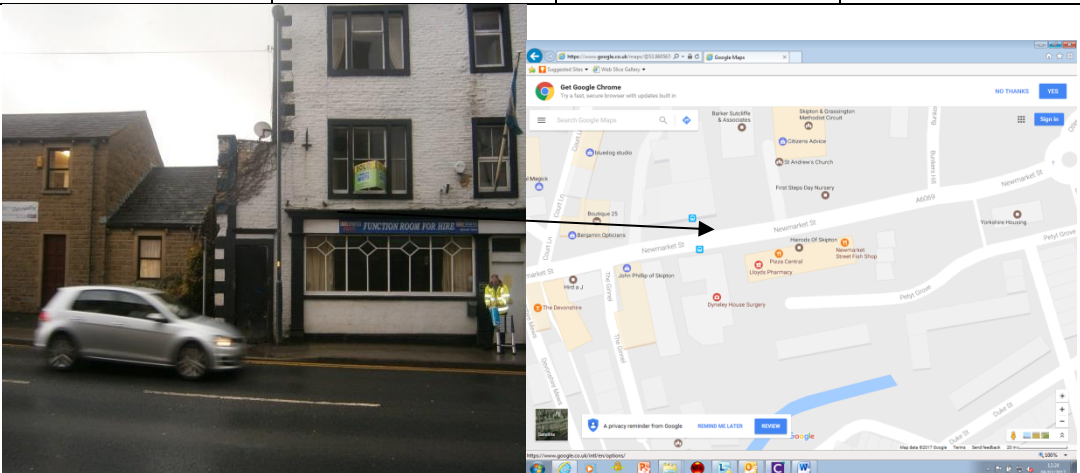
Nitrogen dioxide Tube Sites - February 2018

Site Ref	1	Type	Roadside
Site Address	Station Road Bentham		
Grid Reference	366749 469197	Owner Contact	
Tube Location	Road sign	Telephone	
			
Health & Safety Pedestrians around ladder			
Distance from Kerb	1.37		
Distance from Facade	0.85		
Height above road	2.08		
Exposure	Pedestrians walking along high street Workers in shops & offices, people living above shops and offices.		

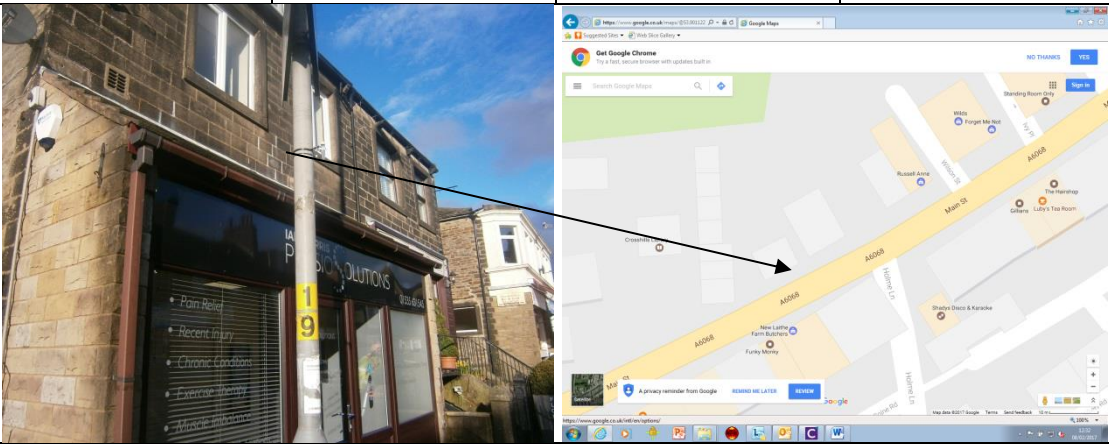
Nitrogen dioxide Tube Sites - February 2018

Site Ref	1b	Type	Roadside
Site Address	Duke Street Settle		
Grid Reference	381959 463625	Owner Contact	
Tube Location	Road sign	Telephone	
			
Health & Safety Pedestrians around ladder, road heavily used by quarry lorries.			
Distance from Kerb	1.21		
Distance from Facade	0.56		
Height above road	3.00		
Exposure	Pedestrians walking along high street Workers in shops & offices, people living above shops and offices.		

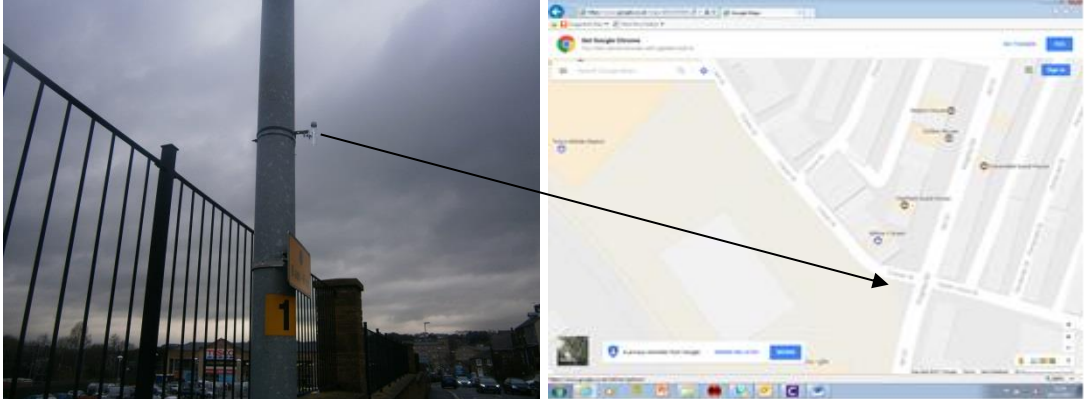
Nitrogen dioxide Tube Sites – February 2018

Site Ref	2	Type	Roadside
Site Address	New Market Street Skipton		
Grid Reference	399138 451611	Owner Contact	
Tube Location	Lamp post	Telephone	
			
Health & Safety Pavement narrow, pedestrians near ladder. This is a main route used heavily by cars and delivery lorries.			
Distance from Kerb	1.40		
Distance from Facade	0.47		
Height above road	2.78		
Exposure	Pedestrians walking along high street Workers in shops and offices Residents in flats above shops		

Nitrogen dioxide Tube Sites – February 2018

Site Ref	3	Type	Roadside
Site Address	High Street Cross hills		
Grid Reference	400628 444998	Owner Contact	
Tube Location	Road sign	Telephone	
			
Health & Safety Pedestrians around ladder, heavily used by traffic as main through road.			
Distance from Kerb	1.66	Distance from setts	
Distance from Facade	1.42		
Height above road	2.55		
Exposure	Pedestrians walking along high street Workers in shops & offices, People living above shops and offices.		

Nitrogen dioxide Tube Sites - February 2018

Site Ref	2b	Type	Roadside
Site Address	Craven Street Skipton		
Grid Reference	398801 451179	Owner Contact	
Tube Location	Lamp post	Telephone	
			
Health & Safety Ladder should be located inside small fenced area			
Distance from Kerb	1.5		
Distance from Facade	None		
Height above road	2.46		
Exposure	Pedestrians walking along street Workers, working in shops and offices and children's school		

Nitrogen dioxide Tube Sites – June 2018

Site Ref	3b	Type	Roadside
Site Address	Station Road Cross Hills		
Grid Reference	400811, 445215	Owner Contact	-
Tube Location	Lamp post	Telephone	-
			
Health & Safety Ladder should be located inside small fenced area			
Distance from Kerb	1.3		
Distance from Facade			
Height above road	2.5		
Exposure	Pedestrians walking along street Workers, working in shops and offices and children's school, <u>significant increase in traffic</u>		

This site has been added from 1st June 2018; this was added due to concerns raised by members of the public and local Councillors of increase traffic and possible pollution issues. Currently no results from tubes collected.

Craven District Permitted Processes under Part I of the Environmental Protection Act 1995

PROCESS ADDRESS	PROCESS TYPE
Arcow Quarry, Helwith Bridge, Horton in Ribblesdale Settle, BD24 0EW	Quarry
Halton East Quarry Harrogate Road Skipton, BD23 6AD	Roadstone coating
Horton Quarry Horton in Ribblesdale Settle, BD24 0HR	Quarry
Dry Rigg Quarry Horton-in-Ribblesdale Settle, BD24 0EL	Quarry
Swinden Quarry Linton Skipton, BD23 6BE	Quarry
Skipton Rock Quarry Harrogate Road Skipton, BD23 6BJ	Roadstone coating
Skirwith Quarry Ingleton, LA6 3AW	Quarry
Craven Bereavement Services Waltonwrays Crematorium Carleton Road Skipton, BD23 3BT	Crematoria
Fibrelite Ltd Snaygill Industrial Estate Skipton, BD23 2QR	Polyurethane (Styrene)
Readymix Huddersfield Ltd Snaygill Industrial Estate Skipton, BD23 2QR	Cement (concrete batching)

PROCESS ADDRESS	PROCESS TYPE
Charvo Ltd Snaygill Industrial Estate Skipton, BD23 2QR	Coatings of Metals & Plastics
Hanson Batching Plant Skipton Rock Quarry Embsay, Skipton, BD23 6BJ	Cement (Concrete batching)
Skipton Ford Airedale Business Centre Keighley Road Skipton, BD23 2UB	Vehicle Re-spraying
Fleet painting Ltd Progress Works Engine Shed Lane Skipton, BD23 1UP	Vehicle Re-spraying
Wm Morrison Supermarket Plc Broughton Road Skipton BD23 1RT	Petrol
Tesco Stores Ltd Craven Street Skipton, BD23 2AG	Petrol
Cross Hills Service Station Station Road Cross Hills, BD20 7DT	Petrol
Three Peaks Services A65 New Road Ingleton, LA6 3DL	Petrol
Snax 24 Ltd Station Road Cross Hills, BD20 7EH	Petrol
Whitefriars Self Service Church Street Settle, BD24 9JD	Petrol
Threshfield Garage Threshfield Skipton, BD23 5PL	Petrol
Johnson Cleaners UK Ltd 73 High Street Skipton, BD23 1DS	Dry Cleaners
White Rose of Yorkshire Ltd 56-58 Brougham Street Skipton, BD23 2JN	Dry Cleaners

Whitelocks Kelber Hill Farm Gargrave North Yorkshire BD23 3PD	Bio Mass incinerator
Whitelock Greens Yard, Ings Lane, Skipton, North Yorkshire, BD23 1TX	Bio Mass incinerator
Whitelock Greens Yard, Ings Lane, Skipton, North Yorkshire, BD23 1TX	Mobile Crusher
Craven Concrete Butts Works Clapham Road High Bentham LA2 7AN	Cement (concrete batching)
Fairhurst awaiting) application Langcliffe Mill Stainforth Road Lancliffe, Settle North Yorkshire BD24 9NP	Mobile Crusher/Screen
Fairhurst Langcliffe Mill Stainforth Road Lancliffe, Settle North Yorkshire BD24 9NP	Concrete mix

Glossary of Terms

Abbreviation	Description
AQAP	Air Quality Action Plan - A detailed description of measures, outcomes, achievement dates and implementation methods, showing how the local authority intends to achieve air quality limit values'
AQMA	Air Quality Management Area – An area where air pollutant concentrations exceed / are likely to exceed the relevant air quality objectives. AQMAs are declared for specific pollutants and objectives
ASR	Air quality Annual Status Report
Defra	Department for Environment, Food and Rural Affairs
DMRB	Design Manual for Roads and Bridges – Air quality screening tool produced by Highways England
EU	European Union
FDMS	Filter Dynamics Measurement System
LAQM	Local Air Quality Management
NO ₂	Nitrogen Dioxide
NO _x	Nitrogen Oxides
PM ₁₀	Airborne particulate matter with an aerodynamic diameter of 10µm (micrometres or microns) or less
PM _{2.5}	Airborne particulate matter with an aerodynamic diameter of 2.5µm or less
QA/QC	Quality Assurance and Quality Control
SO ₂	Sulphur Dioxide
...	...

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https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/332854/PHE_CRCE_010.pdf